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groundtruth2.0

Environmental knowledge discovery of human sensed data

Deliverable D2.3

Customized platform for the Netherlands Demo Case (First Version)

The Ground Truth 2.0 project has received funding from the European Union's Horizon 2020 Research and Innovation Program under grant agreement No. 689744. www.gt20.eu

Deliverable Title	Customized platform for Netherlands Demo Case (First Version)
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Deliverable lead	HR
Author (s)	Rianne Giesen
Internal reviewer (s)	Cristina Montachini, Alberto Masa, Nicolas Luque (Altran)
Contact for queries	Rianne Giesen (HR), rianne.giesen@hydrologic.com
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Abstract of Deliverable	Ground Truth 2.0 (GT2.0) aims to demonstrate that sustainable Citizen Observatories (COs) are possible. This is done using the innovative approach of combining the social dimensions of citizen observatories with enabling technologies, so that the implementation of the respective citizen observatories in six Demo Cases is tailored to their envisaged societal and economic benefits. This report presents the first version of the platform for the Dutch DC Citizen Observatory that was developed jointly with end users during co-design sessions.

Versions and Contribution History

Version	Date	Modified by	Modification details
V0.1	22.01.18	Rianne Giesen	Initial draft
V0.2	24.01.18	Cristina Montachini, Alberto Masa, Nicolas Luque	Review and comments
V0.3	25.01.18	Rianne Giesen	Fully revised draft

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List of abbreviations

CO	Citizen Observatory
DC	Demo Case
DC-NL	Demo Case Netherlands (Dutch demo case)
GT2.0	Ground Truth 2.0
URTT	User Requirement Tracking Tool
WP	Work Package

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Executive Summary

Ground Truth 2.0 (GT2.0) aims to demonstrate that sustainable Citizen Observatories (CO) are possible. This is done using an innovative approach combining the social dimensions of citizen observers with enabling technologies so that the implementation of the respective citizen observatories is adapted to the social and economic benefits anticipated.

The topic of the Dutch demonstration case (DC-NL) is climate proof water management. Because of the changing climate, the frequency and severity of heavy precipitation events and droughts increases. Policy makers take measures to prevent and reduce the damage caused by such events, but citizens can also contribute to make their neighbourhood climate proof. For instance by reducing the percentage of paved surface in their gardens or by contributing to weather and water related observations.

The geographic focus of DC-NL is the region Land van Heusden en Altena (short name Altena), which experienced two extreme rainfall events in the summers of 2014 and 2015. The common goal of the stakeholders is to prevent damage from extreme precipitation, this is reflected in the chosen name for the platform: *Grip op water Altena*.

This document describes how, starting from the functional design and going through the technical design and integration of IT components, the first version of the Dutch demo case platform was developed. The platform will provide information on weather, water and measures. Users can share information and tips, contribute observations on the water system and communicate with different stakeholder groups. Its online presence is at altena.gripopwater.nu.

1. Introduction

1.1 Background

The Ground Truth 2.0 project will deliver the demonstration and validation of six scaled-up citizen observatories in real, operational conditions, with four European and two African demonstration cases. It will demonstrate the technological feasibility, the sustained use and the societal and economic benefits of such citizen observatories. The ultimate objective is the global market uptake of the concept and enabling technologies.

One of the main objectives of WP2[1] is to enable adequate customization, deployment and upscaling of the required technical solutions in each demonstration case. Considering the different starting points and the differences in the cases' requirements, the aim is to set up a technological architecture in each case, taking into account both common modules as well as particular ones.

Within this frame, the Task T2.1, Technical design and integration of components per demonstration case, will settle the specific requirements of each demonstration case, based on the user's requirements made during the work carried out as Task T1.3, Functional design. The Task T2.1 is being developed with the purposes of: make the technical design of the Demo Case; develop standard integration between demonstration cases; and configure the technological platform in each demonstration case.

1.2 Purpose of the document

This document is one of the Task T2.1 outputs. It describes how, starting from the functional design of the Demo Case, going through the technical design and integration of IT components, the first version of the CO platform was developed.

1.3 Structure of the document

The present document is divided into 4 sections in order to give a comprehensive overview of the customized platforms of each Demo Case.

Section 1 presents an introduction to the document, giving details about the background, the purpose and the structure the document.

Section 2 is a summary of the Functional Design for the platform. It describes the results of the planning carried out by the co-design group that participate in the DC. The co-design group, through co-design work sessions, defined and validated the Vision, Mission and Objectives of the Citizen Observatory, the customized Functional Design and the Technical Design.

Section 3 presents the platform architecture validated by the co-design groups of the DC, designed to satisfy the user requirements of the customized Functional Design, the selection of technological tools and the mock-up developed to obtain feedback from the co-design group.

Finally, Section 4 presents and describes the first version of the platform, created based on the customized Functional Design and the feedback from the co-design group.

[1] Ground Truth 2.0 - Environmental knowledge discovery of human sensed data, D0.A extract FINAL for kick-off, 1.3.3. WT3 Work package descriptions

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2. Summary of Functional Design for the platform of the Dutch Demo Case

In the first co-design session, the challenge of the DC-NL was formulated. The co-design group stated that 'If we do not take measures, our urban and rural areas will keep being affected by local flooding because of the extreme weather resulting from climate change.' This challenge forms the basis for the Vision, Mission and Objectives for the Demo Case Citizen Observatory. Then, the functional design for accomplishing that premises was developed.

2.1 Mission, Vision and Objectives of the Citizen Observatory

The members of the co-design group defined validated the Vision, Mission and Objectives of the Citizen Observatory, as given below.

Vision: In Land van Heusden en Altena the municipalities, water authority, citizens and farmers understand each other's interests and ways of working and are together responsible for limiting the damage by pluvial flooding in urban and rural areas.

Mission: The citizen observatory is a place (on- and offline) where collected observations, knowledge and warnings are shared, where bottlenecks and measures are constructively discussed along short communication lines and where it is clear which actions are taken by which party.

