



Ekonomická
fakulta
Faculty
of Economics

Jihočeská univerzita
v Českých Budějovicích
University of South Bohemia
in České Budějovice

University of South Bohemia in České Budějovice
Faculty of Economics
Department of Regional Management

Master thesis

**Financing of Brownfield Regeneration in the EU
(Germany)**

Author: Emmanuel Gouraud

Tutor of master thesis: RNDr. Zuzana Dvořáková Líšková, Ph.D.

České Budějovice 2018

DISSERTATION ASSIGNMENT

(PROJECT, ART WORK, ART PERFORMANCE)

First name and surname: **Emmanuel GOURAUD**
Study program: **N6237 Regional and European Project Management**
Identification number: **E16912**
Specialization:
Topic name: **Financing of Brownfields Regeneration in the EU (Germany)**
Assigning department: **Department of Regional Management**

Rules for elaboration:

Objective:

The main objective is the economic evaluation of regeneration of brownfields in the European Union (Germany) based on the complex assessment of costs and revenues related to the regeneration of brownfields.

Methodological approach:

The master thesis will be solved in 2 basic levels - The first level of research (theoretical) will focus on the evaluation of development and current state of brownfields in Germany. The second application level focuses: then according to the selected criteria the classification of particular brownfields will follow according to the 1. Development potential; 2. Investment and 3. Class of brownfields (self-developing, passively-development and non-development). The second level will be further realized through the economic evaluation, classification of brownfields from the point of view of economic feasibility of regeneration.

Framework structure:

1. Introduction. Objectives.
 2. Review of literature.
 3. Methods.
 4. Results, potentially discussion.
 5. Conclusion.
- X. References
X. List of Annexes (if any)
X. Annexes

Scope of graphic works: **according to need**

Scope of work report
(scope of dissertation): **50-60 pages**

Form of dissertation elaboration: **printed**

Language of dissertation elaboration: **English**

List of specialized literature:

European Commission - European Structural & Investment Funds
http://ec.europa.eu/contracts_grants/funds_en.htm (Accessed: 19/10/2017)

Hollander, J. B., Kirkwood, N. & Gold, J.L. (2010). Principles of brownfield regeneration: cleanup, design, and reuse of derelict land. Washington: Island Press.

Hula R., Reese L. A., & Jackson - Elmoore, C. (2012). Reclaiming Brownfields - A Comparative Analysis of Adaptive Reuse of Contaminated Properties. Farnham: Ashgate.

Medda, F-R., Caschili, S., & Modelewska, M. (2012): Financial mechanisms for Historic City Core Regeneration and Brownfield Redevelopment in The Economics of Uniqueness: Investing in Historic City Cores and Cultural Heritage Assets for Sustainable Development.

Sustainable Brownfield Regeneration: CABERNET Network Report [online] [cit-12-01-2012] <http://www.cabernet.org.uk/resourcefs/427.pdf>


Tutor for dissertation: **RNDr. Zuzana Dvořáková Líšková, Ph.D.**
Department of Regional Management

Date of dissertation assignment: **31 October 2017**

Date of dissertation submission: **30 June 2018**


doc. Ing. Ladislav Rolínek, Ph.D.
Dean


UNIVERSITY OF SOUTH BOHEMIA
IN ČESKÉ BUDĚJOVICE
FACULTY OF ECONOMICS
INTERNATIONAL OFFICE
Sídelská 13
370 05 České Budějovice (23)
Czech Republic


doc. Ing. Eva Cudírnová, CSc.
Head of Department

Statement

I hereby declare that, in accordance with Article 47b of Act No. 111/1998 Coll. in the valid wording, I agree with the publication of my master thesis, in full form to be kept in the Faculty of Economics archive, in electronic form in publicly accessible part of the IS STAG database operated by the University of South Bohemia in České Budějovice accessible through its web pages. Further, I agree to the electronic publication of the comments of my supervisor and thesis opponents and the record of the proceedings and results of the thesis defence in accordance with aforementioned Act No. 111/1998 Coll. I also agree to the comparison of the text of my thesis with the Theses.cz thesis database operated by the National Registry of University Theses and a plagiarism detection system.

Berlin, 15.08.2018



Emmanuel Gouraud

Acknowledgment

- **Z. Dvořáková Líšková**, my tutor, **J. Ulbert** of the Université de Bretagne Sud, the second reader of this thesis, for their disponibility and also the academic institutions they represent for providing me with this framework.
- **W. Schlömer**, project developer at the Senatsverwaltung Berlin, for his time and kind participation in my work. More generally, I would like to thank all professionals of the brownfield regeneration field that I contacted throughout my work.
- My colleagues from the GIZ Berlin for their patience and kind support when looking for interviews or information but also for helping me with communication in German.
- My family and friends for their continuous support and countless advises.
- And all authors whose literature I read when preparing this paper. They all contributed to extending my knowledge and making this work possible.

Table of contents

| | |
|---|-----------|
| Table of contents | 6 |
| 1 INTRODUCTION | 8 |
| 1.1 Objectives | 9 |
| 1.2 Important terms | 10 |
| 2 LITERATURE REVIEW | 13 |
| 2.1 Brownfield Regeneration in the EU context | 13 |
| 2.1.1 Definitions and typology | 13 |
| 2.1.2 Historical context of the issue in Europe | 19 |
| 2.1.3 Current state of brownfields in the EU and particularly Germany | 21 |
| 2.2 Funding of brownfields regeneration in the EU | 25 |
| 2.2.1 History of funding in the EU | 25 |
| 2.2.2 Current funding framework | 26 |
| 2.3 Evaluating the development potential of brownfields | 28 |
| 2.3.1 Identifying stakeholders | 29 |
| 2.3.2 Criteria that may contribute to accurate decision-making | 31 |
| 2.3.3 The expected impacts of brownfield regeneration | 32 |
| 2.3.4 Lessons from the soft reuse of brownfield | 35 |
| 2.4 Costs-Benefits Analysis | 36 |
| 2.4.1 Risks, costs and benefits of brownfields regeneration | 37 |
| 3 METHODS | 39 |
| 4 RESULTS | 44 |
| 5 DISCUSSION | 53 |
| 5.1 Investment structure and stakeholders | 53 |
| 5.2 Class of brownfield and economic feasibility | 55 |
| 5.3 Development potential | 56 |
| 5.3.1 Development potential based on economic value | 56 |
| 5.3.2 Development potential based on social value | 58 |
| 5.3.3 Development potential based on environmental value | 59 |
| 5.3.4 Development potential based on other items | 60 |
| 6 CRITICS | 62 |
| 7 CONCLUSIONS | 63 |
| 7.1 Proposals | 64 |

| | | |
|-----------|-----------------------|-----------|
| 8 | SUMMARY | 65 |
| 9 | REFERENCES | 66 |
| 10 | LIST OF TABLES | 73 |
| | ANNEXES | 74 |

1 INTRODUCTION

Defining the European Union (EU) newer budget is always a difficult challenge and negotiation. This is particularly true nowadays since it is the first time the EU has to prepare a budget while having fewer member states (since Brexit is soon to be official) than in the ongoing Multiannual Financial Framework (MFF). The United Kingdom, one of the main actors in pushing the EU into implementing a regional policy (with the creation of the European Regional Development Fund [ERDF] as a condition for their membership in the EU), is leaving and regional funding may be at stake. However, regions all over Europe still have difficulties adapting to a constantly evolving environment. Urban areas, for example, need to face urban sprawl, issues linked to gentrification or soils contamination.

The ERDF is one of the main tools in supporting the regeneration of European brownfields and 6% of its funding should be dedicated to sustainable urban development in the 2021-2027 MFF (New Cohesion Policy, n.d.). There are still a large number of brownfields and high financial constraints on public institutions throughout the EU, at the EU-level itself but also at national member states, regional or local levels. Regenerating brownfield is not always seen as a priority and when it is, it is not always obvious what should be done in order to achieve a successful regeneration with positive economic, social and environmental impacts. As Stokes wrote “brownfield redevelopment is about what makes financial sense” and “is not a rescue program for disadvantaged individuals” (Howland, 2007, p. 99). However, brownfield regeneration is key to various EU sustainability issues and which can foster the EU economic development in a broader meaning.

In this constraining context, how to harmonize all aspects of a brownfield regeneration

project and make the best use of the available fundings in the EU context?

1.1 Objectives

The aim of the thesis is the economic (in a broader meaning) evaluation of the regeneration of brownfields in the European Union based on the complex assessment of costs and benefits related to the regeneration of brownfields and on further case study in Germany. Brownfields have been an intense research topic in the EU and globally for the past 20 years. There are nowadays calls for research about the factors favoring a successful brownfield regeneration in order to counteract their “environmental, health and economic” consequences (Green, 2018, p. 310). There is a need to identify more clearly socio-economic factors and dimensions for their successful completion (CABERNET Network Report, 2006, p. 112).

Several useful models were designed in order to prioritize investment by assessing the development potential of brownfields but it should be important to assess the development potential of a particular project on a particular brownfield since every brownfield has potentially a very different optimal use. As highlighted by Loures & Vaz (2018), a contextual approach is a key element and research is becoming much more inclusive and holistic.

To our knowledge, such a comprehensive type of study did not exist in the German context. Also, it helps keeping the knowledge up-to-date as the brownfield regeneration is a constantly evolving field where many parameters can vary a lot. Moreover, it is rare to have qualitative study done on one particular brownfield project. Eventually, the comprehensive approach to economy is original but makes sense in the context of brownfield regeneration, where sustainability is a core component.

For all these reasons, we would like to answer the following research question in this

paper: **Based on literature and the case study of Europacity, how to evaluate the economic dimensions of a brownfield regeneration project in the European context?**

1.2 Important terms

In our research question, there are 3 terms that have to be clearly explained: economic dimensions, context and brownfield regeneration. We will provide you already with the definitions of economic dimensions and context. As the definition of brownfield regeneration is more complex, we will define it based on the section of this work dedicated to literature.

Firstly, our understanding of a dimension is well defined by the Merriam-Webster dictionary: “one of the elements or factors making up a complete personality or entity”¹. When speaking about economic dimensions, we can remark that this term is used in plural in order to underline the particular and broader meaning we intend to give to the term “economy” in this paper. The aim is to understand the complexity of the issues linked to brownfields regeneration. Commonly nowadays, economy implies strictly pecuniary, production or consumption aspects. However, these economic variables have a wide influence on numerous other aspects (e.g. social and environmental issues). This is why in our work, economic dimensions are to be understood in a much closer meaning to the original etymology of economy, coming from the Greek *oikonomikos* which corresponds to household management² (from *oikos* as household and *nomos* as management). This original meaning of *oikonomikos* is very important in our analysis of the subject by implying good management on the long term but not of solely pecuniary aspects. One current and extended definition of economy is to be found in the Oxford Dictionaries: “careful management of

¹ Definition from <https://www.merriam-webster.com/dictionary/dimension>

² Definition based on the etymology found on <https://en.oxforddictionaries.com/definition/economic>

available resources”³ Resources do not include only pecuniary aspects. This comprehensive view of economics is particularly crucial when studying brownfield regeneration. Other authors also have a broader view of economic aspects. For example, Bardos et al. (2016) mention three economic levels: direct financial value, wider economically tangible effects and wider economically intangible effects contributing all together to an “overall value” taking into account all stakeholders’ points of view.

In the framework of brownfield regeneration, this latter definition should be completed with a definition of sustainable development. As CABERNET Network Report (2006) states, brownfield regeneration schemes have to be implemented in a way that helps reaching sustainable goals. Thus, there is a need to focus on increasing social and cultural benefits. Mccarthy (2002) is also convinced that sustainable development is an issue to tackle.

The Oxford dictionaries provide us with a basic definition of sustainable development as “economic development that is conducted without depletion of natural resources”⁴. The most normative definition of sustainable development is the one written by the World Commission on Environment and Development in the Brundtland Report, also known as “Our Common Future”, in 1987: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs”⁵. The paper highlights the needs of the poor (which literally means pecuniary needs but rather implies social or health needs) as a high priority of sustainable development. Usually, sustainability is presented as having three main pillars: economic, environmental and social.

This shows us the importance of tackling the complexity of issues. This is also why in

³ Definition from <https://en.oxforddictionaries.com/definition/economy>

⁴ Definition from https://en.oxforddictionaries.com/definition/sustainable_development

⁵ See the full report <http://www.un-documents.net/our-common-future.pdf>

this paper, even though the pecuniary dimension of economy will have a particular focus, it would not make sense to study solely pecuniary costs and benefits. Brownfield regeneration is a sustainable development issue and therefore transversal. If it was only about direct pecuniary profitability, most brownfields would not be regenerated nor redeveloped. Their potential, their costs and their benefits lie in all the positive externalities their regeneration can have.

Moreover, the term “context” in our research question has to be defined. The definition provided by the Oxford dictionaries corresponds quite well to our use of the word: “the circumstances that form the setting for an event, statement, or idea, and in terms of which it can be fully understood”⁶. This means more precisely in this work taking into account as many geographical, political and socio-economic parameters. In the “context” of brownfield regeneration financing, there is a need to highlight the various institutional layers (EU-level, and in the case of Berlin federal state level and regional level) with which project developers have to deal and also from which they can benefit greatly.

⁶ Definition from <https://en.oxforddictionaries.com/definition/context>

2 LITERATURE REVIEW

2.1 Brownfield Regeneration in the EU context

In this part, we will try to understand what brownfield regeneration means and to assess the current state of brownfields in the various European, and particularly German, contexts. As we are trying to work with most updated material, we will study not only scientific literature but also non-specialized journals articles or governmental bodies press releases and articles.

2.1.1 Definitions and typology

First of all, it is crucial to define the most undefined term of our research question. What is a brownfield and what is a brownfield regeneration project? As stated in the introduction, defining it is rather a complex task.

There are numerous definitions given to what a brownfield can be.

As the issue has been extensively studied in the United States, it is pertinent to start with a non-European definition which could later help us reflect on what the European specificities are. The United States Environmental Protection Agency (EPA) published the following definition on its website: “A brownfield is a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. It is estimated that there are more than 450,000 brownfields in the U.S. Cleaning up and reinvesting in these properties increases local tax bases, facilitates job growth, utilizes existing infrastructure, takes development

pressures off of undeveloped, open land, and both improves and protects the environment” (EPA, 2018)⁷. This definition underlines the contaminated characteristic of brownfields and also gives an estimation of the number of brownfields in the U.S. before describing its benefits. We can remark here that the expected benefits are foreseen to be strictly economic (“local base tax”), mixed (economic and social “facilitates job growth” or economic, social and environmental “utilizes existing infrastructure, takes development pressures off of undeveloped, open land”) or strictly environmental (“improves and protect the environment”). This definition involves directly the sub-mentioned three pillars of development. The social pillar seems to be somewhat missing or underlying.

Green (2018) seems to confirm our feeling when underlining the characteristics of brownfields as “often abandoned, [...] not [producing] tax revenues for taxing jurisdictions”. We can remark that the word “abandoned” is quite vague since it might indicate a site left by the population or by any sort of economic activity. However, as Lee & Mohai (2012), he also considers that the main issue of brownfields lies in the negative externalities they have on whole communities. Green mentions “environmental, health and economic problems” (Green, 2018, p. 310) at stake but tends also not to mention the social component of such projects. Is it simply because it is already implied by the three first ones?

When trying to find a European definition, a searcher has to face many differing definitions. One definition can be considered as “European” however since it is given by the Concerted Action on Brownfield and Economic Regeneration Network (CABERNET). CABERNET is an EU-financed multidisciplinary network that focuses on urban brownfield and multi-stakeholder approach to the issue. It also conceptualized an interesting

⁷ Definition from <https://www.epa.gov/brownfields/overview-brownfields-program>

classification of brownfields projects. CABERNET bases its definition on previous CLARINET work and defines brownfields as “sites that: have been affected by the former uses of the site and surrounding land • are derelict and underused • may have real or perceived contamination problems • are mainly in developed urban areas • and require intervention to bring them back to beneficial use” (CABERNET Network Report, 2006). This definition is particular to the extent that it mentions only derelict land. Once more all three pillars of sustainable development are implied by this definition even though the most apparent one might be the environmental one. The economic pillar is quite obvious even though underlying (“underused”, “developed urban areas” and “beneficial use”) while the social pillar is rather left to be guessed within the economic notions (“underused”, “developed urban areas” or “beneficial use” in a broader sense).

If this definition can be seen as scientific authority in the EU context, many member states have their own definition of what a brownfield may be. I will not enlist them all here but they are to be found in the work of Oliver et al. (2005). However, I will give the definitions for 3 of the most important nations of the EU at the current time and their source as enlisted in the work of Oliver et al. (2005, p. 2): France, the United Kingdom and Germany.

In France: “Space previously developed that are temporarily or definitely abandoned following the cessation of activity and need to be reclaimed for future use. Can be partially occupied, derelict or contaminated.” (Ministere de l’Environnement)

In the UK: “Previously developed land – land which is or was occupied by a permanent structure (excluding agricultural or forestry buildings), and associated fixed surface infrastructure.” (Planning Policy Guidance Note No 3: (PPG3) Housing DETR (2000); Welsh Assembly)

In Germany: “Inner city buildings not under use. Inner city areas for redevelopment and refurbishment.” (Umweltbundesamt Berlin)

Sometimes, these definitions change within countries (as for Belgium where Wallonia and Flanders have different definitions).

A limit to the list of Oliver et al. (2005) is that it is compiled information from CABERNET and CLARINET network experts. Moreover, it has already been published almost 15 years ago and the understanding of the issue could have changed a lot.

When searching for a definition given by the current French Ministère de la Transition écologique et solidaire, we can realize that it is actually hard to find any official definition issued by national authorities. The ADEME (Agence De l’Environnement et de la Maîtrise de l’Energie) makes a difference between contaminated soils & sites and “friches” which tend to be polluted but do not have to be. “Friches” are defined as follows: “land areas, large or small, which have previously been used for industrial or service activities, anchored in the mixed urban fabric, often degraded or even polluted” and which “require special attention when conducting a reconversion project” (ADEME, 2016). In another ADEME document (2014), there is an emphasis on the fact that “these sites also represent real land opportunities” while caring about “the need to ensure sustainable urban development by limiting the extension of cities to peripheral agricultural and natural areas”. Some regions, based on the existing literature, give their own definitions⁸.

I could not find a later definition of brownfield or previously developed land for the UK.

The Umwelt Bundesamt states also clearly in an article that “there is no official

⁸ This document, page 13, contains a definition for “friche urbaine”
<https://ceser.regioncentre.fr/files/live/sites/ceser/files/contributed/espace-public/Rapports/2015/FRICHES%20URBAINES%20en%20CVdL%20150709.pdf>

definition of the term brownfields” and adds that “the term “brownfields” is usually applied to land whose urban development potential is either being under-exploited or not exploited at all. In other words, such areas are unused or underused” (BMU, 2014).

It seems that there is a consensus on the fact that brownfield regeneration has to include the three pillars of sustainability. What emerges from some definitions (e.g. Ademe) is the urban aspect of brownfields.

When it comes to comparing European Union Member States’ or projects’ definitions of brownfields with the American definitions, we can rely on Adams et al. (2009) analysis which is quite similar to ours: “brownfield” usually refers to “potentially contaminated land” in North America while it has a more comprehensive definition in England and Scotland (as analyzed by Adams et al., 2009). This is quite apparent when comparing European and North-American literature on the subject. The latter tends to focus much more on the contamination of places. For example, Green (2008) has done quantitative research identifying the different kinds of contaminations on brownfields in the USA in order to find which contaminations could be reasonably dealt with. Furthermore, Adams et al. (2009) underline the popularization of a new set of words (greyfield and vacant land) in order to cover a broader meaning so that - when comparing both continents - this broader definition of brownfield seems to be quite a European specificity which implements a vast range of possible typologies that can be called “brownfield”.

Furthermore, according to Adams et al. (2009) who led a comparative study between the USA, Canada, England and Scotland, another major difference is also in the importance given to economic aspects of brownfields regeneration projects in the US while in England (and also Scotland), the priority is given to redeveloping housing. Despite the continuous challenges of property market and site-dependent difficulties, Adams et al. (2009) also

highlight the fact that private-sector interest in the issue is raising in all studied countries.

