



Action Plan for the Regional Landscapes Antwerp a six "stars" project *******







Part I - General Information

Project: RFC - Recapture the Fortress Cities

Partner organisation(s) concerned: Regional Landscapes Antwerp (represented by RL de Voorkempen)

Country: Belgium

NUTS2 region: Antwerp

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Part II - Policy Context

The Action Plan aims to impact:

Investment for Growth and Jobs programme

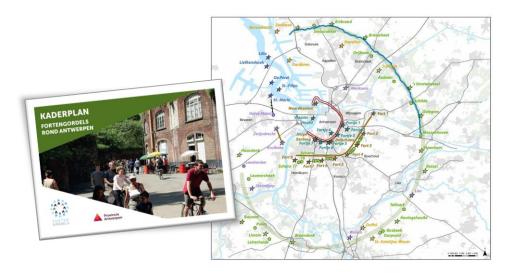
European Territorial Cooperation programme

X Other regional development policy instrument

Name of the policy instrument(s) addressed: Service Area Oriented policy - Province of Antwerp

Further details on the policy context and the way the Action Plan should contribute to improve the policy instrument:

The Service Area Oriented policy was approved in 2015 by the Province of Antwerp. Being a regional policy document, it set out the future perspectives and ambitions. It did not go into the details. This Action Plan will provide for more detailed strategies and actions, focussing on the mission of the Recapture the Fortress Cities project: the sustainable revitalisation of heritage buildings by improving the coexistence of fortified cities and neighbouring forts in urban regions.



www.fortengordels.be

Part III - The Project's Background, overview results of Phase 1 of the RFC project

Cooperation before the RFC project

There was hardly any active regional cooperation on fortress cities left when the RFC project started. The policy instrument (Province of Antwerp Service Area Oriented policy) didn't provide for this cooperation.

The local situation was (and still is) different in each city:

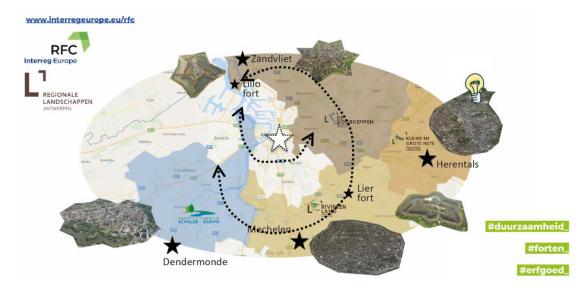
- Antwerp: good awareness of historic value for Fortress Lillo by historic department and also on policy level, because masterplan project, minimal knowledge on Fortress City history in Zandvliet
- Mechelen: almost no awareness of historic value of former fortress wall only 1 (out of 12) gates remained
- Herentals: basic / good awareness of historic value of fortress Lier also on policy level
- Lier: basic / good awareness of historic value of fortress city also on policy level
- Dendermonde: basic / good awareness of historic value of fortress city also on policy level

Cooperation during Phase 1

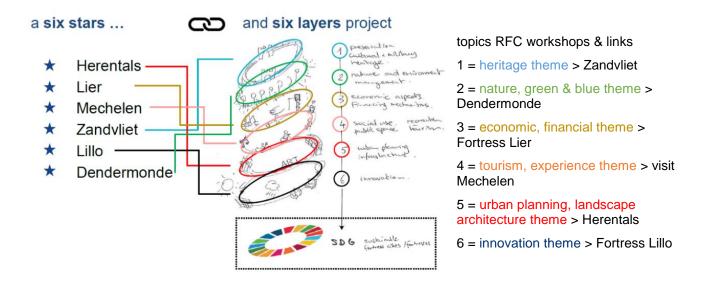
A good cooperation was created between the four Regional Landscapes, the fortress cities, and fortresses involved in the RFC project as direct stakeholder and partner – with in total six sites in the Antwerp region.