Objectives:

1. Facilitate the exchange of observations and information about the weather and water systems [in October 2017] to allow all stakeholders to act or plan ahead.
2. Support short communication lines and insight in plans and activities of stakeholders regarding water management in Land van Heusden en Altena [early 2018]
3. Set up a knowledge platform with action perspectives and tips to take measures against damage from pluvial flooding [in the course of 2018]
4. Support an open and constructive dialogue between all involved parties in Land van Heusden en Altena [from the start] and expand the network towards a real water community.
5. Prepare the sustainable continuation of this CO after GT2.0 [in 2018 en 2019]

The vision, mission and objectives are summarised in Figure 1 below.

Figure 1: Vision, mission and objectives

2.2 Functional Design

In GT2.0, functional design is defined as a method to translate the stakeholders' requirements into design features (see D1.5 Functional design of the citizen observatories). A generic "Story Map"[2] was proposed to guide the development of a customized story map for each DC. It was also proposed that the user requirements are stored in a "User Requirement Tracking Tool" (URTT)[3] to allow for easy tracking of their status and to identify the corresponding layer in the platform architecture.

Departing from the generic Story Map as a reference point, the co-design group developed their own Story Map from the perspective of the future users of the Citizen Observatory, citizens, scientists and policy makers (Figure 2). The customized and validated entries in the URTT form the basis for the deployment of the platform architecture of *Grip op water Altena*.

Grip op water Altena offers its community members two main opportunities: A platform to share and access various sources of information, and channels serving to improve the communication between

[2] The generic Story Map is fully described in Ground Truth 2.0 "Deliverable D1.5, Functional design of the citizen observatories".

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citizens, farmers, municipalities and water authority. Collected data can support both storylines, but is not an essential part of the observatory from the beginning.

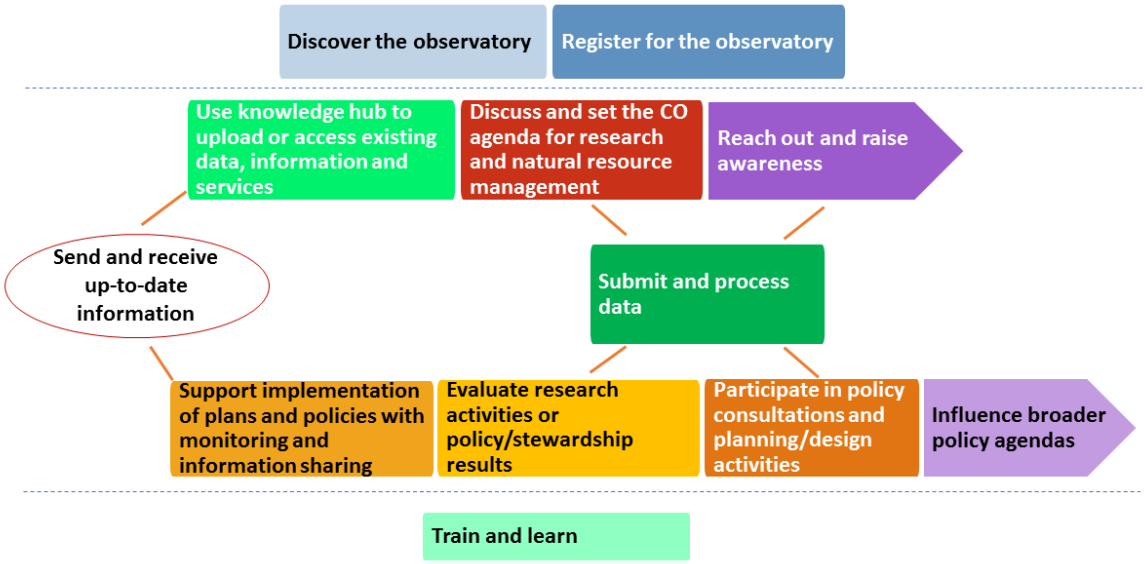

Figure 2: Functional design with main headlines for DC-NL Grip op water Altena

2.2.1 Tools for the development of the platform

WordPress

The layout and content of the platform website have been created in WordPress, a free and open-source content management system. WordPress has primarily been chosen because it is widely used and has a large number of plugins available for various functionalities.

For the current platform (Figure 3), the following plugins have been added:

- WP Google Maps and Basic Google Maps Placemarks, to easily add placemarks to a Google Map
- Contact Form 7, to configure contact forms
- Responsive menu, to allow for scalability of the platform for viewing on laptops, tablets and mobile phones
- Share buttons by GetSocial.io, to add social sharing buttons and track social sharing

WordPress is currently installed on a server owned by HydroLogic Research (demonstration case leader), but in such a generic way that it can easily be transferred to a different server if required.