Given the lack of a common official definition, it is always useful to see what a brownfield is according to brownfields' redevelopers. Rizzo et al. (2015) provide us with stakeholders' perceptions of brownfield regeneration in Europe. As official definitions, stakeholders' definitions of brownfields also are very variable depending on countries (p. 445) and the main difference is in the number of characteristics enumerated by stakeholders (p. 443), which could be due to differing levels of awareness of this issue (p. 445). As we could see already, the vocabulary is also very changing. In the German context particularly, there is not a single word for brownfield. However, there is a term "used in legislation that refers to land (potentially) affected by contamination" (p. 444) (which, according to Kälberer in a document written for the Umweltbundesamt in 2005, represented one-fourth of all German Brownfields - Brachfläche).

Eventually, it is worth mentioning brownfields typology. Indeed, the very wide range typologies might explain the lack of definitions.

Ferber and Grimski (2001) define three categories of brownfields: brownfield in traditional industrial areas, brownfield in urban areas and brownfield in rural areas (p. 145-148).

In the EU context, CABERNET Network Report (2006) proposes several models to understand brownfields and the way they work and interact: Bath Model, A-B-C Model, Football Model, Land Use Puzzle Model, Interaction Matrix. In our work, the A-B-C Model and the Interaction Matrix are quite valuable.

CABERNET have studied the relationship of competition and population density in EU

countries with brownfield regeneration (NICOLE Brownfield Working Group, 2011). From this study emerged three categories: countries where brownfield investments aim at tackling the contamination or pollution (Scandinavia and Ireland), countries lacking greenfield and therefore regenerating brownfields (UK, Germany, Belgium and the Netherlands) and countries that can benefit largely from regenerating brownfields (Denmark, Austria, France and Spain).

2.1.2 Historical context of the issue in Europe

The European historical context of brownfield regeneration gives an idea of its psychological value in people's mindset. If the history of European brownfield is various, we can identify two great tendencies in the European context which led to a rise in the number of brownfields: deindustrialization and the end of communism, which both affected Berlin.

Mostly remediated in the western world, brownfields can be found quite easily in many developed countries. They are the fruits of a similar evolution in many different places at once. If the uses people can do of particular areas have always been adapting to their environment, it is only with the deindustrialization that brownfields became a more significant issue. With de-industrialization, many countries - the UK, France, and Germany more particularly - have seen the birth of industrial brownfields as a significant issue (Adams et al., 2009). Moreover, according to Kurtovic et al. (2014), this process took place in the 1960's and 1970's and implied the decline of manufacturing and the expansion of the service sector. These areas stayed unused for long periods of time, affecting greatly both their ecological and socio-economic environment. In the 1980's, the first structural measures were undertaken in regions active traditionally in steel, mining and textile sectors. On top of the economic loss for local population and state, this provoked migration from these brownfield areas and led to suburbanization in certain areas (Kurtovic et al., 2014). Gibson describes

further the consequences for these isolated communities: higher unemployment, increased crime and a lowering GDP (Gibson, 2007). Also, according to Kurtovic et al. (2014), globalization played a major role in the development of brownfields, transforming the urban life and land use.

Earlier than its continental neighbors, the UK implemented its regional policies after the 1929 crisis in order to face these tremendous transformations. According to Adams et al. (2009), the will to protect greenfield and prevent urban sprawl are important reasons for the English cultural motivation to regenerate brownfield.

However, deindustrialization was somehow delayed in many post-communist countries where the production was “artificially” maintained according to Berki (2011). Indeed, the end of the communist influence and the implied adaptation to the liberal market economy led many industrial and production areas to stop working and eventually be abandoned.

Furthermore, the end of the communist era in the European Union led to the later absorption of the central and eastern European countries within the European Union. Consequently, the lowering tension of wars led to the abandonment of a certain share of military infrastructure in some European countries such as Hungary where demilitarization happened at the same time as deindustrialization (Berki, 2011), both producing more brownfields. Quite rapidly, however, the central and eastern European countries joined the European Union (successively in 2004 and 2007) where they could also benefit from cohesion funding in order to counteract some of the sub-mentioned consequences which the fall of the iron curtain had.

The EU tackled the issue when it adopted the European Spatial Development Perspectives (ESDP) in 1999. With the ESDP, the EU implicitly defined its first own targets

concerning brownfields regeneration. Another EU-wide measure was the implementation of the first Territorial Agenda in 2007 (Kurtovic et al., 2014).

2.1.3 Current state of brownfields in the EU and particularly Germany

In Europe, there is a pregnant opposition between rural and urban brownfields regeneration as seen in brownfields typology. While it seems that more ambitious brownfield regeneration projects are led in urban areas with higher income in the USA (Green, 2018) or more generally in areas with higher socio-economic indicators, Kurtovic et al. (2014) underline the importance of pre-existing infrastructures which increase the demand and competition for brownfields site. In rural areas, there is also more greenfield and fewer means (smaller budgets and tax base, fewer employees) to foster private investment. The only advantage of rural places being their bureaucracy, less challenging to deal with. In urban areas of the EU, the lack of greenfield and higher monetary value of properties tend to encourage the regeneration of brownfield sites.

In the EU, more than 1 million sites are contaminated according to the European Environmental Agency (Kurtovic et al. 2014) and regenerating them involves an enormous commitment. More than 70% of these brownfields used to be military or industrial sites (Special Report, 2012). EU data on brownfields are scarce. According to CABERNET Network Report (2007), brownfields surface amounts to 11,000 ha in the Netherlands, 800,000 ha in Poland, 900,000 ha in Romania and 128,000 ha in Germany. It is not really relevant to compare the number of sites in countries as the average size can vary a lot (0.09 ha per site in France and 248 ha per site in Poland according to Kurtovic et al., 2014). More recent German data of the Umweltbundesamt (Roy, 2013), indicate an area of between 150,000 and 176,000 ha, the number is much lower (63,000 ha) when considering relevant sites from an urban planning point of view and available without extensive treatment.

Kurtovic et al. also gathered information about brownfield density (corresponding to the brownfield land as a percentage of the total area of one country) which is low in Sweden and France (lower than 0.05%) and high in Poland and Romania (almost 4%). In addition to this problem, there is a discrepancy between the reported quantity of brownfield sites and their dimension, which leads to differences among the analyzed countries. For example, there is data that France has 222,000 brownfield sites, which amounts to 20,000 ha of land, or an average of 0.09 ha per location. In the case of Poland, the average is 248 ha per location. According to Adams et al. (2009) in England, brownfield areas represented about 5.5 percent of the total urban areas in 2005, were attracting most of the private investment for housebuilding (possibly up to 70 percent) and were disproportionately concentrated in weaker property markets.

In the German context, the issue is taken seriously at various levels. For example, cities may implement particular measures and define areas of urban development (*städtebaulichen Entwicklungsbereich*) (see *Baugesetzbuch*, 2017). As stated in the comparative study led by Spínola et al. (2010), the legal framework on the brownfield issue in Germany is now quite important since the issue started already in the 1970's. There is a set target to reduce the "daily land consumption" by 2020 (target set in 1998) from over 100 hectares a day up to 30. Moreover, the German environmental and planning legislation concretely implements measures to develop local planning strategies. This shall foster construction in abandoned areas and building gaps while increasing the legally planned land-use density. In Germany, such policies are regulated, implemented and advised by both the federal government and regional states. In order to reduce the period during which areas are "brownfields", the

government tries to foster a "site recycling economy" (Flächenkreislaufwirtschaft) by identifying as early as possible the abandoned areas and their potential reuses.

According to Rizzo et al. (2015), German stakeholders are some of the most educated stakeholders in the issue of brownfield regeneration in the EU. They perceive brownfields as complex issues, in which all sorts of stakeholders have to be involved in all phases of the regeneration process. Furthermore, the interest in Germany seemed to be higher in such research than in other countries (in Rizzo et al. research, they had the highest final response rate of all countries studied). In this study, most of the German stakeholders would understand brownfield regeneration either as generating "economic benefits lower than the cost [with] evident environmental and social benefits" or "no economic benefits [with] evident environmental and social benefits". This illustrates very well the need for a comprehensive approach to all aspects of brownfield regeneration.

With the recent great immigration wave in Europe, Germany received more than 1,000,000 migrants in only 2015 (Noak, 2016). Simultaneously, Germany is planning to build 1,000,000 new residential units in the current legislative period and fosters an innovative partnership with real estate partners in order to achieve both construction and environmental (carbon neutrality of housing by 2050) targets (BMU, 2017). If Germany wants to meet these targets, brownfield regeneration has to be a priority.

Therefore, it is no surprise that regions state their will to reduce the number of brownfields and empty spots as in the CSU position paper of 2018 for surface sparing in Bavaria. It aims for example at developing tax incentives and recording the surface sparing as a principle of the constitution.

It is essential for our study to focus on the situation in Berlin since the project we are going to study is run in Berlin and its geographical, socio-economic and political context.

First of all, it is important to highlight the fact that Berlin is not a “normal” German city to the extent that it is one of the three German cities that also are regions, they are called Stadtstaat (city-state). The city-states benefit from the so-called Stadtstaatenprivileg which provide them with more federal funding per inhabitant than average German regions. Concretely, the money perceived amounts to multiplying the number of inhabitants by 135% (Lammers, 1997). This is one of the reasons why a fusion between Berlin and Brandenburg - often in discussion - is somewhat difficult to negotiate. One example of solution is to reach an agreement about a 15 years transition period of continuous Stadtstaatenprivileg upon fusion of both states (Lammers, 1996). However, as Lammers underlines, this is not only an economic issue but also a social identity and political strategy issue.

As a result of this privilege but also of many other factors (concentration of institutions and economic activities), Piepenburg (2013) highlights the high added value per employee and the above-average number of jobs per inhabitant.

The ongoing coalition agreement of Berlin provides us with useful information about the building targets for the legislative period 2016-2021 with “approx. 37,000 multi-storey apartments in eleven pre-defined areas” (p. 35) but also the will to “update the overall urban planning basis” (p. 35) in order to build more residential units in other zones. Some of the pre-defined zones are brownfields (e.g., Europa City, Stallschreiberstraße or Köpenick) but not all of them. The planning process shall focus on “lively, socially mixed, green and participatory ways” (p. 34). These new areas have to “be checked for urban impact” and to involve “broad public participation” as well as to provide “an efficient public transport

system” (p. 34). One major concern is “to ensure integration in neighboring areas, including through complementary financing of social infrastructure and the improvement of public space and to ensure added value for the population” (p. 34). These new districts have to result in “a mixture of uses and builders” (p. 34).

The heritage of the Berlin wall still exists and some of the areas that are going to be built on are previous wall reserved areas (Aktivierung innerstädtischer Brachflächen Senatsbeschluss trägt hoher Wohnungsnachfrage Rechnung, 2017). Some of the areas targeted were also used, for example as logistical sites, during the communist era (Europacity⁹, freight depot Köpenick¹⁰ and freight depot Pankow¹¹). As stated in the Coalition Agreement, most of these areas will host many residential units.

Some other areas, such as Berlin-Hellersdorf, are rather intended for a soft regeneration process (Latusseck, 2010).

2.2 Funding of brownfields regeneration in the EU

2.2.1 History of funding in the EU

There are two main funding tools at the European level for brownfield regeneration projects (European Court of Auditors, 2012).

In 1975, the most critical fund for brownfields regeneration was created: the European Regional Development Fund. According to George (1998), the negotiations about the UK membership were the most decisive factor in its implementation. Indeed, the creation of a regional fund was already discussed since the 1960’s but Italy was the only country to defend

⁹ More information https://www.stadtentwicklung.berlin.de/planen/stadtplanerische_konzepte/heidestrassen/de/geschichte.shtml

¹⁰ More information <https://www.stadtentwicklung.berlin.de/wohnen/wohnungsbau/gueterbahnhof-koepenick/de/geschichte.shtml>

¹¹ More information <https://www.berliner-zeitung.de/berlin/nach-zehn-jahren-diskussion-auf-brachflaeche-pankower-tor-entstehen-2000-wohnungen-30072460>

this idea in the European Economic Community (EEC). Upon membership, the UK wanted to have a concrete benefit from the EEC (since it would not benefit much from the CAP) and made the creation of a regional funding a condition to its EEC membership. Rapidly, the ERDF proved its usefulness when integrating new poorer countries in the EU.

In addition, social actions have been undertaken in order to assist structural reforms in particular sector-specific sites of the EU: "RESIDER" (steel), "RECHAR" (mining), "RENAVAL" (shipyards) or "RETEX" (textile) (Kurtovic et al., 2014).

Last but not least, the Cohesion Fund was created in 1994 and rapidly benefited strongly to the central and eastern European members of the European Union. Indeed, this fund may only be used by Member States with a Gross National Income (GNI) per inhabitant lower than 90 % of the EU average. Its primary targets being transport (e.g., public transportation) and environment, it may also be a useful funding source for brownfields projects in urban areas. As it culminated to a budget of 70 million € in the period 2007-2013, the cohesion fund benefited to 15 countries, ten of which were located in central and oriental Europe (Bulgaria, Romania, Estonia, Hungary, Latvia, Lithuania, Poland, Czech Republic, Slovakia and Slovenia).

2.2.2 Current funding framework

The advantages of public funding are numerous. Sousa et al. (2009), among other authors (Kotval-K, 2016), is in favour for public funding involvement in these issues. There are some original uses of public fundings such as a so called "brownfield bonus" in Florida, a tax credit for every job created in particular brownfield areas (Howland, 2007). Sometimes, local hiring is even a condition for funding and if not the committed targets are not achieved, private investors may have to reimburse state fundings (Howland, 2007).

In the EU, Kurtovic et al. (2014) mention a reduction in brownfield regeneration investments in the most developed states. This is principally due to the conjuncture after 2007 however. In fact, the brownfields investments in the EU experienced a 67% decline between 2007 and 2013. 2008 was a turning point in the Foreign Direct Investment (FDI) in many EU countries, either as a decline (Netherlands, Germany, France) or as a growth (Czech Republic, Estonia).

Some tangible effect of it is the difference between the quantity of material you can easily find about brownfield regeneration that was published in the framework of the 2007-2013 EU budget and current material, up to date, that is quite hard to find. Lack of literature also explainable by the fact that we have not come to the end of the 2014-2020 MFF yet. However, lesser investment may be simply due to the general economic context and might be a sign that brownfield problem has been tackled seriously enough in the EU so that the EU itself does not need to fund more. According to the subsidiarity principle, brownfield regeneration may well be managed at lower scales.

As German regional states become richer relatively to those in other EU states, their EU funding lowers (e.g. Saxony which became a transition region in 2014 received twice less ERDF funding for the 2014-2020 MFF than in the previous one¹²).

In Berlin more particularly, for the 2014-2020 MFF (European Commission, 2018), 653 million euros were allocated as ERDF funding. This funding was divided into various priorities: research and innovation (302 million), low-carbon economy (121 million), social inclusion (100 million), technical assistance (70 million), environment protection and resource efficiency (15 million).

¹² More information https://stadthalten-chemnitz.de/wp-content/uploads/2013/02/vortrag_christian_wessling.pdf

In Germany, according to the Baugesetzbuch (2017), negotiations between the federal and regional states authorities may happen in order to fund 3 priorities: (1) the strengthening of inner cities and district centers (housing construction and monuments preservation), (2) the reuse of brownfields (railway, industrial) in inner cities (construction of residential and work areas, public utilities and subsequent facilities), using concepts of mixed use, environmental friendliness, cost and space-saving construction methods and (3) urban development measures to remedy social issues.

Furthermore, in the last German governmental coalition contract (Bundesregierung, 2018), the rehabilitation and the preparation of industrial brownfield sites is designated as a priority area for funding for the upcoming years (p. 113) while currently ruling parties also declare their will to remove existing legal obstacles in the Federal Emissions Protection Act to the regeneration of more brownfield areas.

2.3 Evaluating the development potential of brownfields

There are numerous factors that can influence the development potential of brownfields: economic, geographical, social, environmental, legislative, political... In fact, Kurtovic et al. (2014) enumerate all types of value for brownfield sites: economic, historical, social, environmental, psychological, spatial, technological and ecological (fig 1, p. 109). Once more, it proves us that economic aspects of brownfield regeneration cannot solely be studied from a strictly economic perspective. The problem of most of these parameters being that they are very hardly quantifiable, how to evaluate the development potential of such sites? Pizzol et al. (2016) developed a TIMBRE prioritization tool in order to assess which sites should be developed in priority, based on their profitability, and applied it to South

Moravia where they were able to define priority areas for investment. However, the wealth of data needed to analyze potential for a successful sustainable development seems to be overwhelming.

Kurtovic et al. (2014) mention the Smart Growth Network model as being able to assess economic and social criteria, while environmental ones are ignored. Another model, the Thomson GIS model includes geographic, spatial and socioeconomic data. This model is more comprehensive and includes local and state level data. Each of the methods (indexing method, cost-benefit analysis and multivariate analysis) mentioned to assess brownfield regeneration potential seems to be adapted only to particular brownfields, which hinders the applicability. According to Kurtovic et al. these methods are effective in order to make optimal decisions. However, optimal is quite a subjective criteria.

Other methods regarding regeneration potential of contaminated areas and prioritization of sites depending on socioeconomic, smart-growth and environmental indexes are assessed respectively by Schädler et al. (2012) and Chrysochoou et al. (2012).

2.3.1 Identifying stakeholders

As stated by numerous authors (CABERNET Network Report, 2006; Rizzo et al. 2015), identifying stakeholders and understanding their role is crucial. The multiplicity of actors with diverging interests is one of the reasons why models are very difficult to apply.

Green (2018) provides with extended information about stakeholders: in the context of brownfield regeneration, a stakeholder may be either an individual, a group or an organization that is likely to be influenced by a project, directly or not. In this framework, “governments (local, state, and federal); developers; lenders; citizens and residents; environmentalist and conservation groups; and entrepreneurs and business owners” (p. 301)

are potentially stakeholders but also not the only possible stakeholders. Every stakeholder has a different role (e.g. developers and financial stakeholders are responsible for liability and costs)

CABERNET Network Report (2006) underlines the variety of stakeholders, the difficulty to define the limits in the context of brownfield regeneration but also the fact that all sorts of stakeholders can influence a brownfield regeneration project. They highlight the need for multi-stakeholder approaches.

In this framework, the work of Wang et al. (2009) is particularly relevant. Wang et al. have identified main stakeholders (or DMs) and all sorts of coalitions between stakeholders. Usually, a brownfield regeneration project would have three main stakeholders being the landowner, the developer and the government (sometimes one stakeholder has two roles at once). Depending on the coalitions they would form, stakeholders would have different costs and benefits. The aim is to find - after negotiations - the coalition that is bringing the most to each stakeholder. We will quote here the kind of coalition that we are going to deal with in our study: “For a coalition involving landowners, developers and governments, it is assumed that developers buy lands from owners and are responsible for cleanup and redevelopment, and the governments provide financial assistances to the landowners and developers” (p. 514).

According to Green (2018), the involvement of stakeholders (if public, private project or public-private partnership [PPP]) does not really help predicting the potential of brownfields regeneration. A project can be a success or a failure with any kind of financing structure.

2.3.2 Criteria that may contribute to accurate decision-making

As already said, there are several tools, based on different data and criteria. As identified by Green (2018), basing himself on study from 2001, the literature still has not identified properly the factors that would turn brownfield regeneration into successful projects. It seems, however, that the success of regeneration is measured through its economic achievements, as reported by Green (based on De Sousa). Furthermore, as Green has found, some of the most important criteria for stakeholders are economic incentives, public policy initiatives, environmental liability and other costs of regeneration. The factors considered in Green's work are the following ones "Brownfield Redevelopment [...] Stakeholder Involvement [...] Income Level [...] Tax Incentives [...] Type of Contamination [...] Political Climate [...] Green Development" (p. 305). The income level, tax incentives and green development were found as important. However the political factor in his study is relatively limited (political party obedience of the area).

