Coordination of Infrastructure Projects with GIS and SharePoint

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About Markus Schenardi

2001: Master Degree in Geomatics

Swiss Federal Institute of Technology, Zurich

2001-2010: Swissphoto Group
Head of IT, Project manager, WebGIS Hosting

Since 2010: Geocom Informatik AG

- Senior GIS Consultant

- Project manager

- Product owner for server and portable products

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Geocom in a Nutshell

1995   Spin-Off of an engineering Company

2001   Change to ESRI ArcGIS technology

2010   Member of the Esri Deutschland Group

2010   Establishing Geocom Informatik GmbH for the German market

2013   Esri Platinum partner

- Currently around 100 employees
- 6 Geocom offices in Switzerland and Germany
- Present with partners in more than 20 countries on all continents

Market segments
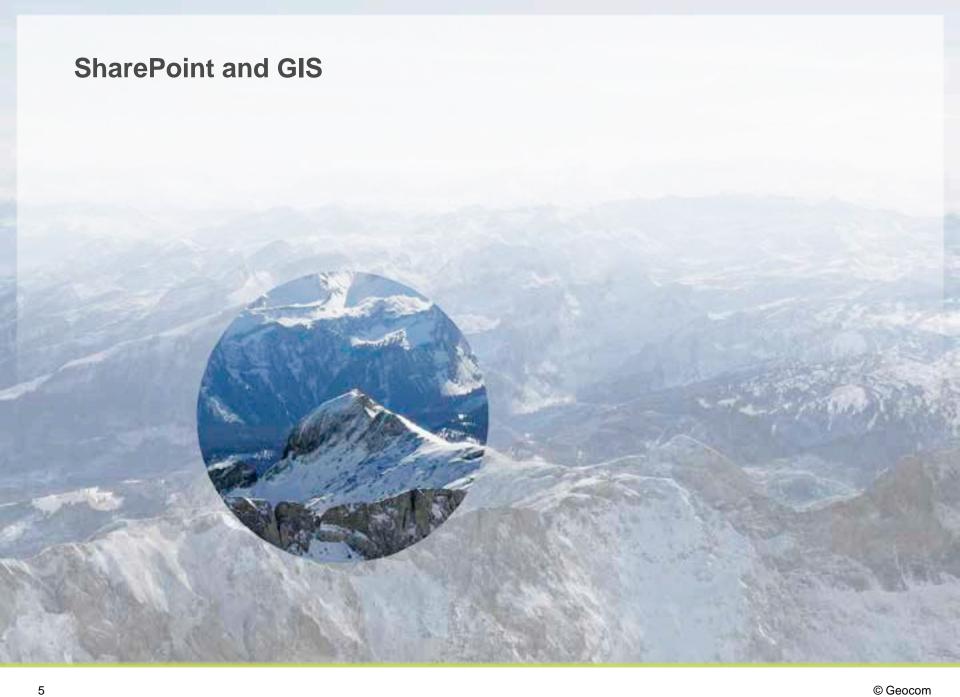

Energy

Plant Management

Cadastral Survey

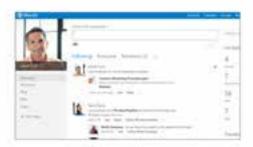Public Infrastructure

Transportation and Logistic

SharePoint and GIS

The Power of Microsoft SharePoint

- Collaboration
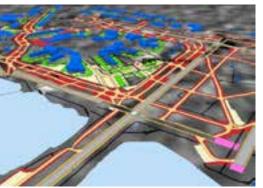
- Document Management

- Workflows

- Etc.

