

Hawaii Commercial Vehicle Information Systems and Networks (CVISN) Program Plan and Top- Level Design

Final Report

prepared for

Federal Motor Carrier Safety Administration

prepared by

Hawaii CVISN Team

final report

Hawaii CVISN Program Plan and Top-Level Design

prepared for

Federal Motor Carrier Safety Administration

prepared by

Hawaii CVISN Team

date

November 2011

Table of Contents

Executive Summary	1
1.0 Introduction	1-1
1.1 Purpose and Scope	1-1
1.2 Background.....	1-2
Hawaii’s CVISN Program	1-4
Hawaii’s CVISN Organization.....	1-5
1.3 Organization of this Document	1-9
2.0 Program Objectives and Project Descriptions.....	2-1
2.1 State CVISN Goals	2-1
2.2 State CVISN Program Status.....	2-2
Program Management	2-2
Electronic Credentialing	2-2
Safety Information Exchange	2-3
Electronic Screening	2-4
Other Relevant State Programs.....	2-5
HDOT WIM Deployments.....	2-5
HDOA Electronic Manifest Program	2-6
Current Operational Issues	2-6
2.3 Planned CVISN Deployment Projects	2-7
2.4 High-Level Requirements for Top-Level Design	2-26
3.0 System Design.....	3-1
3.1 Architecture Overview	3-1
3.2 Description of System Components.....	3-4
3.3 Project Design Elements	3-4
Trucking in Hawaii Web Portal.....	3-5
Vehicle Registration.....	3-6
Commercial Vehicle Information Exchange Window	3-7
Electronic Screening at Sand Island Weigh Station	3-8
Vehicle Identification Card (VIC) System	3-9
Summary of Projects.....	3-10
System Testing	3-12
4.0 Products and Procurement Strategy	4-1

5.0	Program Schedule.....	5-1
6.0	Program Budget and Funding Sources	6-1
7.0	Outstanding Issues.....	7-1
A.	Acronyms and Special Terms	A-1

List of Tables

Table 1.1	CVISN-related Agencies and Organizations in Hawaii	1-5
Table 2.1	Project #1 – Program Management.....	2-9
Table 2.2	Project #2 – Trucking in Hawaii Web Portal.....	2-11
Table 2.3	Project #3 – Modernize Vehicle Registration System Database.....	2-13
Table 2.4	Project #4 – Automate VIC Process	2-17
Table 2.5	Project #5 – Deploy and Maintain CVIEW	2-20
Table 2.6	Project #6 – Deploy E-Screening at Sand Island	2-23
Table 2.7	Summary of Systems to Perform Required Core CVISN Functionality	2-27
Table 3.1	System Interfaces for Trucking in Hawaii Web Portal.....	3-6
Table 3.2	System Interfaces for Vehicle Registration Project	3-7
Table 3.3	System Interfaces for CVIEW Project	3-8
Table 3.4	System Interfaces for Sand Island Weigh Station	3-9
Table 3.5	System Interfaces for VIC System	3-9
Table 3.6	Summary of System Changes	3-11
Table 4.1	Summary of Anticipated Procurements.....	4-2
Table 6.1	Summary of Hawaii CVISN Costs.....	6-2
Table 6.2	Summary of Matching Funds	6-3

List of Figures

Figure 1.1 Typical Core CVISN Functionality	1-3
Figure 1.2 Hawaii CVISN Team.....	1-8
Figure 2.1 Weigh Station Activities at Sand Island Weigh Station.....	2-5
Figure 3.1 CVISN System Design Diagram.....	3-2
Figure 3.2 Computers and Network Diagram.....	3-3
Figure 5.1 Proposed Hawaii CVISN Deployment Schedule.....	5-2

Executive Summary

Commercial vehicles are the dominant mode of freight transportation in Hawaii and support all of the State's key industries, including tourism, national defense, and agriculture. Trucks moved nearly 70 percent of the state's freight by weight and 76 percent of the state's freight by volume in 2004—the most current year for which data is available¹. Trucks also link the State's air and water ports to their ultimate customers—the State's businesses and consumers.

In order to ensure the safety and efficiency of this key industry, Hawaii has elected to participate in the national Commercial Vehicle Information Systems and Networks (CVISN) program, which uses advanced technologies to improve commercial vehicle safety, security, and efficiency. Hawaii began planning its CVISN program in 2006 when it developed its Intelligent Transportation Systems for Commercial Vehicle Operations (ITS/CVO) Business Plan. The goals contained in that Business Plan continue to represent the intent of the State's program and include:

- Improve transportation safety by applying enforcement and other resources to commercial vehicle operations where safety risks are most likely to exist
 - Improve desk-side and roadside access to safety information (inspection data and other data relevant to safety decisions);
 - Continuously improve safety inspection and review processes;
 - Enhance ability to monitor the en route operator/ vehicle safety; and
 - Enhance ability to monitor size/weight status of the vehicle.
- Streamline credentials administration
 - Develop an electronic credentialing capability (“electronic one-stop shop”);
 - Enhance inter/intra-agency (Federal, State, county and private) and inter-county data exchange (carrier, vehicle, driver, container, cargo, chassis); and
 - Provide credentials information to authorized officials.
- Improve the screening and selection of vehicles and containers for enforcement operations
 - Identify carriers, drivers, and vehicles operating unsafely or illegally;

¹ Federal Highway Administration, Office of Freight Management and Operations. *Freight Info: Freight Shipments To, From and Within Hawaii*.

- Reduce the frequency and duration of stops for safe and legal carriers;
- Increase reliance on technology to enhance effective enforcement;
- Provide more “safe havens” for state inspection personnel; and
- Enhance highway safety, public safety, and public health.

This document, the State’s CVISN Program Plan/Top-Level Design, further details Hawaii’s planned involvement in the CVISN program. It documents both the Core and Expanded CVISN functionality and the information systems that will be included in Hawaii’s CVISN Deployment program.

Given Hawaii’s unique CVO environment, some of the standard Core CVISN functionality (i.e., automate processing of International Registration Plan (IRP) credentials, automate processing of International Fuel Tax Agreement (IFTA) credentials, participate in IRP and IFTA Clearinghouses) are not applicable. Given this fact and leveraging the flexibility of the CVISN program, FMCSA has allowed the Hawaii CVISN team to modify the Core CVISN functionality to reflect the unique needs of the State’s public- and private-sector stakeholders. Therefore, the proposed Core CVISN functionality for deployment in Hawaii includes:

- Electronic Credentialing Administration
 - Provide on-line application for commercial vehicle renewals
 - Trucking in Hawaii Portal
 - Automated Vehicle Identification Card (VIC) processing
- Safety Information Exchange
 - Deploy Commercial Vehicle Information Exchange Window (CVIEW) (or equivalent) to facilitate the sharing of information across agencies
 - Deploy ASPEN (which is already completed)
- Electronic Screening
 - Deploy electronic screening at one or more fixed/mobile sites

Based on the interview sessions with the State’s CVISN agencies and discussions with the representatives from the motor carrier industry, **eight** projects were identified for inclusion in the Hawaii CVISN program. Three of these projects are designed to deploy the State’s remaining Core CVISN capabilities. Five projects are designed to deploy the State’s Expanded CVISN functionality/systems in order to augment its Core CVISN projects and further improve commercial vehicle safety, security, and productivity in the State. These Expanded CVISN projects to be undertaken at a later date include:

- Automated Oversize/Overweight (OS/OW) permitting;
- Deployment of a Virtual Weigh Station; and

- Issuance of USDOT numbers to intrastate carriers.

Hawaii also is planning to obtain program management resources to provide ongoing oversight for the State's CVISN program.

A broad range of Federal, State, and County agencies are supporting the State's CVISN program. These agencies include:

- Hawaii Department of Transportation (HDOT), Highways Division Motor Vehicle Safety Office, Planning Office, and District Offices; and Statewide Transportation Planning Branch;
- City and County of Honolulu, Department of Customer Services, Motor Vehicle and Licensing Division; and Department of Information Technology;
- County of Hawaii, Department of Finance, Vehicle Registration and Licensing Division;
- County of Kauai, Department of Finance, Treasury Division;
- County of Maui, Department of Finance, Motor Vehicle Registration and Driver Licensing Division;
- Hawaii Department of Budget and Finance, Public Utilities Commission (PUC);
- Hawaii Department of Agriculture (HDOA);
- Oahu Metropolitan Planning Organization (MPO);
- Federal Motor Carrier Safety Administration (FMCSA); and
- Federal Highway Administration (FHWA).

The motor carrier industry, represented by the Hawaii Transportation Association (HTA) also is actively participating in the State's CVISN program. The Hawaii CVISN Team currently is led by Program Manager Dean Nakagawa. Mr. Nakagawa is from HDOT, which is the State's lead CVISN agency.

Hawaii currently is undecided whether it will participate in the Performance and Registration Information Systems Management (PRISM) program. Should the State opt to participate in the PRISM program, its PRISM Implementation Plan will fully leverage the CVISN functionality/architecture (e.g., CVIEW) described in this document. The final decision regarding the State's participation in the PRISM program will be made after the Federal transportation legislation is reauthorized.

1.0 Introduction

Commercial vehicles are the dominant mode of freight transportation in Hawaii and support all of the State's key industries, including tourism, national defense, and agriculture. Trucks moved nearly 70 percent of the state's freight by weight and 76 percent of the state's freight by volume in 2004—the most current year for which data is available². Trucks also link the State's air and water ports to their ultimate customers—the State's businesses and consumers.

As such, the efficiency, and effectiveness of the state's trucking industry directly impacts the State's economy. Intelligent Transportation Systems (ITS), especially those focused on commercial vehicle operations (CVO), have the potential to deliver direct operational benefits to the commercial vehicle industry, as well as the State and Federal agencies responsible for regulating it. These benefits include:

- Improved highway safety;
- Improved compliance with Federal and State laws and regulations;
- More effective use of roadside enforcement resources through improved information sharing and the targeting of high-risk carriers and vehicles (i.e., carriers or vehicles known to be non-compliant with Federal or State laws/regulations, or those with histories of being non-compliant);
- More efficient and cost effective processing of credential applications;
- Enhanced customer service (e.g., ability to receive credentials 24x7); and
- Improved accuracy and timeliness in credentials processing.

In order to realize these benefits, Hawaii has elected to participate in the national CVISN program. The CVISN program is designed to use advanced technologies to streamline the commercial vehicle credentialing processes, improve information sharing across state and Federal agencies, and target roadside enforcement resources at high-risk carriers and vehicles.

1.1 PURPOSE AND SCOPE

This CVISN Program Plan/Top-Level Design documents Hawaii's planned involvement in the CVISN program. It documents both the Core and Expanded CVISN functionality and the information systems that will be included in Hawaii's CVISN Deployment program. This document is intended to

² Federal Highway Administration, Office of Freight Management and Operations. *Freight Info: Freight Shipments To, From and Within Hawaii*.

communicate the State's desired CVISN functionality and technical architecture, as well as the specific projects that will be included in Hawaii's CVISN program, to the Federal Motor Carrier Safety Administration (FMCSA) and interested State and Federal stakeholders. The key components of this document include:

- Goals and objectives of Hawaii's CVISN program;
- Project descriptions;
- System design;
- Procurement strategy;
- Implementation schedule;
- Budget and funding sources; and
- Design and deployment issues.

1.2 BACKGROUND

The national CVISN program, which is administered by FMCSA, is aimed at improving commercial motor vehicle (CMV) safety, security, mobility, and productivity. CVISN is an information sharing initiative involving a partnership of government agencies, motor carriers, and other stakeholders and third parties. As a partnership formed around a common goal of sharing information, CVISN benefits from maximum nationwide participation by the public and private partners.

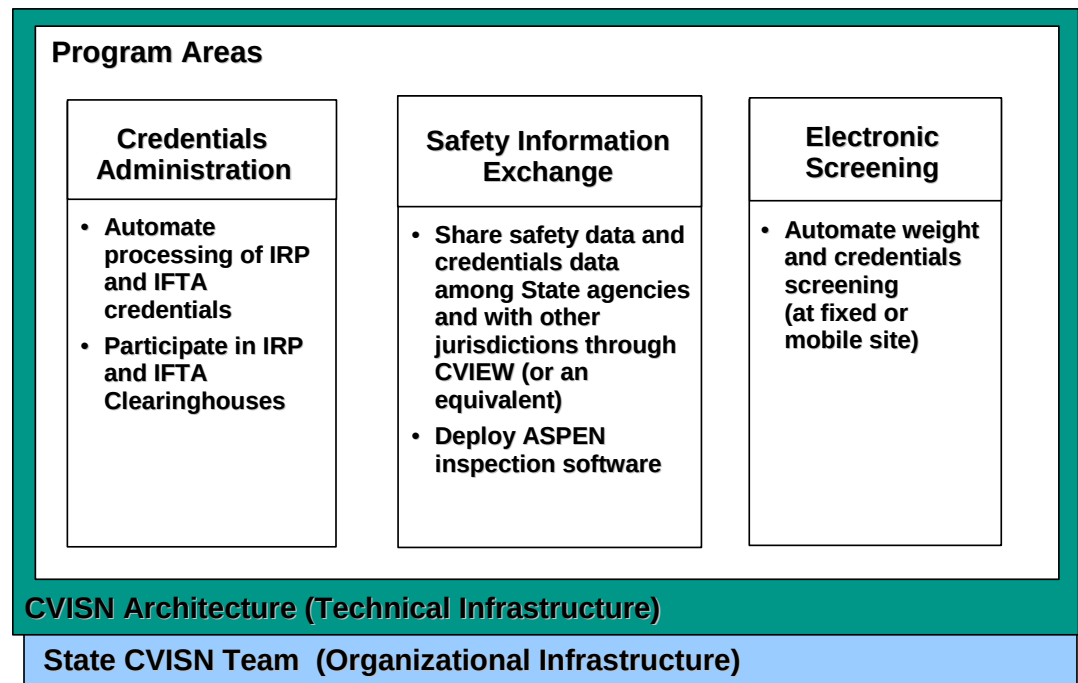
The CVISN program consists of Core functionality that typically must be deployed by all participating states, as well as Expanded functionality that can be deployed at the discretion of participating states. Core CVISN functionality is segmented into three program areas:

- **Electronic Credentials Administration (ECA)** – Projects within this program area automate the application, processing, and issuance of commercial vehicle operating credentials and permits. The projects are designed to streamline regulatory processes, expedite commercial vehicle credentialing processes, and reduce motor carrier and agency costs.
- **Safety Information Exchange (SIE)** – Projects within this program area facilitate the exchange of motor carrier credential and safety data among agencies in a state and between jurisdictions, in order to augment enforcement programs, support the targeting of high-risk commercial vehicles, and streamline regulatory programs.
- **Electronic Screening (ES)** – Projects within this program area electronically identify a commercial vehicle, verify its size, weight, and credentials information, and review its carrier's past safety performance while the vehicle is in motion. Vehicles that are: 1) properly credentialed; 2) operated by a motor carrier with a history of safe operations; and 3) within weight

limits, if the site is instrumented for weight measurements, are allowed to bypass inspection facilities. The projects are designed to target roadside enforcement services at high-risk motor carriers/motor vehicles, and reduce operating costs for safe and legal motor carriers.