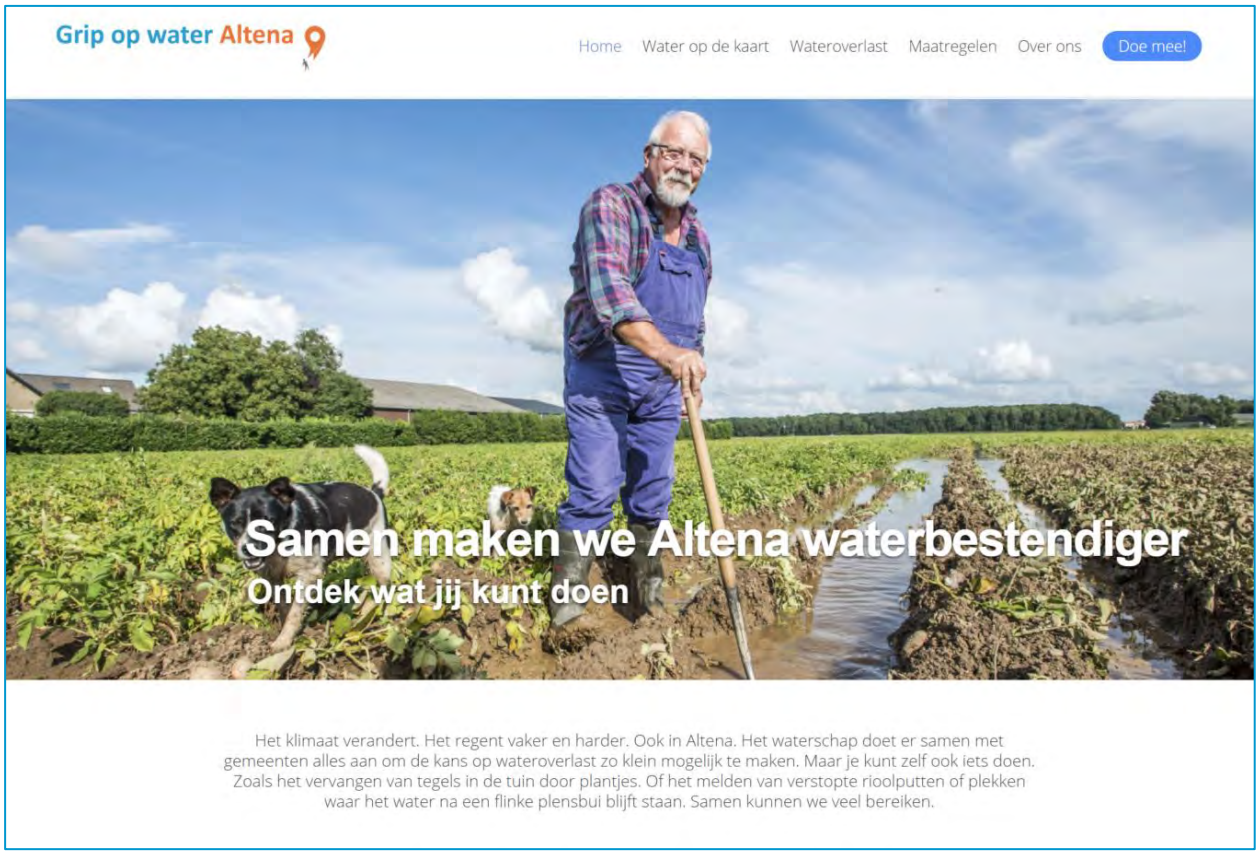

Figure 3: Homepage of the Grip op water Altena platform.

HydroNET platform

Weather and water data and information are made available through the HydroNET platform.

The HydroNET system has been developed by HydroLogic Research and is based on the Software as a Service (SaaS) paradigm. HydroNET runs from a cloud infrastructure and is used both in research and commercial environments.

In HydroNET, open protocols are used to couple existing platforms and create a chain of information services, connecting a variety of distributed data sources through a system of backend services. Online models assimilate, calibrate, forecast and aggregate data into information which is shared via a network of application services and made available to a wealth of web-based applications with real-time thematic maps (Figure 4).

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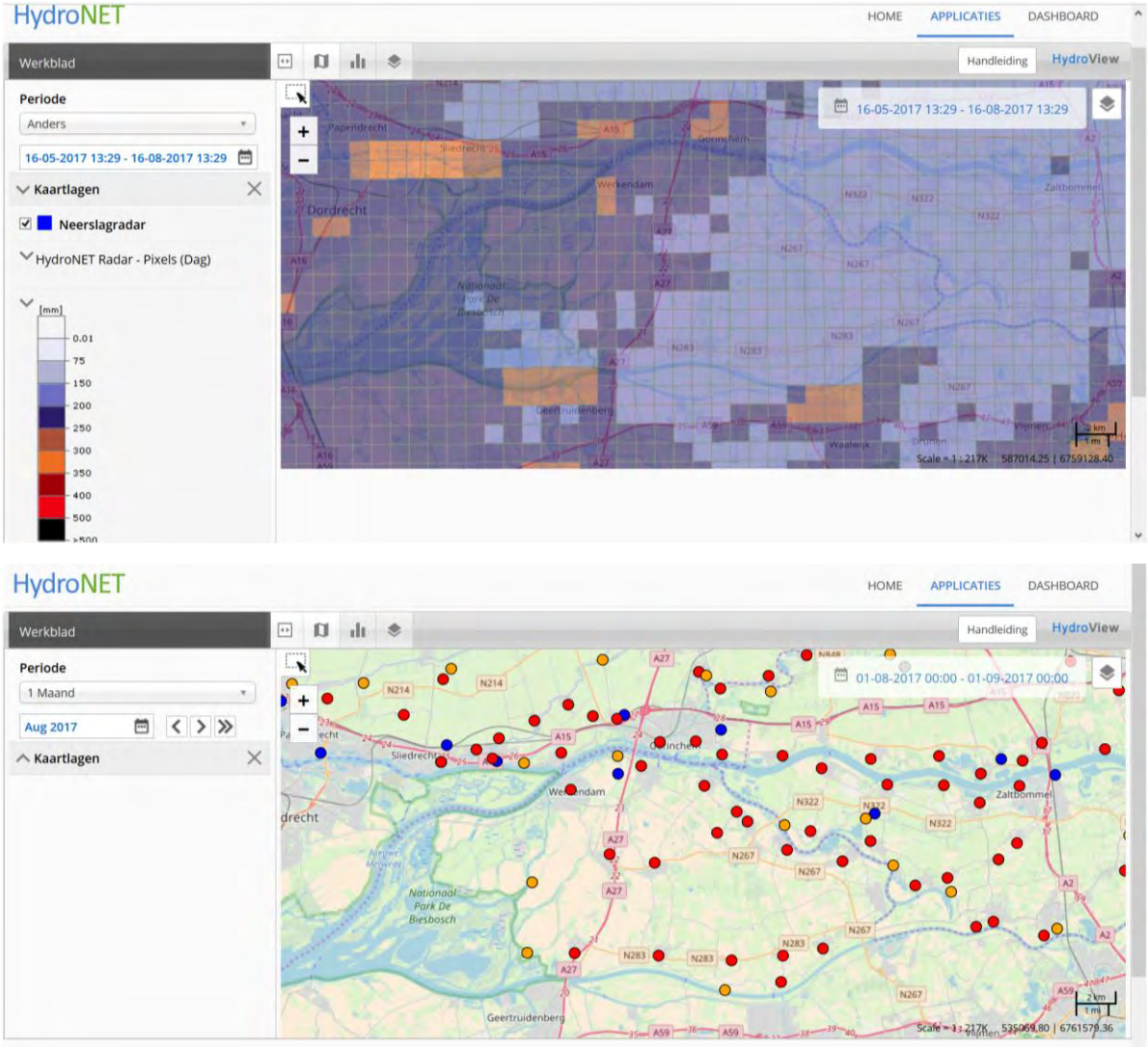

Figure 4: Example maps on the HydroNET platform.

