

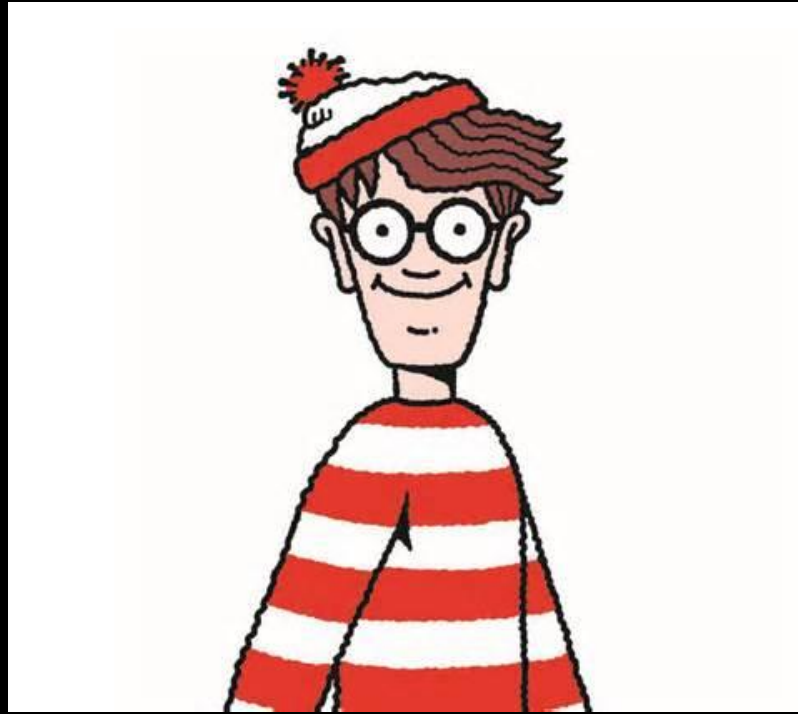
All for One, One for All



Daniel Belcher

Michigan Department of
Transportation

Where's Wally



If you see Wally in this presentation be the first to stand up and win!

Design



Courtesy Dean Bowman, Bentley Systems

Construction



Courtesy Dean Bowman, Bentley Systems

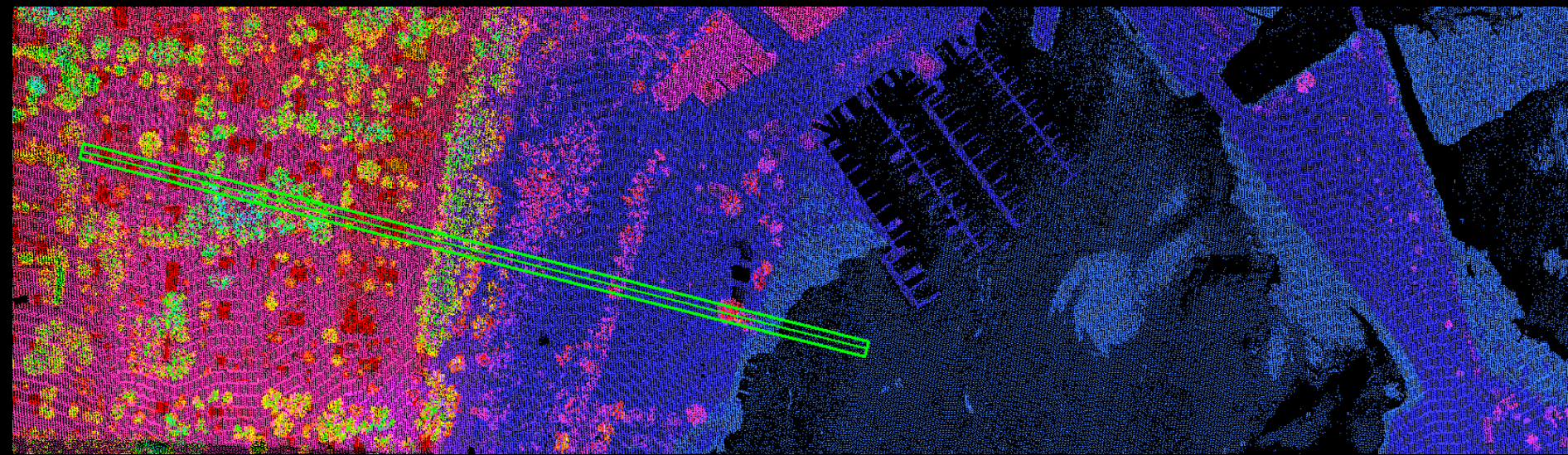
Traditional Engineering Pushed Off a Cliff

Mac, we've
been in
business for
over 100 years
there's nothing
to worry about!

