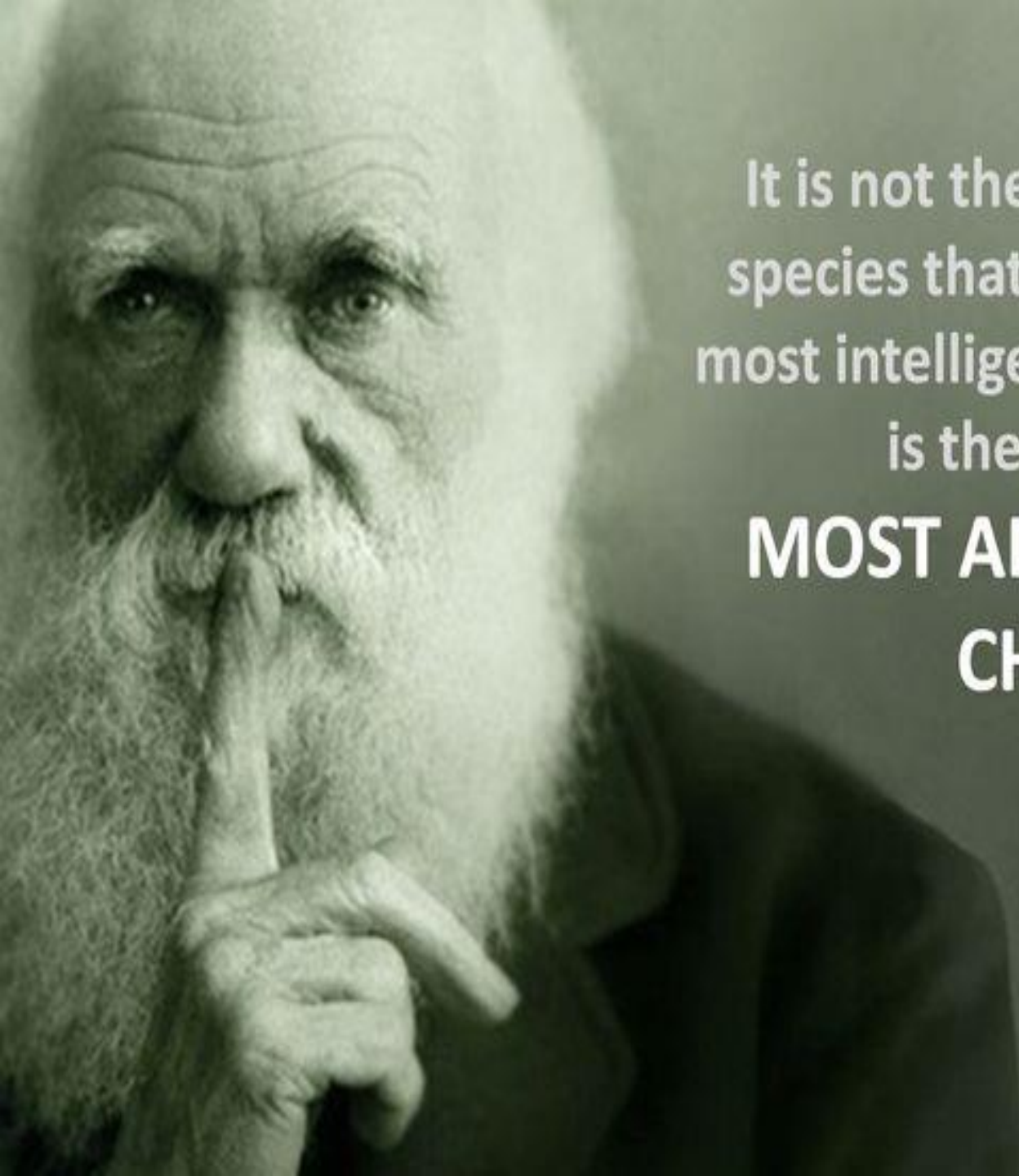


# IT Vision Workshop





It is not the strongest of the  
species that survives, nor the  
most intelligent that survives. It  
is the one that is  
**MOST ADAPTABLE TO  
CHANGE**

# Current Issues

- Information Silos
- Need Common Data Terminology
- High IT Maintenance Cost
- Need Increased Transparency (Staff & Public)
- Expectations of Information Anytime/Anywhere
- Real Time Information That is Self Serve
- Data Retention Concerns
- Inadequate Staffing (Data, GIS, IT)
- Expensive to Migrate Data to New Systems
- Need Publish Once and Use by Many

A historical map of the Great Lakes region of Canada, showing the five Great Lakes (Superior, Michigan, Huron, Erie, and Ontario) and the surrounding landmasses. The map is titled 'CARTE DES LACS DU CANADA' and includes a detailed legend and scale. Overlaid on the map are three large white text elements: 'RPI' at the top center, '45 Systems Changed' in the middle, and '\$411,000' at the bottom center.

