Bilbao Report

Achievements and limits in transforming a city

GETIC Master

Study trip 2025 – February 17th to 21st

SciencesPo
URBAN SCHOOL

Bilbao & Biscay Province

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Governing Ecological Transitions in Cities
2024-25 M1 Cohort

To the left: Image of Viscaya Bridge, a UNESCO-listed transporter bridge in the municipality of Portugalete, Biscay Province.

Acknowledgments

The study trip, an essential element of our formation, was made possible thanks to the planning and vision of the Urban School of Sciences Po. We are particularly thankful for the work and commitment of Ilaria Milazzo, Executive Director of the School, and the Academic Team of the GETIC Master, constituted by Cyriel Pelletier, Antoine Tisserant and Beatrice Susana Delpech. Former Executive Director of the School and Bilbao-acquainted Guillermo Martin played a crucial role in organising and planning the visits, providing us also with highly-valued insights and on-site guidance. Francesca Ferlicca contributed with the key scientific direction during the trip which enabled us to write this very report.

We are immensely grateful for the rich and inspiring presentations and exchanges we experienced in Bilbao. Specifically, we extend our heartfelt thanks to:

-Roberto San Salvador at the Deusto University Cities Lab;

-Idoia Postigo, Director at Bilbao Metropoli 30;

-Maria Bidaurreta, Public Relations coordinator at the Guggenheim Museum;

-Amaia González and Joseba Raldan at Greenpeace Euskadi;

-Ziortza Olano Astigarraga and Aitor Zuberogoitia Espilla, Coordinators at Mondragon Unibertsitatea as well as students Ekain Mendiola, Nabil Kaoutli Sainz and Urko Retegi;

-Asier Abaunza, Councilor for urban planning at the City of Bilbao;

-Juan Mari Aburto, Mayor of Bilbao, his Office and members of the City Council present;

-David and Paul, activists at Stop Guggenheim Urdaibai;

-Unai Diago, Mayor of Zalla;

-Mikel Arieta Araubeña and Nora Goitia Zugazaga, at the Bilbao Chamber of Commerce.

Lastly, we would like to thank the entire cohort of GETIC students for their participation in this report. Your involvement, interest, and conviviality made the trip both intellectually rewarding and socially enriching.

Etienne Eline, Pauline Lemonnier & Victor Duchastel de M.
Editorial Team

Video Report

Have you seen our
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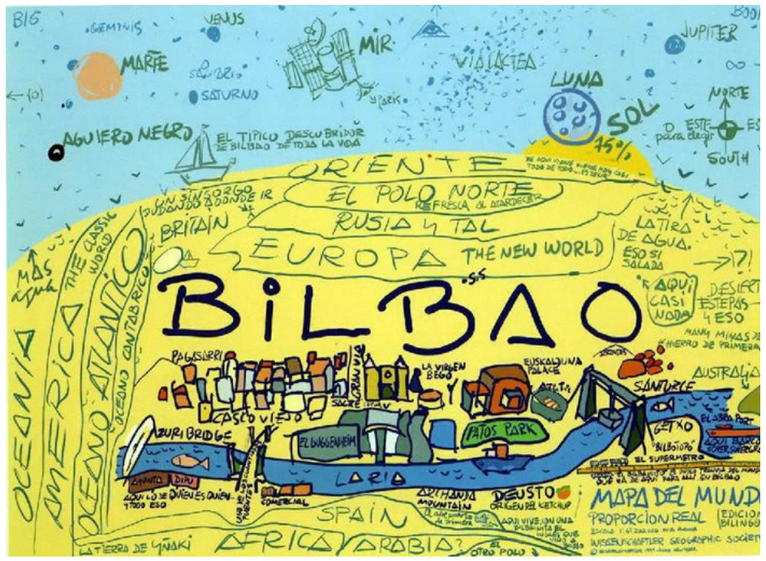
Arthur Jeandenand & Dario Bellenoue
Video Team

FOREWORD



Mapamundi de Bilbao (2000), JEK Larson

BILBAO, ”THE CENTRE OF THE WORLD”

Written by the Editorial Team

Putting Bilbao at the centre of the world is not just a whim of Basque artist JEK Larson. In many ways, Bilbao connects, or has connected, every part of the world. City of commerce, city of industry, city of networks, city of pollution, city of division, city of culture... Bilbao has had a thousand lives and is now committed to becoming a sustainable city: in industry, transport and through its economic model.

At a time when the world is heading towards a climate change trajectory with disastrous consequences for the living world as a whole, cities constitute places where greenhouse gas emissions, populations, key infrastructures and potential solutions are concentrated. Many of them offer desirable paths towards healthy, sustainable societies that rethink their production and consumption models, innovate on many subjects and share their advances with the whole world.

This is the subject we are exploring as part of the Governing the Ecological Transition in Cities (GETIC) Master’s program at Sciences Po’s Urban School, and which has taken us to the beating heart of the Basque Country to study the strategies implemented at a local level in the metropolis of Bilbao.

Bilbao’s recent history has been marked by several natural disasters, including the flood of 1983, as well as a severely-felt deindustrialisation process combined with political violence linked to ETA and a struggle for independence.

It is the story of an urban regeneration, initiated in the city’s dark days of the 1980s, and still ongoing today, that was told to us by the many public and private actors we met during our five-day trip. This regeneration involved transforming the city’s economic model towards a service and knowledge-based economy, as well as developing tourism, a new public transport system and cleaning up the city, which had been badly affected by the waste left behind by centuries of industry. In the Bilbao context, all this has only been possible thanks to the city’s unique features: its trans-sectoral governance, its industrial experience, its own tax system, to name a few. In short, it is a “Bilbao effect” that needs to be deconstructed to examine what its achievements and limitations are in transforming a city.

Note: Unless otherwise sourced, all images in the report have been taken by Bui Luu Quynh Nguyen and all maps made by Jonathan Motte and Etienne Eline

Talking to a broad array of actors – from rural mayors to environmental activists, from Guggenheim Museum officials to the local Chamber of Commerce – was an opportunity for us, as future urban planners, to question and discover the complexities of a local ecosystem that is striving for greater sustainability while also managing inherited path dependency.

Our trip was marked by a number of questions:

- *What are the specificities of the Basque governance model that made Bilbao's transformation possible?*
- *How is the city's new economic model shaping up – and to which externalities?*
- *How successful and consistent is the Bilbao region's green transition model?*
- *Finally, how reproducible is this model in other contexts?*

It is in an attempt to answer these questions that we are writing this report. It will be divided into four main chapters, each bringing together a handful of articles and case studies, recounting what we learnt during the week, but also the questions left unanswered.

Chapter 1: "Governance in Bilbao and the Basque Country" focuses on the decision-making model within the city and its metropolitan area; the way in which public and private partners are invited to dialogue and form consensus, as well as the Basque country's unique tax model. The aim is to understand how urban projects in Bilbao are conceived, even before they are carried out.

Chapter 2: "Deindustrialisation, reindustrialisation and knowledge-based economy" deals with the city's economic model: how it was transformed after deindustrialisation, and where the city is heading from a strategic point of view, dealing as such with green industry, reclamation of brownfield sites and establishment of knowledge-based hubs.

Chapter 3: "The Guggenheim effect" examines the role of tourism and culture in Bilbao's regeneration. Looking at how this cultural development is based on the city's history, and how the museum is not the only factor explaining the city's recovery.

Chapter 4: "Environmental and territorial dynamics" delves into what Bilbao is doing to protect the environment, how it has integrated ecological policies into its development plans, and the limits posed by this model, particularly in terms of center-periphery relations.

We hope that reading this report will bring a fresh, outside perspective to the policies implemented in the city of Bilbao.

We now leave you to read our report.

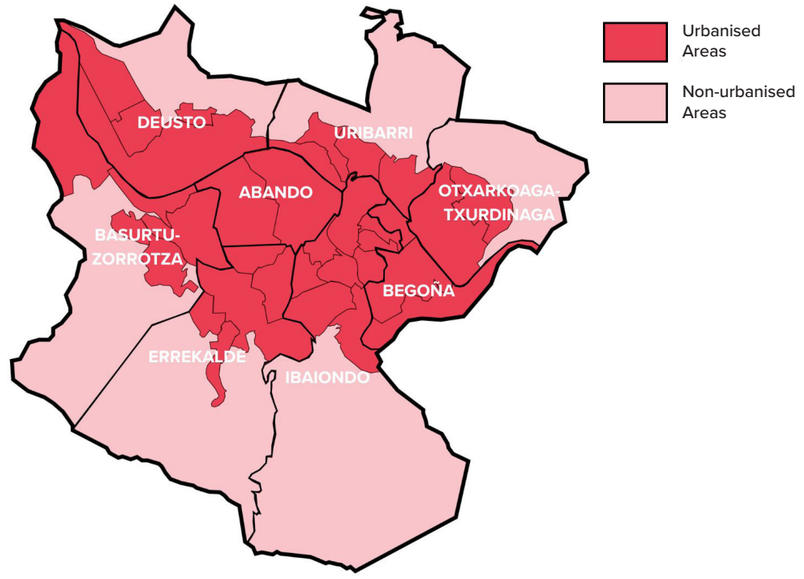


Figure 2: Map of the different districts of Bilbao

Figure 3: Map of the visits we have conducted in central Bilbao

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EXECUTIVE SUMMARY

BILBAO'S URBAN REINVENTION: GOVERNANCE, STRATEGIC INVESTMENTS, AND GREEN CHALLENGES

Written by the Editorial Team

Our trip to Bilbao allowed us to explore different topics related to urban governance that helped us understand various aspects of Bilbao's transformation. This executive summary offers a first set of answers to our research questions, which are explored in detail throughout the report.

Our main findings highlight how strong coordination in Bilbao's governance, at both the city and regional level, played a key role in making the city efficient in its transformation. This was achieved thanks to trans-governmentalism and efficient public policies. Through trans-sectorial and trans-governmental governance, Bilbao managed to transform itself from a city suffering from deindustrialisation into an attractive, less polluted, and culture-driven hub. Nevertheless, the ecological transition is still a challenge for the city, in order to become sustainable.

This was made possible by multiple tools: the use of public-private partnerships (PPPs), the fiscal independence of the Basque Country, the existence of instances such as Bilbao Metropoli 30 that carried different projects with clear objectives, and key political figures who supported the vision of building a new city. The economic transformation was also visible in the physical shape of the city. Tourists, especially attracted by the Guggenheim Museum and the surrounding areas, contributed to shifting the economic and cultural centre from the port to the old town. Additionally, the economic activity of citizens changed: from one driven by workers and fishermen living off port activities to more white-collar jobs and livelihoods tied to tourism. This change also affected the city's identity and core, raising some cultural challenges.

When it comes to the environment, the image of Bilbao's successful transformation is challenged. Despite massive urban projects such as the covering of highways, building new universities and districts from scratch, the city now appears to consider itself as 'done with the transition'. From the actors we met, it seemed like the ecological transformation was rather superficially addressed, being more or less considered as achieved. Furthermore, the transformation of the city raised concerns about environmental impacts on the surrounding municipalities, and what could be described as "green sacrifice zones" at the city's periphery, which have not benefited from the same political and cultural tools to drive their own economic transformation. Finally, we would like to outline several policy recommendations that could help replicate Bilbao's model, while strengthening its environmental and social inclusivity:

- Encourage long-term and trans-sectoral governance models that bring together public and private actors beyond political cycles, helping to maintain a stable urban vision over decades, in the way Bilbao Metropoli-30 did for Bilbao.

To the left: Image of Bilbao's skyline seen from the Altamira neighbourhood

- Having a clear fiscal plan and funds that come from various actors. While not easily replicable, the Basque Country's ability to manage its own tax revenues has been crucial in financing transformative projects and building resilience. The use of PPPs and the inclusion of the private sector help financing long-term and resilient projects that meet the demands of the market.
- Ensure that green transition policies become a central part of urban agendas, even once major infrastructure projects are completed. This includes setting new climate goals, integrating nature-based solutions, and adapting to future risks; it can be achieved by working with environmental activists, engineers specialised in sustainability, and through more public participation in order to preserve the cultural and environmental specificities of each area.
- Develop territorial solidarity mechanisms so that peripheral areas are not left behind or disproportionately burdened by environmental costs. Planning should consider broader metropolitan and rural dynamics. This can be achieved through more inclusive councils, and extend who is 'sitting at the table' to more people.

Bilbao's case offers a compelling example of how to reinvent a city through integrated governance and strategic investments. It's also an impressive model of a city that successfully changed its identity and image. However, the model should evolve to address growing environmental and social challenges, especially if it is to inspire other cities aiming for inclusive and sustainable urban transformation.

To the right: Image of modern residential architecture in Bilbao

PROLOGUE

A BRIEF OVERVIEW OF BILBAO

Written by Clémence Laurent, Lou Dayan & Itri Aguenaou

Located in northern Spain, Bilbao is the capital city of the province of Biscay, one the three provinces that constitute the Basque Country – also called Euskadi. It is the tenth largest city in Spain with around 350.000 inhabitants and a density of more than 8.300 inhabitants per km2, whereas the Bilbao metropolitan area counts around 1.000.000 inhabitants. The city is located around 16 km south of the Bay of Biscay, at the level of the estuary of the Nervión river. The Port of Bilbao is indeed the most important one of the Basque Country and keeps growing nowadays. Even if the city – that used to be a very important industrial center – was struck by an important crisis in the 1970s, it remains nowadays a rich city, with a GDP per capita higher than the Spanish and European Union averages. Indeed, on top of the port activities, the banking sector is very present and the city became in the late 1990s a touristic destination.

Bilbao's recent history

The Basque country faced a severe crisis at the end of the 20th century. The region was politically unstable and underwent strong tensions. In fact, after the end of Franco's dictatorship, as Spain became a democratic republic, the demand for independence in the Basque country was strong. The nationalist movements had a huge influence, with several movements entering

Figure 4: The different districts of Bilbao (*Medium*)

To the left: Image of Bilbao's skyline seen from *Etxebarri Parkea.*

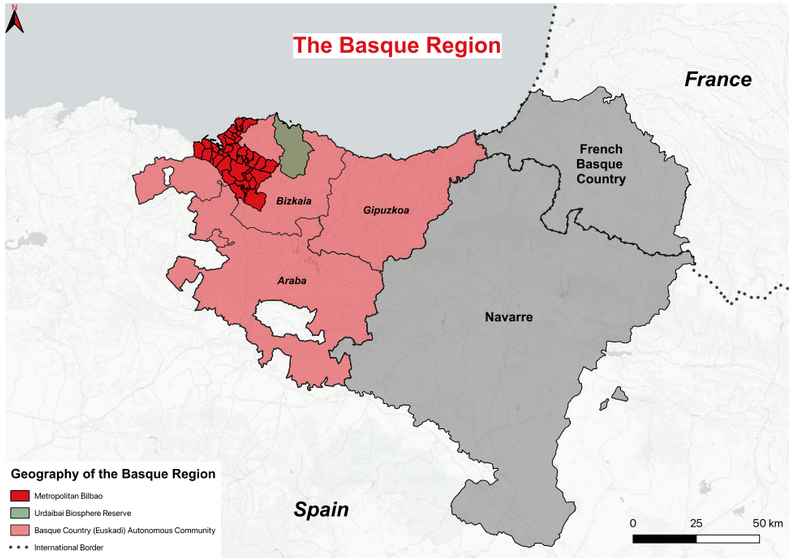


Figure 5: Location of the Basque country in the broader region

the spiral of violence. The ETA (*Euskadi ta Askatasuna*) movement, a Basque terrorist organization, and Spanish nationalist movement contributed to a climate of violence and fear and hindered the development of the region. Only in the Basque country, 551 people were killed by ETA's terrorist attacks. As a matter of fact, economic investors were reluctant to invest in this unstable region. It exacerbated tensions and political instability, as Bilbao was one of Spain's most important industrial centers, especially in sectors such as shipbuilding or steel production. However, they entered a phase of decline in the 1970s and 1980s, and, because many factories closed, unemployment increased rapidly. This industry was also responsible for Bilbao's very poor environmental quality: the river was polluted and industrial zones were abandoned. Therefore, it was particularly hard to make urban space attractive.
All these difficulties contributed to the need for a radical transformation of Bilbao.

The Guggenheim Museum: a symbol of the shift from an industrial-based economy to a service-based economy

The decision was taken to build a contemporary art museum in collaboration with the Guggenheim Foundation, which led to the inauguration of the Guggenheim Museum in 1997. Although this strategy was not understood, and for many stakeholders this investment did not seem to meet local needs at all, it marked the new strategy of the local government for the region's development. The museum became the symbol of a much broader shift towards a service-based economy, which had started earlier through larger infrastructural investments. It also became a landmark of Bilbao thanks to its innovative and remarkable architecture by Frank Gehry. The activities diversified, and Bilbao started to be attractive for tourism or creative industries, while becoming less dependent on the industry. This shift enabled Bilbao to invest in large-scale urban renewal. The river has been cleaned and reintegrated as the heart of the city-center with a pedestrian path, a metro system has been developed and designed by Norman Foster, and industrial areas, such as Abandoibarra, have been renovated. The public space has been generally redesigned to improve connectivity and the mobility between different districts. Along with the Guggenheim Museum, the cultural offer has also been developed, with the Fine Arts Museum or the Maritime Museum. All these projects were supported by public-private cooperation and through the creation of Metropoli-30, a platform that brings together stakeholders that elaborate the long-term vision for the metropolitan area. They eventually improved the quality of life of the population and helped forge a new urban identity, as Bilbao became renowned as a regional capital for culture and innovation.

Therefore, Bilbao has set an example in urban regeneration, inspiring other cities to launch similar transformations to overcome political, social and economic difficulties. It has led to different initiatives that were more or less successful, such as the creation of the Louvre-Lens in the North of France, which still undergoes the consequences of deindustrialisation.