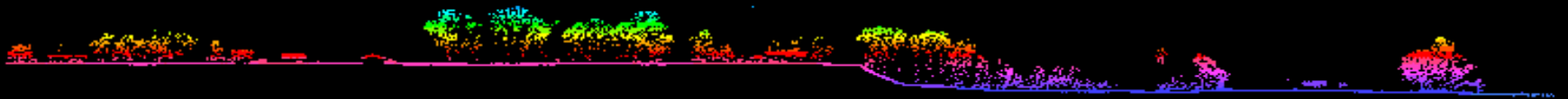


Agriculture





LiDAR



I-96 US-23 Interchange

Mobile LiDAR by Survey Solutions Inc.

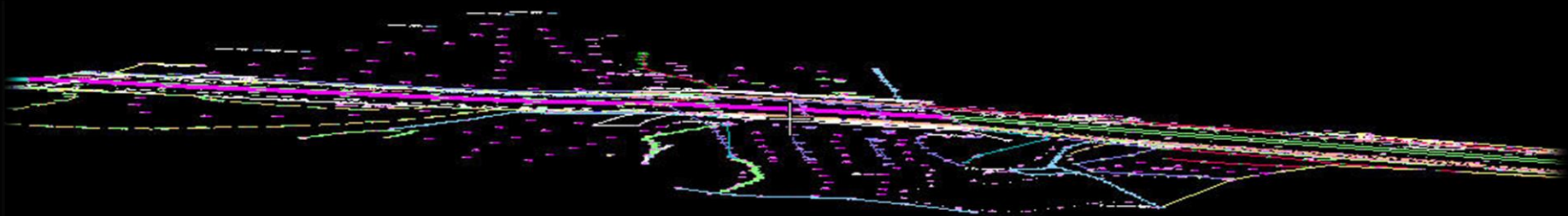
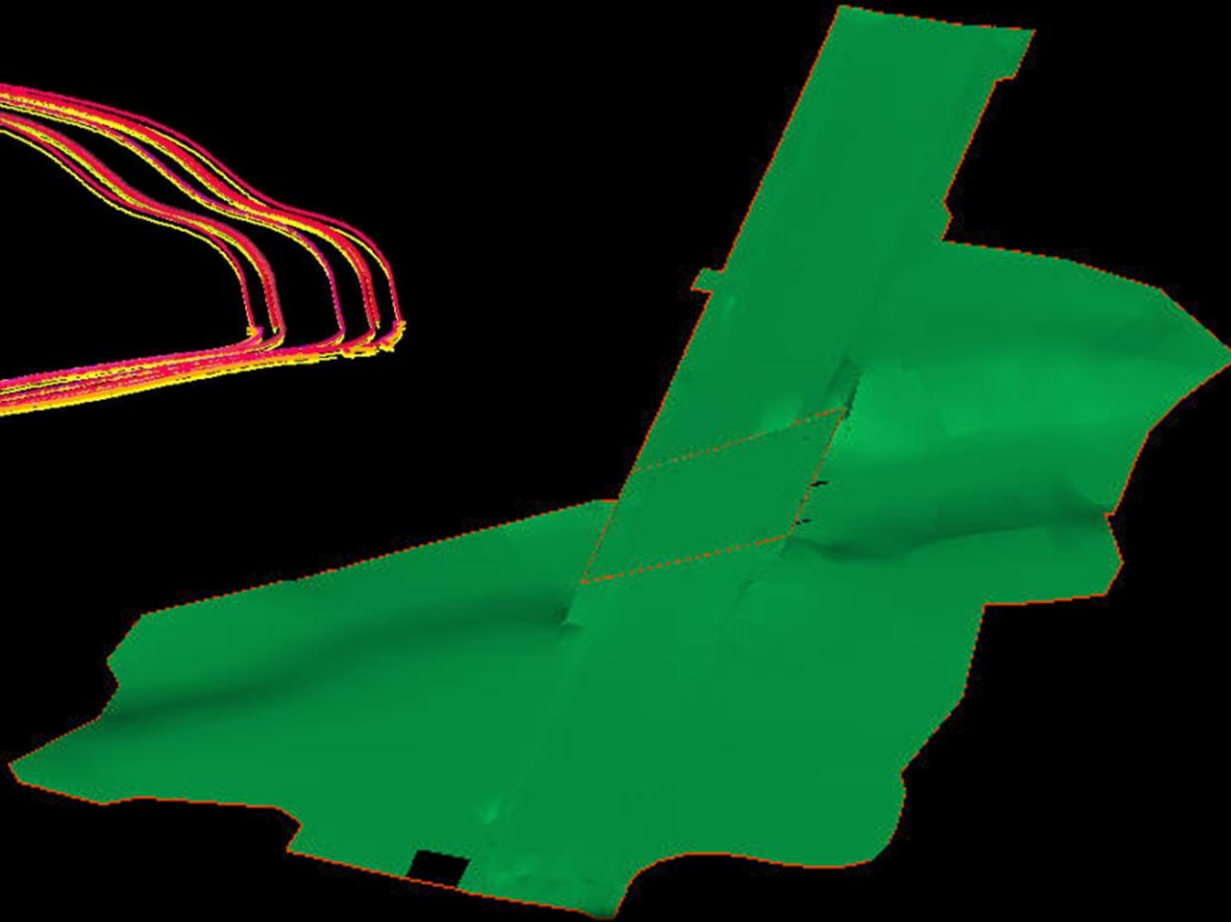
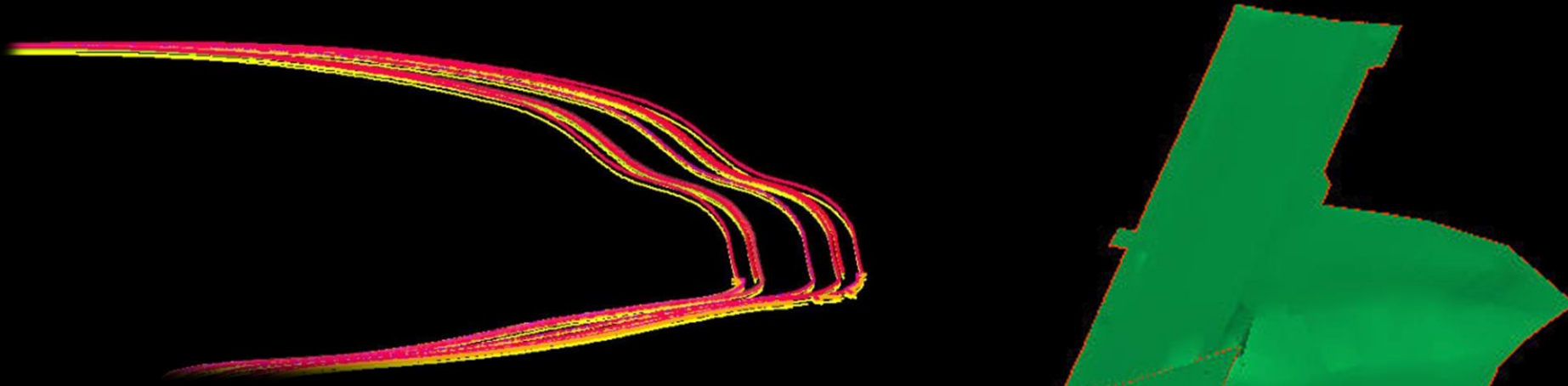


