



ITS Asset Management Business Plan

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Background

- NDOT recognizes the importance of using data to drive business decisions.
- Currently, ITS maintenance activities are performed ad-hoc, with little consistency across the state.
- As part of NDOT's TSMO Implementation Plan, we created an ITS Asset Management Business Plan to expand on what was developed in the TAMP.
 - Overview of existing and future ITS Asset Management Practices
 - Federal reporting requirements
 - Data overlap and gaps analysis
 - Three year implementation plan

TAMP Guidance

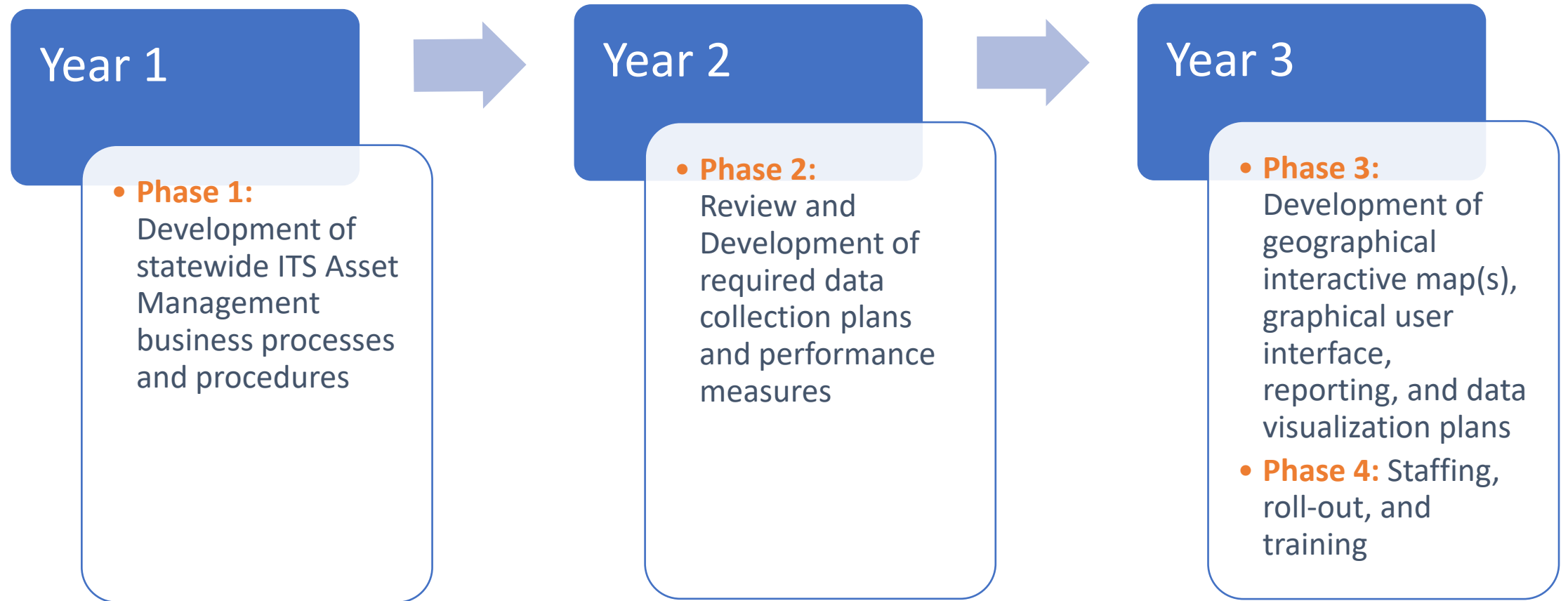
- NDOT has developed some asset management strategies for pavements bridges and ITS as part of the Transportation Asset Management Plan (TAMP) update.

- Guidance for ITS included:
 - Criteria for ITS Asset Condition
 - Recommended Maintenance Activities
 - Maintenance Activity Impact

Age of Device	
Good	< 80% of manufacturer's recommended service life
Low Risk	> 80% of manufacturer's recommended service life < 100%
Medium Risk	> 100% of manufacturer's recommended service life < 125%
High Risk	> 125% of manufacturer's recommended service life

Current Condition	Resulting Condition After			
	Inspection	Minor Repair	Major Repair	Replacement
Good	Good			
Low Risk	Low Risk	Good		
Medium Risk	Medium Risk	Medium Risk	Low Risk	
High Risk	High Risk	High Risk	Medium Risk	Good

Implementation Plan Overview



Implementation Plan: Phase 1

Development of Statewide ITS Asset Management Business Processes and Procedures

- Stakeholder Engagement
 - Ensure stakeholders have access to Asset Management Program (AMP)
 - Meetings to discuss asset management activities (regional opportunities and challenges).
 - Creation of monthly reporting requirements such as asset condition, uptime/downtime, and lifecycle cost.
 - Formalized data “language” (e.g. naming conventions, data point orders)

Implementation Plan: Phase 1

- Financial Resource Management
 - Review and update funding plans to tie them to asset management goals.
 - Development of investment strategies (Maintenance Prioritization Tool)
 - Formalized process for researching and testing emerging technologies.
 - Development of device specific Key Performance Indicators (KPI)
- Develop Quality Control Plan
 - Training plan for maintenance workers
 - Maintenance hierarchy
 - Dissemination of the process/framework

Implementation Plan: Phase 2

Development of Required Data Collection Plans and Performance Measures

- Data Collection Plan
 - Review collection mechanisms (KITS or manual entry) to ensure accuracy of the data.
 - Inventory of all available data and associated programs.
 - Review asset inventory for accuracy and update to statewide naming convention.
 - Develop storage and archiving plan.

Implementation Plan: Phase 2

- Performance Measurement and Analysis
 - Update performance goals, targets, and baselines.
 - Performance measurement reports for identified performance measures:
 - Assets utilization, Maintenance frequency, Percentage of functionality, Maintenance cost per linear mile, Operating condition, Budgeted versus actual maintenance cost, Planned versus actual lifecycle replacement, Percentage of integrated assets per region, Percentage of uptime/downtime, Percentage of network communication issues, Percentage of successful operation of emerging technology, Number of new assets added to the inventory annually, Actual observed assets lifecycle versus the manufacturer's recommended lifecycle, Failure duration versus rectification duration

Implementation Plan: Phase 3

Development of Geographical Interactive Map(s), GUI, Reporting, and Data Visualization Plans

- Integrate GIS solutions such as ITS Strategic Deployment Plan and AMP into the same platform.
- Develop corridor specific maintenance plans
- Create data visualization of the health index of assets.
- Generate reports regularly (weekly, monthly, or quarterly).

Implementation Plan: Phase 4

Staffing, Roll-out, and Training

- Identify staffing needs and skills to be able to adequately maintain asset inventory.
- Conduct staff training and workshops to educate them on the Asset Management Business Process.
- Create ITS Asset Management working group, and hold regularly scheduled meetings to discuss performance reports, challenges, and successes in the field.

Asset Management Program Demonstration

Questions?

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Website is under development. Contact LaShonn Ford for resources.