

ACTION 2

Funding and Financing Guide for Brownfield Redevelopment

Introduction

The Urban Agenda for the EU (UAEU) was established in 2016 by the Pact of Amsterdam, which was adopted by the EU ministers responsible for urban matters at their informal meeting in Amsterdam. It represents a new form of multilevel governance that promotes cooperation between Member States, cities, the European Commission and other stakeholders in order to jointly tackle the issues that European cities are facing. The key delivery mechanism of the UAEU are the thematic partnerships. These multilevel Partnerships develop and implement Action Plans focusing on the three dimensions of Better Regulation, Better Funding and Better Knowledge. More information on the UAEU can be found here.

One of the 14 thematic partnerships is the Partnership on the Sustainable Use of Land and Nature-based Solutions that will be running from mid-2017 to mid-2020. Currently the Partnership is at the beginning of the implementation phase. This Partnership is coordinated by the Polish Ministry of Investment and Economic Development as well as the City of Bologona from Italy. <u>You can find the Action Plan here</u>.

Action 2 is called "Funding and Financing Guide for Brownfield Redevelopment" and falls under the categories of *Better Funding* and *Better Knowledge*. This Action is led by the Ministry of Energy and Spatial Planning of Luxembourg. The other Partners are: City of Bologona (in conjunction with the University of Bologna), City of Cork, City of Zagreb (in conjunction with URBANEX), EUROCITIES, European Metropolitan Area of Lille, Regional Planning Office of Stuttgart, Land Institute of Catalonia (INCASÒL) and the Regional Development Office of the Lisbon and Tejo Region. There is also a close cooperation with the European Commission (DG REGIO) and the European Investment Bank (Urban Development Division).

What is the problem that Action 2 deals with?

The Partners believe that brownfield redevelopment in cities, within the broader context of land recycling and circular land management, presents a valuable opportunity to limit land take and prevent urban sprawl. Moreover, it can make cities more liveable, for instance through implementing nature-based solutions (NBS) and creating green spaces. In line with the definition provided by the CABERNET Network, brownfields are, in this context, defined as sites that:

- Have been affected by the former or existing uses of the site and surrounding land;
- May have real or perceived contamination problems;
- Are derelict or underused and require intervention to bring them back to beneficial use;
- May include historically valuable buildings or areas;
- Are mainly in developed urban areas, but also in peri-urban areas; and
- Should be planned and developed according to the approach of integrated sustainable urban development and based on partnerships between different stakeholders.

The main driver of brownfield redevelopment, once the ownership constraints are overcome, is the economic viability of individual sites. This viability is determined by the actual redevelopment costs and future land value. The CABERNET network developed a conceptual model, the A-B-C model, to categorise different types of site in terms of economic viability. This model categorises sites in the following way:

- <u>A-sites:</u> These sites are highly economically viable and the redevelopment projects are driven by private investment. There is no need for direct financial public intervention.
- <u>B-sites:</u> These sites are characterised as being on the borderline of economic viability due to certain risks. These projects tend to be financed through public-private partnerships, in which the public sector and the private sector are sharing risks and benefits.
- <u>C-sites:</u> These sites are not in a condition in which redevelopment is economically viable. Extensive public intervention is required to attract private investment and stimulate the redevelopment of these sites.

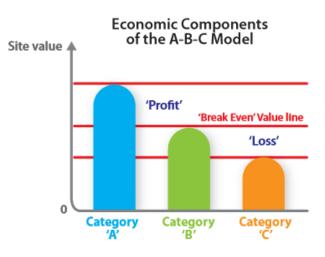


Figure 1: The A-B-C model from CABERNET

While it is important to recognise that there is often considerable uncertainty about anticipated costs, private investors look at a project in terms of economic viability and market potential. The cost–value gap (if the perceived value of a site is less than anticipated costs) generally prevents the redevelopment of B-

and C-sites. This can only change if there is some means of creating a surplus of value over cost. This is particularly important in the early stages of brownfield redevelopment where liquidity problems might occur. While B-sites require only a modest intervention (bridge funding) from the public sector to attract private capital, C-sites require a more substantial intervention from the public sector to address upfront costs and make the project viable and therefore attractive for future use by private investors or community uses.

Brownfield redevelopment cost includes a wider range of activities taking int accout the legacy of the past. The coherent analysis and management of cost are in all types of brownfield projects of key importance for limiting financial risks. Major cost categories are shown in table 1:

Phase	Costs
Data collection and evaluation	Ownership identification (historical) site assessment (former use, infrastructure, heritage aspects) Site investigation Market assessment
Pre-feasibility stage	Ownership agreement Establishment of a preliminary development concept Risk assessment (legal, environmental, ecomonic) cost benefit analysis) Community engagement stragie
Feasibility stage	Masterplan e.g. through Urban design competition inlcluding aspects of Environmental Impact Assessment Impact analysis of remediation and redevelopment options Definition of financing and investing arrangements Adapting land-use plans
4.Implementation	Remediation Redevelopment Site marketing Monitoring and evaluation

Cities obviously play a key role in brownfield redevelopment. They set the boundaries and requirements for development activities in land-use and zoning plans. They also play an active role by (co)financing many of the activities linked to the redevelopment process. Considering the current economic climate where public budgets are strained, it has become more difficult for cities to finance brownfield redevelopment projects and, therefore, it is important for cities to have information on potential funding and financing instruments as well as guidance on how to lever private investment. While there are several networks and research projects that have explicitly dealt with the question of funding and financing for brownfield development (CLARINET, CABERNET, NICOLE, RESCUE, REVIT), this information is often either outdated, incomplete or too general to be of any use to city stakeholders.

What is the objective of Action 2?

The objective of Action 2 is to develop a comprehensive Guide for cities that provides an up-to-date description and analysis of relevant funding and financing instruments, and offers a perspective on how these can be combined in a holistic approach for brownfield redevelopment projects. Each instrument will be complemented by a concrete example from a European city of how it was used to implement a brownfield redevelopment project.

The proposed Guide would be structured as follows:

- 1) Introduction to Action 2
- 2) How can cities finance brownfield redevelopment projects?
 - a) Categorisation of instruments
 - b) Increasing the public budget available for a project:
 - i) Raising the city's revenues
 - ii) City receiving external funding
 - iii) City receiving external finance
 - c) Reducing the costs of the project by involving a private developer
 - i) City sharing risks and benefits with the private developer
 - ii) City reducing the private developer's cost of financing
 - iii) City increasing the private developer's cash-flow
- 3) Outlook and conclusions

Theoretical framework

The decision tree and the categorisation of instruments

As it is not very helpful to simply list a number of instruments that cities can use to finance their brownfield redevelopment projects, Figure 2 below presents the different categories and subcategories of instruments in the form of a simplified *decision tree* whose *decision nodes* are defined by the strategic objectives of the instruments. This means that cities have to take strategic decisions about the instruments they want to use based on which objectives they want to achieve. This method has also been used in other Guides to categorise funding and financing instruments available to cities.¹ In line with the decision tree, the instruments that are available to cities can, in principle, be used to either increase the public budget available for a brownfield redevelopment project or reduce the costs of the project by involving a private developer. Based on these two categories, the decision tree then specifies six strategic objectives that correspond to six subcategories of instruments.

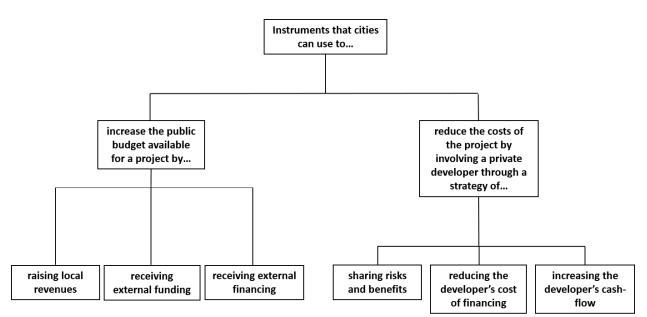


Figure 2: Decision tree depicting the categories and subcategories of instruments based on their strategic objectives

The next step is to sort the different instruments based on their strategic objectives. The table on the next pages lists the instruments per subcategory and provides a short description with sources to avoid any misunderstandings. The instruments in the crosshatched cells will not be considered for the time being.