- Involvement of stakeholders in European Study Visits and technical Workshops, in expert contribution Ewald Wauters on theme Green & Blue, Tim Electeur PMV on theme of Financing and Piet Lombaerde on theme of Urban Planning and landscape architecture.
- The local/regional consultation with stakeholders. With an emphasis on policy change.
- Starting note, project definition and partnership agreements in the five cities, except visit Mechelen all RFC projects were approved by city government to cooperate
- Many local meetings with city government representatives, civil servants and heritage experts
- All cities will host one Regional Stakeholder Meeting linked with the 6 RFC topics.
- All cities can join Study Visits and Technical Workshops also linked with the 6 RFC topics.
- This involvement of all partners has been a good leverage as the knowledge exchange and widening of the scope on fortress cities and fortresses brings new insights and policy changes.

Regional activity, set up of cooperation between different fortress cities and fortresses within the four Antwerp Regional Landscapes: activities linked with Regional Stakeholder Meetings preparation & organisation, also activities linked with Fortengordels as existing policy for regional fortress cooperation (fortress cities not included, and Fortengordels changing context and its inactivity since 2019 while RFC's project start and approval).



Local activities support in expertise and knowledge: six RFC topics (layers) as guideline and approach for the six sites (stars) – as each site / star will host a Regional Stakeholder Meeting on a specific topic – in this way also local input and focus will be part of the total regional approach.



Overview local activities

- Local Meetings: in cities Antwerp, Lier, Herentals, Mechelen and Dendermonde with government, civil servants and heritage experts > continuous since 2019
- Interreg results: Fortengordels GP approval, Fortengordels Peer Review on 16 & 17/11/2021, Pilot Action Virtuafort in Lillo
- Info Days: Fortress Lier weekend on Open Heritage Day 11 & 12/9/21 and Fortress summer in 2022, Dendermonde Open Heritage Day in September 2020, Herentals geotourist app 2020, Zandvliet info day and activities preparation planned in 2022
- Other activities: follow-up Spatial Implementation Plan Zandvliet, follow-up masterplan Fortress Lillo, expert/jury in Flemish Architect design competition in Dendermonde, Dendermonde and Magdeburg meeting and exchange on barracks in 2020, cycling tour fortress city of Dendermonde (2020) and development of cycling tour fortress city Mechelen and implementation by city guides (2021-2022)
- Future plans: Herentals historic research and spatial tool preparation, Fortress Lier masterplan preparation
- Funding: Blue Deal action on Kroonwerk project in Herentals on water infiltration and re-connection in historic fortress ramparts and ditches (policy change progress report sem 2).

Overview regional activities

5 RSM Regional Stakeholder Meetings – linked with the 6 RFC topics:

20/01/2021 RSM Dendermonde on green & blue theme

22/06/2021 RSM Fortress Lier on financing & vision

27/01/2022 RSM Mechelen on tourism & experience

15/03/2022 RSM Herentals on urban planning & landscape architecture

Spring/summer '22 RSM Antwerp Fortress Lillo / Zandvliet (planned)

European Meetings: Partners visited Antwerp in November 2019: technical workshop, study visits and panel discussion in Antwerp (Lillo and Zandvliet) on 1st day and in Herentals on 2nd day. Official kick-off RFC project. Other Partner Meetings followed online (Magdeburg, Terezin, Komotini, Teruel), except hybride meeting in Cluj-Napoca in October 2021. Last SV in Presov will follow in March 2022 (online).

Conclusion Phase 1

The Recapture the Fortress Cities project has been of great importance to activate many different stakeholders. During the local and regional meetings, a large number of project ideas has been developed. With the Pilot Action Virtuafort we were given the opportunity to develop one of those ideas. We managed to achieve 1 policy change during Phase 1. And last, but not least, the Peer Review that was held in November 2021 resulted in an extensive 'to-do-list'.