The Power of GIS

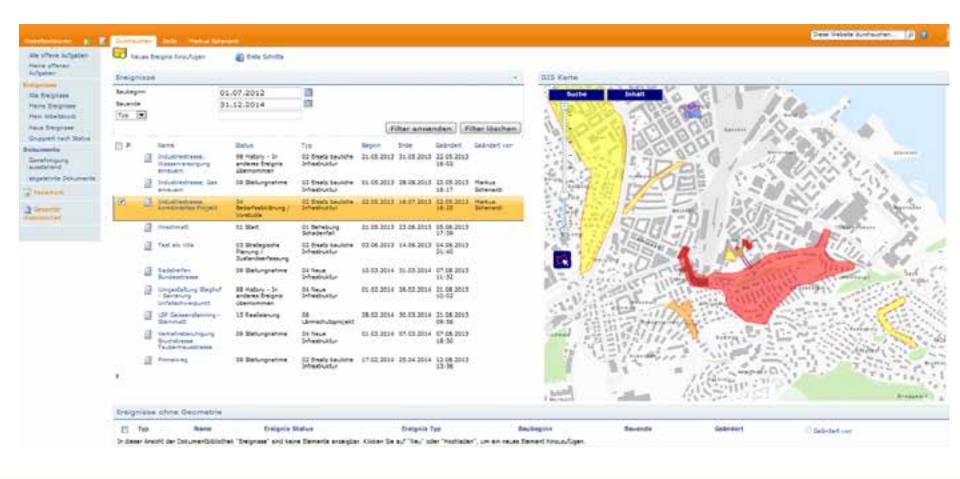- Mapping

- Visualization

- Spatial reference

- Attributive information

A map tells more than words!
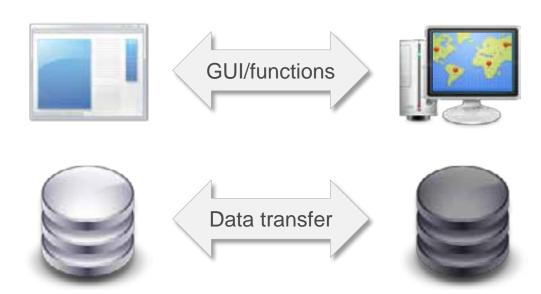
GIS and SharePoint – a Perfect Team

About Integration

Interoperability on Different Levels

Processes

GUI/functions

Data transfer

Processes

- A software system forces an organization to work with structured processes!

- Define responsibilities
- Define in which system the data will be stored
- Define the lead system and object identifiers

GUI/functions

- **User requirement: One system, mature integration**
- Find an appropriate way to integrate the map
- Find a good way of interaction between map and SharePoint
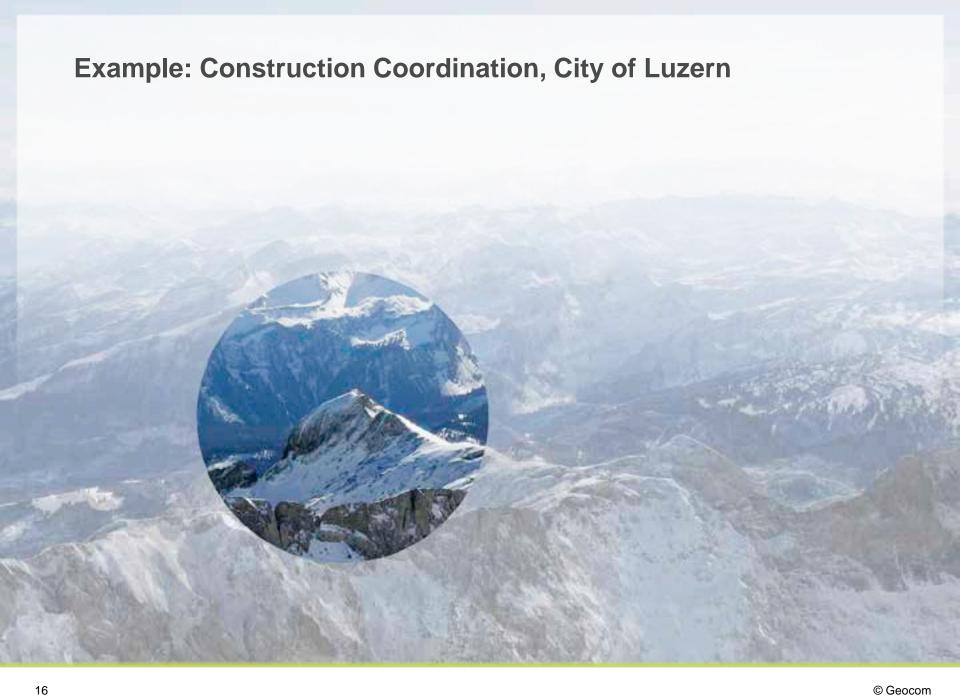
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Data transfer

- Define, if data must be transferred between GIS database and SharePoint

- There is no way to directly use the SharePoint database

- Use REST services!