Bilbao and Euskadi : the specificity of the Basque autonomy

As the capital of the Biscay province, Bilbao lies in the heart of *Euskadi*, the Basque Autonomous Community. Born in 1979 following the establishment of the Statute of Gernika – a legal document organizing its political system, it comprises 3 provinces : Araba, Bizkaia and Gipuzkoa and a capital, Vitoria-Gasteiz.
The formation of this Community is based on a long history that dates back to the *fueros*. Under the Spanish Crown, these were medieval charters that allowed the Basque Provinces a form of self-government, including local laws, institutions and tax systems. At the end of the 19th Century, following the Carlist Wars, a series of civil conflicts between traditional monarchists that stood for regional rights (the Carlists) and supporters of a liberal government, these rights were lost. A few decades laters, as Franco's dictatorship settled, the Basque language and political expression was banned. As Spain transitioned to democracy, regional autonomy mechanisms were introduced in the new Constitution. In a referendum, the people of the Basque Country approved the new political structure of the region, defined in the Gernika Statute. Following claims for further devolution, especially from ETA, some other powers were re-negiociated and granted in the next decades. Nowadays, it represents one of the most decentralised regions in the world.

Indeed, the Basque Autonomous Community has a parliament, legislative body elected by universal suffrage and a President, the *Lehendakari*, leading the executive branch. Each of the three Basque provinces has its own foral government, reflecting the decentralised nature even within the autonomous region. These institutions handle taxation, local infrastructure, and economic development. At the regional level, the Basque Government coordinates broader policies like education, police (the *Ertzaintza*, the Basque autonomous police), and health services.

Fiscal autonomy is also granted, and governed through an Economic Agreement : the provinces collect almost all taxes directly through their own provincial tax authorities, including income tax, corporate tax and VAT. In return, the Basque government pays a quota *(cupo)* to the central government to cover its share of national services such as defense, foreign affairs, and infrastructure. This arrangement gives the Basque Country extraordinary control over its finances and spending, enabling long-term investment strategies and robust social policies. The economic agreement is renegotiated periodically and has been a source of both political pride and controversy. Critics in other regions sometimes see it as overly favorable, while Basque leaders view it as a recognition of their historical rights.

The Basque Country's governance model is

often described as “quasi-federal.” The system has not eliminated all tensions. The legacy of ETA and the long struggle for independence has left deep political divides, although the region has stabilised significantly since ETA’s dissolution in 2018. Today, debates focus more on the expansion or defense of existing powers than on outright independence.

Since the last Basque regional election in April 2024, the *Basque Nationalist Party* (EAJ/PNV) (Centre) and the *Basque Country Gather* (EH Bildu) (left-wing, pro-independence) each account for around 30% of the 75 seats. The Basque Government is chaired by Imanol Pradales (Basque Nationalist Party).

The two main parties in the current general

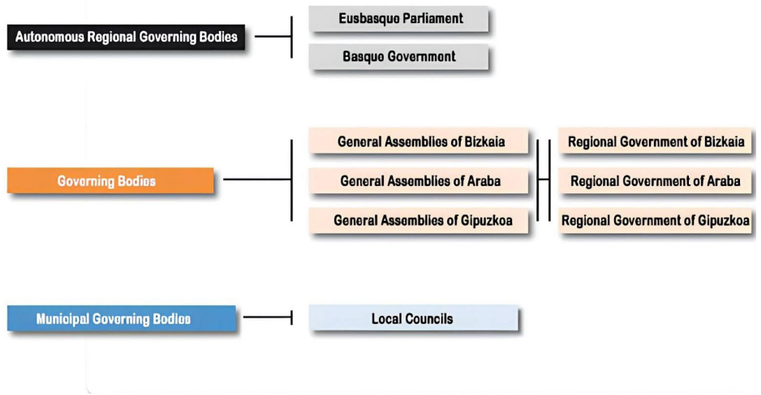


Figure 6: Different governing bodies in the Basque Autonomous Community *(Juntas Generales de Bizkaia)*

assemblies of Bizkaia are also the EAJ/PNV (38%) and the EH Bildu (25%). The EAJ PNV also dominates in the Bilbao Municipal Council, with 37% of the seats, followed by the EH Bildu (19%) and the Basque Socialist Party (16%). The mayors of Bilbao have all been issued from the EAJ-PNV since 1979. Since the 2015 elections, this role has been fulfilled by Juan Mari Aburto.

***

Overall, we are dealing with a city that has undergone rapid transformations over the last decades, in the context of an industrial crisis, associated with a high unemployment rate and high pollution levels. The deindustrialisation and the sectoral shift that occurred led to an increase of the service sector, although the industrial sector is still represented. Yet, this shift was precisely made possible by and led to urban transformations.

These urban transformations can only be fully understood in the context of a unique governance model comprising a special taxation system that contributed to a favorable economic situation. Additionally, the city may have benefited from a relatively recent pacification.

Thus, we’ll try to explore these complex urban and societal transformations beyond the symbol of the Guggenheim museum. We aim to examine the role of the ecological transitions, as well as that of the governance model – largely associated with a top-down approach – in these urban transformations. Delving into it may also help us question the potential replicability of this model, which is often seen as successful.

Bilbao Metro exit, designed by British architect Norman Foster

View of the *Bilbao Ría* with urban infrastructure, seen from Zorrotzaurre island

CHAPTER 1 – GOVERNANCE IN BILBAO AND IN THE BASQUE COUNTRY

IMPACT OF FISCAL AUTONOMY

Written by Kieran Byrne & Clémence Pautrat

One of the elements that was systematically brought up by the actors we met on the field in Bilbao was the fact that the specific constitutional organisation of the Basque country, in regards to the central Spanish government, was somewhat independent, at least in terms of financial competences and responsibility. As explained by the Biskaia talents governmental agency, "within the Spanish State, the Basque Historical Territories are the only provinces with their own regional tax regime with a similar legislative and management capacity to those of state tax administrations".[1]

The agency also presents this specific characteristic of the Basque Country along these terms: "The regional tax system of the Basque Country, derived from the historical rights of Bizkaia, Gipuzkoa and Álava/Araba, represents one of the region's most notable characteristics. We cannot understand the economic history of the Basque Country since the late 19th Century without the fiscal pact reached between the three Basque Historic Territories and the Spanish State: the so-called "Economic Accord". The accord was installed in 1981 and precises the taxing competences of the Basque country, the counter offer being to contribute to a share of Spanish expenditures.

Professor Roberto San Salvador del Valle, during our first presentation, mentioned that 3 ministries are collecting taxes in the Basque country and then paying the region's contribution to national tax collection. This "*cupo*" represents the weight of the Basque country within the Spanish Gross Domestic Product (GDP). According to the Professor, the *Cupo* is about 1.5 billion euros (according to the 2024 budget)[2], while the Basque Country represents 4.5% of Spain's population and 6.4% of its GDP.

As mentioned by the economist Pedro Luis Uriarte, when the accord was signed in 1980, it aimed at giving "competences which are usually assumed by the state: those keeping, establishing and regulating the tax system". He considers that it allows the Basque Government to have "full power to make the public policies [they] deem appropriate without any kind of restriction from the State". He also specifies that " the 251 Basque Town Councils are under the Economic Agreement", which therefore includes Bilbao.[3]

The economic independence from the Spanish State is derived from the notion of political autonomy, and overall the cultural particularity of the Basque country. As mentioned by Professor

To the left: Deusto University seen from *Abandoibarra*.

1 Bizkaia Talent, "The Regional Tax System in the Basque Country," Bizkaia Talent, accessed April 24, 2025, https://www.bizkaiatalent.eus/en/pais-vasco-te-espera/apuesta-de-futuro/sistema-fiscal-propio/.

2 El País, "País Vasco calcula que el cupo a pagar al Estado en 2025 será de 1.488,9 millones, un 0,22% más," October 31, 2024, https://elpais.com/economia/2024-10-31/pais-vasco-calcula-que-el-cupo-a-pagar-al-estado-en-2025-sera-de-14889-millones-un-022-mas.html.

3 Bizkaia Talent, "Interview with Pedro Luis Uriarte – The Basque Economic Agreement," YouTube video, August 8, 2017, https://www.youtube.com/watch?v=Uv3pJA9GHkM.

del Valle, there is a very strong local cultural identity and 70% of the Basque population agrees on a wish for more self-governance and decision-making power to apply policies directly onto local communities. Some actors we met mentioned how this explained why the Basque country was able to invest so much on social security, as well as help their economic development, which is one of the highest in the country.

This reflects a will for a political and economic autonomy, as stated in the speech "2001: a year for the renewal of the Economic Agreement", given by Basque Congressman Josu Bergara: "The Basque Economic Accord is not a contract with a limited lifespan; rather it is a Historical Right recognised and protected by the Constitution and which, according to the Statute of Autonomy, is the instrument that governs fiscal relations between the State and the Basque Country (...) The Economic Accord and the regulations derived there are simply the sovereign decisions of a society that uses the tools available to it to guarantee its future".[4] This shows how closely one can associate the Basque cultural identity with their political autonomous powers and financial independence. For local institutions, those elements are necessarily interconnected. It's a question of self-governance, serving your own community and the monetary means that are required to do so.

This is an element that was clearly highlighted throughout the presentations that we saw during our trip, especially when looking at our exchanges with the members of the Bilbao municipality and Bilbao Metropoli 30. For instance, Metropoli 30's presentation explained how important the Basque government's capacity to raise taxes from its inhabitants was, in order to be able to fund projects such as theirs, even though they mostly used public-private partnerships. Similarly, the Deputy Mayor in charge of urbanism highlighted how 30% of Basque public services were provided by the Spanish government, while the rest is provided by Basque institutions: this means that there is a continuous financing, even if there are political blockades as the national Parliament level. It also allows private development companies such as Bilbao Rio 2000, which is central in the development of all the port infrastructures and more generally of the city in recent years, to be co-owned by both Spanish and Basque governments.

Linking this back to some of the elements seen in class, it's also interesting to observe that the Basque Country autonomous entity is rated higher by international credit ratings agencies than the Spanish State taken as a whole. The Fitch Ratings Agency explains this phenomenon as follows: "under our Local and Regional Governments (LRGs) Criteria, we may rate an LRG above the sovereign when its finances are insulated from the kind of sovereign interference that may lead to unilateral changes of funding and responsibilities. The LRG may also be rated higher than the sovereign when it does not rely on national grants or transfers to maintain strong credit fundamentals".[5]

This is especially interesting when one knows how hard it is for local governments to get funding for urban planning and development without the support of a higher-level institutional entity. As we've seen in our Urban Climate Finance course, a municipality's or local government's credit rating is essential for it to be able to attract funding, especially in the context of sustainability transitions. So, as is described by Fitch's Ratings grid, the fiscal autonomy of the Basque Country is a great advantage to attract investments, at least from a credit rating standpoint. Outside of this standpoint, it is interesting to see that, thanks to its financial autonomy, the Basque country has its own tax on revenues, its own tax on companies, and its own succession tax[6] – these can be other ways for local governments to raise money.

The Basque country's specific cultural and political identity, paired with its unique fiscal competences, helps it stand out as an autonomous and powerful local government, both at the national and European scales. As an illustration, there is a Delegation of the Basque Country to the EU as a local and regional authority, which is quite unique among European centralised countries.

4 J. Bergara Etxebarria, "El futuro del Concierto Económico: su socialización," in 2001: Un año para la renovación del Concierto Económico, Forum Fiscal, 2001.

5 Fitch Ratings, "Fiscal Autonomy Key Rating Driver for Governments in Basque Country and Navarra," November 27, 2024, https://www.fitchratings.com/research/international-public-finance/fiscal-autonomy-key-rating-driver-for-governments-in-basque-country-navarra-27-11-2024.

About the *Cupo*:

The *Cupo* has to be recalculated every five years, according to a methodology that is defined in the economic accords. It is proportional to the Basque's country contribution to the Spanish economy but most importantly to the Spanish government's investment in the Basque country. According to recent articles, the cupo calculated for the 2024 budget within the Basque country was of about 1 488,9 millions.[2]

6 Government of the Basque Country, "Régime fiscal et régime de financement – Principales caractéristiques," April 2007, https://www.euskadi.eus/gobierno-vasco/contenidos/informacion/fisc_sytribvas/fr_3222/indice_f.html.

THE IMPORTANCE OF PUBLIC PRIVATE PARTNERSHIPS AND CONSENSUS-BUILDING IN THE TRANSFORMATION OF BILBAO

Written by Jules Pomero and Clémentine de Rambuteau

The unique fiscal policy of the Basque country has been a key element that allowed the success of the urban regeneration of Bilbao. Other factors are however at stake and have played a major role in the transformation of the city, like the wide use of public-private partnerships (PPP). This type of partnership philosophy has indeed guided most of the projects in Bilbao since the 1990s, from the redevelopment of the Abando-Ibarra river side and the Guggenheim Museum to the renewal of the island of Zorrotzaurre.

A public private partnership is a long-term contract between a private party and a government entity, to provide a public asset or service. Here, we will focus on the major urban planning and development operations for the redevelopment of the former port and industrial infrastructures that have been carried out under PPP governance. After investigating the reasons that lie at the roots of this governance model, we will analyse the mechanisms explaining the extensive use of PPP in Bilbao's urban renewal projects, as well as the potential drawbacks of this development pattern.

A WINDOW OF OPPORTUNITY FOR PPP-BASED URBANISM

A favourable economic and political consensus culture

Public-private partnerships insert themselves well into the traditional Basque economic system, described by Morgan as a "collective entrepreneurship model" in which public and private actors "work in concert to achieve mutually beneficial ends and where firms are encouraged to explore joint solutions to common problems".[1] The author highlights the narrative around innovation as something collectively created by public and private actors, "rather than the product of heroic entrepreneurial individuals".

Besides that, the Basque political culture is deeply traumatised by the ETA era of deep conflict and independentist terrorist attacks. This had two main effects. The first is primarily economic, since foreign investors have been particularly reluctant to invest in the region because of the political tensions. Unable to attract inward investment from abroad, the Basque Government was forced to rely on its own endemic efforts.[2] The second factor is the emergence of a political culture that values finding a consensus and favours working together over conflict. Although it is hard to precisely measure, it has undoubtedly contributed to the PPP culture.

A need for private investment to enable major urban projects in a context of crisis

In the late 1990s and early 2000s, there was a "window of opportunity" to attract foreign investments, corresponding to the end of the climax of terrorism in the region. On the other hand, the city was suffering its darkest economic crisis due to deindustrialisation. According to the representative of Bilbao Metropoli 30 we met, Idoia Postigo, the context of the economic crisis has been paradoxically an opportunity for important and structural change.

1 Kevin Morgan, "Collective Entrepreneurship: The Basque Model of Innovation," *European Planning Studies 24*, no. 8 (2016): 1544–1560.
2 Philip Cooke and Kevin Morgan, *The Associational Economy: Firms, Regions, and Innovation* (Oxford: Oxford University Press, 1998).

Indeed, the deindustrialisation and the creation of the new port left a lot of industrial wasteland behind. This was at the same time an economic opportunity for major urban renewal projects and a challenge regarding the significant amounts of capital needed to finance them. For example, for the renewal of the Abando-Ibarra area, the site needed an extensive de-pollution operation, a new long term project of urbanism and some economic actors to mitigate parts of the risk. However, according to F. Monge in *The "Bilbao Effect": The Collaborative Architecture that Powered Bilbao's Urban Revival* (2022), "no private entity had the resources to finance a transformation of such scale" and "neither did any single public entity".[3] These kinds of projects could only be implemented through the following share of responsibility: the public sector initiated and financially supported a lot of the policies, while allowing the private sector to take an important role in their design and implementation.[4]

A STRUCTURAL USE OF PPPs IN URBANISM

Redevelopment projects financing model

More concretely, in most cases, the financing model of an urban development project would be the following: public actors owning the wasteland would first change the land use, then split it into plots and sell it to private developers. The funds generated by the sales would then be used to clean up the industrial waste and finance other transformation work in the city. This model was used for the Abandoibarra project as well as for the Zorrotzaurre development plan. The Abandoibarra project was the main project carried out by Bilbao Ria 2000 and despite its initial problems and public-sector dominance, it is widely seen as a success story, with its landmark Guggenheim Museum.[5] This initial success enabled the public-private partnership to be strengthened and the operations to be continued in even greater depth.

On the other hand, some projects adopted other models to share responsibility: the Guggenheim Museum was built in 1997 thanks to a partnership between Solomon R. Guggenheim Foundation and the Basque authorities. Risks were shared as follows: the public sector took responsibility for the infrastructure and the land, whereas the private foundations contributed to programming, operations and image. The combination of commercial approaches and the cultural influence of the Guggenheim museum created a unique place that is now deeply integrated with the heart of Bilbao.

The creation of hybrid entities dedicated to public-private partnerships

In order to coordinate and ensure the continuity of the infrastructure projects in Bilbao, the public authorities created two new entities at the beginning of the 1990s : Sociedad Bilbao-Ría 2000 and the Bilbao Metropoli 30. The first one is a public company set up to coordinate and implement urban transformation projects. The second one is a non-profit organisation that aims to bring together public and private players, where they can discuss strategic development and work like a think tank.

Those two entities have a particularly crucial role in the fact that Bilbao's transformation has taken place over a long period of time, despite both political and economic changes. The main factor that makes the redevelopment of Bilbao interesting is that the Ria 2000 has benefited from a very high level of control over land as a result of a massive transfer from the port authority in the middle of the city. It's something unique as most of the time urban renewal projects happen in the periphery. The following sections will thus provide a more in-depth understanding of Bilbao Ria 2000 and Bilbao Metropoli 30, developing on their roles and the various mechanisms they used.

3 Fernandez Monge, F., et al., "The 'Bilbao Effect': The Collaborative Architecture That Powered Bilbao's Urban Revival," *Bloomberg Harvard City Leadership Initiative*, 2022, https://cityleadership.harvard.edu/resources/collection/the-bilbao-effect-the-collaborative-architecture-that-powered-bilbaos-urban-revival/.
4 Morgan, "Collective Entrepreneurship," 1544–1560.
5 Cooke, Philip, and Kevin Morgan. The Associational Economy: Firms, Regions, and Innovation. Oxford: Oxford University Press, 1998.

THE DRAWBACKS OF A DEVELOPMENT MODEL'S DEPENDENCY TO PPP

However, the PPP model chosen by Bilbao is not without its advantages, and there are trade-offs that need to be taken into account.

