

Coordination of Infrastructure Projects with GIS and SharePoint

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About Richard Weiss

1991: Bsc Geography

Pennsylvania State University, USA

1991-1997: Berger & Co, Houston Texas

GIS Consultant, Programmer

1997-2012: Esri Inc and Esri UK

- Senior GIS Consultant
- Product Development Manager
- International Business Dev Mgr

2012 – Present: Geocom Informatik AG

- Head of Product Management



Geocom Informatik AG

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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 Germany Group
- 2010 Beginning of International expansion
- 2013 Becomes Esri Platinum partner

- Currently around 100 employees
- Part of 500 employees in Group
- 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

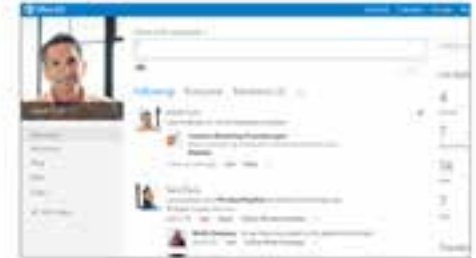
- Collaboration
- Document Management
- Workflows
- Business system integration

SharePoint Overview

Share

Connect with employees across the enterprise - use SharePoint to engage with people, share ideas and reinvent the way you work together

[Learn more](#) →



Organize

Whether working as a team or an individual, SharePoint helps you organize information, people and projects

[Learn more](#) →



Discover

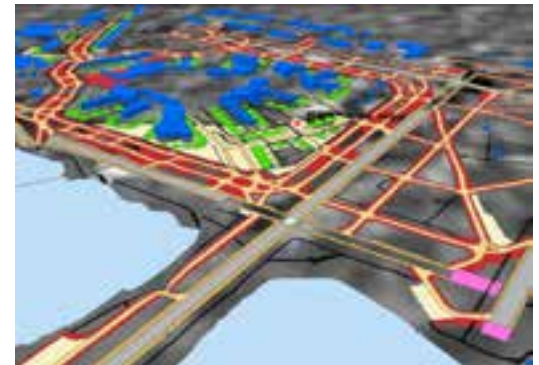
SharePoint makes it easy to find answers, discover insights and connect with experts

[Learn more](#) →



The Power of GIS

- Mapping
- Visualization
- Spatial reference
- Attributive information
- Geo-analysis



A picture tells a thousand words

A map tells more than “just data”!

GIS and SharePoint – a Perfect Team

The screenshot displays a SharePoint web application interface. On the left, there is a navigation pane with options like 'Alle offene Aufgaben', 'Ergebnisse', and 'Dokumente'. The main content area is titled 'Ereignisse' and shows a list of events with the following data:

Name	Status	Typ	Beginn	Ende	Geändert	Geändert von
Industriezonen, Wasserversorgung erneuern	88 Hahn - In anderem Ereignis übernommen	02 Ereignisbeurteilung Infrastruktur	21.05.2013	31.05.2013	22.05.2013	18:52
Industriezonen, Gas erneuern	00 Stellungnahme	02 Ereignisbeurteilung Infrastruktur	01.05.2013	28.05.2013	22.05.2013	Markus Schenck
Industriezonen, Lärmschutzprojekt	04 Bedarfserhebung / Vorstudie	02 Ereignisbeurteilung Infrastruktur	13.05.2013	18.07.2013	22.05.2013	Markus Schenck
Wohnstadt	01 Markt	01 Befragung Schadenfall	21.05.2013	23.06.2013	05.06.2013	17:39
Text als Wkt	02 Strategische Planung / Zusammenfassung	02 Ereignisbeurteilung Infrastruktur	03.04.2013	14.06.2013	04.06.2013	21:40
Siedlerflur Bundeszone	00 Stellungnahme	04 Neue Infrastruktur	10.03.2014	30.03.2014	07.08.2013	11:32
Umgelagert Stehpfahl - Sanierung Aufbaupunkt	88 Hahn - In anderem Ereignis übernommen	04 Neue Infrastruktur	01.02.2014	26.02.2014	21.08.2013	10:57
UVP Gewässerflur - Stehpfahl	11 Realisierung	06 Umweltschutzprojekt	28.02.2014	30.03.2014	21.08.2013	09:26
Verkehrsüberführung Bundeszone Taubentourstrasse	00 Stellungnahme	04 Neue Infrastruktur	01.03.2014	07.03.2014	07.08.2013	18:30
Fremdweg	00 Stellungnahme	02 Ereignisbeurteilung Infrastruktur	17.02.2014	25.04.2014	12.08.2013	13:38

Below the table, there is a section titled 'Ereignisse ohne Geometrie' with a table header:

Typ	Name	Ereignis Status	Ereignis Typ	Startbeginn	Beende	Geändert	Geändert von
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A note at the bottom states: 'In dieser Ansicht der Dokumentbibliothek "Ereignisse" sind keine Elemente angezeigt. Klicken Sie auf "Neu" oder "Neu laden", um ein neues Element hinzuzufügen.'

About Integration



Interoperability on Different Levels



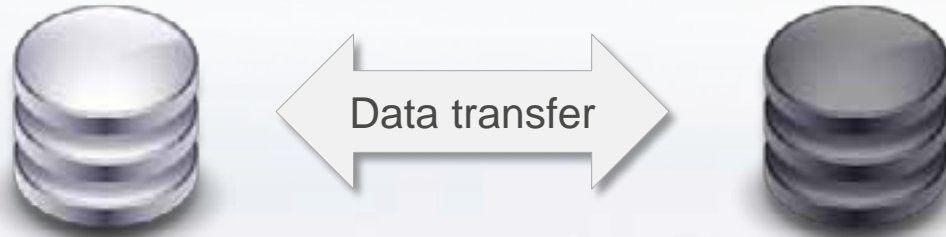
Processes





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



- Define if data must be transferred between GIS database and SharePoint
- There is no way to directly use the SharePoint database
- Use REST services!



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 Organizations 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



Sample Videos

[Interaction between map and SharePoint list](#)

[Select event in map and show details in SharePoint](#)

[Create new event](#)

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

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