INNOVATION ON THE FOUNDATION

Automation of Reliable, Accurate, Timely and Integrated Data (AKA Spatial Data Infrastructures)

Sheila Steffenson, 1Spatial Inc. CEO

Most entities are recognizing data as an asset

Critical to our way of life today

- Recognition that every day we interact with numerous sources of data
- We rely on data to help us solve critical problems
- Benefits
  - Social
  - Financial
  - Strategic

Like any asset can lose value or be undervalued

- If its not maintained
  - Kept current
  - Validated for accuracy regularly
  - Corrected and/or improved
- Made readily available for greater usage
- Integrated to gain greater insights and therefore leading to better decision making

A well thought out, well designed Spatial Data Infrastructure can enable us to get the greatest Return on Investment from our data assets today and into the future!

SDIs require reliable, readily available, and current data …but that has its challenges

Accuracy

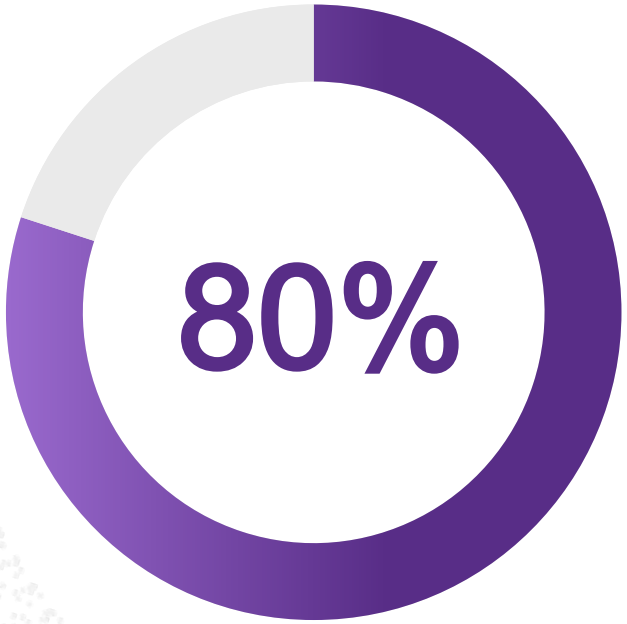
Integration

Maintenance

Time for solving issues is eaten away by time solving data issues!

“Employees spend 50% of their time coping with managing data quality tasks”

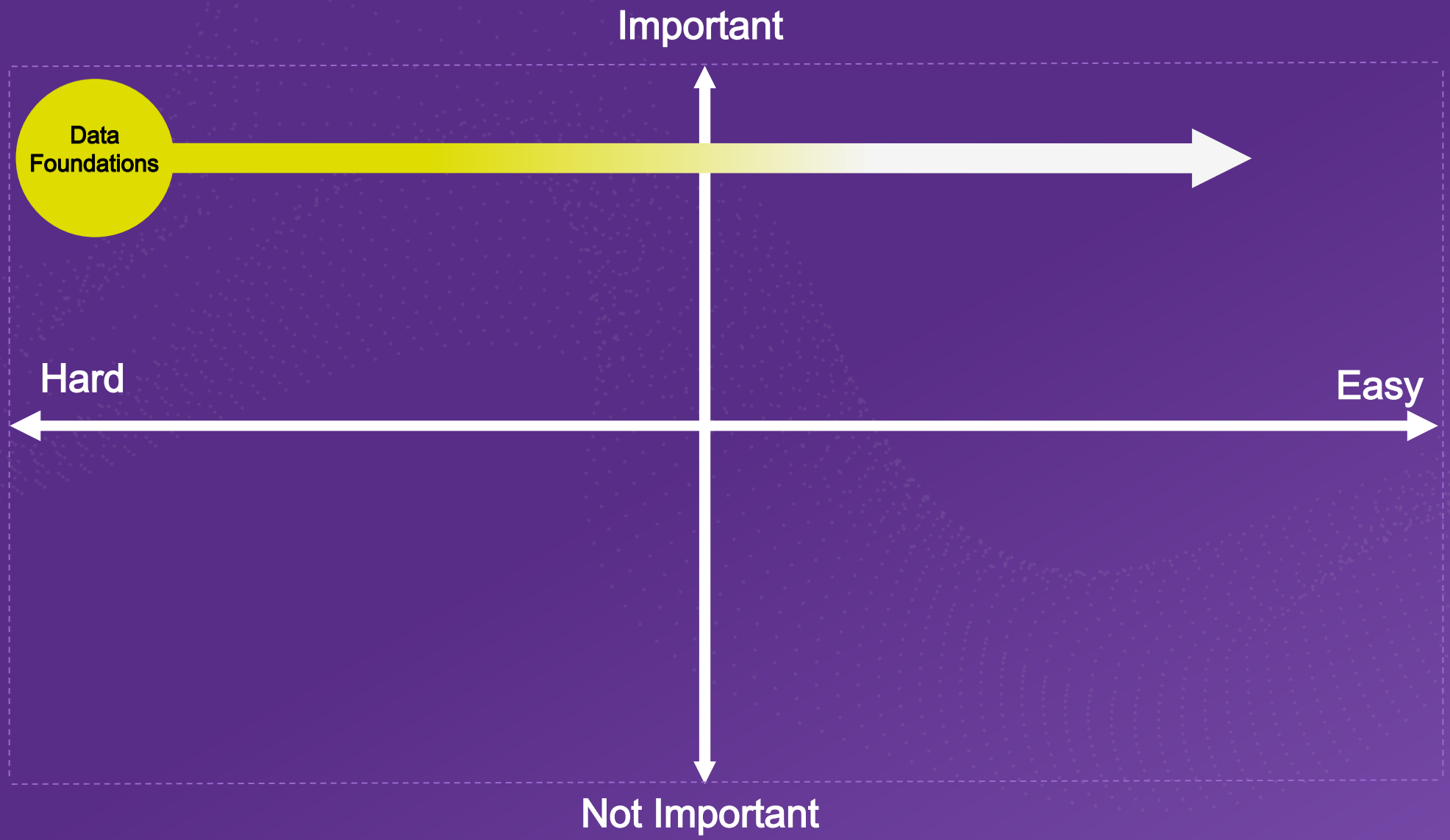
~ Massachusetts Institute of Technology (MIT) Sloan