If the issue has not really been resolved yet, it might be mainly due to the huge amount of potential factors (which explains the numerous case-by-case assessments implemented by public bodies): "environmental and health risk assessment, remediation cost assessment, uncertainty assessment, evaluation of the sustainability of projects, management of the negotiations and partnership among involved stakeholders, etc." as presented by Pizzol et al., (2016) while economic factors are some of the most documented and easiest to integrate in models. There is a consensus (Green, 2018; Pizzol et al., 2016) on the fact that the decision-making does and should highly depend on all three pillars of sustainability and should be based on all three kinds of benefits and costs. This implies that more parameters have to be taken into account. As Rizzo et al. (2015) have found, if the benefits are

numerous, so are the risks: poorer or inaccurate information, not detecting environmental contamination, stakeholders not sharing interest, lesser economic attractiveness than greenfields, lack of information about the European context and the share of good practices, underuse of the available information. Case-study could help identifying further factors.

However, Howland (2007) in her literature review highlights the fact that brownfield regeneration has to be thought at a larger scale than the sole regeneration project by mentioning social criteria. If job skills are low, it is likely for poverty and criminality rates to be high, schools to be worse, making regeneration more challenging. On the other hand, as Green (2018) reports, criminality tends to be lowered in and around regenerated sites.

The prioritization of the areas to be developed should be done by the stakeholders based on their financial, human and time resources (Pizzol et al., 2016).

Green (2018) also identifies a lack in the identified policies leading to successful brownfields regeneration.

2.3.3 The expected impacts of brownfield regeneration

Green (2018), based on the work of De Sousa et al. (2009), states that the impact of brownfield regeneration and its geographic perspective require more complete research.

Kurtovic et al., (2014) underline bigger scaled impacts: projects successfully implementing an “efficient, cost-effective and sustainable land use” (p. 106) should have a direct positive influence on the economic performance of the country where the project is implemented in the global competition.

Green (2018), based on an EPA study, reports that decontaminating a brownfield site may lead to an increase of the closer (in a radius of one-mile) surrounding property values by 0.5 to 1.5 million dollars. The effects on pricing, even though quite important, tend to be

localized however. Sousa et al. (2009) mention also such impacts on property value in the surroundings of brownfield regeneration projects. Park and residential projects are the ones having the most significant effect on the surroundings. Moreover, the regeneration - even into industrial or commercial use - removes the negative outputs that brownfields may have when abandoned. This leads to the conclusion that public investment in brownfield regeneration helps to counteract the effects of deindustrialization while raising property taxes - municipalities revenues - in the surroundings.

Another very important finding of Sousa et al. is that the size and cost of the project have little impact on their concrete benefits. Furthermore, the quantity of public funding should have little to no impact either. According to their study, stronger market situation in a particular area should lead to greater impacts on surrounding property values. Two scenarios emerge from the work of Sousa et al.: (1) funding more numerous smaller private projects in areas with a good market situation in order to get more taxes and improve services and (2) directly investing in projects in less favored areas.

Similarly, Howland (2007) highlights also the role of political pressure (by creating more jobs) so that areas with more economic potential will be targeted first while reporting that brownfield regeneration into commercial or industrial areas are more likely than residential areas to keep existing or create new jobs. Howland advocates rather “environmental justice” and remarks - as a consequence of the impacts on housing prices - that the disadvantaged residents are pushed away from brownfield areas that may be considered successfully regenerated. As reported by Howland (2007), there is an underlying continuous trade between economic development and the rate of clean-up of areas, which sometimes simply hinders the possibility to build housing in the USA.

There is a disagreement on the role of local and governmental funding however between Howland and Sousa. Howland (2007) reports that when public funding has an important role, the community involvement rises accordingly, which may lead to more jobs creations for local residents. Such process is sometimes worked on more closely through discussions to adapt the local workforce and the potential new tenants (Howland, 2007)

One also has to analyze the impacts of not regenerating a (contaminated) brownfield, which Gilderbloom et al. (2014) do when underlining the reduced quality of life, the increased chances of foreclosures and housing devaluation. Green (2018) mentions also the long term economic and social consequences of contaminated brownfields on urban communities. As examples, he adds the visual blight and health concerns while the lack of funding affects the number and quality of services (e.g. schools).

A project, according to Howland (2007), can create jobs during remediation, construction and operation.

One major effect of a successful project is a “promotion” effect, giving a “revitalized and positive image of urban life” in and of this area (Green 2018, p. 302).

But the effects are not only on the people living in the area. According to Kurtovic et al. (2014), private stakeholders that invested in it can expect profit from the development, the exploitation or the sale of the site. They can expect a certain cash flow, or fiscal benefits from the government (as the tax base becomes bigger with minor or without public investment). We can also expect from regeneration - depending on the project - a higher use of existing infrastructure and public services.

Loures & Vaz (2018) have made interesting findings concerning the potential of each type of brownfields. For example, derelict and abandoned land seem to have the greater

impact on infrastructure while contaminated and derelict land are seen as the ones with the bigger economic impact. However, vacant land and derelict land have higher impact on the community aspects. Abandoned and vacant land have a much higher impact than derelict land on recreational aspects. Ecological aspects are better dealt with when an abandoned or derelict land is involved. Projects on contaminated and derelict land have the highest health impacts. Eventually, abandoned and underutilized lands have the highest cultural impacts. These results show well that it is particularly difficult to have one methodology to assess what area has to be prioritized. Indeed, every area seems to be originally more adapted to certain uses and types of regeneration. As Loures & Vaz (2018) write, “not all brownfields are equal” (p. 73).

2.3.4 Lessons from the soft reuse of brownfield

As mentioned earlier (Sousa et al., 2009), parks usually have a positive effect on their surroundings. More generally, in a context of limited funding, the Gentle Remediation Options (GROs) are mentioned by Green (2018) who underlines their lack of awareness and recognition as practical site solutions among stakeholders.

In C areas from the CABERNET Network report (2006) classification, Bardos et al. (2016) reported that soft reuse projects might be smart regenerations and aim at leading stakeholders towards an overall value assessment of GROs. If different hard uses are providing with different benefits, GROs also provide with very valuable benefits. Bardos et al. (2016) identify many benefits from such regeneration projects: environmental as well as economic and social.

Germany is also, with Netherlands and the UK, one of the countries where soft reuse is seen as a viable option (Bardos et al. 2016). In the context of Berlin, a few areas already are

converted as GROs (Latusseck, 2010) where, for example, community gardens have been implemented in the famous former Tempelhof airport (Gemeinschaftsgarten Allmende-Kontor). Another example from Berlin might be the conversion of the former logistic area of Gleisdreieck into a 26 hectares parc¹³.

2.4 Costs-Benefits Analysis

Kurtovic et al. (2014) underline the difficulty to gather coherent listing of brownfield areas because of the negative externalities on property values that such listing may have and the lack of understanding of what such listing is meant for.

The constraint financial context however leads us to try to identify an efficient method to evaluate brownfields projects development potential. According to Green (2018), even with a high overall economic value, it is important to identify risks, costs and benefits.

As a matter of fact, some models were developed in order to assess prioritization or potential of brownfields. Kurtovic et al. (2014) identified two models, the Smart Growth Network model and the Thomson GIS model, mentioned earlier in this document. When speaking of CBA, Kurtovic et al. seemed to think that this method is better for particular projects.

On the other hand, the EPA (2011) encourages the use of CBA over other methods as an appropriate tool for land cleanup and reuse as it helps identifying and measuring social costs and benefits.

As mentioned by Bardos et al. (2016), a shared CBA for all stakeholders is probably not possible. Besides, CBA is not considered in their work as a proper tool for brownfield regeneration soft reuse. Furthermore, all stakeholders have different costs and benefits in a

¹³ More information https://www.berlin.de/senuvk/umwelt/stadtgruen/gruenanlagen/de/gruenanlagen_plaetze/kreuzberg/gleisdreieck/index.shtml

brownfield regeneration projects, the negotiation over costs and benefits between stakeholders leading to the chosen regeneration project (Wang et al., 2009).

Costs Benefits Analysis (CBA) can be both quantitative and qualitative, as shown by Bergh (2004). According to his work applied to climate policy, economic analysis is dominated by quantitative CBA and the notion of optimal policy is based on the research for optimal growth. There is a similarity between the two issues of climate policy and brownfield regeneration which both take into account environmental parameters. As Bergh (2004) emphasizes, quantitative analysis is not the best adapted when there is a very high level of uncertainty. Indeed, there is a lack of comprehensive quantitative information since the number of parameters is very wide. Qualitative research could help in producing more practical and versatile results. The EPA also advocates the fact that when credible valuation is impossible, qualitative methods may be used as well.

2.4.1 Risks, costs and benefits of brownfields regeneration

Some risks that could lead to unsuccessful projects and costs are associated to the too high number of stakeholders (Gilderbloom, 2014), the listing as a brownfield area which may decrease value (Kurtovic et al., 2014), projects not reaching the expected impacts (EU Court of Auditors, 2013). Green (2018) identify the following risks: “prior contamination, environmental compliance, financial concerns, expensive engineering, liability issues, and neighborhood opposition” (p. 301) on top of which Mccarthy (2002) adds “availability of funding for redevelopment; and complicated regulatory requirements” (p. 287).

In 2011, the EPA published a useful handbook trying to identify costs and benefits for the cleanup and reuse of areas. In both costs and benefits, clear components of sustainable pillars are identifiable. The EPA proposes the following sorts of benefits: human health

improvements (mortality, morbidity), ecological improvements (market products, recreation activities and aesthetics, valued ecosystem functions, nonuse values) and other benefits (aesthetic improvements, reduced materials damage, land productivity improvements). On the costs side, the EPA identify direct costs (linked for example to toxicity assessment, removal and treatment, products transport as well as program administration costs), regeneration costs, social costs, temporary health risks, ecological damages. One of the most interesting concepts in this work is the notion of social costs and benefits and the will to calculate them. However, the idea of social costs and benefits is not new (Mccarthy, 2002).

Kurtovic et al. (2014) also identify economic, social, financial and fiscal benefits among which public health and safety, reducing pressure on greenfields, reducing transport externalities, improving local employment, improving the reputation of brownfield sites, improving housing affordability. Under costs, Kurtovic et al. mention primary costs of remediation (assessment and direct regeneration costs). Depending on the project, the degree of ecological remediation (and thus costs) may change.

3 METHODS

First of all, to better understand the process and methods used, it is useful to give a little more information about the author. As a regional and European project management student when writing this paper, we have a certain knowledge and understanding of the general European funding framework but not an extensive mastery of issues related to brownfield regeneration. This explains the quite comprehensive literature presented in this work. Furthermore, having an educational background in the French system where economics are often taught as social sciences, it seemed more natural to make a comprehensive study of socioeconomic dimensions. Eventually, the choice to make a broader (even though sometimes uncomplete) literature approach was aiming at underlining the importance of (historic, social local and global) context in the economic evaluation and understanding of brownfield related issues.

In my work, literature has been crucial in order to get a better understanding of the issues linked with brownfield regeneration. Most of my literature research was done online. The following keywords were used on numerous data and article research tools such as google, google scholar, qwant, duckduckgo, scopus, sciencedirect, tandfonline, journals sagepub, mdpi.com, search proquest, geoconfluences, insee, destatis: cost benefit brownfield, public brownfield, private investment brownfield, private investors brownfield, brownfield regeneration germany, Brachflächen Regeneration, Sanierung von Brachen, brownfield EU, brownfield history, brownfield USA, brownfield regeneration, brownfield development, steueranreizen brachfläche, friches, friches industrielles et commerciales, economic evaluation brownfield, brownfield in germany, etc.

From the analysis of literature, from our capacities and from the opportunities given by our ongoing professional stay in Berlin (Germany), it seemed appropriate to make qualitative research focused on one or several projects.

The first step was to gather general information about brownfields, the issues related and their situation in Germany, more particularly in Berlin. In this framework, we wanted to lead interviews with high-ranking stakeholders at EU, federal or regional level in order to have a better understanding of the issue, become precise information, up-to-date about the impacts of the new 2021-2027 MFF and the exact extent to which brownfield regeneration is currently taken into account in the EU while helping me understand how the German context works and the interactions between the institutions involved in brownfield regeneration (see annex 1). Unfortunately, when we submitted our questions, the contacted persons claimed they could not answer. Therefore, we took the decision to also document these issues to some extent in our work.

Once we gathered sufficient information, we focused on identifying particular interesting projects run in the area of Berlin. We tried to obtain interviews with interested stakeholders. For example, we tried to get interviews with persons involved in the Kulturbrauerei project which would have been interesting to study as it was completed some years ago already, so that we could have possibly studied the differences between expectations and reality. However, completed projects have their own flaw, it is very difficult to find someone who was working on them for a long time and who is still easily accessible. For this reason, we tried to interview persons involved in ongoing projects. This is how an interview with the manager of the project Europacity of the Senatsverwaltung of Berlin (designed as WS further in this work) was obtained after an exchange of emails.

I chose to study an actually well-advanced project rather than a brownfield that is not in a regeneration process as there is a limited number of actual brownfields in Berlin nowadays. Furthermore, assessing their potential could be already done using some of the tools provided by the literature and it seemed more relevant to assess the development potential not only of a brownfield but of a particular project on a particular brownfield.

The project Europacity in Berlin has several important characteristics that we found before the interview: its financing is principally private, it is one very high-scale project and the brownfield site on which it is located has a priori a very high development potential due to its very strategic location.

As literature underlined the importance of sustainable development, social costs and benefits as well as the key role of context and difficulty to determine the factors for successful projects, it became clear that this interview had to be led using a comprehensive approach in order to achieve a certain level of understanding of numerous factors such as stakeholders involvement, structure of funding and foreseen impacts. The most appropriate method for the interview seemed to be the semi-structured interview as it enabled us to prepare questions in a language that is not our mother tongue and to prepare for the potential answers. Furthermore, semi-structured interview have proven to be efficient tools in gathering qualitative data and we have already led and analyzed a semi-structured interview in the past. The interview was prepared with a different research question.

The questions of the interview were prepared by reading literature on the issue of brownfields but also gathering a lot of contextual information related to Berlin and this project in particular. The questions were first written in English and then translated into German. The goal of such preparation was to prepare potentially the most precise questions we could in order to get as many useful information as possible. Before the interview,

accordingly with the semi-structured method, an interview guide was produced, containing 13 open questions and numerous mixed questions whose aim was to make the 13 main questions clearer or more precise. The interview guide was first designed for a 1-hour interview (and could easily last longer depending on the answers) (see annex 2).

The interview took place in the office of WS in the Senatsverwaltung Berlin the 30th of July 2018. Upon request, the length of the interview was reduced to 30 minutes, which limited the possibility to ask as many questions as needed. Therefore, we chose spontaneously which questions were to be prioritized (see annex 4) and 18 of the prepared questions and sub-questions could not be answered (see annex 4.1). Furthermore, some technical issue affected the recording device we used during the interview, which led to the loss of a short part of the interview (between sequences extracts 1 and 2) but also to the fraction of the rest of the interview into several extracts in order to prevent more information loss.

Due to the stress of a shorter interview than expected, technical issues and our difficulty to understand perfectly the interviewee, we were not reactive enough to the information given by the interviewee in order to ask useful precise complementary questions. Thus, we were relatively unsatisfied with the content of the interview.

Upon this dissatisfaction, we took the decision a few days later to try obtaining further information from WS about the analysis of social and economic aspects of the project and its CBA. Up to the day this work was written, there was no answer received.

From the gathered data, we took the decision to use the software ELAN in order to realize an accurate transcription (see annex 3). A German native-speaker corrected our

transcription afterwards when some recorded information could not be understood upon listening of the interview.

In order to organize and analyze further this material, we sorted the content of the interview into 5 extracts and 32 sequences.

In the literature, we identified numerous different items and we chose to study as many items as possible. Therefore, the items chosen are the values given by Kurtovic et al. in 2014 that define brownfield as a cultural landscape (economic, social, environmental, historical, psychological, spatial and technological values, we chose to merge environmental and ecological values) and Wang et al. in 2009 as well as Green in 2018 (stakeholders involvement) which are general and may play a role in the evaluation of economic dimensions of a brownfield regeneration project. After gathering contextual and practical information about the project and the geographical context, these items are applied to sort the gathered information through interview and personal research about identified success and failure factors, positive and negative impacts of the chosen project and eventually CBA for the three main kinds of stakeholders identified in this project. It is important to note that the brownfield site and the brownfield regeneration project are studied separately in the beginning in order to define their compatibility.

These results are presented in 5 tables accordingly to 8 identified items.

Using all the data we gathered, literature and our personal understanding of the situation, we tried to assess the economic dimensions of the project Europacity on this particular site by studying successively its investment structure and stakeholders, its class of brownfield and its development potential. Our approach to economic dimensions and to development potential was based on all the submentioned items but more particularly on the three pillars of sustainability.

4 RESULTS

The results, based on personal knowledge and understanding of the project and context (in tables 1 and 2) but mostly on the interview, are given in a series of 5 tables. All information that does not come directly from the interview in the tables 3 to 5 is signaled by the use of italic font.

Table 1 and 2 provide with crucial context and background information for the understanding of this particular project. Besides the interview, the information presented in them comes from various sources¹⁴.

Mitte, where this project is run, is a particularly densely populated area located in the center of one of the most important German cities. One-third of its population is not German and it is nearly totally urbanized. Berlin also is a city where brownfields are regularly regenerated. The site of Heidestraße, a former goods train station, is not very contaminated and a few years after its use stopped, a regeneration project was worked on. It was a cooperation-based project from very early on. The major landowners of the time started working on this project in 2007. They took the opportunity that there was political will to foster such project in public institutions so that after a certain time, they could design a project that would involve building residential (34%) and business (58%) areas mostly. During the project, the stakeholder involvement changed and at the current time, CA Immo is the only major private stakeholder involved in the project. The public sector did not have to

¹⁴ Data from <https://www.berlin.de/ba-mitte/ueber-den-bezirk/zahlen-und-fakten/bevoelkerung/>, <https://www.statistik-berlin-brandenburg.de/statistiken/inhalt-statistiken.asp>, <https://www.businesslocationcenter.de/de/A/ii/2/popupseite3.html>, <http://www.stadtentwicklung.berlin.de/> and <http://www.caimmo.com/en/portfolio/project/europacity/>

invest too much funding in it relatively to what private actors are likely to have invested according to WS (roughly 2%). Furthermore, private investors participated in other public costs, their share in these costs represent more than twice the public funding of the whole project. However, nearly 25,000,000 € is still a high quantity of money, which was brought by both federal and regional funding institutions.

| Item | Brownfield site of Heidestraße |
|---|---|
| Available area (hectares) | 40 |
| Type of land Contamination degree Types of contamination Previous use Start of the project | Abandoned/vacant Not known, but not high Unknown Former property of Deutsche Eisenbahn, goods train station until 2003 2007 or 2008 |
| Location Population living in the area Density of population in the area GDP per capita (Berlin) Average age (2017) Non-national residents (2017) Land-use (2016) in m² Settlement Transport Total land available Unemployment rate | In Berlin, Germany, Stadtbezirk Mitte Berlin: 3,601,131 (2017) Mitte: 373.944 (2017) 4,012 inhabitants/km ² in Berlin 9,327 inhabitants/km ² in Mitte 35,627 € (2016) 42.7 / 38.9 19.2 % / 32.8% 49,116 / 2,849 13,611 / 955 89,112 / 3 947 8.1 % / 8.2% |
| Identified current main landowner Owned surface Type of landowner Property assets (2017) Net income (2017) No of employees Other identified landowners Public body Private actor | CA Immo 20 hectares Austrian real estate company in 7 countries, most implemented in Germany 4,300,000,000 € 235,000,000 € 378 City of Berlin 6 hectares Deutsche Bahn 10 hectares (formerly) |

| | |
|--|-----------------------------------|
| Identified stakeholders willing to regenerate | Landowners, Federal state, Berlin |
|--|-----------------------------------|

Table 1: Practical information about the brownfield site

| Item | Europacity |
|---|--|
| Area planned (hectares) | 40 |
| Stakeholder involvement Coalition | CA Immo (20 ha) PPP / public, landowner-developer |
| Type of land-use (recreative, residential...) According to the master plan | Mixed Offices (58%), residential (34%), retail & gastronomy (5%) and culture (3%) |
| Budget of the project | |
| Public funding | 22,100,000 € |
| Berlin region share of costs | 9,990,000 € |
| Federal subsidies | 12,110,000 € |
| Private funding | 1,000,000,000 € (estimation) |
| Private costs agreed by contract with public bodies | 49,140,000 € |
| Charge for kindergarten places | 10,770,000 € |
| Reimbursement for the inner access to the building areas | 10,200,000 € |
| Charge for playgrounds | 5,670,000 € |
| Incentives from public to private | Unknown |

Table 2: Practical information about the brownfield regeneration project

Table 3 is designed to give an insight into the compatibility of the project with the brownfield in which it is intended to be implemented by identifying success and failure factors related to all 8 items for the full completion of the project and by self-defining whether they originate in the project itself or contextual background.

