

ECONOMICS AND TRANSPORTATION CLUSTER

1. OVERVIEW

a. Cluster Components

The Economics and Transportation Cluster (ETC) for Information and Information Technology supports the following ministries:

- Ministry of Economic Development
- Ministry of International Trade and Investment
- Ministry of Labour
- Ministry of Research and Innovation
- Ministry of Small Business and Consumer Services
- Ministry of Transportation.

b. Core Businesses

The cluster structure is shown in Exhibit ETC.1. Core businesses for each ministry are listed below along with a brief description of their mandate and programs.

- Ministry of Economic Development

The goal of the Ministry of Economic Development (MED) is to build a strong economy for all Ontarians. Faced with an increasingly competitive global marketplace, the aim is to accomplish this by creating a culture of innovation and promoting investment.

The ministry acts as a catalyst for innovation through:

- Research and development funding partnerships;
- Advisory services to help small and medium-sized enterprises grow;
- Programs to encourage young people to explore careers in science or start their own businesses.

The ministry promotes investment in the province by:

- Attracting new private sector investment and jobs;
- Forging new economic development partnerships;

- Promoting existing and emerging industry sectors.

- Ministry of International Trade and Investment

The goal of the Ministry of International Trade and Investment (MITI) is to build on Ontario's international reputation as an ideal location for foreign investment and a source of innovative, high quality products and services.

Ontario provides the people, the resources and the locations that are essential for success in today's competitive economy.

The ministry promotes Ontario to the world and attracts new investment and trade opportunities for Ontario workers.

The key business priorities are to:-

- Attract new private sector investment and jobs
- Forge new economic development partnerships
- Promote existing industry and emerging sectors.

- Ministry of Labour

Ministry of Labour's (MOL) mission is to advance safe, fair and harmonious workplace practices that are essential to the social and economic well being of the people of Ontario.

Through the ministry's key areas of occupational health and safety, employment rights and responsibilities, labour relations and internal administration, the ministry's mandate is to set, communicate and enforce workplace standards while encouraging greater workplace self-reliance. A range of specialized agencies, boards and commissions assist the ministry.

Three core businesses fulfil the mission of the Ministry of Labour:

- Occupational Health and Safety - setting, communicating and enforcing occupational health and safety laws to reduce or eliminate workplace injury or illness in the workplace. This core business covers occupational health and safety primarily in the construction, mining and industrial sectors.
- Employment Rights and Responsibilities - establishing and enforcing appropriate policies that will ensure that Ontario's workers are protected by minimum standards of employment in respect to working conditions and wages through administration of the Employment Standards Act, the Pay Equity Act and other related legislation.
- Labour Relations - establishing appropriate policies and administering and enforcing the Labour Relations Act and other related legislation.

The key business priorities are to:-

- Make workplaces safer and healthier
 - Protect vulnerable workers
 - Create and maintain stable labour relations.
- Ministry of Research and Innovation

The Ministry of Research and Innovation (MRI) was established to ensure that Ontario has a focused approach to competing and winning in the new ideas arena.

The Ministry of Research and Innovation key goals are to:

- Develop and lead an integrated and coherent innovation agenda to deliver excellence, performance and results;
- Align and deliver government-sponsored Research and Commercialization Programs;
- Engage all external partners, including the private sector, education and research communities in supporting and delivering on the research and innovation agenda;
- Showcase Ontario's Innovation Excellence;
- Inspire the Next Generation of Ontario Innovators.

The Ontario Research and Innovation Council (ORIC) was created to obtain the best advice from experts on strategies for accelerating Ontario's research and innovation strengths. The Council advises the Premier and the Ministry of Research and Innovation on developing and implementing a coordinated and comprehensive research and innovation agenda.

The key business priorities are to:-

- Deliver on the Ontario Innovation Agenda
- Deliver on the research and innovation commitments, including the Next Generation of Jobs Fund, the Ontario Venture Capital Fund and the Centre for Research and Innovation in the Bio-Economy.
- Rejuvenate the Ontario Commercialization Network.
- Market Ontario as innovation powerhouse, by promoting research and innovation opportunities and programs.

- Ministry of Small Business and Consumer Services

The Ministry of Small Business and Consumer Services (MSBCS) is responsible for providing support and assistance to the development of small business within Ontario.

The key business priorities are to:-

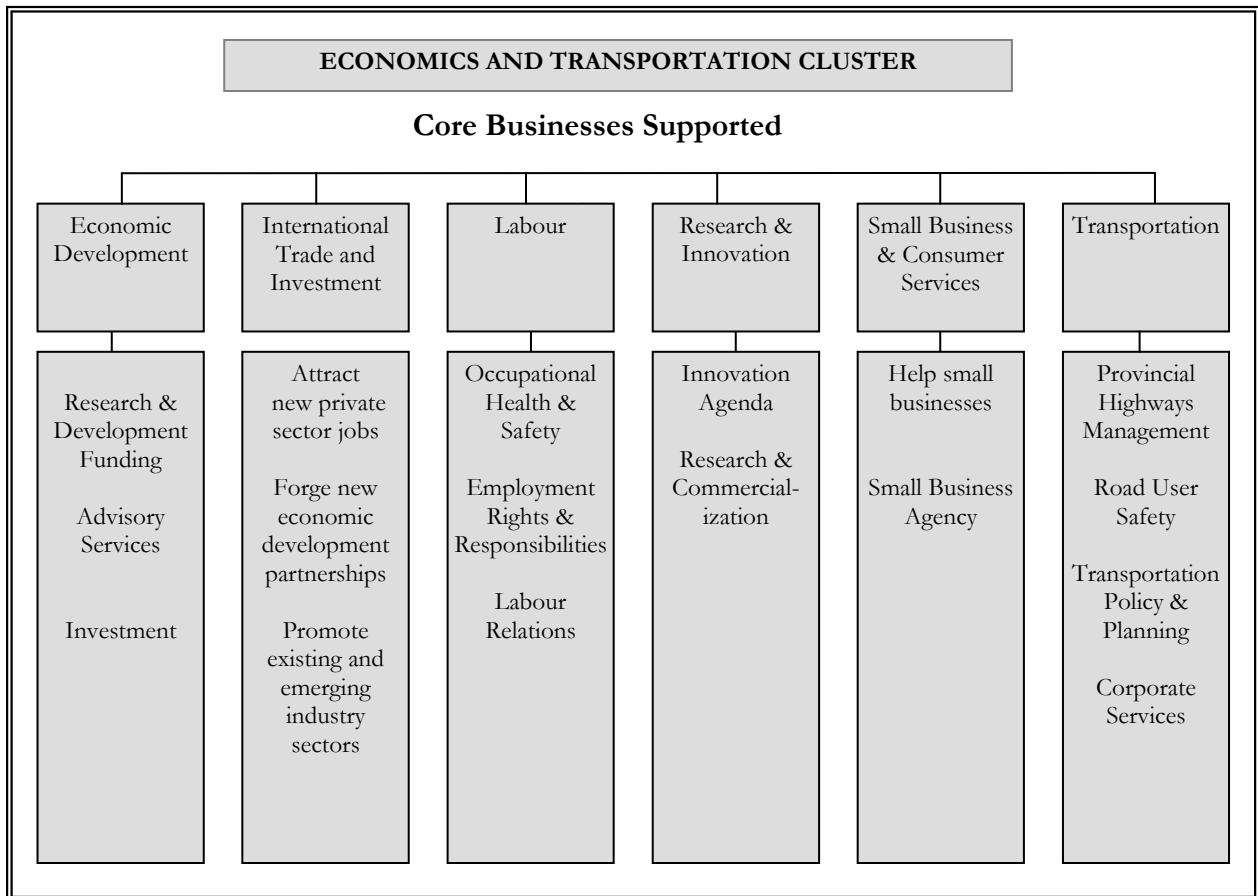
- Promote youth and entrepreneurship and consumer protection
- Work with business and delivery partners to support the “Open for Business” agenda and the move to a green economy.
- Optimize the cap-and-trade initiative to modernize the business and consumer regulatory environment.
- Promote public safety including implementation of the recommendations of the propane safety review.
- Implement the framework to regulate Pay Day Loans.

- Ministry of Transportation

The Ministry of Transportation (MTO) is responsible for building and maintaining highways, improving road user safety and developing effective overall transportation policy.

- Provincial Highways Management (PHM) - oversees the maintenance and operation of the provincial highway networks, and invests strategically in highway infrastructure to ensure that the system is safe, efficient and useable and supports the transportation needs of Ontario’s economy and residents. PHM has reliable and secure information links with alternative service providers. Its application portfolio is fully aligned with the Assets Management Framework, and it has implemented an effective suite of electronic service delivery solutions.

EXHIBIT ETC.1



- Road User Safety (RUS) - is responsible for making Ontario's road users safer by developing effective user safety programs and ensuring efficiency in the delivery of its safety products and services. RUS has business services online, which are channel independent and linked to its service delivery providers. The systems environment is modern, flexible and adaptable to produce and deliver RUS information products and services with a significant reduction in time to market.
- Transportation Policy and Planning (TP&P) - focuses on planning and promoting a safe, efficient and reliable multi-modal transportation system. TP&P works with stakeholders and other jurisdictions to plan, support and enhance an integrated transportation system that promotes safety, efficiency and economic competitiveness. TP&P has appropriate information tools to enhance its information intensive decision making processes, and has populated a knowledge management repository that is capable of meeting both its current and future information needs.
- Corporate Services provides business and resources planning, management advice and direct services to MTO's three core businesses in the functional areas of finance, human resources, occupational health and safety,

acquisition/procurement, facilities management, internal audit, legal services, and communications.

