lowadot.gov/gis

public.iowadot.opendata.arcgis.com

iowadot.maps.arcgis.com



eric.abrams@dot.iowa.gov

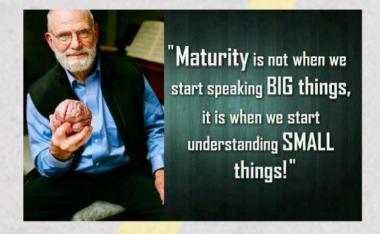
Data Governance Maturity and Implementation

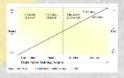
Eric Abrams
Geospatial Manager
Iowa DOT

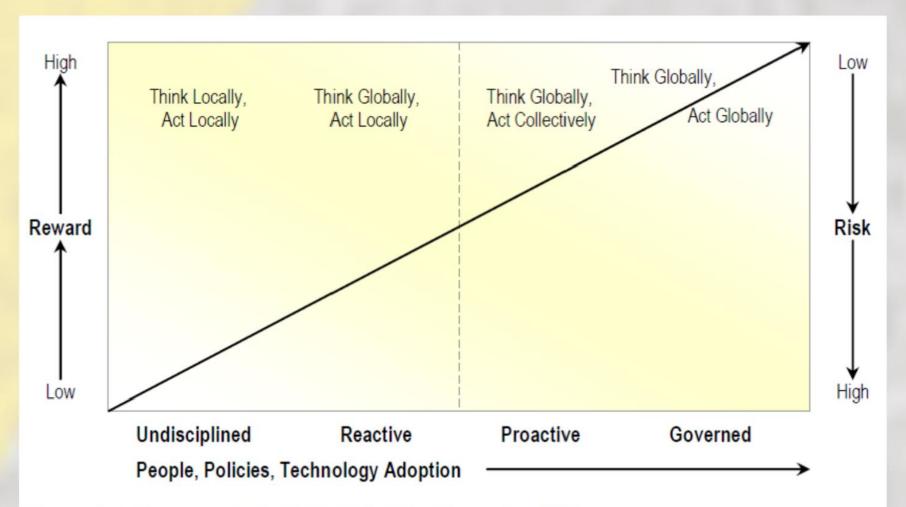
eric.abrams@dot.iowa.gov

Levels of Maturity

- Undisciplined
 - Think Local, Act Local
- Reactive
 - · Think Global, Act Local
- Proactive
 - Think Global, Act Collectively
- Governed
 - Think Global, Act Globally







Source: Data Governance Maturity Model, DataFlux Corporation, 2007.

Undisciplined

- Few Defined Rules & Policies on data quality and integration
- Same data may exist in multiple locations, different sources and formats
- Little or no executive insight into costs of badly integrated data

People Success depends on a few - Analysts are removed from data quality rules - Relies on people who follow different parts to correct data - Inside management buy in on data goality - Blame IT because they store the data Trechnology No data proofing or auditing - isolated cleansing - Data improvement is focused in Silos of Excellence Policies Data quality is project focused only Data in Silos of Excellence - Firefighting Pisk & Reward High Risk: Loss of trust by users Low Reward: Single employee success

Reactive

- Attack data centric problems as they arise
- Have varied levels of data quality
- Specific employees understand the importance of high quality information, management support is lacking





Proactive

- Gives the ability to avoid risks and reduce uncertainty
- · Data becomes an asset to make informed decisions
- Start to institute data management and life cycles





Governed

- Unified data governance strategy
- Data quality, governance, integration and synchronization are integral parts of all business processes
- · Get impressive decision making and results









Where are You? Where is Iowa?

