

# Workplan for the inclusive process

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**Application of the inclusive process of Cloud to Coast to the case of  
Dordrecht, the Netherlands**

March 2021

## Report Information

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# 1. Introduction

## 1.1. About the workplan and VWI journey

The EU Interreg NSR project C5A enables greater integration and innovation in the adaptation to the impacts of flooding taking into account climate change. To achieve this C5A develops an approach that promotes the adoption of a whole-system and long-term perspective to climate change adaptation that is purposeful, collaborative and builds on the principles of social justice, ecosystem health and resilience. This approach is called Cloud-to-Coast (C2C) adaptation.

The C5A project is exploring and developing the basis of this new C2C approach through a combination of knowledge exchange and case studies. The early concepts underlying this approach are laid down in a concept note, developed by the Science Team. This concept note draws from the collective experience of 7 founding EU Interreg NSR projects and a literature review. The approach will be tested and validated in 7 case studies, throughout the partnering countries. The cases are divided into 2 batches: a building batch and a testing batch.

Dordrecht is part of the building batch. As such, it helps to build the C2C approach by reflecting on the own processes and exploring opportunities that C2C offers. Rijkswaterstaat is the lead for this case study, and collaborates with the City of Dordrecht and the IABR. Experts from these and other organisations participated in a workshop series to develop a future vision for ‘De Staart’ together.

The future vision has been created from the perspective of policy makers, spatial planners and other experts. This vision now has to be communicated and further developed with inhabitants, businesses and local stakeholders. The challenge to activate these actors is complex, as the future vision concerns a systemic change. That is, a shift in approach from flood protection to flood resilience and a change in mindset to bring key actors on board for a scenario which may seem statistically improbable but which is increasing in likelihood with climate change.

This workplan describes the activities to deliver the inclusive process of C2C in Dordrecht. This involves a stakeholder strategy with the goal: “How are we going to accomplish the desired change within the public and the private stakeholders, taking into account the vision for ‘De Staart’ and the planned events for the year 2021?”.

The activities in this workplan are part of the development of the Journey ‘The Ark of Dordrecht’ as an international attractive example of **systemic change** of how water is valued and managed. The Municipality of Dordrecht is cooperating with the Valuing Water Initiative (see textbox) to develop the Journey The Ark of Dordrecht as a journey from which other cities that face comparable challenges can draw lessons. This journey will approximately cover a period of two years (Oct. 2020 – Oct. 2022).

**Valuing Water Initiative (VWI):** Valuing Water is a Dutch initiative from the High Level Panel on Water (HLPW), which is initiated by the Dutch prime minister Rutte. This initiative aims to take a broad perspective on water, in which also the economic, ecological and societal value of water is incorporated. The Valuing Water Initiative (VWI) was created as part of the Action Plan of the High Level on Water which in 2016 called for a fundamental shift of how the world perceives water. A number of Valuing Water Principles have been formulated which aim to stimulate a high-quality use of water on various themes (health, food security, economy, ecology, etc.). In the coming phase case studies will be prepared to gain experience with the application of the Valuing Water Principles. Dordrecht is one the two selected Dutch case studies (Besides the Integral River management program).

## 1.2. System change: Multilayer Safety

In the Dutch water safety policies an important system change is evolving: the focus has shifted from preventing flooding by means of dikes, to managing flood risks by means of a combination of dikes, spatial planning and disaster management. In other words, multilayer safety.

Dordrecht has been innovating with the application of this concept for 15 years. The quest for the opportunities of multilayer safety originated from the effects of hurricane Katrina in the United States. From research it was clear that the Island of Dordrecht would have difficulties recovering from the effects of a major flood. The research started in 2005 with focusing on the unembanked development of Stadswerven, an area not protected by dikes. However, soon the focus of the study spread to dike-protected areas. It was discovered that also in dike-protected areas improvements can be made by adjusting the development and construction process. In this way the idea of multilayer safety emerged. Dordrecht serves as an illustration in the report of the Commission Veerman<sup>i</sup> (2008) and the idea of multilayer safety is adopted in Dutch National Water plan<sup>ii</sup> (2009).

