

“My Environment” – A Dashboard for Environmental Information on Mobile Devices

Thorsten Schlachter, Clemens Döpmeier, Rainer Weidemann, Wolfgang Schillinger, Nina Bayer

Institut für Angewandte Informatik (IAI)



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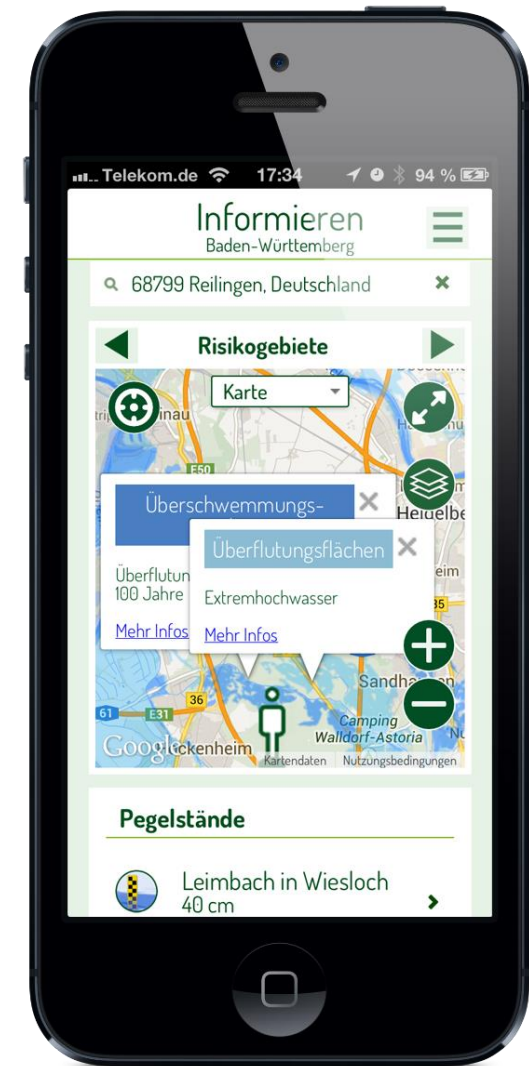
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Outline

- Motivation
- Design principles
 - Pareto and some use cases
 - Backend: environmental data and cloud services
 - No programming required!
 - Cross platform development
- Mobile environmental dashboard
“My environment” 1.0
- Conclusion and outlook



Some motivation needed? Really?



