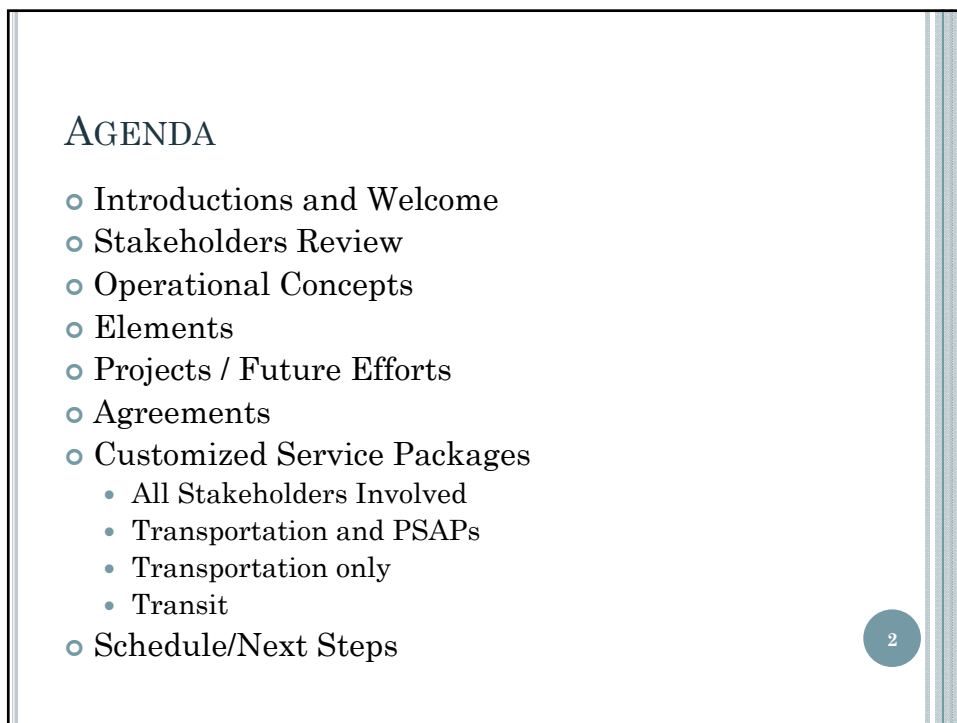


**KAUAI
ITS ARCHITECTURE OPERATIONAL
CONCEPT WORKSHOP**

September 9, 2015



AGENDA

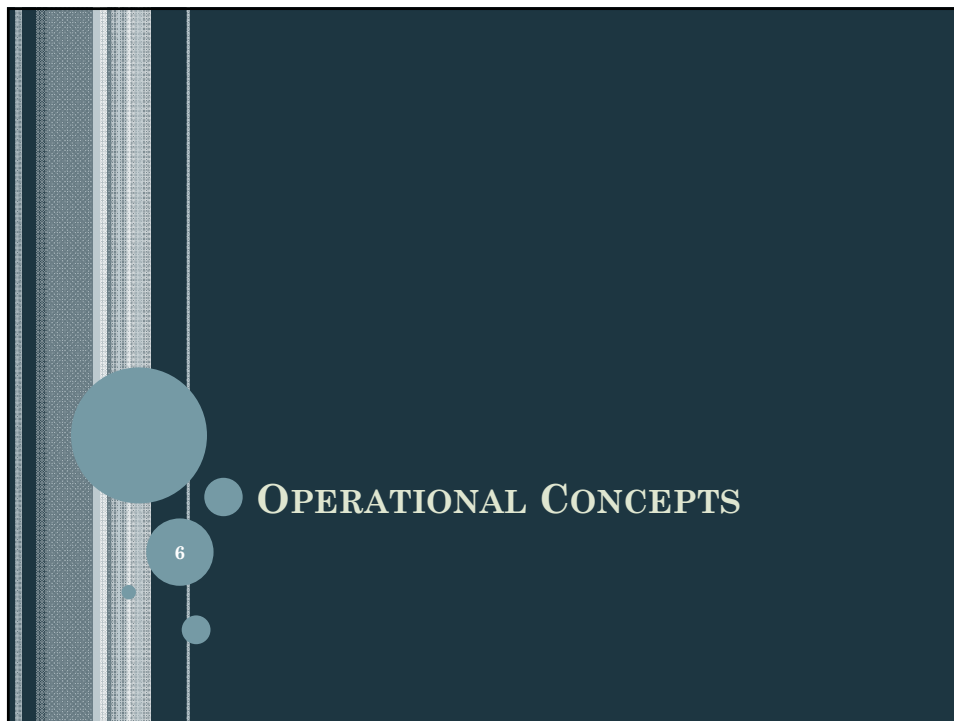
- Introductions and Welcome
- Stakeholders Review
- Operational Concepts
- Elements
- Projects / Future Efforts
- Agreements
- Customized Service Packages
 - All Stakeholders Involved
 - Transportation and PSAPs
 - Transportation only
 - Transit
- Schedule/Next Steps