SharePoint ⟷ esri

Technologies for Sharepoint and GIS Integration

	Esri Maps for SharePoint	Geocom Solution (in cooperation with IOZ AG)
Characteristic	Product	Project-specific Development
Relation between SharePoint & GIS	Based on Geocoding (Place names, addresses, coordinates etc.)	Based on Keyfields
Geometry Editing	No	Yes
Technology Frontend	Javascript or Silverlight	Javascript
Technology Backend	.NET (C#)	.NET (C#)
Prerequisites	ArcGIS Online for Organziations Plan	ArcGIS for Server or ArcGIS Online Webmap

Example: Construction Coordination, City of Luzern

Construction Coordination, City of Luzern
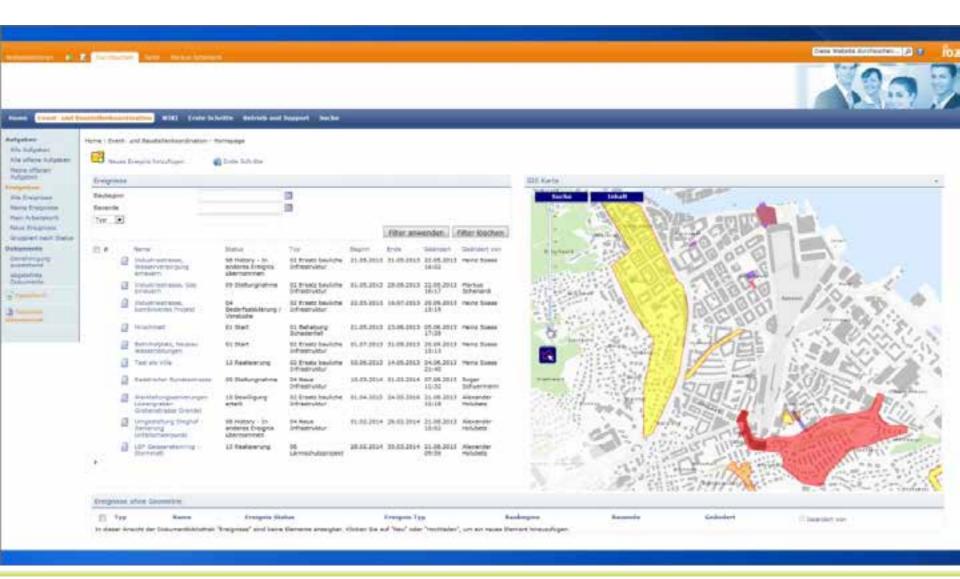
Project Goals:

- Build a system to handle the complete coordination of infrastructure projects

- One platform

- Intuitive handling

- Inform citizens about current projects, construction work on public places, etc.