¹ European Platform on Sustainable Urban Mobility Plans (2019) <u>Topic Guide: Funding and Financing of</u> <u>Sustainable Urban Mobility Measures</u>. Pages 12-32.

World Bank (2010) The Management of Brownfields Redevelopment: A Guidance Note. Page 48.

	Land value tax ²
	A tax exclusively on the value of land with the objective of incentivising owners to invest in improvements or developments.
	Tax increment financing ³
	Using the anticipated increase in tax income from a project to finance public sector investments therein.
	Capturing the increase in property tax resulting from new development and increasing property values.
	Betterment contribution ⁴
Raising the city's revenues	A one-time charge imposed on landowners who specifically benefit from public planning decisions (e.g. rezoning of land or public infrastructure projects) in order to capture the increase in value.
	Land readjustment/consolidation ⁵
	A government-led development process of regrouping smaller land plots in order to develop a larger area, and then redistributing plots to private landowners.
	Strategic land asset management ⁶
	Operations of land acquisition, sale and leasehold by the public sector to raise funds.
	Developer exaction and impact fee ⁷
	A one-time charge either negotiated (developer exaction) with or imposed (impact fee) on the developer as a contribution to the costs of external infrastructure created by a project.
	Local and regional funding: city or region providing funding from own resources.

² OECD (2018) Land value capture: Framework and instruments. CFE/RDPC/URB(2018)5. Page 13.

³ Medda et al. (2011) "Financial Mechanisms for Historic City Core Regeneration and Brownfield Redevelopment", in <u>The Economics of Uniqueness: Investing in Historic City Cores and Cultural Heritage</u> <u>Assets for Sustainable Development</u>, ed. by Licciardi, G., Amirtahmasebi, R. Pages 224-225, 231.

Groenendijk, N. (2007) "4.1 An Early Assessment of JESSICA: Love at First Sight?", in <u>2nd International</u> <u>Conference on Managing Urban Land: Towards more Effective and Sustainable Brownfield Revitalisation</u> <u>Policies</u>. Pages 273-274.

⁴ OECD (2018) Land value capture. Page 14.

OECD (2017) The Governance of Land Use in OECD Countries: Policy Analysis and Recommendations. Page 114.

⁵ OECD (2018) Land value capture. Page 22.

⁶ OECD (2018) Land value capture. Page 21.

⁷ OECD (2018) Land value capture. Pages 15-16.

OECD (2017) The Governance of Land Use. Pages 113-114.

Medda et al. (2011) Financial Mechanisms. Page 231.

City receiving external funding	National funding: national programs on urban renewal, environment etc.
	EU funding: European operational programs ERDF, LIFE etc.
City receiving external financing	Receiving a loan from the EIB: EIB Brownfields Redevelopment Fund, EIB GINKGO Fund, EIB Natural Capital Financing Facility
	Crowdfunding⁸ The practice of financing a project by collecting money from a large number of people via online platforms. In the case of brownfield redevelopment, the most relevant types of crowdfunding are: donation-based crowdfunding, peer-to-peer lending, and rewards-based crowdfunding.
	Impact Investment Funds
City sharing risks and benefits with the private (public)developer	Public-private partnership ⁹ A contract between the government and a private sector partner concerning the delivery of a specific service and the supply of a dedicated infrastructure asset.
	Brownfield tax – "Etablissement public fonciere": Specialised agencies for brownfield redevelopment
	Land trust: brownfield agency in community interest
	Loan guarantee and guarantee fund ¹⁰
City reducing the	A guarantee by a local government to assume the debt obligation of a developer in the case of default. The loan guarantee can be backed by a guarantee fund.
private developer's cost	Development fee waiver, reduction or refund ¹¹
of financing and cash-flow	Waiving, reducing or refunding fees and charges associated with the applications for planning or building permits for a project.
	Loan and revolving loan fund ¹²

⁸ EC: <u>Crowdfunding Explained</u>.

⁹ EC (2003) Guidelines for Successful Public-Private Partnerships. Pages 16-28.

IMF (2004) Public-Private Partnerships. Pages 4-14.

OECD (2008) Public-Private Partnerships: In Pursuit of Risk Sharing and Value for Money. Pages 11-17. PPIAF: Toolkit for Public-Private Patnerships in Roads and Highways.

¹⁰ Medda et al. (2011) *Financial Mechanisms*. Page 235.

¹¹ Huon Valley Council: <u>Development Fee Waiver, Reduction or Refund Policy</u>.

¹² Medda et al. (2011) Financial Mechanisms. Pages 234-235.

Groenendijk, N. (2007) An Early Assessment of JESSICA. Page 274.

A fund financing projects through low-interest (or even no-interest) loans, and using
the interest and principal payments on old loans to issue new ones. The local
government would provide the initial seed capital.

 Table 1: Instruments per subcategory based on their strategic objectives

Sources:

European Commission: Crowdfunding Explained.

European Commission (2003) Guidelines for Successful Public-Private Partnerships. Pages 16-28.

European Platform on Sustainable Urban Mobility Plans (2019) <u>Topic Guide: Funding and Financing of</u> <u>Sustainable Urban Mobility Measures</u>.

Medda et al. (2011) "Financial Mechanisms for Historic City Core Regeneration and Brownfield Redevelopment", in <u>The Economics of Uniqueness: Investing in Historic City Cores and Cultural Heritage</u> <u>Assets for Sustainable Development</u>, ed. by Licciardi, G., Amirtahmasebi, R. Pages 224-225, 231.

Groenendijk, N. (2007) "4.1 An Early Assessment of JESSICA: Love at First Sight?", in <u>2nd International</u> <u>Conference on Managing Urban Land: Towards more Effective and Sustainable Brownfield Revitalisation</u> <u>Policies</u>. Pages 273-274.

Huon Valley Council: <u>Development Fee Waiver, Reduction or Refund Policy</u>.

IMF (2004) Public-Private Partnerships.

OECD (2008) Public-Private Partnerships: In Pursuit of Risk Sharing and Value for Money.

OECD (2017) The Governance of Land Use in OECD Countries: Policy Analysis and Recommendations.

OECD (2018) Land value capture: Framework and instruments. CFE/RDPC/URB(2018)5.

PPIAF: Toolkit for Public-Private Patnerships in Roads and Highways.

World Bank (2010) The Management of Brownfields Redevelopment: A Guidance Note.

Instrument profiles

List of instruments:

Introduction:	10
Land value tax	13
Tax increment financing	15
Betterment contribution	17
Land readjustment/consolidation	19
Strategic land asset management	21
Developer exaction and impact fee	23
Local and regional funding	25
National funding	27
EU European regional development funds	29
EU Life	
Impact Investment Funds	
Crowdfunding	
Brownfield tax- "Etablissement Public Foncier" Nord-Pas-de- Calais/France	
Land Trust/England	
Public-private partnership	41
Loan guarantee and guarantee fund	43
Development fee waiver, reduction or refund	45
Loan and revolving loan fund	47

Introduction:

Based on the theoretical model, all instruments are described in more details by the following aspects:

Strategic objective -

- European Platform on Sustainable Urban Mobility Plans (2019) <u>Topic Guide: Funding and</u> <u>Financing of Sustainable Urban Mobility Measures</u>. Pages 12-32.
- World Bank (2010) The Management of Brownfields Redevelopment: A Guidance Note. Page 48

Type of instrument -

• See also: World Bank (2010) <u>The Management of Brownfields Redevelopment: A Guidance Note</u>. Page 48.

