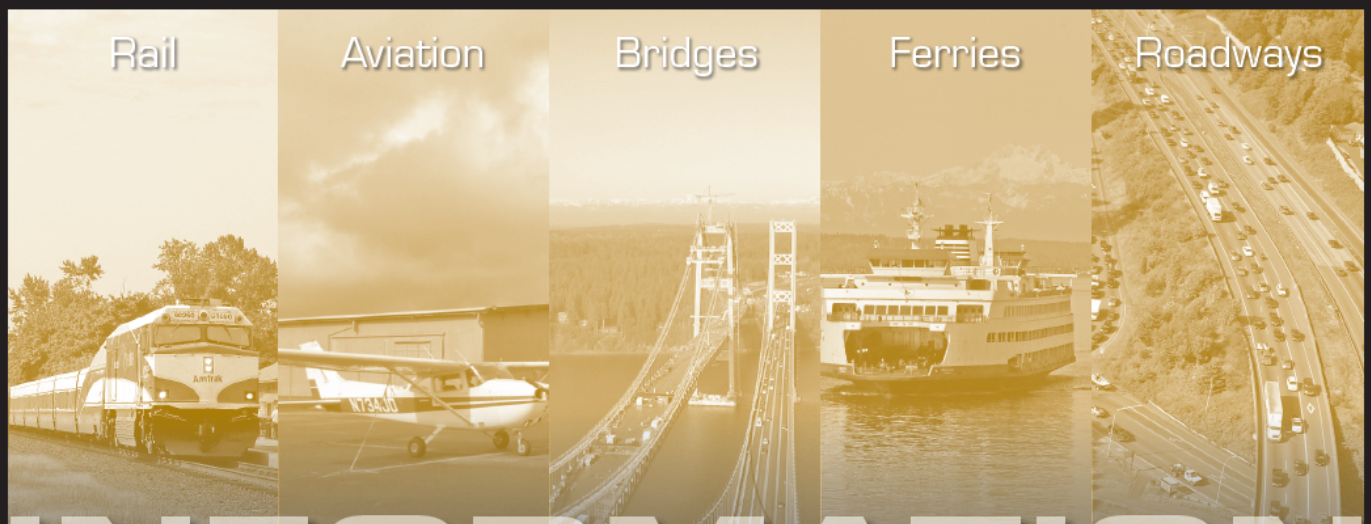

INFORMATION TECHNOLOGY

2011 PORTFOLIO

Washington State Department of Transportation

Introduction to the IT Portfolio

I'm pleased to present the Washington State Department of Transportation's 2011 Information Technology Portfolio. This portfolio provides a snapshot of WSDOT's information technology (IT): our IT investment, an update of IT projects, IT's relationship with the WSDOT 2011-2017 Business Direction Plan, and plans for the future.

WSDOT strategically invests in information technology to improve our business processes and to provide the best possible transportation services to the citizens of Washington. The Office of Information Technology (OIT) is responsible for strategic and operational information technology management. OIT's vision is to leverage technology to maximize efficiencies, improve our services, demonstrate accountability, and provide the best possible return on investment to the State of Washington. Technology services and systems are a **key enabler** and **management tool** in our mission to keep people and business moving on the state's transportation systems.

Taking advantage of IT innovations and new technology WSDOT is moving forward during this period of economic challenges. WSDOT will continue evaluating and implementing recent advancements in new technologies and developments which can assist with critical business functions. A clear example of a WSDOT IT success is the Project Management and Reporting System that is now supporting our capital construction program.

Rarely do future requirements get smaller. As WSDOT moves forward there will be both challenges and opportunities with tolling expansion, the Ferries Vehicle Reservation project and potential new traffic management systems.

WSDOT will take advantage of opportunities to develop innovative ways to assist in getting critical IT equipment back on best practices for life cycle replacements. There will be opportunities to leverage state enterprise requirements to assist in moving major WSDOT projects forward. One example of leveraging state requirements is the need to replace the state enterprise financial system. Working with OFM on this project will assist WSDOT in the replacement of our agency core financial system. We are currently working as the pilot agency on the Enterprise Time and Attendance System (ETAS) with OFM and other state agencies. This project will provide an opportunity for WSDOT to meet the Ferries Divisions' business requirements. Shared services will provide additional opportunities for partnerships. We will find ways to do our work better and faster. IT will always be part of any WSDOT required business solution. Working together, internally or externally WSDOT will meet the state's vision and goals for our transportation systems and put tax payer dollars to the most effective use.

The 2011 WSDOT IT Portfolio is produced by:

The Office of Information Technology
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1 - WSDOT IT Portfolio 2011 Overview

"An investment in knowledge pays the best interest."
--- Benjamin Franklin

With the financial down turn, the importance of Information Technology (IT) continues to grow. The goal of IT is to reduce costs and to improve efficiencies through automation of existing systems and building new systems to support emerging business process changes. More and more of the critical missions of the Washington State Department of Transportation (WSDOT) depend on IT. The direct relationship between IT support and business requirements cannot be over stated. This dependence could be as simple as use of the WSDOT network or as complex as passing statistics to a total dependence of a business on software, hardware and network systems. Maximizing what IT can do for WSDOT is critical to overall cost reductions for the agency. The WSDOT IT Portfolio is a method to allow senior executives to understand the magnitude of the agency's investment in IT and the capabilities these investments bring to WSDOT business units.

A. Purpose of the Information Technology Portfolio

RCW 43.105.105, Information Technology Decisions and Plans mandates that an agency information technology (IT) portfolio shall serve as the basis for making information technology decisions and plans.

The IT Portfolio organizes information for all WSDOT IT resources into the perspective of an investment portfolio. The major components of the IT Portfolio are found in the following document. The portfolio is responsive to the needs of a variety of decision-makers, including executives, technical managers, program managers, Department of Information Services (DIS) and Office of Financial Management (OFM) management and staff, members of the Information Services Board (ISB), the Governor, and Legislature. Information is structured to facilitate recognition of trends, analysis of problems and opportunities, and the evaluation of alternatives within the context of an agency's overall IT investment.

For the state enterprise IT Portfolio, the information is entered manually into OFM's Clairty product which then is available for the legislature, ISB and OFM to produce various reports. WSDOT continues to encourage OFM into automating this process by providing an interface into this system. WSDOT, along with various other state agencies, continue to electronically manage and use the IT Portfolio for decision processes at the agency level.

B. Convergence of Business Mission and IT Vision

Information Technology exists to support the WSDOT business missions and represents a substantial investment of WSDOT funds. To be successful there must be a convergence of business mission and the IT vision. This section of the IT Portfolio describes that convergence. First the agency's business is described, legislative mandates are reviewed, the agency mission is laid out, and then primary business objectives are identified. This provides a foundation for understanding WSDOT. Next the IT alignment of current IT investments to business objectives is defined, the importance of IT in meeting agency goals is reviewed, and then future investments needed to strengthen IT support of the agency's mission are outlined. This convergence becomes more important each year as IT support for WSDOT programs becomes greater each year. **There is little that WSDOT does as an agency that does not depend to some degree on IT.**

WSDOT's Mission and Primary Objectives

The mission of the Washington State Department of Transportation is to "keep people and business moving by operating and improving the state's transportation system vital to our taxpayers and communities". IT supports this mission on a 24/7 basis. To accomplish this mission WSDOT works towards achieving five goals;

- Safety,
- Preservation,
- Mobility (Congestion Relief),
- Environmental Quality,
- System Stewardship.

WSDOT business objectives directly support the Governor's Priority to provide a "seamless transportation system to the prosperity of our state that also addresses the safety of our travelers". The Governor's priorities for Transportation include;

- Puting Safety First,
- Seamless Regional Transportation,
- Building a better future for Washington,
- Keeping the ferries moving,
- Maintaining our infrastructure.

All IT investments must support and facilitate these goals. As overall resources decline due to economic circumstances WSDOT must count on IT to help close the gap between mission and resources that support business requirements.

The Secretary of Transportation's defined primary business objectives are found in the department's strategic plan internet page (www.wsdot.wa.gov/Accountability/PerformanceReporting/StrategicPlan.htm). The WSDOT strategic plan items are linked to the IT strategic plan in Section 2 of this IT Portfolio. WSDOT's business direction, as well as specific objectives, and performance measures, have been identified under each goal.

The Business of Transportation

WSDOT is the steward of a large and robust transportation system, and is responsible for ensuring that people and goods move safely and efficiently. In addition to building, maintaining, and operating the state highway system, WSDOT is responsible for the state ferry system, and works in partnership with others to maintain and improve local roads, railroads, airports, and multimodal alternatives to driving.

WSDOT's vision is an integrated transportation system that is reliable, responsible, and sustainable. In order to achieve this, WSDOT's investment strategy is to preserve and maintain its current system, keep the traveling public and WSDOT workers safe, protect our environment, and reduce congestion and improve mobility through our three-pronged Moving Washington plan.

As WSDOT delivers transportation services, we also work to preserve and restore environmental quality. Programs such as stormwater treatment, construction site erosion control, fish passage barrier removal, wetland protection, air pollution control, and adaptation to climate change are important to the future health and safety of citizens. Each process helps protect priceless natural resources.

WSDOT's diverse programs and projects are supported by more than 7,100 full-time employees, including engineers, vessel captains, maintenance technicians, environmental specialists, planners, and many others. We take pride in our workforce and strive for excellence and integrity in everything we do.

Legislative Mandates for WSDOT

The primary legislative mandates guiding WSDOT are contained in RCW 47.01, Public Highways and Transportation.

The Department of Transportation is mandated:

- To create a statewide transportation development plan which identifies present status and sets goals for the future;
- To coordinate transportation modes;
- To promote and protect land use programs required in local, state, and federal law;
- To coordinate transportation with the economic development of the state;
- To supply a broad framework in which regional, metropolitan, and local transportation needs can be related;
- To facilitate the supply of federal and state aid to those areas which will most benefit the state as a whole;
- To provide for public involvement in the transportation planning and development process;
- To administer programs within the jurisdiction of RCW 47.01.011 relating to the safety of the state's transportation systems;
- To coordinate and implement national transportation policy with the state transportation planning program;
- To exercise all the powers and perform all the duties necessary, convenient, or incidental to the planning, locating, designing, constructing, improving, repairing, operating, and maintaining state highways, including bridges and other structures, culverts, and drainage facilities and channel changes necessary for the protection of state highways;
- To examine and allow or disallow bills for any work or services performed or materials, equipment, or supplies furnished.

WSDOT Vision

Our Transportation vision is an integrated transportation system that is:

- Reliable with
    - Improved travel times for drivers
    - Better reliability and choices for commuters and increased intercity service
    - More efficient freight movement across state and in/out of our ports
- Responsible
    - Safer roads, and fewer fatalities or serious injuries
    - Cost effective asset management and preservation
    - Highways, transit and ferries providing access for jobs and lifeline services
- Sustainable
    - Cleaner air and water
    - Strategic and balanced approach to climate change
    - Predictable funding for affordable improvements and operations

Alignment of Current IT Investments to Business Objectives

Information technology investments support the following WSDOT services:

IT Support for WSDOT Services

Direct Services to the Public
Traffic Flow & Congestion Maps
Live Traffic Cameras
Road Closures, Construction Status
Ferry Schedules & Routes
Ferry Vessel Location Maps
Mountain Pass and Weather Reports
Incident Response Team Communications
Ferry Online Ticket Sales

Environmental & Engineering
Environmental Assessments

Ferries Division
Labor Management
Automated Vessel Dispatch
Electronic Fare System
Vehicle Reservation System

Planning & Programming:
Construction Project Identification, Scoping & Prioritization
Traffic Data Capture and Reporting
Highway Systems Inventory
Accident & Hazardous Locations Tracking
Statewide Transportation Improvement Programs (STIP)

Bridge Design Engineering
Computer Aided Drafting & Engineering
Roadway & Right of Way Designs
Commitment & Permit Compliance

Construction:
Manage & Track Construction Contracts through the use of the Project Management and Reporting System
Construction Materials Test Tracking
Cataloging Pavement Deficiencies

Maintenance:
Highway Maintenance Tracking
Equipment Inventories
Facilities Management
Traffic Monitoring & Signals
Emergency Operations Center

Transportation Improvement Programs (TIP) for Metropolitan Planning Organizations (MPO's) & Regional Transportation Planning Organizations (RTPO's)

Project Management:
Project Planning & Resource Scheduling
Progress Tracking & Reporting
Project Management and Reporting System

Financial and Administrative Management
Budget Management
Accounting Services
Performance Monitoring, Track State, Federal & Local Program Funds
Contract Management & Payments
Transportation Executive Information System (TEIS)
Federal Highways Administration Billing & Reporting
Payroll, Training, Human Resources Management
Purchasing, Inventory

Importance of IT in Meeting Agency Goals

WSDOT is an engineering oriented agency that requires significant information technology support. Examples of information technology required are Computer Aided Engineering (CAE) design software, Geographic Information Systems (GIS), Project Management and Reporting System (PMRS) and document workflow.

OIT has accomplished and continues to work the following critical IT requirements:

- **2011 Supplemental & Legislative Session.** The impact of the recession resulted in WSDOT submitting very few new decision packages. While the replacement of Critical Applications is a high priority project, the funding restrictions focused OIT priorities to those items which were operational in nature such as hardware equipment replacements (PC's, servers and network). Even with the priorities limited to these operational measures, there was not funding available to upgrade all the hardware based upon a 5-year replacement cycle. More than 2/3 of the PC's will need to be replaced sometime this biennium in order for OIT to reach the 5-year replacement cycle goals. OIT will continue to look for innovative ways to move Critical Applications forward, but without additional funding, the focus will remain on operational measures which "keeping the lights on".

- **2011 – 13 Budget & Legislative Session.** WSDOT has started phase one work on the Ferries Division's Vehicle Reservation System which will establish an automated, customer-responsive and interactive vehicle reservation capacity on two key routes. The routes between Anacortes/Sidney, BC and between Port Townsend/Keystone with commercial reservations being introduced only on the San Juan Islands routes. This solution will replace three separate "ARGO" systems currently in place. The replacement is a unified system that is integrated with the existing ticketing and revenue collection processes of Wave2Go. System commissioning is anticipated to be completed in FY2012 with expansion to include all types of vehicles on all San Juan Islands routes and expand the commercial vehicle reservations to all Ferries Division routes in FY2013.

- **Improvements in Technology IT Portfolio, Project Delivery and Accountability.** In FY2010, WSDOT OIT upgraded the Microsoft Project Server software to 2010 which included portfolio management, SharePoint 2010 and Performance Point. OIT will implement an electronic management system for IT investments such as Applications and interface with the existing Database Management System (Data Catalog). OIT and the Business Continuity Manager will upgrade the current FileMaker Pro system and integrate with the OIT Portfolio for a more comprehensive COOP plan. In addition, the IT Project schedules and deliverables will be available in an Enterprise view to provide better resource management. By utilizing Microsoft Project Server, OIT will also be able to track major KPI (Key Performance Indicators) real-time providing the ability for Executive Management the information necessary to make key decisions during this financial recession.

- **Improvements in Operational Processes.** In support of implementing Informational Technical Information Library (ITIL) processes, WSDOT OIT last year implemented changes to the Change Management and Technical Review processes. This fiscal year, WSDOT OIT implemented the Initiative and Operations Support Team with the Support Technical Advisory & Review Team. These two review processes provide better communication along with providing the support needed to staff managing new IT initiatives. Adding these two teams early in the project provide the ability to manage new technologies as well as provide the right assistance in the beginning of the efforts. These two teams provide the necessary peer review and support needed for any IT effort. OIT continues to review and update other operational processes

- **Enterprise Time and Attendance System.** Formerly the Time Leave and Labor Distribution Project, WSDOT in collaboration with the Office of Financial Management (OFM), will be the first pilot agency to interface with the new system. The new system will close the loop holes in the current system which does not meet mandatory federal and state requirements for tracking Family and Medical Leave Act (FMLA) leave accruals and liquidations. This is an area of substantial risk; agencies are using manual processes to ensure compliance with FMLA standards. The new system will increase the complexity of complying with the Federal Fair Labor Standards Act, which mandates that all employees need to submit time worked – not just the exception time, or leave requests as most salaried employees have traditionally done. And remove the limitations in the current timekeeping systems which make it difficult to implement and track provisions of the numerous collective bargaining agreements. These limitations increase the risks of a grievance being filed and of a labor union raising a past practices argument during labor negotiations.

Strengthening WSDOT's Mission

WSDOT strategically invests in information technology to improve our business processes and to provide the best possible transportation services to the citizens of Washington. The Office of Information Technology (OIT) is the agency's technology organization responsible for strategic and operational information technology management. It is the vision of WSDOT OIT to leverage technology to maximize efficiencies, improve our services, and provide the best possible return on investment to the State of Washington. WSDOT Executive management embraces the use of technology services and systems as a **key enabler** and **management tool** in our mission to provide the citizens of Washington with the best possible state transportation infrastructure.

C. IT Plans, Proposals and Acquisitions Process

This section describes the agency process for reviewing IT plans, proposals, and acquisitions, the acquisition process, adherence to state/ISB technical standards, and adherence to state/ISB complaint and protest procedures.

Process for Reviewing IT Plans, Proposals, and Acquisitions

The Office of Information Technology develops plans and proposals for the formal information technology program (C Program). If an information technology enterprise service is provided by the department, or the agency has a specific requirement to acquire hardware, software, or purchased or personal services directly, WSDOT will seek the best possible cost and consult with the Department of Information Services (DIS) in developing the plan. The plans and proposals will include input from business stakeholders. These plans and proposals are reviewed and approved by the agency leadership team prior to submission to DIS. (*Note: The Department of Information Services (DIS) will split to multiple agencies starting October 1, 2011. WSDOT will continue to work with the newly formed Department of Essential Services (DES), Consolidated Technology Services (CTS) and Office of the State CIO (OCIO))*

Acquisition Process

The Office of Information Technology (OIT) Contracts Office follows a documented formal process providing an open and fair opportunity to qualified vendors. This open and fair process culminates in a vendor or service provider selection. Selection is based on criteria which may include such factors as consulting fees, cost, ability, capacity, experience, reputation, responsiveness to time limitations, responsiveness to solicitation requirements, and quality of previous performance. The acquisition process is in compliance with statutes and rules relating to contracts and/or services and follows all Information Services Board (ISB) policies, standards, and guidelines issued under RCW 43.105 as well as RCW 39.29.

Adherence to State Technical Standards

The architectures approved by the Information Services Board (ISB) provide the framework for WSDOT IT internal technical standards. The only deviations are as required by Federal Intelligent Transportation Systems (ITS) standards and agreements between WSDOT and WSP for radio communications. ISB published standards are linked from the WSDOT Information Technology Manual (M3017.00) as a reference point for all agency staff.

Adherence to State Complaint and Protest Procedures

The OIT Contracts Office uses the ISB recommended "Resolution of Complaints and Protest" language from the State IT Investment Standard and inserts it into all competitive acquisition documents issued from the office for the contracts that involve an IT related service.

D. Overview of Infrastructure

This section provides and overview of **Section 3** of the IT Portfolio which contains the detailed information of the technology infrastructure including technology environment, computing hardware, computing software, networks, critical applications, and a description of who is doing IT work.

WSDOT supports a complex environment as outlined below:

• Locations (with a WSDOT network connection)	235
• Operating systems supported (4 Mainframe & 8 Server/Desktop)	12
• Physical Servers connected to the network	575
• Virtual Servers	508
• PCs/workstations	9270
• Data centers (HQ, ELG, ER, NC, NW, OR, SC, SW & FERRIES DIVISION)	9
• Software applications	326
• Programming Languages	32
• Programming Environments	11
• Data marts	12
• Databases	526
• Database platforms *(Access, Adabas, Filemaker, Oracle, SQL, VSAM & ArcGIS)*	7

Current IT Investments

Computing Software

WSDOT's infrastructure environment contains a variety of software tools to support the mainframe, server, and network environments. The agency has adopted workstation standards for all desktop software documented as "Level Playing Field (LPF)". The mainframe runs a suite of IBM software products as well as many independent software vendor (ISV) software products. Server environment is primarily Microsoft software with small additional products to support various business groups, i.e. Geographic Information Systems (GIS) products, and computer-aided engineering software.

The LPF development platform for new application or system develop is Microsoft's .NET framework with C#. All new applications are being developed on this platform for thin client on Microsoft's Internet Information Services (IIS) web servers. By utilizing the latest Microsoft development Web platform, WSDOT has eliminated individual PC deployment needs for the new systems and applications.

Applications & Systems

Many of the agency's strategic objectives rely upon the specialized applications which are supported and maintained by WSDOT OIT. The following tables summarize the technology platforms, databases, development languages and Commercial off-the-shelf customized software used to support OIT maintained applications.

Applications by Technology Platform	
Document/Workflow Management	19
Mainframe	33
Windows	122
Web	94
Other Platform(s)	10

Applications by DataBase	
Access	11
Adabas	26
Archibus	1
Oracle	3
SQL	161
VSAM	12
FileMaker	33
ArcGIS & Related	16
Other Database	25

Applications by Language			
ASP/ASPX	22	*Java*	3
Assembler	1	*JCL*	29
C & C++	3	*Kofax*	21
C#	86	*LiveLink*	1
Clist	20	*LScript*	2
COBOL	32	*Natural*	26
Cold Fusion	8	*.NET Framework*	51
Crystal Reports	10	*PowerBuilder*	18
DYL280	21	*Remedy AR System*	7
Excel	2	*SQL Reporting*	22
FileAid	23	*Utilities*	23
FileMaker Pro	33	*VB*	43
FrontPage	1	*VB.NET*	6
HTML	13	*VBA*	8
Hyperion	7	*XML*	7
Informatica	10	*Unknown*	7

Critical Applications

The state of our Critical Applications varies depending on the platform. There are newer technologies which WSDOT relies upon to perform our business in new ways reaching more of the citizens of our state. These technologies which use the internet, including twitter, blogs, and flickr, provide additional challenges to WSDOT in that the application becomes less critical than the network access. When reviewing the COOP (Continuity of Operations Plan), which identifies the critical applications from the business perspective and business required recovery times, we found that there is a significant change which must also be noted.

Here are is a list of the 61 critical applications which have been identified in the COOP plan as critical applications to WSDOT Operations. For additional information on the description of each application, see Section 3.

Agency Web Site	Merlin-DASH
Automated Fuel Tracking (MAS90)	Minor Capital Inventory (MinorCap)
Barlist	PGSplice
Bridge Engineering Information System	PGSuper
Bridge for Windows Loading Rating Structural Analysis	Public Disclosure Request Tracking System (PDRTS)
Bridge Repair	Purchase and Order System (POS)
Bridge Web Site Admin Interface	Real Estate Information System (REIS)
CADD and Orthophoto Information System (COPIS)	Record Services
Capital Program Management System (CPMS)	Remedy Action Request System (Remedy ARSystem)
CCIS Word Macro	Remedy Asset Management
Computer Aided Engineering Systems (CAFM)	Road Access Management Permit System (RAMPS)
Condition Acquisition and Reporting System (CARS)	ROADS
CONSPLICE	SharePoint
Construction Contracts Information System (CCIS)	Structural Inspection Laptop Program (SI.net hake Map (UofW)/Bridge Damage
Consumable Inventory System	Task Order (130-010)
Content Management Server (CMS)	Traffic & Weather Portal Website (RWIS/Rweather)
Contract Administration and Payment System (CAPS)	Traffic Accident and Roadway Information System (TARIS)
Coop Planning	Transportation Asset Reporting and Tracking System (TARTS)
Credit Card Services (CCSV)	Transportation Executive Information System (TEIS)
Data Card Group, ID Works	Transportation Reporting and Accounting Information System (TRAINS)
Diskeeper Administrator	Washington Bridge Inventory System (WSBIS)
Electronic Bid System (EBIDS)	Washington State Aviation System Plan
Employee Phone Book	Web EOC
Environmental GIS Workbench	Work Order Authorization (WOA)
Financial Information Retrieval System (FIRS)	Automated Operations Support System (AOSS)
Fleet Equipment Management Interface (FEMS)	EPI Suite
Fleet Equipment Management System (FEMS)	Maintenance Management System
Force Account	Material Management System (MPET)
Human Resource Management System	Vigilos
IT Contracts	Computer Aided Dispatch
Labor Collection / Payroll Expenditure Reporting	

In addition to this list are seven applications which are integrated creating an inter-related 'Critical Application' system. These systems constitute the Department's primary financial management, timekeeping, program management, project management, and asset management systems. Performing a range of business functions for the Department including needs identification and project prioritization, development and monitoring of the Department's capital construction program, asset management, project management, procurement, management of the revenue cycle, and financial reporting and general ledger. The Critical Applications project was able to complete the feasibility study during the '07-'09 biennium, however, the remaining phases of the project were not funded. Due to Washington State's financial climate, WSDOT will continue to maintain these critical applications in their current development platform. WSDOT OIT will continue to plan for the necessary upgrade in order to bring these systems into a development platform which can be maintained more efficiently and accessible by the current technical equipment.

Hardware

WSDOT has mainly Intel based desktops across the agency running Windows XP or Windows 7 connecting by twisted pair cabling to the WSDOT data centers. Throughout the state, the various data centers are connect using Fiber optics, creating the WSDOT WAN (Wide Area Network). WSDOT servers run on the Microsoft platform and are scattered through various data center locations throughout the state. In addition to the servers, WSDOT supports one primary data center in Olympia, which runs both the servers and a mainframe.

WSDOT Data Center Facility

The WSDOT main datacenter facility located in the Olympia Headquarters building hosts the following critical functions in an integrated and collaborative manner to maximize the benefits of common infrastructure and support services.

- Headquarters Emergency Operations Center (EOC)
- Information Technology Operations Center (ITOC)
- After Hours Service Desk
- Mainframe Services
- Server Services
- Network Services
- Voice Services

The HQ Data Center's raised floor area (floor tile raised above the subfloor which allow network cables, power cables and air coolant usage in square feet) has a total of 6,329 total square feet. The raised floor area is utilized by the following:

- 2,415 occupied by EOC/ITOC
- 3,118 occupied by IT Equipment
- 796 available for usage

Service Availability

System availability has been maximized by implementing cost effective system redundancy and failover features that all services depend upon to maintain exceptional service levels.

- After Hours Service Desk: A Help Desk is available 24x7 and support staff is on-call 24x7 to ensure high availability of services.
- Critical Applications: Critical applications are distributed across multiple hardware instances to eliminate single points of failure.
- IT Equipment: IT computer equipment components are powered by multiple circuits and a power distribution unit to ensure high quality power.
- Power: All computer equipment is fed by an Uninterruptable Power Supply (UPS) that has two fully redundant battery arrays, each with a 45 minutes battery life.

- Power Backup: The facility has a dedicated generator that is capable of running a minimum of 72 hours before refueling. If an extended outage should occur, on-site fuel deliver has been contracted.
- Cooling: The facility has a dedicated cooling system with a backup system available incase of failure.
- Fire Suppression: The facility has a fire sprinkler system installed exclusively to protect the EOC, ITOC, and After Hours Service Desk areas. A Halon fire suppression system is installed to protect the remaining IT equipment.

All of the services hosted in the ITOC and EOC require the highest level of availability and have benefited from its excellent performance record.

Security

Facility security is integrated with the agency-wide security system and managed cooperatively by WSDOT Space and Lease Management Office and the Office of Information Technology. The ITOC and EOC is vital to WSDOT's business, and the following measures have been employed to secure it:

- Multiple points of access control are enforced throughout building and facility.
- Access is restricted by use of a card-key system and photo identification.
- Authorization requires written approval from management.
- The security system is hosted in this facility and access is tightly controlled.
- All visitors are required to sign in with date, time, and reason for visit. All visitors are escorted by an IT sponsor.

The IT Operations Center security conforms to the Information Services Board standards and maintains the confidentiality, integrity, and availability of data. To date, there have been no instances of failure in this regard.

Emergency Operations Center and Information Technology Operations Center Collocation

The Headquarters (HQ) Emergency Operations Center (EOC) and the Information Technology Operations Center (ITOC) are co-located in the Data Center and the critical functions of both areas are hosted in an integrated and collaborative manner to maximize the benefits of common infrastructure and support services. Jointly building the HQ EOC and ITOC where technologies are shared collaboratively is WSDOT's "OneDOT" approach to successful problem solving through collaboration.

HQ Emergency Operations Center

The HQ EOC is the coordination and resource support structure that directs, monitors, and supports the Department's actions before, during, and after a significant event that impacts the transportation system or a component of the system. The role of the HQ EOC during emergencies and disasters is to provide a forum at which information and coordination can be centralized so that we can form a common operational picture that includes situational awareness. With this information the HQ EOC is able to update the executive staff, local jurisdictions, and the public with ongoing incident status, as well as:

- Provide statewide overview of incidents as needed;
- Provide enhanced management of resources during an incident;
- Efficiently manage the information flow between personnel on scene, WSDOT HQ executive management, the State EOC, the media, and the public.
- Collect and document information related to the incident including events occurring during the incident; impacts to the highway system (i.e. bridge washout); actions taken by WSDOT personnel (i.e. road closures, detours); resources (i.e. trucks, people, deicers) utilized during the incident; weather conditions contributing to the impact of the incident; communications with the media and the public

- Supports any major incident and/or disaster in the State of Washington by coordinating resources and information throughout the six WSDOT regions, and Ferries and Aviation divisions.
- Work in direct coordination with the State Emergency Management Division and the State Emergency Operations Center at Camp Murray to support the functions of transportation and aerial search and rescue.

Information Technology Operations Center

The ITOC provides an after-hours service desk as well as the following services:

- Monitor the health of the mainframe, servers, and network infrastructure.
- Monitor the health of web and mainframe applications.
- Monitor the health of the datacenter facilities including cooling, fire suppression, utility power, UPS, motor generator, and security.

Mainframe

In December 2010, WSDOT replaced its mainframe and storage subsystem with a new IBM z10 2098-E10 model H01 mainframe and IBM DS6800 storage subsystem. The new mainframe is rated at 78 Million Instructions per Second (MIPS) and has a full capacity zLinux engine. The new disk storage is rack mountable and configured for 1.2 Terabytes (TB) of useable storage. A new mainframe was acquired for the following reasons:

- Positions WSDOT for the next seven to ten years.
- Provide a solid platform for WSDOT's critical legacy applications. WSDOT still runs seven of the 11 original critical applications on the mainframe.
- Utilize new mainframe technologies. Mainframe is configured with an Integrated Facility for Linux (IFL)
- Provides significant cost savings with a payback of only 18.6 months and a five-year cost savings of $412,255.

Network

WSDOT has a complex and widespread configuration of wide area and local area networks to serve internal and external customers. The major components of the WSDOT network include:

1) WSDOT Data Network;
2) the WSDOT Voice and Video Network, and
3) WSDOT Traffic Networks.