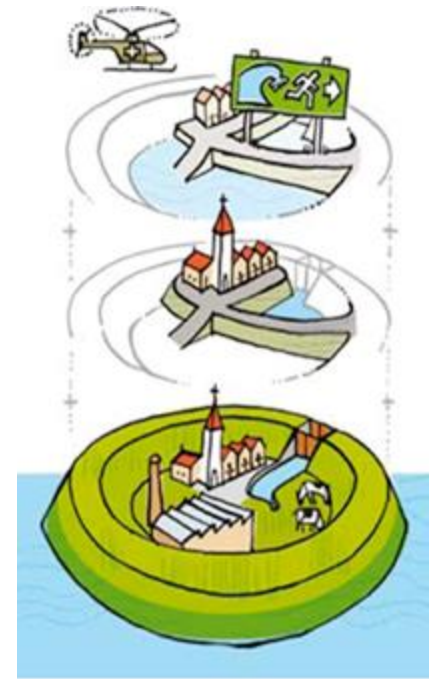


Figure 1: Multilayer Safety Approach

The concept multilayer safety raises various questions. There are not only questions about how governments can create support for multilayer safety approaches and how feasible as well as cost effective multilayer safety approaches are. Moreover, questions emerged about how multilayer safety approaches can be translated and implemented in policies. Therefore, there have been experiments with this concept at different locations in the Netherlands. The Island of Dordrecht is a unique case to practice with multilayer safety as the Island is surrounded by one complete dike ring and consists of dike-protected areas, unembanked areas, urban and rural areas. Furthermore, the political context is unambiguously. The complete island is governed by one municipality, one water board, one disaster management agency, within one province and with one regional division of Rijkswaterstaat.

Appendix A describes the process of the establishment of the cooperation between the Municipality of Dordrecht and the VWI.

## 2. The journey so far: Multilayer Safety

Dordrecht undertook a journey that lasted many years in which the potential of multilayer safety approaches was investigated. On the one hand, it was explored how prevention (layer 1) could be complemented with measures in spatial planning (layer 2) and disaster management (layer 3) to improve water safety. On the other hand, it was examined whether a package of measures targeted at spatial planning and disaster management could replace dike reinforcements. This last application is labelled in the Dutch Delta program as “smart combinations.”



**Figure 2:** Timeline of the quest for multilayer safety solutions in Dordrecht, DPRD stands for Delta Programma Rijnmond Drechtsteden.

### 2005-2008: Urban Flood Management

The Living with Water Project Urban Flood Management<sup>iii</sup> (2005 – 2008) addresses the question how Stadswerven, an area not protected by dikes, could be designed with more innovative measures. In the context of this project a research and design process was completed to create a new neighbourhood in which flood risks were an important design variable. This project also gained national attention. The Commission Veerman refers to the project and writes: In the project Urban Flood Management in Dordrecht, in collaboration with de cities Hamburg and London, knowledge is developed for applying sustainable urban flood management, in which risk management is an integral part of spatial planning. Construction in areas outside dikes, risk management and cost-effectiveness are an important starting point for this. By building “flood resistant” in unembanked areas, innovative and attractive housing concepts can be developed.

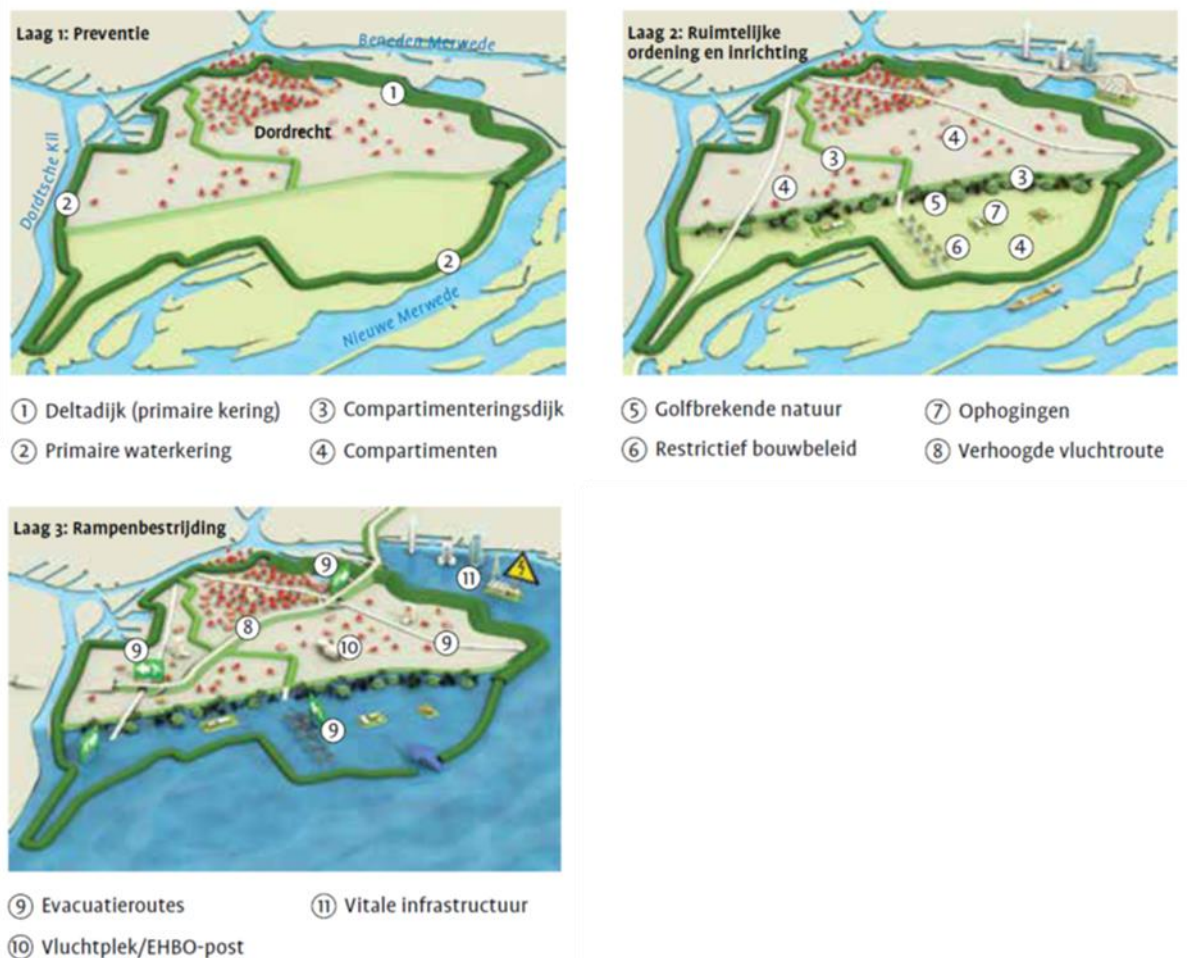
At the same time, investigators and involved policymakers discovered that largest possible benefits in flood risk reduction could be accomplished not in unembanked areas but actually in dike-protected areas. Therefore, the focus shifted in the next research project MARE (INTERREG 2009-2012) to the area behind the dike. In other words: How can flood risks be incorporated in design principles for dike-protected areas? Along the way new perspectives emerged in which spatial planning aided in reducing the vulnerability of the Island of Dordrecht.