ESRI Story Maps

ESRI Story Maps is used to create a gallery of maps from different sources (HydroNET, Rijkswaterstaat) and combine them with explanatory text in a consistent way (Figure 5).

Figure 5: ESRI Story Maps on the Grip op water Altena platform.

2.2.2 Data Collection and data aggregation

As the collection of weather and water data does not have the highest priority for the DC-NL, tools for data collection will be integrated in a later version of the platform.

Gavagai Monitor

Online conversations on topics directly related to the theme of *Grip of water Altena* are being monitored with the Gavagai Monitor. This tool searches for pre-defined keywords on news sites, in blogs and Twitter feeds and performs statistics on the results. The Gavagai Monitor analyses the sentiments in the messages, indicating whether conversations are dominantly negative or positive.

For the DC-NL, the Gavagai Monitor searches for keywords associated with five predefined themes: rain, flooding, water level, drought, water management. In addition, a filter was added with names of towns and cities in the area of interest to allow for geographical selection of messages (Figure 6).

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Figure 6: Gavagai Monitor dashboard for DC-NL themes.

2.2.3 Monitoring and assurance of the technical performance of the platform

Usage of the platform website is being monitored with Google Analytics. The technical performance of the platform is monitored by HydroLogic's IT-team within their standard testing procedures.

2.2.4 Standardization of data management

As no data is being collected in the first platform version, this is not yet implemented.

2.2.5 Enhanced services

Apart from the tools presented above, no enhanced services have been implemented in the platform. This is foreseen for later versions.

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3. Platform technical design and integration of components of the Citizen Observatory

3.1 Platform architecture and selection of technological tools to use

The validated functional design was translated into a technical design, where existing data and information sources, as well as communication channels are integrated into one platform (Figure 7). The central place is the web platform at altena.gripopwater.nu created with WordPress.

On the web platform, the user finds interactive maps with weather and water information from external data sources. These maps are configured using open and private data provided through HydroNET (precipitation product, measurements water authority Rivierenland) and publicly available maps (e.g. Rijkswaterstaat). All maps are brought together and supplemented with explanatory text in the ESRI Story Maps interface.

There is static basic information on what measures can be taken, based on existing websites like hohohoosbui.nl (water authority Rivierenland), Rainproof Amsterdam and huisjeboompjebeter.nl). The static information is augmented with dynamic information and tips from community members (forum). Google Maps plugins are used to include maps showing implemented measures and reports on the water system.

Online and offline stakeholder interactions will inform and be informed by the communication on the web platform. Online tools used are WhatsApp (co-design group communication) and a Facebook page. A wider audience is reached through online social media (Twitter, Facebook) and printed/online local media channels (local newspaper).

Data collection will be implemented in a later stage of the platform.

Figure 7: Technical architecture of the platform (initial/medium term version)

The pages on the web platform are designed around sets of user stories (Table 1).

Table 1: Pages and content on the web platform

Page	Content
Home	Teasers and links to the other pages
Water on the map	Weather and water information maps
Flooding	Information on what to do in case of flooding
	Information on tasks of different organisations
	Personal stories (to be added)
Measures	Map with measures taken by different stakeholders
	Information on what measures stakeholders (can) take
About us	Grip op water Altena
	Ground Truth 2.0
Join us	Contact form

The information on the web platform will be continuously expanded. Next steps are integration of comment functionality and a news section.

3.2 Mock-up and feedback

During the mock-up session in September 2017, the co-design group were given paper versions of example HydroNET maps, information on hohohoosbui.nl and the proposed layout for the web platform.

A returning comment from the co-design group is that provided information and data needs to be actual and tailored to their situation and region. Maps should be zoomed in to cover the Altena region. Measures taken should not be general, but show what the water authority and municipalties are actually working on in their region.

A multitude of devices was used during the mock-up session, directly illustrating the need to set up a responsive platform that works on different screen sizes.

During the mock-up session, a name was chosen for the observatory. *Grip op water* covers the focus on water-related issues, not restricted to pluvial flooding. This allows for expansion of topics, for example with river flooding and water quality issues. The local nature of the observatory is reflected in the addition *Altena*, which is the name of the new municipality to be formed by January 2019 by merging the three existing municipalities. The regional name has been kept separate in the domain name (altena.gripopwater) to allow for easy expansion to other regions, still keeping the local focus of each observatory. As the most obvious domain name, gripopwater.nl, was already registered to another party, we chose the domain name gripopwater.nu.

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Table 2: Necessary tasks to develop the first version of the CO from the mock-up

Task	Tools	Responsible
Register domain name gripopwater.nu	Web hosting	HR
Register Twitter account	Twitter	HR
Design logo Grip op water Altena	Inkskape	HR
Create website content (text and figures)	WordPress	HR
Create precipitation maps	HydroNET	HR
Create aggregated map page	ESRI Story Maps	HR

4 Presentation and description of contents of the Citizen Observatory platform (First version)

The first version of the platform *Grip op water Altena* (altena.gripopwater.nu) has been made available online on 16 January for testing by the co-design group. This was a soft launch, there was no suitable event to connect to for a big public launch.

The website is available in Dutch, use of the Dutch language throughout was a strong requirement of the co-design group and stresses the local character.

