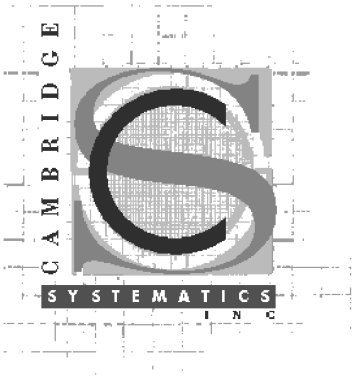

Florida CVISN Business Plan

final report

prepared for

Florida Department of Transportation

prepared by

Cambridge Systematics, Inc.

March 2001

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prepared by

Cambridge Systematics, Inc.
150 CambridgePark Drive, Suite 4000
Cambridge, Massachusetts 02140

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Executive Summary

Executive Summary

This report presents the recommendations of the business planning effort by the Florida state agencies involved in commercial vehicle operations (CVO) and the motor carrier industry in Florida to target and organize the deployment of Intelligent Transportation Systems (ITS) technology in order to increase the safety and efficiency of the state's commercial vehicle operations environment, and to guide the state's participation in the Commercial Vehicle Information Systems and Networks (CVISN) program. This effort and this report were produced under the auspices of the Florida Department of Transportation that convened the Florida CVISN Task Team of state, federal, and motor carrier representatives for the purpose of guiding the development of an ITS/CVO and CVISN Business Plan for the state.

Purpose and Background

The purpose of the business planning effort was to:

- Outline the current regulatory processes associated with CVO in Florida;
- Identify a strategic direction for the state's ITS/CVO and CVISN program;
- Recommend a program of ITS/CVO and CVISN projects for deployment;
- Define a management approach, budget, and schedule for the deployment of the program;
- Identify issues that will affect the implementation of the program; and
- Recommend strategies to overcome these issues and advance the program.

The CVISN Business Plan is a tool to guide the state's future ITS/CVO and CVISN planning and deployment activities. The plan is a "living" document that will require updating over time as the state's priorities, its information systems, or sources of funding change.

Commercial vehicles form the backbone of the state's freight transportation network. All aspects of the economy rely on commercial vehicles to meet their transportation needs. The trucking industry is an active participant in all of Florida's major industries. Motor carriers haul 77 percent of all shipments originating in Florida (by weight). These shipments have a combined value of $154 billion. Commercial vehicles also provide the integral landside link to the state's intermodal facilities.

ITS can help the state address the challenges of a transportation system strained by increased automobile and commercial vehicle traffic and administrative and enforcement agencies strained by the increasing numbers of commercial vehicles. ITS technology – information processing, communications, electronics, and sensors – helps the state to optimize the existing infrastructure, improve safety, and increase the transportation system's overall

efficiency. A segment of ITS is focused on commercial vehicle operations. ITS/CVO involves regulatory, safety, and enforcement processes and systems involved in commercial vehicle operations, such as acquiring a vehicle's registration or undergoing safety inspections and terminal audits. ITS/CVO applies computer and communications technology to improve commercial vehicle safety and enhance the productivity of both the government agencies and the commercial vehicles they regulate. Both ITS and ITS/CVO systems offer an operational enhancement to their users in an environment of limited resources and increased customer demands.

The Commercial Vehicle Information Systems and Networks (CVISN) initiative is the major ITS/CVO program in the United States. The initiative is developing a technical framework to exchange information between the systems of public sector agencies, motor carriers, and third party service providers. CVISN projects span all elements of the national ITS/CVO program and include the automation of credentials, the exchange of safety information among agencies and jurisdictions, and the use of electronic screening to facilitate the bypass of inspections by carriers with good safety histories.

Ten states have been prototyping and piloting the CVISN architecture. These states are demonstrating the program's operational concepts and validating its requirements. The other 40 states are involved in this program in some capacity, including CVISN planning through participation in federally-sponsored deployment workshops and completion of program plans and system designs. Congress has set a goal to have the majority of states deploy the initial set of CVISN capabilities by September 30, 2003.

Florida is poised to begin CVISN planning and development. State and industry representatives are participating in the series of three deployment workshops commencing in fall 2000 and ending in spring 2001.

The essence of the business planning process is identifying projects that will form the core of the state's ITS/CVO and CVISN program. Projects will be recommended that address problems, needs, and requirements identified through a series of activities undertaken during the business planning process. The underlying rationale for state government's, the motor carrier industry's, and the Federal Government's attention to ITS/CVO is the potential benefits of ITS/CVO to state agencies, motor carriers, and the general public. The ITS/CVO and CVISN projects in this Business Plan are anticipated to contribute to the following:

- Efficient, cost-effective regulatory processes;
- Better utilization of state resources;
- Safer motor carrier operations;
- Improved highway safety;
- Reduced congestion and improved mobility;
- Safe and responsible utilization of the state's transportation system;
- Enhanced customer service; and
- Increased productivity.

The CVISN Task Team that participated in the business planning process comprised representatives of the state Department of Transportation, Department of Highway Safety and Motor Vehicles, Department of Revenue, and Department of Agriculture and Consumer Services; Federal Motor Carrier Safety Administration; and motor carriers.

This CVISN Task Team guided the development of the Business Plan. The team as well as other public and private sector representatives participated in interviews, meetings, and conference calls during the development of the Business Plan.

Strategic Direction

A strategic direction with goals and objectives was defined for the ITS/CVO and CVISN program. Goals and objectives are important components of the program. Goals give high-level direction to the program. Objectives help ensure that individual projects address specific public and private stakeholder needs and requirements. This further ensures that resources and investments are targeted to provide maximum benefits to the state, individual agencies, and motor carriers.

The goals of the program are as follows:

- Improve the state's CVO regulatory environment;
- Ensure CVO-related safety without undue costs to the motor carrier industry;
- Guide the development and installation of adopted CVISN projects and programs in an efficient and cost-effective manner; and
- Optimize safe and efficient movement of people and goods throughout the state.

These goals represent broad achievements toward which the program is directed.

Recommended Projects

The core of the Business Plan, a program of ITS/CVO and CVISN projects, was developed to address the needs and requirements identified through the series of business planning activities. These projects are solutions and actions that can be implemented by the state and industry to improve the regulatory system, ensure CVO safety, guide CVISN deployment, and optimize safe and efficient travel through the state. The projects are shown in Table ES.1. Estimated development costs also are shown. Potential sources of funding have been identified in the Business Plan, including federal, state, and private sector sources.

Table ES.1 Project Costs

Projects	Development Cost
1. Feasibility Study of Electronic Credentialing Needs	$ 150,000
2. Electronic Credentialing Software Design and Development	500,000 - 1,500,000
3. Automated Routing and Permitting Software Design and Development	500,000 - 1,000,000
4. Information Systems Inventory	100,000
5. Networked Information Systems Design and Development	300,000 - 1,000,000
6. Electronic Payment Options	50,000
7. Electronic Screening at Weigh Stations	50,000[1]
8. Electronic Screening at Agricultural Inspection Stations	200,000 - 500,000
9. Compliance Help Desk/Service Representative	100,000
10. IFTA Clearinghouse	40,000 - 60,000
TOTAL	**$ 1,990,000 – 4,510,000**

[1] PrePass is deployed at no cost to the state. $50,000 is estimated to be the cost of integrating Florida CVIEW with the screening system.

The ITS/CVO and CVISN program will be deployed incrementally. Funding constraints and the availability of state personnel to carry out key duties prevent the state from deploying the entire program of projects and technologies at once. These projects, when deployed, will result in a comprehensive program and a production-level CVISN architecture for the state that adheres to national CVISN standards and the state's own needs and requirements. Starting with an overall program that is composed of individual projects is the key to ensuring that project deployments contribute to an integrated program that maximizes resources and the benefits to all stakeholders.

CVISN Level 1 has been established as the benchmark or deployment guide to states that are deploying CVISN. It consists of minimum recommendations for a state's initial deployments. These deployments would be followed by another round or group of deployments that enhance the existing functionality. When completed, CVISN will be a fully integrated collection of commercial vehicle information systems operated by the states, the Federal Government, carriers, and other stakeholders. Florida's current ITS/CVO activities combined with the recommended projects in the Business Plan contribute to an anticipated attainment of CVISN Level 1 before the end of 2003.

Following are summary statements of the 10 projects recommended for the Florida ITS/CVO and CVISN Program:

1. **Feasibility Study of Electronic Credentialing Needs –** A high-level assessment of requirements for supporting the on-line application for and receipt of CVO credentials will be conducted.

2. **Electronic Credentialing Software Design and Development –** Software to support paperless business transactions between the Department of Highway Safety and Motor Vehicles and motor carriers will be developed.

3. **Automated Routing and Permitting Software Design and Development –** Software to support the automated processing and issuance of oversize and overweight permits will be developed.

4. **Information Systems Inventory –** A detailed inventory of CVO-related hardware and software will be conducted.

5. **Networked Information Systems Design and Development –** A system for the electronic interchange of information among state agencies and between deskside and roadside systems will be developed.

6. **Electronic Payment Options –** Electronic payment options will be examined and evaluated.

7. **Electronic Screening at Weigh Stations –** The current system for preclearing vehicles to bypass weigh stations will incorporate real-time or near real-time snapshots for safety and credentials checks.

8. **Electronic Screening at Agricultural Inspection Stations –** A selection system that allows carriers meeting Department of Agriculture and Consumer Services and Department of Revenue clearance requirements to bypass agricultural inspection stations will be deployed.

9. **Compliance Help Desk/Service Representative –** A single point of contact in state government for regulatory information will be provided.

10. **IFTA Clearinghouse –** Software to participate in the IFTA Clearinghouse will be developed.

The projects that are recommended for the ITS/CVO and CVISN program contribute to a targeted, coordinated, and well-balanced program of activities that respond to motor carrier, individual state agency, and state CVO needs, and enhance the national CVISN framework by addressing CVISN Level 1 requirements. A summary of the key features of the projects is as follows:

- **Enhanced Customer Service –** Customer service is an important function of state agencies. All the projects in the Business Plan have the potential to significantly enhance customer service to motor carriers. A primary way to enhance customer service is to improve the efficiency of the regulatory processes in order to reduce time and labor costs for carriers as well as agencies. Agencies can provide faster and more efficient service to industry by replacing unproductive or outdated requirements with new ways of doing business, such as allowing safe and legal carriers to bypass weigh stations; reducing the paperwork burden through electronic credentialing and payments; and sharing information across agencies as a result of networked systems. A help desk or service representative that is a single point of contact for regulatory information, possibly for referral only, is by itself extremely effective for enhancing customer service.

- **Time and Cost Savings –** With agencies experiencing funding and staffing constraints and motor carriers facing rising costs, limited resources, and increased competition, the time and cost savings accrued through ITS/CVO implementations are very large benefits to be enjoyed. Time is saved as manual, paper-based methods of issuing and obtaining credentials and permits and traditional ways of weighing and inspecting trucks are automated. Time savings to carriers translate into reduced costs of regulatory compliance. For agencies, on-line credentialing and permitting and tax filing can be expected to reduce administrative costs, and in some areas, automation of functions can enable an agency to focus resources in other areas with a reasonable expectation of measurably improving safety or regulatory compliance. It is important to note that while the application of technology is the cornerstone of ITS/CVO deployment, ITS/CVO also includes process improvements or reengineering and other non-technical solutions to CVO needs, and these kinds of solutions alone can produce significant savings.

- **Increased Efficiency and Cost-Effectiveness –** Performing a business process reengineering analysis as part of an electronic credentialing project can identify opportunities to streamline outdated or inefficient processes and eliminate duplicative functions before applying technology. Automated screening and clearance at the roadside can eliminate much paperwork and many vehicle inspections, resulting in reduced delays for individual vehicles. Networking information systems promotes the sharing of information across agencies and reduces the amount of redundant data collection that occurs. Electronic credentialing and automated permitting will considerably reduce manual processing and paperwork for both agencies and carriers, resulting in saved time and money.

- **Improved CVO and Highway Safety –** Information exchange capabilities that result from networking information systems will make more safety information available to enforcement personnel at the roadside and help make all safety information more reliable and timely for their use. Broad electronic communication and data sharing enhances the monitoring of the en-route safety status of the vehicle and driver, enables focused enforcement on high-risk operators, better ensures the safety compliance of motor carriers, and generally improves highway safety.

- **Reduced Congestion and Fewer Delays –** Deployment of weigh-in-motion (WIM) equipment reduces the amount of time carriers spend at weigh stations by automating the processing of trucks. Similarly, deployment of electronic screening systems results in less congestion, fewer back-ups on to the traveling lanes of the highway, improved traffic flow, and fewer delays.

- **More Effective Utilization of Resources –** Electronic screening activities can improve the efficiency and utilization of officers at weigh stations. This may enable the state to reallocate resources for other enforcement purposes, such as mobile patrol activities on secondary routes, or it may allow the state to keep pace with steeply rising truck traffic given stagnant or falling staffing levels. Screening at agricultural inspection stations will enable more carriers to be inspected than current levels because carriers such as those not carrying agricultural commodities will not need to enter the stations.

Program Implementation: Key Issues

Technical, institutional, and legislative issues impact CVO regulation in Florida and present challenges to implementing ITS/CVO and CVISN projects efficiently and effectively. The issues in concert have the potential to be obstacles to implementation of the Business Plan. These issues must be recognized by stakeholders in the ITS/CVO and CVISN program, and their resolution should be an ongoing and generally incremental effort by the stakeholders. The issues include the following:

- Level of support for ITS/CVO and CVISN activities from state agencies and the motor carrier community is uncertain.
- Resource availability to implement ITS/CVO and CVISN projects is uncertain.
- ITS/CVO activities are somewhat segmented from the larger transportation system.
- Multiplicity of agencies and parties involved in CVO and CVO-related activities makes coordination difficult.
- There is a need for a "champion" or "champions" to drive the development and implementation of the state's ITS/CVO and CVISN program.
- Interoperability of technology components and compatibility of policies and systems are concerns of commercial operators and government agencies.
- Privacy and confidentiality of data are concerns of commercial operators.
- Policies and other institutional factors may prevent potentially effective solutions to problem areas.

Recommendations for Implementing the Program

Strategies are recommended for addressing the key issues and facilitating the implementation of the Florida ITS/CVO and CVISN Program.

1. **It is recommended that a permanent Executive Steering Committee be established to direct the state's ITS/CVO and CVISN program, make policy and funding decisions or recommendations related to the program and individual projects, coordinate the scheduling of projects through the lead agency for each project, and guide the deployment of the projects.** It is recommended that the committee comprise representatives of the four state CVO agencies (Department of Transportation, Department of Highway Safety and Motor Vehicles, Department of Revenue, and Department of Agriculture and Consumer Services), Federal Motor Carrier Safety Administration, and the motor carrier industry.

2. **It is recommended that the Executive Steering Committee pursue endorsement of the Business Plan in each CVO agency.** Endorsement should include commitments of resources, including staffing, equipment, and funding as needed to develop and implement the projects scheduled for early implementation.

3. **It is recommended that the Executive Steering Committee seek the support and participation of the commercial vehicle industry in the deployment of projects.** Support and participation would include a willingness to provide input during development, to solicit pilot carriers for projects, and to explore opportunities for partnerships.

4. **It is recommended that the Executive Steering Committee through the designated participants in the CVISN Deployment Workshops use the workshops to refine project concepts and develop work plans for the projects scheduled for early implementation.** It is further recommended that the Executive Steering Committee use the occasion of the workshops to conduct executive briefings with agency decision-makers to promote greater understanding of the technologies and benefits of CVISN deployments.

5. **It is recommended that the Executive Steering Committee actively pursue funding commitments for the earliest scheduled projects and begin to identify strategies to fund operating and maintenance costs.** Uncertainty of federal funding and the challenging nature of obtaining state funds and private investment require development of multiple strategies for funding projects as well as pursuit of all options concurrently and early.

6. **It is recommended that the Executive Steering Committee seek the participation of the State Technology Office in the CVISN Deployment Workshops as a prelude to their anticipated active role in systems projects.** The nature of CVISN necessitates close coordination with the statewide networking infrastructure; Internet activity; and management, policies, procedures, and standards related to information resources; these areas are supported by the State Technology Office.

7. **It is recommended that the Executive Steering Committee coordinate with other ITS programs in the state that provide traveler information or traffic management services, in order to leverage efforts to facilitate commercial vehicle travel and relieve congestion in areas where commercial vehicles are significantly impacted.** Whereas ITS/CVO activities tend to be segmented from the larger transportation system and "general" ITS projects, opportunities exist for coordination and synergy to maximize resources and benefits as well as move toward "mainstreaming" ITS/CVO.

8. **It is recommended that the Executive Steering Committee draft and endorse guiding principles to accompany the goals and objectives established for the ITS/CVO and CVISN program.** Guiding principles are important underlying assumptions that guide the deployment of projects. In particular, guiding principles should be established that ensure that concerns of a show-stopping nature are addressed and protected within the program. It is recommended that guiding principles concerning the voluntary nature of participation in ITS/CVO projects and the need for interoperable systems, and guarding the confidentiality, security, accuracy, and relevance of

ITS/CVO and CVISN information be among the principles that are drafted and endorsed by the committee.

9. **It is recommended that the Executive Steering Committee conduct briefings when there are changes in state administration or leadership within a CVO agency or the state trucking association.**

Section 1.0

Introduction

1.0 Introduction

Florida's economy is one of the most dynamic in the nation. It ranks fifth in the United States in terms of economic output and is growing third fastest in terms of employment.[1] Florida's transportation infrastructure is a catalyst for the state's economic growth. The highway and rail infrastructure place 60 percent of the United States population within reach of overnight deliveries.[2] The state's 14 seaports and 19 commercial airports have made Florida an international freight hub, now shipping 40 percent of all United States exports to Latin and South America.

Commercial vehicles form the backbone of the state's freight transportation network. All aspects of the economy rely on commercial vehicles to meet their transportation needs. As Figure 1.1 indicates, the trucking industry is an active participant in all of Florida's major industries, including "Services" which accounts for 35 percent of the state's employment. Motor carriers haul 77 percent of all shipments originating in Florida (by weight). These shipments have a combined value of $154 billion. Commercial vehicles also provide the integral landside link to the state's intermodal facilities.

The expanding economy is straining Florida's transportation system. The existing infrastructure is being overwhelmed by the increases in automobile and commercial vehicle traffic. Over 65 percent of the state's urban interstate miles are categorized as moderately or highly congested by the Federal Highway Administration. Four of the state's major metropolitan areas are among the nation's 50 most congested including the Miami-Hialeah region which is ranked third.[3] At the same time, the increasing number of commercial vehicles is straining the state's administrative and enforcement agencies. These agencies' staffing and funding levels have not kept pace with the increased volume of commercial traffic.

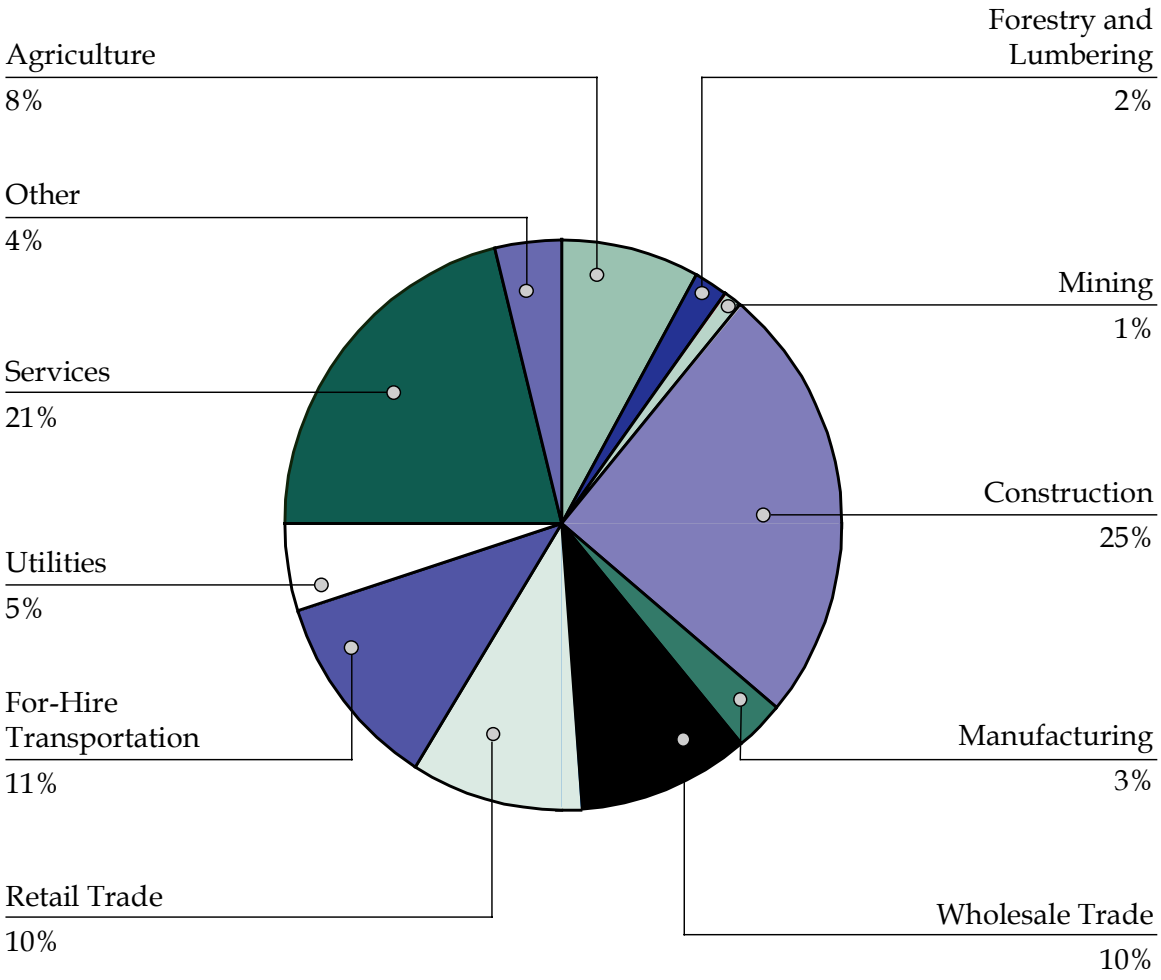
The opportunity to help Florida meet both of these challenges exists with the application of Intelligent Transportation Systems (ITS). These technologies will help the state to optimize the existing infrastructure, improve safety, and increase the system's overall efficiency. ITS also can be focused on commercial vehicle operations (CVO). ITS/CVO can help maximize the state's administrative and regulatory assets in the face of an increasing workload and streamline the business interactions between the state and the motor carriers. In both cases, these systems offer an operational enhancement to their users in an environment of limited resources and increased customer demands.