### 2009-2012: Deltaprogram Rijnmond-Drechtsteden (DP-RD) phase 1

The creation of the Deltaprogram<sup>1</sup> boosted the search for other forms of water safety on the Island of Dordrecht. In 2011 the Pilot Multilayer Safety Island of Dordrecht<sup>iv</sup> started with the purpose to further

<sup>1</sup> The Deltaprogram is a national program. The national government, provinces, municipalities, and water board cooperate in this program and also implement input of civil society organizations and the private sector. The

develop national policy on flood management (Deltaprogram Safety). Under the umbrella of the Delta Program Rijnmond-Drechtsteden a promising strategy is being developed<sup>v</sup>. This strategy concentrates on the idea of a self-reliant island, which includes a safe compartment for a local evacuation.



**Figure 3:** A self-reliant island with a safe compartment for local evacuation

Parties discovered that it is cost-efficient for the Island of Dordrecht to take specific measures on dike sections with the highest risks instead of strengthening a dike completely. Which means that in Dordrecht the dike “de Kop van ‘t Land” should be treated as a delta dike.<sup>2</sup> In 2009 this project and the preparations to strengthen this dike started given the fact that this area was the location where the worst possible flood for Dordrecht could happen. However, at that point it was not possible to differentiate between the different dike sections with safety norms.

### 2012-2014: Deltaprogram Rijnmond-Drechtsteden phase 2

Therefore, the Municipality of Dordrecht and water board Hollandse Delta started in 2013 the Delta Experiment, in which they explored the feasibility and practicability of this strategy. In this experiment the waterboard and the Ministry of Infrastructure and Environment concluded that de Kop van ‘t Land

goal of the program is to protect the Netherlands against flooding and provide sufficient drinking water also for the generations to come.

<sup>2</sup> A delta dike is a dike that does not fails under extreme circumstances but allows for a limited amount of water to flow over the dike.



could not become a delta dike because in the Second Highwater Protection Program (HWBP)<sup>3</sup> there is no institutional framework present to decide on localized specific safety norms. Without a delta dike the option of a safe compartment (safe haven) was taken of the table. In anticipation of new legal norms and more financing from the water board dike enforcement are made more robust for extra safety.

### **2014-2018: MIRT research Dordrecht**

In 2014 the Delta Decisions with respect to water safety norms were taken. The Delta Decisions are the bases for the national flood management policies and detail how the Netherlands will be protected against flood. As preferred strategy within the shared program Rijnmond-Drechtsteden for the first time the focus is on multilayer safety. The parties received extra time to come up with a norm advice for the North as well as the South side of the island. The minister liked to continue the search for a smart combination. Which took shape by the means of a MIRT research<sup>4</sup> which after two years resulted in the promising strategy 'Self-reliant Island.' In the period 2015-2017 this strategy was further operationalised by the Municipality Dordrecht, the water board Hollandse Delta, the Ministry of Infrastructure and Water Management, Rijkswaterstaat, the province of South-Holland and the Safety Area South-Holland South by a second MIRT research. The results<sup>vi</sup> of this research have been published in 2018.

The research dropped the possibility for a "smart combination" as the necessary investments in the regional flood defences proved to be higher than the possible savings on the primary flood defences. Moreover, the research concluded that the norms, as documented in the National Waterlaw, are sufficient. This is also the case for the maintenance standard for the compartment flood defences (documented in the provincial water regulation).