Foto: dsl-kontor.de

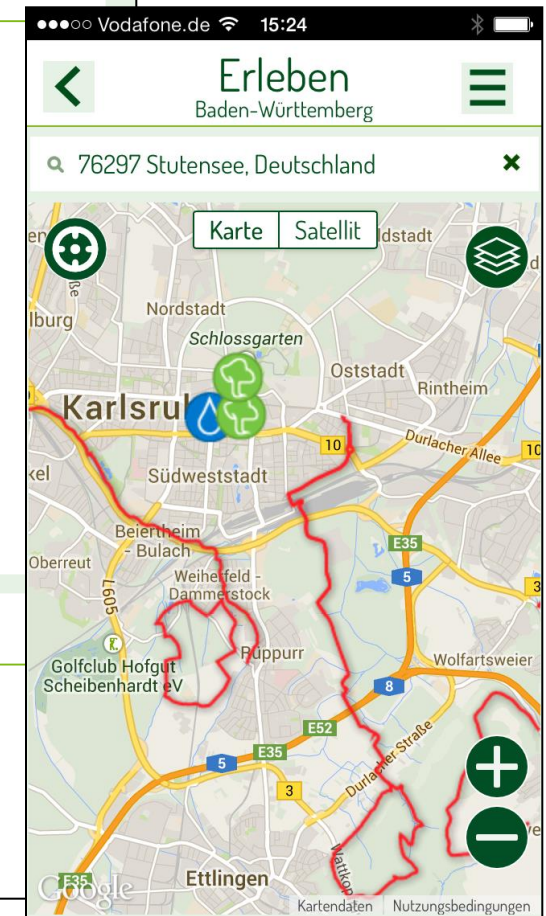
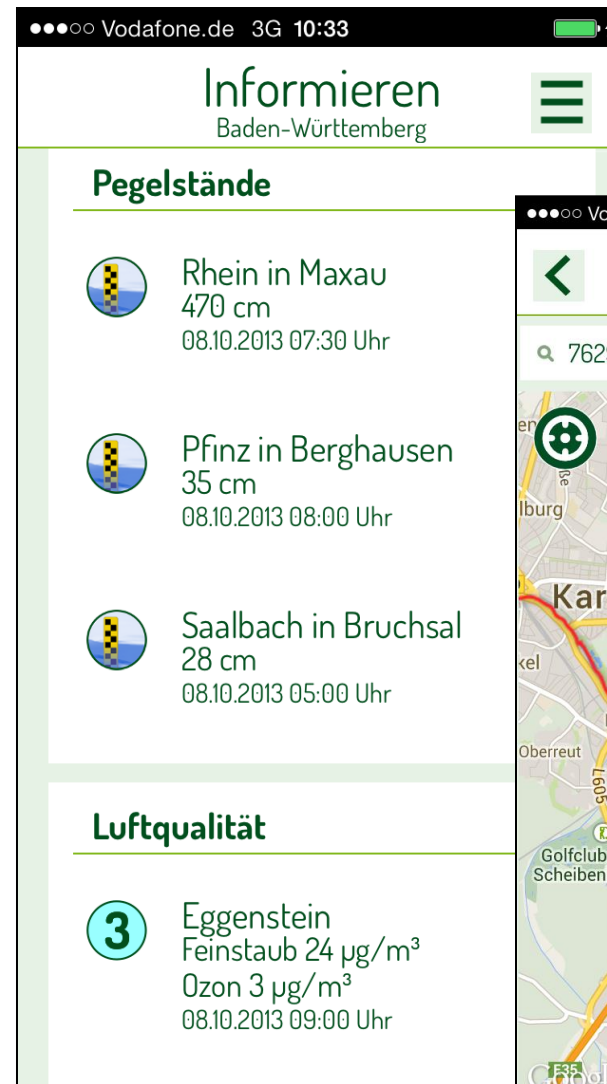
- (Many) people are interested in the state of their direct environment.
- Some even are willing to contribute and share their observations.
- **While being in the middle of this environment!**

We need an app!



„My environment“ – design principles

- “Pareto principle”:
Common use-cases
- Use of existing data
and services
- Cloud services as
infrastructure
- Describing instead of
programming
- Cross-platform
approach (hybrid app)



Pareto principle („80:20“)

- Limit to few common **use cases** (reduce customization!)
an implement generic functionality!

inform

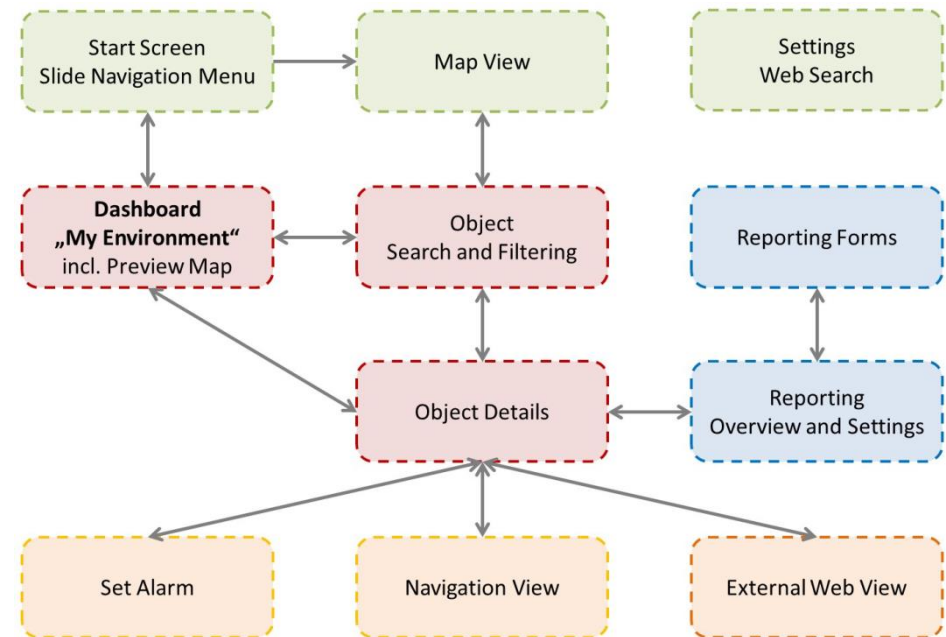
- “What’s in my backyard?”