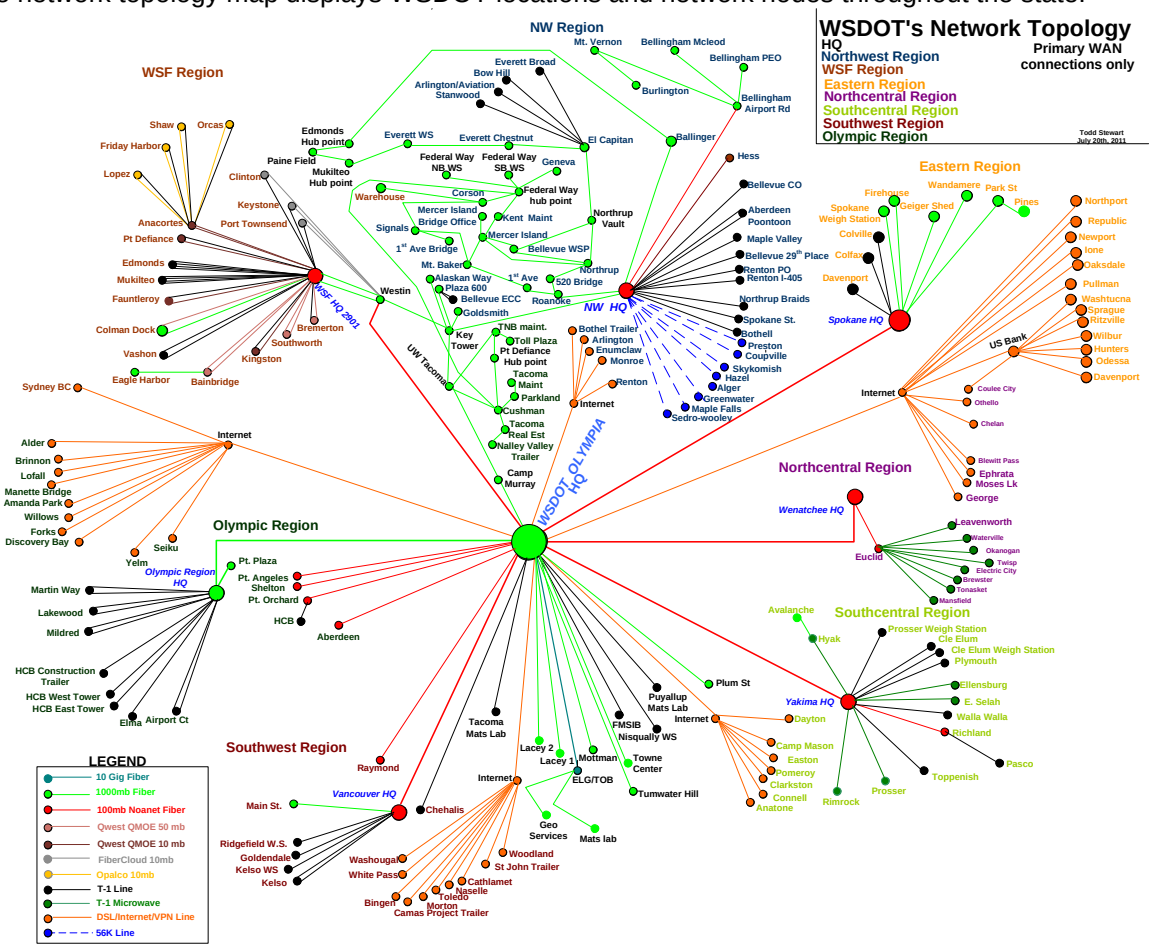
The WSDOT network environment is based primarily on Microsoft Windows and uses TCP/IP as the primary network protocol. A description of the major components is provided in Section 3.

IT Locations

WSDOT IT has two central locations, Tumwater and the other at the Olympia Transportation Headquarters building. WSDOT IT has additional distributed locations at each of the 6 regions and Ferries division to serve the agency's business. The locations are as follows:

- Headquarters (Olympia includes ELG building in Tumwater) – supporting the agency infrastructure (network, mainframe, servers) services, applications, field services, enterprise architecture and planning.
- Northwest Region (Shoreline)
- Ferries Division (Seattle)
- Eastern Region (Spokane)
- North Central Region (Wenatchee)
- South Central Region (Yakima)
- Southwest Region (Vancouver)
- Olympic Region (Tumwater)

The network topology map displays WSDOT locations and network nodes throughout the state:



Who is Doing the Work

The Office of Information Technology (OIT) is the core technology service provider for the Department of Transportation. Technology services are managed and maintained by OIT and provide essential support for the agency statewide. Services provided include all facets of technology such as, infrastructure/ networks, mainframe operations, web operations, technology equipment, statewide business applications, desktop services and support, technology strategic planning and governance.

Subprogram C1 Business and Administration — 13.3 FTEs

Provides the executive management of Information Technology and the C program. Key activities:

- IT Director; IT Planning & Administrative Operations Management
- IT Communications
- Customer Relationship Management
- Strategic Planning
- IT Key Performance Indicators, Measurements and Tracking (IT Dashboards)
- IT Portfolio Management and Technology Governance
- Performance Reporting
- IT Administrative Support
- IT Accounting Support (Program C)
- IT Budget Support (Program C)
- IT Prompt Pay Initative

Subprogram C2 Field Services — 108.3 FTEs

Provides strategic and operational coordination in support of the statewide infrastructure backbone along with region and ferries technology activities. Key activities:

- Application Deployments
- Level Playing Field (LPF) Software Support
- Workstation Configuration and Security
- Software Upgrades & Maintenance Releases
- Hardware Upgrades and Replacements
- IT Help Desk
- Disaster Recovery
- HQ Desktop Services

Region IT (includes Ferries Division) (FTE count included in total for subprogram C2)
Includes regional Information Technology support. Key activities:

- Local Area Network and Server Planning
- Region Computer Equipment Purchase Planning
- Region Help Desk Administration
- Region Software Technical Support
- Regional Application Deployment
- Local Area Network, Server Installation & Support
- Computer Workstation Installation & Support

Subprogram C3 Infrastructure Services — 39.6 FTEs

Provides enterprise management and operational support for mainframe operations. Key activities:

- Mainframe Operations
- Network Planning & Operations
- Server Management and Support
- LAN/WAN Design
- Voice/Video Planning, Design & Operations
- Voice Help Desk
- Network Security Operations

Subprogram C4 Enterprise Implementation — 7.9 FTEs

Provides consulting, business analysis and project management knowledge, expertise and methodology for Information Technology Projects. Key activities:

- IT Project Management Guidelines & Policy Integration
- Project Planning/Scoping
- Project Management
- Project Tracking & Reporting
- Change Management
- IT Customer Consulting and Business Needs Assessment
- Build/Buy Analysis & Recommendations
- Project Post Implementation Reviews
- Enterprise Architecture

Subprogram C5 Enterprise Application Services — 44.9 FTEs

Provides application and Tier 3 application support for enterprise applications. Key activities:

- Application Development
- Application Enhancements
- Application Maintenance
- Tier 3 Application Support
- Product Support
- Software Testing & Quality Assurance

Subprogram C6 Software Maintenance — 0 FTEs

Provides budget codes for software maintenance agreements, contracts, and subscription services.

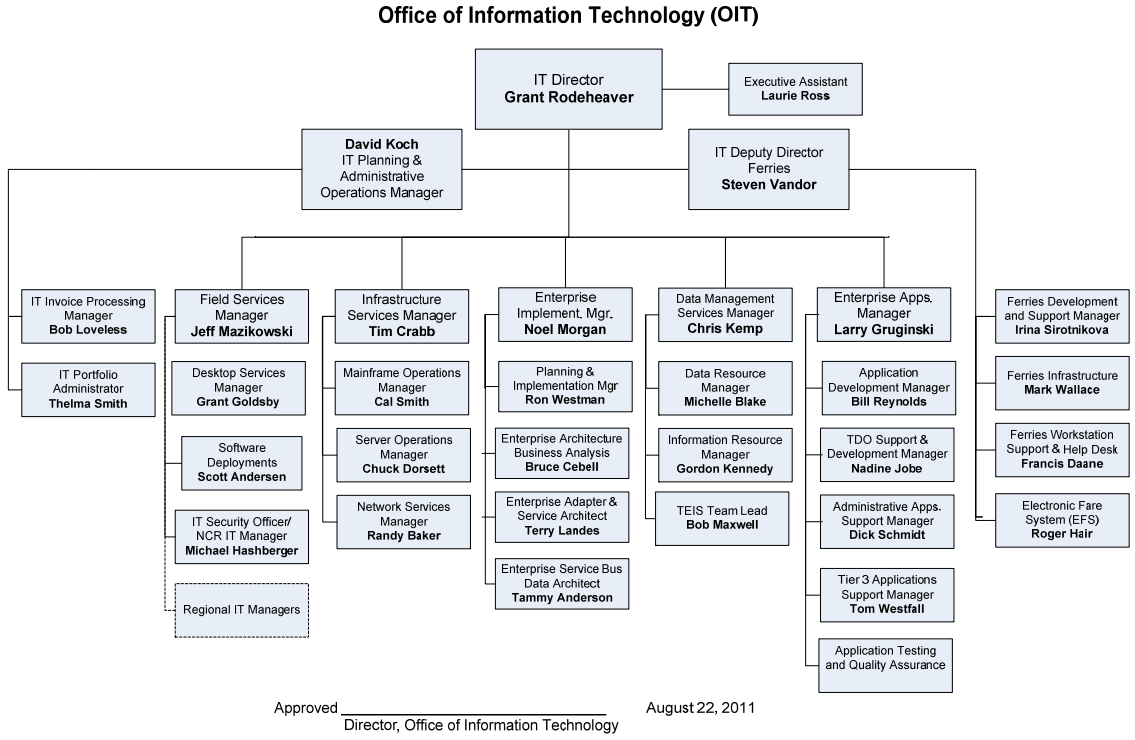
Subprogram C7 Data Management Services — 17.4 FTEs

Provides data management support for Enterprise. Key activities:

- Data Analysis and Modeling
- Data Mart Development and Support
- Data Administration
- Customer Query Tool Support/Datamart Administration
- Data Security Administration
- Data Storage & Capacity Planning
- Data Catalog Administration

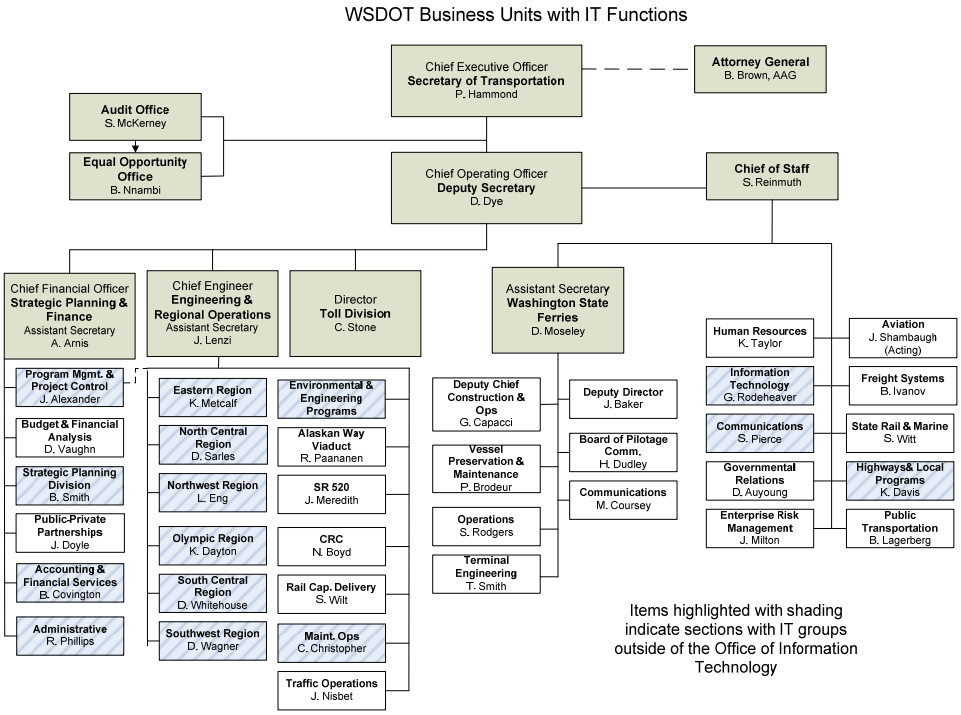
In addition, there are a number of other IT specialists employed in business units that are funded under program budgets. Budget reductions in the C program will directly impact on OIT's ability to meet mission requirements.

IT Organizational Structure



IT organizations and business units with IT groups are shown on the following chart in gray with bars. The Office of Information technology includes the regional IT support groups.

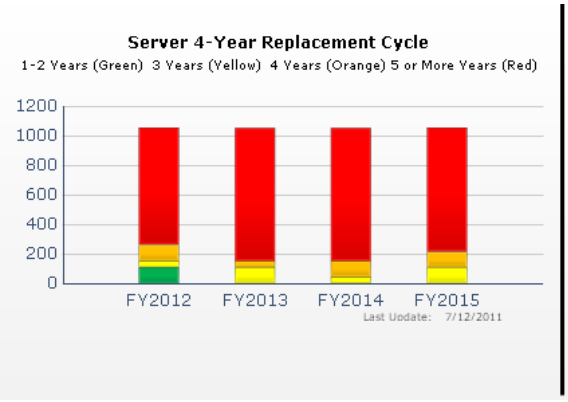
IT Organizations

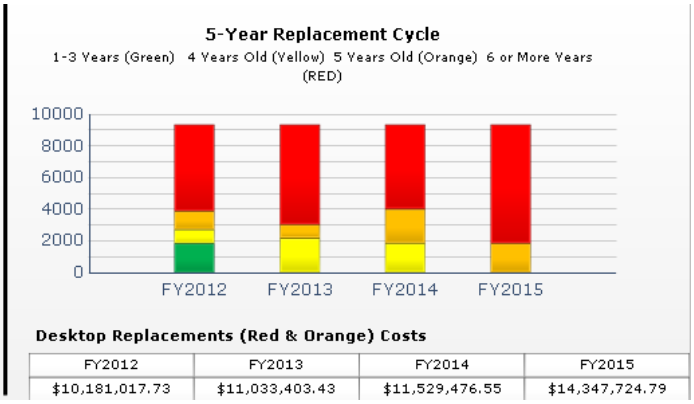


E. Analysis

The Office of Information Technology (OIT) enables the use of technology throughout WSDOT. OIT is responsible for the management of the department's technology program and provision of all core technology services.

The department's technology usage has shown dramatic growth over the last decade. Even with an expected dramatic drop in FTE due to a drop in construction projects, WSDOT's need for technology continues to grow. WSDOT OIT continues to innovate with solutions such as server virtualization to cut down the costs of hardware and support while providing better service in the area of recovery. This innovation has compensated for the inability to replace equipment on the 4-year lifecycle schedule. With these innovations, the limitations to funding continue to impact our ability to replace the PC's on a 5-year lifecycle.

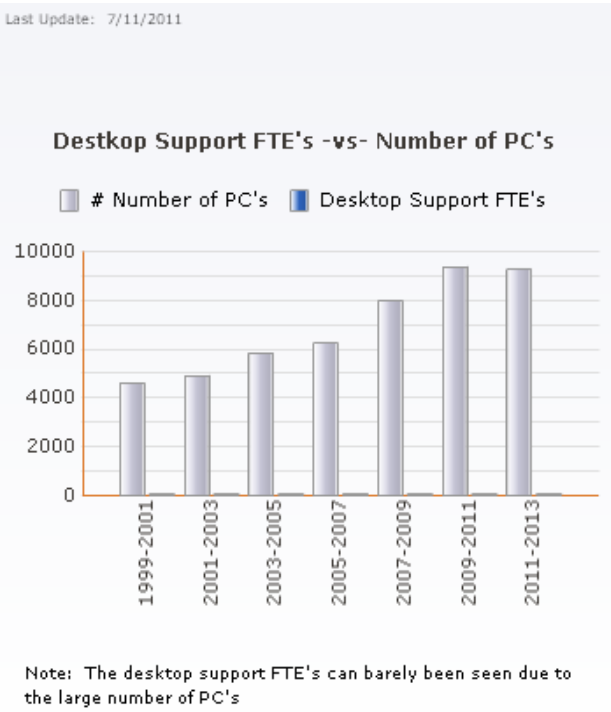




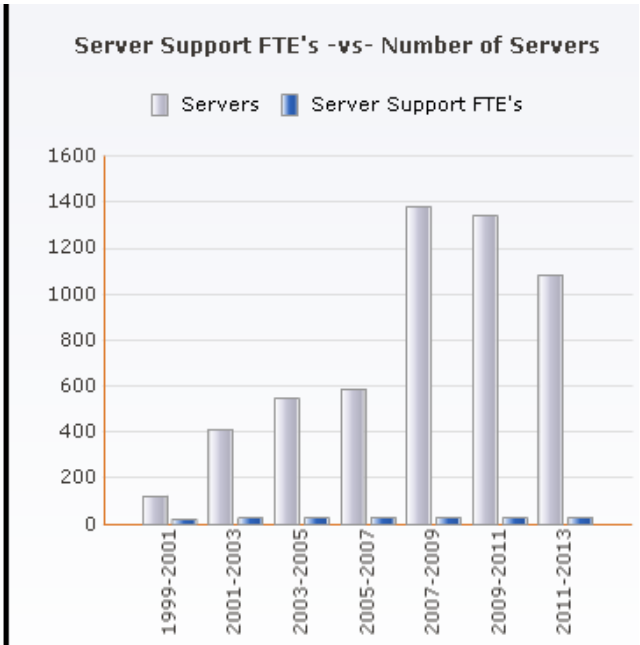
Desktop Replacements (Red & Orange) Costs

FY2012	FY2013	FY2014	FY2015
$10,181,017.73	$11,033,403.43	$11,529,476.55	$14,347,724.79

WSDOT's dependency on desktop hardware relates directly to the number of support staff necessary to maintain the desktops. The following two charts are examples of the growth in hardware to be supported and that the growth expected in FTEs proportional to the amount of equipment growth has lagged considerably behind.



Note: The desktop support FTE's can barely been seen due to the large number of PC's



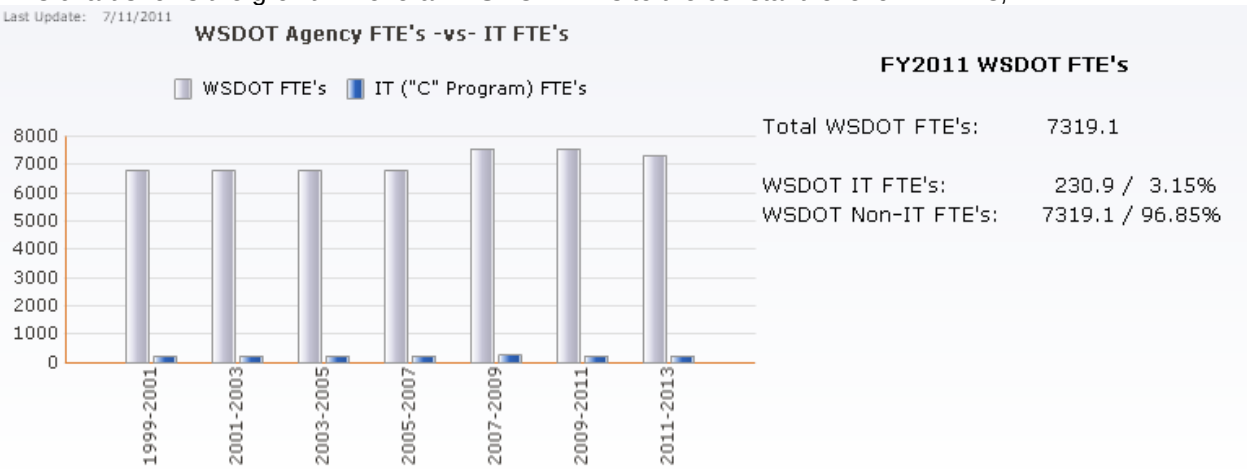
Server Totals include both Physical and Virtual Servers.

WSDOT has also continued to increase its *online* presence to deliver vital services to the traveling public on the web such as construction project reports, traffic camera images, travel time forecasts and pass information, to name just a few of the services provided. These have quickly become essential services to the public — not just nice to have. Technology is at the bedrock of WSDOT work and services. It takes a reliable network of hardware, software and technology professionals to keep the systems, services and supporting infrastructure running to support WSDOT business needs. Investments in personnel need to grow proportionally to the amount of hardware and software being maintained.

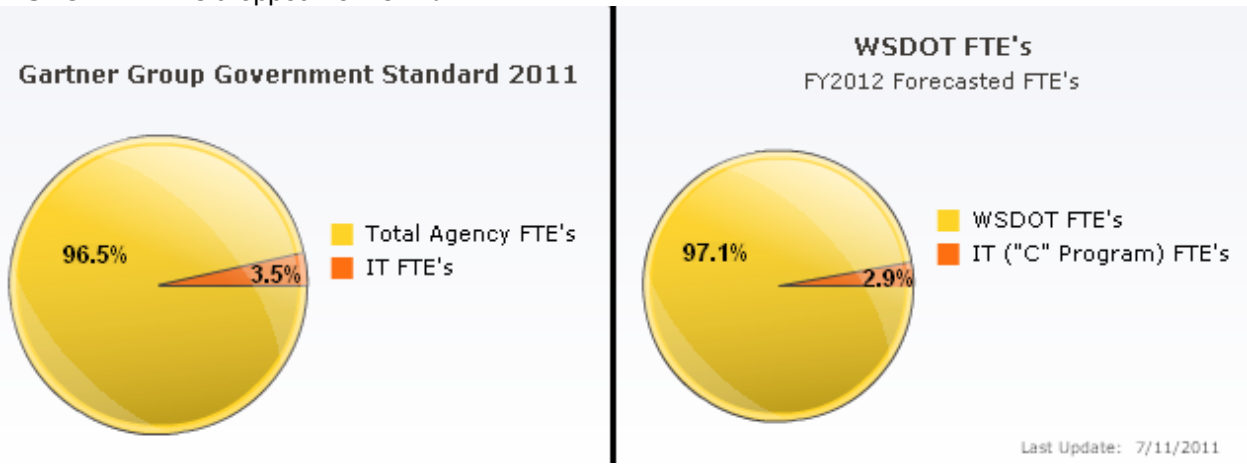
F. Challenges and Opportunities

As the agency's workload increases due to the demands of implementing the $15 billion capital construction program, Legislative changes in the current and previous Biennium, (ESSB 3871), Furlough bill (SSB 6305), Temporary Compensation Reductions for State Employees (SB 5860), Streamlining central service functions (ESSB 5931) and Hiring freeze bill are impacting all core technology services. Technology resources are finite and have not increased correspondingly with the department's growth and project delivery demands. In addition to this legislation, the equipment purchase freeze has resulted in restricting the replacement of equipment to when the equipment is unusable. The restriction of replacement has moved WSDOT IT out of the preventative planning, to reactionary task responsive.

This chart shows the growth in overall WSDOT FTEs to the constant level of IT FTEs;



These two charts depict the ration of WSDOT FTEs to C Program IT FTEs and the Gartner average for state government. The Gartner Group Standard for IT FTE's dropped from 5% while the percentage of WSDOT IT FTE's dropped from 3.2%.



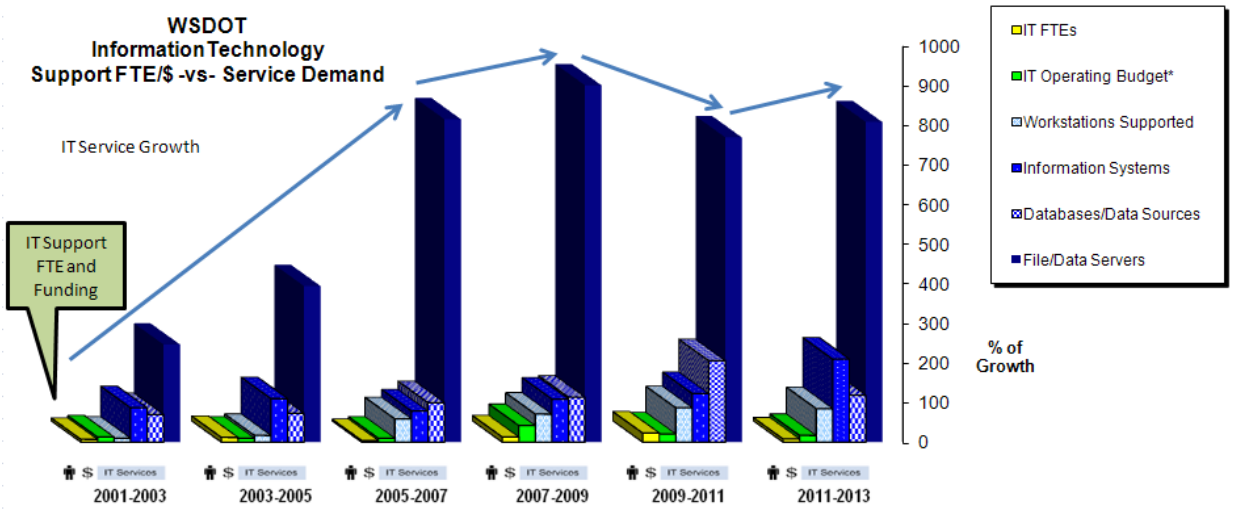
*Gartner offers the combined research capability of 1,200 research analysts and consultants who advise executives in 75 countries every day. Gartner publishes tens of thousands of pages of original research annually and answer 200,000 client questions every year. They are a world recognized company for IT research.

Challenges faced by WSDOT IT

The other challenges facing the Office of Information Technology include;

- Providing technology services on an aging infrastructure where growth is outpacing the ability to meet demand. Funding cuts for IT infrastructure have resulted in an inability to maintain the current level of support. Workstations which were slated for replacement on the expanded 5-year lifecycle fell short in FY11. OIT continues to manage dramatic increases in workload while meeting the operational demands of delivering comprehensive core technology services for the agency. Utilizing virtual technology platforms has helped in the shortfall as we strategize how to meet the increasing needs of WSDOT without the support through funding.
- Balancing the agency's technology support needs while delivering WSDOT's new technology initiatives. The following initiatives were highlighted in the WSDOT 2008 IT Portfolio. The results of the '09-'11 budget reductions continue in the '11-'13 biennium:
  - Critical Applications Modernization & Integration Strategy - **not funded '09-'11**.
  - Enterprise Architecture Program – **not funded '09-'11**
  - Statewide Government Network (SGN) Reconnect– **not funded '09-'11**
- Ensuring WSDOT can adapt and use the best of rapidly changing technologies while meeting the agency growing business needs and technology service demands. This includes key agency technology capabilities such as Tolling, Web Services (traffic cameras, traveler information), Data Security, Network Access/Connectivity, Voice/Video technologies and Geographic Information Services.

Statistically, since 2002, OIT staff has reduced the number of budgeted FTE's in the C Program by 11 positions. During this period the number of PC's, Applications/systems and database continue to soar. Efficiencies have allowed OIT to reduce the number of Servers using virtual services. The following chart provides service growth and infrastructure requirements since 2001;



What WSDOT IT Needs to Succeed

Success for information technology is measured by how effectively and efficiently IT organizations meet the needs of their constituencies, either internal or external. From a financial perspective, information technology success is focused on Cost Effectiveness – How efficiently the IT organization use IT expenditures, and Value – The value information technology provides to the agency. However, IT **must be funded adequately** to be cost effective and to provide increasing value. Extended under-funding will, in the long term, reduce cost effectiveness and value to the agency. The current underfunding will result

in old software that fails to work and old hardware that is obsolete. The results of this decline in capability will ultimately result in citizens losing confidence that WSDOT can support their needs.

Success is also measured by the ability of information technology organizations to provide quality services, the effectiveness of the service delivery, and overall customer service and satisfaction. From a customer and constituent perspective, information technology success is focused on:

- ability of IT organizations to provide dependable, accurate, and consistent product/service delivery;
- ability of IT organizations to provide prompt product/service delivery and to engage in continuous communication; and
- the ability of IT organizations to meet customer and stakeholder expectations.

Efficient service delivery and customer satisfaction are the results of the ability of IT organizations to identify key processes at which they must excel and then to monitor those processes to ensure that outcomes will be satisfactory. The use of the OIT dashboards is contributing to this management capability. From the internal process perspective, Information Technology success is focused on: infrastructure planning, acquisition, operations, and maintenance; application planning, integration, acquisition/development, testing, support, and maintenance; data consistency, availability, reliability; project management; and productivity tools available and used. Two of these processes requiring immediate attention is effective prioritization of investments/projects to deal with competing demands for limited IT resources and obtaining the funding necessary to replace workstation equipment to get back onto the 5-year replacement cycle. Based upon a 5-year replacement cycle, which IT was not able to fully met in the FY2011 and the projected costs to return to the state standard of a 5-year cycle for all agency PC's, there will be long lasting impacts to the IT Budget.

Processes will only succeed if adequately skilled and motivated staff supplied with accurate and timely information, are driving them. Additionally, executive management must take a key role in the prioritization of IT projects. In order to meet changing requirements and customer expectations, staff may be asked to take on new responsibilities, and may require skills, capabilities, and technologies that were not available before. From an innovation and learning perspective, information technology success is focused on: **Training** - Ability of staff to support accomplishment of organizational goals; **Innovation** - Quality of information technology solutions; and **Organizational Alignment** - Effects of IT organizational alignment in accomplishment of organizational goals.

Opportunities for Data or Resource Sharing

WSDOT currently shares GIS, Accident, Environmental, Real Estate, and other data with other state and local government entities, as well as actively participating and providing layers of GIS data to the inter-agency portal. Additional opportunities for data sharing should be exploited with improved data standards and procedures, as well as additional funding for staff and other needed resources.

Internal data sharing continues to thrive through datamarts. By creating data warehouses of information, multiple systems can contribute to the data and staff can use cubic drill-down reports or features to retrieve linked data. Since 2002 with the CPMS datamart, the need to interconnect database information into data marts has resulted in 15 datamarts which tie multiple systems worth of information into useable reporting options without creating additional collection systems.

How WSDOT Contributes to the State IT Plan

WSDOT develops IT plans within the context of the Washington State IT Strategic Plan. Wherever it makes business sense, WSDOT takes the opportunity to support the state IT strategic planning effort. In addition, WSDOT contributes to the establishment of statewide direction by participating on various statewide focus groups. Examples of the support WSDOT provides to the state is participation in the:

- State Enterprise Architecture Committee (WSDOT CIO is on the committee)
- State IT Portfolio Manager's Group (working on a better way of building the state IT Portfolio)
- State E-mail Shared Services Group
- State Workstation Shared Services Group

WSDOT is currently working to implement network, server, data, and security changes that support WSDOT's ability to securely process credit card transactions. In order to securely process credit cards WSDOT must comply with Payment Card Industry (PCI) Data Security Standards (DSS). PCI DSS is a very specific compliance program requiring an intense manpower effort and substantial financial investment in order to potentially meet the 30 September 2011 target date. Our efforts to establish our Multiprotocol Label Switching (MPLS) are progressing, we have purchased network equipment to establish the MPLS network, servers and other equipment and security software have been purchased and we are working to complete installation. We have acquired a Qualified Security Assessor (QSA) to assist WSDOT in our efforts to finalize designs and help with configuration issues. WSDOT is working towards a September 30th 2011 compliance date.

