How to effectively integrate data from any source into ArcGIS

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Agenda

- Introduction
- What can data integration do for me?
- Data integration examples
- How can I use data integration in ArcGIS?
- Where can I learn more?
Introduction

- Francisco Girón Gesteira
  - FME consultant

- con terra GmbH
  - Headquarters in Münster (Germany)
  - Offices in Berlin, Madrid, Vigo
  - Esri Platinum Partner
  - Safe Software Platinum Partner
  - European Service Centre for FME

FME Team at con terra
What is Data Integration?

- to bring together data from **disparate sources** in a unified view to create a *dataset* with both **valuable and usable information**
What can data integration do for me?

- Some data challenges
  - Big Data
  - Data Silos
  - Semantic Integration
  - Accessibility
Data Integration Examples – Data Accessibility

- Challenge: BMVI Data Run
  - Many different datasets (traffic, weather, etc.)
  - Many different formats (Datex II, etc.)

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<table>
<thead>
<tr>
<th>Primary Data Storage</th>
<th>Data Transformation</th>
<th>Data Provision via Files</th>
<th>Data Provision via APIs</th>
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<td>MDM Proxy</td>
<td>Amazon S3 Bucket</td>
<td>OGC W*S ESRI Services</td>
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<td>FME Cloud</td>
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Data Integration Examples – Data Harmonization

- Challenge: Data Standards
  - Data from many sources
  - INSPIRE Directive

311 Municipalities → SITMUN (Oracle Spatial) → INSPIRE Download Service (Atom Feed)

- [http://sitmun.diba.cat/opendata/INSPIRE/AD/SPADBADATOM.atom.xml](http://sitmun.diba.cat/opendata/INSPIRE/AD/SPADBADATOM.atom.xml)
Data Integration Examples – Automation

- Challenge: IDEAMB (New SDI)
  - Metadata automation
    - Change detection
    - Automatic extraction
  - Dynamic Data Download
Data Integration Examples – Data Synchronisation

- Challenge: Companies merging results in isolated datastores
  - Data synchronization between different environments and applications
  - System of record vs system of engagement vs system of insight
How can I use data integration in ArcGIS?

- FME Desktop / Data Interoperability Extension
How can I use data integration in ArcGIS?

- FME Server / FME Cloud
How can I use data integration in ArcGIS?

- FME & ArcGIS Integration
  - Supported formats:
    - Esri Personal and File Geodatabase (incl. raster data)
    - Esri ArcSDE Geodatabase (incl. raster and mosaic data)
    - Esri Shapefile
    - Esri Map Document
    - Esri ArcGIS Online Feature Service
    - Esri ArcGIS Server Feature Service
    - Esri ArcGIS Portal Feature Service
    - Esri-JSON
    - Esri Indexed 3D Scene Layer
  - Custom and specific transformers
Where can I learn more?

- Download FME: [https://www.con-terra.com/fme](https://www.con-terra.com/fme)
- Training Resources: [https://www.con-terra.com/training-courses](https://www.con-terra.com/training-courses)
- FME Community: [https://knowledge.safe.com](https://knowledge.safe.com)

- FME team at con terra
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Muito obrigado!!