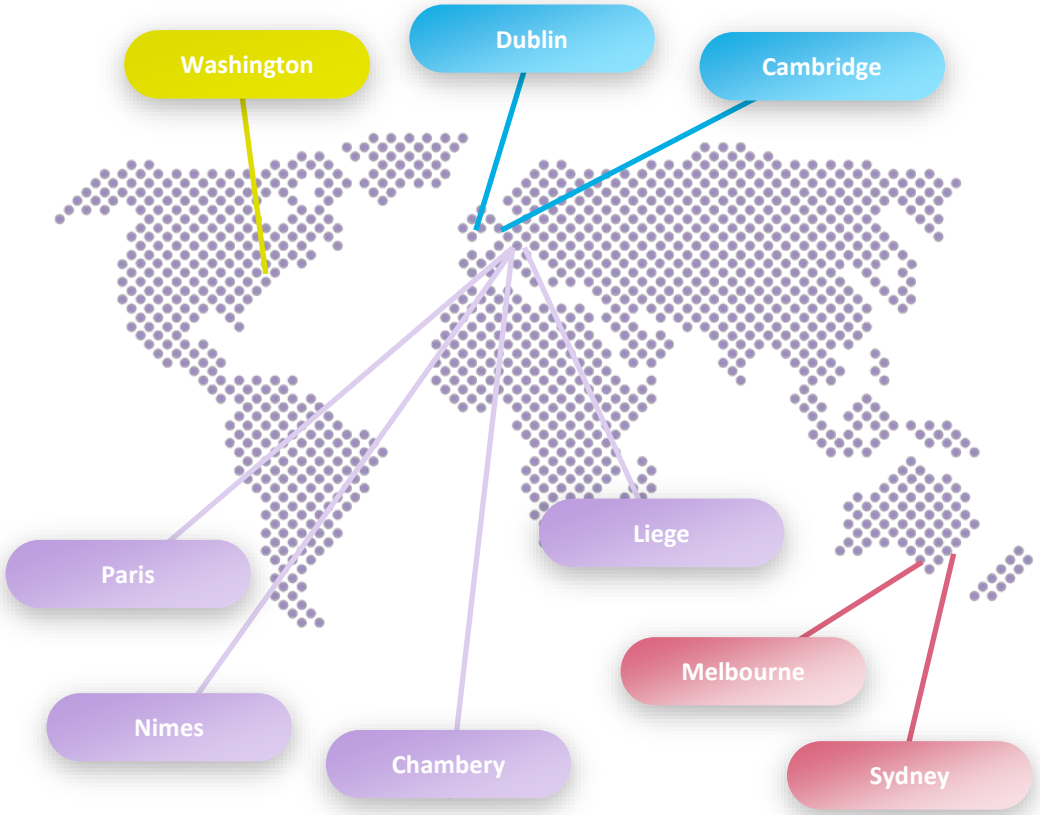
“Data scientists spend around 80% of their time cleaning and organizing data”

