



MASTERARBEIT | MASTER'S THESIS

Titel | Title

Unveiling technoscientific promises: The arrival of a Hyperscale
Data Centre in Talavera de la Reina (Spain)

verfasst von | submitted by

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angestrebter akademischer Grad | in partial fulfilment of the requirements for the degree of
Master of Arts (MA)

Wien | Vienna, 2026

Studienkennzahl lt. Studienblatt | Degree
programme code as it appears on the
student record sheet:

UA 066 906

Studienrichtung lt. Studienblatt | Degree
programme as it appears on the student
record sheet:

Masterstudium Science-Technology-Society

Betreut von | Supervisor:

Univ.-Prof. Dr. Ulrike Felt

Abstract | English

In Talavera de la Reina, Spain, the announced arrival of a Hyperscale Data Centre (HDC) is framed by the authorities as a vital engine for economic revival in a region struggling with stagnation and depopulation. This research aims to analyse how the sociotechnical promise accompanying the HDC announcement is assembled and stabilised within the specific context of Talavera de la Reina. By tracking how these promissory narratives travel from global corporate levels to local institutions, it is possible to say that they are also reshaped by local histories and material constraints. Additionally, throughout the study, I investigate how local political arrangements and activist responses negotiate or contest the futures imagined through this infrastructure. Methodologically, this study adopts a qualitative case study design, combining a thematic analysis with semi-structured interviews involving local activists and stakeholders in Talavera de la Reina. The results reveal that the HDC *promise* is a relational configuration of heterogeneous parts, including land zoning, drought-related water issues, and developmental narratives that together form a specific sociotechnical assemblage. Through my findings, I demonstrate that while the State acts as a "promissory amplifier" to naturalise technological advance as inevitable progress, local friction arises as activists challenge these claims by highlighting ecological externalities, while keeping a "*reluctant expectations*", which I describe as the tension in inhabitants' narrative of knowing that the promise will not be achieved, but hoping that it works. Ultimately, this work concludes that the announcement of the HDC operates as an infrastructural becoming that reconfigures local territory to serve the global digital economy, merging with locals' visions of the future while always using a global firm's narrative of efficiency and sustainability. This thesis contributes to STS by unpacking how "promissory regimes" and the logic of scalability are used to bypass local debate and install specific technoscientific futures into local political time.

Abstract | German

In Talavera de la Reina, Spanien, wird der angekündigte Bau eines Hyperscale-Rechenzentrums (HDC) von den Behörden als entscheidender Motor für die wirtschaftliche Wiederbelebung einer Region dargestellt, die unter Stagnation und Bevölkerungsrückgang leidet. Ziel der Forschung ist es zu analysieren, wie das soziotechnische Versprechen, das mit der Ankündigung des HDC einhergeht, im spezifischen Kontext von Talavera de la Reina zusammengesetzt und stabilisiert wird. Indem nachverfolgt wird, wie diese versprechensvollen Narrative von der globalen Unternehmensebene zu lokalen Institutionen gelangen, lässt sich sagen, dass sie auch durch lokale Geschichten und materielle Zwänge umgeformt werden. Darüber hinaus untersuche ich im Laufe der Studie, wie lokale politische Arrangements und aktivistische Reaktionen die durch diese Infrastruktur imaginierten Zukünfte aushandeln oder in Frage stellen. Methodisch folgt diese Studie einem qualitativen Fallstudien-Design, das eine thematische Analyse mit semi-strukturierten Interviews kombiniert, an denen lokale Aktivisten und Interessengruppen in Talavera de la Reina beteiligt sind. Die Ergebnisse zeigen, dass das HDC-Versprechen eine relationale Konfiguration heterogener Teile ist, darunter Flächennutzungsplanung, wasserbezogene Probleme infolge von Dürre und Entwicklungsnarrative, die zusammen ein spezifisches soziotechnisches Assemblage bilden. Durch meine Befunde zeige ich, dass der Staat zwar als „Versprechensverstärker“ fungiert, um technologischen Fortschritt als unvermeidlichen Progress zu naturalisieren, lokale Reibung jedoch entsteht, wenn Aktivisten diese Behauptungen anfechten, indem sie ökologische Externalitäten hervorheben, während sie gleichzeitig „widerstrebende Erwartungen“ hegen, was ich als die Spannung im Diskurs der Bewohner beschreibe, der darin besteht, zu wissen, dass das Versprechen nicht erreicht werden wird, aber zu hoffen, dass es funktioniert. Letztlich kommt diese Arbeit zu dem Schluss, dass die Ankündigung des HDC als ein infrastrukturelles Werden operiert, das das lokale Territorium neu konfiguriert, um der globalen digitalen Wirtschaft zu dienen, sich mit den Zukunftsvisionen der Bewohner verbindet, dabei jedoch stets die Erzählung von Effizienz und Nachhaltigkeit eines globalen Unternehmens verwendet. Diese Dissertation leistet einen Beitrag zu den Science and Technology Studies (STS), indem sie entschlüsselt, wie „Versprechensregime“ und die Logik der Skalierbarkeit genutzt werden, um lokale Debatten zu umgehen und spezifische technikwissenschaftliche Zukünfte in die lokale politische Zeit zu installieren.

Abstract | Spanish

En Talavera de la Reina, España, el anunciado arribo de un Centro de Datos de Hiperescala (CDH) es presentado por las autoridades como un motor vital para el renacimiento económico de una región que lucha contra el estancamiento y la despoblación. Esta investigación tiene como objetivo analizar cómo la promesa sociotécnica que acompaña al anuncio del CDH se ensambla y se estabiliza en el contexto específico de Talavera de la Reina. Al rastrear cómo estas narrativas de promesas viajan desde los niveles corporativos globales hasta las instituciones locales, es posible afirmar que también son remodeladas por las experiencias de los habitantes locales y las actuales limitaciones materiales. Además, a lo largo del estudio investigo cómo los arreglos políticos locales y las respuestas activistas negocian o cuestionan los futuros imaginados a través de esta infraestructura. Metodológicamente, este estudio adopta un diseño de caso cualitativo, combinando un análisis temático con entrevistas semiestructuradas a activistas locales y actores clave en Talavera de la Reina. Los resultados revelan que la promesa del CDH es una configuración relacional de partes heterogéneas, que incluyen la zonificación del suelo, los problemas de agua relacionados con la sequía y las narrativas de desarrollo, que en conjunto forman un ensamblaje sociotécnico específico. A través de mis hallazgos, demuestro que mientras el Estado actúa como un "amplificador de las promesas" para naturalizar el avance tecnológico como progreso inevitable, surge una fricción local cuando los activistas cuestionan estas afirmaciones señalando las externalidades ecológicas, mientras mantienen unas "expectativas renuentes", que describo como la tensión en la narrativa de los habitantes entre saber que la promesa no se cumplirá, pero esperando que funcione. En última instancia, este trabajo concluye que el anuncio del CDH opera como un devenir infraestructural que reconfigura el territorio local para servir a la economía digital global, fusionándose con las visiones de futuro de los habitantes, aunque siempre recurre a la narrativa de eficiencia y sostenibilidad de una empresa global. Esta tesis contribuye a los estudios de ciencia y tecnología (CTS) al desentrañar cómo los "regímenes promisorios" y la lógica de la escalabilidad se emplean para eludir el debate local e instalar futuros tecnocientíficos específicos en el tiempo político local.

Acknowledgements

Writing this thesis has been a long and exhausting endeavour, full of ups and downs, stress, travelling to conduct the field trip, deep and light-hearted conversations, laughter and complaints, and hours, hours and hours spent in many libraries. Without a doubt, this would not have been possible without the good measure of encouragement I got in various forms. It wouldn't be possible without the conversations that fuel my intellectual debates, or without the love I have received on this adventure of migrating from my distant country.

First, I thank each and every one of my interviewees: the people from Tu Nube Seca mi Río for opening both the door and my mind to the problems hidden around the use of AI and data centres. To Verdébora, to Mesa por la Recuperación de Talavera, LGTBóra, and to Luis from Ecologistas en Acción for making this work possible. Special mention to Nacho and Enrique in Talavera de la Reina for lending me a bicycle so I could move around freely during the hot days. Long live their podcast.

To my supervisor, Ulrike Felt, for her support, dedication, and the interesting conversations that have stimulated me intellectually in the preparation of this document. To the INNORES team, who have always given me encouragement throughout this process. To Fredy Mora-Gámez for his always-on-point life-advice.

To those who have spent time with me in endless reading and writing sessions: Jule, Alix, Inge, Paloeka, Kirsty, Roman and Roxana from the STS group. To Dario, Ben, Lea and Illia for the writing sessions at Postsparkasse. To Tereza, because besides sharing writing time and endless conversations, it is always lovely to connect musically and jog with the wheels.

To my big family in Chile, family by blood and by friendship, because I am nothing without their unconditional support. Blanca, Gonzalo, Max, Francisca, Helena, Ángela, Antonia, Santiago y Emilia. Mauricio, Reinaldo, Manu, Guille, Javi, Dana y Maurimar. You're the best.

Finally, to the friends who have accompanied me during my migration process: Jojo and Julien for being among the first to welcome me in Vienna; to Chandani, Anna, Jahan and Hodaka for their constant company and the joy they bring. Without a doubt, my first friends in this distant land. To Pukka and Hugo, for their support. To my WG, Lizzie, Emil, David, Felix and Cat, for putting up with me living together, and for their help with encouragement and conversations when everything seems uphill and there is no light at the end of the tunnel. To all of you, for making me feel at home while living in Vienna.

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List of Acronyms and Abbreviations

HDC: Hyperscale Data Centre

PSI: Project of Singular Interest

CHT: Hydrographic Confederation of the Tagus River

1 Introduction

In a forgotten rural village in Spain in the 1950s, whose name is known to no one but the locals, the inhabitants of *Villar de Río* receive news of the future arrival of US-American investors and diplomats. Quickly, the village, led by the mayor as the local authority, prepares to show the visitors Spanish customs and culture, investing in stage sets, hiring flamenco performers, and dressing in typical Andalusian costumes (which are uncommon in everyday life), while they dream of the things they will ask to the US-Americans who are supposedly to visit them, in the midst of the implementation of the Marshall Plan for the reconstruction of Europe. Among the preparations to receive their visitors, rehearsals for their welcome are held, and even a list of items they will ask for is prepared, ranging from animals for ploughing to kitchen utensils, generating expectations of development and growth for this forgotten village. Later, on the day of the visit, the caravan of US-Americans passes quickly without stopping, leaving behind a village disillusioned by the development it could have had but never did. A development they will have to find it on its own.

The historical shadow of this film hangs over the announcement of Talavera de la Reina's new project, serving as a critical metaphor for the current state of developmental expectations. The film mocks the hypocrisy of promising aid that never stops in the village, and this research identifies a similar pattern of grand announcements followed by material silence. Through this brief 'vignette' in which I describe the Spanish film "Welcome Mr. Marshall" by the director Luis García Berlanga (1953), a satire that remains present in the Spanish memory to this day, I introduce my research topic. This is an example of what an announcement about the arrival of investment and development can produce, from the authorities to the population: expectations and concerns about those who come to invest, what they gain from their investment, and what they leave behind as a result of the proposed development.

1.1 Brief chronology of the announcement

After announcing it in March 2022, the regional government of Castilla-La Mancha gave the green light to the project of singular interest (PSI) "Data centre campus" in October 2024, marking a significant milestone in the expansion of META's presence in Southern Europe. The project will be built 12 kilometres from the city of Talavera de la Reina, on the Torrehierro industrial estate and near the urban centre of Gamonal, on a 191-hectare plot, where approximately 72,000 m² of data centre space is proposed. Although it is presented in official documents as an ordinary, run-of-the-mill data centre, according to press announcements, it

can be classified as a hyperscale data centre (HDC), with highly automated processes and the capacity to operate the so-called cloud in an industrial manner, including digital platforms and the development of artificial intelligence. The 2024 approval constitutes the culmination of a process in which investment attraction policies, instruments of exceptional territorial planning, and environmental assessment procedures converge, gradually endowing the project with institutional and territorial viability, as well as formal and rhetorical approval from various authorities at both the regional and local levels. Four key milestones can be identified from the announcement of the investment project to its approval.

Figure 1 – Regional context of Talavera de la Reina



Source: Created by author using data from Instituto Geográfico Nacional (March, 2026)

The first milestone corresponds to its announcement. The Junta of Castile-La Mancha (Regional Government Council) publicly communicates its interest in building the HDC in the city of Talavera de la Reina, thereby activating the public disclosure of the project announced jointly with META in March 2022. From this moment on, a phase begins in which the project is framed as an opportunity for regional development and for economic and technological modernisation, according to what the various authorities are communicating. The second milestone occurs in June 2022, when the Governing Council of Castille-La Mancha agrees to declare the data centre project of regional interest. This declaration of regional interest can be seen as a mechanism of territorial prioritisation, identifying the project as strategic while

accelerating its approval process, and reinforcing its legitimacy amid the various debates taking place within the government of Castile-La Mancha. This generates strong political backing at both the regional and municipal levels, helping to consolidate the public narrative focused on innovation, investment, and the projection of Talavera de la Reina as a technological hub. This initiative and the priority status in the project's processing are institutionally embodied in the figure of a project of singular interest.

The third milestone occurs in March 2023, when META submits the project of singular interest for processing, and the regional ministry of development (the institution responsible for its institutional processing) agrees to its initial approval a few days later, marking the beginning of a period of public information in which the project ceases to circulate solely as a promise of investment and future work and begins to materialise in the form of plans, territorial boundaries, built surface areas, energy consumption and water consumption in the future. In November 2023, the strategic environmental report concerning the necessary urban planning modification is issued, and in March 2024, the Environmental Impact Assessment is approved, reinforcing the administrative viability of the new data centre and contributing to its institutional stabilisation, but opening the debate around issues such as water consumption, future energy demand, land transformation, environmental impact, and the territorial compatibility of a large-scale infrastructure. Finally, the fourth milestone marks the final phase of the announcement process, which arrives in October 2024 with the approval of the project of singular interest, the establishment of a ten-year development horizon, and the formal endorsement by the main institutional bodies at both the regional and local levels.

However, behind the “*fast-track*” process that gave the green light to the HDC, there is a layer of opposition that mainly comes from environmental activist organisations, both at the regional and local levels, that materialises along various axes, such as water, energy use, urban planning procedures, and the social promises regarding investment and employment. At the same time, Talavera de la Reina is experiencing economic stagnation and depopulation, for which investment and economic measures are required to revive the city to something close to its former glory. It is along this axis that my research is situated: focusing on what is promised, what expectations the announcement creates, and how that promise lands in Talavera de la Reina.

1.2 Promises and expectations in Talavera de la Reina

How to deal with the promise that everything will be better? What is the gap between what is promised and what is the reality of failure? What type of future is produced from building promises? I find a tension between what's expected and what is slowly becoming, and

of what the aspiration is, and when it is possible to find a failure of what was promised. In this thesis, I focus on the tensions I kept encountering while moving among documents, headlines, and conversations on the ground in Talavera de la Reina. The city is often described in the media in terms of opportunity and renewal, but it also lives within hard material limits. Water, heat, land, electricity, and administrative time all place constraints on what can happen and on how fast it can happen. At the same time, the arrival of the HDC carries its own momentum, attracting political attention and generating a ready-made story about modernity. In Talavera, those forces meet. I wrote this thesis to stay close to that meeting point, because it reveals how large-scale digital infrastructure becomes meaningful in a specific place, and how that meaning gets stabilised, challenged, and revised. In a certain sense, this introduction is also a promise to unfold what I call my topic: the social life of what is promised around the HDC announcement in Talavera de la Reina. I focus on how people talk about it, how institutions package it, and how local groups contest it. I also take seriously the resources and infrastructure that underpin the promise, especially water. I do not treat the data centre as a distant cloud that floats above the city. I treat it as a territorial project that must connect to land, regulation, resource governance, and everyday urban life. That choice matters because Talavera de la Reina already carries long-standing struggles over environmental conditions and economic fragility. So, when a large technology firm appears as a potential engine of “revival”, it does not land on neutral ground. It lands in a city with memory, with scepticism, and with reasons to demand proof.

After this introduction, I develop my research questions. Building on the global patterns that enable the arrival of the HDC in Talavera de la Reina. Later on, I continue with a literature review that situates data centres as media infrastructure and as economic development objects, and I also review scholarship on resistance, contestation, and the political ecology of digital infrastructure. From there, I develop a theoretical framework that brings together infrastructure, scalability, scale, assemblage thinking, and the politics of expectations and futures. This framework gives me language to track how promises travel, how they “land” in Talavera, and how they get reshaped by local actors and material constraints. Next, I explain my research design and methods in detail. I describe how I constructed the press corpus, how I conducted field observations and interviews, and how I approached coding and analysis. I also reflect on positionality and research ethics, because fieldwork does not simply produce data. It produces relations, and those relations shape what people choose to share, how they frame it, and what they consider important.

The empirical findings chapter then unfolds in three broad movements. I begin by showing how big announcements build big promises, and how those promises circulate

publicly. I then turn to stagnation and deferral, because delays and uncertainty do not pause promissory politics. They change it. After that, I examine the contested promise through local assemblages, focusing on legitimacy, scale, and what I call a resigned hope that sits between desire and distrust. In the final empirical section, I push the analysis deeper into the mechanisms that hold the promise together, examining friction, authorisation, credibility work, governance assumptions, and accountability.

My thesis ends with a discussion and conclusion that draws together the empirical insights and clarifies what the Talavera case can contribute to broader debates about digital infrastructure, resource governance, and the politics of promised futures. I dive into how the announcement of the HDC reconfigures local territory and links it to the global economy, while the project functions as an infrastructural becoming of land, water and narratives that converge in Talavera de la Reina. Also, I reflect on how the future data centre campus functions as a site where the cloud is assembled through technical design, political economy and environmental factors (Plantín et al., 2018). This logic simplifies the world into units that can be repeated and extended. It pushes aside activist responses and treats the territory as a collection of standardised resources available for economic growth. Scalable designs rely on standardised units, and they work by removing the disturbances that would force a redesign. The State uses the PSI to bypass traditional planning timelines and remove the disturbances of local planning and environmental debate.

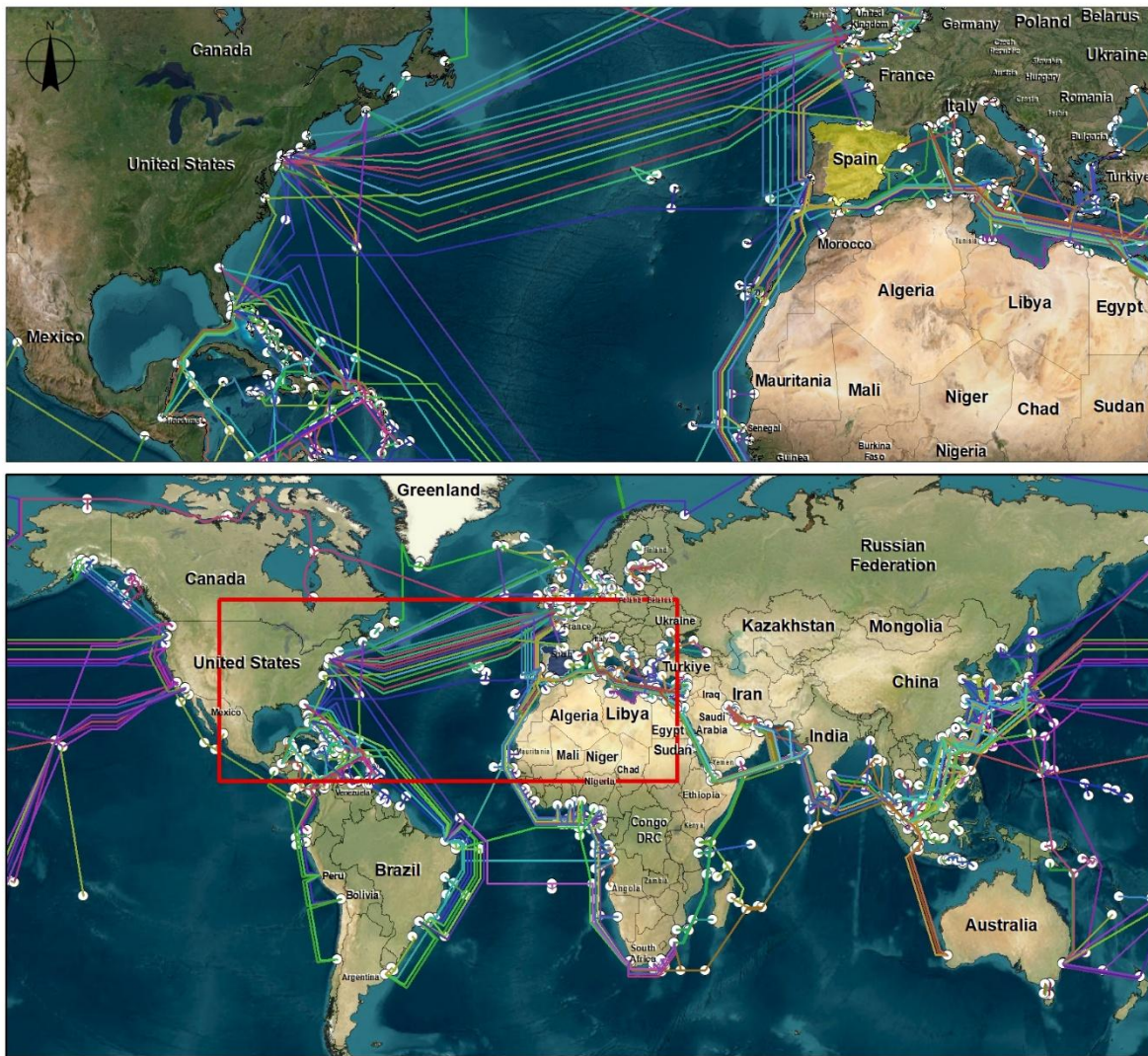
2 Research questions

People often describe the cloud and the digital world as placeless, clean, and endlessly expandable. However, digital infrastructure research emphasises that data centres are located in specific territories with material dependencies, such as land, connectivity, electricity, regulation, and heat management, which connect local infrastructures and natural resources to the cloud (Parks, 2005, 2015; Parks & Starosielski, 2015). A new hyperscale facility in Talavera de la Reina would involve more than just a facility; it would require land, power, connectivity, and regulatory frameworks, and would actively integrate local resources into its operations. These dependencies demonstrate how cloud infrastructure links to physical environments and resource networks.

But the digital world has significantly evolved over the past decades. Due to the transition from the analogue to the digital that has been taking place since the 1980s, passing through the digital financialisation of the economy, the massification of internet use, and, more recently, the massive use of artificial intelligence not only for domestic purposes but also for value generation, data centres have gained increasing relevance in the role they play in national economies. Today, they form part of a value chain (Valdivia, 2024) that keeps the digital services provided by large technology firms operational. These firms have transitioned from data storage and transfer to operational hubs for artificial intelligence, with increased energy requirements and heat generation, necessitating the selection of territories with reliable energy and cooling infrastructure. Because of this, there is a common-sense idea that data centres ought to be located in cold countries. In the case of Europe, this means Northern Europe, in countries such as Norway, Sweden, Finland or Ireland (Velkova, 2019).

