



Florida Department of
TRANSPORTATION

Geospatial Roadway Data Strategic Framework Project Update Phase I

**Joel Worrell
Tina Hatcher
Transportation Statistics Office**

Overview

- Project Background & Deliverables
- Post-Project Progress
- Phase 2 Approach
- Workshop Discussion

Project Background

- OIT
 - Project Managers – Karen Veenstra & Brian Toppel
 - Contract Manager – Don SanGregorio
- Functional Offices
 - Sponsor – Ed Hutchinson
 - Coordinators – Tina Hatcher, Kirk Hutchison, Steve Bentz
- Vendor – ISF
 - Project Manager – Victor Holman
- District and Central Office Data Collectors and Users
 - Traffic Operations
 - Transportation System Development
 - Finance and Administration

Project Background

Interviews September 2015 to November 2015



Project Background

- Project Concluded February 12th, 2016
- Final Deliverables
 - Deliverable 1 – Vendor Introduction
 - Deliverable 2 – Project Plan and Schedule
 - Deliverable 3 – Schedule of Joint Application Review Sessions
 - Deliverable 4 – JAR Sessions
 - Deliverable 5 – Draft Requirements
 - Deliverable 6 – Final User Requirements Document
 - Deliverable 7 - Final Data Requirements Document
 - Deliverable 8 – Recommendations for future phases.
- Sharepoint (Internal) Link:
 - https://fldot.sharepoint.com/sites/FDOT-OIS/Projects/externalprojects/RCIRequirements/_layouts/15/start.aspx#/SitePages/Home.aspx

Deliverable 6 – Final User Requirements

- 26 Business Function Requirements
- 210 Functional Requirements
- 33 Non-Functional Requirements
- 20 System to System Interfaces
- 11 Non-System to System Interfaces



Individualized Solutions
Innovative Solutions

FDOT RCI User Requirements

Deliverable 6: Final User Requirements

FDOT R

NON-FUNCTIONAL REQUIREMENTS

FDOT RCI User Requirements

Deliverable 6: Final User Requirements

System Name	Description	What RCI Data Is Collected	What the Data Is Used For	Interface Direction (from perspective of RCI)
		Toll Plazas Traffic Monitoring Sites Signals Structures		
Federal Authorization Management System (FAMS)	FAMS transmits federal project information to The Federal Highway Administration (FHWA) for subsequent authorization of federal funding for transportation projects.	Highway Maintenance Classification Strategic Highway Network Code Travel Way Along Roadway Functional Classification Urban Area Number Urban Size	OWPA uses RCI data for building authorization requests for federal funding in FAMS. A project authorized in FAMS is qualified for reimbursement from FHWA for improvements to eligible projects. This application allows the state to qualify for approximately \$2 billion per year for projects in Florida.	Outgoing
Financial Project Search (FPS)	A crosswalk for highway operations, construction, materials, maintenance, design, and right of way to search for project numbers and project information.	State Road Number US Route Number Local Name of Facility BEGSECTPT ENDSECTPT	Data is used for on-screen presentation of the project data contained in the Work Program.	Outgoing
Maintenance Rating Program (MRP)	Maintenance office system used to record and report on the visual and mechanical evaluation of routine highway maintenance conditions.	State Road Number Functional Classification Toll Road Flag Access Control Type Cost Center Number Segment Status Bridge Number Highway Maintenance Classification	The random samples and results are used in a GIS application that is managed by the Office of Maintenance. The random samples/scores are also shared with the MRP Asset Maintenance SharePoint Application for contract administration.	Outgoing
Pavement Condition Survey (PCS)	System used to determine the present condition of State roads, predict future deterioration rates, and estimate funding needs.	Segment Status	PCS data is provided to TranStat for Highway Performance Monitoring System reporting and MAP21 reporting.	Outgoing

ISF

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Internet Explorer, the last 2 versions of Chrome, as well as the Edge web browser.