Together with our Regional Stakeholders we shortlisted the following projects for the Action Plan:

- 1. Long term stakeholder organisation on regional scale: Fortengordels
- 2. Financing possibilities: Fortengordels
- 3. Digitalisation of historic maps of Herentals in GIS
- 4. Full study assignment for the spatial master plan 'Dendermonde fortress belt' with participation
- 5. Renovation plan, study and estimate for Fortress Lier
- 6. Memorial 400 years Zandvliet fortress city
- 7. Fortress Lillo Serious Game
- 8. Mechelen VR/AR project
- 9. Assignment vision & concept fortress city Herentals

JS recommended to limit the number of actions to be included in the Action Plan. Nevertheless, we will continue to develop all 9 projects, but for those not part of the Action Plan we can take some more time.

Summary Matrix of the Actions

#	Name of the Action	Timeframe		Coordinator	Stakeholders	Cost	
		Start date	End date		Cianoni Cia	3331	
1	Action 1 Serious Game Lillo follow-up of the Pilot Action	01/08/2022	31/05/2023	Regional Landscapes Antwerp	Fortress Lillo	Costs for project preparation covered by tool developer, minimal staff costs RL € 75.000 funding by VAF	
2	Action 2 Cooperation Fortress Belts follow-up of the Peer Review	01/08/2022	31/05/2023	Regional Landscapes Antwerp	Fortress owners Six heritage cells City of Antwerp Simon Stevin Foundation Fortress Belts association	General follow-up, included in staff costs RL € 300.000 funding specific project on culture (heritage cells)	
3	Action 3 Blue Deal Herenthals follow-up of the achieved policy change	01/08/2022	31/05/2023	Regional Landscapes Antwerp	Municipality Herentals Heritage organisation	General follow-up, included in staff costs RL € 250.000 funding by Flemish Government	

Part IV - Details of the Actions Envisaged

ACTION 1

Name of the Action: Serious Game Lillo - follow-up of the Pilot Action

1. Relevance to the project

The Covid situation slowed everything down and therefore inspiration was needed how to overcome this difficult situation. It soon became clear that virtual technology can guarantee the public access: videos, 360 drone images, street view, virtual and augmented reality ... elements that perfectly fit in the innovation research and sustainability approach of the RFC project (innovation as sixth topic thematic workshops). Secondly, from the start of the RFC project in 2019 PP2-RLDV was already considering Lillo Fortress as a good testing area for innovative projects, this is also written and described in the RFC project definition / starting note and agreed in the RFC partnership agreements with the local cities and governments. Therefore, we received funding during Phase 1 to develop the Pilot Action Virtuafort (virtual technology for resilient fortification heritage). The Pilot Action is dedicated to testing new innovative and digital technology of Virtual Reality (VR) in fortifications in the Antwerp region – as a useful tool for a durable preservation and accessibility of military heritage sites. 3 Policy instruments are addressed with this Pilot Action:

- Framework Plan Fortress Belts (Kaderplan Fortengordels): Province of Antwerp and Service Area Oriented Design
- Lillo Fortress Masterplan: local and more detailed plan for a new future and redesign of the Fortress Lillo (and RUP Spatial Development Plan as legal translation destinations)
- Sigmaplan: Flemish Waterway strategic Flemish project on climate change and the raising of the sea levels

2. Nature of the action

Concept: The testing consists in the development of Virtual Reality (VR) in fortifications as a durable way of restoration and preservation of military heritage.

The Lillo Fortress will be transformed as an important touristic gate with total restauration and new public space in combination with higher dikes as protection against flooding. These plans have already undergone a difficult process for 10 years as some functions have to be relocated (marina, car parking) that influence the nature area around the Fortress.

A digital application will make the plans virtual experienceable in real time so policy makers, designers and residents can get acquainted and get the opportunity to think about the future design of Lillo in an interactive way. Also, from a tourist point of view the application will play an important role to receive the increasing number of visitors, who arrive in large groups every half hour via the Waterbus. The virtual tool offers possibilities for a decent reception, and it will probably become a top tourist experience.

The pilot action describes a prototype with Time Machine functions and allows to provide different target groups with a visualization of the past, present and future of fortresses as this will be tested in Lillo Fortress.

Virtual technology makes it possible to bring atmosphere to 3D in otherwise sterile 3D visualizations. Think of a number of powerful optimization techniques that allow a number of virtual phases to be visualized in real-time and animated with extensive visual effects such as wind, shadows, reflection on water, weather system and day-night cycle.