This common sense has been shifting over the past five to ten years, during which a massification of data centre projects for the operation and training of artificial intelligence has been observed, and a change in the location strategies of large data centres has become evident, increasingly moving towards countries with tropical climates and greater access to the submarine cable networks that connect the digital world (Velkova, 2019). It is at this point that an increase in the use of resources for cooling data centres arises, primarily water, which dissipates heat from servers by absorbing it and evaporating (Zhou et al., 2024). While the marketing strategies of large digital firms focus on the measured and sustainable use of water and electricity, they simultaneously disseminate narratives of technological development and investment. However, these narratives have been challenged by the emergence of social movements opposing the arrival of data centres in their territories (Lehuedé, 2022).

Figure 2 – Global distribution of submarine cables.



Source: Created by the author using data from TeleGeograph (March, 2026).

It is in this global context that META, together with the regional government of Castilla-La Mancha, announces the arrival of a HDC in Talavera de la Reina. The announcement and institutional processing of which, as described above, simultaneously assembles the expectations of the population of Talavera de la Reina for an economic resurgence, the questions surrounding the use of resources, the forms of institutional approval, and the need to elucidate what has been promised and how to discern whether this is a new “Welcome Mr. Marshall” for an emptied Iberia.

Therefore, I formulate my research questions as follows:

Main Research question: How does the sociotechnical promise that comes with the announcement of the new Hyperscale Data Centre assembled in Talavera de la Reina?

Sub-research question 1: *How have the different narratives of the promise around the data centre in Talavera been constructed and circulated in Spanish press coverage over the last three years?*

Sub-research question 2: *How do local political arrangements and activist responses shape, negotiate, or contest the promises attached to the data centre?*

Sub-research question 3: *How are the different promises surrounding the hyperscale data centre assembled across scales, from local to global, and what futures are imagined for Talavera de la Reina as a result?*

3 Literature Review

3.1 Unpacking the Data Centre. From media infrastructure to infrastructure in driving economic growth

Conceptualising data centres as media infrastructure situates them within the broader landscape of physical and organisational systems necessary for the functioning of the digital world. Telephone towers, submarine cables, energy lines and data centres fall under the umbrella of media infrastructure, comprising physical facilities and structures that, together with organisations, firms, state regulations and various normative contexts, constitute situated sociotechnical systems designed to support media distribution (Parks, 2005, 2015; Parks & Starosielski, 2015). However, rather than being merely conceptualised in terms of media infrastructure, there is now a greater understanding and emphasis on the role of data centres and critical infrastructure in economic development. This reflects their growing importance to regional digital economies and the urban landscape (Aalbers et al., 2020).

A data centre might look like a generic industrial building, but scholarship increasingly treats it as a hinge point in contemporary digital life. Researchers describe it as a tightly engineered facility that integrates servers, cooling and ventilation systems, backup power, and security into a single, managed environment that enables storage and computation at scale (Ritts, 2025). As the building blocks of digital infrastructure, data centres form the backbone of cloud computing, artificial intelligence, and big data analytics. They house enormous computational resources that power financial transactions, e-commerce, logistics, and other digital services that drive the new economy (Couldry & Mejias, 2019). Here, their worth extends beyond their technical function to their status as economic assets, with cities and nations competing to attract data centre investments for their ability to generate employment, stimulate local economies, and promote technological sovereignty (Graham & Marvin, 2001).

A data centre serves as a location that addresses the “where” for data and also as a ‘how’. It enacts decisions related to reliability, redundancy, and speed, and these decisions are reinforced through physical infrastructure such as steel, concrete, grid connections, water access, and maintenance labour (Hogan, 2015; Velkova & Plantin, 2023). This demonstrates a shift, as the data centre increasingly mediates the emergence of digital services as essential in everyday life and their management as infrastructural systems. Understanding this shift can be facilitated by research on media infrastructure, which emphasises that media rely on physical substrates and environmental conditions. Media continue to operate only when institutions actively maintain and stabilise them (Starosielski, 2019). Additionally, the physical aspects of infrastructure play a crucial role in supporting digital services and their governance.

Platform and infrastructure studies demonstrate how digital systems that function as services or products also serve infrastructural roles, especially when they act as intermediaries for communication and economic coordination (Plantin et al., 2018). These approaches position the data centre not as a background container for “the cloud” but as a site where the cloud is assembled through technical design, political economy, and environmental factors. Plantin et al. (2018) observe that platforms and infrastructures increasingly converge into a single object, thereby redefining the concept of infrastructure and shifting control over it. This shift draws attention from traditional public infrastructure to privately operated systems that many rely on, but few can inspect or influence. Data centres serve as essential components that support platform power. As platforms expand, their need for data centre capacity, connectivity, and reliable, always-on performance also grows (Plantin et al., 2018; Velkova & Plantin, 2023). The data centre, therefore, becomes integral to how private ecosystems establish their infrastructural status. It also transforms corporate operational requirements into public dependencies.

Starosielski’s “elemental” orientation highlights the foundational elements on which infrastructure relies. Instead of viewing infrastructure as a neutral conduit, elemental analysis emphasises the material and conditioning substrates that enable media, such as air, water, ground, and energy systems (Starosielski, 2019). This perspective corresponds with the data centre because its primary function involves managing heat and humidity, which requires a resource flow often omitted from narratives of seamless digital services (Hogan, 2018; Ritts, 2025). The data centre operates as a system that maintains within tolerable thresholds to ensure global computational stability.

Research on temporalities shows that infrastructures occupy space and organise time. Velkova and Plantin describe data centres through infrastructural temporalities that connect high-speed exchange with longer communication lineages. They highlight how operators manage multiple “timescapes”, including economic time, material decay, and environmental rhythms, simultaneously (Velkova & Plantin, 2023). Data centres are often discussed in terms of speed and accessibility, while construction, repair, and ecological impacts receive less attention. The focus on speed links faster data exchange to established practices of regional modernisation. Hogan’s account illustrates the temporal politics of continuity by describing how data centres operated during Hurricane Harvey through diesel generators and on-site provisions. These facilities position themselves as resilient and necessary even when surrounding communities face disruptions (Hogan, 2018). This resilience results from redundant power design, fortified buildings, and operational practices that treat interruptions as unacceptable. These features contribute to the classification of data centres as critical

infrastructure, as their failure can trigger cascading failures across many dependent services (Plantin et al., 2018; Velkova & Plantin, 2023). Reliability is both a technical property and a political claim about indispensability.

Critical data centre studies highlight that the degree of indispensability varies and that environmental costs often arise where political influence is weaker. Brodie emphasises that data infrastructure studies must consider inequality as an inherent aspect of digital expansion, rather than an external impact that occurs afterwards (Brodie, 2024). He and Ritts point out that data centres consume significant amounts of electricity and often increase pressure on grids and decarbonization efforts (Brodie, 2024; Ritts, 2025). This literature explores questions beyond facility efficiency, such as how efficiency is defined, which resource baselines are considered, and how corporate growth shifts energy and water use across different regions. Brodie describes data centres as "energy vacuums" (Brodie, 2024, p. 1). Additional research examines the spatial distribution of environmental impacts related to data infrastructure.

The historical arc in this scholarship does not treat the data centre as a timeless form. Instead, it traces how digital infrastructures became legible as geography and as economy. Ritts notes that economic geography began to engage with data-driven spatial transformation in the 1990s, and later work expanded into political geography and political ecology as scholars foregrounded the ecological costs of data-driven economies and data centre projects from the early 2010s onward (Ritts, 2025). This arc complements the platform-infrastructure convergence arguments by showing that disciplinary attention followed shifts in what digital systems did in places, including how they reshaped land use, investment patterns, and industrial imaginaries (Plantin et al., 2018; Ritts, 2025). It also suggests that "*the data centre*" becomes thinkable as an object of study when its spatial footprint and resource claims become harder to ignore.

Accounts of the 2000s and the early cloud era often highlight expansion through repurposed industrial sites and development narratives that frame data storage as a new chapter in regional productivity. Hogan describes the conversion of defunct facilities into data centres as part of corporate strategy and public celebration, especially when projects promise to "*rekindle*" local economies while quietly relying on existing power and water infrastructure (Hogan, 2015, 2018). Similarly, Ritts emphasises how scholarship links data centres to industrial pasts through the repurposing of warehouses, power plants, and other inherited infrastructure, thereby making digital growth appear less disruptive and more like a "natural evolution" of regional economic development (Ritts, 2025).

In the same vein, Johnson's work on Iceland complicates simple location stories that reduce siting to climate or electricity prices. She frames data centres as infrastructural in-

betweenness that expand global connections while producing enduring marginalities, and she shows how local proponents position geographical and elemental features as competitive advantages in development narratives (Johnson, 2019; Ritts, 2025). From this idea, we derive an important analytical move: data centres do not simply arrive in places that “have” resources. Actors narrate resources into relevance and align those narratives with visions of modernity, competitiveness, and participation in a global digital economy. The in-between frame also sharpens attention to the production and existence of symmetries, because the facility can intensify connectivity without building broadly shared local capacity or control.

Work centred on extractivism and political ecology extends this argument by treating the data centre as a node in wider resource-making processes, not merely as a consumer at the end of a supply chain. Hogan argues that Big Tech increasingly positions itself as a custodian and manager of natural resources while sustaining growth-oriented logics that demand ongoing infrastructural expansion (Hogan, 2018). Ritts notes that political ecology has foregrounded the ecological costs of data-driven AI and cryptocurrency economies, as well as data centre projects, since the early 2010s, reframing digital development as materially demanding and ecologically consequential (Ritts, 2025). Recent work on “green extractivism” goes further, arguing that data centres increasingly act as infrastructural managers of energy geographies and that corporate decarbonisation discourse can coexist with material expansions that deepen dependence on grid capacity, land, and “clean” power (Brodie, 2024; Edwards et al., 2024). Across these strands, the key point is not that data centres use resources. It is that they can reorganise how resources are governed and justified.

This literature also highlights contestation, as data centre growth often triggers disputes over land, water, grid access, and the meaning of public benefit. Ritts explicitly frames data centres as sites of ideological struggle and local contestation that can persist long after operations begin, and he links this to broader questions about how ecologies become mobilised through data flows and infrastructure siting (Ritts, 2025). Brodie similarly insists that inequality is not a side issue but an organising condition for the expansion of data infrastructures, which helps explain why conflicts often arise over planning, regulation, and the distribution of burdens and benefits (Brodie, 2024). Even where corporate narratives foreground jobs and innovation, critical work urges researchers to track how those claims align with material arrangements such as redundancy requirements, land enclosure, securitisation, and long-term resource commitments.

Geography plays a distinctive role in this conversation by insisting that digital systems produce spatial relations rather than merely occupying space. Ritts treats environmental data as an opening to study the “*environments*” that result from data’s material and spatial

entailments, and he argues that the data centre has become an increasingly prominent object of concern across digital geography and related subfields (Ritts, 2025). This geographical orientation resonates with media infrastructure scholarship, which emphasises that infrastructures gain meaning and power through their situated materialities and the institutional practices that maintain them (Starosielski, 2019; Velkova & Plantin, 2023). It also presses researchers to attend to mundane but decisive questions, such as where routing concentrates capacity, how industrial land becomes revalued as digital land, and how “nature” is articulated as an economic advantage. Geography has also facilitated an understanding of the geographical aspects of data centres in economic development. Researchers locate the agglomeration of data centres in specific areas across the globe, prompted by access to energy, political stability, and tax relief. The spatial distribution of these structures has led to economic disparities, as some areas are becoming data hotspots while others remain disconnected from the benefits of digital infrastructure (Furlong, 2011, 2021). These disparities call into question digital inclusion and the uneven geographies of economic growth enabled by data capitalism (Aalbers et al., 2020).

Across these approaches, the state of the art does not treat the data centre as a singular object with a stable meaning. Scholars instead show how its category shifts as different actors describe and manage it: from a facility supporting data storage, to a media infrastructure enabling digital circulation, to a platform-adjacent backbone that increasingly claims critical status, and finally to a politically contested site where resource use and development narratives meet. Plantin and colleagues help explain how corporate systems adopt infrastructural roles and expectations, while Starosielski and Hogan foreground the elemental and ecological conditions that sustain those roles (Hogan, 2018; Plantin et al., 2018; Starosielski, 2019). Brodie and Ritts then push analysis towards unevenness and environmental governance, in which the data centre serves as a lens for understanding how digital economies materialise through land, water, energy, and policy (Brodie, 2023; Ritts, 2025).

3.2 Data Centre as Resistance Struggles

There has been a growing body of research in the field of data centre studies in recent years, exploring a variety of topics related to the political economy and geopolitics of data centres (Hogan, 2015; Lehuedé, 2022), environmental consequences (Vonderau, 2019), the role of conditions in attracting data centres (Huang, 2023), and the construction of certain sociotechnical imaginaries (Upham et al., 2023). However, the aspects of local contestations and activist practices against the construction of new data centres have not been discussed

as much, with only a few exceptions, such as Rone (2024) on the contestation of data centre construction in North Holland (Netherlands), local protests against data centre construction in Ireland (Brodie, 2020; Parker, 2019), and recent protests against the construction of a Google data centre in Chile (Lehuedé, 2024). In this section, my aim is to expand on protests against data centres around the world.

Ireland's status as a data centre territory stems from the continuation of policies that supported the Celtic Tiger's thriving economy, largely based on the tech and financial services sectors, to sustain growth after the financial crisis (EirGrid & SONI, n.d.). The "cool" climate, necessary for cooling data centre systems, low corporate tax, and a government in favour of accepting big technological firms for economic development, but not without challenges (Brodie, 2020). However, data centres in Ireland are projected to consume 27% of the Irish electricity grid by 2029, according to EirGrid and SONI, the transmission system operators for Ireland and Northern Ireland (EirGrid & SONI, n.d.). In 2023, there were 82 fully functional data centres and 19 more awaiting approval. The rising electricity demand has been denounced by activist initiatives such as Not Here Not Anywhere, which demand a "Pause on Data Centres" while thinking responsively about the impacts of the constructions, with policy recommendations related to sustainability goals not to undermine the fossil-fuel-free transition and to respect the Paris agreements, while putting a cap on data centre construction until the adjustment of the Irish energy grid (NHNA, 2023).

Also, the Netherlands has emerged as a magnet for data centre development, thanks to its strategic advantages, including a temperate climate, robust digital infrastructure, and access to renewable energy sources. These factors have attracted major technology companies, such as Microsoft and Google, to establish hyperscale data centres (Reuters, 2024). The country's central position within Europe, combined with its well-developed network connectivity, offers reduced latency and efficient data handling, making it an attractive hub for data-intensive operations. Additionally, the Dutch government's proactive investment in photonic semiconductor facilities, exemplified by the European Union's allocation of €133 million in 2024, underscores a commitment to advancing technologies that enhance data centre performance and energy efficiency.

However, the rapid expansion of data centres has sparked significant opposition from local communities and political entities. Concerns centre on the substantial land and energy requirements of these facilities, which are perceived to encroach on valuable agricultural areas and strain local resources. For instance, in Zeewolde, public protests led Meta to abandon plans to build a large data centre, as residents feared it would deplete water supplies and disrupt the natural environment. Similarly, in Hollands Kroon, Microsoft's data centre

developments have faced criticism for proceeding without full environmental permits, intensifying debates over land use and regulatory transparency. These disputes highlight the tension between technological advancement and environmental preservation, prompting calls for more stringent regulations and greater community engagement in data centre planning (Hoeffnagel, 2022; Meaker, 2023).

Local contestation often stems from a simple mismatch. When people experience data centres as intensely material, promoters describe them as weightless digital progress. Vonderau (2019) shows how public narratives portray “the cloud” as fluid and immaterial, while the industry depends on land, energy grids, water systems, and long-term political deals that remain difficult to scrutinise. Edwards et al., (2024) make a similar point when they map the field’s attention to energy and water demand and to the ways private expansion leans on public infrastructure, incentives, and utility access. Even where governments and investors frame data centres as modern, clean, and high-tech, the projects still reorganise local space and resource priorities, inviting dispute over what counts as a fair exchange between corporate benefit and collective cost.

These controversies also take shape in struggles over visibility and legibility. Data centres tend to operate as “closed” industrial sites, and corporations manage information through centralised public relations, leaving many residents with partial, uneven knowledge of what exactly is being built and negotiated (Vonderau, 2019). Rone (2024) captures this dynamic in North Holland through the language of black boxes and secrecy, in which local actors confront contracts and planning decisions that appear already settled. Gilmore & Troutman (2020) add an important nuance: contestation does not only respond to hidden decisions, but it also actively “articulates” infrastructure by making water, pipes, permits, and extraction regimes publicly discussable. In that sense, resistance often operates as a public pedagogy that translates technical systems into shared political problems.

North Holland exemplifies how procedural conflict can serve as a central element of mobilisation. Rone (2024) locates the controversy in Hollands Kroon, where decentralised spatial planning allowed local officials to negotiate directly with large firms. Many councillors and citizens perceived they had limited oversight. The conflict gained attention through media coverage, party tensions, resignations, and citizen organising, extending beyond local concerns. It influenced calls for national strategy and parliamentary oversight. Rone highlights a shift from technical siting to democratic principles with the statement: “the question for many local politicians and activists is not ‘to build or not to build’, but ‘who decides’” (Rone, 2024). This presents the data centre site as an arena where communities assert local sovereignty, transparency, and accountability. Beyond this issue, the conflict also reflects broader debates

about governance and community involvement.

Substantive environmental concerns often reinforce these procedural critiques, particularly when residents link data centres to scarcity, risk, or long-term lock-in. In Vonderau's (2019) Swedish case, Facebook's facility in Luleå drew on a large-scale electricity supply and entailed extensive bargaining over energy and water supply arrangements, as well as subsidies and land deals. Gilmore & Troutman (2020) show how water can become the central political object when communities interpret corporate extraction as a threat to shared provisioning and future resilience. Upham et al. (2023) broaden the lens by showing that pro-data-centre narratives in Norway and Iceland rely heavily on renewable power and climate advantages, yet the publics still express moral scepticism, especially when they question what the energy ultimately serves. Across these cases, environmental concerns do not function as generic anti-growth attitudes. They operate as grounded arguments about distribution, vulnerability, and the governance of common resources.

Contestation also arises in urban settings where data centres and adjacent "smart" projects blur into debates about housing, gentrification, and surveillance. Charitsis & Laamanen (2024) analyse campaigns against Google-associated developments in Toronto and Berlin, showing how activists fused place-based concerns with data politics. In Toronto, campaigners challenged the financial terms of development on valuable public land, disputed promises of jobs and affordability, and framed the project as a surveillance testbed with weak consent mechanisms and uneven protections. This urban repertoire resonates with Rone's (2024) emphasis on democratic deficits, but it adds another layer: activists treat data collection, governance, and privatised planning as inseparable. The result is not simply "anti-tech" mobilisation, but a contest over who defines the public interest when corporations propose to redesign urban life through data-driven infrastructures.

A recurring pattern across cases is scale-making, in which local disputes quickly connect to national policy, transnational corporate strategies, and circulating activist knowledge. Vonderau (2019) describes how cloud infrastructuring generates new geographies and rescales territories, as states and regions seek to claim the cloud as a national or regional asset while corporations attempt to limit local entanglements. Rone (2024) shows a parallel dynamic: local council politics and citizen mobilisation politicise data centre siting in broader media arenas and help compel higher-level strategic decision-making. Charitsis and Laamanen (2024) document how campaigns sought legitimacy and leverage by linking to international networks and using the corporation's global track record as evidence for local claims. This scaling work makes resistance more than a local "NIMBY" reaction. It becomes a method for translating site-specific grievances into broader questions about infrastructure

governance and corporate power.

Imaginarities are central: promoters promote data centres through narratives of natural fit and sustainable modernity, while critics challenge the conditionality of these claims. Upham et al. (2024) demonstrate how promotional materials in Norway and Iceland construct a techno-environmental imaginary that links digital technology to pristine Nordic landscapes, cold air, and renewable electricity, and is supported by policy instruments and investment messaging. These imaginaries are susceptible to change, as external narratives can influence public perception and attach different meanings to the infrastructure, including scepticism about energy use for cryptocurrency mining in Iceland. Vonderau (2019) shows how branding and publicity emphasise national pride and innovation while minimising infrastructural issues, uncertainty, or reliance on local resources. Contestation typically involves efforts to destabilise a dominant imaginary and introduce alternative interpretations of the infrastructure's purpose and audience.

Political economy runs through these disputes because states and municipalities rarely act as neutral referees. Vonderau (2019) details competitive site-selection dynamics, including extensive bargaining, subsidies, and efforts to secure favourable conditions for corporate investment. Edwards et al. (2024) generalise this pattern, highlighting how the industry benefits from public subsidies, tax incentives, land deals, and utility access, and how “economic revival” rhetoric often accompanies these arrangements. The political stakes sharpen when officials present a deal as a collective win, while residents suspect an uneven exchange: public resources and long-term infrastructure commitments traded for limited local benefit, uncertain jobs, or short-lived construction booms. Resistance often responds directly to that asymmetry. It questions the terms of value, the durability of promised gains, and the rights of communities to set conditions rather than absorb consequences.

Legal and regulatory ambiguity can intensify local unease, as data centres operate at the intersection of territorial law and cross-border data flows. Vonderau (2019) discusses uncertainties regarding jurisdiction and responsibility, illustrating how Swedish authorities struggled to clarify oversight over data processing and corporate structure. Charitsis and Laamanen (2024) demonstrate that activists in urban areas emphasise privacy, consent, and data protection as concrete political issues. Rone (2024) notes that citizens and councillors often perceive secrecy as a governance failure that undermines legitimacy, even when projects comply with formal planning procedures. These cases show that regulation involves more than technical considerations; it is a contested boundary object delineating the limits of state authority, corporate autonomy, and the distribution of accountability across governance levels.

Taken together, these studies suggest that resistance follows identifiable repertoires but does not rely on a single frame. Activists mobilise around water and energy, land use and landscape, transparency and procedural justice, and surveillance and the right to opt out. They also mix tactics. Charitsis and Laamanen (2024) describe public meetings, workshops, lobbying during consultations, media work, and coalition building, including translocal connections to other campaigns. Rone (2024) shows how institutional politics, party disputes, and press oversight can interact with bottom-up mobilisation, producing pressure that extends beyond the immediate site. Gilmore and Troutman (2020) emphasise that these movements often succeed in turning infrastructure into an object of public reasoning, even when opponents do not control the technical system itself. Resistance, in this sense, operates as a politics of problem definition that can reshape what authorities treat as negotiable.

Methodologically, these texts also explain why contestation remains difficult to study and why ethnographic attention matters. Vonderau (2019) stresses that access to industrial-scale data centres is restricted and that researchers must rely on multi-sited, “polymorphous” engagements with subcontractors, planners, trade associations, documents, and peripheral actors. Edwards et al. (2024) explicitly call for more observational and ethnographic work with people living in places where data centres arrive as development promises, including marginalised workers and activists resisting particular energy arrangements. Charitsis and Laamanen (2024) show how activist websites, public statements, and campaign practices offer a rich archive for tracing how political claims travel and how local struggles connect to wider critiques of Big Tech. If resistance is partly about making infrastructures visible, research needs methods that can follow the work of visibility itself across media, institutions, and everyday political practice.