~ Gartner

Data Infrastructure Quadrant Analysis *with automation!*



Data Management Solutions



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Automated Validation, Clean-up, Change Detection, Conflation based on business requirements

Government

Spatial Data Infrastructures, Data Supply Chain, NG9-1-1, Conflation

U.S. Department of Commerce Bureau of the Census
U.S. Department of Transportation Federal Highway Administration
USGS science for a changing world
DTMB Technology, Management & Budget
Cal OES Governor's Office of Emergency Services
State of Georgia
ARIZONA Department of Administration Technology
Department of Public Safety State of Minnesota
County of Los Angeles California

Transportation

Data Supply Chains, Asset Management, Crash Data, HPMS

massDOT Massachusetts Department of Transportation
Caltrans
PENNDOT
State of West Virginia Department of Transportation
Kansas Department of Transportation

Facilities Mgt

CAD & Asset Mgt

Google

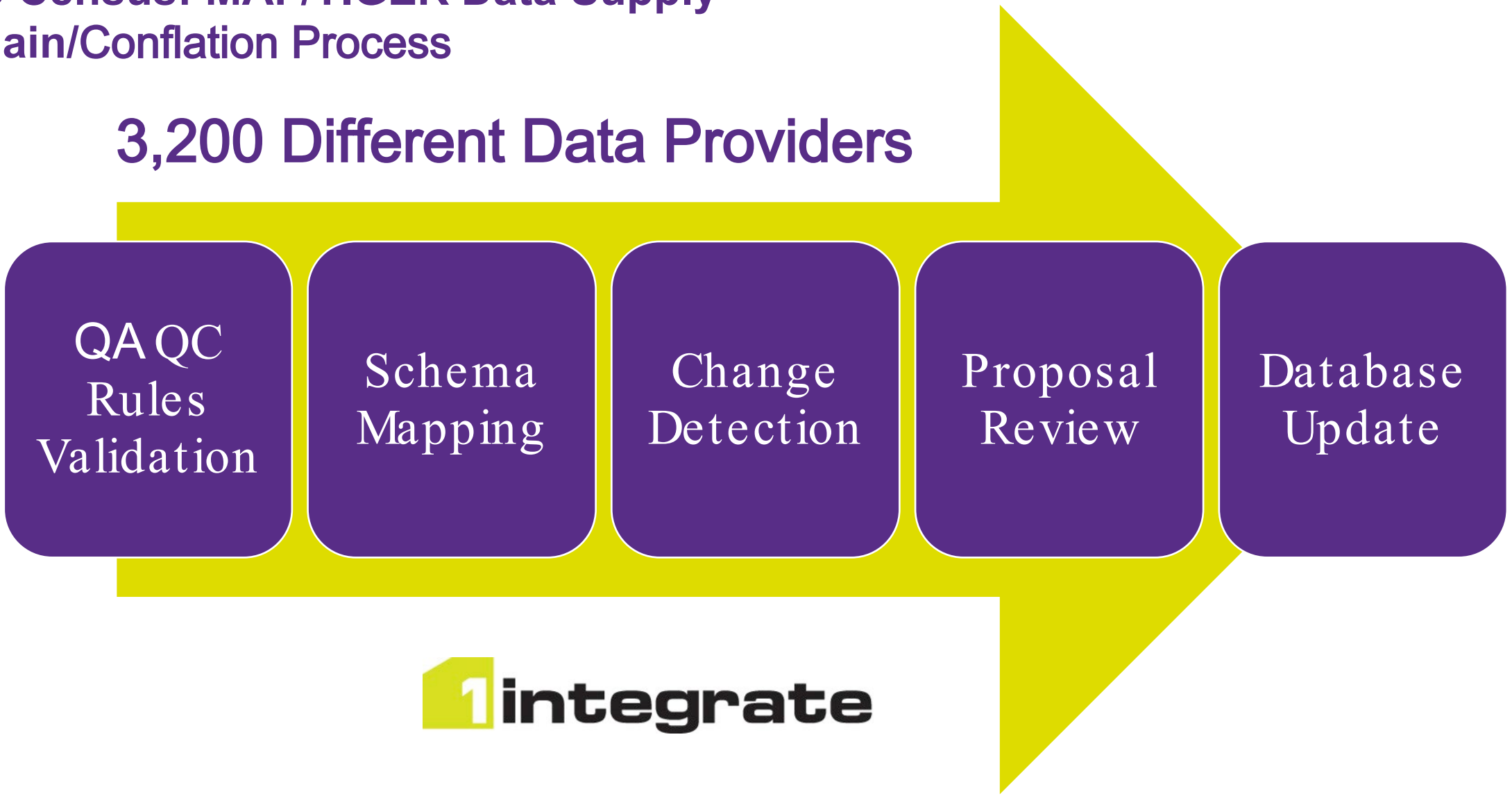
DATA AGNOSTIC: SPATIAL/NON-SPATIAL

PARTNERS

ORACLE Gold Partner
esri
SAFE SOFTWARE
CAMUNDA

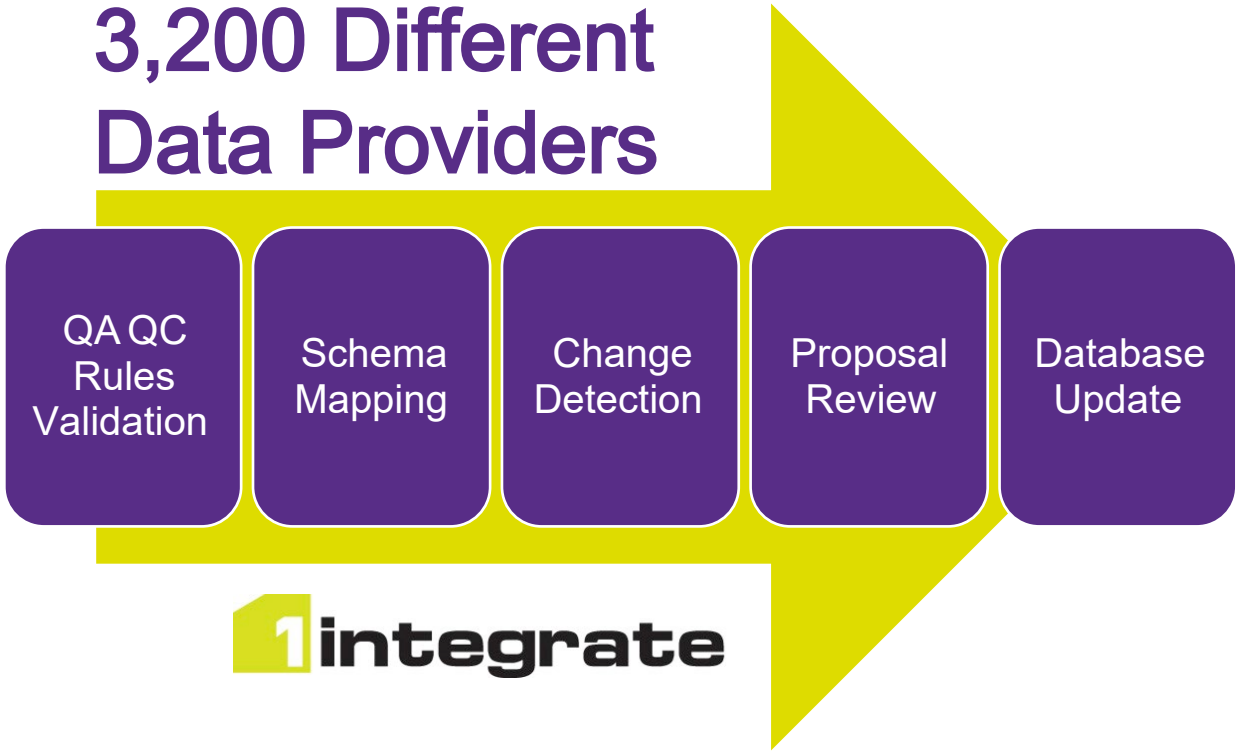
Automation makes the process doable and removes subjectivity

US Census: MAF/TIGER Data Supply Chain/Conflation Process



Iteration enables improvement

Census Data Supply Chain/Conflation Process – Benefits (ROI)



