Quality of Information collected with the help of Map-Based Questionnaires
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1. Introduction
1. Introduction

- Decision makers in urban planning need information about the interests and needs of the people living in a certain area.
- In the past they often used analog questionnaires and field analysis to collect this information.
1. Introduction

Analog Questionnaires

Web Platform (http://www.wilhelmsburg amwasser.de)
 Migration of analog collected geographic information can result in substantial effort invested by GIS experts who have to enter and interpret the objects drawn on a map.
2. Case Studie: The Switch Project in Wilhelmsburg
Case Studie: Wilhelmsburg

Situation:

The city district is located on the south of Hamburg, across the River Elbe and close to the harbor district. It is surrounded by the docks and waterways as well as the river Elbe.

Urban planners focus on possible conflicts between recreational use and the nature protection in the neighborhood areas.
Case Studie: Wilhelmsburg

Conflicts between the recreational use and nature protection in Wilhelmsburg:

Combination of analog questionnaires and web platform to collect information about the needs and wishes of the people in the district.
Case Studie: Wilhelmsburg

- Personal questions: age, gender
- Questions about how the participant uses the water bodies and the nature along the waterbodies: barbecue, walk, bicycle, sports, children playing there, drive a boat, watching nature
- Questions about how the participant would like to use the water bodies and the nature around them.
- Questions could be answered with text and drawing up to three objects like points or lines.
- How did you hear from this participatory platform
3. The Web Platform
The Web Platform

http://www.wilhelmsburgamwasser.de
Technical Architecture

Web 2.0 Technology

- Client-Server Structure with Browser Frontend at the client side
- Background maps from Google Maps
- Map overlay of the water areas provided by geoserver (wms)
- CMS: Typolight
- MySql Database
Interactive Maps

- Background maps from Google
  - Google Street Map
  - Google Hybrid

- Water Bodies Overlay from OpenSource WMS Geoserver.

- JavaScript-library Openlayers used for the development of the interactive maps
Interactive Maps

- 2 modes: navigation and editing
- 3 buttons for drawing objects in the map

http://www.wilhelmsburgamwasser.de
Interactive Maps

- interactive maps provide possibilities to draw up to 3 objects like points or lines on the map.
- The collected data is saved in a MySql 5.0 database on the server and is available for analysis.
4. Case Studie: Quality of the collected information
Information Quality: User groups

Participants
web platform: 98
analog questionnaires: 66
Information Quality: Overview

Information collected with the web platform

Information collected by interviewers with analog questionnaires

BG: (c) LBV Hamburg
Problems: Positioning Quality of the drawn objects

BG: (c) LBV Hamburg

BG: (c) Google
Problems: Positioning Quality of the drawn objects

Orange Markers show objects which were possibly drawn by the participants to test the edit functions.

Red Ellipses show lines along the border of the initial view of the interactive map. These lines indicate that participants had problems with changing between edit and navigation mode.

BG: (c) LBV Hamburg
5. Conclusions

The design of the online map-based web questionnaires was a challenge: There is no standard tool available which would help to create the interactive maps.

In the projects the people in Wilhelmsburg used the web platform to express their opinions about the use of the water bodies. The map based questionnaires were a helpful tool for the collection of information.

Interactive maps are an appropriate tool in projects that concern many people. In smaller projects involving a lower number of participants, discussions and interviews with paper questionnaires combined with paper maps are appropriate.

The collected informations was part of discussion meeting with the different stakeholder groups an is accepted as a base of further planning.