Overall, the literature on local contestation reveals data centres as sites where communities negotiate resource futures, political authority, and the meaning of development amid corporate secrecy and state enthusiasm. Promoters often stabilise projects through narratives of sustainability, innovation, and economic uplift, but publics and activists regularly treat these narratives as conditional and contestable, especially when they are linked to water extraction, electricity allocation, land commodification, or surveillance. The conflicts reviewed here suggest that resistance does not merely oppose a building. It contests a mode of infrastructural decision-making that can rearrange local priorities while distributing benefits and burdens unevenly. By tracking how people challenge deals, reframe imaginaries, and demand a say in the terms of infrastructural change, these cases help situate data centre expansion within broader struggles over democratic control and ecological limits.

3.3 Spain as the new space for data centre investment?

Spain has emerged as a strong option for data centre investment in recent years, following a strategic alliance between the private sector and the government. This alliance aims to position the nation as a technology-driven hub in Europe, leveraging its location, resources, and business-friendly regulatory environment. In this context, the Spanish government has played an active role in spurring growth. Notably, in December 2024, it invested €61.76 million to establish the country's first Artificial Intelligence (AI) factory within the Barcelona Supercomputing Centre (European Newsroom, 2024). According to the project's aims, the goal is to democratise access to high-quality supercomputing infrastructure so that not only the research community but also startups and SMEs can leverage AI capabilities (La Moncloa, 2024).

Particularly in regions such as Talavera de la Reina and Aragón, strategic alliances between government bodies and private businesses aim to position these sites as technological hubs in Europe. In Talavera de la Reina, the regional government of Castile-La Mancha has been instrumental in making significant investments. One example is the approval of Meta's "Data Center Campus" project in October 2024, a €750 million investment. Construction will begin in early 2025 on a 191-hectare plot, with 102 hectares to be used for the campus. It is expected to create 250 direct jobs and a further 300 during the construction phase. Direct government intervention, such as the sale of 190 hectares of industrial land in the Torrehierro area for €20.6 million, has been key to attracting such large-scale investments. Minister Isabel Rodríguez highlighted the project's significance, noting that it could generate over 1,000 direct jobs during construction and 250 stable positions upon completion. This development underscores the government's resolve to establish Talavera de la Reina as a data centre hub in Spain (EFE, 2024).

Nevertheless, the new HDC in Talavera de la Reina was approved through a spatial planning instrument called the Project of Singular Interest (PSI). As Escudero-Gómez (2023) argues, the PSI allows the construction of any infrastructure and real-estate project under the notions of "public interest and social interest" on a regional scale. It is a singular instrument that facilitates certain interests without undergoing the urban planning system. It also makes it easier to invest in private territory. One of the most notable aspects is that it enables changes to land use as set out in the urban planning instruments and the current normative. Regarding environmental consequences, Escudero-Gómez notes that the PSI tends to undervalue the environmental value of the places where investment projects are located, failing to account for more fragile landscapes or resource constraints such as water (Escudero-Gómez, 2023). This

type of development highlights a symbiotic relationship between government initiatives and private-sector investments in Spain's data centre landscape. The strategic efforts by regional governments to create favourable conditions, coupled with substantial investments from private enterprises, are transforming regions like Talavera de la Reina not only into what they call “prominent data hubs” but also into spaces for environmental and technological resistance.

Spain's water politics, or waterscape, have been shaped over time by political decisions, technological advances, and social struggles. Erik Swyngedouw (1999, 2015) describes how water management in Spain has been used as a tool of power, influencing economic development and territorial control. Large-scale projects, such as reservoirs and irrigation systems, have played a key role in transforming water into a resource governed by political and economic interests. Through the concept of the hydrosocial cycle (Swyngedouw, 2013), water is seen not just as a physical substance but as something continuously reshaped by human intervention.

During Franco's rule (1939-1975), hydraulic engineering was central to economic growth; damming and irrigation development were national priorities (Swyngedouw, 1999). These projects continued, but were increasingly driven by neoliberal agendas of privatisation and market efficiency (Loftus & March, 2016). One of the most disputed plans in recent decades was the National Hydrological Plan, designed to transfer water from the Ebro River to arid regions. It faced strong opposition from environmental groups and local communities advocating sustainable, locally managed solutions. Building on Swyngedouw's work, more recent publications highlight the role of social movements in challenging large water schemes. Schmidt (2014) examines how local citizens push for more participatory governance, while López-Gunn (2009) discusses how climate change further pressures the rethinking of water policies. These perspectives show that water in Spain is not simply a natural resource but a contested political landscape shaped by power relations and environmental conditions.

4 Theoretical Framework - Between infrastructural technoscientific promises and sociotechnical assemblages

Understanding the rapid expansion of HDCs in contemporary Southern Europe from a theoretical perspective requires delving into their complex, multi-scalar, and contested nature. As I mentioned in the previous chapter, the Data Centre operates as an infrastructural development, like vast physical compounds that were mainly supporting the operations of telecommunications in the past, moving to the scalability of cloud computing and data storage, and reaching the current hyperscale AI-driven development (Van Der Vlist et al., 2024; Velkova, 2023), increasingly integrating into national development, regional economic narratives, and global geo-political competition (Valdivia, 2024). To understand how those infrastructures come into being, how they are justified, and how they are contested, I elaborate in this current chapter on an interplay between a comprehension of how the material infrastructure also materialises scalability, both in their announcements, passing through construction and future operation, to signify what data is in the current understanding of hyperscale data centres. Then, I develop an account of assemblage theory and explain why it makes sense for understanding the current topic, drawing primarily on Manuel De Landa's ontology of the heterogeneous in emergent social formations. Finally, I am getting into the speculation of expectations and future promises. At this point, I aim to understand how promissory discourses of imagined futures and economic projections shape socio-technical projects in the present and how they affect the co-production of the existing assemblage in Talavera de la Reina.

4.1 Infrastructure as the materialisation of scalability

Data, the cloud and recently, AI, are part of the same story, the evolution of how we understand the digital turn over the last 50 years (Boyd & Crawford, 2012). Throughout these years, misconceptions have surrounded digital technologies, which can be summarised as the persistent metaphor of the so-called "*Cloud*", subtly suggesting immateriality and placelessness (Jacobson & Hogan, 2019; Vonderau, 2019). In response to that trend, there has been a scholarship in infrastructure studies, infrastructure anthropology, critical media studies and digital geography (among other fields of study) that has elaborated different work and research on dismantling within academic circles and beyond, the narrative that leads to immateriality, arguing and demonstrating that organisational elements allow them to be situated as sociotechnical systems (Parks, 2015), and explaining that the cloud is not dematerialised but, instead, is resting on profound material industrial infrastructures (Holt &

Vonderau, 2015; Parks & Starosielski, 2015).

Here, we have several warehouses connected via submarine and land cables, cooling systems, lithium mines and processed batteries, rare-materials deposits, electrical grids, among other materialities that constitute the backbone of contemporary digital life (Valdivia, 2024), with HDCs representing the upper extreme of this infrastructural development. In this scenario, as massive hubs operated by the world's largest technology corporations, such as Alphabet (Google), Apple, Amazon, Microsoft, Nvidia, and META take the lead in this industry (Saura García, 2024), with millions of servers connected to provide the required computational power for their operations. At the same time, the HDC industry is making a specific claim about the world today, proposing that computation can expand without limit and that “*data*” can circulate as if it were weightless, avoiding any problematic questions about how data is managed. Nevertheless, the more these projects claim to promote smoothness and green growth, the more they rely on environmental components and their commodities.

On the other hand and thinking on Tsing’s reflection (Tsing, 2012), if scalable designs rely on standardised units, they also rely on the removal of disturbances that would otherwise force redesign. Different facilities could draw more electricity than computation alone would require, suggesting that operators keep servers running as an insurance policy against energy loss. This is an environmental cost, though that is an accepted part of it. We see how infrastructure translates certain uncertainty into design requirements, and that translation reshapes what data “is” as an object to be defended against worst-case futures (Holt & Vonderau, 2015).

For me, everything described here comes into being through the scalability of operating performance. As Anna Tsing argues in *Nonscalability*, scalability is about spreading or expanding systems indefinitely, without taking time to reconsider the basic elements that constitute them. As with many elements that constitute the different features of technology, scalability is not neutral but an accomplishment that rests on design choices that simplify the world into units that can be repeated and extended, while pushing aside what does not fit (Tsing, 2012). In the context of the HDCs discussion, this might shift the analytic focus from “how big” to “how made”, by arguing that if scalability means expansion without revising the project’s basic assumptions, then hyperscale infrastructure should protect those assumptions throughout their announcement, construction and operation (Tsing, 2012). Could this be the naturalisation of its own expansion as ordinary progress? The politics of scalability thus, turns its meaning beyond technical design, as well as the institutional and environmental arrangements that allow the infrastructure to continue appearing as a simple extension of itself. In other terms, the interpretation would be that the cloud is material. When an industry tells a

story of frictionless expansion, it also implies that the frictions have been solved, exported, or rendered illegible (Monstadt & Saltzman, 2025; van Es et al., 2023).

In this regard, Anna Tsing brings an interesting point in her book *Friction*, when she mentions “*So how does one study the global? telling us that is the way in which the world aspires for global connection in their effort to mutually encounter each other globally*” (Tsing, 2004, p. 4). In HDC development, though, the global does not preexist the encounter but shifts the perspective on how developers and states try to produce it through the encounter, thereby narrating the outcome as inevitable. Different ways of representation provide partial views that invite audiences to infer the broader system that no single observer can see in full (Anand et al., 2018) (Parks, 2015), while Hyperscale announcements and public tours thus become part of scalability’s materialisation, they help build acceptance of the conditions of scaling by turning a dispersed industrial ecology, legitimising the rhetoric of development behind technology.

To finish this first idea, it could be said that Valdivia’s is a way to translate Tsing’s critique into the contemporary moment of AI. If AI is increasingly framed as a new wave of “the cloud,” then its scaling depends on the supply chains that connect different extractivist practices to their facilities, such as data centres, and the disposal of different elements into political-economic formations (Valdivia, 2024). In this context, scalability seems to be an achievement, extended across multiple sites and jurisdictions, from mineral sourcing and energy provisioning to cooling water and logistics, and, throughout, to electronic waste at the end of the hardware’s lifespan. Data, thus, is becoming an element whose circulation and storage require ongoing material conversions and externalised costs to operate (Valdivia, 2024).

A second related view of infrastructure is about how the different hyperscale projects enter into public discussions. The early moments set expectations before they distribute electricity, jobs, or the associated risks of their operations, thereby constituting, through announcements, their development narratives, as they formulate themselves. In the framework developed by Appel, Anand, and Gupta, infrastructures are inseparable from the promises they carry and enable not only development, but also becoming a medium through which modernity and progress are imagined, and contested, playing a role in redistribution, especially in relation to infrastructure and urban geography, explaining why data centres are, often, envisioned as future-making devices, with their technical functions remaining opaque to most of the public (Anand et al., 2018).

So, there is an inextricable connection between infrastructure and the idea of promise. Every part of the materialisation of infrastructure throughout roads, water pipes, electricity

lines, ports, Data centres, etc., mentioned before is part of a dense social, material, aesthetic, and political formation that is critical both to differentiated experiences of everyday life and to understanding expectations of the future. “They have long promised modernity, development, progress, and freedom to people all over the world” (Anand et al., 2018, p. 3). From this theoretical argument, it is possible to start thinking of infrastructures as future-oriented artefacts that embed expectations of growth, modernisation, and national and regional progress. They carry a societal role in developmental and political promises, which do not simply support socio-economic life but also actively help articulate and materialise visions/imaginaries of the future.

To extend this discussion around HDCs, it helps to track how the promise is engineered through the phases of a project. Appel, Anand, and Gupta emphasise that infrastructures help to organise a differentiated experience and unequal provisioning depending on the political and economic contexts, while stressing that promises coexist with threats and precarious assembly (Anand et al., 2018). An example of this what is brought by Parks and Starosielski, illustrating how a site like Hamina, Finland, can be rhetorically recast as “efficient” and “advanced” through the conversion of a paper mill into a data centre, even as employment contracts and the region are repositioned within a global media distribution network (Parks & Starosielski, 2015). The legitimisation and consolidation of infrastructural authority distort the benefits of development and make them appear more widely shared than they often are (Holt & Vonderau, 2015). A hyperscale announcement often foregrounds a narrow subset of the promised future, emphasising elements such as digital sovereignty, competitiveness, innovation, and high-skilled employment that together reaffirm the need for these infrastructures. However, the infrastructure simultaneously reorganises other futures that remain less visible in official narratives, such as long-term dependence on corporate operators, intensified resource demand, or reconfigured landscapes of authority. This is what Ana Valdivia explains to us. That by tracing how cloud and AI expansion rely on supply-chain linkages, extractive frontiers, data centre clusters, and waste economies, the same promises of high-tech renewal often travel alongside, displacing burdens that do not disappear but instead move across space and jurisdictions (Valdivia, 2024).

A third point concerns infrastructure and temporality. While Anand, Appel and Gupta (2018) provide a framework for understanding how infrastructures carry promises, Larkin (2013) helps to explain why those promises feel persuasive or compelling. Larkin argues that infrastructures function as semiotic and aesthetic vehicles that store desire and fantasy, sometimes in ways that exceed their technical functions, rather than as purely technical systems (Larkin, 2013). The meaning in public life of the facility, aka, Hyperscale Data Centre,

tends to precede any direct experience of its operation, with everything that it carries, like the architectural rendering, and the corporate launch event, all becoming part of an infrastructural poetics that addresses publics as subjects of modernisation. The data centre becomes a symbol of the future even before it processes a single request.

Star's ethnographic sensibility converges with this point by treating infrastructure as visible upon breakdown and learned through membership and practice, rather than as an object delivered (Star, 1999). Similarly, Star & Ruhleder (1994) show us that infrastructures emerge relationally and can fail when designers ignore local practices and dependencies (Star & Ruhleder, 1994). Long construction timelines reorganise present-tense politics by demanding anticipatory alignment as municipalities adjust zoning and energy planning, while residents face shifting expectations and institutions adapt to an operator's future presence. The project's temporality becomes infrastructural in itself because it structures what actors consider reasonable, inevitable, or already decided.

Finally, the material infrastructure produces scalability as a lived and narrated condition across different phases. The announcement frames any proposed facility as development and inevitability, while the construction installs a future into local political time. Their operation enacts permanence and sturdiness through maintenance and controlled visibility. In that process, infrastructure also produces a specific ontology of data. Data becomes an object of logistical management, regulatory ambiguity, and anticipatory governance, made real through cables, pipes, standards, and repair. HDCs, therefore, signify "what data is" by materialising the conditions under which data can appear placeless, frictionless, and endlessly extendable, even though those conditions remain contingent, uneven, and always at risk of coming apart.

4.2 Assemblage theory and the territorialisation of issues

While understanding the materialisation of scalability through infrastructure gives us a glimpse of materiality and temporality in the discussion, understanding the heterogeneous configuration through assemblage theory allows us to conceptualise the heterogeneous social formations that coalesce around META's HDC in Talavera de la Reina.

Assemblage theory, especially as developed by the Mexican author Manuel DeLanda (DeLanda, 2022), helps us to understand of how issues around materiality come together and evolve over time. Instead of understanding social and technological structures as fixed entities, DeLanda builds on Deleuze and Guattari's (1987) work to show that social life and everything around is dynamic, shaped by ever-changing relationships among people, materials, institutions, and discourses, allowing us to observe the world as a constellation of different assemblages. Fluid, emergent, and contingent rather than rigid and predetermined. In other

words, DeLanda questions the notion that the so-called social is a layer that sits “above” the material, but opposite of fixed categories or pre-given scales. Social individuals and structures emerge historically, operate across different socio-temporal scales, and remain analytically comparable without assuming hierarchies among them. Sesay et al. reconstruct this position as a flat, non-essentialist ontology that resists treating units like “city” or “region” as something methodologically given and asks researchers to show how the different heterogeneous arrangements get produced in specific circumstances (DeLanda, 2006, as cited in Sesay et al., 2016, pp. 8–9)).

DeLanda’s distinction between properties and capacities helps keep this analysis concrete. Hanseth and Rodon summarise the distinction by noting that properties refer to what a component is. In contrast, different capacities refer to what it can do when it interacts with other components (DeLanda, 2000, as cited in Hanseth et al., 2021, p. 136), granting those properties to the different elements, such as water rights, land parcels, regulations, or local associations in the Talavera de la Reina context. However, the controversy turns on capacities that only appear through interaction. In this sense, for example, water becomes contentious through allocation procedures and the announced water consumption claims, while land becomes infrastructurally consequential through territorial planning zone demarcations. Another example comes from the use of electricity, where the grid interconnects and constitutes part of their supply chains; as associations that become politically agentic through their ability to mobilise knowledge, press institutions, or force procedural pauses. Assemblage theory keeps the analysis oriented toward these interaction effects rather than assuming causal primacy for either “structure” or “agency”.

A second anchor is the material-expressive axis. Components do not line up neatly as “material things” versus “ideas”. Rather, every component can play variable roles between material and expressive poles. Hanseth and Rodon describe this relation as how the material components can include individuals, organisations, and physical structures, while expressive components include laws, contracts, norms, and also non-linguistic expressions such as logos or design features, and most components play both roles at once (Hanseth et al., 2021, p. 136). In the same vein, Sesay et al. sharpen this into the Deleuzian language of double articulation: a form of content and a form of expression, where the first can be understood as a “state of things” that manifests through connected material operations, while the second is more like a “set of statements” that manifests through linguistic and non-linguistic operations, both functioning in reciprocal presupposition (Deleuze & Guattari, 1987, as cited in Sesay et al., 2016, pp. 6–7).

Sesay et al. also help avoid a narrow understanding of “*expression*” as only language.

They emphasise that sensemaking and meaning move through non-linguistic forms, including what they call a-signifying semiotics, such as diagrams, procedures, authentication processes, and other devices that bear similar meaning without relying on propositional speech (Lazzarato, 2014 as cited in Sesay et al., 2016, p. 9). As the announced infrastructure generates different statements, the same statements start taking procedural and technical mechanisms, materialising different forms such as environmental impact assessment categories, compliance checklists, standards, metrics, and accounting conventions that translate claims into auditable traces that express the components that participate in stabilising, delimiting, and legitimating the assemblage.

Within this ontological take, we understand an assemblage as a part-to-whole relation in which the properties of the whole do not reduce to the properties of the parts and vice versa, while the capacities of the parts only become visible when relations activate them. Irreducibility and decomposability as defining features make the assemblages avoid totalization and instead consolidate heterogeneous elements into a consistency that can always change as relations change (Deleuze & Guattari, 1987, as cited in Sesay et al., 2016, pp. 4–5).

The why assemblage theory for this discussion becomes clearer when the HDC is treated as an infrastructural becoming rather than an isolated facility. Large-scale digital infrastructures as systems with renegotiated boundaries, long-term evolution, and loosely coordinated action among many autonomous actors propose “*architecture-governance configurations*” as an intermediate-scale assemblage that regulates their implementation and operation, also coevolving with the infrastructure itself (Hanseth et al., 2021). In other words, the HDC governance arrangements, decision rights, standards, contracts, and interconnections that make the infrastructure operational and politically permissible. The controversy then concerns how that configuration is assembled, who is enrolled, and what kinds of stabilisation are possible. This resonates with the HDC controversy in Talavera de la Reina because coherence will not emerge automatically from formal planning procedures or corporate investment alone. It must be produced through continuous negotiation among water resources, political actors, environmental concerns, cloud firms, local associations, technicians, land, regulations, and climate change, and through the practical work of aligning these heterogeneous elements in ways that hold long enough to enable action. Adding to this discussion, Kitchin et al. (2014) provide additional specificity on how discursive and material elements congeal in data-intensive domains. They define a data assemblage as a socio-technical arrangement in which the technical stack embeds a data architecture. In contrast, a contextual stack gathers discursive and material elements that shape how the system is built, maintained, and justified over time, and that define what becomes “*possible, desirable and*

expected” in a given domain (Kitchin, 2014; Kitchin et al., 2025).

The second analytic move is to treat territorialization and deterritorialization as ongoing rather than episodic. In DeLanda’s terms, territorialization sharpens the boundary between an assemblage and its outside context, and coding stabilises by formalising relations through contracts, specifications, and regulations (DeLanda, 2006, as cited in Hanseth et al., 2021). Kitchin et al.’s account of planning data ecosystems offers a parallel dynamic: interconnections depend on seams, standards, and protocols, but frictions and vulnerabilities can fragment the ecosystem, and endogenous institutional politics can render relations precarious or conflictual (Kitchin et al., 2025). This provides a way to analyse how cloud scalability and platform logics can deterritorialise different ways of accountability across jurisdictions, even when local actors attempt to reterritorialise the data centre through zoning tools, procedural constraints, or community mobilisation.

The third move is to treat different made promises as mechanisms of stabilisation, and to analyse their failure modes as assemblage dynamics rather than as simple “broken commitments”. Coding and homogenization can align actors, standards, and justification practices, and interlocking can deepen dependencies, making the assemblage harder to reverse (DeLanda, 2006, as cited in Hanseth & Rodon, 2021, p. 136).

Nevertheless, returning to Sesay et al. (2016), the idea of understanding territorial units as methodological givens matters to the controversy in Talavera de la Reina because the “context around the announcement” cannot be reduced to either corporate discourse or local impacts alone. It takes shape as a historically contingent configuration that links land, water, planning categories, institutional procedures, and situated ways of life into an emergent whole. The same point supports the methodological implication that a proposed HDC should not be treated as a single “*project object*” that later meets an external “*social environment*”. The project becomes one component among many, and it can also become a site where new relations consolidate and where previously separate assemblages interpenetrate.

As a final point, assemblage theory supports a stance toward the “context” itself. Kitchin et al. (2025) note that the study of assemblage theory can drift into describing what exists while losing sight of wider political-economic forces, resistance, and alternative visions. They argue that being critical requires contextualising how assemblages get produced and what they do in reproducing or contesting dominant relations (Kitchin et al., 2025, p. 4). Territorialisation is perhaps the most significant concept in assemblage theory and refers to the process through which things become relatively fixed in the long term (DeLanda, 2022). As an assemblage territorialises, it acquires a temporary order, either a scientific paradigm, a technical system, or a policy scheme. To provide an example, a dominant water infrastructure,

such as a dam, is not just a structure of concrete but a stabilised assemblage including water management institutions, legislation and norms, practices of use, narratives of culture, and certain imaginaries of both the flowing water and the built structure. Such stability is always provisional. Impulses from new technologies, changes in the law, or shifts in public sentiment can initiate de-territorialisation, for the assemblage becomes incoherent and becomes open to change.

Understanding assemblage theory as a method entails adopting a relational, processual approach to problem-solving, instead of assuming determinate categories. We examine how different factors, such as policies, economic interests, or technical expertise, interact to constitute an issue. For example, when studying climate governance, we do not examine different agreements and laws but also how activism, scientific research, economic interests, and media narratives shape climate policy. These forces work together in a way that provides temporary stability while also allowing for transformation and challenge. Assemblage theory draws upon STS principles of relational and situated knowledge. This helps us realise that problems are not merely provided but constantly appear and are remade through interactions among disparate domains. By doing so, we are in a position to understand how sociotechnical realities are made, sustained, and transformed over time.