The header on the website shows the observatory logo on the left side (Figure 8). The logo includes the colours and the pin from the Ground Truth 2.0 logo. On the right side, the different menu items are available, as presented in Table 1.

Figure 8: Header of the platform website

The homepage starts with a large picture, followed by a call to action (Figure 9). Below are coloured blocks with teasers to the different pages on the website.

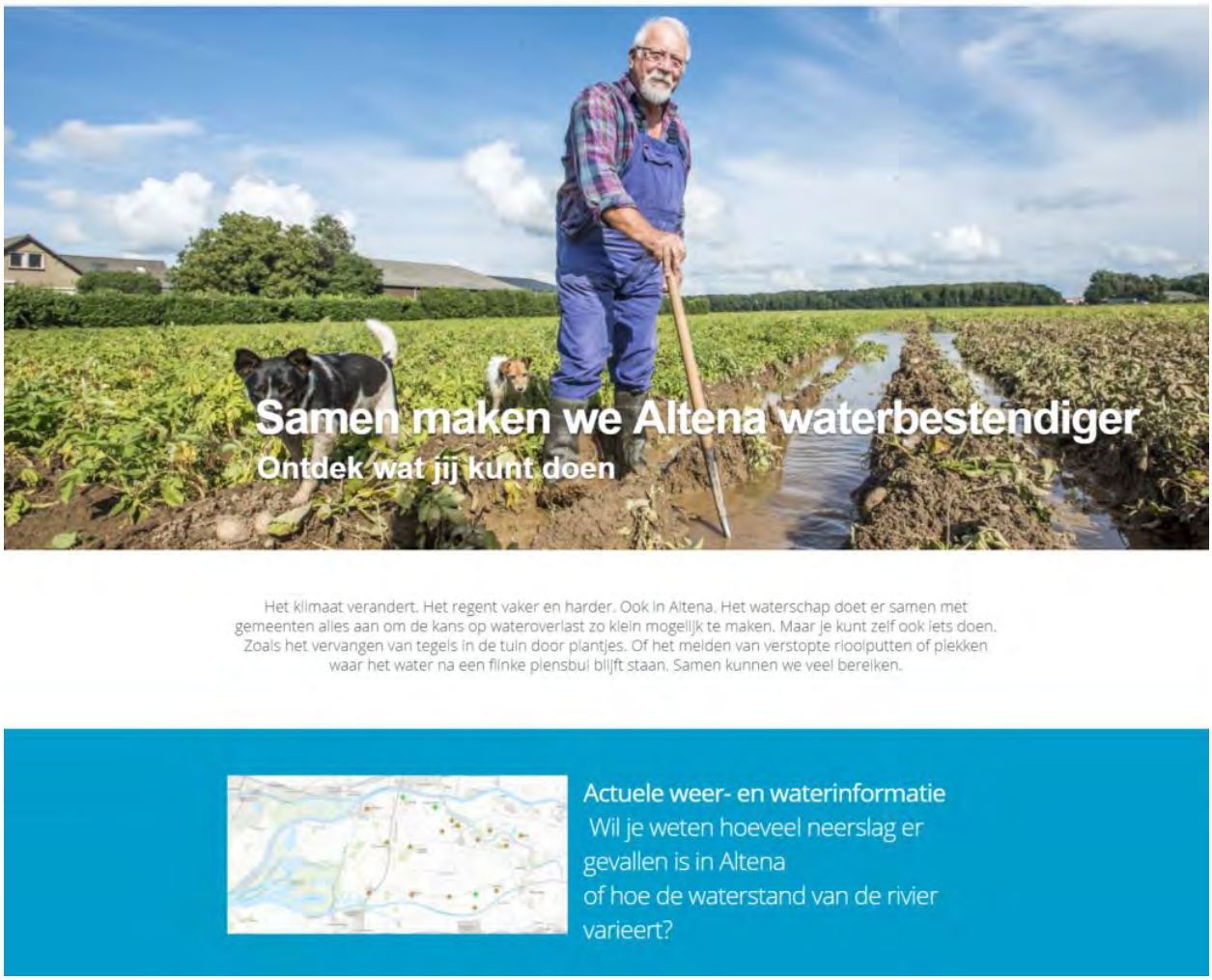

Figure 9: Top part of the homepage

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The lower part of the homepage (Figure 10Figure 10) includes additional links to the pages on the website and the acknowledgement of the EU funding in two languages (Dutch and English). This bar is included in all the pages.