[1] Enterprise Florida, *Florida: An Economic Overview,* April 2000.

[2] Enterprise Florida, Infrastructure, web site.

[3] Texas Transportation Institute, *Urban Roadway Congestion Annual Report, 1998.*

Figure 1.1 Major Uses of Medium and Large Trucks In Florida, 1997



Source: U.S. Department of Commerce, Bureau of the Census, *1997 Vehicle Inventory and Use Survey, Florida*, November 1998.

1.1 Purpose of the Business Plan

The state of Florida has organized an interagency, public-private CVISN Task Team to discuss the potential applications of ITS/CVO in Florida and coordinate its ITS/CVO efforts. The Florida CVISN Business Plan is part of that effort and is designed to guide Florida's development and deployment of ITS/CVO technologies as well as its participation in the Commercial Vehicle Information Systems and Networks (CVISN) program. Input from the major CVO stakeholders, including state regulatory and enforcement agencies, the Federal Motor Carrier Safety Administration (FMCSA), and the motor carrier industry, has been included in this document. This Business Plan:

- Outlines the current regulatory processes associated with commercial vehicle operations in Florida;
- Describes existing ITS and ITS/CVO projects in Florida;
- Identifies a strategic direction for the state's ITS/CVO and CVISN program;
- Recommends a program of ITS/CVO and CVISN projects for deployment;
- Defines a management approach, budget, and schedule for the deployment of the program;
- Identifies issues that will affect the implementation of the program; and
- Recommends strategies to overcome these issues and advance the program.

The ITS/CVO and CVISN projects and program elements recommended in this Business Plan are anticipated to:

- Improve roadway safety;
- Utilize advanced technological solutions to enhance the operational efficiency of both the state agencies involved in regulating CVO and the commercial vehicle industry;
- Maximize the state's resources through targeted enforcement on motor carriers with historically poor safety performances;
- Coordinate the ongoing efforts of the numerous state and federal agencies responsible for regulating the CVO industry; and
- Support and strengthen the state's economy by increasing the efficiency of the transportation system.

The Business Plan is organized into the following sections:

Section 1.0 provides an introduction to ITS/CVO and Florida's motor carrier industry;

Section 2.0 gives an overview of the business planning process;

Section 3.0 describes the scope of the Florida ITS/CVO and CVISN Program, including its goals and objectives and the current regulatory environment;

Section 4.0 summarizes the user requirements for ITS/CVO and CVISN deployment;

Section 5.0 presents the program of ITS/CVO and CVISN projects;

Section 6.0 explains the implementation plan for these projects, including the organization and management approach, schedule of projects, and funding needs;

Section 7.0 lists the contact names for the Business Plan and the CVISN program;

Appendix A provides a bibliography; and

Appendix B provides a list of acronyms used in the Business Plan.

1.2 Background to ITS/CVO

Intelligent Transportation Systems refer to the suite of advanced technologies designed to enhance the safety and efficiency of the nation's transportation system. These technologies include information processing, communications, controls, sensors, and electronics. Advanced Traveler Information Systems (ATIS) are an increasingly familiar example of an ITS application. ATIS are designed to reduce congestion and accidents by delivering accurate and timely traffic and traveler information to users so they can make informed decisions regarding their travel, such as method of travel or selection of routes. This information can be disseminated in a variety of ways, including cellular phones, the Internet, in-vehicle communication systems, and dynamic message signs.

Examples of public sector ITS deployments in Florida include:

- Electronic toll collection;
- Development of a Statewide ITS Architecture (ongoing);
- Deployment of five travel and traffic management centers, including Orlando's Regional Traffic Management Center; and
- Deployment of traffic monitoring devices including closed circuit cameras and in-pavement detectors.

A segment of ITS is focused on commercial vehicle operations. ITS/CVO involves regulatory, safety, and enforcement processes and systems involved in commercial vehicle operations, such as acquiring a vehicle's registration or undergoing safety inspections and terminal audits. ITS/CVO applications are designed to improve commercial vehicle safety and enhance the productivity of both the government agencies and the commercial vehicles they regulate. ITS/CVO includes:

- Automating existing procedures and operations – Use of computer hardware and software, communications systems, electronics, and sensors to automate recordkeeping, credentials processing, inspections, and data communications.
- Networking information systems – Linking databases and networks of information systems that are maintained by government entities, motor carriers, and third parties with CVO interest or involvement such as the insurance industry.

- Changing the way that states and carriers do business – Changes in traditional processes, development of "transparent borders," and one-stop shopping for credentials or services.

Some examples of ITS/CVO deployments in Florida include:

- Weigh-in-motion technology at interstate weigh stations;
- Utilization of ASPEN-equipped laptop computers to conduct roadside inspections;
- Participation in a national preclearance system; and
- Participation in national-level information systems for commercial driver licensing and safety data management.

These ITS and ITS/CVO projects demonstrate Florida's commitment to improving its transportation system through the innovative use of technology.

National ITS/CVO Program

The national ITS/CVO program encompasses dozens of projects undertaken by individual states, consortia of states, the Federal Government, individual motor carriers, and industry associations. The national program is designed to encourage the development and implementation of technology to enhance the safe movement of commercial vehicles across the United States. This program is part of FMCSA's effort to reduce by 50 percent the number of fatalities in commercial vehicle crashes by 2010.

The national program has four main areas:

- **Safety Assurance –** Programs and projects that are designed to assure the safety of commercial drivers, vehicles, and cargo. These include automated inspections, safety information systems, and on-board safety monitoring systems.
- **Credentials Administration –** Programs and projects that are designed to improve the procedures and systems for managing motor carrier regulation. These include electronic application for and issuance of credentials and permits and electronic tax filing.
- **Electronic Screening –** Programs and projects that are designed to facilitate the verification of size, weight, safety, and credentials information. These include automated screening at weigh stations and international border crossings.
- **Carrier Operations –** Programs and projects that are designed to reduce congestion and manage the flow of commercial vehicle traffic. These include traveler information systems and hazardous material incident response.

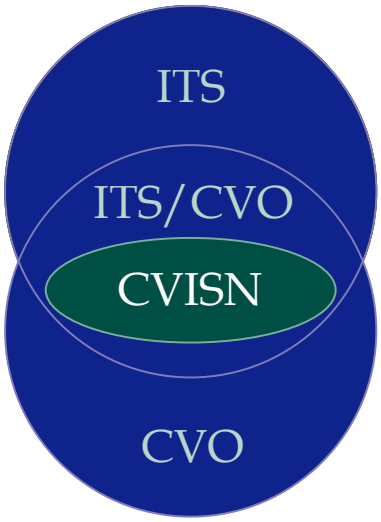
The Commercial Vehicle Information Systems and Networks (CVISN) initiative is the major ITS/CVO program in the United States. The initiative is developing a technical framework to exchange information between the systems of public sector agencies, motor carriers, and third party service providers. Figure 1.2 illustrates the relationship between

CVISN and the rest of the ITS/CVO program. CVISN projects span all elements of the national ITS/CVO program and include the automation of credentials (registration, fuel tax, and oversize/overweight permits), the exchange of safety information among agencies and jurisdictions, and the use of electronic screening to facilitate the bypass of safety inspections by carriers with good safety histories.

Ten states have been prototyping and piloting the CVISN architecture. These states are demonstrating the program's operational concepts and validating its requirements. The other 40 states are involved in this program in some capacity, including CVISN planning through participation in FMCSA-sponsored training classes and deployment workshops and completion of program plans and system designs. Congress has set a goal to have the majority of states deploy the initial set of CVISN capabilities by September 30, 2003.

The ITS/CVO Mainstreaming initiative is developing an organizational infrastructure to support ITS/CVO deployment and complement CVISN's technical infrastructure. Through Mainstreaming, ITS/CVO plans, policies, and projects are developed at three levels: state, regional, and national. The infrastructure comprises state and regional working groups and the development of state business plans and regional coordination plans. The development of this Business Plan is a Mainstreaming activity.

Figure 1.2 The Relationship of CVISN to the National ITS/CVO Program



CVISN is a subset of ITS/CVO. CVISN involves the information and communications systems owned and operated by public agencies, motor carriers, and third party service providers.

Expected Benefits of CVISN Deployment

Safety, credentialing, and electronic screening benefits that accrue from CVISN deployment have been documented by states, the Federal Government, and private organizations.[4] The following list includes the major benefits to the state:

- States, motor carriers, and third parties will exchange information electronically, and this interchange will be timely, accurate, and less expensive;
- Credentials issuance, tax filing, interstate reconciliation, and audits will be automated, and will be more efficient and cost-effective;
- Registration, size, weight, and tax regulations will be better enforced;
- Enforcement resources will be focused on non-compliant carriers;
- Safety monitoring will improve as safety data quality and transfer time improve; and
- Agencies will be able to provide better customer service.

The other major stakeholders, the motor carriers, can expect these benefits from CVISN deployment:

- Reduced administrative compliance costs;
- Fewer delays as a result of electronic screening and automated inspections;
- Improved safety management and practices with better data; and
- A leveling of the "playing field" from reduced numbers of illegal and unsafe carriers.

1.3 Trucking and Economic Characteristics

Trucking is the dominant mode of freight transportation in the United States. As such, it is closely tied to the nation's economic output and productivity. Motor carriers account for 69 percent of all commodity shipments in the United States (by weight), totaling 7.7 trillion tons.[5] By value the trucking industry hauls 72 percent of the nation's commodities, a total of $4.9 trillion in goods.

[4] A good discussion of the sources is found in The Johns Hopkins University Applied Physics Laboratory, POR-99-7186, *Introductory Guide to CVISN,* February 2000.

[5] 1997 is the most recent year for which data are available.

The nation's trucking industry includes approximately 360,000 interstate carriers. The number of intrastate carriers is unknown but may be near double the number of interstate carriers. Fifty-three percent of the carriers are small firms, operating five or fewer trucks; 22 percent are large firms operating 100 or more commercial vehicles. The major uses for commercial vehicles include construction, agriculture, manufacturing, and trade.

The evolving logistics patterns associated with manufacturing-on-demand and e-commerce are increasing the demand for trucking industry's safe, reliable, and flexible service. The annual number of tons hauled by trucks has increased 21 percent since 1993 and the annual value of commodities hauled by trucks has increased 13 percent during the same period. Both of these trends are projected to continue for the foreseeable future, which will continue to strain the nation's transportation system.

Commercial Vehicles in Florida

Florida's motor carrier industry comprises over 10,000 interstate carriers and an estimated 20,000 to 25,000 intrastate carriers. These carriers register approximately 453,000 medium and large commercial trucks in Florida.[6] The trucking industry serves all of Florida's communities, including 84 percent of them exclusively.

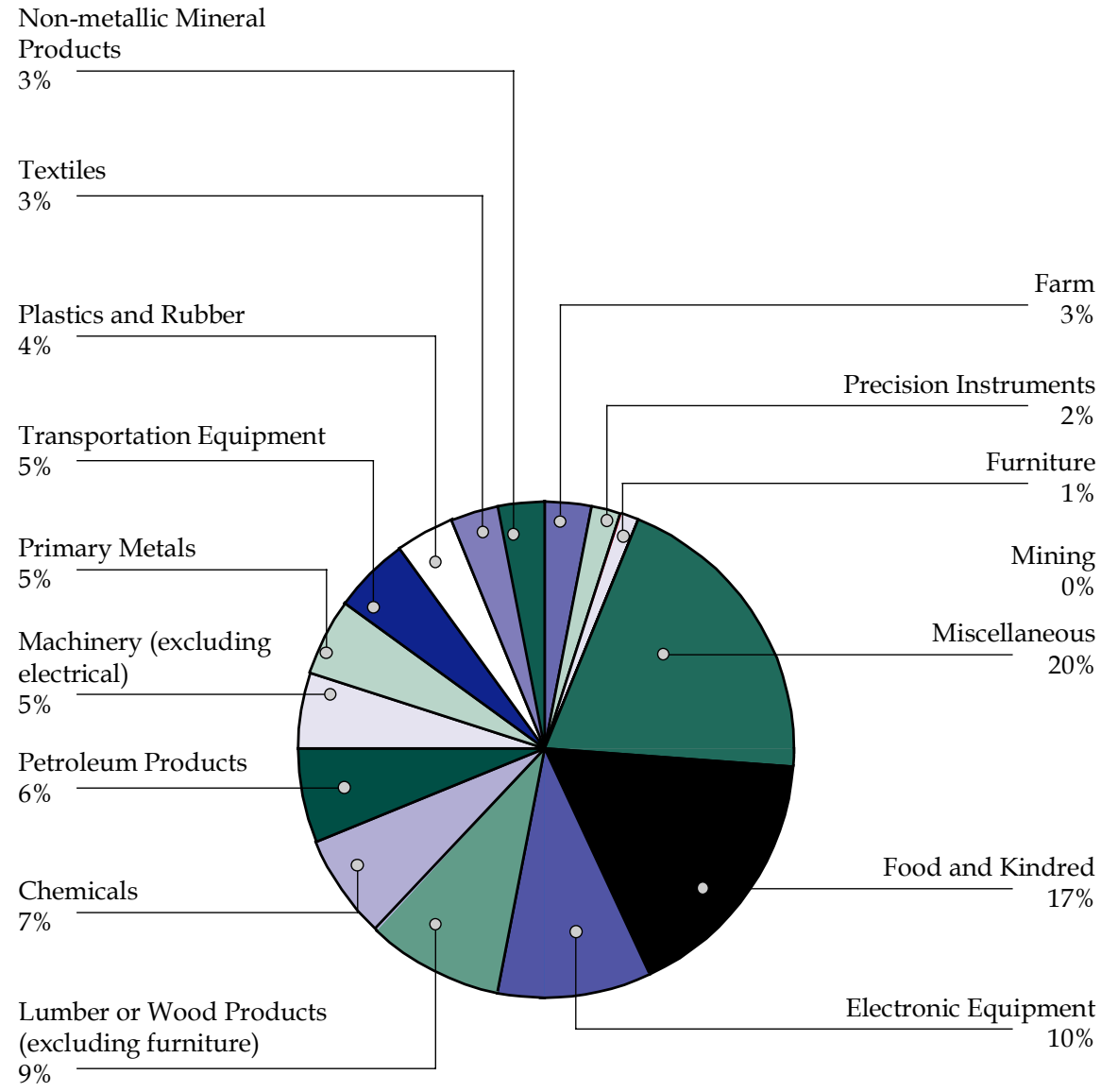
Forty-five percent of the state's carriers operate small fleets (less than 10 trucks). The vast majority of the carriers operate primarily in Florida with less than 25 percent of their miles accumulated in other states. Nearly half of the carriers classify themselves as "local" with an average trip length of 50 miles or less.

In terms of value, the major commodities hauled by the motor carrier industry include food and kindred products (17 percent), lumber or wood products (9 percent), and chemicals (7 percent). In total, commercial vehicles haul $154 billion of commodities originating in Florida (see Figure 1.3). Commercial vehicles haul 77 percent of the freight originating in Florida (by weight). Major commodities hauled by the motor carrier industry (by tonnage) include non-metallic products (19 percent), petroleum products (18 percent), and food and kindred products (9 percent) (see Figure 1.4).

Commercial vehicles also are the vital link to the state's agricultural industry. Florida is the nation's ninth largest producer of agricultural products with total cash receipts totaling $6.7 billion in 1998. The state is the single largest producer of citrus products and 19 other agricultural products, such as cucumbers, sweet corn, and tropical fish. Commercial vehicles are responsible for shipping nearly all of these goods to their processors, final markets, and points of export.

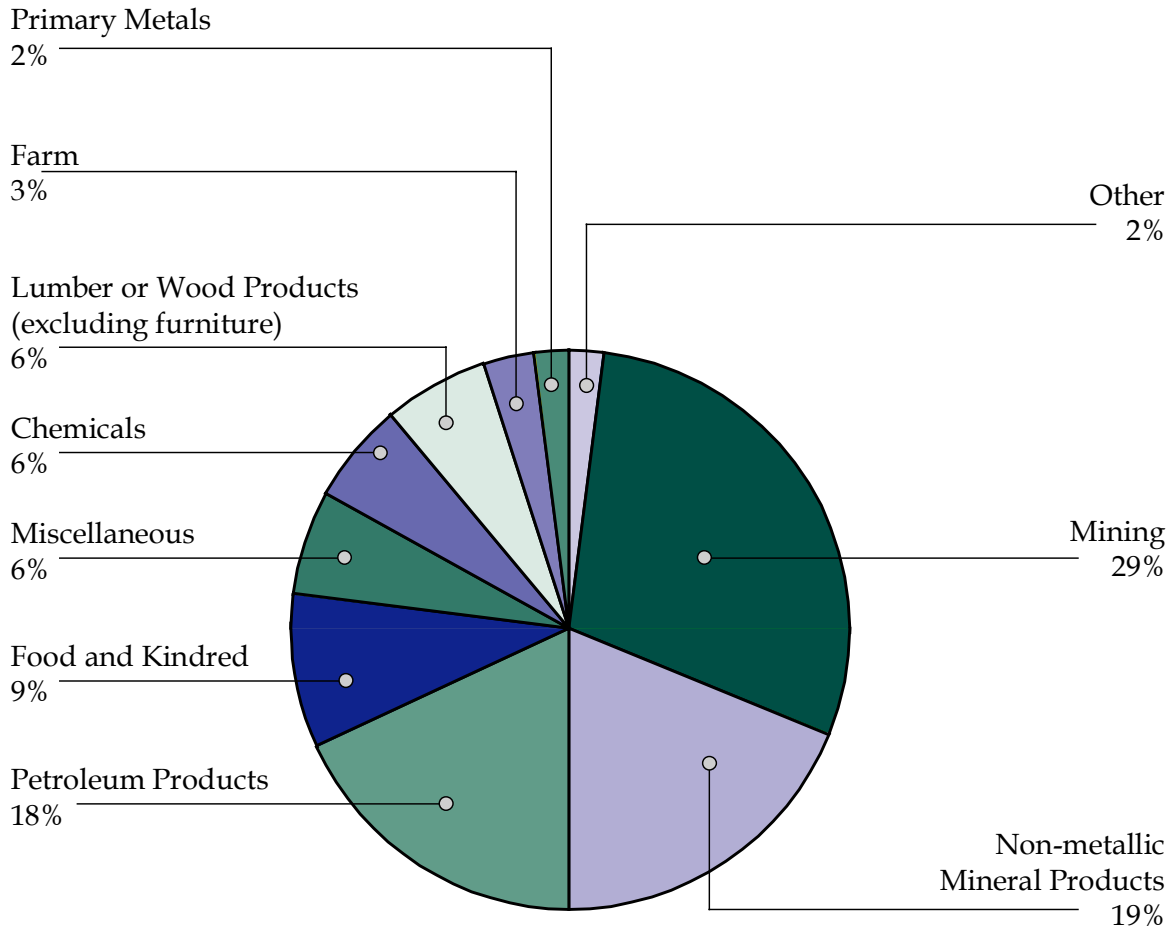
[6] U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 1998,* November 1999.

Figure 1.3 Commodity Shipments Originating in Florida Ranked by Value



Source: U.S. Department of Commerce, Bureau of the Census, *1997 Florida Economic Census: Transportation*, December 1999.

Figure 1.4 Commodity Shipments Originating in Florida Ranked by Weight



Source: U.S. Department of Commerce, Bureau of the Census, *1997 Florida Economic Census: Transportation*, December 1999.

Section 2.0

Overview of the Business Planning Process

2.0 Overview of the Business Planning Process

This section describes the work steps and participants involved in developing the Florida CVISN Business Plan.

2.1 Organization

The Florida Department of Transportation (DOT) was the lead agency in the development of the Business Plan. A CVISN Task Team comprising representatives from each of Florida's agencies with motor carrier regulatory or safety enforcement responsibilities supported the DOT project management. Motor carrier industry representation included McKenzie Tank Lines, Landstar System, Rountree Transport and Rigging, and Watkins Motor Lines. The Federal Motor Carrier Safety Administration (FMCSA) and Federal Highway Administration (FHWA) also provided representatives on the CVISN Task Team. The federal participation helped to ensure that the state's Business Plan is consistent with the national ITS/CVO and CVISN programs.