4.3 Promises, expectations and the politics of the future

Infrastructure has always been linked with promises of progress, such as dreams of development, modernity, and economic growth. However, as Anand et al. (2018) explain, infrastructure is not only composed of material artefacts; it also embodies expectations and disappointments, and of power. From this perspective, we cannot consider promises without examining what the expectations are. Expectations are not neutral forecasts existing outside sociotechnical worlds. Instead, different actors use them as practical devices to make uncertain futures manageable in the present. In the sociology of expectations, expectation statements guide attention, justify investments, and coordinate efforts across organisations that otherwise lack a stable centre (Borup et al., 2006; Brown et al., 2003; Brown & Michael, 2003). A succinct summary captures this: “*Expectations are part of the world of action: they incite, block, justify*” (Borup et al., 2006, p. 3). Expectations also operate through time, as Brown and Michael demonstrate. They show how actors constantly interpret the future through the lens of the past and the past through the lens of the future, treating expectation work as both prospecting and retrospecting (Brown & Michael, 2003).

At the same time, rephrasing Joly & Le Renard (2021), the literature on the emergence of sociotechnical promises concentrates on theories and cases of how technologies emerge

and stabilise, rather than on the infrastructures that make these technologies possible in practice. In other words, infrastructure is one part of the sociotechnical promise, but other components are overlooked in these discussions. Here, the concept of Regimes of Economics of Techno-scientific Promises specifies how this future-oriented work gains institutional thickness. Joly treats regimes as stabilised sets of formal and informal rules and routines that organise the construction of collective futures in economic and legal domains, involving exploration and experimentation that connect to investment in the circulation and accumulation of resources (Joly, 2010). Promises become coordination mechanisms that draw heterogeneous actors into a shared project, not only by persuading them but also by aligning their actions and funding (Joly, 2010), thereby linking promises to materiality.

The concept of sociotechnical imaginaries (Felt, 2015; Jasanoff & Kim, 2013) becomes more concrete when we analyse it through regimes of promises. Joly describes sociotechnical imaginaries as visions of a good society embedded in socio-technical networks that mobilise resources via future-focused coordination (Joly, 2010). Encoding in this context involves practical efforts, with promissory actors carrying out this work through problem definition and enrolment. A promise usually relates to a pressing, widely recognised problem because urgency boosts legitimacy and expands the coalition that can be persuaded to accept constraints now for benefits tomorrow (Joly, 2010). Joly emphasises that promises must withstand scrutiny across different arenas, from core specialists to broader publics, and actors often naturalise technological advances to make trajectories appear inevitable and difficult to oppose (Joly, 2010).

Also, the sociotechnical imaginaries and the regimes of expectations rely on a collective understanding of what came before. Memory acts as a symbolic framework that establishes the limits of the possible and provides the necessary resources for political action (Verovšek, 2016). This framework shapes the specific expectations people hold for new technological systems. Contemporary infrastructure functions as a communicative system that manages and organises these shared meanings (Gjoçi, 2025). Political actors use these historical narratives to ground their imaginaries in a sense of continuity. They build legitimacy for new promises by linking them to existing cultural identities, and so the past becomes an active resource for engineering the future. Physical infrastructures embody specific promises of progress and industrial growth, but they often carry the *"memory of lost futures"* (Dawney, 2021). This concept describes how the material remains of past projects persist in the landscape even after the initial dream ends. These sites serve as memory infrastructures that allow communities to amend their pasts while navigating new sociotechnical goals (Gjoçi, 2025). The material presence of a power plant or a city grid acts as a "residual cultural and

material resource" for world building (Dawney, 2021, p. 405). This persistence creates a future anterior where we remember what the future was supposed to be. These structures then provide the ontological conditions for how people live after the peak of high modernity.

The politics of memory functions as a research paradigm explaining how the past exerts power over current political life (Verovšek, 2016). Modern infrastructure projects must navigate these existing layers of meaning to succeed. Communication systems actively amend our pasts to facilitate these new futures, but the ghosts of old progress still haunt our expectations (Gjoçi, 2025). This material persistence turns the ground beneath us into a script for what comes next. Dawney (2021) argues that these infrastructures provide the limits for emergent ways of living. These memories serve as the bedrock of regimes of expectations and define the boundaries of what society considers a credible promise. This interaction ensures that every new technical promise must first settle its debt with the memories embedded in the soil (Verovšek, 2016).

One of the many roles that promises have is stabilising assemblages but also destabilising them by narrowing options and provoking counter-work. Joly emphasises that promissory narratives define both the desirable futures that innovation supposedly brings into being and the adverse futures it helps to prevent, and that these narratives can generate counter-narratives and socio-technical controversies (Joly, 2010). Destabilisation results from breadth: the broader the claim, the larger the set of actors and values it touches, so opposition is more likely and more diverse (Joly, 2010). At the same time, promises can produce irreversibility. They turn discursive commitments into alliances, artefacts, and organisational routines, making it harder to sustain alternatives without early support (Joly, 2010). This dynamic also aligns with expectation studies that describe cycles of enthusiasm and disappointment when projects require belief and resources long before outcomes are delivered (Borup et al., 2003; Brown & Michael, 2003).

Joly and Le Renard expand this specific contextualisation by arguing that techno-scientific promises succeed when they align with the regimes of historicity they are embedded in (Joly & Le Renard, 2021). They contrast a modernist regime, where progress provides a strong baseline and the future appears open and hopeful, with a presentist regime, where the future becomes fragile and is often portrayed as a threat (Joly & Le Renard, 2021). In this presentist context, techno-sciences face increased contestation over risks and irreversible impacts, meaning promissory work must also restore an expectation horizon amid doubt (Joly & Le Renard, 2021). They argue that promoters respond by exaggerating their promises, partly to renew their role as future entrepreneurs, thereby heightening rather than diminishing contestation (Joly & Le Renard, 2021).

Visions of the future also gain meaning through place-specific politics of knowledge and governance. Goldman and Turner argue that environmental knowledge is multiple and situated, yet certain formulations travel widely because power and institutional prerogatives stabilise particular narratives as truth and marginalise others (Goldman, Mara & Turner, 2011). They emphasise the packaging, translation, and transport of knowledge, viewing production, circulation, and application as interconnected practices rather than separate stages (Goldman, Mara & Turner, 2011). Rather than merely describing what the future should be, they circulate through institutions, documents, and authoritative platforms, becoming actionable when they enter arenas where decisions on regulation, investment, and management are made. Joly similarly insists that promises must persuade heterogeneous public arenas, so analysts should pay attention to the topology of arenas and the power struggles that occur across them (Joly, 2010).

Critical data centre studies illustrate how various contextualised future visions develop. Edwards et al. (2024) explain to us that data centres become infrastructural objects through their location and emplacement, reflecting decisions and struggles that connect facilities to climates, energy systems, water, land, labour, and political-economic incentives across different levels of administration (Edwards et al., 2024). Their account views data centres as relational, demonstrating how emplacement becomes a site where actors contest the nature and purpose of the infrastructure. In these debates, developers and supportive officials regularly highlight promises of clean energy, new jobs, and economic diversification or revitalisation to justify projects and gain local acceptance (Edwards et al., 2024). These visions are effective because they frame the facility as a public good and align it with local desires for prosperity and stability, even as the facility reorganises resource demands and governance relations (Edwards et al., 2024).

Different visions of the future can therefore lead to different assemblies and influence contestation at various scales. Joly points out that techno-scientific promises operate through multi-level dynamics, with general promises at higher levels interacting with many lower-level promises, and where failures at lower levels can destabilise broader imaginaries (Joly, 2010). Edwards et al. (2024) also demonstrate similar nesting in data centre conflicts, where place-based promises of jobs or economic revival intersect with larger categories such as nation, nature, culture, and power. These shape perceptions of what constitutes a data centre and what is viewed as harm or benefit (Edwards et al., 2024). Expectation studies aid in interpreting this as coordination across levels, but also as a site of friction, because actors do not share the same temporal horizons or standards of evidence for what the promised future requires (Borup et al., 2003).

Pollock and Williams present an important institutional layer by showing how promissory organisations help shape and maintain organising visions around technologies (Pollock & Williams, 2010). These organisations reinforce futures through creating evaluations, classifications, and narratives that circulate across firms and sectors, becoming integrated into procurement and investment decisions (Pollock & Williams, 2010). Their work also changes accountability. When actors accept an organising vision, they become answerable to timelines, benchmarks, and evaluative categories that define progress and failure (Pollock & Williams, 2010). This process not only supports promoters but also allows critique, while the same classificatory framework that stabilises a market offers tools for questioning over-claiming, exposing mismatches between promised benefits and experienced costs, and reallocating responsibility across a wider network of actors (Pollock & Williams, 2010).

Taken together, these texts support a theory section that considers regimes of promises as the central dynamic within sociotechnical imaginaries and assemblage formation. Promises stabilise assemblages by translating imaginaries into projects that pass credibility and legitimacy tests across different arenas, and by enrolling heterogeneous actors and non-humans into socio-technical arrangements that can persist over time (Joly, 2009; Joly & Le Renard, 2021). Conversely, promises destabilise assemblages when inflated claims lead to cycles of disappointment, when broader narratives spark counter-narratives, and when presentist conditions intensify contestation over risk and irreversibility (Borup et al., 2003; Joly & Le Renard, 2021; Joly, 2009). Applying this to an empirical context requires a concrete analytical strategy, allowing researchers to trace the promissory repertoire by focusing on different issues, benefits, urgency, and credibility devices such as platforms, expertise, naturalisation, material enrolments related to resources, infrastructures, and regulations, as well as the scale shifts through which visions travel and become contested (Edwards et al., 2024; Goldman, Mara & Turner, 2011).

5 Material and Methods

5.1 The data centre as a research site

As this research focuses on Talavera de la Reina, Spain, as a site where the construction of a HDC has sparked significant sociotechnical controversies, I approach the “Data Centre Announcement” as a research site because it helps to reveal how a potential corporate future becomes credible in a specific location. Here, I draw from Critical data centre studies, a field that views the data centre as a focal point where it is possible to translate “the cloud” into different elements such as land zoning, permits, grid connections, and public narratives, making the project discussable and governable (Edwards et al., 2024). Promissory talks attempt to embed themselves in local histories and material constraints that different actors must address publicly. As Edwards et al. (2024) mention, data infrastructures “*exist in tension with local histories, environments, communities, and publics*” (Edwards et al., 2024, p. 430). I follow built tension as a methodological cue because it guides me to identify the concrete moments where claims about revival meet questions about water, energy, and land within the assemblage.

I approach the “promise” in question as something that actors assemble rather than something the technology “conveys”. As discussed in the previous chapter, the sociology of expectations scholarship around STS is relevant to reflecting on how future-oriented narratives and imaginaries organise investment, shape legitimacy, and discipline doubt, so that the promise functions as a practical instrument rather than a rhetorical one (Brown & Michael, 2003). To complement this, scholars of infrastructure studies argue that promises persist when they circulate through different forms of accountability and temporalities but also fight back when upkeep becomes uneven or contested (Anand et al., 2018). Having these two main ways to understand the topic helps treat the data centre as an arena of struggle, with officials, firms, and intermediaries aligning their storylines, while critics can challenge or test those imaginaries by questioning what the firms offer the community as part of the territorial assemblage. In that sense, the different narratives are used to connect natural resource use and technological development to local economic futures, and they set the terms on which trade-offs become acceptable or unacceptable. Both natural resources and the promises linked to technological and economic development sit at the heart of these controversies because they depend on their continuous flows, yet they often present those flows as neutral, optimised, benign, and bright. As a result of this interaction, critical data centre studies highlight how data centres entangle environmental conditions, energy systems, and governance practices, making resource use both a technical requirement and a discursive

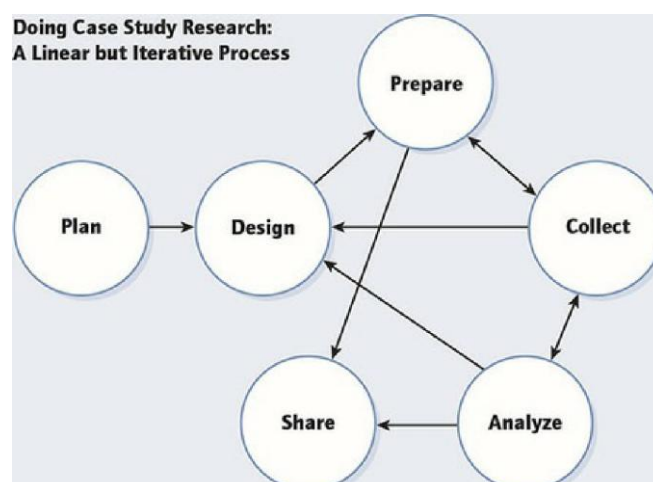
battleground (Edwards et al., 2024; Hogan & Vonderau, 2019).

Thus, the data centre announcement connects promises of local economic revival to a broader political economy closely linked to AI development. Methodologically, this guides me to compare layers of narrative, including corporate messaging, municipal and regional development discourse from various officials and authorities, planning and consultation materials, and local counter-narratives. The points of disagreement used as analytical leverage reveal where the promise needs to be rephrased, where it becomes costly to sustain, and where resource questions reframe what “revival” can realistically mean for different local and regional activists (Edwards et al., 2025).

For this research, I propose a content analysis with a qualitative approach. This considers the researcher's communication with the field and its members as an explicit part of knowledge production, rather than excluding it as a variable. Additionally, it aims to analyse specific cases in their temporal and local particularity, based on people's expressions and activities in their local contexts (Flick, 2007, 2014). According to Yin (2014), a case study seeks to understand real-life phenomena in depth, focusing on important elements of contextual conditions, aiming to answer "What?", "How?", and "Why?"; while also a case study operates within the interplay of subject, object, and medium, always considering the functioning of particular characteristics within a broader context or system.

At the same time, this approach allows me to understand the research exercise not as a linear path, but as an iterative process between both theory and practice. From Yin (2014: p. 31)

Figure 3 – Case Study – Research Design Illustration

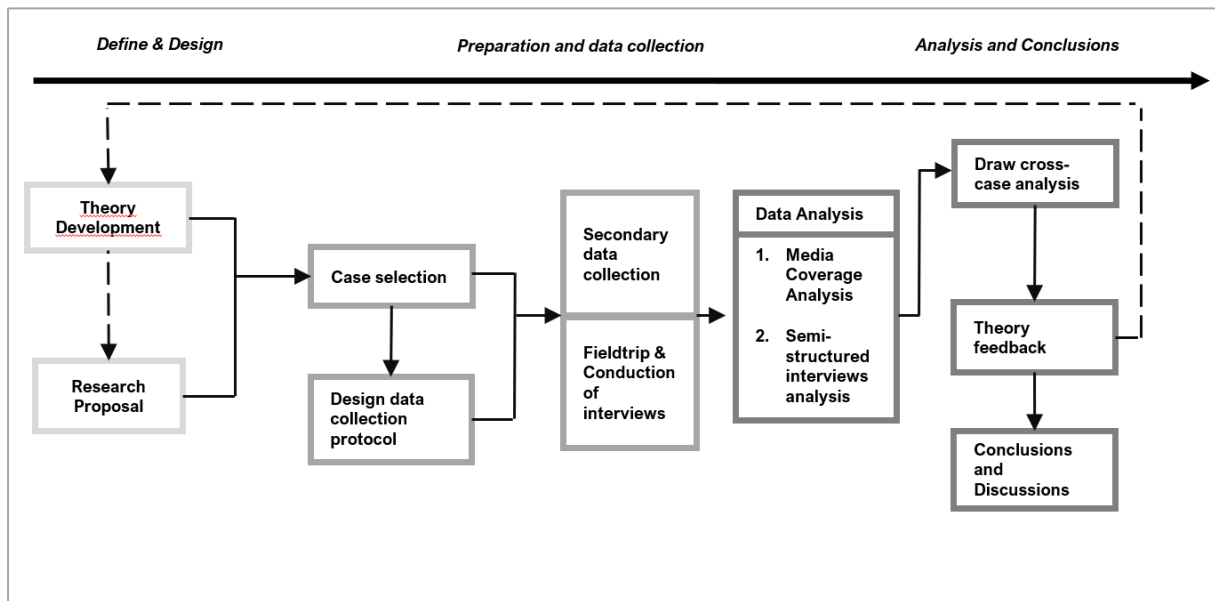


Source: Yin (2014: p. 31)

For this approach, I intended to combine primary and secondary sources with semi-structured interviews involving key stakeholders, including activists from grassroots organisations (e.g., Tu Nube Seca mi Río) and representatives of private-sector entities

involved in the HDC project.

Figure 4 – Methodological diagram



Source: Adapted from Yin (2014, p. 60)

5.2 Exploration on the site – Media coverage analysis

After understanding the data centre announcement as a site of research, my first approach to the site happens through a media coverage analysis. The software I chose to collect, manage, and code for the press coverage analysis is Obsidian, a note-taking application that uses mostly plain text and Markdown coding language for formatting. I chose this option because I could work locally on my laptop, ownership of my own notes and all the customisation options offered with different external plugins. In practice, I had to add two main plugins to make my work pipeline useful: Obsidian Web Clipper¹ for a quick web scraping of the Press articles I would like to analyse, and QUADRO² (Qualitative Data analysis Realised in Obsidian), developed specifically for Obsidian and built under the principles of qualitative content analysis paper written by Gläser and Laudel (2019). The collected data corresponds to press articles, primarily from Spanish websites and some other European ones, from 2018 to 2025. Keywords such as "META," "Data Centre," "Hyperscale," "Talavera de la Reina," and "TorreHiero" were used to filter content about other data centres announced across Europe. The sites are sorted by the publication date of each article, with this information being auto-filled by the plugin in half of the cases and manually filled in the other half. In this way, a list of 75 press releases dating from March 2018 to April 2025 was obtained.

¹ <https://obsidian.md/clipper>

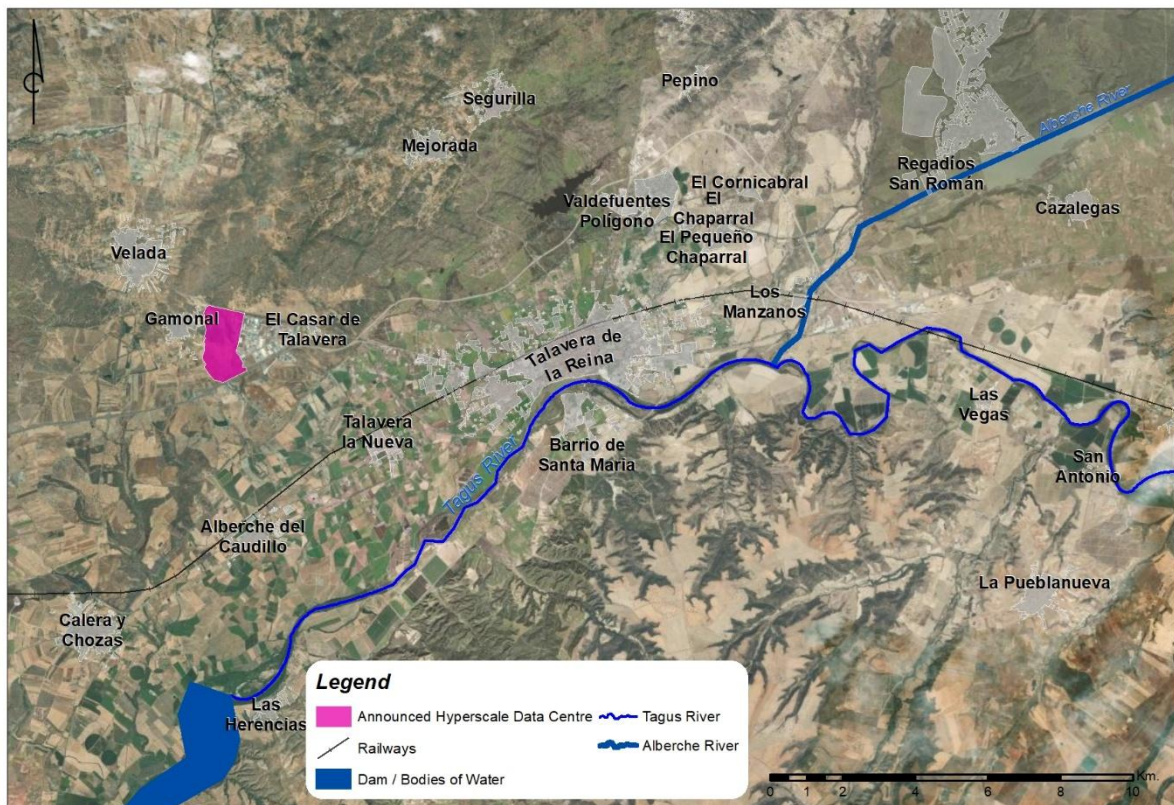
² <https://www.obsidianstats.com/plugins/quadro>

5.3 Field observations in Talavera de la Reina

Because I come from a Human Geography background, fieldwork is important to me. It allows us, as researchers, to connect directly with living territories through negotiations, contestations, daily life, routines, infrastructures, power relations, and experiences that help us understand how the concepts discussed in this thesis are rooted in reality. It is essential to grasp the territory I am exploring and how it responds to us.

My fieldwork took place from 25th to 31st May 2025, during the onset of the extreme heatwaves. Specifically, I visited Madrid to conduct one of my planned interviews, then I spent the rest of my fieldwork in Talavera de la Reina. During this week, I collected a corpus of fieldnotes from my visits to various locations in town and systematic observation, documenting everyday interactions with locals, material settings, and the situational context in which claims about the HDC emerged. Notably, I was lent a bike by one of the environmental collectives I interviewed, which proved extremely useful for visiting the future HDC site, situated 12 kilometres from Talavera de la Reina at the Torrehierro industrial park, as well as for exploring the confluence of the Alberche River with the Tagus. During the site visit, I recorded details about the location, surroundings, local water infrastructure, waterscapes, and the prevailing summer climate.

Figure 5 – Talavera de la Reina and the announced location of the Hyperscale Data Centre



Source: Created by author using data from Instituto Geográfico Nacional (March, 2026)

It is important to note that, coming from a geographical background, I encountered specific ethnographic challenges, such as balancing the urge to map and categorise spatial patterns with the slower process of building rapport, and viewing meanings as relational rather than fixed during my time there. I also had to navigate positionality and access, since the actors often expected technical or planning-oriented questions. Consequently, I had to translate between spatial analysis and the open-ended, reflexive approach that ethnography demands, which also influenced how I shared my knowledge of data centres with my interviewees as they shared their experiences with me. I elaborate more on this in the next subheading.

5.3.1 Semi-structured Interviews

My visit to Spain would be incomplete without interviewing people and organisations I deem relevant to this subject. To this end, I conducted six semi-structured interviews with individuals representing environmental activism organisations or who have participated in the debate surrounding the announcement of Meta's data centre in Talavera de la Reina. The debate about the data centre spans various levels, including national and local scales, as well as in the digital realm, spoken conversations, everyday voice exchanges, and public discussions. The different levels at which my interviewees operate are reflected in their backgrounds, spheres of influence, activist activities, and places of residence. Spatially, I conducted interviews in Madrid, Talavera de la Reina, and online.

I initially contacted my interlocutors via e-mail, referencing the previous analysis of media coverage. At this point, I want to highlight my first interview with the collective "*Your cloud is drying my river*," during which they provided additional recommendations for future interviews. Subsequently, I reached out to most of the remaining interviewees through snowball sampling (Kirchherr & Charles, 2018). The interviews ranged from 50 minutes to 3 hours and were conducted both in person and online.