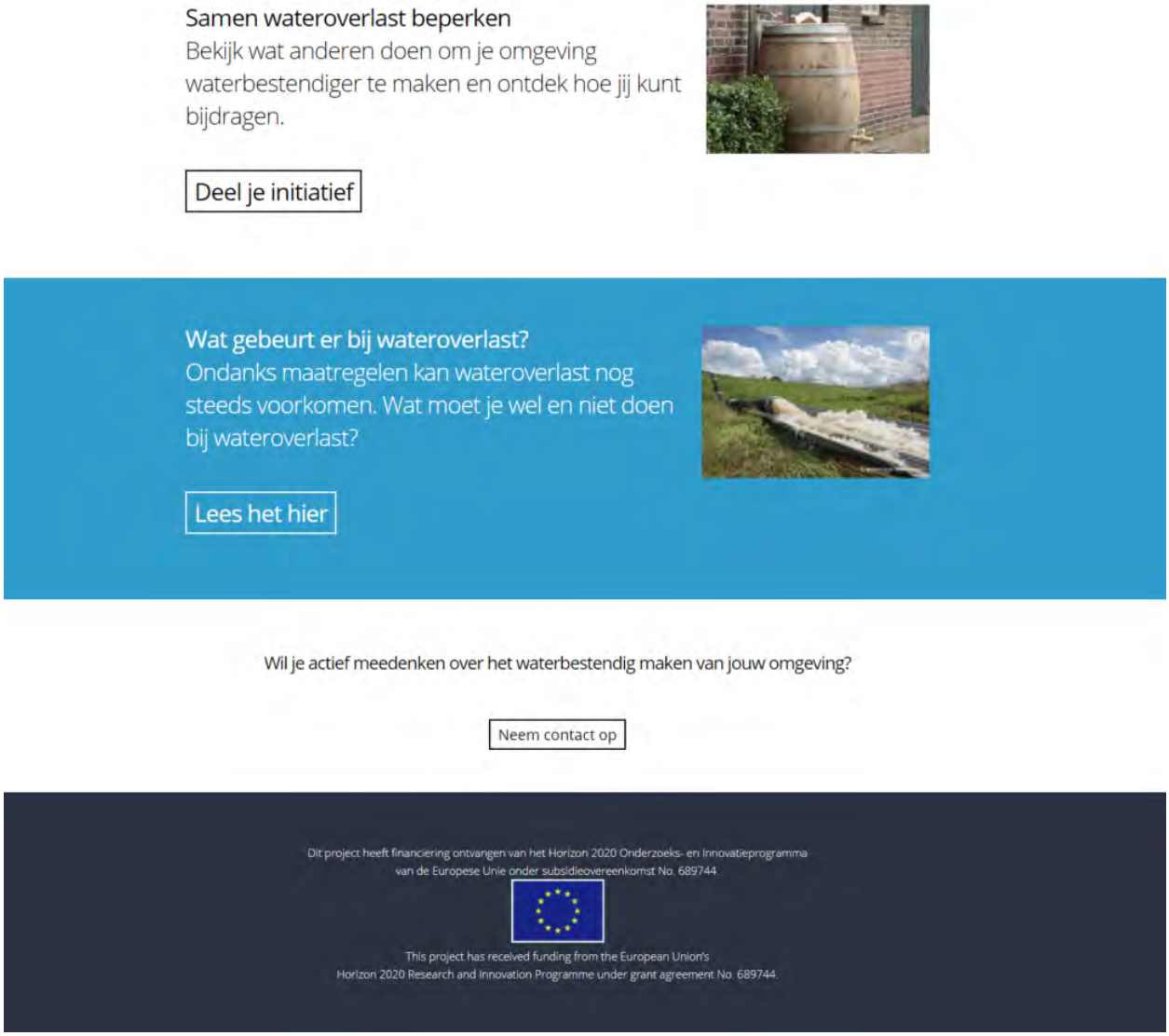

Figure 10: Lower part of the homepage

Water op de kaart currently includes five maps (three from HydroNET, two from Rijkswaterstaat) with weather and water information (Figure 11). The layout is configured with ESRI Story Maps. More maps will be added when the water authority makes their data available.

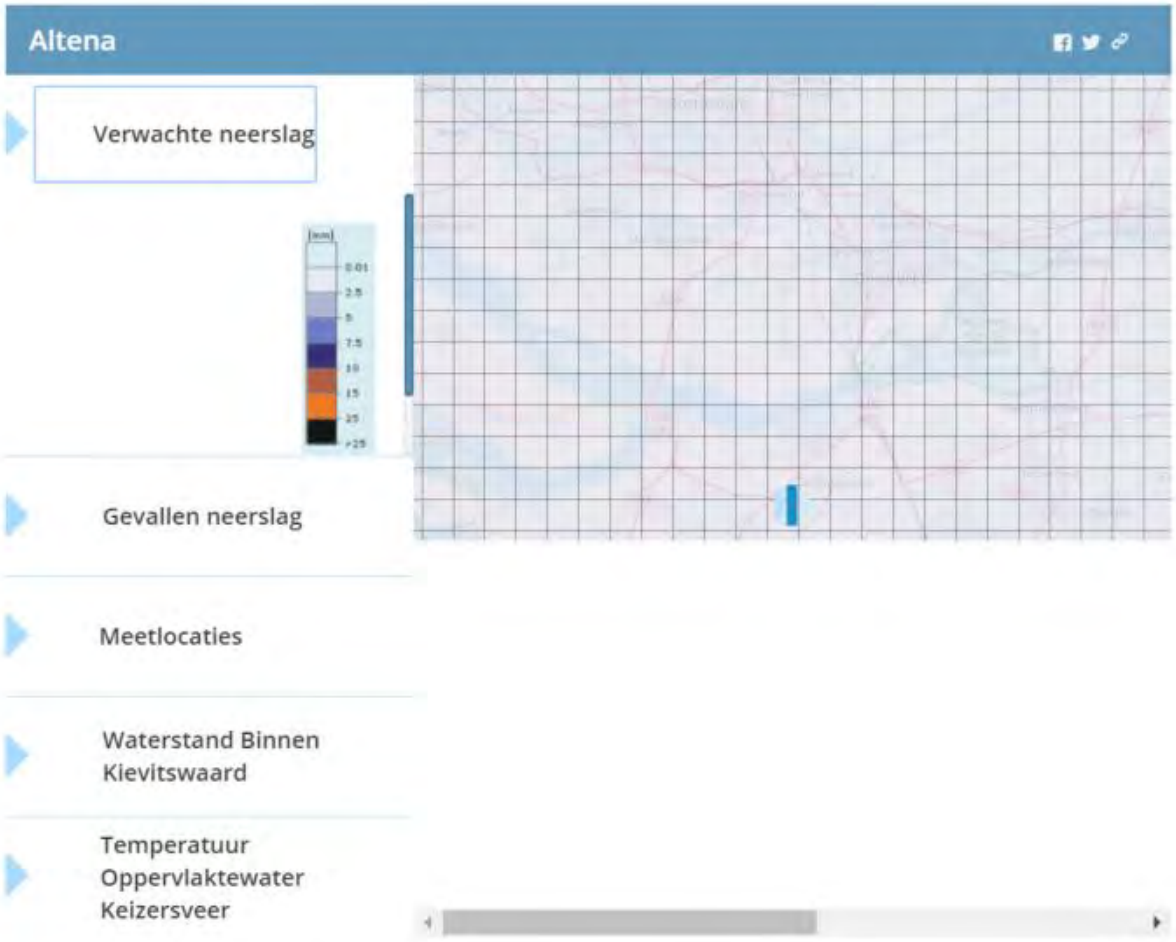

Figure 11: Page Water op de kaart with ESRI Story Maps.