Reflecting our understanding of the situation, success and failure factors for the completion of the project are numerous. As the project is close to its completion, it makes sense that there seems to be a few more success than failure factors. Some of the main issues to overcome were the difference between the output originally thought and the output

currently delivered out of economic or or other practical reasons. All items considered represented to some extent both success and failure factors to the project completion. Also, all items involve success or failure factors directly related to the area context. Among success factors, stakeholders involvement, economic, social, historical, psychological and spatial values all involve to some extent the potential of the area. Some threats to the project full completion due to the area itself are mentioned in stakeholders involvement, environmental, economic, historical and spatial values. A few factors may be both an opportunity and a threat (few stakeholders mean an easier management but also greater impact when a stakeholder leaves, weak legal framework involves both flexibility and workloads for policy makers, the private investors willingness to make profit may lead to a cost-efficient project as well as to less sustainable decisions). Out of 25 success factors, 14 were due to the project (p) and 16 related to the context (c) (some to both [p and c] as “project based on cooperation” or “relatively few major actors”). Out of 16 identified failure factors, 9 were linked to the project while 10 were due to context elements. If almost all items involve both project and contextual factors, spatial and technological comprehend respectively only contextual and project elements.

| Item | Success factors | Failure factors |
|---------------------------------|--|---|
| Stakeholders involvement | <p>Relatively few major actors (p and c) PPP as the only legal solution (c) Involvement of non-specialized public (c)</p> <p>Project based on cooperation since the beginning (p and c) Every stakeholder has a well define role, there are contracts (p and c)</p> <p>Berlin did not own the area so that the investors had only very few rules to respect (c)</p> | <p>The main stakeholders involved changed during the project (p and c)</p> <p>Multiplication of the quantity of stakeholders when the main landowners sell properties, which makes the project management harder (p)</p> <p>Local and surrounding residents live relatively far away from the area (c)</p> <p>Legal elements had to be created (p and c) Legal framework changed during the project (<i>städtebauliche Entwicklungsmaßnahme</i>) (c)</p> |

| | | |
|----------------------|--|---|
| Economic | <p>A mix of sources of funding was reached (EU, state, regional and private funding) (p and c) Berlin is satisfied with the part they finance (p)</p> <p>The property prices in Berlin have been rising for years now (c) There is quite a high demand for residential and offices areas in Berlin (c) The preparation phase costs were paid by private investors (p) Some public services paid by the private investors (p)</p> | <p>Private investors had to take in charge some of the land preparation and participate in infrastructural costs (p)</p> <p>Some indirect costs were not included in the project (tram connection) (p and c)</p> |
| Social | <p><i>This project would bring life to the area (political support)</i> (p) At the scale of Berlin, 6000 residents and 20000 working persons are not so many (p and c)</p> | <p>Some of the expected buildings to foster art will probably not be used for this end (p)</p> |
| Environmental | <p>A preservation plan was followed (c) This project is expected to be sustainable and true to the vision of what a good city should be in the future (p)</p> | <p>The mentioned solar panels seem to have been rather a marketing element (p) About some issues, the cheaper or more practical solution (floodings insurance, energy connection with the surroundings) was chosen. The original quality requirements were higher (p and c)</p> |
| Historical | <p>The project has been worked on intensively since 2007 (p) <i>Experience of public actors in this subject</i> (c) The project includes the renovation of protected buildings (p)</p> | <p>Area in the immediate wall border area for decades (c)</p> |
| Psychological | <p>Private investors have the goal to make this project profitable from the beginning (p) <i>Willingness to reinvest the former wall border areas</i> (c)</p> | <p>Private investors have the goal to make this project profitable from the beginning (p)</p> |
| Spatial | <p>The proximity of Hauptbahnhof, political institutions, Charité hospital, federal news service (c) The location is very central (c) There is few infrastructural adaptation to make (c)</p> | <p>The involved inhabitants do not live closely (c) Not all areas are the property of the private investors (c) A tram line is influenced by the project (c)</p> |
| Technological | <p><i>Technology is sufficiently mastered</i> in order to keep schedules (p)</p> | <p>The way to deliver the proper outputs (<i>Leistungen</i>) had to be figured out (p)</p> |

Table 3: Values success and failure factors for the project completion in this context

Table 4 identifies the development potential of the project by assessing its potential impact on given items.

All items are positively impacted by the project while stakeholders involvement, historical and technological values do not seem to be impacted by the project negatively. The number of identified negative impacts only exceeds the number of positive impacts in the environmental value. 17 positive and 10 negative impacts were identified.

| Item | Positive impact | Negative impact |
|---------------------------------|---|--|
| Stakeholders involvement | <p>With relatively little public investment, a lot of private investment was leveraged</p> <p>Arrangements enabled overcoming some property issues (e.g. road areas)</p> | |
| Economic | <p>Property tax will be raised</p> <p>There is an investment to provide public services (e.g. school, kindergarten, main square, roads, promenades from private and transportation from public)</p> <p><i>Attracted the headquarters of TOTAL</i></p> | <p>People consuming there might not be consuming elsewhere (risk of competition with main station) (however this is taken into account by Senatsverwaltung)</p> <p>There is a need to attract people from other areas in order to make this area survive</p> |
| Social | <p>A primary school is included in the project</p> <p>This project would bring life to the area</p> <p>Some infrastructure likely to foster the well-being of inhabitants are included</p> <p>Too little to really impact gentrification</p> | <p>Most of the people there would be working in the area, not living</p> <p>Art will probably not be fostered as much as first wanted</p> <p>Social housing is built only on the east side and concerns only 215 housing units (25% of the 850 ones on the east sides)</p> <p>Too little to really impact gentrification</p> |
| Environmental | <p>Sustainability should be attained to some extent</p> <p><i>Green mobility is an important component of the project (through promenades)</i></p> | <p><i>This project means more area covered by buildings and roads even though it is no greenfield</i></p> <p>Some choices do not match the original environmental requirements</p> |
| Historical | <p>Building a museum</p> <p>Keeping some historical monuments</p> | |
| Psychological | <p><i>Reappropriating the wall area</i></p> | <p><i>It is not sure whether the people of Berlin will feel this area is theirs</i></p> |
| Spatial | <p>Many buildings, and areas within the project should have their own architectural personality</p> <p>Indirect influence on the development of public transportation - new tramway station</p> | <p>With 20,000 working persons and 6,000 residents expected, the project is bringing potentially 50,000 car trips daily in the area <i>the project will increase the pressure on transport infrastructure</i></p> |

| | | |
|----------------------|--|--|
| Technological | <i>Development of know-how</i> in order to manage and achieve such a project | |
|----------------------|--|--|

Table 4: Potential impacts of the project on values

Table 5 aims at identifying the costs and benefits for the main stakeholders (public actors, private investors, residents) according to the categories considered.

The three main identified stakeholders are public authorities, private investors and residents. The main finding is that the state’s costs and benefits seem to be the ones impacting the most the values considered. While the citizens took relatively little part to the decision-making process, their costs and benefits seem to impact very much the considered values. Eventually, the private investors’ costs and benefits tend to affect economic, environmental values more than any other. Some items, such as stakeholders involvement, psychological, spatial or to a lesser extent economic values, seem to be more affected by project developers while others (social and historical), are rather concerning both public actors and citizens.

Some particular changes are both costs and benefits (e.g. changes in property value for citizens). Most values considered imply both costs and benefits (only the changes in historical and technological values were solely benefiting to stakeholders).

| Value affected by the project | Public bodies | | Private investors | | Local and surrounding residents | |
|---------------------------------|---------------|---|-------------------|--|--|----------|
| | Costs | Benefits | Costs | Benefits | Costs | Benefits |
| Stakeholders involvement | | The project could not happen without private partners | | The project could not happen without public partners | The future residents or users of the area were not involved in public meetings | |

| | | | | | | |
|----------------------|--|---|---|--|--|---|
| Economic | Public actors invested a lot of money in this project | On the longer term, there might be valuable (property <i>and added value</i>) taxes Some public infrastructures were privately financed Preparation phase was financed by private actors | Private investors had to invest a lot of funds in order to prepare the area and they had to finance some public infrastructures | The area gains enormous value which enables benefit when selling or using it | The property value will probably increase - buying or renting housing will be more costly (<i>in Berlin the vast majority of the apartments is for renting</i>) | The property value will probably increase - selling or renting one's property will be more valuable |
| Social | Public actors invested a lot of time in this project <i>rather than in other ones that could have brought more social benefits</i> | A bit more social housing is provided, <i>enabling a few hundred poorer persons to live in the center of Berlin</i> This area creates social interactions and activities | | | Rising prices might redefine who lives in this neighbourhood <i>Making Mitte even a denser area</i> <i>Further air pollution could influence health</i> <i>The new public infrastructure might not cover the needs of the residents</i> | 6000 new persons will be able to live in the center of Berlin 20000 jobs will be located in this area Improved education through museum <i>Promenades may improve the life quality</i> |
| Environmental | <i>This area is becoming very urbanized - polluted</i> | The area was cleaned-up in the regeneration process | Investors had to take into account particular assessments | Not all original requirements were to be met | <i>Soils and water in the area are likely to be polluted by human activities</i> <i>Rise in air pollution through the expected 50,000 cars driving there everyday</i> | The area was cleaned-up in the regeneration process |
| Historical | | <i>The museum should protect the memory of this area</i> Some historical buildings are preserved | | | | <i>The museum should protect the memory of this area</i> |
| Psychological | <i>Reputational costs of regenerating an area with not so many services</i> | <i>Reputational gains of good management if achieved on time and with the right outputs</i> | | <i>Reputational gains among partners and citizens</i> | | <i>Berlin separation is becoming more of a memory than a reality</i> |

| | | | | | | |
|----------------------|---|--|---|---|--|--|
| Spatial | Some portions of land were given to private investors | Some portions of land were given back to the public Transport network were improved | Some portions of land were given back to the public | Some portions of land were given to private investors | | |
| Technological | | Most of the outputs were successfully delivered - <i>know-how</i> | | | | |

Table 5: Costs and benefits for each stakeholder depending on the value considered

These results match our expectations to the extent that, as the project is close to completion, it is expected that more positive aspects should appear. However, the data gathered is surely incomplete.

5 DISCUSSION

Using all the data we gathered and confronting it to literature, we will try to answer to our research question: Based on literature and the case study of Europacity in Berlin, how to evaluate the economic dimensions of a brownfield regeneration project in the European context?

We will answer to this question in three steps: investment structure, class of brownfield and development potential.

5.1 Investment structure and stakeholders

As CABERNET Network Report (2006) or Green (2018) underlined, it is useful to adopt a multi-stakeholder approach and this is what we did. However, as Wang et al. (2009) showed the major influence of so-called DMs, we preferred to focus on the main stakeholders for the purpose of this study. In this framework, we defined two major stakeholders: public bodies (represented by the Senatsverwaltung Berlin) and private investors (represented by CA Immo). However, this project being an urban business-residential project and as several authors mentioned effects of brownfields and their regeneration on the neighborhood (Howland, 2007; Sousa et al., 2009, Gilderbloom et al., 2014; Green, 2018), it was logic to include local and neighboring residents in our analysis.

In this project, there was a public-private partnership with a much bigger funding from the private sector than from the public. However, as Sousa et al. (2009) mentioned, the size and cost of public participation do not really matter. Furthermore, there are mixed costs on several public services. We can define this project as a private-driven project. However, it is

difficult to say who took the actual initiative of the project.

As presented in Table 2, the overall cost of the project should be around 1,000,000,000 €, which makes it one of the most expensive brownfield projects that was studied.

One of the potential factors explaining why the private sector invested so much more money than the public is that the private investors were the landowners. Moreover, with housing and property prices rising in Berlin (and the very good location of this brownfield), building on this area is expected to lead to significant benefits. As Berlin does not own the area, the only economic benefits it can expect is on the longer term from the use and the taxes of this area as a driver for activity.

Among public funding sources, there were shared federal, state and EU (through ERDF) funding sources which show the importance of taking into account all possible layers of institutional context that a project in Berlin implies.

If we put this private investment in the perspective of Green's findings (2018), who enumerates economic incentives, public policy initiatives, environmental liability and other costs of regeneration as main drivers for private investment, it seems that the land ownership and the profit perspectives are missing in this list as they were some of the main factors for this area and this project. As far as we have found, there were no particular economic incentives needed and the private investors had to pay for the land cleanup so that these factors seem to be outweighed by the potential profit or the particular mindset of developers in Germany who are more aware than the average of the European developers of the various aspects of brownfield regeneration and put a lesser emphasis on profit (Rizzo et al., 2015).

However, the profits expected are very high and we cannot say that this project is going to counter the statement that "brownfield redevelopment is about what makes financial sense" (Howland, 2007).

5.2 Class of brownfield and economic feasibility

According to the typology of Ferber and Grimski (2001), this is a brownfield in an urban area.

This project, very ambitious, corresponds well to the fact that urban brownfields - or brownfields in areas with higher socio-economic indicators - are usually most privileged (Green, 2018).

Based on CABERNET Network Report (2006) A-B-C classification and the much higher private than public investment, this project seems to be quite obviously to take place in an class A brownfield. Following the CABERNET factors for economic viability, the site seems to be quite profitable.

Indirect as well as direct costs of the regeneration are quite significant but were mostly included in the project and paid by private investors. The tram extension costs, as part of the public willingness to improve transportation is not included. However, this is a relatively short extension as the area is located in the very center of Berlin.

Unfortunately, we did not gather precise information on the predicted revenues created by the site either for the city of Berlin or for CA Immo. However, Berlin can expect long-term benefits from this area through property taxes while CA Immo, either by selling or renting, makes and will go on making high benefits.

From a strictly economic point of view, as the financing is mostly private, the risk is relatively little for the public institutions. However, 25,000,000 € are still a high amount of investments that could possibly have been used for other projects. From the perspectives of development, it seems however that the risk is not so high on the longer-term since taxes will be raised and economic activity in the area will have numerous externalities on the housing

prices in the area for examples.

Given the land's ownership, it seems that this PPP is likely to be a win-win partnership and the long and cooperative work on the project is probably one of the main reasons for it.

5.3 Development potential

Throughout our work, we have identified - in Tables 3, 4 and 5 - success and failure factors, impacts of the project on particular values and the costs and benefits for each main stakeholder. This information will help us discussing the development potential of the project. Based on our findings and the literature, we will discuss our findings accordingly to the items classification used in the results. However, we will focus particularly on the three items linked to the sustainable development pillars. Indeed, as we remarked already, there is a consensus (Green, 2018; Pizzol et al., 2016) on the fact that the decision-making should highly depend on all three pillars of sustainability. Thus, these three aspects are key in considering development potential. When taking into account CABERNET Network Report (2006) interaction matrix for the urban land system, it is important to notice that this project on this area is likely to meet all following items out of 12: attract tourists, provide a market, provide habitats in park (to a lesser extent), provide tax revenues, provide jobs, prevent unnecessary use of resources (as avoiding further development on greenfield), mixed cost housing. Health would be the only mentioned item that could be influenced negatively.

5.3.1 Development potential based on economic value

First of all, with 6 success and 2 failure factors, it seems clearly that this project was potentially very profitable to lead. The mixed financing lowered the charge on public actors,

which is particularly good when managing a project in a constrained financial context. The financial agreement involved the private investors into the public services investments and the market factors (prices, offer and demand) were in favor of such a development project. These financial promises were not outweighed by the potential failure factors of the project. This made the completion of this project financially very attractive. However, this does not correspond to the ideal public financing of a project according to Sousa et al. (2009).

When looking at the potential impacts of the project on the area, there are 3 positive and 2 negative ones. Raising property taxes (as identified by Sousa et al, 2009), the investment in newer public services and areas, and the attraction of a very powerful and rich company. However, on a more local level, it is hard to say whether these impacts outweigh the potential competition with the surrounding retail and business infrastructure. WS mentioned that this was taken into account but also that this area would highly depend on people not living in it.

Eventually, when considering economic costs and benefits, it seems that public actors and private actors will both be winners to some extent in this agreement. The private investors by making great profits and the public actors by implementing a big project at relatively little cost. A project that will hopefully lead to more benefits on the longer term. However, it is unsure whether the neighboring residents will gain more than lose in this project since most of Berlin's housing is for rent and the property value is likely to be rising for contextual reasons as well as because of the project itself, as mentioned by Green (2018) and Sousa et al. (2009). Moreover, this project, highly residential, is one the most likely to have higher effects on the surroundings according to Sousa et al. (2009).

When looking at the economic value, this project has a particularly high development potential since the area and the project offer positive factors for the completion of the project,

the project has very positive direct impacts on both the public bodies and private investors. Economically speaking, only the surrounding might be actually affected negatively.

5.3.2 Development potential based on social value

But as we mentioned several times already, the social aspects should be key in any brownfield regeneration project.

In the factors for the completion of the project, the perspective of bringing this area to life is a main driver while not meeting the original goal to make this area an art center is quite negative.

When considering the impacts of the project, the social services are key (even though maybe too few of them for the number of inhabitants foreseen). On the other hand, it is hard to know how social life will be as this neighborhood will rely intensely on people coming from other areas. Furthermore, the social housing rates, due to the ownership of land, are not implemented in all areas. The private investors having no particular interest in social housing, only a few hundred of social housing units will be built. That will not foster a certain social mix. Eventually, this project is said to be too little to impact gentrification. It is hard to know to what extent it will contribute to (by raising the prices in the surroundings) or contain it (by offering 3,000 more housing units and thus improving the offer of housing in an area where the demand is very high). Eventually, from the literature, we could add the potential “promotion” effect of this area and urban life in general given by this project and relatively sustainable neighborhood as described by Green (2018). Based on the work of Howland (2007) or Kurtovic et al. (2014), we can remark that this project could contribute to reducing further the unemployment rate in this area (depending on the workforce qualification and the jobs offered there).

When doing a social CBA, it is interesting to note that we have not identified social costs and benefits for the private investors as they are not involved so much at the local level. One of the main criticisms we can make to this project is that the millions invested by public actors could have served more social purposes. However, if we follow the analysis of Sousa et al. (2009), the project might generate revenues to finance more social projects in the future. But most costs and benefits are for the inhabitants. Jobs creations (but maybe destruction elsewhere), improved education and quality of life as opposed to potential gentrification, further air pollution and density which may affect greatly the quality of life. Furthermore, the public infrastructure does not seem to be sufficient to cover the needs of the new inhabitants, which could lead to pressure on existing infrastructure and reduce the service quality in the area.

All in all, the social value perspective on development potential shows that the will to develop a project on this area is quite legitimate but this particular project might not be the most socially valuable due to its potential interactions with the surroundings.

5.3.3 Development potential based on environmental value

Eventually, from an environmental point of view, the main factors for the completion of the project green development (Green, 2018) are positively met. However, some negotiations over a few practical, economical and less ecologic solutions influenced negatively these factors.

In terms of impacts, if sustainability should be attained to some extent, these factors seemed to be rather marketing arguments when it came to making choices. Furthermore, this land use is no soft brownfield regeneration which could have impacted less the people and

neighborhood in terms of social aspects. Even though not on a greenfield, this is a kind of urban sprawl.

Eventually, the CBA in this case is quite paradoxical, the land was cleaned up but also instantly urbanized. For private investors, the benefits and costs related to environment are opposed to the interest of environment. For citizens, the costs are relatively high since further air, soils and water pollution is brought by the project.

On environmental terms, this project does not seem to have such a high green potential as we could have first thought. However, this is a flaw related to any sort of quite dense urban development. From this point of view, another project could have been chosen.

5.3.4 Development potential based on other items

Regarding other items (stakeholders involvement, historical, psychological, spatial and technological values), all were both success and failure factors which confirms that these items are to be taken into account when assessing a project on a certain area. Only technological value did not seem to influence very much the project.