report

- your observations to the authorities, e.g. ambrosia
- Update existing data

experience

- “What to do next
sunday afternoon?”



Key views and click paths for the use cases “information” and “reporting”.

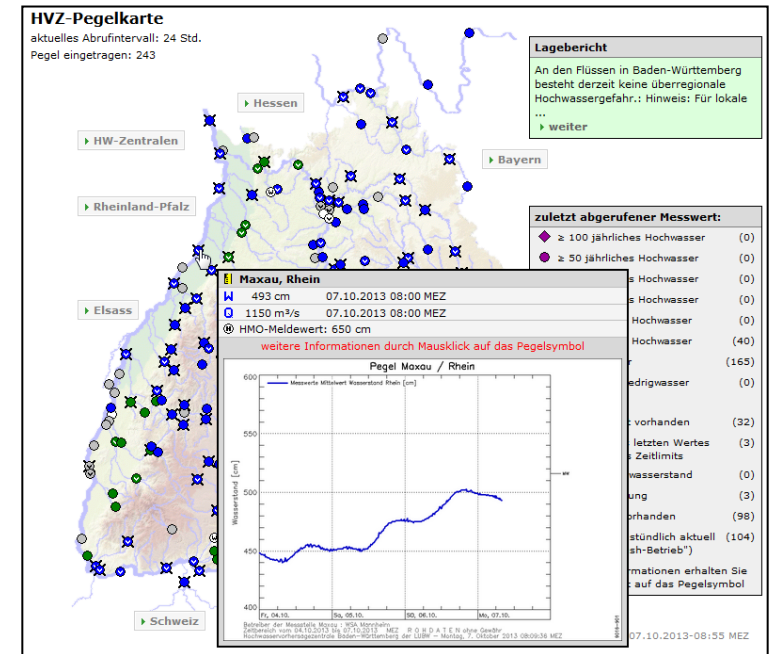
Environmental data

- are available
 - maybe not as (public) services (yet)
 - Infrastructure?

- can be made available

- can be presented in new/other ways/contexts
 - reduce complex data for public use

- can be collected/inspected/updated by the public
 - ➔ use of cloud services



Use of (commercial) cloud services

- to complement existing services and infrastructure

- Google Maps Engine

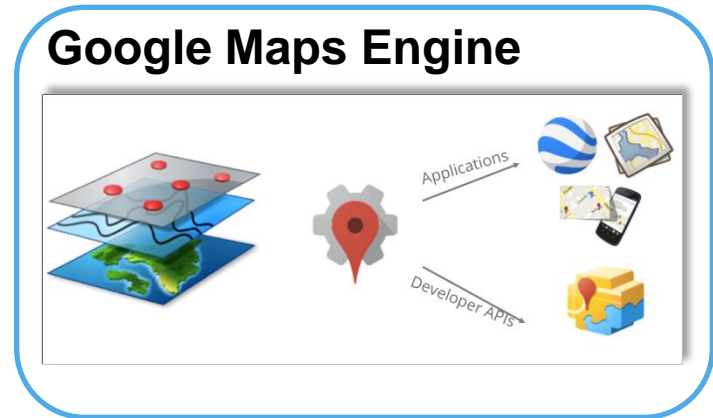
- Spatial data incl. attributes

- Google Fusion Tables

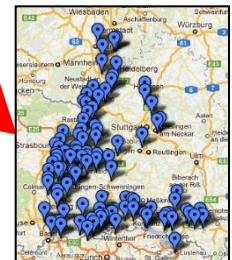
- Measurement data, e.g. water levels, air quality
 - Raw user-collected data