Relevant phase or activity of the redevelopment process -

• World Bank (2010) <u>The Management of Brownfields Redevelopment: A Guidance Note</u>.

Below you find the template for the individual instrument profiles.

Instrument	
	What is the objective(s) of the instrument? Please select among the following options:
Strategic objective	 Raising the city's revenues City receiving external funding City receiving external finance City sharing risks and benefits with the private developer City reducing the private developer's cost of financing City increasing the private developer's cash-flow
Type of instrument	Please select among the following options: Planning instrument Funding instrument Financial instrument Fiscal instrument
Category of brownfield	For which category of brownfield site is this instrument most suitable? [] A sites (highly economically viable) [] B sites (on the borderline of economic viability) [] C sites (not economically viable at this moment)

	<i>Please select the relevant phase(s) or activity(ies) of the redevelopment process among the following options:</i>
	1) Data collection and evaluation
	 [] Ownership identification [] Site assessment [] Site investigation [] Market assessment
	2) Pre-feasibility stage
Relevant phase or activity of the	 [] Establishment of a preliminary development concept [] Risk assessment (incl. cost benefit analysis) [] Community engagement
redevelopment	3) Feasibility stage
process	 Urban design competition Performing an Environmental Impact Assessment Impact analysis of remediation and redevelopment options Definition of financing and investing arrangements Adapting land-use plans
	4) Implementation
	 [] Remediation [] Redevelopment [] Site marketing [] Monitoring and evaluation
Functioning	How is the instrument set up? How does the instrument function? How can the city use the instrument?
Preconditions	Which preconditions must be fulfilled for the instrument to function? These could be technical preconditions (e.g. regular land valorisation) or preconditions linked to ownership.
Potential obstacles or risks	Which are potential obstacles or risks for the use of the instrument? Are there potential problems regarding EU rules on State aid? How could cities overcome these obstacles, risks or problems?
	Can this instrument be strategically combined with other instruments? With which instruments?
Strategic combination of instruments	 [] Specific instrument(s): [Instrument A] [Instrument B] Please explain. [Instrument A] [Instrument C] Please explain.
	[] All instruments: [Instrument A] [all instruments] Please explain.

Link with nature-based solutions	What is the link with nature-based solutions?
Prevalence across EU	How prevalent is the instrument in the EU? In which Member States does the instrument exist?

Land value tax	
Strategic objective	 What is the objective(s) of the instrument? Please select among the following options: [X] Raising the city's revenues [] City receiving external funding [] City receiving external finance
	 [] City sharing risks and benefits with the private developer [] City reducing the private developer's cost of financing [] City increasing the private developer's cash-flow
	Please select among the following options:
Type of instrument	 [] Planning instrument [] Funding instrument [] Financial instrument [X] Fiscal instrument
	For which category of brownfield site is this instrument most suitable?
Category of brownfield	 [X] A sites (highly economically viable) [x] B sites (on the borderline of economic viability) [) C sites (not economically viable at this moment)
	How is the instrument set up? How does the instrument function? How can the city use the instrument?
Functioning	The instrument needs to be set up by the municipality and the tax set exclusively on the value of land with the objective of incentivising owners of brownfields to invest in improvements or developments. Land value taxes greatly depend on the national tax systems and could in the case of low level taxation support the persistence of brownfields. Land value based taxes encourages landowners to develop a vacant and underused site to its full planning potential, and discourages land banking.
	Which preconditions must be fulfilled for the instrument to function? These could be technical preconditions (e.g. regular land valorisation) or preconditions linked to ownership.
Preconditions	Prerequisites include that municipal competences in taxation and that the adequate orientation on local brownfield types and ownership are in place (including the specific role of state-owned brownfields). Land values also should already be adequately appraised (including values).
Potential obstacles or risks	Which are potential obstacles or risks for the use of the instrument? Are there potential problems regarding EU rules on State aid? How could cities overcome these obstacles, risks or problems?

	The use of taxes for brownfield redevelopment depends upon municipal priorities.
Strategic	Can this instrument be strategically combined with other instruments? With which instruments?
combination	[x] Specific instrument(s):
of instruments	Strategic land asset management: local orientation toward the mobilisation of brownfields
	Funding programs: source of co-funding
Link with nature-based solutions	What is the link with nature-based solutions?
	The tax can be a source of finance for implementing nature based solutions.
Prevalence across EU	How prevalent is the instrument in the EU? In which Member States does the instrument exist?
	Land value taxes are collected in various manners in the different countries. Value based tax systems increase the amount of land value tax by 2-7% (EPA, 2017). In France, the property tax for undeveloped land highly linked to the national rental value (OECD, 2017 France). In Germany the planned reform of the property tax (Grundsteuer) in 2020 can enable the strong valuation of the value of land.

Tax increment financing	
Strategic objective	 What is the objective(s) of the instrument? Please select among the following options: [x] Raising the city's revenues [] City receiving external funding [] City receiving external finance [] City sharing risks and benefits with the private developer [] City reducing the private developer's cost of financing [] City increasing the private developer's cash-flow
Type of instrument	 Please select among the following options: [] Planning instrument [] Funding instrument [] Financial instrument [X] Fiscal instrument
Category of brownfield	 For which category of brownfield site is this instrument most suitable? [x] A sites (highly economically viable) [x] B sites (on the borderline of economic viability) [) C sites (not economically viable at this moment)
Functioning	How is the instrument set up? How does the instrument function? How can the city use the instrument? The instrument anticipates the increase in tax income from a project to finance the related public sector investments for the same development. The municipality captures the increase in property tax resulting from new development and increasing property values. Through the use of tax increment financing (TIF), municipalities typically divert future property tax revenue increases from a defined area or district toward an economic development project or public improvement project in the community. TIF subsidies are not appropriated directly from a city's budget, but the city incurs loss through foregone tax revenue.
Preconditions	 Which preconditions must be fulfilled for the instrument to function? These could be technical preconditions (e.g. regular land valorisation) or preconditions linked to ownership. Relevant land values are adequately appraised and the local tax needs to be value dependent.
Potential obstacles or risks	Which are potential obstacles or risks for the use of the instrument? Are there potential problems regarding EU rules on State aid? How could cities overcome these obstacles, risks or problems?

	In shrinking areas, taxes must be raises after development – which is typically not the case in deprived areas. In dynamic metropolitan areas, as investment in an area increases, it is not uncommon for real estate values to rise and for gentrification to occur. The experience gathered in the US show that the TIF process arguably leads to favouritism for politically connected developers, implementing attorneys, economic development officials, and others involved in the processes.
Strategic combination of instruments	Can this instrument be strategically combined with other instruments? With which instruments? [X] Specific instrument(s):
	Public-Private-Partnership: profile of the site after-use e.g. influence of green infrastructure on tax increment finance.
Link with nature-based solutions	What is the link with nature-based solutions? Instrument to interest private sector for green infrastructure
Prevalence across EU	<i>How prevalent is the instrument in the EU? In which Member States does the instrument exist?</i>
	The instrument, mainly used in the US, is being discussed in the UK but still a disagreement on the management aspects, particularly among local authorities ("LAs"), exist. TIFs were ushered in by the Local Government Finance Act 2012 in the UK. Scottish TIF projects include Glasgow City Region City Deal which will see £1.13 billion spent on infrastructure up until 2035, hoping to leverage £3 billion private investment. Also, the Edinburgh Waterfront is a mixed residential/commercial development in Leith. The Council here has invested a total of £84 million.