Figure 1.1 depicts the typical Core CVISN functionality.

Figure 1.1 Typical Core CVISN Functionality



In order to further improve CMV safety and security and to build upon states' Core CVISN functionality, FMCSA and the CVISN stakeholder community identified a set of Expanded CVISN capabilities. These capabilities are designed to:

- Enhance the safety, security, and productivity of commercial vehicle operations; and
- Improve the access to, and quality of, information about commercial drivers, carriers, vehicles, chassis, cargo, inspections, crashes, compliance reviews, and citations for authorized public and private sector users.

The development of these capabilities was guided by the lessons learned from the Core CVISN deployment program, advances in technology, and the increased focus on freight security, passenger security and safety, and commercial motor vehicle drivers.

The Expanded portion of the CVISN program is designed to be more flexible than the Core component of the program. States are not required to deploy a set of fixed capabilities but rather may choose the capabilities that they wish to deploy. This "cafeteria approach" allows the states to customize their Expanded

CVISN programs and focus their resources on the projects that are most important to them and their constituencies. The Expanded CVISN capabilities are segmented into four program areas:

- Driver Information Sharing;
- Enhanced Safety Information Sharing;
- Smart Roadside; and
- Expanded Electronic Credentialing (e.g., Unified Carrier Registration; OS/OW Permitting).

Deployment of Core and Expanded CVISN projects is supported by the national CVISN architecture, which provides the framework for interoperability and standardized interfaces for deploying CVISN-compliant systems. In each State, deployment is led by members of the CVISN team comprised of representatives from the State and Federal agencies responsible for regulating motor carriers and/or commercial vehicles, as well as representatives from the State's motor carrier industry.

Hawaii's CVISN Program

Given Hawaii's unique CVO environment, some of the standard Core CVISN functionality (i.e., automate processing of International Registration Plan (IRP) credentials, automate processing of International Fuel Tax Agreement (IFTA) credentials, participate in IRP and IFTA Clearinghouses) are not applicable. Given this fact and leveraging the flexibility of the CVISN program, FMCSA has allowed the Hawaii CVISN team to modify the Core CVISN functionality to reflect the unique needs of the State's public- and private-sector stakeholders. Therefore, the proposed Core CVISN functionality for deployment in Hawaii includes:

- Electronic Credentialing Administration
 - Provide on-line application for commercial vehicle renewals
 - Trucking in Hawaii Portal
 - Automated Vehicle Identification Card (VIC) processing
- Safety Information Exchange
 - Deploy Commercial Vehicle Information Exchange Window (CVIEW) (or equivalent) to facilitate the sharing of information across agencies
 - Deploy ASPEN (which is already completed)
- Electronic Screening
 - Deploy electronic screening at one or more fixed/mobile sites

Hawaii's CVISN Organization

A broad range of Federal, State, county, and local agencies are responsible for regulating the motor carrier industry or have some impact on commercial vehicle operations in Hawaii. Table 1.1 lists these agencies and summarizes their primary role(s) in commercial vehicle operations. In addition to the public-sector stakeholders, the Hawaii Transportation Association, which is the State's trucking association, and its members are actively involved in commercial vehicle operations and therefore are key CVISN stakeholders.

Table 1.1 CVISN-related Agencies and Organizations in Hawaii

Agency/Organization	Key CVISN-related Responsibilities
Hawaii Department of Transportation (HDOT), Highways Division Motor Vehicle Safety Office, Planning Office, and District Offices; and Statewide Transportation Planning Branch	• CVISN program management • Commercial vehicle size, weight, and safety enforcement • Issuance of OS/OW permits • Issuance of the Vehicle Identification Card (VIC) • Tracking of Heavy Vehicle Use Tax (HVUT) • Deployment and maintenance of weigh-in-motion (WIM) scales
City and County of Honolulu, Department of Customer Services, Motor Vehicle and Licensing Division; and Department of Information Technology	• Commercial vehicle registration and titling for City and County of Honolulu • Host for vehicle registration system used by all counties to register/title commercial vehicles
County of Hawaii, Department of Finance, Vehicle Registration and Licensing Division	• Commercial vehicle registration and titling for County of Hawaii
County of Kauai, Department of Finance, Treasury Division	• Commercial vehicle registration and titling for County of Kauai
County of Maui, Department of Finance, Motor Vehicle Registration and Driver Licensing Division	• Commercial vehicle registration and titling for County of Maui
Hawaii Department of Budget and Finance, Public Utilities	• Issuance of PUC license numbers

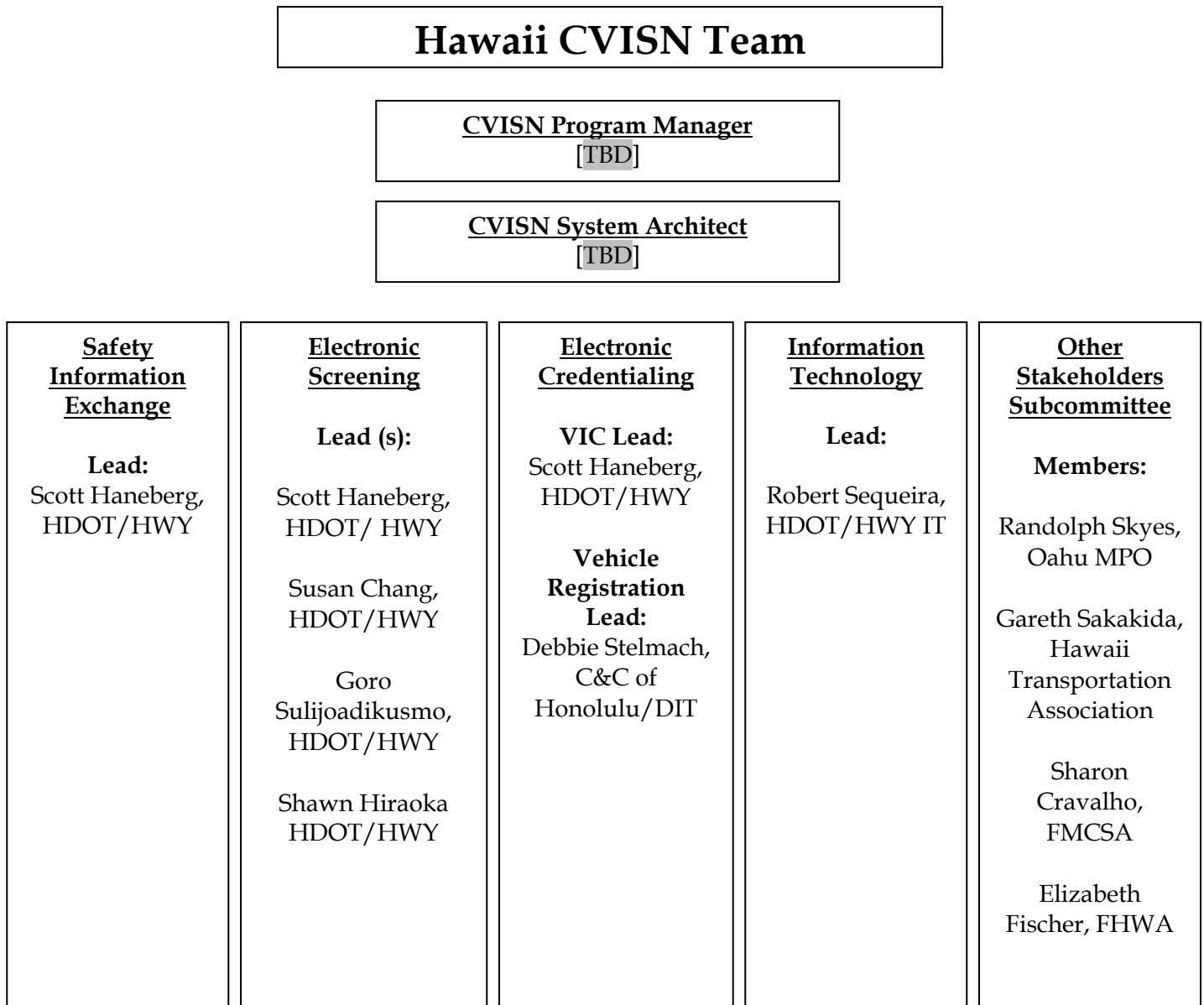
Agency/Organization	Key CVISN-related Responsibilities
Commission (PUC)	
Hawaii Department of Agriculture (HDOA)	• Electronic manifest program • Inspections of ocean-going containers that contain agricultural products, most of which are hauled by commercial vehicles
Hawaii Transportation Association (HTA)	• Representing “industry's interests before county, state and federal agencies as well as county councils, the state legislature and Congress” ³ • Research and education programs for its member motor carriers
Oahu Metropolitan Planning Organization (MPO)	• Transportation planning coordination on Oahu
FMCSA	• Administering and providing guidance regarding FMCSA safety-, security-, and education-related programs • Ensuring State’s consistency with Core CVISN requirements • Facilitating distribution of CVISN funds to State CVISN program • Monitoring implementation of State’s CVISN Program Agreement • Processing reimbursements associated with CVISN Program Agreement • Conducting compliance reviews
FHWA	• Oversees State’s size and weight program [23 CFR 657] • Oversees State’s heavy vehicle use tax program [23 CFR 658]

³Hawaii Transportation Association website: www.htahawaii.org

Agency/Organization	Key CVISN-related Responsibilities
	Oversees State and MPO efforts to plan for freight mobility in Hawaii [23 CFR 450]

The Hawaii CVISN Team currently is led by Program Manager Dean Nakagawa. Mr. Nakagawa is from HDOT, which is the State's lead CVISN agency. The State's CVISN Team also is comprised of a series of agency leads responsible for overseeing the design and implementation activities in their respective areas. Figure 1.2 illustrates how the Hawaii CVISN team is organized. It should be noted that the State's long-term plan is to assign both a full-time CVISN Program Manager and part-time System Architect to the program. These positions will be funded by the State's FY 2009 CVISN Deployment grant.

Figure 1.2 Hawaii CVISN Team



1.3 ORGANIZATION OF THIS DOCUMENT

This document is comprised of seven sections and an Executive Summary.

- **Executive Summary** – Provides a concise summation of the full document.
- **Section 1: Introduction** – Provides an overview of the purpose, scope, and contents of the document as well as an overview of the national CVISN program. This section also provides background information regarding the State's CVISN program and team.
- **Section 2: Program Objectives and Project Descriptions** – Provides a general introduction to the Hawaii CVISN program and details the State's nine planned CVISN projects.
- **Section 3: System Design** – Presents the system design for Hawaii's CVISN deployment. This section provides an overview of the existing State and national systems/networks involved in CVISN deployment, new systems to be implemented to complete deployment, and a summary of the system changes required to implement CVISN capabilities.
- **Section 4: Products and Procurement Strategy** – Identifies the products/services that Hawaii plans to procure for each planned CVISN project, as well as State resources that will be required to support these projects.
- **Section 5: Program Schedule** – Provides an overview of the proposed schedule for completion of all CVISN projects identified and detailed in this document, including key milestones. The schedule graphic (i.e., Gantt chart) provides visual reference to all projects and milestones in full programmatic context.
- **Section 6: Program Budget and Funding Sources** – Identifies anticipated financial resources required for execution of projects. Information provided in this section also identifies planned funding sources for each project, as well as State staff resources required to support implementation activities.
- **Section 7: Outstanding Issues** – Identifies any outstanding issues which may be encountered during the State's implementation of its planned CVISN projects.

2.0 Program Objectives and Project Descriptions

2.1 STATE CVISN GOALS

The CVISN goals and objectives reflected in Hawaii's 2006 ITS/CVO Business Plan continue to represent the intent of the program. The State's CVISN goals are:

- Improve transportation safety by applying enforcement and other resources to commercial vehicle operations where safety risks are most likely to exist
 - Improve desk-side and roadside access to safety information (inspection data and other data relevant to safety decisions);
 - Continuously improve safety inspection and review processes;
 - Enhance ability to monitor the en route operator/ vehicle safety; and
 - Enhance ability to monitor size/weight status of the vehicle.
- Streamline credentials administration
 - Develop an electronic credentialing capability ("electronic one-stop shop");
 - Enhance inter/intra-agency (Federal, State, county and private) and inter-county data exchange (carrier, vehicle, driver, container, cargo, chassis); and
 - Provide credentials information to authorized officials.
- Improve the screening and selection of vehicles and containers for enforcement operations
 - Identify carriers, drivers, and vehicles operating unsafely or illegally;
 - Reduce the frequency and duration of stops for safe and legal carriers;
 - Increase reliance on technology to enhance effective enforcement;
 - Provide more "safe havens" for state inspection personnel; and
 - Enhance highway safety, public safety, and public health.

2.2 STATE CVISN PROGRAM STATUS

Program Management

CVISN requires an organizational framework for cooperative development of CVISN capabilities among State agencies and motor carriers. As described in Section 1, Hawaii has an active CVISN Team led by Dean Nakagawa, the State's CVISN Program Manager. Hawaii's CVISN Team meets on an as-needed basis to address issues within specific functional areas. Members of the Team collaborated on the development of Hawaii's ITS/CVO Business Plan, as well as the development of this document. The Team will continue to coordinate their efforts as they implement projects and market the CVISN program, systems, and services to motor carriers.

