GREENFIELD DEVELOPMENT

faster realization through map-based collaboration
1. ABOUT US
Unitymedia Geospatial Services

integrates...
- geo data
- commercial data
- technical data
- assets / documentation

develops and delivers...
- static maps
- web-based apps
- geo processing
- data services

collaborates with and works for...
- sales and sales planning
- marketing
- planning and documentation
- data ware house und BICC
- strategy

exists since and consists of...
- 4 developers
- 1 product owner
- March 2017
Unitymedia Geospatial Services

Matthias Daues, product owner geo data

- with Unitymedia since 2011
- sales as key account manager until 2015
- developing tools for sales planning and sales potential analysis since 2014
- Building team and portfolio of the geospatial services since 2017
Unitymedia Geospatial Services

our tools of choice

ETL: FME, Python
Back End: PostGIS
Server: ArcGIS-Server, Geoserver
Front End: MapApps
Desktop: ArcGIS, QGIS
2. THE PROJECT – MAP BASED COLLABORATION IN GREENFIELD DEVELOPMENT
Annual throughput, approximated:

Greenfield Projects  200
Homes Connected    20,000
# A dictionary of greenfield development*

<table>
<thead>
<tr>
<th>PROCESS</th>
<th>Set of instructions documented in PDF, Word, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TASK ASSIGNMENT</td>
<td>Messages sent via Email</td>
</tr>
<tr>
<td>DATA ENTRY</td>
<td>Different people put the same data in different systems using unconstrained textboxes</td>
</tr>
<tr>
<td>SIGN OFF / AUTHORIZATION</td>
<td>Print out documents, sign manually, scan, email</td>
</tr>
<tr>
<td>DOCUMENT MANAGEMENT</td>
<td>Save files in dedicated file system</td>
</tr>
<tr>
<td>ERROR CONTROL</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

*Incomplete and biased towards the initial steps.
*Especially down the process chain where low level design and construction are in charge, things are much more automated.*
„Much work is done with computers, and yet it’s not done digitally.“
There are some key weaknesses in our approach

• The departments involved work in isolated environments and systems.
• Data entry is often redundant and nothing is automated.
• Blimey, there is no GIS. None. Zip. Nada.
what people do

Work Flow

in what order

- Involves diverse sales and planning functions
- Each department has its own workflow and system environment
- Work flow and systems need to be aligned in a unified E2E framework and connected via APIs. There must be a persistent project entity.
where things are Geo Data how to find them

- A greenfield lot is a featureless void in GIS space
- Information initially is collected in a non-spatial format, e.g. text, pdf or image files
- The Greenfield outline needs to be digitized. The geometry entity must be tied inseparably to the project entity.
3. The beginnings of a truly digital work flow
These are the tools of choice:

**GIS**
- Digitizing: MapApps 3.x
- Viewing: MapApps 4.x
- Web Service: FME
- Server: ArcGIS Server

**Project Management**
- Workflow Management: JIRA
- Document Management: Confluence

**Related Legacy Systems**
- CRM and Sales Tools
- Address Management
- Planning and asset documentation
- Data Warehouse
Let there be a greenfield plot...

Receive a letter of intent
Create a project in JIRA

Draw the outline on a map.
Enter the project key.

Update data via web service.
- Event-driven on creation
- Scheduled daily
Geo Data + Work Flow

- Draw outline and enter reference
- Map assisted georeferencing
- Look up status of development
- Use a spatial constraint to select data

- Spawn construction phase projects
- Enter new addresses
- Win customers and sell products
- Collect data for a report
We use the three branches of GIS-magic...
...to help the work flow become digital.

- A single point of data entry
- Workflow accessible through GIS and vice versa
- Department specific frontends to a unified data flow
4. OUR NEXT STEPS
BUG FIXES AND NEW FEATURES

- Go Live!
- Connect our data store to planning and documentation.
- Redevelop for MapApps 4.x / ESRI Java API 4.x
5. Q&A