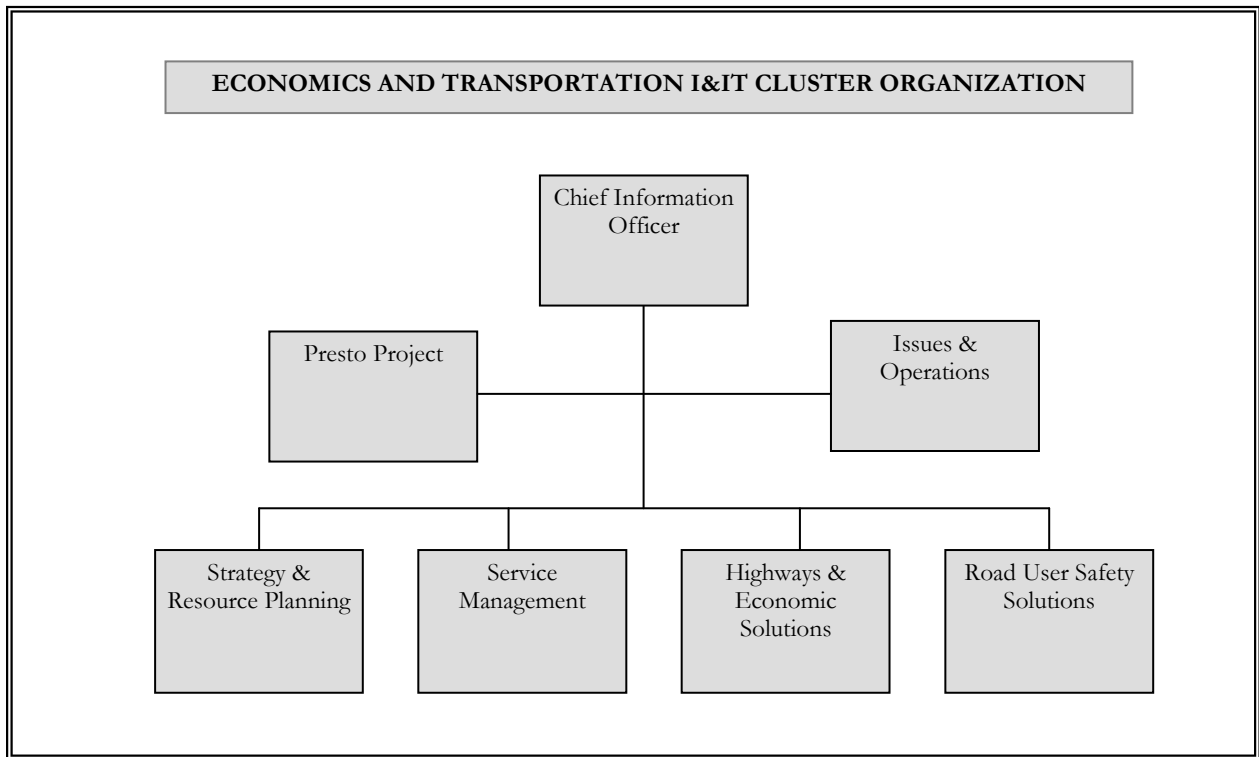
The key business priorities are to:-

- Increase transit ridership
- Promote a multimodal transportation network to support efficient movement of people and goods
- Promote road safety in order to remain among the safest jurisdiction in North America
- Improve Ontario's highway, bridge and border infrastructure.

c. Organization

The Economics and Transportation I&IT Cluster is organized as shown in Exhibit ETC.2.

- Highways and Economics Solutions - Responsible for meeting the I&IT planning, applications development and support, data and information management requirements of the Provincial Highways Management and the Economics ministries core businesses. Also responsible for meeting the application development and support, and information management needs of the core businesses and the Business Support core activity. It provides leadership and implementation of OPS restructuring and corporate initiatives, including Shared Services, Regional Service Delivery and Internal Administration.
- Road User Safety Solutions - Responsible for meeting the I&IT planning, application development and support, data and Information Management needs of the Road User Safety core business.
- The Strategy and Resource Planning Branch (SRPB) provides strategic advice and services that allow the cluster to run like a business, including financial controllership, planning, architecture, security, procurement, information management and communications.
- The Service Management Branch (SMB) is dedicated to improving the quality of IT service by managing the end-to-end support and delivery of the ETC service portfolio while promoting a positive client experience
- Presto (Farecard) Project – Responsible for supporting GTA Fare System project to implement a common transit fare collection system based on contactless chip card technology in the Greater Toronto Area.

EXHIBIT ETC.2**d. Key Contacts**

Economics and Transportation Cluster

Chief Information Officer – Ken Kawall, 416-327-1955

I&IT Strategy and Resource Planning

Director – Mike Anderson, 416-325-7814

IT Service Management

Director – Dani Danyluk, 905-704-2838

Highways and Economics Solutions

Director – Howard Bertrand, 905-704-2488

Road User Safety Solutions

Director – Harjeet Kaur, 416-235-4523

Presto Project

Projects Director – Jeffery Young, 416-869-3600

e. Resources Available

- | | |
|--|---------------|
| • 2009-10 I&IT-Related Other Direct Operating Expenses | (\$ millions) |
| Professional Services | 9.6 |
| Hardware, Software Etc. | 52.0 |
| Sub Total | 61.6 |
| Salaries and Wages | <u>32.1</u> |
| Cluster Total | \$93.7 |
- I&IT Cluster and Regional Staff 340

f. Technology Overview

The Economic ministry environment has been brought together with the Ministry of Transportation services.

- The Economic ministries current Information Technology Architecture supports the clients of the five ministries (MED, MITI, MOL, MRI, MSBCS) with local and remote network connections to their business applications from over 160 Ontario work locations. The cluster has a large mobile workforce, particularly within MOL, which means that communication requirements are very diverse. The OPS supports the network and provides WAN and LAN connectivity and VPN services.
- The Economic ministries use a centralized Technology Service Desk (help desk), which is outsourced.
- The Economic ministries have a major focus on Enterprise Architecture best practices and use Microsoft tools for Application Development.
- The cluster is the Centre of Excellence for .NET application development.

The Transportation ministry's current Information Technology Architecture includes three components: the general business environment, the engineering environment within Provincial Highways Management and the systems environment in Road User Safety.

- General Business Environment

Within this environment, Infrastructure Technology Services computer centres provide mainframe and server services. The ministry LANs support business and engineering environments and the ministry knowledge workers use notebooks and desktop workstations. ITS provides the MVS/ESA mainframe platform which is used for high volume or large database corporate applications.

- The ministry currently supports Windows XP Professional Operating Systems in the business and application development and support environments. As part of

the standardized desktop environment, each user has access to a standardized desktop office suite of programs and to an Internet browser.

- The ministry uses the TCP/IP protocol and a single, province-wide domain that allows LAN users to access services from all networked offices in the ministry. This greatly facilitates the use of client/server and Internet applications.
- Engineering Environment
 - The engineering environment leverages the same components as the general business environment: Windows XP notebooks and desktops connected using TCP/IP through a LAN to Windows 2003 servers, and through the WAN to the mainframe.
 - The engineering environment also includes Sun UNIX servers. The UNIX servers are utilized as database and application servers. File and Print services are provided by Windows 2003 Servers. The Windows XP desktops also connect to the seven UNIX servers using TCP/IP through the LAN and WAN environment.
- Road User Safety IT Environment
 - In addition to the cluster-wide Windows 2003 infrastructure, the RUS core business has a large and complex technical environment dedicated to legacy Driver, Vehicle and Carrier business applications. The current technical environment has evolved over the past three decades and is based on mature technology consisting of an ITS mainframe and IMS, DB2 and Oracle databases.
 - RUS uses Internet technologies to support channel independent, thin client delivery of Safety and Regulation core business and information services. Key to the RUS technical infrastructure is the wide-area network. The network is composed mainly of the ITS backbone using TCP/IP. However, substantial links are provided to other systems and jurisdictions across Canada.
 - This technical environment is home to all of the RUS applications (e.g. Driver, Vehicle and Carrier systems). These, in turn, are primarily transactional in nature and combine on-line, real time and overnight batch processing. The environment also includes a middle tier consisting of program-specific servers:
 - Workgroup LANs follow the ministry standard, including special purpose customer service workstations serving as the front-end to over-the-counter licensing;
 - Registration transactions have been transitioned to Microsoft Windows XP Professional.