WHO IS A STAKEHOLDER?

- Technical Definition:
 - Someone that sends or receives transportation information to/from other stakeholders either directly or with their systems.
- Institutional Definition:
 - Someone who builds, operates or maintains ITS equipment.

KAUAI STAKEHOLDERS		
State or County	Stakeholder Name	Abbreviation
State	Department of Transportation Highways Division, Kauai District	HDOT-HWY-K
State	Department of Transportation Airports Division, Kauai District	HDOT-AIR-K
State	Department of Transportation Harbors Division, Kauai District	HDOT-HAR-K
County of Kauai	Department of Public Works	Kauai DPW
County of Kauai	Police Department	Kauai Police
County of Kauai	Fire Department	Kauai Fire
County of Kauai	Civil Defense Agency	Kauai CDA
County of Kauai	Transportation Agency	Kauai TA
County of Kauai	Medical Transportation	Kauai EMS
County of Kauai	Dept. of Finance, Info. Tech.	Kauai IT
County of Kauai	Department of Planning	Kauai Planning
State	Kauai Visitors Bureau	KVB



OPERATIONAL CONCEPTS

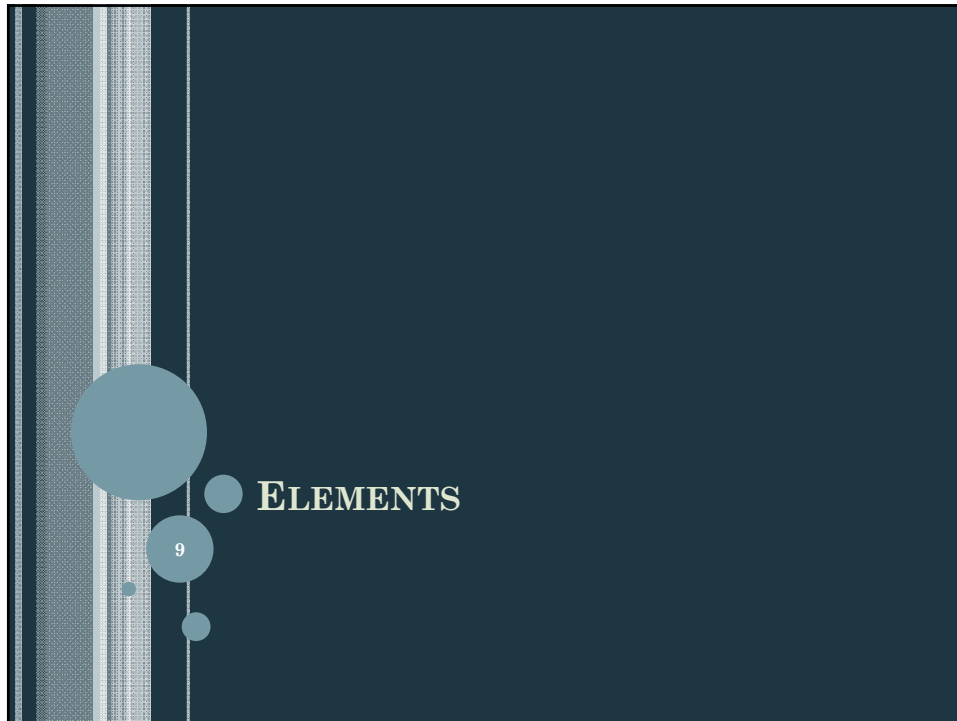
- Defines roles and responsibilities of stakeholders in providing the ITS services
- Organized by
 - Stakeholder
 - Service Area
 - Emergency Management
 - Incident Management
 - Information Dissemination
 - Maintenance Management
 - Traffic Signal Control
 - Transit Management

