A lightweight citizens information portal for extreme weather events

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Data Week 2022
06.07.2022 (11:30 – 11:45)
The greatest sight there is is the world
- go see it.

- Kurt Tucholsky
CISS TDI GmbH

Established: 1982
HQ: Sinzig / Rhein
Employees: ~37
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flood of the century (14.07.2021)
Analysis of precipitation (DWD, Hydrometeorologi)

12. Juli 2021, 05:50 UTC
bis 13. Juli 2021, 05:50 UTC

13. Juli 2021, 05:50 UTC
bis 14. Juli 2021, 05:50 UTC

14. Juli 2021, 05:50 UTC
bis 15. Juli 2021, 05:50 UTC
At one day more showers than the average sum of the last years
Destroyed Infrastructure

- Streets
- Bridges
- Telecommunication
- Power grid
- Gas grid
- ...
Where to find

- Medical care
- Childcare
- Information points
- Relief supplies
- Waste zones
- …
how information was distributed
Goal: citizens information portal
Official Data Portal (ADD)
(Supervisory and Service Directorate)

• Data was managed by 1 person (receiving updates via e-mail)
• Long update cycles
• No optimization for mobile devices
• No offline usage
• ESRI licensed

https://lvermkv.maps.arcgis.com/apps/webappviewer/index.html?id=da78a306408441769ff803ec349789bc
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- ESRI licensed
- Offered around two to three weeks after the event...

https://lvermkv.maps.arcgis.com/apps/webappviewer/index.html?id=da78a306408441769ff803ec349789bc
how information could be distributed
**Goal:** citizens information portal

**Requirements:**

- Allow input from different sources (apply changes immediately)
- Allow input from non-technical experts
- Allow offline usage (data download)
- Must be optimized for mobile usage
- Provide a data API
Extreme situations require “extreme” solutions

E.g. Google Docs as data source

affected citizen
Authorized accounts should be able to update data immediately

- Add coordinates automatically
- Adjust coordinates manually (when needed)

### Automatic data publication
Data portal provided by CISS TDI and YellowMap
(https://ahr-hochwasser.ciss.de)

- Update: immediately w/o knowledge
- Access: offline and mobile mode
- Data: 10 different categories
- Export: CSV, Excel, PDF, GeoJSON

Detailinformationen in Tabellenform

<table>
<thead>
<tr>
<th>Name</th>
<th>Straße</th>
<th>Nr. Ort</th>
<th>Telefon</th>
<th>Kategorie</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sportplatz</td>
<td>Grüner Weg</td>
<td>9</td>
<td>Sinzig</td>
<td></td>
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<tr>
<td>Pavillon am Kurpark</td>
<td>Blücherstraße</td>
<td>3</td>
<td>Sinzig</td>
<td></td>
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<td>Markt</td>
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<td>Sinzig</td>
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<tr>
<td>CoWorking Sinzig</td>
<td>Bachovenstraße</td>
<td>3</td>
<td>Sinzig</td>
<td></td>
</tr>
<tr>
<td>Container Jahrspende</td>
<td>Dreidrittelweg</td>
<td>32</td>
<td>0151/5434215</td>
<td></td>
</tr>
</tbody>
</table>

Legende
- Medizinische Versorgung
- Hilfegebiete
- Verwaltung
- Betroffenes Gebiet

For a detailed view, click on the search bar.
where to go next
**What went well**

- Prototype was ready **7 days** after the flood
- Google Sheets enabled non-technical experts to provide data
- Google based authentication
- Adjusting coordinates, integrated in google sheets
- SmartMaps enabled simple data visualization
- License free solution

**What could be better**

- Portal was applied in Sinzig only -> need for a German/European wide approach (joined proposal?)
- Import data automatically from already available linked data sources and export as linked data
- Polygon information was difficult to add -> not everyone is an expert
- Need for a Google account -> use open distributed tools
Summary in three points

1. Distributed data provision allows input from different sources
2. Google Sheets allow non-technical experts to provide data
3. No power grid, no internet → data must be optimized for offline usage