- Presto Project
 - The Presto Project is implementing a common transit fare collection system based on contactless chip card technology in the Greater Toronto Area (GTA). The GTA is the 4th largest region in North America with a population of 5.5 million and covers an area of over 8,100 square kilometres. The GTA Fare System will be an important enabler of public transit integration in the GTA and will facilitate seamless travel across the GTA for public transit passengers.
- There are IBM business and Sun-based engineering environments in the cluster with approximately 5,750 PCs and over 3,000 notebooks and 50 Sun Sparc units.
- In addition, over 2,000 customer service workstations running Windows XP Professional are installed in over 430 offices (Private Issuing and Driver Exam Centres) across the province. This environment delivers Road User Safety over-the-counter products and services utilizing a TCP/IP network and mainframe services.
- Sun Solaris platforms host electronic data transfer and photo licence applications.
- Nine Sun servers deliver 2nd and 3rd tier applications services to the Provincial Highways Management Division.
- 16 Sun servers deliver development and testing services.
- 125 Intel-based Windows 2003 servers deliver messaging services, n-tier business applications and file/print services.

2. TODAY'S PLATFORM AND APPLICATIONS

- Infrastructure Consolidation
 - The Office of the Corporate Chief Infrastructure Technology Services (ITS) is responsible for managing and delivering mandatory OPS I&IT infrastructure to all clusters and ministries. The hardware and software environments described below will change as consolidation continues and server virtualization is introduced more widely. The cluster will be participating in this and other shared initiatives such as the common components and services and common business applications.
- Mainframe Platform
 - The MVS/ESA production, development and test mainframe platform is provided by ITS in a shared facility. It is used primarily for high transaction volume or large database corporate applications.
 - Access is provided with an IMS/TM teleprocessing monitor, DB/DC and DB/2.
 - This platform is primarily used to support the major Road User Safety applications related to Driver, Vehicle and Carrier Licensing and Control core business as well as Information Services.
 - These applications are linked to all Canadian provinces and territories, Ontario's Police Forces, Courts, Municipalities, the RCMP, other ministries and business partners.
 - RACF security and TCP/IP network environment with NETVIEW are used.
 - A disaster contingency plan has been established in cooperation with ITS for critical applications.
- Client/Server Environment

There are three client/server environments, one for business support applications, one for engineering applications and one for Road User Safety applications.

- The business environment has approximately 5,750 PCs and 3,000 notebooks installed across the ministries.
 - The PCs operate with Windows XP Professional Operating System on the desktop.
- The engineering environment leverages the same technology as the business environment.
 - Windows 2000 Professional desktops connect using TCP/IP through a LAN to Windows 2003 servers and through the WAN to the mainframe.

- The engineering environment also includes Sun UNIX servers. These UNIX servers are used as database and application servers.
- Road User Safety (RUS) has over 2,000 Customer Service Workstations (CSWs) running Windows XP Professional utilizing a TCP/IP network and mainframe services, located in approximately 430 offices (e.g. Private Issuing and Driver Exam Centres) across the province. Peripherals include bar code scanners, POS pad devices, camera and digital signature equipment and printing devices.
 - These are used for product delivery for the Driver, Vehicle and Carrier system.
 - Lotus Notes/Domino is configured for Road User Safety for information products and services via the Internet.
 - RUS has a Sun UNIX server to support RUS mobile users.
 - MQ/SNA Gateway on mid-tier to support messaging with business partners.
 - CSWs supporting Driver/Vehicle/Carrier (D/V/C) programs are equipped with a point-of-sale device facilitating credit/debit card purchases.
 - Enforcement officers use rugged Panasonic mobile laptops within their patrol vehicles to retrieve vehicle, carrier and driver information via web-based applications using the Inquiry Services System (ISS).
- The Economic ministries are located at more than 160 physical locations. There is a large mobile workforce particularly within MOL, which means that communications are very diverse. All users have Internet access.
- The business server environment is currently based on Intel servers running Windows 2003.
 - TCP/IP is the LAN/WAN protocol and there is a single province-wide Windows 2003 domain for any-to-any connectivity.
 - 125 Windows 2003 servers are used primarily to share disk and printing for a number of workstations, to support file, print, directory, Exchange 5.5/Outlook 2000 in both the business and engineering environments.
 - A PC Fleet Management Program results in a one-third annual replacement.
- Server software currently includes Microsoft SQL Server and Oracle as RDBMS's.
- The Economic ministries support several environments that have been identified as Legacy and are working on plans for their replacement:
 - HP servers with Oracle and VMS for MOL legacy applications;

- IBM Lotus Notes environment used by MED to capture content;
- IBM Lotus Domino for MED websites.
- The Cluster is using Microsoft Systems Management Server to support its systems management requirements.
- ServiceOntario
 - ServiceOntario provides a cross-ministry delivery network for a range of services to a cluster of general public or “retail” customers. The initiative will result in a number of delivery channels being developed to provide routine transactions and information.
 - The current self-serve Kiosk facility is a MTO managed platform that delivers services to the public for the Ministry of Transportation, Ministry of Natural Resources and Ministry of Health. Over seventy Kiosks are now installed. Debit and credit card services are supported.
 - MTO transactions include vehicle sticker dispensing, driver, vehicle and carrier record searches, driver’s licence renewal, vehicle registration, the Used Vehicle Information Package and Personalized Plate ordering.
- Web based Services
 - RUS and Corporate Service information product and services are provided using Lotus Notes/Domino as well as Windows 2003 IIS and Mid-tier application servers.
- Interactive Voice Response
 - Some RUS applications use Interactive Voice Response (IVR) technology to provide customer service. These applications include Road Test Booking. The Driver Licence Check for the Vehicle Impoundment program uses ICE³ from ComputerTalk as the applications link with the Driver system. These services are provided via Synervoice platforms as well as GO-IVR.
 - Voice recognition capability is used for winter road condition reports and for summer road construction and maintenance reports.
- AS/400 Platform
 - An AS/400 platform comprised of two systems supports an imaging application for medical review files in the Downsview Driver Improvement Office.

- Sun Solaris Platform
 - An application system with special message handling tools and software is used for delivery of an Electronic Data Transfer (EDT) service using Oracle as the database.
 - It supports the photo card system for the Ontario Driver Licence System.
- Electronic Service Delivery
 - Currently, the customer service workstations supporting the Driver and Vehicle systems are equipped with a point-of-sale device that facilitates customer transactions using VISA, MasterCard or debit card. Credit and debit card services are in place for both Kiosk and over-the-counter (OTC) services.
 - The RUS core business is also delivered via an e-commerce application operating using a secure environment with up to 128 bit encryption. Customers can access a catalogue of RUS publications through a Web browser and place orders using VISA or MasterCard for payment.
 - There are second-generation e-commerce transactions with online fulfilment capability in RUS, such as Driver Licence Check and Red Light Camera, currently using CyberCash/Global Payment system card services, and are connected to the Driver/Vehicle database.
 - MTO systems interface to key programs and initiatives such as Integrated Justice, DriveClean, ServiceOntario, Family Support, International Registration program, Interprovincial Record Exchange, insurance partnerships, Retail Sales Tax collection and the used Vehicle Information Package.
- Communications Environment
 - Wide Area Network services are provided by Telus across 38 MTO business locations. This network delivers business services using TCP/IP and Data-Link Switching (DLSw).
 - The ITS-managed TCP/IP network, which is part of the Telus provided network, supports and provides data communications to the Vehicle and Drivers Registration System (VRS) located in 430 offices (e.g. Private Issuing and Driver Exam Centres) across the province. Terminal emulation is supported for TSO, IMS and CICS. In addition, the Cluster uses TCP/IP protocol to support custom applications running on over 2,000 customer service workstations located in the D&V issuing offices.
 - LAN Services for 8,500 ports are provided by Telus for the 38 MTO business locations. Additionally the 430 D&V office LANs have also been transitioned to the Telus service. The cluster uses the TCP/IP protocol and a single, province-wide domain to enable and host n-tier web-based applications.

- Remote access to the MTO applications is provided by an in-house RAS infrastructure (to be phased out over the next fiscal year).
- The Government Mobile Communications Network is implemented for MTO's Enforcement Officers and the road maintenance operations. The Northern Region was installed in 2006.
- External Network Access (ENA) services are provided by Telus. This securely connects the MTO infrastructure/applications to external customer data centres. This currently includes IBC, CGI, Protect Air, IBM/Kiosks and a connection to the wireless Enforcement inquiry service.
- A Video Conference infrastructure provides video and voice services to each Regional office as well as Queen's Park, Downsview and St. Catharines.
- The MobiText network provides application services to the MTO Enforcement Officers by integrating into MTO mainframe services.
- Development Environment
 - The Economic ministries have standardized on Microsoft development toolset.
 - A variety of Vendors of Record are currently being used for acquiring professional services.
- Major Business Applications

Cross-Economic Ministry Applications

- ETC in-house support systems include In-Vision for project management, Remedy for Incident and Problem Management; Fax-on-demand (RightFax platform) is used to distribute information to clients as well as staff. eRoom (EMC Documentum) is a service provided by CAC to ministry clients supporting a collaborative environment that enables people to work closely together.
- The Online Correspondence Management System (OCMS) is a web-based database application that consists of two components, a contact management portion and a services tracking component.
- The Stakeholder Relations Database (SRD) collects and manages information about various stakeholder interactions. The application is being upgraded to the new ETC standard platform and will be one of a suite of common Enterprise Administrative systems (EASY) for use across the OPS. It will be an Intranet application using Websphere / Oracle.