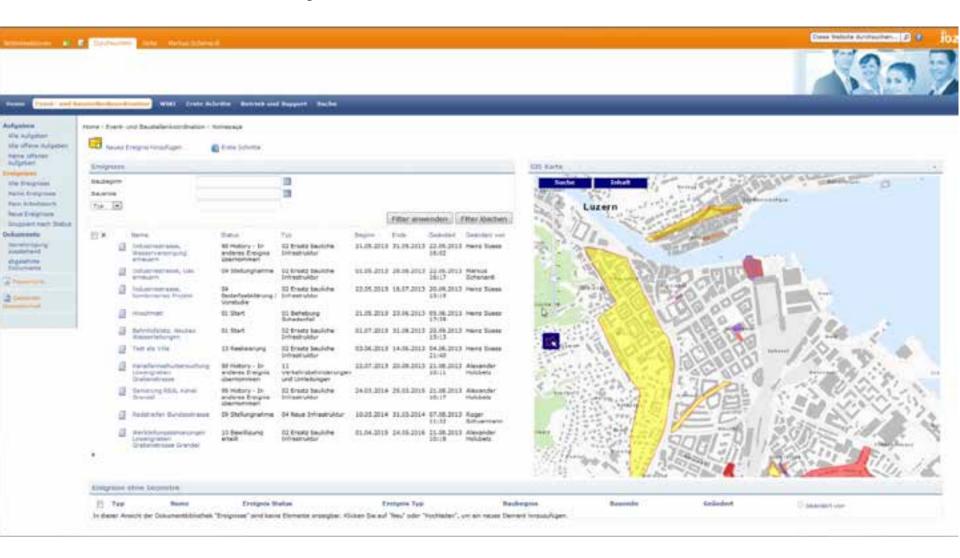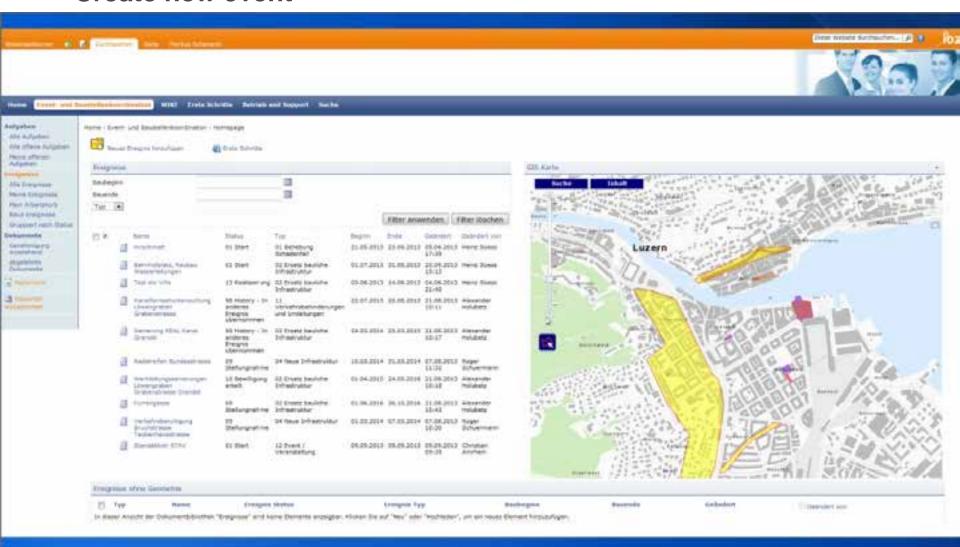- Possibility to extend as "Event Coordination System"

■ ■ ■ **Stadt Luzern**

Population: 80'000

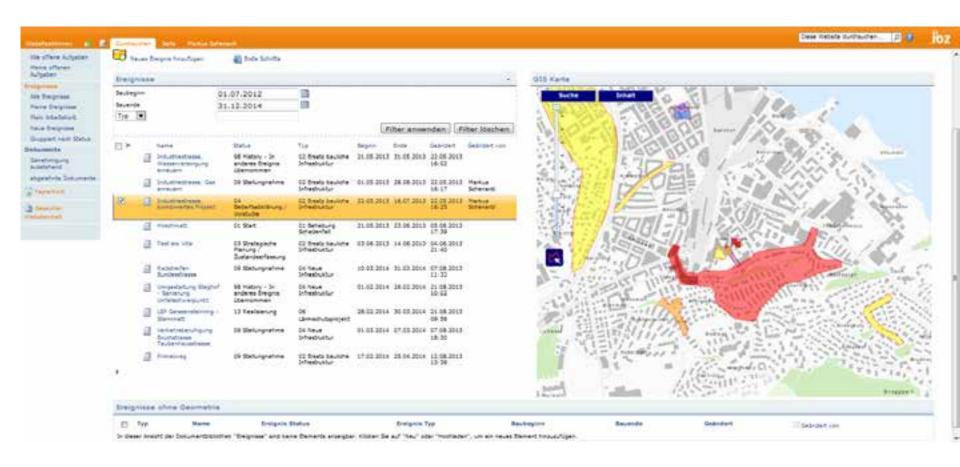# Interaction between map and SharePoint list
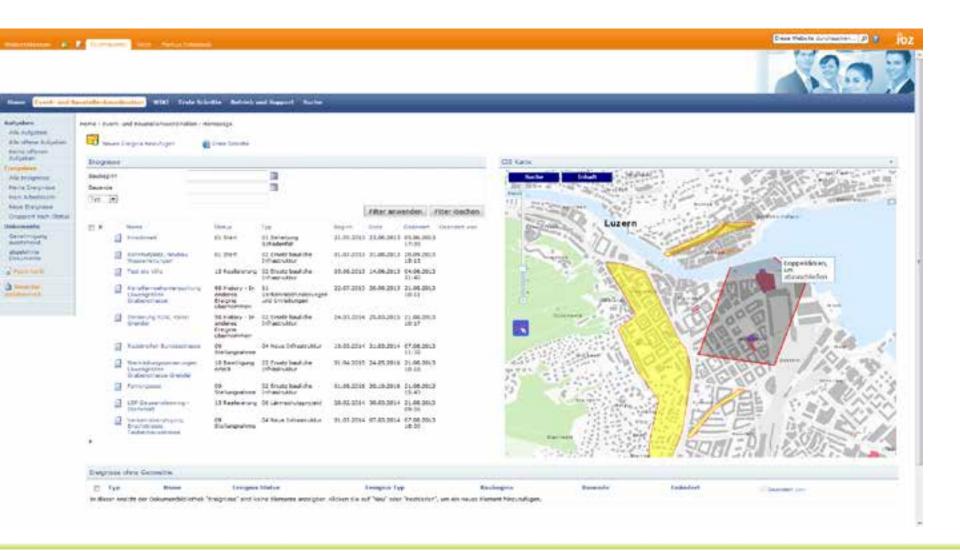
Select event in map and show details in SharePoint