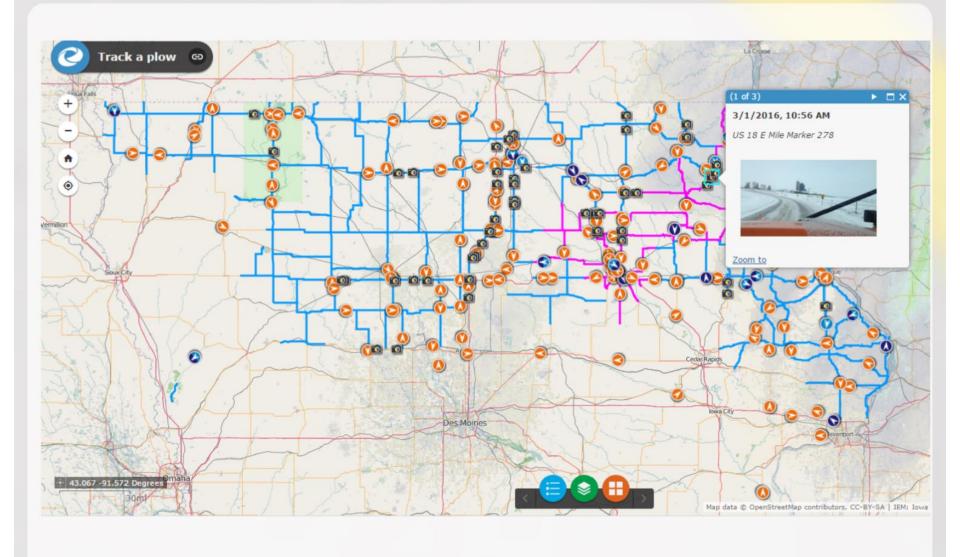
Iowa DOT is somewhere between Reactive and Proactive

- HPMS
- Find a guardrail
- Bridge
- Projects
- Crash
- ROW



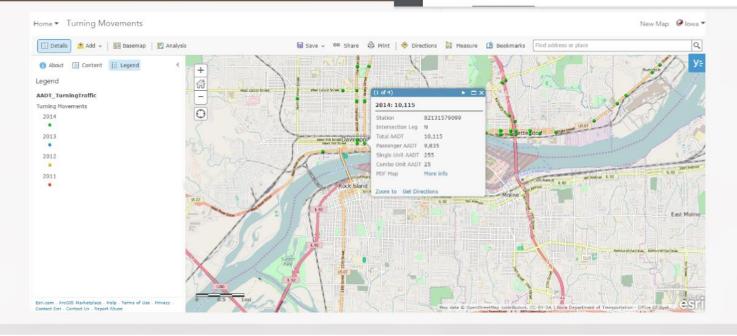








Raw Data-All Vehicles:



Iowa DOT's Path - Organized Chaos

noun. (informal) a complex situation or process that appears chaotic while having enough order to achieve progress or goals.



Football, by its very nature, is organized chaos and a nightmare to keep under control.



- Multiple prongs
 - Geospatial Inventory
 - Data Governance Initiative
 - IT Consultant Recommendation
 - Iowa Open Data