- The Enterprise e-Forms utility provides a generic facility for OPS-wide use to allow program areas to develop electronic forms web applications to meet specific business requirements.
- Other key systems include:
 - Business Immigration
 - Regulatory Registry
 - Wisdom Exchange Integrated Community Profiles
 - Employment Standards Services Integration System
 - Occupational Health and Safety Inspection System
 - Summer Company.

Ministry of Economic Development

- Ontario Growth Firms – a client management system supporting the Wisdom Exchange and Field Services groups, primarily in support of innovative growth firms.
- Wisdom Exchange/Business Exchange - supports the annual Wisdom Exchange conference.
- Enterprise Centre Reporting (ECR) - accepts secure online input of information from Small Business Enterprise Centres and Business Self-Help Offices.
- Summer Company - manages registration and eligibility/evaluation processing for Summer Company applications.
- Ontario Exports Inc. applications – a client management system, providing call tracking, calendar of events, Global Traders Awards nomination and registration applications, and activity reporting.
- Science and Technology Integrated Investment Database – maintains information about research and other transfer payment programs and their corresponding projects.
- Internet sites are:
 - www.ontariocanada.com - main MED public Internet site, provides a broad range of news, information, resources and links related to MED and its programs;

- www.ontarioexportsinc.com - Ontario Exports Inc. public Internet site and associated applications are targeted to organizations to help Ontario companies export their goods and services worldwide;
- www.2ontario.com - Ontario Investment Service public Internet site, provides marketing information about Ontario to attract and assist investors.

Ministry of Labour

- The Industrial Relations Information System tracks employment agreements and their settlement process, as well as wage information and occupational data for agreements. It is an Oracle application that operates under Alpha/VMS.
- The Ministry of Labour has an Internet website for external clients and an intranet website for internal communication.
- The Occupational Health and Safety Merged Information System provides occupational health and safety information for Ontario workplaces, lost time injury claims for firms and data collection reporting for occupational exposure limits. It is an Oracle 7.1.5 application running under Alpha/VMS.
- The Occupational Health and Safety program uses an inspector notebook computer to generate reports and update directly into the application from the field. It is a Sybase SQL application that operates under Windows 2000.
- The File Information Case Tracking system is used by Legal Services to track case files.
- The Pay Equity Case Tracking System (PECTS) tracks case information for the Pay Equity Commission Review Services has been replaced with a new application based on the Filemaker Toolset.
- Case management systems for Grievance Settlement Board and Office of the Employer Advisor have been established using the Filemaker toolset.
- The Freedom of Information system maintains data for the receipt, tracking and reporting function of the Freedom of Information branch. The application is based on an Oracle database and operates in the Alpha/VMS environment.
- The Communications Branch has introduced an intranet-based tool to electronically distribute news clippings from a third party source to key individuals within the organization. The following Internet sites are maintained:
 - www.owa.gov.on.ca - The Office of the Worker Adviser (OWA) is an independent agency of the Ontario Ministry of Labour. The OWA provides free services to non-unionised injured workers and their survivors in workplace insurance matters (formerly called Workers' Compensation);

- www.psab.gov.on.ca/english/gsb/index.htm - The Grievance Settlement Board provides expeditious and appropriate dispute resolution services for grievances arising under the collective agreements between Crown employers and Unions representing Crown employees in order to resolve disputes and promote harmonious labour relations in the Ontario Public Service;
- www.olrb.gov.on.ca - The Ontario Labour Relations Board is an independent, quasi-judicial tribunal mandated to mediate and adjudicate a variety of employment and labour relations-related matters under a number of Ontario statutes.

Ministry of Research and Innovation

- Internet site
 - www.mri.gov.on.ca - a website that highlights the focus on the government's commitment to innovation as the driver of growth across all sectors of the economy.

Ministry of Small Business and Consumer Services

- Internet site
 - www.sbe.gov.on.ca a web portal to strengthen the small and medium business sector and to encourage entrepreneurship.

Ministry of Transportation

- The Cluster partners with the MTO's Road User Safety Division to deliver effective technology-enabled solutions through the Road User Safety systems for the driver, vehicle and carriers.
- A portfolio of over 135 information systems support a large complex and diverse range of Provincial Highways Management business and operational functions. These systems include the analysis of the highway network through online inventories of highway and bridge conditions facilitating the planning and scheduling of multi-year construction projects, engineering design work and the management of highway maintenance.
- The Integrated Ticketing office supports the Presto project of the Ministry of Transportation.
- The IT Service Management Office provides I&IT services and business management to the Cluster and all the ministries.
- The Asset Management Business framework will support PHM in developing an improved framework for asset management, primarily roads and bridges, and will initiate changes in the current business processes and activities. There are

over \$50 billion of assets under management and the direction is to develop and implement a more strategic management approach by linking applications through a common architecture and through the use of standards. This system is undergoing system renewal. There are currently multiple applications on multiple platforms. These systems will be moving to a common platform based on the Microsoft .NET architecture. All applications will be moving by the end of 2009.

- Work is continuing with Land Information Ontario for road network information to align with the LIO databases.

3. INFORMATION SYSTEMS DRIVING FORCES

Exhibit ETC.3 outlines some key influences which will affect the information systems activities within the cluster.

- The cluster's strategy is to transform the organization so that as much as half of the resources are focused on growing and transforming the business. The essence of this transformation is that the cluster needs to re-allocate resources, that today are focused on just running the business, to growing the business and driving the modernization agenda. To reduce the 'Run' component from 70% to 50% requires a reduction in the number of technologies supported, use of commercial-off-the-shelf (COTS) solutions, a shift to component-based delivery and the need to leverage enterprise and horizontal solutions. This is a significant change for the organization. The dual thrust of this strategy is best captured by the phrase "Transforming While Performing". In 2008-09, the ETC strategy was to stabilize the cluster and build the foundation for transformation and in this year the focus is to build the roadmap and start the journey of transformation. There are four roadmaps that need to be created and integrated: business architecture; application architecture; information architecture and the technology architecture.
- A key change in priorities in the last few years has been the shift from focussing on the road transportation network to a renewed focus on public transportation, increasing transit ridership and promoting a multi-modal transportation network to support the efficient movement of people and goods. These changes drive the need for new systems.
- The RUS legacy systems (registration and licensing databases) are critical for the ministry, other ministries, clients and external stakeholders. These ageing systems require major re-investment to meet the need of providing stable, reliable information to support business plans and programs.
 - The RUS Electronic Service Delivery Strategy and associated initiatives have been developed with the primary goal of migrating these legacy systems to a flexible, scalable platform.
- There is a requirement to develop a phased, comprehensive risk management strategy to renew cluster legacy applications in partnership with Road User Safety and Employment Standards programs.
- Citizens are encouraging governments to put more services online. Governments are also moving forward with electronic citizen engagement in the decision making process. The cluster will introduce and demonstrate new tools to foster collaboration both externally and internally.
- The Presto Project is an important enabler of public transit integration in the GTA and will facilitate "seamless" travel across the GTA for public transit passengers.

- From a technology perspective, the cluster is leading in the use of .NET development and acts a Centre of Excellence as the new application factory paradigm of business solutions development. The Cluster is building on the Zachman framework to provide additional functionality to Service Oriented Architecture solutions. The cluster is leading in deployment of Service Oriented Architecture.
- The cluster must build capacity and strategy to meet Information Management needs. Today in excess of 70% of the OPS data resides in an unstructured form. This is a significant inhibitor to the government's ability to achieve public policy objectives. The I&IT organization will develop an information management program focusing on information as a core asset of the OPS and reduction of the growing costs of duplication and storage of unnecessary documents.
- As the ministry changes its role from being a service provider to a service manager more focus will be placed on policy, planning and regulating, and less on direct service delivery.
 - A stronger information resource management approach will be required to support this role.
- Greater focus will be placed on managing the road network as an asset and novel approaches are being considered.
- Greater focus on improved processes, methods and tools to enable projects to meet project gating, risk management and architectural governance, and review process requirements without adding extra time and resources to project timeframes and budgets.
- There is a major need to shorten the timeframe to implement system changes.
 - Legislative changes add to the pressure.
 - The “connected economy” is creating a fast pace for new ideas or requirements.
- Increasing population growth and accompanying growth of drivers especially amongst youth, seniors and commercial drivers is having a significant impact.

EXHIBIT ETC.3

INFORMATION SYSTEMS DRIVING FORCES

- The cluster needs to re-allocate resources that today are focused on just running the business to growing the business and driving the modernization agenda.
- The legacy systems are critical and major reinvestment has been approved is being made.
- Requirement to develop a phased, comprehensive risk management strategy.
- The Presto Project will be an important enabler of public transit integration in the GTA.
- The cluster is leading in the use of .NET development and is building on the Zachman framework to provide additional functionality to Service Oriented Architecture solutions.
- The cluster must build capacity and strategy to meet Information Management needs.
- More focus will be on policy, planning and regulation, and less on direct service delivery.
- Greater focus will be placed on managing the road network as an asset.
- Faster system implementation is needed.
- There is increasing growth in driver population.