Limits of participation and technocratic bias in Bilbao Metropoli-30

One of these limitations could, for example, be the lack of democracy and the very great importance that can be given to the private sector, sometimes to the detriment of the quality of life of the inhabitants. For example, in her 2024 article, Idoia Postigo[6] analyses the governance model of Bilbao Metropoli-30, highlighting its role as a strategic platform for public–private collaboration in the city's urban transformation. While the association presents itself as a space for broad societal dialogue, Postigo shows that in practice it is largely driven by institutional and professional elites, including public authorities, private firms, and technical experts. Civil society participation remains very limited, with minimal involvement from local communities. The visioning process promoted by Metropoli-30 is thus shaped by a technocratic and top-down approach, prioritising consensus among powerful stakeholders over inclusive public engagement.

A development model leading to gentrification and spatial inequalities?

Moreover, the urban renewal model of a post-industrial area may lead to (green) gentrification, with spatial inequalities favouring higher and middle-class neighbourhoods over lower-class ones. For example, the Abandoibarra project included very few residential areas and a flat in the Isozaki towers (one of the few residential projects) in the area ranges between half a million euros to seven hundred thousand euros. This has a direct effect on the population as it intrinsically means that the local population that once lived near these areas could not afford to live there anymore and has had to move to other parts of the city.[7]

Idoia Postigo (Bilbao Metropoli 30), presenting the Bilbao governance model

Can adaptation to climate change be funded by the private sector?

Finally, to open the discussion, we may question the sustainability of the PPP-based urbanism in the context of climate change. Indeed, seeing the vulnerability of the city to sea-rise level and the pressing need for adaptation, will the private sector take part in financing the adequate infrastructure? Or will this result in shedding light on the limits of Bilbao's urban financing model?

6 Postigo, Idoia. "The Revitalisation Process of Metropolitan Bilbao: A Model of Public–Private Collaboration [O Processo de Revitalização da Metrópole de Bilbao: Um Modelo de Colaboração Público–Privada]," Revista de Desenvolvimento e Políticas Públicas (Redepp) 8, no. 1 (2024): 74–81, https://doi.org/10.31061/redepp.v8n1.74-81.

7 Martínez-Pérez, Alberto. "Socio-Spatial Impact of Great Urban Projects in Bilbao and Applicable Lessons for Other Cities [Impactos Socio-Espaciales de los Grandes Proyectos Urbanos en Bilbao y su Aplicabilidad a Otras Ciudades]," Revista Bitácora Urbano Territorial 24, no. 1 (2014): 1–13, http://www.redalyc.org/pdf/748/74830875013.pdf.

BILBAO METROPOLI-30: HISTORY AND MODEL OF GOVERNANCE

Written by Chiara Andreazza and Charlène Lepelletier

The *Association for the Revitalisation of Metropolitan Bilbao*, also named Bilbao Metropoli-30 is a non-profit public-private association created in 1991 in order to align the public and private efforts for the transformation of Metropolitan Bilbao. It is financed by its members, which are more than 140, representing both public entities, private companies, universities, technological and educational centres and social organisations. They include 30 municipalities, forming a metropolitan area that has no specific administrative limits but is defined by common culture and industrial heritage.

This case study helps us to understand how to promote cooperation between public and private actors to create a coherent long-term vision of a metropolitan area. In a study on the role of development agencies and companies published by the OECD in 2009, Bilbao Metropoli-30 is described as "visionary, collaborative, ambitious, agenda-setting, nimble, niche and focussed".

HISTORY

1991-1999 — Creation of Bilbao Metropoli-30 as a response to economic decline: The infrastructure phase

In the 1980s, the city of Bilbao experienced economic decline which "encouraged leaders to look towards a large-scale urban renewal to start a change of economic strategy" (Bilbao Metropoli-30, 2008 cited in OECD, 2009). In 1991, Bilbao Metropoli-30 was created to incorporate the private sector in the project and co-ordinate the different actors. It was recognised as a "Public Utility Entity" by the Basque Government on 9 June 1992, and its work as a "priority activity" by the 10/2023 Provincial Law of Biscay. The same year, the *Strategic Plan for the Revitalisation of Metropolitan Bilbao* was launched, after a request by three different levels of government: the Basque Government, the Government of Bizkaia and the City of Bilbao.

2000-2015 — Anchoring the long-term vision of an attractive metropolitan area: The value phase

At the end of the twentieth century, Bilbao Metropoli-30 realised that most of the big infrastructure projects were completed, and that they needed to change their mission. A new paradigm emerged, based on the attributes of an attractive city: they started working with their stakeholders on the values of Bilbao. After a number of meetings and workshops on the subject, they defined five core values : professionalism, innovation, openness, community and identity.

2016-today — Metropolitan Bilbao 2035: A look into the future

In 2016, Bilbao Metropoli 30 launched a participatory process to define the values of the city's development strategy for the next twenty years: *Metropolitan Bilbao 2035* (MB2035), a look into the future.[1] The project

1 Bilbao Metropoli 30, Metropolitan Bilbao 2035: A Look into the Future, May 2016, https://www.bm30.eus/wp-content/uploads/2017/09/RE-BM2035-E.

saw the participation of nearly 150 institutional, socio-economic, academic and civil society stakeholders. Four critical uncertainties were identified to be addressed: environmental sustainability, changing society, economy and technology, and mobility. Eight working groups discussed these challenges and responded according to the values they wanted to bring out in the city. Indeed, *Metropolitan Bilbao 2035* is a value-based strategic plan for the metropolitan area's future.[2]

Professionalism

Bilbao's stakeholders agreed on the "co-creation of wellbeing" through local businesses and financial efficiency, generating wealth for the community and providing employment opportunities. On the same line, they agreed on strengthening professionalism, closing the ties between university and business, facilitating knowledge sharing and career training. This reflection follows an initiative that was launched by BM30 in 2011, *BasquePro*, a forum for associations of professionals and academia. According to this, the city's ultimate aim should be that of fostering business culture and becoming internationally recognised as a role model on the matter.

Innovation and openness

Technological development is largely recognised as one of the main drivers of growth for metropolitan Bilbao's economy and as a means to deliver public services more efficiently. Together with the revitalisation of the Nervión estuary, industry 4.0 should contribute to local development, attractiveness and the creation of international business opportunities.

Community and Identity

Cooperation between actors in economy, public policy and education is another crucial value brought up by MB2035. Indeed, the new strategy follows Bilbao's tradition of shared governance. Strengthening the community's ties and its identity are other important points, along with redistribution of wealth and social policies for care.

Finally, sustainability is understood as acceptance of environmental values by the population, rational infrastructure planning in Bilbao and balanced development in the whole metropolitan area.

The aim of *Metropolitan Bilbao 2035* is that, by 2035, Bilbao will strengthen its sense of community and rank among the top five territories in the EU (of similar size and socio-economic conditions) in terms of employment, GDP, education and health, among other variables.[3]

In addition to the strategic plan, BM30 promoted other initiatives such as *Urban revolution Aurrera*[4] (October 2023), an international conference bringing together different thinkers, professionals, public authorities and activists engaged in urbanism. The event led to the drafting of a manifesto for future urban planning, focusing on environmental and social sustainability, circular economy and respect for fundamental rights in the city. To reward initiatives in line with these principles, The Bay Urban Visoning Awards were created and will be held every 2 years.[5]

A MODEL? STRENGTHS AND CONSTRAINTS

Strengths

According to the OECD 2009 report and the presentation we had on Tuesday February, 18th, 2025, the strength of *Bilbao Metropoli-30* is its capacity to bring together public and private actors, by allowing them to leave politics aside to preserve a long term vision. Bilbao Metropoli-30 is an apolitical entity which preserves them from the political calendar: the long term vision does not have to change with every political turnover. According to the OECD (2009), "part of Bilbao Metropoli-30's success is due to its capacity to position itself as a meeting point for all sectors, which warrants its ability to unite the public and private sectors (Eurocities, 2006)".

This position is made possible by the perceived lack of power of *Bilbao Metropoli-30*, both on economic and political terms. Firstly, their core budget comes exclusively from their members. The financing is split 50:50 between public and private stakeholders (OECD, 2009). They have a small budget (total budget of 2 264 304€ in 2023)[6], which is mostly "devoted to pay BM30 staff, to generate reports and to undertake analysis and studies" (OECD, 2009). In addition, they have a limited public image which confers them a "non-threatening position [that] helps to make agents more confident in the organisation".

Finally, their strength also lies in their international experience. They acquire knowledge and experience through a long process of international benchmarking. They work with international partners, such as the British Urban Regeneration Association (BURA, the Urban Forum Network, or the World Development Federation.

Constraints

If their lack of executive power can be seen as a strength, it is also a limitation as Bilbao Metropoli-30 is highly dependent on their members. As pointed out in the OECD 2009 report, if disagreements arise among their members, they would have to face a complex situation. They also have a small budget which is a barrier to growth of working capacity. However, they innovate by building robust and two-way partnerships to fill this capacity gap.

Another shortcoming could be identified in Bilbao Metropoli-30's strategic planning and reporting. While the way of collecting information and reflecting upon issues concerning the city is remarkable—including participatory processes and working groups involving many different stakeholders—the goals elaborated are very broad and they lack follow-up evaluation and reporting. This issue has been particularly evident since the switch to the value-based approach. The improved use of an impact measurement framework could be helpful in identifying more precise objectives and strategies to achieve them.[7] The collection of data and their integration in the plans could lead to a more tailored approach to the issues raised and an efficient impact assessment.

What stands out, however, is Bilbao Metropoli-30's capacity to adapt and innovate from within, even in the face of structural limitations. This ability can be traced back to its very origins. The tension of the 1980s set the stage for much-needed change in Bilbao. As Idoia Postigo, Director General of Bilbao Metropoli-30, highlighted in her presentation, innovation often emerges from moments of tension, while calmer periods or deep crises tend to inhibit it. At that time, Bilbao faced a critical choice: to undertake a significant transformation or continue struggling with long-standing political and social challenges. It was within this context that BM30 was founded, marking the beginning of a new phase of public-private collaboration in the region.

Undoubtedly, the long-term success of Bilbao Metropoli-30 lies in its ability to continually renew itself—a shift clearly seen in its evolution from the infrastructure to the values focus. As Idoia Postigo pointed out, places often transform faster than people's mindsets, having a narrative is hence essential to accompany physical change. In Bilbao, the prevailing mentality remains largely industrial, while the cultural transformation is still in progress. *Bilbao Metropoli 30*, with its program on shared values, is certainly contributing to it.

2 Bilbao Metropoli 30, *Metropolitan Bilbao 2035 Strategic Reflection and Scenario Analysis*, https://www.bm30.eus/en/goals-and-objectives/strategic-planning/metropolitan-bilbao-2035-strategic-reflection-and-scenarios-analysis/.
3 Bilbao Metropoli 30, Official Website, consulted April 9, 2025, https://www.bm30.eus/en/.
4 The Bay Awards, *Urban Revolution Aurrera!*, consulted April 9, 2025.
5 The Bay Awards, consulted April 9, 2024, https://thebayawards.com/premiere-2023.
6 Bilbao Metropoli 30, *Plan de Gestión y de Presupuesto 2023*, https://app.box.com/s/3scjng5egi6bdp8vwpclecucndoj2h26.
7 OECD/European Union, *Measure, Manage and Maximise Your Impact: A Guide for the Social Economy*, Local Economic and Employment Development (LEED), OECD Publishing, Paris, 2024, https://doi.org/10.1787/2238c1f1-en.

CHAPTER 2 – DE(RE)INDUSTRIALISATION AND KNOWLEDGE-BASED ECONOMY

HOW IS BILBAO'S INDUSTRIAL PAST EVOLVING AND COPING WITH THE NEW SOCIETAL AND ENVIRONMENTAL CHALLENGES ?

Written by Iris Aubé

In the late 19th century, Bilbao became a major industrial hub in Spain thanks to its iron ore reserves and strategic port location. The rise of steel and shipbuilding industries led to urban projects development along the ria and economic benefits testified by the presence of banks and Energy companies (Ibérduero which became Iberdrola, or Altos Hornos) in the city.

However, by the late 20th century, traditional industries like metallurgy and siderurgy faced plummeting activities due to globalization and economic crisis. It affected industrial cities all over Europe such as Pittsburgh, Glasgow, Hamburg, Rotterdam or Turin—and Bilbao was not spared. The deindustrialisation processes in the 1970s/1980s resulted in significant economic and social challenges, as the unemployment rate rose up to 30% in the region and many were sent to anticipated retirement. Bilbao became a place of emigration and stagnation[1].

But contrary to many industrial cities, Bilbao was able to recover from this era, and far from only recovering the city succeeded in reinventing its core economy and identity. How was Bilbao able to transform its core activity and shift from industrialisation to a knowledge-based economy?

All developed economies have transitioned from agriculture to industry and more recently from industry to tertiary. Indeed, automation and technological progress reduced the workforce required by labour and then industries. Nowadays, 70% of European jobs are provided by the tertiary sector, including information, trade or cultural activities according to OECD indicators[2]. Bilbao's public and private actors responded to this change and industrialisation processes by developing academic and research institutions, such as the Deusto and Mondragon Universities, investing in R&D programs, and supporting the development of start ups. The city also conducted important urban transformations, reconverting former industrial wasteland like Zorrotzaurre island and Abandoibarra into technological centers.

But if the economy of Bilbao shifted towards a tertiary and service economy, the industrial past survived. The spatial repartition changed, as industrial activities were displaced from the city centre to other nearby cities within the Bilbao Metropolitan area. This is striking when seeing the extension of the port which provided a better access to the sea for the region and allowed the development of new activities along the ria, preserving internal and central lands for cultural and services spaces. The change was also structural as the industries had to adapt to a new globalised market, facing international concurrency with lower prices. To survive, Bilbao's industry specialised from

To the left: *Tall Tree & The Eye* by British-Indian sculptor Anish Kapoor (2009), one of numerous artworks outside of the Guggenheim Museum.

1 Roberto San Salvador, meeting at Deusto University, Bilbao, February 17, 2015.

2 https://www.oecd.org/fr/data/indicators/employment-by-activity.html

heavy industry to digitalised and manufactured products. This change allowed the appearance of a new industry, industry 4.0 which aimed at being oriented toward smart technologies while being, more importantly, carbon neutral.

Decarbonising industry is indeed a core issue, as the sector represents 30% of GHG emissions and requires the burn of fossil fuels to produce heat and steam. Necessary production activities seem therefore to face an impossible challenge. However, the Basque Industrial Supercluster is at the forefront of the industrial ecological transition. The region invested in renewable energies such as offshore windmills through research centres such as the Biscay Marine Energy platform or the Biskaia Hydrogen plan project. Working with the polluting industries, the cluster evaluated the emissions sources by creating a roadmap of emissions, promoting decarbonation. Acting as a leader of the World Economic forum, the region tries to "lead the way to share infrastructure, financial and operational risks and natural and human resources" to develop best practices.

The path towards a green industry is thus long and current factories in Bilbao and in the world are only at the premises of their transformation. But if they want to engage on the path of green industry someday, industries should not only count on technological change and renewable energy but also envision structural changes and reevaluate their activities to new needs and consumption. Maybe it is also time to go beyond the question of "how" to produce and focus rather on "why" and "what" to produce.

Still operating industry along the *Ría* in Bilbao

FUNDING RENEWAL OR FUELING DISPLACEMENT? THE COMPLEXITIES OF LAND VALUE CAPTURE IN BROWNFIELD REDEVELOPMENT

Written by Marion Dejean & François Lambert

Rehabilitating industrial brownfields

Every year, an area equivalent to the surface of Berlin is permanently sealed in Europe for the construction of housing, roads, and other infrastructure.[1] In this context, urban industrial brownfields – once viewed as neglected urban gaps[2] – are attracting increasing attention. Defined as the process to "revitalise previously unused or derelict urban land", brownfield redevelopment offers a potential solution not only to prevent the destruction of natural and arable land, but also to promote socio-economic renewal in post-industrial communities.[3] However, as scholars point out, one of the main barriers to brownfield regeneration is its prohibitive cost.[4] These sites often suffer from low market demand and land values, coupled with the high expenses of soil decontamination and redevelopment.

Bilbao's success story partly lies in its ability to transform former industrial brownfields into vibrant, modern neighborhoods through an innovative financing model, relying on an organisation: Bilbao Ria 2000 and a financial tool: Land Value Capture (LVC). This article explores both the promises and pitfalls of this financing model in Bilbao's brownfield redevelopment, and asks whether it could serve as an example for other post-industrial cities.

Leveraging industrial brownfield as a resource for the renewal of a city

The transformation of former industrial zones, or brownfields, into urban redevelopment projects frequently relies on the use of LVC. This mechanism allows public institutions to fund infrastructure and revitalisation efforts by reclaiming the increase in land value generated by new zoning, environmental remediation, and the introduction of fresh urban uses on previously neglected land. In cities like Bilbao, where high urban density and ambitious regeneration goals converge, brownfields have become pivotal sites for reshaping the urban landscape.

A standout example is Bilbao Ria 2000, which demonstrates the effective application of LVC. According to project records, the public consortium secured control of abandoned industrial and port areas (notably Abandoibarra and Ametzola), re-zoned and developed the land before selling it to private investors. This method financed the majority of public infrastructure –

1 Maria Rosaria Sessa, Alessio Russo, and Francesco Sica, "Opinion Paper on Green Deal for the Urban Regeneration of Industrial Brownfield Land in Europe," *Land Use Policy* 119 (August 1, 2022): 106198, https://doi.org/10.1016/j.landusepol.2022.106198.
2 Guillaume Jacek et al., "Brownfields over the Years: From Definition to Sustainable Reuse," *Environmental Reviews* 30, no. 1 (March 2022): 50–60, https://doi.org/10.1139/er-2021-0017.
3 Mengyixin Li et al., "A Brownfield Regeneration in Urban Renewal Contexts Visual Analysis: Research Hotspots, Trends, and Global Challenges," *Landscape Research* 49, no. 6 (August 17, 2024): 896–911, https://doi.org/10.1080/01426397.2024.2359521.
4 Emmanuel Rey, Martine Laprise, and Sophie Lufkin, "Urban Brownfield Regeneration Projects: Complexities and Issues," in N*eighbourhoods in Transition: Brownfield Regeneration in European Metropolitan Areas*, ed. Emmanuel Rey, Martine Laprise, and Sophie Lufkin (Cham: Springer International Publishing, 2022), 65–76, https://doi.org/10.1007/978-3-030-82208-8_4.

transport systems, parks, and cultural spaces – covering 90% of the costs through internal LVC mechanisms, with only 10% supplemented by EU structural funds.[5] In principle, this model not only enabled large-scale urban redevelopment but also provided crucial fiscal autonomy for a city operating under tight budgetary constraints. Importantly, Bilbao Ria 2000 sought to balance commercially lucrative projects with social investments, such as affordable housing and public parks.[6] This balance supported sustained redevelopment over the past three decades and helped explain the city's ability to pursue a wide range of transformative projects.