90% Automation through iterative process improvement

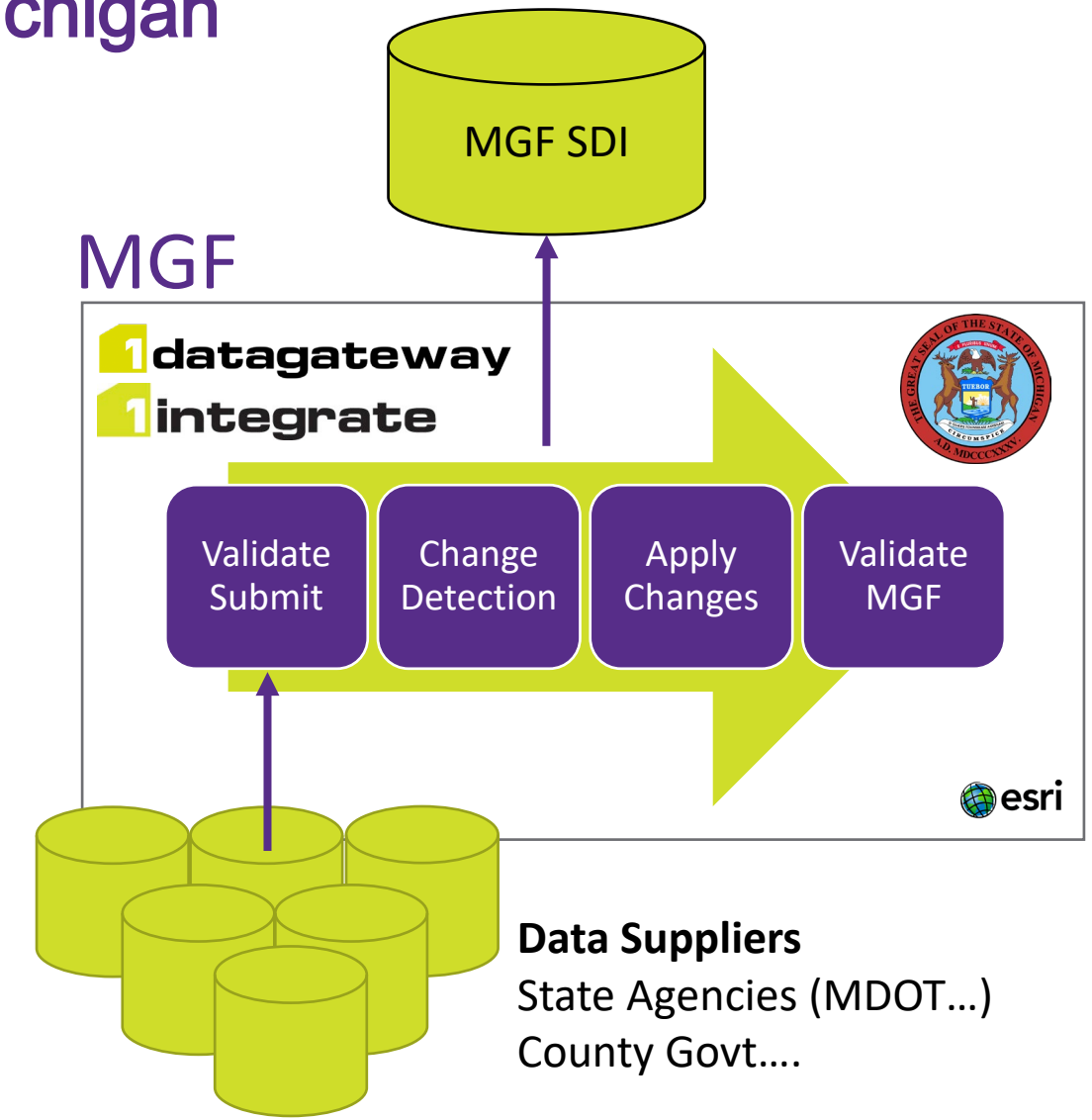
- Automation of validating and ingesting the data
- Improved currency to the data Census shared out to Government and Public entities
- Improved quality of the data enabling better decision making
- Turned a largely manual process into a mostly automated one
- Freed people up to focus on the actual mission of the Census
- **Significantly helped reduce the extent and cost of address canvassing for the 2020 Decennial Census**