The composition of the CVISN Task Team is as follows:

- Department of Transportation;
- Department of Agriculture and Consumer Services;
- Department of Revenue;
- Department of Highway Safety and Motor Vehicles;
- Federal Motor Carrier Safety Administration;
- McKenzie Tank Lines;
- Landstar System;
- Rountree Transport and Rigging; and
- Watkins Motor Lines.

The primary responsibilities of the team members were to:

- Participate in interviews and meetings that were part of the business planning process;
- Provide reports, documents, data, and other materials needed to understand the current CVO environment;
- Identify the scope and requirements for the Florida ITS/CVO and CVISN Program;

- Provide input and guidance to the development of the Business Plan; and
- Review and approve the products of the work tasks.

Cambridge Systematics, Inc. of Cambridge, Massachusetts was hired by DOT to lead the development of the Business Plan. Financial support for consultant services was provided by Mainstreaming funds provided by FMCSA and state matching funds.

2.2 Business Plan Development Process

The Business Plan development process was part of a project to produce a Florida CVISN Business Plan and a Commercial Vehicle Information Exchange Window (CVIEW) System Plan. This project had seven tasks. The tasks are depicted in Figure 2.1, and explained below.

A kickoff meeting was held on May 15, 2000. The purpose of the meeting was to assemble the major stakeholders in the Business Plan to review the statement of work for the project and the project deliverables.

Work Plan Overview

Cambridge Systematics developed a work program divided into two components. Tasks 1 through 4 focused on the development of the CVISN Business Plan. Tasks 5 through 7 examined the state's requirements for a CVIEW system and resulted in the development of a CVIEW System Plan.

Project Tasks

The specific tasks that led to the development of the CVISN Business Plan and subsequently produced the CVIEW System Plan are summarized below.

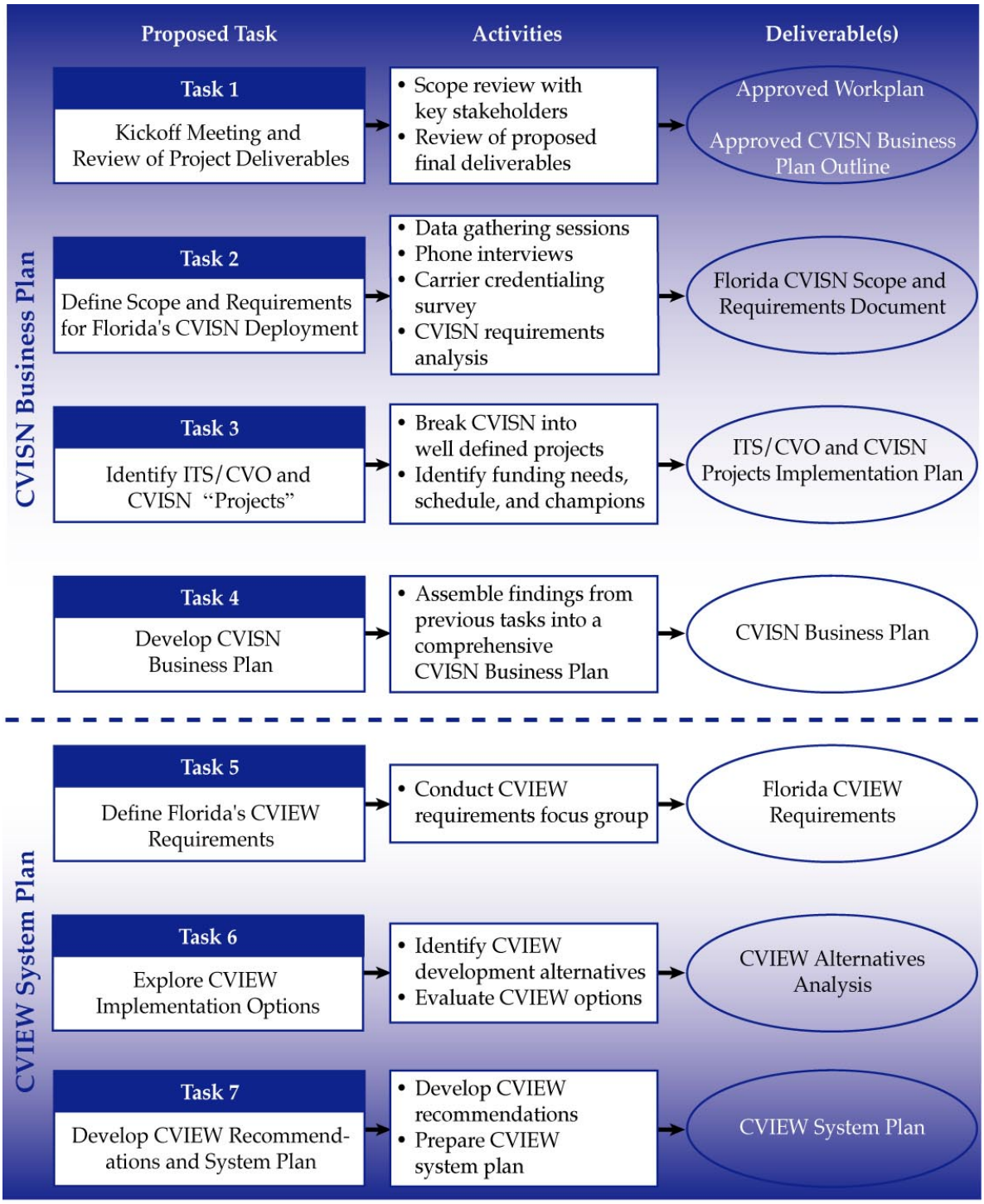
Task 1. Project Kickoff Meeting and Review of Project Deliverables

An on-site project kickoff meeting was held in Tallahassee on May 15, 2000 to assemble the members of the state's CVISN Task Team to accomplish the following:

- Review and approve the project work plan. The Cambridge Systematics Project Manager presented the scope of work for the project in order to ensure that representatives from each of the state's CVO agencies understand the goals and objectives of the project and the products that will be developed.
- Attendees were asked to identify key staff to participate in data gathering sessions in Task 2.

- Review and approve the CVISN Business Plan outline. The Cambridge Systematics Project Manager presented an overview of the Business Plan and discussed the sections of the plan in detail.

Figure 2.1 Business Plan Development Process



Task 2. Define Scope and Requirements for Florida's ITS/CVO and CVISN Program

Defining the scope and requirements for the state's ITS/CVO and CVISN deployment is the basis for identifying projects for the Business Plan. The approach to conducting this task was based foremost on data gathering sessions in Tallahassee with state, federal, and industry representatives. Session objectives were to understand the current CVO environment in Florida; identify the functions and services to be included in the ITS/CVO and CVISN program; and identify needs and new technologies in the state.

The data gathering sessions were conducted by the Cambridge Systematics team in Tallahassee during the same week as the kickoff meeting. Six sessions were held with the following stakeholders:

- Department of Transportation;
- Department of Agriculture and Consumer Services;
- Department of Revenue;
- Department of Highway Safety and Motor Vehicles;
- Federal Motor Carrier Safety Administration; and
- Motor carriers.

The objectives of the sessions enabled the Cambridge Systematics team to gather information on key elements of the Business Plan. The objectives and respective key elements were as follows:

1. **Understand the current CVO environment –** The current environment includes CVO functions and business processes; information systems used to administer CVO functions; and institutional factors that may impact ITS/CVO and CVISN.

2. **Identify functions and services to be included in the ITS/CVO and CVISN program –** Analysis of the current functions, business processes, and systems guided development of the scope of the ITS/CVO and CVISN program.

3. **Identify needs or areas for improvement and new technologies or opportunities –** Needs and opportunities identified by stakeholders helped determine functionality requirements for ITS/CVO and CVISN deployment, technology preferences, and key issues that have the potential to impact deployment.

Telephone interviews were conducted with a number of stakeholders to supplement the information gathered in the on-site sessions. These included discussions with representatives of the Motor Carrier Compliance Office (within DOT) and motor carrier industry, and experts on the Statewide ITS Architecture, ITS Strategic Plan, and regional and corridor ITS projects.

In addition, a motor carrier credentialing survey was developed by the Cambridge Systematics team for distribution among a sample of motor carriers. The purpose of the survey was to understand aspects of the carrier's interaction with the state with regard to

obtaining operating credentials and permits, and to gather information on how credentialing activities could be improved. This information would be used to understand the current environment and specific needs from the perspective of other carriers that did not attend the data gathering sessions.

Other activities also were performed to enhance the requirements analysis. These activities included review of literature pertaining to CVISN, including national directives, states' CVISN architecture reports, program plans, and system designs; review of other relevant literature and source materials, including ITS/CVO business plans, Florida and national Internet sites, and Florida agency or legislative reports and documents; and best practices regarding ITS/CVO implementations nationwide.

The task deliverable, a technical memorandum, defined the scope of the Florida ITS/CVO and CVISN Program and identified the high-level requirements for ITS/CVO and CVISN deployment. This document served as a foundation for the work to be conducted over the remainder of the project.

Task 3. Identify ITS/CVO and CVISN "Projects"

This task focused on breaking down the state's overall needs and requirements (as defined in Task 2) into smaller, more manageable projects. Projects were identified that address the needs and requirements defined in Task 2. These projects, when deployed, will result in a comprehensive ITS/CVO program and a production-level CVISN architecture for the state that adheres to national CVISN standards and the state's own requirements. Starting with an overall program that is composed of individual projects is the key to ensuring that project deployments contribute to an integrated program that maximizes resources and the benefits to all stakeholders.

The key work steps under this task included:

1. Recommending specific ITS/CVO and CVISN projects that will serve as the building blocks for the deployment of the state's overall program. The content of other states' ITS/CVO business plans and CVISN plans and designs, as well as states' best practices and successful technology applications for ITS/CVO implementations, were analyzed as part of the project identification process.

2. Identifying a lead agency and determining a technical approach for carrying out each project.

3. Developing an implementation plan for each project that identifies estimated cost, duration, and any issues that may impede the progress of the project and that may require special attention for their resolution or mitigation.

4. Developing an implementation schedule for the projects that shows duration and sequence over three years.

The task deliverable, a technical memorandum, proposed an integrated program of ITS/CVO and CVISN projects and presented an implementation plan for the program that included costs, a schedule, and technical and organizational approaches.

Task 4. Prepare CVISN Business Plan

The CVISN Business Plan is a tool to guide the state's future ITS/CVO and CVISN planning and deployment activities. The plan is a "living" document that will require updating over time as the state's priorities, information systems or information system standards, or other circumstances that affect project implementation details change.

The CVISN Business Plan includes the following:

1. Scope of the state's ITS/CVO and CVISN program (defined in Task 2; documented in the scope and requirements technical memorandum);

2. Requirements from the point of view of the state's end users (also defined in Task 2, and included in the scope and requirements technical memorandum);

3. Proposed projects for deployment (defined in Task 3; documented in the projects identification technical memorandum); and

4. Implementation details with an organizational structure for directing the ITS/CVO and CVISN program and directing individual projects, costs, and a schedule (these were also defined in Task 3, and included in the projects identification technical memorandum) as well as funding strategies and outreach activities.

5. Recommendations for implementing the ITS/CVO and CVISN program.

The Cambridge Systematics Project Manager presented the CVISN Business Plan to key stakeholders in the state during an on-site meeting, October 5, 2000. Executives from the Departments of Transportation, Highway Safety and Motor Vehicles, Revenue, and Agriculture and Consumer Services; Office of Information Systems (now the State Technology Office); Federal Motor Carrier Safety Administration; and Florida Trucking Association, in addition to CVISN Task Team members, attended the briefing.

The briefing also included a review of the CVIEW work that would be conducted following presentation of the CVISN Business Plan. The CVIEW work was covered under Tasks 5, 6, and 7.

Task 5. Define Florida's CVIEW Requirements

Following the state's approval of the CVISN Business Plan, work began to document the state's requirements for CVIEW. The CVIEW system is one of the key systems under CVISN. It supports the exchange of information between a state's "deskside" computer systems (vehicle registration system, fuel use tax system, etc.) and "roadside" enforcement systems. The interface enables enforcement personnel to access near real-time "snapshots" of motor carriers. This information then can be used to support performance-based enforcement decisions. CVIEW also supports the cross-checking of credentials across agencies. For example, staff from Florida Highway Safety and Motor Vehicles could send an electronic query to CVIEW to determine whether a carrier has paid the Heavy Vehicle Use Tax (HVUT) prior to issuing vehicle registration credentials to the carrier. Lastly, CVIEW serves as the interface between the state and national systems such as SAFER, which provides national information (from other states) back to Florida.

Task 5 documented the state's requirements for CVIEW. This was accomplished in a one-day session, supplemented by telephone interviews, with representatives from each of the state's CVO agencies to discuss how the state intends to use CVIEW. Specifically, the session focused on the following questions:

1. What information does the state want to store in CVIEW?

2. Who should have access to this information? What are the security requirements?

3. How up-to-date does the information in CVIEW need to be?

4. Which state systems will CVIEW need to interface with? Which national systems will CVIEW need to interface with?

5. Are there specific state hardware/software requirements that would apply to CVIEW?

6. How will CVIEW be operated and maintained over time?

The task results were presented in a technical memorandum. This requirements document provided guidance regarding CVIEW implementation options under Task 6.

Task 6. Examine Florida's CVIEW Implementation Options

This task examined the state's requirements for CVIEW developed under Task 5 and identified four different technical scenarios for deploying CVIEW. Each scenario was then evaluated with respect to the following:

1. The extent to which each scenario meets the state's requirements as defined under Task 5;

2. The cost of each scenario (both one-time software development/modification costs and ongoing costs);

3. Future technology trends; and

4. The extent to which each scenario gives the state flexibility in the future while at the same time adhering to CVISN standards.

The CVIEW alternatives analysis was documented in a technical memorandum.

Task 7. Develop CVIEW Recommendations and System Plan

Based on the analysis and options considered in Task 6, a preferred CVIEW system implementation scenario was recommended to the state and a System Plan was prepared that summarized the findings of Tasks 5 and 6. Specifically, the System Plan included the following:

1. A detailed inventory of the state's requirements for the CVIEW system, including a summary of functional requirements (i.e., what the CVIEW system must do);

2. Recommendations pertaining to hardware and software needs for CVIEW;

3. Recommendations pertaining to ongoing operations and maintenance of CVIEW; and

4. Recommendations pertaining to additional work that must be done to CVIEW in order for it to meet the state's requirements, including an estimate of the cost to complete this work and a recommended schedule.

The CVIEW System Plan was the final deliverable of the project.

Section 3.0

Scope of the ITS/CVO and CVISN Program

3.0 Scope of the ITS/CVO and CVISN Program

This section describes the state's regulatory program, existing ITS/CVO projects, goals, and objectives for the ITS/CVO and CVISN program, and needs and opportunities concerning regulatory procedures and technologies. These elements are the foundation of the Florida ITS/CVO and CVISN Program. New projects that address the needs, opportunities, and requirements identified in the business planning process will be added to the program. Recommended projects are described in Section 5.0, Program Summary.

3.1 Current CVO Environment

Commercial vehicle operations encompass the interaction between regulatory agencies and the commercial vehicle industry. Regulatory agencies are responsible for the administration and enforcement of motor carrier regulations, including registration, fuel use taxation, size and weight, and safety. Additional CVO-related functions include agricultural vehicle inspections, weigh station planning, operation of weigh station preclearance systems, and routing restrictions. Numerous state agencies in Florida and the Federal Government share responsibility for the various functions (see Figure 3.1). The agencies and the major CVO functions include the following:

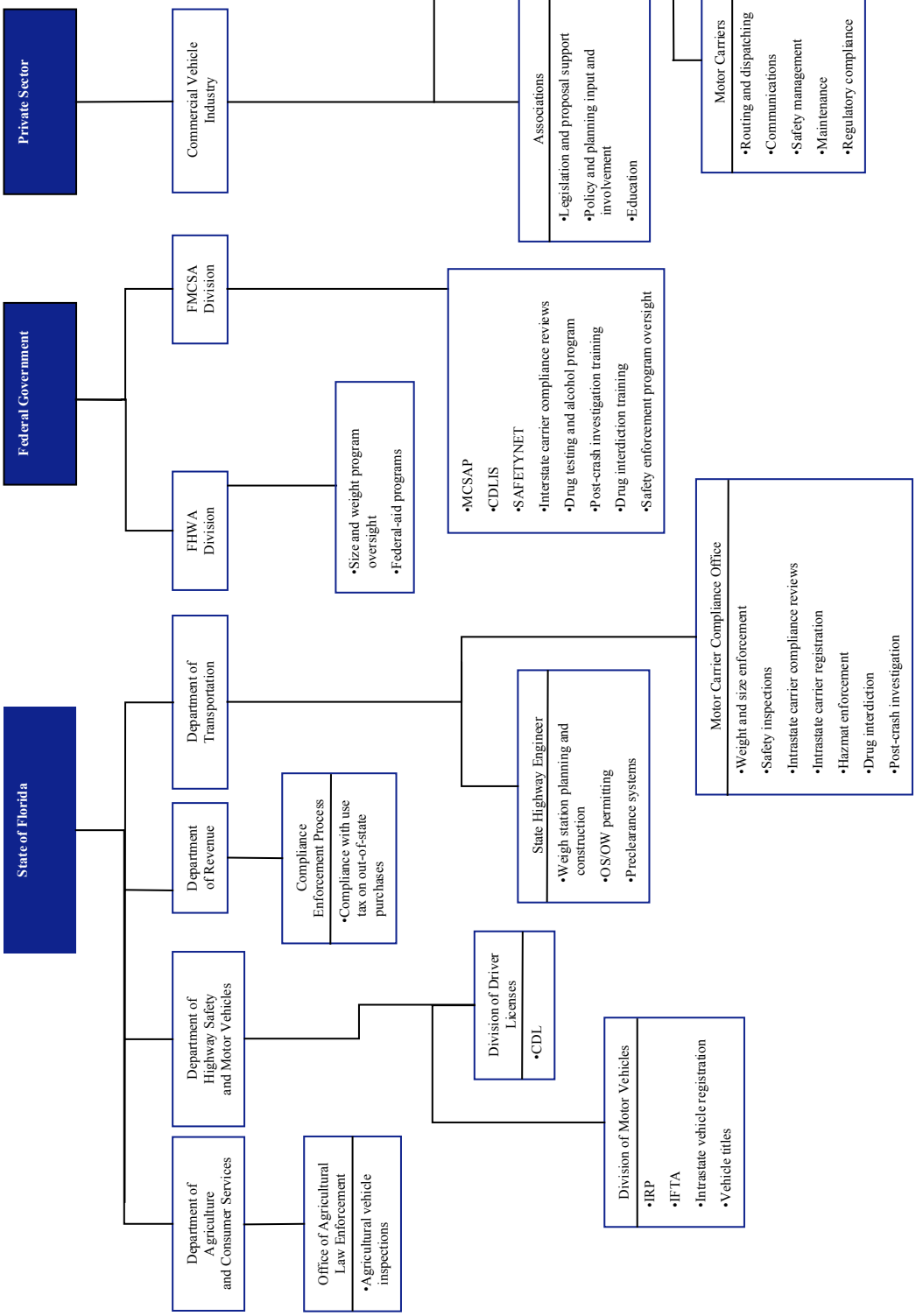
- The **Department of Agriculture and Consumer Services** operates the state's agricultural inspection stations where it conducts agricultural vehicle inspections.

- The **Department of Highway Safety and Motor Vehicles** administers vehicle registration, fuel use taxation, and vehicle titling, and issues commercial driver licenses (CDL). Vehicle registration includes interstate vehicles that are covered under the International Registration Plan (IRP), and intrastate vehicles. Fuel use taxation includes interstate vehicles that are covered under the International Fuel Tax Agreement (IFTA).

- The **Department of Revenue** has responsibility for collecting the use tax on out-of-state purchases. Under a cooperative agreement, Department of Agriculture and Consumer Services personnel at agricultural inspection stations screen inbound trucks and scan or copy bills of lading for the Department of Revenue.

- The **Department of Transportation** plans, builds, and upgrades the weigh stations; issues oversize and overweight (OS/OW) permits; has responsibility for the development and operation of mainline preclearance systems; enforces safety, size, and weight regulations; and provides staff to operate the weigh stations and statewide mobile units.

Figure 3.1 Commercial Vehicle Operations in Florida



- The **Federal Highway Administration (FHWA)** oversees the size and weight program in the state and manages federal-aid highway programs.

- The **Federal Motor Carrier Safety Administration (FMCSA)** has federal regulatory authority over the safety performance of all commercial motor carriers engaged in interstate or foreign commerce. In this capacity, it manages the Motor Carrier Safety Assistance Program (MCSAP), the Commercial Driver License Information System (CDLIS), SAFETYNET, the Drug and Alcohol Testing Program, and a number of educational and training programs.

As described in Section 2.0, Overview of the Business Planning Process, representatives of these agencies and the commercial vehicle industry compose the CVISN Task Team that participated in developing the Business Plan.