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OPERATIONAL CONCEPT EXAMPLE

Stakeholder	Service Area	Roles and Responsibilities Description	Status	Notes
HDOT-HWY-K	Incident Management	Perform network surveillance for detection and verification of incidents on state roads	Future	
		Send traffic, incident information and traffic images to the 911 Dispatch Center and Kauai County EOC	Future	
	Information Dissemination	Provide traffic information to travelers via HDOT DMS equipment	Existing	HDOT currently operates portable DMS, but the DMS is not controlled remotely.

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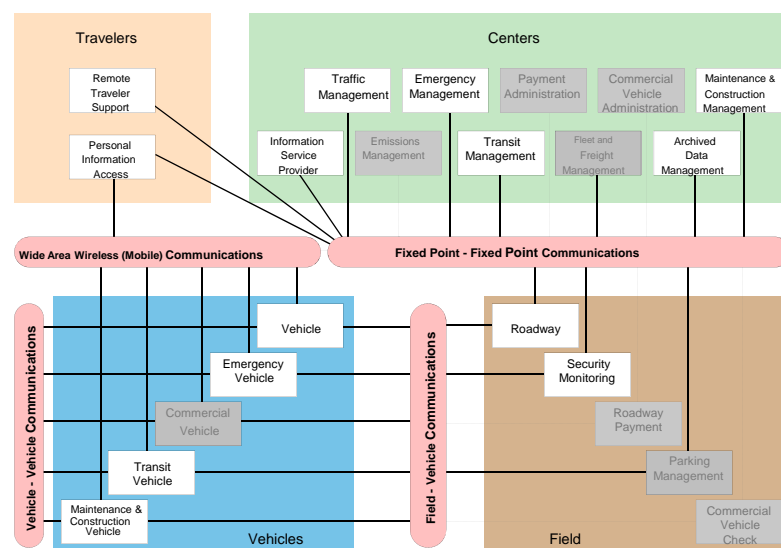
ITS INVENTORY

- A list of ITS elements and the elements that interface with them
- And an ITS element is:
 - The name used by stakeholders to describe high level parts of an ITS system.
- Types of Elements:
 - Centers – Traffic, Emergency, Transit
 - Field Devices – Traffic, Maintenance
 - Traveler Interfaces – Websites, Smart Phones
 - Data Systems – Planning, Archives
 - Vehicles – Transit, Emergency, Maintenance

REGIONAL ITS INVENTORY

- Review current and planned elements
 - Owner
 - Status
 - Definition
 - Entity Type

REGIONAL ITS INVENTORY: SUBSYSTEMS



REGIONAL ITS INVENTORY

- Let's go to the inventory....

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REGIONAL ITS PROJECTS

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REVIEW ITS PROJECTS

- ITS projects identified from stakeholder interviews with key
- For each project consider
 - Name, Description
 - Key Stakeholders
 - Timeframe
 - Near-Term: Within the next 5 years
 - Long-Term: More than five years
 - Mapping to Architecture

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ITS PROJECTS

- Will input ITS projects into the Turbo Architecture database.
- Ability to generate outputs to create a systems engineering analysis and functional requirements for each project.