Create new event

© Geocom

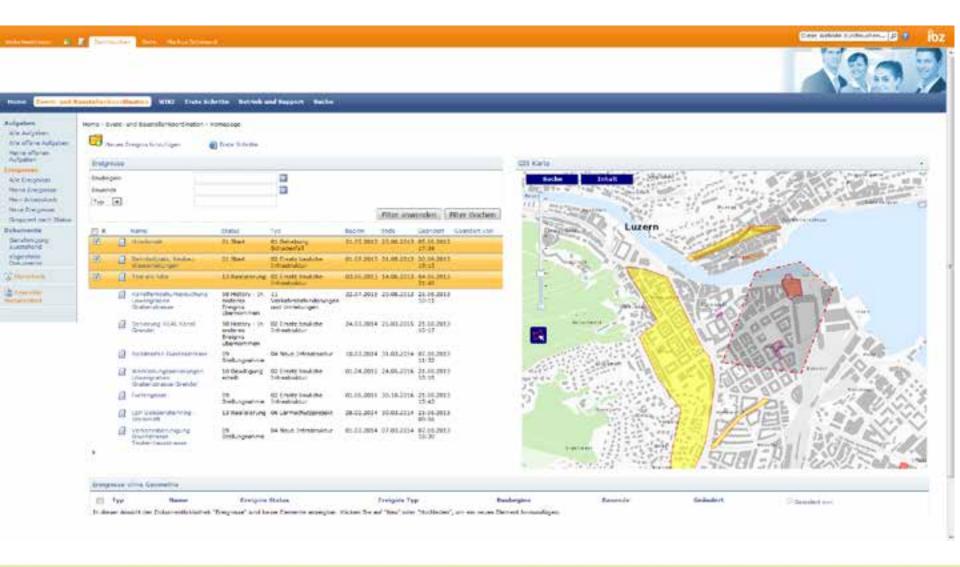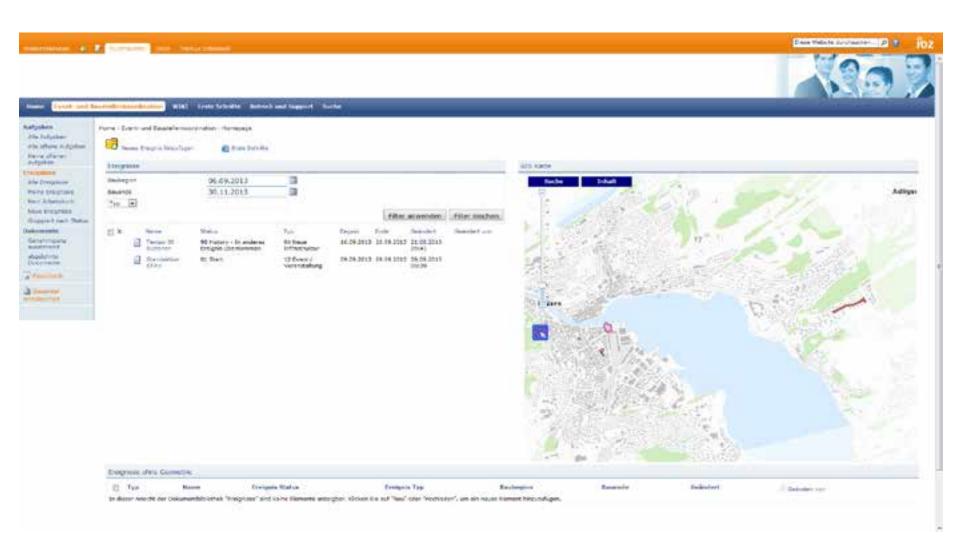# Select Event in SharePoint –> Highlight on Map