5 "Bilbao Ria 2000: Urban Regeneration through Local Self-Financing Strategies," *Ciudades Sostenibles* (blog), March 28, 2023, https://blogs.iadb.org/ciudades-sostenibles/en/bilbao-ria-2000-urban-regeneration-through-local-self-financing-strategies/.
6 Ibid.

Figure 7: Ametzola (above) and Abandoibarra (below) brownfield interventions: before and after (*Ibon Areso*)

Ametzola:
The first success story of brownfield redevelopment by Bilbao Ria 2000: transforming an old freight station into 900 residential buildings and public spaces.[7]

Abandoibarra:
The displacement of the port to the outerbay has freed up land in the heart of Bilbao for the creation of one of the most touristic zones of Bilbao, notably with the Guggenheim Museum and the Euskalduna Palace.

The pitfalls of LVC in brownfield redevelopment: land as a speculative asset and citizen (non-) participation

Nevertheless, scholars increasingly highlight the limitations and potential drawbacks of relying on LVC in brownfield contexts. As scholars argue, LVC extends beyond a mere financial tool – it represents a broader urban governance model where land is treated as a speculative asset.[8] This approach pressures public entities to adopt entrepreneurial roles, aligning redevelopment efforts with anticipated land value gains. In this framework, economic outcomes often overshadow social sustainability goals, such as housing affordability, tenure diversity, and the preservation of local identity. Consequently, social needs can be sidelined, and marginalised communities may be excluded from the benefits of redevelopment.

In Bilbao, the Zorrozaurre project vividly illustrates these challenges. LLong-standing residents expressed concerns over displacement, the speculative nature of the redevelopment and large-scale projects framed by the Zaha Hadid masterplan. With the projected population increase from 500 to 10,000 residents, fears also emerged about losing community control, cultural identity, and access to affordable housing.[9] Although Zorrozaurre was conceived as a forward-thinking, mixed-use neighborhood, it encountered significant resistance from residents who felt marginalised by top-down planning processes.[10] Trust issues were exacerbated when local communities were excluded from early planning stages, as seen with university-led initiatives that initially sparked backlash but eventually led to more participatory engagement.

To mitigate such challenges, alternative planning models have been proposed. Scholars suggest incorporating participatory scenario modeling and decision-support systems to ensure that resident perspectives and long-term societal goals are considered.[11] Such strategies are crucial in post-industrial settings where redevelopment must not only address spatial transformation but also confront the social injustices and environmental legacies of the past.

Uncaptured land value, uneven outcome: Brownfield regeneration beyond Bilbao

While Bilbao's model of financing brownfield regeneration enabled fiscal autonomy and strong coordination, its replicability in other contexts remains uncertain. Reflecting on the cases of Le Havre and Belfast allows us to assess whether LVC could or should have been used, and what its absence reveals in these cities.

Le Havre's waterfront renewal featured ambitious

7 "Bilbao Ria 2000," *Ciudades Sostenibles*.
8 Patricia Canelas and Luise Noring, "Governmentalities of Land Value Capture in Urban Redevelopment," *Land Use Policy* 122 (November 1, 2022): 106396, https://doi.org/10.1016/j.landusepol.2022.106396.
9 Aitor Zuberogoitia Espilla, presentation at Mondragon University, Bilbao, February 19, 2025.
10 Rey et al., *Neighbourhoods in Transition*, 2022.
11 Yilun Liu et al., "Land-Use Decision Support in Brownfield Redevelopment for Urban Renewal Based on Crowdsourced Data and a Presence-and-Background Learning (PBL) Method," *Land Use Policy* 88 (November 1, 2019): 104188, https://doi.org/10.1016/j.landusepol.2019.104188.

cultural and architectural projects but lacked an integrated funding mechanism. Without a structure like Bilbao Ria 2000, the city failed to capture rising land values to fund broader urban improvements, leading to uneven benefits, missed opportunities, and green gentrification.[12] While small-scale interventions aimed to improve accessibility and community engagement[13], they couldn't sustain larger housing or infrastructure projects. With LVC, these initiatives might have continued, but fragmented governance and limited land control made this difficult.

Similarly, Belfast's Titanic Quarter mirrored Bilbao's approach to cultural and waterfront regeneration but lacked its fiscal strategy.[14] Driven by private developers and the port authority, land value gains favored private returns over public reinvestment.[15] LVC could have redirected some of this value to support surrounding working-class neighborhoods, addressing the socio-spatial divides that regeneration arguably deepened.[16]

Yet both in Le Havre and Belfast, the absence of a unified public development authority meant that a Bilbao-style LVC scheme was politically unfeasible. The key takeaway is that success depends not just on fiscal tools, but on the institutional capacity to implement them equitably.

Conclusion

In Bilbao, the use of Land Value Capture (LVC) to reclaim brownfield sites has significantly contributed to enhancing the city's quality of life while curbing urban sprawl.[17] However, in brownfield contexts, LVC can also prioritise profit against people, as illustrated by the displacement fears and top-down planning in Zorrozaure. To mitigate these risks, more inclusive approaches are needed to better align redevelopment with community needs.

Bilbao's LVC model was a success because it was embedded in a broader strategic vision, delivered through a purpose-built institution and benefited from a real estate market on the rise. In contrast, the absence of such conditions in cities like Le Havre and Belfast has hindered the financial viability of brownfield regeneration projects.

Ultimately, LVC should be viewed not just as a financial tool, but as a reflection of how cities manage and balance economic, social, and spatial values. The key question is not whether other cities should replicate Bilbao's model, but rather under what conditions the principles behind it can foster more inclusive, resilient, and place-based urban transformations.

12 Catalina Santana Bucio, La reconquête urbaine au Havre : Etude de la gentrification d'un quartier portuaire et industriel et des formes de contestation (PhD diss., Normandie Université, 2018), https://theses.hal.science/tel-01962996.
13 Bahadır Altın, "Le Havre and Akçakoca: Waterfront Transformation Lessons," *Meer*, February 2, 2025, https://www.meer.com/en/83738-le-havre-and-akcakoca-waterfront-transformation-lessons; Melina Arvaniti-Pollatou, "SS Regeneration: A Series of Urban Interventions in the Seafront of Le Havre I Thesis by Harris Vamvakas," *Archisearch* (blog), September 6, 2019, https://www.archisearch.gr/student-works/ss-regeneration-a-series-of-urban-interventions-in-the-seafront-of-le-havre-thesis-by-harris-vamvakas/.
14 "How 10 Years Turned the Titanic Quarter from a Wasteland to a Wonder," *BelfastTelegraph.co.uk*, October 19, 2015, sec. Business, https://www.belfasttelegraph.co.uk/business/how-10-years-turned-the-titanic-quarter-from-a-wasteland-to-a-wonder/34119480.html.
15 Phil Ramsey, "'A Pleasingly Blank Canvas': Urban Regeneration in Northern Ireland and the Case of Titanic Quarter," *Space and Polity* 17, no. 2 (August 1, 2013): 164–79, https://doi.org/10.1080/13562576.2013.817513; Pete Hodson, "Titanic Struggle: Memory, Heritage and Shipyard Deindustrialization in Belfast," *History Workshop Journal* 87 (April 1, 2019): 224–49, https://doi.org/10.1093/hwj/dbz003.
16 Jone Belausteguigoitia, *Reviving the City: Brownfield Interventions in Bilbao*, 1990–2005, 2006.
17

New housing development in San Ignazio / Sarriko area, right across the ria from Zorrotzaurre

New Titanic Quarter in Belfast, U.K. *(Titanic Belfast)*

COOPERATIVE ECONOMY IN THE BASQUE COUNTRY

Written by Alice Dubois and Lisa Videau

In the Western neoclassical economic thought, based on Schumpeter's and Solow's theories, social welfare and well being improve directly and only from technical progress (Solow, 1956). Yet, they developed their models representing a society in which natural resources and human values like money and labour have been commodified and the economic market disembedded from the social structure (Polanyi, 1945). The following paradox emerges: as long as the market is disconnected from society, aiming to grow for the sole purpose of growing, the product of innovation cannot benefit society. The competition between workers and companies on a global scale is leading to the breakdown of the working community, leaving workers alone to face up to increasingly unattainable partnership demands.

Yet, Bilbao is now positioning itself at the forefront of industrial decarbonisation, aiming to reorient its economic base around sustainability and social cohesion. This transition reflects broader efforts to re-embed economic activities within the social and environmental context, recognising that innovation must serve collective well-being rather than isolated market efficiency. The cooperatives in the Basque Country are a great example of a solution to the various challenges that societies are facing. With the priority given to democratic and participatory organisation within firms, and horizontal cooperation between establishments, the cooperative model of the Basque Country places workers' well-being and social values at the centre of its functioning. Facing a multi-crisis (economic, financial, sanitary, and environmental) international environment, cooperatives networks seem to present a resilient management and integration of its members in the worldwide economy. In this article, we want to delve into the socio-economic model of the cooperative system in the Basque Country: how is the cooperative model another innovative way of thinking urban development in a multipolar competitive context?

We will look at the overall organisation of such a cooperative model, illustrating each aspect with the example of the Mondragon cooperative. We will conclude with some limitations this particular economic model still has to overcome.

Local anchorage & international intention

The cooperative system is characterised by its strong attachment to the Basque region. In the Autonomous Community of the Basque Country (ACBC), the Basque cooperatives contributed 6% to the GDP and accounted for 5.7% of its total employment. Moreover, this trend is gaining momentum year on year, as we can observe on Figure 8. Opposing the international competition between workers due to globalisation, companies base their activities in the region and essentially employ locals, largely contributing to the low unemployment rate of the region. Mondragon cooperative employs 83,800 workers. Compared to the national features, the Basque Country enjoys a noticeable resistance to the last crises (looking at the 2009 financial crisis: unemployment rate was 11% in Mondragon compared to 17,36% in total in Spain[1]). Thanks to the knowledge centre embodied by the Mondragon University, the cooperative is able to hire high-skilled workers and engineers directly coming from the region. Current students are even included in renovation projects during their curriculum, offering them both a professional experience, and incentives to work for the community.

Year	Cooperative Jobs
1996	32.574
1998	41.698
2000	36.825
2002	47.531
2004	47.797
2006	49.760
2008	50.359
2010	48.092
2012	47.944
2014	47.322
2016	49.883
2018	53.390

Figure 8: Cooperative employment in the period 1996-2018 *(ACBC)*

Besides, the organisation of the cooperative lies on a strong connection between its companies and workers members. The mutual assistance and the flexibility of both financial and human resources guarantee the stability of the economic model. For instance, during difficult periods, members can agree to forfeit or postpone entitlements such as one or more of their fourteen per annum pay packets or the payment of interest on their individual capital accounts, or in extreme circumstances even authorise individual capital account draw-downs.[2] Workers can also be transferred to another cooperative experiencing labour shortage.

The fact that workers are embedded in their territory gives them a clear vision of their contribution to and their place in the world. Thus, the local anchorage doesn't prevent the Basque Country from having an international intention. The example of Mondragon illustrates well how cooperatives have a significant impact beyond regional borders. Among its four pillars—finance, industry, knowledge, and retail—the latter is a solid one, with the Eroski Group being one of the largest retail firms in Spain: mainly operating in the food sector with 1,600 shops, the group also owns sports shops, petrol stations and opticians. The cooperative of the Basque country is well integrated in the worldwide market, and records sales in 150 countries.

In the end, the dual connection, from the local to the global, seems to present a resilient answer to shocks for the region being reduced neither to aggressive globalisation nor to isolating autarchy.

1 Le Monde, "Le taux de chômage explose en Espagne, culminant à 17,36%," April 24, 2009, https://www.lemonde.fr/europe/article/2009/04/24/le-taux-de-chomage-explose-en-espagne-culminant-a-17-36_1184874_3214.html.
2 The Conversation, "The Mondragon Model: How a Basque Cooperative Defied Spain's Economic Crisis," October 19, 2012, https://theconversation.com/the-mondragon-model-how-a-basque-cooperative-defied-spains-economic-crisis-10193.

The cooperative system, an alternative with many benefits but with enduring limits to overcome

The economic success of the cooperative shows that economic viability and democratic values can work hand in hand when workers take back their means of production. The economic strength of Mondragon is not to be proven anymore, as they have annual sales in excess of $US20 billion. What's more, the cutting-edge technologies designed there demonstrate that the production of knowledge and innovation in the cooperative is equal to the objectives of economic growth pursued by the capitalist system. Yet, capital is mobilised as a means for production, rather than a goal in itself. The profit sharing system mentioned above is collectively decided by workers-owners. Therefore, the preference for horizontality over leadership management creates a stronger sense of belonging and gives incentivises co-responsibility. The horizontal and democratic organisation of the cooperative allows to enhance the empowerment of the workers by making them participate actively in the decision-making process of the structure. Besides, the way cooperatives in the Basque country are structured permits to strengthen themselves with the importance given to the creation of a sense of belonging to the structure. This is linked to the notable Basque identity and the great sense of community within the territory. To finish on this part, cooperatives are an economic alternative that guarantees growth through cooperation, in an individualistic context, that makes it possible to propose an alternative to ultra-competitiveness. However, as the previous article elaborates on the subject of decarbonising industry (2.2), here the economic model of cooperatives does not make the ecological crisis a cornerstone of their structure. As the example of Mondragon tried to show, such cooperations are still acting within the consumption paradigm rather than promoting post-growth values.

Conclusion

The Basque cooperative model, embodied by Mondragon, shows that grounded social values and democratic governance can be a great alternative to the current economic model presenting various shortcomings. By seeking to re-embed economic activity into the social fabric, and by operationalising basic needs for the collective, the Basque cooperative system is a more robust, more inclusive option, that is inherently both locally rooted, and open toward the interconnected global context. In the end, linked to the ecological limits, the opportunity going forward is to push this emergent model beyond questions of social justice, into a model of true ecological sustainability.

CASE STUDY: THE REJUVENATION PROJECT OF THE ZORROTZAURRE ISLAND

Written by Lucas Hotier

In the former port area, to the North-West of the city of Bilbao and near the Nervión River, the island of Zorrotzaurre is the latest urban regeneration project to be implemented by the City Council of Bilbao.

A brief history of the Zorrotzaurre Island

During its industrial heyday, Zorrotzaurre island was an important industrial site for the city of Bilbao specialised in iron, steel, and shipbuilding production. Since the 1970's, the 2.5km long and 190 by 270m wide island, which used to be a peninsula until the digging of the Deusto canal was finally completed in 2018, has seen its industrial prosperity come to a halt and has since then faced disinvestment and abandonment. In 1995, almost all industries had closed down and the island was retrograded from an industrial to a residential area in the general urban plan of the city. Nowadays, only 500 people live on the island and the quality of life has greatly deteriorated. Yet, the municipality of Bilbao alongside multiple private entities taking part in the regeneration project have pledged in the master plan to rehabilitate the 200 existing buildings of the island and to create 5 500 new housing accommodation, of which 50% will consist of social housing in a global objective to improve living conditions.

Conciliating the preservation of the industrial heritage and improving living conditions in Zorrotzaurre

The regeneration project of Zorrotzaurre started in 2001 with the creation of the management commission composed of public and private owners on the island such as the city council of Bilbao, the port authority, Accciona immobiliaria S.L.U, Vicinay Cadenas S.A., etc. The members of this commission own 65% of the island overall and are the main stakeholders responsible for the project. In 2004, the architect Zaha Hadid designed Zorrotzaurre's master plan to transform the peninsula into an island and protect it from floods. In 2012, the special plan was finally adopted by the city council and the construction work could start. A holistic approach was taken in the master plan to transform a previously industrial peninsula into a creative island with four main pillars: sustainability (including flood-risk reduction, zero-emission buildings, etc.), knowledge (thanks to the university ecosystem), innovation (by promoting the culture and creativity industry in the northern district and digital technologies and other services in the southern district), and living (by keeping the industrial heritage while also improving living conditions).[1] Citizens were also consulted in 2004 during discussion forums and terms such as "eco-ciudad" (eco-city), "Zorrotzaurre verde" (green Zorrotzaurre) and "Barrio pensado para

1 Martin Jacobs and Miren Estensoro, "Smart City Development in Zorrotzaurre, Bilbao: A Case Analysis" (Bilbao: Instituto Vasco de Competitividad, 2020).

el peatón" (District devised for the pedestrian) were commonly agreed upon by all participants, highlighting the importance of the sustainable pillar for the rejuvenation project.[2]

Amongst priorities set in the master plan is the need for an improved integration of recent architecture within the historical landscape and water-side of the island. Indeed, Zorrotzaurre's skyline was thought to have an irregular profile in order to favour the view from the river and create new open spaces such as a linear park of 40 000m^2 within the central district.[3] In terms of mobility, the priority will be given to pedestrians and cyclists on the island by creating new bike lanes and a riverside-walk closer to the water. Similarly, the tramway network will be extended over the whole length of the island to better connect it to the rest of the city. The integration of Zorrotzaurre within Bilbao's urban context can also be seen with the construction of multiple bridges: two to connect the island with Deusto, four to San Ignacio and Sarriko, and one to the Zorrotza neighbourhood. Lastly, there is a strong will expressed in the master plan to keep the local character and identity of Zorrotzaurre as a port district by keeping parts of its industrial background and turning 14 preexisting industrial buildings into "containers" for new uses and to help relocate industry 4.0 companies on the island.

Yet, the conservation of the island's industrial heritage faces continuous debates. While some residents call for more leisure and green spaces, others argue that this industrial heritage is part of the history of the city and must be preserved. The municipality on the other hand gradually dismantled the industrial past of the city to promote tertiarisation of the economy and services firms, and later evoked it through new urban equipment and buildings:

"Where there were cargo ships there is now a congress centre whose façade replicates that of the old vessels. Where there were once cranes in the harbour, there are now streetlights that mimic the shapes of the tower cranes and hooks over the river, although these are now flanked by palm trees to underline the area's new leisure ambience..." [4]

The past is thus preserved as "souvenirs" in buildings and structures made for an entirely different economic model through what is often referred to as "evocative transformation". As Bilbao turns towards industry 4.0 and a knowledge and services based economy, the city is slowly making a clean sweep of the past.