	Betterment contribution	
	What is the objective(s) of the instrument? Please select among the following options:	
Strategic objective	 [X] Raising the city's revenues [] City receiving external funding [x] City receiving external finance [] City sharing risks and benefits with the private developer [] City reducing the private developer's cost of financing [] City increasing the private developer's cash-flow 	
Type of instrument	 Please select among the following options: [X] Planning instrument [x] Funding instrument [] Financial instrument [] Fiscal instrument 	
Category of brownfield	For which category of brownfield site is this instrument most suitable? [] A sites (highly economically viable) [x] B sites (on the borderline of economic viability) [x C sites (not economically viable at this moment)	
Functioning	How is the instrument set up? How does the instrument function? How can the city use the instrument? Betterment contributions are a one-time charge imposed on landowners who specifically benefit from public planning decisions (e.g. rezoning of land or public infrastructure projects) in order to capture the increase in value. As such, they are one-time charges put on existing land uses, e.g. brownfield redevelopment or infrastructure improvements.	
Preconditions	Which preconditions must be fulfilled for the instrument to function? These could be technical preconditions (e.g. regular land valorisation) or preconditions linked to ownership.Betterment contributions depends on data collected after the investment is made and land valorisation has occurred, which means they cannot be used to fund the project beforehand.	
Potential obstacles or risks	Which are potential obstacles or risks for the use of the instrument? Are there potential problems regarding EU rules on State aid? How could cities overcome these obstacles, risks or problems? Estimation of land value gains is difficult and highly controversial with private land owners?	

Strategic	Can this instrument be strategically combined with other instruments? With which instruments?
combination of	[X] Specific instrument(s):
instruments	ERDF/LIFE: using funds (e.g. for brownfield acquisition) is limited in public programs (e.g. ERDF up to 10% of project costs)
Link with nature-based solutions	What is the link with nature-based solutions? Funding source for NBS
Prevalence	How prevalent is the instrument in the EU? In which Member States does the instrument exist?
across EU	In Poland, there is one betterment levy associated with planning decisions, and another one linked to local public infrastructure projects. In both cases, the levy is assessed by a parcel-by-parcel appraisal process. The assessment process has been reported to be costly, partly due to subsequent administrative and judicial disputes (OECD, 2011). This "fear" of disputes has become problematic in Poland, up to the point that authorities have refrained from adopting planning decisions only to avoid the levy appraisal process, and in other cases have avoided applying it in relation to local infrastructure works (OECD, 2011).

	Land readjustment/consolidation
Strategic objective	 What is the objective(s) of the instrument? Please select among the following options: [] Raising the city's revenues [] City receiving external funding [X] City receiving external finance [] City sharing risks and benefits with the private developer [] City reducing the private developer's cost of financing [] City increasing the private developer's cash-flow
Type of instrument	 Please select among the following options: [X] Planning instrument [] Funding instrument [X] Financial instrument [] Fiscal instrument
Category of brownfield	 For which category of brownfield site is this instrument most suitable? [x] A sites (highly economically viable) [X] B sites (on the borderline of economic viability) [] C sites (not economically viable at this moment)
Functioning	 How is the instrument set up? How does the instrument function? How can the city use the instrument? Land readjustment is a government-led development process of regrouping small, irregular or undeveloped land plots in order to develop and service an area, and then redistributing smaller plots to private landowners. A fraction of the developable land is transferred to the government for public use (e.g. roads and public spaces). The instrument was developed for "greenfields" but could be adapted to smaller brownfield areas with minimal contamination problems and split ownerships e.g. underused/abandoned historic housing areas. Urban land readjustment reduces the risks of municipalities compared to public land development, because municipalities do not have to acquire land. Instead, the risks of the redevelopment project are shared with all property owners. Finally, urban land readjustment may contribute to the transparency of the redevelopment process. Instead of confidential bargaining between the municipality and each individual property owner, land readjustment requires defining the existing values of all properties at the start of the project. All property owners participating in the land readjustment scheme will receive this information.

Preconditions	 Which preconditions must be fulfilled for the instrument to function? These could be technical preconditions (e.g. regular land valorisation) or preconditions linked to ownership. Land readjustment is to be preferred when (some of) the original buildings will not be demolished but renovated and the owners of these buildings are expected to benefit from the redevelopment of the location or (some of) the original owners are interested in participating in the development; and 'extra' infrastructure costs cannot be recovered with the regular cost recovery State institutions to managing the relatively complex process must be in place and transparency and often juridical control ensured. Besides the cost for personal and the process, municipalities also need proper funds and could refinance public investments.
Potential obstacles or risks	 Which are potential obstacles or risks for the use of the instrument? Are there potential problems regarding EU rules on State aid? How could cities overcome these obstacles, risks or problems? Complex administrative processes need a high administrative performance and must be able to deal with risks on legal disputes.
Strategic combination of instruments	Can this instrument be strategically combined with other instruments? With which instruments? [X] Specific instrument(s): Strategic land asset management: detailed knowledge (e.g. on ownership interest) as a precondition to the agreed use of the instrument
Link with nature-based solutions	What is the link with nature-based solutions? Land for green infrastructure could be included as a public assets
Prevalence across EU	How prevalent is the instrument in the EU? In which Member States does the instrument exist? Legal basis exist only in Germany, Austria and France (Remembrement Urbaine)

	Strategic land asset management
Operat	ions of land acquisition, sale and leasehold by the public sector to raise funds
	What is the objective(s) of the instrument? Please select among the following options:
Strategic objective	 [X] Raising the city's revenues [] City receiving external funding [x] City receiving external finance [] City sharing risks and benefits with the private developer [] City reducing the private developer's cost of financing [] City increasing the private developer's cash-flow
	Please select among the following options:
Type of instrument	 [X] Planning instrument [x] Funding instrument [] Financial instrument [] Fiscal instrument
	For which category of brownfield site is this instrument most suitable?
Category of brownfield	[X] A sites (highly economically viable)[X] B sites (on the borderline of economic viability)[X C sites (not economically viable at this moment)
	How is the instrument set up? How does the instrument function? How can the city use the instrument?
Functioning	The instrument can be started independently by the local authority and created in the medium to long term. The aim is a strategic land acquisition (brownfields/greenfields) that is free from speculation and that opens up potentials for urban development (e.g. housing, commerce and infrastructure).
	Which preconditions must be fulfilled for the instrument to function? These could be technical preconditions (e.g. regular land valorisation) or preconditions linked to ownership.
Preconditions	Legal options for determining the development-free acquisition of sites and the implementation carried out by a qualified public as well as transparent organization.
Potential obstacles or risks	Which are potential obstacles or risks for the use of the instrument? Are there potential problems regarding EU rules on State aid ?How could cities overcome these obstacles, risks or problems?

	An effective use of the instrument requires the exact observation of the local land value market, the ability of enforcing planning regulations (such as the use of brownfields for green spaces, etc.) and if possible the use of pre-emptive acquisition. The goal is to hinder the speculative investments of private developers. Before the acquisition reach an understanding or agreement with the property owner about the legal responsibility in the case of soil contamination.
Strategic combination of instruments	Can this instrument be strategically combined with other instruments? With which instruments? [X] Specific instrument(s): Brownfield tax/EPF: precondition for public interventions in the market Land Trust: pre-selection of suitable land for trust's purpose [x] All instruments: basic instrument for all types of intervention .
Link with nature-based solutions	What is the link with nature-based solutions? Strong potential to acquire land for green infrastructure in urban areas.
Prevalence across EU	How prevalent is the instrument in the EU? In which Member States does the instrument exist? It is open to all municipalities but the application is difficult in urban areas with high land values. Instead, this instrument is a key strategic instrument to restructure shrinking cities with brownfield land. Mainly this instrument is used in combination with regional land agencies in France, UK and Germany.