RPI

45 Systems Changed

\$411,000



# IT Demands - Trends

- Mobile
- Cloud
- Software as a Service (SaaS)
- Modular Small Apps
- Open Software Architecture
- Interoperability
- Internet of Things
- Business Intelligence

Business is out pacing IT, finding solutions that increase efficiency and save money.



IT is concerned with security and software architecture standards.

# Leadership Guide for Strategic Information Management for State Departments of Transportation

Frances Harrison  
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Gary Allen  
Waynesboro, VA

Submitted March 2016



“Drowning in data but thirsting for information”



“Without good information,  
agencies are flying blind”



“I don’t think [construction of infrastructure] is our primary role any more. I believe we are now facilitators of information...”

Paul Trombino,  
Director, IowaDOT  
AASHTO President



# Vision Statement

Becoming data-centric is  
the foundation of MDOT's  
business and IT future

Information is an asset that requires deliberate  
management in order to maximize value

# Strategic Information Management Activities

- Allocate Resources for Data/Information Management
- Understand Data and Information Needs
- Document Information Assets and Value
- Create Data Warehousing or Repositories
- Manage Data/Information Through Lifecycle
  - Collection/Acquisition
  - Storage
  - Retrieval
  - Analysis and Reporting
  - Manage Data Retention Schedules

# Strategic Information Management Benefits

- Maximize Value of Information to Meet Strategic Plan Goals
- Maximize Efficiencies in Collection, Processing, Storing and Accessing Information
- Improve Decision Making and Transparency
- Reduce Reliance on IT
- Reduce IT Maintenance & Development Cost
- Increase Mobility
- Improve Readiness for Future Technology

# Strategic Information Management Supports

- Civil Integrated Management (CIM)
- Geographic Information Systems (GIS)
- Transportation Asset Management (TAMS)
- Performance Based Operations (PBOS)
- Knowledge Management (KM)
- Business Intelligence (BI)
- Enterprise Information Management (EIM)
- Dash Boarding & Performance Metrics
- Transparency & Building Public Trust
- Mobile Computing (Information 24x7)



Benefits to MDOT by Bureau



# Strategic Information Management

## Highways CIM

- Lifecycle of Data – Planning, Design, Construction, O&M, and Asset Management
- Deliver Data Instead of Drawings
- Translate Positions XYZ, Sta. Offset, LRS....
- Standardize Quantities, Pay Items, Assets
- Capture Assets When Created
- Capture Data About Assets During Creation
- Capture all Underground When Exposed
- Gain Efficiencies in Design & Construction
- Feed TAMS

# Strategic Information Management Planning GIS

- Statewide Definition of Assets
- Centralized Data
- Centralized Access to All
- Centralized Services, Map and Data
- Single Source of Truth for End Users
- Ability to be More Transparent/Public Facing
- Centralized Data/Service Standards
- Centralized Policies & Ability to Enforce
- Elimination of Silos of Data/Info/Services
- Strategic Decision Support Based on Information
- Risk & Performance Based Budgeting Support

# Strategic Information Management Finance

- Merging of Financial & Operations Data
- Ease Reporting to FHWA & Legislature
- Standardize Terminology Across MDOT
- Self Serve Reporting Reduces Staff Time
- Use of GIS for Financial Reporting

# Strategic Information Management

## IT Operations

- Change from Application to Enterprise Focus
- Reduce Dependence on IT for Reporting
- Reduce Maintenance Costs
- Reduce Data Migration Costs
- Enable Cloud, SaaS and Mobile
- Align Automation/Innovation with Data & Decisions

# Strategic Information Management

<b>Strategic Areas of Focus</b>	<b>Goals</b>	<b>How Information Adds Value</b>
<b>Leadership</b>	Accomplish Mission & Vision	Establish and measure performance goals and adjust direction with reliable real time information.
<b>Safety</b>	Towards Zero Deaths	Identify highest risk locations based on crash history, road characteristics, condition, weather and traffic. Communicate, Coordinate and collaborate with safety partners.
<b>Customer - Centered</b>	Transparency	Track and report on MDOT's key performance metrics.
	Improved Incident Response	Speed incident response and clearance based on real-time congestion data and reported events. "crowd sourcing" & ITS
	Travel Forecasting	Providing the traveling public with predictive route and travel time information.

# Strategic Information Management

<b>Strategic Areas of Focus</b>	<b>Goals</b>	<b>How Information Adds Value</b>
<b>Partners</b>	Optimize Operations	Partner to create efficiencies and optimize transportation investments through collaboration with data and information
<b>System Focus</b>	Provide Cost-effective & Integrated Solutions	Have the asset information necessary to prioritize and implement the most cost-effective investment strategies.
<b>Innovative &amp; Efficient</b>	Customer Centered Services and Performance Driven Decision Making	Manage performance and pursue innovations that lead to investing more into the transportation system.
<b>Workforce</b>	Recruit, Develop and Retain a High Performing Workforce	Value, engage and empower employees. A “Born digital” workforce brings expectations that the information they need will be readily available from desktop or mobile devices.

# Questions/Discussion?