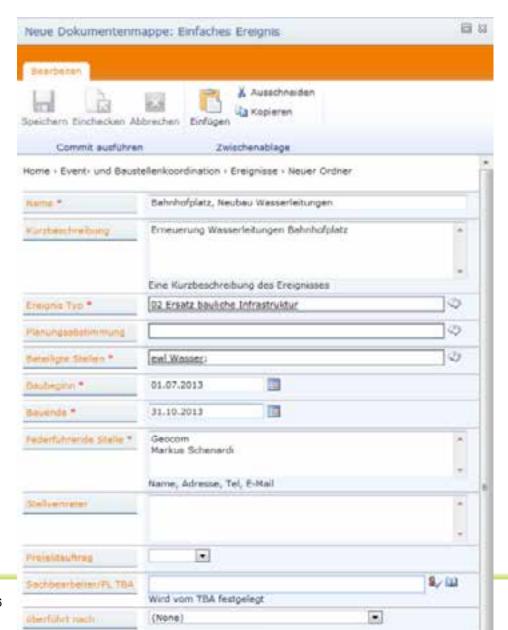# Select Events on Map -> Highlight in SharePoint

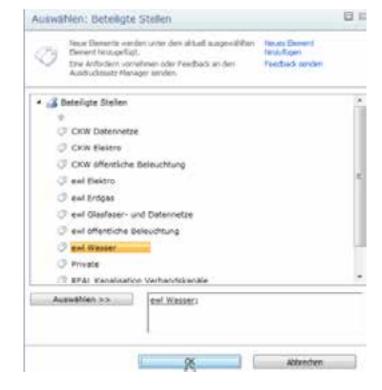# Select Events on Map -> Highlight in SharePoint

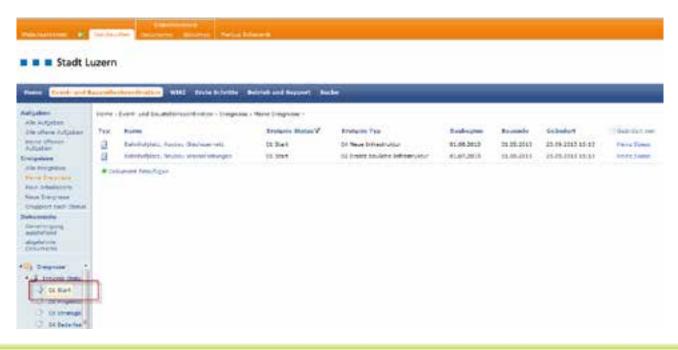# Filter Events by Date Range

Create New Event

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Create New Event

Use SharePoint Collaboration Functions

- Involve other people by starting SharePoint workflows on events
- Manage documents including versioning, approvals, etc.
- Group events by status, owner, etc.

Other Project Ideas?

Contract Management

- Manage contracts in SharePoint

- Visualize spatial relevance of each contract

Map Archive

- Archive maps (pdf, dxf, etc) in SharePoint

- Visualize spatial relevance

- Find archived maps based on location

Many others…

Thank you for your attention