	Developer exaction and impact fee	
	What is the objective(s) of the instrument? Please select among the following options:	
Strategic objective	 [] Raising the city's revenues [] City receiving external funding [X] City receiving external finance [x] City sharing risks and benefits with the private developer [] City reducing the private developer's cost of financing [] City increasing the private developer's cash-flow 	
	Please select among the following options:	
Type of instrument	 [] Planning instrument [x] Funding instrument [] Financial instrument [] Fiscal instrument 	
	For which category of brownfield site is this instrument most suitable?	
Category of brownfield	 [X] A sites (highly economically viable) [x] B sites (on the borderline of economic viability) [] C sites (not economically viable at this moment) 	
	How is the instrument set up? How does the instrument function? How can the city use the instrument?	
Functioning	Developer exactions or in-kind exactions are one-time charges negotiated for new land uses in single projects "negotiated exactions". In an A type of brownfield projects (such as a commercial centre or residential complex) which creates significant infrastructure needs in the surrounding area, the developer is requested to contribute to meet them. If the developer directly builds the new infrastructure, the tool is called in-kind exaction. If the developer pays the equivalent in cash, it is a developer exaction.	
	Which preconditions must be fulfilled for the instrument to function? These could be technical preconditions (e.g. regular land valorisation) or preconditions linked to ownership.	
Preconditions	The instrument needs a common understanding on the risks and benefits of the project and clear impact descriptions including monetary quantification and efficient stakeholder management including citizen involvement. Clear legal frameworks at the national level are helpful in this regard.	
Potential obstacles or risks	Which are potential obstacles or risks for the use of the instrument? Are there potential problems regarding EU rules on State aid? How could cities overcome these obstacles, risks or problems?	

	The instrument only works if public and private partners negotiate "on the same level" and are willing to compromise. Conflicts to be expected from brownfield development projects (traffic, urban climate, social mix) can be compensated for using a transparent process.
Strategic combination of instruments	Can this instrument be strategically combined with other instruments? With which instruments? [X] Specific instrument(s): PPP: developer fees could be used for public infrastructure
Link with nature-based solutions	What is the link with nature-based solutions? Developer fees could contribute to fund or implement nature based solution.
Prevalence across EU	How prevalent is the instrument in the EU? In which Member States does the instrument exist? Developer fees are widely used by municipalities in the EU. Some states provide legal frameworks e.g. "Urban contracts"" in Germany

Local and regional funding	
Strategic objective	<pre>What is the objective(s) of the instrument? Please select among the following options: [] Raising the city's revenues [] City receiving external funding [] City receiving external finance [x] City sharing risks and benefits with the private developer</pre>
	[X] City reducing the private developer's cost of financing[X] City increasing the private developer's cash-flow
Type of instrument	 Please select among the following options: [] Planning instrument [x] Funding instrument [] Financial instrument [] Fiscal instrument
Category of brownfield	 For which category of brownfield site is this instrument most suitable? [] A sites (highly economically viable) [x] B sites (on the borderline of economic viability) [x] C sites (not economically viable at this moment)
Functioning	How is the instrument set up? How does the instrument function? How can the city use the instrument? The instrument can be set up by local, inter-municipal or regional initiative and is therefore only used in financially stronger municipalities. To this end, the municipality or region is largely autonomous when it comes to structuring the funding conditions and can tailor them specifically to local or regional needs and brownfield types. For example, the property fund of North Rhine-Westphalia, Germany, specifically supported the revitalization of brownfields in the coal and steel industries. Many municipal grants can also revitalize fallow land, e.g. for green infrastructure.
Preconditions	 Which preconditions must be fulfilled for the instrument to function? These could be technical preconditions (e.g. regular land valorisation) or preconditions linked to ownership. Municipalities or regions must have access to their own funding sources. The regulations of the EU for state aid are to be observed.
Potential obstacles or risks	Which are potential obstacles or risks for the use of the instrument? Are there potential problems regarding EU rules on State aid? How could cities overcome these obstacles, risks or problems?

	Municipal funds for (private) brownfield land usually do not have sufficient political support. There is a risk of local "prestige projects". Municipal funds should only be used directly in exceptional cases, especially for co-financing e.g. by European Union funds.
Strategic	Can this instrument be strategically combined with other instruments? With which instruments?
combination of	[X] Specific instrument(s):
instruments	EU Funding: ERDF and life, for co-funding of projects or project-related costs
Link with nature-based solutions	What is the link with nature-based solutions? Strong potential to acquire land for green infrastructure in urban areas
Prevalence	How prevalent is the instrument in the EU? In which Member States does the instrument exist?
across EU	Local and regional funding is typically used for the co-financing of national and European funding programs. Independent municipal and regional funding programs (for example dedicated to city development or climate change adaptation) also intersect with the topic of brownfield regeneration in many aspects.

National funding	
Strategic objective	 What is the objective(s) of the instrument? Please select among the following options: [] Raising the city's revenues [x] City receiving external funding [x] City receiving external finance [] City sharing risks and benefits with the private developer [] City reducing the private developer's cost of financing [] City increasing the private developer's cash-flow
Type of instrument	Please select among the following options: [] Planning instrument [x] Funding instrument [x] Financial instrument [] Fiscal instrument
Category of brownfield	 For which category of brownfield site is this instrument most suitable? [] A sites (highly economically viable) [x] B sites (on the borderline of economic viability) [x] C sites (not economically viable at this moment)
Functioning	 How is the instrument set up? How does the instrument function? How can the city use the instrument? State subsidy programs are only targeted on brownfield sites in exceptional cases. Nevertheless, many specialist programs offer the possibility of integrating brownfield projects, for example economic development programs (brownfields), urban redevelopment programs, programs to clean up contaminated sites and climate adaptation programs. In addition, there are low-interest loan programs from the development banks at the national level that can be used for brownfield projects. The respective application procedure must be clarified with the national contact person.
Preconditions	Which preconditions must be fulfilled for the instrument to function? These could be technical preconditions (e.g. regular land valorisation) or preconditions linked to ownership.
Potential obstacles or risks	Which are potential obstacles or risks for the use of the instrument? Are there potential problems regarding EU rules on State aid? How could cities overcome these obstacles, risks or problems?
Strategic combination of instruments	Can this instrument be strategically combined with other instruments? With which instruments? [X] Specific instrument(s):

	ERDF: may be possible to use for a portion of co-funding
	 Brownfield tax/EPF: state funding for brownfield agency
	 Land trust: state support e.g. for environmental issues and climate adaptation programs
Link with nature-based solutions	What is the link with nature-based solutions? Check the funding opportunities on national level
Prevalence across EU	How prevalent is the instrument in the EU? In which Member States does the instrument exist?

	EU European regional development funds
Strategic objective	What is the objective(s) of the instrument? Please select among the following options:
	 [] Raising the city's revenues [x] City receiving external funding [] City receiving external finance [] City sharing risks and benefits with the private developer [] City reducing the private developer's cost of financing [] City increasing the private developer's cash-flow
	Please select among the following options:
Type of instrument	 [] Planning instrument [x] Funding instrument [] Financial instrument [] Fiscal instrument
Category of brownfield	For which category of brownfield site is this instrument most suitable?
	 [] A sites (highly economically viable) [x] B sites (on the borderline of economic viability) [x] C sites (not economically viable at this moment)
	How is the instrument set up? How does the instrument function? How can the city use the instrument?
Functioning	As part of the European Cohesion policy, the ERDF as a major regional development fund can be accessed for brownfield projects. The fund supports programs that address regional development, economic change and enhanced competitiveness. For this purpose, Operational Programs (OPs) at the regional level have to be established which reflect the investment priorities of the respective regions and their "urban dimension". Although regions have some flexibility in devising their OPs, their priorities have to be consistent with national priorities and have to receive approval from the European Commission before they can be implemented. Thus, within member countries, Regional OPs tend to be relatively unitary, but they can vary substantially in design and expected outcomes from country to country. (World Bank, 2010) Priorities for the 2021 – 2027 period are currently under negotiation.
Preconditions	Which preconditions must be fulfilled for the instrument to function? These could be technical preconditions (e.g regular land valorisation) or preconditions linked to ownership.
	Cities must apply under the specific national/regional ERDF management bodies and adapt the priorities in relation to brownfield redevelopment. Co-funding depends on the region and can range from 25-50%. Generally all cost for

	individual redevelopment steps could be funded. Public leadership is required and private partners could be supported under the "De-Minimis" rule.
Potential obstacles or risks	Which are potential obstacles or risks for the use of the instrument? Are there potential problems regarding EU rules on State aid? How could cities overcome these obstacles, risks or problems?
	The procedure tends to be relatively "bureaucratic" and experiences with EU fund management are required. Public tendering and monitoring of the implementation are also required. Land acquisition is limited to 10% of the project costs.
Strategic combination of instruments	Can this instrument be strategically combined with other instruments? With which instruments?
	 [X] Specific instrument(s): State funding and local/regional funding as sources of co-funding Use can be linked with Loans. ERDF for private partners under "DE-Minimis rule"
Link with nature-based solutions	What is the link with nature-based solutions? Nature based solutions could be an integrated part of the project.
Prevalence across EU	How prevalent is the instrument in the EU? In which Member States does the instrument exist?
	Relevant for all EU member states, specifically brownfield sub-programs as found for example in Saxony, Germany.