Department of Agriculture and Consumer Services

The Department of Agriculture and Consumer Services (DACS), through its Office of Agricultural Law Enforcement, administers the Agricultural Vehicle Inspection Program and operates agricultural inspection station operations. The Agricultural Vehicle Inspection Program supports and supplements all of the department's regulatory and law enforcement programs by conducting inspections of highway shipments of agricultural, horticultural, and livestock commodities which are designed to determine and assure compliance with Federal-State Marketing Agreements and various laws, rules, and regulations implemented to ensure the consuming public a safe, quality food product and/or prevent, control, or eradicate specific plant or animal pests and diseases that could economically devastate segments of Florida's seven billion dollar a year agricultural industry. As an industry, agriculture is second only to tourism in Florida in economic output, necessitating the viability of the state's agricultural industry be protected.

State statutes stipulate that all vehicles with the exception of private passenger automobiles with no trailer in tow; travel trailers; camping trailers; van conversions; motor homes; pickup trucks not carrying agricultural, horticultural, or livestock products and which have visible access to the entire cargo area; or city, county, state, or federal vehicles; must submit for inspection. This amounts to 11.5 million vehicle inspections per year. Of the vehicles inspected, 24 percent are transporting a regulated commodity. Regulated commodities include most traditional agricultural products such as fruits, vegetables, livestock, bees, plants and plant material, dairy, etc., and also involves aquaculture.

There are 22 stations at 19 locations (three locations are interstate highways with a station on each side of the interstate), open 365 days and 24 hours. Automatic queuing is installed on I-95 and I-75 to prevent trucks from backing on to the highway and creating a safety hazard. Other locations do not experience queuing problems. Interstate shipments, both inbound and outbound, are inspected to verify specific plant or animal pests and diseases or food-borne illnesses are prohibited from being transported into or out of the state. Additionally, outbound shipments of certain commodities are inspected to verify compliance with Federal-State Marketing Agreements involving quality, grade, and packaging standards. Intrastate shipments are inspected to verify specific plant or animal pests and diseases established in the state are controlled or eradicated and the spread of food-borne illnesses is prevented.

Shipments not in compliance with applicable statutes and regulations result in criminal and/or administrative actions being initiated which include arrest of violator, administrative fines, cargoes denied entry into Florida, shipments returned to destination, commodities destroyed, fumigation of plant products, inspection by accredited veterinarians, etc. A card file pertaining to past Federal-State Marketing Order violations is maintained which provides detailed information on the violator, violation, and disposition.

Per agreement (1993), DACS officers at the agricultural inspection stations copy bills of lading and provide them to the Department of Revenue. As a result of a request to the Legislature, DACS received funds for a scanning system to scan bills of lading at three stations. This past legislative session, it received additional money to expand the system. Scanning will be conducted at more locations and also extended to agricultural documents. To this end, development is underway to enable Agriculture officers to move between bill of lading and agricultural document scanning; to transfer the information to Agriculture's mainframe computer in Tallahassee; and to move it from the DACS mainframe either to Revenue or the appropriate Agriculture division.

DACS' scanning project includes four phases. The initial phase was scanning bills of lading. Incorporation of agricultural documents into the scanning system is the second and current phase of the scanning project. The third phase will be development of system query capabilities, followed by the fourth phase, computer enhancements in various divisions of DACS. Implementation of the third and fourth phases is contingent upon receiving adequate funding from future Legislatures.

Department of Highway Safety and Motor Vehicles

The Department of Highway Safety and Motor Vehicles (DHSMV) administers a number of CVO administrative programs. The following discussion concentrates on the credentials with strong CVISN implications.

International Registration Plan

International Registration Plan (IRP) is administered in the Bureau of Motor Carrier Services (MCS) of the Division of Motor Vehicles (DMV). It is commonly called interstate vehicle registration. IRP is a base state, reciprocity agreement among states for apportioned registration of interstate commercial motor vehicles. Florida registers 10,200 carriers with 75,000 power units, with approximately 20,000 supplements annually. Credential applications are mailed to Tallahassee or walked in, and keypunched by staff into an in-house developed system. Registration is staggered from January through October; the license plate expires at midnight on the last day of the month indicated on the license plate. Renewals are sent 90 days in advance. Because Florida is not a port-of-entry (POE) state that allows carriers to obtain credentials or permits at facilities at or near the state line, credentials must be in order at any point of inspection. If not in order when checked, the carrier is fined, but a temporary authority generally can be issued. Turnaround time for a new registration is about two weeks. Payment is by cash, check, or money order. IRP and IFTA accounts are audited together.

International Fuel Tax Agreement

International Fuel Tax Agreement (IFTA) also is administered in MCS/DMV. It is commonly called interstate fuel taxation. IFTA is a base state, reciprocity agreement among states for fuel tax registration and payment by interstate motor carriers. There are 8,500 Florida base state carriers, filing 35,000 tax returns. Carriers mail or hand deliver applications; information is keypunched by staff. Renewals begin in August. IFTA decals expire on December 31 of each year (not staggered registration). Turnaround time for credentials is about 10 business days. Joint IRP and IFTA audits are conducted by division field staff.

Intrastate Vehicle Registration

Intrastate vehicle registration is carried out in the Bureau of Titles and Registration of the DMV. New vehicle plates are required every five years. Registrations are performed by county tax collectors that act as agents for DHSMV (totaling over 230 agents in 67 counties). Titles and Registration plans to allow registration on the Internet with credit card payment, but the date of implementation is unknown because of heavy work loads. Intrastate registration and vehicle title information reside in one system; IRP will be merged into this system.

DHSMV also issues vehicle titles through the Bureau of Titles and Registration, DMV, and commercial driver licenses through the Division of Driver Licenses.

Information Systems Projects

Systems development and modifications projects are performed by the Division of Information Systems Administration within DHSMV. Current CVO projects include merging IRP, IFTA, intrastate registration, and titles into one system; enabling driver license and passenger vehicle registration renewals through the Internet with payment by credit card; developing a file of all title information for the National Motor Vehicle Title Information System (NMVTIS) so all states can query for information; and working to enable participation in the IRP Clearinghouse.

Department of Revenue

The Department of Revenue (DOR) is responsible for collecting the use tax on out-of-state purchases; merchandise purchased out-of-state is subject to tax when brought into Florida untaxed or if the tax rate paid was less than six percent. This use tax complements the state sales tax. It applies to untaxed items purchased out-of-state from sources such as Internet sites, mail order catalogs, television shopping networks, toll-free shopping services, auctions, and out-of-state vendors. If the seller does not collect the tax, or collects it at a rate less than six percent, the purchaser is responsible for paying it directly to Florida DOR. Items not subject to this tax generally are groceries and medical items.

Prior to the current cooperative program whereby DACS personnel at agricultural inspection stations copy bills of lading and provide them to DOR, Revenue officers went to agricultural inspection stations and weigh stations and copied bills of lading pertaining to

taxable merchandise. As a result of the DACS-DOR agreement, DACS officers screen inbound trucks and copy pertinent bills of lading for DOR. An innovation grant from the Legislature provided funds for DACS to purchase scanners to scan bills of lading. The images are transmitted by modem to the DACS legacy system, then are sent on-line to DOR.

Two carriers currently are participating in the electronic (rather than scanned) submission of bills of lading to Revenue. These carriers are not identified to DACS officers and as a result of this and agricultural inspection considerations, they are required to submit for inspection at agricultural inspection stations in the same manner as other carriers. It is believed that the lack of DACS preclearance combined with industry concerns about the release of proprietary information have inhibited growth of the program to include more carriers.

Department of Transportation

The Florida Department of Transportation's (DOT) mission regarding commercial vehicles is the fair and impartial enforcement of weight, size, and safety laws to preserve the highway system while making it a safe and economical place to travel. The Motor Carrier Compliance Office and the State Highway Engineer's Office are the two primary CVO-related units within DOT.

Motor Carrier Compliance Office

The Motor Carrier Compliance Office (MCCO) has two sections with CVO implications, Program Development and Roadside Enforcement. The Program Development section provides the resources for weigh stations, including provisions for truck parking. The Roadside Enforcement section staffs the weigh stations and conducts safety and hazardous materials inspections. The following discussion concentrates on the responsibilities of the Roadside Enforcement section because of its greater implications for CVISN deployment.

- **Size and Weight Enforcement –** Enforcement of size and weight regulations is a primary activity. Weight inspections are conducted at the 17 fixed weigh stations that currently operate; in the future, 22 stations will operate. Ten of the 22 weigh stations will have high-speed (45 miles per hour) ramp weigh-in-motion (WIM) equipment, compared to four today. It is estimated that about 15 percent of trucks that approach a fixed facility are weighed on static scales; the overwhelming majority (85 percent) are weighed on WIM equipment and are allowed to bypass static weighing. Weight inspectors are responsible for enforcing the weight regulations without the broader enforcement authority of the "sworn" officers who are empowered to conduct safety inspections, make arrests, etc.

- **Safety Inspections –** Safety inspections are performed by 200 field (sworn) officers who use ASPEN-loaded laptop computers to conduct inspections. The inspections are uploaded to the SAFETYNET system via dial-in phone modem, or downloaded to a disk and then uploaded in the office (Tallahassee). Almost all of the weigh stations are equipped with 56K frame relay circuit connections that tie them directly to MCCO servers in Tallahassee; the other weigh stations, which are not open 24 hours, are phone-connected via a remote access server. In addition to local SAFETYNET data

management and access, MCCO supports an intrastate safety violations database that is electronic and used for customized management reports.

- **Safety Audits –** MCCO has been performing intrastate compliance reviews of carrier safety management programs and procedures for two years, totaling approximately 100 compliance reviews annually. The goal is to increase the number that are performed each year. MCCO does some compliance reviews for interstate carriers jointly with the Federal Motor Carrier Safety Administration. Intrastate compliance reviews differ from those performed for interstate carriers in that hours of service checks are omitted (because Florida has no statutory authority to perform these checks) and insurance is also not covered.

- **Intrastate Carrier Registration –** MCCO issues identification numbers to intrastate carriers. Census-type information is collected manually on a form, and key-entered into a file that is not linked to any other system. To date, 6,000 intrastate identification numbers have been issued out of a possible population of 20,000 to 25,000 intrastate carriers. Registration is not tied to any other MCCO function; operators choose to register and obtain an identification number. Operators are made aware of the program through word of mouth, through the Florida Trucking Association, by way of publicity, or via notices sent out to carriers on DHSMV intrastate registration lists. This program has important implications for the state's possible participation in Performance and Registration Information Systems Management (PRISM), which requires assignment of intrastate identification; facilitating determination of eligibility for roadside clearance programs; and generally facilitating the state's ability to develop compliance histories of intrastate carriers to use for targeting safety enforcement activities such as compliance reviews.

- **Additional Functions –** MCCO also has responsibilities related to hazardous materials enforcement, drug interdiction, cargo and commercial motor vehicle theft, post-crash investigation, roadside credentials sales (certain categories of temporary permits), and mutual aid law enforcement.

- **Current Projects –** MCCO is installing communications capability via Cellular Digital Packet Data (CDPD) for laptop computers in the field to more quickly transmit inspections to the SAFETYNET server in Tallahassee. A 30-day pilot phase of deployment started in June of 2000, and was followed by mass deployment of CDPD connectivity covering 75 percent of the state. Officers also access DHSMV files via CDPD. The CDPD project is part of MCCO's overall information systems plan. This plan has a goal of a "one-stop shop" for connectivity – Tallahassee is the central hub for access to Safety and Fitness Electronic Records (SAFER), National Crime Investigation Center (NCIC), and other safety systems and repositories, and all personnel, whether at a weigh station or mobile, will have the capability to access information directly regardless of mode of connection (56K frame relay, CDPD, phone modem). MCCO's strategic direction is to continually improve its data systems and connectivity in order to improve the availability of information for targeting enforcement efforts.

State Highway Engineer's Office

In terms of CVO-related functions, the State Highway Engineer's Office builds weigh stations and issues OS/OW permits. Approximately 100,000 permits are issued annually, of which 60 percent are for single trips and 40 percent are annual permits. New weigh stations are being considered for development in the western panhandle area of the state and on Highway 27 between I-75 and I-95 to augment the 17 existing stations (statewide, 22 stations will operate in the future). Existing stations are being upgraded to provide maximum functionality and comfort, including provisions for truck parking. The office also manages traffic operations and safety. Much of this functionality is accomplished with ITS technology.

Mainline preclearance at weigh stations is under the purview of the State Highway Engineer's Office. At present, three sites on I-75 are operational PrePass locations. The locations are Wildwood, Punta Gorda, and White Springs. All interstate locations will eventually operate as PrePass.

Federal Highway Administration

The FHWA oversees the size and weight program in the state. FHWA Florida Division approves the state's annual Size and Weight Enforcement Plan that identifies the existing facilities and equipment and their status; the level of operation at each facility; available resources; and anticipated changes in the program. FHWA also manages federal-aid highway programs such as State Planning and Research (SPR), Surface Transportation Program (STP), National Highway System (NHS), and Congestion Mitigation and Air Quality Improvement (CMAQ). These programs have funds that may be used for ITS, ITS/CVO, and CVISN purposes.

Federal Motor Carrier Safety Administration

The FMCSA administers a number of safety- and education-related programs in Florida. Compliance reviews for interstate carriers are conducted by FMCSA Florida Division personnel; as noted previously, MCCO conducts compliance reviews for intrastate carriers. Interstate and intrastate reviews are similar, except that interstate reviews cover hours of service, insurance, and other areas that are not included in intrastate reviews. FMCSA manages the SAFETYNET system which has data on interstate and intrastate carriers, including inspections, compliance reviews, and crashes; MCSAP, a grant program that assists state enforcement of safety, size, and weight regulations; and CDLIS, a pointer system to the complete driver record kept by the state issuing the CDL.

FMCSA administers the Federal Drug and Alcohol Testing Program and oversees post-crash investigation training. Florida and Minnesota both provide this training in filling out crash reports to improve the quality of crash data. Training was first offered to MCCO; officers are now coming for the training from other states. The Drug Interdiction Assistance Program involving drug intervention with dogs is funded by state MCSAP monies and also administered by FMCSA. FMCSA approves the state's annual Commercial Vehicle Safety Plan that defines the safety enforcement program for Florida.

3.2 Existing ITS/CVO Projects

Florida has actively deployed ITS/CVO technologies to enhance the safety and efficiency of its transportation system. The deployments have included fully operational systems, as well as operational tests and pilot programs. These systems have been deployed across the spectrum of ITS/CVO services including credentials, safety assurance, electronic screening, and carrier operations. All of the state's CVO agencies have been participating in these initiatives in conjunction with the motor carrier industry, federal agencies, and academia. Summaries of the major projects are provided below.

- **International Registration Plan (IRP)** is a base state program which provides apportioned registration for interstate carriers. Forty-eight states (Alaska and Hawaii are the exceptions), the District of Columbia, and three Canadian provinces are members of the plan. Under IRP, interstate commercial vehicle operators satisfy vehicle registration and fee requirements for all jurisdictions in which they operate through a single, base state.

- **International Fuel Tax Agreement (IFTA)** is a base state program for collecting and administering fuel use taxes. Forty-eight states (Alaska and Hawaii are the exceptions) and 10 Canadian provinces are members. Under IFTA, interstate carriers satisfy fuel tax registration and payment requirements for all jurisdictions in which they operate through a base state.

- **Laptop computers and ASPEN software** are used to automate the collection of driver and vehicle data during roadside inspections. The software was developed by FHWA under the 100/200 MCSAP site project; new versions of ASPEN are developed and distributed by FMCSA.

- **Cellular Digital Packet Data (CDPD)** communications enable the upload of inspection reports from ASPEN-loaded laptops to the SAFER Data Mailbox and SAFETYNET systems. CDPD also will provide officers at the roadside real-time access to data in SAFER and law enforcement systems such as the National Crime Investigation Center (NCIC). When fully deployed, MCCO officers will have remote data access in 75 percent of the state.

- **Intrastate carrier registration** provides for the assignment of carrier IDs to intrastate commercial operators. This registration facilitates the development of carrier safety profiles which can draw data about the carrier from inspection reports, compliance reviews, and post-crash reports, and which can be used to target enforcement on intrastate carriers with poor safety histories.

- **SAFETYNET** is a system for maintaining safety data (including inspections, crashes, and compliance reviews) locally in Florida and for transferring data to the Motor Carrier Management Information System (MCMIS), the national repository for safety data. Both systems are maintained by FMCSA.

- **CAPRI** software is used to automate the collection of data during compliance, specialized tank facility, and hazardous materials shippers reviews. FMCSA and MCCO terminal auditors utilize this software, although the state personnel use a specially designed intrastate package.

- **Commercial Driver License Information System (CDLIS)** is designed to ensure that a driver has only one CDL, that all convictions are made part of the driver's history in the licensing state, and that conviction data are transferred between states. CDLIS serves as a "pointer" to the complete driver record kept by the state issuing the CDL. As states issue CDLs, they electronically notify CDLIS of the driver's name, date of birth, social security number, and other important data. All other data, including restrictions, crashes, and convictions, are maintained by the licensing state. CDLIS is connected to the 51 licensing jurisdictions in the United States by AAMVAnet, a national electronic communications network.

- **Weigh-in-motion (WIM) technology** is being deployed on the ramps of many of the state's weigh stations. It dynamically weighs vehicles at speeds approximating 45 miles per hour, enabling sorting of vehicles for increased weighing capacity and timely processing of trucks so as not to unnecessarily penalize compliant carriers.

- **Electronic preclearance** is deployed on the mainline at three locations in Florida, I-75 at Wildwood, Punta Gorda, and White Springs. In 2000, the state agreed to operate all present and future interstate clearance stations as PrePass sites. PrePass regularly verifies an enrolled carrier's credentials and safety status with state and federal sources and "pre-clears" the carrier's vehicles through participating stations. Transponders are used to identify PrePass carriers and communicate signals.

- **Traveler information projects** are being deployed by both public and private entities in Florida. These include Advanced Traveler Information Systems (ATIS) as well as Advanced Traffic Management Systems (ATMS). ATMS projects include the Orlando Traffic Management Center, Tallahassee Advanced Traffic Management System, and Seminole County Traffic Action Center. These initiatives use advanced technologies (closed circuit television cameras, in-pavement detectors, changeable message signs, and fiber optic communications technology) to enhance incident detection and response as well as identify roadway congestion and inform the public which areas should be avoided. The state's ATIS assets include the Florida DOT's traveler information web page, Orlando-Orange County Expressway's web page of construction information, and numerous web sites containing real-time incident and congestion information. While these assets are not specifically targeted at CVO, they are resources that the state's commercial vehicle operators can utilize.

- **Electronic toll collection systems** in Florida include SunPass, E-Pass, C Pass, Leeway, and O Pass. SunPass is the statewide system that is being implemented on all state-operated toll roads. The state of Florida is actively pursuing interoperability between SunPass and the other toll systems. E-Pass and O Pass users received new SunPass-compatible transponders beginning in the fall of 2000 which were activated in December 2000.

- **Agricultural vehicle inspections** are conducted at roadside agricultural inspection stations. State statutes stipulate which vehicles must submit for inspection; of the vehicles inspected, 24 percent are carrying a regulated commodity. Automatic queuing operates on I-95 and I-75 to prevent ramp back-up on to the traveling lanes. Agricultural documents will soon be scanned at roadside for subsequent transfer to DACS' mainframe computer, and thence to divisions within the agency.

- **Bills of lading** are already being scanned by Agriculture officers at agricultural inspection stations to help enforce Revenue's collection of the use tax on out-of-state purchases. At the roadside, DACS officers conduct a "visual triage" of vehicles and the actual bills of lading and determine which vehicles' bills of lading should be scanned. The scanned images are forwarded to DOR for processing and follow-up. To enhance efficiency, carriers may also forward their bills of lading directly to DOR on electronic media. Two carriers are currently participating in this electronic bill of lading program. DOR notifies DACS when a carrier has enrolled in the program.

- **Statewide ITS Architecture and standards project** is adapting the National ITS Architecture to Florida's specific needs. The effort is also working to incorporate existing regional and corridor ITS deployments and architectures into the statewide model. This project is ongoing.

3.3 Goals and Objectives

Goals and objectives have been established for the Florida ITS/CVO and CVISN Program. They are important components of the program. Goals give high-level direction to the program. Objectives help ensure that individual projects address specific public and private stakeholder needs and requirements. This further ensures that resources and investments are targeted to provide maximum benefits to the state, individual agencies, and motor carriers.

The ITS/CVO and CVISN program will be deployed incrementally. Funding constraints and the availability of state personnel to carry out key duties prevent the state from deploying the entire program of projects and technologies at once. Thus, the needs and requirements are broken down into smaller, manageable projects for deployment. Together, the projects produce a comprehensive ITS/CVO and CVISN program that fulfills Florida's requirements and adheres to national standards.

The goals of the ITS/CVO program are as follows:

- Improve the state's CVO regulatory environment;

- Ensure CVO-related safety without undue costs to the motor carrier industry;

- Guide the development and installation of adopted CVISN projects and programs in an efficient and cost-effective manner; and

- Optimize safe and efficient movement of people and goods throughout the state.

These goals represent broad achievements toward which the program is directed. Specific components of the goals, or objectives, also have been developed. The goals and their respective objectives are as follows:

Goal 1: Improve the state's CVO regulatory environment.