The page Wateroverlast provides the contact information of the authorities in case of flooding (Figure 12). More content will be provided by the municipalities and the water authority, citizens will add personal stories.

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Figure 12: Page Wateroverlast

The page Measures shows a map where measures taken by the community members can be added, together providing an overview of what is being done in Altena (Figure 13

Figure 13). The map is based on Google Maps with a plugin for placeholders. Below the map is a link to a form where visitors can share their measures. The page furthermore contains short descriptions of measures and links to pages with more detailed information.

Samen aan de slag

De gemeenten en het waterschap doen er alles aan om wateroverlast te beperken of te voorkomen. Maar je kunt ook zelf meehelpen je omgeving waterbestendiger te maken. Bekijk hier wat je zelf kunt doen en wat anderen doen. Deel je initiatieven om anderen te inspireren!

Grip op water in Altena

Jouw initiatief ook op deze kaart? Deel het hier met ons.

Wat kun je zelf doen in je tuin?

Tegels eruit, groen erin!

Minder tegels in de tuin of straat zorgen ervoor dat regenwater niet bovengronds wegstroomt.

Lees meer

Regenton

Een regenton helpt om water op te slaan bij hevige regenval.

Lees meer

Infiltratiekratten

Infiltratiekratten worden gebruikt voor ondergrondse berging van overtollig regenwater.

Figure 13: Page Maatregelen

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The page About us contains more information about Grip op water Altena and Ground Truth 2.0 (Figure 14).

Grip op water Altena

De co-designgroep van Grip op water Altena tijdens de workshop van 13 juni 2017

Met Grip op water Altena willen burgers, organisaties, gemeenten en waterschap samen het Land van Heusden en Altena klimaatbestendiger maken. Dit doen we door:

- De uitwisseling van waarnemingen en informatie over het weer- en watersysteem te faciliteren
- Een kennisplatform op te zetten met tips om zelf maatregelen te treffen tegen wateroverlast
- Korte communicatielijnen te ondersteunen en inzicht te geven in plannen en activiteiten wat betreft waterbeheer
- Een open dialoog tussen alle betrokken partijen mogelijk te maken en het netwerk uit te breiden tot een echte watercommunity.

We zijn begonnen met een kleine groep mensen die meer grip op water in hun omgeving willen krijgen. We zijn continu op zoek naar versterking van enthousiaste burgers, organisaties en bedrijven die Altena waterbestendiger willen maken. Dit kan bijvoorbeeld door mee te denken, waarnemingen door te geven of activiteiten te organiseren.

Wil je meehelpen, meld je dan aan!

Figure 14: Page About us, Grip op water Altena

The page Doe mee contains a contact form that collects the visitor's name and e-mail address and sends it to HR currently. Information will be provided promptly after receiving the request.

The Twitter page of Grip op water Altena (https://twitter.com/gripopwater) is used to share news from the observatory and other related sources and to get in contact with a wider audience (Figure 15).

Figure 15: Twitter page of Grip op water Altena

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The matching of the tools, headlines and platform content is presented in Table 3 and

Table 4.

Table 3: Development of the technical platform Grip op water Altena. Technical design and integration of components

FIRST VERSION PLATFORM IMPLEMENTATION					
HEADLINES	**SUBHEADLINES**	**YES/NO**	**WHY NOT?**	**TOOL**	**WHERE?**
DISCOVER THE OBSERVATORY	Read portal/info pages	yes		WordPress	http://altena.gripopwater.nu
	Watch videos	no	Not yet applicable		
	Play games/do quizzes	no	Not yet applicable		
	Access public data/materials	yes		WordPress, HydroNET and ESRI Story Maps	http://altena.gripopwater.nu/water-op-de-kaart http://altena.gripopwater.nu/maatregelen
	Take guided tours	no	Not yet applicable		
JOIN THE COMMUNITY	Register account/agree terms	no	Final platform	WordPress (plugin)	
	Provide information required for user assessment/verification	no	Not yet applicable		
	Create profile & link to other users	no	Not yet applicable		

	Choose notifications channels	yes		Twitter, Facebook, e-mail	https://twitter.com/gripopwater, https://www.facebook.com/gripopwateraltena/
FIRST VERSION PLATFORM IMPLEMENTATION					
HEADLINES	**SUBHEADLINES**	**YES/NO**	**WHY NOT?**	**TOOL**	**WHERE?**
SUBMIT AND PROCESS DATA	Submit open observations for exploration and discovery	yes		WordPress, Google Maps, Google Maps Placemarker	http://altena.gripopwater.nu/maatregelen
	Send notifications to "go and observe"	No	Final platform		
	Submit observations according to research protocols and instructions	No	Final platform		
	Add tags and meta-data	no	Not yet applicable		
	Provide comments on observations	no	Final platform	WordPress	
	Integrate external data sets	yes	NA	WordPress, HydroNET and ESRI Story Maps	http://altena.gripopwater.nu/water-op-de-kaart

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FIRST VERSION PLATFORM IMPLEMENTATION					
HEADLINES	**SUBHEADLINES**	**YES/NO**	**WHY NOT?**	**TOOL**	**WHERE?**
SUBMIT AND PROCESS DATA	Validate/process scientifically	No	Not yet applicable		
EVALUATE RESEARCH ACTIVITES OR POLICY/ STEWARDSHP RESULTS	Rate and review activities	no	Possibly offline		
	Launch or respond to surveys	no	Not yet applicable		
	Post or review results data	no	final platform		
	Discuss results	no	Possibly offline		
TRAIN AND LEARN	View instruction videos	no	Not yet applicable		
	Access/download manuals and field guides	No	Not yet applicable		
	Test knowledge	no	Not yet applicable		
	Create and get feedback on test submissions	no	Not yet applicable		