Electronic Credentialing

Numerous State agencies are involved in the issuance of credentials for commercial vehicles. Specific commercial vehicle credentials issued in Hawaii include:

- **PUC License Number** - which a motor carrier must acquire prior to "providing commercial vehicle service or operations to the public."⁴ This credential is issued by the Hawaii Department of Budget and Finance, Public Utilities Commission (PUC). A carrier must provide its PUC number when paying its Heavy Vehicle Use Tax (HVUT) as well as when acquiring a Vehicle Identification Card (VIC).
- **VIC** - which is required before a commercial vehicle is put into service. The VIC is issued by the Hawaii Department of Transportation (HDOT) Highways Division Motor Vehicle Safety Office (HWY-V) and contains information regarding the vehicle type, Gross Vehicle Weight Rating (GVWR), United States Department of Transportation (USDOT) number, interstate/intrastate classification, PUC license number, Vehicle Identification Number (VIN), and carrier contact information. The VIC is required to be updated when information changes or when the vehicle is no longer in service. VIC records currently are maintained as hard copy documents. The HDOT IT department recently began the process to convert the physical cards - which are stored in file cabinets - into electronic records in a Microsoft Access database.
- **Commercial Vehicle Registration** - which is required of all vehicles with a tare weight greater than 6,500 pounds. (Note: HDOT and FMCSA classify all vehicles with a GVWR greater than 10,000 pounds or, for vehicles carrying passengers, a carrying capacity of 16 or more [including the driver] as a

⁴ Hawaii ITS/CVO Business Plan, December 2006, page 10.

commercial vehicle.) Commercial vehicle registrations and titles are administered by the Department of Finance for the Counties of Hawaii, Kauai, and Maui, and the Department of Customer Services for the City and County of Honolulu. Each county determines the amount of motor vehicle weight tax and registration fees owed to the State. The county submits a transaction report with the associated funds collected to HDOT on a monthly basis.

Vehicle registration data for all counties is maintained in an IBM mainframe system that is operated by the City and County of Honolulu's Department of Information Technology (DIT). The system resides on a county network. The system is owned and operated by the Counties. Any State or Federal employee can be given inquiry access to vehicle registration data with prior authorization from the county DMV administrators.

The current system provides owners of individual vehicles with the ability to renew their vehicle registrations on-line. Companies that operate fleets do not have the ability to renew commercial vehicle registrations on-line. Fleet operators receive a monthly report of vehicles eligible for renewal, edit the report, and submit a corrected report and associated payment to their respective county's DMV office.

- **Oversize/Overweight (OS/OW) Permits** - which are required for any vehicle that exceeds the following legal limits: weight - 80,000 pounds; width - 9 feet; length - 65 feet; or height - 14 feet. OS/OW permits are issued by HDOT's Highways Division District Offices. City and county OS/OW permits are required for over-dimensional movements on local and county roads. All issued permits currently are maintained as hard copy documents.
- **Heavy Vehicle Use Tax** - which is required for all heavy vehicle registrations subject to the use tax. 23 U.S.C. 141(c) documents that the State must obtain proof of payment of Federal heavy use tax prior to registering the vehicle(s) subject to the tax. States that do not or improperly collect and report this information are subject to Federal withholding of up to 25 percent of the apportionments for the Interstate Maintenance (IM) program. The withheld apportionment is reapportioned to other States using 23 U.S.C. 104(b)(4), i.e., the IM formula.

Safety Information Exchange

Roadside weight and safety inspections are conducted by staff from HWY-V. Inspections currently occur at one fixed facility, Sand Island on Oahu, as well as at safe roadside locations by mobile enforcement units. Vehicles are selected for inspection at Sand Island by weight and/or human observation (e.g., presence of safety inspection sticker, general upkeep of truck). Mobile units use human observation to select a commercial vehicle for inspection. Safety screening algorithms (e.g., Inspection Selection System [ISS-2]) and credentialing status

currently are not used to select a commercial vehicle for inspection. During an inspection HWY-V personnel verify the following credentials:

- Vehicle registration;
- VIC;
- Commercial Driver's License;
- Medical card;
- OS/OW permit (if required);
- Insurance policy; and
- Annual safety inspection.

All motor carrier and vehicle credentials (e.g., vehicle registration, VIC) are verified manually (e.g., inspector reviews paper document in vehicle). Inspectors currently do not verify credential data or safety history information electronically from the roadside.

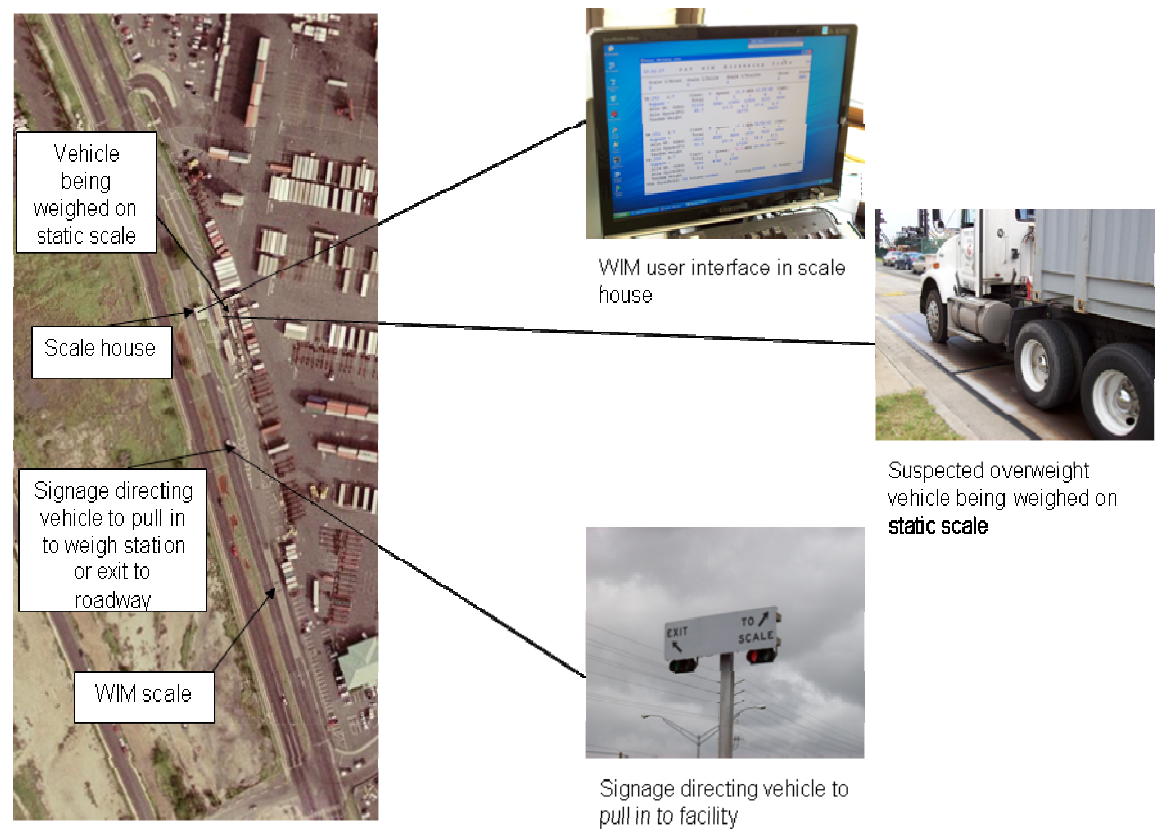
If a vehicle is inspected and found to have no defects, it is issued a color-coded quarterly safety inspection sticker, which indicates to other HWY-V personnel that the vehicle likely does not need to be inspected again during that quarter. HWY-V personnel are equipped with laptops and ASPEN inspection software to capture the results of their roadside inspections. Inspection data is uploaded via landline to the national Safety and Fitness Electronic Records (SAFER) Data **Service**. HWY-V personnel download inspection data from **SAFER Data Service** to the State's SAFETYNET system and then upload the data to FMCSA's Motor Carrier Management Information System (MCMIS). HWY-V personnel currently do not have wireless access to verify credentials at the roadside or upload inspection reports. The purchase of air cards (i.e., wireless modems) has been included in the State's recent Motor Carrier Safety Assistance Program (MCSAP) grants but the hardware has not been purchased due, in part, to concerns about the use of equipment for accessing external/non-"work-related" web content.

Electronic Screening

HWY-V personnel conduct weight screening activities at the Sand Island inspection station, which is equipped with a mainline WIM scale, user interface to the WIM equipment in the scale house, and overhead signage. Figure 2.1 provides a satellite picture of the Sand Island facility, with insets showing detail of some components. (Note: The large trailer yard to the right of the facility is part of the Horizon Line terminal at the Port of Honolulu and is not part of the Sand Island facility.) As commercial vehicles exit the Port, they approach the weigh station and are required to move to the right lane where they cross the WIM scale. The gross vehicle weight, axle weights, and tandem axle weights are calculated by the WIM and displayed to an inspector in the scale house. If WIM data indicates that a vehicle is overweight, they are instructed to pull into the weigh station by an overhead sign. The suspect vehicle is weighed on the

facility's static scale, which provides a greater degree of accuracy than the WIM. If the vehicle is found to be overweight and no OS/OW permit is in hand, the driver of the vehicle is issued a citation and may be required to return to the Port, in order to adjust the load/vehicle configuration before crossing the bridge from the Island. If a vehicle is not overweight on the static scale, the driver is allowed to proceed.

Figure 2.1 Weigh Station Activities at Sand Island Weigh Station



Other Relevant State Programs

In addition to traditional CVISN-related activities, the State has several other programs that could provide data and/or roadside infrastructure to support the State's CVISN program.

HDOT WIM Deployments

HDOT has deployed nine WIM scales for collecting traffic information to support the analysis of travel and weight trends, pavement and bridge monitoring and management, pavement design, and other purposes. WIM

scales currently are deployed in the Counties of Oahu, Kauai, Maui, and Hawaii. The WIM scales continuously record traffic counts, vehicle weights, vehicle classifications, and time of day. Real-time data from the WIM scales can be accessed by authorized HDOT personnel via a secure website. HWY-V personnel also have been trained to connect their laptops to the WIM controller, in order to access the data in real-time and perform screening. However, HWY-V currently does not conduct screening operations at the WIM sites because inspections cannot be safely conducted in the vicinity of the WIM scales.

HDOA Electronic Manifest Program

As part of the State's agricultural inspection program, all transporters are required to provide an electronic manifest (e.g., consignee name, container number, description of commodity) of their ship's containers at least 24 hours before landing in Hawaii. (Ocean carriers commonly provide this information within 24 hours of leaving the originating port, which typically is at least four to five days before landing in Hawaii.) HDOA staff use the manifest data to prioritize containers for inspection. Containers that require inspections are opened and inspected at the Port, resealed with a HDOA seal, and then allowed to be transported from the Port.

Current Operational Issues

Through interview sessions with representatives of Hawaii's CVISN agencies and the motor carrier industry, the following operational issues were identified:

- **Confusion about agency roles** – There is confusion among motor carriers about what is required to operate a commercial vehicle legally in Hawaii and which agency should be contacted for a specific requirement. State personnel also are confused about which agency is responsible for a particular aspect of regulations.
- **Paper credentialing process** – Motor carriers are required to travel to each agency's physical location in order to apply for and receive credentials. The number of vehicle registrations that can be processed in a single day by a carrier is limited and, as such, a carrier may need to make multiple trips to the credentialing office.
- **Outdated registration system** – The State's vehicle registration system was built in 1968 and cannot be expanded to support additional functionality or data. The lack of system flexibility has prevented desired functional enhancements.
- **Little redundancy for OS/OW permits** – OS/OW permits on Oahu currently are issued by a single individual. While the individual can issue permits quickly and efficiently, the lack of redundancy requires the individual to be on-call 24x7 in order to respond to permit-related issues.

- **Lack of space to safely conduct roadside inspections** – There is a limited number of safe locations where HWY-V can safely conduct roadside inspections. Motor carriers that operate near a location that can accommodate inspections are more likely to be inspected while carriers that operate in areas without a safe inspection area are less likely to be inspected.
- **Limited number of roadside inspectors** – HWY-V has a limited number of inspectors that conduct commercial vehicle inspections. The Counties of Maui, Kauai, and Hawaii each only have one inspector.
- **Lack of real-time data at the roadside** – HWY-V currently does not have access to real-time credential or historical safety data to support their screening of vehicles for inspection. HWY-V cannot target its resources at high-risk carriers and cannot easily verify the validity of a credential presented at the roadside.
- **Lack of pursuit power** – HWY-V currently does not have pursuit power and therefore cannot pursue commercial vehicles that illegally bypass enforcement operations. Violators may be notified via phone but no additional enforcement action is taken.

2.3 PLANNED CVISN DEPLOYMENT PROJECTS

Based on the interview sessions with the State’s CVISN agencies and discussions with the representatives from the motor carrier industry, **eight** projects were identified for inclusion in the Hawaii CVISN program. Five of these projects are designed to deploy the State’s remaining Core CVISN capabilities, including:

- Modernization of the State’s vehicle registration system database;
- Trucking in Hawaii Portal;
- Automated Vehicle Identification Card (VIC) processing;
- Deployment and maintenance of a State Commercial Vehicle Information Exchange Window (CVIEW) and accompanying web-based query interfaces; and
- Deployment of electronic screening functionality at Sand Island weigh station.

Three projects are designed to deploy the State’s Expanded CVISN functionality/systems in order to augment its Core CVISN projects and further improve commercial vehicle safety, security, and productivity in the State. These Expanded CVISN projects include:

- Automated Oversize/Overweight (OS/OW) permitting;
- Deployment of a Virtual Weigh Station; and
- Issuance of USDOT numbers to intrastate carriers.

Hawaii also is planning to obtain program management resources to provide ongoing oversight for the State's CVISN program. These six projects are detailed in Tables 2.1 through 2.6. The design for each system project is included in Section 3.0. Procurement plans for these projects are further detailed in Section 4.0. Project schedules are included in Section 5.0. Project budgets are detailed in Section 6.0.