Towards an industry 4.0 island?

Solving this tension between a burdening industrial past and the need to regenerate the island may appear impossible at first glance, but one of the answers may lie in the AS-Fabrik initiative and the new campus of the Mondragon University. Built in 2021 on the grounds of a former screw factory, the Zorrotzaurre campus of the Mondragon University brought together university students, local companies, and service providers in an attempt to create new specialised jobs on the island, train students and professionals to acquire the skills necessary to answer the needs of the industry 4.0, as well as build a collaborative working methodology to favour the blossoming of local cooperations. Indeed, the main objective of the AS-Fabrik initiative is to increase the competitiveness of the Knowledge Intensive Business Services (KIBS) sector of Bilbao.[5] If the arrival of the university raised suspicion amongst residents, the initiative now acts as a mediator between the city council and local communities to try to identify local issues and solve them through co-participation and exchanges between public, private, and individual practices. Some issues remain and were raised during our discussion with professors and students from the Mondragon University, such as the risk of gentrification and the uncertainty of the number of inhabitants, but further research will be needed to clearly assess potential shortcomings of the rejuvenation project.

2 Ibid.
3 Zorrotzaurre Masterplan, "Integrating the City and the Metropolis," https://www.zorrotzaurre.com/en/la-junta-de-gobierno-municipal-ha-acordado-la-aprobacion-definitiva-del-proyecto-de-reparcelacion-de-la-unidad-de-ejecucion-1-de-la-actuacion-integrada-1de-zorrotzaurre-aprobado-inicialmente-el-14-de/.
4 Cristina Ortega Nuere and Fernando Bayón, "Cultural Mapping and Urban Regeneration: Analyzing Emergent Narratives about Bilbao," Culture and Local Governance / Culture et gouvernance locale 5, no. 1-2 (2015): 9–22, https://doi.org/10.18192/clg-cgl.v5i1-2.1455.
5 UIA - Urban Innovative Awards, "Bilbao," https://www.uia-initiative.eu/en/uia-cities/bilbao.

New office building along the *Nervión Ría*, in the *San Ignazio* neighbourhood, right across from *Zorrotzaurre* island

View over Zorrozaurre island and the *Ría,* with the *San Mames* stadium in the back

CHAPTER 3 – THE GUGGENHEIM EFFECT

GOVERNANCE AND ACTORS OF THE GUGGENHEIM MUSEUM

Written by Soline Juster & Léon Rube

One of the most well-known features of Bilbao is undeniably the Guggenheim Museum. With over 1,2 million visitors in 2022[1], it has established itself as one of the most famous art museums in Europe since its opening in 1997. For the city of Bilbao, the Guggenheim museum stands as the prize jewel symbolizing the urban renewal of the city and the Basque country. However, the museum is also notably part of a constellation of museums under the direction of the American Solomon R. Guggenheim foundation. This article will aim to analyse the governance of the Guggenheim Museum Bilbao, assessing how institutional and civil society actors try to shape an internationally renowned museum to local interests and stakes.

Puppy, Jeff Koons (1992). Located in front of the Guggenheim Museum

To the left: Close-up view of the Guggenheim Museum Bilbao, designed by Canadian-American architect Frank Gehry and opened in 1997.

1 The Guggenheim Museum, "Bilbao Welcomes 1,289,147 Visitors on the Year of Its 25th Anniversary," Guggenheim Museum Bilbao, 2023, https://www.guggenheim-bilbao.eus.

A Basque project for the regeneration of the city

Local Basque governance was at the centre of the creation of the Guggenheim Museum. Indeed, the construction of the Museum was financed locally, with the Basque government funding half of the project.[2] Furthermore, the development of the museum has allowed it to gain autonomy: while at the opening of the museum in 1997, the Guggenheim museum in Bilbao largely relied on the Solomon Guggenheim Foundation based in New York, its governance is now independent. The Guggenheim Museum Bilbao has its own executive board, independent from the Foundation, and company trustee members cannot participate in decisions; unlike the American foundation. The link to the Solomon R. Foundation is strategic for the Guggenheim Museum Bilbao: being associated with such a renowned and international name of modern art allowed the museum to gain global momentum and recognition quickly. Nevertheless, the building belongs fully to local public partners —mainly the city and Basque governments. Thus, while Bilbao has bet on the creation of a cultural centre stemming from a North American foundation, it has managed to keep a very local governance and control of the museum.

This local governance of the project also reflects the status of the museum as the ultimate showcase of the urban transformation of Bilbao. Maria Bidaurreta Zabala, external relations coordinator at the Guggenheim Museum, describes the museum project as a "catalyst for urban transformation". The construction of the museum symbolises the will of the local government to turn Bilbao from an industrial to a cultural city; which is reflected in the choice of star architect Frank Gehry to design the building.

The Guggenheim museum also stands as a symbol of the city's successful comeback after economic and social distress[3]: it has attracted over 20 million visitors since its opening in 1997.[4] While the province's investment was expected to be profitable within 20 years of the museum's opening[5], it was actually recovered within the first 2.5 yeast of activity.[6]

However, while the Guggenheim museum is now recognized as a success for the city, this vision was not initially shared by the Bilbao population. Indeed, when the decision to build the museum was first taken, it faced huge popular opposition, as Bilbao inhabitants criticised the government for paying 125 million dollars to build a museum in the middle of an economic crisis. Popular opposition also rose regarding the choice to partner with an American foundation as well as choosing a North-American architect to build the museum, instead of bringing forward local artists and architects. The museum has partially answered this criticism by emphasizing the inclusion of Basque artists in the museum collections.

In the face of the popular opposition to the project, one could point out the lack of consideration of citizens' opinions regarding the museum. Indeed, while faced with growing criticisms of the museum project, local authorities decided to keep going with the project. While some actors now recognise that the development of the project could have benefitted from the inclusion of more stakeholders, the museum is still considered as a major success. The direction of the Guggenheim seems to frame the development period of the project as a time when citizens did not believe in the potential of the Guggenheim for urban regeneration, a belief which has been proven untrue by the larger-than-expected success of the project. Thus, Bilbao has managed to make the Guggenheim museum the public showcase of its urban transformation, attracting international attention while keeping a very local governance of its structure. However, the design period of the project was all but participatory and carried on despite major citizen opposition. *In fine*, one could fear the historical success behind the Guggenheim initiative being invoked for political purposes in the future to promote controversial personal projects.

2 I. Laka et al., "Language Experience in Early Bilingual Development: The Case of Basque and Spanish in the Basque Country. The Harvard-Bilbao Early Bilingual Development Study" (Harvard University, 2022).
3 Ibid.
4 S. Frick, "Turnaround Cities: Spanish Case Study. Insights from the Basque Country & Bilbao" (Oxford University, 2023).
5 Laka et al., "Language Experience in Early Bilingual Development."
6 Maria Bidaurreta Zabala, presentation at the Guggenheim Museum, Bilbao, February 18, 2025.

Opposition to the Guggenheim: grassroots movements and their modes of action

Infrastructure-projects are renowned for their capacity to materialise and crystallise political contention—a dynamic from which the Guggenheim Project was not spared. This resistance was especially nurtured by the project's financial magnitude. While diverse; opposition can be considered to have coalesced around three major strands:

- People considering their material 'livelihood' jeopardized; an element, holding particularly true to stakeholders, tied spatially and materially to the project. In the Guggenheim context, economic claims were forwarded by the *Banco Bilbao Vizcaya*—former owner of the land that houses today's Museum.
- The project's entire reliance on public funding, blended with municipal stewardship, provided strong legitimacy for popular claims.
- Political views, inherently related to topics subject to personal opinions. Local Bilbao political parties and local artists voiced their disapproval, seeing in the project a foreign and neoliberal intervention.

If the 'right' or 'wrong' driving the protest hinges primarily on context and individual political stances, and if the different strategies used by by incumbent powers to tone down or repress political opposition are already widely covered by academia[7-8]; our subsequent mapping will in the following table focus on the array of action levees adopted by social movements.

It must be noted that the salience of social movements tends to increase as the scope (local, regional, international) and diversity (legal pathway, political mobilization, economic) of their actions extends. Further research might be of use to evaluate which of the different mechanisms might prove more effective according to different contexts, so to additionally expand our outlined mechanisms.

7 S. R. Arnstein, "A Ladder of Citizen Participation," *Journal of the American Institute of Planners 35*, no. 4 (1969): 216–224, https://doi.org/10.1080/01944366908977225.
8 J. De Moor, "Alternatives to Resistance? Comparing Depoliticization in Two British Environmental Movement Scenes," *International Journal of Urban and Regional Research 44*, no. 1 (2020): 124–144.

	Legal pathway	Political Mobilization	Economic elasticity
Local scope	- Challenging administrative irregularities (permit grants) - Local referendas / civil participations	- Advocacy & organization of local civil society - Civil disobedience	Presence of tangible alternatives, to the discussed project
National Scope	- Litigation on national jurisdictions	- Entering the legislative realm : national or regional party politics - Structuration of claims : through scientific reports & economic forecasts	Alignment with National / Regional strategies
International Scope	int. litigation : - EU: CJEU / ECHr - Other charta's the country ratified	Media campaigns with international institutions and public figures (Greenpeace, TV personalities)	Reputational costs Soft law : UNESCO, CITY networks

Figure 9: Non-exhaustive mapping of tools employed by social movements to resist to infrastructural projects

GUGGENHEIM MUSEUM AND URBAN REGENERATION PROCESS

Written by Mathis Reis & David Vetrovsky

The Guggenheim Museum Bilbao (GMB) is situated on an industrial port in the Abandoibarra district of central Bilbao and was born out of a unique convergence of public and private interests, driven primarily by political and economic necessities rather than cultural consideration. In this specific context, art served as a catalyst for the economic revitalisation of a city in decline. This article will delve into the transformative power of the museum in the urban regeneration process of Bilbao and how its embeddedness in local, regional and global dynamics enable us to better understand this success story to happen.

GBM : BEYOND THE MUSEUM, A MULTI-SCALE EMBEDDED PROJECT

The local embeddedness

"The Guggenheim Museum Bilbao (GMB) is the cherry on the top" said Roberto San Salvador del Valle, historian at University of Deusto, when introducing the contested 'Guggenheim Effect'.[1] GMB was indeed not solely thought of as a cultural project but rather as a broader project embedded within the city's regenerative processes starting from the 1990s. In 1992, the Strategic Plan for the Revitalisation outlined the different recommendations to revitalise the urban space and developing the cultural sector was only one option among others. Hence, the GMB was just one piece of Abandoibarra's reinvention. This area now boasts offices (Iberdrola Tower), concert hall (the Euskalduna Congress), malls, university buildings, and residential housing, all contributing to a modernised cityscape.[2]

It appears that GMB was just the most visible action that was done by the city thanks to its stunning architecture, but it did not make the whole city change. Broader and more expensive projects have been done around the museum, including the cleaning of the river, the creation of a footpath system out of the former railway lines, and the airport and tram to connect visitors with the venue. We may assume that policy-makers understood well that the GMB was an agent for change for the city but also acknowledged that the sake of the city could not entirely rely on the attractiveness of a museum. This is well illustrated by Idoia Postigo, from Bilbao Metropoli 30 : "The revitalisation process was not just a museum arriving and making magic, rather a whole palette of projects contributing to the transformation".

The local embeddedness

Moreover, the GMB was not just the result of an agreement between Bilbao and the Solomon R. Guggenheim foundation but rather a multiscale political strategy that aimed at revitalising a whole region.[3] It is worth noting that the GMB project was supported by all political levels (regional, provincial and local) which were governed at that time by the same political party (PVV), facilitating consensus with the Foundation, as they were sharing the same vision of the revitalisation strategy provided by the museum for Bilbao and its metropolitan area. This agreement was also strengthened by the specificity of the Basque Country, which can proceed with projects without needing approval or funds from the central Spanish government.

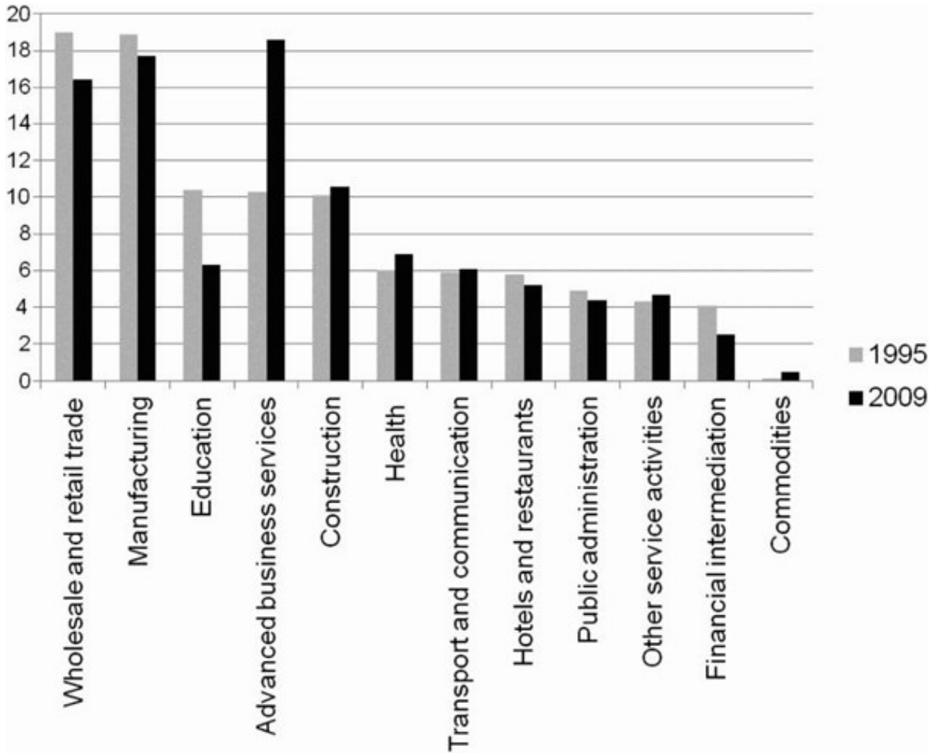


Figure 10: Diversification of Bilbao's economy in terms of employment 1995–2009 (%). *(Plaza, B. et al. 2015)*

NB : the graph illustrates that the main diversification occurred in 'advanced business services', a broad category including higher-end manufacturing, knowledge activities, ICTs, and the creative sector. This wide range of sectors thus account for a significant share of employment, which may help explain the observed economic boom. In contrast, tourism is not included in this category and is limited to a more specific segment of 'hotels and restaurants' which was already well developed prior to the arrival of GBM. This may explain why it did not benefit from a similar boost.

1 Roberto San Salvador, meeting at Deusto University, Bilbao, February 17, 2015.
2 Plaza, B., Tironi, M., & Haarich, S. N. (2015). "The Guggenheim Museum Bilbao: Between regional embeddedness and global networking". *European Planning Studies*, 23(8), 1456–1475.
3 Ibid.

The local and regional embeddedness of the project proved to be successful as in just a few years a change in Bilbao metropolitan area's economic structure was observed. The economy shifted from producing mainly industrial goods to providing advanced services (communication technologies, tourism, commerce). Besides, the boost in the tourism sector in the Basque Country drove the attraction for tourists in other areas around Bilbao. Hence, the GMB effect happened because of a particular synergy between the local and regional level in a specific moment of crisis but also political alignment as well as in the particular context of the Basque Country.

The global embeddedness

In addition to the economic turmoil of the 1990s, the terrorist action conducted by ETA dominated international news, with frequent reports of violence and political instability which did not make Bilbao and the Basque Country a safe and very pleasant place to visit or invest in. Maria Bidauretta, Public relations coordination at GMB, refers to the museum as providing "an alternative narrative, positioning Bilbao and the Basque Country as a center of modernity, culture, and innovation rather than conflict".[4] Furthermore, it also served as "a cultural reference point". In fact, we observe that Bilbao was seeking an attractive name in the art world, and not really developing a strong argument to support the actual contemporary art museum, as Bilbao already had one, the Museum of Fine Arts, featuring important European and Basque artists. Bilbao was willing to pay the price—i.e $97.5 million—to have this name, which appeared to be highly appreciated in consumer society.

Finally, we assume that policymakers thought that by creating a museum with very academic exhibitions would attract highly-educated visitors which would also be high-spending consumers that would benefit the Bilbao economy (90% of visitors are international).[5] Hence, the museum aligned with Bilbao's immediate need for investment returns, directly managing to reach its target. Maria Bidauretta thus underscores that "the economic impact was significant: the government recovered its $125 million investment within 3.5 years".[6] A curious paradox thus emerges : while the city gained prestige from its art-driven reputation at a global stage, locally, bringing art to the Basque people and fostering the cultural sector was not the main priority as contemporary art did not fit with local people's identity. This city-branding primarily served the political and economic interests of both public and private stakeholders further arguing the GMB was not just a cultural project for the city of Bilbao.

GUGGENHEIM EFFECT: LOCAL SPECIFICITIES AND CHALLENGES IN REPLICATION

Throughout the years, the GMB has become a holy grail for many post-industrial city leaders seeking to replicate the famous "Guggenheim Effect".[7] And still, to this day, the GMB receives 170 to 180 delegations annually from cities worldwide, all eager to learn more about the secrets behin[8]d Bilbao's transformation and potentially bring about a similar change in their own city. While Bilbao's turnaround was real, its success was deeply rooted in a complex "network of cultural, economic and political institutions, capacities, dispositions, and practices that spanned the city, the Basque Country region and beyond".[9]

Yet the importance of the specific local context is often overlooked when the model is transferred elsewhere. Numerous cities around the world have invested heavily in high-profile cultural projects in an attempt to spark a similar 'cultural renaissance,' but most of these efforts have ultimately failed to deliver the expected results.

The underlying foundations of the GMB's success

The Basque Country's historical connection to the *Camino de Santiago de Compostela* (*Camino del Norte*) is a critical but often forgotten factor that contributed to the success of Bilbao's transformation. This ancient pilgrimage route, which has traversed the region since the ninth century, was instrumental in developing what is now a well-established culture of tourism and hospitality. As the number of Camino travellers grew over the centuries, and notably spiked in the early 1990s, Bilbao naturally emerged as a key stop along this route[10], where not just accommodation, but also entertainment and local culture flourished to cater to tourists' needs. Therefore, we can assume that this rich heritage had paved the way for Bilbao's urban redevelopment, long before the GMB's arrival.