Geospatial Inventory

Restructure REST end points Remove duplication Flatten features

Leverage geospatial as a starting integrator

Started with inventory and interviews

REST Inventory

Defined REST owners

Set up 35 Interviews

Map SME and a Data SME in each interview

260 services; 150 public

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             ← → C https://mygeonexus.iowadot.gov/Arcgis/rest/services
             ## Apps 🗀 DOT ** Bookmarks
            Folder: /
           Current Version: 10.31
         View Footprints In: ArrGIS Online map viewer
            <u>AerialImagery</u>
          · Aviation
   Investigations
· Local Projects
```

REST Inventory

Compiled interviews
Remade REST end points
Set up GeoLibrary Instance

Set up ETL process

Wait until DOT governance direction to support that function

Enterprise Information Management

Promote and adopt data is asset

Put together proposal to management team (P&T/IT)

Two initiatives RFP and Inventory

Data and information first technology second

Enterprise Information Management

Scheduling over 168 interviews

Focus on duplication, maturity and security (PII)

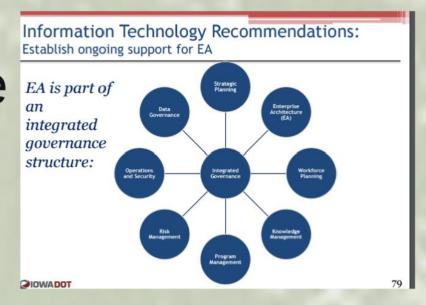
RFP on enterprise warehousing technology and best practice