The impacts of the project on other values were relatively positive. In fact, three of them seemed to be solely positive. When developing a project, these values should be also taken into account.

When assessing CBA, these other values seemed to consist rather in benefits than costs for all stakeholders. However, some depend on the project and others on the context. For example, the historical value consists in a valuable output of this particular project while the psychological benefit of making Berlin reunification more concrete would have been a possibility in many other types of projects done in this area.

All in all, the different values of brownfield as a cultural landscape given by Kurtovic

et al. (2014) (to which we add stakeholder involvement) seem to make a great sense when trying to assess the development potential of a project and may help in not prioritizing solely economically profitable projects but other projects that are beneficial to other values in order to foster long-term development, well-being and brownfield regeneration as non-strictly economic. Complementary to the findings of Green (2018), it seems that stakeholders involvement plays a very important role when not considering solely if a PPP, public project or private project is led.

In this particular project, it seems that the private funding led to a focus on financial aspects. The social dimensions do not seem to have been studied extensively enough even though concrete efforts have been made in order to improve social life and life quality in this area. Environmental aspects, however, seem to have become sometimes rather a marketing argument than a priority concern.

Therefore, the strictly economic development potential is very high while the social development potential as well as the environmental ones seem uncertain. It seems unsure whether the regional coalition agreement will to “to ensure integration in neighboring areas” (p. 34) has been well implemented.

However, we lack information about the social and environmental aspects to be sure that these results are in disagreement with the findings of Rizzo et al. (2015) about German stakeholders view of brownfield regeneration. We could gather such data on the longer term.

6 CRITICS

There are several aspects that can be criticized in our work.

First of all, the interview was originally prepared for another research question, which was close to the subject studied here. Furthermore, the time of the interview was too short in order to gather sufficient information on all wanted aspects and personal research could not make up for the lacking information. This could explain incomplete - if not inaccurate - results. Eventually, if the point of view of the city of Berlin was the most important in order to become data and valuable information, it would have been even better to be able to interview other stakeholders of the project.

Another limit is that the case study is not comparative. What applies to this project is likely to not apply for another for reasons that we have identified or that we have not.

Also, studying an ongoing project facilitated the possibility to reach the person in charge of it. However, the results obtained are mostly predictions and would need to face other factual research led when the project will be ended.

Last but not least, this study written in English was mostly led in German by a French native speaker. The linguistic obstacles may have hindered our understanding of the situation and opportunities of communication with potential stakeholders.

For all these reasons, the results of the study would benefit from further verification through complementary study.

7 CONCLUSIONS

To conclude, from all the information gathered, how to evaluate the economic dimensions of a brownfield regeneration project in the European context? It seems clear now that, if “Brownfield redevelopment is about what makes financial sense”, it is still yet to define what would make financial sense. As considering solely the economic value of things might lead to projects with negative externalities on all other values, it seems that - even economically speaking - considering all the values studied throughout this work might be profitable on the longer term. An efficient decision-making towards brownfield regeneration should always at least be based on a good balance between the three pillars of sustainability but other items, particularly stakeholder involvement as well as to a somewhat lesser extent historical, psychological and spatial values are worth considering. Furthermore, we have seen in our study that this project could have negative externalities and, more generally, that its impacts on neighborhood were not intensively studied. It seems crucial that the interaction due to the implementation of such a project with its surroundings becomes a more intense field of study.

We have also found in our work that it was of high relevance not only to study the potential of a brownfield but also of a project on this particular brownfield by comparing its success and failure factors, its impacts on given values and the costs-benefits analysis of the main stakeholders. Applying such methodological framework to every project proposal for a given brownfield site would mean a great workload however.

7.1 Proposals

As we are not totally satisfied with the interview, further research could also study this project again a few years after its completion in order to compare our results. It would be also interesting to be able to interview representatives of the private investors and citizens.

Our methodology seems to be accurate but would need to be tested on more projects in various contexts to assess its versatility. In fact, we would call for a more extensive qualitative research to assess the development potential of specific projects in various environments and the reasons why such a project might have failed or worked in a given context.

A further step would be to simplify this methodology in order to reduce the workload for decision makers while keeping its comprehensive aspect.

Eventually, quantitative research could be led to compare projects, assess their similarities and specificities and eventually sort them out in order to design later a comprehensive prioritization tool.

8 SUMMARY

Based on qualitative, case study and the analysis of Europacity project in Berlin, this study aims at assessing the important criteria in order to evaluate the economic dimensions and development potential of a brownfield and a brownfield project. In the literature, more contextual information is given by making an updated state of the arts of brownfield regeneration financing and framework in the European Union with a particular focus on Germany. Furthermore, tools to evaluate the development potential of particular brownfield regeneration projects in particular brownfields and costs-benefits analysis in this field are reviewed. Using a compilation of official and informal data acquired through the interview of one main institutional actor in the development of the Europacity project, the author tried to assess the factors influencing the successful completion of the project in this area, the impacts of the project on eight selected items (stakeholders involvement and following values: economic, social, environmental, historical, psychological, spatial and technological) and the costs-benefits analysis for three of the main stakeholders of the project. The main finding is that all items studied were relevant to some extent in the economic evaluation of a brownfield regeneration project.

Keywords: Financing, brownfield regeneration, sustainable development, economic dimensions, social, environmental, Europe, European Union, Germany, Berlin, Europacity, brownfield redevelopment, development potential, costs-benefits analysis, success and failure factors, impacts, qualitative study, case study, friche, allemagne, Brachflächen, ERF, European funds, stakeholders involvement, value of brownfield as a cultural landscape

9 REFERENCES

All references presented in this document were consulted at the latest on the 15th of August 2018.

Adams, D., Sousa, C. D., & Tiesdell, S. (2009, 11). Brownfield Development: A Comparison of North American and British Approaches. *Urban Studies*, 47(1), 75-104. doi:10.1177/0042098009346868

ADEME (2014). *La reconversion des sites et des friches urbaines pollués*. Retrieved from <https://www.ademe.fr/sites/default/files/assets/documents/reconversion-sites-et-friches-urbaines-pollues-7794.pdf>

ADEME (2016). *Reconversions des friches urbaines*. Retrieved from <https://www.ademe.fr/expertises/urbanisme-amenagement/passer-a-laction/reconversions-friches-urbaines-0>

Baugesetzbuch (2017, November 11). (BGBl. I S. 3634). Retrieved from <https://www.gesetze-im-internet.de/bbaug/BauGB.pdf>

Bardos, R. P., Jones, S., Stephenson, I., Menger, P., Beumer, V., Neonato, F., . . . Wendler, K. (2016, 09). Optimising value from the soft re-use of brownfield sites. *Science of The Total Environment*, 563-564, 769-782. doi:10.1016/j.scitotenv.2015.12.002

Bergh, J. C. (2004, 04). Optimal climate policy is a utopia: From quantitative to qualitative cost-benefit analysis. *Ecological Economics*, 48(4), 385-393. doi:10.1016/j.ecolecon.2003.10.011

BMU (2014, May 12). Brownfield redevelopment and inner urban development.

Retrieved from

<https://www.umweltbundesamt.de/en/topics/soil-agriculture/land-use-reduction/brownfield-redevelopment-inner-urban-development#textpart-1>

BMU (2017, July 25). Alle Partner im Bündnis für bezahlbares Wohnen und Bauen setzen Zusammenarbeit fort - BMU-Pressemitteilung. Retrieved from <https://www.bmu.de/pressemitteilung/alle-partner-im-buendnis-fuer-bezahlbares-wohnen-und-bauen-setzen-zusammenarbeit-fort/>

BMU (2017, August 17). Bündnis wirbt für mehr Akzeptanz von Neubauten - BMU-Pressemitteilung. Retrieved from <https://www.bmu.de/pressemitteilung/buendnis-wirbt-fuer-mehr-akzeptanz-von-neubauten/>

Bundesregierung (2018, March 12). *Koalitionsvertrag zwischen CDU, CSU und SPD. 19. Legislaturperiode*. Retrieved from https://www.bundesregierung.de/Content/DE/_Anlagen/2018/03/2018-03-14-koalitionsvertrag.pdf

CABERNET Network Report (2006). Retrieved from <http://urbandesign.ir/wp-content/uploads/2017/11/Sustainable-Brownfield-Regeneration-cabernet.pdf>

Chrysochoou, M., Brown, K., Dahal, G., Granda-Carvajal, C., Segerson, K., Garrick, N., & Bagtzoglou, A. (2012, 04). A GIS and indexing scheme to screen brownfields for area-wide redevelopment planning. *Landscape and Urban Planning, 105*(3), 187-198. doi:10.1016/j.landurbplan.2011.12.010

CSU (2018). *10 Positionen des AKU und der KPV zum Flächensparen in Bayern*. Retrieved from <https://www.csu.de/common/csu/content/csu/hauptnavigation/partei/parteiarbeit/aku/2018-02>

-01_Positionspapier_AKU_und_KPV_Bayern_Flaechensparen_in_Bayern.pdf

Dimension. (n.d.). Retrieved from

<https://www.merriam-webster.com/dictionary/dimension>

European Court of Auditors. (2012). Have EU structural measures successfully supported the regeneration of industrial and military brownfield sites?. Special Report No 23, 2012. Retrieved from

<https://publications.europa.eu/en/publication-detail/-/publication/6e4855e6-5921-410d-829e-7ba60338427a>

European Commission (2018). Open Data Portal for the European Structural Investment Funds - European Commission | Data | European Structural and Investment Funds. Retrieved from <https://cohesiondata.ec.europa.eu/programmes/2014DE16RFOP003>

Ferber, U., & Grimski, D. (2001). Urban Brownfields in Europe. *Land Contamination & Reclamation*, 9(1), 145-148.

Gemeinschaftsgarten Allmende-Kontor. (n.d.). Retrieved from

<https://gruen-berlin.de/tempelhofer-feld/ueber-den-park/projektnutzungen/gemeinschaftsgarten-allmende-kontor>

George, S. (1992). *An awkward partner Britain in the European community*. Oxford University Press.

Gibson, K. J. (2007, 04). Bleeding Albina: A History of Community Disinvestment, 1940-2000. *Transforming Anthropology*, 15(1), 3-25. doi:10.1525/tran.2007.15.1.03

Gilderbloom, J. I., Meares, W. L., & Riggs, W. (2014, 05). How brownfield sites kill places and people: An examination of neighborhood housing values, foreclosures, and lifespan. *Journal of Urbanism: International Research on Placemaking and Urban Sustainability*, 9(1), 1-18. doi:10.1080/17549175.2014.905488

Green, T. (2018, 04). Evaluating predictors for brownfield redevelopment. *Land Use Policy*, 73, 299-319. doi:10.1016/j.landusepol.2018.01.008

Handbook on the benefits, costs, and impacts of land cleanup and reuse. (2011). United States Environmental Protection Agency, Office of Policy and Office of Solid Waste and Emergency Response.

Howland, M. (2007, 11). Employment Effects of Brownfield Redevelopment: What Do We Know from the Literature? *Journal of Planning Literature*, 22(2), 91-107. doi:10.1177/0885412207306616

Kälberer, A. (2005). *Die Zukunft liegt auf Brachflächen: Reaktivierung urbaner Flächenreserven - Nutzungspotentiale und Praxisempfehlungen: Informationen für Investoren, Bauherren und Immobilieneigentümer.* ICSS.

Koalitionsvereinbarung 2016-2021. (2017, February 20). Retrieved from <https://www.berlin.de/rbmskzl/regierender-buergermeister/senat/koalitionsvereinbarung/>

Kotval-K, Z. (2016, 07). Brownfield Redevelopment. *Economic Development Quarterly*, 30(3), 275-282. doi:10.1177/0891242416656049

Kurtovic, S., Siljkovic, B., & Pavlovic, N. (2014, 01). Methods of Identification and Evaluation of Brownfield Sites. *International Journal of Research in Business and Social Science (2147-4478)*, 3(2), 105. doi:10.20525/ijrbs.v3i2.101

Lammers, K. (1996). Zu viele Bundesländer?, *Wirtschaftsdienst*, 76(1), 4. Retrieved from https://www.econstor.eu/bitstream/10419/137310/1/wd_v76_i01_pp004-004.pdf

Lammers, K. (1997). Systemfehler im Finanzausgleich. *Wirtschaftsdienst*. 77(8), 430-431. Retrieved from https://www.econstor.eu/bitstream/10419/137508/1/wd_v77_i08_pp430-431.pdf

Latusseck, R. H. (2010, July 22). Stadtgrün: In Berlin werden Brachflächen zu

Blumenwiesen - WELT. Retrieved from

<https://www.welt.de/wissenschaft/article8582719/In-Berlin-werden-Brachflaechen-zu-Blumenwiesen.html>

Lee, S., & Mohai, P. (2012, 06). Environmental Justice Implications of Brownfield Redevelopment in the United States. *Society & Natural Resources*, 25(6), 602-609.

doi:10.1080/08941920.2011.566600

Loures, L., & Vaz, E. (2018, 02). Exploring expert perception towards brownfield redevelopment benefits according to their typology. *Habitat International*, 72, 66-76.

doi:10.1016/j.habitatint.2016.11.003

Mccarthy, L. (2002, 10). The brownfield dual land-use policy challenge: Reducing barriers to private redevelopment while connecting reuse to broader community goals. *Land Use Policy*, 19(4), 287-296. doi:10.1016/s0264-8377(02)00023-6

New Cohesion Policy. (n.d.). Retrieved from http://ec.europa.eu/regional_policy/en/2021_2027/

NICOLE Brownfield Working Group (2011). *Environmental Liability Transfer in Europe: Divestment of Contaminated Land for Brownfield Regeneration*. Retrieved from <http://www.nicole.org/uploadedfiles/2011-wg-brownfields-finalreport.pdf>

Noack, R. (2016, May 04). Germany welcomed more than 1 million refugees in 2015. Now, the country is searching for its soul. Retrieved from https://www.washingtonpost.com/news/worldviews/wp/2016/05/04/germany-welcomed-more-than-1-million-refugees-in-2015-now-the-country-is-searching-for-its-soul/?noredirect=on&utm_term=.daea1b13d26b

Oliver, L., Ferber, U., Grimski, D., Millar, K., Nathanail, P., The Scale and Nature of European Brownfield. Retrieved from

https://www.researchgate.net/publication/228789048_The_Scale_and_Nature_of_European_Brownfield

Overview of the Brownfields Program. (2018, July 12). Retrieved from <https://www.epa.gov/brownfields/overview-brownfields-program>

Piepenburg, A. (2013). *Ist das stadtstaatenprivileg bei der einwohnerwertung berechtigt?* Grin Verlag.

Pizzol, L., Zabeo, A., Klusáček, P., Giubilato, E., Critto, A., Frantál, B., . . . Bartke, S. (2016, 01). Timbre Brownfield Prioritization Tool to support effective brownfield regeneration. *Journal of Environmental Management*, *166*, 178-192.

doi:10.1016/j.jenvman.2015.09.030

Politique européenne de la Suisse. (n.d.). Retrieved from <https://www.eda.admin.ch/eda/fr/dfae/politique-exterieure/politique-europeenne/politique-europeenne-suisse.html>

Rizzo, E., Pesce, M., Pizzol, L., Alexandrescu, F. M., Giubilato, E., Critto, A., . . . Bartke, S. (2015, 11). Brownfield regeneration in Europe: Identifying stakeholder perceptions, concerns, attitudes and information needs. *Land Use Policy*, *48*, 437-453.

doi:10.1016/j.landusepol.2015.06.012

Roy, L. (2013, August 02). Flächenrecycling und Innenentwicklung. Retrieved from <https://www.umweltbundesamt.de/themen/boden-landwirtschaft/flaechensparen-boeden-landschaften-erhalten/flaechenrecycling-innenentwicklung#textpart-1>

Schädler, S., Morio, M., Bartke, S., & Finkel, M. (2012). Integrated planning and spatial evaluation of megasite remediation and reuse options. *Journal of Contaminant Hydrology*. *127*, 88-100. doi:10.1016/j.jconhyd.2011.03.003

Sousa, C. A., Wu, C., & Westphal, L. M. (2009, 01). Assessing the Effect of Publicly

Assisted Brownfield Redevelopment on Surrounding Property Values. *Economic Development Quarterly*, 23(2), 95-110. doi:10.1177/0891242408328379

Spínola, A. L., Philippi, A., & Tomerius, S. (2010, 04). Contaminated sites and brownfield management. *Management of Environmental Quality: An International Journal*, 21(3), 299-307. doi:10.1108/14777831011036867

Wang, L., Fang, L., & Hipel, K. W. (2009, 10). Negotiation over Costs and Benefits in Brownfield Redevelopment. *Group Decision and Negotiation*, 20(4), 509-524. doi:10.1007/s10726-009-9179-5

World Commission on environment and Development, & World Commission on environment and Development. (1987). *Our common Future*. Oxford, Univ. Press.

Context | Definition of context in English by Oxford Dictionaries. (n.d.). Retrieved from <https://en.oxforddictionaries.com/definition/context>

Dimension. (n.d.). Retrieved from <https://www.merriam-webster.com/dictionary/dimension>

Economic | Definition of economic in English by Oxford Dictionaries. (n.d.). Retrieved from <https://en.oxforddictionaries.com/definition/economic>

Economy | Definition of economy in English by Oxford Dictionaries. (n.d.). Retrieved from <https://en.oxforddictionaries.com/definition/economy>

Sustainable development | Definition of sustainable development in English by Oxford Dictionaries. (n.d.). Retrieved from https://en.oxforddictionaries.com/definition/sustainable_development

10 LIST OF TABLES

| | |
|--|----|
| Table 1 – Practical information about the brownfield site..... | 45 |
| Table 2 – Practical information about the brownfield project..... | 46 |
| Table 3 – Values success and failure factors for the project completion in this context..... | 47 |
| Table 4 – Potential impacts of the project on values..... | 49 |
| Table 5 – Costs and benefits for each stakeholder depending on the value considered..... | 50 |

ANNEXES

| | |
|--|------------|
| Annex 1: Prepared questionnaires at EU-Germany-Bundesland levels..... | 75 |
| Annex 2: Guide prepared for the interview with W. Schlömer (W.S.) and explanation of the questions asked..... | 78 |
| Annex 3: Transcription of the interview..... | 84 |
| Annex 4: Sequences of the interview & Questions not corresponding to the planned interview..... | 93 |
| Annex 5: Questions not corresponding to the planned interview..... | 100 |

Annex 1: Prepared questionnaires at EU-Germany-Bundesland levels

The following are questions I prepared in case the author could obtain an interview with responsible persons at the different institutional levels of the German context.

Questions at EU-level:

- v Which EU funds actually fund brownfield regeneration projects? ERDF? ESF? Cohesion Fund in poorer EU countries?

- v How much money does the EU invest in brownfield regeneration projects (in particular in Germany)? How much further public and private investment did it (or is it expected to) leverage?

- v To what extent did and does the current Multiannual Financial Framework for 2014-2020 impact brownfield regeneration?

- v To what extent does already and would the new Multiannual Financial Framework for 2021-2027 impact brownfield regeneration?

- v How does the EU define brownfield regeneration? Consequently, what outputs does it expect from this kind of projects?

- v After the former RESCUE/CABERNET/TIMBRE projects, are there current or upcoming initiatives to study further this issue in the EU nowadays?

- v According to you, what challenges (lesser EU-funding?) and opportunities (digitalization, e-mobility?) will brownfield regeneration and its funding have to deal with in the future?

Questions at Germany national level:

- v What are the objectives of Germany in terms of brownfield regeneration? Is it precisely planned by the government (it is mentioned in the GroKo Vertrag 5300-5306: "Rehabilitation and preparation of industrial brownfield sites as a priority area for funding")?

- v What financial mechanisms does Germany offer to brownfield regeneration projects? What criteria does the funding of projects depend on? How much money does Germany invest in brownfield regeneration projects?

- v In GroKo Vertrag mentioned: how related are “Soziale Integration im Quartier” pact of investment and “Nationale Projekte des Städtebaus” program with brownfield regeneration?
- v According to you, what may be the impact of the new German coalition agreement on brownfield regeneration funding, more generally?
- v To what extent are the German brownfield regeneration policy and funding decentralized?
- v To what extent did and does the current EU Multiannual Financial Framework for 2014-2020 impact brownfield regeneration in Germany?
- v To what extent does already and would the new EU Multiannual Financial Framework for 2021-2027 impact brownfield regeneration in Germany?
- v How does the German government define brownfield regeneration? Consequently, what (in particular economic) outputs does it expect from this kind of projects?
- v According to you, what challenges (lesser EU-funding?) and opportunities (digitalization, e-mobility?) will brownfield regeneration and its funding have to deal with in the future?