4. PLANNED CHANGES AND UPCOMING PROJECTS

The various system initiatives are described within each line of business.

a. Cluster Infrastructure

- Infrastructure Consolidation
 - Effective the 1st April 2005, the Office of the Corporate Chief Infrastructure Technology Services (ITS) took responsibility for managing and delivering mandatory OPS I&IT infrastructure to all clusters and ministries. The hardware and software environments described below will change as consolidation continues. The cluster will be participating in this and other shared initiatives such as the common components and services and common business applications.
- Common Infrastructure (Intel-Based Servers) have migrated to Windows 2003 and continue to deliver n-tier business applications as well as file, print, directory, e-mail, groupware, workflow and systems management services. MTO enterprise server environments will eventually consolidate into server farms and be positioned to support shared services (storage management, middleware, systems management) although the cluster is not formally engaged on any initiatives with the server and data centre consolidation project at present.
- The business environment of approximately 5,200 PCs uses Windows XP Professional.
- It is planned to refresh the Customer Service Workstations.
- Microsoft Enterprise Project Management, Microsoft Project 2003 and Visual Process have been implemented to provide improved project management.
- The web-based platform delivers J2EE multi-tier applications that include ESDI and Inquiry Information Services (IIS). The Microsoft.NET Framework 2.0 based platform will continue to expand as part of the fundamental changes to the Highway Business Service application delivery strategy.
- Business Information availability requirements will dictate robust Disaster Recovery and backup/recovery implementations through unified management and decentralized execution.
- Cellular wireless services have been implemented to support the MTO Enforcement officers to securely deliver Carrier, Vehicle and Driver related information.
- The ministry has developed architecture standards and guidelines for use in the development of all I&IT solutions. The objective is to progressively develop an I&IT architecture that integrates the I&IT and business initiatives of the Economics and Transportation I&IT cluster.

- There is a project to implement a cluster-wide standard for repository technology that will inter-operate with architecture management tools.
- The vision for information management (IM) is one in which decision-makers have access to the right information at the right time. Policy analysis will be supported and enhanced by improved IM because the data/information upon which research and analysis rests will be authoritative, authentic and accurate. With improved information and the ability to integrate information within and across formats and business lines, service delivery will be modernized and enhanced, and coherent enterprise approaches will be enabled. Not only will service planning improve, but also direct delivery can be positively impacted by better information. Finally, citizens will have greater and quicker access to information that they desire. This is the vision for IM within the OPS.

The Cluster will work towards building organizational capacity to fulfil its IM steward/manager role in 2009-10. The go-forward plan will include identification of key IM services to be provided by the Cluster, versus those services that are necessary to continue in client ministries. The focus at the Cluster level will be on bringing the client ministries together to form an IM community of work jointly to achieve enterprise IM goals including readiness to implement the enterprise Information Management suite of policies, standards, tools and applications.

- The .NET Centre of Excellence (.NET CoE) was established by the IT Executive Leadership Committee (ITELC) to develop and promote a uniform, standards-based, methodology driven, application development environment in the OPS. To provide a response to the challenges of increased demand for business solutions, shorter product cycles and staff turnover facing the I&IT Clusters, a significant shift in the way applications are being developed needs to take place. By establishing a uniform way of developing applications in the OPS , for example using the same tools, methods, and reusable software assets, multiple benefits will continue to be realized such as:
 - Reduced time-to-market
 - Reduced maintenance costs
 - Common Application development methodology

Driving towards achieving those objectives, the .NET CoE performs various tasks and services, and acts in multiple roles:

- Establishes a common standardized toolset to be used across the OPS
- Promotes a common, factory software paradigm-based, application development methodology
- Provides hands-on training to developers

- Mentors application designers and developers
- Works with various stakeholders such as the Justice Technology Services cluster and ITS in order to promote common services to the OPS like the SharePoint service.

Three areas of increased emphasis by the CoE are the creation of a common training roadmap, the promotion of the standardized toolset, and the establishment of a common infrastructure, in collaboration with the Service Delivery Environment initiative.

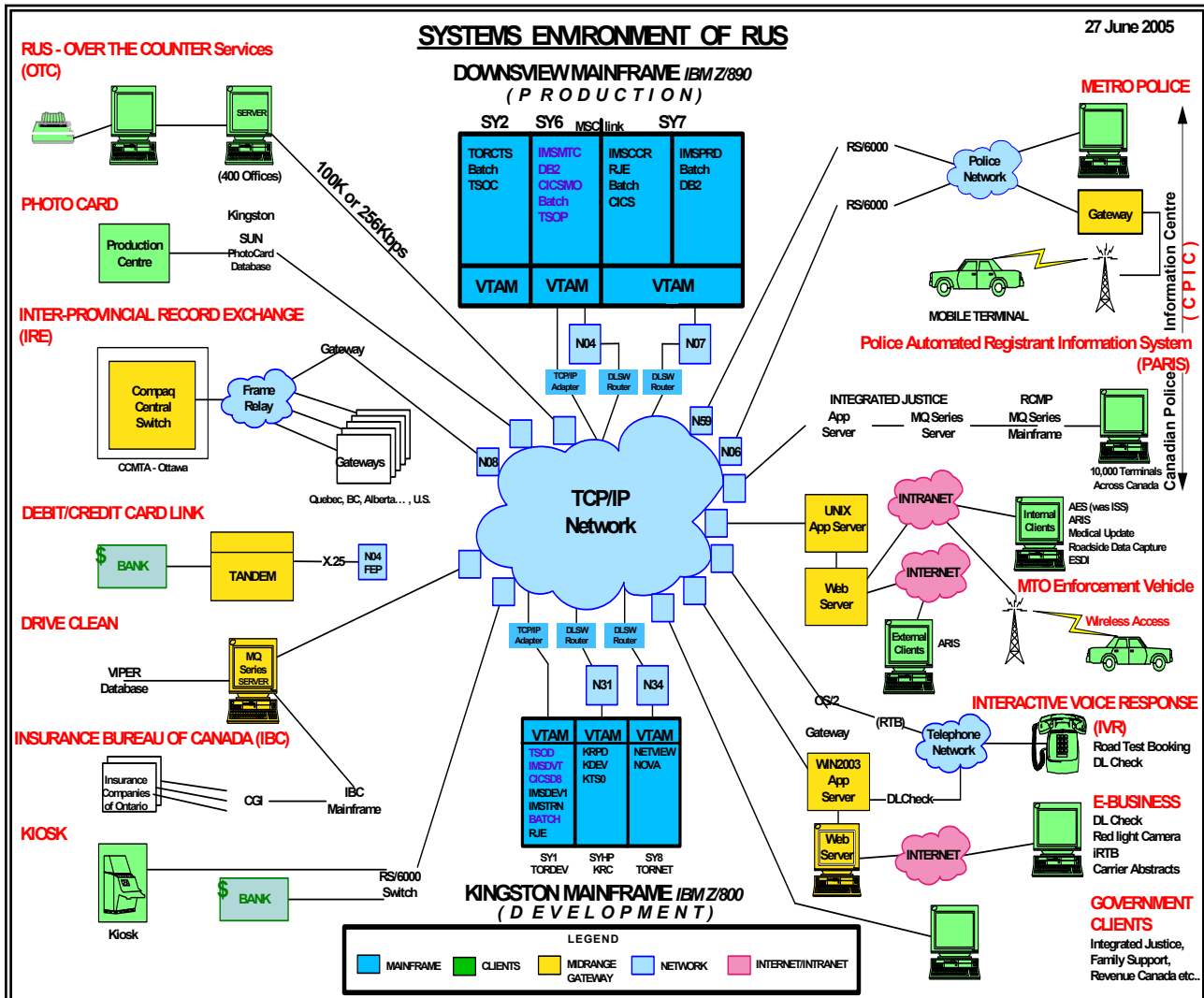
b. Ministry of Transportation - Road User Safety

A series of system enhancements is necessary to support the following new Road User Safety requirements.

- The Road User Safety portfolio is large and touches many other parts of the government as well as many other partners delivering component services within the Road User Safety envelope. The Road User Safety Applications schematic is shown in Exhibit ETC 4.

EXHIBIT ETC.4

ROAD USER SAFETY SOLUTIONS



The Road User Safety critical applications include:

- Driver Program – the licensing and control of all drivers.
- Vehicle Program – the registration of all active and inactive vehicles, plates and their registration and maintaining databases of registrants.
- Carrier program - the registration, enforcement of all carriers and maintenance of a database of 80,000 carrier operators.
- Information and Support Services – provide secure and efficient access to MTO Driver Vehicle and carrier information.

- A design framework project was completed in March, 2003 to ensure consistent architecture across all Road User Safety projects while conforming to the MGS Zachmann framework and security models. This will include technology, information, business, security and application architectures and will conform to the principles and standards set by the Enterprise Information Architecture project. The RUS future architecture is based on an n-tier model utilizing browser-based thin-client PCs. It will feature the use of reusable objects and a common interface for service delivery channels and business partners. It will be web-enabled and will provide a single virtual channel delivery interface, which will simplify support requirements.
 - From a business perspective, this new architecture will align MTO business lines and product delivery to the overall e-government direction and customer centric strategies including:
 - Increased self-service and integration with ServiceOntario;
 - Integration of data across applications, ministries and jurisdictions;
 - Proactive prevention of fraud;
 - Provision of business intelligence and information at users' fingertips;
 - Facilitate agile and flexible systems that can easily reflect the latest policies, business processes and the ongoing changes to the regulatory framework.