It also became clear that because of the possibility to place flood barriers on the Voorstraat in the historic city centre of Dordrecht, the reinforcement measures can be postponed to after 2050. Finally, the Island of Dordrecht is the first municipality of the Netherlands for which a Water Safety Plan is designed. This plan is created as an agenda that should be further implemented by the involved parties, which include the Municipality of Dordrecht, the Safety Area South-Holland South, the water board Hollandse Delta, Rijkswaterstaat and other key stakeholders. In this plan the evacuation strategy in case of a (impending) flood is being further elaborated on. The plan led to a research and implementation agenda with measures to increase the self-reliance of the Island of Dordrecht.

### **2018-2020: IABR–Atelier: The Ark of Dordrecht**

The Water Safety Plan takes into account the exceptional case in which the dikes do break, and the city is flooding. The advice to everyone who is not able to leave the city is to flee to their attic. However, there is possibly a better and safer alternative. The Staart, a higher located area outside the dikes could be potentially be developed as a large-scale temporary shelter location. The Staart has exceptional qualities as it is located between two rivers and near the city centre as well as the nature parc the Biesbosch. The last years the developments in this area have been limited because of environmental problems (risk contour<sup>5</sup> from chemical industry). The large housing development

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<sup>3</sup> The HWBP is part of the National Delta Program and is the largest implementation program of the Delta Plan Water Safety.

<sup>4</sup> MIRT is the Dutch abbreviation of the Multiyear program, Infrastructure, Space and Transport. In MIRT there are different programs in which the national government cooperates with the region to work on accessibility, water, spatial and economic challenges. The national investment in the MIRT is mostly financed by the Infrastructure Fund and the Delta Fund.

<sup>5</sup> A risk contour shows for a specific risk how large the probability of death is in a certain area in case of an accident: within the contour the risk is large, outside the contour the risk is smaller.



ambition of the city of Dordrecht offers the opportunity to revalue this area and continue developments on themes such as sustainability, energy, and mobility.

The International Architecture Biennale Rotterdam<sup>6</sup> (IABR) and the Municipality Dordrecht have together formulated the ambition to research and with design imagine how the area the Staart can be a large-scale shelter during a potential flood and at the same time how this approach can be a *driver* for the development of the area. How can the future necessity of temporary self-reliance have a positive effect on the current necessity of permanent sustainable development? This question has been researched in an IABR-Atelier, which was coordinated by Adriaan Geuze (West 8). West 8 is in consultation with the IABR and the Municipality Dordrecht contributing to the public debate and is responsible for the translation of the results of the Atelier to an exposition and a program open to the public.



**Figure 4:** The Staart an higher located area outside the dikes (blue = low, brown = high)

The IABR-Atelier the Ark of Dordrecht is commissioned by the IABR and the Municipality Dordrecht. IABR is performing these Ateliers as a lead partner of the national government in the context of the Action Agenda Spatial Design 2017-2020 (ARO) of the Ministry of Internal Affairs.

The starting point of the IABR-Atelier de Ark van Dordrecht is that by simultaneously researching solutions for both challenges; future water safety and the current home construction challenge, added value will be created by implementing both solutions. The Atelier creates plans and proposals, that are realistic and can be easily implemented, to develop the Staart as a natural large-scale shelter in case of a flood and as an evident location for sustainable spatial planning.

An important result of the Atelier is a strong visualisation and convincing design for the future Staart, which makes a new perception of the area by the inhabitants of Dordrecht and other stakeholders possible: the Staart as a safe location to evacuate to in the case of a flood and as an attractive place for sustainable development which can be an optimal (partial) solution for the housing development ambition. These developments also help to improve the reputation of this socially vulnerable neighbourhood.

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<sup>6</sup> IABR is a development institution and a cultural platform and has as main objective the target-oriented use of the power of imagination and design for real change.

The Biennale, IABR-2020, will take place in the spring of 2021. This will be the moment at which the results of the Atelier will be exposed, presented, and discussed in an international context. The results of the Atelier are an important part of the exhibition and the public debate that takes place during the Biennale, but this is not the final goal. More important is that the results will be implemented by the local counsel while working on local challenges.



**Figure 5:** A vision of the future Staart.

### 3. The Journey ahead: “Ark of Dordrecht”

#### 3.1. Proposal for the journey

The strategy of a self-reliant Island of Dordrecht has been created in the last 15 years from the perspective of governments and knowledge institutions. This strategy now has to become familiar to citizens, the private sector, and local stakeholders. The challenge to activate these actors is large as we aim to achieve systemic change. Namely, the shift from an approach centred around prevention to a focus on multilayer safety.