- **Objective A:** Reduce the paperwork and time spent on compliance activities that can be cost-effectively automated.
- **Objective B:** Network information systems to ensure timely interagency communication and critical data sharing.
- **Objective C:** Streamline or eliminate outdated or inefficient business and enforcement processes.
- **Objective D:** Provide one interaction or point of contact in the state for regulatory information.

Goal 2: Ensure CVO-related safety without undue costs to the motor carrier industry.

- **Objective A:** Improve the accuracy and timeliness of safety information.
- **Objective B:** Provide direct near-real time access to safety information at the roadside.
- **Objective C:** Network information systems to ensure timely interagency communication and critical data sharing.

Goal 3: Guide the development and installation of adopted CVISN projects and programs in an efficient and cost-effective manner.

- **Objective A:** Establish a cooperative, interagency, and public-private organizational structure.
- **Objective B:** Promote interoperability of screening systems and other technical components and systems.
- **Objective C:** Participate in CVISN Deployment Workshops and develop products based on workshop participation and review by experts and peers.

Goal 4: Optimize safe and efficient movement of people and goods throughout the state.

- **Objective A:** Reduce delays for weight, safety, and other CVO inspections.
- **Objective B:** Reduce highway congestion.
- **Objective C:** Improve highway safety.

3.4 Needs and Opportunities

Needs and opportunities represent problems and areas for improvement that pertain to ITS/CVO or CVISN, and which can be addressed by solutions and actions (i.e., potential

projects or strategies) that are implemented by the state and/or industry. Public and private stakeholders identified the following needs and opportunities concerning regulatory procedures, technologies, capabilities, and services, in discussions and meetings held as part of the business planning process. Needs identified by state and federal agencies are followed by needs identified by motor carriers.

Agencies

- **Automate and Cross-check OS/OW Permitting, IRP, and Other Credentials –** Currently, permits are requested in person, by mail, or via facsimile/wire service. Screening and approval processes are not automated. About 30 to 40 percent of single trip permits are envelope vehicles traveling on preapproved routes; the tool used is a blanket map that is generated once a year. Some permits are referred to a DOT District (by e-mail); otherwise, a route review focusing on individual bridges or a statewide analysis is necessary. For this, the department's Roadway Characteristics Inventory is used. Permits are issued by mail or faxed. A project that would automate 90 percent of the permit issuance and approval process is on the shelf after considerable development as a result of a change in technology approach. Electronic checks of IRP, IFTA, and intrastate registration information before a permit is issued were identified as a need that enhances automated permit issuance. Of particular interest is the vehicle's registered gross weight. Automatic checking of vehicle title information before issuing IRP credentials also was singled out; currently, the title check is a manual check.

- **Electronic Credentialing for IRP and IFTA –** The need and opportunity to implement electronic credentialing in Florida to reduce paper transfer, provide quick and assured delivery of credentials, and generally shorten the process of applying for, issuing, and receiving credentials, was stated often. IRP electronic credentialing could include all or some of the IRP transactions (initial, renewal, and temporary operational permit). The same is true for IFTA (initial, renewal, supplement, quarterly tax return, and emergency fuel permit). IRP and IFTA can be followed by electronic credentialing for intrastate vehicle registration, titles, OS/OW permits, and intrastate carrier registration.

- **Educate Carriers on Regulations –** Because Florida is not a POE state, all credentials and permits must be in possession upon entering the state. It is particularly critical for operators to understand what papers they must have, where they can get them, and how long it takes.

- **Provide Direct Access to Information –** Key personnel lack timely access to safety and other regulatory information which can help them perform their jobs more effectively and efficiently, including MCCO field officers needing connections from their ASPEN-loaded laptops to SAFER (accomplishable with new ASPEN-32 version software in combination with CDPD connectivity) and various DHSMV files (to be accomplished with CDPD).

- **Continue to Deploy Electronic Preclearance of Commercial Vehicles –** Weigh station preclearance is effective for increasing throughput, reducing queuing and backups on to highway mainlines, and reducing delays for compliant vehicles, and locations are being increased. Currently, three preclearance stations are operating.

- **Enhance Intrastate Overweight and Safety Violations Databases for Use Other than as Legislative and Management Tools –** These MCCO databases capture information on intrastate carriers from weigh stations and mobile units. They contain numbers of trucks, numbers of trucks signaled to the static scales, numbers of violations, and nature of violations. Their utilization is hampered by limited connectivity affecting who can access the data.

- **Redirect Safety Inspections to Focus More on Drivers than on Vehicles –** Studies are showing that driver safety performance more than vehicle condition is the key indicator of safety risk. Therefore, targeting enforcement efforts on high-risk drivers is likely to be more effective in preventing crashes and generally improving highway safety than the current strategy of targeting high-risk carriers and vehicles for safety inspections and compliance reviews. However, concerns about privacy and confidentiality of driver data are slowing efforts at the national level to increase the use of driver information for enforcement. MCCO has an enforcement program focusing on driver behavior called STOP (Speeding Truckers Offensive Program) that targets vehicles for speed, following too closely, and improper lane changes, to help reduce commercial vehicle crashes.

- **Collect Bill of Lading Information Electronically –** Information contained in a bill of lading regarding the seller of goods, what the goods are, and the recipient of the goods is important for Revenue's program for collecting use tax on out-of-state purchases. It is believed that concerns about confidentiality and data security are obstacles to carriers providing this information electronically, although one carrier proposed on-line bill of lading transmission. DOR is in the process of building a firewall that will facilitate secure data transmission. In addition to security guarantees, an incentive for carriers to provide electronic bill of lading information is needed because they are still required to stop at the agricultural stations for agricultural inspections regardless of bill of lading status.

- **Target the DACS Scanning of Bills of Lading for Revenue Purposes –** In order to reduce the amount of bills of lading that are scanned and transferred to DOR, DACS officers have been trained regarding which bills of lading to scan. Training is ongoing and will continue to be important.

- **Consider Participation in PRISM –** Federal money is available to states that adopt and implement the PRISM system. The objective is to improve highway safety by linking registration with safety performance so that unsafe carriers can be identified and entered into safety improvement programs.

- **Participate in IRP Clearinghouse and IFTA Clearinghouse –** Work is needed to make operational connections between DHSMV and these clearinghouses, but the timelines for the development work are uncertain.

- **Automate Past Offenders Files and Make Them Accessible to all Agricultural Inspection Stations –** Automation of the collection, storage, and sharing of information on past violators in the Agricultural Vehicle Inspection Program would enable targeted enforcement at all sites. Automation generally of the collection and analysis of agricultural inspection data would facilitate their use by various DACS divisions (Animal Industry, Dairy Industry, etc.).

- **Improve the Infrastructure at Agricultural Inspection Stations –** Inspection station approach ramps at interstate locations need renovating to expand their ability to adequately handle the constantly increasing truck traffic. DACS has requested funding through the legislative process to renovate and expand these ramp facilities. The stations are relatively old – interstate stations were built in the 1960s, others date from the 1940s – and they suffer from a general lack of advanced technology.

- **Increase Intrastate Compliance Reviews Conducted by MCCO –** Both MCCO and FMCSA personnel believe that the number of intrastate compliance reviews that are performed in the state should increase, reflecting a greater priority than exists at present. It was suggested that the number could be doubled for an annual total of approximately 200 reviews.

- **Automate Intrastate Carrier Registration Process at MCCO –** Registration is done by one employee who keys in handwritten data. Data are not usable for compliance and enforcement purposes since data are stored in the federal database.

- **Collect Carrier Fines through the Internet –** Enable the state to collect carrier fines online by electronic payment. Ideally, carriers with unpaid fines could be identified from CVIEW snapshots that could hold this kind of information.

Carriers

- **Access to Data Used to Compile Safety Ratings and SafeStat Scores –** Carriers want access to all citation, out-of-service, and other safety information that pertains to that carrier, and the ability to verify information and request corrections if necessary.

- **Notification of Citations Issued to Driver –** Carriers are given 15 days to correct vehicle problems but they may not be aware of problems if not informed by drivers.

- **Increase Mainline Electronic Preclearance –** Presently, this capability is available at three weigh stations, with additional sites planned for deployment. Weigh station bypass helps reduce delays and operating costs for the carrier.

- **Avoid Stopping at BOTH Weigh Stations and Agricultural Inspection Stations –** Multiple stops at weigh stations and agricultural inspection stations may delay trips by 30 minutes or more, affecting driver schedules as well as delivery of goods. Non-agricultural as well as agricultural trucks have to stop at agricultural inspection stations. Florida is one of only three states (California and Arizona are the others) that check agricultural products. Its 22 agricultural stations all are open 24 hours and seven days. Most of the 17 weigh stations also are 24 hours and seven days. The two types of stations typically are from five to 10 miles apart. An extreme situation exists on I-10 eastbound at Ellaville, where less than one mile separates an agricultural from a weigh station. One carrier proposed that agricultural information be incorporated in a transponder along with safety and/or credentials information, and used to screen trucks at agricultural inspection and weigh stations, whether they are co-located or not.

- **Safety is a Concern at Agricultural Inspection Stations –** When back-ups occur, the stations are closed by automatic signal, but ends of the queues may spill out on to the highway nonetheless, creating a safety hazard.

- **Interoperable Toll Systems –** Numerous electronic toll systems exist in the state, including SunPass (Turnpike), E-Pass (Orlando-Orange County Expressway), Leeway (Lee County Bridges), C Pass (Metro Dade Bridges), and O Pass (Osceola Parkway), that are not all interoperable with one another nor with systems outside the state. E-Pass and O Pass became interoperable with SunPass on December 31, 2000, and Leeway interoperability is expected to follow.

- **Automated OS/OW Permitting –** Florida is not a POE state, thus the trucker must have a permit as the vehicle enters the state. Making the process of requesting and issuing a permit more convenient and fast by automating it would facilitate compliance.

- **Internet-based Credentialing –** Carriers would like on-line IRP and IFTA adds and deletes (for example, for vehicles).

- **Proactive Planning for Projected Enormous Growth in Truck Traffic –** Queuing at weigh stations and agricultural inspection stations already is a significant problem. Nationally, truck traffic is projected to double in the next five years; in Florida, it is projected to double in the next three years. One carrier expressed concern for the ability of the existing infrastructure to handle the projected growth.

- **One Point of Contact for Answers to Regulatory Questions –** Trucking information can be found on the Internet; for example, DOT and DHSMV sponsor web sites that contain information on size and weight limits, OS/OW permits, safety rules, IRP, IFTA, telephone numbers, etc. However, finding information on the web can be tedious and is generally time-consuming, and not all trucking information is available.

- **Improve Safety at Weigh Stations –** One carrier said close a weigh station when there is construction nearby because of the compounded safety hazards. Queuing also was mentioned as a frequent hazard, especially at certain weigh stations.

- **Increase Apprehension of Stolen Cargo and Vehicle Theft through More Rapid Dissemination of Information –** Stolen cargo is typically sped out of the country at seaports. It was suggested that rapid dissemination of information about cargo and vehicle theft could result in increased apprehension of stolen property. Currently, the Highway Patrol broadcasts cargo hijackings, but this is done by facsimile.

- **On-line Payment of Fines to Supplement Use of ComCheck Certified Checks –** This was proposed as a convenience for carriers.

High-level requirements for the state's CVISN architecture based on the identified needs and opportunities as well as on national CVISN requirements and CVISN deployments in other states are presented in Section 4.0, User Requirements for ITS/CVO and CVISN Deployment.

Section 4.0

User Requirements for ITS/CVO and CVISN Deployment

4.0 User Requirements for ITS/ CVO and CVISN Deployment

This section presents the functionality requirements for Florida and discusses issues that can impact the deployment of the ITS/CVO and CVISN program.

4.1 Functionality

High-level functionality requirements for the CVISN architecture in Florida have been defined. These requirements are based upon the needs and opportunities identified in discussions and meetings with key stakeholders; review of literature pertaining to CVISN, including national directives, states' CVISN architecture reports, CVISN program plans, and CVISN system designs; review of other relevant literature and source materials, including ITS/CVO business plans, Florida and national Internet sites, and Florida agency or legislative reports and documents; and best practices regarding ITS/CVO implementations nationwide.

CVISN Level 1

The Federal Government has established CVISN Level 1 as a benchmark for states deploying CVISN. It consists of an organizational framework for cooperative system development that has been established among state agencies and motor carriers and development of a system design that conforms to the CVISN architecture and can evolve to include new technology and capabilities. As shown in Section 2.1 of this plan, Florida currently supports a cooperative organizational structure for business planning and preparing the state to deploy CVISN. This organization will be augmented, or revised, by additional organizational and management components when the Business Plan is completed. The state's CVISN system design will be produced during the CVISN Deployment Workshops that commenced in the third quarter of 2000. The design will be refined following the workshops.

The final ingredient of CVISN Level 1 is implementation of the elements of three capability areas: safety information exchange, credentials administration, and electronic screening. The specific elements in each area are as follows:

- **Safety Information Exchange**
  - ASPEN (or equivalent) at all major inspection sites
  - Connection to SAFER to provide exchange of interstate carrier and vehicle snapshots among states

  - Implementation of Commercial Vehicle Information Exchange Window (CVIEW) (or equivalent) system for exchange of intrastate snapshots within the state and connection to SAFER for exchange of interstate snapshots

- **Credentials Administration**
  - Automated processing (i.e., carrier application, state application processing, credential issuance, fuel tax filing) of at least IRP and IFTA credentials; ready to extend to other credentials (intrastate, titling, OS/OW, carrier registration, hazmat). Processing does not necessarily include e-payment
  - Connection to IRP and IFTA Clearinghouses
  - At least 10 percent of the transaction volume handled electronically; ready to bring on more carriers as carriers sign up; ready to extend to branch offices where applicable
- **Electronic Screening**
  - Implemented at a minimum of one fixed or mobile inspection site
  - Ready to replicate at other sites

New Areas of Functionality

The functionality requirements for Florida based on stakeholder needs, CVISN requirements, and other considerations will introduce exciting new technologies and capabilities for the state and carriers alike. The state's CVISN architecture will implement this new functionality. For the motor carrier, the architecture will enable electronic submission of credential applications, electronic delivery of some credentials, and electronic payment options. For the state, the architecture will enable it to work faster, more efficiently, and better ensure safety and regulatory compliance. Overall, automation of traditional ways of doing business and the streamlining of procedures that generally accompanies automation will produce time, and ultimately cost, savings on both sides.

The following are the major new areas of functionality for Florida's CVISN architecture:

- **Electronic Receipt of Credential Requests –** IRP and IFTA are recommended as initial credentials, with carriers voluntarily submitting requests using a web browser.

- **Electronic Delivery of Certain Credentials –** Credentials that would be delivered electronically might include temporary authorities, permits, licenses, and cab cards.

- **Automation of Credential Processing and Issuance –** This typically is part of electronic credentialing. In some instances, automated processing and issuance may precede electronic receipt of credential requests and electronic delivery of credentials. In Florida, automated processing and issuance was specifically mentioned for OS/OW permits.

- **Networking Information Systems –** Networking information systems is the core of CVISN. It enables the interchange of information electronically among public agencies, motor carriers, and other parties. The basic problem addressed by CVISN is the inability of state agencies to share data with other agencies in the same state and in other states. CVISN will eventually produce a fully integrated collection of commercial

vehicle information systems operated by the states, FMCSA, carriers, and other stakeholders. CVIEW or a CVIEW-type system is the essential element for networking information systems.

- **Carrier Electronic Access to Safety and Credentials Information –** Motor carriers will have access to their own safety performance information. Using an Internet browser, a carrier will be able to review and verify its history of crashes, inspections, and citations. Carriers also will be able to access their own vehicle registration and fuel tax status.

- **Electronic Funds Transfer –** This is important to support electronic credentialing. Credit cards are arguably the preferred method but other methods of electronic payment exist and are potentially deployable in Florida.

- **Electronic Screening Based on Safety and Credentials –** Electronic screening will be based on real-time/near real-time access to up-to-date safety and credentials information. Credentials verification is an important need. Roadside credentials checks do not cover the 85 percent of trucks that are not weighed on static scales and therefore bypass credentials inspections. The state ITS Strategic Plan (August 23, 1999) states that preclearance on major truck routes should check vehicle weight and vehicle and driver credentials status; check for out-of-service vehicles; and communicate directly with the SAFER system. Near real-time electronic safety information exchange, based on SAFER for interstate carriers and a CVIEW-type system for intrastate carriers, is at the core of electronic screening in the CVISN framework. This information exchange should include credentials as well as safety information.

- **Interoperability of Transponder-based Programs –** This is a major concern of commercial operators and public agencies in Florida as it is in other states. Interoperability of technology components, specifically transponders, governs whether the equipment can be used for different functions (for example, a transponder that is used for both toll collection and weigh station screening) and also within different programs (a single transponder for use in multiple toll collection systems or clearance programs). It is being addressed by a number of organizations and groups at the national level, which are calling for interoperable systems in all states and, indeed, throughout North America.

- **Revenue Preclearance –** This calls for a carrier to be enrolled in the DOR electronic bill of lading program in advance of entrance into Florida. Preclearance could be granted to a vehicle with a transponder that indicates that the carrier is supplying bills of lading electronically to DOR. An agricultural inspection station bypass would have to be based on two "green lights" – on the basis of DOR and DACS clearances. For DOR purposes, a bypass would signify that the carrier is enrolled in the DOR electronic bill of lading program.

- **Agriculture Preclearance –** Preclearance for agricultural purposes could be granted to a carrier with a transponder that signals that the load is not a regulated agricultural commodity, for example. For bypass of agricultural inspection stations, trucks must clear both DACS and DOR requirements. There is optimism that the current DACS-DOR scanning project can evolve to produce benefits to both agencies through the use of transponders, electronically supplied bills of lading, and electronically supplied agricultural cargo information.

- **Compliance Help Desk/Service Representative –** Quick delivery of accurate regulatory information will be provided to motor carriers through a single point of contact in state government. Within the present organizational framework, agencies tend to own pieces of information. If a question cannot be answered in one agency, the carrier is referred to another agency. This can be frustrating, and there is not a way to ensure that a question is answered. It is likely that a central source of regulatory information will increase carriers' ability to comply with regulations. Inasmuch as carriers must be in possession of credentials and permits when entering the state, knowing how, when, and where to obtain necessary credentials is crucial.

Benefits of new areas of functionality to both motor carriers and state agencies can be expected to be significant. They include the following:

- Improved motor carrier safety;
- Improved regulatory compliance;
- Faster turnaround time for credentials;
- Reduced data entry and processing costs;
- Reduced paperwork;
- More accurate data; and
- Better customer service.

4.2 Issues Affecting ITS/CVO and CVISN

The business planning process in the state also has identified a number of issues and factors that have the potential to impact the deployment of the ITS/CVO and CVISN program. Institutional, legislative, and technical issues present challenges to implementing ITS/CVO and CVISN projects efficiently and effectively. Some of these issues are relatively long-standing, and likely will continue one or more years into the future. A few issues, such as interoperability and interest in targeting drivers rather than vehicles for inspection, are more recent.

The issues in concert have the potential to be obstacles to implementation of the Business Plan. Although they are not typically included in a state's architecture, the issues must be recognized in the implementation plan for the ITS/CVO and CVISN program. The resolution of them has to be an ongoing and generally incremental effort by stakeholders in the program.

The key issues are as follows:

- **Staff and financial resources availability** is uncertain at best. It may be difficult to secure funding for projects or improvements, and heavy workloads in agencies can impair the ability of these agencies to implement new ways of doing business and also to participate in innovative new projects. In DHSMV, participation in the IRP

Clearinghouse has been stalled because of scarce staff resources in the Information Systems Administration Division, and automation of credentials processing has been delayed because of other project commitments. Further, development of electronic credentialing capabilities will entail numerous purchases (web server, credentialing interface, and middleware) as well as necessary modifications to existing legacy systems to allow electronic data entry instead of keying in data, and it is unclear where the needed funds will come from. However, DOT recently contracted for CVISN systems architect and facilitator positions to provide support for DOT program management and planning staff.

- **Policies and other institutional factors** may prevent potentially effective solutions to problem areas such as trucks having to make multiple stops at weigh stations and agricultural inspection stations, and possible cost-beneficial decisions such as whether the state elects to participate in PRISM, a generously funded federal program that ensures that motor carriers with a history of compliance violations cannot renew their registrations. In order to carry out PRISM requirements, the state must have the ability to deny, suspend, or revoke carrier registrations on the basis of poor safety performance, and evidently legislative authority is needed for this empowerment.

- **Process reengineering and procedural changes** typically are instituted before, or concurrently with, the automation of regulatory processes. This is generally considered to be a "best practice" for states developing ITS/CVO programs. Process reengineering includes a critical examination of specific agency procedures (how things are done), in order to identify opportunities to streamline or eliminate outdated or inefficient CVO business and enforcement processes. A "zero-base" review that examines each element or step in a process and determines if it is justified as to need would be followed by process improvements, if appropriate. Examination of organizational functions (who does it) and overriding mandates (what is done and why) may or may not accompany procedural review. Process reengineering has been necessary in Florida as elsewhere to change the roadside enforcement approach of universally selecting vehicles for inspection as they pass fixed weigh stations, to a strategic, targeted approach focused on high-risk carriers and vehicles. Further reengineering will be necessary to change the focus to the driver.