Table 2.1 Project #1 – Program Management

PROJECT NAME: Program Management	
Project Objectives	
	• Provide ongoing oversight to overall CVISN program and individual CVISN projects • Provide system architect services to ensure all projects conform to national and State IT standards as well as SAFER CVIEW interface specification • Ensure compliance in CVISN Data upload requirements • Complete FMCSA-required quarterly reports for Federal CVISN Deployment Grants • Ensure all stakeholders remain engaged in the CVISN program and are aware of program's most recent accomplishments/issues • Participate in national CVISN forums - o Monthly CVISN Program Manager conference calls - o Monthly Architecture Configuration Control Board (ACCB) calls - o National CVISN Deployment Workshops
Project Benefits	
	Benefits to the State: • Constant oversight of CVISN activities • Increased productivity and efficiency of CVO-related processes • Reduced administrative costs • Adherence with national CVISN architecture • More efficient deployment through incorporation of lessons learned and best practices from other states
	Benefit(s) to the Motor Carrier Industry: • Timely and successful deployment of CVISN functionality
Operational Scenario	
	CVISN support will be provided through hiring/assigning a Program Manager and a System Architect. The Program Manager will be responsible for supporting the State's CVISN program activities (e.g., coordinating CVISN Team meetings, completing quarterly progress reports for Federal CVISN grants, participating in national CVISN conference calls and deployment forums). The System Architect will be responsible for overseeing the technical implementation of the State's CVISN projects and ensuring that these projects adhere to both national CVISN and statewide IT

PROJECT NAME: Program Management	
	standards. The State likely will hire a contractor(s) to serve as Program Manager and System Architect for the entire duration of the State's CVISN program deployment. In the future, the State will transition Program Manager responsibilities to a State employee, when appropriate/possible.
Lead (Host) Agency	
	Hawaii Department of Transportation, Statewide Transportation Planning Office; Dean Nakagawa
Other Participating Agencies	
	N/A
Core CVISN Requirements Addressed by Project	
	Effective and ongoing CVISN organizational structure.
Estimated Budget	
	The estimated cost for Program Manager services is \$200,000. The estimated cost for System Architect services is \$150,000.

Table 2.2 Project #2 – Trucking in Hawaii Web Portal

PROJECT NAME: Trucking in Hawaii Web Portal	
Project Objectives	
	• Provide a single point of access for motor carriers to view commercial vehicle regulatory and enforcement information from all state agencies • Minimize motor carrier effort required to collect information about CVO-related state agencies and programs • Reduce time required by state personnel to respond to motor carrier inquiries • Create a “user experience” that streamlines motor carrier operations • Provide a single “storefront” for Hawaii’s CVO credentialing systems
Project Benefits	
	Benefits to the State: • Consolidated location for State’s CVO credentialing information • Increased efficiency of processes • Reduced administrative costs
	Benefits to the Motor Carrier Industry: • Improved customer service through single point of access • Improved quality of data (e.g., accuracy, timeliness, security)
Operational Scenario	
	The Trucking in Hawaii web portal will provide a single website for information on all State CVO regulatory and enforcement programs. The portal will support the following functionality: • Easy to remember website address; • Single username/password to log onto State credentialing systems (e.g., vehicle registrations, VIC); • Links to instructions and supporting documentation; and • Application forms that can be downloaded and printed. Operationally, the user will: 1. Access the State’s website (Hawaii.gov); 2. Select the Trucking in Hawaii portal; 3. Log into the Trucking in Hawaii portal using a username and password provided by HDOT; 4. Be presented a hyperlinked list of on-line credentialing applications that are available in Hawaii as well as a link to a query interface that will allow the user to view safety and credentialing information

PROJECT NAME: Trucking in Hawaii Web Portal	
	regarding his/her carrier; and 5. Select the desired application and be directed to the chosen on-line credentialing system. Only users whose carriers have valid USDOT numbers and no out-of-service (OOS) order will be allowed to access the on-line vehicle registration application. If a user's carrier is OOS or does not have a valid USDOT number, the user will be directed to a page that will indicate the specific reason why they cannot access the vehicle registration system and how the problem can be resolved.
Lead (Host) Agency	
	Hawaii Department of Transportation, Highways Division; Scott Haneberg
Other Participating Agencies	
	Hawaii Department of Transportation, Highways Division Motor Vehicle Safety Office, Planning Office, and District Offices County of Hawaii, Department of Finance, Vehicle Registration and Licensing Division County of Kauai, Department of Finance, Treasury Division County of Maui, Department of Finance, Motor Vehicle Registration and Driver Licensing Division City and County of Honolulu, Department of Customer Services; Hawaii Department of Agriculture Hawaii Transportation Association Oahu Metropolitan Planning Organization
Core CVISN Requirements Addressed by Project	
	This core CVISN project will fulfill the State's Core CVISN electronic credentialing functionality by establishing the means for the motor carrier to register on-line.
Estimated Budget	
	The deployment costs for a single sign-on web portal are estimated to be \$100,000.

Table 2.3 Project #3 – Modernize Vehicle Registration System Database

PROJECT NAME: Modernize Vehicle Registration System Database	
Project Objectives	
	• Make on-line commercial vehicle renewals available to fleet operators • Enable authorized Federal, State and county users to access vehicle registration data in real-time
Project Benefits	
	Benefits to the State: • Increased efficiency of vehicle registration process and State resources • Reduced administrative costs • Improved regulatory compliance • Improved data integrity
	Benefits to the Motor Carrier Industry: • Reduced labor costs • Reduced turnaround time for credentials • Better customer service • Better data quality (e.g., accuracy, timeliness)
Operational Scenario	
	In Hawaii, the current vehicle registration system is an IBM mainframe system that resides on a county network. The City and County of Honolulu currently operates and maintains the vehicle registration system that is used by all Counties. The vehicle registration application uses Customer Information Control System (CICS) transactions and an Information Management System (IMS) database. The current system does not track or identify the motor carrier that owns or operates a CMV. The City and County of Honolulu is planning to modernize the database environment in which the vehicle registration system operates. The new vehicle registration database will support the association of motor carriers and commercial vehicles. To implement this functionality, database fields to store carrier-specific information (e.g., PUC number, USDOT number) will be added to the database. This carrier-specific information also will aid in separating commercial vehicles from other types of vehicle registrations in the system.

PROJECT NAME: Modernize Vehicle Registration System Database

The operational scenario for Hawaii's on-line Vehicle Registration application will consist of the following high-level tasks:

- Processing of on-line applications; and
- Querying vehicle registration data by authorized users.

When processing on-line renewal applications, the following steps will be followed:

1. Carrier user will navigate to the Trucking in Hawaii web portal (Project #2);
2. User will log into the Trucking in Hawaii portal using a username and password provided by HDOT;
3. After carrier user has been authenticated, carrier user will select "Vehicle Registrations" from the available services;
4. Carrier user will be directed to the vehicle registration application (only carriers with a valid USDOT number and no outstanding OOS order will be able to access the vehicle registration application);
5. Vehicle registration renewal application will be pre-populated with the carrier's information for editing;
6. Carriers will be allowed access to view/edit their own account information (i.e., vehicles associated with their fleet) – linkage will be based on USDOT number;
7. Carrier will complete and submit vehicle registration renewal application electronically;
8. Carriers will submit payment electronically via DMV's existing credit card payment interface;
9. City and County of Honolulu will issue the vehicle registration credential;
10. Carriers will be notified via email that their credential is ready to print; and
11. Approved State and Federal users will be able to query vehicle registration in real-time.

PROJECT NAME: Modernize Vehicle Registration System Database

In order to deploy this functionality, this project will include four distinct elements:

- Data Model Update – City and County of Honolulu will need to update the vehicle registration system's data model to accommodate the desired functionality. The current data model was developed in 1996.
- Database Development – The on-line functionality will require modifications to the vehicle registration database. City and County of Honolulu staff will make the necessary database modifications in-house.
- WebSphere Development – City and County of Honolulu is planning to develop an IBM WebSphere-based portal/interface that will allow the vehicle registration data to be accessed by the proposed enforcement and motor carrier query interfaces, as well as the automated roadside enforcement programs (Projects #5 and #6). While City and County of Honolulu has available in-house technology staff to develop the IBM WebSphere portal/interface, additional funding will be required to train staff to support the development process and to conduct a pilot program.
- Network Deployment – Any State or Federal employee can be given inquiry access to the vehicle registration data with prior approval from the county DMV administrators. However, access currently is limited to applications that reside on the City and County of Honolulu's mainframe. Since the vehicle registration system will reside on a modernized database platform, and in order to provide statewide access, City and County of Honolulu will build a statewide network to support data access by users outside of the City's network but within the State's network. The statewide network will have the capability to support remote data access. A statewide network may take up to one year to complete.

In addition to these technical steps, the State and counties are seeking a process by which current vehicle records will be associated with the appropriate fleet.

NOTE: The vehicle registration system will NOT send vehicle registration credentialing information to CVIEW. All query applications will access the vehicle registration database in real-time to provide current registration data to authorized users.

Lead (Host) Agency

City and County of Honolulu, Debbie Stelmach

Other Participating Agencies

N/A

<u>PROJECT NAME:</u> Modernize Vehicle Registration System Database	
Core CVISN Requirements Addressed by Project	
	Credentials Administration ✓ Automated processing of vehicle registration credentials
Estimated Budget	
	Costs to modernize the vehicle registration system database and provide access to this data are estimated to be \$1,100,000. This includes: • Data Model Update - \$150,000 • Database Development - \$700,000 • WebSphere Development - \$150,000 • Network Deployment - \$100,000

Table 2.4 Project #4 – Automate VIC Process

PROJECT NAME: Automate VIC Process	
Project Objectives	
	- Automate the application, issuance, and receipt of Vehicle Identification Card (VIC) credential - Support the real-time roadside enforcement of VIC credential
Project Benefits	
	Benefits to the State: - Increased efficiency of VIC process and State resources - Reduced administrative costs - Improved regulatory compliance - Improved data integrity
	Benefits to the Motor Carrier Industry: - Reduced labor costs - Reduced turnaround time for credentials - Better customer service - Better data quality (e.g., accuracy, timeliness)
Operational Scenario	
	Hawaii is planning to procure an automated credentialing system that will modernize the processing of VICs and provide on-line credentialing functionality for VIC applications. The State will ensure that its new VIC system will meet CVISN requirements. The VIC system also will be linked to CVIEW so that VIC status can be cross-checked electronically during other credentialing processes. Completion of this project, in coordination with the deployment of CVIEW (Project #5), will streamline and expedite the credentialing process and improve motor carrier compliance with Federal and State regulations. The operational scenarios for Hawaii's on-line VIC process will consist of the following high-level tasks: - Processing of on-line applications; - Querying credential and safety content in CVIEW; and - Sending VIC credential information to CVIEW.

PROJECT NAME: Automate VIC Process

When processing on-line renewal and supplemental applications, the following steps will be followed:

1. Carrier user will navigate to the Trucking in Hawaii web portal (Project #2);
2. User will log into the Trucking in Hawaii portal using a username and password provided by HDOT;
3. After user has been authenticated, user will select "Vehicle Identification Card (VIC)" from the list of on-line credentialing applications that are available in Hawaii and be transferred to the VIC system;
4. VIC system will be pre-populated with the carrier's information for editing;
5. Carrier will complete and submit VIC application electronically.
6. VIC system will query the census and safety data (e.g., USDOT, out-of-service orders) in CVIEW to determine if carrier is in good standing;
7. Carrier user will print invoice, attach a check and submit payment and invoice to HDOT via mail or walk-in;
8. HDOT employee will receive the payment and associated invoice from a carrier and mark the invoice paid in the VIC system;
9. Once the invoice is paid, the credential will be presented to the carrier (walk-in payment) or mailed to the carrier (mail-in payment). Carrier users will be notified via email that their credential is ready; and
10. After the credential has been issued, the VIC system will send the updated information to CVIEW so that it may be incorporated into the overall carrier and vehicle snapshots.

Lead (Host) Agency

Hawaii Department of Transportation, Highways Division; Scott Haneberg

Other Participating Agencies

Federal Motor Carrier Safety Administration, Hawaii Division; Sharon Cravalho

<u>PROJECT NAME:</u> Automate VIC Process
--

Core CVISN Requirements Addressed by Project

This Core CVISN project will support the State's Core CVISN electronic credentialing functionality by enabling motor carriers to process their VIC credentials electronically.

Estimated Budget

Costs for an automated VIC system are estimated to be \$200,000.

Table 2.5 Project #5 – Deploy and Maintain CVIEW

PROJECT NAME: Deploy and Maintain CVIEW	
Project Objectives	
	• Deploy a CVISN-compliant CVIEW that meets the needs of State’s CVISN stakeholders • Support intra-agency and inter-agency exchange of safety and credential information with authorized users • Support motor carriers’ review of their safety and credential data contained in Federal and State systems
Project Benefits	
	Benefits to the State: • Improved information sharing within the State • Improved quality of data • Enforcement will have information to focus on high risk carriers • Improved regulatory compliance • Fulfillment of CVISN data exchange requirements
	Benefits to the Motor Carrier Industry: • Improved quality of data (e.g., accuracy, timeliness, security) • Leveling of the playing field (i.e., safe/low-risk carriers are less likely to be targeted for enforcement) • Faster inspections, resulting in time savings
Operational Scenario	
	The State’s CVIEW will serve as a primary data repository for credential (e.g., VIC), safety (e.g., out-of-service orders), motor carrier census, and Electronic Freight Manifest (EFM) data. CVIEW also will be the State’s conduit for downloading Federal motor carrier census and safety data. At this time, no data is envisioned to be uploaded to SAFER from CVIEW due to the fact that the State does not participate in the IRP or IFTA programs. The State will continue to upload its roadside inspections to the SAFER Data Service from ASPEN. The State’s CVIEW deployment also will support three separate web-based query interfaces to meet the specific needs of the following user types: • <u>Roadside enforcement users</u> – Web-based interface that will be accessed by roadside enforcement personnel via wireless network to include graphic indicators (e.g., green checkmarks, red “X”s) enabling enforcement personnel to quickly determine if a commercial vehicle

PROJECT NAME: Deploy and Maintain CVIEW

should be inspected. At a minimum, enforcement personnel will be able to query the CVIEW database based on USDOT number, Vehicle Identification Number (VIN), and license plate state and number.