This journey will research the discourse-shift that is necessary to get key actors on board to prepare for a scenario that might look statistically unlikely, but that will become more probable as climate change effects get worse. This journey is organized knowing that in 2021 it will be 600 ago that the Island of Dordrecht was created as an effect of the Sint-Elisabeth Flood. This historic event will be commemorated and can be excellent opportunity to promote the Staart as a ‘safe haven and temporary ark’ and draw in the year 2021 the attention of the citizens of Dordrecht to the Staart.

**The final goal of this Journey is to start a broad movement towards a self-reliant Island of Dordrecht, with the Staart as a higher area outside the dikes that can serve as a large-scale shelter.** Besides this, it is an important goal that the multilayer safety will be replicated at other locations in the Netherlands and especially in the region Rijnmond-Drechtsteden. Therefore, we join the further development of the preferred strategy for the Rijnmond-Drechtsteden to a regional Delta Strategy. Wherein the three themes of the Delta Program (water safety, freshwater availability, and spatial adaptation) will be approached jointly and we will be looked for connections which have additional societal value.

The Sint-Elisabeth flood probably was the inspiration for the painting “Noah’s Ark on the Mount Ararat” by Simon de Myle, in which the Ark of Noah symbolises the safe Island of Dordrecht. The fact that Dordrecht is preparing itself six centuries later for a potential flood and is already working fifteen years in an innovative way as an example for other places, is a strong meaningful story. It is essential that broad support from all involved parties: citizens, the private sector, and others, emerges. It needs to become very clear that it is really possible, and that the Ark becomes a development which is aspired by Dordrecht.

At the same time, it is a substantively complex challenge. Although in the last years a lot of experience is gained within and outside the Netherlands with the largescale development of former industrial areas, the Staart is very complex, compared to other locations. The specific combination of vital infrastructure, future water safety, the ambitious housing construction plans, the currently dominant and diverse industry, and the opportunities for self-reliance (for example electric self-sufficiency) are collectively researched in the IABR-Atelier. These aspects are simultaneously researched to gain added value in the implementation of these solutions. The IABR-Atelier, therefore, aims to develop plans and solutions that will lead to wide support for the idea of developing the Staart as a large-scale shelter for flooding and as an evident location for sustainable area development. This has to make the development of this area more attractive and forms an important part of the Journey.

#### 3.2. Coherence within “Value for Water” initiative

The journey in Dordrecht actually started 15 years ago with the first work on Urban Flood Management. The intended journey within the Valuing Water Initiative is a continuation of the work that has already been done, and the steps that have been taken in the system change. There are still steps and results to be achieved, but with the work so far, the journey fits well within the Valuing Water Initiative. All principles of the Valuing Water Initiative are also present in the Journey of Dordrecht.

VWI Principles	How this is relevant for the Dordrecht journey
1. <b>Recognize and embrace water's multiple values</b> to different groups and interests in all decisions affecting water;	The value of water is a crucial factor for the development of De Staart as a shelter. Living and working in one of the most beautiful places in the Netherlands, because of the freshwater tidal area. But the central value is the high position of the Staart. This makes the area safe in the event of a flood and a safe haven for surrounding residents.
2. <b>Reconcile values and build trust</b> – conduct all processes to reconcile values in ways that are equitable, transparent, and inclusive;	Many people already live on the Staart. Clearly, it is not intended they have to move in order to create room for something new. It is important to identify what they want, what aspects they value and what opportunities they see.
3. <b>Protect the sources</b> , including watersheds, rivers, aquifers, associated ecosystems, and used water flows for current and future generations;	We protect and strengthen the Wantij as a green-blue structure, looking at, among other things, biodiversity and water quality. In addition, we also increase the recreation possibilities, to allow people to experience the value of water. People will strive for the protection of things they value.
4. <b>Educate to empower</b> – promote education and awareness among all stakeholders about the intrinsic value of water and its essential role in all aspects of life;	This is one of the four themes of the river as a tidal park project. We use the St. Elisabeth flood to tell the story of the tidal landscape. Water as friend and enemy, and as the foundation for the city and the landscape.
5. <b>Invest and innovate</b> – ensure adequate investment in institutions, infrastructure, information and innovation to realize the many benefits derived from water and reduce risks.	In addition to the focus on prevention, we develop multi-layer safety. The Delta Fund does not have any means for shelter locations and evacuation. With the IABR, we are rethinking the problem: We use water as leverage for sustainable development. Not only in the event of imminent flooding, but in a daily situation.

### 3.3. Aspects of the system change (the WHAT-question)

The Journey aims to create a broad movement towards a self-reliant island of Dordrecht. For this to happen there needs to be a shift from the dominant discourse of ‘dikes, dikes, dikes’ to a discourse of dikes and spatial planning and adequate disaster management. In the table below, we summarize what the new discourse means for each stakeholder and what their desired behaviour is.