Table 1 - *Recap of interviews*

Names and/or Pseudonyms	Organisation	N° Interview	Interview Date	Setting
Tu Nube Seca mi Río	YCDMR	1	March 31 th , 2025	Online [Webex]
Tu Nube Seca mi Río	YCDMR	2	May 26 th , 2025	In person
Nacho	Verdebora	3	May 27 th , 2025	In person
Enrique	Verdebora	3	May 27 th , 2025	In person
Rosa	Mesa Recuperación Talavera	4	May 28 th , 2025	In Person
Oscar	Mesa Recuperación Talavera	4	May 28 th , 2025	In Person
LGTBora	LGTBóra	5	May 30 th , 2025	In Person
LGTBora	LGTBóra	5	May 30 th , 2025	In Person
LGTBora	LGTBóra	5	May 30 th , 2025	In Person
LGTBora	LGTBóra	5	May 30 th , 2025	In Person
Luis	Ecologistas en Acción	6	July 8 th , 2025	Online [Zoom]

As my interviewees were situated in different contexts and scales, I decided to use a flexible interview protocol for each session, mainly centred around core topics. These included questions to explore their biographies, the organisation they are involved in, how they established or joined it, and various practices of networking with other organisations (Byrne, 2018; Roulston, 2010, 2015). My questions then aimed to understand their relationship with Talavera de la Reina and the Tagus River, their visions of water, and their perceptions of the arrival of META to the city through the new Data Centre they announced. The interviews took place in different settings and locations, such as in person and online, in libraries, public spaces like parks, near the Tagus River in Talavera de la Reina, and the Manzanares River in Madrid, as well as cafés and main rooms used as offices by some organisations

5.3.2 Coding structure and analysis framework

As mentioned, when approaching the analysis of the data collected, there were two distinct stages in the coding process. The first occurred before the field trip and involved press coverage analysis, while the second took place during the examination of documents and semi-structured interviews. Therefore, I conducted two separate coding processes in this research.

For my initial coding process, I used the note-management software Obsidian, applying thematic analysis to the collected media content. Why thematic analysis? My motivation stemmed from a desire to move beyond a chronological record and explore the substantive narratives and discursive practices associated with many of the actors and items involved in data centre development (Braun & Clarke, 2006). I believed that thematic analysis offers a research method capable of systematically identifying, analysing, and reporting themes (patterns) within my data. It also allows me to critically examine the rhetoric of various actors, such as corporate representatives like META, local and national government stakeholders, environmental groups, and community advocates. The overarching aim was to deconstruct these narratives critically, in order to uncover key political positions, economic arguments, and framing strategies around benefits or costs. For example, I want to explore distinguishable themes between those that support data centres, which are typically framed in the context of jobs, technological progress, and economic investment, and those that oppose their development, which consistently identify problematic water consumption, local power grid deficiencies, and what some may see as potentially speculative real estate practices. Additionally, this method also revealed some of the differences in strategic communications; while corporate press releases often relied heavily on technical jargon, they also included (or promised) aspects of sustainability ("hyperscale efficiency"), while local opposition narratives often highlight themes where water is presented as a public good, and an agricultural advantage.

Later, the coding process involved a qualitative data analysis within Obsidian, following a consistent approach based on the QUADRO method for consistent analysis. The 75 press articles were each recorded as individual notes in Obsidian, with the initial step being open coding of the qualitative data. This involved highlighting and tagging key sentences, phrases, and paragraphs from each article using Obsidian's native tagging system (such as #stakeholder-local-government, #argument-water-usage, #tone-opposition). After open coding, I performed a secondary phase of deductive, axial coding to synthesise subsequent codes, developing a coding scheme to categorise broader thematic nodes prepared beforehand, visualised through Obsidian's graph view feature. This enabled me to see how ideas and themes interconnected in a three-dimensional space, along with the related articles and stakeholders involved (e.g., #stakeholder-local-government, #tone-opposition). The final codes were organised based on whether they related to descriptions and issues in Talavera de la Reina, other regions in Spain, or general aspects of the country's situation. The themes identified included: 1. Political and economic discourse, 2. Technical discussions, 3. Water issues, 4. Activists and community practices, and 5. Others.

For the second part of my analysis, I examined the six semi-structured interview transcripts using a grounded coding approach, drawing on Charmaz's constructivist emphasis on staying close to participants' meanings and allowing analytic directions to emerge from the material rather than from a pre-existing framework (Charmaz, 2006). I imported the transcripts into MaxQDA and regarded coding as an iterative process rather than a single technical step. I reviewed the interviews line by line in the first cycle, focusing on what participants specifically said about Talavera de la Reina. When interviewees shifted to other topics, I set those passages aside and did not include them in the analytic corpus for this thesis.

In the first cycle, I used *in vivo* coding to retain participants' own terms, metaphors, and emphases made, avoiding early abstraction that might smooth out specific language. This often involved coding short segments with the exact phrasing from the interview, especially when speakers condensed broader points into striking expressions or action-oriented descriptions. For example, one participant described the situation in Talavera de la Reina as "[insert verbatim quote from your transcript]" (Interviewee [#], semi-structured interview, [date]). Another framed their experience through the language of "[insert key phrase]" (Interviewee [#], semi-structured interview, [date]). These *in vivo* codes were built directly into MaxQDA's code system and applied consistently across the dataset, enabling later retrieval of all instances of a phrase and analysis of how its meaning shifted across interviews and contexts. I then moved into open coding as a second cycle, developing more analytical labels that could traverse cases while remaining grounded in the interview data (Charmaz, 2006). At this stage, I revisited earlier segments, compared where different *in vivo* codes pointed to the same underlying issue, and consolidated or split codes as the data required. MaxQDA facilitated this process through systematic retrieval of coded segments and by allowing me to test emerging categories against the full set of interviews, checking whether interpretations held across participants or were unique to a single account. This transition from *in vivo* to open coding helped me craft a more cohesive set of concepts that stayed anchored in how people narrated Talavera de la Reina, while also enabling me to articulate patterns in their actions, values, and disputes.

The data analysis process will involve coding the interview transcripts using qualitative content analysis techniques. Initially, codes will be generated from the transcripts to capture key concepts, themes, and patterns relevant to the research question. These codes will then be iteratively refined as new data are collected and analysed, enabling the identification of emerging themes that reflect recurring ideas, perspectives, and experiences across interviews. Additionally, a cross-case analysis will be performed to compare and contrast findings across different interviewees and stakeholder groups. This comparative analysis will

highlight commonalities, differences, and nuances in the perspectives and experiences of government officials, government authorities, and individuals from the private sector. MAXQDA, a qualitative data analysis software, will be utilised to facilitate the coding and analysis process.

5.4 Ethical Considerations, Positionality, and AI Usage

To conclude the methodology section, I should note that I followed Jensen & Laurie's (2016) ethical considerations, focusing on the three main principles researchers should uphold: informed consent, confidentiality, and anonymity. Before conducting interviews, informed consent will be obtained from all participants, ensuring that they understand the purpose of the research, their role, and how their data will be used and anonymised. Additionally, I plan that all the data collected will be treated with strict confidentiality, and measures will be taken to anonymise participants and protect their identities.

Regarding the field trip for my research, I arrived in Talavera de la Reina assuming that its history and identity were deeply entangled with the river. I use the word 'assumption' here as a supposition I held before conducting fieldwork, based on preliminary reading and the city's geographical setting. After my fieldwork and conversations with residents, I developed this idea into a more tangible deduction, a conclusion based on evidence and reasoning. Not only is traditional ceramic made from the river's clay, but it is also part of the locals' narratives. During the interviews, especially in Talavera de la Reina, I began to question and reflect on my role as an interviewer, and on how the knowledge I had already gathered about the topic and META's Data Centre shapes the dynamics I create with my interviewees. Still, the process offers insights and experience in navigating unbalanced access to certain types of knowledge and helps to dispel the idea that everything in research should go as planned. In this sense, I fully agree with John Law (2003, 2004), when he argues that the complexity in all social sciences, or what he calls 'messy' in social science, means that attempts to make this work tidier or cleaner might lead to problems of representation.

Finally, I present the following table to disclose the AI usage during this research

Table 2 - Use of AI

AI Tool	Work Phase	Prompts/How was the AI used?	Reason for Usage	Comment and Reflection on the Results
Grammarly	Writing and refining	I use the Grammarly plugin in Word to improve grammar structure in my writing when I'm missing essential parts of English syntax.	It helps improve my writing speed without affecting my writing style, and I write efficiently without falling into common mistakes that come with not being a native English speaker.	Even though the tool usually gives me good recommendations, I sometimes sense it changes the intent of what I want to say, so I use it carefully.
DeepL	Empirical chapter writing and refining	I used DeepL to translate the quotes from my interviews from Spanish to English.		The results were good enough, considering that I'm not a professional translator.
@ATrain	Transcription of interviews	I used @ATrain to transcribe my interviews. Is a local AI engine in which I was able to select the number of speakers and language output.	I used the tool to save time during transcription. It is also open-source and runs online, avoiding data sharing with other companies.	The output was good enough to work with, but it still needed refinement before stepping into the analysis of interviews.

6 Empirical findings

6.1 Introduction

As I mentioned in the methodology section, I visited Madrid and Talavera de la Reina between May 25 and May 31 of 2025. If I had to describe Talavera de la Reina, I would start by contrasting it with Madrid, where my field trip began, as the differences became increasingly apparent as my trip unfolded. The distinctions are evident from my point of view to the moment of arrival: a train station smaller than Madrid's grand terminals, and pavement repairs that show the imperfect coating of years. As I arrived in the evening, my impression was that the social life centres on bars, cafes, and park benches, but only after the sun has set and the intense heat has decreased. I gained this particular impression because I arrived in the city close to sunset, having passed through several rural towns, or comarcas, as Spaniards call the small settlements in the countryside.

Figure 6 - *Example of red bricks and decorative tiles in a building of the local government*



Photograph taken by author.

The presence of red bricks is prominent in most buildings, and decorative ceramic tiles are widespread, appearing on street name signs, public institutions, commemorative shields,

and civic structures. In Talavera de la Reina, I discovered that this distinctive decoration and the unique use of red brick are made possible by the rich clay deposits along the banks of the Tagus River, the largest river on the Iberian Peninsula. The Tagus is a central landmark in Talavera de la Reina's landscape and history (Martínez González, 2024).

Figure 7 - Decorative tiles at Jardines del Prado park



Photograph taken by author.

Yet, the relationship with the river has been tense since 1979, when the Tagus-Segura aqueduct was inaugurated. As the water volume in the Tagus decreases because of water management policies and negotiations among different Spanish autonomous communities (Morote et al., 2020), the city's economic prosperity (and the sense of belonging tied to it) seems to be diminishing, according to what locals are telling us from the different interviews. The Tagus-Segura Water Transfer³ is one of Spain's most significant hydraulic engineering projects, channelling water from the Tagus basin to the drier Segura basin in the southeast, thereby supporting human consumption and agriculture in regions such as Murcia (Morote et al., 2020). This deviation of water has resulted in less water flowing downstream to towns and cities in Spain and Portugal, ultimately reaching the Atlantic Ocean at Lisbon.

The flow of water has decreased over the years due to a drought that, as my interviewees note, has been ongoing since they were children. They recalled using the riverbank as an indoor beach, an activity no longer possible due to low water levels and

³ Trasvase Tajo-Segura

pollution.

“Our river, our city is closely linked to the river. Those of us who can remember growing up with the Tagus River know that it is the longest river on the Iberian Peninsula, and our connection to the river, to water, could even be understood in terms of its river. Those of us who have lived here have realised that it has become a sewer. - Sewage means a foul-smelling stream, a foul-smelling stream, because of the Tajo Segura water transfer, with the issue of water conflicts that we have here in Spain. - Therefore, this issue is also a matter of dignity and the recovery of our historical and natural heritage, the enhancement of the historical and natural heritage of our city”. (Interview 4 - Mesa Rec. Talavera, Pos. 68)

Figure 8 – The Tagus Basin in the context of the Iberic Peninsula and the Tagus-Segura Water Transfer



Source: Created by the author using data from Instituto Geográfico Nacional (Extracted in March, 2026)

The drought has been severe, and although the winter of 2024/2025 was rainier than in previous years, it was insufficient to end the drought (AEMET, 2024). Paradoxically, in March 2025, the old Medieval Bridge⁴ partially collapsed during a flash flood after one of the heaviest

⁴ Locals in Talavera de la Reina call it “Puente Viejo”, “Puente Romano”, and “Puente de Santa Catalina”. However, the Roman origin of the old bridge has been questioned in recent years. Here, I will call it “Old Bridge – Puente Viejo”.

rainfalls in a century for Talavera de la Reina, a devastating blow to a community proud of its riverine history.

Figure 9 - *The Tagus River with a look at the old Medieval bridge (destroyed in March 2025)*



Photograph taken by author.

Figure 10 - *Historic photo of the old Roman bridge. Photography taken at the Ethnography Museum of Talavera de la Reina*



Photograph taken by author.

Figure 11 - Tagus River from Santa Sofia bridge. May 2025



Photograph taken by author.

Another point is that the city's economic situation is crucial. Talavera de la Reina had a population of about 83,000 people in 2022 (Ayuntamiento, 2023). It has dropped from being the second most populous city in the region to the fourth over the past 10 years, a demographic decline widely seen as a sign of *“economic stagnation of the construction and real estate sectors, a crisis in the private service sector (particularly seen in the retail), a clear demographic decline driven by an ageing population, the perpetual delay in the arrival of the high-speed rail link, the failure of economic recovery measures, and the exodus of the working-age population to the Madrid metropolitan area”* (Escudero-Gómez et al., 2023), that has not recovered since the subprime crisis in 2008. As one of my interviewees says:

OM: This (economic) crisis led to depopulation. In ten years, Talavera has lost nearly six thousand inhabitants to exile. We went from being the second-largest city in Castile-La Mancha to being the fourth. (Interview 4 - Mesa Rec. Talavera, Pos. 70)

OM: - The fourth. We have lost six thousand inhabitants in the city and another six thousand in the surrounding villages, a total of twelve thousand in our town. You cannot understand this city without its surrounding areas, and its surrounding areas without its city. That's how it is. (Interview 4 - Mesa Rec. Talavera, Pos. 72)

This population loss is driven by the outmigration of young people to more vibrant cities

such as Toledo, the regional capital, or Madrid, the national capital. Moreover, Talavera has one of the highest rates of Paro in Spain (a term covering both unemployment and the receipt of unemployment benefits), especially among young people (Abad Liñán, 2019). In response, local authorities have promoted the city as a "*High Technology Incubator*" to encourage economic growth. However, in my interviews and informal chats, I heard little about this initiative. Most people were unaware of what it meant or how such a policy could improve their current economic situation and depopulation issues.

Later on, in October 2024, META, together with regional and local authorities, announced the approval of a HDC named "Campus Data Centre". The project was fast-tracked using an administrative tool called a Project of Singular Interest, or PSI, which stipulated that construction must begin within one year, by October 2025 (Conserjería de Formento, 2024; El Español, 2024; Perea, 2024). However, as of the end of May 2025, I can confirm what locals told me during my interviews:

They sold it to us as... I don't know, with great fanfare, like the miracle of P. Tinto, the miracle of Lourdes⁵. Talavera is going to be saved, and it was madness at the national level and here locally. We're saved. Talavera and its region are saved. But that's not the case. It's not the case because, to begin with, here we are in 2025, and there's no machine to work with. Construction is going to take us ten years, and they sold us on the idea that there would be thousands of jobs, and there may be around 250 future jobs... (Interview 4 - Mesa Rec. Talavera, Pos. 125)

As time passes, the expectations of the Talavera de la Reina inhabitants I spoke to are slowly deflating. Meanwhile, it seems that concerns are growing among activists in Talavera de la Reina about environmental impacts and unfulfilled promises regarding jobs and economic development. Perhaps, it can be called as a sense of resignation about what the near future might hold, as if the city's prosperity and expectations are tightly tied to the flow of the Tagus River and the arrival of different types of investments and political strategies to overcome economic stagnation.

Reaching this point, I would like to recap the formulation of my research question, *How is the narrative of the "promise" surrounding a large technology firm's new Data Centre in Talavera de la Reina assembled, in relation to natural resource use and local economic revival?* In the first section, I elaborate on what is promised and how the promise narrative

⁵ *The miracle of Lourdes*, and *the miracle of P. Tinto* are Spanish sayings, meaning that people are waiting for miracles that would never happen. Specifically, the idiom "The miracle of P. Tinto" refers to a 1998 Spanish surrealist comedy directed by Javier Fesser.

circulates widely in the public opinion. Towards which public/audiences is it addressed, and to distinguish the main elements of what is promised by the HDC announced until today. In the second section, I outline the *data centre as a site of negotiation* regarding the circulating promise. Moving from a narrative media coverage to focus on giving voice to the actors I interviewed, I find that what is promised is not static, but is actively being reshaped, legitimised, and challenged by the assemblage of local actors and activists, with the Tagus River as a central part (material and symbolic) of this controversy.

6.2 Promises circulating. The announced arrival of a Digital Giant in Talavera de la Reina

In 2013, Brian Larkin elaborated on his essay “The Politics and Poetics of Infrastructure”, exploring how infrastructures are both material and symbolic. He discussed not only technical systems but also social and cultural formations that facilitate the circulation of goods, resources, people, and media. They affect how life is organised, carrying not just utility, but also its aesthetics, affective dimensions, promises, and deferrals (Larkin, 2013). The announcement of Meta's HDC in Talavera de la Reina exemplifies this type of material-symbolic mediation, where economic and political narratives are taking shape in this Castilian-La Mancha city.

One of the earliest ideas conveyed through media coverage, and a recurring theme, is the framing of the new Data Centre as a transformative investment that exemplifies the convergence of global technological capital with regional development ambitions amidst demographic and economic challenges. It was approved under a fast-track spatial planning instrument known as "Project of Singular Interest" (PSI) by the regional government in October 2024 and was presented as a catalyst for modernisation and prosperity. However, the project's trajectory in press coverage reveals a dynamic and contested process, in which the initial grand promises have been gradually reshaped by various forces, including technical, environmental, and social pressures, as well as ongoing negotiations.

6.2.1 Big announcements building big promises

The public story of Talavera de la Reina's HDC begins with a media coverage event: in March 2022, national and local outlets reported that Meta had selected Talavera de la Reina for a large “*Data Centre Campus*”, while the regional administration also eased the approval process. While their corporate news announced a significant investment in human resources and infrastructure in Spain (Olivan, 2022), an early press article highlighted that the project would be disclosed to the public for the first time, following unofficial conversations over the

past months between government officials and the firm.

“The project for the installation in Talavera from META, a company that manages applications such as Facebook, Instagram and WhatsApp, will be made public this Friday following the Declaration of Regional Interest in the project, which aims to provide the multinational with every facility and encourage it to choose the City of Ceramics”. (Muñoz, 2022. ABC.es, id-250423-223143).

The latest quote reflects how things are happening at different scales. With different digital technologies in place, like social networks, with a multinational company landing in Talavera in the city of ceramics, which one could say has nothing to do with the digital, but it is possible to say that we find a cohabitation between the analogue (the city of ceramics) and digital world (the Hyperscaler), and making the cultural sensitivity in the same place as the “*necessary*” investment that the city needs. This opens the path for setting two anchors for later coverage: institutional sponsorship and scale. The announcement indicated that the Castile-La Mancha regional government was not only welcoming the new infrastructure but also adopting a different pace in its administrative processes. It also introduced a notable narrative cue, which is “*Meta chooses Talavera*”. This narrative cue was repeated in later stories, where it was both emphasised and debated.

However, what is a *Data Centre Campus*, and where will it be located? Regional media described that the Data Centre Campus will be in the Torrehierro industrial estate, about a dozen kilometres from the city. One news brief, summarising the Project of Singular Interest (PSI) resolution, stated that the campus “*...will house the company’s operations and information technology equipment used for digital production, data processing, and storage...*” and recapped that it would occupy 191 hectares, of which 102 correspond to the “Data Campus META Center,”⁶ in Torrehierro (2024, CMM/El Español relayed by CMM, id-250421-181431; 2024, El Español, id-250421-193509). In this context, the label “Data Centre Campus” conveys the large scale of the future facility, the different phases of construction, and a sense of permanence. “Campus” spoke as much to adjacency, like roads, fibre spurs, utilities, as to walls and racks.

As a subsequent topic, job promises were prominently featured in the initial account. In March 2022, a piece amplified the stance of Talavera de la Reina’s representatives of the Workers’ Union UGT⁷, emphasising the city’s unemployment and summarising headline

⁶ As a personal note, I assume the order of the words in this case has a typo, but I keep it as it is written in the press article.

⁷ UGT from the Spanish “*Unión General de Trabajadores*”

figures:

“... a project of such magnitude for Talavera, which has been severely affected for years by its high unemployment rate. In this regard, the project would involve the creation of 840 direct jobs for the construction of the Data Centre Campus and another 250 once it begins operating”. (2022, ABC.es, id-250423-223947).

These figures would be revisited over time. In October 2024, regional officials repeated a modified version of the speech, stating that the project would create “250 direct jobs and 300 during the construction phase” (2024, La Razón, id-250421-201800; 2024, El Español, id-250421-193044). As these numbers varied across outlets over time, with the last figure remaining consistent, the underlying purpose stayed the same, aiming to anchor the public attention on employment, while translating a complex technical infrastructure into familiar household metrics of what Talavera de la Reina needs, which is more jobs.

It is possible to say that capital expenditure and timelines were a second pillar of the promise. During autumn 2024, multiple reports attached a price tag and a calendar. A regional press conference put the investment at €750 million and reiterated the job tally (2024, La Razón, id-250421-201800), while months before, it was announced that a €1.000 million investment had been made. Subsequent coverage synthesised the PSI documentation into a long-term plan, explaining that from the turn of 2025, with a ten-year construction schedule, “from 2027 onwards, operations will begin in phases from 2031 onwards, and a steady-state workforce of 250 full-time employees”. (2024, El Español, id-250421-181106). This timeline architecture allowed different media outlets to speak to different audiences simultaneously by offering immediate benefits to construction trades and local services, while also addressing long-term residents who would live with the campus beyond the ceremonial ribbon-cutting.

As the third element of the promise, the announcement of digital connectivity shifts the narrative from specific local benefits to the broader scope of territorial digital imaginaries. The major announcement linked the facility to new regional digital infrastructure under development, supported by both private and political interests. In October 2024, a government spokesperson described “a new high-capacity fibre optic network between the Community of Madrid and Talavera de la Reina that would supply the data centre and, crucially, be usable by others, ‘making the region an attractive location’ for digital activities (2024, La Razón, id-250421-202148). Another outlet echoed this point, presenting the fibre spur as value-added that extended beyond META’s perimeter (2024, El Español, id-250421-194341), turning through it to Talavera de la Reina to be set up as a node in the middle of the data centre infrastructure necessary for economic development.

Also, compatibility with narratives of technological modernity aligns with the site's industrial and well-connected vocation. The early months of coverage also made the project legible through nearby landmarks, with several outlets stressing Torrehierro as a recognisable industrial zone; while other articles were writing that Talavera de la Reina's past designation as a 5G "*Technological City*," is alive again, where Telefónica had piloted use cases since 2018 (2018, DigitalES, id-250423-225048/225122). Rhetorically, the data centre announcement arrived in a city already scripted as a peripheral yet connected place.