US-131 at Kalamazoo River

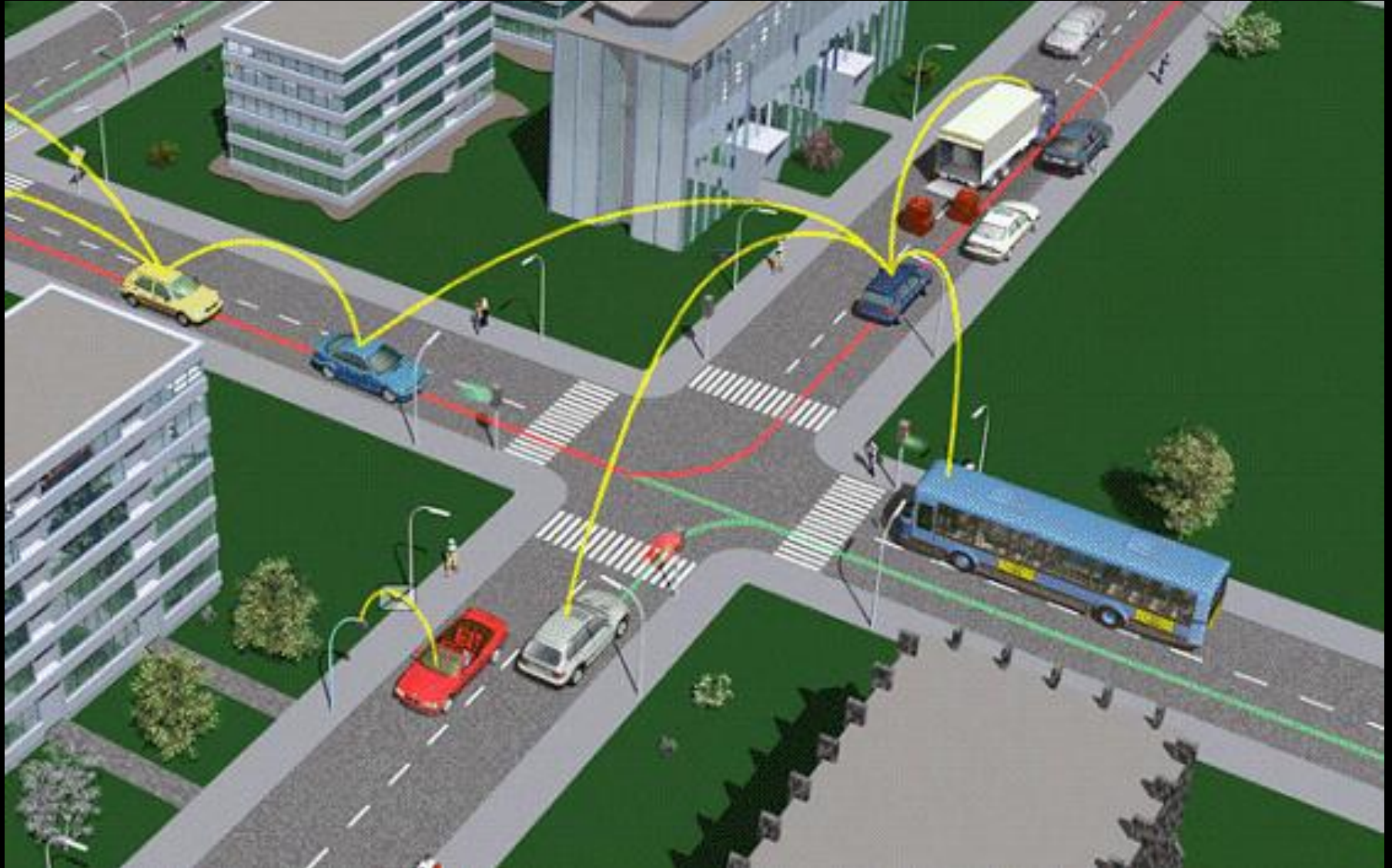
Terrestrial LiDAR by Design Survey Support



3D
CAD



ITS



Contractors – Stringless Paving



Horseless Carriage with no Driver!