Repeatability reduces risk and time to production

US Census work resonated with Michigan

A Repeatable Solution

- MGF was ready for a refresher
- The new process could provide increased efficiencies to validating and ingesting data through greater automation
- 1Integrate offered increased processing speeds and management of large data sets
- Enabled integration of the data in a more seamless manner
- Providing efficiencies to the currency of the data
- Improved data for better decision making



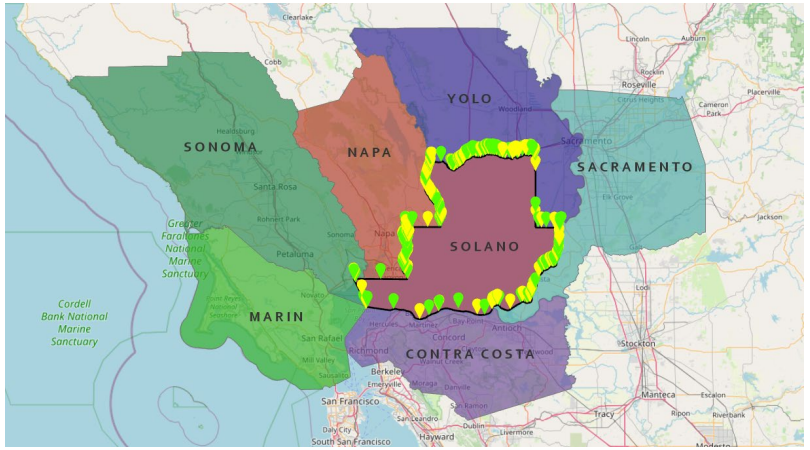
Like Alton Brown, States don ’t want Unitaskers

Organizations are looking for solutions that can be configured and expanded to fit multiple user cases

SDIs are not "unitaskers"…they are extensible in many ways

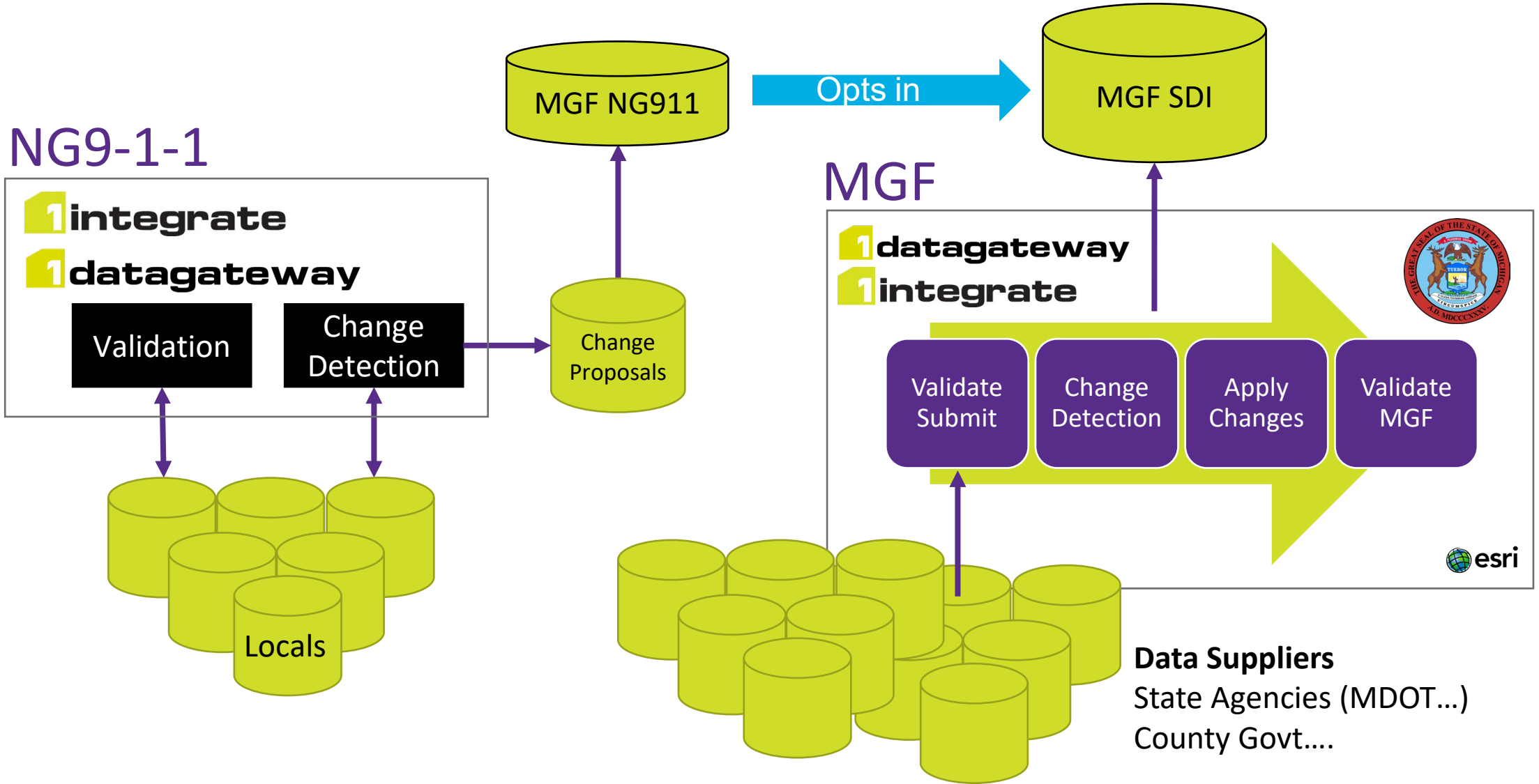
States are looking for solutions that can be configured and expanded to fit multiple user cases