Responding to the policy plan and the innovative waterline, special attention will go to the water aspect in the project as in the context of the Sigmaplan it is the aim to clearly visualize and substantiate the proposed measures in an interactive way for example by visualizing the new and higher dikes and important infrastructural interventions such as lock gates, ramps ... interventions that will have a certain impact on the fortress and the protected heritage site. The tool will make a visualisation of

virtual flooding possible, and the water aspect will be visualised in the virtual reconstruction of the fortress – also the former and recovered bastions and ramparts can be filled again with water of the river Scheldt.

Different types of devices will be tested during the pilot action. The prototype only requires a good PC, a video-projector, projection screen and a games controller to do interactive presentations for a group of people, this is a minimal investment. Besides that the prototype will also be used on smartphone and tablet (with or without guide) and on a VR headset for individual use. The prototype and virtual reconstruction will also be shown online as a normal video or 360° video. In this way testing and evaluation can be made which medium or device is suitable for which use.

The serious game will implement the basic tool as developed by the Virtuafort prototype – and develop an educative and historical game that can be played online and onsite. The project will add virtual characters and extensive story lines on the life inside Lillo Fortress such as transportation and harbour activities, military life and soldiers, illness and the black plague... This serious game takes place in an indoor location (eg the church) and is suitable for group use.



3. Players / stakeholders involved

Visual Dimension (VisDim) - Daniel Pletinckx: technical and conceptual support and VR tool developer City Antwerp – owner of the site represented by Frederick Bruneel: coordinator masterplan Fortress Lillo and Karen Minsaer: head of heritage department, will provide all information,

University of Antwerp: will research on relevant historical data and share knowledge by linking this pilot project to the broader Time Machine movement and digitalisation – this new cooperation will open a wide range of opportunities to present the project.

Simon Stevin Foundation: expertise center on fortifications

Poldermuseum: local historical museum

Kruitmagazijn - Kris Dockx: theater and local entrepreneur

4. Timeframe

The original Pilot Action will be finalized in July 2022.

Given the positive reactions, alle stakeholders are eager to continue this project, on the one hand usefull for guides and virtual tours and on the other hand by individuals and small groups. Therefore additional funding needs to be found.

The ambition is to apply for a grant from the Flemish Audio-Visual Fund (Vlaams Audiovisueel Fonds) and receive funding before the end of 2022. By then only 7 months of Phase 2 will remain, that is not enough to complete the Serious Game that will be developed. A rough estimation is that it will be finished by the end of 2023.

5. Costs

The estimated costs for project preparation are covered by the VR tool developer Visual Dimension, follow-up of the project require minimal staff costs from Regional Landscape (aprox. € 2.500) Also input and costs from University of Antwerp are expected to be minimal (aprox. € 2.500) as most research is done within the Virtuafort project, the Virtuafort consortium and team will remain. These costs can be recovered through funding by VAF € 75.000

6. Indicative funding sources

The VAF provides funding of € 75.000

Additional Information

First pitch for VAF funding by Visual Dimension (in Dutch, set English subtitles in settings) https://www.youtube.com/watch?v=8X4epJAg-hA

ACTION 2

Name of the Action: Cooperation Fortress Belts – follow-up of the Peer Review

1. Relevance to the project

This Action derives from the Policy Learning Platform Peer Review that was held in November 2021: *Reviving the network of fortress belts.*

Antwerp is a city in the Flemish region of Belgium. It is the capital of the Province of Antwerp and the district of the same name. The city is at the centre of and the reason for the fortification heritage that surrounds it, dating between the 9th - 20th century. The stronghold of Antwerp is one of the largest military structures in Europe, including more than 30 sites spread out over three provinces: a medieval castle near the river, walls, quays, fortresses, sconces, inundation fields, ramps, bunkers, ditches and dikes.