G. Solutions: Current & Future IT Investments
How Challenges Will Be Addressed

Challenges will be addressed by integrating project delivery information systems, revitalizing application development, strengthening infrastructure security, enhancing network reliability, consolidating data management, providing a new focus for project management, reducing the cost of hardware, and enhancing software management. OIT will continue to search for ways to reduce costs while improving services. Specifically OIT will:

- Continue to **standardize** where appropriate and use economies of scale to gain efficiencies in technology service delivery, statewide.
- Implementation of industry **best practices** in service management including resources management, resource use and planning. Implement effective software tools to support service delivery and management objectives.
- Effectively **communicate agency technology needs** in the legislative forums and utilize the supplemental and biennial decision package processes to request funding in support of priority technology initiatives.
- Continue to monitor and **manage projects** through the OIT Project Management Office with reporting to agency executives. This is in conjunction with the oversight and monitoring of large, complex projects provided by DIS and the ISB.
- Make the **best use of limited FTEs** to support the new technology initiatives.
- Use contract staff to **supplement** WSDOT resources.
- Continue to implement a supporting **technology foundation** to reduce the cost of change will support the agency's existing business applications and newly developed systems such as the Critical Applications Replacement Project.
- IT has implemented the DIS recommended 5-year replacement cycle for PC's which have a short-term effect on IT budget challenges. Long term, this will create financial impacts to the agency including the inability to upgrade software. This will impact IT projects such as the Windows 7/Office 2010 upgrade project, due to the limitations of the aging hardware. WSDOT IT is working on a plan to move to upgrade PC's as quickly as the funding will allow.
- Maintain an Information Technology **organizational structure** that can support agency's priorities and have long-term sustainability.
- Invest in **staff development**, training and core competencies.
- Implement **software tools** to help improve efficiencies in program delivery.
- Investment in e-tools, e-learning and remote computing
- Increased use of **virtual servers** and desktops
- Increased monitoring and identification of KPI's, focusing on areas which have opportunities for improved service delivery.

Current "In-development" Projects Overview

Investments / projects enable WSDOT to meet the demand for IT beyond the ongoing IT services. Current investments/projects (funded & ongoing) are listed below. For additional information see Section 4 of this portfolio.

Investment/Project	Oversight Level
Tolling & Statewide Tolling Customer Service Center	Level 2 Oversight
Washington State Roadway Toll Systems (405 & 99 Tunnel)	Level 2 Oversight
Ferries Vehicle Reservation System (Presented to ISB on 7/8/2010)	Level 3 Oversight
Ferries Division Enterprise Security System Upgrade (ESSU)	Level 2 Oversight

Planned Investments/Projects Overview

Planned Investments/Projects are projects that have not yet started but initial work has started to define the project and where appropriate obtain investment approval. Planned investments/projects are found in section 5 of this portfolio.

11-13 Biennium Projects	Oversight	Status
Tolling (Hwy 405 & Hwy 99)	Anticipated Level 3	Not Started
Enterprise Time and Attendance system ETAS (in coordination with OFM/DES)	Anticipated Level 3	Not Started
Stormwater Permit Compliance	N/A	Not Started

Non-funded Future Investments/Projects	Oversight	Status
Critical Applications Replacement Project	Pending Oversight 2	NOT FUNDED
Traffic Operations Performance Monitoring & Management System	Pending Oversight 2	NOT FUNDED

H. Prioritization Process

Screening criteria and prioritization criteria are used to prioritize IT investments. Screening criteria include strong executive support, clear alignment to agency goals, clear benefits for completing the project or acquisition, and the probability of success given the current IT environment. The initial screening of projects or investments will take place with the WSDOT Executive Team.

For IT work requests, the business sponsor will submit a Pre-Project Analysis Report (PPAR). The PPAR requires signatures from the office level director, assistant Secretary, and the OIT Director as a means to establish executive support for effort being proposed. The business sponsor will submit this to the project management office which will assign a business analyst to the project and take the project initiation request to the Project Review and Prioritization meeting. The business analyst will meet with the business to prepare a Project Summary statement, identify the high level background requirements, scope, objectives and the vision/goals prior to starting the project and assigning a Project Manager.

Prioritization criteria include strategic alignment, business value, probability of success, maintainability, urgency, and funding. WSDOT uses a Severity and Risk Assessment matrix and the Investment Plan to set prioritization. A Level 3 or a particularly challenging level 2 ranked project in the Severity & Risk assessment evaluation will cause a project to "float to the top" of the prioritization. Likewise any project that has a legislative mandate driving it, or proviso funding attached will also raise to the top of the prioritized list.

The WSDOT IT Director meets bi-weekly with the Project Management Office Manager and weekly with his Executive Team to review prioritization and align new investments opportunities with the business priorities.

2 - WSDOT Strategic Business Plan

"No duty the Executive had to perform was so trying as to put the right man in the right place."
--- Thomas Jefferson

The WSDOT Strategic Business Plan allows the Office of Information Technology (OIT) to ensure that current and proposed technology investments are aligned with the WSDOT business vision for the future and directly supports WSDOT business processes. The strategic direction in WSDOT is laid out in the ***Business Directions: WSDOT's 2011-2017 Strategic Plan.*** For an electronic copy of the complete WSDOT Strategic Plan, visit the WSDOT Internet page on accountability at: http://www.wsdot.wa.gov/Accountability/PerformanceReporting/StrategicPlan.htm. A summary of key parts of the plan and the alignment of IT strategic planning is contained in this section. This information has been included in the IT portfolio to help strengthen the bond between the agency's use of technology and its mission, strategies, and business processes.

Performance reporting is provided quarterly in the WSDOT Gray Notebook in support of the WSDOT Strategic Business Plan. In turn OIT evaluates the IT Strategic Plan on a quarterly basis.

WSDOT Mission

WSDOT's mission is to keep people and business moving by operating and improving the state's transportation systems vital to our taxpayer and communities.

WSDOT Strategic Plan

Business Directions: WSDOT's 2011-2017 Strategic Plan identifies the agency management principles, strategic initiatives, and activities to be carried out.

Management Principles

- Safety – Health and safety of citizens and employees.
- Project Delivery – Quality, lowest total cost, and highest return of value.
- Accountability and Management – Responsibility, efficiencies, leadership.
- Communication – Listen, clarity, sharing.
- Innovation, Best Business Practices, Efficiency, and Effectiveness – Cost effective and efficient transportation systems.
- Strategic Long-Term Investment Program – Preservation and improvement.
- OneDOT and Partnerships – Unified organization building coalitions for today and tomorrow.
- Environmental Commitment – Protect and improve.
- Excellence and Integrity – Professionals working together with all with honesty.

Primary Business Goals

WSDOT business objectives directly support the Governor's Priorities of Government, specifically "Improve the Mobility of People, Goods and Services" and the Legislature's statewide policy goals established for all transportation agencies. The Secretary of Transportation's defined primary business goals are found in the DRAFT WSDOT 2009-2015 Business Directions document included in this section.

The primary goals are:

- **Safety**: Vigilantly reduce risks and increase safety on all state-owned transportation modes; reduce fatalities and serious injuries; assist local communities in identifying effective solutions to transportation safety needs
- **Preservation**: Catch up with all necessary maintenance and preservation needs on existing highways, bridges, facilities, ferry vessels, airports, and equipment, while keeping pace with new systems additions.

- **Mobility**: Move people, goods, and services reliably, safely, and efficiently, by adding infrastructure capacity strategically, operating transportation systems efficiently, and managing demand effectively.
- **Environment**: Protect and restore the environment while improving and maintaining Washington's transportation system.
- **Stewardship**: Enhance WSDOT's management and accountability processes and systems to support making the right decisions, delivering the right projects, and operating the system efficiently and effectively in order to achieve the greatest benefit from the resources entrusted to us by the public.

WSDOT IT Strategic Planning

The WSDOT IT Strategic Plan supports the WSDOT Strategic Business Drivers. The Draft IT Strategic Plan for '09-'15 is below to provide business users an understanding of how OIT will meet their business requirements over the coming biennia. The plan for '09-'15 takes a more inclusive view than a standard strategic plan. The working plan below includes current operations and projects, near term objectives (tactical plan) and the traditional long term or strategic plan. The IT plan links IT objectives by number to WSDOT business driver objects. The plan provides action steps and responsibilities for achieving current, near term, and future objectives. It includes information as to '11-'13 decision package submissions. The strategic plan is scheduled to be updated during the last quarter of 2011.

IT Tactical Plan (2013-15)

The IT Tactical Plan identifies the strategic goals for the 13-15 biennium. These goals and performance measures were identified for the 11-13 biennium, but due to the state's financial crisis, the operational plan continues for another biennium while both the tactical and strategic plans must be moved one biennium out. Here are the goals and objectives as identified by the IT Executives:

GOALS	Objectives	Strategies	Action Steps	Performance Measures
1) Manage information systems required to support the agency's operational and strategic objectives (What we have).	1. A. Provide IT Infrastructure that supports agency business requirements. (1.7(b), 2.5(c), 5.3)	1. A.1. Determine optimal equipment replacement cycles. (Servers, network, PCs). (DP '11-'13)	c. Determine risk assessment criteria for keeping equipment beyond expected lifecycle.	Conduct risk assessment.
			d. Target replacements towards specific projects. Target Business Areas to co-sponsor our DP. (i.e., CMS, SWAMP, ECM, PCI Compliance, etc) * DP could include network equipment and regional equipment (hardware, software and staff). Note: Cross sectional projects need additional PM planning.	DP submitted
		1.A.2.B: Plan for implementation of SQL 2010		
		1.A.3. Migrate CMS to SharePoint 2010	Develop evaluation and migration plan.	Deploy SharePoint 2010 if it is the best technical solution

	1. B. Provide networks for voice and data communication. (1.8, 2.12, 5.3)	1. B.3. Connect to the SGN	c. State Government Network (SGN) Re-connect project with DIS. (July 2012 is deadline to have everything ISB compliant.)	Correct security issues for ISB
			d. PCI Compliance deadline is ASAP. PCI Compliance is on-going with yearly reviews.	PCI compliance
		1.B.4. Deploy a Hub and Spoke Topology for availability, throughput and functionality.	Request from Ferries for mesh network for funding 12-16. Need a whitepaper/ DP. (Murry Larson bill)	Establishment of a redundant network capability for Ferries.
	1. C. Ensure critical systems and services to support WSDOT business needs are available in a disaster. (1.8)	1. C.1. Ensure a comprehensive DR plan is in place, understood, and updated annually or as changes take place.(Applications, infrastructure, data) Whitepaper based on emergency operations	c. Establish DR mission requirements, staff requirements & define positions.	White paper and DP submitted '11-'13.
			d. Partner with Customers on DR. Target with specific business programs to support DR.	
			e. Align with COOP plan Emergency operations and DR.	
			g. Consideration of Union Gap as a facility	
			h. Review the order of applications to restore within DR.	
			i. Provide and maintain an emergency data repository for emergency Operations Center (EOC).	Date repository available and updated as required.
	1. D Provide up to date and documented policies, standards, and procedures. (5.3)	1. D.1 Operate with current policies, standards & procedures.	a. Review policies, standards, and procedures as required.	All standards are updated as required.
2) Provide technology services and tools that support and maintain agency operations and project delivery goals.(What we provide)	2. A. Implement industry best practices for continuous improvement in service management and delivery. 5.3	2. A.1. Implement ITIL staffing, processes & procedures	b. Determine which best practices fit WSDOT IT	# of best practices being developed to the # being used.
			c. Determine training requirements for IT personnel on ITIL	# of personnel trained on ITIL versus the # IT personnel assigned.
			d. Document system	# of

			dependencies (The CMDB incorporates the interdependences as well as the COOP, DR, Security & Portfolio.)	dependencies documented
			e. Develop a draft service catalog (staffing, equipment, services, overhead functionality, etc) for the agency.	
			f. Time & Task Management reporting is needed to determine the resource matrix for estimating and who is spending time on which systems/programs. Whitepaper on system	
			g. Develop SLA's after implementation to identify the maintenance costs (staff, equipment, software, etc).	
	2.B. Maintain a trained, knowledgeable, and qualified staff.5.5	2. B.1. Develop career paths for ITS levels.	c. Document standard procedures (desk manuals or online standard procedures for every position.)	# of procedures documented to # not documented
		2 B 2. Train Developers to .Net Framework 3.5 & w/Windows Identity foundation (or recruit employees with these skills).	a. Develop plan for implementation of .NET Framework 3.5, Windows Identity foundation and migration of current .NET applications.	Plan for Training staff in current technology.
			b. Plan for training developers on .NET framework 3.5 and Identity foundation.	
			c. Add to development standard.	
		2. B.3. Develop a succession plan with cross training requirements.	a. Publish plan with cross training requirements. <u>*Note:*</u> Succession plan is emergency replacement for a position. <u>*Note:*</u> Developmental plan is planning for future skill sets and positions for supporting new services.	Plan is updated as personnel change in OIT and new personnel are cross trained.
			b. Organizational structure with staffing plan is needed for HR. Identifying the appropriate staffing model for supporting our services.	Review and update OIT organization.
			c. Creating structure around making changes to the staffing model. And communicating the changes along with the decisions for the new staffing model. (Equity issues which effect morale.)	Change organization as required.

	2. C. Continuously optimize quality, effectiveness & efficiency of infrastructure, systems, and services. 2.10, 3.4, 5.3		b. Implement contacts similar past Acct. Executives process (concept) -	Requires additional FTE's for single point of contact. Current collection of business needs is being done informally with Application Developers and Desktop support staff.
			c. Develop the Account Executives planning template on duties / responsibilities and objectives.	
			d. Identify the current staff assignments with the customers. (Which staff are working with which customers and on which area of IT) (Tim C.)	
		2. D.4. Develop a project prioritization process.	a. Implement & document a project prioritization process. Review the priority process (from the CAG) and update as needed.	% of projects that have gone through the prioritization process.
			b. Get executive approval for process (Every charter has assistant secretary and management approvals.)	Priority process approved by executive team.
	2.E. Provide timely, consistent information to WSDOT about our IT assets, systems and services.5.3, 5.10(b)	2. E.1. Ensure alignment of data with key business areas.	b. Establish Data Stewardship Council.	Date reinstated and meetings actively underway.
			c. Data Sharing agreements process needs to be documented and communicated. DRM works with Contracts staff for external data sharing agreements.	Date agreement process is approved.
			d. ISB recently adopted new data standards and data modeling structures. Need to verify alignment with new standards and participate with this group.	Date verification is complete. (this appears to be current ops)
		2.E.2. Plan for replacement of Hyperion for Data Warehouse Users (Needed due to	a. Develop a timeline for the replacement project.	Date plan is complete.

		replacement by Oracle of Hyperion with another product.)	b. Initial planning for replacement 2011-2013.	
	2. F. Identify technology that enhances the productivity of every WSDOT employee. 5.10(b)	2. F.2. Provide IT training to WSDOT	a. Deploy on-line training for ITE-Learning tools	Number of personnel trained using E-learning
		2. F.3. Provide a "self-service" process for routine IT needs of employees	a. Establish on-line support to resolve end-user problems. (Better service at less cost!)	# of issues resolved
			b. Building up the "How-to" and knowledgebase system within Remedy for those items which the customer can do for them-selves on-line.	"How to library", other methods provided
			c. Research tools available for self-service. (i.e., resetting passwords, scheduling phone bridges/go-to meetings, etc., that results in reducing IT costs.)	
	2.G Provide IT security for WSDOT IAW new Standards by 2012	2.G.1 Provide WSDOT plan to ensure compliance – agency wide by July 2012	b. Determine composition of the initial response team to handle malicious code attacks (ISB requirement)	Team established
		2.G.3 Execute plan to ensure Security Standards are met	a. Execute to plan	Compliance by 2012
		2.G.4. Implement IBM Mainframe Security Migration (ACF2 -> RACF)	a. Conduct needs assessment for how much longer a mainframe will be needed. b. Develop plan and white paper for migration for consideration.	Conduct an assessment of services including feasibility study, CBA, business plan and staffing plan for Mainframe (sustainability plan) in 2011-2013. Include alternative options such as migrating to SQL, Intel based ADABAS, etc.
3) Develop and maintain IT that is reliable, adaptable, scalable, and	3. A. Provide a robust and agile architecture to meet current and future needs of WSDOT in support of business initiatives.	3. A.1. Continue Enterprise Architecture (EA) program. Supplemental FY 10 being submitted to continue	a. Implement Service Oriented Architecture (SOA)	Scope, schedule, & budget met by EA.

driven by WSDOT business requirements.(How we move forward)	2.12, 3.5	program at a reduced level.	b. Maintain alignment with DIS compliance and industry practices.	Web Service registry has been created and needs on-going updating.
			c. Interface with DIS services and standards. in the.	Include infrastructure group with service bus or other services such as integration with DIS.
			d. In partnership with OFM, pilot the implementation of a Enterprise Time and Attendance System (ETAS) replacement -Phase 1 Ferries.; Phase 2 agency-wide.(Need whitepaper)	Develop solution for ETAS (in tactical plan).
			e. Research the possibility of purchasing a SAP software package for support of SOA.	Start defining the interfaces to WSDOT core systems.
			f. Develop and implement Phase I of a Transportation Asset Management System (TAMS)	Implementation of Phase I solution (in tactical plan)
			g. Submit Whitepaper for TRIPS – the next generation see 3.A.2)	TRIPS scope, schedule, & budget met per project plan. DP '11-'13) (included in TAMS DP 3.A.1.e)
		3. A.4. Improve business partnership with various organizations to better coordinate future IT requirements for any other IT providers in WSDOT.	a. Establish agreements with other IT agencies (MOUs, SLAs, OLAs) with appropriate organizations.	# of agreements signed versus # to be signed.
			b. Align with GIS, CAE, TDO, Maintenance & Operations, MATS lab and regional areas within WSDOT.	# of agreements signed versus # to be signed.
		3. A.6. Evaluate the viability of one Enterprise Content Management (ECM) system.	a. Select possible ECM solutions (use of enterprise Stellent agreement?)	One ECM system selected if business requirements can be met.
	3. B. Provide innovative IT solutions to provide personalized access for customers (to include the public).	3. B.1. Investigate state-of-the-art technology that provides information portal for all. WSDOT Portal and roaming profiles (WSDOT employee) and personalized profile on the public intranet for a personalized experience..	a. Set up team with charter, members, and executive oversight. Move to Strategic plan (2013-2015)	# of innovative solutions adopted versus explored

	3. C. Provide IT systems that support green initiatives and responsible stewardship of the environment. 4.1, 4.3	3. C.2. Increase public availability of transportation information on the web.	d. Ferries Reservation Project (Terminal configuration and signage. Phase 1 complete in early 2011-13.)	Scope, schedule, & budget
	3. D. Develop a comprehensive process for developing and sustaining the C program budget.5.5	3. D.1. Work with WSDOT Budget Office to document current processes.	a. Document what is C program funded and what isn't	Date of documentation of C program funding
			b. Follow process to adjust base budget.	Date process for adjustment is published
	3.E. Identify new and existing tools/ applications developed by industry that may meet WSDOT business requirements.2.12, 5.3	3.E.1. Establish GIS Server environment and governance	a. Develop Enterprise design of GIS. (Effort being led by Mark Finch, Rich Daniels, Alan Smith)	
			b. Develop white paper to enhance our GIS environment for staffing and software licensing.	
		3.E.2.. Evaluate the use of "cloud" computing	Evaluate & Implement services TBD Improve Web Availability FTP Storage Archive	
	3. F. Review all applications (other than 14 critical apps) and determine replacement requirements. 2.12, 5.3	3. F.1. b. Develop list of applications for decommissioning and develop plan for replacing old technology. (Dust off the Y2K plan / process for decommissioning applications and update for current operation / maintenance best practices.) (application cut-over must include data migration!)	a. Replace or decommission aging applications	Number decommissioned
			c. De-commission Cold Fusion – decommission old applications no longer in use.	Develop de-commissioning plan for Cold Fusion with Jeremy.

IT Strategic Plan (Beyond 2015)

The IT Strategic Plan identifies the strategic goals for beyond 2015. These goals and performance measures are:

GOALS	*Objectives*	*Strategies*	*Action Steps*	*Performance Measures*	*Baseline*
1) Manage information systems required to support the agency's operational and strategic objectives (What we have).	1. B. Provide networks for voice and data communication. (1.8, 2.12, 5.3)	1.B.1 Maximize benefits of mobile technology	a. Develop data policy and direction for supplying the public with mobile data availability. (Our data in a consistent format for others to develop I-apps.)	Develop policies for Grant to move forward to Assistant Secretaries.	
			b. Determine IT policy decision and strategic direction on developing Mobile application platforms internally to WSDOT.		
	1. C. Ensure critical systems and services to support WSDOT business needs are available in a disaster. (1.8)	1. C.1. Ensure a comprehensive DR plan is in place, understood, and updated annually or as changes take place.(Applications, infrastructure, data)	c. Train all IT on existing plan. MOVE TO 13-15	% trained	5%
2) Provide technology services and tools that support and maintain agency operations and project delivery goals.(What we provide)	2. A. Implement industry best practices for continuous improvement in service management and delivery. 5.3	2. A.1. Implement ITIL staffing, processes & procedures (Endorse ITIL by an office IT Project with resources & Project Manager.)	a. Determine staff requirements and submit decision package for an ITIL project manager and support resources to get ITIL up at WSDOT.	Date staff hired.	
GOALS	*Objectives*	*Strategies*	*Action Steps*	*Performance Measures*	*Baseline*
3) Develop and maintain IT that is reliable, adaptable, scalable, and driven by WSDOT business requirements (How we move forward)	3. A. Provide a robust and agile architecture to meet current and future needs of WSDOT in support of business initiatives. 2.12, 3.5	3. A.1. Continue Enterprise Architecture (EA) program. Supplemental FY 10 being submitted to continue program at a reduced level.	f. Develop and implement Phase II of a Transportation Asset Management System (TAMS) Move to strategic plan. (Depending on funding)	Implementation of Phase II (in tactical and Strategic Plan)	
			g. Develop and implement with OFM an integrated Enterprise Resource Planning	Requirements definition and acquisition planning activities (in tactical and	

			(ERP) System for state WSDOT as lead for state Move to strategic plan. (in partnership with OFM.)	strategic plan)	
		3.A.2 Update Core WSDOT Systems following EA established principles for applications, data, and integration.	a. Replace 14 critical applications Except for trips and 2 others (LRS & ?) move to strategic plan.	TRIPS scope, schedule, & budget met per project plan. DP '11-'13) (included in TAMS DP 3.A.1.e)	
			b. Consistent with funding align current & future financial applications with OFM Roadmap in identified phases and in coordination with the OFM Roadmap for financial systems and 2.12	# of financial applications aligned with OFM Roadmap	0%
			d. Phase replacement of critical applications that are not on the OFM Roadmap. Move to strategic Plan.	# of critical applications that are scheduled that are not on the OFM Roadmap.	
	3. B. Provide innovative IT solutions to provide personalized access for customers (to include the public).	3. B.1. Investigate state-of-the-art technology that provides information portal for all. WSDOT Portal and roaming profiles (WSDOT employee) and personalized profile on the public intranet for a personalized experience..	a. Set up team with charter, members, and executive oversight. Move to Strategic plan (2013-2015)	# of innovative solutions adopted versus explored	
		3.B.2 Embrace Web 2.0-Social Networking - Instant mgs sag/lvl - Facebook - Twitter - Blog - Other? Integrate into business	Develop policy and standards for adding social networking capabilities as needed for supporting WSDOT Business. Incorporate security, business usage issues and producing litigation	SAO has given responsibility to individual agencies for policy. Additional CAL's needed for Web 2.0. Allowing blogging discussions from external sites which are being used for legislative decision	

			reporting.	package decisions.	
GOALS	*Objectives*	*Strategies*	*Action Steps*	*Performance Measures*	*Baseline*
GOALS	*Objectives*	*Strategies*	*Action Steps*	*Performance Measures*	*Baseline*
		Train Staff on Service-Oriented Architecture – Design & Build	Plan for training developers on SOA.	Plan for Training staff in current technology. Need follow-up session to discuss COTS/independent platform principles to agree upon.	
		Productionalize UDDI 3 (Universal Description, Discovery and Integration) for cataloging web services	Plan for Training staff in current technology.	Need follow-up session to discuss COTS/independent platform principles to agree upon.	
			Identify the WSDOT IT development strategy and direction.	Prioritize any platform independent scripting language and UDDI 3 standards prior to training.	
		Train staff on a standard, platform independent scripting language (PHP or Ruby)	Plan for training developers on platform independent scripting language.	Plan for Training staff in current technology. Need follow-up session to discuss COTS/independent platform principles to agree upon.	
GOALS	*Objectives*	*Strategies*	*Action Steps*	*Performance Measures*	*Baseline*

3 – 2010 Technology Infrastructure

"I do not fear computers. I fear the lack of them."
--- Isaac Asimov

The Technology Infrastructure section defines the current inventory of systems, defines their functionality, describes the architecture and provides the core of IT capacity for the current period. It also addresses operating environment requirements including planning related to IT security and continuity of operations planning (COOP), business continuity (BC), and disaster recovery (DR). It also includes an inventory of specific components in the agency's IT infrastructure.

An agency's technical infrastructure is a platform for future technology investments and a constraint limiting the investments that can be cost-effectively pursued. Failure to continually update infrastructure/equipment replacement in a timely manner will result in an increase of obsolete systems on platforms that are only maintained at a very high and increasing cost. This section of the portfolio provides a convenient reference for executives engaged in planning and managing the agency's use of IT.

A. Current and Projected Budget

These tables show the combined IT Budget for the Office of Information Technology, Washington State Ferries, and Regional IT. This budget is administered under program C. The budget does not include the Business Unit IT budgets.

	Hardware Purchase/ Lease	Software Purchase/ Lease	Hardware Repairs/ Maintenance	Software Enhancement/ Maintenance
FY 2007 Actual	5,078,300	1,134,143	5,298	4,914,525
FY 2008 Budget	5,450,000	0	0	4,213,000
FY 2008 Actual	2,972,321	1,193,484	9,810	4,046,538
FY 2009 Budget	7,734,000	0	0	4,381,000
FY 2009 Actual	4,624,954	1,024,933	42,455	7,655,967
FY 2010 Budget	4,169,000		1,228,000	3,895,000
FY 2010 Actual	4,441,975	356,965	740,822	4,377,473
FY 2011 Budget	7,275,000	See Note below	987,000	2,838,000
FY 2011 Actual*	4,494,466	360,466	979,380	4,061,126
FY 2012 Budget	4,240,813	340,800	707,272	4,179,233
FY 2013 Budget	4,211,878	338,474	702,447	4,150,717
FY 2014 Budget*	4,200,000	325,000	705,000	4,500,000

* *Note: FY2011's increase in budgeted hardware is a combination of: The "Replace Ferries Ticketing Equipment" and "Network Security for Credit Cards" provided in the 2010 Supplemental Budget account for the majority of increase ($1.7 million).*
* *FY2011's Software Purchase/Lease budgeted amounts have been merged with the software Enhancement/Maintenance object codes due to the amount of data entry necessary by the budget staff in creating the budget. The Software Purchase/Lease expenditures will be broken-out to this category upon purchases.*
* *WSDOT does not at the time of this IT Portfolio planned for the FY2014 budget. Figures used are estimates based upon trends.*

Continued from previous page:

	Telecomm	Data Processing Services (DIS)	Other Major IT Expenses	Total Agency IT Budget
FY 2007 Actual	1,521,065	283,244	1,184,931	34,927,660
FY 2008 Budget	1,465,000	180,000	722,000	41,375,000
FY 2008 Actual	1,272,927	236,244	553,848	36,969,127
FY 2009 Budget	1,725,000	217,000	852,000	45,445,000
FY 2009 Actual	570,961	305,127	801,477	45,699,469
FY 2010 Budget	1,007,000	248,000	565,000	37,804,000
FY 2010 Actual	822,837	201,488	825,184	37,610,238
FY 2011 Budget	1,229,000	238,000	773,000	37,880,000
FY2011 Actual	898,860	216,830	416,861	35,639,728
FY 2012 Budget	785,574	192,363	787,814	35,907,000
FY 2013 Budget	780,214	191,051	782,439	35,662,002
FY 2014 Budget	775,000	185,000	775,000	37,115,000

B. IT Personnel

The tables show IT Personnel for the Office of Information Technology, Washington State Ferries, and Regional IT. The table does not include FTEs working on IT activities in various Business Units.

	Salaries & Benefits	Personal & Purchased Services	Professional Development of IT Staff	Total Agency IT FTEs
FY 2007 Actual	17,635,863	3,549,767	356,319	222.3
FY 2008 Budget	24,621,000	4,385,000	339,000	249.4
FY 2008 Actual	21,690,960	4,573,366	419,629	235.0
FY 2009 Budget	25,025,000	5,049,000	462,000	254.4
FY 2009 Actual	22,737,416	7,728,121	208,058	243.8
FY 2010 Budget	23,295,000	3,243,000	154,000	239.3
FY 2010 Actual	23,412,915	2,322,140	108,438	243.7
FY 2011 Budget	23,364,000	987,000	189,000	234.3
FY2011 Actual	22,770,315	1,289,438	151,986	227.5
FY 2012 Budget	22,352,625	2,216,979	130,527	226.8
FY 2013 Budget	22,200,109	2,201,852	102,821	226.8
FY 2014 Budget	22,400,000	2,100,000	115,000	215.5

C. Personal and Workgroup Computing

WSDOT will be at our 5-year replacement cycle by June 2011. However, due to freeze on equipment purchases and the state's financial crisis, these may not all get replaced. The current refresh cycle is 48 months for laptops and 60 months for desktop equipment purchase freeze may prevent WSDOT from meeting the cycle. Due to the state's financial crisis, some of WSDOT's PC's maybe forced into a 6 year or older replacement cycle.

PC's, Laptops and Tablets

FY	Total Agency FTEs	Total PCs	Planned PC Replacements FY12	Refresh Cycle	PCs Donated to Schools
FY2007	7575	7961	3980+	48 months	
FY2008	7575	8573	2050+	48 months	
FY2009	7585.5	9441	2050+	48 months	
FY2010	7507.13	9366	3510	48 months laptops / 60 months PC	
FY2011	7278.7	9270 Total	3499	48 months laptops / 60 months PC	1092 PC's were donated in FY11 for a total potential cost savings to Schools of $ 1,836,229 WSDOT has surplused 5830 PC's to Schools since 2000
FY2012 Planned	7182.3	9270	839	48 months laptops / 60 months PC	WSDOT's policy is to surplus the majority of our equipment to GA
FY2013 Planned	7182.3	9270	839	48 months laptops / 60 months PC	WSDOT's policy is to surplus the majority of our equipment to GA

Platform and P-25 Compliance

Only 2% of staff have access to the DIS backbone due to business requirements. The additional information required by DIS for the IT Portfolio which doesn't fit in other sections of this report include the Network operating system, desktop office suite and P25 compliance Radios:

% of WSDOT with inside WA Access	2%
WSDOT Primary Network Operating System	Windows 2003 R2 (Note: WSDOT is in the process of migrating all the servers to Windows 2008 R2 expected completion 12/2011)
WSDOT Desktop Operating System	Windows XP
WSDOT Desktop Office Product Suite	Office 2007
WSDOT XML Enabled?	Yes
WSDOT Radio's with P25 Compliant	2
WSDOT Radios without P25 Compliant	4560

WSDOT is working on an implementation plan for Windows 7 to start sometime in second quarter FY2011 and completed by the end of the calendar year 2011.