- **Multiplicity of agencies or units involved in CVO, ITS, and information systems projects** makes coordination and integration of efforts difficult. This is, however, necessary to leverage resources and avoid duplicate efforts and competing for the same resources. The state's ITS Strategic Plan recognized the need to coordinate all state agencies involved in CVO to provide the most efficient possible CVO program. In the same vein, the plan recommended a statewide CVO program rather than multiple local or regional programs that reflects the licensing and travel of commercial motor vehicles on a statewide basis. A statewide program would avoid the incidence of stovepiped efforts focusing on regional or corridor needs that make interagency coordination and communication as well as interoperability for carriers extremely difficult.

  A common goal of the ITS programs in the state is to build a more efficient statewide transportation system, one that produces safer travel and quicker travel. The SunGuide program and traveler information initiatives have elements that impact the travel of commercial vehicle operators and these elements should be coordinated with the

ITS/CVO and CVISN program. The new State Technology Office, which took over many of the functions of the DOT Office of Information Systems, is an important party to ITS/CVO and CVISN deployment because it has potentially key impacts on CVISN systems and networks.

  - SunGuide is South Florida's ITS initiative, a cooperative effort of transportation agencies in Miami-Dade, Broward, and Palm Beach counties. Modern technology is extensively used to reduce traffic congestion and provide motorists with real-time information about travel conditions. The infrastructure includes traffic management centers, pavement sensors, cameras, ramp meters, dynamic message signs, highway advisory radio, web sites and e-mail, on-board computers, and traffic kiosks – used in combination to provide greatest benefits. The SunPass electronic toll collection system is part of the SunGuide program.
  - Discussions with persons outside the CVISN Task Team indicated that the ITS/CVO and CVISN program should look at the need to provide traveler information geared to commercial operators. Such an effort could be coordinated with regional or corridor traffic management or traveler information projects. One reason given for this need is the increasingly acute congestion in and around major cities, including active ports such as Jacksonville, that heightens the demand for accurate traveler information. ITS applications around the state typically include traffic management with varying degrees of Advanced Traveler Information Systems (ATIS) capabilities, but these deployments do not serve CVO separately from the general community. According to one source, most trucking companies have better traveler information capabilities than the public sector offers because they use their trucks as traffic probes. However, another source expressed the need to look at ATIS as a tool to reduce or manage congestion in and around port facilities, and suggested that the ITS/CVO program might work with other entities on this problem.
  - State Technology Office (STO) will control all of the state's technology activities. This includes the statewide networking infrastructure; Internet development and activity; information resources management policies, procedures, and standards; and quality assurance activities. CVISN seeks to develop and enhance information systems and networks to support ITS/CVO deployment, and it must be done within the framework of the centralized systems and network environment and associated standards, policies, and other factors. Significant changes in the state's technology environment are occurring and will continue through 2001. Reengineering of the entire state networking backbone and development of a single web portal for all agencies are two of the most far-reaching initiatives.

- **Confidentiality and security of freight information** is of paramount importance to carriers that supply bill of lading information to DOR at agricultural inspection stations for tax purposes. Automation has created a huge wealth of easily transferable and accessible information; private industry wants this information used for the specific purpose of its collection, not for other supplemental purposes. Because carriers may forego participation in the ITS/CVO and CVISN program if their privacy and confidentiality concerns are not guaranteed, state stakeholders must address how data are used, and by whom, when developing the CVISN architecture.

- **Changes to CVO systems as well as non-CVO information systems** will be necessary to handle the new functionality provided by CVISN; for example, CVO legacy systems (existing agency administrative and safety deskside systems) require modifications to support standardized information exchange and electronic credentialing, and deficiencies in the base data contained in the Roadway Characteristics Inventory (a "non-CVO" database) create problems for automated permit routing capabilities. Therefore, the cost of implementing new functionality must account for CVO legacy system modifications in addition to new system development and/or purchase within the CVO agency as well as system needs related to non-CVO databases.

Section 5.0

Program Summary

5.0 Program Summary

This section presents the projects that are recommended for the state's ITS/CVO and CVISN program. It relates the projects to the goals and objectives of the program and to CVISN requirements, describes the projects, and discusses the key features of the projects. Two additional concepts representing potential projects also are presented.

5.1 Business Plan Structure

Participants in the business planning process from the public sector and private sector provided a list of needs and opportunities concerning regulatory procedures, technologies, capabilities, and services. These needs and opportunities are described in Section 3.4 of this plan. High-level functionality requirements for Florida's ITS/CVO and CVISN deployment were defined on the basis of the stakeholder needs; CVISN requirements; CVISN deployments; ITS/CVO business plans and best practices; and various reports, documents, and other literature pertaining to ITS, CVO, and CVISN. The functionality requirements are identified in Section 4.1 of this plan.

The core of the Business Plan, a program of ITS/CVO and CVISN projects, was developed to address the needs and requirements identified through the series of business planning activities. These projects are solutions and actions that can be implemented by the state and industry to improve the regulatory system, ensure CVO safety, guide CVISN deployment, and optimize safe and efficient travel through the state.

Recommended Projects

Following are summary statements of the 10 projects recommended for the Florida ITS/CVO and CVISN Program:

1. **Feasibility Study of Electronic Credentialing Needs –** A high-level assessment of requirements for supporting the on-line application for and receipt of CVO credentials will be conducted.

2. **Electronic Credentialing Software Design and Development –** Software to support paperless business transactions between the Department of Highway Safety and Motor Vehicles and motor carriers will be developed.

3. **Automated Routing and Permitting Software Design and Development –** Software to support the automated processing and issuance of oversize and overweight permits will be developed.

4. **Information Systems Inventory –** A detailed inventory of CVO-related hardware and software will be conducted.

5. **Networked Information Systems Design and Development –** A system for the electronic interchange of information among state agencies and between deskside and roadside systems will be developed.

6. **Electronic Payment Options –** Electronic payment options will be examined and evaluated.

7. **Electronic Screening at Weigh Stations –** The current system for preclearing vehicles to bypass weigh stations will incorporate real-time or near real-time snapshots for safety and credentials checks.

8. **Electronic Screening at Agricultural Inspection Stations –** A selection system that allows carriers meeting Department of Agriculture and Consumer Services and Department of Revenue clearance requirements to bypass agricultural inspection stations will be deployed.

9. **Compliance Help Desk/Service Representative –** A single point of contact in state government for regulatory information will be provided.

10. **IFTA Clearinghouse –** Software to participate in the IFTA Clearinghouse will be developed.

Goals and objectives for the ITS/CVO and CVISN program were presented in Section 3.3 of this plan. It is essential for projects to address the goals and objectives established for the ITS/CVO and CVISN program. Each project that is recommended fulfills one or more goals and hence, one or more objectives. Table 5.1 shows the projects and the goals and objectives for each project.

The organizational structure of the program, which like the projects is proposed as a new "deployment," also is included in Table 5.1. This structure comprises the CVISN Task Team, the Executive Steering Committee, the program lead agency, and project lead agencies. It is described in detail in Section 6.0, Program Implementation.

Table 5.1 Recommended Projects by Program Goals and Objectives

Projects	GOAL 1 Regulatory Environment Objectives				GOAL 2 CVO-Related Safety Objectives			GOAL 3 Guide CVISN Objectives			GOAL 4 Safe and Efficient Movement Objectives		
	A	B	C	D	A	B	C	A	B	C	A	B	C
1. Feasibility Study of Electronic Credentialing Needs	X		X										
2. Electronic Credentialing Software Design and Development	X		X										
3. Automated Routing and Permitting Software Design and Development	X		X										X
4. Information Systems Inventory		X	X		X	X	X		X		X		X
5. Networked Information Systems Design and Development		X	X		X	X	X		X		X		X
6. Electronic Payment Options	X		X										
7. Electronic Screening at Weigh Stations	X		X						X		X	X	X
8. Electronic Screening at Agricultural Inspection Stations	X		X						X		X	X	X
9. Compliance Help Desk/ Service Representative			X	X									
10. IFTA Clearinghouse	X		X						X				
Program Organizational Structure								X	X	X			

Projects and CVISN Requirements

Participation of states in the CVISN Deployment Workshops is designed to prepare them to deploy the CVISN architecture. Florida will produce a technical system design and a program plan during the workshop series, and will refine both documents after the third and final workshop. A primary activity at the workshops is identifying projects and activities for the state's CVISN program. This is done within the context of developing the program plan. Typically, states identify projects in the three capability areas of safety information exchange, credentials administration, and electronic screening, plus activities such as program management and systems engineering and integration that apply across the capability areas.

CVISN Level 1 has been established as the benchmark or deployment guide to states that are deploying CVISN. It consists of minimum recommendations for a state's initial deployments. These deployments would be followed by another round or group of deployments that enhance the existing functionality. When completed, CVISN will be a fully integrated collection of commercial vehicle information systems operated by the states, the Federal Government, carriers, and other stakeholders.

Prior identification in the Business Plan of projects that will serve CVISN requirements and the state's expressed needs will position Florida to take the best advantage of the workshops. The state's workshop team will be able to enhance the implementation details included in the Business Plan to produce detailed work breakdown structures, procurement and funding strategies, and timelines, that then will benefit significantly from the feedback of the assembled experts, states that are further along in the deployment process (including several that have reached CVISN Level 1), and peer states.

Florida's current ITS/CVO activities and services and proposed projects contribute to an anticipated attainment of CVISN Level 1 before the end of 2003. Section 6.2 of this plan presents the project schedule. The following discussion lists the CVISN Level 1 capability elements and describes the current activities or proposed projects that address the capability.

Safety Information Exchange

- **ASPEN at All Major Inspection Sites –** ASPEN software currently is used to conduct inspections by all MCCO field officers.

- **Connection to SAFER for Exchange of Interstate Snapshots –** MCCO field officers are being equipped with CDPD connectivity which will enable direct connection to SAFER from laptop computers loaded with ASPEN-32 software that is expected for general release this year. Weigh stations are connected to SAFER via 56K frame relay connections to an MCCO server in Tallahassee.

- **Implementation of CVIEW System for Exchange of Intrastate Snapshots Within the State and Connection to Safer for Exchange of Interstate Snapshots –** Project No. 5, Networked Information Systems Design and Development, will develop an information exchange system, or CVIEW, for this purpose. Project No. 4, Information Systems Inventory, will provide the critical input for Project No. 5.

Credentials Administration

- **Automated Processing of at Least IRP and IFTA Credentials; Ready to Extend to Other Credentials. Processing Does Not Necessarily Include E-payment –** Project No. 1, Feasibility Study of Electronic Credentialing Needs, will produce an assessment of requirements for automating the credentialing process; Project No. 2, Electronic Credentialing Software Design and Development, for IRP and IFTA, will develop the software for supporting key parts of the process (carrier interface, credentialing interface, and legacy system interfaces). Project No. 3, Automated Routing and Permitting Software Design and Development, will develop the software specifically for OS/OW permits. In addition, Project No. 6, Electronic Payment Options, will analyze e-payment alternatives and define a pilot test for implementing one or more alternatives.

- **Connection to IRP and IFTA Clearinghouses –** Project to connect the state to the IRP Clearinghouse is in process. Project No. 10, IFTA Clearinghouse, will develop the software for connecting to the IFTA Clearinghouse.

- **At Least 10 Percent of the Transaction Volume Handled Electronically; Ready to Bring on More Carriers –** PC-based electronic credentialing may be particularly attractive to larger carriers with a high volume of IRP and IFTA transactions. A web-based approach often serves the needs of smaller carriers better. While it has not been determined whether a PC-based or web-based approach will be implemented first, indications are that both will be included in deployment plans.

Electronic Screening

- **Implemented at a Minimum of One Fixed or Mobile Inspection Site –** PrePass is performing electronic screening in Florida. At the roadside station, transponder-equipped vehicles are checked against a pre-clearance list. Project No. 7, Electronic Screening at Weigh Stations, will incorporate real-time or near real-time snapshots for safety and credentials checks.

- **Ready to Replicate at Other Sites –** Project No. 7 will deploy electronic screening based on safety and credentials information used at the roadside and provided by CVIEW/SAFER and instituted at multiple locations. Project No. 5, Networked Information Systems Design and Development, will develop the CVIEW capabilities (including the interface with SAFER) which will be necessary to support safety and credentials screening.

5.2 Project Descriptions

Descriptions of the 10 recommended projects follow. The project description includes the purpose and anticipated outcome of the project, the proposed lead agency, an overview of the technical approach, the estimated cost of the project, project duration, and key issues associated with the project.

Project No. 1. Feasibility Study of Electronic Credentialing Needs

Purpose – Conduct a high-level assessment of electronic credentialing needs in Florida.

Outcome – Recommendations and conclusions regarding mode (PC-based or web-based interface); specific CVO credentials to be offered electronically; differential interest in and ability to transact electronic credentialing on the part of motor carriers and licensing agents; required enhancements and modifications to existing legacy systems and estimated costs; organizational and management responsibilities; training needs; and implementation time.

Lead Agency – Department of Highway Safety and Motor Vehicles.

Overview of Technical Approach

- Perform a market analysis to determine motor carrier interest in electronic credentialing and which credentials will be applied for and obtained on-line, and identify the appropriate technology alternatives to enable the on-line exchange of motor carrier regulatory information and credentials.
- Inventory legacy systems to determine the level of effort needed to develop interfaces.
- Determine the conceptual framework and high-level requirements for exchanging carrier information through on-line methods, including security, timeliness, and other requirements.
- Assess training needs of both agencies and carriers.
- Recommend a deployment approach, including initial credentials, pilot carriers, mode, milestones, and schedule.

Estimated Cost – $150,000.

Duration – Nine months.

Key Issues

- Technology options, and standards, are still evolving.
- In the absence of a mandate to conduct all business electronically, dual systems, one traditional and paper-based and the other new and electronic, will need to be supported for an indefinite period of time.
- Electronic credentialing should be coordinated or integrated with state e-commerce efforts.

Project No. 2. Electronic Credentialing Software Design and Development

Purpose – Develop software for electronic credentialing in Florida.

Outcome – Detailed system design and automated software to support paperless transactions for CVO credentials between the Department of Highway Safety and Motor Vehicles and motor carriers.

Lead Agency – Department of Highway Safety and Motor Vehicles.

Overview of Technical Approach

- Perform requirements analysis organized around the agency's credential business areas to define the specific requirements for electronic credentialing services. Vehicle registration and fuel taxation will be the areas of examination.

- Perform business process reengineering analysis to identify potential opportunities to reengineer current business processes to ensure that outdated processes are not perpetuated by the application of technology.

- Design system software, including PC-based interface, web-user interface, credentialing interface, and legacy system interfaces.

- Construct system interfaces as well as modifications to legacy systems.

Estimated Cost – $500,000 – $1,500,000. The cost will vary depending on the number of credentials.

Duration – 24 months.

Key Issues

- Adoption of electronic credentialing will require considerable training of state and motor carrier personnel.

- Some agency staff resistance and defensiveness should be expected.

- This project should be coordinated closely with the project for electronic payment options and the project for networking information systems, especially possible integration of the credentialing interface with the CVIEW being developed in the latter project.

Project No. 3. Automated Routing and Permitting Software Design and Development

Purpose – Develop software for automated routing and permitting in Florida.

Outcome – Detailed system design and software for the automated processing and issuance of oversize and overweight permits to motor carriers.

Lead Agency – Department of Transportation.

Overview of Technical Approach

- Perform a market analysis to determine motor carrier interest in electronically submitting permit information via various means, and identify the appropriate technology alternatives to enable collection of all permit information automatically, self-routing or automatic routing of vehicles, and permit issuance.

- Perform requirements analysis to define the specific requirements for automated routing and permitting, including on-line application, security, timeliness, and other requirements. OS/OW permits will be the permits for which requirements are defined.

- Perform business process reengineering analysis to identify potential opportunities to reengineer current business processes to ensure that outdated processes are not perpetuated by the application of technology.

- Design system software.

- Build system or modify commercial off-the-shelf software (COTS) to meet Florida's requirements.

- Construct system interfaces as needed.

Estimated Cost – $500,000 – $1,000,000.

Duration – 12 months.

Key Issues

- Adoption of automated routing and permitting will require considerable training of state and motor carrier personnel.

- Ability to automatically route vehicles is contingent on the quality and availability of the state's highway and bridge data.

- Some agency staff resistance and defensiveness should be expected.

- This project should be coordinated closely with the project for electronic payment options and the project for networking information systems, particularly regarding cross checking credentials before permit issuance.

Project No. 4. Information Systems Inventory

Purpose – Conduct an inventory of Florida's CVO-related hardware and software.

Outcome – Detailed inventory of systems both in place and planned, and requirements for linking the systems to promote electronic information exchange.

Lead Agency – Department of Transportation.

Overview of Technical Approach

- Document hardware and software configuration, communication platform, CVO-related system/applications (description, communication protocol, communication path, file format, platform, planned updates affecting file layout, inventory of programs, initiated and received transactions, transaction volume, security protection, system backup), and data structure architecture.
- Map existing data linkages.
- Map desired data flows in a high-level functional design.
- Identify requirements for linking systems together based on examination of security, data transfer, system configuration, operation and maintenance, and other issues.

Estimated Cost – $100,000.

Duration – Three months.

Key Issues

- All agencies that support or otherwise impact CVO-related information management systems must participate to ensure that information is complete and accurate.
- Projects increasingly require capability for electronic communication between existing and planned information systems, and linkages must be developed with presently non-existing systems.

Project No. 5. Networked Information Systems Design and Development

Purpose – Develop a system for electronic interagency communication and data sharing in Florida.

Outcome – Detailed design and software development to support the interchange of information electronically among CVO agencies in Florida and with other states and federal systems.

Lead Agency – Department of Transportation.

Overview of Technical Approach

This project is the heart of CVISN implementation in the state. The information exchange system that is developed will support "deskside" to "roadside" information exchange; enable enforcement personnel to access near real-time safety information ("snapshots") and make performance-based enforcement decisions; support cross-checking of credentials across agencies; and serve as the interface between state systems and national systems such as SAFER, which provides information from other states back to Florida. This information exchange system, or CVIEW, is one of the key systems under CVISN, supporting or enabling implementation of elements in all three CVISN capability areas (safety information exchange, credentials administration, and electronic screening).

This project comprises two major tasks:

1. Design the architecture for linking the various CVO-related databases and systems, including the exchange of data at the deskside as well as between the deskside and the roadside.

2. Construct a system that links information systems currently used by the state and any new systems, and connects the state to systems outside Florida.

Estimated Cost – $300,000 – $1,000,000. The cost will vary depending on the number of systems and the extent to which modifications to legacy systems are needed.

Duration – 12 months.

Key Issues

- Integration with the credentialing interface for electronic credential applications should be considered because of development cost and time savings that result from shared legacy system interfaces.

- Database incompatibilities within Florida, with other states, and at the national level will affect the ability to accomplish all desired linkages.

- Software and hardware incompatibilities and variable system performance must be addressed and resolved.

- Changes in technology and evolving data communication standards must be monitored and incorporated into decisions on hardware and software.

- Privacy, security, and access issues must be addressed and resolved.

- Agency staff resistance may be encountered.

Project No. 6. Electronic Payment Options

Purpose – Explore electronic payment options for electronic credentials in Florida.

Outcome – Analysis of electronic payment alternatives to support electronic credentialing and recommendation of a preferred alternative.

Lead Agency – Department of Highway Safety and Motor Vehicles.

Overview of Technical Approach

- Determine specific relevant CVISN requirements, as well as statewide or agency-specific requirements or standards that may impact the implementation decision, such as ongoing or planned e-commerce efforts at the state or agency level.
- Determine motor carrier preferences as to payment methods.
- Identify potential payment methods, such as prearranged electronic funds transfer, prepaid accounts/escrow, and credit cards; and evaluate each alternative against relevant CVISN and other requirements.
- Recommend a preferred alternative on the basis of meeting the requirements and addressing carrier preferences.
- Define a pilot test for implementing the preferred alternative(s).

Estimated Cost – $50,000.

Duration – Three months.

Key Issues

- Projects for determining electronic credentialing needs and designing and developing electronic credentialing software should provide guidance on relevant requirements; this project should be coordinated with the electronic credentialing software project.
- It may be desirable or necessary to offer multiple payment alternatives.

Project No. 7. Electronic Screening at Weigh Stations

Purpose – Deploy electronic screening at weigh stations in Florida based on real-time/near real-time safety and credentials data in snapshots.

Outcome – Selection system that targets high-risk operators and allows safe and compliant carriers to bypass weigh stations.

Lead Agency – Department of Transportation.

Overview of Technical Approach

Electronic screening on interstate highways in Florida is performed by PrePass which bears all deployment costs, including site preparation, system installation, maintenance of the electronic screening algorithm, motor carrier enrollment, and transponder administration. PrePass is a nationwide program with a growing population of participating carriers and operational sites that provides these carriers with the opportunity to bypass facilities in numerous states. Currently, screening is based on quarterly verification checks of carriers to provide weigh station preclearance.

The objective, as prescribed for CVISN Level 1, is to use snapshot data as the basis for safety and credentials checks. Snapshots using data from Florida CVIEW and/or other data systems will be delivered to the roadside screening computer in real-time or near real-time, and safety and credentials checks of a transponder-equipped vehicle can then be made using the appropriate carrier and vehicle snapshots.

At present, three PrePass sites are operational. Plans are to increase the number to 10 by June 2001. Subsequent phases will bring additional sites on-line.

