Alaska Department of
Transportation & Public Facilities

Meeting State and MPO Information Needs in a Constrained Fiscal Environment

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Closing Session Comments

Heard Around the Campfire

Hot Off the Press - Kind of

- NCHRP 20-90: *Improving Management of Transportation Information*
- Development of a Structure for a MIRE Management Information System

MAP-21 References	
Safety	971
Performance	369
Data	361
Asset management	40
Performance measures	40

Heard Around the Campfire

What Do Decision Makers Really Care About

- Collect it once, use many times
- Agile and flexible in data program
- Consistent & objective data collection
- Inventory of data already collected, QA/QC, linking, integrating, synchronizing → before new data collection

Heard Around the Campfire

What Do Decision Makers Really Care About

- Accountability & credibility for data programs & information delivery
- Education & Awareness – roles, value, needs
- Roles & responsibilities – clear definition
- Security, privacy, & confidentiality – emerging issues
- Formalized data business rules - documents data management policies and standards
- Service level agreements – formalizes expectations and anticipated performance

Heard Around the Campfire

What Do Decision Makers Really Care About

- Data and information quality is everyone's business
- Structured content vs unstructured documentation - manage
- Information literacy - findability & access
- Relevance of information found – is it what we need and expect
- What is in the information we find – metadata, taxonomies, data dictionaries
- Information searches - find and narrow searches to improve efficiency
- Terminology – common definitions, metadata, data dictionaries, taxonomies
- Building relationships – need engagement to develop data programs

Heard Around the Campfire

What Do Decision Makers Really Care About

- Link trips to commodities
- Definition for asset attributes – inventory, database, & use
- Asset and project locations – accuracy & access
- Data quality definitions – different things to different people. Need to formalize and document

Heard Around the Campfire

Mandates of MAP-21

- Spatial base map – MAP-21
- Linear reference system (LRS) for all public roads
- All roads network – local and regional sources
- GIS can leverage stakeholder buy-in

Food for Thought

What Do Decision Makers Really Care About

- What role should a CEO play in communicating the direction of data programs and data quality?
- What question are we trying to answer for operations, executive, and the public before we start collecting data?
- Do we need this process?
- How do we reach the customer more effectively?
- Why isn't Google enough?
- Who owns the data?

Food for Thought

What Do Decision Makers Really Care About?

- How should transition management take place?
- How do we get aging legacy systems talk to each other?
- What does data quality mean – really depends on what business unit you talk to?
- Where is the person that can talk to and understand both data and IT folks?
- What does “enterprise” really mean

Food for Thought

When Extreme Weather Strikes

- How do we package climatic information for transportation agencies to be effective for addressing extreme weather events?
- What transportation data should be collected for climate change and extreme weather?
- How do we capture the experience of maintenance, operations, and engineer experience on impacts of changes in weather events?

Research Areas

What Do Decision Makers Really Care About

- Develop clearing house for bicycle / pedestrian sources – lots of sources out there but no single reference
- Understand what data you have – how to leverage the data you have to answer the questions
- Define roles for the maturity models in transportation data programs
- Look at cross training opportunities to improve communication among IT and data management functions

Research Areas

When Extreme Weather Strikes

- Package weather & climate data tailored for transportation agency operations
- Capture the workforce experience on what impacts they are seeing from extreme weather events and climate change
- Define the type and accuracy of both transportation and weather data to collect before, during, and after extreme weather events. **Note – this is a cross cutting topic**.

Research Areas

What Do Decision Makers Really Care About

- Define the role of open data and open architecture and the impact on information management
- Examine the role of a governance board on developing standards – where it should stop and delegate
- Look at roles and responsibilities:
  - Structure and application
  - Delineating roles of data management vs IT
  - Hybrid positions
  - Succession planning

Research Areas

What Do Decision Makers Really Care About

- Understand how the value of data and information management be explained – business cases to communicate the value in terms of anecdotal / qualitative value, return on investment, and risk
- Develop guidebook on making a business case for data programs that are linked to data principals
- Formalize better tools to identify when it is safe to resume operations

Research Areas

Mandates of MAP-21

- Spatial business analytics processes - still investigating options
- Risk – how do communicate risk and incorporate into long range plans

Research Areas

Framework for Strategic Information Management

- Framework - for research and development to improve transportation information and knowledge management
- Purpose - help state DOTs and our partner organizations evolve the modern information management systems we need to support and improve agency business practices and performance
- Importance - look at the information / data/ knowledge management practices as a focus area in its own right. By focusing on these practices, we may be able to move forward in many areas as opposed to the one topic.
- Intent - use this as a living document, to be vetted, and implemented (the how we do this, still needs to be figured out).

Research Areas

Primary Strategic Areas

- Strategic Information Management Policy and Practice
- Information Technology and Architecture
- Capture, Storage, Findability, & Retrieval
- Distribution & Reporting
- Human Elements

Moving Forward

What Do Decision Makers Really Care About

- *Tools/technologies and Business Opportunities for Mining our Existing Data* - sets to identify patterns/opportunities for performance improvement. This connects to the theme of what do decision makers really care about – desire to be more like the private sector in understanding what is going on by overlaying disparate data sets

Moving Forward

Mandates of MAP-21: TRB 2014

- *MAP-21: Are States Ready for Data-Driven Decision Making and Reporting*? Examine the readiness of states to make decisions using existing data programs, how to leverage existing data, and identify gaps that need to be addressed.
- *Issues of Communicating Local Transportation Data* - MAP-21 requirements, Session.
- *MAP- 21 and Travel Time Speed and Reliability (*TTSR) - will be a big player in MAP - 21 performance measures, session and a poster session.

Moving Forward

Mandates of MAP-21: TRB 2014

- *Making Use of the Clo*ud – policies and processes now that technologies have matured. For MAP-21, the cloud can support data sharing and collaboration across agencies for real time traffic, detailed asset data.
- *MAP-21: Are States Ready for Data-Driven Decision Making and Reporting*? Examine the readiness of states to make decisions using existing data programs, how to leverage existing data, and identify gaps that need to be addressed.

Moving Forward

TRB 2014

- *National Geospatial Resources for Transportation Decisions* - e.g. National Weather Service, Department of Commerce, Workshop
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Moving Forward

When Extreme Weather Strikes: TRB 2014

- *Weather Extremes* – lots of different considerations here.
  - Transportation Asset Management Conference in April 2014 - will coordinate with the conference planner.
  - Significant cross cutting committee interest, e.g., data committees and asset management.
- Integrating Weather Impacts into MAP-21 Performance Measures — measures are sensitive to weather impacts, how should this be factored into the measures
- International approaches