- Google Drive

- Raw user-collected binary data (e.g. images, videos)



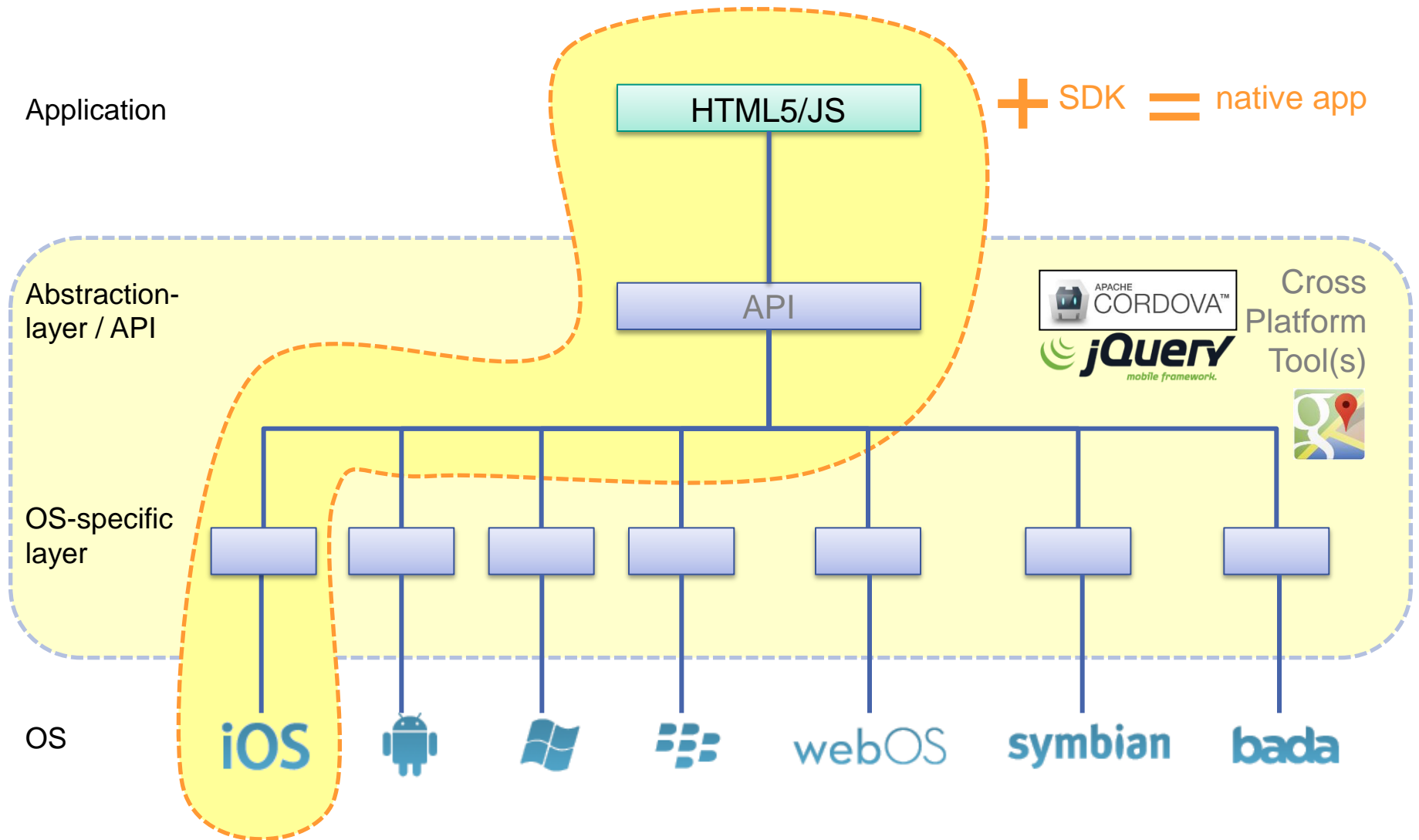
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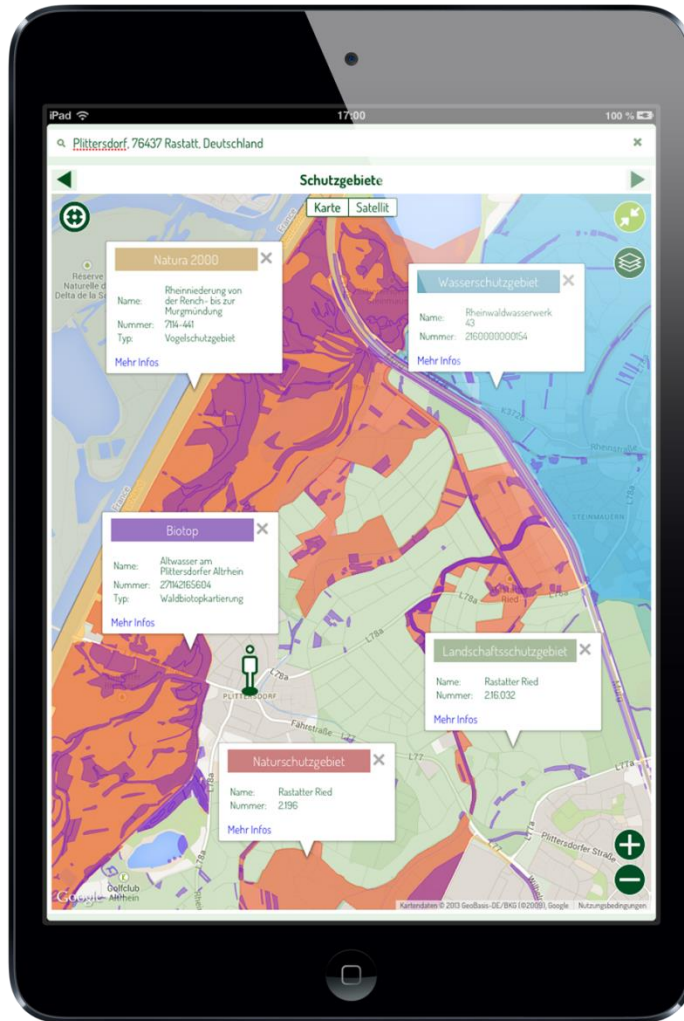
No programming required!