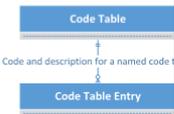
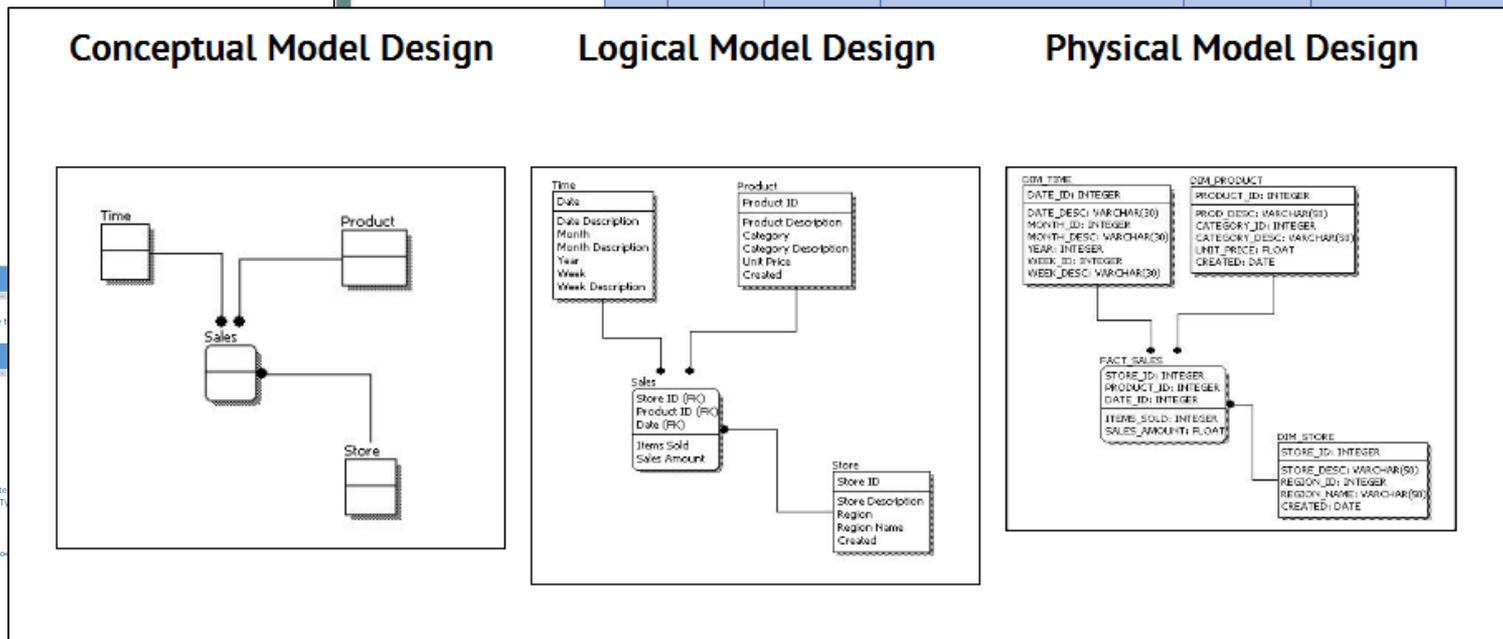
Deliverable 7 – Final Data Requirements

- RCI Concept Data model

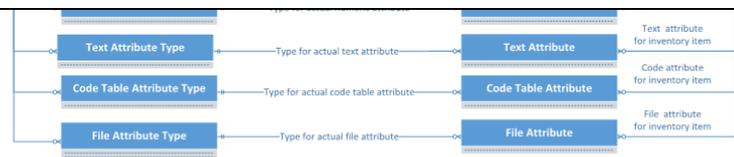
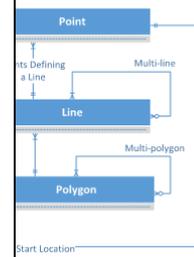