There are two key projects for planning the RUS replacement:-

- RUS Modernization Planning – to develop and publish the plans for modernization of Road User Safety (RUS) legacy systems. Implementation is dependent on completion and approval of the RUS Modernization Business Case.
- RUS Modernization – to provide a modern and flexible infrastructure for business modernization and future delivery of MTO programs.
- RFP's are planned for each of
 - Business rules extraction
 - Integration Services
 - Enterprise solutions.

Other key projects are:

- Geographical Positioning System (GPS) Data Reporting System – to develop a reporting system for externally provided GPS data from Turnpike Global Technologies.

- Commercial Vehicle Information System – to enable trend analysis and evaluation of program effectiveness.
- Commercial Vehicle Survey (CVS) Database Management – to provide an upgraded technical environment within the common infrastructure to house this data and allow for effective data management and reporting and to define and implement access rules.
- Commercial Vehicle Survey Reporting System (CVSRS) Enhancements 2009-10 – to enhance CVSRS to accommodate changes to the externally provided Commercial Vehicle Survey data feed from the Government of Canada.
- Next Generation COMPASS Software (NGCS) Project - originally designed in 1987 and having reached the end of its design life cycle, this five year project's purpose is to upgrade COMPASS's software and hardware to facilitate future expansion and enhance functionality.
- Interim MAPS Strategy - represent ETC-RUSSB working towards the remediation plan for high risk applications. This includes the development of an application portfolio assessment framework.
- Truck Inspection Station (TIS) Network Bandwidth Upgrade – to increase the network communications bandwidth for Truck Inspection Stations offices and District offices to improve performance of application.
- Report Management System (RMS) Database Archival – to archive the historical general ledger transactions from main (RMS) tables to improve system performance.
- Customer Service Workstation Refresh – this requires new workstations and gateway servers to be rolled out for all Driver Training Centres and MTO offices involved in the supply chain and delivering service to the citizens of Ontario.
- Private Issuing Network (PIN) and Driver Training Centres (DTC) Encryption Network – to replace the existing security encryption with a less expensive alternative that will secure the data flows between Private Issuing Network (PIN) and Driver Training Centres (DTC) and the Downsview MTO mainframe computer.
- Revenue Refund Payment System (RRPS) Migration – to re-engineer and improve the business workflow and associated Integrated Financial Information System (IFIS) interface, and to migrate the existing legacy mainframe-based system to a .NET platform to better facilitate growth and long-term support and maintenance.
- Vehicle Registration System (VRS) to Bank Reconciliation (VBR) Migration – to migrate the existing VBR application from its legacy platform to a .Net platform to improve functionality, efficiency of operation and long-term support and maintenance.

- Address Validation via Over-the-Counter Channel - to implement system changes to allow for Accessible Parking Permit (APP) address validation via Over-the-Counter (OTC) Channels.
- Apply Outstanding Stored Credit to Transactions - to implement capability to automatically transfer stored credit to client's next vehicle transaction at a Private Issuing Network (PIN) to handle "credits" instead of "refunds".
- Changes to OPP Short Form Wordings – the changes required to Ontario Provincial Police (OPP) Short Form Wordings.
- Commercial License Renewals - Senior Drivers - to implement system changes to support Commercial License Renewals for Senior Drivers.
- Eco-License Plate (Business Program Design) - to implement system to recognize/reward vehicle owners of current environmentally-friendly vehicle or those considering purchase/lease of such vehicle. It has been proposed that an eco-license plate that would entitle fuel-efficient cars to a package of perks such as free parking or access to car-pool lanes.
- IBC Uninsured Vehicles - system changes required in support of Insurance Bureau of Canada (IBC) for uninsured vehicles.
- ICON System Changes - CVOR - Phase 2 – to change the convictions file layout to accommodate Federal Motor Vehicle Transportation Act enhancements; affects convictions upload batch programs for drivers and carriers.
- Limited Speed Motorcycle Phase 3 - to implement system changes to support Limited Speed Motorcycle Phase 3. This includes a bundle of 25 work requests.
- Payment Service Improvement - outstanding and deferred issues resolution features gaps, etc, including Privacy Impact Assessment and Treat and Risk Assessment recommendations.
- Prevent Multiple Address Changes - to implement system changes to prevent multiple address changes.
- SERCO - DESO 6 year Rolling Windows (Fees) - DESO funded/initiated system changes to implement the expiry of unused fees after 6 years.
- Payment Card Industry Compliance - outstanding and deferred issues resolution (Payment Card Industry, Certification conditional approval items etc.), including Privacy Impact Assessment (PIA) and Threat and Risk Assessment (TRA) recommendations.
- 407 ETR Plate Denial - Phase 2 - to implement system changes in support of 407 ETR fines that exceed \$99,999.99.

- Canadian Driver Licence Agreement Business Program Design - to implement system changes to support Canadian Driver Licence Agreement Business Program Design. A five-year program (Canadian Council of Motor Transport Administrators); provide uniformity among all member jurisdictions concerning exchange of information on driver licenses including records, convictions and administrative actions that result in the withdrawal of licensing privileges.
- Fall Bill 2008 (including Bill C13) - to implement business and technical changes to multiple programs within MTO to support safer roads in Ontario.
- Enhanced Drivers Licence Card - to enhance the Ontario Drivers Licence with citizenship information, to allow the card to be used for cross-border identification. The driver's licence will be enhanced with citizenship information to allow the card to be used for cross-border identification. To include the non-Driver's Licence Photo ID Card project which provides Ontario residents with an identification card, particularly for individuals who do not qualify for a Driver License Card and the Photo Comparison Technology project.
- New Driver Licence & Photo Health Card Production - the packaging of card production requests and the production of new secure Drivers License cards and Health Cards, and an MTO Audit and Reconciliation data base.
- Ontario Photo Card ID - to provide Ontario Residents with an identification card (availability of a government-issued photo card for identification, particularly for individuals who do not qualify for a Drivers Licence card).
- Photo Comparison Technology Implementation - to reduce fraud and duplicate driver licenses under different names, eliminate potential for identification theft. This project will enable the identification of drivers who have successfully acquired more than drivers licence through the use of alternate identification. The project will facilitate the comparison of a drivers's photo against all other drivers' photos.
 - To strengthen the integrity of the licensing system and embed the one driver, one driver record principle, steps are being taken through the photo comparison initiative to enhance the registration processes. Photo Comparison Technology (PCT) will reduce the likelihood of issuing multiple licenses to same individual under different identities.
 - PCT is now sufficiently robust to consider business applications in MTO as a fraud prevention and risk mitigation measure to improve the integrity of the licence issuance process, the credibility of MTO, and road safety. If successful, PCT may also be able to apply to Health Cards.
- Operational Costs of Point of Sale Pads (Desjardins/Getronics) - the replacement of 1,400 Point of Sale Pads across the province.
- Ontario Auditor General (OAG) Report on Carrier Safety & Enforcement - response to the Ontario Auditor General (OAG) relating to New Entrant Education

and Evaluation Program, US Data Exchange, Enforcement Duty Reports, and Private Issuing Network Related Registration.

- Revenue Management System (RMS) – Oracle Financials Business Functions – to enhance Revenue Management System (RMS) following Oracle Technical System upgrade.
- Electric Low Speed Vehicle – new registration and performance for new vehicle class i.e. electric low speed vehicle.
- Reverse Commissions for Transaction Back-Outs – to reverse transaction commissions for transactions that have been backed out to prevent loss of revenue.
- Accept Debit Card for Special Handling - to modify Licensing Control Systems to allow debit card payments for selected transactions.
- Access to Enforcement Services (AES) Photo Access For Police Services – the roll-out of Access to Enforcement Services (AES) Photo Access for Police Services.
- Chip Card Technology Transition - to implement new release of Desjardins Integrated Payment Solutions (DIPS) and new PIN pads.
- SERCO Ontario Driver Examinations Booking System (DEBS) - to implement modernized web-based Road Test Scheduling.
- SERCO Workstation Upgrades – the SERCO workstations and gateway servers to be replaced to enable implementation of new features.
- ServiceOntario Enterprise Payment Processing - consultation work on MGS solution and Desjardins implementation.
- ServiceOntario Kiosk Renewal - Release 3 – the implementation of a new ServiceOntario kiosk that will leverage existing ServiceOntario /MTO infrastructure to deliver products to the citizens of Ontario.
- APP Internet Address Changes - to implement system changes to support Accessible Parking Permit (APP) address changes.
- APP Transition Plan Phase 2 - to build a robust foundation to increase the ability to manage and audit customer data; and enable cost-effective addition of other online services (renewals, travel permits, etc.) for Accessible Parking Permit (APP).