Servers

This year's reduction in the number of physical servers being used can be directly related to continuing efforts by staff in all regions to decommission servers running unused services, consolidation, and migrating older physical machines to WSDOT's virtual server environments. There have been major efforts agency wide to improve storage and virtual environments that will allow WSDOT to further decrease the amount of physical servers agency wide. The OIT goal for virtualization of servers in the regional headquarters was 50% by the end of FY 2011 which was exceeded. Starting FY2012, the HQ percentage was 58%, well on the way to reach the goal of 60% by the end of the fiscal year.

Replacing existing physical servers with virtual servers will allow the agency to avoid spending money on new server equipment with the added benefit of saving money on power and cooling costs. Additionally, there will be significant savings in server licensing since WSDOT will not require as many licenses that are currently maintained. Over the next 5-10 years the cost avoidance for IT will be found in these areas.

Additionally savings will be realized by the consolidation of OR, MATS, and GeoService severs in the HQs Data Center.

Fiscal Year	Server Type	Total Number of Servers	Total Number to be replaced	Total Number to be Added	Factors Driving Server Acquisition Strategy
FY2007	Physical Servers	985	200	100	New business applications need for infrastructure elements not provided in existing configurations, i.e. web enabled applications
	Logical Servers	106		100	
FY2008	Physical Servers	1003	200	100	
	Logical Servers	190		100	
FY2009	Physical Servers	1131	40	20	A reduction in the amount of servers being used can be directly related to efforts to decommission servers running unused services, consolidation, and migrating older physical machines to WSDOT's virtual server environment. Looking forward WSDOT will further decrease the amount of physical servers. The agency's existing virtual environment currently has the ability to host roughly another 100 servers. Over the course of the next biennium WSDOT will be upgrading our existing storage and further enhance our virtual server hosts.
	Logical Servers	249			
FY2010	Physical Servers	1036	30	20	This year's reduction in the amount of servers being used can be directly related to continuing efforts by staff in all regions to decommission servers running unused services, consolidation, and migrating older physical machines to WSDOT's virtual server environments.
	Logical Servers	304			
FY2011	Physical Servers	575	63	20	This year's reduction in the amount of servers being used is based upon WSDOT IT's strategic plan to decommission servers running unused services, consolidation, and migrating older physical machines to WSDOT's virtual server environments.
	Logical Servers	508			
FY2012 Planned	Physical Servers	500	20	10	
	Logical Servers	608		100	
FY2013 Planned	Physical Servers	450	20	10	
	Logical Servers	630		22	

Servers: Continued from previous page

	FY 2010	FY 2011
Microsoft Server 2000	64	30
Microsoft Server 2003	833	808
Microsoft Server 2008	5	36
Microsoft Server 2008 R2	0	16
	902	890

Active Directory Domains Servers	FY 2010	FY 2011
WSDOT.LOC	1030	988
WEBDOT.PUB	58	82
DOTT.LAB	18	27
WSDOT-INTER-AGY.PUB	12	12
	1118	1109

Virtual Server Assets	FY 2010	FY 2011
Virtual Hosts	40	38
Virtual Servers	249	304
Agency Virtual Server Percentage	22 %	29.3%

For detailed information on servers contact the WSDOT OIT Server Operations Manager.

Networks

The WSDOT network environment is based primarily on Microsoft Windows for servers and workstations and uses TCP/IP as the primary network protocol. A brief description of the major components follows.

WAN

The Washington State Department of Transportation has an extensive data transmission system to meet its internal operational needs for information sharing between its offices across the state. The data network is the WSDOT communications medium used primarily for file and print services, electronic mail, calendaring, document transfer, Client/Server systems, file transfer, and mainframe access. The WSDOT network backbone consists mostly of Cisco routers/switches and Enterasys switches.

Internet access is provided to WSDOT through the DIS. A few outside devices, from both the Internet and from other state agencies, are allowed to connect directly to any machine within the WSDOT class B address via a secure encrypted pass through of the firewall. Email, HTTP, and FTP (pull only FTP) connections are allowed through the WSDOT firewall.

The backbone of the WSDOT network is a WAN that connects the Olympia headquarters building to about 235 (this changes often as offices are moved/added/deleted) offices including six Regional Headquarters sites, and the Ferries Division (FD) facilities. The network backbone infrastructure is based on Cisco routers/switches and legacy Enterasys switches with a combination of dedicated Ethernet 10/100/1000 mb and T-1 point to point circuits to all regional headquarters, and a mix of T-1 point-to-point (P2P) and T-1 Frame Relay (FR) circuits to all Project Engineer and non-maintenance satellite offices. Area Maintenance Offices are currently also connected via DSL, Cable, T-1 P2P, and T-1 FR from Qwest, Century Tel, Verizon and various third part Telecommunications vendors. DSL and Cable connections are used with IPSEC VPN to provide secure access to the DOT network over the Internet. The WAN is also the communications medium used for access to mainframe and Client/Server applications, Email, calendaring, document transfer, and file transfer.

Communications for all of the services offered on the network are vital to the business operations of WSDOT and depend heavily on the availability and reliability of the Wide Area Network.

WSDOT Regional Local Area Data Network

There are six Regional Headquarter sites (not including Ferries Division) which vary in size. Each Regional Headquarters acts as a hub for the portion of the WAN that it serves. The regional network infrastructure is based on Cisco routers/switches, Enterasys switches, and various Intel server platforms operated and administered in concert with OIT Infrastructure Services. Network topologies include 10BaseT, 100BaseT, 1000BaseT, Switched 56K, T-1 P2P, FR T-1, Ethernet fiber, and Spread Spectrum Radio components. WSDOT OIT centrally contracts, manages, and arranges installation and supports 56K, T-1 P2P, FR T-1, Fiber and other transmission modes to remote offices. Local Area Network (LAN) cabling ranges from Category 3 to Category 7 and supports 10/100/1000 MB twisted pair Ethernet services to workstations and other nodes on each LAN.

Region Traffic Systems Network

The Traffic Management Centers (TMC) in region headquarters operate a network application for several traffic management systems. The Northwest Region network application operates over 100 miles of optical fiber on Interstate 5, Interstate 90, Interstate 405, and SR 520 and SR167. Near-term projects will expand the coverage in many of the other regions, specifically Southwest, Olympic, North and South Central combined and Eastern. The traffic management system consists of the following components:

- Fiber connected cameras (700+) used for traffic management, emergency services and for the public at large. Public images are presented to the wsdot.wa.gov web page and update every one to five minutes. They are also used by the news agencies for traffic information to the public.
- A series of loop detectors (counting devices) imbedded in the roadways at one-half mile intervals on major Seattle area freeways.
- Optical fiber cables for transmission of loop sensor data to a central computer at the Traffic System Management Center.
- A VAX 6420 minicomputer to process the traffic data.
- A workstation gateway between the VAX minicomputer and other workstations that dial in to get traffic data, which is subsequently displayed, in graphical format.
- A set of traffic management system file servers.

The information generated by this system goes to the public via WAN to the Internet, television and radio stations, the Seattle Times information line and WSDOT traffic information numbers as well as directly into malls and major employment sites throughout the region.

Voice and Video Network

WSDOT has its own PBX and video conferencing infrastructure linking most of the major sites in Washington. A separate network of T-1 links handles voice and video transmissions between locations with “Voice over Frame” and “Voice over IP/Data Network” available between regional HQ sites and the Transportation Building.

D. Geographic Information Systems (GIS) Resources

WSDOT’s GIS is a collection of people, data, computers, software products and applications. WSDOT’s GIS supports a broad environment of GIS training and technical support, mapping tools, data stewardship, spatial analysis, cartographic production and application development. GIS enables the mapping and spatial analysis of our transportation system and the surrounding landscape. GIS provides desktop, server, mobile and web environments which enable the integration, storage, analysis, and presentation of data that describe the transportation system, how it is used, its condition, and how it performs. GIS is an information analysis tool for discovering issues and making decisions about the management of the transportation network and its assets that are necessary for successful transportation planning, and efficient use of public resources. The data, applications, cartographic and geoprocessing services, maps and reports produced by our GIS facilitate the Agency’s communication and public involvement efforts and help foster understanding and support from our customers.

WSDOT strives to bring together accurate, up-to-date, geographic information and spatial analysis tools in an easy to use format thereby increasing the efficiently of WSDOT’s ability to identify the best

transportation solutions, develop programs that can be delivered on time and on budget, track assets, operate the system efficiently, and communicate internally and externally to the public. GIS directly contributes to WSDOT's safety, preservation, mobility, environment, and stewardship goals.

WSDOT GIS delivers accurate, up-to-date, geographic information and spatial analysis tools together in an effective product. To improve WSDOT's ability to identify the best transportation solutions, deliver projects on time and on budget, track assets, operate the transportation system, and communicate internally and to the public. GIS directly contributes to WSDOT's strategic planning, maintenance and operations, system management, mobility enhancement, emergency operations, environmental stewardship and public communication goals.

Staff

Staff Location/WSDOT Division	Number of GIS Staff (FTEs)	Indicate here if included in Total Agency IT FTEs
Central Support (OIT)	5	Yes
Program Area Support (GIS & Roadway Office)	15.5	No
Program Area Support (Materials Lab)	1	No
Program Area Support (Environmental)	3.5	No
Program Area Support (Public Trans)	1	No
Program Area Support (Traffic)	1	No
Program Area Support (NW Region)	0.5	No
Program Area Support (South Central Region)	1.5	No

GIS Software

Product Name	Vendor Name	Number of Licenses	Number of Installations Workstation	Number of Installations Server
ArcView 3.21	ERSI	9	9	
ArcInfo Concurrent Use Licenses	ERSI	20	25	
ArcEditor Concurrent Use Licenses	ERSI	2	2	
ArcView Concurrent Use Licenses	ERSI	78	1820	
ArcEditor Single Use	ERSI	2	2	
ArcView Single Use	ERSI	32	32	
ArcGIS Server Advanced Enterprise	ERSI	4		4
ArcGIS Server Advanced Enterprise Staging	ERSI	2		2
ArcGIS Server Standard Enterprise	ERSI	7		7
ArcGIS Server Standard Enterprise Staging	ERSI	1		1
ArcGIS Server Basic Enterprise (a.k.a., ArcSDE)	ERSI	5		5
ArcIMS	ERSI	3		2
Motorola GeoFile Utility	PRINTRAK	1		1
Advanced Tactical Mapping	PRINTRAK	2		2

Hardware

Operating System Platform	Hardware Type	Number
Intel based/Windows XP or Windows 7 configured for WSDOT Level Playing Field software	Desktops - deployed ArcGIS	1820
Microsoft Windows NT Server 5.2	Geodata Catalog Servers	10
Microsoft Windows NT Server 5.2	ArcGIS Server Basic Enterprise	5
Microsoft Windows NT Server 5.2	ArcGIS Server Standard Enterprise	8
Microsoft Windows NT Server 5.2	ArcGIS Server Advanced Enterprise	6

Is this included in Total PCs?	Yes
Is this included in Total Servers?	Yes

Major GIS Applications

Name	Description
GIS Workbench	The GIS Workbench is a custom ArcGIS extension that presents menus of data from the WSDOT GeoData Catalog, and custom tools that have been tailored for defined business areas. GIS Workbench (GISWB) is designed to serve all business areas of WSDOT without having to spend resources to create separate GIS applications for each group or business area. Currently the GISWB contains seven business areas (BA) with customized views of the WSDOT GeoData Catalog. • Environmental BA, owned by Environmental Services Office, provides access to data and tools that support project environmental review, documentation and permitting processes. • Transportation Data Office BA, owned by the Transportation Data Office, provides access to data collected by TDO as part of their ongoing roadway inventory programs. • Facilities BA, owned by the Equipment and Facilities Office, provides access to data and tools that are used to assist in the location, identification, and management of WSDOT owned or maintained facilities across the State. • Transportation Analysis BA, owned by Systems Analysis and Program Development, provides quick access to corporate engineering data required for high-level scoping and design decisions. • Emergency Operations Center BA, owned by Emergency Operations, provides access to data commonly needed in the event of local and regional emergency situations. • Northwest Region, owned by the NW Region Maintenance Office, provides access to Region specific GIS data and is used to support the Regions' on-going maintenance operations. • Geotech BA, owned by the Geotechnical Services, provides access to data needed by geotechnical engineering and engineering geology specialists to support the design, construction, and maintenance needs of the state's transportation system.

Construction Impact Analysis (CIA)	The Construction Impact Analysis (CIA) application provides internal GIS maps and tools for analyzing construction project work in terms of location and time so WSDOT can more effectively keep people and goods moving while completing construction projects.
Highway Activities Tracking System Mobile (HATS Mobile)	HATS MOBILE is a combination of two independent applications which support the M & O inspection efforts. The two applications have parallel functionality in terms of walking maintenance staff through various required steps as they perform an inspection. The handheld PDA application has the additional functionality of allowing field crews to see previously collected features on a map, to inspect the attributes of those existing features. Field crews can enter new features into the database either by using SRMP text input, or by getting a GPS x/y coordinate of the new feature.
Integrated Vegetation Management	Integrated Vegetation Management is used to manage control programs for nuisance and noxious weeds. WSDOT HQ Maintenance staff use the system.
Monument Map Engine	Monument Map Engine provides WSDOT engineers and the public access to a database of geodetic survey monuments via an Internet map.
Roadside Feature Inventory Program	RFIP is an enterprise program for collecting, storing and reporting roadside features such as guardrails, culverts, signs, objects in clear zones, and other features.
Spatial Web Services	These GIS web services can be used by software application developers in order to perform spatial tasks. X/Y coordinates can be converted to nearest state route mile post, accumulated route measures can be converted to X/Y, line features can be created along state routes. These, and additional, services can be used to build more complicated tools within an end-user application.
Stormwatch	Stormwatch allows WSDOT to manage snow removal during storm events. The system provides for tracking of weather and road conditions along with snow plow routes.
Traffic Planning Trends	This application displays Annual Average Daily Traffic (AADT) volumes maintained by the Washington State Department of Transportation (WSDOT) for the State Highway System. This application replaces the Annual Traffic Trend (ATR) report that was discontinued in 2008.
Transportation Mapper 2	TransMapper 2 is a free GIS viewer intended to support the growing interest for simple GIS mapping applications at WSDOT. GRDO has recently upgraded TransMapper to work with newer technology to provide a simpler interface and faster performance. TransMapper includes access to many new WSDOT map layers and basemaps along with continued support of custom WSDOT tools. These tools include ability to locate State Route Milepost locations, connectivity to SR View, and access to Metadata.
Unstable Slopes	Unstable Slopes provides WSDOT engineers access to unstable slope information via a map including rating information and possible design solutions.
Vessel Watch	Vessel Watch provides commuter updates on Washington State Ferry vessel locations via the internet.
Winter Operations	Winter Operations is a real time GPS vehicle tracking system which monitors the location, and activity, of WSDOT Maintenance Vehicles and IRT trucks. A web browser GIS map displays road conditions, road surface treatment and various vehicle activities such as speed, direction plow blade position, chemical application, air temperature, road temperature and many more.

WSDOT Traffic and Weather Web Site	WSDOT Traffic and Weather web site provides traveler information via the Internet. Available information includes pass reports, weather conditions, surveillance camera views, highway advisory radio messages, construction zones, traffic restrictions, and road conditions. Information is accessed through GIS generated map graphics.

GIS Database(s) Environment

Vendor Name	Number of Applications
ESRI Coverage (enterprise databases)	0
ESRI SDE (enterprise databases)	11
ESRI Shape file (enterprise/office/personal databases)	14
Microsoft SQL Server (enterprise databases)	21
Microsoft Access (office/personal databases)	2 (at least, probably more). Includes: Eastern Region – (1) Real Estate Services Parcel Tracking System.
Microsoft Excel (office/personal databases)	Unknown

Critical GIS Datasets

Database Name	Spatial Data Format Type	Server
Federal Emergency Management Q3 Flood Data for WA Counties	SDE Feature Class	ArcSDE Server
LiDAR, from the Puget Sound LiDAR Consortium w/index	GRID	File Server
State Route GIS Road Log	SDE Table	ArcSDE Server
Sate Route Milepost Markers of WA State	SDE Feature Class	ArcSDE Server
Liquefaction Zones, WA State DNR	SDE Feature Class	ArcSDE Server

E. Security and Disaster Recovery/Business Resumption Plans

Security Program Compliance

WSDOT tracks compliance with the ISB Security Standards and provides an annual update on the state of compliance. WSDOT Security Plan, standards and procedures are maintained in the WSDOT IT Manual. Those portions of the IT Manual that are sensitive have restricted distribution and access is limited to those individuals with a need to know. The annual security program compliance verification letter is signed by the Transportation Secretary and submitted to DIS by August 31st of each year. Every three years there is an independent audit of the IT security program conducted by the WSDOT audit Office. The last audit was started in 2009 and completed in 2010 and the next audit is due to be conducted in 2012 under the new ISB standards.

2011 Security Report

The Office of Information Technology tracks compliance with IT security policies, standards, and guidelines. Changes to the security program are currently being worked as part of the effort to become compliant with Information Services Board (ISB) standards, Purchase Card Industry standards, and as part of our continuing efforts to reconnect to the SGN. The Three Year Security Audit was conducted in 2009 with the next security audit scheduled for 2012. On July 31, 2012 WSDOT is required to be fully compliant with ISB standards and where not compliant have identified, approved deviations, and mitigation strategies.

2011 Disaster Recovery Report

The Annual Disaster Recovery/Business Resumption Plan verification letter is signed by the Transportation Secretary and submitted to DIS by August 31. The current plan has been reviewed and updated. The update is the result of linking the Continuity of Operations Plan (COOP) work, a plan for actions during any type of IT incident, the business continuity planning work and overall disaster recovery planning work. The resulting document is a working document available for critical personnel in OIT. This effort began in September 2008, has continued into 2010.

The 2011 IT Disaster Recovery (D/R) Plan identifies the escalation and notification processes used for issue resolution along with the procedures for identification of an emergency or disaster incident. The plan outlines the procedures and authorization of declaring an emergency or disaster incident and provides the procedures for each OIT section in the appendixes to recover the systems identified in the COOP. The D/R plan is updated each year after the Mainframe recovery test in June. The current year results of the D/R test are located in Appendix C.

2011 Business Continuity Planning

WSDOT Business Continuity Planning is accomplished through the Agency's Continuity of Operations (COOP) Program. The purpose of the Continuity of Operations (COOP) Program is: (1) to manage the immediate aftermath of an emergency that has severely impacted agency staff, facilities, or information technology; (2) to ensure ongoing delivery of mission essential functions and essential supporting functions during any emergency; (3) to ensure availability of people, facilities, equipment, materials, technology, and records to support those essential functions; (4) to fully restore all functions after the emergency ends, and (5) to fulfill federal and state continuity of operations and pandemic flu planning requirements. IT business requirements are found in the COOP Needs document produced as a part of the COOP Planning process. The Office of Information Technology provides technical support for the Continuity of Operations Program and provides a major role in disaster recovery/business resumption planning.

F. Public Access

WSDOT continues to excel at providing electronic access to public information and enabling citizens to have appropriate two-way interaction for obtaining information and services, as requested in RCW 43.105.270.

The WSDOT website has been continually redesigned to improve public access to information and better serve the public. Using a customer-focused perspective, WSDOT evaluates how customers look at the site and designs navigation to support improved access by topic rather than the traditional navigation by organizational structure. The WSDOT website averages 800,000 page views each day, far exceeding the public usage of other Washington state agency web services.

Information architecture is developed based on how real users actually look for information. Standardized navigation design across pages creates a more consistent and intuitive user experience that lets users know what to expect from one page to the next.

WSDOT's award winning, nationally recognized, real-time traveler information displays live images from more than 600 cameras and continues to be the most popular public access service provided by any government agency in the state. During the winter, mountain pass and cross-state travel conditions are also heavily used.

Public Interaction

In planning or implementing electronic access and two-way electronic interaction and delivery technologies, RCW 43.105.270 encourages agencies to increase their capabilities to communicate directly with the public.

WSDOT uses social media technologies and more traditional electronic mail services in combination to increase opportunities for public interaction.

- The WSDOT Blog helps us break down bureaucratic barriers and establishes a direct, casual, interactive conversation between the agency and the public.
- The Flickr photo and video hosting website lets us share images with the public.
- WSDOT's YouTube channel allows us to share and discuss videos.
- Twitter provides instant text messages with Puget Sound traffic information, mountain pass reports, Canadian border wait times and aviation weather reports.
- WSDOT provides e-mail and text message alerts for more than 75,000 subscribers using software as a service provided by GovDelivery.
- WSDOT's construction projects publish the contact information for the individual directly responsible for that project to encourage direct public correspondence.
- Encouraging citizens to take alternative transportation and receive incentives for doing so.
- Online tools such as SRweb allow citizens to take a virtual drive across state highways.
- Electronic business transactions are well established on the WSDOT web, including the following transaction services:

Electronic business transactions are well established on the WSDOT web, including the following transaction services:

- Contract ads and awards on the web provide contractors with information on construction projects.
- Contractors can research and find qualified products to use for construction projects.
- Citizens, contractors and other public agencies can order technical manuals and publications and receive e-mail notices when there are updates.
- Online ordering of Washington State Highway Maps.

Electronic commerce applications include:

- Tolling transponders for the Tacoma Narrows Bridge and other tolling systems.
- Purchasing Ferry tickets online
- Monthly passenger passes for frequent travelers on Washington State Ferries.
- Reservations for international ferry travel.
- Aircraft registration for Washington pilots.
- Issuing permits to move oversize and/or overweight loads
- Train reservations and ticket purchasing through the Amtrak Cascade Web site.

Continuous Access

RCW 43.105.270 also encourages agencies to use public access technologies that allow continuous access twenty-four hours a day, and seven days per week. More than two thirds of the hits on WSDOT web servers are recorded outside of traditional business hours. The busiest hour for WSDOT web services is typically between six and seven in the evening.

Among the 24x7 services provided by WSDOT's web are services for consumers, businesses, and other government agencies. These include:

- The WSDOT News Room provides easy access to news items and social media services.
- Real-time traveler information includes traffic cameras and weather forecasts.
- Travel alerts to warn drivers about highway slowdowns.
- RSS (Real Simple Syndication) feeds provide news bulletins and other information directly to subscribers.
- Automated e-mail bulletins and text messages provide timely updates on road conditions and many other WSDOT services.
- The most current information of the status of hundreds of major transportation projects.

- Public transportation options, such as car pools, bicycling, bus travel and more.
- Mountain pass reports provide an important public safety service for Washington travelers.
- A guide to Washington airports and flight service stations including the most current communications frequency chart.
- On line access to Washington State Ferry schedules and service information for commuters and tourists.
- Highway construction updates all around the state.
- A property boundary monument locator provides a popular resource for surveyors.

Commercial news organizations regularly use the WSDOT Web site and WSDOT traffic cameras as their original source material for timely and accurate information. Newspapers, radio and television stations provide links to the WSDOT Web site to enhance their own public service activities.

G. Applications (Systems) Information

As WSDOT applications age, the Total Cost of Ownership (TCO) is met and increasing maintenance and support costs negate any cost savings. Older applications which have not been converted to the newer technologies run on out-dated platforms and provide a challenge to support. The support for these older applications requires specialization in the out-dated technology which becomes increasingly hard to find. These technologies are not longer taught in Colleges and many of the WSDOT support staff have retired, are reaching retirement or have moved to the newer technology which provide better career opportunities.

WSDOT OIT continues to identify and plan upgrades for the technologies which are more than 15 years old. Many of these applications are mission critical and with limited resources will continue to age until funding can be found for converting the applications.

Applications by Age	
0 - 5 Years	86
5 - 10 Years	92
10 - 15 Years	74
15 - 20 Years	21
20+ Years	42
Unknown	18

Application Portfolio

WSDOT has 326 applications. Of this 333 there are 234 applications in the OIT application portfolio maintained by the OIT Enterprise Application Group. The Materials Laboratory maintains 20 of their mission specific applications. The Roadway/Transportation Data Office maintains 15 mission specific applications while the remaining applications are spread among the other business units of WSDOT. In addition, there are small, business centric applications that do not require OIT support and therefore are not included in this count. WSDOT OIT continues to coordinate with the business units to identify and report on application information.

The follow Application list contain all the applications which are supported and maintained by the Office of Information technology. For additional maintenance information such as the description of the application, number of users, application interfaces or last modification date, please refer to the IT Application Portfolio on SharePoint at: http://sharedot/it/ITPortfolio/Lists/PortAppInfo/.

This is a list of all the applications with a summary description:

Application Name	Description Summary
167 HOV Office Documents	Document management application for Scan/Store/Retrieval of documents.
3RAM Interface	Interface between Traffic Stats and vendor supported 3RAM system to help dispatch WSP personnel
511 Voice Interactive System	511 system is the state-of-the-art speech recognition technology allows callers to verbally tell the system what they want, such as "traffic" or "mountain pass" , highway roads incidents and traffic congestion information.
Accounting Data mart	Detailed view of agency Expenditures, Agreements, Revenues, Deferred Revenue and Cash Receipts.
Accounts Receivable Interface	This system provides an interface between the WSF Point of Sale system (POS), the WSF Automated Revenue Control System (ARCS), the US Bank, and TRAINS for the charge slip monitoring, limited charge slip data entry,
Accumulated Route Mile Calculation Module	This application replicates the TRIPS mainframe function, given a SRMP or an ARM with a Reference Date, this program will return the requested SRMP or ARM for the specified Response Date, for a PC application. A file containing several values that have to be converted can be processed in batch mode. Common module for any PC system to convert/validate SRMP to ARM and ARM to SRMP. Includes Web services. Limited support due to resources shortages.
Activity Reports Online	Allows participating Adopt a Highway organizations to file their littler pickup reports via the web.
Administrative Services Contracts	Document management application for Scan/Store/Retrieval of documents.
Adopt A Highway	Tracks groups signed up for the Adopt a Highway program and the litter picked up
Aggregate Source Approval	This application lists all aggregate sources (7400+ pit sites) that have been used for WSDOT construction purposes and identifies whether or not they are currently approved for use.
Airport Information System (AIS)	Airport Information System (APIS) is a secured external facing application developed for Aviation department of WSDOT. The application will be used by WSDOT trusted partners that include Airport Representatives, Federal Aviation Administration employees along with WSDOT Aviation staff. Some report will be available to general public. The application is ADA compliant. This application will provide information about the airports and aircrafts in Washington State and will also let the airport employee to update the information on airports and register aircrafts.
Amtrack Cascades	Rail services information.
Apprenticeship/Journeymen Tracking	Application for contractors to report apprentice and journeyman hours and DBE compliance on state construction contracts
As Builts	Document management application for Scan/Store/Retrieval of documents.
Audit Tracking	Tracks internal and external auditing data.
Automated Fuel Tracking	Provide systems interface between a vendor supported system and TRAINS (AM) system.

Automated Operations Support System	Washington State Ferries, in order to better serve its customers and to meet or exceed current and anticipated international safety regulations,
Automated Training Management System	ATMS supports internal and external training programs for over 6,000 agency and various county & city employees. The system is an integral part of the department's training program.
Available4Adoption	Shows adopt a highway segments that can be adopted as well as those segments not available.
Aviation Internet Registration	The Aviation Division registers Washington aircraft, pilots and aircraft mechanics. Annual registration is required by law. Registration fees and excise taxes are collected using a web-based e-commerce application.
Barlist	Reinforcing steel quantity estimating tool. Distributed under the terms of the Alternate Route Open Source License.
Base Administration	The Application(s) and the WebFerries database serve the Washington State Ferries needs for Common data like Vessel, Terminal, etc.
Basic Accounting Transaction System	The BATS system is responsible for transmitting the Materials Lab billing transactions to the WSDOT accounting systems, TRAINS.
Better Mousetraps	A web based system to provide a place to share ideas among public works employees about ideas and home-grown equipment to save time and money on projects.
Bids Tab Pro/Plus	Bid Tabs Pro is software provided by a private company using Bid Tabulation data from EBASE. It analyzes all Standard Bid Item and Contractor bid data for contacts let by WSDOT. It makes this data available with a multitude of predefined query areas, and creates reports or exports to excel the results based on those queries.
Bids unit price analysis	Used by public and internal staff to view bid history, unit price and bid items and analysis unit price and history
Bridge Design Issues	For the bridge office to keep track of and monitors design issues that arise during bridge construction or repair projects.
Bridge Engineering Information System	Web-based application that provides access to inventory data, plans, rating reports, inspection reports, photographs, and related files for bridge structures in the WSDOT inventory.
Bridge Opening Schedule	Used by the Traffic Management Centers for scheduling when a movable bridge opening is required
Bridge Repair	Web-based application that provides information pertaining to bridge repairs.
Bridge Timesheets	Application for the Bridge Office to fill out and submit electronic timesheets
Business Card Order System	Used by all WSDOT personnel to order WSDOT business cards. Orders are processed by system, reviewed by Forms Management staff and electronically sent to Printing Services Docutech copiers for printing.
CADD and Orthophoto Information System	The system’s business function is a tracking catalogue for the Department of Transportation in Geographic Services.

Capital Program Management System	CPMS helps establish, monitor, manage, and deliver the WSDOT statewide Capital Highway Program. CPMS does not manage individual project details, but does help plan and monitor the overall construction program.
CCIS Word Macro	To provide users at the Regional Project Offices the ability to add or modify Change Order Text of an existing DOT contract stored on the CCIS mainframe.
CCR Load	loads credit card data from EFS into CCR Database for processing
Census 2000 Data Engine	The Census 2000 Data Engine is an application/database designed and distributed by the U.S. Census Bureau.
Central Operations Support	This system assists Central Operations with managing tape requests.
CIA GIS components	Silverlight component and GIS services necessary to create map products for the application.
City View	Application used to view streets in cities in Washington and the pavement condition of those streets
Claims Management System	Claims Management System tracks and analyzes all WSF customer incident reports and all public claims and associated dollar costs.
CLAS - Edwms (Collisions)	This application provides the ability to scan and index collision report images; add, update and delete collision report data in the statewide collision repository database as well as feeding other systems, both inside and outside the department. Components of the CLAS-EDWMS System are: PTCR and Citizen Report Document Imaging, Workflow, CLAS Screens, Electronic Collision Report Processing, Collision Image Web Viewer, Online CLCF, DSHS Data feed Web Service, CVARS Web Service, City / County / CRAB / TSC / FARS Data feeds, DOL Data feeds, Carfax and Experian Data feeds, and WSP Public Disclosure.
Coast Guard Documents	CGDocs is an add-on to the existing Vessel Technical Library system to electronic search, display and print of the scanned images of correspondence between WSF Vessel Library and the Coast Guard.
Collision Data Mart	This database is the repository for all collision data from 1999 – current. It provides the ability to search for a collection of collision reports based on the customer's request. It does not contain any personal identifiers. The Collision data mart is an integral component of the WSDOT Data Warehouse.
Collision Location and Analysis System	Processes collision reports form 2002 forward.
Collision Report Public Disclosure (Cash receipts)	This application is used to track cash and the status of all collision information requests. A request is received from a citizen or organization that includes the name of a person involved in a collision, the date of collision or collision number, and a $5 payment. The WSP public disclosure office prepares and deposits the cash receipts and mails out a copy of the requested collision to the requestor. Due to OFM regulations, payments must be deposited the same day they are received. If this application is necessary to process the daily deposit.