- Add additional systems (“applications”) just by **describing** them!
- Enhanced **OpenSearch descriptions** (XML or JSON)
 - + data abstraction layer, (known) data formats
 - + query-parameters and -types
(e.g. latitude&longitude, timestamp, river names, ...)
 - + display templates (HTML-snippets) with variables
 - + forms („report“) (HTML-snippets)
 - + style information (CSS and related assets)
- Multiple peculiarities and corresponding system catalogs within a single app.

Cross platform development (hybrid app)



“My Environment” 1.0 – “inform”



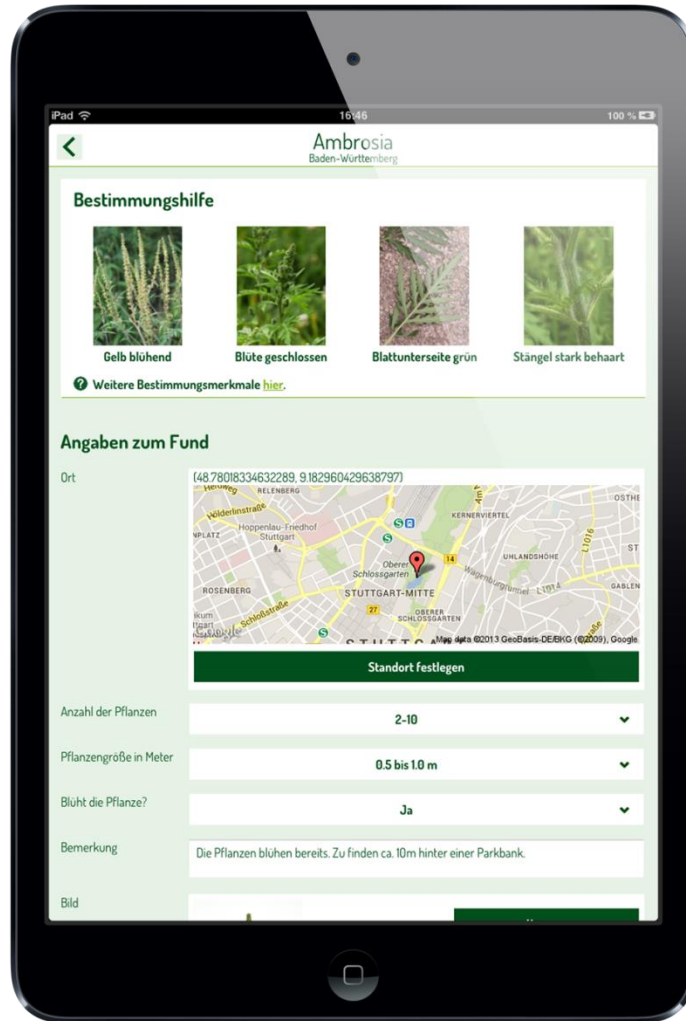
- Air quality
- Water levels

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 08.10.2013 09:00 Uhr

Maps:

- Attractions (3)
- Energy (3)
- Risk areas (2)
- Protection areas (5)
- Observations (2)

“My Environment” 1.0 – “report”



- Ambrosia

- Floods



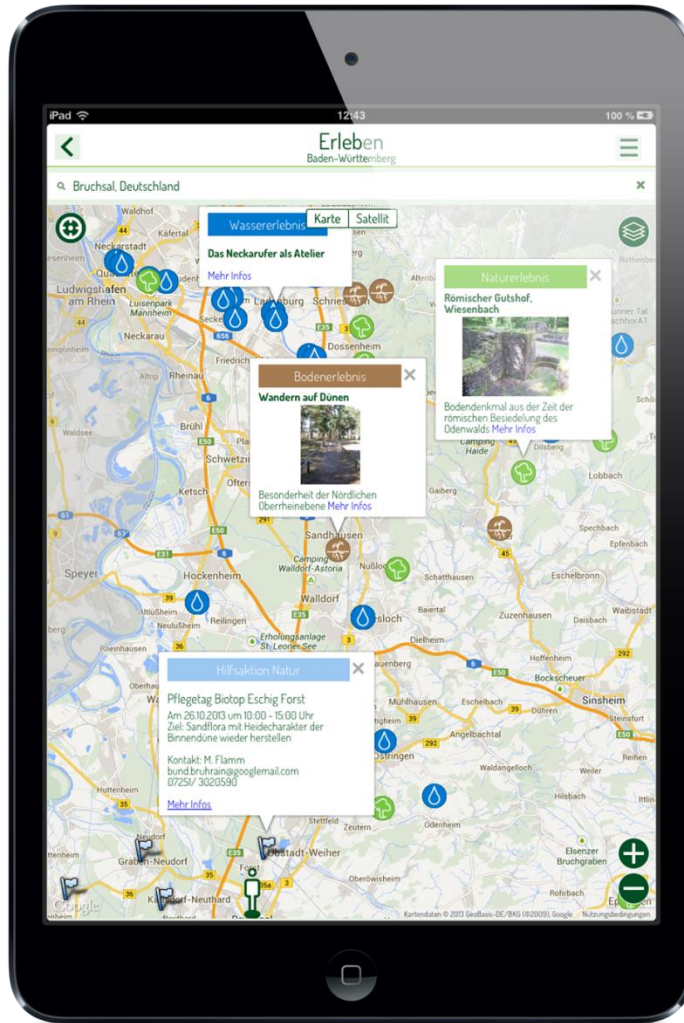
Planned:

- Wells, rivers

- Div. species

- Waste dumps

“My Environment” 1.0 – “experience”



- Nature trails
- Experiences
 - nature
 - soil+geology
 - water
- Environmental education
- Actions (fostering days, open days, ...)
- ...