Another key factor that set Bilbao apart is its distinctive Basque food culture, celebrated as one of Spain's best for decades. As a result, a number of Michelin-starred restaurants, located along or near the ancient pilgrim routes of the *Camino de Santiago de Compostela*, have helped attract relatively wealthy tourists into the region. Apart from that, the Basque Country's food culture also thrives in more informal settings, such as *pintxos* bars and cafés that often spill out onto streets and plazas[11], attracting a wider range of visitors. Thus, it appears clear that the social fabric of Basque cuisine, being deeply embedded in the region's cultural identity, has made it a naturally appealing aspect for tourists. Nevertheless, it is only right to acknowledge that the GMB reinforced the city's cultural identity in many ways. The museum, which "started assembling its collection in 1993 during the building's construction"[12], had access to an established collection encompassing the modern canon of art by the time it opened, strongly boosting the city's credibility. Moreover, as part of a region already familiar with certain tourist flows, the museum became a cultural anchor that helped bridge the gap between local traditions and global attention. As such, the GMB not only enriched Bilbao's cultural landscape but also helped reposition the city on the global stage.

The challenge of replicating the "Guggenheim Effect"

Overall, one of the most common myths in attempts to replicate the "Guggenheim Effect" is that any "city in economic difficulties could be turned around just by iconic architecture".[13] While the Guggenheim Museum Bilbao acted undoubtedly as a "catalyst for transformation"[14], it was just one out of many important elements. Thus, trying to replicate the "Guggenheim Effect" in other cities without understanding the specific cultural, historical, and political landscape is unlikely to succeed.

The Guggenheim Museum Bilbao was a project that proved to be beneficial for the region, but it also greatly benefited from the conditions in Bilbao at that time. The museum would not have succeeded without the region's existing tourism interest, the ease of travel to Bilbao from the rest of Spain and Europe, and notably the carefully laid-out urban planning.[15]

4 Maria Bidaurreta Zabala, presentation at the Guggenheim Museum, Bilbao, February 18, 2025.
5 Banio, T. (2007). "Art for whose sake? Modern art museums and their role in transforming societies: The case of the Guggenheim Bilbao". *Journal of Conservation and Museum Studies*.
6 Maria Bidaurreta Zabala, Guggenheim Museum Bilbao.
7 Franklin, Adrian (2016). Journeys to the Guggenheim Museum Bilbao: Towards a revised Bilbao Effect. University of Tasmania. Journal contribution.
8 Maria Bidaurreta Zabala, Guggenheim Museum Bilbao.
9 Adrian Franklin, Journeys to the Guggenheim Museum Bilbao, 12
10 Adrian Franklin, Journeys to the Guggenheim Museum Bilbao, 12
11 Adrian Franklin, Journeys to the Guggenheim Museum Bilbao, 12
12 Maria Bidaurreta Zabala, Guggenheim Museum Bilbao.
13 Santamaría, G. del C. (2020). The fading away of the Bilbao effect: Bilbao, Denver, Helsinki, Abu Dhabi. Athens Journal of Architecture, 6(1), 25-52. https://doi.org/10.30958/aja.6-1-.
14 Maria Bidaurreta Zabala, Guggenheim Museum Bilbao..
15 Tucci, V. (2017). The difficulty of replicating the Bilbao effect: Case studies concentrating on Saadiyat Island and M+. Veronica Tucci. https://vltucci.wordpress.com/2017/07/26/first-blog-post/.

CONCLUSION:

From a historical point of view, it is clear that the Guggenheim Bilbao Museum changed the economic model of Bilbao and it is worth noting how it has to be seen not as a separate, but as an integrated part of the broader urban renewal process. However, further investigation must 'be carried out to assess whether this story has truly been a success for the population of Bilbao over time, and to analyse the potential backlash associated with the shift in economic model from an industrial society towards one focused on sustainability.

Iberdrola Tower in Abandoibarra, designed by Argentinian architect César Pelli and constructed between 2007 and 2011

Disused industrial architecture on the island of Zorrotzaurre

TOURISM, INDUSTRIAL PAST AND BENEFITS TO LOCAL POPULATION

Written by Violaine Girard and Rebekka Godskesen

As established, the Guggenheim Museum was part of Bilbao's transformation away from being an industrial city. The museum did, though, besides establishing a more cultural identity, also open up the opportunity for attracting tourism to Bilbao and the rest of the Basque Country. Starting from a point of next to no tourism, this posed a great transformation of industries, economy, and identity. Therefore, viewing the museum as a tourist magnet makes us raise two questions: firstly, is the transformation of identity from industrial city to cultural icon forced or "authentic"? Secondly, does the museum exist for the tourists or the local population?

The industrial mentality of Bilbao: an obstacle for the new developments in the city?

"We have gone from an industrial city to a livable city. Now, we have to become a knowledge city", declared the deputy mayor of Bilbao, Ibon Areso, in 2014.[1] The implications of this quote are double: Areso implies that before the deep transformations undergone in Bilbao, the city was "unlivable" and that going from an industrial city to a city symbolised by cultural structures such as the Guggenheim Museum, made it livable for its inhabitants. But, he also presses that Bilbao needs to transform again to endorse a fully cultural identity, and become a "knowledge city", meaning a city driven by research, innovation, technology, and brainpower to support knowledge dissemination and discovery, and thereby creating value and wealth.[2] This need to deepen Bilbao's transformation is shared by the current mayor, Juan Mari Aburto, who stated in 2015 that "the biggest misconception about Bilbao is that this was just about the Guggenheim. We have to continue the work." [3]

More than a simple museum, the question raised by the Guggenheim Effect is one of identity shift. We have established that city officials want Bilbao to evolve into a knowledge city based on culture, yet the industrial past of the region stays entrenched in its citizens' mentalities. Indeed, Idoia Postigo, Director of Bilbao Metropoli 30, stated that places transform quicker than people, and that the mentality in Bilbao is still deeply rooted in its industrial history.[4] She also observed that some locals only take pictures of the Guggenheim museum from the outside, but do not enter to visit it. Idoia Postigo concluded her point by saying that the metropolis of Bilbao is still on its way toward becoming a cultural city, but that it would need a huge mentality shift from its residents to manage that.

These statements raise questions about the cultural marketing of the city. It appears that Bilbao is marketed at the international level

1 Monge, F. De Jong, J. Bilmes, L. (2022). The "Bilbao Effect" The Collaborative Architecture that powered Bilbao's Urban Revival, Bloomberg HarvardF. Monge, J. De Jong, and L. Bilmes, The "Bilbao Effect": The Collaborative Architecture That Powered Bilbao's Urban Revival, *Bloomberg Harvard City Leadership Initiative*, 2022.
2 Francisco Javier Carrillo, Knowledge Cities: Approaches, Experiences, and Perspectives, introduction: "The Century of Knowledge Cities," *ResearchGate*, 2006, 11–15.
3 Monge, De Jong, and Bilmes, "The 'Bilbao Effect'".
4 Postigo, Idoia, presentation, Bilbao, February 18, 2025.

as a cultural hub, as stated by Asier Abaunza[5], councilor in charge of urban planning at the Municipality of the City. According to him, tourists come to Bilbao not for its beaches, but for "something different": its culture and museums. The promotion of the city outside of the Basque Country is centred around the Guggenheim Museum, thus associating the city's main identity and attractions with a cultural offer. Therefore, there seems to be a gap between the marketing of Bilbao based on culture and knowledge that mostly attracts foreign tourism, and its inhabitants' mentality still revolving around a no-longer prominent industry. This clash appears to us as a pressing issue the city would need to address to continue its transformation, mostly because a metropolis cannot properly move forward without its residents, and cannot force a marketing that only corresponds to what tourists want to hear.

5 Abaunza, Asier. (19/02/2025). Personal communication.

Meeting with Asier Abaunza, Councilor for urban planning at the City of Bilbao, on 19/02/2025

A following question would be to determine whether cultural tourism actually benefits the local population.

Tourism in Bilbao: a double-edged activity

The question of whether the museum benefits the local population is two-sided: on the one hand, there is the economic benefit, and on the other, the question of who and how tourism serves as a benefit.

The economy of Bilbao today depends greatly on tourism, and the tourist industry is growing each year. According to Bilbao Turismo[6], it accounts for more than 5% of the GDP and almost 50.000 jobs in the Basque Country. It is interesting to note that this percentage of the GDP represented by tourist activities in Bilbao is significantly lower than the Spanish national average percentage of 11,6% of the GDP generated from the tourism sector in 2022.[7] This can be linked with the cultural marketing pushed by the authorities. Indeed, a large share of Spain's tourism comes from its sunny climate and beaches, both of which are not strengths of Bilbao. Since the city leans on more cultural, urban, and gastronomy tourism, with a lower audience, it might struggle to compete with the massive beach tourism implanted in the rest of Spain. But the revitalisation of Bilbao and its marketing as a cultural hotspot have certainly permitted the city to gain widespread recognition, and new visitors. Thus, it seems fitting to remember that tourism is Spain's main productive sector, and that the country is also the number one European country in terms of international visitors.[8] Bilbao's rise as a tourist destination, then remains quite impressive for such a short period of time.

Of course, not all tourism can be attributed to the Guggenheim museum, but according to Maria Bidaurreta[9], who works as coordinator of external relations at the Guggenheim museum, the museum played a key role as a catalyst of this development. She stated that Bilbao had next to no visitors before it opened and that it now has more than 1 million visitors yearly. When asked about the relationship between the museum and the people of Bilbao, she stated that they actively worked to open up the museum to benefit the locals. They did this, for example, by offering free spaces for local cultural institutions to work in. The relationship with local artists seemed more contentious, as she said the museum has often been critiqued for mainly featuring big international exhibitions instead of focusing on local art.

Job creation and attraction of tourism have become cornerstones of the Basque economy, transitioning away from its industrial past. Though important, tourism can take many forms, and the question of quality tourism remains. This raises the issue of whether pressure from Airbnb can raise housing prices in the central area, and whether the tourism industry manages to downstream the economic benefits to the residents of Bilbao. One of the main criticisms that the activists from StopGuggenheim in Urdaibai posed was that, because of the seasonal nature of tourism, opening a second museum in the Urdaibai biosphere near Guernica, would not create stable jobs in the region.[10] It would rather create high-skilled seasonal jobs that would not support the local economy as such, and that would most likely be occupied by people from Bilbao instead of from Guernica, therefore contributing only marginally to the local economy in a viable way.

Conclusion: the limits of the Guggenheim effect

This article stated that Bilbao is facing backlash due to the rapid change of its economic model, from industrial to cultural, thus questioning the identity of the city and the way it is perceived by its inhabitants. This gap between citizens' mentality and the municipality's ambitions would have to be tackled for the city to become what it markets: a knowledge-based and cultural metropolis. Moreover, we have seen that while the economy of Bilbao greatly depends on tourism, it does not always benefit the population. This shows the limits of the praised "Guggenheim effect": its pull has limited power on locals' mentality and sometimes does not benefit them.

6 Bilbao Turismo, Bilbao Turismo 2025, accessed April, 2025, https://www.bilbaoturismo.net/BilbaoTurismo/fr/touristes.

7 Pablo Hernández de Cos, Competitiveness Factors in the Spanish Tourism Sector, HOTUSA EXPLORA, 10th Tourism Innovation Forum, Banco de España, January 22, 2024, https://www.bde.es/f/webbe/GAP/Secciones/SalaPrensa/IntervencionesPublicas/Gobernador/Arc/Fic/IIPP-2024-01-22-hdc-en-tr.pdf.

8 Ibid.

9 Maria Bidaurreta Zabala, presentation at the Guggenheim Museum, Bilbao, February 18, 2025.

10 David from Stop Guggenheim Urdaibai, presentation in Urdaibai Biosphere Reserve, Guernika, February 20, 2025.

CHAPTER 4 – ENVIRONMENTAL AND TERRITORIAL DYNAMICS

INCIDENCE OF CULTURE: BILBAO'S URBAN REGENERATION MODEL IN QUESTION

Written by Maria Alejandra Naranjo

Bilbao, once an industrial hub, has gained international acclaim for its model of urban regeneration. With the collapse of its main traditional industrial sectors during the 1970s and 1980s, and the will of giving back the river to the city, Bilbao was able to establish a long term vision during the 1990s. This was concretised with Bilbao Ria 2000 with the aim of rebranding the city through strategic planning and urban renovation projects into a centre for culture and innovation. Bilbao's remarkable transformation was elevated to a global level through prominent architects such as Frank Ghery, Santiago Calatrava, Norman Foster and Arata Isozaki in the 2000s.[1] Through an independent taxation system and the strategic use of Land Value Capture (LVC), Bilbao successfully reinvested capital from major infrastructure projects into future developments in a nearly cyclical process.

1 Diogo Borges Ferreira, "Bilbao Architecture City Guide: 22 Projects Shaping a Modern Basque City in Spain," ArchDaily, January 24, 2025, https://www.archdaily.com/1025501/bilbao-architecture-city-guide-22-projects-shaping-a-modern-basque-city-in-spain.

Bilbao's metro, designed by British architect Norman Foster

To the left: Image of the natural and cultural landscape of the *Urdaibai Biosphere Reserve* in *Bizkaia* province.

According to Bilbao Metropoli 30, a public interest body founded in 1991 focusing on Bilbao's long term planning vision, most of the infrastructures were completed after 15 years. With the understanding that cities no longer compete in terms of infrastructure, as previously thought as given in the international scene, this led to a shift toward cultural values that make cities attractive. Nowadays, Bilbao focuses on innovation, professionalism, community, and openness. However, as Idoia Postigo, representative of Bilbao Metropoli-30, notes: places transform quicker than people and their mentality. Bilbao's mentality is still rooted in its industrial past. This questions the replicability and sustainability of Bilbao's model, taking into account economic, social and ecological concerns. The transition towards a service and international culture based economy has reproduced tensions engrained in industrial paradigms, such as growth and production and their respective impact on the environment and local identity. These tensions may intensify as Europe moves towards a renewed push for reindustrialisation.

The Basque Country offers contrasting territorial realities, from industrial legacy[2] in Bilbao to the preserved landscapes of the Urdaibai Biosphere Reserve founded in 1984 and spanning across 23 000 hectares . This article explores the incidence of culture in shaping sustainability pathways, questioning international cultural tourism, architectural spectacle, and the heavy-infrastructure based regeneration paradigm. To what extent can the Bilbao model of urban regeneration be considered sustainable, and what alternative paradigms could be grounded in cultural identity rooted in local heritage and ecological transition? The first section critically evaluates Bilbao's regeneration model under sustainability considerations, contrasting culture as product and culture as process. The second section, focuses on reimagining culture and territory from the perspective of situated ecological transition rooted in Basque heritage.

Bilbao's regeneration model: a critical perspective under sustainability considerations

Bilbao's development of infrastructure was conducted as a self-feeding loophole. The combination of public-private partnerships and a stable political context facilitated multi-faceted governance and funding mechanisms essential for the city's transformation, mainly through land use changes and strategic interventions. The city redevelopment strategy incorporates a financing loop that reinvests the resulting funds back into the urban regeneration. For instance, 35% of Bilbao Ria 2000 revenue, generated mainly through Land Value Capture, were dedicated to other urban development projects that have been already carried out such as the *Variante Sur Ferroviaria* or Bilbao's tramway, to name a few[3]. The city's strategic shift toward culture-led regeneration has taken a baseline model for global diffusion and replication within the city.

However, some critical shortcomings of this model arise. Touristification and speculative urbanism may result in the commodification of culture and displacement of local residents. Creating a unique model based solely on a global culture poses some issues by reducing originality to the detriment of a site's branding.[4] Furthermore, urban regeneration financing rooted in overreliance on infrastructure development poses the risk of cultural consumption, and environmental contradictions with intensive resource and energy use without grounded production of meaning. Future development funding based solely on other construction projects creates a self-feeding loop that poses critical environmental concerns without balancing the actual amount of infrastructure that is needed. Even in its "post-industrial" phase, Bilbao reflects a logic of production and competitiveness (compete with other cities, build more) which testifies to the persistence of an industrial mindset. This raises the question: is the city regenerating or reproducing past extractivist logics? Moreover, the production of the image of a creative urban space not only relies on infrastructure and interaction places. They must provide value and a narrative, with a branding process that does not eradicate existing culture.[5] Otherwise, redevelopment projects can produce or amplify socio-spatial inequalities with uneven benefits, local disengagement and symbolic exclusion amongst local residents, thus raising environmental justice concerns.

The dichotomy between *culture as a product* and *culture as a process* should be reflected in the way we think about city values in the scope of the ecological transition. According to the body responsible for urban planning of the city of Bilbao, a top-top down approach might be useful when building projects on a constrained schedule and potentially securing the construction of the project. Nevertheless, the prevalence of this approach might lead the way towards a consumption-driven model of cultural policy to the detriment of real value for residents. Commodification of culture may lead to gentrification processes that transgress the authenticity of a place, transforming it into standardised space.[6] Thereby, cultural policies really do matter. A more comprehensive approach on cultural policy, taking on board non-cultural local needs in other cities such as Barcelona has shown the potential to create local value.[7] The Guggenheim project in Urdaibai has sparked controversies around ecological concerns for the Biosphere reserve amongst the local population. The act of building always has an environmental impact. The real question is: if cultural infrastructure is to be built regardless, does it produce real added value for locals? If cultural buildings are created as a "container" of international art, that would pose deeper concerns, with a disconnection from local Basque identity and the values that inhabitants want to project into space. Furthermore, if cultural, infrastructural and environmental policies do not support local identity rooting its values into local culture with higher sensitivity towards the local natural spaces, that could result in the disappearance of rooted environmental values by default. Culture as lived and place-bound process could be marginalised.