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HIGHLIGHTED PROJECTS

- Hanalei Flood Warning System K-34
- Jet Fuel Tank Relocation

- Let's go to Project List.....

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AGREEMENTS

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POTENTIAL AGREEMENTS

- Managing ITS equipment, including traffic signals
 - HDOT-HWY-K
 - Kauai DPW
- Sharing of video feeds
 - HDOT-HWY-K
 - Kauai Fire Dept
 - Kauai Police Dept
- Sharing of speed data and signs
 - HDOT-HWY-K
 - Kauai Police Dept
 - Kauai DPW
- Use of permanent and portable dynamic message signs
 - HDOT-HWY-T
 - Agencies wanting to use the signs

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ITS SERVICES

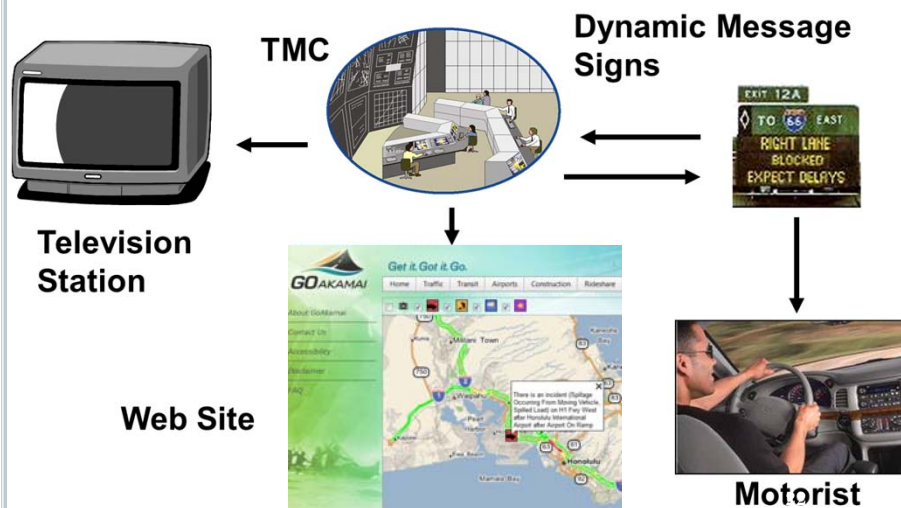
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ITS SERVICES COVER

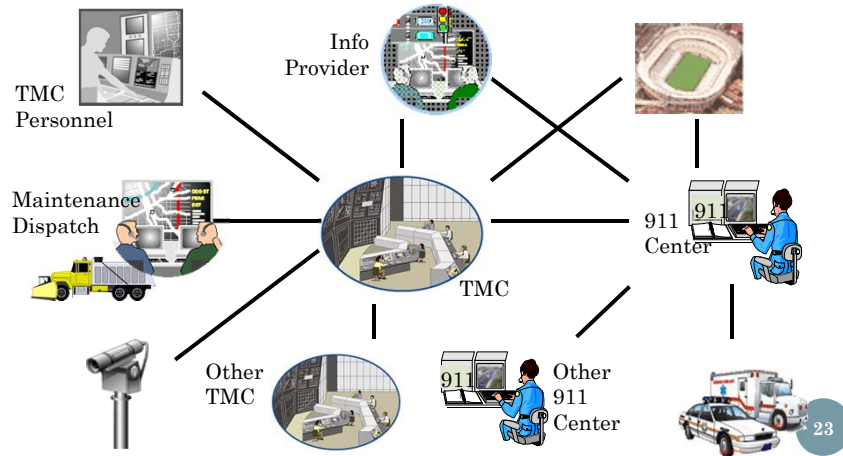
- Traffic Management
- Traveler Information
- Transit Management
- Emergency Management
- Commercial Vehicle Operations
- Maintenance and Construction
- Archived Data Management
- Advanced Vehicle Safety