EU Life	
Strategic objective	What is the objective(s) of the instrument? Please select among the following options: [.] Raising the city's revenues [X] City receiving external funding [] City receiving external finance
	 [] City sharing risks and benefits with the private developer [] City reducing the private developer's cost of financing [] City increasing the private developer's cash-flow
Type of instrument	 Please select among the following options: [] Planning instrument [x] Funding instrument [] Financial instrument [] Fiscal instrument
Category of brownfield	 For which category of brownfield site is this instrument most suitable? [] A sites (highly economically viable) [] B sites (on the borderline of economic viability) [x] C sites (not economically viable at this moment)
Functioning	How is the instrument set up? How does the instrument function? How can the city use the instrument? The LIFE programme is the EU's funding instrument for the environment and climate action. The objective is to improve the development, implementation and enforcement of EU environmental and climate policy and legislation, and act as a catalyst for, and promote, the mainstreaming of environmental and climate objectives into other policies and practices; Brownfield projects could be funded if the support the objectives e.g. improve the quality of the environment and reverse biodiversity loss e.g. by the development of green infrastructure.
Preconditions	 Which preconditions must be fulfilled for the instrument to function? These could be technical preconditions (e.g. regular land valorisation) or preconditions linked to ownership. The program funding is competitively tendered through the EU agency EASME, co-funding generally 50%.
Potential obstacles or risks	Which are potential obstacles or risks for the use of the instrument? Are there potential problems regarding EU rules on State aid? How could cities overcome these obstacles, risks or problems?

	Life funded brownfield site are excluded from future urban ("hard") after-uses, so the projects should be part of the local/regional climate adaption and biodiversity strategy. Also long term maintenance costs should be considered and responsibilities allocated e.g. to charitable organisations.
Strategic	Can this instrument be strategically combined with other instruments? With which instruments?
combination of	[X] Specific instrument(s):
instruments	Land trust for funding and implementation of biodiversity projects Crowdfunding instruments for co-funding and maintenance costs.
Link with nature-based solutions	What is the link with nature-based solutions? Nature based solutions could be integrated into the projects.
Prevalence across EU	How prevalent is the instrument in the EU? In which Member States does the instrument exist? Relevant for all EU member states.

Impact Investment Funds	
Strategic objective	What is the objective(s) of the instrument? Please select among the following options:
	 Raising the city's revenues [x] City receiving external funding [] City receiving external finance [] City sharing risks and benefits with the private developer [] City reducing the private developer's cost of financing [] City increasing the private developer's cash-flow
	Please select among the following options:
Type of instrument	 [] Planning instrument [X] Funding instrument [] Financial instrument [] Fiscal instrument
	For which category of brownfield site is this instrument most suitable?
Category of brownfield	 A sites (highly economically viable) B sites (on the borderline of economic viability) C sites (not economically viable at this moment)
	How is the instrument set up? How does the instrument function? How can the city use the instrument?
Functioning	Impact investments are provided by organisations supporting socially responsible investments which are not exclusively driven by profit, but also provide social and environmental benefits. They tend to take the form of a balanced investment portfolio over a range of projects.
	There are several innovative financial paths to support brownfield redevelopment. In order to choose the most appropriate option, all stakeholders need to understand the relationship between investment and the real estate market and establish formal and transparent partnerships.
Preconditions	Which preconditions must be fulfilled for the instrument to function? These could be technical preconditions (e.g. regular land valorisation) or preconditions linked to ownership.
	Individual requirements by each organisation require intensive project preparation and dialog.
Potential obstacles or risks	Which are potential obstacles or risks for the use of the instrument? Are there potential problems regarding EU rules on State aid? How could cities overcome these obstacles, risks or problems?

	Depending on each individual application in general high level of transparency.
Strategic combination of instruments	<i>Can this instrument be strategically combined with other instruments? With which instruments?</i>
	[X] Specific instrument(s):
	Crowdfunding for brownfield projects to mobilise civic involvement
	EU life program for environmental projects
	• PPP with investment funds organisations, e.g. Land Trust, England
Link with nature-based solutions	What is the link with nature-based solutions?
	The link to nature based solutions is an optional one which can be included in the project.
Prevalence across EU	How prevalent is the instrument in the EU? In which Member States does the instrument exist?
	Examples: Montag foundation, Deutsche Stiftung Umweltschutz (DBU, Land Trust)

Crowdfunding	
Strategic objective	 What is the objective(s) of the instrument? Please select among the following options: [] Raising the city's revenues [X] City receiving external funding [] City receiving external finance [] City sharing risks and benefits with the private developer [] City reducing the private developer's cost of financing [] City increasing the private developer's cash-flow
Type of instrument	 Please select among the following options: [] Planning instrument [X] Funding instrument [] Financial instrument [] Fiscal instrument
Category of brownfield	 For which category of brownfield site is this instrument most suitable? [] A sites (highly economically viable) [X] B sites (on the borderline of economic viability) [X] C sites (not economically viable at this moment)
Functioning	How is the instrument set up? How does the instrument function? How can the city use the instrument? Successful crowd funding is usually not aimed at the community, but a civic initiative. It requires the presentation of a convincing concept or project for brownfield revitalization with benefits e.g. for the community, health, environment and/or cultural heritage. Money is collected from a large number of people via online platforms. In the case of brownfield redevelopment, the most relevant types of crowd funding include: donation-based crowd funding, peer-to- peer lending, and rewards-based crowd funding.
Preconditions	Which preconditions must be fulfilled for the instrument to function? These could be technical preconditions (e.g. regular land valorisation) or preconditions linked to ownership. Besides a reliable project calculation, there is the need for a creditable financer and a communication strategy.
Potential obstacles or risks	Which are potential obstacles or risks for the use of the instrument? Are there potential problems regarding EU rules on State aid? How could cities overcome these obstacles, risks or problems?