FDOT RCI User Requirements

Deliverable 7: Final Data Requirements Document



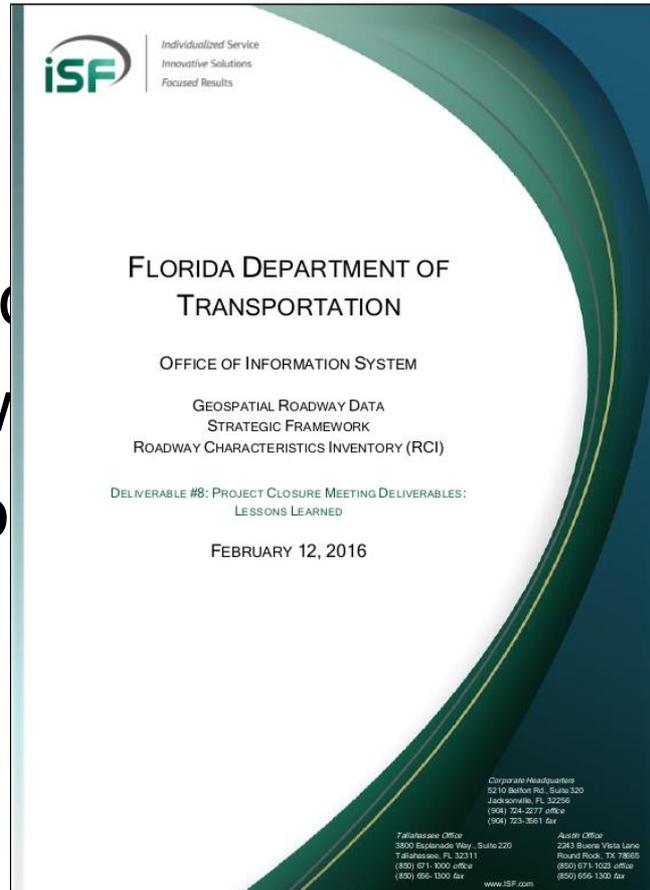
Allowed Relationship
Inventory Item T



Deliverable 8 –

Recommendations for Future Phases for the RCI replacement

- Ten possible steps.
 - High level of
 - Points of w
 - Strategy fo



Recommendation 1:

Align Current Funding with Data Collection Demands

- Data demand is beyond Transtat's budget
- Data demand does not match current requirements
- New funding formula must be determined with other offices.

What data demands are needed in your district offices?

Recommendation 2:

Consolidate Data Collection Methods on the State Highway System

- Safety from reduced field collection
- Cost-savings in reduced data collection periods
- Creation of a one-stop shop for Department data programs
- Technology under consideration:
 - GPS based data collection
 - Robotic Total Stations
 - Remote Sensed data collection (Imagery, LIDAR)

What is your perspective on safe and efficient data collection?

Recommendation 3:

Create a Data Collection Task Force

- Coordinate other data collector needs, standards and rules
- Possible Tasks
 - Managed decision making
 - Review data collection tools
 - Identification responsibilities
 - Data taxonomy/dictionary
 - Data collection contracts
 - Understanding of proprietary data
 - Coordinate with ROADs stewards/custodians
 - Include RCI Technical Task Force Team Needs

Recommendation 4:

Adopt an Asset Centric Approach

- Expand the program to support construction and maintenance notifications and schedules
- Create uniform data for information tracking, reporting and transparency

Is transparent data a priority in your District?

Recommendation 5:

Adopt a formal change management process for RCI data.

- Structure new communication methods for data updates.
- Evaluate current routines to create efficient workflows
- Identify user and data storage responsibilities

How is the RCI program supported within your area?

Recommendation 6:

Break down Department silos

- Move data across divisions
- Give more access to the data
- Encourage cross-teaming and cross-regional communication
- Communicate ideas and success

Should communication for the RCI program occur quarterly or monthly?

Recommendation 7:

Leverage District Best Practices and Enterprise Wide Tools

- Identify data collection best practices and innovations
- Determine where District partnerships can be Statewide investments

What best practices should Central Office be supporting?

Recommendation 8:

Modernize and Standardize GIS and the Linear Referencing System (LRS)

- Determine what data can be collected geospatially
- Develop a standard process for the Department Linear Referencing System (LRS)
- Investigate commercial, off-the-shelf (COTS) products

How can we meet the geospatial expectations of our data?

Recommendation 9:

Establish User Training for System and Process Changes

- Enhance current RCI training elements
 - Efficient lookup functions
 - Mobile device usability
- Provide training and methodology to users
- Update training with creation of a new system

Where can statewide training support district training?