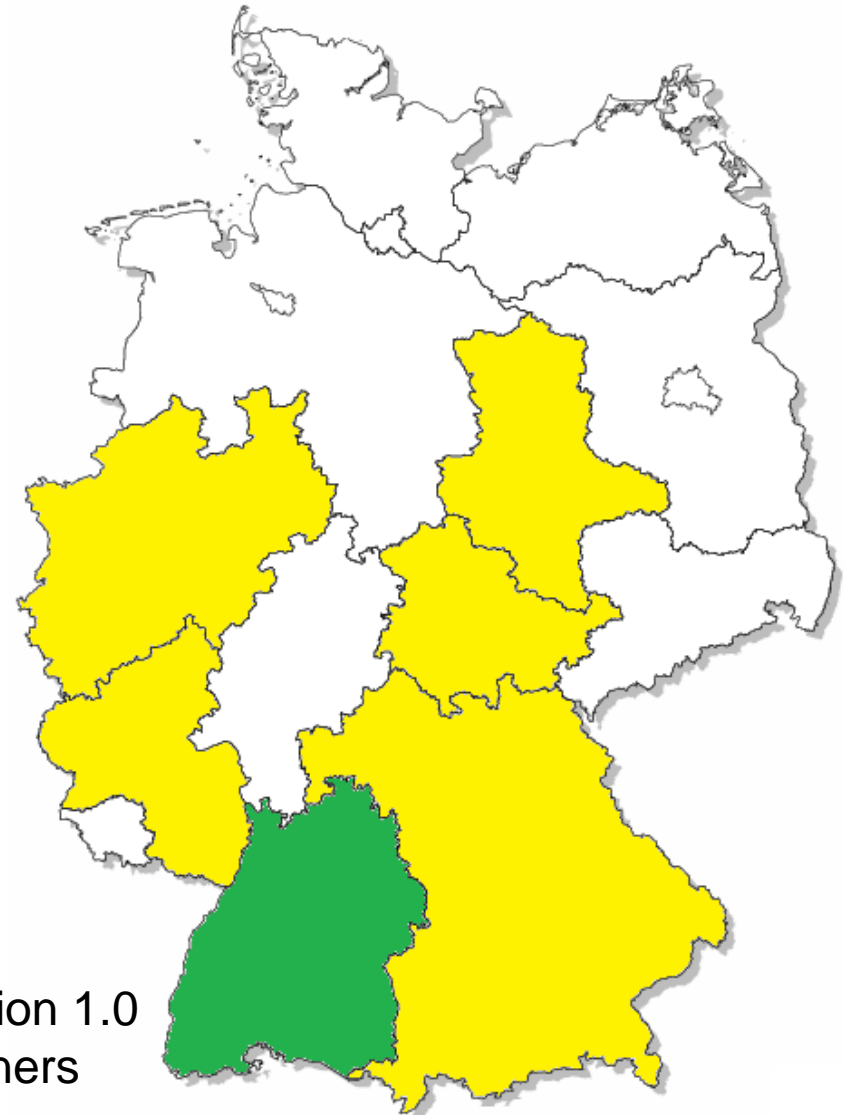
Conclusion: Lessons learned

- **It works!** [limitations included!]
- **Our “dashboard” is more than a single application!**
- “Information” and “experience” can serve as incentive for the “reporting” (crowdsourcing) part.
- Describing (instead of programming) works for sufficient similar applications.
- Cross platform approach based on HTML5 works fine and reduces expenses – if application (and customer) do not have to many special requests/needs.

Outlook

- Windows Phone, Blackberry
- Partner peculiarities for 5 other Federal States
- Enhanced “experience”
- Alarms with push notification
- Enhanced personalization
- Comprehensive authorization concept

■ Version 1.0
■ Partners



Come and have a try!

Meine Umwelt

iOS



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Android