Questions at regional state level:

- v What are the main projects regarding brownfield regeneration in your Land in terms of budget?
- v What stakeholders does the Land usually choose to work with regarding brownfield regeneration projects?
- v What financial mechanisms does the Land offer to brownfield regeneration projects? What criteria does the funding of projects depend on?
- v What are the objectives of the Land in terms in brownfield regeneration and brownfield regeneration funding? How much money does it invest in brownfield regeneration projects?
- v To what extent are the German brownfield regeneration policy and funding decentralized?

- v To what extent did and does the current EU Multiannual Financial Framework for 2014-2020 impact brownfield regeneration in your Land?
- v To what extent does already and would the new EU Multiannual Financial Framework for 2021-2027 impact brownfield regeneration in your Land?
- v How does your Land define brownfield regeneration? Consequently, what outputs does it expect from this kind of projects?
- v According to you, what challenges (lesser EU-funding?) and opportunities (digitalization, e-mobility?) will brownfield regeneration and its funding have to deal with in the future?

Annex 2: Guide prepared for the interview with W. Schlömer (W.S.) and explanation of the questions asked

| Question prepared in German | Translation into English | Explanation |
|--|---|--|
| <p>1. Könnten Sie sich vorstellen?</p> <p>1.1. Wie lange sind Sie an diesem Projekt beteiligt?</p> <p>1.2. Arbeiten Sie für die Senatsverwaltung schon länger?</p> <p>1.3. <i>Warum war dieses Projekt Ihrer Meinung nach für Berlin/dieses Gebiet nützlich oder notwendig?</i></p> | <p>1. Could you present yourself</p> <p>1.1. How long have you been taking part in this project?</p> <p>1.2. Have you been working at the Senatsverwaltung for a longer time?</p> <p>1.3. <i>Why was this project important to Berlin, according to you?</i></p> | <p>Introducing the topic and creating a relation based on confidence. Knowing the experience of W.S. in this project.</p> <p>Knowing whether he has had a longer public experience or if he has had private experiences favouring the cooperation with private actors.</p> <p><i>Knowing W.S. own analysis of the project scope and goals.</i></p> |
| <p>2. Bevor wir mit präziseren Fragen anfangen, könnten Sie bitte zusammenfassen, welche weiteren Stakeholder am Projekt beteiligt sind? Welche Rolle spielen sie dabei?</p> <p>2.1. Grundbesitzer: Vivico Gmbh/DB AG 2.1.1. Gebäudebesitzer?</p> <p>2.2. Verwaltung: Bezirksamt Mitte von Berlin/Senatsverwaltung</p> <p>2.3. Architekten & Technology suppliers: ASTOC/StudioUrbanKatalysator/Argus</p> <p>2.4. Weitere akademische/Professionelle Advisors?</p> <p>2.5. Weitere Projektentwickler?</p> <p>2.6. Nachbarschaft und zukünftige Einwohner?</p> <p>2.7. Zukünftige Geschäftsmieter? Andere?</p> | <p>2. Before starting with more precise questions, could you sum up, which other stakeholders take part in this project? What is their role?</p> <p>2.1. Landowners Vivico Gmbh/DB AG 2.1.1. Owners of the buildings?</p> <p>2.2. Administration Bezirksamt Mitte von Berlin/Senatsverwaltung</p> <p>2.3. Architects & technology suppliers ASTOC/StudioUrbanKatalysator/Argus</p> <p>2.4. Further academic and professional advisors</p> <p>2.5. Further project developers?</p> <p>2.6. Inhabitants from the neighbourhood and future inhabitants?</p> <p>2.7. Future users of the business areas?</p> | <p>Defining precisely who the stakeholders are and confirming the information I gathered before the interview.</p> <p>Based on CABERNET categorization of stakeholders.</p> |
| <p>3. Wer oder welcher Stakeholder hat die Initiative ergriffen, das Projekt zu starten?</p> | <p>3. Who or which stakeholder took the initiative to start the project?</p> | <p>Defining whether it is rather a public or private initiative, which would help understanding the goal of the project.</p> |

| | | |
|---|--|---|
| <p>3.1. Was waren die Gründe für alle Stakeholder, um dieses Projekt zu starten? Und um es zusammen durchzuführen?</p> <p>3.1.1. Hätte Berlin ein solches Projekt ohne private Investoren durchführen können?</p> <p>3.2. Welche politischen und legislativen Aspekte haben (finanziell) den Start dieses Projekts ermöglicht?</p> <p>3.2.1. War die Genehmigung und Unterstützung der Behörden notwendig, um das Projekt zu starten?</p> <p>3.2.2. Welche Kriterien waren zu beachten (nachhaltige Entwicklung, sozialer Wohnungsbau?)</p> | <p>3.1. What were the reasons for all stakeholders to start this project? and to run it together?</p> <p>3.1.1. Could Berlin have run such a project without private investors</p> <p>3.2. Which political and legislative aspects enabled (financially) the project to start?</p> <p>3.2.1. Was the approval and support of the authorities necessary to start the project?</p> <p>3.2.2. What criteria had to be observed (sustainable development, social housing?)</p> | <p>Getting to know the motivations for stakeholders involvement and cooperation.</p> <p>Confirming my understanding of the situation.</p> <p>Identifying whether there was some key decision at the institutional level that permitted the start of the project.</p> <p>Confirming my understanding of the situation.</p> <p>Figuring out what criteria I could have forgotten.</p> |
| <p>4. Welche Stakeholder werden auch nach dem Regenerationsprozess an den Projektaktivitäten beteiligt?</p> <p>4.1. Welche Rolle werden sie spielen?</p> <p>4.2. Welche werden danach Geld verdienen?</p> <p>4.3. Welche finanzieren und besitzen die in einigen Projektdokumenten erwähnten Solarmodule?</p> <p>4.4. Welche finanzieren die kulturellen Gebäude/Aktivitäten?</p> <p>4.5. Welche finanzieren die Grundschule?</p> | <p>4. Which stakeholders are also involved in the project activities after the regeneration process?</p> <p>4.1. What role will they play?</p> <p>4.2. Which ones will earn money afterwards?</p> <p>4.3. Which ones finance and own the solar modules mentioned in some project documents?</p> <p>4.4. Which ones finance the cultural buildings/activities?</p> <p>4.5. Which ones finance primary school?</p> | <p>Understanding who will use the area after the construction ends, and possibly who will profit from the situation?</p> <p>How will they benefit from it?</p> <p>Confirming whether private investors but also public authorities will benefit financially from the project.</p> <p>Understanding the scope of sustainability in the project.</p> <p>Understanding the actual meaning of the mentioned cultural activities.</p> <p>Understanding to what extent it is a private project.</p> |

| | | |
|---|--|--|
| <p>5. Wie ist die Projektfinanzierung gestaltet? (PPP)</p> <p>5.1. Wie viel Geld haben private und öffentliche Akteure investiert? Wie lange haben DB und Vivico diesen Bezirk vor dem Projekt gekauft?</p> <p>5.2. Wird Berlin für diesen Zweck von Bundes- oder EU-Fonds unterstützt? Haben Sie versucht mehr öffentliche Förderung zu bekommen? (Urban Development Funds, Impact Investment Funds)</p> <p>5.3. Warum gibt es eine kombinierte Finanzierung auf öffentlichen Flächen? Wie viel davon wird öffentlich gefördert?</p> <p>5.4. Haben private und öffentliche Investoren von Investitionsanreizen profitiert? (z.B. Darlehen gewähren, Land Value Finance – tax relief)</p> <p>5.5. Steht die Investition privater Akteure im Zusammenhang mit dem Anteil des Landes, das sie besitzen?</p> <p>5.6. Welche Auswirkungen hatte die enge Beziehung der Deutschen Bahn zu den Behörden auf das Projekt? Erklärt sie die Ausrichtung auf eine nachhaltige Entwicklung?</p> | <p>5. How is project financing structured? (PPP)</p> <p>5.1. How much money have private and public actors invested? How long before the project did DB and Vivico buy this area?</p> <p>5.2. Is Berlin supported by federal or EU funds for this purpose? Have you tried to get more public funding? (Urban Development Funds, Impact Investment Funds)</p> <p>5.3. Why is there combined financing in public areas? How much of this is publicly funded?</p> <p>5.4. Have private and public investors benefited from investment incentives? (e.g. granting loans, Land Value Finance - tax relief)</p> <p>5.5. Is the investment of private actors related to the share of land they own?</p> <p>5.6. What impact did Deutsche Bahn's close relationship with the authorities have on the project? Does it explain the focus on sustainable development?</p> | <p>Understanding exactly the structure of budget.</p> <p>Understanding to what extent it is a public-private partnership and the long-term approach of the identified investors.</p> <p>Understanding the relation between different scales of funding and identifying what funds benefited to the project.</p> <p>Further understanding the extent to which this project is public or private.</p> <p>Identifying incentives to investment.</p> <p>Understanding how the project financing is structured.</p> <p>Understanding how close the investors and the public actors of this project are.</p> |
| <p>6. Wie hoch ist genau das Projektbudget?</p> <p>6.1. Vorbereitungsphasen/Masterplankosten? War</p> | <p>6. What exactly is the project budget?</p> <p>6.1. Preparation phases/master plan costs? Was the master plan mandatory?</p> | <p><i>Becoming precise and up-to-date information about budget</i></p> <p><i>Understanding how these processes work.</i></p> |

| | | |
|--|---|---|
| <p><i>der Masterplan verpflichtet?</i></p> <p>6.2. <i>Sind alle öffentlichen indirekten Kosten (wie Straßenbahn, Straßen, Strom- oder Wasserinfrastruktur) bereits im Projektbudget enthalten?</i></p> <p>6.3. <i>Was war das ursprüngliche Budget? Wie hoch ist das Budget jetzt?</i></p> | <p>6.2. <i>Are all indirect public costs (such as tram, roads, electricity or water infrastructure) already included in the project budget?</i></p> <p>6.3. <i>What was the original budget? What's the budget now?</i></p> | <p><i>Knowing whether all indirect costs are taken into account.</i></p> <p><i>Knowing whether - as many building projects - the budget increased over time.</i></p> |
| <p>7. Was waren die Herausforderungen des Projekts bei der Vorbereitung der Finanzierung?</p> <p>7.1. <i>Welche theoretischen Kenntnisse oder praktischen Erfahrungen haben Sie vor diesem Projekt gesammelt?</i></p> <p>7.2. <i>Veränderungen seit dem Projektanfang in den Gesetzen/im Finanzierungsrahmen, die ein Einfluss gehabt haben?</i></p> | <p>7. What were the challenges to tackle when preparing the financing?</p> <p>7.1. <i>What theoretical knowledge or practical experience did you acquire before this project?</i></p> <p>7.2. <i>Changes since the beginning of the project in the laws/funding framework that have had an impact?</i></p> | <p>Understanding the difficulties from the point of view of a project developer.</p> <p>Establishing relations between the project developer education and the way the project is run.</p> <p>Getting knowledge of recent legislative changes in Berlin, Germany, the EU that could have influenced such a longer-term project.</p> |
| <p>8. Welche Auswirkungen könnte dieser Art Projektfinanzierung Ihrer Meinung nach haben?</p> <p>8.1. <i>Welche Vor- und Nachteile hat diese Konstellation?</i></p> <p>8.2. <i>Was erklärt die geringe Anzahl von öffentlichen Dienst? (nur Grundschule, keine Kindergarten/Gymnasium/Gesundheitsinfrastruktur) die hauptsächlich private Finanzierung oder gibt es schon genügend öffentliche Dienste in der Umgebung?</i></p> <p>8.3. <i>Was erklärt die große Anzahl von Geschäftsgebäude?</i></p> | <p>8. What impact do you think this type of project financing could have?</p> <p>8.1. <i>What are the advantages and disadvantages of this structure?</i></p> <p>8.2. <i>What explains the low number of civil services? (only primary school, no kindergarten/high school/health infrastructure) the mainly private financing or are there already enough public services in the area?</i></p> <p>8.3. <i>What explains the large number of commercial buildings?</i></p> | <p>Establishing a relation between the financing structure of the project and its impacts (e.g more profit oriented).</p> <p>Identifying self-defined relations that the developer could have established consciously or not.</p> <p>Confirming my understanding of the situation.</p> <p>Confirming my understanding of the situation.</p> |

| | | |
|--|---|--|
| <p>8.4. Hätten private Investoren ohne öffentliche Förderung doch soziale Wohnungsbau gefördert?</p> <p>8.5. Was erklärt die geringe Anzahl von renovierten Gebäuden?</p> <p>8.6. Wurde die Ausbildung einiger Beteiligten im Rahmen des Projekts gefördert?</p> | <p>8.4. Would private investors have supported social housing without public funding?</p> <p>8.5. What explains the small number of renovated buildings?</p> <p>8.6. Was the training of some participants supported within the project?</p> | <p>Confirming my understanding of the situation.</p> <p>Making up for my lack of knowledge about the state of the area before the projec (e.g. how many buildings were there).</p> <p>Understanding to what extent this project structure is an opportunity for project developers education to brownfield regeneration and also to make private and public actors close in order to encourage further cooperation between these stakeholders).</p> |
| <p>9. Was sind die erwarteten sozioökonomischen Auswirkungen des Projekts?</p> <p>9.1. Wie viel Geld sollte es letztendlich für die Stadt und die Grundbesitzer bringen?</p> <p>9.2. Ist dieses Projekt eine Antwort auf einen Mangel an Geschäfts-/Wohnbereichen?</p> <p>9.3. Warum ein nicht spezialisiertes Gebiet?</p> <p>9.4. Ein Viertel der Wohnungsbau wird Sozialwohnungen: was wäre die Auswirkung davon auf den Bevölkerungsmix und die Wohnatmosphäre?</p> <p>9.5. Wie sehr wird die Umgebung wegen diesem Projekt gentrifiziert? Heidestraßenkiez/Lehrter Straße (37% Bewohner auf staatliche Transferleistungen angewiesen/Anteil der Menschen mit Migrationshintergrund 64%)</p> | <p>9. What are the expected socio-economic impacts of the project?</p> <p>9.1. How much money should it ultimately bring to the city and the landowners?</p> <p>9.2. Is this project a response to a lack of business/residential areas?</p> <p>9.3. Why a non-specialized area?</p> <p>9.4. Social housing represents one quarter of housing construction: What would be the impact on the population mix and the living atmosphere?</p> <p>9.5. How much is the environment being gentrified because of this project? Heidestraßenkiez/Lehrter Straße (37% of residents depend on state transfer payments/64% of people with a migration background)</p> | <p>Understanding the socio-economic impacts of this project in this particular context.</p> <p>Confirming, if not already done, the expected economic consequences for both public and private stakeholders and investors.</p> <p>Confirming my understanding of the situation (gentrifying profile of Berlin and impact of residential buildings)</p> <p>Confirming my understanding of the situation (specialization is rather outdated in developers' mindsets and might not be the most efficient solution).</p> <p>Establishing a relationship between mixed housing and local societal impacts.</p> <p>Understanding the extent to which this project could impact the local surrounding population.</p> |

| | | |
|--|--|---|
| <p>9.6. Was werden die Aktivitäten der dort Tätigen sein? Politische/Lobbyarbeit?</p> | <p>9.6. What will be the activities of those working there? Political/lobby work?</p> | <p>Confirming my understanding of the situation (influence of the proximity with the very center of Berlin main station and political institutions)</p> |
| <p>10. Was sind die erwarteten kulturellen Auswirkungen?</p> <p>10.1. Widerspruch zwischen kultureller Spezialisierung und 3% Flächennutzung für Kultur? / Verlust des Deutsch-Amerikanische n Volksfestes?</p> | <p>10. What are the expected cultural impacts?</p> <p>10.1. Contradiction between cultural specialization and 3% land use for culture? / loss of the German-American Folk Festival?</p> | <p>Understanding how much is the cultural aspect taken into account in this very project.</p> <p>Identifying a contradiction between what is officially said and what is actually done.</p> |
| <p>11. Was sind die erwarteten Auswirkungen für die Umgebung?</p> <p>11.1. 50.000 Autos täglich: gehören sie ausschließlich diesem Stadtteil oder beitragen sie zu einem effizienteren und geringeren Verkehr in anderen Stadtteilen Berlins?</p> <p>11.2. Wettbewerb von Büros und Einzelhandels-geschäften (insbesondere mit Hbf)?</p> <p>11.3. Antwort auf eine hohe Nachfrage im innerstädtischen Wohnbereich - Senkung oder Eindämmung des Preisniveaus?</p> | <p>11. What are the expected impacts on the surroundings?</p> <p>11.1. 50,000 cars per day: do they belong exclusively to this part of the city or do they contribute to more efficient and reduced traffic in other parts of Berlin?</p> <p>11.2. Competition of offices and retail shops (especially with main station)?</p> <p>11.3. Response to high demand in inner-city housing - reduction or containment of price levels?</p> | <p>Establishing a relationship between this project and its impacts on the surroundings.</p> <p>Understanding the effects on circulation in Berlin.</p> <p>Identifying a potential negative externality in building many shops near the main station where there are already many shops.</p> <p>Identifying the impact on housing prices in the surroundings.</p> |
| <p>12. Inwieweit sind die Projektziele bereits erreicht?</p> <p>12.1. Sind alle Flächen bereits zum Mieten oder Verkaufen reserviert? oder denken Sie, dass es am Ende des Baus sein wird?</p> | <p>12. To what extent have the project goals already been achieved?</p> <p>12.1. Are all spaces already reserved for rent or sale? or do you think they will be by the end of construction?</p> | <p>Concluding the interview with the progresses of the project.</p> <p>Understanding whether this project is already - at least locally and on a shorter term - an economic success.</p> |
| <p>13. Möchten Sie etwas zum Thema finanzieller Aspekten Ihres Projekts ergänzen?</p> | <p>13. Would you like to add something to the topic of financial aspects of your project?</p> | <p>Concluding the interview and giving the opportunity to the interviewee to complete its content.</p> |

Annex 3: Transcription of the interview

The following interview was led with WS, Senatsverwaltung Berlin's manager for the project Europacity, on the 30th of July 2018 from 14:50 to 15:30 in its office at the Senatsverwaltung Berlin. "i:" correspond to the author's segments and "ws:" to WS's segments. The transcript was made based on a modified version of the GAT-2 convention. Some parts of the interview may not be accurately transcribed as German is not the author's mother tongue.

i: 00:02 - 00:17 so schon erstmal vielen dank dass sie das akzeptiert haben | damit es offiziell sei würde ich noch mal fragen erlauben sie mir dieses interview aufzunehmen und im rahmen meiner wissenschaftlichen arbeit zu verwenden

ws: 00:17 - 00:17 ja

i: 00:18 - 00:23 danke schön | und wollen sie auch im rahmen meiner arbeit auch anonymisiert werden

ws: 00:24 - 00:25 das müssen sie nicht

i: 00:25 - 00:55 okay alles klar | jo dann also die fragen sind so in drei kategorien | erstmal würde ich ein paar fragen zu den stakeholdern fragen | zweitmal würde ich über genauer über die finanzielle gestaltung fragen stellen | und zum schluss über die auswirkungen des projekts | also könnten sie sich einfach kurz mal vorstellen und wie lange sie sind zum beispiel an diesem projekt beteiligt

ws: 00:57 - 01:11 genau ja mein name ist werner schlömer | ich bin der gesamtprojektleiter der senatsverwaltung für stadtentwicklung für das projekt europacity und ich arbeite seit 2010 an diesem projekt genau

i: 01:12 - 01:17 heißt das dass sie früher auch bei der senatsverwaltung arbeiteten

ws: 01:17 - 01:20 genau ja seit 2004 arbeite ich bei der senatsverwaltung

i: 01:21 - 01:44 alles klar | also ich habe ein paar informationen über die verschiedene stakeholder also als grundbesitzer bauherr wer bei der verwaltung beteiligt ist und so weiter und sofort | ich möchte wissen gibt es weitere projektentwickler als sie die über das projekt arbeiten

ws: 01:46 - 02:14 also es ist bei dem projekt europacity also die fläche nördlich der invalidenstraße bis zur perleberger brücke und westlich bis zu den bahngleisen östlich ist der berlin spandau schiffenskanal das umgrenzt diese ungefähr 40 hektar große fläche so dass es im wesentlichen zwei große eigentümer gibt | das eine war die deutsche bahn

i: 02:13 - 02:13 ja

ws: 02:13 - 05:15 die 2014 verkauft hat und das andere ist die ca immo oder vivico | das sind beides partner gewesen oder beides gesellschaften gewesen die | also das ganze gelände gehörte früher der deutschen reichsbahn | dann wurde durch beschluss des bundestages das vermögen aufgeteilt in dem deutschen bahn in aurelis und in vivico das waren gesellschaften des bundes und später wurden die vivico und auch die aurelis privatisiert durch bundestagsbeschluss und dann wurde die ca immo an den