Commercial Vehicle Information Systems and Networks	CVISN provides the ability to weigh vehicles in motion, automatically clear those that meet state transportation standards, and check vehicle licenses and permits against state records.
Commercial Vehicles Restrictions	Verifies vehicle routes based upon the dimensions of the vehicle & Trailer.
Commitment Tracking System	Provides an automated single point of entering and tracking environmental commitments. This system allows WSDOT to log, track, and document completion of environmental commitments.
Common Modules	These are common modules shared by various IT applications.
Commute Trip Reduction Survey	This application allows the Public Transportation Division to more effectively and efficiently meet its legal and contractual obligations to provide data analysis and statistical reporting including measuring of the changes in drive-alone trips and VMT per employee at the worksite, jurisdiction, regional and state scales. The CTR re-design automated and streamlined the transfer of data from raw survey format to a CTR database management system. Every two years employers survey their employees and jurisdictions, RTPOS and WSDOT use this data to analysis progress towards meeting the CTR goals established in local plans.
Commute Trip Reduction System	System to track participants activities in the commute trip reduction program
Computer Aided Engineering Systems	These systems support the roadway design process within WSDOT. They consist of VBA macros that run within the Bentley Microstation environment and C# applications. They port data between MicroStation, InRoads, and survey utilities/data collectors and ensure WSDOT engineering standards and practices are followed.
Computer Aided Facility Management	The Computer Aided Facility Management system provides data and functionality in support of all facility management functions.
Condition Acquisition and Reporting System	The Condition Acquisition and Reporting System (CARS) is a standardized way for transportation department personnel to manually input and share information about traffic, incidents, construction, closures, and other activity on the roadway.
Construction Audit Tracking System	Construction and audit system that provides a communication process in resolving noncompliance issues found during construction inspections.
Construction Contracts Information System	CCIS collects, analyzes, and reports on construction contract details, e.g. start dates, end dates, percent complete, fair hiring practices, fair wage rates, percent of work sublet, etc. System functions include:
Construction Impact Analysis	Provides the necessary functionality for data entry, analysis and reporting of traffic disruption projects in terms of location, impact, time and duration so WSDOT can more effectively keep people and goods moving while completing these projects.
Construction Water Quality Monitoring System (CWQM)	Construction Water Quality Monitoring (CWQM) is a project sponsored by ESO that is used to collect water samples at WSDOT construction sites.

Consultant Agreements	System for the Consultants Office to manage agreements with outside entities
Consumable Inventory	Tracks WSF Consumable and Eagle Harbor Inventory. Initiates & Tracks Store Wants needs.
Consumable Inventory System	Tracks consumable inventory for MVF, WSF, and Maintenance. Handles Orders, Receipts, issues, Physical Inventory and adjustments to the inventory.
Content Management Server	Content Management Server 2002 is an enterprise Web content management system that makes content authoring and delivery easy. Content Management Server 2002:
Contract Administration and Payment System	CAPS maintains administrative and payment information about highway and ferry construction contracts. System functions include:
Contract Agreement Tracking System	Consultant Agreement Tracking System (CATS) to track consultant agreements, task and supplemental budget allocations, and Management Reserve Fund allocations for Washington State Ferries.
Contractor Prequalification	Handles contractor pre-qualification, pre-contract administration, and region contractor inquiry
Contractor Pre-Qualification System	The Contractor Pre-Qualification System handles contract pre-qualification, pre-contract administration, and district contractor inquiry.
Contracts Administration	Present the general public with the contracts information
CPMS Data Mart	A SQL-based adhoc reporting database containing various snapshots of CPMS data. The database has been designed for ease of reporting. The types of snapshots include Production, Yesterday-Production, Book, Yesterday-Book, and Month end. Book is a generic name for a snapshot of the mainframe production data that is being matched to the latest Legislative Budget. The Production snapshot is updated nightly with the current information. The latest Book snapshot is updated nightly, while the data is being updated on the mainframe. Eventually, the data is locked down and not updated thereafter. The Month end snapshots are loaded once after the month is closed in CPMS and not updated again.
Credit Card Refunds	Processes refunds to WSF credit card sales.
Credit Card Services	Web-based WSDOT application provides a single interface through which WSDOT applications can process credit-card transactions.
Crew Manager	Manages and Maintenance TMC staff details, application helps to maintain staff information as group (crew) wise.
Culvert Inspection	The Culvert Recording application is a C# program that uses the VLC media player to record video and capture stills directly from the culvert inspection rover to a laptop’s hard drive. The culvert inspection rover is a remote controlled mobile unit used by the Roadway Systems branch to inspect WSDOT culverts. The video and stills collected by “Culvert Recording” are then manually transferred to OIT supported file storage when the laptop is reconnected to the DOT network.

Culvert Maintenance Management System	The Culvert Maintenance System allows the collection, storage and reporting of culvert inspections, cleanings and repairs to meet the requirements of the Department.
Customer Inquiry System Interface	Web application allows customer inquiry
Delphi Web Survey	The goal of this survey is to evaluate the current acceptance process and refine them as necessary to be more beneficial to the department and the traveling public.
Design Variance	Used by the Construction Office to keep track of variances from design standards that occur on projects.
DIRSEL	The Dirsel program is a traffic count utility program designed to delete a single direction from a traffic data file. The user selects a file, a direction, and a new file name and the program creates a new file deleting every line that is a reference to the elected direction. The original file is left untouched.
DIS Call Detail Report System	WSDOT Telecommunications receives monthly SCAN, SCAN Plus, and phone line reports from Department of Information Services (DIS) in two formats (paper reports and compact disk).
Economic Gas Tax Reporting	The process reports on the state gas tax distribution to the counties and cities. It provides percentage of the allotments to the counties and cities.
E-Discovery	Used by the Risk Management Office and the AGs Office to keep track of the status of litigation against WSDOT
EFS Exception Report	examine a chronological group of entry, usage and exit records for a particular auto booth and date range.
ELearning - Download and Export Reports	ELDER is a new automated process that downloads employee e-learning course completion information from Web Services hosted by Geo Learning on weekly basis and updates the information in ATMS replacing the current manual process. Geo Learning is the vendor managing the data for Department of Personnel.
Electronic Bid System	Electronic construction materials bid tracking system.
Electronic Statewide Network Overweight & Oversize Permit Issue	Web-base application allows agents to issue oversize, over weight trip permits to truckers. Replaced client/server based Electronic Statewide Network Overweight & Oversize Permit Issue system Nov 1, 2003.
Employee Master File/Personnel Information System	Load employee data from HRISD to DOT-Employee-Master-File. Maintain employee data.
Employee Phone Book	Maintain employee telephone, location and e-mail address information. Create and maintain the “Blue Pages” of the WSDOT phone book.
Employee Search	Provide search for employee office contact data on the WSDOT Intranet and Internet.
Engineering Publications CD Library	Statewide external system used by local agencies, WSDOT contractors, vendors, Other state DOTs, and other foreign entities via subscription through Engineering Publications.

Enterprise Location Class	A webservice that can be used to transform State Route locations to and from geographic XY locations.
EOC Video Wall	Emergency Operations Command center's collection of video monitoring systems.
EPI Suite	Electronic personal identification suite - EPI Suite (EpiSuite) is a credentialing application. The application was developed by ImageWare Systems, and modified by WSF. Used by the Homeland Security department to issue ID cards to Employees, Venders, Contractors, Spouses, Dependents, and Retirees. This system is also used to store information about keys that have been issued.
ESS Safety Compliance Suite	Tracks Employee Safety Incidents
Estimate and Bid Analysis System	EBASE is used to develop estimates and reports for transportation construction projects, allow easy entry of contractor bid data, and award apparent successful bidders on those estimates.
Executive TORT Claims Web Site	A secure web application for WSDOT Agency Executives, Risk Management and the Office of Attorney General (OAG) attorneys to provide accurate and timely information on tort liabilities brought against WSDOT.
Exit Interview	A system for the HR Office to distribute, collect, and report on responses to the exit interviews given when someone leaves WSDOR or state service
Expenditure History On-line Query System	Expenditure History is a reporting application that answers questions related to highway construction expenditures on a state route. The selection criteria includes fiscal or calendar year, region, county, state route, and subprogram
Federal Aid Tracking System	Federal Aid System supports the preparation, review and processing of federal funding authorization agreements and modifications to the federal Fiscal Management Information System.
Federal Reporting System	This system is used by the Economics Branch for detailed reporting to the Federal Highway Administration on highway construction, maintenance, and administration expenditures.
Ferries Division Reporting	Various Hyperion Reports based on WSF Data supporting Operations, Port Engineers office and Payroll
Ferries Division Web	Provides a simple way for customers to access transit, highway, and ferry tourist and travel information through the WSF and other regional transit Web home pages.
Ferries Division Web Services	Public Fares; Public Schedules; Vessels, Terminals
Ferries EFS Integration with Smart Card	WSF's point of sale system which includes three primary components, a Web Store, Kiosk, and Point of Sales system in each tollbooth. The primary functions of the system is to sell tickets, track usage of tickets and report on revenue collection activities in the tollbooths and terminals.
Financial Information Retrieval System	FIRS provides access to summarized accounting, spending plan, and work order information from TRAINS and TRACS. The FIRS database is read-only; data is retrieved and presented as an Excel spreadsheet.

Financial Services	Suite of financial services to receive accounts information from various clients and send to TRAINS which is WSDOT's accounting system. Services are Journal Voucher, Payment Voucher, Cash Receipt
Fleet Equipment Management Interface	Provide system interface support between a vendor supported system (Fleet Equipment Management system) and TRAINS (AM) system.
Fleet Equipment Management System	FEMS interfaces transactions to TRAINS monthly.
Fleet Location	Software provided by Meteor to monitor real-time vessel location and replay past vessel travels. Current vessel location information is fed to public WSF Ferries web page.
Force Account	Force Account is a client-server based system that provides and tracks reliable construction project information. The system will track expenses for Labor, Equipment and Invoice Items.
Foundation Data Services	Provides one source of data for main WSF subjects like Vessels, Terminals, Schedules, etc
Functional Class Specifications	Document management application for Scan/Store/Retrieval of documents.
Functional Class Web Map	A web map application used by local agencies to verify the Functional Class status of their roadways. This application supports the submission of Washington all roads information to the HPMS program.
GIS GEO Catalogue Data Maintenance Application	Provides a mid-tier administrative interface to build and maintain the GIS Workbench database and the WSDOT enterprise GeoData Catalog.
GIS Workbench	The GIS Workbench is a child of the original Environmental GIS Workbench concept, fielded in 1998 and enables the access to Geographic Mapping Information in the agency. The application also includes tools such as SR View, Locate a State Route/Mile Post, Map a Point, As-built scanned document access, etc.
H&LP Conference/Workshop Tracking System	Used by H&LP to keep track of registrants and finances when a conference is put on.
HES Risk	A system for on-line grant applications via the web to apply for Federal Aid grants for Hazard Elimination Safety projects to mitigate the risk of a collision at a high risk location. Used sporadically when grants are being accepted.
HES Safety	A system for on-line grant applications via the web to apply for Federal Aid grants for Hazard Elimination Safety projects for hazardous locations. Used sporadically when grants are being accepted.
Highway Activities Mobile Map	This product is a component of the HATS system maintained by the GRDO office. It is a Windows Mobile Compact Framework component that works in conjunction with the HATS mobile collection system. Its purpose is to display HATS data on a map to facilitate updating, deleting or creating HATS maintenance tasks that are recorded in the field.

Highway Activities Tracking System	Highway Activity Tracking System Overview The highway system is composed of thousands of assets that are managed by WSDOT Maintenance and Operations. Examples of these assets are bridges, culverts, barriers, guardrail, pavement, ditches, catch basins, signals, traffic signs, etc. The Highway Asset Tracking System is designed to be a tool for managing general activities (work operations) to a linear section of roadway and activities that are performed against a specific asset. This system will give Maintenance Technicians the ability to document their work. For instance, when doing an inspection on an asset, they will have the capability to generate a pending activity, record deficiencies which require action to be taken. This action could be from making a specific repair, cleaning, or making recommendation for a larger repair. The system will track when and where the inspection was completed, and if a pending activity was generated, the tracking system will show when the pending activity was completed, or its still in need of completion. The system will also track multiple work activities to a section of road. An example of this is safety patrol where multiple activities are done on a given section of roadway. The system will create a pending repair for those items that cannot be completed at the time of the safety patrol.
Highway Performance Monitoring System Web Application	HPMS data is collected annually by all states and reported to the Federal Highway Administration (FHWA).
Highway Road Logs	Document management application for Scan/Store/Retrieval of Highway Road Logs.
Historical Photos	Document management application for Scan/Store/Retrieval of documents.
Hood canal bridge weather	Public web page used for reporting on the current weather conditions at the Hood Canal Bridge. Camera images from bridge are also available.
HPMSview	Application to combine Pathways Van imagery with existing HPMS data for use in field verification. Used by local agencies
HR Communication	Hyperion reports for different purposes based on Master data
Human Resources Employee Actions	Workflow and Imaging application for the processing and storage of HR Employee Action documents.
HY8 Input Generator	Hydraulic design software for culvert design and analysis. Developed by FHWA, Requires Windows 2000 not approved for Windows XP.
Illegal Sign Inventory	Internal application used by the Traffic Office to track advertising signs that have not been permitted or that do not meet standards IAW RCW.
Illicit Discharge Detection and Elimination (IDDE)	IDDE is a web application funded by the Environmental Services Office (ESO) which provide ESO's IDDE program participants the ability to track and report on the status of Illicit Discharges and Illicit Connections discovered within WSDOT's NPDES permit area to meet the IDDE program obligations as defined by WSDOT's Stormwater Management Program plan.

Incident Location Tool	A tool for use by STCDO Collision section to more accurately locate collisions. A version of this tool will also be used in SECTOR; an application enforcement officers use to electronically record ticket and collision information.
Information Agent Support	ARGO is the reservation system component of Automated Operations Support System (AOSS).
Integrated Real Estate Info System	REIS replaced in 2008 by IRIS
Interchange Viewer	Allows the viewing of interchange drawings statewide. (This system is no longer being used and is currently being removed from workstations 7/25/06).
Internet Employee Search	Employee information is downloaded from the mainframe on a daily basis. This information is merged with other information that is maintained on SQL and the results are stored in a SQL database.
Inventory Process	Process that reconciles SCCM and Remedy Asset for annual IT inventory.
IP Addresses	A system for keeping track of IP addresses, who owns them what devices they are assigned to, and so on.
IT Account Master	Storage master and computer operations use this to validate logon accounts and billing accounts.
IT Administrative Support	This is an administrative function for overtime pay reporting, and monitoring of IT core expenditures.
IT Contracts	The Contracts database contains information technology contracts, administrative contracts and outsource contracts as well as some interagency agreements. Detail information includes products and amendments providing status and history.
IT Executive Dashboards	This is a HTML application which displays charts and graphs on IT KPI's from the Asset data mart.
IT SDC Common Routines	These are common routines used by all MIS Systems.
IT Task Management	Track tasks for and time spent on developing and supporting applications by OIT application support analysts.
Key Systems (GFMS)	Controls the release of keys by personal identification (card) that gets access rights information from the Vigilos volt.
Labor Collection / Payroll Expenditure Reporting	The Labor Collection and Payroll Expenditure Reporting systems collect and process data about employee hours worked, leave taken, and financial details associated with labor hours
Labor Data mart	Expenses, equipment hours and other Timesheet data from Payroll Labor, exclusively. Does not include labor journal voucher transfers done in TRAINS.
Labor System	Supports Labor/Payroll, Human Resources, Budgeting, Accounting. Collects Time Sheet Labor Transactions for Employee Pay and Labor Expenditure Generation. Provides Labor costing for TRAINS, MPET and multiple reporting processes.

Laboratory Information Management System	Provides the Materials Laboratory staff with online access to the materials testing and other laboratory data.
Lessons Learned	A system for keeping track and sharing construction lessons that are encountered in the course of a project. Keeping tack of these will improve construction as time goes on by not repeating mistakes, or using better methods.
Local View	Application to allow local agencies to view their streets and monitor pavement condition on those streets.
Lost&Found	To keep track of the items lost or found at the WSF ferries and terminals
LPILE PLUS	Lateral pile analysis.
Maintenance Operations Map Display	The Maintenance Operations app is a system of processes and applications that collect and display real-time information from maintenance equipment used to clear snow, ice, and perform other actions. This information is used to show where the vehicles have been operating and what materials they are deploying and actions they are taking. The GRDO portion of this system is primarily used to display this information on a map.
Manual Counts	This application is used to read data from manual count boards, add header information, print out reports and produce intersection diagrams prior to a subset of the data being uploaded to the mainframe.
Marine Expenditure System	Extracts monthly WSF General Ledger Expenditures. Prepares and feeds expenditures to RT - BEARS. Generates Expenditure Reports for Accounting. FTP's Daily GL and Monthly GL Transactions to server for further reporting and ad hoc inquiry.
Material Management System	MMS - MPET application issues and tracks maintenance work requisitions, both corrective and preventative, for the WSF Terminal Maintenance Engineering, Terminal Engineering, Eagle Harbor Repair Facility and vessels.
Materials Accreditation and Testing System	Standardize agency test information recording and provides a stable central data repository.
Materials Lab Documents	Document management application for Scan/Store/Retrieval of documents.
Materials Tracking Program	Provides the ability to record and assign construction documents and material information to agency Project Offices.
McDonald Mailing List Database	Application used by Secretary of Transportation Doug McDonalds office to keep track of contacts and all contact information.
Medicare Reporting	Reports Medicare cases to the Federal Government
Merlin-DASH	Analysis and design of steel bridges.
MGSFlood	Continuous Simulation Hydrologic design software for estimating storm water runoff and treatment facilities in western Washington.
Microsoft Dynamics Great Plains	Allows for automated approach to tracking and billing of damage to WSDOT property by the ERMO group

Minor Capital Inventory	Tracks location of equipment and depreciates equipment over $5000 for reporting to Statewide Asset Reporting System (SARS). Handles the physical inventory for Minor Capital.
Module Counts	Reformats outputs from GK serial data ports for upload and processing by mainframe programs.
Monthly Construction Reporting	Provides high-level construction contract information and specific project information for the public (reports and update the Trout web server) was well as internal use to answer ad hoc questions.
Monuments/Survey Information System	Set of entities and attributes as referenced to individual geographic locations (points).
Mountain Pass Web	Provides Mountain Pass traffic on the Traffic and Weather Web site and the 511 System.
National Flood Frequency Program	Hydrologic design software for estimating magnitudes and frequency of flood peak discharges and flood hydrographics.
NCR Daily Leave	Server based workflow approval application for regional leave slips in North Central.
NCR Shared Leave	Server based application for regional shared leave process in North Central.
New Products	Review new products from businesses for use in WSDOT.
NewWim	The Weigh in Motion (WIM) Database application is designed to error check data files received by the WSDOT Transportation Data Office. It tracks missing days in the file as well as patterns of bad data. It also creates data that can be graphed through a separate program and keeps copies of reports to be viewed at a later date.
North Everett Timesheets	Timesheet system for the North Everett Project Office. Migrated from earlier versions of FileMaker.
NW Region Scoping Analysis and Budgeting System	SMARTS information can be shared with SAAB through a direct database link.
NWR Design	Document management application for Scan/Store/Retrieval of documents.
NWR Error Check	A traffic utility program that checks traffic count files for Seattle site errors and produces a list of sites whose data is not correct.
Olympic Region Photos	Imaging Application for storage and retrieval of bridge inspection photos for Olympic Region bridge department.
OMWBE Reporting	Extract expenditure data from TRAINS General Ledger for reporting to OMWBE (Office of Minority and Women's Business Enterprises) .
Onboard Ferry data collection	Application to collect weather data using Campbell software from ferry vessels and send collected data to UW for analysis and publish on ferry weather site
On-Line Training Registration System (WebBase)	This is the application that the T2 (Technology Transfer) Center in Highways & Local Programs uses to allow people to sign up for training classes.
On-Time Performance	As mandated by Legislature HB3209. Track late departures and arrivals and provide reasons for the late activity.

OTP Reporting	The Public OTP Report is a 1 page summary designed to be posted at Terminals monthly to inform the public of WSF's On Time Performance and summarize the top 6 Late Reasons for the prior month.
Out of State Travel	Authorization for out-of-state travel for attending conferences or training routing system.
Outdoor Advertising Inventory and Permitting System	System to keep track of outdoor advertising signs on state routes
Payroll Backup	Payroll Reporting information.
Payroll System Reporting	Payroll Expenditure Reporting. Also acts as the source of employee information for the Labor Collection System.
Payroll Workflow	Workflow and Imaging application for processing, storing, and retrieval of Payroll documents.
Performance Management Program	WSDOT's Performance Management Program replaces the existing EDPP/MDPP process. It is designed to foster a positive, performance-based culture.
Personnel Archive Database	Creates an easy web front to the Personnel Archive Database. Allows users to retrieve, edit, update, and add past employees of WSDOT.
PGSplice	Spliced precast pre-stressed concrete girder analysis software. Companion tool with PGSuper. Distributed under the terms of the Alternate Route Open Source License.
PGSuper	Prestressed Girder Superstructure Design and Analysis software. Distributed under the terms of the Alternate Route Open Source License.
PMRS External Reports	This application is used by the public to search for project pages and reports on the WSDOT capital projects.
PMRS Legacy Reports	The PMRS Reporting system is a web-based application for generating project management reports that aggregate data from Primavera Project Manager (PM), CPMS, and the Specialty Group Comment Database. It also provides data entry and storage of custom data fields such as project comments that don't exist in the other systems.
PMRS Project ECM	Document management system for project delivery documents
PMRS Project Management Utility	.Net based application for setting up projects and applying permissions in the PMRS Project ECM system.
Primavera Contract Manager	Primavera Contract Manager is a document management, job cost and project controls solution which: provides visibility into contractor performance, facilitates coloration, and streamlines contract and document administration.
Primavera Project Scheduler	Primavera P6 lets you manage projects of all types and sizes. It combines scheduling, communication, resource management and reporting analysis in one software tool. This single solution adapts to various levels of complexities and scales to meet the needs of various users, functions and skill levels.
Primavera Web	Web based interface for Primavera Project Scheduler.

Priority Array Tracking System	PATS collects, maintains, and tracks data on WSDOT's highway deficiencies across the state. System functions include:
Professional Membership Tracking System	The agency is required to track the number of agency-paid memberships, along with the amount of funds used for paying these memberships. This application is used to approve, track and monitor all agency paid memberships.
Project Estimating and Scheduling	The Project Estimating and Scheduling database retains data and calculations on facility design and construction projects.
Project Summary	Project Summary collects project information during the initial phase of the project scoping process. Project Summary documents the WSDOT commitment for scope of work and communicates Design, Planning and Environmental decisions.
Public Disclosure of Collision Reports	Provides a need for tracking monies received from the public for copies of collision reports
Public Disclosure Request Tracking System	Used to track all requests for public records made to WSDOT.
Purchase and Order System	Purchase and Order System includes 5 forms/applications: Field Order Stores Issue (8420) Stores Withdrawal Purchasing Card Order Bid / Quotation Request
Purchase Card Management System (PCMS)	The PCard Management System (PCMS) provides the means for DOT purchasing cardholders to view their transactions, reconcile them, interface with Remedy, validate the accounting codes against TRAINS and export directly to TRAINS to generate payment documents , keeps tracks of Purchasing Card related administrative records and updates accounting data in the data warehouse.
QConBridge	HL93 Live Load Analysis for continuous bridge structures. Distributed under the terms of the Alternate Route Open Source License
Qualified Products List	Provides a list of products that have been pre-qualified for use on WSDOT construction projects.
Quality Assurance Specification	Stores test data related to paving, specifically to asphalt. Calculates the bonus or penalty a contractor may receive as test data on the asphalt is entered.
Quantity Tabulation Structure Notes	Smart Excel spreadsheet used for project bid item tracking. For each bid item entered quantities and notes are kept in an easy to follow 11X17 spreadsheet document.
Queue Delay Estimation	Provides accurate information on arrival times of ferries at each terminal by collecting data on the location, speed, heading, and capacity of vessels on the WSF fleet.
Radio Log	Log radio communications between Region radio operators and highway maintenance workers
Radio Towers Information System	Secure inventory of government radio tower infrastructure. Secure web application with GIS interface from ArcIMS server. Established by Legislative mandate.

Railroad Crossing Elimination Program	A system for on-line grant applications via the web to apply for Federal Aid grants for elimination of hazardous RR crossings. Used sporadically when grants are being accepted.
Range Tracking	This service is used to determine decision sight distances to support the identification of No Passing Zones. This is a non networked vehicle based application. Two computers - interfaced to distance measuring instruments - along with wireless modems compose the bulk of the system.
Real Estate Deeds Documents	Document management application for Scan/Store/Retrieval of Real Estate Deeds.
Real Estate Information System	REIS is a tool for estimating, tracking and management of projects. A modular development approach has been followed with REIS having several modules: - replaced by IRIS Database is currently read only
Real Estate Services - Electronic Review	This is an electronic workflow of the disposal requests for WSDOT properties. The system collects recommendations on the surplus or lease of properties and electronic key approval for this process to proceed.
Record of Materials	Record of Materials is a list of major construction items used on a contract. It is produced at OSC and then downloaded by the Project Engineer. The list is used as a base for tracking material items on a contract.
Record Services	Processing and Management of Records and Information. Record Archiving. This application is designed to keep track of and help locate WSDOT's business documents.
Region Technical System	Captures material test results at Regional testing centers for Asphalt, Grout, Ignition Furnace Calibration, Blends, Aggregate, Cylinders, Gauge Correlation, Multi-Grading and generates reports.
Reliable Travel Times	Public web page for reporting on how long a trip will take in the Seattle Metro area. Users choose a start and end location and an estimate for how long the trip will take is returned.
Remedy Action Request System	ARS is a programming tool. client/server based.
Remedy Asset Management	This is DOTs official Purchasing and Inventory Management system for IT purchases and equipment. This includes the complete life cycle of assets from requisition to disposal.
Remedy helpdesk ticket status	Display users' currently active Remedy Help Desk on an Intranet web page.
Remedy Library Reference & Request Management	Library Reference & Request Management is a forms based application focused on trading request and effort.
Remedy Mats Lab Equipment Tracking	Mats Lab Equipment Tracking is a form based inventory system that also tracks scheduled testing and calibrations of equipment.
Remedy Payroll Request Tracking System	Service Desk application created for Payroll to manage requests and issues.
Remedy Service Desk	IT Service Management - incident and problem management system with service level management which includes notifications and escalation paths.

Report Generator	Generates reports of test results using Adobe Acrobat PDF 3.0 when a field ('Ready to Report') in the Lims Database is flagged as "Y". The PDF is stored and distributed by email from an email list in the Lims Database.
Research Project Management Database	Application to track WSDOT research projects
Retired Professionals	A HR web based system for retired professional engineers to post their resumes on-line so that they may be available for employment by local agencies.
Revenue Control System	Revenue Control System (RCS) - Used by WSF Accounting Services to perform all revenue accounting functions associated with POS revenues. The system uses data transmitted nightly from the POS system.
RMCalc	Restraint moment calculations for precast girder bridges made continuous
Road Access Management Permit System	WSDOT is required to manage all access to state highway system that are not in a centrally incorporated area.
ROADS	Roadway Occurrence Activity Delivery System
Roadside Features Inventory System	A GPS-based system that will be used to gather select roadside features, post-process those features to improve the GPS accuracy, transfer that data to HQ for processing into a corporate ESRI database for use in the GIS Workbench.
Roadway Data mart	This database is the repository for roadway geometric data found in the TRIPS system. It provides the ability to search for a collection of roadway elements based on the customer request. The Roadway data mart is an integral component of the WSDOT Data Warehouse.
Rumble Strips	This is a desktop application that is used to collect and maintain state route rumble strip information for inclusion in the TARIS database.
RunIRD	A traffic utility program that converts binary data from traffic counter files into ASCII.
Safety Management Accident Review Tracking System	This application helps the NW Safety Management group handle reviews of high accident locations (HALs), high accident corridors (HACs), and pedestrian accident locations (PALs).
SCAN Billing Datamart	Provides access to monthly billing information from DIS concerning our use of the SCAN system.
Scanweb	Poll, record and provide web access to weather station data.
School Bus Stop Inventory	Internal application used by the Traffic Office to track school bus stop zones on roads and highways maintained by WSDOT. Tracking is mandated to WSDOT by RCW.
SDC Cross Reference	A cross reference utility that runs on the IBM Mainframe.
Seattle VMS pages	Public web page where the current message being displayed on Variable Message Signs around the Seattle area can be viewed.
Security Drill Log	USCG mandated security drills log for Terminal Personnel
Short Duration Counts	Document management application for Scan/Store/Retrieval of documents.

Sign Shop Order System	Automated sign ordering system for WSDOT Sign Shop. Used by Traffic, Construction and Maintenance personnel to order highway signs from the sign shop.
Sign Specifications & Cost Estimation	Used to document sign removal, installation, and relocation information for highway construction projects that are included in the set of standard plans.
Signal Maintenance Management System	A database system to help the Signal Maintenance department manage work and inventory data. SIMMS is used to enter work reports for maintenance jobs, print timesheets, and maintain location records for Signals inventory.
SMS Document Control	SharePoint based application for SMS Manuals distribution
SMS Non-Conformity	Remake of the old SMS application in .NET
Snow Entry	Internal web page used for entering the current snow depth at Snoqualmie, White and Stevens pass.
Specialty Group Database	Special Group Comments are entered via web application and loaded onto database. Database is then loaded into Primavera P6.
SR 167 Toll Collection System	
SRMP/ARM Calculator	This interactive Windows Forms tool provides a UI to the ARM calculation module. It allows a user to make single ARM/SRMP calculations or to perform batch operations on a file containing many rows of location data that needs ARM/SRMP calculations. It is also used to update certain datamart tables.
SSIS Oncore data replication process	Collect PMP data from OnCore database and copy into the Northwest database to generate reports and other information
State Route Viewer	Internal DOT Web/VB application for viewing roadway perspective images of Washington State routes.
Statewide Situation Status	Application to keep track of the incidents happened on freeways action taken, communication and resources mobilized.
Statewide Transportation Improvement Program	STIP is the federally mandated project plan tracking tool (Statewide Transportation Improvement Plan) and it is used by agencies, MPOs, and Highways and Local Programs staff to track their 4 and 6 year projects. Local agencies, in order to receive federal funding for transportation projects.
Statistical Analysis of Materials	Provides analysis of the test results and calculates the quality assurance pay incentive for use by agency staff and contractors in resolving noncompliance issues found during construction inspections.
StormShed	Hydrologic and Hydraulic design software for calculating runoff and conveyance design as well as stormwater treatment facilities.
SuperSQL	Lots of Data.