c. Ministry of Transportation – Provincial Highways Management

- Highway Infrastructure Business Solutions (HIBS) – this is the restructured former PHIMS project with the same components in scope:
 - Traffic Volume System
 - Location Referencing / Mapping
 - Asset Management (Inventory/Deficiencies/Corridor Investment Plans)
 - Data Integration
 - Maintenance Program (Inventory Component).
- AutoCAD 2009 Upgrade – the upgrade of AutoCAD 2004 software licenses to AutoCAD 2009 as well as upgrade of integrated engineering solutions.
- Registry, Acquisition and Qualification System (RAQS).Net Conversion – this carry over multi-year project started in 2007-08 with a purpose to migrate the existing RAQS Consultants application from its legacy Lotus Notes platform to the new .NET standard platform which will serve to facilitate ongoing support and maintenance by reducing associated turn-around times and costs for enhancements.
- Contract Preparation System (CPS) – .Net Conversion – this will include the conversion and web-enabling of the Provincial Highways Management Capital contract compilation system.
- Product Centre Replacement – to replace the current outdated system which is no longer supported or maintained in MTO, and will not run once infrastructure upgrades occur in MTO. Document management and storage were identified as a high priority item in the regions during the Business Application Strategic Plan project, in particular for service management.
- Property Information Management System Renewal – the Property function is currently supported by a computer application which is outdated in terms of technology and functionality and requires full redevelopment and replacement. The Land Management Database System application was built over 10 years ago and the business of Property management has changed; systems functions must also now be changed accordingly.
- Corridor Management System Renewal – the redevelopment of the current Corridor Management Permit system to the .Net platform for web-enabled third-party permitting and addition of a mapping interface. Current technology is prohibitive in terms of web-enablement.
- Bridge Management System (BMS) – HIBS Integration – the integration of the Bridge Management System with the Highway Infrastructure Business Solution (HIBS).

- Pavement Management System (PMS) – HIBS Integration – the integration of the Pavement Management System with Highway Infrastructure Business Solution (HIBS).
- Accident Information System (AIS) – HIBS Integration – the integration of the Accident Information System with Highway Infrastructure Business Solution (HIBS).
- Contract Services Management Project -- this solution is expected to streamline management, administration and documentation of construction and maintenance contracts.
- Capital Improvement Delivery (CID) – .Net Conversion – the conversion of the system used to manage the delivery of the highway capital program to a .NET platform.
- Environmental Management System (EMS) Development – replace current EMS and develop improved application with greater functionality and enhanced user interface.
- HESB Intranet Technology Solutions (HITS) Stabilization – consists of assessment, recommendation and implementation of changes for this business critical aging infrastructure to stabilize and increase capacity where possible. The goal is to continue hosting applications until the new .Net Service Delivery Environment is available and application transition has occurred.

d. Ministry of Transportation – Corporate Services

- OPS.NET Service Delivery Environment – plans on partnering with CYSSC, the .NET CoE and ITS to develop and implement a common service for delivering and hosting .NET applications OPS-wide.
- Fleet Services Centre of Excellence – to facilitate the implementation of an OPS-wide fleet management service offering in partnership with MTO and Common Component & Application Services (CCAS).
- MTO Intranet Migration – to migrate the existing MTO intranet website to a Microsoft Office SharePoint Server (MOSS) 2007 to better facilitate content editing and ongoing support and maintenance.
- MTO Public Internet Migration – to migrate the existing MTO public internet website to a Content Management Tool (CMT) to better facilitate content editing, ongoing support and maintenance.
- Vendor Invoice Search Engine (VISE) Enhancements – the purpose of this project will be to enhance the reporting system by adding graphical reporting of financial data and permit drill-down to detail from graphical summary views.

- Continuous Transactions Control Monitoring – to investigate acquired solution software that are able to analyze card transaction data along with financial and employee data to identify suspicious activity, thus providing a platform for continuous monitoring and automation of a process to identify errors and control violations across all financial systems.
- Corporate Services Division (CSD) Website Migration - migrate the existing SharePoint 2003-based website to Microsoft Office SharePoint Server 2007.
- Correspondence Tracking Information System (CTIS) Migration – to migrate the existing CTIS application from its legacy Lotus Notes platform to a .NET platform to better facilitate growth and long-term support and maintenance.
- Information Management System (IMS) Migration – to migrate the existing IMS application (Briefing Notes) from its legacy Lotus Notes platform to a .NET platform to better facilitate growth and long-term support and maintenance.
- Senior Management Team (SMT) Dashboard Enhancements 2009-10 – this phase of development for the SMT Dashboard includes a migration to SharePoint 2007 and various functional enhancements.

e. Ministry of Transportation – Presto Project

- The GTA fare system will enable seamless travel across the GTA. It will provide one card (farecard) that customers can use to ride on any GTA transit vehicle without tickets, passes or exact cash fare. It will work on all participating transit services. It will let riders pay any fare or charge including transfers, special fares (e.g. children, students, seniors) and honour frequent rider discounts.
- The farecard is a plastic card embedded with a computer chip. Its common currency will be an e-purse (the electronic equivalent of cash). A Central System will link all municipal systems, handling all financial information. It will track farecard transactions, store e-purse values in separate bank accounts, do fiscal reconciliations every day with each transit service and provide other customer and transit provider services. Separate municipal systems will interface with both equipment and software. The TTC System will handle bus, subway, light rail trains, and streetcar services. A GO Transit System will manage fares-by-distance and will provide the same functions as the Municipal Systems and may be used for verifying proof of payment.
- The project office is currently working on finalizing the specifications for each of the main components of the system. More information is available at <http://www.prestocard.ca>.
- Under the leadership of The Ontario Ministry of Transportation (MTO), the design of the main system components is now complete. The system will be implemented through a single, joint procurement and contract for all transit services except the TTC. MTO will issue and execute the contract.

- April 2005 – Short list of pre-qualified vendors was selected through a Request for Qualifications process. The four vendors were invited to make RFP submissions for the design, build, delivery and operation of the system(s).
- October 2006 – Accenture was awarded a 10 year contract, worth \$250 million including sales taxes, to design, develop and implement a seamless fare card system for public transit in the GTA. Thales Transportation Systems will provide all of the front-end equipment. TELUS will provide infrastructure support including network and hosting services. IBI Group will provide implementation and transition services and Giesecke & Devrient will be responsible for fare card production and distribution. Accenture will manage the project, and provide system integration services.
- The PRESTO card will be rolled out in four stages across the GTA and Ottawa:
 - 1. Field Trials, GO Transit’s Oakville and Bronte rail stations as well as Union Station, Fall 2009.
 - 2. Complete Lakeshore West GO Rail and Oakville and Burlington Transit by Winter 2010.
 - 3. Milton and Georgetown GO Rail lines and associated GO Bus routes, Brampton Transit, Mississauga Transit and TTC Islington Subway Station by Summer 2010. Barrie, Stouffville and Richmond Hill GO Rail and Associated GO Bus routes, Hamilton Street Railway, York Region Transit and TTC Subway stations Finch, Don Mills and Downsview by Fall 2010. Lakeshore East GO Rail line and associated GO Bus routes and Durham Region Transit by Winter 2011.
 - 4. Ottawa’s OC Transpo System by Winter 2011.
- The Ministry of Transportation is currently leading this initiative, in partnership with each of the GTA Transit Agencies and OC Transpo in Ottawa.

f. Ministry of Labour

- OHS Inspector Notebook (INB) Renewal Project – the Occupational Health and Safety (OHS) Program provides compliance monitoring and enforcement of OHS legislation and related regulations. This project will deliver the solution necessary to replace the existing INB application with current and aligned technology, and generate opportunities for integration with other MOL technology initiatives.
- Employment Standards Information System (ESIS) Final Phases - enables the public to submit labour claims via multiple channels: web, mail, fax, and over the counter. Complex workflow supports the enforcement action when required, appeals to the Ontario Labour Relations Board, and money that has been provided to the government to be held in trust. The project will extend the functionality of the

existing application to better support the business and will align / integrate with similar information and application initiatives across the MOL.

- Dispute Resolution Services (DRS) Renewal Project - this initiative will deliver the solution necessary to replace the existing applications with current and aligned technology and generate opportunities for integration with other MOL technology initiatives.

g. Ministry of Economic Development

The following systems are being developed for deployment by other cluster ministries in addition to MED.

- MED Content Management System – the scope of the project focuses on organizing the corporate information, making it useful and maintaining it on the MED website.
- MED Enterprise Grants Management and (eCRM) Client Relationship Management – this application will manage clients’ relationships by using the Internet, web browsers or other electronic touch points. The challenge is to offer communication and information on the right topic, in the right amount, and at the right time that fits the customer’s specific needs.
- MED Network and Collaboration – the Ministry of Economic Development has identified the need to provide and support effective and efficient broad based collaboration with vested parties in Ontario’s economic development sphere.
- MED OCMS (Correspondence Tracking) – this project is designed to improve and modernize the Correspondence Tracking System by implementing the common CCAS offering.
- MED Executive Dashboard – the Ministry of Economic Development has identified an opportunity for a Knowledge Management tool. The Executive Dashboard will set the foundation for an integrated platform of information on the OPS Intranet, which will support staff and management in doing their jobs better and faster.

h. Ministry of International Trade and Investment

- MITI Content Management System – the scope of the project focuses on organizing the corporate information, making it useful and maintaining it on the MITI website.
- MITI Geographic Information System - the scope of the project is to create a new Investment Attraction Tool that would allow ministry consultants and potential investors to review multiple data sets for Ontario and its regions through one, easy to navigate, on-line function on the International Trade and Investment Division’s website.
- MITI Enterprise Grants Management and (eCRM) Client Relationship Management – this application will manage clients’ relationships by using the Internet, web browsers or other electronic touch points. The challenge is to offer communication

and information on the right topic, in the right amount, and at the right time that fits the customer's specific needs.