Stakeholder	Desired behaviour
The municipality (local counsel)	Decide on the risk contour and the acceptable risks for the development of areas outside the dikes.
Water board/Safety area	Make decision about new evacuation plan, with the inclusion of the Staart as a Flood Shelter.
DP Rijnmond Drechsteden	Adherence to the new Delta Strategy; implementing prevention, adaptation, and crisis management holistically.
Citizens of Dordrecht	Change in mindset > the Staart is safe and the better choice in case of a flood.
Citizens of the Staart	Show willingness to provide shelter for evacuees.
Businesses	Join and develop innovative solutions (also for recovery).
Local stakeholders	Join
The Red Cross	Join.

### 3.4. How do we want to achieve this? (the HOW-question)

The central question is: if we want to change the way the public and private stakeholders behave, how are we going to achieve that change? In general these are groups for who the direct significance of this topic is not clear and who are focussed on daily issues instead of potential future problems. To realize change and to overcome the day by day focus an approach that includes methods and means to support and ease action. We aim to develop a strategy to integrate with all those stakeholder groups using knowledge about behavioural change. We accomplish this by first performing a target analysis. With this target analysis we approach a consultant or a professional in behavioural change. With one of these we will develop a strategy for behavioural change. We can apply this strategy during events, workshops, materials, methods, meetings etc. The proposed activities for 2021 are listed below.

### 3.5. ACTIVITIES

In the year 2021 Dordrecht and the surrounding areas will remember that the Sint-Elizabeth flood took place 600 years ago. In the year 1421 twenty-three villages near Dordrecht were destroyed by the waves and Dordrecht became an island. There will be various programs and events which will commemorate the flood.

#### 1. Tide Festival in April, the Heroes of Dordt on 2. July

The Heroes is a competition for students and children to help evacuate fleeing residents over the river the Wantij to a save shelter on the Staart by means of self-built floats. The competition is a collaboration with schools and artists.

#### 2. Tide Festival in June & July, Academy, knowledge sharing

Besides the tour, an additional program will be offered in the Biesboschwerf with online experts meetings. Meet-ups with the public will be organized together with a media partner. The theme will be liveability and survival strategies. Additionally, a photo exhibition from all BEGIN cities about water will take place. This is a collaboration with the London Design Academy. Finally, a film program is planned in The Movies about climate change and a clear connection with the artworks that will be shown during the Tide Festival. Potential partners are BEGIN, the United Nations, Deltares, IABR, design agencies, VPRO, AVROTROS, De Correspondent, Da Vinci, V2.

We utilize these three different program parts to start a broad movement in which we involve inhabitants, companies (e.g. the creative sector) and local stakeholders (e.g. the cultural sector). The



Journey in the framework of the VWI can make an important contribution to this. This offers for Dordrecht a unique opportunity to put the idea of a self-reliant island, and specifically the Ark, on the international agenda and at the same time involve local businesses and citizens in this movement. The idea behind this is that an international platform often helps to involve local stakeholders.

### **3. Tide Festival in October, story walk route.**

A story walk from about 60 minutes, along highwater locations that played and still play an important role in water safety of the Wantij and the city of Dordrecht. The route starts from the land that was untouched in 1421; the historic city centre and leads to the reclaimed land; the Staart. The walks are accompanied by a guide (live or an audio tour). For example, by a journalist, historian, climate researcher, teacher, or artist. Inhabitants and cultural and educational organizations in Dordrecht could be involved and stimulated to offer additional activities in the period of the festival; autumn 2021, to strengthen the storytelling throughout the city.

### **4. High level / policy debate on 2. July**

A policy debate will be organised (jointly with C5a) on the implementation of the vision for 'De Staart'. The debate will take place in the Biesboschhal on 2. July 2021. This debate should (help to) set the agenda for the actual implementation of the vision for 'De Staart'. The number of participants will be around 10 to 15 people on site. Intended participants are local politicians (Wouter Kolff (major), Piet Sleeking (BVD) and Maarten Burggraaf (VVD)), national politicians (prime minister Mark Rutte or minister Kajsa Ollongren) and high level experts in each silo of C2C (like water envoy Henk Ovink).

### **5. Cloud to Coast workshop in June / July**

A third, closing workshop for the application of the C2C approach in practice will take place in June / July 2021. The focus lies on the question of how the insights gained can be included into actual decision making. This will represent a next step in the development of the vision for 'De Staart'. Intended participants are local stakeholders around Dordrecht, e.g. the municipality, the province, the emergency management authority, developers and Rijkswaterstaat. Number of participants will be around 20 people.

### **6. Delta Congress Rijnmond Drechtsteden on 7 June**

Another trajectory in which the Journey could partake is the regional Delta Congress Rijnmond Drechtsteden (DPRD), a biennially congress at which all results and new developments from the DPRD are presented to professionals within the water and climate adaptation sector, mostly from the area of South-Holland. Expected participants will be from governmental organisations, universities and private companies. The two central topics that will be discussed there are sea level rise with the accompanying knowledge program and the ambition for integrated delta strategies. The development of the Staart is already an example of the added value of looking from an integrated point of view at water, water safety, and spatial adaptation in one area. Furthermore, is an integrated view also a method to increase the safety of the city, also from sea level rise.