Estimated Cost – PrePass is deployed at no cost to the state. $50,000 is estimated to be the cost to the state of integrating Florida CVIEW with the screening system.

Duration – 36 months, as necessitated by the state's construction schedule.

Key Issues

- Participation in screening programs must be voluntary.
- Screening systems should be interoperable with those in different jurisdictions.
- A common performance standard for screening is desirable to ensure equity in enforcement.
- Definition is needed regarding how PrePass will incorporate snapshots into the screening process, and how it will interact with a Florida CVIEW.

Project No. 8. Electronic Screening at Agricultural Inspection Stations

Purpose – Deploy electronic screening at agricultural inspection stations in Florida based on agricultural inspection and bill of lading considerations.

Outcome – Selection system that allows carriers that meet established DACS and DOR criteria to bypass agricultural inspection stations. DOR criteria would include carrier enrollment in the electronic bill of lading program.

Lead Agency – Department of Agriculture and Consumer Services. Department of Revenue will be a major participating agency.

Overview of Technical Approach

This project provides the same electronic screening functionality as electronic screening at weigh stations. It also uses the transponder for carrier identification and communication, and use of a common (one) transponder for both weigh station and agricultural station clearance is encouraged. Screening override capability will be provided to enable personnel to disallow bypass and instruct any vehicle to enter the station (both at agricultural inspection stations and weigh stations). However, rules governing bypass are entirely different and independent between the two programs, and each program is operated independently of the other.

The major tasks are as follows:

- Determine inspection requirements at agricultural inspection stations, including inspections performed under the Agricultural Vehicle Inspection Program as well as inspections of bills of lading for taxable cargo under Revenue regulations.
- Identify needs pertaining to the automation of the collection, analysis, and sharing of relevant DACS data, and develop a strategy for "converting" data to be used for screening.
- Map the data flows between the various systems supporting electronic screening using functional thread diagrams for depicting the DACS and DOR business processes.
- Determine basic site layout and components; support staff requirements; and operational or processing requirements; and identify other requirements as necessary.
- Define the electronic screening algorithm.
- Develop a deployment strategy for electronic screening that identifies short- and long-term goals, including specific sites prioritized for implementation of the system.
- Complete software design.
- Develop screening software.
- Perform system integration.
- Deploy a pilot test at one location.
- Design and develop a carrier enrollment system.

Estimated Cost – $200,000 – $500,000. The cost will vary depending on hardware needs.

Duration – 12 months.

Key Issues

- Anticipated benefits such as fewer delays and reduced operating costs will be maximized when trucks are able to bypass all roadside inspection facilities.
- Automation of agricultural inspection stations will enable personnel to inspect a greater number of carriers as carriers that are not required to enter the stations are given a bypass.
- Trucks must be able to use the same transponder for clearing both agricultural inspection stations and weigh stations.
- Participation must be voluntary.
- Enrollment can be complex and should be addressed in the design of the electronic screening system.
- A strategy should be planned for building a "sufficient" population base of transponders.

Project No. 9. Compliance Help Desk/Service Representative

Purpose – Provide motor carriers with a single point of contact in Florida state government for obtaining information on CVO regulatory policies and procedures.

Outcome – More efficient delivery of regulatory information to carriers resulting in higher levels of compliance and reduction in agency and carrier administrative burdens.

Lead Agency – Department of Transportation.

Overview of Technical Approach

A human or an automated option would be selected. The human option involves hiring or reallocating staff, training, and support infrastructure (office space, telephone system, reference materials, etc.). Retraining would be necessary to keep staff abreast of changes. Roughly, about two FTEs (full-time equivalents) plus startup costs would be needed. A mostly automated system is the other option. All sources of authoritative CVO-related information would have to be identified. A decision tree would be built to show how a customer decides what information is needed, and where that information can be found. A web site could be used to house the full decision tree, i.e., all forms and documents; in addition, an automated telephone system could have an abbreviated version of the decision tree. In both cases, the system directs the customer to the appropriate source(s) to answer question(s). Perhaps 0.5 FTE (person who incorporates information updates into the web and telephone systems) plus startup costs would be needed for an automated system.

The major tasks include the following:

- Pursue commitment of the CVO state agencies to support and develop the concept of a single point of contact for regulatory information.
- Convene meetings of representatives of the state agencies, motor carrier industry, and federal agencies to refine the concept and develop an implementation plan.

- Train staff that will be involved in the program.
- Implement a new information dissemination system.

Estimated Cost – $100,000.

Duration – 12 months.

Key Issues

- Strategies for long-term financing must be identified.
- Considerable education of personnel may be required to ensure that accurate information is provided.
- Support from all agencies involved in CVO regulation will be required for successful implementation.
- Collaboration with the motor carrier industry is necessary during the development stage and for marketing purposes.

Project No. 10. IFTA Clearinghouse

Purpose – Develop software for Florida to participate in the IFTA Clearinghouse.

Outcome – Software to upload motor carrier demographic and IFTA fee transmittal data from the Department of Highway Safety and Motor Vehicles to the IFTA Clearinghouse central site.

Lead Agency – Department of Highway Safety and Motor Vehicles.

Overview of Technical Approach

- Review IFTA Clearinghouse documentation and develop detailed solution for mapping DHSMV data to clearinghouse transactions.
- Develop modifications to legacy system.
- Conduct testing with the clearinghouse.

Estimated Cost – $40,000 – $60,000.

Duration – Six months.

Key Issues

- None identified.

5.3 Key Features

The projects that are recommended for the ITS/CVO and CVISN program contribute to a targeted, coordinated, and well-balanced program of activities that respond to motor carrier, individual state agency, and state CVO needs, and enhance the national CVISN framework by addressing CVISN Level 1 requirements. A summary of the key features of the projects is as follows:

- **Enhanced Customer Service –** Customer service is an important function of state agencies. All the projects in the Business Plan have the potential to significantly enhance customer service to motor carriers. A primary way to enhance customer service is to improve the efficiency of the regulatory processes in order to reduce time and labor costs for carriers as well as agencies. Agencies can provide faster and more efficient service to industry by replacing unproductive or outdated requirements with new ways of doing business, such as allowing safe and legal carriers to bypass weigh stations; reducing the paperwork burden through electronic credentialing and payments; and sharing information across agencies as a result of networked systems. A help desk or service representative that is a single point of contact for regulatory information, possibly for referral only, is by itself extremely effective for enhancing customer service.

- **Time and Cost Savings –** With agencies experiencing funding and staffing constraints and motor carriers facing rising costs, limited resources, and increased competition, the time and cost savings accrued through ITS/CVO implementations are very large benefits to be enjoyed. Time is saved as manual, paper-based methods of issuing and obtaining credentials and permits and traditional ways of weighing and inspecting trucks are automated. Time savings to carriers translate into reduced costs of regulatory compliance. For agencies, on-line credentialing and permitting and tax filing can be expected to reduce administrative costs, and in some areas, automation of functions can enable an agency to focus resources in other areas with a reasonable expectation of measurably improving safety or regulatory compliance. It is important to note that while the application of technology is the cornerstone of ITS/CVO deployment, ITS/CVO also includes process improvements or reengineering and other non-technical solutions to CVO needs, and these kinds of solutions alone can produce significant savings.

- **Increased Efficiency and Cost-Effectiveness –** Performing a business process reengineering analysis as part of an electronic credentialing project can identify opportunities to streamline outdated or inefficient processes and eliminate duplicative functions before applying technology. Automated screening and clearance at the roadside can eliminate much paperwork and many vehicle inspections, resulting in reduced delays for individual vehicles. Networking information systems promotes the sharing of information across agencies and reduces the amount of redundant data collection that occurs. Electronic credentialing and automated permitting will considerably reduce manual processing and paperwork for both agencies and carriers, resulting in saved time and money.

- **Improved CVO and Highway Safety –** Information exchange capabilities that result from networking information systems will make more safety information available to enforcement personnel at the roadside and help make all safety information more

reliable and timely for their use. Broad electronic communication and data sharing enhances the monitoring of the en-route safety status of the vehicle and driver, enables focused enforcement on high-risk operators, better ensures the safety compliance of motor carriers, and generally improves highway safety.

- **Reduced Congestion and Fewer Delays –** Deployment of WIM equipment reduces the amount of time carriers spend at weigh stations by automating the processing of trucks. Similarly, deployment of electronic screening systems results in less congestion, fewer back-ups on to the traveling lanes of the highway, improved traffic flow, and fewer delays.

- **More Effective Utilization of Resources –** Electronic screening activities can improve the efficiency and utilization of officers at weigh stations. This may enable the state to reallocate resources for other enforcement purposes, such as mobile patrol activities on secondary routes, or it may allow the state to keep pace with steeply rising truck traffic given stagnant or falling staffing levels. Screening at agricultural inspection stations will enable more carriers to be inspected than current levels because carriers such as those not carrying agricultural commodities will not need to enter the stations.

5.4 Potential Projects

Two concepts are potential projects. These respond to specific needs identified in Section 3.4 of this plan, but are too ill-defined at this time to recommend as projects for the state's program. The two concepts are "Collect Carrier Fines through the Internet" (need identified by an agency) and "Notification of Citations Issued to Driver" (need identified by carriers).

- **Collect Carrier Fines through the Internet –** The purpose of this implementation would be to enable the state to collect fines on-line by electronic payment method(s). It would result in more effective collection of money due to the state. Carriers with unpaid fines could be identified from information captured in snapshots. For interstate carriers, this information would be available at roadside in other states, where enforcement action could be taken unless the fine is paid immediately on the Internet. Lead agency would be Department of Transportation – Motor Carrier Compliance Office. This implementation would require coordination with CVIEW development and development of electronic payment options (Projects No. 5 and 6, respectively).

- **Notification of Citations Issued to Driver –** The purpose of this implementation would be to electronically notify the carrier when a citation is issued to a driver. A carrier has 15 days in which to correct a vehicle problem, but often the carrier is unaware of a problem because it is not informed by the driver. In this case, the problem cannot be resolved in a timely manner and the vehicle may be taken off the road. Specialized software for entering citations on a laptop computer, a system for linking carrier with an e-mail address, and automatic notification of a citation to the e-mail address, would be required. Department of Transportation – Motor Carrier Compliance Office, would lead the effort, with considerable cooperation from the Florida Trucking Association.

Section 6.0

Program Implementation

6.0 Program Implementation

This section covers the organization and management approach for implementing the ITS/CVO and CVISN program, including program roles and responsibilities, scheduling of projects, anticipated funding needs and strategies, outreach activities, and updating the Business Plan. Recommendations for implementing the program conclude the section.

6.1 Organizational Structure

The organizational structure in place for developing the CVISN Business Plan and preparing the state for CVISN deployment comprises a project manager and a CVISN Task Team. The project manager, also a member of the team, represents the Department of Transportation (DOT), the lead agency for the business planning and CVISN efforts. The four primary Florida agencies involved in CVO are represented on the CVISN Task Team; the agencies are DOT, Department of Highway Safety and Motor Vehicles (DHSMV), Department of Revenue (DOR), and Department of Agriculture and Consumer Services (DACS). In addition, the CVISN Task Team includes FMCSA as well as motor carriers. A CVISN systems architect to coordinate technical development was hired late in 2000, and a CVISN facilitator to assist the project manager was hired early in 2001.

With the completion of the Business Plan and delineation of a management approach for deploying the projects in the ITS/CVO and CVISN program, an Executive Steering Committee, program lead agency, and project lead agencies will be designated. These parties will form the key components of the management structure for the program.

Steering Committee

The Executive Steering Committee should be a permanently established body that directs the ITS/CVO program, makes policy and funding decisions or recommendations related to the program and individual projects, coordinates the scheduling of projects through the lead agency for each project, and guides the deployment of the projects outlined in the Business Plan. At minimum, it should consist of a representative from DHSMV, DOR, DACS, DOT – State Highway Engineer's Office, DOT-MCCO, and the motor carrier industry. FMCSA also should be represented, whether as a voting member or as an advisor. Committee membership, in terms of individuals and organizations, may change over time and this should to be revisited as needed.

Program Lead Agency

The program lead agency performs key functions for the program. At a high level, it can provide focused leadership for ITS/CVO activities extending from the planning phase through deployment, resulting in more efficient administration and operation of the ITS/CVO and CVISN program. Chief among specific lead agency responsibilities are to mobilize participation from the public and private sectors, initiate and maintain effective stakeholder outreach, coordinate policy and funding decisions, administer contracts, administer the program budget and allocate funds to projects, and lead efforts to identify and secure funding.

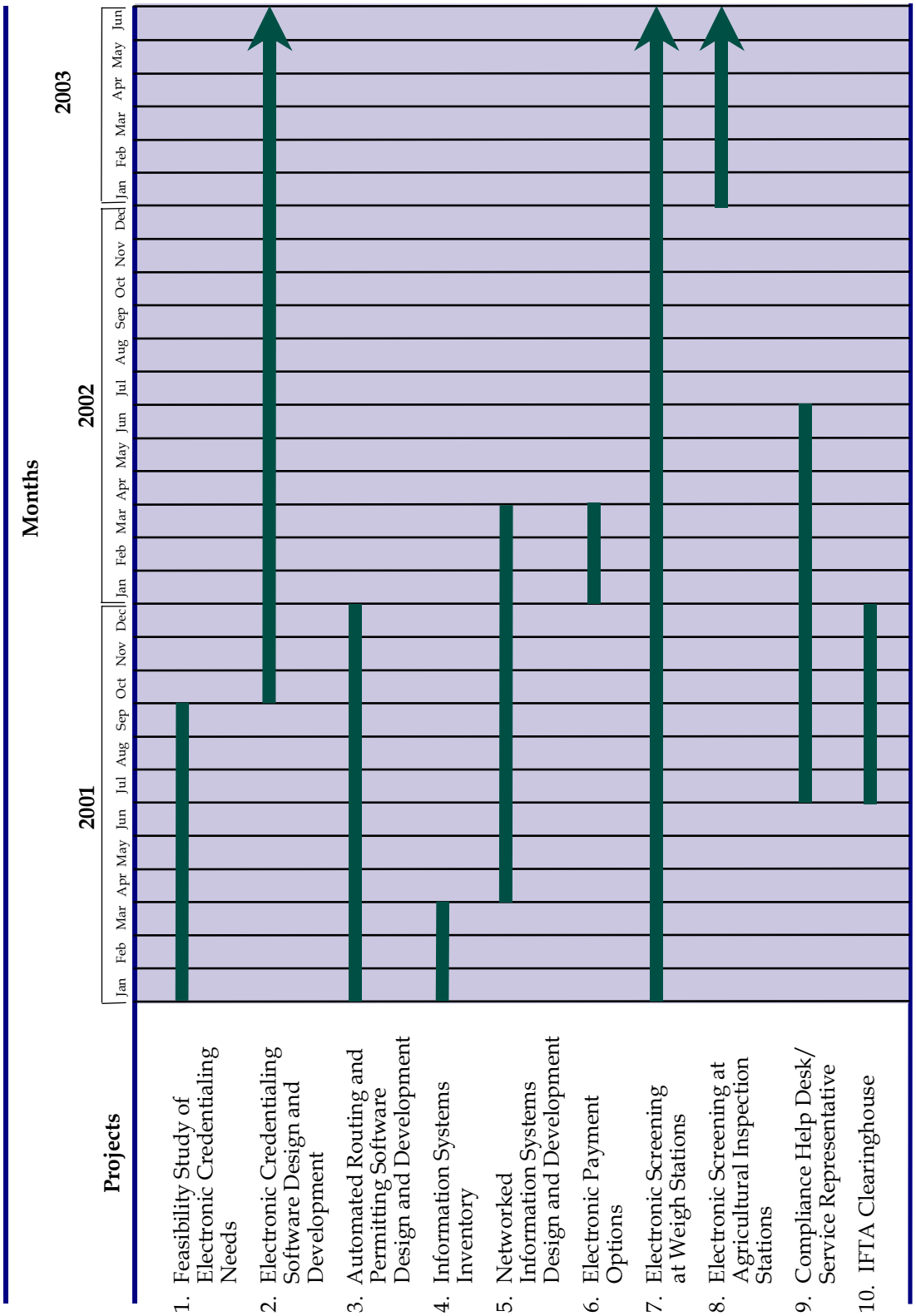
Project Lead Agencies

The last elements of the program management triad, project lead agencies, are responsible for project management, status and financial reporting, coordination with participating agencies, other liaison activities, and management of outside consultants. The Executive Steering Committee may coordinate the scheduling of projects through the lead agency for each project.

6.2 Schedule of Projects

Figure 6.1 shows the schedule for implementing the recommended projects. The schedule indicates duration and sequence spanning approximately two and a half years.

Figure 6.1 Schedule of Projects



6.3 Costs and Funding Strategies

Costs

Implementation of the nine projects identified in the Business Plan is estimated to total between $1,990,000 and $4,510,000 in development costs. Operations and maintenance costs are not shown. These must be developed by the state and incorporated into the program funding strategy. Table 6.1 lists the development cost of each project.

Table 6.1 Project Costs

Projects	Development Cost
1. Feasibility Study of Electronic Credentialing Needs	$ 150,000
2. Electronic Credentialing Software Design and Development	500,000 - 1,500,000
3. Automated Routing and Permitting Software Design and Development	500,000 - 1,000,000
4. Information Systems Inventory	100,000
5. Networked Information Systems Design and Development	300,000 - 1,000,000
6. Electronic Payment Options	50,000
7. Electronic Screening at Weigh Stations	50,000[1]
8. Electronic Screening at Agricultural Inspection Stations	200,000 - 500,000
9. Compliance Help Desk/Service Representative	100,000
10. IFTA Clearinghouse	40,000 - 60,000
TOTAL	**$ 1,990,000 – 4,510,000**

[1]PrePass is deployed at no cost to the state. $50,000 is estimated to be the cost of integrating Florida CVIEW with the screening system.

Funding Strategies

Funding strategies for the ITS/CVO and CVISN program include the following:

- Federal sources of funding;
- State sources of funding; and
- Private sector funding.

Federal Sources of Funding

A number of programs can provide funding for ITS/CVO and CVISN projects. These programs are the ITS deployment earmarks, MCSAP, federal-aid highway programs, and PRISM. Federal-aid programs include State Planning and Research (SPR), Surface Transportation Program (STP), National Highway System (NHS), and Congestion Mitigation and Air Quality Improvement (CMAQ).

ITS Deployment Earmarks – National ITS appropriations for FY 2000 totaled some $211 million split between research and development programs ($98 million) and deployment incentives ($113 million). Virtually all of the $113 million were earmarked across 75 projects identified only by a geographic designation. For Florida, this included Clearwater ($3.5 million); Florida Bay County ($1 million); Miami ($1 million); and Northeast Florida ($1 million). It is unknown at the time of publication of the Business Plan what earmarks for 2001 will go to Florida. CVISN would most likely receive a share of earmarked funds if an earmark is designated for the "State of Florida" rather than a geographic area within the state. Earmarks for ITS deployment can be applied to ITS/CVO purposes, but ITS/CVO has to compete with other applications such as metropolitan or rural ITS for these funds. Key planning and budget staff in the state DOT or other administering agency often have limited familiarity with ITS/CVO and CVISN. In addition, because the organization of a state's ITS/CVO program is typically still developing, ITS/CVO may take a back seat to more "glamorous" deployments such as traffic management or operations centers.

MCSAP – MCSAP is a grant program that assists state enforcement of safety, size, and weight regulations. For Florida, funds are granted according to a 50-50 federal and state split. Eligible uses include laptop computers for recording and transferring inspection data and compliance reviews; hardware and software used for collecting and transferring crash information; and roadside access to safety information systems, including wireless communications. MCSAP is a key funding source for ITS/CVO safety assurance projects. Recently, the FMCSA issued communication to all states affirming that MCSAP funds can be used for CVISN purposes.

SPR – SPR is a federal-aid highway program with funds that can be applied to a range of planning projects, whether related to safety assurance, credentials administration, or electronic screening. Reengineering or process improvements, work plans, and requests for proposals to develop or deploy ITS/CVO and CVISN projects are eligible uses. Organizational ITS/CVO activities also are eligible for this program.

STP and NHS – STP provides funding for capital and operational improvements to the federal-aid highway infrastructure, highway safety improvements and programs, and highway research, development, and technology transfer. NHS funds are applicable to capital and operational improvements to interstates and major state routes (the National Highway System network). Funds from both programs can be used for weigh station upgrades and technologies for traffic monitoring and management. Electronic screening systems may qualify for NHS funding. STP funds in particular can be directed toward ITS/CVO and CVISN safety-related deployments; states are now required to set aside 10 percent of their STP funds for safety improvement projects, including railway-highway crossings.

CMAQ – Funds from another federal-aid program, CMAQ, are used for a range of projects that are likely to improve air quality, including traffic flow improvements through signalization and other technology applications, high-occupancy vehicle lanes, and ITS strategies such as traveler information systems that reduce congestion. CVO traffic management activities and electronic screening, particularly in urban areas, would qualify for CMAQ funding.

PRISM – PRISM funds are available to states that propose to adopt and implement the PRISM system. The objective is to improve highway safety by linking registration to safety performance so unsafe carriers can be identified and entered into safety improvement programs. PRISM states have used program funds to modify or upgrade legacy systems; develop software to facilitate on-line safety inspection, citation, and crash data entry, and install rapid communications capability; incorporate the issuance and collection of U.S. DOT numbers into the interstate registration system as well as intrastate carrier registration process; and develop interagency information exchange.