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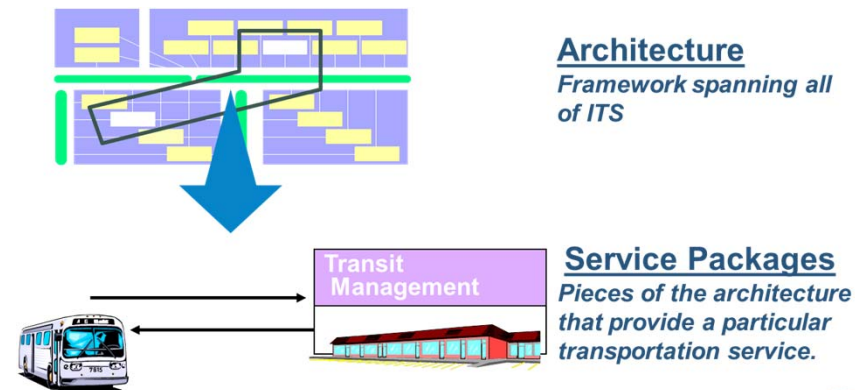
ITS SERVICE: TRAFFIC INFORMATION DISSEMINATION



ITS SERVICE: INCIDENT MANAGEMENT

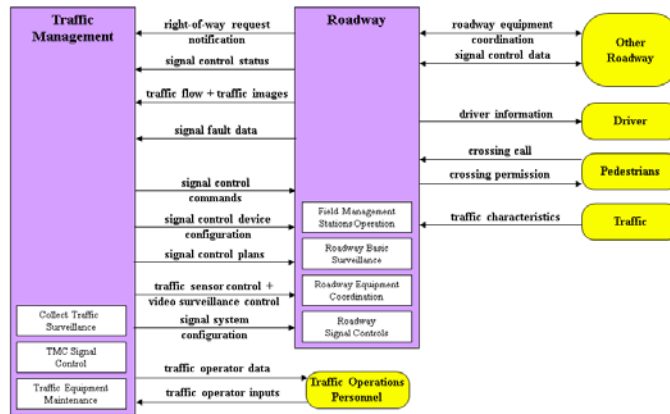


SERVICE PACKAGES = ITS SERVICES

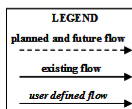
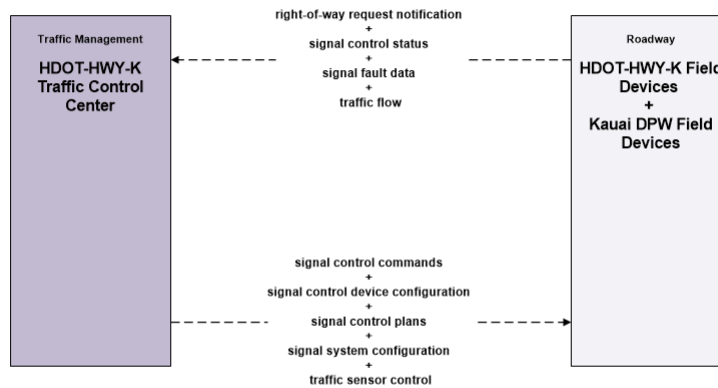


NATIONAL ITS ARCHITECTURE SERVICE PACKAGE

ATMS03 – Traffic Signal Control



ATMS03 - Traffic Signal Control
HDOT Highways Kauai District (HDOT-HWY-K)



We documented future projects on County roads to include ITS devices (e.g., CCTV cameras, speed signs, dynamic message signs, etc.). We also noted that there are no plans to develop a traffic operations center for the County operations. Discuss how ITS devices will be controlled and if the State is open to controlling at the future HDOT-HWY-K Traffic Control Center.