Survey Monument Database	Survey Monuments tracks the location, status and history of survey monuments for Washington State Highways. The Survey Information System database maintains a set of entities and attributes that refer to individual geographic locations.
SWR Timesheets	Application for the Chehalis Project Office to fill out and submit electronic timesheets. Pilot in PEO, then to Region. (OIT Developed for regions)
Task Order (130-010)	Task Order Application (DOT form 130-010)
TDMValidation	A traffic utility program that allows a user to validate that a site has data in the traffic data mart.
TDO Traffic	A collection of applications: MainWim, VolCheck, Dirsel, that collects, tracks and helps maintain traffic count data.
Technical Library System	The Vessel Technical Library Database identifies the current documents, electronic and physical, of the Washington State Ferries Vessel Design Department's Technical Library
Terminal Daily Cash	To reconcile Terminal daily Cash for EFS
Terminal Records Resource System	Enables WSDOT employees to identify and determine the physical location of WSF terminal contract records.
Tester Qualification	The Tester Qualifications program was created to help track the credentials of laboratory staff in the Washington State Department of Transportation Materials and Regional Labs.
Toll Collection and Accounting System	
TRACS - Trans. Allotment and allocation Control System	Sub-system of TRAINS
Traffic - ASCIICheck	The ASCII Checker program is a traffic count utility program designed to read through an ASCII file deleting lines that meet a specified criteria. A new file is then written without the deleted lines.
Traffic - NewWim	The W.I.M. Database application was designed to error check data files received by the D.O.T. Data Office. It tracks missing days in the file, as well as patterns of bad data. It also creates data that can be graphed through a separate program. It also will file away reports to be viewed at a later date.
Traffic - Submittal	Retrieves data from the G: drive that was loaded via the automated counters. Reformats into bin 4 data and creates new file on G: drive.
Traffic - TC Checker	This program is designed to test a file before sending it to the TC Mainframe program. It checks to make sure the data in the file follows the rules for input into TC. The program reports on any errors found so the user can manually fix the file before sending it to the TC mainframe program.
Traffic - Volume Checker	Volume Checker is a traffic program utility that retrieves the mainframe file and loads it to a SQL table. The users can then edit work on the file and/or do data analysis (e.g., build graphs).

Traffic - VTRIS Help	A traffic utility program that takes data that was loaded to a drive from automated counters and converts the old TMG (Traffic Monitoring Guide) format to a newer TMG format.
Traffic & Weather Mobile application	Web application to display traffic and weather information on small screen devices and smart phones
Traffic & Weather Portal Website	The WSDOT Traffic and Weather project collects and disseminates real-time and predictive statewide road and weather information.
Traffic Accident and Roadway Information System	TARIS is a SQL database that contains traffic, roadway, and collision data downloaded from the TRIPS mainframe database (I-695 funding cuts impacted plans for this system and the current database is basically a "shell" of what is needed).
Traffic Action Tracking System	TRACTS provides a central location to store critical traffic project data (work type, location, assignments, due date). Provides metric data to measure the performance of the Traffic organization.
Traffic Data Mart	This database is the repository for all traffic count data found in the TRIPS system. It provides the ability to search for a collection of traffic count elements based on the customer's request. The Traffic data mart is an integral component of the WSDOT Data Warehouse.
Traffic Planning Trends	This application is an interactive map for the internet that displays Annual Average Daily Traffic (AADT) volumes on the State Highway System.
Traffic Sign Management	Traffic Signs Management System inventories all of the signs installed by the Department of Transportation, Traffic Office, on various state and inter state routes across the state.
Traffic Statistics System	WSF collects and stores ticket sales information and, for traffic statistics purposes, categorizes the ticket sales counts by type of fare.
Traffic Stats Loader	Load EFS Fare types into Traffic Stats Application
Training Evaluation Application	After completing training course, students will access the Course Evaluation Application on the WSDOT Intranet.
TRAINS Web Service	Web service providing access to certain functions in WSDOT's TRAINS accounting system:
TransMapper	A set of WSDOT Add-ins for ArcGIS Explorer. ArcGIS Explorer is Google Earth like product that is simpler and easier to use than ArcGIS Desktop. These extensions add features that provide access to WSDOT data and custom tools that integrate with other WSDOT IT infrastructure
Transmittal System	Creates an electronic transmittal form for the samples of materials that are to be tested by the Materials Laboratory personnel that were sent in from project offices.
Transportation Allocation and Allotment System	Management tool to aid in the Budget process.

Transportation Asset Reporting and Tracking System	Reports on depreciation of department assets. Contains a module used by Minor Capital and Capital Facilities for computing depreciation. Compiles value and depreciation for reporting to SARS.
Transportation Data Office (TDO) Scanning & Indexing	The Transportation Data Office, the Office of Information Technology, and the Records Management Section have collaborated to successfully scan and index several document types residing at the TDO:
Transportation Engineer Recruitment	Provides a Web-based application process for TE1 recruiting. Applicants complete an evaluation questionnaire. Qualified applicants are identified and reports are provided to HR and regions.
Transportation Executive Information System	TEIS is a suite of programs designed to facilitate legislative planning and oversight. It provides budget preparation and executive summary information about a variety of activities to transportation agency managers.
Transportation Information Planning and Support System	TRIPS maintains and processes current and historical data about the WSDOT roadway network, traffic volumes and classifications, collisions, and collision severity. System functions include:
Transportation Reporting and Accounting Information System	TRAINS accounts for all WSDOT revenues, expenditures, receipts, disbursements, resources, and obligations. It is a highly customized version of an American Management Systems (AMS) software package. System functions include:
TRIPS - Collisions	TRIPS is an integrated, automated roadway, traffic, and collision tracking application stewarded by the TDO. The application is designed to provide engineering, maintenance, planning and accounting personnel with up-to-date highway geometric, traffic and collision data. The TRIPS application includes both current and historical information about the State highway system.
TRIPS - Roadway	TRIPS is an integrated, automated roadway, traffic, and collision tracking application stewarded by the TDO. The Roadway part of the application is designed to provide engineering, maintenance, planning and accounting personnel with up-to-date highway geometric data. The TRIPS application includes both current and historical information about the State highway system.
TRIPS - Traffic	TRIPS is an integrated, automated roadway, traffic, and collision tracking application stewarded by the TDO. The Traffic part of the application is designed to provide engineering, maintenance, planning and accounting personnel with up-to-date traffic data. The TRIPS application includes both current and historical information about the State highway system.
Unstable Slopes Management System	USMS allows the entry and storage of slope information, ratings and cost estimates. Map component of web application updated on 4/8/2011 to run under ArcGIS Server vs. ArcIMS.
Utility Franchise Permits	UFP is a client/server application written in PowerBuilder with a SQL Server database. The Utility/Franchise Permits System (UFP) lets you enter, edit and view utilities, franchise, and permit information in a variety of formats.

Vessel Technical Library	WSF Vessel Tech Library is on electronic search and display system for WSF Vessel Technical Drawings.
Vessel Watch	Shows location of the ferry boat on the Web in real time
Vigilos	Video / Security System monitoring application.
Washington Bridge Foundation Libraries	Programmable software components for bridge engineering.
Washington Bridge Inventory System	The Washington State Bridge Inventory System (WSBIS) is an integrated, bridge inventory system designed to be used throughout WSDOT.
Washington Transportation Planning	
Wave2Go Electronic Fare System	Wave2Go is the Electronic Fare Collection for the Washington State Ferries. The Project name was EFS.
Weather Station Reporting	An Internal web application where information from weather stations can be viewed and reported on.
WEB Cameras	Displays Ferry lots, docked vessels, etc. for the public
Web Reservation	Allows general public to make reservations on Anacortes/Sidney B.C. and Pt.Townsend/Keystone routes over the web
Websense Web Filter	Based on Customer access profile, software filters allowed internet traffic based on predefined categories of webpage type
winBDS	Box girder bridge design system.
WINDS	Terminal workforce resource planning/scheduling application.
winFAD	Footing analysis and design.
winRECOL	Reinforced column analysis and design.
winSEISAB	Seismic analysis of bridges.
Winter Operations	The Winter Operations application is a state-wide web based Mapping/GIS system(Geographic Information System) to track winter vehicles. The system currently display's live truck icons that show current location, travel direction, and the function the truck is performing (I.e., chemical treatments, plowing, etc.) along with the current road condition (icy, compact snow and ice, bare and wet, etc.). The system also allows reporting of the winter vehicles and materials usage.
Work Order Authorization	The WOA - Work Order Authorization is a statewide electronic workflow document management web application used for the authorization of funding expenditures for new work orders, modify existing work orders and to close work orders.
Work Order Grabber	Work Order Grabber transfers work order information from FIRS and CCIS to the LIMS (Laboratory Information Management System).
Workforce Management	Historical Work Force Expenditures (detailed) used to aid in forecasting future workforce needs.
WSDOT Alerts	web application used for formatting and sending via email messages information regarding traffic and weather alerts.
WSDOT Archives	Document management application for Scan/Store/Retrieval of OIT Support Related documents.

WSDOT Data Catalog	A Web application for retrieving and storing meta data about WSDOT data.
WSDOT Data Warehouse	A collection of data designed to support management decision making. It allows reporting and analysis of data for those who need to make strategic decisions or analyze information on agency products., administration, or operations.
WSDOT eDocs Importer	.Net based application for the electronic importing of documents into the agencies document management systems.
WSDOT Incident Tracking System	System is used to track and report field reports of Incident Response Team (IRT) participants. System includes 2 FM Servers - one internal (main) and one external server.

H. Database Information

Database/Data mart by Database Management System – WSDOT's databases utilize different database management systems. Of these database management systems, only the SQL server platform is being used for our datamarts, although there are Informatica processes which export data from the mainframe to the SQL environment for additional datamart integration. For a complete list of databases and additional maintenance information such as the description of the database, number of users, application interfaces or data stewardship, please refer to the the data catalog.

Critical Datasets

Database Management System Platform	Number of Databases/Datasets	Mission Critical Databases	Vital Databases	Essential Databases	Important Databases
SQL Server	459	25	13	117	304
Adabas/VSAM	165	5	92	41	27
FileMaker	25	4		9	12
GIS Datasets	61	3	39	5	14

- *Mission Critical databases have an impact on ability to share critical information, impact on mobility (moving people & goods), impact maintenance of public health & safety or have mandates or legal requirements.*
- *Vital databases include payments to employees, payments to vendors or contractors or contain receipts from any source.*
- *Essential databases have impact on program delivery, impact on public image, have other cash flow impacts or have regulatory impacts other than mandated or legal.*
- *Important databases have individual impact, unit level operational impact or workgroup impact.*

WSDOT identifies, stores and updates Database criticality information in the WSDOT Data Catalog system. For specific information about geodatasets, contact the WSDOT GIS Data Administrator. WSDOT makes GIS data it generates accessible for others to use through the GeoData Distribution Catalog found at http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm#main.

Critical Databases

WSDOT has the following databases currently listed in the Database/Data mart Portfolio. There are 39 which are considered mission critical by the COOP. Information on the mission critical databases is available through OIT's Data Management Services.

Database Name	Environment	Business Areas
Agreement Tasks database	FileMaker	Bridge & Structures
Automated Fuel System Database	Oracle	Highway Maintenance
CAFM	SQL Server	Highway Maintenance

Continued from previous page:

CARS	SQL Server	Highway Maintenance/Region Ops/Communications
CARS QA	SQL Server	Communication
CCIS	SQL Server/Adabas	Region Ops/Highway Construction
Chart of Accounts	Adabas/VSAM	Bridge & Structures/Accounting & Financial Services
Common Accounting	SQL Server	Accounting & Financial Services
Consumable Inventory Orders Database	Adabas/VSAM	Administrative Services
Contract Tracking database	SQL Server	Bridge & Structures
COOP Planning	FileMaker	Administrative Services
Employee Master File (ADABAS DB01, DB66 & DB166)	Adabas/VSAM	Information Technology
Enterprise Location Class	ArcSDE	Information Technology
Excise Tax database		Accounting & Financial Services
Facilities Work Order Database	FileMaker	Highway Maintenance
FIRS System	SQL Server	Highway Maintenance/Administrative Services
Fleet Production Database	Oracle	Highway Maintenance
FM Studio		Highway Maintenance
Force Account 2	SQL Server	Region Ops/Highway Construction
GIS Workbench	SQL Server/ArcSDE	Highway Maintenance
IT Contracts	SQL Server	Administrative Services
Load rating Data	SQL Server	Bridge & Structures
Master File	SQL Server	Administrative Services
Mobile Bridge	SQL Server	Bridge & Structures
Record Services	SQL Server	Administrative Services
Road Access Management	SQL Server	Project Development
Road Weather Info	SQL Server	Communication
ROADS	SQL Server	Highway Maintenance
Services.fp7	FileMaker	Administrative Services
Sign Inventory	SQL Server	Bridge & Structures
SitStat	SQL Server	Highway Maintenance
SR View	SQL Server	Region Ops
SRTS	FileMaker	Administrative Services
TRAINS	Adabas/VSAM	Bridge & Structures
Vigilos Database	Postgres	Ferries Operations
Winter Operations	SQL Server/ArcSDE	Information Technology
WSBIS	SQL Server	Bridge & Structures
AOSS Database	SQL Server	Ferries Operations
EPISuite Database	SQL Server	Ferries Operations
MPET Database	SQL Server	Ferries Operations

Data Mart Portfolio

WSDOT has the following 14 business subjects in the WSDOT Data Warehouse.

Data Mart Name	Environment	Server
Accounting data mart	SQL Server	DOTDBOLYDS01
Asset data mart	SQL Server	DOTDBOLYDS01
Collision data mart	SQL Server	DOTDBOLYDS02
Construction data mart	SQL Server	DOTDBOLYDS01
Consumable Inventory data mart	SQL Server	DOTDBOLYDS01
Data Warehouse Data Usage dm	SQL Server	DOTDBOLYDS01
Facilities data mart	SQL Server	DOTDBOLYDS01
Ferries Fares data mart	SQL Server	DOTDBOLYDS01
Human Resources data mart	SQL Server	DOTDBOLYDS01
Labor data mart	SQL Server	DOTDBOLYDS01
Program Management data mart	SQL Server	DOTDBOLYDS01
Roadway data mart	SQL Server	DOTDBOLYDS02
TDO Traffic data mart	SQL Server	DOTDBOLYDS02
TEIS Reporting data mart	SQL Server	DOTDBOLYDS01

Details on each of these data marts are available from OIT's Data Management Services.

I. Computer Aided Engineering (CAE)

Computer Aided Engineering (CAE) software is critical to efficient, effective delivery of highway projects. InRoads, CAiCE, ProjectWise & MicroStation are the primary agency-wide applications within this category. These applications support field survey data operations, project design, quantity calculations, plan preparation, and construction administration. It's important to note that there are many specialty applications that support other engineering processes that are not included here.

Staff

	Number of CAE Staff (FTEs)	Indicate here if included in Total Agency IT FTEs
Central Support (OIT)	2.0	Yes
Central Support (HQ Design Office)	6.0	No
Program Area Support (Regions)	10.0	**7 are not included, 3 (NWR) are included**

CAE Software

Vendor Name	Carlson Software	AutoDesk	Bentley Systems Inc.	Bentley Systems Inc.
Product Name	SurvCE	CAiCE	InRoads	MicroStation
Number of Licenses	50+	100+	Subscription	Subscription
Daily Users	50	15	200	500
Primary Uses	Survey crew data collection. Software operates instruments and manages data.	Survey Data Processing, Roadway Design, Surfacing & Earthwork Quantities	Survey Data Processing, Roadway Design, Surfacing & Earthwork Quantities	Drafting Contract Plans, Visualization, Photogrammetric, Cartography
Comment	Software runs on Windows CE devices	CAiCE is being phased out and has substantially been replaced by InRoads.	Wsdot has an Enterprise subscription license for all Bentley applications. InRoads uses MicroStation as the CAD platform; therefore, InRoads also uses MicroStation license.	WSDOT has an Enterprise subscription license for all Bentley applications.

Vendor Name	Bentley System Inc	Transoft Systems
Product Name	ProjectWise	AutoTurn
Number of Licenses	Subscription	25
Daily Users	200	10
Primary Uses	Engineering document management between offices and organization.	AutoTurn is a 3rd-party add-in for MicroStation that is used for turning templates.
Comment	WSDOT has an Enterprise subscription license for all Bentley applications.	AutoTurn uses MicroStation as the CAD platform.

CAE Hardware

Make/Model	Intel/Windows PC's configured for WSDOT Level Playing Field. Survey equipment includes Trimble, Leica, and Topcon total station and GPS. Allegro data collectors.
Number	No count available on total stations, GPS, or data collectors
Is this included in Total PCs?	N/A
Is this included in Total Servers?	N/A

Major CAE Applications

CAE doesn't encompass applications as traditionally defined for IT. Engineers use engineering software and technology tools to facilitate surveying, engineering and drafting for design and construction.

Name	Description
Roadway Design Software	Roadway design software is used for processing survey data, solving coordinate geometry calculations, calculating earthwork, surfacing and other volumes, analyzing water flows, calculating contract pay quantities, and visualizing projects. ProjectWise encompasses both InRoads and MicroStation providing content management between the applications as well as standard documents.
Computer Aided Drafting Software	CAD software is used to electronically draft R/W, contract plans, and other plans. MicroStation has been the WSDOT standard since the early 80's. The Bridge Division uses MicroGDS for drafting bridge plans because of functionality that supports the bridge design process. MicroStation is a very stable CAD platform and we have a large base of trained CAD Operators. MicroStation is also the standard for 49 other State DOT's..
Survey Technology	Survey technology comprises the total stations, data collectors, GPS receivers, and software for processing data for design and construction survey work. WSDOT has no standards for survey instruments, there are a variety of different instruments and GPS receivers in use. We do use a standard data collector, the Allegro running Carlson SurvCE software that connects to all the instruments. InRoads and CAiCE survey modules are used to process survey data and to move data between the PC and data collector.
Engineering Document Management	ProjectWise is used to manage engineering files by internal WSDOT staff and external consultants.

4 – Technology Investment/Current Project Summaries

"You will launch many projects, but have time to finish only a few. So think, plan, develop, launch and tap good people to be responsible." --- Donald Rumsfeld

Section 4 - Technology Investment/Project Summaries is based on documentation that is routinely required for effective project management. The information included is a summary of key information extracted from project documentation, including but not limited to project feasibility study reports, and project quality assurance plans.

Project managers are responsible for the project itself and for related documentation. The portfolio model assumes that projects, investments, acquisitions and assets have current documentation available and accessible for use by agency executives, IT personnel, QA professionals and those acting on behalf of the ISB. This section also provides the opportunity to document formal project acceptance by key stakeholders.

The Technology Investment/Project Summaries section is comprised of a summary analyses of each current project and technology investment, including when applicable, information about web-based transactional applications, as required by the IT Security Policy and Standards at http://www.dis.wa.gov/portfolio.

The following investments/projects are summarized in this section:

Investment/Project	Oversight Level	Status
Washington Transportation Framework for GIS (WA-Trans)	Level 2 Oversight	Completed PIR pending approval review
Ferries Employee Dispatch System Replacement (WINDS)	Level 2 Oversight	Completed PIR due 12/2011
Ferries Regional Fare Coordination System (RFCS integration with SmartCard)	Level 2 Oversight	Completed PIR due 12/2011
Storm-water Information Management System (SWIM)	Level 2 Oversight	Completed
Tolling & Statewide Tolling Customer Service Center	Level 2 Oversight	Active
Washington State Roadway Toll Systems (405 & 99 Tunnel)	Level 2 Oversight	Active
Ferries Vehicle Reservation System (Phase 1 approved by ISB on 7/8/2010)	Level 3 Oversight	Active
Ferries Division Enterprise Security System Upgrade (ESSU)	Level 2 Oversight	Active
Enterprise Time and Attendance System (ETAS)	TBD	Not started (Reporting at OFM)

Detailed project information is provided in the chart on the following pages.

Title	Washington Transportation Framework for GIS (WA-TRANS)
Project Status	Completed (PIR pending Approval Review)
Description/Purpose	In 2003, WA-Trans was originally scoped as a GIS database containing transportation data about roads, railroads, ferries, aviation, ports and non-motorized transportation infrastructure using data from local governments, tribes, state and federal agencies. It was being developed collaboratively with a multi-jurisdictional partnership and incrementally in pieces of limited size and scope. In 2007, a mid-term review of the project determined that the scope was unattainable in size as constrained by available resources. The project scope was reduced to seamlessly connecting road data between jurisdictions, boundaries and other framework layers for 18 counties along the I-5 corridor. It also included the data model, tools, processes and documentation for the Transportation Pooled Fund states (California, Idaho, Nebraska, Ohio, Oregon and Tennessee).
Cost Estimate	Completed Actual Cost: $ 2,262,758
FTE's	2 State FTE's, 1 Contractor
Schedule	7/1/2007 – 6/30/2010
Scope	The scope of the WaTrans Project was to create a transportation data portal that could be used by local transportation agencies to contribute and extract transportation data at a statewide level. The components of the WaTrans Project included; • Roadway data • Data import software tools • Data QA/QC software tools • Data integration tools (for connecting individual county/city datasets) • Data export tools • Governance • Documentation for data and system usage
Business Driver/Strategy Supported	The primary business driver for WaTrans was to reduce the redundant efforts across multiple jurisdictions in the creation, maintenance and management of Transportation data. Wa-Trans attempted to create a collaborative mechanism for sharing spatially connected data across jurisdictional boundaries. The WA-Trans Project attempted to support the following strategies : •Greater efficiencies in managing the HPMS and Functional Class processes and reporting to FHWA, •Provide greater efficiencies in development of the Freight and Goods System •Support of regional transportation planning, and related partnerships. •Support of WSDOT role in the State Emergency Management Plan for developing alternative routes into and out of an incident. • Benefits to other partners of WSDOT including MPOs and RTPOs, local governments.
Executive Sponsor	Brian Smith
Project Manager	Michael Leierer

Title	Ferries Division Employee Dispatch System Replacement (WINDS)
Project Status	Completed (Waiting on PIR)
Description/Purpose	Replace the existing dispatch system module with a new vessel and terminal workforce resource planning/scheduling application.
Cost Estimate	Total Actual Cost: $ 947,347
FTE's	2 FTE's
Schedule	1/16/2007 – 6/30/2010
Scope	Improve dispatch process and controls Ensure regulatory compliance capabilities Provide full Engine Room Crew and Terminal Employee dispatch capability in addition to Deck Crew dispatch Incorporate business efficiencies Replace old/outmoded technology Provide a system that is compatible with new WSDOT systems and WSDOT Service- Oriented Architecture (SOA) design principles
Business Driver/Strategy Supported	Achieving improved performance in workforce planning and scheduling in the above categories will also create an environment for reducing overtime, reducing short notice/shift change premiums, strategic use of temporary or seasonal workers and maximizing employee utilization.
Executive Sponsor	David Moseley, Director Ferries Division
Project Manager	Kate Kruller

Title	Electronic Fare System w/Smart Card
Project Status	Completed (Waiting on PIR)
Description/Purpose	This project is a result of legislative push for a more regional transportation approach. Goal – Improve Revenue Controls Washington State Ferries Electronic Fare System (EFS) goals was to replace an existing out of date point of sales system with one that would allow delivery of new services such as selling tickets at Kiosks or on the Web, deliver improved revenue controls and provide the necessary infrastructure to support Ferries Division's participation in the regional Smart Card system.
Cost Estimate	Total Actual Cost: $ 157,946
FTE's	1
Schedule	4/29/2003 – 6/30/2010
Scope	Replace the existing Point of Sale and back office revenue accounting system at all (20) Ferries Division ferry terminals. Integration of a regional fare collection system using smart card technology with 6 participating transit agencies, - Improve revenue controls - Install at terminals in the SJ Islands where fare collection is manual - Smart card accepted as a form of payment at all terminals. - Integrated handheld to accept smart cards and Wave2Go bar coded tickets
Business Driver/Strategy Supported	This project is a result of legislative push for a more regional transportation approach. Goal – Improve Revenue Controls Washington State Ferries Electronic Fare System (EFS) goals was to replace an existing out of date point of sales system with one that would allow delivery of new services such as selling tickets at Kiosks or on the Web, deliver improved revenue controls and provide the necessary infrastructure to support Ferries Division's participation in the regional Smart Card system.
Executive Sponsor	David Moseley, Director Ferries Division
Project Manager	Roger Hair

Title	Stormwater Information Management System (SWIM)
Project Status	Completed
Description/Purpose	This project will contribute to managing WSDOT's environmental commitments articulated in the September 2001 Environmental Policy Statement that calls for protecting and preserving "natural resources and other environmental assets and its citizens' health and safety" and to "comply with all environmental laws and regulations applicable to our business and activities".
Cost Estimate	Total Actual Cost: $ 1,707,930
FTE's	4.5
Schedule	7/1/2007 – 6/30/2010
Scope	Development of a Permitting System that will comply with federal and state storm water permitting requirements.
Business Driver/Strategy Supported	Better environmental management and compliance with state and federal requirements.
Executive Sponsor	Jerry Lenzi, Assistant Secretary, Engineering and Regional Operations
Project Manager	Maribeth Sapinoso

Title	Tolling & Statewide Tolling Customer Service Center
Project Status	Active
Description/Purpose	WSDOT is authorized to implement early tolling on the SR 520 corridor to help finance the construction of the replacement SR 520 floating bridge and necessary landings. To do this, WSDOT needs to install electronic and photo tolling technology on the roadway to capture up to 115,000 new toll transactions daily. The current Tacoma Narrows Bridge (TNB) customer service center and back office system cannot accommodate the additional transactions and photo tolling. The TNB customer service center will be migrated to the new CSC.
Cost Estimate	Total Actual Cost: 11,384,012
FTE's	8 State FTE's and 33.5 Contracted FTE's
Schedule	6/8/2009 – 12/31/2012
Scope	To establish tolling on SR 520 and to implement a single tolling Customer Service Center (CSC).
Business Driver/Strategy Supported	As cost of highway and bridge maintenance and replacement increase WSDOT continues to seek innovative ways to assist in funding these projects. Tolling for key bridges and variable tolling to reduce congestion are the way of the future in gaining addition funds for requirements.
Executive Sponsor	David Dye, WSDOT Chief of Staff
Project Manager	Lucinda Broussard, Tolling Project Manager

Title	Washington State Roadway Toll systems
Project Status	Active
Description/Purpose	Procure a vendor to design, install, integrate, test, operate and maintain systems to identify and classify passing vehicles to support toll revenue collection. The project will include electronic equipment for transponder and photo tolling systems on the I-405 Express Toll Lanes and SR 99 Tunnel.
Cost Estimate	$ 17,670,000
FTE's	1 State FTE & 3 Contracted FTE's
Schedule	7/1/2011 – 10/1/2015
Scope	The scope is to design, install, integrate, test, operate and maintain systems to identify and classify passing vehicles to support toll revenue collection. The project will include electronic equipment for transponder and photo tolling systems on the I-405 Express Toll Lanes and SR 99 Tunnel.
Business Driver/Strategy Supported	The Washington State Legislature has identified the I-405 corridor as a toll eligible facility. Additionally, the Legislature has identified the intent to collect tolls on the proposed SR 99 bored tunnel. To commence toll operations on these two facilities, WSDOT needs to install electronic equipment to identify and classify passing vehicles to support toll revenue collection.
Executive Sponsor	Craig Stone, Tolling Director
Project Manager	Jennifer Charlebois

Title	**Ferries Vehicle Reservation System** (VRS) (Phase 1 approved by ISB on 7/8/2010)
Project Status	**Active**
Description/Purpose	Space on Ferries Division's vehicle deck during peak times is a scarce commodity. Often times there are more vehicles wanting to board a given sailing than can be accommodated given the available capacity. This has led to congestion in and around terminals, growing wait times for customers, and an overall level of service that is deteriorating over time. As populations in ferry communities grow over time, resulting in increased demand for ferry services, the situation is expected to grow worse. Expanding the fleet to add vessel capacity is an extremely costly proposition, and one that needs to be considered in the context of other transportation infrastructure needs across the State. Ferries Division's ability to accommodate forecasted growth levels is significantly affected by the available vessel capacity during the "peak commute periods" and the capacity of terminal facilities to process traffic during these periods. Without any additional capacity expected (at least over the 22-year long range planning horizon), Ferries Division has been directed by the Legislature to take steps to manage its demand. ESHB 2358, passed in 2007, requires Ferries Division to both accommodate ridership growth and to "level peak period demand." Effectively, this means Ferries Division needs to enact strategies that will move discretionary trips currently happening during peak times to other times during the day where there is capacity. The projected ridership growth is relatively easy to accommodate if it occurs primarily on off-peak sailings. The current phase of the project (Phase 1 of 3) will replace the current reservation systems in use on Anacortes to Sydney, Coupeville (Keystone) to Port Townsend and Commercial traffic in the San Juan Islands. Release A will deliver enhanced ticketing functions to support making reservations from the web and allowing users to self serve for changes and cancellations. • Release A will also deliver enhanced customer account functions to allow travel preferences and additional information to be maintained. • Release B will build on the Customer Account system allowing frequent traveler type functions to be activated, it will also provide Web Based Support for commercial customers and advanced load management support. • Phase 2 (not yet budgeted) will extend the Commercial Reservations to the remainder of the routes and Passenger Vehicle reservations to the San Juan Islands as in a series of releases that fit the system to the different routes and terminals based on the terminal and vessel configurations • Phase 3 (not yet budgeted) will extend Passenger Vehicle reservations to the heavy commuter routes and the remaining Central Puget Sound routes and make any updates or additions to the base system that will be needed due to changes in business model
Cost Estimate	Total Planned Budget: $ 11,169,000
FTE's	33.5 Contracted FTE's
Schedule	7/1/2010 – 6/30/2017
Scope	Scope of Phase 1: Replace three existing reservation systems with a single, automated VRS for commercial traffic in the San Juan Islands and for general traffic on the international and Port Townsend/Keystone routes Assure that all elements of the system are capable of supporting vehicle reservations throughout the ferry system

Business Driver/Strategy Supported	The Washington State Department of Transportation (21 WSDOT) Ferries Division is the largest ferry operator in the United States. Operating as Washington State Ferries , the department is responsible for auto/passenger ferries serving ten ferry routes in the Puget Sound region, including one international route from Anacortes, Washington to Sidney, British Columbia. Space on Ferries Division's vehicle deck during peak times is a scarce commodity; often there are more vehicles wanting to board a given sailing than can be accommodated. This has led to congestion in and around terminals, an inability to plan travel times reliably leading to growing wait times for customers, and an overall level of service that has been deteriorating over time. At many terminals during periods of high demand, the capacity of the terminal vehicle holding is reached and traffic beings to overflow. When the holding areas overflow, the traffic and congestion impacts are frequently severe on streets and highways surrounding the terminals. Effects are felt by the neighborhoods and businesses in the terminal area, whose business traffic is impeded. In most cities and towns served by Ferries Division, local and county governments see this traffic impact as untenable. While most understand ferry traffic is an overall benefit to the community, when waiting ferry traffic clogs the streets, increases air pollution, and reduces commerce, it is no longer seen as beneficial and is largely deemed as detrimental. There are a number of secondary impacts that also result from this situation, the ferry system incurs higher operating costs for traffic control and other costs associated with the acquisition, construction, and ITS sign elements to accommodate these peak conditions.
Executive Sponsor	David Moseley, Ferries Division Director
Project Manager	Roger Hair

Title	Ferries Division Enterprise Security System Upgrade (ESSU)
Project Status	Active
Description/Purpose	Replace the current Vigilos enterprise security system at 43 sites with a new COTS enterprise system integrated with our physical key management system and replacement ID credential center. In addition, provide for replacement of EOL hardware, provide TWIC compliance, and smart video analytics with GIS interactive maps.
Cost Estimate	$ 4,386,700.00
FTE's	FY 2011 - 1 Contractor FTE
Schedule	7/1/2010 – 5/1/2013
Scope	Replace current enterprise security system with a new COTS enterprise solution
Business Driver/Strategy Supported	Required for Ferries Division Operations by DHS and USCG directives
Executive Sponsor	David Moseley, Ferries Division Assistant Secretary
Project Manager	Mike Mellin, OIT Project Manager

5 – Planned Investments/Projects, 2011

"The object of all work is production or accomplishment and to either of these ends there must be forethought, system, planning, intelligence, and honest purpose, as well as perspiration. Seeming to do is not doing." *--- Thomas A. Edison*

Section 5 – Planned Investments/Projects provides an opportunity for agency executives to view IT investment alternatives in context, rather than as isolated projects. The contents of the portfolio are drawn from documents that have already been created by each agency in conjunction with its regular management processes.