At the same time, the announcement narrative maintained a productive vagueness about the build itself as a rhetorical resource. In other words, while most of the media coverage and documents consistently describe the project in general terms, the specifics of the operation remained open, with little mention of the project's scale or the term "Hyperscale", which would bring a better insight into what it would mean to construct a facility like this one. A 2023 summary of the PSI documents noted "*a new design typology*", which made it hard to specify the number and content of phases until detailed design and contract award (2023, La Tribuna de Toledo, id-250423-213544). In other words, it is possible to explain why the calendar stretched to a decade, and it performed the hyperscale as a moving target, modular, upgradable, and iterative according to the contextual demand of services. For this, the data centre's promise would become flexible, as the campus would grow as needs and architectures evolved, with uncertainty about what would be needed in the future, while keeping the infrastructure contained.

This would change when META's own description of its purpose appeared in the press, bringing the announcement down to earth. One piece summarised that the Talavera de la Reina site "*(...) will house the company's IT operations and equipment used for digital production, data processing and storage, enabling it to provide services through META's applications, such as Facebook, Instagram and WhatsApp, amongst others*". (2024, La Razón, id-250421-201913). Such formulations ground the abstract "data centre" in platforms familiar to readers, while implicating a European, or even transnational, catchment of traffic. If fibre tied Talavera de la Reina to Madrid, this line tied it to the everyday user interface.

A key aspect concerns what META and various government officials have presented, what is at stake, and what may concern different actors. Concerning environmental issues, from the beginning, there were circulating counter-promises and, in some articles, as part of the same commitment to responsible modernisation. A recurring figure in discussions of water was "600 million litres of water a year," which appeared in headlines in 2023 and 2024 as the Environmental Impact Assessment progressed (2024, El HuffPost, id-250423-133725). Additionally, by December 2023, reporters noted a technical change: Meta "cut by 24%" by

adopting dry-air cooling technology (2023, El País, id-250423-160730). The announcement phase thus involved an adjustment loop, starting with an initial figure that raised concerns, followed by an engineering revision presented as increased efficiency and sustainability. However, coverage went beyond this. In 2024, RTVE reported that the revised figure would account for “8% of the city's water consumption” (2024, RTVE.es, id-250422-125549). The core of the promise narrative lies in how technical claims, such as cooling design and water optimisation, became central to the messaging, while also promising the main goals of jobs, investment, and connectivity, with a drought-aware approach.

While the grand promise of what META offered to Spain and to Talavera de la Reina is circulating, the regional administration has also promised a complementary measure to speed up the offering. Media reports from 2022 and 2024 presented the project's special status, first as “Declaration of Regional Interest” and later as “Project of Singular Interest (PSI)”⁸ as mechanisms to shorten procedures and assign public land for private use, while maintaining environmental review (2022, ABC.es, id-250423-223143; 2024, El HuffPost, id-250423-133725). The reported push to “accelerate” appears to have been framed for several publics at once. For the firm, it seems to have conveyed a sense of steadier timelines. For local readers, it arguably suggested that the administration was doing something rather than waiting. And at the regional scale, it may have signalled an intention to nudge Castille-La Mancha higher in the queue for digital infrastructure that has historically concentrated elsewhere.

Place-making softened the initial promise narrative, integrating the facility into a project of regional balance and attaching prestige claims to a mid-sized city better known for ceramics than data centres. A local column argued that the announcement could make “*Talavera sees its long-term future more clearly*”, explicitly linking the campus to a second stage of Torrehierro (2022, Cover Talavera, id-250423-224553). Official statements framed the data centre as “*avant-garde/state of the art*” and as a tool for “*Territorial Rebalance*”, positioning Talavera as an alternative to “*traditional production centres in the region*” (2024, La Razón, id-250421-202054), positioning the development of the Data Centre as necessary for overcoming the economic stagnation previously referred to. At the same time, in the same column, it is linked to the Data Centre approval in the industrial site of Torrehierro, the need for the socialist government to stop making obstacles for the approval, and join the efforts of the Populist Party, a right-wing party, to move investment and development forward, implying that innovation and the territorial redistribution of the benefits only happens with right wing authorities.

⁸ Nevertheless, in the normative conduct of the PSI, it is understood that those are part of the same process.

Throughout 2022–2024, the project’s timetable became more defined. One aspect of coverage highlighted immediate actions, such as land acquisition in 2024 and early works in 2025 (2024, La Tribuna de Toledo, id-250423-171413; 2024, El Español, id-250421-193509). Another reiterated the decade-long rollout starting in 2027 (2024, El Español, id-250421-181106). Rather than conflicting messages, these represented layered promises targeting different timeframes: “soon,” “*during the decade*”, and “*when fully built*”, that should be materialised and kept the announcement pertinent across news cycles: each administrative milestone could be seen as fulfilling a previously announced step.

Finally, the announcement clarifies the purpose of the facility and the reasons for its establishment. Most articles explained that the campus would act as a hub for META’s platforms (2024, La Razón, id-250421-201913), while others highlighted Talavera de la Reina’s “strategic location,” revitalising its identity as a connected periphery (2024, El Español, id-250421-174838; 2018, DigitalES, id-250423-225048). These developments positioned the city within broader Spanish debates about the role of hyperscale infrastructure and how an “*Emptied Iberia*”⁹ (Taibo, 2023) can be reimagined without relocating the capital. The story of promise did not assert it could reverse fundamental structural trends by itself. Nonetheless, it implied that Talavera de la Reina might become an enduring hub for daily cloud activity, functioning as the central point for Facebook photos, WhatsApp calls, Instagram reels, and the evolving backend infrastructure that underpins these services.

Taken together, the announcement stage appeared to form a multi-layered pledge: rapid mobilisation now, a development plan spanning roughly a decade, and then routine operation; a campus imagined as both self-sufficient and connected; short-term jobs with longer-term skills development; and a technology story told through platforms people already recognise. Over subsequent months and years, media coverage seems to have repeated, adjusted, and cross-referenced these themes, gradually reinforcing the idea that Talavera de la Reina’s initiative is broad in scope, phased over time, and infrastructural in nature. The story’s durability probably stems from that combination: it relies on figures that can be updated, a campus image that can expand, and a location cast as close enough to Madrid to operate effectively, yet distant enough to matter on its own terms.

6.2.2 Stagnation and deferral of the promise

It is possible to say that from 2024 onward, the Talavera de la Reina data-centre story moves from a declarative stance to a conditional one. Headlines still repeat the scale of the

⁹ From the Spanish “*Iberia Vaciada*”

project, but the coverage swivels to what must happen first, who gets to ask questions, and how long each step may take. Perhaps the promise does not disappear but stretches. In early October 2024, the president of Castilla-La Mancha, Emiliano-Page, set October as the “probable” date for the final start of construction of the data centre, signalling uncertainty (2024, El Español, id-250421-192504). This would be ratified in the approved PSI, while different media outlets described what “approval” means in practice: the project reaches and passes the first legal threshold, but building still depends on subsequent actions, such as the Environmental Impact Assessment approval and PSI approval, and the following purchase of the land (2024, CMM, id-250421-181402).

Additionally, media coverage in autumn 2024 details infrastructures outside the fence line that influence the pace. One aspect highlights a new, high-capacity fibre link between Madrid and Talavera de la Reina to serve the campus and remain accessible to other users, adding another requirement: before the campus can route traffic, the region must provide a backbone spur (2024, La Razón, id-250421-202148; 2024, El Español, id-250421-194341). The PSI synthesis further explores land assembly for these connections. If the purchase fails, the documentation considers expropriation for off-site links. Press reports mention this as an available tool, quietly extending the project’s scope from a single parcel to corridors and easements, areas where negotiations with owners could delay timelines (2024, El Español, id-250421-200517; 2024, El Español, id-250421-200923).

As a key part of the discussion, water becomes the central issue in which contestation intensifies, and deferral is justified through technical revisions. Several 2024 articles revisit the earlier headline figure of 600 million litres per year and recount how the Tagus River Basin Authority warned about consumption levels in a drought-prone context. They also document demands from organisations like SEO/BirdLife for adjustments and compensatory measures (2024, El HuffPost, id-250423-131041). Simultaneously, other reports highlight the administration’s positive environmental impact report and the argument that dry-air cooling reduces anticipated water use, but without specifying which technology would achieve such a reduction. A detailed article in May 2024 notes that the regional government considered the consumption ‘adequate’ after reviewing the data, while summarising the shift to a system designed to use little or no water (2024, El Salto, id-250422-171638). By autumn, articles paraphrase the PSI’s own language to claim significant reductions, “up to 80%”, linked to the altered cooling design, and associate this revision with a lower overall investment of €750 million compared to the initial figure of €1,000 million cited when the project first entered the administrative phase (2024, El Español, id-250421-193131; 2024, El Español, id-250421-193131/compilation).

With those adjustments in the public speech, like practising both warning and recalibration, the shape of how promises are disputed is different. The counterpart of the speech in national outlets are activists and technical voices, warning that water is a regional common, and they press for independent figures and explicit caps. The coverage does not resolve the contention; it records a shift from a headline number to an infrastructural fix and then pauses at the question of verification. National public media describe the wider Spanish debate as one about “*opacity*” and the need for more data for citizens, explicitly arguing that “*the cloud is not such*” because it requires large flows of water and electricity (2024, RTVE.es, id-250422-121744). A later RTVE piece pushes the same line from a governance angle: companies should provide clearer information, and governments should evaluate the real impacts.

Employment numbers, central to the initial promise, face a different kind of debate in 2024 coverage. Activist voices remind readers that data centres “*are not factories*” (referring to the classic understanding of an Fordist-industrial factory) and require “*very little labour*”, so the headline job numbers in politics and the press may overstate everyday change in the labour market. Some reports also mention neighbours who have heard about the job promise and express caution rather than enthusiasm; they acknowledge the figures but highlight uncertainty about who will fill those roles and where workers will reside (2024, La Razón, id-250421-202148). The effect is cumulative, as the job narrative remains, and it's accompanied by reminders that operational staffing is small and specialised, which may limit the everyday impact outside the build-up phases.

Contestation also challenges the instrument chosen to expedite the project. The PSI label is a legal standard, but it carries political weight in the coverage. One interview with an activist argues that declaring a project of singular interest “allows many environmental obstacles to be overlooked,” placing the decision within a group of regional fast-track figures used for other controversial infrastructures (2024, Todo Por Hacer, id-250423-111721). A second article addresses the same point, stating that the PSI “*facilitates*” procedures for Meta’s “*enormous*” campus (2024, El Salto, id-250422-170027). Environmental groups quoted in the dataset go further in their interpretation, suggesting that PSI processes speed up projects that already have political backing. This critiques the sequence of political decision first, technical review afterwards, and directly challenges how the promise moves through administrative milestones (2024, dataset excerpt citing Ecologistas en Acción positions, id-250423-155139).

If water and legal instruments define the how, the 2024 timeline pieces specify when of deferral. Several articles summarise the PSI to present a decade-long schedule:

construction from 2027 to 2036, with operation beginning in phases from 2031. They also translate that plan into stages: starting with the substation and high-voltage connection, followed by administration and the first data hall, then the second hall, and finally the on-site solar plant (2024, *El Español*, id-250421-181106; 2024, *El Español*, id-250421-180333). The same summaries clarify that the solar park is part of the campus plan, not an external purchase, which involves its own licensing, grid connection, and construction process (2024, *El Español*, id-250421-200923). In narrative terms, the promise of the campus manifests as a series of commitments (which we can identify as electric, normative, civil, and digital), each with the potential for deferral.

Another important point is that not all contestation in 2024 takes the form of formal objections. Some contestation occurs through comparisons of numbers and labels. Several items note that the investment attached to the campus shifts from an initial “€1.000 million” to €750 million as the design updates and the cooling system change. Journalists attribute the difference to alterations introduced during processing and present the new number as the one that anchors the PSI (2024, *El Español*, id-250421-193131). Although this is not framed as a scandal in the dataset, it tempers early expectations and highlights that “Meta chooses Talavera de la Reina” is a flexible, context-dependent idea rather than a fixed specification.

The 2024 pieces that extend beyond the campus perimeter demonstrate that deferral is more than just postponement; it also involves redistributing the future. When *La Razón* and *El Español* describe green corridors, public easements, and drovers’ roads preserved within the 191-hectare perimeter, they are highlighting spatial trade-offs that forecast future use and access, as well as the time needed to implement them on the ground (2024, *La Razón*, id-250421-201823). When CMM and *El Español* report on fibre and power works, they refer to contracts, trenching, and coordination with other agencies. The narrative of “Talavera node” increases in detail, with each detail implying potential delays if any component encounters setbacks (2024, CMM, id-250421-181514; 2024, *El Español*, id-250421-194341).

A second, quieter strand of contestation in 2024 concerns who speaks and how much they know. National features quote academics and activists advocating for transparency and baseline data on water and electricity use. These pieces do not accuse any single actor in Talavera de la Reina; instead, they depict an information environment where promises depend on models and proprietary designs, forcing the public to trust some numbers (2024, RTVE.es, id-250422-121744; 2024, *ElDiario.es*, id-250422-153359). This information politics explains why headlines about approvals often attract comments about “opacity” or “silence”. The coverage highlights the gap between an “approved” project and the public’s understanding of its resource consumption.

Finally, contestation not only diminishes what is promised but also redirects it. The PSI narrative includes mitigation and shared-use claims, green areas, corridors, and an on-site solar plant, placing gains in categories other than jobs. Several media reports state that the new fibre spur will be accessible to all users, potentially attracting various digital activities beyond Meta's servers. This presentation emphasises territorial addition and demonstrates how the promise shifts under pressure from a focus on a single employer to a platform of infrastructures (2024, La Razón, id-250421-202148). Additionally, the 2024 construction plans reveal deferral through specific language. Articles describe approvals, works, and operations using terms like "probable," "is it expected," and "from," and detail phases in the imperative: stage 1 and stage 2, linked to conditions such as grid connections and plant commissioning (2024, El Español, id-250421-180333). This approach enforces disciplined postponement rather than allowing drift. Journalists avoid stating that the project has halted; instead, they depict progress as a series of successive steps. Activists and basin managers interpret these steps through their own frameworks, considering drought cycles, cumulative impacts, and requesting checks at each point (2024, El HuffPost, id-250423-131041; 2024, RTVE.es, id-250422-125916).

Together, the 2024 coverage highlights a phase where the Talavera de la Reina data-centre promise remains, yet is contested and deferred. The PSI accelerates the project's progress legally, while critics describe this speed as politically motivated. The environmental dossier advances, with water serving as the medium for both adjustment claims and verification demands. Land purchases are made, and new rights-of-way outline future conflicts. Fibre optic and solar energy emerge as shared assets, yet also create dependencies that extend operations into the next decade. Residents and activists adjust their job expectations, shifting the story towards infrastructure and connectivity rather than wages alone. The narrative remains cohesive because each contestation leads to a concrete counter-promise: dryer cooling, greener corridors, open fibre. Each counter-promise requires time. This approach keeps the project visible in the news throughout 2024 by revealing its next steps step by step.

6.3 The Contested Promise. Building local assemblages

With a clearer understanding of the promise and its circulation in the Spanish press and media, the plan is to set the stage for how it manifests among people. Instead of being portrayed as a single, unchanged promise passing through time, it is shown as a complex multivalent promise that expands or contracts as it encounters the river, the city, and the rhythms of daily life. People regularly talk about flows in the Tagus and the Alberche, of

riverbanks that sometimes hold and sometimes fail, and of summers when the water moves little due to the declining stream. They also refer to headline job figures and training pipelines that may align or diverge when it matters. Land also appears uneven: some areas fill quickly, while other prepared plots sit idle as different projects queue. Repeatedly, a provisional question emerges: can this promise coexist with Talavera de la Reina's hydrology and the city's social fabric? The Tagus in these accounts is both material and symbolic. It reflects earlier decisions, such as the Tajo-Segura water transfer, and now embodies a new ambition involving servers, cables, and cooling systems. The promise is not fixed; it is continually redefined as neighbours, associations, and environmental groups explore what the basin and the city can reasonably support and translate into lasting benefits.

6.3.1 Legitimacy at stake

As the promise is contested, its legitimacy begins to stumble into different elements that initially manifest as a cumulative burden on the Tagus, and interviewees actively construct that burden through speech. Here, my interviewees describe the new data centre as an entity within a river system already affected by long-standing decisions, bringing those decisions into the present through a compressed historical reference. They make legitimacy tangible, with one of their first points situated on the riverbank. Two environmental organisers lead a simple tour that becomes a test. They start at the confluence and identify recognisable presences to anyone in the city. Then they elevate the scene into a shared memory:

There has been a water transfer scheme on the Tagus River for 40 years now, which takes a lot of water away from us and leaves us with less flow and more pollution. If you add a company that consumes a lot of water and can also pollute or heat up the water, the problems multiply. (Interview 3 Pt1 - Verdébora, Pos. 56).

The sentence may sound like a dramatic warning, but it functions more as an accounting device. It accumulates stresses and questions whether the city should accept another layer without strong guarantees. In doing so, interviewees establish legitimacy through a logic of addition and multiplication, rather than moral condemnation. They construct an argument that the project must respond to existing conditions, not an imagined blank slate, leading to the question: how does a large user fit where water already arrives under stress?

That logic transforms the river into more than a physical resource, with people speaking as if the river holds memory and using that memory to define what counts as “fit”. Members of the Mesa por la Recuperación de Talavera de la Reina narrate the same question through

scenes. They recall a Talavera de la Reina where families used “*los arenales*”¹⁰ and then describe what they see now.

The city had its sandbanks on its inland beach. - Right. - That's gone to hell. - That's gone to hell. - So, to begin with, we've destroyed one of the hallmarks of our area and now we're like zombies, feeling like something is missing. (Interview 4 - Mesa Rec. Talavera, Pos. 80)

This is a way of transforming environmental degradation into a civic diagnosis. The sandbanks serve as a public marker of the city's losses, and that loss becomes a criterion for evaluating new projects. Legitimacy begins when a project's water plan aligns with that tranquillity and accounts for the load of residues. They do not stop at the scene but connect it with a repeated target:

“Yes, minimum ecological flows (Interview 4 - Mesa Rec. Talavera, Pos. 108) ... what we want and aim for, because it is only fair, is to have those minimum ecological flows. (Interview 4 - Mesa Rec. Talavera, Pos. 108)

From that standpoint, legitimacy is established through clear commitments and firm reassurance. Interviewees ground it in a baseline they regard as non-negotiable and express it using a combination of technical language and moral entitlement. The language is straightforward, supported by a history of court rulings and seasonal experience. This approach shifts the concept of “legitimacy” from media settings to tangible thresholds that people can understand. This manner of speaking aligns closely with data and procedures. In one exchange, an organiser asks a straightforward question to gauge trust: “*Do you have any information on how much water he said he was going to consume?*” Then, they look to the basin authority to determine responsibility.

“The CHT Hydrographic Confederation sets the limit on water consumption. What I do not know is whether they will then be concerned, if Meta is established here, with controlling what that water is being consumed for”. (Interview 3 Pt1 - Verdébora, Pos. 110).

This ordering guides interviewees into procedural terrain, and the interviews demonstrate them performing legitimacy work through institutional mapping. They identify who sets limits, who monitors, and who might fail to enforce. This approach highlights the distinction between setting a limit and making that limit meaningful. The interviewee states that

¹⁰ In this case, Arenales refers to areas covered by sand that are used as an inland beach.

a project can meet formal requirements and still lack legitimacy if monitoring remains opaque or if responsibility is dispersed across agencies. Legitimacy depends on administrative follow-through rather than merely on permits being granted. Interviewees then set employment promises alongside what Talavera de la Reina can supply now. They acknowledge the influence of an announcement. One resident describes a common perception, while another offers a cautionary note but leaves the possibility open.

PS: Well, I've seen headlines about thousands of jobs. Maybe it's true, I don't know.

LD: Thousands of jobs were lost, according to the press. If there's a headline, if you look for it, you're sure to find it. Thousands of jobs. Thousands of jobs. (Interview 5 - LGTBora, Pos. 150-151)

The phrase “*I don't know*” could highlight a gap between media circulation and certainty. A participant describes this circulation mechanism rather than addressing the substance. This demonstrates how legitimacy can be created through repetition. The interviewee shows that the job promise is reinforced by its ease of repetition and challenge of verification in daily life. As a result, legitimacy becomes influenced by a media logic that emphasizes scale and drama, while the water question requires specific information and monitoring.

Communication also serves as a hinge that can elevate or diminish legitimacy. That tension clarifies why interviewees treat communication as a hinge that can lift or lower legitimacy, and about this, two activists describe how talk about jobs often drowns talk about water.

“Communication is very important, because people need to be given a summary of the negative aspects, since if we complicate things too much, in the end people won't pay attention. They simply hear that a company is coming that will bring a lot of work, they say, and then it will be less than expected, but no one talks about water consumption”. (Interview 3 Pt1 - Verdébora, Pos. 56)

Analytically, this frames legitimacy as partly rhetorical infrastructure. Whoever controls the summary determines what is considered salient. The activist does not request a flood of detail but calls for a credible synthesis that keeps water visible alongside jobs. Consequently, legitimacy depends on narrative balance and the distribution of attention. If the public story emphasises employment and de-emphasises water, then legitimacy aligns with one metric and overlooks another. Interviewees view communication as a site where the promise is assembled, trimmed, and prioritised.

Ultimately, people tie legitimacy to time itself. They assign announcements to specific years, viewing each as a pivotal moment for Talavera de la Reina. One asks, *"How many years will Meta, Google, or Amazon stay in this city, five, ten, twenty? Just one?"* Another responds with a term for fragile cycles: *"Yes, bubble, that's the word. I think there's a bubble"*. (Interview 5 - LGTBora, Pos. 219). From an analytical perspective, this links legitimacy to temporal accountability. A major infrastructure project bears different burdens at each stage: uncertainty during planning, disruption during construction, ongoing resource use during operation, and potential landscape abandonment or broken expectations upon exit. By invoking *"bubble"*, the interviewee suggests that a promise can inflate rapidly, garner political and social focus, and then deflate, leaving behind costs. Therefore, legitimacy becomes intertwined with credible commitments across all phases. People seek more than a long-term vision; they want contingency plans and assurances that the project will bear the risks it entails.

6.3.2 The articulation of contestation at different scales

During the interviews, people never let the data centre remain at a single scale. There is a discourse that draws on technical files, legal instruments, and broader policy frameworks to examine Talavera de la Reina's future HDC. With local organisations interpreting the city's history of deferred development and its material aspects through the lens of the Targus River to understand the data centre's arrival, we have perspectives that focus on water and express expectations for Talavera de la Reina's future. Aurora's account begins with bodily heat and improvised cooling at home, then expands to hydrology. She states, *"It's so hot we can't stand it... we're spending too much on climate change mitigation"*, and then discusses aquifers:

"Castile-La Mancha has a worse image, but Aragón isn't a great region either because it's still very dry. When you go to Talavera you'll be amazed; people talk about it, but that's just where the river crosses, whereas the rest of La Mancha is dry. Even our ecosystems are dry; we have a very typical type of ecosystem called a wetland, where water flows from top to bottom, but only at certain times of year; if the aquifer is dry, nothing happens. (Interview 2 Pt2 - Tu Nube Seca mi Río - May26, Pos. 5).

The chain follows a straightforward sequence: lived heat, ecological stress, then infrastructure demand. It highlights the transmission of knowledge across different scales and formats. The diagnosis considers issues such as excessive heat, depleted rivers, and the influence of a specific class of data centres on heat and water redistribution within a stressed basin. The data centre is integrated with climate dynamics and local ecology, facing the pressures of the new industry.