Policy-wise, the province of Antwerp took the lead on a regional level in 2009-2019 with an Area Oriented Strategic Project called the 'Fortress Belts' of Antwerp. In this period, a policy instrument addressed as the 'Framework Plan of the Fortress Belts of Antwerp' (2015) was developed in collaboration with local, regional and (inter)national stakeholders and partners. Projects and actions on different levels were embedded in this framework and when relevant, subject of European and Flemish funding programs (Interreg projects 'Forts and Lines', 'At Fort', 'Great War', 'Murailles et Jardins' and several Natura 2000 and LIFE projects). The purpose of the framework consisted of an analysis of the existing situation, developing a global vision on different scales, listing possible actions and introducing a consultation structure to create broad support.

The province of Antwerp ended its coordination of the Fortress Belts in 2019 but various partners wish to continue the network and brand. This 'Fortress Community' of stakeholders (fortress owners, municipalities and organisations), has taken the initiative to support the former cooperation of the network, its website and annual event. The City of Antwerp, which is at the historic centre of the Fortress Belts stronghold since the 9th century, has over the last 20 years increasingly focused on improving the policy on military heritage. As such, the City is an important partner in shaping this transition together with all stakeholders. The city of Antwerp has hosted this peer review to help reinvigorate the new Fortress Belt organisation and to gain helpful insights from experts in the field of military heritage and tourism in identifying potential opportunities and pitfalls.

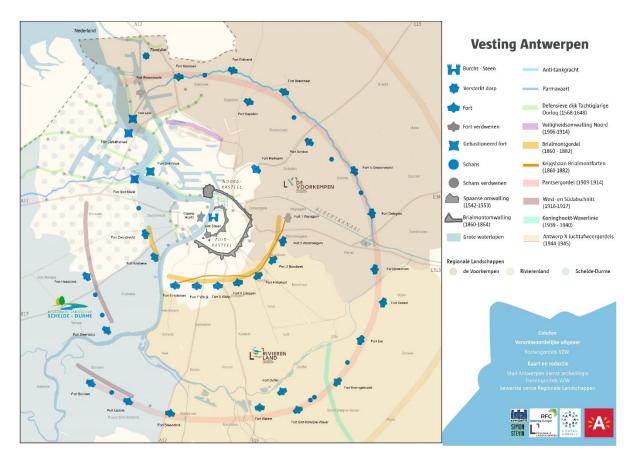
Specification of the policy challenge encountered

Fortengordels (Fortress Belts) was an effective operational structure during the period 2010-2019, under the leadership and coordination of the Province of Antwerp and with support of the Flemish government and European funding. During the period Fortengordels was active, it booked good results concerning –among other things- strong common branding, an informative website, an annual event,... However, in 2019 the province of Antwerp discontinued its support for the organisation, thus creating the need for a new regional policy framework. The period of 2019-2020 was a transition period which saw the Fortress Community itself take the initiative to restart the cooperation between the many fortresses. This led to the founding of the new Fortengordels (NPO Non-Profit Organisation). For a smooth relaunch of the Fortengordels, the Fortengordels community wants to learn from the experience of experts and of other defence lines in Europe, hence the Peer Review was initiated.

2. Nature of the action

The Peer Review resulted in an extensive list of recommendations. Only the short term – recommendations can be executed during Phase 2 of the RFC project.

'Task force Fortengordels': the set-up of a stakeholder platform has been ongoing since the take-over of the Fortengordels project from the Province of Antwerp by a private conglomerate consisting of EFFORTS, Simon Stevin VVC and BLWRK, with the support of Regional Landscapes. These organisations continue to work on a voluntary basis to do the minimum that is required, keep this platform going and with it also the interest in joint communication, for example on summer events. Currently this task force is at its lowest level of activity. However, with the Peer Review results in hand, Regional Landscapes and EFFORTS (European Federation of Fortified Sites) are working project-wise together for the strengthening of the Fortengordels and their community.



Mapping of the stakeholders: on the basis of an existing mapping exercise by the Fortengordels Association, a new mapping effort will be done in the spring or start of the summer 2022 from within the organisation of Regional Landscapes in its Recapture the Fortress Cities regional stakeholders meeting with and in the City of Antwerp. This will be well prepared and organised as a co-creation session as starting point for a new project and common dream. This final Regional Stakeholders Meeting of the RFC project hosted by the city of Antwerp will be a stimulus for reviving the network.