- State regulatory/credentialing staff – Web-based interface that will be accessed from an office setting and allow authorized Federal and State users to query carrier and vehicle information in support of their regulatory functions (e.g., sending warning letters to motor carriers, identifying vehicles engaged in interstate commerce). At a minimum, users will be able to query the CVIEW database based on USDOT number, Vehicle Identification Number (VIN), and license plate state and number.
- Motor carriers – Web-based interface that will allow motor carriers to view only the Federal (e.g., census, operating authority, screening algorithm) and State (e.g., credentials) data that is associated with their company.

The operational scenario for CVIEW can be broken down into the following components:

- Data exchange with additional Hawaii credentialing systems (e.g., oversize/overweight permits, vehicle identification card);
- Data exchange with the national SAFER/PRISM Central Site; and
- Read-only access to safety and credentials information to authorized users.

Operationally, CVIEW will include the following steps:

1. CVIEW will receive and integrate credentials and safety data from the SAFER/PRISM Central Site using T0030, T0031, and T0032 transaction sets;
2. CVIEW will be populated with a baseline upload of credential data from some State's CVO credentialing systems (e.g., VIC);
3. VIC will query CVIEW to determine if a carrier/vehicle passes all safety (e.g., no OOS order) checks before issuing a credential;
4. The Trucking in Hawaii web portal will query CVIEW to determine if a carrier passes all safety (e.g., no OOS order) and census (e.g., presence of USDOT number) checks before transferring user to the vehicle registration web-based application;
5. After credentials are issued by VIC system, credentialing system will upload the revised credential information to CVIEW;
6. CVIEW will integrate credential information into carrier and vehicle snapshots;

PROJECT NAME: Deploy and Maintain CVIEW	
	7. HDOA will upload an electronic manifest file nightly to CVIEW to support electronic screening at Sand Island (Project #6), as well as the identification of carriers engaged in interstate commerce; 8. CVIEW will respond to interactive queries from web applications (e.g., CVIEW query interface), as well as Sand Island and VWS screening systems; and 9. CVIEW will send EFM data nightly to the roadside screening computer at Sand Island.
Lead (Host) Agency	
	Hawaii Department of Transportation, Highways Division; Scott Haneberg
Participating Agencies	
	Hawaii Department of Transportation, Highways Division, Motor Vehicle Safety Office, Planning Office, and District Offices; Susan Chang Hawaii Department of Agriculture; Carol Okada
Core CVISN Requirements Addressed by Project	
	Safety Information Exchange ✓ Deployment of a Commercial Vehicle Information Exchange Window (CVIEW) or equivalent system
Estimated Budget	
	The deployment cost for a CVIEW with roadside and deskside query interfaces is estimated to be \$250,000.

Table 2.6 Project #6 – Deploy E-Screening at Sand Island

PROJECT NAME: Deploy E-Screening at Sand Island	
Project Objectives	
	• Electronically identify vehicles as they approach Sand Island facility • Use vehicle identifier to electronically query safety and credential information on motor carrier and vehicle • Calculate real-time screening decision based on real-time weight, credential, safety, and cargo data • Target enforcement resources at “high-risk” carriers and vehicles - o Carriers and vehicles known to be non-compliant - o Carriers and vehicles with histories of being non-compliant
Project Benefits	
	Benefits to the State: • Improved highway safety • Improved compliance with weight and safety regulations • Reduced congestion at inspection areas • More efficient movement of freight
	Benefits to the Motor Carrier Industry: • Inspection bypass for compliant carriers resulting in time savings on routes with automated electronic screening sites • Better customer service to safe and legal carriers and drivers
Operational Scenario	
	HWY-V is planning to augment its fixed screening site at Sand Island with the following: • Automated identification systems (e.g., transponder reader [TR], license plate reader [LPR], USDOT number reader, container number reader); and • Screening software that will integrate credentials (e.g., vehicle registration, VIC), safety (e.g., Federal safety algorithms, out-of-service orders), cargo (e.g., EFM), and weight data from WIM scales into the bypass decision. Operationally, electronic screening in Hawaii will follow these general steps: 1. Roadside screening computer is updated nightly with EFM information from CVIEW;

PROJECT NAME: Deploy E-Screening at Sand Island

2. Commercial vehicles approaching Sand Island facility will be identified electronically via roadside TR, LPR and USDOT number reader;
3. Container being hauled by CMV will be identified by container number reader;
4. Vehicles will be weighed via WIM scales;
5. Roadside screening computer will use identifiers captured in Steps 2 and 3 to query CVIEW and vehicle registration system for safety and credential data;
6. Roadside screening computer will combine roadside weight data with updated credential, safety, and EFM information and determine if vehicle should be inspected;
7. Screening decision will be displayed to the operator of the facility. Authorized users will be able to modify the screening algorithm in real-time, as well as override the screening decision and request a vehicle to enter the site;
8. Commercial vehicles will be informed via overhead signs if they are required to pull-into Sand Island facility;
9. Roadside screening computer will forward event data from Sand Island (e.g., date/time, license plate, USDOT number, container number, screening decision, photographs) to CVIEW, which will store it for future analysis;
10. FMCSA Division will query data in CVIEW (i.e., linkage between a container and a specific motor carrier and commercial vehicle) to identify motor carriers that are involved in the hauling of interstate commerce and therefore subject to FMCSA regulations;
11. HDOT enforcement will query EFM data in CVIEW to support resource scheduling and staffing decisions for Sand Island facility; and
12. HDOT and MPO may use a subset of data from EFM, Sand Island, and virtual weigh stations to identify the specific routes being used to haul commodities in support of freight planning activities.

Lead (Host) Agency

Hawaii Department of Transportation, Highways Division; Scott Haneberg and Susan Chang

PROJECT NAME: Deploy E-Screening at Sand Island	
Other Participating Agencies	
	Federal Motor Carrier Safety Administration, Hawaii Division; Sharon Cravalho Hawaii Department of Agriculture; Carol Okada
Core CVISN Requirements Addressed by Project	
	Electronic Screening ✓ Deployment of electronic screening at one or more fixed/mobile sites
Estimated Budget	
	The deployment costs for electronic screening capabilities at Sand Island weigh station are estimated to be \$500,000.

2.4 HIGH-LEVEL REQUIREMENTS FOR TOP-LEVEL DESIGN

The Hawaii CVISN Team is fully committed to the goals, and objectives of the national CVISN program. The State takes no exceptions to the provisions of the COACH Part 1 document and will ensure that its deployments are consistent with the national CVISN architecture.

Table 2.10 summarizes the systems that will support Core CVISN functionality in Hawaii.

Table 2.7 Summary of Systems to Perform Required Core CVISN Functionality

Required Core CVISN Functionality	System(s) to Perform Required Function
State Safety Information Exchange and Safety Assurance Systems	
Use ASPEN (or equivalent) at all major inspection sites.	ASPEN
SAFETYNET submits interstate and intrastate inspection reports to SAFER.	SAFETYNET
Implement the CVIEW (or equivalent) system for exchange of intrastate and interstate data within state and connection to SAFER for exchange of interstate data through snapshots. - OR	CVIEW
Utilize the SAFER option for exchange of inter- and intrastate data through snapshots.	CVIEW
Use CAPRI (or equivalent) for compliance reviews.	CAPRI
State Commercial Administration Systems	
Support electronic credentialing (electronic submission of applications, evaluation, processing, and application response) for vehicle registration	Vehicle Registration System (C&C of Honolulu)
Support electronic credentialing (electronic submission of applications, evaluation, processing, and application response) for IRP.	N/A
Proactively provide updates to vehicle snapshots as needed when IRP credentials actions are taken.	N/A
Proactively provide updates to carrier snapshots as needed when IRP credentials actions are taken.	N/A
Provide IRP Clearinghouse with IRP credential application information (recaps).	N/A
Review fees billed and/or collected by a jurisdiction and the portion due other jurisdictions (transmittals) as provided by the IRP Clearinghouse.	N/A
Support electronic state-to-state fee payments via IRP Clearinghouse.	N/A
Support electronic credentialing (electronic submission of applications, evaluation, processing, and application response) for IFTA registration.	N/A
Proactively provide updates to carrier snapshots as needed when IFTA credentials actions are taken or tax payments are made.	N/A
Support electronic tax filing for IFTA quarterly fuel tax returns.	N/A
Retrieve IFTA tax rate information electronically from IFTA, Inc.	N/A

Required Core CVISN Functionality	System(s) to Perform Required Function
Provide IFTA Clearinghouse with IFTA credential application information using available interface.	N/A
Provide information on taxes collected by own jurisdiction and the portion due other jurisdictions (transmittals) to the IFTA Clearinghouse using available interface.	N/A
Download for automated review the demographic information from the IFTA Clearinghouse.	N/A
Download for automated review the transmittal information from the IFTA Clearinghouse.	N/A
Provide commercial driver information to other jurisdictions via CDLIS (Commercial Driver's License Information System).	N/A
State Electronic Screening Systems	
At one or more sites, provide electronic mainline or ramp screening for transponder-equipped vehicles, and clear for bypass if carrier and vehicle were properly identified and screening criteria were passed.	Sand Island Weigh Station (LPR technology to be used)
Follow FHWA guidelines for Dedicated Short Range Communications (DSRC) equipment.	N/A
Use snapshots updated by a SAFER/CVIEW subscription in an automated process to support screening decisions.	Sand Island Weigh Station and CVIEW
Accept each qualified vehicle already equipped with a compatible transponder into your e-screening program without requiring an additional transponder.	N/A
Enable the carrier to share information about the transponder that you issue with other jurisdictions, e-screening programs, or agencies.	N/A
Carrier enrollment: Collect from the carrier a list of jurisdictions and/or e-screening programs in which it wishes to participate. Inform those jurisdictions and/or e-screening programs.	N/A
Vehicle enrollment: Collect from the carrier a list of the vehicles for each jurisdiction and/or e-screening program. Inform those jurisdictions and/or e-screening programs.	N/A
Record transponder number and default carrier ID for each vehicle that intends to participate in e-screening.	N/A
For each carrier that intends to participate in e-screening, share carrier ID with other jurisdictions and/or e-screening programs as requested by the carrier.	N/A
For each vehicle that intends to participate in e-screening, share transponder number and default carrier ID with other jurisdictions, e-screening programs, or other agencies as requested by the carrier.	N/A
Verify credentials/safety information with authoritative source prior to issuing citation.	CVIEW

3.0 System Design

3.1 ARCHITECTURE OVERVIEW

The proposed architecture for the Hawaii Core CVISN implementation is shown in Figure 3.1 with the corresponding host computers and networks shown in Figure 3.2. New or updated systems are shown in red. The following State/county systems are directly related to the State's CVISN program:

- Trucking in Hawaii web portal;
- Vehicle Registration system;
- Vehicle Identification Card (VIC) system;
- Commercial Vehicle Information Exchange Window (CVIEW);
- Electronic screening system at Sand Island weigh station;

Tables 3.1 through 3.5 summarize the interfaces that will be used for each of these systems. Table 3.6 summarizes the new and updated systems depicted in the architecture and network diagrams.

The proposed Hawaii CVISN architecture demonstrates the State's commitment to meeting all national ITS/CVO and CVISN standards while allowing sufficient flexibility in maintaining the State's in-house systems. This architecture will meet the following high-level goals:

- Deployment of Core CVISN functionality;
- Deployment of electronic credentialing for several intrastate/Hawaii-specific credentials;
- Use of traditional and expanded roadside enforcement technologies; and
- Support of the State's program to link vehicle registration to carrier safety performance.

The design is guided by the following principles:

- The existing CVO-related legacy systems will be upgraded or replaced, as necessary, to support electronic credentialing and data exchange with CVIEW. These upgrades and replacements will allow Hawaii to leverage existing solutions to meet the unique needs of the State in a manner consistent with CVISN objectives and the national architecture.