Reimagining a situated Transition through the lens of local culture and territory

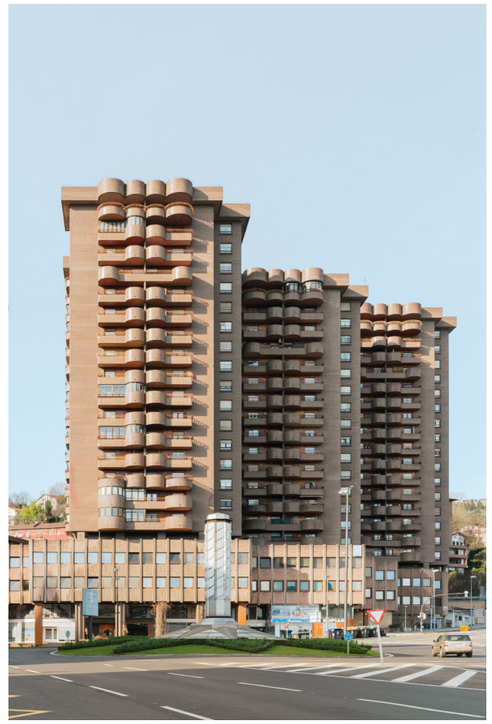
Grounding transition in heritage and rural cultures could help reimagine a sustainable, situated transition. Research indicates a tendency of decline of traditional rural activities in the areas outside the *Urdaibai Biosphere Reserve*, with urban sprawling and growth of the tertiary economic sector. Within the sector however, the denomination might have helped to safeguard rural traditions, their sustainability, without any negative impacts on the local population. On the contrary, safeguarding its conservation could have enhanced socioeconomic and cultural development.[8] A more sustainable alternative pathway could find its strength in rural traditions, Basque legends connected with natural and rural landscapes with characters such as *Mari*, and more original slow tourism compatible with environmental values. Therefore, cultural regeneration does not necessarily need to equal

2 Euskadi Turismo, "Industrial Tourism: The Culture of Work | Tourism Basque Country," n.d., https://tourism.euskadi.eus/industrial-tourism/.
3 Jason Anthony Hobbs, "Bilbao Ria 2000: Urban Regeneration Through Local Self-financing Strategies," Ciudades Sostenibles, April 27, 2023, https://blogs.iadb.org/ciudades-sostenibles/en/bilbao-ria-2000-urban-regeneration-through-local-self-financing-strategies/.
4 Mark Bailoni, "La Reconversion Des Territoires Industriels Par La Culture Dans Les Villes Britanniques : Un Modèle En Crise ?" BELGEO (Leuven), vol. 1, 2014, https://doi.org/10.4000/belgeo.12753.
5 Joaquim Rius Ulldemolins, "Culture and Authenticity in Urban Regeneration Processes: Place Branding in Central Barcelona," Urban Studies 51, no. 14 (January 7, 2014): 3026–45, https://doi.org/10.1177/0042098013515762.
6 Ibid.
7 Ibid.
8 Nekane Castillo-Eguskitza, Alejandro J. Rescia, and Miren Onaindia, "Urdaibai Biosphere Reserve (Biscay, Spain): Conservation Against Development?," The Science of the Total Environment 592 (March 17, 2017): 124–33, https://doi.org/10.1016/j.scitotenv.2017.03.076.

iconic infrastructure. Urdaibai's case highlights tensions between pressures from tourism and debates around development versus conservation. Local residents worry that jobs provided by the new museum are only going to be temporary. without long a long-lasting positive effects for the community, besides environmental impacts resulting from the interventions within the reserve. The question is whether this produces real meaning for the community and the health of the biosphere reserve? The conversations with Urdaibai's StopGuggenheim association, points to diverse possibilities for economic development centred on local-led cultural initiatives such as organic agriculture, community cafeterias, Basque rural traditions as alternatives to increased tourism driven by museum construction. Some of them are already taking place already. Some policy clues could emerge from the support of such initiatives across the region and try to reconcile projects of the Guggenheim museum with dimensions of ecology and place-making for local residents. In this sense, another innovatively authentic, sustainable and cultural opportunity could emerge from this collaboration. Bilbao's metropolitan area could support decentralised cultural policies across the territory, by encouraging education, participation and intergenerational transmission of heritage, integrating ecological values and place-rooted cultural narratives in land-use planning.

Conclusion

Bilbao's regeneration model, anchored in strategic planning and cultural rebranding, has undoubtedly transformed the city's image and urban fabric, positioning it as a global reference in post-industrial redevelopment. However, the sustainability of the model can be put into question when analysed from the ecological, social and cultural lens. The self-feeding loophole for funding city development questions the exportability of Bilbao's model in nowadays' socio-ecological context, although it was innovative during the 2000s. The act of building, always leads to environmental impact. It conveys great responsibility, therefore it must create true meaning for local population. True regeneration must go beyond infrastructure and image. Overreliance on iconic architecture and infrastructure, whilst economically and symbolically powerful, risks perpetuating extractivist logics and disconnecting urban transformation from the lived realities and values of local communities. As the Bilbao metropolitan area faces divergent pushes between the expansion of international cultural tourism and the preservation of ecologically sensitive areas – such as Urdaibai – this makes the reimagining of regeneration processes through place-based cultural narratives imperative. Shifting from culture *as a product* towards culture *as a process* offers a great opportunity for an alternative paradigm, rooted in slower, community-led, situated and heritage-sensitive approaches, and enabled through the transformation of urban governance from growth to care, from spectacle to shared meaning. This could create a genuinely sustainable pathway that resonates not solely with ambitious goals but also with the soul of the territory itself.



Residential architecture in Bilbao, presumably built in the 1980s

Discussion with activists from *STOP Guggenheim Urdaibai* in Guernika, in front of a mural reproduction, dating from 1997, of Pablo Picasso's famous *Guernica*

WHEN ENVIRONMENTAL GOALS AND TERRITORIAL TRANSFORMATIONS CLASH: THE EXAMPLE OF THE GUGGENHEIM URDAIBAI PROJECT IN THE URDAIBAI BIOSPHERE RESERVE

Written by Patrizio Gravina, Ophélie Mahot and Achille Ribeyron

Since the opening of the Guggenheim Museum of Bilbao in 1996, the per capita GDP more than doubled in Bilbao, growing from 13,561€ to 30,895€ in 2015[1], far exceeding the Spanish average GDP. The city's rapid transformation is striking, moving from an industrial, polluted regional capital to a vibrant, modern hub and thriving tourist destination. The driving force behind this remarkable transformation is the opening of the Guggenheim Museum, which spurred the city's tourism boom. Hoping to build on that success, plans for a new Guggenheim expansion in the region are underway.[2] The project involves the construction of two buildings that would be linked by a green lane: one in Gernika Lumo, on the grounds of the former Dalia cutlery factory, and the other in Astilleros. According to Maria Bidaurreta, a Guggenheim Bilbao manager, this project had already been planned for more than fifteen years, and the idea was to create a new artist hub, with residencies for creatives. But beyond its cultural ambitions, the underlying goal is clear: to replicate the 'Guggenheim effect', attracting more visitors and boosting the region's economy. However, this project is not without its challenges, as it is set to be built in a protected area: the Urdaibai Biosphere Reserve. Located about 40 kilometers northeast of Bilbao, this natural region — also known as the Mundaka or Gernika estuary — is the only biosphere reserve in the Basque Country. As a crucial wetland, it serves as a sanctuary for numerous protected species and plays an essential role in preserving the region's biodiversity. As a consequence, territorial ambitions driven by economic factors on the one hand are entering into conflict with environmental protection ambitions of the region on the other hand.

This paper aims to explore this dilemma through the case of the Guggenheim Urdaibai Project within the Urdaibai Biosphere Reserve, addressing the question: how does the Guggenheim Urdaibai Project highlight the tensions between environmental conservation and territorial development in the Reserve? The first section examines how the Urdaibai Biosphere Reserve is a territory committed to the preservation of biodiversity, offering a precious habitat for protected species. The second section analyses how the Guggenheim Urdaibai Project, as a major driver of regional development, poses a threat to this Reserve.

The Urdaibai Biosphere Reserve as a territory committed to biodiversity preservation...

Protecting biodiversity is crucial for sustaining ecosystems that provide essential services to humanity. Green areas with limited or no human intervention play a critical role in climate change mitigation, as they represent a carbon sink, absorbing approximately 2.6 billion tonnes of carbon dioxide annually, accounting for about one-third of the CO_2 released from burning fossil fuels. However, biodiversity loss can significantly reduce this carbon sequestration capacity, exacerbating climate change through a self-reinforcing feedback loop.[3] Recognising the importance of green areas, the Basque Country has developed a detailed Biodiversity Strategy Plan 2030, which outlines priorities and commitments for preserving natural heritage, with a strong emphasis on conserving threatened wildlife and plant species.[4] The Urdaibai Biosphere Reserve is a focal point of this plan, reflecting the region's dedication to biodiversity conservation. Covering an area of 220 km^2 and home to around 45,000 inhabitants, the reserve was designated a "biosphere reserve" in 1984. It is home to 615 plant species and 318 vertebrate species, including 245 species of birds.[5] In addition to its ecological significance, the reserve supports a thriving tourism sector by attracting visitors from around the world to its pristine beaches, including Mundaka Beach, which is internationally renowned among the surfer community.

The Urdaibai Biosphere Reserve serves as a key example of the interconnectedness of biodiversity conservation, climate change mitigation, and sustainable regional development. By preserving its rich ecosystems, the reserve not only supports diverse flora and fauna but also strengthens the region's resilience against environmental challenges. Its designation as a Natura 2000 site highlights the Basque Country's commitment to safeguarding natural heritage, aligning with broader global efforts to protect biodiversity. Ensuring the long-term preservation of Urdaibai is not only an environmental necessity but also an economic and cultural asset. In addition to the ecosystemic services it brings, its beauty is a source of pride for the Basque country, benefiting both local communities and future generations.

... that is threatened by the Guggenheim Urdaibai Project as a driver of regional development

During our study trip, we had the opportunity to meet two volunteers from Stop Guggenheim Urdaibai, an association that was founded to oppose the construction of the museum. On October 19, 2023, the group organized a large demonstration in Guernika that gathered around 4,000 participants, including local residents, celebrities and environmental organisations.[6] The association raises several concerns, arguing that the project poses a significant threat to both biodiversity and the local community. The main museum is planned to be built on the site of the Astilleros Murueta shipyard, which was established during the Franco era and was originally intended to return to its natural state after 70 years, following an agreement from 1943. Under the current proposal, the shipyard will sell the land to public institutions, which will clear the soil of heavy metals before construction begins. While this cleanup is a positive step, the association argues that it is motivated by economic interests rather than genuine environmental concern.[7] Indeed, doubt can be cast upon the relationship to biodiversity protection and genuine environmental concern when the project-site selection concludes the only natural reserve in the Basque country as it's ideal space. The region, already vulnerable to rising sea levels, is also a wetland home to many species, some of which require complete tranquillity, putting them at risk. From a legal standpoint, the project promoters have admitted that they need more time to address administrative challenges before

1 Fernando Monge, Jorrit de Jong, and Linda Bilmes, "The 'Bilbao Effect': The Collaborative Architecture that Powered Bilbao's Urban Revival" (2022).
2 *Expansion in Urdaibai | Musée Guggenheim Bilbao*, accessed April 2, 2025, https://www.guggenheim-bilbao.eus/fr/expansion-in-urdaibai.
3 Sarah R. Weiskopf et al., "Biodiversity Loss Reduces Global Terrestrial Carbon Storage," *Nature Communications 15*, no. 1 (2024): 4354.
4 Ihobe - Biodiversity, accessed April 2, 2025, https://www.ihobe.eus/biodiversity.
5 "Urdaibai Estuary," Wikipedia, January 14, 2025, https://en.wikipedia.org/w/index.php?title=Urdaibai_estuary&oldid=1269449001, accessed April 2, 2025.
6 N. Goti, "Manifestation Massive à Gernika Contre le Projet Guggenheim Dans la Réserve d'Urdaibai," October 30, 2023, https://www.mediabask.eus/fr/info_mbsk/20231030/manifestation-massive-a-gernika-contre-le-projet-guggenheim-dans-la-reserve-d-urdaibai.
7 Further, the proposal offers a wooden path for people to access the museum without using cars. However, public transports into the region are already overcrowded and the long walk seems an unrealistic target for all people to choose, beggThe wooden path would also require more solid, cemented structures, of which the technique of building

construction can proceed. This has included a change of coastal protection laws to reduce the protected area from 100 to 20 meters, allowing the previously illegal proposal to move forward. Economically, the construction costs are estimated to be around 150 million euros, which constitutes a considerable amount with an expected 40 million from the local government, another 40 million from the Spanish government and possibly 50 million from the Basque government. Further, the association denounces the lack of transparency from the Basque government and the media. As time has passed, the original and only Environmental Impact Assessment (EIA) could be increasingly disconnected from the project's current form whose evolution remains difficult to trace due to limited information and a notable lack of transparency.

In the region, there is growing unease about the project's potential to drive touristification, raising critical questions about the area's capacity to absorb such influxes. Concerns center on the likely expansion of Airbnb-style short-term rentals, which could intensify pressure on the housing market. Additionally, heightened tourism threatens to exacerbate competition over local water resources. Adding to these concerns, a particularly revealing issue raised by local associations is the museum's so-called "public participation scheme". While presented as a platform for dialogue, the initiative has functioned more as a symbolic listening session — lacking any clear mechanisms to incorporate community feedback into project planning. Instead of enabling meaningful participation or co-design, the process seems to primarily serve to legitimise the project to external stakeholders, sidelining local concerns in the process. Finally, the association and local opposition argue that there are already enough Guggenheim museums, with no need for another so close to the existing one in Bilbao. These criticisms are often contested by the project initiators, reminding that the first Guggenheim Museum in the city center of Bilbao was a success despite public opposition.

The struggle of the Stop Guggenheim Urdaibai association nonetheless serves as a powerful example for students like us, as it addresses complex issues that are both economic, environmental, social, and political. Their struggle highlights the power dynamics shaping regional development and raises crucial questions about natural resource management and the protection of local ecosystems. Understanding these dynamics is essential to anticipate the region's future.

Conclusion

This article sought to explore the tensions that can arise between territorial ambitions and environmental protection through the case of the Guggenheim Urdaibai Project in the Urdaibai Biosphere Reserve. While the future of the region remains uncertain, the possibility of the project's implementation has raised serious concerns about potential environmental consequences. These include risks such as the extinction of endangered species, increased pollution, threats to protected wildlife, degradation of water and soil quality, disruption of migratory bird patterns, and intensified pressure on marine and coastal ecosystems. At the same time, it is important to acknowledge that the project has its supporters, some of whom view it as an opportunity for cultural and economic revitalisation. Others, including local voices like that of a student from Mondragon University, have expressed ambivalence, noting that they are aware of valid arguments on both sides. This perspective points to a deeper issue: the absence of a coherent and inclusive territorial strategy for Urdaibai that could guide development while respecting ecological limits. Ultimately, this case study underscores the importance of maintaining and protecting biosphere reserves, which play a key role in preserving biodiversity. It also highlights the need for clear legal frameworks and meaningful local participation in decision-making processes, especially in areas as sensitive and symbolically charged as Urdaibai.

ZALLA AND BILBAO : "CENTRE/PERIPHERIC" DYNAMICS AND THE RISK OF CREATING GREEN SACRIFICE ZONES

Written by Louanne Le Vagueresse and Manon Riou

In the two municipalities of Zalla and Gernika-Lomo (where the Urdaibai Biosphere is located), in the large periphery of Bilbao, there is a prevailing sense that the well-being and interests of the city of Bilbao often take precedence over those of smaller surrounding towns, including their own. Many residents feel their landscapes will be sacrificed, some for tourism and investment, others for energy transition, without sufficient consideration of their needs. This perceived injustice stems from an imbalance, where Bilbao, as the dominant urban centre, holds greater influence than its peripheral areas. This inequality between "centre" and "periphery" zones can be linked to the concept of green sacrifice zones, especially in Zalla (cf. case study).

The notion of "green sacrifice zones" finds its origins in the context of "areas dangerously contaminated by the mining and processing of uranium for developing nuclear weapons during the Cold War".[1] In the European context, those sacrifice zones historically refer to the so-called "downwinders", populations whose health was badly impacted by the "large industrial complexes of extraction, refining, and petrochemical production"[2], as they precisely lived downwind or downstream of those complexes. From this context, the notion evolved to its new meaning, nowadays more related to disadvantaged places and communities disproportionately and negatively impacted by the sourcing, transportation and operation of solutions presented as beneficial for all in the name of low-carbon transition measures.

Zalla's case illustrates how this phenomenon unfolds in the Basque Country. Historically shaped by industrial and mining activity, the shift toward a post-industrial, service-based economy has rebranded Bilbao through cultural and urban regeneration (including investments in tourism and the iconic Guggenheim Museum). However, surrounding towns like Zalla have not equally benefited from this growth. Instead, they are now expected to host new infrastructures tied to the energy transition, such as wind farms, despite limited local gains and deep concerns over landscape degradation and loss of identity. The project isn't only planned in the city boundaries but in many mountains close by and until the coast. This form of uneven development is not confined to rural or remote municipalities. Even within the city of Bilbao, spaces like the old port or certain historical working-class neighborhoods remain excluded from the cultural and economic revival of the city center. These areas serve as internal peripheries, visible examples of how territorial inequality can exist both between and within urban zones.

1 C. Zografos and P. Robbins, "Green Sacrifice Zones, or Why a Green New Deal Cannot Ignore the Cost Shifts of Just Transitions," One Earth 3, no. 5 (2020): 543–546.

2 D. N. Scott and A. A. Smith, "'Sacrifice Zones' in the Green Energy Economy: Toward an Environmental Justice Framework," McGill Law Journal / Revue de droit de McGill 62, no. 3 (2017): 861–898, https://doi.org/10.7202/1042776ar.

Beyond the environmental impacts: "Green Sacrifice Zones" as socio-economic and spatial analysis of inequalities

Green sacrifice zones, therefore, must be understood not only in environmental terms but also through their socio-economic and spatial dimensions. Indeed, according to Zografos and Robbins (2020), green sacrifice zones are usually peripheral places (such as peripheral villages or towns), embedded in relations of economic dependance with centric zones (such as big cities).[3] Scott & Smith (2017) explain that "green energy enthusiasm" experienced by decision-makers in the context of green transition, which refers to the policy imperative to rapidly move away from fossil extractivism, had led those past decades to the removal of "procedural protections and democratic controls" when it comes to the implementation of green transition infrastructures. The consequence of it was that the necessity for an ecological transition became a way to justify damages in terms of landscape (such as "green grabbing") and culture of marginalised communities. The cost of the Green Transition shifted from the centres to the peripheries with no real attention paid to the "harmful consequences and damages" of it for those peripheral communities, and to their needs in terms of transition. Zografos and Robbins (2020) point out that this "cost shifting" is distinguished from the notion of mere externalities as it is not an exceptional practice with "accidental and unintended effects", and so, because its causes are systemic, cannot be corrected or internalised into the market.