Each investment in IT must be viewed in relation to:

- Its impact on the business of the agency - as represented by the Agency Strategic Business Plan section of the portfolio;
- Its impact on the agency's technical environment - the Agency Technical Infrastructure;
- Its priority as measured against current investments and other proposed investments - Sections 4 and 5 of the portfolio; and
- The impact, if any, on the statewide IT infrastructure.

The Planned Projects/Investments section is comprised of a summary analyses of each project and proposed technology investment, including when applicable, information about web-based transactional applications, as required by the IT Security Policy and Standards at http://www.wa.gov/dis/portfolio/.

11-13 Biennium Projects

The following projects have received funding but have not been started at the time of this IT Portfolio reporting period:

Title	Description/Purpose	Cost Estimate	FTEs	Schedule	Scope	Business Driver/ Strategy Supported	Executive Sponsor	Project Manager
Enterprise Time and Attendance system (ETAS)	This project is the WSDOT IT portion of the Time, Leave and Labor Distribution Project in coordination with OFM.	$1,667,000	Unknown This is dependant upon OFM/DES	Unknown This is dependant upon OFM/DES	WSDOT is the pilot agency to interface current timekeeping systems in with the new system which will be implemented by OFM/DES.	The new system will close the loop holes in the current system which does not meet mandatory federal and state requirements for tracking Family and Medical Leave Act (FMLA) leave accruals and liquidations. This is an area of substantial risk; agencies are using manual processes to ensure compliance with FMLA standards. The new system will increase the complexity of complying with the Federal Fair Labor Standards Act, which mandates that all employees need to submit time worked – not just the exception time, or leave requests as most salaried employees have traditionally done. And remove the limitations in the current timekeeping systems which make it difficult to implement and track provisions of the numerous collective bargaining agreements. These limitations increase the risks of a grievance being filed and of a labor union raising a past practices argument during labor negotiations.	Grant Rodeheaver, IT Director	Noel Morgan, IT Enterprise Implementation Manager
Stormwater Permit Compliance	On-going support costs of the SWIM application implementation in FY11.	$ 210,000	0.5	N/A	Funding for the on-going support and maintenance costs of the SWIM application. The funding will also include the hardware/software maintenance and license renewals.	Support and continued operational maintenance of the Stormwater Information Management system. This system supplies information to other regulatory environmental agencies.	Grant Rodeheaver, IT Director	Larry Gruginski, Enterprise Applications Manager

Not Funded Projects

The following projects have no funding. WSDOT remains committed to these projects in the future:

Title	Description/Purpose	Cost Estimate	FTEs	Schedule	Scope	Business Driver/ Strategy Supported	Executive Sponsor	Project Manager
WSDOT Critical Applications Replacement Phase 3 – TRIPS Replacement (3)	Requesting funding to focus on the three most critical systems that need replacement: Labor Collection and Distribution System/Payroll (Labor Payroll), Transportation Information Planning and Support System (TRIPS), and Priority Array Tracking System (PATS)	'09-'11: $5 million (Not funded) '11-'13: TBD	'09-'11: 14.0 (not funded) '11-'13: TBD	Start –'09 Completion- '13	Complete replacement of the first system (TRIPS).	The future WSDOT faces will place increasing demands on the existing core systems that simply cannot be met. Future needs will require an integrated set of applications and data with capabilities of agility, flexibility and responsiness.	Bill Ford, Assistant Secretary Administration	Kristine Hubble
Traffic Operations Performance Monitoring & Management System (2)	Purpose of the project is to purchase a Traffic Operations Performance Monitoring and Management system that will allow the department to enhance system management and quickly report on the performance and condition of critical components of the "Moving Washington" initiative, such as Integrated Corridor Management and Active Traffic Management, which	'09-'11: $1,617,000 '11-'15: $980,000	'09-'11: 1.25 '11-'15: 1.25	Start :'09 Completion: '11 Maintenance: '11-'15	To provide WSDOT with a decision support systems needed to adequately monitor and report on the use and performance of the state roadway system.	Mobility	State Traffic Engineer TBD	Daniela Bremmer

	are integral to the agency's strategic plan. The existing system was developed in 1997							

6 – Annual Technology Investment and Project Reviews, 2011

"Twice and thrice over, as they say, good is it to repeat and review what is good."
--- Plato

Section 6 – Annual Technology Investment and Project Reviews consists of three sections; a review and update of each ongoing level 2 and 3 IT investment or project, a post-implementation review of any level 2 or 3 IT investment or project completed since the previous annual update, and a copy of the Annual Compliance Letter.

The project review of each ongoing level 2 and 3 investment or project is performed as part of the annual update of the IT portfolio. This review is to compare expectations for the investment or project as documented in the original investment analysis and project plan against the current project status.

For projects completed since the last annual portfolio update a post-implementation review is included. This review assesses the causes and impacts of any significant reductions in benefits, increases in one-time or continuing costs, problems with project management, or increases in project risk during the course of the project. It documents practices and procedures that lead to project successes with recommendations for applying them to similar future projects, and recommendations for improving the planning, management, and quality control of future, similar investments or projects.

a. Annual Reviews

The following projects with an oversight level of 2 or 3 are ongoing. The Annual Review is based on the final Quarterly Project Review as of March 2010 and May 2010, respectively for the projects.

Investment/Project	Oversight Level
Tolling & Statewide Tolling Customer Service Center	Level 2 Oversight
Ferries Vehicle Reservation System - Scheduled to present to ISB on 7/8/2010 - No Annual Review until Project Manager is assigned in late July 2010 and work begins.	Level 3 Oversight
Washington State Roadway Toll Systems (405 & 99 Tunnel) *No Annual Review until RFP is released*.	Level 2 Oversight
Ferries Division Enterprise Security System Upgrade (ESSU) *No Annual Review until RFP is released.*	Level 2 Oversight

Tolling & Statewide Tolling Customer Service Center

PROJECT: Tolling Project - Statewide Customer Service Center			
OVERSIGHT LEVEL >	☐ **Level 3**	☒ **Level 2**	☐ **Level 1**

Executive Sponsor David Dye, Chief Operating Officer, Deputy Secretary Craig Stone, Director Toll Division	**Project Manager** Patty Rubstello, CSC Project Manager Toll Division **DIS Oversight** Tom Parma, Department of Information Systems
Business Area Manager Patty Rubstello, Director Toll Systems Development & Engineering Pete Briglia, Director Toll Operations	**Contracting/Consulting Firms** Electronic Transaction Consultants Corp (ETCC) Jacobs Engineering Group Inc. (Jacobs) PBSJ Corporation (PBSJ) IBI Group (IBI) DHP Project Services (DHP) Dye Management

PROJECT DESCRIPTION

TYPE OF PROJECT >	☐ **System Development**	☐ **RFP**	☐ **Feasibility Study**	☒ **Other**

Project Start Date:	01/11/2010	**Current Baseline Scheduled Completion Date:**	12/31/2012

Note: Projects which have a DIS Investment Plan, the Start and End dates should equate to dates specified in the Investment Pan.

Procure a service provider (vendor) to establish and operate a customer service center / back office for statewide toll collection. Vendor will be responsible for providing *Good To Go!* customer and account services including: customer service storefronts; website; transponder and photo toll processing; customer account management; payment processing; violation processing; adjudication support, associated accounting and financial systems support; and reporting.

Business Need

BUSINESS DRIVERS >	☒ **Legislative**	☐ **Audit Finding**	☒ **Business Opportunity**	☐ **Other**

Engrossed Substitute House Bill 2211 authorizes WSDOT to implement early tolling on the SR 520 corridor to help finance the construction of the replacement SR 520 floating bridge and necessary landings. Current customer service center/back office is not sized to accommodate the large increase in accounts anticipated with tolling SR 520.

PROJECT BUDGET			
Funding Source(s)		**Funding Source Specifics**	
☐	Program Funds	*Subprogram(s)*:	$
☐	Legislative Funding	*Source ID:*	$
☒	Federal / Grant Funds	*Source ID*: TCSP(88%)/ITS(7%)/VPPP(5%)	$15,488,986
☒	Other Funding	*Specify*: TPA	$150,000
		Total Project Funding:	**$15,638,986**

Current Status *(compared to Current Baseline) "=": no change, "-": ↓, "+": ↑*	**SCOPE**	**SCHEDULE**	**BUDGET**
	=Yellow	**↓Red**	**= Green**
Status Summary	During this period, the vendor continued to address operational issues associated with the CSC opening (Phase 1a) during last period while working toward the next system enhancement (Phase 1b), which will enable photo tolling and provide better financial reconciliation capabilities. Also, during this period, the vendor completed functional testing of the Phase 1b functionality, identified a number of items for resolution, and is remediating these in preparation for the next phase of testing, Extended Operational Testing (EOT). The scope EOT is still being defined but will include a comprehensive end-to-end test of the system under loads approximating those expected during live operations. EOT is expected to begin mid-August and last two to three weeks. Additionally, an Expert Review Panel was convened during this reporting period to review progress to date and provide recommendations. One of the preliminary recommendations was to conduct an end-to-end test of the Phase 1b enhancements to assess the current capabilities and inform future development work. This test was conducted and provided useful information that is being incorporated into the Phase 1b design.		

SCOPE

This Reporting Period's Progress

The following significant achievements were realized during this reporting period:

- Vendor resolved many of the operational issues associated with Partial CSC Operations Commencment.
- Vendor commenced functional testing of remaining functionality, in particular, photo tolling and NOCP processes.

This Reporting Period's Issues / Risks and Mitigation Strategies

Vendor focussed on delivering the full system functionality during this period. This includes photo tolling and reconciliation reporting capabilities. In parallel, vendor focused on addressing several operational issues identified following Partial CSC Operations Commencment. The schedule for tolling commencement slipped from April 2 to July 9 and further slipped to fall 2011 (anticipated to be October 1). Two change orders (#3 and #5) address the schedule slip and associated damages. WSDOT and its consultant partners are working very closely with the vendor address issues collaboratively; however, at this point, a firm date for tolling commencement cannot be determined.

Change Control Decisions

Three change orders have been executed on this contract. Two change orders are pending:

- Change order #1 added scope for vendor to deploy an adjudication module in support of scheduling adjudication hearings. Executed Novemer 2010.
- Change order # 2 clarified vendor's authority to enter into a retail marketing agreement with alocal

SCOPE

grocery chain (Safeway). Executed February 2011.

- Change order #3 revised program schedule and identified damages owed to WSDOT by vendor due to delays. Executed May 2011.
- Change order #4 adds scope for vendor to provide and buildout a space at the University District CSC location for adjudication hearings and to provide system and personnel support of hearings. Anticipated to be executed August 2011.
- Change order #5 revises the program schedule and identifies damages owed to WSDOT by vendor due to extended delays. Anticipated to be executed August 2011.
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Objectives for next Reporting Period

During the next reporting period, the following activities are expected to be achieved:

- Execution of change orders #4 and #5, noted above.
- Complete Regression Testing and any associated remediation.
- Complete Extended Operational Testing (EOT).
- Obtain Secretary Certification for photo tolling.
- Commence photo tolling on TNB and tolling commencement on SR 520.

SCHEDULE

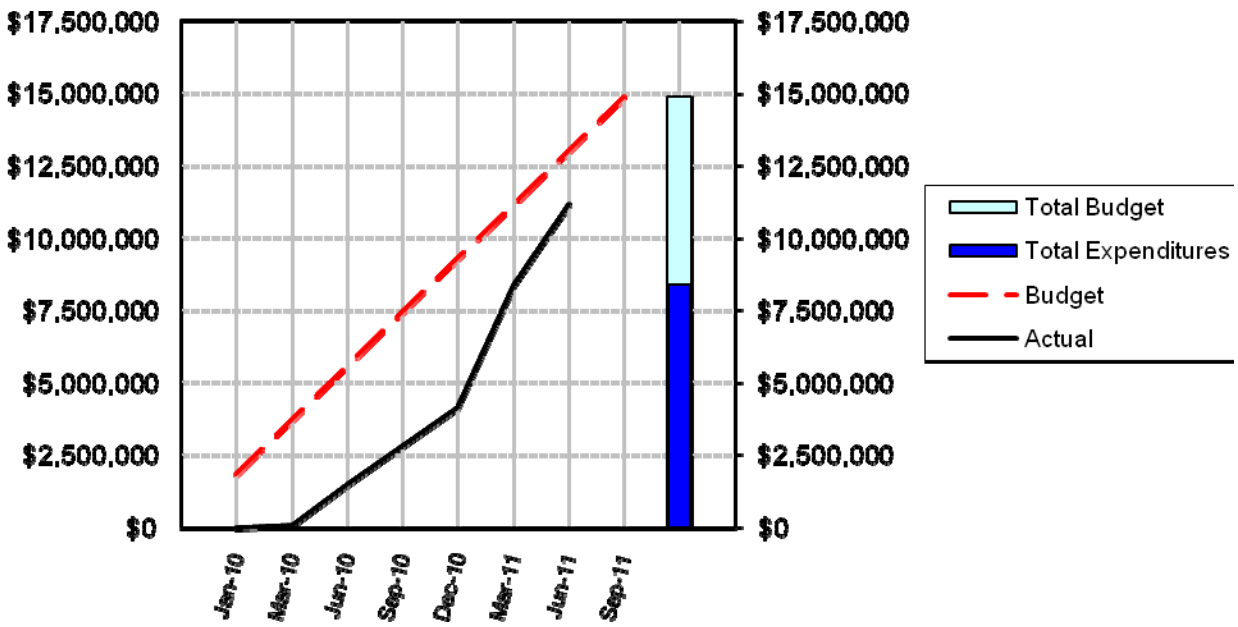
PROJECT LIFECYCLE >	☐ Initiation	☐ Planning	☐ Execution	☒ Implementation	☐ Closure

◆ Major Milestones Current Baseline	Schedule			Milestone Outlook
	Original Baseline	Current Baseline	Attained	
Program Planning Complete	03/12/2010	03/12/2010	4/19/2010	Complete
TCS Interface Control Document	07/01/10	12/13/10	12/13/10	Complete
Financial and Accounting Preparation Complete	12/19/2010	06/10/11		Delayed; to be revised in change order #5
Operations Preparation Complete	12/19/2010	06/10/11		Delayed; to be revised in change order #5
System Preparation Complete	12/19/2010	06/10/11		Delayed; to be revised in change order #5
TNB Data Migration Complete	01/18/2011	01/18/2011	2/12/2011	Complete
Facilities Established	02/17/2011	01/18/2011	2/12/2011	Complete
Start-up Complete	01/18/2011	06/10/11		Delayed; to be revised in change order #5
Partial CSC Operations Commencement	01/18/2011	02/14/11	2/14/2011	Complete
TNB Photo Tolling Start	01/18/11	06/13/11		Delayed; to be revised in change order #5
Tolling Commencement	03/19/2011	07/09/11		Delayed; to be revised in change order #5
Acceptance Issued	07/21/2011	09/24/11		Delayed; to be revised in change order #5

BUDGET

Project Budget Breakdown *Item Description*	**Original Baseline Budget Plan**	**[A] Current Baseline Budget Plan**	**[B] Actual Expenditures To Date**	**[C] Projected Amount to Complete**	**Variance** Variance = [A] - [B] - [C]
ETC Contract (Implementation/Start-up only)	$2,824,628	$3,077,101	$2,294,533	$782,568	0
WSDOT	$1,150,000	$950,000	$301,779	$648,221	0
Consultant Services	$5,135,245	$7,249,444	$5,410,993	$1,838,451	0
TransCore Amend #2	$750,000	$726,839	$260,586	$466,253	0
Marketing/Outreach/Research	$5,000,000	$3,635,602	$2,873,902	$761,700	0
Other Agreements					
Future Agreements					
Totals >	**$14,859,873**	**$15,638,986**	**$11,141,793**	**$4,497,193**	**0**

Budget Plan vs. Actual Expenditures



Ferries Division Vehicle Reservation System

PROJECT: Washington State Ferries Vehicle Reservation System Phase 1			
OVERSIGHT LEVEL >	☒ Level 3	☐ Level 2	☐ Level 1

Executive Sponsor **David Moseley** Assistant Secretary Ferries Division	**IT Project Manager** Steve Johnson (Consultant)
Business Area Managers Jean Baker, Deputy Chief Administration and Finance, Ferries Division **Project Director** George Capacci, Deputy Chief Construction and Operations, Ferries Division	**Consultant/Contracting Firm** Barry Otterholt, External Quality Assurance, Stouffer, Co.

PROJECT DESCRIPTION				
TYPE OF PROJECT >	☒ System Development	☐ RFP	☐ Feasibility Study	☐ Other

Project Start Date:	4/01/2010	**Current Baseline Scheduled Completion Date:**	December 2012

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Business Need				
BUSINESS DRIVERS >	☒ Legislative	☐ Audit Finding	☐ Business Opportunity	☐ Other

Space on WSF's vehicle deck during peak times is a scarce commodity. Often times there are more vehicles wanting to board a given sailing than can be accommodated given the available capacity. This has led to congestion in and around terminals, growing wait times for customers, and an overall level of service that is deteriorating over time.

As populations in ferry communities grow over time, resulting in increased demand for ferry services, the situation is expected to grow worse. Expanding the fleet to add vessel capacity is an extremely costly proposition, and one that needs to be considered in the context of other transportation infrastructure needs across the State.

WSF's ability to accommodate forecasted growth levels is significantly affected by the available vessel capacity during the "peak commute periods" and the capacity of terminal facilities to process traffic during these periods. Without any additional capacity expected (at least over the 22-year long range planning horizon), WSF has been directed by the Legislature to take steps to manage its demand. ESHB 2358, passed in 2007, requires WSF to both accommodate ridership growth and to "level peak period demand." Effectively, this means WSF needs to enact strategies that will move discretionary trips currently happening during peak times to other times during the day where there is capacity. The projected ridership growth is relatively easy to accommodate if it occurs primarily on off-peak sailings.

The current phase of the project (Phase 1 of 3) will replace the current reservation systems in use on Anacortes to Sydney, Coupeville (Keystone) to Port Townsend and Commercial traffic in the San Juan Islands. This phase will deliver enhanced ticketing functions to support making reservations from the web and allowing users to self serve for changes and cancellations. This phase will also deliver enhanced customer account functions to allow travel preferences and additional information to be maintained. This phase will build on the Customer Account system allowing frequent traveler type functions to be activated, it will also provide Web Based Support for commercial customers and advanced load management support.

Phase 2 (not yet budgeted) will extend the Commercial Reservations to the remainder of the routes and Passenger Vehicle reservations to the San Juan Islands as in a series of releases that fit the system to the different routes and terminals based on the terminal and vessel configurations

Phase 3 (not yet budgeted) will extend Passenger Vehicle reservations to the heavy commuter routes and the remaining Central Puget Sound routes and make any updates or additions to the base system that will be needed due to changes in business model

PROJECT BUDGET			
Funding Source(s)		**Funding Source Specifics**	
☐	Program Funds	*Subprogram(s)*:	$
☒	Legislative Funding	*Source ID:*	$2,791,000
☐	Federal / Grant Funds	*Source ID*:	$
☐	Other Funding	*Specify*:	$
		Total Project Funding:	**$2,791,000**

PROJECT: Washington State Ferries Vehicle Reservation System Phase 1

Report Submitted by: Steve Johnson (Consultant), Project Manager

Current Status *(compared to Current Baseline)* *"=": no change, "-": ↓, "+": ↑*	**SCOPE**	**SCHEDULE**	**BUDGET**
	=Yellow	**=Yellow**	**= Green**
Status Summary	The project has digressed during this past quarter with multiple Quality Assurance (QA) Findings remaining open. However, a new IT Project Manager has been hired who is working to get the Findings under control and closed. Another risk is the recent loss of multiple IT development resources. Recently, three to four WSF FTE development resources have been lost in the last month, leaving the remaining developer struggling just to keep current systems alive and forcing the VRS contract staff to assist on production issues. **Scope** of delivered functions will still be driven by the 8/15/11 business requirements. **Schedule** has also been affected by the impediments and the software will now be delivered in **late 2012**. **Budget** Analysis indicates that cost will be contained to the original. The budget work will also move forward with the re-work of the project management plan to use a hybrid iterative/waterfall approach.		

SCOPE

This Reporting Period's Progress

- Business Requirements Identified – 95% complete (still left to go is Reporting, Auditing, and Argo replacement)
- Project approach (methodology) solidified. We will use a hybrid iterative/waterfall approach detailed in V3.1 of the Project Management Plan (PMP).
- Modifications to Project Management Plan started, to be completed by 8/15/11.
- Iteration construction started w/first delivery 8/12/11. Task management tool installed and in use by Dev team.
- Adjustments to scope, budget, and schedule completed. $304,285.49 recovered from incorrect JV back to VRS IT project budget (Phase 1).

This Reporting Period's Issues / Risks and Mitigation Strategies

- Business Requirements gathering process will not be completed to stakeholder and IT team satisfaction until 8/15/11. Requirements are 95% complete for Phase 1. It is not yet clear that the level of requirements definition will be sufficient for the IT development team to advance the project.

- Galaxy Update project will impact VRS schedule and/or scope. Concern is over account management and web store functionality.
- A major assumption, (and project risk), is the presumption that all the current systems will still be retained and operated in the same manner in the future. Many manual disparate systems exist today that may need to be incorporated into VRS scope.
- Fare Media Study may alter or eliminate some business rules. The Fare Media study is due November 2011.
- PCI project will impact VRS schedule and/or scope
- Customer Login Account Management requirements not fully defined yet (and this is a priority 1 work item for the dev team)
- Definition of Auditing Requirements not yet complete
- Definition of Reporting Requirements not yet complete
- Definition of Administrative functions requirements not yet complete
- Integrate stakeholder issues into this log. Will be done after 8/15 for open stakeholder issues (many should be closed by 8/15 requirements delivery)
- Preferential load WAC needs possible modification. Need AG opinion to determine if we can charge for no-shows.
- Development resources not sufficient for project. We need to acquire two more .NET developers, and a Software Test Engineer of suitable caliber ASAP.

Note: The VRS project has Risk/Issue log on the project sharepoint site: http://sharedot/it/wsfvrpii/default.aspx

Change Control Decisions

<none>

Objectives for next Reporting Period

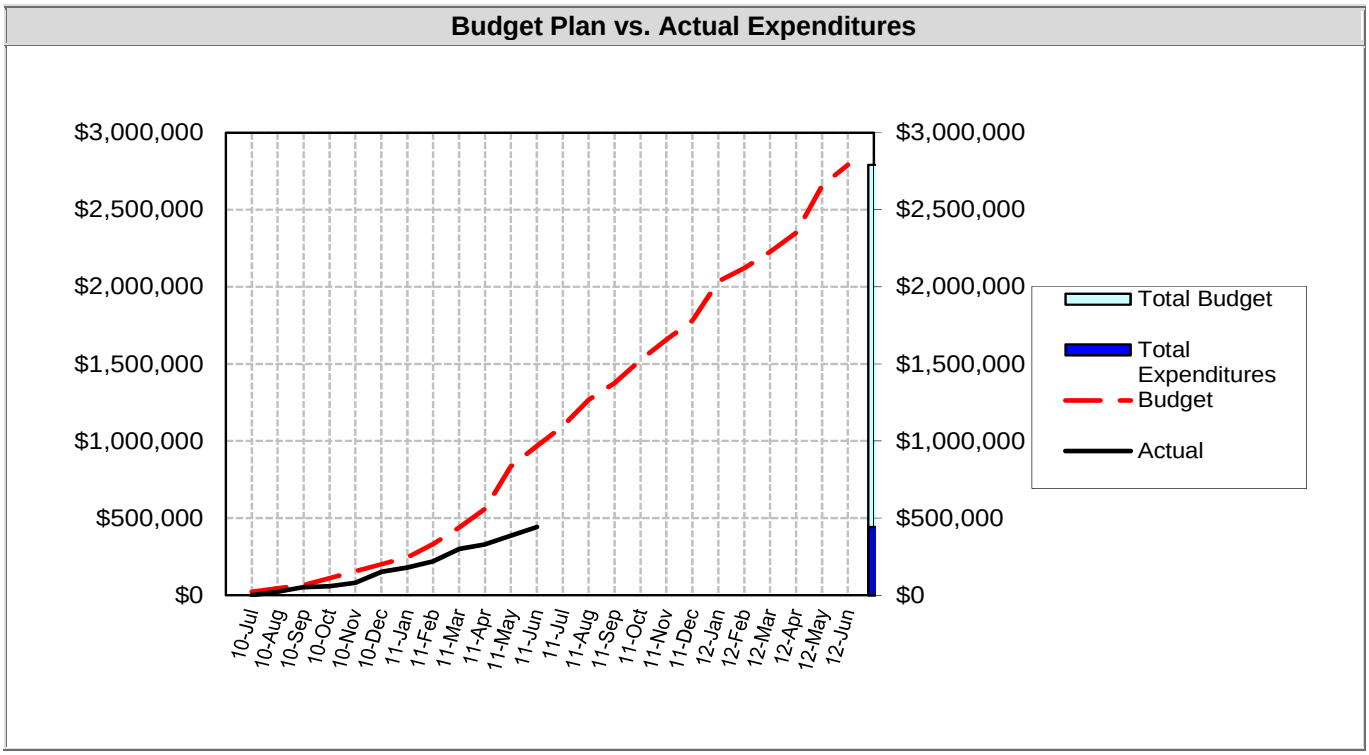
- Completion of all business requirements (including Reporting, Auditing, and Argo replacement)
- Completion of design, database model (virtual and physical), class framework, and architecture for first iteration deliverables
- Iterations 1-6 deliverables delivered and reviewed by customers

SCHEDULE PHASE 1

PROJECT LIFECYCLE >	☐ Initiation	☒ Planning	☒ Execution	☒ Implementation	☐ Closure

◆ Major Milestones Current Baseline	Schedule			Milestone Outlook
	Original Baseline	Current Proposed Baseline	Attained	
Project Start Date	Spring 2010	1/11/2010	1/11/2010	Pre Design Completed and Submitted
Funding Release	Spring 2010	7/8/2010	7/8/2010	Investment Plan Approved
Market Review		11/30/2010	12/04/2010	Completed – Reviewed Change in Project Methodology Required
Project Management Planning & Documentation	Spring 2010	August 2011		On track
Reservation Phase 1 Business Requirements Complete		August 2011		On track
System Architecture		August 2011		On track
Software Build Complete		May 2012		

Delivering Enhanced ticketing for reservations, Additional Customer Account capability and Enhanced Web Site functions				
Integration Testing Complete		September 2012		
User Acceptance Testing Complete	Summer 2010	October 2012		
Initial Version Ready for Transition	Summer 2010	November 2012		
Transition to new reservation Component complete	Fall 2010	December 2012		



b. Post Implementation Reviews

Projects Completed Since Last IT Portfolio Update

Investments/projects that have been completed are shown below. Post Implementation Reviews (PIRs) will be added to section 6 of this portfolio as the PIRs are received.

Investment/Project	Deployment Date	Oversight Level
Washington Transportation Framework for GIS (WA-Trans)	June 2010	Level 2 Oversight
Ferries Employee Dispatch System Replacement (WINDS)	June 2010	Level 2 Oversight
Storm-water Information Management System (SWIM)	June 2010	Level 2 Oversight
Ferries Regional Fair Coordination System (RFCS) with Smartcard	June 2010	Level 2 Oversight

The following projects will submit the Post Implementation Reviews (PIRs) within the next six months:

- Ferries Employee Dispatch System Replacement (WINDS)
- Ferries Regional Fair Coordination System (RFCS) with smart card

Stormwater Post Implementation Review (PIR)

Project Name:	**StormWater Information Management System**	Acronym: **SWIM**	
Report Completed by:	**Maribeth Sapinoso**	Report Date:	7/1/2011

Project Sponsor(s) – Name and Organization:

- Jerry Lenzi, Assistant Secretary, Engineering and Regional Operations
- Megan White, Director, Environmental Services
- Grant Rodeheaver, Director, Office of Information Technology

Other users or customers of the Project Deliverables – Names and Organization:

- Ken Stone, Resource Programs Branch Manager, Environmental Services
- Joe Witczak, Operations Branch Manager, Environmental Services
- Dick Gersib, Stormwater & Watersheds Program Manager, Environmental Services
- Elizabeth Lanzer, Environmental Information Program Manager, Environmental Services

Project Background/Description:

This project is one component of the Stormwater Management Program (SWMP). The primary business driver is to demonstrate and satisfy requirements for compliance with the WSDOT National Pollutant Discharge Elimination System Stormwater Permit (NPDES) Municipal Stormwater Permit. This stormwater permit was issued by the Department of Ecology on February 4, 2009 and modified on May 5, 2010. WSDOT's compliance with the permit will support clean water in Washington; salmon recovery efforts; and the quality of Puget Sound.

Project Metrics

Estimated Project Cost	*Actual Project Cost*	*Estimated Hours*	*Actual Hours*
$1,707,929	$1,600,000	3170	6925

If there is a substantial difference between the estimated and actual cost, what were the contributing factors?