- MITI Network and Collaboration - the Ministry of International Trade and Investment has identified the need to provide and support effective and efficient broad-based collaboration with vested parties in the International economic development arena.
- MITI Activity Reporting System - this project is designed to improve and modernize the Activity Reporting System (ARS) application by re-engineering the existing system and incrementally building, and deploying, a new web-based system, as per current technology standards.
- MITI OCMS (Correspondence Tracking) – this project is designed to improve and modernize the Correspondence Tracking System by implementing the common CCAS offering.
- MITI Executive Dashboard – the Ministry of Economic Development has identified an opportunity for a Knowledge Management tool. The Executive Dashboard will set the foundation for an integrated platform of information on the OPS Intranet, which will support staff and management in doing their jobs better and faster.

i. Ministry of Research and Innovation

- MRI e-Grants System – the Ministry of Research and Innovation is looking to move to a system that can provide an end-to-end solution to manage grants that would include electronic applications, adjudication, award and financial management.
- MRI eCRM Client Relationship Management – this application will manage clients' relationships by using the Internet, web browsers or other electronic touch points. The challenge is to offer communication and information on the right topic, in the right amount and at the right time, that fits the customer's specific needs.
- MRI Executive Dashboard – the Ministry of Research and Innovation has identified an opportunity for a Knowledge Management tool. The Executive Dashboard will set the foundation for an integrated platform of information on the OPS Intranet, which will support staff and management in doing their jobs better and faster.
- MRI Network and Collaboration - the Ministry of Research and Innovation has identified the need to provide and support effective and efficient broad based collaboration with vested parties in Ontario's economic development sphere.
- MRI Content Management System – the scope of the project focuses on organizing the corporate information, making it useful and maintaining it on the MRI website.

j. Ministry of Small Business and Consumer Services

- MSBCS Content Management System – the scope of the project focuses on organizing the corporate information, making it useful and maintaining it on the MSBCS website.
- MSBCS Network and Collaboration – the Ministry of Small Business and Consumer Services has identified the need to provide and support effective and efficient broad based collaboration with vested parties in Ontario’s economic development sphere.
- MSBCS Executive Dashboard – the Ministry of Small Business and Consumer Services has identified an opportunity for a Knowledge Management tool. The Executive Dashboard will set the foundation for an integrated platform of information on the OPS Intranet, which will support staff and management in doing their jobs better and faster.
- MSBCS Enterprise Grants Management and (eCRM) Client Relationship Management – this application will manage clients’ relationships by using the Internet, web browsers or other electronic touch points. The challenge is to offer communication and information on the right topic, in the right amount, and at the right time, that fits the customer’s specific needs.
- MSBCS OCMS (Correspondence Tracking) - this project is designed to improve and modernize the Correspondence Tracking System by implementing the common CCAS offering.

5. BUSINESS OPPORTUNITIES

Exhibit ETC.5 summarizes the business opportunities in the cluster.

- The RUS Modernization project is expected to issue RFP's for each of
 - Business rules extraction
 - Integration Services.
- The Photo Comparison project will strengthen the integrity of the licensing system and embed the one driver, one driver record principle. The ministry is taking steps through the photo comparison initiative to enhance the registration processes. A procurement is planned.
- Ontario Photo Card ID - to provide Ontario Residents with an identification card (availability of a government-issued photo card for identification, particularly for individuals who do not qualify for a Drivers Licence card). The project has high priority.
- Geographic Information System for MITI - the scope of the project is to create a new Investment Attraction Tool that would allow ministry consultants and potential investors to review multiple data sets for Ontario and its regions through one, easy to navigate, on-line function on the International Trade and Investment Division's website. A procurement is planned.
- The GIS Investment Attraction Tool project will create a GIS mapping system that would allow ministry consultants and potential investors to review multiple data sets for Ontario.
- Corridor Management System Renewal for MTO – the redevelopment of the current Corridor Management Permit system to the .Net platform for web-enabled third-party permitting and addition of a mapping interface.
- It is planned to refresh the MTO Customer Service Workstations.
- Dispute Resolution Services (DRS) Renewal Project - this initiative will deliver the solution necessary to replace the existing applications with current and aligned technology and generate opportunities for integration with other MOL technology initiatives.
- Next Generation COMPASS Software (NGCS) Project - this five year project's purpose is to upgrade COMPASS's software and hardware to facilitate future expansion and enhance functionality is underway.
- Capital Improvement Delivery (CID) – .Net Conversion – the conversion of the system used to manage the delivery of the highway capital program to a .NET platform.

- Employment Standards Information System (ESIS) Final Phases - enables the public to submit labour claims via multiple channels: web, mail, fax, and over the counter. The project will extend the functionality of the existing application to better support the business and will align / integrate with similar information and application initiatives across the MOL.
- Truck Inspection Station (TIS) Network Bandwidth Upgrade – to increase the network communications bandwidth for Truck Inspection Stations offices and District offices to improve performance of application.
- ICON System Changes - CVOR - Phase 2 – to change the convictions file layout to accommodate Federal Motor Vehicle Transportation Act enhancements; affects convictions upload batch programs for drivers and carriers.
- Property Management System – Development of a system to support the management of Ministry properties.
- Contract Business Management System .NET Migration – the purpose is to re-write this legacy Notes application within the .NET platform.
- A new Inspector’s Notebook and Management Information System (INB/MIS). A renewal project is under way and a procurement is expected.
- A new Common Case Management Solution will be implemented in several ministries.
- Planning is under way regarding the procurement of a hosted service for Client Relationship Management to manage the details, events, and co-ordination of communication for provincial, national, and international stakeholders. This is planned to be a subscription service. An RFP is expected.
- An Executive Dashboard system is planned.
- Information management tools are required to manage the retention and disposal of documents as well as auditing and indexing functions.
- Consulting services are required in specific niches including:
 - Expertise in new tools and techniques will be needed to assist in product evaluations for subsequent effective use.
 - Web services will create ongoing opportunities.
 - Information Management expertise will be needed to assist in relating user requirements to system specification.

- Architecture standards and methodology assistance is required for solution development projects.
- A broad range of web products and expertise will be needed.
- Service management best practices.

EXHIBIT ETC.6**BUSINESS OPPORTUNITIES**

- The RUS Modernization project is expected to issue several RFP's.
- The Photo Comparison project will strengthen the integrity of the licensing system and embed the one driver, one driver record principle. The ministry is taking steps through the photo comparison initiative to enhance the registration processes. A procurement is planned.
- Ontario Photo Card ID - to provide Ontario Residents with an identification card (availability of a government-issued photo card for identification, particularly for individuals who do not qualify for a Drivers Licence card). The project has high priority.
- Geographic Information System for MITI - the scope of the project is to create a new Investment Attraction Tool that would allow ministry consultants and potential investors to review multiple data sets for Ontario and its regions through one, easy to navigate, on-line function on the International Trade and Investment Division's website. A procurement is planned.
- The GIS Investment Attraction Tool project will create a GIS mapping system that would allow ministry consultants and potential investors to review multiple data sets for Ontario.
- Corridor Management System Renewal for MTO - the redevelopment of the current Corridor Management Permit system to the .Net platform for web-enabled third-party permitting and addition of a mapping interface
- It is planned to refresh the MTO Customer Service Workstations.
- Dispute Resolution Services (DRS) Renewal Project - this initiative will deliver the solution necessary to replace the existing applications with current and aligned technology and generate opportunities for integration with other MOL technology initiatives.
- Next Generation COMPASS Software (NGCS) Project - this five year project's purpose is to upgrade COMPASS's software and hardware is under way.

BUSINESS OPPORTUNITIES (Continued)

- Capital Improvement Delivery (CID) - .Net Conversion - the conversion of the system used to manage the delivery of the highway capital program to a .NET platform.
- Employment Standards Information System (ESIS) Final Phases - enables the public to submit labour claims via multiple channels: web, mail, fax, and over the counter.
- Truck Inspection Station (TIS) Network Bandwidth Upgrade - to increase the network communications bandwidth for Truck Inspection Stations offices and District offices to improve performance of application.
- ICON System Changes - CVOR - Phase 2 - to change the convictions file layout to accommodate Federal Motor Vehicle Transportation Act enhancements.
- Property Management System - Development of a system to support the management of Ministry properties.
- Contract Business Management System .NET Migration - the purpose is to re-write this legacy Notes application within the .NET platform.
- A new Inspector's Notebook and Management Information System (INB/MIS). A renewal project is under way and a procurement is expected.
- Planning is under way regarding the procurement of a hosted service for Client Relationship Management to manage the details, events, and co-ordination of communication for provincial, national, and international stakeholders. This is planned to be a subscription service. An RFP is expected.
- An Executive Dashboard system is planned.
- Information management tools are required to manage the retention and disposal of documents as well as auditing and indexing functions.
- Consulting services are required in specific niches