Funding structure - preparation: Regional Landscapes, together with EFFORTS and other stakeholders continue searching good funding opportunities for the reviving of the network. Currently there are two funding opportunities where a project idea is under construction. Most important is to have funding to cover costs for a stable team as a starting point for the full project cooperation:

3. Players / stakeholders involved

Creation of a stakeholder platform: EFFORTS, Simon Stevin Foundation and BLWRK, with the support of Regional Landscapes.

Mapping of the stakeholders: Fortengordels Association, Regional Landscapes, City of Antwerp. Funding structure: Regional Landscapes, EFFORTS

4. Timeframe

August 2022 - May 2023

5. Costs

General follow-up is included in staff costs from Regional Landscapes. First funding is in preparation € 300.000 for a common project on culture (heritage cells).

6. Indicative funding sources

The action will be financed through a mix of funding and resources. On the one hand from the public bodies and fortress owners through staff input and membership, on the other hand through external funding (local, province, region, national, europe)

Additional Information

Peer Review information

https://www.interregeurope.eu/find-policy-solutions/expert-support-reports/reviving-the-network-of-fortress-belts-in-antwerp-policy-recommendations

ACTION 3

Name of the Action: Blue Deal Herentals – follow-up of the achieved policy change

1. Relevance to the project

This Action derives from an achieved policy change (reported in semester 2): A Blue Deal action on Kroonwerk project in Herentals – on water infiltration and re-connection in historic fortress ramparts and ditches.

Inspiration for the project in Herentals has been found in 2 Good Practices:

Singelpark image quality plan and citizen participation (The Netherlands, Leiden): The image quality plan (IQP) could be a specific tool to implement the vision of the fortress structures in cities into various ongoing projects. The approach of Leiden is also good to gain support and movement around the city wall. Not only on a social level, but also financially. Also, introduction of the bridges could also be a good solution for some parts to make connection between isolated parts of city walls. The Leiden approach is also a good inspiration how to set up a global vision and with the added advantage of the role the fortress can play in the field of city marketing.

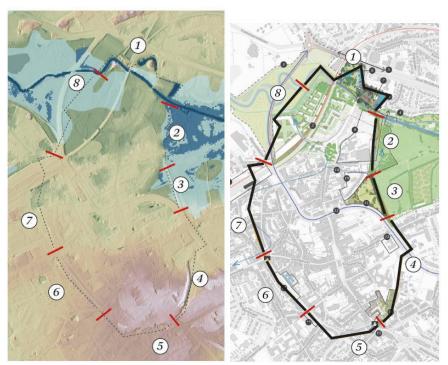
Fortress Advisory Board (Germany, Sachsen-Anhalt): Decision making concerning the fortifications of the town is more soundly based and conflicts can be avoided. Necessary compromises become more balanced. The fortress advisory board has increased acceptance among the population.

2. Nature of the action

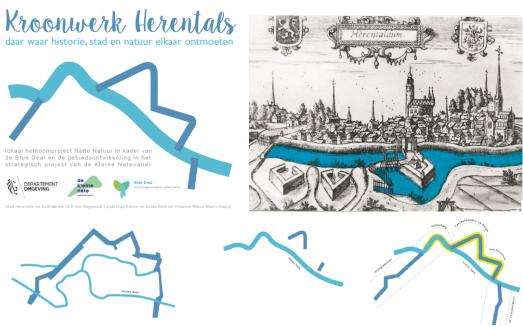
The Blue Deal 'Kroonwerk' will be first realisation (see nr 1 map below) as recapturing of the fortress city Herentals. The project combines several tasks in one integrated project in which a net amount of approx. 1 ha of new wetlands is being developed: strengthening ecological connectivity, creating new wetlands, restoring water-carrying and storing old meanders, restoring valuable heritage elements and increasing the spatial quality of public space.