österreichischen projektentwickler vivi | äh also wurde die vivico an den österreichischen projektentwickler ca immo verkauft und die aurelis war nicht mehr beteiligt in diesem projekt sodass es nur noch ca immo und deutsche bahn gab | das sind die beiden großen landlords in diesem projekt und ansonsten gibt es nur wenige flächen die berlin gehören zum beispiel die heidestraße und belanglose restflächen | das heißt das sind die beide partner mit denen dieses projekt seit 2007 zusammen entwickelt worden ist und das heißt das ganze ist ein sehr kooperatives projekt von anfang an | bis heute wo jeder seine entsprechenden aufgaben hat | also berlin | das ist dann auch im wesentlichen meine aufgabe | liegt ja darin das projekt in den wesentlichen aspekten zu steuern das heißt das die verträge geschlossen werden dass das planungsrecht über die bebauungspläne geschaffen wird dass die koordination zwischen den maßnahmen der öffentlichen anlagen also der grünanlagen promenade brücke soziale infrastrukturen und so weiter geschaffen werden | währenddessen die privaten entwickler sich darum kümmern dass deren flächen bebauungsfähig sind | sie kümmern sich um die bodenuntersuchung und den gesamten hochbau | sie kümmern sich darum dass interne erschließungsstraße durch sie geplant und gebaut werden die werden dann später an berlin übergeben und viele dinge dieser art | seitens der verwaltung gibt es dann zahlreiche andere organisationseinheiten die damit befasst sind mit diesem projekt | also das heißt kollegen aus dem verkehrsbereich die sich um die straßenthematik kümmern tiefbaubereich die sich um brücken uferpromenaden kümmern dann geht es um sozialverwaltung wegen schulen und kindergärten ach und ganz ganz viele mehr

i: 05:15 - 05:30 ja okay und wurden auch dann die | wie sagt man | die nachbarschaft und die zukünftige einwohner auch beteiligt im projekt in der projektentwicklung

ws: 05:31 - 06:05 ja es gibt ja mal die verfahren zu gesetzlichen bürgerbeteiligung im rahmen der bebauungsplanverfahren | war darüber hinaus haben wir insgesamt acht standortkonferenzen für dieses projekt gemacht wo die öffentlichkeit zu eingeladen war aber tatsächliche öffentlichkeit die nicht der fachöffentlichkeit zugehört ist hat sich im relativ geringen massen beteiligt was aber eben daran liegt dass dieses projekt europa city sehr stark eingegrenzt ist durch diese genannten zäsuren insofern anwohner relativ weit entfernt sind

i: 06:06 - 06:25 okay alles klar ja und wer hat dann genau die initiative ergriffen also war das zunächst ein projekt der senatsverwaltung oder ist es eher eine private initiative oder

ws: 06:26 - 06:36 na ja so genau weiß ich jetzt nicht mehr wie das 2008 war wer da eigentlich den aufschlag gemacht hat | ob das berlin war oder die privaten das weiß ich nicht mehr genau

i: 06:36 - 06:50 ok und was waren dann | wissen sie ob die gründe | also wissen sie was die gründe von ausseits der ausseits berlins waren um dieses projekt zu machen

ws: 06:51 - 7:41 naja die privaten hatten natürlich ein ökonomisches verwehrensinteresse | die fläche war ja über

jahrzehnte im unmittelbaren grenzbereich wie manche andere flächen um potsdamer platz etcaetera auch | insofern ist ja in den letzten jahrzehnten relativ wenig auf diesen flächen passiert und die private investoren hatten natürlich ein interesse daran dort | verwertungsmöglichkeit zu generieren | und bei flächen dieser größenordnung weiß man ja dass die entwicklung eher sich so im rahmen von 15 bis 25 jahren bewegt also insofern wenn man da 2007 den aufschlag gemacht hat 2008 war der wettbewerb dann war klar dass es so bis in die heutige zeit hineinreicht das projekt

i: 7:41 - 08:01 ok und wäre es möglich gewesen sowohl für berlin als auch für private akteuren das allein und getrennt | also solch ein projekt zu führen durchzuführen | sowohl finanziell als auch legislativ oder

ws: 08:01 - 08:44 naja wie schon gesagt das läuft ja in | also finanziell tragen ja die wesentlichen kosten die privaten investoren | also berlin beteiligt sich inklusive mit fördermittel und allem drum und drann mit ungefähr 25 millionen euro an diesem projekt und die privaten tragen ungefähr 50 millionen euro für infrastruktur und dann kommt ja on top ihre ganzen andere kosten für die gebäude für altlastung und so weiter | also mehrere hundert | na ja wahrscheinlich geht es in den milliardenbereich | so ein projekt kann man nur sehr kooperativ zwischen investoren und verwaltung steuern sonst funktioniert das nicht das war aber allen klar

i: 08:44 - 09:01 ok | und welche stakeholder werden auch nach dem regenerationsprozess dann an den projektaktivitäten beteiligt | immer noch die drei werden sie intensiv

ws: 09:00 - 09:42 ja die deutsche bahn hat 2014 verkauft an eine private gesellschaft | wir sind nach wie vor in sehr intensiven kontakt | letzte woche war der letzte große wettbewerb für ein hochhaus in dem bereich dann gibt es abstimmung zwischen den gebäuden es müssen ja noch viel gebaut werden also es müssen noch weitere plätze gebaut werden und die straßen intern sind noch nicht fertig | das heißt das wird noch ungefähr | 3 bis 5 jahre wird das noch sehr intensiv laufen und dann | zwischenzeitlich hat die ca immo einen erheblichen anteil ihrer fläch verkauft | das heißt es mittlerweile sehr sehr viele mehr eigentümer mit den es dort bilaterale abstimmung zwischen uns und anderen verwaltungen gibt

i: 09:42 - 09:54 ok | ja ich hatte mal gelesen dass es solarmodule auch drin steht also im rahmen des projekts

ws: 09:58 - 09:59 ich glaub da macht keiner solarmodulen

i: 09:59 - 10:06 okay alles klar also im rahmen der nachhaltigen entwicklung und | okay das war eher marketing dann vielleicht

ws: 10:06 - 10:07 wahrscheinlich ja

i: 10:07 - 10:20 ok und wer finanziert dann diese | wie heißt es noch mal | kunst kunstcampus ist es

ws: 10:22 - 11:24 ja der kunstcampus ist nur ein begriff gewesen für | für einen räumlichen teilbereich innerhalb des projektes | und zwar nur für diesen hier | der hatte den

arbeitstitel kunstcampus bekommen wegen dem museum hamburger bahnhof und der riekhalle die hier ist so dass man gehofft hat dass man perspektivisch mehr kunst in diesem bereich reinbekommen kann | das hat sich aber nicht bewahrt | also freie gallerien die es auf der anderen seite der heidestraße gab sind abgewandert und mittlerweile ist das ne Mischung aus museum bürogebäude wohngebäude da kommt noch ein wohngebäude hin zur heidestraße entstehen zwei wohngebäude und wahrscheinlich wird 2021 die sehr lange riekhalle abgerissen und durch ebenfalls wohngebäude ersetzt werden

i: 11:24 - 11:29 also dann habe ich nicht verstanden war das doch öffentlich oder privat finanziert

ws: 11:29 - 11:31 privat privat ja

i: 11:31 - 11:35 alles klar | und die grundschule das ist doch öffentlich

ws: 11:35 - 11:35 ja

i: 11:37 - 11:47 dann wie ist die projektfinanzierung genau gestaltet also teilweise | also lieber | also ne eher privat ist es

ws: 11:47 - 11:48 ja

i: 11:48 - 11:55 ist es schon | aber dann sind das ja ok das haben sie schon gesagt sorry

i: 11:59 - 12:19 ja ok | wissen sie ob berlin auch für in diesem rahmen nicht genau fürs projekt für für dieses besondere projekt sondern einfach allgemein für brachflächenregenerierungsprojekte bund also entweder bundes- oder eu-fonds bekommt

ws: 12:24 - 13:43 also in diesem projekt wird werden teile | zum beispiel die uferpromenade eine brücke über den landwehrkanal und noch kleine andere teilbereiche | werden über grw-mittel gefördert das ist gemeinschaftsaufgabe zur förderung der regionalen wirtschaftsstruktur und dort gibt es ein förderzweig der heißt touristische infrastruktur | darüber erfolgt eine förderung und zwar 90 pro zent fördermittel und 10 prozent komplementärmittel | die komplementärmittel werden von den privaten eingebracht | das ist über ein vertrag geregelt | und der rest wird zur hälfte durch berliner mittel und zur hälfte durch bundesmittel eingespeist | solche fördermodelle gibt es bei vielen projekten für bestimmte teilmaßnahmen | es gibt auch noch andere förderprogramme | das muss man individuell gucken | also es gibt ja klar manches geht dann eben auch nach auf dem efre förderprogramm gefördert oder so aber so ist ja in der regel dann auch öffentliche öffentlichkeitswirksame maßnahmen objekte und so weiter | das ist unterschiedlich in den projekten

i: 13:43 - 13:59 ok | alles klar und hätten sie auch aus nochmal ausseits der stadt berlin interesse daran gehabt mehr geld einen größeren anteil in der gesamten investition zu haben

ws: 14:00 - 14:07 das eigentlich nicht ne | also der teil den berlin ja einbringt der ist denke ich angemessen bezogen auf die gesamtsumme das ist ok

i: 14:08 - 14:16 ok | und warum gibt es eine kombinierte finanzierung auf öffentlichen flächen

ws: 14:23 - 15:20 also es gibt teil es gibt | also bis auf die heidestraße in der mitte sind fast alle flächen in privaten eigentum der ca immo und der deutschen bahn | diese gesellschaften geben teile ihrer flächen kostenlos an berlin ab damit dort promenaden plätze erschließungsstraße gebaut werden können | das heißt die internen erschließungsstraßen zum beispiel die planen und bauen sie in abstimmung mit berlin selber und übergeben die flächen dann komplett an berlin und dann ist berlin zuständig | bei den promenaden beispielsweise oder bei dem großen stadtplatz da ist das genauso da hat man sich | also dieses förderprogramm schreibt vor dass es eine einen komplementäranteil zur finanzierung gibt der muss aufgebracht werden | den hätte berlin selber auch aufbringen können aber man hat sich in den verhandlungen darauf verständlicht daß die privaten sich hier

[break]

ws: 00:02 - 01:16 also beispielsweise wenn es um das thema regenwasserversicherung geht dort waren die ansprüche höher mehr systeme zu implementieren die das niederschlagswasser auf dem gelände unterbringen | das ist sehr intensiv bearbeitet worden wurde dann aber aus verschiedenen gründen nicht weiterverfolgt bei dem thema energie wurde sehr umfangreich gearbeitet | letztendlich haben aber die privaten gesagt fernwärme ist vorrätig in der heidestraße insofern ist fernwärme für sie aus ökonomischen gründen die günstigste wärmeerschließung dem konnten wir uns auch nicht verschließen also gibt es ganz viele verschiedene themen wo der anspruch höher war als das was sich in der realität umsetzen lässt | dennoch ist das gesamte städtebau so konzipiert auch mit vielen bereichen was die erdgeschoßwohnungen anbelangt | dass wir auch glauben dass sie projekte dass dieses projekt auch weitreichend in die zukunft anforderung an eine gute stadt aufnehmen kann das insofern ist es für uns so gesehen auch nachhaltig

i: 01:17 - 01:33 ok | und wieder zum budget also haben die masterplankosten etwas also viel geld gekostet und alle diese vorbereitungsphase

ws: 01:34 - 01:39 ja sie hat einige hundert tausend euro gekostet | das haben aber die privaten bezahlt

i: 01:40 - 01:53 ahah ok | und sind alle öffentlichen indirekten kosten wie zum beispiel zum straßenbahn schon im budget enthalten

ws: 01:55 - 02:00 diese straßenbahn die gehört sozusagen nicht zum projekt europacity | sie ist nicht drin

i: 02:00 - 02:14 ok | ok was waren dann für sie die herausforderungen des projekts bei der vorbereitung der finanzierung

ws: 02:20 - 04:03 es gibt ja in diesem an einem solchen projekt eine sehr sehr große bandbreite an leistungsspektren |

also klassisch wird ja ein solches projekt aufgegliedert in leistungen was soll alles gemacht werden mit der qualität was und wie soll es gemacht werden | dann gibt es die kosten was kosten diese unterschiedlichen leistungen und dann gibt es die zeit bis wann sollen diese leistungen fertiggestellt werden | und im rahmen eines solchen projektes zumal wir 2011 nach über einjährigen verhandlungen einen großen rahmenvertrag mit den beiden privaten investoren abgeschlossen haben | geht es natürlich im wesentlichen darum diese unterschiedlichen leistungen die auftauchen die zu identifizieren ein einigermaßen klares ziel zu formulieren | also beispielsweise es soll eine uferpromenade gebaut werden das ist das ziel und die grobe leistung | dann muss aber abgeschätzt werden was diese leistung kostet das heißt es muss entweder eine grobe voruntersuchung oder eine schätzung geben in der wird diese leistung eingepreist | und dann gibt es risiken die in der umsetzung liegen welche probleme war in diesen maßnahme dass sie wieder risiken für kosten aber auch für die zeit | und diese ganzen themen in ihrer sehr sehr großen bandbreite zu identifizieren und dann transparent zu machen und in einen vertrag zu bringen das ist eine große herausforderung ja

i: 04:05 - 04:26 ok | ja | also dann was wären ihrer meinung nach die auswirkungen dass dieser art projektfinanzierung haben könnte | soll ich wieder sagen

ws: 04:26 - 04:30 ja ja sagen sie nochmal wie sie das meinen habe ich nicht so richtig verstanden

i: 04:30 - 04:48 also ich habe das so geschrieben | welche auswirkungen könnte dieser art projektfinanzierung ihrer meinung nach haben | also diese | also diese verschiedene anteile von öffentlich und private finanzierungen und so weiter zum beispiel

ws: 04:54 - 05:19 naja sie ist ja irgendwie eine zwingende voraussetzung dass so ein projekt zum laufen kommt | also es gibt ja | berlin wollte oder möchte dass eine solche fläche | weil sie eine sehr zentrale lage hat | dass eine solche fläche entwickelt wird | weil die infrastrukturen umfeld sehr gut ist der hauptbahnhof liegt sehr nah dran das ist unser eigenes entwicklungsziel neue

[break]

ws: 00:00 - 01:35 an zu schaffen | diesen anspruch den kriegen wir nicht komplett umsonst | das heißt die gemeinde muss ich ja ein stück weit an dieser entwicklung beteiligen | das tun wir auch indem wir uns um viele dinge kümmern die auch im vertrag vereinbart sind | es muss das recht für die bebauung geschaffen werden | und ganz viele andere dinge auch | in wesentlichen partizipieren aber die privaten von einer solchen entwicklung denn sie können auf einer brachfläche zukünftig gebäude realisieren und dadurch haben sie einen enormen wertzuwachs | und insofern gewinnen beide durch diese entwicklung aber beide haben auch kosten um sich dort in diesem verhältnis zu einigen wer welche kostenanteile trägt hängt jeweils immer vom projekt ab | also man

hätte ein solches projekt | heutzutage würde man ein solches projekt wahrscheinlich ganz anders konstellieren | man würde wahrscheinlich eine städtebauliche entwicklungsmaßnahme hier darauf legen und würde man einen anfangswert bestimmen und dann würde es ein endwert geben wenn das objekt fertigentwickelt worden ist | und diesen differenzenwert müssen die privaten investoren abgeben | damals konnte man das nicht | 2008 da war die entwicklung nicht so dass man glaubte dieses instrumente darauf legen zu können weil dann hätten die privaten gesagt nein dann machen wir einfach gar nichts | das hängt immer bisschen von der zeit ab also insofern hat berlin hier relativ wenig bezahlt aber im wesentlichen gewinnen die privaten an dieser entwicklung das ist

i: 01:36 - 01:46 und würde berlin wenn das projekt jetzt starten sollte dann versuchen mehr anteile am projekt zu haben um mehr zu gewinnen

ws: 01:47 - 02:43 naja man kann | wie gesagt grundvoraussetzung ist ja bei diesem modell dass die über fast alle flächen komplett privaten eigentümern gehören | wenn die flächen berlin gehören würden ist das natürlich etwas ganz anderes | dann wären wir anders mit diesen flächen umgegangen zum beispiel was den wohnungsanteil anbelangt also in diesem projekt gibt es keine regel zum | fast fast keine regel zum wohnungsbau | also kein regelung ob eigentumswohnung oder mietwohnungen und so weiter | das modell der kooperativen baulandentwicklung kam erst später | konnte für die ostseite überhaupt nicht angewendet werden und auf der westseite konnten wir es anwenden das heißt von 850 wohnungen die auf der ostseite in diesem nördlichen bereich realisiert werden muss der investor 215 wohnungen mit sozialen fördermittel errichten entsprechend vermieten | das ist die einzige regelung die es dazu gibt | ansonsten haben wir hier kaum regelung drinn

i: 02:44 - 02:46 ok alles klar

[break]

i: 00:00 - 00:16 alles klar ok | und es gibt doch habe ich gelesen so ein viertel der wohnungsbau die soziale wohnungsbau sind

ws: 00:16 - 00:19 genau das sind diese 215 wohnungen auf der westseite

i: 00:20 - 00:30 und die | also das ist eine mindestens dass von der stadt erwartet wird

ws: 00:30 - 00:35 das sind 25 pro zent der wohnungen die mit fördermitteln errichtet werden müssen

i: 00:36 ok | und für die investoren ist es überhaupt nicht interessant mehr zu bauen

ws: 00:43 - 00:44 genau | für die ist das nicht interessant

i: 00:46 - 00:55 ok | und wurde auch die ausbildung einiger beteiligten im rahmen des projekts gefördert

ws: 00:56 - 00:57 nein ne

i: 00:59 - 01:19 ok | und was erklärt auch die geringe anzahl von renovierten gebäuden also soweit ich weiss habe ich nur die den sogenannten kornversuchsspeicher als wirklich renovierte gesehen | ist es einfach dass es nicht andere solche gebäude gab oder

ws: 01:19 - 01:40 naja der kornversuchsspeicher steht unter denkmalschutz und ansonsten gibt es nur noch hier im südwesten der heidestraße einige alte gebäude die an der straße stehen | die gehören vier anderen privateigentümern die sich aber an der entwicklung aber überhaupt nicht beteiligen | dann gibt es noch das museum hamburger bahnhof und hier so ein sozialgericht ansonsten gibt es da nichts nein

i: 01:40 - 01:41 ok

[break]

i: 00:00 - 00:16 und jetzt zu also sozioökonomischen aspekten und auswirkungen | wissen sie wie viel geld genau es letztendlich für die stadt oder auch für die grundbesitzer bringen sollte

ws: 00:21 - 00:22 sie meinen was es gekostet hat oder

i: 00:21 - 00:29 mit steuern | ne was was | wie viel geld zum beispiel die stadt damit verdienen würde

ws: 00:30 - 00:31 die stadt verdient gar nichts

i: 00:32 - 00:41 also es gibt keine grundsteuer oder solche für die besitzer die das besetzen

ws: 00:40 - 00:47 doch | ja klar die müssen natürlich grundsteuer bezahlen aber das wissen wir nicht was sie bezahlen