Figure 3.1 CVISN System Design Diagram

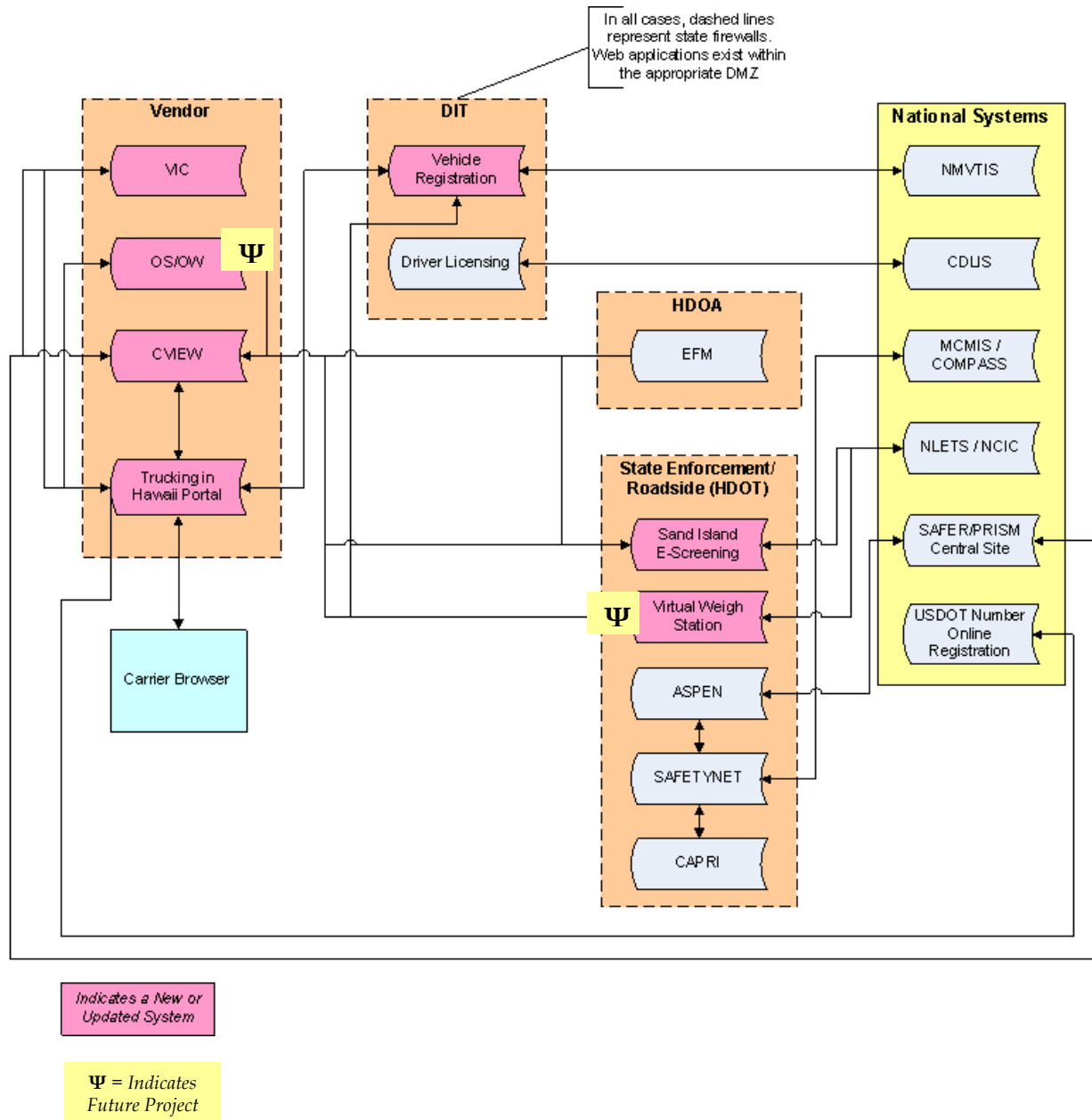
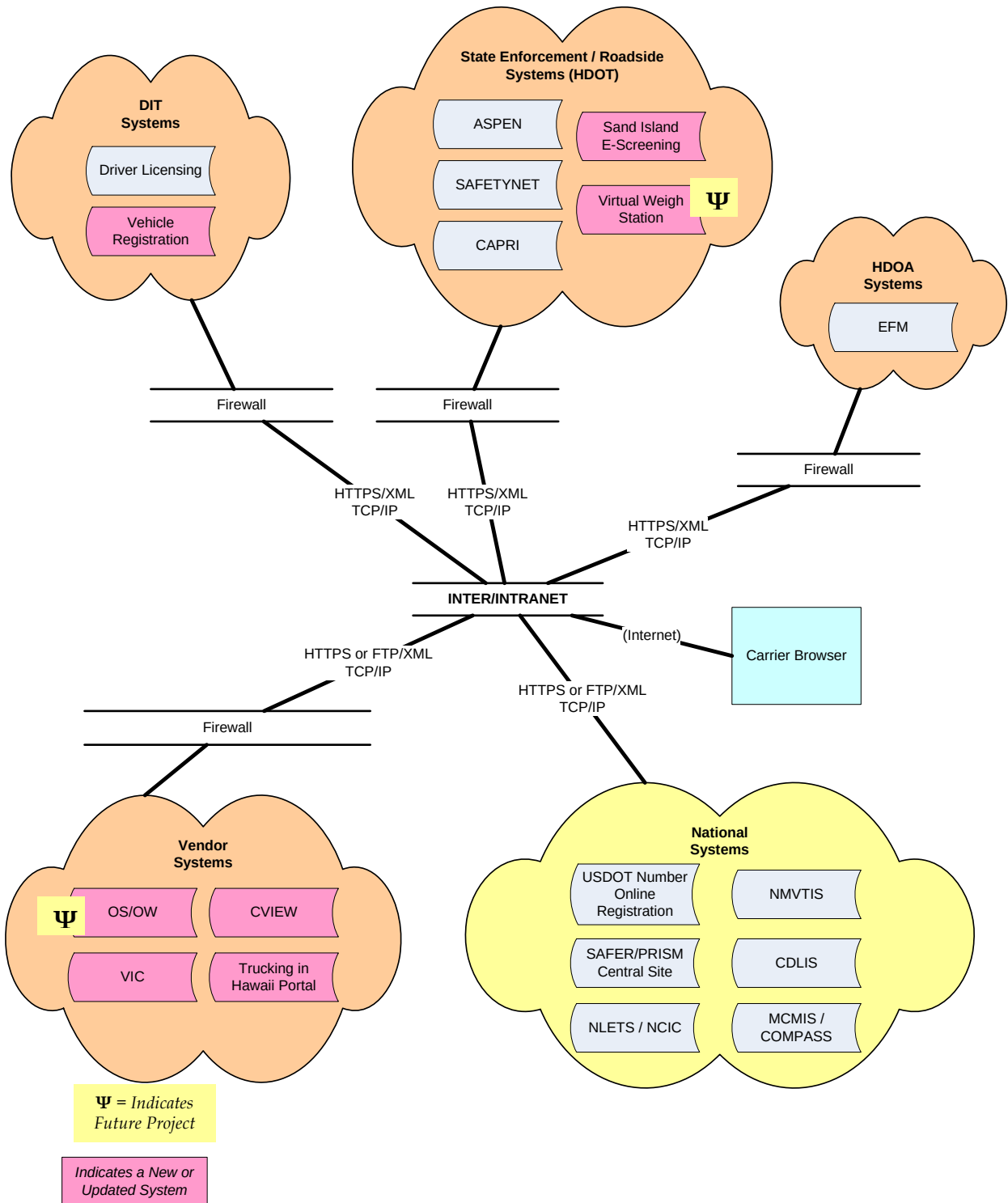


Figure 3.2 Computers and Network Diagram



- The primary means of communicating with the carrier community will be via the Internet using a web portal.
- Standard protocols will be used for communications between all systems. The exact protocol will depend on the scenario. For example, when communicating with the carrier community over the Internet, Hyper Text Transfer Protocol Secure (HTTPS) will be used and CVIEW will exchange eXtensible Markup Language (XML) documents with SAFER using the File Transfer Protocol (FTP) or web services.

A Detailed Design will be developed for each information system project. The interfaces required to support each project will be included in their respective Detailed Design documents.

3.2 DESCRIPTION OF SYSTEM COMPONENTS

The following are the CVISN-specific systems currently deployed in Hawaii:

- **Vehicle Registration system** – Hawaii uses a system developed in house to process commercial vehicle registrations. The current system supports a broad range of DMV functions, including registering commercial and passenger vehicles. The system supports on-line renewals for select vehicle types (e.g., passenger vehicles). This system currently does not associate commercial vehicles with a carrier and does not support fleet-level renewals.
- **ASPEN** - ASPEN is used during roadside inspections. Information is directly uploaded to the SAFER data mailbox.
- **Electronic Freight Manifest system** – The State’s Electronic Freight Manifest (EFM) system collects and analyzes information regarding containers being shipped into the State by maritime transporters. HDOA personnel use the information in the EFM system to triage inbound shipments and prioritize containers for agricultural inspections. The State recently completed a prototype of the EFM on-line submission system. The on-line submission capability currently is being tested and has not yet been made available to all maritime transporters.

The Vehicle Identification Card “systems” currently are manual, paper-based processes. The CAPRI and driver licensing systems will not be affected by any of the anticipated CVISN projects.

3.3 PROJECT DESIGN ELEMENTS

Hawaii has identified six projects for consideration in this CVISN Program Plan. Five new and/or modified systems will be deployed through these projects. These systems are described below. In addition, the State will procure program

management and system architect support and will leverage the existing FMCSA web application to issue USDOT numbers to Hawaii-based carriers.

Trucking in Hawaii Web Portal

The Trucking in Hawaii web portal will provide a one-stop shop for motor carrier customers of the State. The main purpose of the portal is to provide a single point of access with an easy-to-remember address for all motor carrier operations and CVISN-related systems in the State. The portal will include a single sign-on interface that will allow motor carriers to connect to all State credentialing systems (e.g., vehicle registration, VIC) with a single username and password provided by HDOT. After the motor carrier has been authenticated, the portal will display links to web-based credentialing systems supported by Hawaii.

The web portal also will conduct high-level cross-checking of a carrier's operating and safety status (e.g., does the carrier have a valid USDOT number and is there an out-of-service order in effect for the carrier) prior to allowing a user to navigate from the portal to the vehicle registration web application. If any validation fails, the motor carrier will be directed to a web page indicating the specific issue that is preventing vehicle registration. This page also will provide guidance on how to resolve the issue.

The web portal also will include a web-based query application accessible to authorized Federal, State, county, and motor carrier users. This query application will pull data from the CVIEW and vehicle registration systems in order to provide an integrated snapshot of Federal, State, and county data for a motor carrier. Motor carrier users will be able to view only their company's data through this application. Authorized public-sector users will be able to query data for any motor carrier.

Finally, the web portal will include a link to the FMCSA-operated web application through which motor carriers can apply for a USDOT number. Information regarding USDOT numbers issued to Hawaii-based motor carriers will be retrieved via the CVIEW-SAFER interface described below.

The interfaces that will be supported by the web portal are shown in Table 3.1.

Table 3.1 System Interfaces for Trucking in Hawaii Web Portal

Source System	Destination System	Interface Type
End User	Web Portal	HTML
Web Portal	End User	HTML
Web Portal	CVIEW	XML
CVIEW	Web Portal	XML
Web Portal	Vehicle Registration	HTML/XML ⁵
Vehicle Registration	Web Portal	HTML/XML ⁵
Web Portal	VIC	HTML/XML
VIC	Web Portal	HTML/XML

Vehicle Registration

The vehicle registration system is an IBM mainframe application that resides on a county network. The City and County of Honolulu operates and maintains the vehicle registration system, which is used by all counties to process passenger and commercial vehicle registrations.

The vehicle registration system uses Customer Information Control System (CICS) transactions and an Information Management System (IMS) database. The City and County of Honolulu plans to modernize the system by:

- Updating the data model and database to accommodate the capture of USDOT number, PUC number, and other values to aid in identifying commercial vehicles and associating motor carriers and commercial vehicles;
- Developing an IBM WebSphere portal/interface that will allow vehicle registration data to be accessed by the web portal, as well as automated roadside enforcement programs (e.g., electronic screening at Sand Island, VWS); and
- Deploying a statewide network to support remote access to vehicle registration data by users outside of the City's network but within the State's NGN network.

These upgrades will improve electronic credentialing and allow vehicle registration data to be shared with authorized stakeholders and systems.

All query interfaces and roadside enforcement programs requiring vehicle registration data will access the information directly from the vehicle registration system – not from CVIEW – to ensure that the data is accurate and up-to-date.

⁵ This interface includes both handoff of control to the credential web application and retrieval of data to support queries.

Table 3.2 summarizes the interfaces that will be supported by the vehicle registration system. This table does not include an interface to CVIEW because vehicle registration will be retained only in the vehicle registration system. Query interfaces will access the vehicle registration system to ensure the accuracy and timeliness of the data.

Table 3.2 System Interfaces for Vehicle Registration Project

Source System	Destination System	Interface Type
Web Portal	Vehicle Registration	HTML/XML
Vehicle Registration	Web Portal	HTML/XML
Vehicle Registration	Sand Island Weigh Station	XML web service
Sand Island Weigh Station	Vehicle Registration	XML web service

Commercial Vehicle Information Exchange Window

Hawaii plans to purchase a CVIEW system to serve as a data repository and exchange mechanism. CVIEW will facilitate the exchange of CVO information between State systems and agencies, support electronic credentialing and electronic screening operations, and fulfill the role of CVIEW in the national CVISN architecture by exchanging data with SAFER.

Table 3.3 lists the interfaces that will be supported by Hawaii CVISN Systems interacting with CVIEW. Interfaces to SAFER are dictated by existing standards as defined in the SAFER Interface Control Document (ICD). At a minimum, the CVIEW-SAFER interface will include Federal census and safety data. It is anticipated that the interfaces to CVIEW from VIC will be accomplished via web services using XML.

The State's EFM system will upload information nightly to CVIEW. EFM data will be used by roadside personnel to target specific commodities for special enforcement details (e.g., hazardous material, fireworks). EFM data in CVIEW also will be joined to data from the roadside systems (e.g., vehicle identifier, container number, date/time, location), so that FMCSA personnel can identify vehicles engaged in interstate commerce via a query of CVIEW.

Standard secure Internet protocols will be used to allow enforcement personnel to query the CVIEW in real-time from the roadside. At the roadside, CVIEW will support both human-to-system and system-to-system interfaces from enforcement personnel equipped with laptops and wireless Internet connections, from the electronic screening systems at Sand Island weigh station. Screening systems at Sand Island and the VWS sites will be capable of initiating real-time queries to CVIEW in order to determine whether a commercial vehicle should be pulled over for inspection.

Table 3.3 System Interfaces for CVIEW Project

Source System	Destination System	Interface Type
VIC	CVIEW	XML
CVIEW	VIC	XML
EFM	CVIEW	XML
CVIEW	EFM	XML
SAFER/PRISM	CVIEW	XML
CVIEW	SAFER/PRISM	XML
Sand Island Weigh Station	CVIEW	XML
CVIEW	Sand Island Weigh Station	XML
Web Portal	CVIEW	XML
CVIEW	Web Portal	XML

Electronic Screening at Sand Island Weigh Station

To augment its manual roadside enforcement activities at Sand Island weigh station, Hawaii will deploy an electronic screening system to utilize advanced technologies to screen vehicles at mainline speeds.

The electronic screening system will include technologies such as Transponder Readers (TRs), License Plate Readers (LPRs) and USDOT number readers to identify commercial vehicles as they approach the weigh station. Commercial vehicles will continue to be weighed via weigh-in-motion (WIM) scales.

The Sand Island weigh station will adopt an “open standard” design to support a variety of vehicle identification technologies. In addition to USDOT, TRs and LPRs, capabilities such as transponders and radio-frequency identification (RFID) may be used in the future as they reach maturity and are more widely deployed by motor carriers. The screening process will remain the same regardless of the manner in which a vehicle or carrier is identified.