FIRST VERSION PLATFORM IMPLEMENTATION					
HEADLINES	**SUBHEADLINES**	**YES / NO**	**WHY NOT?**	**TOOL**	**WHERE?**
TRAIN AND LEARN	Develop personal competencies	no	Not yet applicable		
USE KNOWLEDGE HUB TO UPLOAD OR ACCESS EXISTING DATA, INFORMATION AND SERVICES	Search/Browse observatory data	yes		WordPress, HydroNET and ESRI Story Maps	http://altena.gripopwater.nu/water-op-de-kaart
	Browse observatory database	yes		WordPress, HydroNET and ESRI Story Maps	http://altena.gripopwater.nu/water-op-de-kaart
	View maps and visualizations	yes		WordPress, HydroNET and ESRI Story Maps	http://altena.gripopwater.nu/water-op-de-kaart
	Upload existing data and information	yes		WordPress, HydroNET and ESRI Story Maps	http://altena.gripopwater.nu/water-op-de-kaart
	Use CO knowledge hub	yes		WordPress, HydroNET and ESRI Story Maps	http://altena.gripopwater.nu/water-op-de-kaart

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	Use enhanced services	No	Not yet applicable		
INFLUENCE BROADER POLICY AGENDAS	Participating decision makers	yes		WordPress	http://altena.gripopwater.nu
REACH OUT AND RAISE AWARENESS	Share contents on social media	Yes		WordPress (plugin)	http://altena.gripopwater.nu https://twitter.com/gripopwater https://www.facebook.com/gripopwateraltena/

FIRST VERSION PLATFORM IMPLEMENTATION					
HEADLINES	**SUBHEADLINES**	**YES/ NO**	**WHY NOT?**	**TOOL**	**WHERE?**
REACH OUT AND RAISE AWARENESS	Create, send or read newsletters	no	No yet applicable		
	Download information/promotion materials	No	Final platform		
	Launch or take part in online campaigns	No	Not yet applicable		
	Find/join/promote offline activities	Yes		WordPress, Twitter, Facebook	http://altena.gripopwater.nu https://twitter.com/gripopwater https://www.facebook.com/gripopwateraltena
DISCUSS AND SET THE CO	Post concerns/ideas in discussion fora	No	Final platform		

AGENDA FOR RESEARCH AND NATURAL RESOURCE MANAGEMENT	Take part in (live) online discussions	No	Final platform		
	Organize offline activities	yes		WordPress, WhatsApp	http://altena.gripopwater.nu WhatsApp group
	Interpret exploratory data and set internal agenda	No	Not yet applicable		
	Develop a shared vision	yes		WordPress	http://altena.gripopwater.nu

FIRST VERSION PLATFORM IMPLEMENTATION					
HEADLINES	**SUBHEADLINES**	**YES / NO**	**WHY NOT?**	**TOOL**	**WHERE?**
SUPPORT IMPLEMENTATION OF PLANS AND POLICES WITH MONITORING AND INFORMATION SHARING	Communicate new policies/plans	yes		WordPress, Twitter, Facebook	http://altena.gripopwater.nu https://twitter.com/gripopwater https://www.facebook.com/gripopwateraltena
	Access info how to comply/participate	yes		WordPress	http://altena.gripopwater.nu/doe-meemee/
	Create, promote or find offline activities	Yes		WordPress, Twitter, Facebook	http://altena.gripopwater.nu https://twitter.com/gripopwater https://www.facebook.com/gripopwateraltena
	Track progress of activities	Yes		WordPress, Twitter, Facebook	http://altena.gripopwater.nu https://twitter.com/gripopwater https://www.facebook.com/gripopwateraltena

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	Monitor status of a resource	yes		WordPress, HydroNET and ESRI Story Maps	http://altena.gripopwater.nu/water-op-de-kaart
	Encourage compliance and facilitate communication with formal authorities	yes		WordPress	http://altena.gripopwater.nu
PARTICIPATE IN POLICY CONSULTATIONS AND DESIGN PLANNING ACTIVITIES	Post policy drafts and request feedbacks	yes		WordPress and offline	http://altena.gripopwater.nu
	Provide feedback on policy drafts	yes		WordPress and offline	http://altena.gripopwater.nu
	Organize/Invite to off-line activities	Yes		WordPress, Twitter, Facebook	http://altena.gripopwater.nu https://twitter.com/gripopwater https://www.facebook.com/gripopwateraltena

FIRST VERSION PLATFORM IMPLEMENTATION					
HEADLINES	**SUBHEADLINES**	**YES/NO**	**WHY NOT?**	**TOOL**	**WHERE?**
PARTICIPATE IN POLICY CONSULTATIONS AND DESIGN PLANNING ACTIVITIES	Report on results of the planning process	no	Not yet applicable		
	Platform features to co-design mutually	no	Not yet applicable		

Table 4: .Summary of contents of each page of Grip op water Altena website (first version)

Page	Content	Netherlands Story Map Headline - User card
Grip op water Altena [Home page]	Links to all website pages and platform functionalities.	H1. Discover the observatory - 1.1. Read portal and info pages
Water op de kaart [Water on the map]	Maps with external, partly publicly available data	H4. Use CO to upload or access existing data, information and service - 4.3. View maps and visualizations
Wateroverlast [Water nuisance]	Information on past flooding events, who takes care of what and what to do in case of a (threatening) flooding event	H1. Discover the observatory - 1.4. Access public data/materials
Maatregelen [Measures]	Stakeholders can upload the measures they have taken, these are visualized on a map. In addition, there is information on the measures that can be taken by different stakeholders.	H3. Submit and process data - 3.1. Submit open observations for exploration and discovery
Over ons [About us]	Introduction of the Dutch demo case, links to the contributing organisations, introduction of the Ground Truth 2.0 project.	H1. Discover the observatory - 1.4. Access public data/materials
Doe mee [Join us]	Visitors can fill in a contact form to request more information. For the final platform, an online registration procedure will be added.	H2. Join the CO community - 2.1. Register account and agree terms

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