Other linked action are:

- installation of a Fortress Advisory Board with minimal investment
- Digitalisation of historical maps in GIS
- assignment vision & concept project on the fortress city Herentals



Herentals: basic design concepts,- in total 8 project zones - nr.1 = Kroonwerk 'Blue Deal'



Blue Deal Kroonwerk as first incentive in recapturing the fortress city Herentals

3. Players / stakeholders involved

Municipality Herentals, Regional Landscapes, heritage organisation

4. Timeframe

August 2022 - May 2023

5. Costs

General follow-up of achieved policy change is included in staff costs from Regional Landscapes. The Blue Deal funding € 250.000 for hydraulic study and investment projects for water works, planting, excavations and re-connection of water structures.

6. Indicative funding sources

The action will be financed through Blue Deal funding and cofinancing by Municipality Herentals. Linked actions such as the installation of the Fortress Advisory Board, digitalisation of historic maps and assignment of the project vision & concept on the fortress city are financed by Municipality Herentals.

Additional Information

Flemish Government funding of Blue Deal projects - communication (Dutch text) https://omgeving.vlaanderen.be/blue-deal-lokale-hefboomprojecten-gebiedsontwikkeling-met-focus-op-natte-natuur

1. Result Indicators

Name of the Indicator		Action 1	Action 2	Action 3
Indicator 1	User valuation of the VR device (minimum 7/10)			
Indicator 2	Number of funding opportunities enclosed >3		Х	
Indicator 3	Number of stakeholders engaged for future cooperation >6		Х	
Indicator 4	Installation 1 advisory board			Х
Indicator 5	1 assignment vision & concept fortress city Herentals			Х

2. Risk Assessment

#	Risk Classification	Risk Description	Impact Severity (1-5)	Risk Probability (1-5)	Risk Score (Impact x Probability)	Contingency Plan	Responsible
1	External Risk	COVID19 lockdown	4	1	4	-	National Government
2	External Risk	Changes in political relations	2	2	4	Focus on mediaton	Regional Landscapes
3	Project Execution Risk	Interruption in funding	5	1	5	Extra co-funding from regional/local budget	All stakeholders
4	Stakeholder Risk Inability to integrate cooperation between stakeholders from different sectors		2	2	4	Co-management and shared responsibilities	All stakeholders
5	Regulatory Risk	Non-inclusion of the sustainable use of cultural heritage in tourism/urban development objectives in strategic documents	2	1	2	Long term Heritage policy plan	Regional Landscapes and other (local) authorities

3. Impacts

#	Name of the Action	Policy Instrument	Self-defined performace (result) indicator	Impact (on society and/or policy)	
1	Serious Game Lillo	- Framework Plan Fortress Belts (Kaderplan Fortengordels): Province of Antwerp and Service Area Oriented Design - Lillo Fortress Masterplan: local and more detailed plan for a new future and redesign of the Fortress Lillo (and RUP - Spatial Development Plan as legal translation destinations) - Sigmaplan: Flemish Waterway - strategic Flemish project on climate change and raising of the sea levels	User valuation of the VR device (minimum 7/10)	Better understanding of the different layers of history, increased comprehension of spatial development, new touristic product providing better accessibility, story and branding	
2	Cooperation Fortress Belts	- Framework Plan Fortress Belts (Kaderplan Fortengordels): Province of Antwerp and Service Area Oriented Design	Number of funding opportunities enclosed >3 Number of stakeholders engaged for future cooperation >6	First steps to re-establish a long-term cooperation and engagement of stakeholders, including structural funding for the safeguarding, development, and exploitation of the fortified heritage in a network.	
3	- Blue Deal Herentals: Flemish Government and Municipality Herentals		Installation 1 advisory board 1 assignment vision & concept fortress city Herentals	Blue Deal as first incentive and action. Image quality plan is a new method to help both the inhabitants and the politicians to better understand the plans fo the fortress city Herenthals. The advisory board will see to a fair decision making procedure.	

Date:	_
Signature:	
Stamp of the organisation (if available):	