Will be working to publish results and process

eVision Recommendation

Look at IT infrastructure Look at data systems

Giving Meat to the process



eVision Recommendation

Enterprise Data Warehouse

Geospatial

Security

Iowa Open Data

State initiative to make data easily available

ETL to or have them pull REST

Iowa Open Data

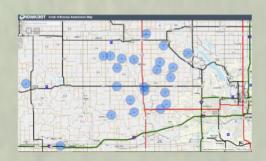
- Take time to export
- Data needs to be vetted
- with authoritative feeds no need to export

High level informal guidance Organized Chaos

duplicate, yes same goal, yea More people have ownership, you bet

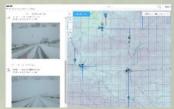
Include all technology enabling concepts geospatial, security, database and service bus - Your Ecosystem

Create once; Use Many

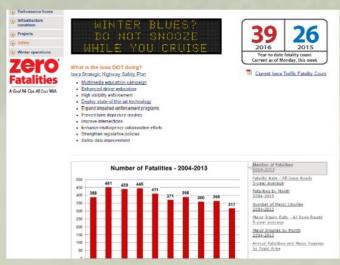


Database Central; Software neutral

Database Central; Service central







- Impressive results with organized data
- Avoid "It must be in the GIS" Talk
- Navigate political spectrum
- · Avoid data silos of excellence







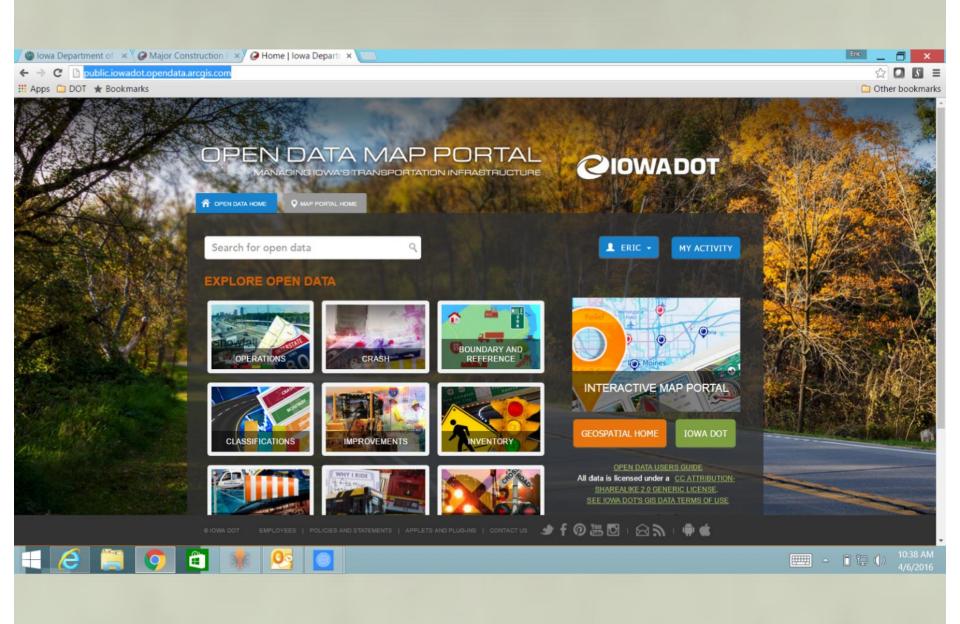
GIS Open data

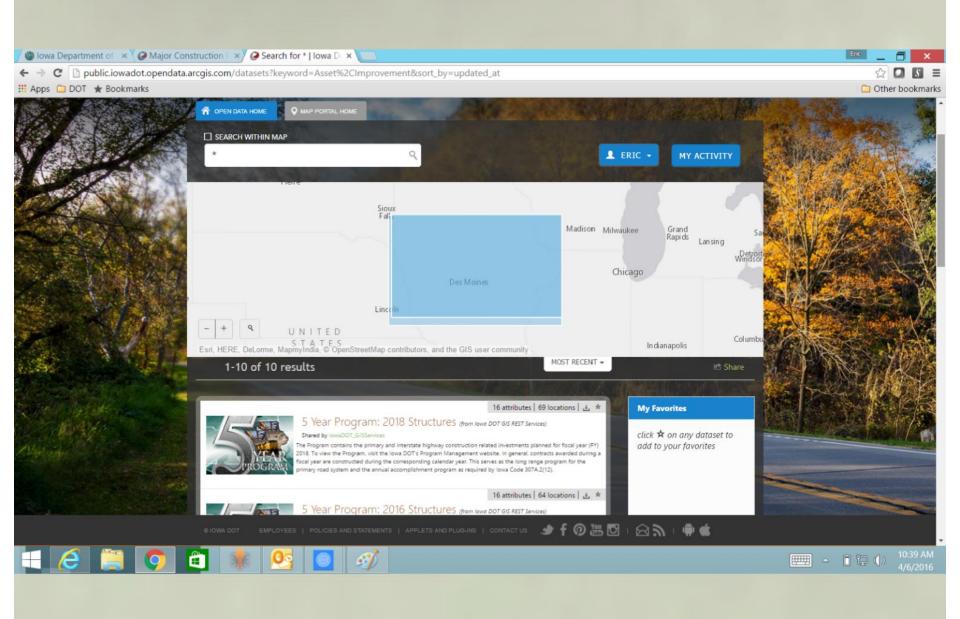
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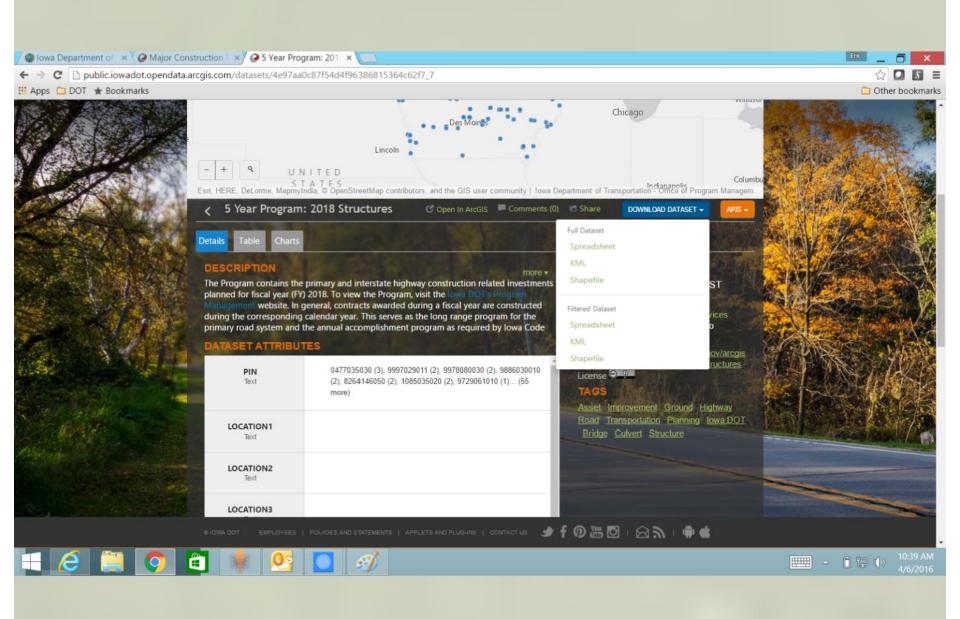












When it all comes together