**Asset
Management**

**Performance
Based
Operations**

**Intelligent
Transportation
Systems**

Data I \$

**Decision
Support**

**Performance
Measurement**

MAP 21

**Autonomous
Vehicles**

**Automated
Design &
Construction**

**Transparency
in
Government**

ASSET Lifecycle

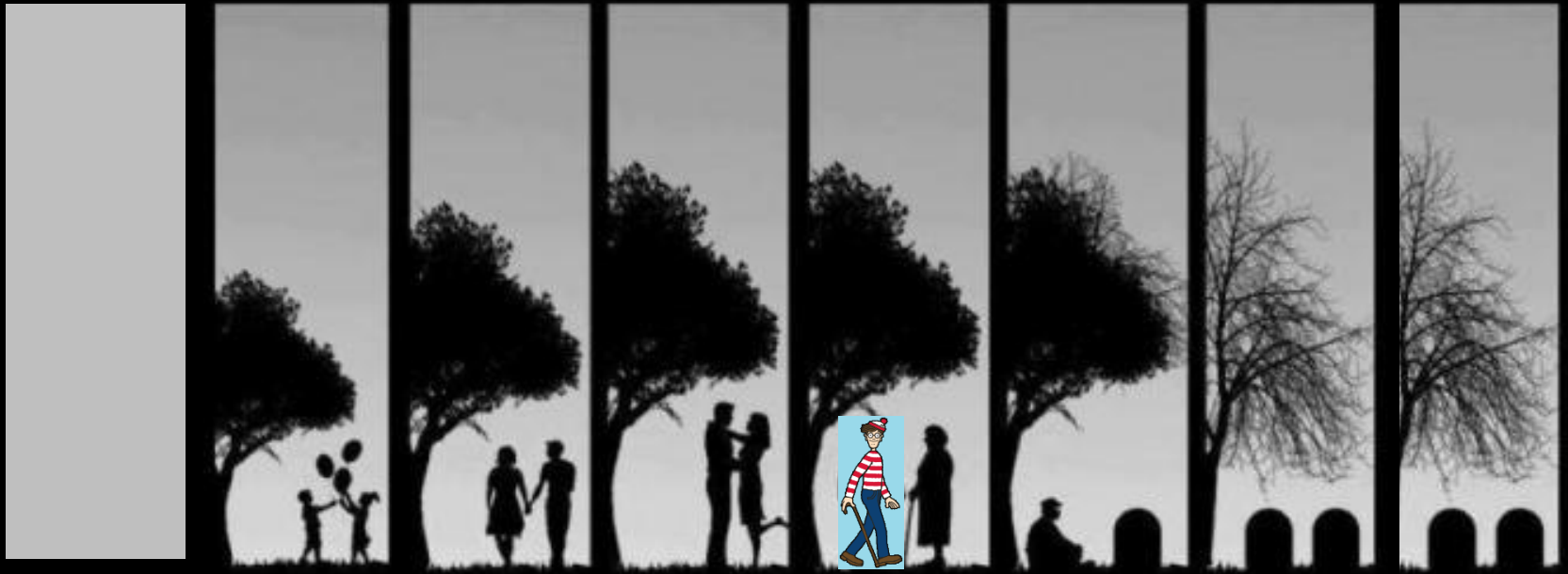
Conceived
in Design

Born in
Construction

Cared for During
Maintenance