i: 00:47 - 01:00 ok alles klar | und antwortet dieses projekt also ist es ist dieses projekt irgendwie eine antwort auf einen mangel an geschäfts- und wohnbereiche in zentrum berlins

ws: 01:01 - 01:33 nein | der also der geschäftsbereich ist restriktiv hier man wollte bewusst nicht dass eine konkurrenz entsteht zum einzelhandel im hauptbahnhof in der müllerstraße in wedding und in der turmstraße in moabit | deshalb ist der einzelhandel hier ganz stark beschränkt | beim wohnen ist es klar | beim wohnen ist es natürlich so dass die 3000 wohnheiten die ungefähr entstehen die sind natürlich wichtig für die stadt das ist keine frage sicherlich

i: 01:35 - 02:18 ok | ja und über die auswirkungen für die umgebung | also sie haben ganz kurz von einem von wettbewerb mit der umgebung gesprochen | gibt es | also kann man doch erwarten dass es eine irgendwie eine schlechte einfluss auf diese einzelhandel am hauptbahnhof zum beispiel hätte oder

ws: 02:20 - 02:55 naja | 3000 einwohner das sind geschätzt | 3000 wohnheiten das sind geschätzt 6000 einwohner und ungefähr 20 tausend menschen die dort zukünftig arbeiten werden | sicherlich werden die auf die infrastruktur am hauptbahnhof | je nach dem | die leute zum hauptbahnhof fahren um dort weiter zu fahren vielleicht kaufen sie da noch ein oder so | wird es auswirkungen geben aber inwieweit diese auswirkungen sich wohin auswirken das ist nicht untersucht worden

i: 02:56 - 03:00 ok und hätte man das mehr untersuchen sollen
ws: 03:00 - 03:03 ich wüsste im moment nicht warum ja
i: 03:03 - 03:10 ne nicht unbedingt ok | also man erwartet
eher so positive einflüsse auch über auf die umgebung
ws: 03:12 - 03:22 ja man erwartet jetzt keine negativen | also
man muss eher gucken 3000 wohnheiten 6000 einwohner ist auch
nicht so besonders viel
i: 03:22 - 03:23 ja klar
ws: 03:23 - 04:03 also dass hier so eine infrastruktur
geschäft und so weiter davon leben kann das ist grenzwertig |
eigentlich braucht es mehr einwohner und beschäftigte damit hier
einzelhandelsgeschäfte und so weiter davon überleben können also |
insofern ist eher zu hoffen dass die menge der menschen hier
ausreicht damit die infrastruktur hier gut funktioniert | also
einzelhandel gastronomie etc | dass jetzt natürlich hoffen wir
auch dass leute aus anderen bereichen dort hinkommen um dort sich
das anzugucken oder die gastronomie zu benutzen weil wie diese
wechselwirkung sind das ist schwer vorauszusagen
i: 04:03 - 04:27 ok | und ist die anzahl von neuen einwohner
und wohnungsbau zu wenig um | um zu schätzen dass es dazu
beitragen könnte das wohnpreisniveau zu eindämmen oder also ich
mein
ws: 04:27 - 04:57 die preise steigen | die preise sind im
projekt sehr hoch und in der umgebung steigen die preise auch aber
das ist nicht vorrangig durch dieses projekt nicht vorrangig
tangiert also die | der bundesnachrichtendienst ist in der nähe da
arbeiten zig tausend leute in der charite bundeswehrkrankenhaus |
das sind so viele einflüsse in unmittelbaren nähe | außerdem ist
der wohnungsmarkt sowieso angespannt | also dass dieses projekt
das wird | man kann nicht mal mehr sagen dass das gentrifizieren
wirkt oder so
i: 04:57 - 04:57 ok
ws: 04:57 - 05:00 die preise sind sowieso schon gestiegen im
umfeld
i: 05:00 - 05:05 jaja | genau also das wurde schon vorher in
berlin gentrifiziert sozusagen
ws: 05:06 - 05:11 die entwicklung setzte schon vor jahren in
diesem bereich ein
i: 05:12 - 05:20 ja ok und dann als sozusagen letzte frage |
inwieweit sind die projektziele bereits erreicht für sie
ws: 05:22 - 06:07 es ist klar absehbar dass das projekt in
ungefähr drei bis vier jahren fast vollständig realisiert werden
wird | wir werden bis ende 2019 die promenade die brücke und
platzanlagen hier fertiggestellt haben | bei den privaten
entwicklern kann man das ja sehen | noch der ostseite des projekts
sind so gut wie alle gebäude im bau beziehungsweise werden in ein
bis drei jahren fertig sein auf der westseite sind im moment
bauvorbereitende maßnahmen am laufen | dort kann man davon
ausgehen dass in drei bis vier jahren alles komplett bebaut ist |
das heißt damit sind die ziele erreicht

i: 06:08 - 06:15 ok alles klar möchten sie noch etwas zum
thema finanziellen aspekten ihres projekts ergänzen
ws: 06:15 - 06:16 nein
i: 06:17 - 06:19 ok alles klar vielen vielen dank
ws: 06:19 - 06:19 gerne

Annex 4: Sequences of the interview

| Timeframe in the extract | Number of sequence | Translation of the questions asked & corresponding question number | Results |
|--------------------------|--------------------|---|--|
| Before the interview | 0 | | |
| Extract 1 | | | |
| 00:02 - 00:25 | 1 | Do you allow me to record this interview? Should I anonymise you in this work? | - Yes - No |
| 00:25 - 01:20 | 2 | So could you simply and shortly present yourself and tell me how long you have been working at the Senatsverwaltung? Does it mean that you have started working earlier at the Senatsverwaltung? Question 1 | - W.Schlömer (WS) and General project manager at the Senatsverwaltung for urban development since 2004 but since 2010 in this project |
| 01:21 - 05:15 | 3 | So I have gathered some information about the different stakeholders and I would like to ask whether there are other project developers than you in this project? Question 2.5 | <ul style="list-style-type: none"> - Surface of 40 ha - Exact limits of the zone - 2 main landowners: CA Immo and previously Deutsche Bahn which sold its parts in 2014 - CA Immo and Deutsche Bahn have been working on the project since 2007 - The area was previously possessed by the Deutsche Eisenbahn - The area was sold to the Aurelis and to the Vivico, both property of the federal state which were later privatised - Aurelis was not involved anymore in the project and Vivico was bought by the Austrian project developer CA Immo - Berlin owns some areas (Heidestraße and others) - The project is very cooperation-based since the beginning - The role of Berlin and W.S. is to carry on contracts, planning law about the preservation plans and coordination of the public bodies (e.g. transport sector) - The role of private developers is to prepare the land to be built on, carry on soil investigation and building, they construct internal access roads which will be later given to Berlin |
| 05:15 - 06:05 | 4 | Were the neighbourhood and the future inhabitants also involved in the process? Question 2.6 | <ul style="list-style-type: none"> - There are the procedures for legal citizen participation within the framework of the development plan procedures - A total of eight conferences on the location of the project were held for this project - The public was not a specialized audience - This project is very strongly limited to the extent that inhabitants live relatively far away |
| 06:06 - 06:36 | 5 | Ok and who took the initiative? Was it rather a | - WS cannot remember exactly who took the initiative in 2008 |

| | | | |
|---------------|----|--|--|
| | | Senatsverwaltung's project or a private one? Question 3 | |
| 06:36 - 07:41 | 6 | What were the reasons for Berlin to start this project? Question 3.1 | <ul style="list-style-type: none"> - Private investors had economic self-interest - Area in the immediate border area for decades like many other areas around potsdamer plat - Relatively little has happened on these areas in the last decades and the private investors had of course an interest in generating exploitation opportunities - With areas of this size, the development is more in the range of 15 to 25 years - The project starting in 2007, it was clear that it would be still going on |
| 07:41 - 08:44 | 7 | Would it have been possible either for Berlin or private actors to run this project alone? coalitions Question 3.1.1 | <ul style="list-style-type: none"> - Berlin invests roughly 25 million € through so called <i>Fördermittel</i> - subsidies - Private investors roughly 50 million € for infrastructures on top of which they have their own costs for building and preparation work (<i>Altlastung</i>). The total amount should be close to 1 billion € for private investors |
| 08:44 - 09:42 | 8 | Which stakeholders will still be involved in the activities of the project after the regeneration process? Question 4 | <ul style="list-style-type: none"> - even though Deutsche Bahn sold, contacts are still very close - the last big design competition for a skyscraper took place the week before the interview - there is still a lot to be built (squares and internal road) which should take 3 to 5 more years - there is a multiplication of actors and owners since CA Immo sold a considerable portion of its area, this implies a lot of coordination work for the Senatsverwaltung and other administrations with these new owners |
| 09:42 - 10:07 | 9 | I have read that solar modules were to be implemented in the project Question 4.3 Maybe only in marketing promotion of the area? Further question | <ul style="list-style-type: none"> - WS believes that nobody is planning to make solar modules in this project - Probably |
| 10:07 - 11:31 | 10 | Who finances the <i>Kunstcampus</i> (art campus)? Question 4.4 | <ul style="list-style-type: none"> - Kunstcampus is only a way to speak of a particular area in the project where the museum Hamburger Bahnhof and the exhibition building Riekhalle will be built - It was hoped that these two buildings would foster art activities in this area but this will not happen since the Freie Gallerien on the other Side of Heidestraße have left the area - This is rather a mixture of museum, office building, residential building - There will be another residential building on Heidestraße, two residential buildings will be built - In 2021, the very long Riekhalle will be probably demolished and replaced by residential building - It was financed from private investors |

| | | | |
|------------------|----|--|---|
| 11:31 - 11:35 | 11 | Who finances the primary school? Question 4.5 | - The public sector |
| 11:37 - 11:55 | 12 | How is the project financing exactly structured - question eventually cancelled after asking it, WS had already answered Question 5 | |
| 11:59 - 13:43 | 13 | Do you know if Berlin receives particular EU of federal funding for brownfield regeneration projects? Question 5.2 | <ul style="list-style-type: none"> - The Uferpromenade, Landwehrkanal and a few other areas benefit from GRW-Mittel (Gemeinschaftsaufgabe zur Förderung der regionalen Wirtschaftsstruktur) in which a funding component is focused on touristic infrastructure - In this component, there are 90 percent of subsidies and 10 percent of complementary funds which are provided by private investors - The rest is funded in half by berliner mittel and half by federal funds - This is regulated by a contract - Such funding models exist in many projects for certain submeasures - There are also other support programmes among which the ERDF most probably - This is usually the way this works for objects with a public profile - This varies from project to project |
| 13:43 - 14:07 | 14 | Would Berlin have had interest in investing more in the project? Further question | - Berlin is satisfied with the part they finance in this project |
| 14:08 - 15:20 | 15 | Why is there a combined financing for public spaces? Question 5.3 | <ul style="list-style-type: none"> - Until the Heidestraße is most of the surface a private property of CA Immo and Deutsche Bahn - These actors give some parts of their properties to Berlin for free in order to build promenades, square, access roads - For example, the access roads are planned and built in agreement with Berlin. They are totally given afterwards to Berlin - It is the same for the promenades and the large city square - This funding programme stipulates that there is a complementary share to the financing that berlin could have afforded - However, it has been agreed in the negotiations that the private sector will finance it |
| Extract 2 | | | |
| 00:02 - 01:16 | 16 | <i>Question not recorded</i> | <ul style="list-style-type: none"> - the topic of floodings insurance was worked on intensively but was not pursued further: there were more demands to implement more systems which store the precipitation water on site - the topic of energy too: in the end, however, as the private underlined that district heating was already available in the heidestraße, it would be the best heat development out of economic concerns - In these and other topics, the |

| | | | |
|------------------|----|---|---|
| | | | <p>Senatsverwaltung could not ignore the arguments of the private investors even though the original requirements were higher than what can be implemented in reality</p> <ul style="list-style-type: none"> - nevertheless, the entire urban development is designed in such a way that in many areas (e.g. the ground-floor apartments) the Senatsverwaltung believes that this project can also take up far-reaching demands on a good city in the future - in which respect it is also sustainable |
| 01:17 - 01:39 | 17 | <p>Back to budget, did the masterplans and the whole preparation phase cost a lot of money</p> <p>Question 6.1</p> | <ul style="list-style-type: none"> - The preparation phase cost a few hundred thousand € which were paid by the private investors |
| 01:40 - 02:00 | 18 | <p>Are all indirect costs already included in the budget? For example the tramway extension</p> <p>Question 6.2</p> | <p>This tramway extension is not part of the project</p> |
| 02:00 - 04:03 | 19 | <p>What were the challenges of the project when preparing its financing?</p> <p>Question 7</p> | <ul style="list-style-type: none"> - There's a very wide range of different types of outputs/work (<i>Leistungen</i>) in this project - Classically such a project is divided into outputs, costs and time - Outputs are to be defined accordingly to what should be done and how it should be done - Costs as how much do these outputs cost - Time as until when should these outputs be delivered - In this project, a framework agreement was reached with the two private investors after more than a year of negotiations - Within the framework of such a project it is essentially a matter of formulating these different outputs which emerge in order to reach a reasonably clear goal - For example, building the Uferpromenade is the output. Then, it is necessary to define its cost through either a rough preliminary investigation or an estimation - There are risks in the implementation of these measures that may again pose risks for costs and time - Fully identifying all these issues, making them transparent and bringing them into a contract is a big challenge |
| 04:05 - 05:19 | 20 | <p>What would be the consequences of this structure of financing</p> <p>Question 8</p> <p>For example these parts of public and private financing</p> <p>Additional explanation</p> | <ul style="list-style-type: none"> - This structure of financing is kind of a prerequisite - Berlin wants to develop this space since it is very centrally located and very close to the central station |
| Extract 3 | | | |
| 00:00 - 01:35 | 21 | <p>End of the answer to sequence 20</p> | <ul style="list-style-type: none"> - There is a need to involve the municipality more in this development which WS does by taking care of things agreed in contract |

| | | | |
|------------------|----|--|---|
| | | | <ul style="list-style-type: none"> - The legal framework must be created - Private actors participate in such a development because they can later build on a brownfield and thus they gain an enormous increase in value - Both private and public actors would be winners in this - Both have also costs to agree on in this relationship - Who bears which share of the costs, always depends on the project - Nowadays, such a project would probably be designed completely differently. There would probably be an urban development measure (<i>städtebauliche Entwicklungsmaßnahme</i>) The expected value would be determined at the beginning and then there would be an end value when the object has been developed. The difference between both values would be paid by private investors - In 2008 this would not have been possible. Private actors would have refused to do any project at all under such conditions. It always depends a little bit on the time so in this respect berlin has paid relatively little here but essentially the private ones gain in this development |
| 01:36 - 02:46 | 22 | <p>Would this project start now, would Berlin try to invest more in the project and thus earn more with it?</p> <p>Further question</p> | <ul style="list-style-type: none"> - As already mentioned, the basic prerequisite for this model is that the owners are completely private over almost all areas - Should Berlin own larger portions of this area, the situation would have been completely different - For example, concerning the proportion of apartments, there is almost no rule at all on residential construction in this project (e.g. the proportion of owned and rented apartments) - The model of cooperative building land development only came later. It could not be applied to the east side at all but it was applicable to the west side. - Out of 850 apartments to be built on the east side in this northern area the investor has to rent 215 apartments with social subsidies |
| Extract 4 | | | |
| 00:00 - 00:44 | 23 | <p>And I have read that one quarter of the built apartments have to be social housing?</p> <p>Question 9.4</p> <p>This is the minimum fixed by the city.</p> <p>Additional statement</p> <p>And it is not interesting for private investors to build more.</p> <p>Question 8.4</p> | <ul style="list-style-type: none"> - This corresponds to these 215 apartments on the west side - 25 percent of the newly built apartments benefit from subsidies and must be social housing - It is not interesting for them. |
| 00:46 - 00:57 | 24 | Was the education of some stakeholders of the project | - No |

| | | | |
|------------------|----|--|--|
| | | funded within the project? Question 8.6 | |
| 00:59 - 01:41 | 25 | What explains the small number of renovated building in this area? Question 8.5 I could find only one, the so called Kornversuchspeicher. Additional explanation | - The Kornversuchspeicher is listed as a historical monument - There are a few more old buildings at the south west of the Heidestraße but their 4 owners do not take part in the development - In the project, the Museum Hamburger Bahnhof and a social court (<i>Sozialgericht</i>) also are older buildings |
| Extract 5 | | | |
| 00:00 - 00:47 | 26 | About socio-economic aspects and consequences, do you know how much money this should bring to the city and the landowners? Question 9.1 For example, with taxation. Additional explanation | - The city does not earn anything - There will be a property tax but the Senatsverwaltung does not know its amount |
| 00:47 - 01:33 | 27 | Is this project somehow an answer to a lack of business and living areas in the center of Berlin? Question 9.2 | - It is not the case for retail. There is the conscious will to avoid competition with retail in the main station, in the müllerstraße, in wedding, and in the turmstraße in moabit - Therefore the retail here is very strongly limited - On the other hand, the 3000 residential units which are about to arise are very important for the city |
| 01:35 - 04:03 | 28 | And about the consequences about the neighbourhood, you mentioned competition with the surroundings, can we expect a negative influence of this project about e.g. the main station retail Question 11.2 Should we have studied these impacts further? Further question So do you rather expect positive consequences (also more generally on the surroundings)? Further question | - 3000 residential units, 6000 foreseen inhabitants and roughly 20000 persons working there in the future - There will be impacts but they were not assessed - WS wouldn't know for what reason - Neither good or bad. 3000 residential units and 6000 residents are not so many - Such a business infrastructure is a bit risky/limited (<i>Grenzwertig</i>). It needs more inhabitants and employed people to survive and function properly (e.g. retail, gastronomy) - There is the hope from the Senatsverwaltung that people from other areas come there as these interdependencies are difficult to predict |
| 04:03 - 05:11 | 29 | Is the number of new inhabitants and built housing too low to have a containing or reducing impact on the living costs? | - Prices are rising, they are very high in this project and rising in the surrounding areas but this is not due to the project - The federal news service is working in the area, tens of thousands of people work at the Charité federal military hospital |

| | | | |
|---------------|----|--|--|
| | | <p>Question 11.3</p> <p>Berlin was already gentrified earlier.</p> | <ul style="list-style-type: none"> - As there are many other influences and the market is tense, it is not possible to say that this projects leads to gentrification - Prices rose already in the surroundings - This trend began years ago |
| 05:12 - 06:07 | 30 | <p>To what extent have the project goals already been achieved?</p> <p>Question 12</p> | <ul style="list-style-type: none"> - It is assumed that the project will be completed within three to four years - By the end of 2019, the promenade, the bridge and the squares will be achieved - Almost all the buildings on the east side of the project are under construction or will be completed within one to three years. - On the west side, building preparation measures are currently under way - In three to four years everything will be completely built-up which means that the goals have been achieved |
| 06:08 - 06:16 | 31 | <p>Would you like to add something about the financial aspects of this project?</p> <p>Question 13</p> | <ul style="list-style-type: none"> - No |

Annex 5: Questions not corresponding to the planned interview

| Questions not asked (reason) | Questions answered to spontaneously (corresponding sequence) | Questions asked but not recorded due to technical issues (response) | Questions asked earlier or later than expected |
|--|--|--|--|
| 1.3 (not crucial) 2 (time, not crucial) 2.3 (time, not crucial) 2.4 (time, not crucial) 2.7 (time, not crucial) 3.2.1 (time) 4.2 (too early to really know) 5.5 (WS not most relevant interviewee for this question) 6.3 (time, not crucial) 7.1 (time, not crucial) 8.1 (too general) 8.2 (time, not crucial) 8.3 (time, not crucial) 9 (too general) 9.3 (time) 10 (time) 10.1 (time) 11.1 (time) | 2.1 (3) 2.1.1 (3, 8) 2.2 (1, 3) 3.2 (3, 4, 7, 13, 17, 20) 3.2.2 (21, 22, 23) 4.1 (8) 5 (7, 13, 20) 5.1 (7, 3) 7.2 (21) 9.5 (29) 11 (29) 12.1 (27, 28) | 5.4 (Forgotten) 5.6 (Remembered: "no impact, Deutsche Bahn is a private partner like any other, striving for benefits") | 9.4 8.6 8.5 |