Planned Project Schedule		*Actual Project Timeline*	
Start Date	End Date	Start Date	End Date
7/1/2009	6/30/2011	7/1/2009	6/30/2011

If there is a substantial difference between the planned schedule and actual project timeline, what were the contributing factors?

Project Benefits

Comparison of the expected benefits with the benefits realized at the project's completion. Please complete the *Projected Benefits* section, as documented in the project's charter. The *Actual Benefits* are a subjective comparison of the Projected Benefits or additional benefits that were realized as a result of the project.

Projected Benefits	***Actual Benefits***
Implementation of the stormwater information management tool will be an essential component of WSDOT's strategy to being in full compliance with the new NPDES municipal stormwater permit. Further, this tool will support the integration of stormwater features data from Environmental Services Office, Maintenance and Operations, and the construction office into a departmental Roadside Inventory database.	The data management tools developed under this project are key pieces of NPDES permit compliance. The tools enable 1) stormwater feature inventory to be coordinated between multiple WSDOT programs, 2) water quality monitoring data to be collected, analyzed, and reported, 3) field reporting and updates for construction monitoring, illicit connections, and underground injections controls.

Project Functionality

This section compares the expected functionality with the actual functionality of the project (system/application) at completion. Does the final product function as specified in the requirements? If so, does it function satisfactory?

The *Expected Functionality* should reflect the functionality as documented in the project's Requirements Specification. The functionality can be stated at a fairly high-level (for example, the requirements may be summarized such as: The system shall provide an adhoc inquiry and reporting function).

Please indicate a rating on a scale of 0 to 3 how you feel that product delivered meets the functionality expected.

0 = not at all 1 = adequate 2 = satisfactory 3 = exceeds expectation

Expected Functionality Original Specification	*Actual Functionality* Delivered Product	Meets Specification (Rating 0-3)	Works Satisfactorily (Rating 0-3)
Develop, implement, and maintain a GIS-based inventory of stormwater management system features that provides detailed information about the flow control and treatment functionalities of each system. Provide for field verification and update of data initially developed in the office.	GIS database was designed and established that includes characterizations of flow control and treatment functions for each feature, and flags for field verification and update.	2	2
Update stormwater management system features based on the same reference sources. History on features that have changed or been replaced will be maintained.	Established GIS database and agency highway feature database to enable cross referencing features between programs.	2	2
Maintain history and updates of changes to stormwater management features due to new construction or other activities.	Established GIS database has the capacity to record new construction updates and track feature history.	2	2
Register existing and new UICs with Ecology	Workgroup Application gathers data needed to complete UIC registration and submit updated to ECY	2	2

Expected Functionality Original Specification	*Actual Functionality* Delivered Product	Meets Specification (Rating 0-3)	Works Satisfactorily (Rating 0-3)
Record and track WSDOT's compliance with TMDL implementation requirements	Not addressed as a corporate or workgroup application.	0	0
Track and coordinate stormwater retrofit priorities and solutions	Functionality partly delivered as part of the Stormwater Feature Inventory. Does not track priorities or solutions.	0	1
Provide Maintenance and Operations staff with stormwater management feature locations and associated flow control and treatment functions	Maintenance and Operations can access the stormwater treatment and flow control features mapped by the Stormwater Program.	1	1
Pull available relevant information on labor, training, monitoring costs, project expenditures, completed projects, construction site monitoring, BMP monitoring, BMP site characterizations, maintenance materials usage, maintenance activities on BMP's, etc. into summary form for annual reporting	Not addressed by a corporate or workgroup application.	0	0
Manage, analyze, and report monitoring data on BMP's unapproved treatments, untreated areas and other locations based on Ecology's direction. Be able to load this data to Ecology's database and/or to the International BMP database and exchange data with other MS4 permitees.	Software for managing monitoring data on BMP treatments was purchased and installed. Configuration of that software is on going.	1	1
	Manage, analyze, and report monitoring data for Discharge Point, Upstream/Downstream, TMDL, and 303(d) sampling requirements on construction project permits. Be able to load this data onto the Ecology-approved Discharge Monitoring Report template and produce paper copies of the report.	2	2

Note any additional comments regarding the functionality or effectiveness of the product.

The Project Experience

Describe significant experiences and lessons learned during the project. This will enable future teams to learn from this project as well as provide opportunities to incorporate improvements into the Office of Information Technology's processes and procedures.

Things That Went Well

Stormwater Feature Inventory Database (SFID):

- ✓ The team agreed that core team that completed this project would remain unchanged.
- ✓ Surprised how well the team worked together and how much had been accomplished midstream of the project.
- ✓ The team felt that the voice of the customers (business and IT) was effectively heard.
- ✓ Staff was challenged to take on more responsibilities due to the economy and still expected to do their day-to-day job which surprised the team to have met the permit deadlines.
- ✓ The team felt that the voices of the customers (business and IT) were effectively heard.

Construction Water Quality Monitor (CWQM):

- ✓ Surprised how well the team worked together to meet requirements.
- ✓ Surprised in how the last year a consistent group of people and constant communication turned the project around for success.
- ✓ IT developers had a good understanding of the business and workflow which proved to be important.
- ✓ Committed group members that communicated and were engaged in the process proved to be crucial for the success of this project.
- ✓ The knowledge that the users did not have to administer the content of the application was a turning point for the project's technical approach for application development.
- ✓ The current effort has been very effective because of the active project manager's planning, communications, organization, risk/change management, and overall involvement.
- ✓ The current effort has been very effective because of the communication and the exchange (back and forth) of information such as the asking of business related questions from IT.
- ✓ The business had an active role in writing their Use Cases which helped validate testing and coding efforts.
- ✓ Customers' availability to validate what had been developed was effective for the QC/QA activities.
- ✓ Current effort of the project's QA and QC was effective involving the business/customers in the early stages of development and testing efforts.
- ✓ Would not change the current composition and commitment of the team.
- ✓ The iterative process of receiving feedback earlier from the customers than later helped deliver the application earlier.

Illicit Discharge Detection and Elimination (IDDE):

- ✓ Surprised how well the IDDE application was being developed as the IDDE program was being developed at the same time.
- ✓ It was helpful to have a Business Analyst on this project which a BA was brought eight months prior to the end of this project. The BA helped the business evaluate and scrutinize their business processes creating visual workflow.
- ✓ The last year of the project there was no "us vs. them" attitude in the team environment.
- ✓ Having knowledgeable and flexible IT staff on the project team the last year of the project proved to be very important.
- ✓ Business analysis helped the application take shape.
- ✓ Having a consistent and solid business person helped keep the project flowing and stable.
- ✓ Having an active, flexible, and trusting project manager the last year helped move this project.
- ✓ IT staff was very proactive in understanding the business process which helped communicate the voice of the customer.
- ✓ IT feels the final product is easily maintainable and understandable even for new developers to support.
- ✓ Entity Framework helped this project be completed sooner.
- ✓ The team's ability to compromise and create a workable solution worked extremely well in reaching the final goal of this project.

Things That Could Have Gone Better

Stormwater Feature Inventory Database (SFID):

- ✓ Wished the decision making about features were better documented and organized. This would have saved a lot of time and confusion.
- ✓ More testing should have been involved.

Construction Water Quality Monitor (CWQM):

- ✓ Surprised that the application was almost ready for production a year ago when it did not meet requirements and was unstable.
- ✓ The original requirements and use cases documents were unclear and inaccurate. The new and current team was not able to get a good sense of what the application was supposed to be.
- ✓ When trying to hook CWQM with CTS, it would have been helpful to know that instead of an exact match, an approximation would have sufficed. This would have allowed for a quicker turnaround to make the connection between CWQM and CTS.
- ✓ It would have been helpful to have the ability to ask CTS to make the connection to CWQM rather than CWQM making the connection. This would have allowed for a more stable service-based interface and minimize dependencies between systems.
- ✓ First attempt of this project did not effectively capture and communicate the voice of the customer because of limited/iterative subject matter experts' availability and lack of communication and poor understanding of the business by IT staff.
- ✓ Because the requirements were handed over from the first attempt of this project, it has been difficult to ensure accuracy and detect contradictory information or gaps in the current efforts. This has led to issues such as validating testing to see if the requirements or use cases have been met.

Illicit Discharge Detection and Elimination (IDDE):

- ✓ There were no clear requirements a year after the project started.
- ✓ There was no application the first go around. There was a front end but no functionality to it.
- ✓ The data model had to be redesigned to account for recently clarified and new business processes and requirements. Additionally, the new developer felt that Entity Framework was a better solution and the database redesign was needed to accomplish both goals.
- ✓ The regions input and feedback were nonexistent so uncertain how the application will be received by them.
- ✓ The customer demos helped the quality control even though there was very little hands-on experience.

Lessons Learned

Stormwater Feature Inventory Database (SFID):

- ✓ SFID was not initially managed by a Project Manager yet other SWIM applications were managed by a Project Manager. That Project Manager was against knowing about SFID which caused miscommunication and frustration by the team. The situation was also confusing to upper management.
- ✓ Staff was challenged to take on more responsibilities due to the economy and still expected to do their day-to-day job which surprised the team to have met the permit deadlines.
- ✓ Wished the team had known that the Roadside Feature Inventory Program (RFIP) did not want to change their product in order to be an enterprise solution. This would have caused an earlier rollout of the Highway Features database.
- ✓ Surprised that it took so much time to get to the end product and that it was odd that the business had to initially manage their own project.
- ✓ Wished the decision making about features were better documented and organized. This would have saved a lot of time and confusion.
- ✓ Standards for spatial data collection methodology should have been created prior to the project starting to allow for a more robust environment for the separate components.
- ✓ Should have involved CAE in the beginning of this project which would have given us more data than we have now.
- ✓ Testing should be a top priority for staff's workload. Test plans should be more formalized and documented.

Construction Water Quality Monitor (CWQM):

- ✓ Surprised how complicated the original application became compared to the current application.
- ✓ The project team wished they had worked in iterations at the beginning of the project and wished the requirements and packages were better organized as they were not easy to work with or locate especially for each of the phases. This would have helped create better prototypes and make progress more efficient and expedient.
- ✓ The project team wished they had known not to gather all requirements before users had any interactions with the application and that the flow of communication between development and business occurred earlier in the project. The project would have likely been completed much sooner.
- ✓ Wished the project had an experienced and effective Business Analyst that focused more on the business processes than the technological solution. The project would have likely been completed much sooner.
- ✓ Comfortable with the product with the ability to improve the product in the future such as the data entry efficiency.
- ✓ Change how testing documentation was given during the testing process – System approval documentation should have been given during user acceptance testing instead of after testing.
- ✓ The first attempt of this project needed to be changed and it happened.
- ✓ Erase the first attempt of this project from history.
- ✓ Change CWQM to not to have interfaces with other systems, i.e., WIN/PIN, which made the project more complicated.
- ✓ Change CWQM to a silo.

Illicit Discharge Detection and Elimination (IDDE):

- ✓ The QC and QA was nearly perfect; would prefer to have the application earlier on to get more hands-on before user acceptance testing.
- ✓ Some short cuts had to be taken due to the schedule demands.
- ✓ Place the current and consistent project team at the start of this project.

Specific Recommendations for Future Projects

- The Project Management Office needs to listen and respond to the project team when issues are raised related to the Project Manager. Project Manager should not just document but facilitate team meetings.

  An effective Business Analyst should be involved in the project during the initiation and requirements gathering phases of a project.

- The team found iterative demonstrations of the application to the business, as it was being developed, helpful and recommended for all projects. This encouraged early feedback from the business and minimized surprises during user acceptance testing. It was also efficient for the developers to modify code early in the development stage saving significant amount of time fixing bugs or UI changes.

Appendix A: DIS Certification Letter

Washington State Department of Transportation
Paula J. Hammond, P.E.
Secretary of Transportation

Transportation Building
310 Maple Park Avenue SE
Olympia, WA 98504-7300
360-705-7000
TTY: 1-800-833-6388
www.wsdot.wa.gov

August 31, 2011

Mike Ricchio
Department of Information Services
Deputy Director, Management & Oversight of Strategic Technologies
PO Box 42445
Olympia, WA 98504-2445

Dear Mr. Ricchio:
This letter is to certify that the Washington State Department of Transportation (WSDOT) is in compliance with the Information Services Board's (ISB) information technology (IT) policies and standards for IT Portfolio Management. This includes the following areas;

- WSDOT has reviewed and updated our IT Portfolio, including plans and information for fiscal year 2011- 2013. Attached is a copy of the 2011 IT Portfolio for your review. The WSDOT OIT support for two boards (Board of Pilotage Commissioners and Freight Mobility Strategic Investment Board) is included in the 2011 IT Portfolio. An electronic copy of the portfolio will be submitted to the Department of Information Services (DIS) Oversight Consult responsible for WSDOT. Appropriate entries in accordance with the ISB IT Portfolio Standard have been made to the Information Technology Portfolio Management System (ITPMS) that replaced the e-Portfolio. The responsibility for ITPMS has migrated from DIS to OFM.
- WSDOT's IT Security Program has been reviewed and updated. WSDOT's SGN connection now provides connectivity to DOP's HRMS service and the NLETS network hosted by WSP, with future service connectivity planned. WSDOT continues to work for full compliance in meeting the new IT security standards by July 2012 as required. There will be changes over the next year as a result of the continued work to meet the standards outlined in Policy 401-S4 and the implementation for compliance with Purchase Card Industry (PCI) standards. The last IT Security Audit was conducted in 2009 and WSDOT was fully compliant with the audit requirements. The next audit is due in July 2012.
- WSDOT's IT Disaster Recovery/Business Resumption Plan has been updated and tested in compliance with the ISB Disaster Recovery/ Business Resumption Policy. On June 13-16, 2011 a successful disaster recovery test was conducted by the WSDOT mainframe group. Results of this test are available from the WSDOT Office of Information Technology.
- WSDOT has updated our agency's GIS information.
- The 2011 IT Certification Checklist is attached.

If you have any questions, please do not hesitate to call Thelma Smith, IT Portfolio Administrator (360-705-7764) or Dave Koch, IT Planning & Administrative Operations Manager (360-705-7764).

Sincerely,

Paula J. Hammond, P.E.
Secretary of Transportation

Agencies and Universities
2011 Compliance Certification Form

2011 ISB IT Portfolio Certification for the Washington State Department of Transportation

My agency has reviewed and updated its IT Portfolio information in the IT Portfolio Management System (ITPMS) application. ITPMS can be found at http://ssvapolyptmg1p.ssv.wa.lcl/niku/app. NOTE: To be compliant, agencies must provide updated information in the following sections of ITPMS: IT Portfolio overview; agency strategic business plan; GIS resources (if applicable); personal & workgroup computing; projects; applications; and, databases.	☒ Yes ☐ No
My agency has entered its actual IT-related expenditures and inventory information for Fiscal Year 2011 into the IT Portfolio Management System.	☒ Yes ☐ No
My agency has updated its projected and budget IT-related expenditures and inventory for Fiscal Years, 2012, 2013, and 2014 into the IT Portfolio Management System.	☒ Yes ☐ No
My agency has updated its applicable geographic information systems (GIS) information into the IT Portfolio Management System.	☒ Yes ☐ No
My agency has updated and tested its disaster recovery/business resumption plan.	☒ Yes ☐ No
My agency has reviewed and updated its IT Security Program.	☒ Yes ☐ No
If you completed your security audit between September 1, 2010 and August 31, 2011, please provide the completion date:	Due July 2012

Your signature below indicates your agency has complied with the ISB IT Portfolio Policy and Standards:

Agency Executive Signature — 8/30/11 Date

Paula J. Hammond, P.E.
Print Name

WSDOT Certification Letter Reminder

STATE OF WASHINGTON

DEPARTMENT OF INFORMATION SERVICES

Olympia, Washington 98504-2445

June 30, 2011

Paula Hammond
Secretary
Washington State Department of Transportation
PO Box 47300
Olympia, WA 98504-7300

Dear Ms. Hammond:

Subject: 2011 Portfolio Certification – Final Reminder

In May of this year you received an early reminder from me regarding your 2011 Information Technology (IT) Portfolio certification requirements. As promised in that letter, I am sending this final reminder.

The Information Services Board's (ISB) IT Portfolio Policy and Standard require that you certify annually your agency's compliance. Links to these documents may be found at http://isb.wa.gov/policies/planning.aspx. This year's certification is due by August 31, 2011, or your agency's budget submittal date, whichever is later.

Again this year, we are providing a certification form for you to complete, sign, and return to the Department of Information Services by your due date. This form confirms that your agency has completed all required activities to maintain its IT delegated authority. A copy of the certification form is included and also posted on the ISB web site at http://www.isb.wa.gov.

If your security audit due date falls between September 1, 2010 and August 31, 2011, you must complete the audit prior to submitting your certification form. Our records indicate your agency's security audit due date is **December 2012**.

If you or your staff have questions about your agency's certification requirements for 2011, please contact your DIS Policy & IT Consultant, Tom Parma at (360) 902-3552 or tom.parma@dis.wa.gov. Thank you.

Sincerely,

Mike Ricchio

Mike Ricchio
Acting Director

cc: Grant Rodeheaver, WSDOT
Tom Parma, DIS

Enclosure

Freight Mobility Certification Letter Reminder

Freight Mobility Strategic Investment Board has 2 desktops, 2 laptops and leases a Multifunction printer/fax/scanner. WSDOT provides the usage of our HQ SAN for file storage, WSDOT network for internet and E-mail services. Freight Mobility Strategic Investment Board employees no IT staff.

STATE OF WASHINGTON

DEPARTMENT OF INFORMATION SERVICES

Olympia, Washington 98504-2445

June 30, 2011

Karen Schmidt
Executive Director
Freight Mobility Strategic Investment Board
PO Box 40965
Olympia, WA 98504-0965

Dear Ms. Schmidt:

Subject: 2011 Portfolio Certification – Final Reminder

In May of this year you received an early reminder from me regarding your 2011 Information Technology (IT) Portfolio certification requirements. As promised in that letter, I am sending this final reminder.

The Information Services Board's (ISB) IT Portfolio Policy and Standard require that you certify annually your agency's compliance. Links to these documents may be found at http://isb.wa.gov/policies/planning.aspx. This year's certification is due by August 31, 2011, or your agency's budget submittal date, whichever is later.

Again this year, we are providing a certification form for you to complete, sign, and return to the Department of Information Services by your due date. This form confirms that your agency has completed all required activities to maintain its IT delegated authority. A copy of the certification form is included and also posted on the ISB web site at http://www.isb.wa.gov.

If your security audit due date falls between September 1, 2010 and August 31, 2011, you must complete the audit prior to submitting your certification form. Our records indicate your agency's security audit due date is **December 2012**.

If you or your staff have questions about your agency's certification requirements for 2011, please contact your DIS Policy & IT Consultant, Jim Hammond at (360) 902-3587 or james.hammond@dis.wa.gov. Thank you.

Sincerely,

Mike Ricchio

Mike Ricchio
Acting Director

cc: Grant Rodeheaver, DOT
Jim Hammond, DIS

Board of Pilotage Commissioners Certification Letter Reminder

Freight Mobility Strategic Investment Board has 3 desktops, 1 of these is not connected to the network. WSDOT (ferries division) provides the usage of our servers, WSDOT network for internet and E-mail services. There are no IT Staff at the Board of Pilotage Commissioners.

STATE OF WASHINGTON

DEPARTMENT OF INFORMATION SERVICES

Olympia, Washington 98504-2445

June 30, 2011

Peggy Larson
Executive Director
Board of Pilotage Commissioners
2901 Third Avenue, Suite 500
MS: TB-32
Seattle, WA 98121-3014

Dear Ms. Larson:

Subject: 2011 Portfolio Certification – Final Reminder

In May of this year you received an early reminder from me regarding your 2011 Information Technology (IT) Portfolio certification requirements. As promised in that letter, I am sending this final reminder.

The Information Services Board's (ISB) IT Portfolio Policy and Standard require that you certify annually your agency's compliance. Links to these documents may be found at http://isb.wa.gov/policies/planning.aspx. This year's certification is due by August 31, 2011, or your agency's budget submittal date, whichever is later.

Again this year, we are providing a certification form for you to complete, sign, and return to the Department of Information Services by your due date. This form confirms that your agency has completed all required activities to maintain its IT delegated authority. A copy of the certification form is included and also posted on the ISB web site at http://www.isb.wa.gov.

If your security audit due date falls between September 1, 2010 and August 31, 2011, you must complete the audit prior to submitting your certification form. Our records indicate your agency's security audit due date is **December 2012**.

If you or your staff have questions about your agency's certification requirements for 2011, please contact your DIS Policy & IT Consultant, Jim Hammond at (360) 902-3587 or james.hammond@dis.wa.gov. Thank you.

Sincerely,

Mike Ricchio

Mike Ricchio
Acting Director

cc: Grant Rodeheaver, DOT
Jim Hammond, DIS

Enclosure

Appendix B: Security Audit Report

Washington State Department of Transportation

Memorandum

To: Grant Rodeheaver
Director of Information Technology

From: Steven P. McKerney, CPA
Director of Internal Audit

Date: August 4, 2010

Subject: Management Request Report No. D09-05A
Follow-up review of 2009 IT Security Audit Report Number D09-05.

The Washington State Department of Transportation Office of Information Technology (OIT) requested that we review updated OIT policies and procedures for compliance with the Information Services Board (ISB) Information Technology (IT) Security Policy and Standards, both revised January 10, 2008, as a follow up to findings in our 2009 IT Security Audit. Specifically, OIT asked the Internal Audit Office to determine whether OIT's updated IT security policies and procedures comply with all ISB IT Security Policy and Standards identified as being non-compliant in our 2009 IT Security Audit Report Number D09-05.

We reviewed the audit findings from our 2009 IT Security Audit Report and worked with IT Communication Strategies and Policy Manager, David Koch, and IT Policy and Standards Specialist, Peggy Bright to obtain OIT's updated IT policies and procedures.

Results:

Based on our review, **OIT's policies and procedures are in full compliance with the January 10, 2008, revised ISB IT Security Policy and Standards.**

This report is intended solely for the use of the WSDOT management and should not be used for any other purpose. This restriction is not intended to limit the distribution of this report, which, upon acceptance by the Office of the Secretary, is a matter of public record.

Scope

This request focused on reviewing additional documentation provided by OIT and determining if the additional documentation corrects findings identified in Audit Report Number D09-05 and brings OIT into full compliance of those sections of the ISB IT Security Policy Standards, both revised January 10, 2008, identified in this report.

We reviewed the following updated OIT Security Procedures, developed in response to our 2009 ISB Security Audit Report, Number D09-05.

- Two (2) **revised** OIT IT security standards:
  - 950.03 – Network Anti-Virus Protection
  - 960.03 - Remote Access Security

- Ten (10) **new** security standards:
  - 900.02 – Information Technology Risk Analysis Procedures
  - 940.14 – Data Encryption Procedures
  - 940.15 – Secure File Transfer (SFT) Procedures
  - 950.14 – Virus Protection for E-Mail Procedures
  - 950.15 – Host Anti-Virus Procedures
  - 950.16 – Virus Protection for File Transfers Procedures
  - 950.17 – Web Access Security and Client Procedures
  - 960.09 – Internet Monitoring/Filtering/Blocking Procedures
  - 960.10 – Dial-Up Remote Access Procedures
  - 960.11 – Remote Access Monitoring Procedures and two standalone security documents; SQL Server 2008 Sensitive Data Protection Procedures and Mainframe Sensitive Data Protection Procedures.

We reviewed the following sections of the ISB IT Security Policy revised January 10, 2008,

A. Policy Statement 2

Each agency shall adhere to this policy and current security standards adopted by the Information Services Board (ISB).

We reviewed the following sections of the ISB IT Security Standards, revised January 10, 2008:

A. **I.B** - Business Impact and Vulnerability, Threat and Risk Analysis

Attribute 1 bullet point (5). Identify the value of safeguards or countermeasures designed to reduce the threats and vulnerabilities to an acceptable level.

B. **II.A** - Personnel Security Standards

Attribute (1) Reference checks and background investigations where appropriate.

C. **II.C** - Data Security Standards

Attribute (4) (b) (i) Secure File Transfer - Confidential information subject to exposure shall be encrypted.

Attribute (4) (b) (iii) Secure data storage is defined as the protection of data content and changes in data state from its original storage on electronic media by using encryption processes. Secure data storage requires that:

- An organization has the ability to un-encrypt stored data through an authorized process.
- An organization has the ability to un-encrypt stored data through a pre-defined recovery period identified by the organization.
- An organization protects the encryption and decryption method (key and algorithm).
- If the data is accessed by unauthorized entity, it cannot be understood.
- An organization has the ability to detect alteration of intended content.

D. **II.D** - Network Security Standards

Attribute (4) (a) Agencies shall develop, document, and implement policies and procedures that address virus prevention, detection and removal processes, including signature currency. Agencies shall ensure that all file transfers, e-mail of all types, and web browser based traffic are examined for known viruses. File transfer, e-mail or web browser-based traffic that cannot be examined for viruses should be disallowed.

E. **II.E** Access Security Standards

Attribute (2) (a) (i) Dial-in ports may be used only if there is no other way to satisfy a business need.

Attribute (2) (a) (ii) If dial-in is used; all security features (dial back, etc.) appropriate to the operating environment shall be used.

Attribute 2 (c) Agencies shall monitor remote access by vendors

Disaster Recovery Services
Post-Rehearsal Report

Created by
Washington State Department of Transportation
in response to rehearsal held
June 13th through June 16th, 2011

Data Management
Disaster Recovery Services
3225 Jordan Boulevard
Malabar, FL 32950

Table of Contents

Introduction

This report details a joint-summary of Washington State Department of Transportation's recent Disaster Recovery rehearsal. It includes established objectives and results, issues raised during the rehearsal and/or post-rehearsal review, and other focus items and recommendations. If you have any questions or comments concerning this report, please contact Cal Smith.

History

Washington State Department of Transportation signed a Disaster Recovery Services contract with Data Management in March 2010. The plan is to rehearse semi-annually. The June rehearsal was the second test conducted at the Data Management Disaster Recovery site in Malabar, Florida. This rehearsal included testing several of WSDOT's critical mainframe applications (TRAINS, CPMS, TRIPS, and Labor).

Rehearsal Period

REHEARSAL HELD JUNE 13th – JUNE 16th 2011	
Hours allotted annually for rehearsal:	48 Hours
Hours accrued from previous rehearsal:	0 Hours
Time consumed during this rehearsal:	32 Hours
Year-to-date time consumed:	32 Hours
Remaining available time for this year:	16 Hours
Overtime testing hours:	0 Hours

Staff Participation

Data Management
Mike Everette, Technical Support Manager
Tracy Beckett, Technical Support
Jeff Harner, Technical Support
Washington State Department of Transportation
Cal Smith, Mainframe Technical Support Manager
Arne Hansen, Mainframe Technical Support: (Operating System)
Gregory Killian, Mainframe Technical Support: (Subsystem Support)
Billie Rosen, Mainframe Technical Support: (Database Support)
Jim Wimpee, Mainframe Technical Support (z/VM and Linux Support)
Shane Cagle, Mainframe Technical Support: (Network Support)
Loree Becker, Computer Operations (Supervisor, Day Shift)
Lorri Johnstone, Computer Operations (Operator, Day Shift)
Gary Anderson, Computer Operations (Operator, Day Shift)
Barb Robles, Computer Operations (Production Control)
Karen Pedersen, Computer Operations (Operator, Swing Shift)
Steve Watson, Computer Operations (Supervisor, Swing and Graveyard Shift)
Donald Harris, Computer Operations (Operator, Graveyard Shift)
David Brown, Network Support
Mary Stewart, Mainframe Applications Support (Labor)
Pat Weldon, Mainframe Applications Support (TRIPS)
Hung Pham, Mainframe Applications Support (CPMS)
Dale Madera, Mainframe Applications Support (TRAINS)

Rehearsal Objectives

The following systems were tested:

OBJECTIVE	RESULT
▪ Restore Production Operating Environment from June 4th Backups	Successful
▪ IPL Production z/OS Operating System	Successful
▪ Restore Production Environments	Successful
▪ Perform Application Testing	Successful
▪ Establish connectivity between WSDOT and DR-site using VPN	Successful
▪ Establish Communications to DIS using Enterprise Extender	Unsuccessful

---

Issues:

- WSDOT lost terminal and console connections over the Virtual Private Network (VPN) several times during this Disaster Recovery (DR) exercise.
- Did not test the Enterprise Extender (EE) connection from Data Management to DIS due to lack of prior notification to WSDOT's user community.

Contingency Plan Status

Washington State Department of Transportation will provide Data Management Disaster Recovery Services with a documented contingency plan.

Recommendations / Future Objectives

- Restore all files and data on the mainframe and test at least one major application.
- Establish connectivity between DR site and DIS using Enterprise Extender.
- Establish connectivity between DR site and DIS's DR site using Enterprise Extender.
- Establish connectivity between DR site and DIS's DR site using VPN.

Additional Comments

The following comments were noted at the disaster recovery post-rehearsal meeting:

- Coordinate and test Enterprise Extender (EE) connection between Data Management and DIS July 26-28, 2011.
- Determine the cause of terminal and console sessions dropping.
- Establish a basic operating system build to be used for a remote Initial Program Load (IPL) with only the minimum SMF, Page, and JES2 datasets allocated.
- Determine if the Nucleus Initialization Program (NIP) console and an alternate console at Data Management can retain fixed Unit Control Block (UCB) addresses while the rest of the consoles are available for pooling.
- WSDOT and Data Management will coordinate what Job Control Language (JCL) to use to restore WSDOT's system. Determine a central place where this JCL can be stored at Data Management.
- WSDOT and Data Management will explore an in-house system or a second Logical Partition (LPAR) for a rescue system that WSDOT can access.
- WSDOT would like to have a remote Hardware Maintenance Console (HMC), although Data Management was very responsive to all of our IPL requests.
- Determine if there are other datasets that require special recovery, such as (catalogs, Tape Management System (TMS), Hierarchical Storage Manager (HSM) and allocate these data sets on a special volume for recovery.
- Identify all application datasets that require synchronization with Adabas backups. These datasets will be allocated on special volumes that are backed up daily along with the Adabas files.
- Decide what files and Data Access Storage Device (DASD) volumes should be on the HOT tape from SW$BKHOT.
- Verify all required volumes are on the weekly stacked backup tapes to facilitate quicker system recovery.
- Keep DASD volume UCBs in sync with our DASD configuration. WSDOT uses several esoteric names that require DASD volumes to be defined within specific ranges.
- Update the DR suffix versions of key parmlib members for quick reuse in the future.
- Update appropriate VTAMLST and TCPPARM entries for future DR use.
- Store scratch tapes on-site at Data Management.

Next Anticipated Rehearsal

Rehearsal Date: Exact date of this rehearsal has yet to be determined.

Rehearsal Type: Restore mainframe operating system, applications, and enterprise data and verify functionality.

Requirements at Time of Disaster

Personnel:	A minimum of three people are needed in a disaster recovery situation. One person needed from Data Management at DR site and two people needed from WSDOT at WSDOT location.
Hours:	24x7
Critical Applications:	See Disaster Recovery Contingency Plan
Telecommunications	See Disaster Recovery Contingency Plan