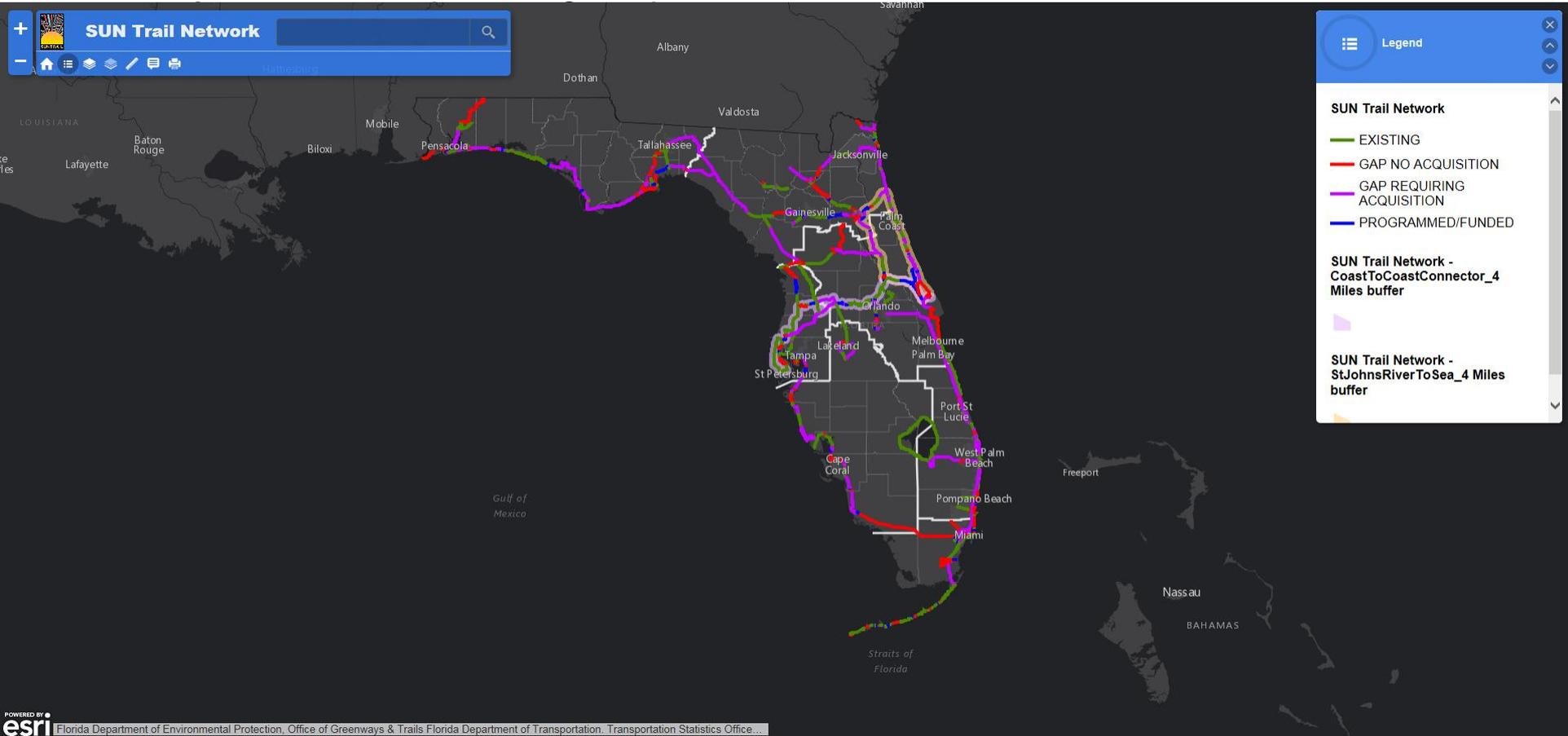
Recommendation 10:

Plan for Scalability to Meet Future Demands

- Data reporting demands
 - Federal Reporting, State Initiatives
- Data resolution demands
 - Traffic Count Data, Freight, Modal data,
- Technology demands
 - Data storage demands (probe data)
 - Vehicle technology (Automated/Connected Vehicles)

How are you meeting your data demands in your District?

Post-Project Progress



Phase 2 Approach

- Research into Commercial Off-the-shelf (COTS) Products
- Coordination with OIT for next Business Case
- Options are open for discussion



Workshop Questions/Discussion