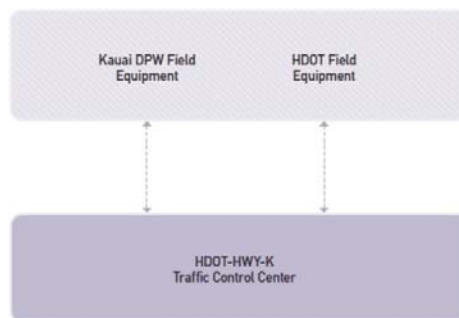
CUSTOMIZED SERVICE PACKAGE DIAGRAMS

- Customize to reflect regional operational concepts
- Review selected service package diagrams
 - Incident Management
 - Emergency Management
 - Disaster/ Evacuation
 - Traveler Information
 - Traffic Management
 - Transit Management
- Review first the Summary Diagram for the area, then the details of each service package

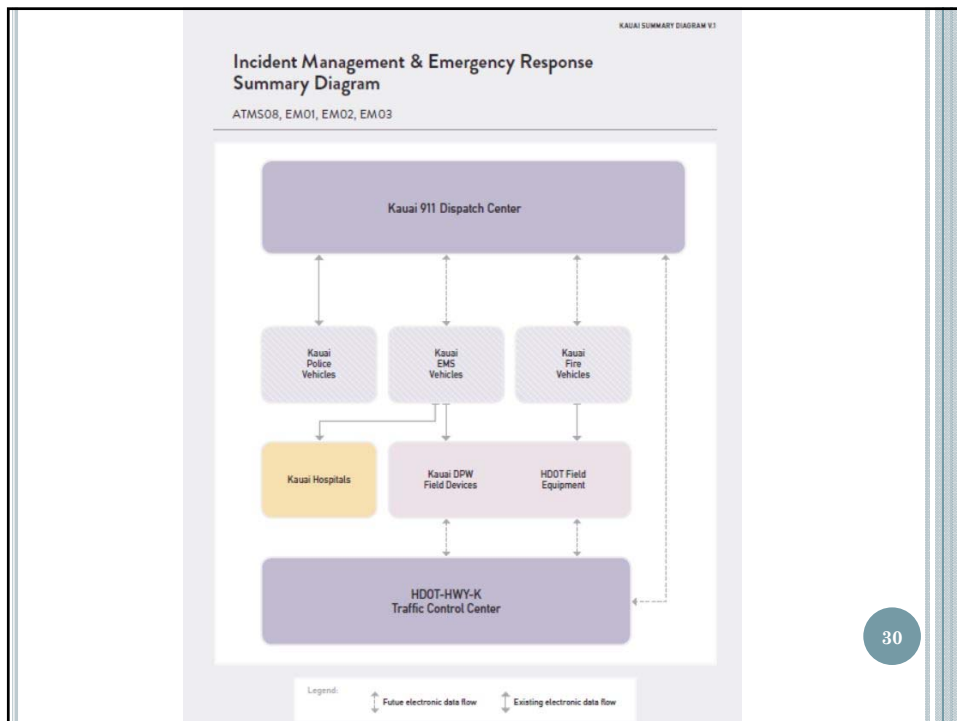
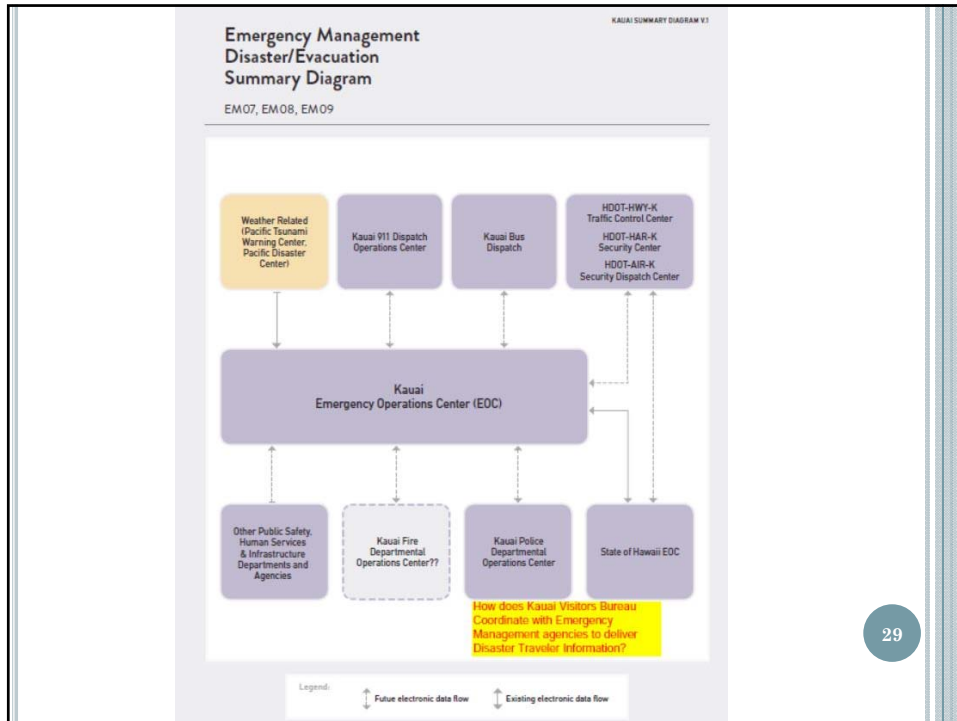
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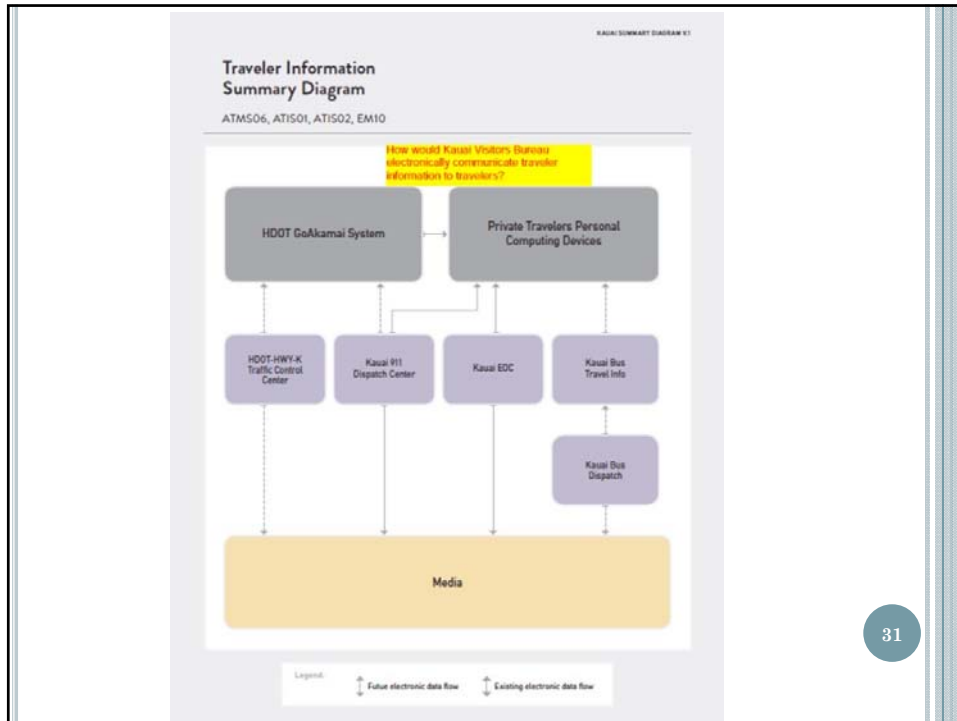
Traffic Management Summary Diagram

ATMS01, ATMS03, ATMS06, ATMS19



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SCHEDULE

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SCHEDULE & NEXT STEPS

- Sept-Oct. 2015: Update Service Package Diagrams to reflect Workshop Discussion
- Nov. 2015: Stakeholder Review of Architecture
- Dec. 2015: Finalize Kauai ITS Architecture

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OPEN

- Questions?
- Comments?

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THANK YOU!!!!