	The large investments required for brownfields are usually not able to be gathered. In certain cases it is reasonable to split charitable project parts up and finance them via crowd funding.
Strategic combination of instruments	Can this instrument be strategically combined with other instruments? With which instruments? [X] Specific instrument(s): Impact investment funds as supporter of campaigns, PPP for project parts of public interest (e.g. culture space)
Link with nature-based solutions	What is the link with nature-based solutions? Source for nature conservation projects.
Prevalence across EU	How prevalent is the instrument in the EU? In which Member States does the instrument exist? Many examples of this measure exist in Europe: Platform: "Stadtmacher" in Berlin, Project examples: Centre for Arts and Urbanism, Berlin

Brownfiel	Brownfield tax- "Etablissement Public Foncier" Nord-Pas-de- Calais/France	
	What is the objective(s) of the instrument? Please select among the following options:	
Strategic	[] Raising the city's revenues[] City receiving external funding	
objective	[] City receiving external finance	
-	[X] City sharing risks and benefits with the private/public developer	
	[] City reducing the private developer's cost of financing	
	[] City increasing the private developer's cash-flow	
	Please select among the following options:	
- /	[] Planning instrument	
Type of instrument	[x] Funding instrument	
matument	[] Financial instrument	
	[] Fiscal instrument	
	For which category of brownfield site is this instrument most suitable?	
Category of	[] A sites (highly economically viable)	
brownfield	[X] B sites (on the borderline of economic viability)	
	[X] C sites (not economically viable at this moment)	
	How is the instrument set up? How does the instrument function? How can the city use the instrument?	
Functioning	The "Etablissement Public Foncier" (EPF) are public institutions of the French state under the autonomous national law and are specialised on the topic of brownfield land management. The decision-making body is the Board of Directors. Its composition is determined by the national decree and includes local and state representatives. EPFs are exclusively responsible for land-based interventions, predominantly on brownfields, but they are not in charge of urban development projects. The municipality proposes action based upon an urban development plan. EPF purchase brownfield site(s) and take over the site reclamation with staff and resources of the EPF (demolition, environmental remediation and landscaping). EPF typically resells the area after 5 years. There are currently 32 EPFs in France.	
Preconditions	Which preconditions must be fulfilled for the instrument to function? These could be technical preconditions (e.g. regular land valorisation) or preconditions linked to ownership.	

	Financing preconditions: In a start-up phase of 10 years the financing is ensured by a regional development-related tax. Furthermore, the EPF is funded by income from sales of land and buildings. Additional contributions come from the state, municipalities, departments, the European Regional Development Funds (ERDF) and the private sector.
	Which are potential obstacles or risks for the use of the instrument? Are there potential problems regarding EU rules on State aid? How could cities overcome these obstacles, risks or problems?
Potential obstacles or risks	The professionalization of planning, legal and technical steps (completed by about 20 people / 4 million inhabitants) is of great importance to the revitalization of brownfields. The EPF is responsible not only for land purchase and sales, but can be used for the management of currently privately owned or unclaimed land and buildings (on-site backup). To fulfil these tasks, EPF has specialized personal (real estate experts, lawyers, engineers and technicians), which could not be financed by a single municipality.
	Can this instrument be strategically combined with other instruments? With which instruments?
Strategic	[X] Specific instrument(s):
combination of instruments	 Strategic land asset management and state funding providing support for the land agency
	EU ERDF: examination if compatible required
Link with	What is the link with nature-based solutions?
nature-based solutions	Option to develop regional green infrastructure.
Prevalence	How prevalent is the instrument in the EU? In which Member States does the instrument exist?
across EU	Major brownfield development instrument in France.

Land Trust/England	
	What is the objective(s) of the instrument? Please select among the following options: [] Raising the city's revenues
Strategic objective	 [] City receiving external funding [] City receiving external finance [x] City sharing risks and benefits with the Public/private developer [] City reducing the private developer's cost of financing [] City increasing the private developer's cash-flow
Type of instrument	 Please select among the following options [X] Planning instrument [x] Funding instrument [] Financial instrument [] Fiscal instrument
Category of brownfield	 For which category of brownfield site is this instrument most suitable? [] A sites (highly economically viable) [] B sites (on the borderline of economic viability) [x] C sites (not economically viable at this moment)
Functioning	How is the instrument set up? How does the instrument function? How can the city use the instrument? The task of the Land Trust is to improve the environment and the quality of life in communities by providing long-term sustainable management of neglected public spaces. Their regional focuses are the old industrial areas and regions dominated by a shrinking population in England. The land trust acquires and cultivates brownfield or under-used land. It focuses on the environmental restoration, creation and cost effective management of green spaces in close consultation with the relevant authorities. Previous methods for turning brownfield land into public open space had not worked, despite significant sums of public (and private) investment in the restorations. With no organisation prepared to take on the long term ownership and management, restored land was quickly falling back into disrepair and becoming derelict. The Land Restoration Trust is an independent trust fund under the umbrella of a foundation. Partners are the Homes and Communities Agency, Groundwork (an association of charities giving voluntary mutual aid), the Forestry Commission and the British Environment Agency.

Preconditions	 Which preconditions must be fulfilled for the instrument to function? These could be technical preconditions (e.g. regular land valorisation) or preconditions linked to ownership. Financing preconditions: In addition to the ownership of the property, the Land Restoration Trust will receive a "compensation" for the burdens that the new owner takes over by the handing-off party. The compensation is added to the investment portfolio of the trust fund to ensure the permanent maintenance of the site. The former landowners are exempt from the responsibility of maintaining the land. The resources for investment in refurbishment and redevelopment of the area are ensured. Aside from the revenues derived from the foundation, additional funding can be acquired depending on local circumstance. This can be received from various sources: Service fee from residents / traders Commercial use of the site (e.g. golf course) Use of renewable energy generation (e.g. wind power) Lease revenue (e.g. agriculture) Other income (e.g. parking fees) Through its national presence and networking the trust facilitates the negotiations with (inactive) institutional owners concerning the sale of real estate. By bundling their know-how in the field of "green re-use", the trust has established itself as a resource for the community. The trust profited by this from the wide-spread
Potential obstacles or risks	voluntary services in England, for example in terms of foster partnerships. Which are potential obstacles or risks for the use of the instrument? Are there potential problems regarding EU rules on State aid? How could cities overcome these obstacles, risks or problems? Capital market orientation is currently problematic. The model highly depends on community engagement and motivation.
Strategic combination of instruments	Can this instrument be strategically combined with other instruments? With which instruments? [X] Specific instrument(s): "EU-life", "state funding" and "Crowdfunding" as co – financing instrument
Link with nature-based solutions	What is the link with nature-based solutions? The model is highly relevant for the development and maintenance of green infrastructure on brownfields.
Prevalence across EU	How prevalent is the instrument in the EU? In which Member States does the instrument exist? The Land Trust exists in England whereas different trust organisations partly engaged on the topic of brownfields do exist in other countries as well e.g. Sielmann Stiftung/Germany.

	Public-private partnership	
Strategic objective	 What is the objective(s) of the instrument? Please select among the following options: [] Raising the city's revenues [x] City receiving external funding [] City receiving external finance [x] City sharing risks and benefits with the private developer [x] City reducing the private developer's cost of financing [x] City increasing the private developer's cash-flow 	
Type of instrument	Please select among the following options: [] Planning instrument [x] Funding instrument [x] Financial instrument [] Fiscal instrument	
Category of brownfield	For which category of brownfield site is this instrument most suitable? [] A sites (highly economically viable) [x] B sites (on the borderline of economic viability) [] C sites (not economically viable at this moment)	
Functioning	How is the instrument set up? How does the instrument function? How can the city use the instrument? The local government transfers responsibility (and thus risks) for a combination of brownfield redevelopment phases, including but not limited to the design, construction, financing or operation to a private sector partner who then delivers the service either to the government itself or directly to the end users. For type B brownfield projects PPP models are adequate options for development. Based on a contract between the local government and a private sector partner objectives (e.g. concerning environmental remediation), the delivery of a specific service and the supply of a dedicated infrastructure asset or social housing could be provided. Optional land owners could actively participate as project partner.	
Preconditions	 Which preconditions must be fulfilled for the instrument to function? These could be technical preconditions (e.g. regular land valorisation) or preconditions linked to ownership. To be effective, a PPP needs formal arrangements between partners and a clear identification of roles and responsibilities. In particular, close co-operation among the different partners - authorities, private actors, local residents - plays a key role in the success of a project. 	