- Boundary Management
- Parcel Data
- Broadband
- Elections
- Hydrography (Conflation, PAI)
- And beyond…



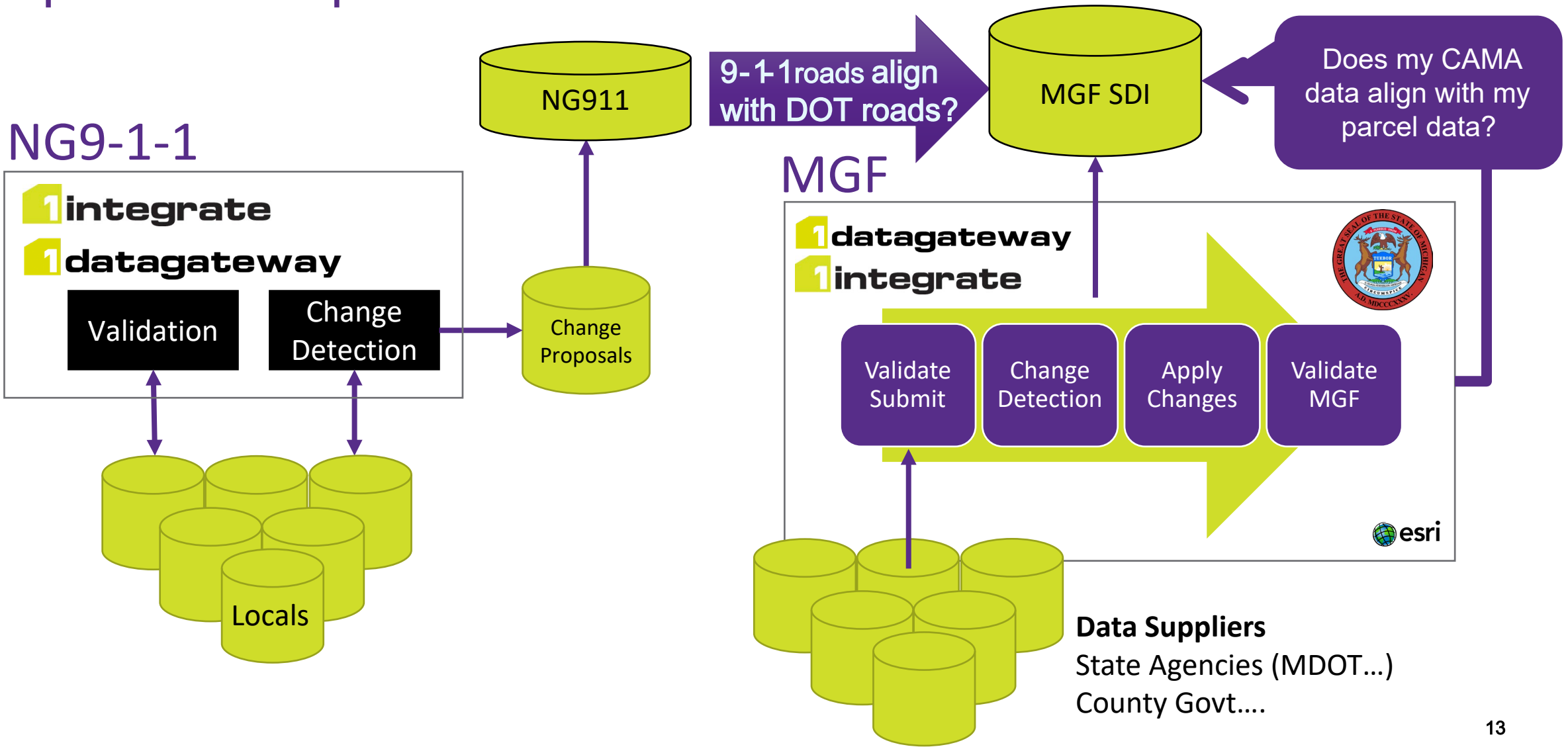
Extensibility : Enables the system to add new data and new use cases