& Operations

End of Life

Reincarnation
By Design

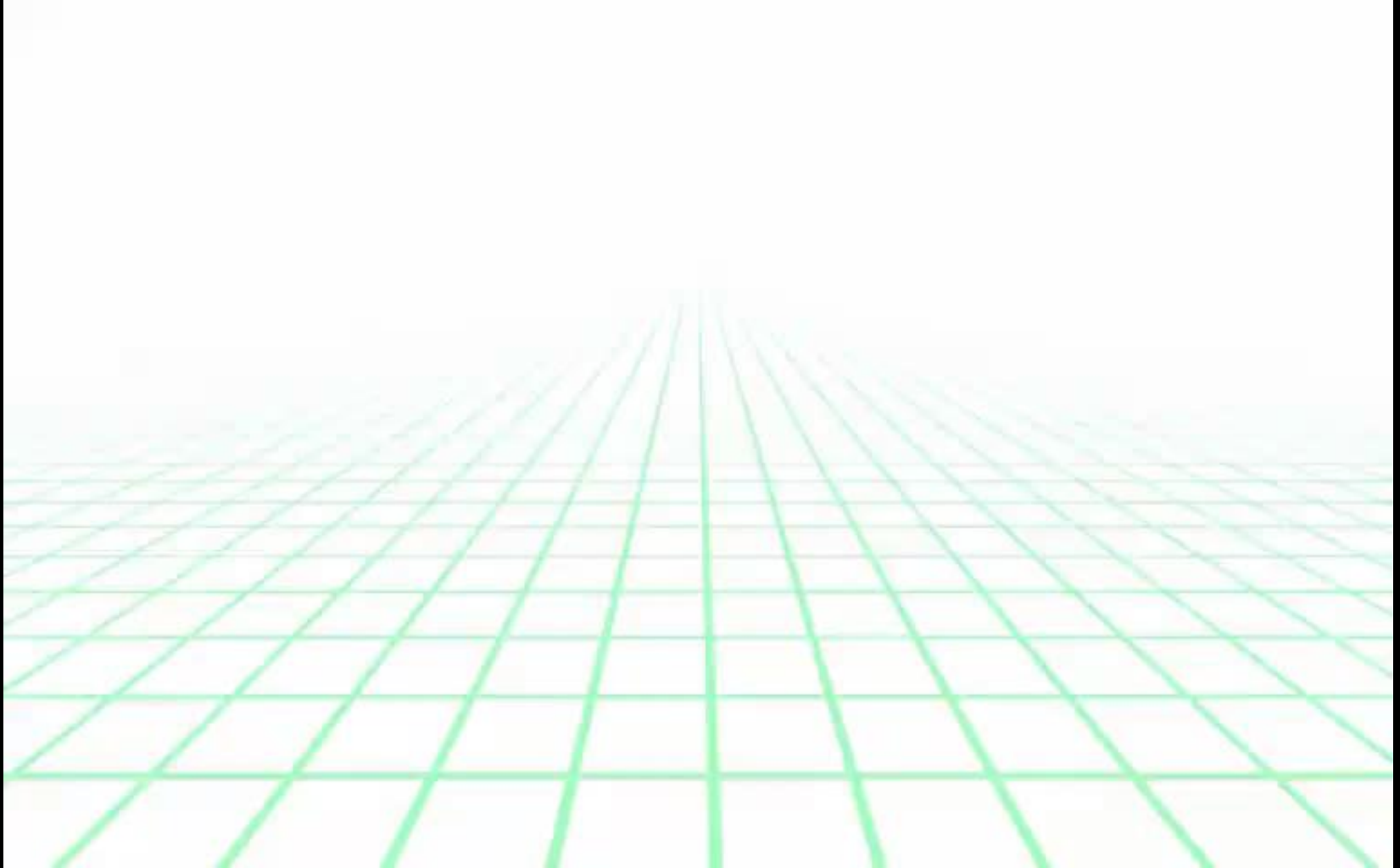


Capture Data During Normal Business

“Maps are like campfires – everyone gathers around them, because they allow people to understand complex issues at a glance...”

Sonoma Ecology Center

GIS Vision



Contractors - Machine Guidance

US-2 Crystal Falls 2005



I-96 Latson 2013



I-96 at Latson Rd.