	In the case of brownfield redevelopment, the most relevant PPP models involve financing from a private sector partner who can recover the costs either through public subsidies or from user charges (under a concession agreement). One example is the design-build-finance-operate (DBFO) contract under which the private sector designs, builds, finances and operates the infrastructure asset. Under the DBFO contract, the private sector partner generally owns the infrastructure asset for the contract period, after which the ownership reverts to the government. There are also PPP models under which a private sector partner, instead of designing and building, buys (e.g. a buy-build-operate, BBO contract) or leases (e.g. a lease-develop- operate, LDO contract) an existing infrastructure asset from the government, renovates and/or develops it, and then operates it.
Potential obstacles or risks	 Which are potential obstacles or risks for the use of the instrument? Are there potential problems regarding EU rules on State aid? How could cities overcome these obstacles, risks or problems? PPP models are frequently criticised for giving too high of benefits to the private sector and neglecting public interests and needs. Even clearer publicly driven development goals and planning based on integrated urban development strategies is needed. Internal and external financial controls and transparency is also urgently required. Agreements and contracts need to be compatible to European state aid law. Municipalities should include a "Salvotorische Klauses" in case of noncompatibility.
Strategic combination of instruments	Can this instrument be strategically combined with other instruments? With which instruments? [X] Specific instrument(s): Land value tax, developer fee, betterment contributions: in relation to after-use options [X] All instruments: PPP: is one key element in the "fine-tuning" of financial instruments for brownfield revitalisation
Link with nature-based solutions	What is the link with nature-based solutions? Agreement on the use of nature based solutions could be part of negotiations and contracts.
Prevalence across EU	How prevalent is the instrument in the EU? In which Member States does the instrument exist? The instrument is in use with different profiles in the European states within private partners but also significantly with "semi – private" partners or agencies such as Societees d'economie mixed in France, AGORA project in LX.

	Loan guarantee and guarantee fund
Strategic objective	 What is the objective(s) of the instrument? Please select among the following options: [x] Raising the city's revenues [] City receiving external funding [] City receiving external finance [] City sharing risks and benefits with the private developer [X] City reducing the private developer's cost of financing [X] City increasing the private developer's cash-flow
Type of instrument	Please select among the following options: [] Planning instrument [] Funding instrument [X] Financial instrument [] Fiscal instrument
Category of brownfield	 For which category of brownfield site is this instrument most suitable? [] A sites (highly economically viable) [x] B sites (on the borderline of economic viability) [] C sites (not economically viable at this moment)
Functioning	 How is the instrument set up? How does the instrument function? How can the city use the instrument? Liability issues can also make it difficult for a private brownfield developer to secure funding from the private market, as financial institutions are often afraid to deal with the liability should a developer default on a loan. In this case a guarantee by a local government can assume the debt obligation of a developer in the case of default. The loan guarantee can be backed by a guarantee fund. A default guarantee for a private institution in public ownership (municipal development company) is also possible for brownfield development.
Preconditions	Which preconditions must be fulfilled for the instrument to function? These could be technical preconditions (e.g. regular land valorisation) or preconditions linked to ownership.
Potential obstacles or risks	Which are potential obstacles or risks for the use of the instrument? Are there potential problems regarding EU rules on State aid? How could cities overcome these obstacles, risks or problems?

	Guarantees for private partners must be derived from a public interest (environmental restoration, urban and social regeneration) and are subject to European state aid law.
Strategic combination of instruments	Can this instrument be strategically combined with other instruments? With which instruments? [X] Specific instrument(s): EIB grants as complementary instrument
Link with nature-based solutions	/
Prevalence across EU	How prevalent is the instrument in the EU? In which Member States does the instrument exist? They are not often implemented due to the restrictions set on state aid. (Practical examples???)

	Development fee waiver, reduction or refund
	What is the objective(s) of the instrument? Please select among the following options:
Strategic objective	 [X] Raising the city's revenues [] City receiving external funding [] City receiving external finance [] City sharing risks and benefits with the private developer [] City reducing the private developer's cost of financing [] City increasing the private developer's cash-flow
	Please select among the following options:
Type of instrument	 [X] Planning instrument [] Funding instrument [] Financial instrument [] Fiscal instrument
	For which category of brownfield site is this instrument most suitable?
Category of brownfield	 [X] A sites (highly economically viable) [] B sites (on the borderline of economic viability) [] C sites (not economically viable at this moment)
	How is the instrument set up? How does the instrument function? How can the city use the instrument?
Functioning	Fee-waiver policies waive, reduce or refund fees and charges associated with the applications for planning or building permits for a project. These could be part a "letter of understanding" to support public objectives with a brownfield project. The instrument is specifically important to assist not-for-profit community based organisations with the delivery of their projects, activities or services that provide a community benefit and which align with local policies, strategies and activities.
Preconditions	Which preconditions must be fulfilled for the instrument to function? These could be technical preconditions (e.g. regular land valorisation) or preconditions linked to ownership.
	The main prerequisite of this instrument is to establish a consistent, equitable and transparent approach for the consideration of requests for the waiving, reducing or refunding of planning or building application fees and charges.
Potential obstacles or risks	Which are potential obstacles or risks for the use of the instrument? Are there potential problems regarding EU rules on State aid? How could cities overcome these obstacles, risks or problems?

	Potential risks are the conflict of interests, e.g. by personal, commercial or family circumstances.
	Can this instrument be strategically combined with other instruments? With which instruments?
Strategic combination of	[X] Specific instrument(s):
instruments	Land Trust: for project support,
	Crowdfunding: to support charity initiatives on brownfields,
	Impact investment funds: can be engaged in this context
Link with	What is the link with nature-based solutions?
nature-based solutions	Indirect instrument to support green infrastructure development.
Prevalence across EU	How prevalent is the instrument in the EU? In which Member States does the instrument exist?
	Application depends on the specific local legal and political framework and the political will to find flexible solutions e.g. also in informal planning and community involvement activities.

Loan and revolving loan fund A fund financing projects through low-interest (or even no-interest) loans, and using the interest and principal payments on old loans to issue new ones. The local government would provide the initial seed capital.	
Strategic objective	 What is the objective(s) of the instrument? Please select among the following options: [] Raising the city's revenues [] City receiving external funding [x] City receiving external finance [] City sharing risks and benefits with the private developer [x] City reducing the private developer's cost of financing [] City increasing the private developer's cash-flow
Type of instrument	 Please select among the following options: [X] Planning instrument [] Funding instrument [] Financial instrument [] Fiscal instrument
Category of brownfield	 For which category of brownfield site is this instrument most suitable? [X] A sites (highly economically viable) [] B sites (on the borderline of economic viability) [] C sites (not economically viable at this moment)
Functioning	How is the instrument set up? How does the instrument function? How can the city use the instrument? A fund financing projects through low-interest (or even no-interest) loans, and using the interest and principal payments on old loans to issue new ones. The local government would provide the initial seed capital.
Preconditions	 Which preconditions must be fulfilled for the instrument to function? These could be technical preconditions (e.g. regular land valorisation) or preconditions linked to ownership. The portfolio of brownfields needs to include A and B sites in order to balance the portfolio.
Potential obstacles or risks	Which are potential obstacles or risks for the use of the instrument? Are there potential problems regarding EU rules on State aid? How could cities overcome these obstacles, risks or problems?

	Administrative fees by financial institutions need to be covered. Funds with the sole purpose of achieving credit dividends are, in the current context of low interest rates, of little relevance.
Strategic combination of instruments	Can this instrument be strategically combined with other instruments? With which instruments?
	 [X] Specific instrument(s): [Instrument A] [Instrument B] Please explain. [Instrument A] [Instrument C] Please explain.
	[] All instruments: [Instrument A] [all instruments] Please explain.
Link with	What is the link with nature-based solutions?
nature-based solutions	Potential funding element e.g. for the transformation of technical infrastructure refunded by user fees
Prevalence across EU	How prevalent is the instrument in the EU? In which Member States does the instrument exist?
	Integrated, sustainable urban renewal projects are supported through JESSICA (Joint European Support for Sustainable Investment in City Areas). A range of sophisticated financial tools are used including equity investments, loans and guarantees, offering new opportunities for the use of EU Structural Funds. The first application of funds under the JESSICA initiative of the EU have started in Poland.