The roadside screening computer at Sand Island will be updated nightly with EFM data from CVIEW. The screening computer will integrate EFM data with data from the site’s WIM scales, and with data retrieved from a real-time query of the vehicle registration and CVIEW systems, in order to make a screening decision. The screening decision will be presented to the operator of the facility. Authorized roadside personnel will be able to modify the screening algorithm as needed. Drivers of commercial vehicles will continue to be informed of the screening decision via overhead signs.

Table 3.4 depicts the interfaces that will be supported at Sand Island weigh station.

Table 3.4 System Interfaces for Sand Island Weigh Station

Source System	Destination System	Interface Type
Sand Island Weigh Station	CVIEW	XML
CVIEW	Sand Island Weigh Station	XML
Sand Island Weigh Station	Vehicle Registration	XML web service
Vehicle Registration	Sand Island Weigh Station	XML web service
Vehicle	Sand Island Weigh Station	OCR (Transponder, License Plate and USDOT readers)
Sand Island Weigh Station	Vehicle	Overhead signs

Vehicle Identification Card (VIC) System

HDOT administers the State's VIC credentialing process for commercial vehicles. The VIC credential is required in order for a motor carrier to legally operate a commercial vehicle in the State. The VIC credential contains information regarding the vehicle type, Gross Vehicle Weight Rating (GVWR), USDOT number, interstate/intrastate classification, PUC license number, Vehicle Identification Number (VIN), and carrier contact information. The VIC credential is updated when information changes or when the vehicle is no longer in service.

Hawaii currently uses a manual, paper-based process to issue VIC credentials. Hawaii is planning to procure an automated VIC system that will allow for electronic processing of VIC credentials. The automation of VIC credentialing will improve the efficiency and data quality of the system. The new VIC system will allow motor carrier users to apply for and receive their VIC credential via a web-based application. The system also will allow appropriate HDOT personnel to review, process, and approve/reject VIC applications.

The VIC system will upload information to the Hawaii CVIEW in order to support enforcement and credential cross-checking as appropriate. Table 3.7 summarizes the interfaces that will be supported by the VIC system.

Table 3.5 System Interfaces for VIC System

Source System	Destination System	Interface Type
Web Portal	VIC	HTML/XML
VIC	Web Portal	HTML/XML
VIC	CVIEW	XML
CVIEW	VIC	XML

Summary of Projects

Table 3.6 summarizes the high-level system changes required to meet the proposed CVISN architecture in Hawaii. The changes are categorized as:

- Small (S) – Change to existing software to add minor new functionality;
- Medium (M) – New or modified application of limited scope; and
- Large (L) – New enterprise-wide application or new application with multiple State, national, or third-party interfaces.

The table also documents the State’s high-level procurement decision (build/buy) for all new systems.

Table 3.6 Summary of System Changes

System	Description of Required Modifications	No Change	Size of Change	Buy	Build
Trucking in Hawaii Web Portal	New application that provides a single point of access to motor carrier information and web-based credentialing applications in Hawaii.		S	X	
Vehicle Registration	Modernized application that will support on-line renewals for commercial vehicle registrations. The upgrades will include a data model, database modifications, WebSphere interface, and statewide network deployment.		M		X
CVIEW	New application that will house credential and safety information with interfaces to State systems and the national SAFER system. CVIEW also will support electronic credentialing and screening processes and include a web-based query interface.		L	X	
Electronic Screening at Sand Island	Purchase the equipment (e.g., LPR, USDOT number reader, container number reader) and screening software necessary to perform electronic screening at Sand Island weigh station.		M	X	
VIC	New application that will house VIC credential information and support all VIC processes, including an interface to new CVIEW.		M	X	

System Testing

The testing of CVISN software systems in Hawaii will follow current State practices. At a minimum each system will address the following testing phases:

- Proof of concept – Validate work flow with end users;
- Unit test – Verify that individual components work. This is considered to be part of the overall software development effort;
- Integration test – Verify that the individual components work together with all interfaces;
- Acceptance test – Verify that the user interface and all components behave as expected for a range of data inputs expected to be entered by end users; and
- Pilot test – Performed by selected end users. This is done in parallel with the system to be replaced (if one exists).

Interoperability tests will be performed to determine if two systems that have a defined interface between them are successfully passing the desired information. At least one test will be performed for each interface that exists. For the interface between CVIEW and SAFER, certification testing will be performed according to the SAFER Interface Certification Procedures (SICP) document available on the CVISN website.

Each project team is responsible for defining the quantitative means to measure the progress of the testing effort and what constitutes its successful completion.

A test plan will be generated for each system. The purpose of the test plan is to document the testing process, methodology to be utilized, approach for developing and maintaining test data, testing tools used, recording of testing results, tracking and resolution of defects, and test schedule.

4.0 Products and Procurement Strategy

To deploy its Core CVISN functionality, Hawaii will need to procure new systems in addition to modifying existing ones. All purchases will follow the State's standard procurement policies and procedures.

Table 4.1 lists the items that will be procured for each project. The high-level procurement strategy for most projects is to obtain commercial off-the-shelf (COTS) systems and customize them to meet the specific needs of the State. The current plan is to submit a series of Requests for Proposals (RFPs) and to evaluate vendors based on the responses received. Modifications to the vehicle registration system will be conducted in-house by staff from the City and County Honolulu, Department of Information Technology.

To fill the roles of Program Manager and System Architect, the State is will issue a single RFP.

Table 4.1 Summary of Anticipated Procurements

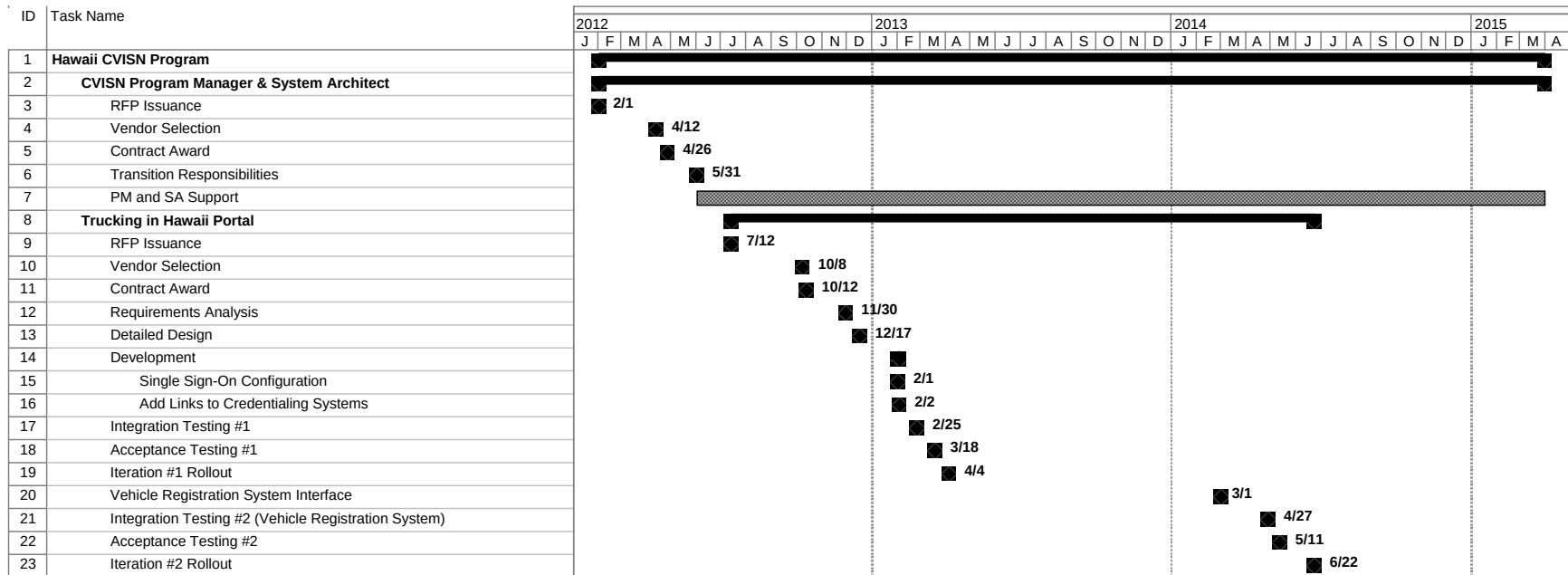
Procurement Item Group	Item to be Procured	Procurement Item	Category	Contracting Approach		Procurement Leader(s)	Anticipated Procurement
				Type	Method of Award		
Program Management	Program Manager and System Architect	Two years of Program Management and System Architect Services	Professional services	New contract	Request for Proposals	HDOT, Highways Division	Q2 2012
Safety Information Exchange	CVISN-compliant CVIEW	CVIEW software, including interfaces to/from CVIEW (e.g., SAFER, VIC, roadside screening, EFM); web-based query interfaces for roadside enforcement, regulatory/credentials staff, and motor carrier users; and three years of support and maintenance	Software development and ongoing support and maintenance	New contract	Request for Proposals	HDOT, Highways Division	Q4 2012
Electronic Credentialing	Trucking in Hawaii Portal	Website to provide single storefront environment to all of the State's CVO-related websites; as well as three years of support and maintenance	Software development and ongoing support and maintenance	New contract	Request for Proposals	HDOT, Highways Division	Q4 2012
	Vehicle Registration Database	Updated data model and database, WebSphere interface, statewide network deployment	Software development	In-house	N/A	City and County of Honolulu	
	Vehicle Identification Card System	VIC software, including an interface to CVIEW and three years of support and maintenance	Software development and professional services	New contract	Request for Proposals	HDOT, Highways Division	Q3 2013
Electronic	Electronic Screening System at Sand	Screening hardware and software, and necessary	Hardware, software and	New	Request for Proposals	HDOT, Highways	Q3 2012

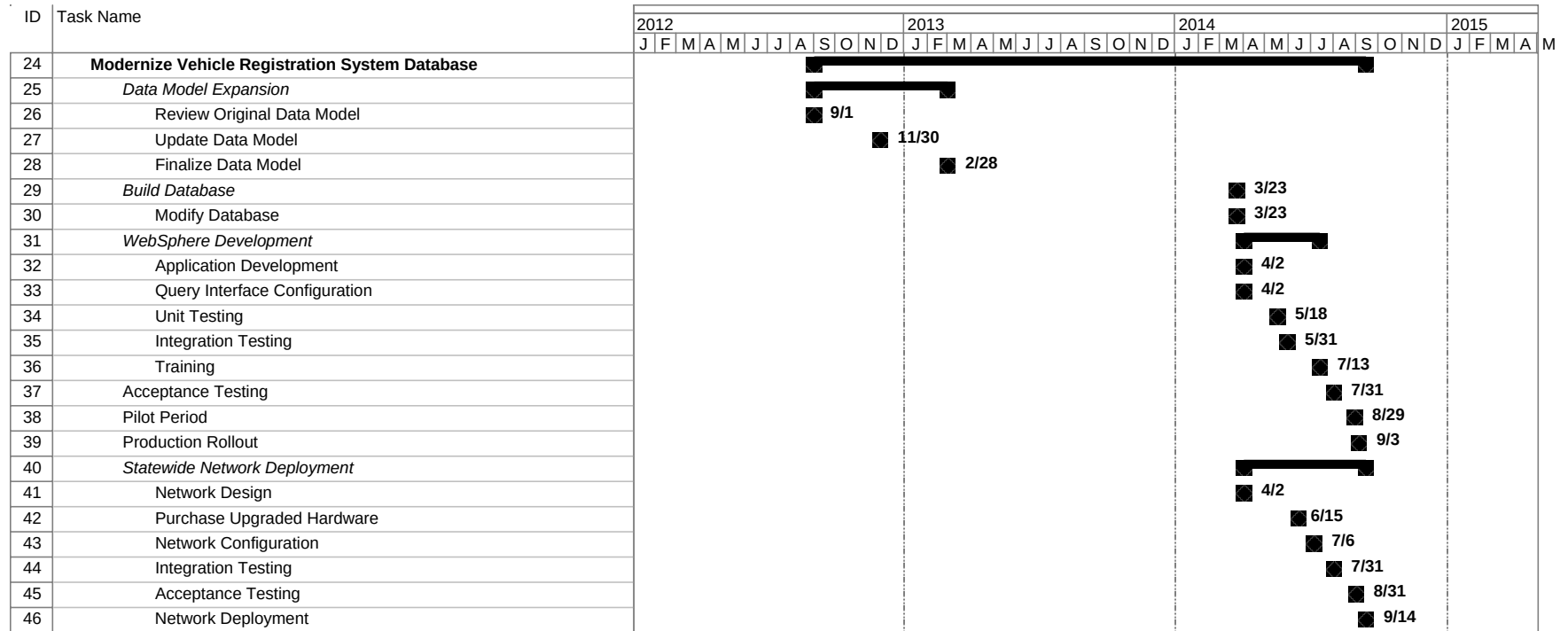
Procurement Item Group	Item to be Procured	Procurement Item	Category	Contracting Approach		Procurement Leader(s)	Anticipated Procurement
				Type	Method of Award		
Screening	Island	communication equipment to exchange data with CVIEW and query vehicle registration system	ongoing support and maintenance	contract		Division	