Michigan extended Implementation to support NG9 -1-1



Being Data Agnostic enables cross database validation ensuring alignment and "steel threading " of the data enterprise

Spatial or Non-Spatial



Automation

Easier

Removes subjectivity

More time to focus on business purpose and less time on getting the data “right”

Iteration

Improves rules and thus outcomes with the data

Repeatability

Shortens implementation time and thus time to production

Reduces Risk

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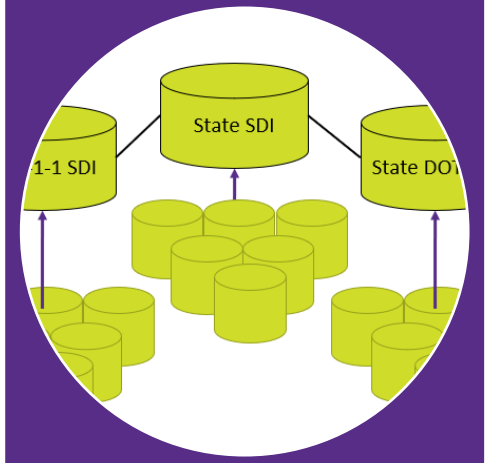


Extendability

Incorporate new data sources

Incorporate new use cases

Data Agnostic

Cross database validation

Alignment of data spatially

“Steel threading” of the entire enterprise of data

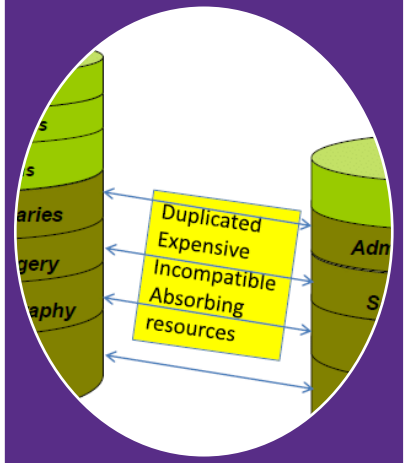
Rules Engine Approach Benefits

Establishes an authoritative set of data layers

- More reliable decision making
- Builds end user confidence
- Data funnels from the data SMEs

Data is more readily accessible

- Greater usage Increases the value of your data assets
- Build once, use many
- Ready in times of emergency



Reduces duplication of efforts

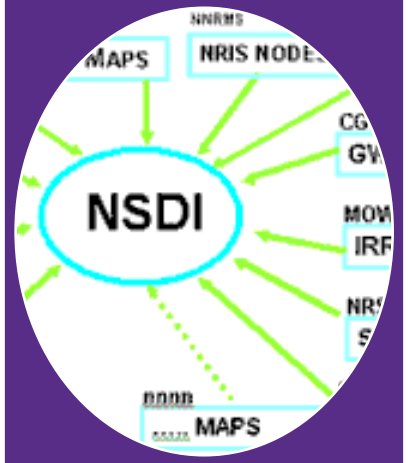
- Saves time
- Saves money

Drives collaboration

- Between Local entities
- Between Local and State entities

Economic benefits

- Data available for businesses to make decisions on location (NYS example)



Potential to lay the groundwork for a TRUE National Spatial Data Infrastructure

- Data flows from locals to state to feerald
- Benefitting every leve l of govt.

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Rules Engine Approach Return on Investment (ROI)

THANK YOU!

Sheila Steffenson, CEO

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