TURAS

Rotterdam City Delta – Rotterdam | Infrastructure Summary

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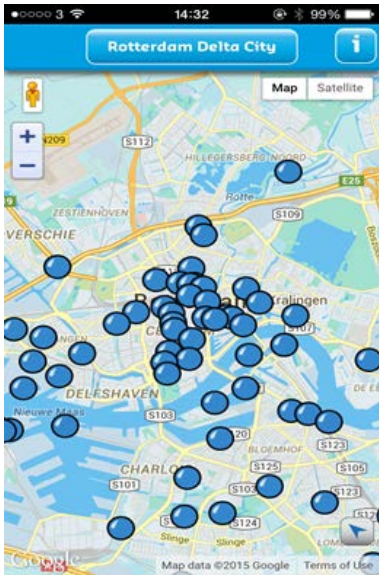

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Introduction

Transitioning Towards Urban Resilience and Sustainability (TURAS) is an FP7 funded European-wide research and development programme. The "TURAS" project aims to bring together urban communities, researchers, local authorities and SMEs to research, develop, demonstrate and disseminate transition strategies and scenarios to enable European cities and their rural interfaces to build vitally-needed resilience in the face of significant sustainability challenges. As part of this process, the TURAS project has developed a suite of Geo-ICT tools for the project to demonstrate some of the research topic address over the lifespan of the project.

Design Intent

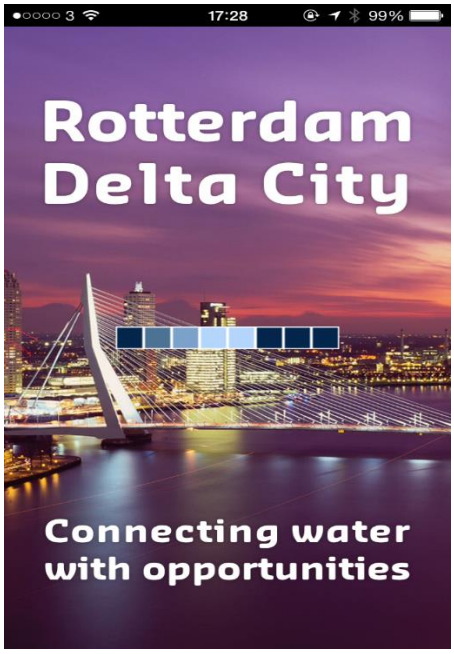
The Rotterdam City Delta app is a way to explore the city while discovering the measures Rotterdam takes to protect itself against the ever present water: sea, river, rain and ground water (Figure 40). The application is part of WP4 Climate change Resilient City Planning and Climate-Neutral Infrastructure which addresses the challenge of flooding in Rotterdam. The Rotterdam City Delta app allows the user to discover the broad network of innovative solutions such as multifunctional dykes, water plazas and the Maeslant Barrier. The users can learn about the actions Rotterdam as a delta city takes to protect itself against flooding in a time where new challenges present themselves as a result of climate change. Smart spatial design and multifunctional solutions contribute to a more attractive and economically strong city and therefore increase its economical capital.

Contact Details: The Rotterdam City Delta app was developed by the City of Rotterdam. The application is part of WP4 Climate change Resilient City Planning and Climate-Neutral Infrastructure. WP4 lead partner VU University Amsterdam and University College Dublin assisted in the associating the application to the TURAS project. Future Analytics Consulting were responsible for the technical linking of the application with the TURAS website.

Link to Existing Application: http://www.turas-cities.org/urban_regions/Rotterdam/en

Principal Elements

Figure 1: Rotterdam City Delta App interface



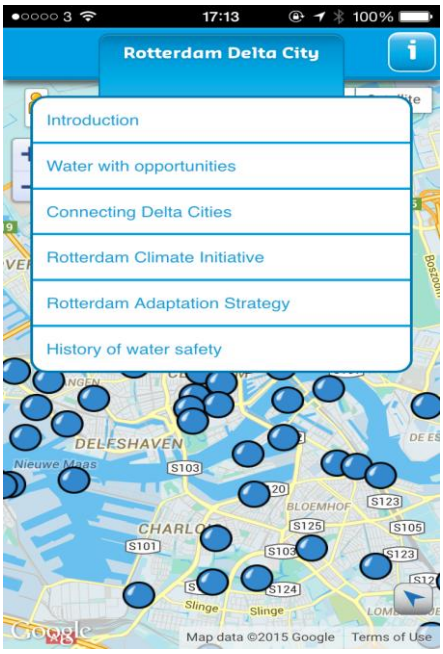
Functionality

Rotterdam City Delta app has 3 main functions: Main menu, Map and Information icon.