Although potential federal sources have been identified, alternative sources should be actively pursued. This is critical because federal funding may be delayed or not available. In particular, state or private funds should be sought. One of the primary responsibilities of the program lead agency is to lead efforts to secure funds to support the program.

State Sources of Funding

Obtaining funds at the state level is often difficult. Lack of dedicated funding sources for ITS/CVO, competition with other projects such as bridge or pavement improvements, and agency priorities such as passenger cars, are issues that muddy the availability of state funding. This situation is exacerbated by the fragmentation of CVO functions among multiple agencies. In the long term, however, deployment of the ITS/CVO and CVISN program depends on state funds. State, and local funds are the primary source of federal matching dollars. Moreover, state and local governments will bear the majority of operating and maintenance costs.

Although few state governments, and fewer local governments, have dedicated funding sources for ITS/CVO projects, agencies with CVO functions may have access to their own dedicated stream of CVO-related revenue. For example, this may include permit fees and citation fees that accrue to the state DOT and registration and CDL fees that accrue to DHSMV. Toll and turnpike authorities also can provide funding for ITS/CVO deployments for their facilities.

Operational cost savings that result from an ITS/CVO implementation could fund the very project. Credentials projects such as electronic credentialing may be developed and funded incrementally in this manner. Given the likelihood that an agency will experience cost savings from accepting and processing on-line transactions, the savings could be "put back into the system" to help defray the annual operating costs of the new or upgraded system that supports the on-line capabilities.

The project cost estimates do not include costs for operating and maintaining systems. Again, state and local funding will be needed to fund long-term operations and maintenance.

In order to meet this challenge, the state must begin to develop strategies for funding the ITS/CVO and CVISN program. Some strategies include the following:

- **Incorporate ITS/CVO and CVISN Systems into Agency Budgets –** The state will need to estimate operating and maintenance costs and refine and clarify details of project funding.

- **Reprogram Operating Cost Savings –** ITS/CVO technologies often reduce labor and operating costs for agencies. If agencies can reinvest these cost savings in their operations, the savings can provide the funds to support future investments.

- **Pursue Funds Available through Florida DOT Programs –** Florida DOT general fund is a potential source for CVISN through set-asides for ITS activities. Transportation Outreach Program (TOP) has funding available for transportation projects that would improve the state's economic competitiveness. Eligible projects include planning, design, acquiring right-of-way, or constructing rail, transit, aviation, seaport, spaceport, or intermodal infrastructure that would carry significant flows of domestic or international trade or tourism. A possible CVISN application is the reduction of carrier operating costs through projects such as electronic screening. For both programs, program leadership and/or a committee decides the allocation of funds for various purposes.

- **Cash Management –** Innovative financing techniques such as phased funding for projects, tapering of federal contributions, and advanced construction of projects can manage the use of available federal-aid and state funds.

- **Asset Management –** Funding for projects may come from enhanced management of available staff and facilities, such as reducing implementation costs by outsourcing technical activities, using innovative contracting and procurement techniques, and sharing resources among agencies or other states.

Private Sector Funding

A source of funding that is becoming more prominent is private sector investment in ITS/CVO. An early and continuing example is the adoption of fleet and vehicle management technologies by motor carriers. HELP, Inc. raised the banner of public-private partnerships in the formative years of the national ITS/CVO program; today, its PrePass service is a premier roadside clearance system operating throughout the United States.

In all, a number of models of private sector involvement are in place today, chief among them are the following:

- Franchises, wherein the state receives a share of the private sector profits;

- User fees, including charges for the purchase of transponders or transaction fees for electronic clearance;

- Shared resources, such as telecommunications right-of-way; and

- Private sector contributions to public sector programs, such as non-public partner contributions to ATIS for commercial carriers.

Despite the often formidable barriers to private sector participation in ITS/CVO, a variety of opportunities exists. Given the uncertainty of federal and state funding for ITS/CVO and CVISN deployments, states increasingly are looking to the private sector to help fund their programs.

6.4 Outreach Activities

A coordinated education and outreach program will be a key component of the implementation of the Florida ITS/CVO and CVISN Program. An effective outreach initiative will:

- **Facilitate "Buy-in" from Both Public and Private Sector Stakeholders –** Many stakeholders, both public and private, have limited knowledge of ITS/CVO and CVISN, which is often a barrier to their acceptance and support of the programs. Explaining the various technologies, concepts, and benefits will foster stakeholder support for them. On the public side, this support can be useful in acquiring the necessary staff and funding. On the private side, the "buy-in" can identify which ITS/CVO services are in the greatest demand and improve participation in the program once it is deployed.

- **Generate Momentum Throughout the Program –** Many ITS/CVO deployments require multiple years to fully deploy. In the case of Florida's CVISN program, the initial implementation schedule spans three years. It is important to maintain public and private sector interest and motivation throughout the life of the program. Highlighting the interim successes and demonstrating the benefits being delivered will be an effective tool in maintaining the program's initial momentum.

- **Manage Stakeholders' Expectations –** ITS/CVO projects are often doomed by stakeholders' inflated expectations about the benefits offered by technology. Clearly communicating the anticipated benefits from the outset of the program will generate realistic perceptions of the program and what it offers. The expectations can be further managed by defining a timeframe when stakeholders can expect to realize the anticipated benefits.

Recommended Outreach Materials

Based on other state ITS/CVO and CVISN deployments, the following elements are recommended for inclusion in Florida's outreach initiative:

1. **Executive briefings or one-on-one group sessions with agency directors on the program and the anticipated benefits.** Executive involvement in the planning and

deployment activities fosters a sense of ownership that is critical to obtaining long-term support for the program. These sessions also are valuable in securing the necessary staff and budgetary resources for the program. This method already is being used successfully in Florida as described below in Near-Term Outreach Efforts.

2. **Educational materials for motor carriers to outline the program, detail its implications on motor carrier operations, and communicate its anticipated benefits.** Industry involvement is critical in ensuring long-term success. The program should be described to the motor carriers in relation to the impact it will have on their businesses and the benefits they can expect. These messages can be conveyed through a variety of resources, including specially designed brochures, industry meetings, association newsletters, and symposiums. While the primary focus of this initiative should be the Florida trucking industry, it is important also to include motor carriers from other states that will be affected by projects in the program. As such, neighboring state trucking associations and national trade associations should be included in this outreach effort.

3. **Hold regular ITS/CVO Showcases.** Showcases are an effective way to illustrate the program's progress and successes to the participating agencies, motor carrier industry, and general public. These showcases should be held at major project milestones.

The outreach materials should include several general themes, including:

- Background information concerning ITS/CVO and CVISN;
- Anticipated benefits of the ITS/CVO and CVISN projects to the public and private sector users;
- Deployment schedule; and
- Interim successes, including process improvements.

The outreach materials also should address any specific concerns or issues that a specific audience may have. For instance, the motor carrier industry's concerns regarding data privacy and voluntary participation in ITS/CVO programs should be addressed in the outreach materials. Additional issues, which may need to be included in the outreach materials, are presented in Section 4.2 of this plan.

Near-Term Outreach Efforts

An executive briefing describing the business planning process, the recommended program, and the anticipated benefits was prepared and delivered in October 2000 by the Cambridge Systematics team in cooperation with the state's project manager. The objective was to secure high-level approval of the Business Plan. Executives representing the four CVO agencies in Florida, FMCSA, and Florida Trucking Association (FTA) attended the briefing and approved the plan.

As a result of this briefing, the FTA President invited the project manager, the consultant, and the CVISN Task Team to deliver the presentation and participate in a question and answer session before the FTA Board at its annual meeting in January 2001 with the objectives of promoting awareness of the CVISN program, both in Florida and nationwide, and garnering support and encouraging participation in CVISN projects and activities.

6.5 Updating the Business Plan

Both the Business Plan and the program it defines are "living" entities that need to be updated to reflect changing circumstances, the advancement of specific projects, and new information. Changes in technologies, policies, and funding sources, as well as problem areas, are especially critical in creating the need to update the plan and adjust the program. In addition, at any time the state may wish to incorporate in the program coordination of activities with new stakeholders or projects. It is the responsibility of the Executive Steering Committee to call for necessary adjustments.

Typically, it is recommended that the Business Plan be updated every two years. Projects in the plan generally are scheduled up to three years into the future; that is, projects that will begin within a three-year time period will be shown on the schedule of projects. States that have participated in the federally-sponsored CVISN Deployment Workshops have drawn up CVISN program plans that span three years.

The plan may be updated by changing or adding information to the existing plan, or an addendum may be issued. A number of topics, shown below, should be considered in deciding how and when to update the plan. At minimum, the Executive Steering Committee should take up the question once yearly. The following topics should be included in the annual revisit of the Business Plan:

- What is the status of the ITS/CVO and CVISN program?
- What is the status of individual projects?
- Are there new funding sources?
- Are there significant problem areas?
- Are there new projects that should be added to the program?
- Are there new technologies available that are applicable to the program or any project?
- Has there been, or is there a need for, a change in the strategic direction of the program?

In addition to decisions regarding whether to add information or issue an addendum, the Executive Steering Committee will need to decide whether to use in-house staff or hire a consultant and what methodology will be used to collect information to support the update.

6.6 Recommendations for Implementing the Program

Based on the work conducted to produce the Florida CVISN Business Plan, the following recommendations for implementing the ITS/CVO and CVISN program are presented for consideration by the state agencies and motor carriers represented on the CVISN task team:

1. **It is recommended that a permanent Executive Steering Committee be established to direct the state's ITS/CVO and CVISN program, make policy and funding decisions or recommendations related to the program and individual projects, coordinate the scheduling of projects through the lead agency for each project, and guide the deployment of the projects.** It is recommended that the committee comprise representatives of the four state CVO agencies (Department of Transportation, Department of Highway Safety and Motor Vehicles, Department of Revenue, and Department of Agriculture and Consumer Services), Federal Motor Carrier Safety Administration, and the motor carrier industry.[1]

2. **It is recommended that the Executive Steering Committee pursue endorsement of the Business Plan in each CVO agency.** Endorsement should include commitments of resources, including staffing, equipment, and funding as needed to develop and implement the projects scheduled for early implementation.

3. **It is recommended that the Executive Steering Committee seek the support and participation of the commercial vehicle industry in the deployment of projects.** Support and participation would include a willingness to provide input during development, to solicit pilot carriers for projects, and to explore opportunities for partnerships.

4. **It is recommended that the Executive Steering Committee through the designated participants in the CVISN Deployment Workshops use the workshops to refine project concepts and develop work plans for the projects scheduled for early implementation.** It is further recommended that the Executive Steering Committee use the occasion of the workshops to conduct executive briefings with agency decision-makers to promote greater understanding of the technologies and benefits of CVISN deployments.

[1] As a result of this recommendation, the Secretary of the Florida Department of Transportation formed the CVISN Executive Steering Committee to be "the driving force in the CVISN Program from this point forward" (Thomas F. Barry, Jr., Secretary, Florida Department of Transportation. Letter of invitation to The Honorable Bob Crawford, Commissioner, Department of Agriculture and Consumer Services; The Honorable Fred O. Dickinson, III, Executive Director, Department of Highway Safety and Motor Vehicles; Dr. Jim Zingale, Director, General Tax Administration, Department of Revenue; Jim Gregg, State Director, Federal Motor Carrier Safety Administration; and Charles Brantley, Executive Director, Florida Trucking Association; November 6, 2000). The agenda for the first meeting of the Committee, January 12, 2001, included final approval of the Business Plan, projects to fund in the current and upcoming fiscal years, and action items.

5. **It is recommended that the Executive Steering Committee actively pursue funding commitments for the earliest scheduled projects and begin to identify strategies to fund operating and maintenance costs.** Uncertainty of federal funding and the challenging nature of obtaining state funds and private investment require development of multiple strategies for funding projects as well as pursuit of all options concurrently and early.

6. **It is recommended that the Executive Steering Committee seek the participation of the State Technology Office in the CVISN Deployment Workshops as a prelude to their anticipated active role in systems projects.** The nature of CVISN necessitates close coordination with the statewide networking infrastructure; Internet activity; and management, policies, procedures, and standards related to information resources; these areas are supported by the State Technology Office.

7. **It is recommended that the Executive Steering Committee coordinate with other ITS programs in the state that provide traveler information or traffic management services, in order to leverage efforts to facilitate commercial vehicle travel and relieve congestion in areas where commercial vehicles are significantly impacted.** Whereas ITS/CVO activities tend to be segmented from the larger transportation system and "general" ITS projects, opportunities exist for coordination and synergy to maximize resources and benefits as well as move toward "mainstreaming" ITS/CVO.

8. **It is recommended that the Executive Steering Committee draft and endorse guiding principles to accompany the goals and objectives established for the ITS/CVO and CVISN program.** Guiding principles are important underlying assumptions that guide the deployment of projects. In particular, guiding principles should be established that ensure that concerns of a show-stopping nature are addressed and protected within the program. It is recommended that guiding principles concerning the voluntary nature of participation in ITS/CVO projects and guarding the confidentiality, security, accuracy, and relevance of ITS/CVO and CVISN information be among the principles that are drafted and endorsed by the committee.

9. **It is recommended that the Executive Steering Committee conduct briefings when there are changes in state administration or leadership within a CVO agency or the state trucking association to ensure ongoing buy-in to the ITS/CVO and CVISN program.**

Section 7.0

Contact Names

7.0 Contact Names

Business Plan and CVISN Project Manager

Mr. Mike Akridge
ITS Administrator, CVO/ETC
ITS Program Office
Florida Department of Transportation
605 Suwannee Street, MS 57
Tallahassee, FL 32399-0450
Phone: (850) 414-5259
Fax: (850) 410-5424
E-mail: michael.akridge@dot.state.fl.us

CVISN Task Team

Mr. Howard Fitzgerald
Watkins Motor Lines, Inc.
P.O. Box 95002
Lakeland, FL 33804-5002
Phone: (800) 456-4545, x 2171
Fax: (863) 687-6310
E-mail:
Howard.Fitzgerald@Watkins.com

Mr. Richard Gerke
U.S. Department of Transportation
Federal Motor Carrier Safety Administration
227 North Bronough Street
Suite 2060
Tallahassee, FL 32301
Phone: (850) 942-9650, x 3047
Fax: (850) 942-9680
E-mail: richard.l.gerke@fhwa.dot.gov

Mr. Jim Gowen
Compliance Enforcement Process
Enforcement Operations Coordinator
State of Florida Department of Revenue
5050 West Tennessee Street
Building G, Room 191
Tallahassee, FL 32399-0100
Phone: (850) 488-8011
Fax: (850) 922-1265
E-mail: gowenj@dor.state.fl.us

Mr. Jim Kennedy
McKenzie Tank Lines
4748 Blountstown Highway
Tallahassee, FL 32310
Phone: (850) 575-5123
Fax: (850) 574-3676
E-mail: jimkennedy@prodigy.net

Mr. Art Lemon
Senior Analyst
Florida Department of Highway
Safety and Motor Vehicles
2900 Apalachee Parkway
A-430, MS 04
Tallahassee, FL 32399
Phone: (850) 414-5488
Fax: (850) 414-7195
E-mail: lemon.art@hsmv.state.fl.us

Mr. Randy Lenczyk
Florida Department of Highway
Safety and Motor Vehicles
2900 Apalachee Parkway, MS 62
Tallahassee, FL 32399
Phone: (850) 921-0066
Fax: (850) 487-2328
E-mail:
lenczyk.randy@hsmv.state.fl.us

Mr. Barry Mason
Weigh Station Program Manager
Florida Department of Transportation
Motor Carrier Compliance Office
1815 Thomasville Road, MS 99
Tallahassee, FL 32303
Phone: (850) 921-1907
Fax: (850) 922-6798
E-mail: barry.mason@dot.state.fl.us

Captain Roger Pittman
Department of Agriculture and
Consumer Services
P.O. Box 850
Old Town, FL 32680
Phone: (352) 463-3130
E-mail: pittmaj@doacs.state.fl.us

Mr. Tom Runck
Rountree Transport & Rigging
2640 North Lane Avenue
Jacksonville, FL 32254
Phone: (904) 781-1033
Fax: (904) 786-6229
E-mail:
rountreetransport@worldnet.att.net

Mr. Hugh Stephens
Sales and Use Tax Compliance
Coordinator
State of Florida Department of
Revenue
5050 West Tennessee Street
Building D-5
Tallahassee, FL 32399-0100
Phone: (850) 922-0708
Fax: (850) 922-1265
E-mail: stephenh@dor.state.fl.us

Mr. Don Steverson
Department of Agriculture and
Consumer Services
Law Enforcement Office
545 East Tennessee Street
Tallahassee, FL 32308
Phone: (850) 922-6507
E-mail: steverd@doacs.state.fl.us

Captain Marcel Tart
Florida Department of Transportation
Motor Carrier Compliance Office
719 South Woodland Boulevard,
MS 1-995
Deland, FL 32720
Phone: (904) 943-5626
Fax: (904) 943-5619
E-mail: marcel.tart@dot.state.fl.us

Mr. Tommy Thomas
Watkins Motor Lines, Inc.
P.O. Box 95002
Lakeland, FL 33804-5002
Phone: (800) 456-4545, x 4477
Fax: (863) 687-6310
E-mail:
Tommy.Thomas@Watkins.com

Ms. Dianna White
Landstar System, Inc.
4160 Woodcock Drive
Jacksonville, FL 32207
Phone: (904) 390-1460
Fax: (904) 564-4285
E-mail: dwhite@landstar.com

CVISN Systems Architect

Mr. Bill Giuffre
Senior Associate
Cambridge Systematics, Inc.
150 CambridgePark Drive
Suite 4000
Cambridge, MA 02140
Phone: (617) 354-0167
Fax: (617) 354-1542
E-mail: wlg@camsys.com

CVISN Facilitator

Mr. Charlie Katz
Miller Management Support Corporation
7961 Bolling Drive
Alexandria, VA 22308
Phone: (703) 721-9501
Fax: (703) 721-9502
E-mail: charles.katz@prodigy.net

Consultants – Business Plan Development

Project Manager

Ms. Cathy Erickson
Senior Associate
Cambridge Systematics, Inc.
75½ South Harrison Street
Princeton, NJ 08540
Phone: (609) 430-1749
Fax: (609) 430-1749
E-mail: cle@camsys.com

Principal-in-Charge

Mr. Brad Wright
Principal & Manager, State CVO Business Line
Cambridge Systematics, Inc.
150 CambridgePark Drive
Suite 4000
Cambridge, MA 02140
Phone: (617) 354-0167
Fax: (617) 354-1542
E-mail: bww@camsys.com

CVO Specialist

Mr. Steve Capecci
Associate
Cambridge Systematics, Inc.
150 CambridgePark Drive
Suite 4000
Cambridge, MA 02140
Phone: (617) 354-0167
Fax: (617) 354-1542
E-mail: sac@camsys.com

Appendix A

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Appendix B

List of Acronyms

List of Acronyms

AAMVAnet	American Association of Motor Vehicle Administrators network
ATIS	Advanced Traveler Information Systems
ATMS	Advanced Traffic Management Systems
CAPRI	Carrier Automated Performance Review Information
CDL	Commercial Driver License
CDLIS	Commercial Driver License Information System
CDPD	Cellular Digital Packet Data
CMAQ	Congestion Mitigation and Air Quality Improvement
COTS	Commercial Off-the-Shelf Software
CVIEW	Commercial Vehicle Information Exchange Window
CVISN	Commercial Vehicle Information Systems and Networks
CVO	Commercial Vehicle Operations
DACS	Department of Agriculture and Consumer Services
DHSMV	Department of Highway Safety and Motor Vehicles
DMV	Division of Motor Vehicles
DOR	Department of Revenue
DOT	Department of Transportation
e-commerce	electronic commerce
e-mail	electronic mail
e-payment	electronic payment
FHWA	Federal Highway Administration
FMCSA	Federal Motor Carrier Safety Administration
FTA	Florida Trucking Association
FTE	Full-Time Equivalent
Hazmat	Hazardous material
HELP	Heavy Vehicle Electronic License Plate

HVUT	Heavy Vehicle Use Tax
I-10	Interstate 10
I-75	Interstate 75
I-95	Interstate 95
IFTA	International Fuel Tax Agreement
IRP	International Registration Plan
ITS	Intelligent Transportation Systems
ITS/CVO	Intelligent Transportation Systems/Commercial Vehicle Operations
MCCO	Motor Carrier Compliance Office
MCMIS	Motor Carrier Management Information System
MCS	Motor Carrier Services
MCSAP	Motor Carrier Safety Assistance Program
MCSIP	Motor Carrier Safety Improvement Process
NCIC	National Crime Investigation Center
NHS	National Highway System
NMVTIS	National Motor Vehicle Title Information System
OS/OW	Oversize/Overweight
PC	Personal Computer
POE	Port-of-Entry
PRISM	Performance and Registration Information Systems Management
SAFER	Safety and Fitness Electronic Records
SafeStat	Safety Status Measurement System
SPR	State Planning and Research
STO	State Technology Office
STOP	Speeding Truckers Offensive Program
STP	Surface Transportation Program
TOP	Transportation Outreach Program
U.S. DOT	United States Department of Transportation
WIM	Weigh-in-Motion