Concerns in Zalla, as elsewhere, are rooted in real power dynamics. For instance, a study from Karam and Shokrgozar (2023) shows how a village has been affected by the installation of wind turbines and how the locals felt that their local identity and concerns had been sacrificed.[4] Within the area (Åfjord Municipality in Norway) studied, different opinions toward wind turbines created huge tensions among the locals and some sorts of social fragmentation. The study suggests that the solution may lie in the degrowth or deep ecologists approach, avoiding the creation of green sacrifice zones and municipal councils, and by this, preventing the loss of governance power grabbed by bigger scale agencies (regional, national) and private-sector. The text highlights that by investing in "sustainable" forms of growth, the socio-ecological alternatives (deep ecologists approach) are set aside in favour of an "extractivist" economy that hinder just transitions.

From the "Green Sacrifices Zones" analysis: advices on how to achieve a "Just Transition"

In reaction to the notion of Green Sacrifice Zones, several authors developed the concept of "just transition", which highlights the need for the "shift to low-carbon societies to be as equitable as possible [...] together with environmental sustainability" (Zografos and Robbins, 2020). For this to be implemented, Zografos and Robbins (2020) advise the academic and political sphere to focus on four parameters. First, "land-use policy" should seek to minimise or avoid the generation of the cost-shifts, aiming at achieving a fairer distribution of cost. Second, policies should also focus on each stage of the green economy to make it beneficial for all. Third, there is a necessity to analyse who are the winners and the losers depending on the transition design (How ? Who ? For whom ? etc). Last, the authors advise to look at alternative models and narratives of transition from the marginalised communities, and to how they conceive a just transition answering their needs as well as the need for ecological measures.

Listening to the concerns of Zalla and other affected places is essential to imagining a fairer ecological transition. Doing so would allow for new forms of cooperation between urban centres and their peripheries, ensuring that no community is left behind.

3 Tomasz Zarycki, "An Interdisciplinary Model of Centre-Periphery Relations: A Theoretical Proposition," Regional and Local Studies, Special, iss. uw.edu.pl, 200.

4 A. Karam and S. Shokrgozar, "'We Have Been Invaded': Wind Energy Sacrifice Zones in Åfjord Municipality and Their Implications for Norway," Norwegian Journal of Geography 77, no. 3 (2023): 183–196.

Meeting with Unai Diago, Mayor of Zalla, on 20/02/2025

Activist David presents to us the movement's critique of the planned museum project on the site of the Biosphere Reserve, on 20/02/2025

CASE STUDY: WIND TURBINE DEVELOPMENT IN ZALLA, PROCESS, OPPOSITION AND POLICY RECOMMENDATIONS

Written by Coline Régembal

The EU Green Deal allows for the financing of the energy transition for companies to survive in the market economy. This has incentivised Spain to develop a national energy and climate plan, and the Basque country, in a context where oil and gas are the main sources of energy, to develop wind energy. Wind turbines are not necessarily installed in areas where wind power is high, but more so in "sacrifice zones" which are not densely populated, have low employment rates and are not protected natural areas. This is notably the case of the city and municipality of Zalla. In addition, the Basque country sells cheap energy to France, as a result of an underground connection between Gatica (which is located north of Bilbao) and Bordeaux. This benefits Bilbao financially, and the main surrounding areas, but not Zalla, which suffers from the resulting infrastructure such as a large electric plant.

Zalla is located in the province of *Bizkaia* in the Autonomous Community of the Basque Country, 24km to the southwest of Bilbao. It is home to 8 229 inhabitants (2024).[1] The Mayor of the municipality, Unai Diago, is a member of an independent non-political mayors' association that he created in 2011. Finally, Zalla has the lowest economic level in the Bizkaia province. High school drop-out levels are high, and population density is low.

As a result of being considered a "sacrifice zone", wind farms are installed in Zalla even as they only bring 200 000 euros yearly to the municipality, and one to two maintenance jobs. In addition, the largest waste landfill in the Basque country is also located in Zalla, which only receives 600 000 euros from it every year. Despite some "empty areas of Spain", according to the Mayor, receiving compensation for the acceptance of wind turbine developments, such as money to provide services which increase the attractiveness of the municipality, this is not the case in Zalla. In addition, negative externalities resulting from the development of wind turbines also influence neighbouring municipalities which get no compensation.

According to Unai Diago, the municipality wishes to show politicians that they want to become a part of the wind energy development instead of merely suffering its consequences. Zalla is not in favor of the strategy of importing energy elsewhere; stating that "you're keeping your house clean but dirtying the one of your neighbors"; but more so to foster renewable energy development by providing fair and equitable deals for local communities. Indeed, the mayor emphasises that Zalla is "completely in favour" of renewables. All in all, what the mayor defends are "micro-renewable projects at a town scale not at a massive scale", which would offer renewable energy for local people.

1 Municipal Datos Estadísticos, Zalla, accessed May 3, 2025, https://en.eustat.eus/municipal/datos_estadisticos/zalla.html.

In addition, the mayor highlighted that the reduction of consumption levels must also be incorporated into the renewable energy strategy. He is in favour of a "slow city", promoted through systems which indicate how much individuals and municipalities are consuming, efficiency, and the regulation of lighting and water use as a result of technology and change of habits. Wind turbine development must therefore take local interests into account and be fair and equitable. It must also accompany a development process for the municipality of Zalla. Indeed, the city has plans of expanding and improving its transportation system so that Zalla inhabitants, who access Bilbao in 50 minutes by train today, can do so in 15, tomorrow. In addition, the Mayor is developing cycling paths from Zalla to neighbouring towns and Bilbao. This would help improve the attractiveness of Zalla, which offers many services and low housing prices, as well as a slower lifestyle. Indeed, the price of rent is very high in Bilbao, and the real estate market is expanding away from the city. As a result, many people from Bilbao are getting closer to Zalla, which offers an opportunity for the municipality. As Zalla's inhabitants are already working in Bilbao, as a result of a lack of work opportunities in the town itself, the improvement of transportation infrastructure and networks would only incentivise people to live in the municipality.

The case study of Zalla further emphasizes policy recommendations made in the literature. Indeed, the "Not in my backyard" (NIMBY) claim arguing that local populations are in favour of policies only insofar as they do not impact them negatively at a personal level, is often overemphasised by policymakers.[2] This top-down approach views the public as a "danger" to be avoided for the successful implementation of necessary policies. Nonetheless, this perspective only results in more opposition as local contestation is misunderstood, which further reinforces the belief in the NIMBY claim, leading to a "cycle of NIMBYism" according to Devine-Wright. In reality, the example of Zalla has shown that populations are often not against the development of wind turbines, as they may even support renewable energy projects, but more so the unfair process which does not take their voice and needs into account. This highlights the importance of local participation in wind turbine project development. Indeed, the way the decision-making process is conducted has a major impact on the rates of acceptance (Wolsink, 2007). It is necessary to guarantee procedural justice, rights of participation, access to information and trust.[3] In addition, only allowing for the local community's participation during the decision-making process is insufficient. Instead, relationships should be maintained with host communities during the lifetime of the project (Windemer, 2023)[4]. Indeed, there is a positive correlation between experiencing the construction or seeing the implemented project and acceptance (Bidwell, 2023). Finally, during the duration of the project, co-investment of local citizens leads to higher community acceptance of wind turbines (Sirr et al, 2023), through local ownership, tax revenues for municipalities, the improvement of local infrastructure such as local roads and local power lines (Maleki-Dizaji, 2020), and wind turbines providing a secure supply of energy for local communities.[5]

2 Maria A. Petrova, "NIMBYism Revisited: Public Acceptance of Wind Energy in the United States," WIREs Climate Change 4, no. 6 (November 2013): 575–601, https://doi.org/10.1002/wcc.250.
3 Ibid.
4 Geraint Ellis et al., "Dynamics of Social Acceptance of Renewable Energy: An Introduction to the Concept," Energy Policy 181 (October 2023): 113706, https://doi.org/10.1016/j.enpol.2023.113706.
5 Pouyan Maleki-Dizaji et al., Overcoming Barriers to the Community Acceptance of Wind Energy: Lessons Learnt from a Comparative Analysis of Best Practice Cases across Europe, no. 9 (April 2020), https://www.mdpi.com/2071-1050/12/9/3562#B7-sustainability-12-03562.

CONCLUSION

ACHIEVEMENTS AND LIMITS IN TRANSFORMING A CITY

Written by The Editorial Team

Reflecting upon the outcomes of this study trip, and the implications its learnings may have for our evaluation of urban transformations in the broader sense, it is compelling to bear in mind the words of Jane Jacobs, who in her highly celebrated *The Death and Life of American Cities* wrote: "Cities are an immense laboratory of trial and error, failure and success, in city building and city design".[1] While this may seem like a truism today, it reminds us that, in urban projects, results may never be fully anticipated – each attempt constituting an experiment in and of itself. As cities test and explore their ways forward, they enrichen the shared *corpus* of practices that forms the reference base for urban planners and policy makers.

Consequently, it becomes not only possible, but necessary, to condense the findings of the previous articles to attempt answering the latter two, more culminating questions we asked ourselves in the very beginning:

How successful and consistent is the Bilbao region's green transition model?

Meeting the climate targets by the end of the century will depend on society's capacity to transition from a model dominated by the fossil-fuel sector to one dominated by low-emission sectors. To get there, Shayegh et al. (2023) indicate three paths: linear, delayed or fast.[2] The fast path, centred around substantial transfers from the brown sector to the green one, coupled with significant abatement efforts, is undoubtedly the most favourable, but it cannot be accomplished without significant consideration for environmental justice.[3] In light of our analyses, we may ask ourselves which of these paths is closest to the current efforts of Bilbao, and Bizkaia more broadly – and to which integration of concerns for environmental justice?

Many of the achievements of Bilbao's transformative projects are directly attributable to a broader strategic vision. Indeed, the shift from a declining industrial economy to a prospering knowledge-based and cultural economy, as well as the successful large-scale reconversions of brownfields, cannot be mentioned without evoking the city's trans-sectoral governance scheme. In these two cases, public and private actors convened to delimit a common plan, beneficial for both parties. Particularly illustrative of this is the usage of LVCs, through which a pre-set portion of the added value from development projects is utilised for financing non-monetised urban regeneration projects, such as the burying of highways. The resulting situation has significantly contributed to improving quality of life while also revitalising and decarbonising economic output by promoting new, less carbon-intensive sectors.

In widespread culture, the Guggenheim Museum is often seen as the catalyst of the transformation of Bilbao and an icon of the transformed city. Despite there being much more to this transformation, the Museum does represent the rebirth of a dormant tourism sector, focused on culture rather than attracting the masses, offering a distinct economic path forward for other cities. More extensively,

To the left: Image of construction works in the *Basurto* neighbourhood of central Bilbao.

1 Jane Jacobs, *The Death and Life of American Cities* (New York: Random House, 1961).

2 S. Shayegh, S. Reissl, E. Roshan, et al., "An Assessment of Different Transition Pathways to a Green Global Economy," *Commun Earth Environ 4* (2023): 448, https://doi.org/10.1038/s43247-023-01109-5.

3 Amorim-Maia, A. T. et al. (2022). "Intersectional climate justice: A conceptual pathway for bridging adaptation planning, transformative action, and social equity". *Urban climate*, 41, 101053.

the Mondragon cooperative model presents a resourceful example of how to maneuver an extant capitalist context, with its alternative to ultra-competitiveness that combines economic viability with democratic values.

Yet, from these very successes also arise some significant limitations that may be questioned. The economic model centred on financing urban regeneration projects through LVCs on other new projects participates in a paradigm wherein continued construction and expansion is required for it to be sustained. What happens when all brownfields have been converted; when the societal need for new construction projects thins out; when we realise that construction itself is an inherently unecological act which, though often socially necessary, should be kept to some minimally required societal level? Similarly, one may interrogate to what extent cultural tourism is more ecologically 'sustainable' than regular tourism. In Bilbao's case, the total number of visitors has substantially risen since the "Guggenheim Effect", with the expansion of the Airport and the opening of a new Cruise Terminal[4] serving to accommodate those arrivals, by means of carbon-intensive transportation modes. Although it may be seen as a more viable option than the tourism model on the Mediterranean coast of Spain, it may also just appear as the 'less bad' of the two. Combined with an expanding Mondragon model[5], the image that crystallises is one of a system still dependent on continued consumption and growth – with its attached externalities – in order to sustain the very efforts meant to curb those same externalities.

This conceptual contradiction was best illustrated through our visits to the Urdaibai Biosphere Reserve and the Municipality of Zalla. Here, the bearing of the externalities became very clear: neglected considerations for the area's invaluable biodiversity in the case of the former, and sacrificed local economic opportunity, in the name of the ecological transition, for the latter. As cities start engaging in their necessary ecological transitions, it is crucial to avoid a situation of 'winners' and 'losers' – for upon this depends the durable success of the transition itself. Public participation and project transparency serve here as important tools that could be further mobilised: although some projects, like the Guggenheim Museum in the 1990s, may ultimately become popular and appreciated despite lacking initial public approval, such approaches risk damaging trust over time, disregarding genuine needs and grievances, and thereby casting doubt on whether environmental justice can be achieved through such means.

Besides, elements of the City of Bilbao's mitigation and adaptation measures may also be challenged and seen as partly insufficient. Projects such as the Zorrotzaurre island redevelopment are ambitious in reducing flooding risks, but the City could go further in augmenting resilience, notably by incorporating more nature-based solutions (as was done with the Ibaieder Park), and by increasing surface permeabilisation. Calls for re-industrialisation and lesser environmental regulation, which were heard at the Chamber of Commerce, put into question whether Bilbao's growing efforts towards strategic sovereignty are compatible with the vision of a post-industrial society. This echoes a dynamic seen across the continent, and driven by the very highest levels of European power. The current model – based on the externalisation of production and environmental costs – is no better, yet a comprehensive plan towards reaching a geopolitically and economically necessary self-sufficiency without sacrificing the ecological transition is still missing. Bilbao did not provide us with a convincing answer to this challenge.

How reproducible is this model in other contexts?

The fiscal autonomy that the Basque Country detains vis-à-vis the Spanish state poses questions of replicability. The model of the evoked *Concierto Económico* derives from an ambition of the centralised authorities to accommodate the region in a 1980s context marked by severe tensions surrounding a battle over sovereignty. However, this model – although having enabled many of the significant changes that were made, and still are underway, in the Basque country – remains rather unusual, both nationally and in a broader European context. In Spain, only the neighbouring autonomous community of Navarre, benefits from the same so-called *Foral Regime*.[6] In the rest of Europe, the existence of similar models appears as even more scarce: only a few select regions, such as South-Tyrol in Italy, the Åland Islands in Finland, and Scotland in the U.K. (non-EU) have partially comparable models.[7]

Considering many of the efforts that were made in Bilbao and the Basque Country were financed precisely through investments enabled by this fiscal and financial regime, we may question to what extent it can serve as a model for other cities and regions wanting to transform. The *Foral Regime* enabled the Basque country to capitalise on its higher than average economic output on a national level, but it still sits at a level which is below that of richer European regions. Furthermore, following a general trend towards decentralisation in the EU since the 1990s[8], multiple sub-national entities have gained significant financial and structural capacity to organise large-scale visionary projects, when this is accompanied by a legal autonomy to do so. This can for instance be seen through cities and regions with high credit-worthiness setting up municipal green bonds to attract additional funding, on top of their already strong regional finances.[9] Although they do not possess the fiscal autonomy that the Basque Country has in Spain, well-off regions in other parts of Europe may already mobilise the favourable financial position that they have gained through decentralisation to conduct ambitious and costly transformative projects. In those conditions, setting up large-scale trans-sectoral governance, through entities similar to Bilbao Metropoli 30, does not appear as a far-fetched possibility but, on the contrary, as a direct tangible option.

In the Basque case, one may also see the *Foral Regime* as exempting the region from the charge of mitigating the deficits of poorer regions, paying no more than what its share of national GDP is, and thus insulating it from broader national challenges. This, in turn, enables it to set up more disciplined regional budgets, which has contributed to a credit-rating higher than that of Spain as a whole, thereby allowing it to allocate more considerable funds to large projects. However, this raises questions of equity between regions: to what extent are the changes in the Basque country permitted at the expense of lesser funding to poorer regions? Whilst one should be cautious in speculating about the potential impacts higher equalisation funds could have induced in less affluent regions, the issue does shed light on the growing tension in Europe between more and less prosperous areas.

Closing remarks:

Regarding our overarching question – *what have been Bilbao's achievements and limits in transforming a city?* – we hope that this report has been able to provide a balanced account of both. Bilbao's transformation has been impressive in many regards and certainly stands out in a broader European context as one of the more successful attempts of its kind. Yet, it still sustains a model that could benefit from more active redirection toward the green sector, greater sobriety, and improved participation in order to engage on a fast path towards meeting climate targets, without sacrificing environmental justice. With its proximity to the coastline, some climate change risks remain partially unanswered: here, greater adaptation efforts, notably through nature-based solutions, could play a more prominent role. Finally, while its transformation may partly serve as a model for more prosperous and decentralised regions, it may not be copied by all – thus raising the broader question of the responsibility a region bears for the provoked disparities endured by other regions.

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5 Mondragon Corporation, 2023 Annual Report, https://www.mondragon-corporation.com/urtekotxostena/3_competitividad.php?lang=en.

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7 M. Keating, *The New Regionalism in Western Europe: Territorial Restructuring and Political Change* (Cheltenham: Edward Elgar, 1998).

8 OECD, Making Decentralisation Work: A Handbook for Policy-Makers, OECD Multi-level Governance Studies (Paris: OECD Publishing, 2019), https://doi.org/10.1787/g2g9faa7-en.

9 Ile-de-France in 2012 and Gothenburg (Sweden) in 2013, as precursors

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Conclusion : ACHIEVEMENTS AND LIMITS IN TRANSFORMING A CITY

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