### **7. Business to Business Event in July**

This event will be part of the larger program surrounding the Sint-Elisabeth Flood and will be specially geared toward local business. During this event local business from the maritime industry can meet and network with each other, to create new possible partnerships in this region. The maritime industry is one of the main and most important industries in this region. The event of the Sint-Elisabeth flood is used to see whether there are possibilities for these companies to also benefit from the journey to a self-reliant island of Dordrecht. The business to business event can help to identify opportunities for their expertise and resources to be a central part in this journey.

## **8. International Water Week on 23-27 August and other relevant events**

We will participate in the digital Stockholm International Water Week and possible other relevant events, to share the journey of Dordrecht, the results and learned lessons with other cities, companies and any other interested organisation.

## **9. Case study write up**

As already stated previously, the work down within Dordrecht which is now the Journey with the VWI program, is a continuation of a 15 year effort and focus from Dordrecht. To properly explain the full journey that Dordrecht has done, a professional write up will be written to explain the full journey and future steps, to be shared amongst interesting organisations.

## **10. Strategic Communication Advisor**

To organize and coordinate the work for the Journey, and make sure that the different separate activities of the Sint-Elisabeth flood remembrance year all fit within the same communication message we need a strategic communication advisor. The advisor will work in tandem with the internal experts on water safety and floods, to organize a communication campaign that will create the systematic change within Dordrecht, for the different stakeholder groups.

## **11. Strategic advisor multi-level safety**

As the VWI Journey of Dordrecht has been an ongoing process over the last 15 years, a lot of expertise knowledge and new methods have been developed. The Multi-level safety strategy and the ambition of Dordrecht as a self-reliant Island have been developed with internal expertise and an external strategic advisor for multi-level safety. This cooperation will be continued throughout the VWI Journey of Dordrecht.

## **12. Trainee behavioural change**

Extra capacity and expertise is necessary to plan and organize a behavioural change campaign with behavioural change principles. A trainee specialized in this subject can help with setting up the action plan, make sure the actual events will follow to original plan and where necessary adjust to new developments. The use of an external company to create the plan can help us get started quickly. By involving an expert on behavioural change during this process and during the entire year, the continuity of approach is ensured.

## **13. Behavioural change campaign**

The behavioural change campaign is central to our ambition in creating a systematic change in which stakeholders perceive and live as part of a self-reliant island of Dordrecht. For this to happen there needs to be systematic shifts in the actions of different stakeholder groups. A behavioural change campaign can help us achieve these shifts. For this we need a communication plan and concept, support for a communication campaign and communication materials.

### **11.1 Communication plan and concept**

To kick-start the campaign a communication plan and concept will be developed with the help of an external expert organisation. This plan will detail what we will do, and how to communicate with the different stakeholders, and achieve the overall goal of a self-reliant Island of Dordrecht. An external organisation will be used to make sure a full communication plan and concept can be finished as early as possible, and do the necessary research and preparatory work.

The communication plan and concept will set the structure for the campaign during the VWI Journey and will incorporate the following 5 steps.

1. Stakeholder analyses



2. Identify desired behaviour
3. Identify current behaviour
4. Create strategy to reach desired behaviour
5. Create communication plan (message, tools, agenda)

Preparations are underway since 2020, and some steps have already been taken. Already some stakeholder groups, their current and desired behaviour have been identified. In order to be able to start the program as quickly as possible, external expertise is necessary to co-write the communication plan and concept, together with experts on water safety, communication and behavioural change. This plan will incorporate the steps we have already taken, help us finalize some of the analyses in relation to certain stakeholder groups (mostly the business stakeholder group), and help us test the assumptions with a quick study and interviews of the local citizens. This will help to check whether the proposed activities will achieve the specific behavioural change goals.

### **11.2 Communication campaign and materials**

With every communication plan there are costs for the campaign and the materials. Examples that are discussed were social media posts to announce events and create water awareness. Another option was to start a poster campaign on the Staart with which citizens can indicate their readiness to take in other people from Dordrecht during a flood risk situation. Detailed plans will be made in the communication plan.

### **11.3 Journey Video Report**

With a Journey Video report, several or one longer video can be filmed and edited, that details the progress of the journey in Dordrecht. This can both be an informative video relevant organisations, as well as a communication tool to the citizens of Dordrecht. We see the realisation of this video as a large added value to the journey. It can also be used in the years after 2021, to reintroduce the subject to new stakeholders and interested parties, and help to create a clear picture of the journey and the goals of a self-reliant island of Dordrecht.

### 3.6. BUDGET

The above described activities result in following proposed / tentative budget.