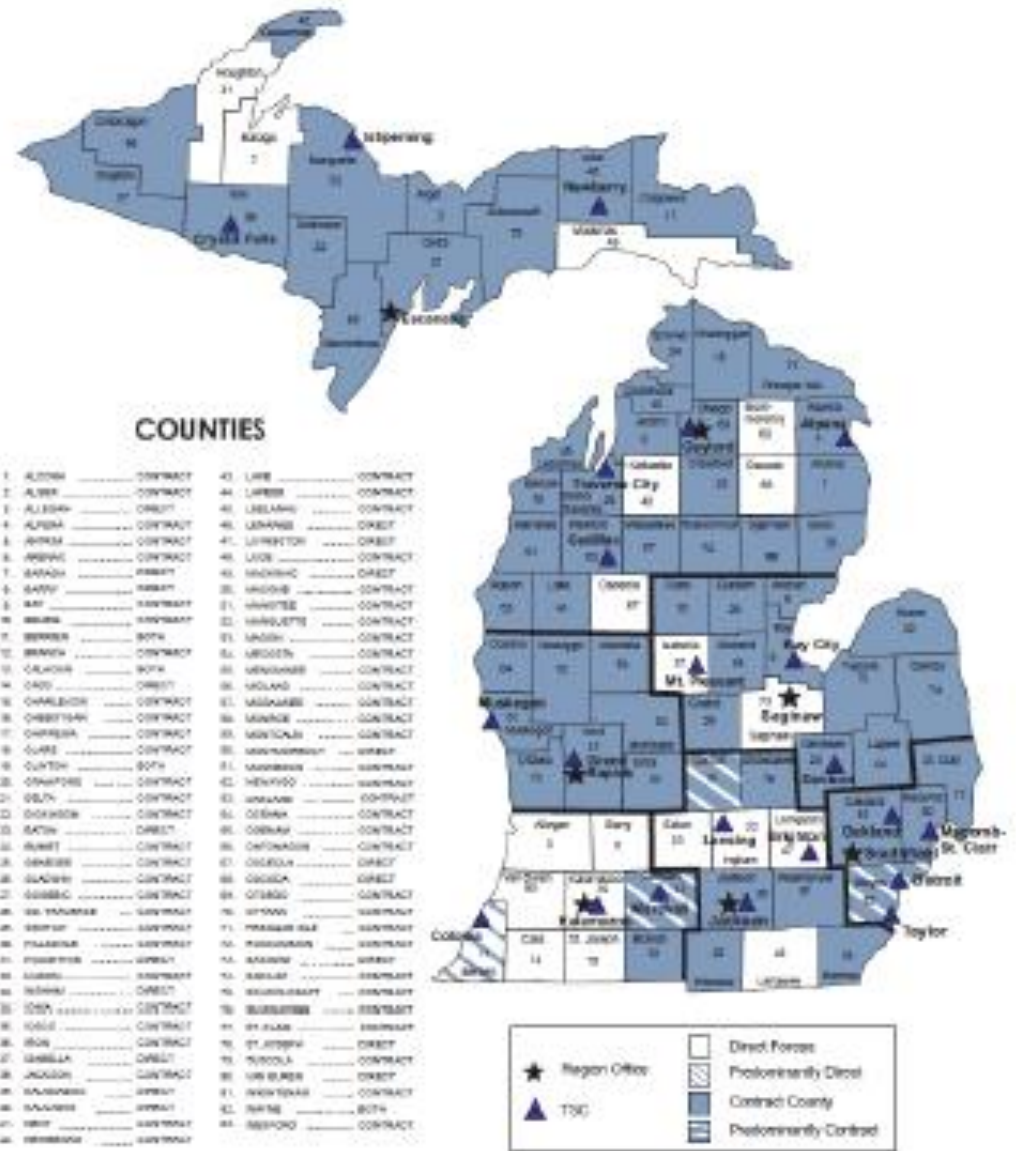


Maintenance

- White is MDOT
 - Blue is Contracted
 - Others Mixture
- No Common System



Maintenance Responsibilities by County



Asset Inventory Management

Table 10: Data Quality Assessment Summary

Asset Type	Coverage	Reliability	Confidence	Recommendations
Lane Inventory	Complete	Excellent	High	No Action
Signs	General	Very Good - Excellent	High	Collect GPS locational data through BAU updating
Guardrail	Complete	Good	Medium	Improve reliability issues through BAU updating
Culverts ¹	Initial	Poor	Low	Consider undertaking an initial Statewide data collection effort to improve the data quality for culverts

Enterprise Asset Management System (EAMS)

Request for Proposal “off the shelf” software

- Asset Inventory Management
- Highway Maintenance Management
- FutureRoad Network Management
- Integration Capability



EAMS Functionality

- Unlimited Asset Types
- Geo-referenced database
- Asset characteristics
 - Physical description
 - Historical info
 - Condition
- Maintenance Management
 - Work Orders
 - Field Inventory Collection
- Initial focus on
 - Lanes
 - Signs
 - Culverts
 - Guardrail



EAMS Project Status

- EAMS RFP advertised – April 18, 2014
- Mandatory Pre-Bid Meeting – May 2, 2014
 - Attended by twenty vendors
- Bids due – May 29, 2014
- Short listed vendor – Est. August 15, 2014
- Vendor oral presentations – August, 2014
- Award date – October, 2014
- Implementation – Sept 2016

Questions?