On the same vein, Luis approaches through the Spanish institutional instruments and the governance of monitoring the environmental obligations. He insists that environmental approvals hinge on the assumption that the “*monitoring plans*” will be effective and asks what happens if water consumption exceeds limits. In his words,

"But it's techno-solutionism, this image they project of 'We are progress, we bring progress, you are old-fashioned farmers who don't know how to manage your resources, and we are going to contribute much more than we take away'. For me, the most serious aspect of this is that every single environmental impact study has an associated environmental monitoring plan" (Interview 6 - Ecologistas en Acción, Pos. 41).

In this case, the key to success is ensuring the procedure is necessary to keep the promise made. It involves continuously reviewing the file as a dynamic document that triggers actions when specific thresholds are met. In this context, contestation also requires extracting measurable quantities, establishing enforceable limits, and defining clear and meaningful consequences to maintain accountability and achieve desired outcomes.

On a scalar key, organisations operating at the local level function differently from those at the regional or national level. They do not present the centre as an abstract symbol of global cloud infrastructures; instead, they embed it into Talavera de la Reina's history of unfulfilled promises. One interviewee recalls auto-mobilisation and past setbacks, the anticipated arrival of Ford or Airbus in the 80s and 90s and then discusses the present.

There is a lot of excitement surrounding META. On the one hand, yes, but on the other hand, we have to be cautious about everything we are saying and discussing. Because then, here we are in 2025, when they told us that construction on META would begin in early 2025. At the beginning of this year. There is no machine, summer is coming, and there is no machine. The year is flying by. (Interview 4 - Mesa Rec. Talavera, Pos. 144)

In this case, contestation is shaped by the relationship between temporality and materiality. The project is evaluated based on its spatial inscription and the presence or absence of visible interventions. The PSI timeline sets expectations for material transformation within a specified legal period. From this perspective, implementation should manifest as tangible traces in the landscape, such as machinery, construction, fencing, or signage. The interviewee connects the official schedule directly to the site's observed condition. This is reflected in the following quote:

"No, actually, as I said, the PSI states that within the first 12 months – that is, from October 2024 to October 2025 – they were required by law to be in place. Construction

was due to start and, as you say, well, the last time I went past it was about 15 days ago and there was nothing there. Absolutely nothing. So, I don't know, it's the end of May today and there's nothing here". (Interview 4 - Mesa Rec. Talavera, Pos. 145)

The statement links administrative time to local spatial observation. The interviewee interprets the absence of physical traces as evidence of the project's current stage. Contestation manifests in this comparison between the official timetable and the terrain's material condition. Local observation of the site thus becomes a tangible practice through which institutional claims are interpreted and evaluated.

Another environmental organisation, Verdébora, occupies a nearby but distinct space. Their questions are technical, but their footing remains in Talavera de la Reina, criticising META's decision to arrive there. They worry about the fit between climate and cooling,

It makes no sense that in an area with such intense heat – for such a long period of time, from May, April-May to October, when temperatures hover around 30-40 degrees – there is a centre that specifically requires cooling for its servers. It makes no sense. People always look north. (Interview 3 Pt1 - Verdébora, Pos. 103)

To and then admit an information gap, saying that

"If data centres have water consumption in common or each one has undergone renovation. - If the cooling is different, - we don't have that much information. - Of course. - If they all work the same, - all data centres. Or if Meta's are particularly negative. (Interview 3 Pt1 - Verdébora, Pos. 103)

The articulation explicitly addresses uncertainty. They know where to look and cite the CHT as the institution responsible for managing the Tagus's water. They articulate the risk that limits may not be monitored "if Meta is established here". The network here connects Talavera de la Reina's summer temperatures, basic refrigeration logic, and the authority of the CHT. It is a knowledge practice grounded in reading, asking, and verifying, but it differs from that of activists operating on a regional or national scale, who make broader discursive moves.

Another activist group, LGTBora, discusses everyday care for the city and the recovery of Targus. Their focus is on how water practices affect well-being, emphasising the importance of water management. The centre represents one of many factors influencing whether there is scarcity or resilience. The debate remains cautious, questioning if Talavera de la Reina can allocate more water to a high-consumption installation while households and businesses try to conserve. It compares the city's ability to become greener, better shaded, and more comfortable with previous promises.

The two constellations, or scales, interpret the politics of the instrument differently. Aurora describes a regional media ecology that mitigates conflict and an instrument that emphasizes urgency (Interview 1). Luis expresses concern about the effectiveness of corrective regimes when limits are exceeded (Interview 6). The Mesa por la Recuperación de Talavera de la Reina considers the PSI's one-year deadline as a test of credibility. They compile various factors: institutional deadlines, unfulfilled promises, and neighbours' expectations. The focus is on how to make the project responsive to Talavera de la Reina. One approach calls for binding oversight; the other emphasizes visible, timely delivery and direct engagement with officials.

A second difference lies in how each side presents uncertainty. Verdébora and LGTBora acknowledge uncertainty openly, stating, "we don't have that much information" and "I don't have it to hand... I don't have it in my head," and proceed with what they can confirm. Mesa por la Recuperación de Talavera de la Reina recognizes information gaps that could improve their assessment of the data centre's impact by noting, "per year, it is not yet known exactly how much it will be," and finds reassurance in the idea that design changes reduced losses through reuse. This demonstrates a cautious approach, considering whether the project can be adjusted to fit constraints. Conversely, Aurora expresses uncertainty through a demand for proof, placing the burden of demonstration on the proponent and the administration. She highlights the discrepancy between a "*brutal hydrographic stress*" and the increased draw of a hyperscale facility, while Luis emphasizes institutional uncertainty, seeking to see how a plan responds when challenged (Interview 6). Across these approaches, the same publicly available and trusted figures generate different forms of contestation: one focusing on sufficiency and enforcement, the other on prudence and local suitability.

Still, water remains the axis. The press dataset reinforces why. Articles track the initial headline numbers, the CHT's admonitions, and the later recalibration that links to the already mentioned more efficient cooling methods, while noting that Talavera de la Reina's allocation leaves little slack (2023, El País, id-250423-154730; 2023, El País, id-250423-161527). Other pieces stress that EIA approvals view the declared consumption as "*adequate*", which becomes a key talking point for regional authorities (2024, El Salto, id-250422-171638). Mesa and Verdébora absorb these signals and return to a common question: can Talavera de la Reina enforce a cap, and what does it mean in very dry late-summer weeks, when the Alberche has historically struggled? The first constellation answers with oversight design; the second answers with the pragmatics of seasonal scarcity.

There is also a contrast in how each network imagines the city's bargaining position. Mesa reads structural disadvantages, like deindustrialisation, delayed rail promises, low

negotiating power, and suspects that Talavera de la Reina attracts projects when broader incentives align for the firm: “tax benefits... European funding... if I pay less for the land... It’s in Meta’s interest. (Interview 4). This looks like two assemblages of contestation. The first assembles heat, aquifers, legal thresholds, and media dynamics, and uses them to pressure the project into public accounting. The second assembles civic patience, administrative clocks, the CHT’s authority, and neighbourhood expectations, and uses them to pace belief and to insist on territorial fit. Each assemblage links entities that do not belong to the same scale in any tidy way: windows darkened against heat alongside basin governance; a PSI deadline alongside an empty field; the CHT’s numeric cap alongside households’ taps. In both, water makes the links hold. And in both, Talavera de la Reina’s long memory, of hopes announced and then deferred, adds friction.

Finally, both constellations address the same intimate tension: Talavera de la Reina needs options, and each option involves costs. Mesa acknowledges the fatigue of promises and maintains the possibility with “*creemos que sí*” because people want jobs and signs of care (Interview 4). Verdébora presents the consumption numbers straightforwardly and requests only verification. LGTBora proposes small household technologies and public shade as strategies to improve urban livability and resilience amid increasing major usage (Interview 5). Aurora emphasises the importance of hydrological limits first, followed by the politics influencing publication decisions (Interview 1; Interview 2). Luis insists on seeing corrective plans developed into tangible projects (Interview 6). Across these differences, contestation takes multiple forms; it involves connecting various elements, such as laws, leaks, caps, and clouds, to a city aware of the gap between official announcements and actual excavations. Different actors articulate their narratives at different levels. Some engage with specialised knowledge and broad references, while others speak from everyday experiences in Talavera de la Reina. The distinction between these levels influences how contestation is expressed and how data centres are understood, as issues to address, risks to manage, or possibilities to consider.

6.3.3 Reluctant expectations over the new Hyperscale Data Centre

As my field trip is coming to an end, I perceive a tone that is neither celebratory nor fatalistic regarding expectations for the announcement of the new HDC. It is careful and steady, preserving hope while framing it with conditions. I call it “reluctant expectations” because it reflects a posture learned over time, even before the arrival of META to Talavera de la Reina, but shaped by the new data centre announcement, water scarcity, the low flow in the Tagus, and demographic depopulation. People sit with the long build they have seen before, keeping

a hand on the river and an eye on papers that may take a year or more to return.

One strand of this reluctant expectation focuses on time. Three residents discuss the expected duration of a project like this. They do not make predictions; they inquire about the city's reliable timeframe. How many years...? Five, ten, twenty? One asks, and another suggests "bubble" to describe how a sector can rapidly grow and then slow down. I believe there is a bubble, and they are not benefiting from it," he says regarding certain data centres. The exchange does not forecast an exit. Instead, it advocates for creating agreements that account for cyclical changes. This approach ensures the project's presence is not tied to a single timeline, allowing Talavera de la Reina to plan for land reuse or utility adjustments if a slowdown occurs.

Another strand rests on water, and it speaks of plans that must be enforced. An environmentalist recalls a corrective measure that bewildered him: "We represent progress, bringing advancement. You are outdated peasants unaware of resource management, but we will contribute far more than we take". The transcript cuts off mid-sentence, but the intent is evident. When a large user surpasses a threshold, the resulting impact should not fall on farmers and ranchers who already operate with minimal resources. The tone here is not punitive but protective. It safeguards a shared resource and the livelihoods dependent on it. It emphasises that the promise of jobs and activity should bear the costs of maintaining sustainable limits. People also describe how hope sustains them when the river demands so much of them. The Mesa speaks of years of work, court cases, and meetings, without dramatising the effort. They explicitly acknowledge it: *"It's a constant, never-ending struggle over so many years that it takes a significant toll. But anyway, we'll keep at it"*. (Interview 4 - Mesa Rec. Talavera, Pos. 106). The phrase acts as a hinge, setting the tone for how the group intends to proceed if the project advances. It also clarifies why they value transparency. When documents and data are accessible, thresholds are public, and monitoring is regular, staying involved requires less effort. In that environment, hope becomes easier to carry because people can verify claims without chasing them.

Interviewees express cautious expectations by emphasising tangible, practical uses of any investment. Multiple voices highlight the river corridor, mentioning upgrades for potable water and riparian maintenance that prevent floods from eroding banks or clogging stretches with debris. They advocate for improvements that restore the river's livability, viewing these as priority efforts because the river symbolises the area where Talavera de la Reina has accumulated deficits. In this context, hope is rooted in concrete projects, walkable works that ease the fatigue residents have expressed. This perspective also encourages a balanced view of energy and costs. One resident states the project won't turn off home taps but predicts

pressure issues: *"On the bill. So, more consumers, more demand, higher prices"*. (Interview 5 - LGTBora, Pos. 226).

VG: And then there's the issue of electricity, that thing we were talking about earlier, how in Spain we might have energy but no water. But in reality, we've been feeling the pinch of rising electricity prices for years. I mean, every 4 or 5 years, it's like 10 years, the price of the electricity bill doubles, and we're also a bit worried that META's energy consumption might have an impact here too,

PD: On the bill

VG: On the bill. So, more consumers, more demand, a higher bill. (Interview 5 - LGTBora, Pos. 224-226)

The sentence neither serves as a warning nor an endorsement. It simply reminds us that an extra load arrives somewhere for someone. When referring to farms, the speaker locates the issue more locally by naming nearby towns dependent on irrigation that could face reduced incomes if water availability changes. These short lines ground the idea of "resigned hope," keeping it close to the bills and fields.

One additional note on how narratives are situated in Talavera de la Reina concerns the role of timing and information flow. A digital-rights activist observes the rapid progression of large projects and how information influences this pace. She highlights local outlets' reliance on funding and explains that they move at a different speed from defenders of the land. She notes that she expected data to appear quickly in her village, witnessing the emergence of a data centre there. Her comments do not target any particular actor but rather describe a media environment that tends to prioritise headlines over detailed documents. In such an environment, reluctant expectations call for formats that facilitate the sharing and readability of data. The posture does not diminish ambition. Interviewees expect Talavera de la Reina to benefit from a project of this magnitude. They express pride in the local informatics degree. They acknowledge that a substantial construction phase can attract contractors and that ongoing operations can sustain stable employment. They maintain realistic expectations, highlighting internships, tailored modules, and supplier policies that favour local firms. These elements serve as bridges, narrowing the gap between headlines and paychecks in Talavera de la Reina. From their perspective, the expectation relies on thoughtful design rather than slogans.

The same posture treats land as a practical lever. It recognises that plots can fill quickly, making staging and additional parks important. A city with many closed storefronts and a weak green infrastructure seeks a mix that attracts both large and small firms. In this context, the

project can serve as an anchor if it leaves space. Residents talk about “cheap land” as an initial magnet, then quickly consider what follows: the need to reserve space for others and to pace services, ensuring the city remains open. These lines do not dictate what must happen; they highlight what matters if a “yes” is given.

6.4 Assembling friction and the regime of promises

In this chapter, I bring together the strands already touched on: how the promise behind the announcement of the new Data Centre in Talavera de la Reina is spread, circulated, and then contested. I read the interviews alongside the press narratives synthesised earlier to tell a story about scale: how a globally distributed infrastructure integrates into Talavera de la Reina’s river city, and how people here interpret that encounter to envision futures they can pursue. The HDC’s promise involves numbers and adjectives such as investment, jobs, fibre, and infrastructural vanguard while it meets a lived hydrology and civic responses. In the interviews, the Tagus and the Alberche become a central focus, as they anchor the assessment done by the interviewed activists. People evaluate the project against still water in summer, floods at the confluence, and court decisions that have failed to restore the ecological flows of the Tagus River. They also consider the city’s labour market, land availability, and training pipelines. As a result, the promise becomes a set of conditions and guidelines that must align with Talavera de la Reina.

Earlier press coverage, as detailed in previous sections, helped establish this sense of scale. Announcements from 2022 to 2024 consistently highlighted jobs, capital expenditure, future fibre connectivity, and Talavera de la Reina’s modern image as a mid-sized city. This reporting positioned the city on a development map and followed an institutional rhythm, with fast-track approvals under the designation “PSI” phased works, and environmental adjustments aimed at balancing speed with oversight. Starting in 2024, press coverage documented the expansion of the project: water numbers changed with design revisions; land purchases followed PSI; fibre and grid dependencies were mapped over ten years; and journalists used terms like “*probably*”, “*starting from*”, and “*by phases*”, indicating a step-by-step implementation. Interviews then reflected these steps with a local rhythm.

The point is complex. When a project becomes discussable in Talavera de la Reina, it is already being shaped into a specific future before it is introduced to the local environment. This shaping involves different perceptions of credibility. Promoters claim that the project aligns with development policy, industrial strategy, and urban marketing, positioning Talavera de la Reina as a potential site for the future. Residents and organised groups respond to these claims by testing and qualifying them, making judgments about benefits and harms. As a result,

the project's promise remains conditional in practice, even if it is presented rhetorically as unconditional. In other words, local reactions influence the ongoing development process, but have little ability to change the outcome or to request major changes to it.

Friction provides a useful perspective for understanding how landing and subsequent stabilisation occur. Promises do not propagate as smooth messages that retain their meaning; instead, they encounter specific histories, institutions, and material constraints. These encounters generate heat and can lead to new forms of movement (Tsing, 2005; Larkin, 2013). The concept of regimes of technoscientific promises focuses on how futures are constructed in the present through authorised speech, credibility work, and a patterned division of roles (Borup et al., 2006; Brown & Michael, 2003; van Lente, 1993). The interviews reveal that Talavera de la Reina's responses, "yes", "no", and "maybe", depending on who defines the Data Centre, who sets the terms of its acceptability, and who retains the ability to renegotiate those terms as the process moves forward.

6.4.1 Coproducing the promise. Authorisation, credibility work and promissory roles

At this point in my research, a promissory regime, in a broad sense, depends on authorisation, and promises began their development long before their first visible manifestation. Interviews indicate that the process involves a choreography of announcement and endorsement that signals legitimacy in advance. In this choreography, local and regional institutions, such as different levels of government, as well as the media observed, serve as promissory amplifiers. When interviewees discuss the project, they often describe political actors as speaking on behalf of the future and take this stance to run the PSI as a fast track of the HDC. This shifts the promise from a corporate aspiration to a quasi-public expectation. In the sociology of expectation studies, promises become more influential when they move from a single actor's plan to a broader coalition's story about what must happen next (Borup et al., 2006; Brown & Michael, 2003). The HDC announcement in Talavera de la Reina demonstrates a local aspect. Several interviewees interpret the speed and confidence of public endorsement as evidence that the project's terms were established elsewhere, prompting them to seek information they have not been provided with, whether concerning water, land, or monitoring.

Authorisation functions as a form of power that shapes perceptions of what is possible or realistic. The interviews highlight administrative labelling and procedural speeding as components of that authority. Interviewees often focus on practical aspects rather than legal terminology, describing a political process in which the public interest is defined through moral framing. This framing tends to categorise critique as obstruction and channels disagreement

into limited avenues where only certain types of argument are accepted. This reflects how promissory regimes in Science and Technology Studies are described, allocating legitimacy unevenly by designating some actors as future builders and others as obstacles who must justify their positions. In Talavera de la Reina, the regime's effectiveness is evident when the project is presented as evidently advantageous, requiring opposition to demonstrate harm within a technical context and to do so promptly.

Credibility work is directly linked to authorisation and has become a key component in establishing and stabilizing the narratives surrounding promises. Interviews reveal that credibility is not a fixed trait possessed or lacking by large technological firms or government officials; rather, it is actively constructed by actors. Credibility is built through public displays of seriousness and the repeated circulation of numerical claims that are difficult to verify locally. It is also established through the presence of global scale, implying that a hyperscale firm would not choose Talavera de la Reina unless it had conducted thorough due diligence. In promissory economies, numbers serve not only to describe but also to persuade by simplifying complexity into portable tokens (Borup et al., 2006). The friction in Talavera de la Reina arises when people refuse to accept these tokens as conclusive evidence. Instead, they regard numbers as starting points for local testing, based on what interviewees consider Talavera de la Reina's non-negotiables. Water is the clearest example. Some describe the river and its governance history as an archive of previous institutional assurances that did not lead to tangible improvements. When advocates claim they will manage water use responsibly, their assertion is evaluated against accumulated memories of ecological flow disputes, court rulings, and a recognition that formal victories do not always alter hydrological realities. This creates a credibility gap rooted in historical and institutional factors (Jasanoff & Kim, 2013; Wynne, 1992). The promise regime can project control and modernity, but residents' experiences reflect regimes that promised environmental repair yet resulted in administrative continuity.

Promissory roles are divided along predictable lines, with interviews illustrating how those roles are negotiated locally. Political actors speak in terms of renewal and strategic positioning, while the firm communicates through the language of investment and technical inevitability, as residents interpret it. Civil society actors utilise the language of conditionality. They do not simply oppose; they translate, query, and slow down the transition from announcement to inevitability. This approach aligns with concepts of counter-expertise or civic epistemology in scholarship on publics and technology: practical methods for evaluating claims that do not rely on formal authority but require recognition. In Talavera de la Reina, this civic work seeks to reopen the terms of debate, ensuring the promise does not stand alone.

An interview detail illustrates how promissory roles are reinforced through timing. An interviewee explains that public participation windows are strategically scheduled during periods when mobilisation is more challenging, prompting civic groups to engage in rapid, intensive technical and legal efforts. The timing may or may not be intentional, but it is experienced as a technique. This approach makes the regime of promise feel procedural rather than democratic and transforms credibility work into a form of labour that civil society must perform under pressure, while proponents can reiterate broad claims with minimal proof. This asymmetry contributes to the understanding of a promise as a regime (Brown & Michael, 2003; Felt, 2015).

6.4.2 Promises travelling, promises landing, and promises becoming.

The production of a promise relies on specific infrastructures of circulation, such as media outlets, press conferences, planning documents, timelines, and transferable metrics across contexts. The analysed press dataset serves as a circulation infrastructure by standardising the project into recurring motifs such as jobs, investment, accelerated procedures, and regional connectivity, which can persist across news cycles. This prepares the city to accept the project as a defined governance object. It informs readers about the nature of a hyperscale campus and indicates the types of questions deemed relevant. Promises move through infrastructures of circulation, and these infrastructures determine what is considered a “good” promise. In Talavera de la Reina, interviewees describe learning about the data centre through media coverage, public announcements, and everyday conversation in the city. This illustrates that the promise is propagated through official documents and formats that prioritise speed, clarity, and headline legibility. Press narratives influence which terms become prominent: investment totals, job figures, and labels framing Talavera de la Reina as a strategic node. The promise is effective when it aligns with these genres, allowing it to be repeated with minimal contextualisation. Communication channels facilitate the spread of the promise across platforms. The dissemination, though, depends on existing media practices and the narrative's prominence.

The interviews illustrate how repetition functions in practice. Several interviewees describe an early moment when the project's scale became a symbol of recognition and entered local discourse. This symbolic role is significant for Talavera de la Reina because recognition has been limited. If the city has faced economic stagnation and political neglect, being chosen by a globally visible actor can symbolise a reversal, and this perception can enhance the impact beyond technical descriptions. Scholarship on infrastructure explains why this symbolic layer holds influence. Large infrastructures often serve as political aesthetics,

where visibility and scale foster a sense of inevitability and modern identity (Larkin, 2013; Jasanoff & Kim, 2015). The promise made by these projects extends beyond the physical facility; it shapes a new identity for the city.

Circulation is a stage where friction influences the meaning of promises. When a promise enters different social environments, it is interpreted through various questions. In civic organisations, the promise is viewed as a technical and legal matter that requires engagement through decision-making channels. In everyday conversation, it is seen as a moral issue concerning whether Talavera de la Reina merits investment, and a practical matter related to whether local households will benefit. These reactions occur at different points in the reception process, leading to varied interpretations of the same promise. This demonstrates a core principle of friction theory: movement depends on translation, and translation alters perceptions of movement. Different contexts shape how a promise is understood and acted upon. Understanding these interpretations helps clarify how promises function across social settings.

The press synthesis demonstrates how the promise travelled by attaching itself to wider national narratives. Coverage framed the project as part of a broader story about digital transformation and territorial development. This framing positioned Talavera de la Reina as a site where the future could arrive outside the usual metropolitan centres. The national framing scales the project and alters the nature of opposition to it. Residents critique not only a local facility but also oppose the idea of modernisation itself. Civic actors are aware of this dynamic and attempt to focus their critique on specific conditions rather than outright rejecting technology. This approach reflects a strategic adjustment in how local actors engage with circulation infrastructure through tailored messaging.