Budget Dordrecht Journey with VWI	from start 12 month duration			planning
	Dordrecht funding	VWI funding	Total	
<b>Events:</b>				
<i>Direct costs and external services</i>				
Tidefestival	320.000		320.000	nov-21
Deltacongres Rijnmondrechtsteden displays		5.000	5.000	jun-21
IABR*	50.000		50.000	may - june 2021
De Reddertjes (the Heroes)	150.000		150.000	march-june 2021
Business to Business event	25.000		25.000	jun-21
travel and accomodation IWW and other events		4.000	4.000	
Case study write-up for international audience		10.000	10.000	end of 2021
<i>Staff capacity</i>				
Trainee behavioural change		36.000	36.000	entire project
Strategic advisor Multi-level safety	-	30.000	30.000	entire project
strategic communication advisor	85.000		85.000	entire project
<b>Total Events:</b>	<b>630.000</b>	<b>85.000</b>	<b>715.000</b>	
<b>Behavioural change campaign:</b>				
<i>Direct costs and external services</i>				
Communication plan and concept		20.000	20.000	finalized march 21
Communication campaign and materials		30.000	30.000	entire project
Journey Video report		15.000	15.000	end of 2021
<b>Total Behavioural change campaign:</b>	<b>-</b>	<b>65.000</b>	<b>65.000</b>	
<b>Total:</b>	<b>630.000</b>	<b>150.000</b>	<b>780.000</b>	
	81%	19%	100%	

\*For the IABR, the Municipality of Dordrecht already invested 100.000 euro in 2020.

## Appendix A: Process description

The time period that is used for developing opportunities for multilayer safety is remarkably long. In the period of 2005 to 2017 involved governments have been able to cooperate intensively. This cooperation has evolved and has become of a higher quality. According to those involved, this long period of time was also necessary because of the complexity of the question and the new insights that emerged during the process. Over and over new findings changed the content of the question and changed the direction of the research. For a long time, there was the opportunity to explore without having to follow a determined path. Only later on in the project the attention shifted to specifying the results of previous phases, but a well in this phase there was space for incorporating new insights. Considering the nature of the question this is a valuable approach.

During this process The Municipality Dordrecht felt they were the problem owner of the question multilayer safety and manifested themselves as the pioneer of the search for solutions for a 'self-reliant island.' This active role of the Municipality Dordrecht stands out. It turned out there was sufficient energy within the municipality to put the issue on the agenda by means of new research projects and follow-up questions. This is quite unique for a theme that for many municipalities is less of a priority. The same is true for the political attention that was demanded for this theme and the prominent place the themes water and climate occupy within the urban programs.

During the MIRT-research the water board Hollandse Delta was the other advocate for multilayer safety. This collaboration has been valued as important by those involved to research all opportunities of multilayer safety. Although it was commented during the research that the water board could have provided more capacities. However, this proved to be impossible because of the political sensitiveness of the process and the cold feet to really commit to this process. As we will discuss later, this is not illogical considering the institutional vacuum wherein the search for smart combinations needed to be organized.

In the first phase the Province had the role to bring in expertise about spatial aspects. In the second phase of the MIRT-research, additionally, the Province delivered important expertise about regional flood defences. The same was true for the National Department of Waterways and Public Works, which played an active role and provided a lot of information about calculating the strength of flood defences. With this and by contracting various third parties it can be concluded that the project team possessed the highest quality information that was available in the Netherlands. During the MIRT-research the national government had a stimulating role and aimed by means of the research to explore the opportunities for smart combinations that could potentially be applied in other areas in the Netherlands. With this the link to the world of water safety was made and the core team had relatively easy access to the core politics and the expertise and networks available there. Also the Safety Area had a had a pro-active role, with their input about risk-assessments and their practical knowledge about the area.

The involved parties positively valued the cooperation. The collaboration was collegial on the basis of a natural role division in which crucial choices were directed to politicians and were decided upon by them. For a long period of time the collaboration between the Municipality Dordrecht and the water board Hollandse Delta was difficult, especially because of the discussion about a possible delta dike, but the relation has improved because of the intensive collaboration during the research. Remarkable is the time that has been taken for developing the plan of action (in both MIRT-researches). As this plan could only be realized with the continued support of all parties. According to the involved parties this has increased the feeling of joint ownership.

**Source:** evaluation by GovernEUR / Erasmus University Rotterdam

## Appendix B: Reference list

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- <sup>i</sup> <http://www.deltacommissie.com/doc/2008-09-03%20Advies%20Deltacommissie.pdf>
- <sup>ii</sup> <http://www.deltacommissie.com/doc/2008-09-03%20Advies%20Deltacommissie.pdf>
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- <sup>iv</sup> [https://www.academia.edu/24071175/Gebiedspilot\\_meerlaagsveiligheid\\_Eiland\\_van\\_Dordrecht\\_Tussenrapportage\\_ter\\_inspiratie?ssrv=c](https://www.academia.edu/24071175/Gebiedspilot_meerlaagsveiligheid_Eiland_van_Dordrecht_Tussenrapportage_ter_inspiratie?ssrv=c)
- <sup>v</sup> <https://ruimtelijkeadaptatie.nl/@159995/gebiedsrapportage/>
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