Main menu: The main menu provides an introduction to Rotterdam, the effects of climate change and the Rotterdam Climate Proof programme (Figure 2). There are 6 main sections to the *Main menu*:

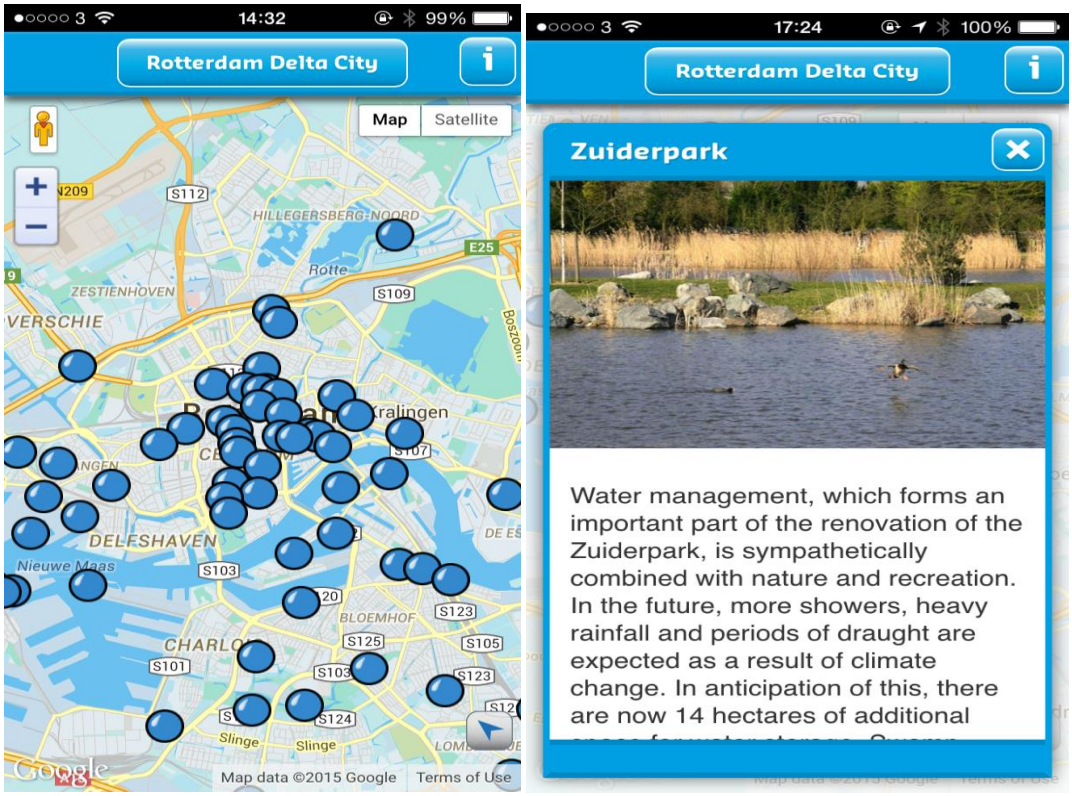
- Introduction
- Water with opportunities,
- Connecting delta cities,
- Rotterdam Climate Initiative
- Rotterdam adaptation strategy
- History of water safety

Figure 2: The Delta City Rotterdam app *Main menu* function



Map: The map shows the measures Rotterdam takes to protect itself against water: sea, river, rain and ground water (Figure 3). Unique hotspots allow the user to discover the broad network of innovative solutions such as multifunctional dykes, water plazas and the Maeslant Barrier. It allows the user to navigate their way across the port city of Rotterdam.

Figure 3: The Delta City Rotterdam *Map* function



Information icon: Provides information about the application's publication, design and development team and sources of information and images used in the application (Figure 4).

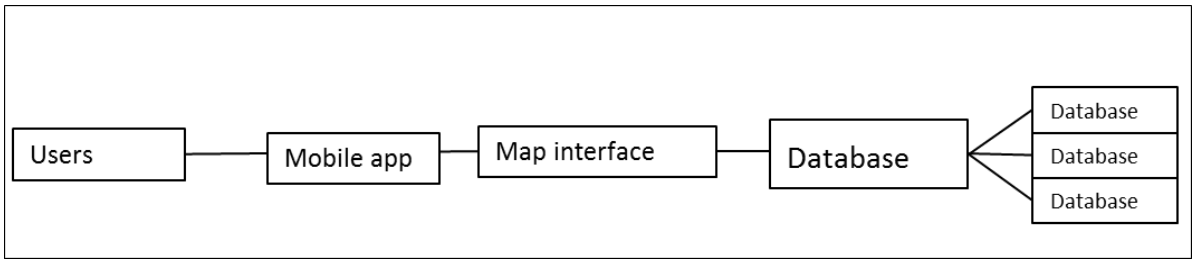
Figure 4: The Delta City Rotterdam *Information icon* function

Technical development

The application is developed by RNW Concept design with Tremani based on a tool design concept (Figure 5). Databases feed into the main database for the app. Data are displayed using a map interface. The user can access the map through a mobile phone app. The app was developed using the following software:

- iOS - Operating system for Apple devices. 12.8MB iOS
- Android - Operating system for Android devices. 7.8MB Android.

Figure 5: The Delta City Rotterdam tool design concept



Wider Application Dissemination

In order to create the best environment for re-use, modification and visibility of the TURAS Geo-ICT tools we package all code and documentation for each application and have made them directly available to the public in zip file or available on GitHub @ https://github.com/UCDTURAS.

Compressed Archive File

- To make the development and coding accessible to the public and researchers interested in using, adapting, or further developing the TURAS tools, we have packaged the information (code, development operations and documentation) into a single compressed file which can be downloaded from the final TURAS interface. This package will contain a computer program as well as necessary metadata for its deployment.

GitHub Repository

- The aim of the TURAS project is to bring urban communities and businesses together with local authorities and researchers to collaborate on developing practical new solutions for more sustainable and resilient European cities. Following this, we recognise the importance of having a dedicated modern interface with which to disseminate all the Geo-ICT tools developed as part of the project. TURAS has created a GitHub account to allow end-users, technical developers etc to push/pull data code from the TURAS account.