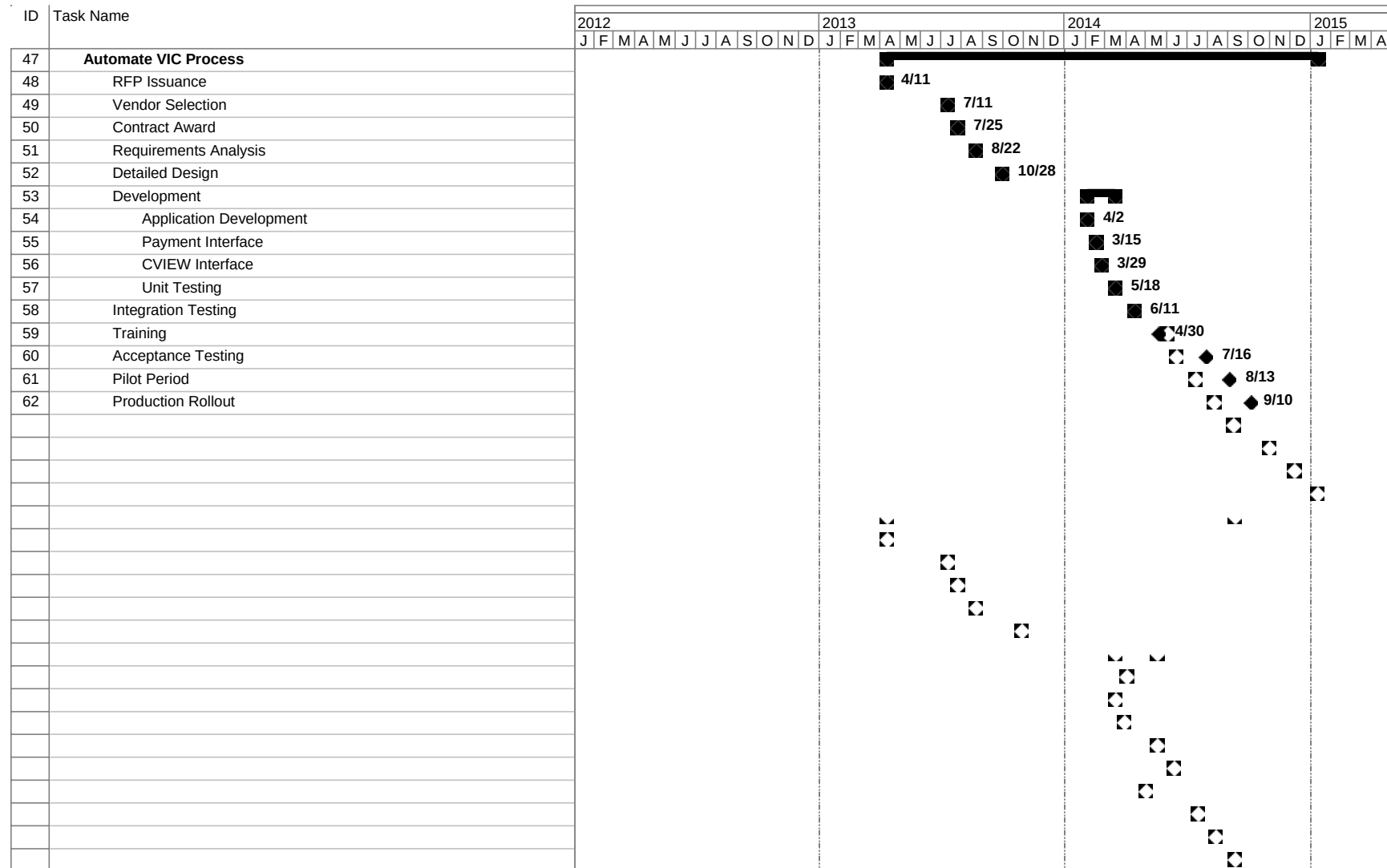
5.0 Program Schedule

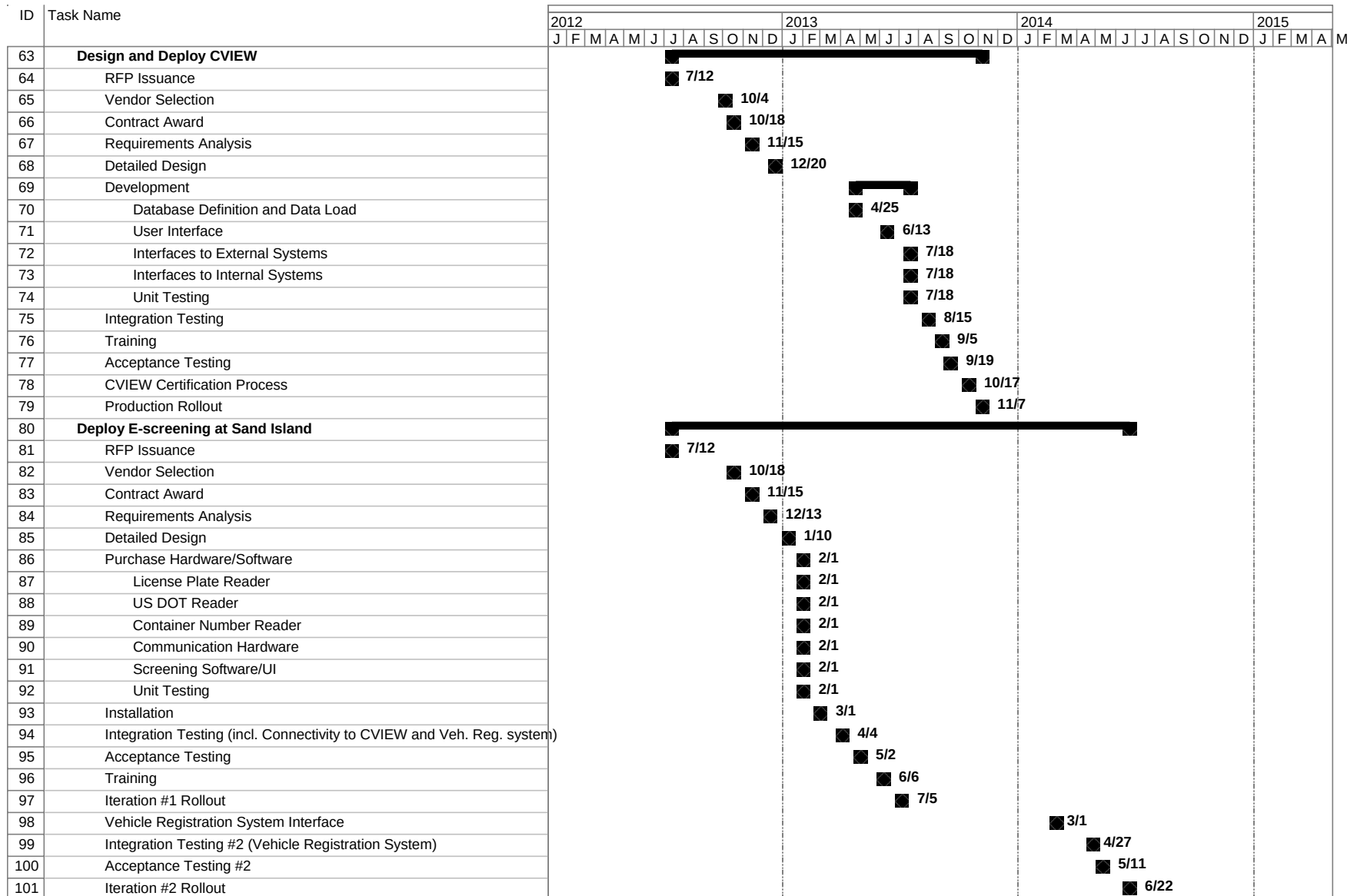
Hawaii's detailed schedule for advancing its CVISN projects is shown in Figure 5.1. The State's recent CVISN activities began in late 2011 with the kick-off to develop the State's CVISN Program Plan/Top-Level Design. Timelines for projects (start to finish) including project phases are shown in the figure. Completion dates are shown for milestones associated with the projects (indicated by diamonds). Additional information will be added to the schedule when factors such as the selected vendor, customization needs, available resources, etc., are known. Documenting stakeholder requirements and specific system interfaces will be core elements of the Detailed Design process for all deployment projects. Attempting to provide a greater level of detail than is presently shown currently is not possible.

Figure 5.1 Proposed Hawaii CVISN Deployment Schedule









6.0 Program Budget and Funding Sources

Cost estimates for the State's six planned CORE CVISN projects are shown in Table 6.1. The State received a \$2.5 million FY 2009 Federal CVISN Deployment grant to support the deployment of its CVISN projects. The State realizes that these grant funds cannot be spent until this document is accepted by FMCSA.

Table 6.2 summarizes the final budget for each project, the total budget for the State's CVISN program, and the sources of matching funds that will be applied to the State's grant.

Table 6.1 Summary of Hawaii CVISN Costs

CVISN Project	Total Deployment Costs	Anticipated Funding Sources			
		FY 2009 Grant	State Funds	MCSAP Grant	PRISM Grant
Program Management (Two years)	\$350,000	\$350,000			
Trucking in Hawaii Portal	\$100,000	\$100,000			
Modernize Vehicle Registration System Database	\$1,100,000	\$1,100,000			
Automate VIC Process (includes three years of support and maintenance)	\$200,000	\$200,000			
Design and Deploy CVIEW (includes three years of support and maintenance)	\$250,000	\$250,000			
Deploy E-Screening at Sand Island	\$500,000	\$500,000			
Total	\$2,500,000	\$2,500,000			

Table 6.2 Summary of Matching Funds

CVISN Project	Total Deployment Costs	Eligible Matching Funds
<u>Electronic Credentialing</u>		
Project #2: Trucking in Hawaii Web Portal	\$100,000	
Project #3: Modernize Vehicle Registration System Database	\$1,100,000	
<i>Project #4: Automate VIC Process</i>	\$200,000	
<u>Safety Information Exchange</u>		
Project #5: Deploy and Maintain CVIEW	\$250,000	
<u>Electronic Screening</u>		
Project #6: Deploy E-Screening at Sand Island	\$500,000	
<u>Program Management</u>		
Project #1: Program Management (Program Manager and System Architect)	\$350,000	
Total Cost of Proposed Projects	\$2,500,000	
Sources of Matching Funds		
Safety Inspection Maintenance of Effort (June 2010 - June 2013)	Not required	\$300,000
HWY-V Roadside Enforcement Program (June 2010 - June 2013)	Not required	\$2,200,000
Totals	\$2,500,000	\$2,500,000

7.0 Outstanding Issues

Hawaii has identified several issues that need to be investigated/resolved before the State can proceed with certain elements of its CVISN program. Specific issues are:

- Electronic Credentialing
 - Evaluate each agency's ability to deny the issuance of a credential based on the status of another Federal or State credential.
 - Determine if the eHawaii.gov infrastructure can be leveraged to develop and/or host the Trucking in Hawaii web portal.
 - Investigate whether the State has an existing electronic payment facility that can be leveraged for use in automated credentialing systems.
 - Investigate whether State law requires that potential customers use an electronic credentialing system if/when it is deployed.
 - Determine a process by which current vehicle records will be associated with the appropriate motor carrier fleet in the on-line vehicle registration system.
 - Investigate the feasibility of expanding existing on-line vendor applications that support new vehicle registrations to include new registrations for motor carrier fleet owners.
 - Determine if private data, such as social security numbers, can be stored in a web-based system.
 - » If so, determine which authorized agency users will have access to private data.
 - Update State rules, regulations and bylaws to accommodate issuance and display of USDOT numbers by intrastate carriers.
- Safety Information Exchange
 - Ensure that all CVISN agencies are able to maintain privacy and security of their data, in accordance with applicable laws.
- Electronic Screening
 - Identify high truck traffic areas where there currently is insufficient physical space to safely conduct roadside inspections.
- Program Management
 - Determine if a qualified State individual can be trained in the future to serve as the State's long-term CVISN Program Manager.

A. Acronyms and Special Terms

ACH - Automated Clearing House

AVI - Automatic Vehicle Identification

ASPEN - (Not an acronym) Software application used by FMCSA and most state commercial motor vehicle enforcement agencies to conduct inspections

CAPRI - Compliance Analysis and Performance Review Information

CDL - Commercial Driver's License

CDLIS - Commercial Driver's License Information System

CICS - Customer Information Control System

COACH - CVISN Operational and Architectural Compatibility Handbook

COTS - Commercial Off-The-Shelf systems

CVIEW - Commercial Vehicle Information Exchange Window

CVISN - Commercial Vehicle Information Systems and Networks

CVO - Commercial Vehicle Operations

CVSA - Commercial Vehicle Safety Alliance

DIT - Department of Information Technology

DMV - Department of Motor Vehicles

DSRC - Dedicated Short-Range Communications

EFM - Electronic Freight Manifest

FHWA - Federal Highway Administration

FMCSA - Federal Motor Carrier Safety Administration

FTP - File Transfer Protocol

GVWR - Gross Vehicle Weight Rating

HDOA - Hawaii Department of Agriculture

HDOT - Hawaii Department of Transportation

HTA - Hawaii Transportation Association

HTTPS - Hyper Text Transfer Protocol Secure

HTML - Hyper Text Markup Language

HVUT - Heavy Vehicle Use Tax

HWY-E - Highways Division, Engineering Information Services Office

HWY-V – Highways Division, Motor Vehicle Safety Office
ICD – Interface Control Document
IFTA – International Fuel Tax Agreement
IMS – Information Management System
IRP – International Registration Plan
ISS-2 – Inspection Selection System
IT – Information Technology
ITS – Intelligent Transportation Systems
LPR – License Plate Reader
MCMIS – Motor Carrier Management Information System
MCSAP – Motor Carrier Safety Assistance Program
MCSIP – Motor Carrier Safety Improvement Process
MOA – Memorandum of Agreement
MOU – Memorandum of Understanding
MPO – Metropolitan Planning Organization
MVSO – Motor Vehicle Safety Office
NCIC – National Crime Information Center
NLETS – National Law Enforcement Telecommunication System
NMVTIS – National Motor Vehicle Title Information System
O&M – Operations and Maintenance
OS/OW – Oversize/Overweight
PDF – Portable Document Format
PIQ – Past Inspection Query
PRISM – Performance and Registration Information Systems Management
RFID – Radio Frequency Identification Tags
RFP – Request for Proposals
RPC – Regional Processing Center
SAFER – Safety and Fitness Electronic Records
SafeStat – Motor Carrier Safety Status Measurement System

SAFETYNET – (Not an acronym) A system designed to manage and provide appropriate access to crash data, roadside inspection history and data, and motor carrier and shipper identification information⁶.

SDM – SAFER Data Mailbox

SICP – SAFER Interface Certification Procedures

SQL – Structured Query Language

TCP/IP – Transmission Control Protocol/Internet Protocol

UCR – Unified Carrier Registration

URL – Uniform Resource Locator (Internet address)

USDOT-R – United States Department of Transportation number Reader

VIC – Vehicle Identification Card

VIN – Vehicle Identification Number

VPN – Virtual Private Network

VWS – Virtual Weigh Station

WIM – Weigh-In-Motion

XML – eXtensible Markup Language

⁶ http://www.dot.gov/pia/fmcsa_safetynet.htm