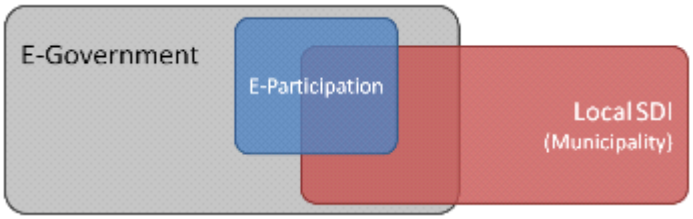
A SDI and Web 2.0 based Approach to Support E-Participation in Municipal Administration and Planning Strategies

TECHNISCHE UNIVERSITÄT DARMSTADT

XXIV FIG International Conference 2010 — TS 7E – SDI and Planning



Dipl.-Geogr. Markus Schaffert | Dr.-Ing. Joerg Blankenbach
Institute of Geodesy, TU Darmstadt, Germany

Agenda

TECHNISCHE UNIVERSITÄT DARMSTADT

- Motivation
- eParticipation in Germany
- Web 2.0 and SDI
- Fit the parts together - Web 2.0 and SDI for enhanced eParticipation
- Example: Bürgerservice Wiesbaden
- Conclusion

Motivation

TECHNISCHE UNIVERSITÄT DARMSTADT

- Municipal administration and planning require citizens' participation
  - Form of governance (representative democracies, welfare state)
  - Juridical standards
- Challenges for municipalities
  - Financial tightness
  - Demographic change

→ Intensified participation as a way to face these challenges

Participation today

TECHNISCHE UNIVERSITÄT DARMSTADT

- Many obstacles for citizens
  - Checking a plan's draft (defined time span and place)
  - Efforts are neccessary (time consuming, costly)
  - → Little participation
- Many obstacles for the municipal government
  - Financial & organizational costs
  - Media disruption
  - → Little efficiency, little voluntary efforts (beyond legal requirements)

eParticipation today

TECHNISCHE UNIVERSITÄT DARMSTADT

- Plenty efforts in the past to use IT in municipal administration and planning … but no breakthrough
- Legal pressure: EU-directive (006/123/EC) on services in the internal market … but still a long way to go

→ Today, new promising possibilities to improve participation are given

Web 2.0

TECHNISCHE UNIVERSITÄT DARMSTADT

- Everyone is able to publish, edit and distribute information via the web
- New web tools and technologies are at hand, like
  - Social networks, blogs, …
  - AJAX

- Earthviewer (Google Maps, …) raise the awareness with regards to geospatial information
  - Sharing of geospatial information → Spatial Web 2.0 Tools

→ New and promising chances for eParticipation

Geostandards and SDI

TECHNISCHE UNIVERSITÄT DARMSTADT

- Geostandards assure interoperability
  - → In this context especially Geo Web Services
  - Web Map Service (WMS)
  - Web Feature Service (WFS)
  - …
- Spatial Data Infrastructures (SDI) applying these standards are required by law and pushed by the public authorities
  - Currently established on different administrative levels
  - → e.g. INSPIRE in Europe or GDI-DE in Germany

Fit the parts together - Web 2.0 and SDI for enhanced eParticipation

TECHNISCHE UNIVERSITÄT DARMSTADT

- People get involved on a voluntary base
- Popularity of Earthviewers lead to an increased awareness of geoinformation
- Increasing availability of geodata (both community-based as well as qualified)
- Use of SDI enables the sustainable and secure storage of community-based geodata
- Use of SDI (→standards) allows the integration of Web 2.0 instruments within municipal IT infrastructures

→ Combining Web 2.0 and SDI promote new ways of eParticipation

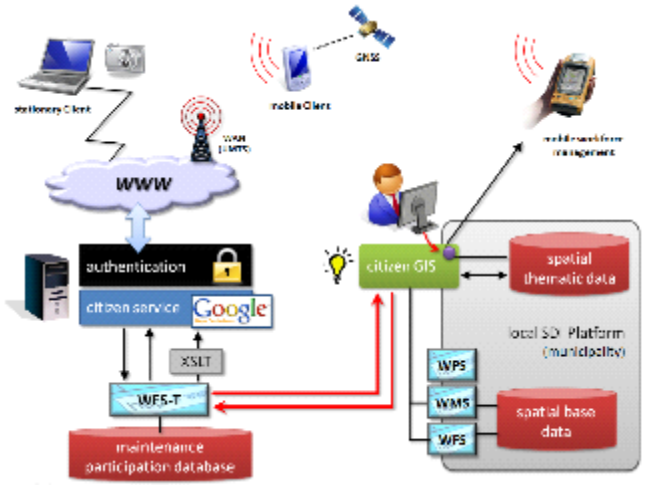
Bürgerservice Wiesbaden – Intention

TECHNISCHE UNIVERSITÄT DARMSTADT

- Prototypical Web 2.0 eParticipation instrument to inform the administration about infrastructural problems
  - Garbage, damaged road lightning, pot-holes,…
  - → More efficient administration
  - → Simple way of citizens‘ participation
- Technical Implementation
  - Geodatabase for storing the spatial base and spatial thematic data
  - Google Maps as viewing component
  - Web form for reports
  - Use of OGC Web Services

Bürgerservice Wiesbaden – Overview

TECHNISCHE UNIVERSITÄT DARMSTADT



Bürgerservice Wiesbaden – Viewer

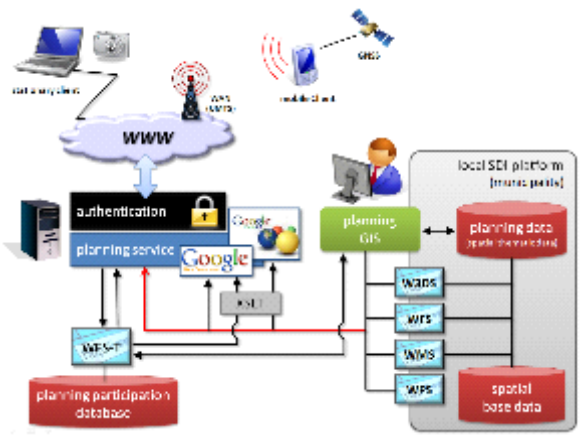
TECHNISCHE UNIVERSITÄT DARMSTADT

- GeoRSS as message format (incl. taken photos) retrieved by XSLT from the WFS
- Different colors for categorizing the citizens‘ messages
- Mobile extension for GPS-based cell phones intended

Additional Applications

TECHNISCHE UNIVERSITÄT DARMSTADT

- Example: Municipal Planning
  - Service with similar architecture to the Bürgerservice
  - Integration of additional spatial thematic data via Geo Web Services
  - Use of 3D-Geodata by using 3D-Earthviewer



Conclusion

TECHNISCHE UNIVERSITÄT DARMSTADT

- Combining Web 2.0 and SDI offers new and promising possibilities to develop adequate eParticipation instruments
  - Benefits
    1. Enhancement of usability
    2. Improved persistence
  - Consequences
    1. Enhanced involvement of the public
    2. Increased efficiency of administration and planning

  - eParticipation could become part of an existing eGovernment and take advantage e.g. of the security mechanisms already provided there

Conclusion

TECHNISCHE UNIVERSITÄT DARMSTADT

- Developing Bürgerservice Wiesbaden as a prototype
  - Technical implementation is in progress
  - The development is conducted in team work with the city‘s personnel

  → Usability and acceptance in the municipal administration
  - Some questions are to be answered, e.g. details about the citizens‘ authorization
  - Extensions like the access via mobile GPS phones are intended
  - Evaluation and transfer to further applications