Circulation relies on platforms. Interviewees describe a strong attachment to the firm's services, which can reduce conflict because users are less likely to oppose something they use regularly. This creates a subtle layer of circulation not easily seen in press coverage. The promise extends beyond newspapers, influenced by the normalisation of platform infrastructure that makes a local facility feel integral to the digital environment. Scholars of datafication and platform capitalism argue that these attachments influence political engagement by framing refusal as a personal inconvenience rather than a collective choice (Couldry & Mejias, 2019). In Talavera de la Reina, critique remains necessary, but it must be careful and practical to be socially recognised.

As the promise develops, it incorporates new elements. Press coverage, as previously synthesised, reveals additional claims concerning connectivity and related infrastructure, serving as side-benefits that expand the project's scope. These additions demonstrate that the

promise becomes modular, capable of integrating new components to address emerging concerns. When concerns arise about extraction, supporters can highlight shared infrastructure. When resource pressure is raised, supporters can emphasise technical efficiency or mitigation strategies. The promise remains coherent because it is a bundle of claims that can be reorganised while maintaining the same momentum. This adaptability allows the promise to evolve alongside technological and social changes. The interviews demonstrate how the promise changes after bundling. It shifts from a projection of project outcomes to a focus on governance, specifically on monitoring, enforcement, and mechanisms to prevent slippage when attention shifts. This change marks a key point in the process. The promise evolves into a question of whether Talavera de la Reina can manage the Data Centre's implementation. The focus shifts accordingly, affecting the project's progress.

6.4.3 Assumptions and governance

Every promise embodies a particular theory of the state, even when it does not explicitly state it. In the Talavera de la Reina case, the promise assumes that the state can manage a highly complex infrastructure while still delivering public benefits. The interviews indicate that many residents accept this assumption and see value in revitalising the city through public institutions. They believe that institutions can play a constructive role. However, their experience of environmental governance often involves fragmentation, slow responses, and contested responsibility. Understanding these perspectives aligns with STS research on the public perception of expertise: distrust tends to stem from realistic assessments of institutional performance, rather than opposition to science or technology (Wynne, 1992). Insights from community engagement highlight the importance of transparent communication in building trust.

Interviewees describe institutional complexity as a recurring issue in Talavera de la Reina's river-related concerns. They note that responsibilities for river maintenance and environmental management are distributed across multiple agencies, which can lead to inaction. This situation is experienced as a lived condition that compels civil society to undertake compensatory efforts. Governance expectations assume that monitoring and compliance will be routine, yet residents report that routine maintenance often fails, requiring public pressure to elicit even basic responses. The situation is structural. It reflects a mismatch between the state capacity envisioned in formal promises and the actual capacity experienced by residents.

The promise assumes that procedural legitimacy equates to democratic legitimacy. If the project follows the correct administrative steps, its acceptability is generally considered

justified. Several interviewees highlight that participation is often limited by timing constraints, technical complexity, and the perception that key decisions had already been made before public input was solicited. This perspective is based on actual experiences of participation. The way participation is organised influences these perceptions.

Hydrology reveals governance issues by exposing the failures of the state. Interviewees describe the river system as a space where legal and policy claims often do not match actual conditions, linking this discrepancy to questions about the legitimacy of new water management assurances. When discussing court decisions, they see law as an intermediate step that relies on enforcement, which may lack reliability without ongoing political support. The governance model implied by these promises assumes that rules alone can manage risks. Public memory associates rules with past failures in ecological restoration, influencing how individuals interpret future water management claims. These perceptions shape ongoing debates about water policy and enforcement.

Another governance assumption concerns economic spillover. The promise presumes that a large facility will generate meaningful local benefits through employment, procurement, and ancillary development. Interviewees consider this plausible but inquire about mechanisms that would increase its likelihood. They focus on training pipelines, job quality, and whether the local labour market can access the expected opportunities. This reflects a practical concern about establishing a governance architecture that links private investment to public outcomes. Without such an architecture, the benefits may remain concentrated elsewhere, while local costs persist. Scholars of infrastructure and development have shown how this pattern often occurs when projects are promoted as transformative without binding local obligations (Larkin, 2013). In Talavera de la Reina, residents' questions demonstrate an understanding of this risk. Further engagement is essential to develop governance structures that align private investment with community benefits.

The interviews reveal a subtle contestation of how the state defines "public interest". Some interviewees describe a sense that public interest language is attached to projects that serve specific economic logics, which can silence alternative priorities such as ecological restoration and slower urban care practices. This contestation demands that public interest be explicitly argued for rather than assumed. Such a demand challenges the promise regime's tendency to treat its future as inherently desirable (Brown & Michael, 2003; Van Lente, 1993). In Talavera de la Reina, friction functions as a refusal of automatic consensus.

6.4.4 Accountability on promises

When the promise encounters critique, it often responds by producing handrails.

Handrails are secondary commitments that support the main promise's progress. They include claims about safeguards, monitoring, mitigation, and shared benefits. Press narratives earlier synthesised demonstrate the development of such additions as the controversy matured, including claims that reframe the project as compatible with environmental care or broader infrastructural benefits. Handrails are a component of promissory governance; they stabilise a future by addressing present doubts without hindering the project's advancement (Borup et al., 2006; Felt, 2015).

The interviews demonstrate that civic actors build handrails differently. They work to transform abstract promises into enforceable conditions by engaging in formal processes, submitting objections, and requesting that specific issues be documented in writing. This represents a form of accountability work intended to make promises auditable. It also shows an understanding that a promise lacking documentation can be politically unstable. When benefits are vague and risks are undefined, a project may later claim success by redefining terms. Civil society interventions seek to prevent this by anchoring projects to measurable obligations. This aligns with the concept known as the politics of inscription, which involves ensuring concerns are embedded into the artefacts that will guide future actions (Latour, 1992; Star, 1999). Such efforts highlight the importance of formal documentation in policy processes.

The interviews reveal why mistrust remains even when handrails are present. Mistrust extends beyond the firm to include the state's ability to maintain enforcement over time. Participants describe everyday environmental issues where formal responsibility exists, but practical action relies on volunteer effort and ongoing pressure. One interviewee summarises this experience in a brief statement.

So, everyone causes us problems, both the CHT and the council. Nobody does anything, only volunteers do. That's what you were asking, who is responsible. In the end, when there's a problem, neither of them does anything. (Interview 3 Pt2 - Verdébora, Pos. 248)

This is a governance diagnosis indicating that formal accountability mechanisms often fail without civic substitution. It also raises concern about whether a high-stakes industrial facility will adhere to its conditions after the initial spectacle fades. Effective oversight depends on continuous civic engagement.

Handrails also create new sources of friction by multiplying the points of potential failure. If the promise includes monitoring plans, the public can ask who monitors, how often, and with what level of transparency. If it adds training commitments, then the public can ask who funds training, who gets access, and how jobs are allocated. If it adds claims about careful water management, then the public can ask how consumption will be measured and what

sanctions apply if thresholds are exceeded. These questions do not necessarily block the project but keep it politically open and threaten the regime's preference for closure (Brown & Michael, 2003; Felt, 2015). The interviews suggest that residents' conditionality often works in this way. It does not always say "stop". It says "*show us how*", and "*show us who answers when*".

Press accounts highlight that opacity became a recurring theme, with journalists emphasising the lack of accessible detail on key aspects of the project. The interviews explain why opacity is politically costly in Talavera de la Reina. When information is limited, people rely on what they can verify, which directs evaluation towards local experience and institutional memory. If institutions have not previously succeeded in ecological restoration, residents may interpret their opacity as an indication that the same pattern will recur. Opacity reflects a distribution of interpretive power that benefits authorised actors. It makes technical critique more difficult, requiring critics to frame their arguments in moral and experiential terms. Accountability intersects with coalition-building; civil society must organise across groups to gain influence because individual associations lack the institutional weight of a large corporate-state alliance. This coalition-building is usually slow and involves effort, but it enables local concerns to spread beyond small activist circles and provides a platform for ongoing engagement rather than isolated protests. Accountability functions as a social infrastructure, involving organisations, trust, and routines of participation. Scholars of public engagement emphasise that these infrastructures influence the persistence of critique over time (Felt, 2015). The Talavera de la Reina interviews illustrate this point.

Still, mistrust persists because residents believe that what has been promised may be reinterpreted later. Promises related to jobs can shift to claims about indirect employment. Promises regarding safeguards can change to assertions of compliance "on average". Promises about transparency can lead to selective disclosure. Interviewees are concerned that the project's narrative will remain adaptable even if formal conditions are in place, due to the political nature of interpretation and enforcement. Conditionality is a form of friction that institutionalises ongoing contestation over what constitutes fulfilment.

7 Discussions

The arrival of the HDC in Talavera de la Reina represents a potentially profound reconfiguration of the territory and its relationship with the global economy, and at the same time, it doesn't. Why the ambiguity? Because the project operates as an infrastructural becoming and assembles heterogeneous elements such as land, water, and national development narratives, there is a constant, reluctant expectation of a promise that will not land in the future, like knowing it will not work and hoping it does. However, the promise of a better future due to infrastructural development is contested in the sense that it should be better; it should offer less friction with the environment and with the specific territoriality of Talavera de la Reina. In addressing my main research question regarding how the promise of the HDC is assembled, I agree with what Larkin (2013) proposes, that the infrastructure functions as a material-symbolic mediation that facilitates the circulation of specific aesthetics and promises, while the State acts as a promissory amplifier and it uses the singular interest status to signal legitimacy in advance and so it naturalizes technological advance as an inevitable path to progress.

Connecting with my first sub-research question, concerning the circulation of narratives in the press, the coordination of societal expectations emerges as a complex endeavour because it requires the synchronisation of different actors across local, regional and global scales, thus, the multi-scalarity of the promissory regime. Every aspect of the materialisation of infrastructure is embedded in a dense social and political formation, and it is critical to understanding expectations for the future (Anand et al., 2018). This coordination is difficult and complex because each actor has different temporal horizons and standards of evidence (Borup et al., 2006). While the promoters use the expectations as statements to gain attention and justify investments, they coordinate efforts across organisations that lack a stable centre (Brown & Michael, 2003), the press narratives act as coordination mechanisms that distil technical complexity into portable metrics such as job figures and investment totals, and they draw heterogeneous actors into a shared project (Joly, 2010). The data centre campus functions as a site where the cloud is assembled through technical design, political economy, and environmental factors (Plantin et al., 2018). In the middle of this, we can consider social life to be a constellation of dynamic assemblages and these formations are shaped by changing relationships among people, materials and institutions (DeLanda, 2022). The announcement of the HDC in Talavera de la Reina enables it, comprising expressive components such as laws and material components such as physical structures (Hanseth et al., 2021). Territorialization sharpens the boundary between the assemblage and its context,

and it transforms the industrial estate of Torrehierro into specialised digital land. This process involves the double articulation of a form of content and a form of expression, in which the state of things manifests through material operations and the set of statements manifests through linguistic operations (Deleuze & Guattari, 1987, as cited in Sesay et al., 2016). This reflection addresses my main research question by showing how the promise is not a singular message but a relational configuration of parts and wholes.

Addressing my second sub-research question on local political arrangement and activist responses, I find that friction produces the encounters that shift perspectives on what is inevitable, and so it facilitates global connection (Tsing, 2004). The encounter between the announced facility and local hydrology produces an adjustment, or an engineering fix, like the dry-air cooling system that becomes one on the handrails of the promissory regime (Felt, 2015). In this sense, scalability is a design achievement, and it allows to the different systems to expand without reconsidering their basic elements, resting on design choices that might simplify the world into units that can be repeated and extended, and it pushes aside what does not fit (Tsing, 2012), which in this case are activist responses to what would be the consequence of the new HDC in the long-term. The scalability enables a sort of frictionless expansion of the digital world through the new infrastructure, and it treats the territory as a collection of standardised resources or commodities available for economic growth. Also, the infrastructure responds to local disturbances by seeking massive water and energy allocations, and these interventions exclude local complexity and naturalise consumption as ordinary progress (Holt & Vonderau, 2015).

However, memory comes into being here. Acting as a symbolic framework, establishing limits of the possible while providing resources for political action (Verovšek, 2016). In Talavera de la Reina, the sociotechnical promise encounters a city with a thick memory of industrial failure and hydrological loss. Activists evaluate the new data centre against lost futures, and these historical narratives ground their imaginaries in a sense of continuity. Infrastructure projects are communicative systems, and they manage shared meanings (Gjoçi, 2025). The physical remains of past projects persist as memory infrastructures, and they allow communities to navigate new goals while remembering what was supposed to be (Gjoçi, 2025). This material presence creates a future anterior where people remember the future of prosperity that never arrived and so it complicates the current promise (Dawney, 2021). The past becomes an active resource for engineering the future and it settles the debt with the memories embedded in the soil (Verovšek, 2016).

Finally, when reflecting on my third sub-research question, how promises are assembled across scales and what futures are imagined. The hydrosocial cycle in Spain is

shaped by political decisions, and these transform water into a resource governed by economic interests (Swyngedouw, 1999, 2013). There is a strong memory of the 1979 Tagus-Segura water transfer, which remains central to local identity, and it influences how residents perceive new large-scale water users (or water infrastructures). Water is more than a fluid substance; it is a contested political landscape, and activists use the memory of the riverbanks to demand ecological flows. Environmental knowledge is multiple and situated, and certain formulations travel because power stabilises them as truth (Goldman & Turner, 2011). This clash of knowledge systems makes the coordination of expectations a site of friction, and so resistance operates as a public pedagogy. Promoters respond to presentist regimes by exaggerating their promises, thereby heightening the scepticism of a public that has experienced the failure of high modernity (Joly & Le Renard, 2021). Also, the material infrastructure produces scalability as a lived condition, and it installs a future into local political time. HDCs signify what data is by materialising the conditions under which data appears frictionless, even though those conditions remain contingent and uneven. This stability is always provisional and impulses from new technologies or shifts in sentiment can initiate de-territorialization (DeLanda, 2016). The coordination of expectations must manage this risk to maintain the stability of the promissory assemblage in the long term.

So, the digital cloud is a territorial project, and its announcement also announces that it will be deeply entangled with the mud and the water of the Tagus basin. The promise is always in the making, and it is constantly renegotiated in the face of local resistance. The coordination of societal expectations is an ongoing practice of maintenance and repair, involving the repair of trust. The state performs interventions to bridge gaps in its own capacity, but these often lead to a privatisation of planning. The big challenge is to coordinate these expectations in a way that is democratic and respects the place's material specificities. The project of scalability attempts to de-territorialise the issue, but the community attempts to re-territorialise it by bringing it back to the river. This dialectic of territorialization shapes the sociotechnical assemblage, and it ensures that the digital future remains a grounded political concern. The discussion thus answers the research questions by showing that the assembly of the promise depends on the alignment of multi-scalar expectations and the navigation of a local memory that demands environmental and social accountability.

8 Conclusions

The announcement of an HDC in Talavera de la Reina serves as an example of how a supposed pivotal moment for the Castilian landscapes works, while it might force a radical re-evaluation of how we understand the intersection of digital infrastructure and regional development. Through this research, I demonstrate that the project is not a neutral technical facility, but a potent speculative object that materialises specific visions of the future while marginalising territorial realities and societal expectations. The arrival of Meta constitutes a new form of infrastructural governance that prioritises private capital over social negotiation, and it reveals deep tensions between grandiloquent political narratives and the material limits of the Tagus River. By examining the practices of mobilisation and the scalar strategies used to justify this investment, this thesis clarifies that the promise of modernity operates through a complex regime of expectations.

8.1 Between different narratives. Progress, Future and Realities of the Empty Iberia

The narratives surrounding the data centre announcement in Talavera de la Reina exist in a state of constant friction, while they reveal a significant gap between the imagined digital future and the lived experience of the “Empty Iberia” (Tejo, 2022). This term defines the long-term trend of depopulation and rural abandonment in the Spanish interior, and it provides the essential backdrop for the government’s techno-optimistic claims. The regional authorities frame the data centre’s arrival as a messianic event, which locals mock with slogans like “Talavera is saved!” to create a sense of inevitability, and a sense of deep-seated scepticism from a population that has witnessed decades of unfulfilled developmental pledges, and it creates a state of “*reluctant expectation*”. Gupta (2018) argues that “*promises by definition are speculative*” and they embody aspirations for modernity while often revealing the harsh tensions between these desires and the actual outcomes. This techno-optimism functions as a form of technological determinism, and it suggests that the mere presence of a high-tech infrastructure will automatically trigger an economic revival. For this, the government presents the data centre as a measure that goes in parallel with the “*High-Tech Incubator*”, and it claims that the project certainly would stop the exodus of the working-age population to a more attractive cities. The State’s mobilisation practices involve the circulation and accumulation of resources to build legitimacy and credibility. They focus on investment totals like seven hundred and fifty million euros to silence doubt and they use these numbers as tools for credibility work.

Also, the first steps in the materialisation of the HDC involve a fast-track process for

economic progress, relying on the PSI to bypass traditional planning timelines. This governance tool endows the investment with institutional viability and it allows the state to declare that the digital future is a matter of public and social interest. But this acceleration marginalises societal negotiation and it forces the territory to adapt to the needs of the global firm. Anna Tsing (2012) observes that scalable designs rely on standardised units and they work by removing the disturbances that would force a redesign. In Talavera de la Reina, the PSI removes the "disturbances" of local planning and environmental debate, allowing the system to land with minimal resistance. The accumulation of promissory resources aims to secure institutional and territorial viability, but it often widens the gap between the official story and the daily struggles of residents.

8.2 Water as a Lost actant in the assemblage of economic revival

One of my central findings in the current thesis is the emergence of an assemblage where water is losing its status as a relevant actor in decision-making processes. The Tagus River is the largest river on the Iberian Peninsula and has defined the history of Talavera de la Reina, but its ecological health is currently at a breaking point. In this sense, the articulation of the promise involves an assemblage of temporal and scalar strategies, and it aligns the agendas of different actors. While politicians promise a thriving future to secure their roles, entrepreneurs fund that promise by adding a layer of sustainability, using dry-cooling systems for the data centre, making the announcement more appealing and presenting the data centre as a responsible user of the environment.

But, this sustainability alignment obscures the material reality of the river, that it's getting drier and drier according to locals, and it treats water as a neutral technical input rather than a shared common. The project is situated near a basin already stressed by the Tagus-Segura Water Transfer, and this hydraulic engineering project has already turned the river into a sewer in the eyes of the locals. Nevertheless, there is a technological shift to dry-air cooling, as a response to local friction, and it aims to mitigate contestation regarding the depletion of the river. But the latest numbers are still far from satisfactory for those who monitor the basin and they suggest that the project takes the water supply capacity to its absolute limit. The resource cycle is being reconfigured to serve the needs of the digital giant and this process involves the territorialisation of global traffic within local pipes. The State, through its institutions like the Regional Government or the CHT, treats the consumption as adequate, and so it ignores the potential for extreme drought in the coming years. The water as a lost actor means that its ecological needs are secondary to the uptime of social media platforms and it prioritises the cloud over the riverbank. The study finds that the legitimacy of the project rests

on technical fixes that do not address the long-term sustainability of the region. So the economic revival is built on a fragile environmental foundation, and it uses the promise of modernisation to justify an uneven exchange of value.

8.3 Suspicion on a New “Welcome Mr. Marshall”, Scalability and its externalities

There is a pervasive feeling that the HDC will go ahead regardless of local concerns, and this reinforces the idea that governance is out of the hands of local activists. The State uses the PSI as a legal formula to facilitate implementation, and so it makes the project very difficult to challenge. This absence of societal negotiations creates a gap between the official authorities and the citizens, and it leaves people to navigate uncertainty on their own. At the same time, it works as a privatisation of the social promise, which reaches the extent where the HDC is framed as the enabler of essential services like healthcare and government operations in the digital world. By promising that the HDC and all the technology behind it, like the cloud or the AI, will modernise these sectors, the government makes the welfare of the city dependent of the arrival of a private firm. The regime of promises create a state of reluctant hope, and it forces the population to accept the investment as one of the only available futures.

In this sense, my study concludes that the case of the announcement of the HDC in Talavera de la Reina represents a modern version of the satire *Welcome Mr. Marshall* (García Berlanga, 1953), expecting locals to welcome the foreign investment without contestation, but with petitions for development, with a weary understanding that the benefits may be selective and transient. So, the project functions as a form of social engineering that seeks to reshape the identity of the city around the needs of platform capitalism. This is a significant step away from democratic planning, and it puts the collective needs of the community at the centre of a profit-driven logic.

On the same vein, on the topic of scalability, the announcement of the HDC materialises its logic, and it aims to expand the digital system without reconsidering the local elements that sustain it. Scalability is not a neutral technical fact but an achievement that rests on design choices, and these choices simplify the world into units that can be repeated. The announced infrastructure translates uncertainty into design requirements, and it reshapes what data is as an object to be defended. The campus in Torrehierro is a managed environment, and it integrates servers and cooling into a single facility to ensure global computational stability. But this stability comes at a high environmental cost and it demands ongoing material conversions from the local landscape. The externalities of this scalability are felt most acutely in the labour market and the resource networks. The initial promises of 840 direct jobs are contrasted with

the reality of only 250 permanent positions. These permanent roles are highly automated and so they do not provide the broad economic resurgence that the city was led to expect. The study finds that the data centre industry is moving toward regions where energy and land are cheap and so it exploits the vulnerabilities of the Empty Iberia. This is a form of green extractivism in which the corporation positions itself as a resource manager while deepening the region's dependence on its operations.

The research concludes that the infrastructural regime of the data centre prioritises the health of the platform over the health of the territory. The privatisation of social promises around the hyperscale facility enables the narrative that digital health and government operations require this specific infrastructure. But this model weakens public power and democracy and it dilutes the role of government in a deliberate attempt to diminish public capacity. The residents are subjected to the whims of profit-driven executives and so they lose their ability to set the goals for their own community. The sovereignty of Talavera is being traded for a place on the global digital map, and the price of this inclusion is the loss of control over common resources.

8.4 Final reflection - Grounding the regimes of promises

The case of Talavera de la Reina pushes the field of STS-Geography to consider how ecologies become mobilised through infrastructure. Larkin (2013) argues that infrastructures operate as semiotic and aesthetic vehicles that store desire and fantasy and so they exceed their technical function. The data centre becomes a symbol of the future even before it processes a single request, and it uses the architectural rendering and the corporate launch event to address the public as subjects of modernisation. But the poetics of infrastructure in Talavera de la Reina also carry the memory of lost futures, and they remind the residents of the unfulfilled dreams of the past. The regime of technoscientific promises gains institutional thickness through exploration and experimentation. Joly (2010) treats these regimes as stabilised sets of rules that organise the construction of collective futures. The promises become coordination mechanisms that draw heterogeneous actors into a shared project and they align their actions and funding. In Talavera de la Reina, the state acts as a promissory amplifier, and it uses its laws to mitigate legacies of neglect and to rectify market failures. But this coordination often leads to a presentist regime where the future is portrayed as a threat, and so promissory work must restore an expectation horizon amid doubt.

Ultimately, to say that the announcement of the HDC in Talavera de la Reina is a site of ideological struggle. The Tagus River and the digital cloud are now part of the same assemblage, and their fates are tied together in a complex web of promises and frictions. The

study concludes that the promise of a digital future in Talavera de la Reina is a significant step in the wrong direction for progressive policymaking, and it hollows out the public capacity of Empty Iberia. The regime of promises must be replaced by a regime of accountability and so the digital future must become a public good once again. Only then can Talavera de la Reina move beyond the shadow of Villar del Río, and it can find a path to a future that is truly its own.

9 Bibliography

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