

APPENDIX C

SWOT ANALYSIS

STRENGTHS, WEAKNESSES, OPPORTUNITIES & THREATS (SWOT) ANALYSIS

User Services: Traveler Information Services

| Strengths | Weaknesses | Opportunities | Threats |
|--|--|--|--|
| <ul style="list-style-type: none"> • Public acceptance & expectations • Strong tourism industry • Existing information system for winter advisories and road conditions. • Strength in tourism agencies – Travel Manitoba. • WAA has a website. • Availability of web tech is on the rise, 60% households. • Communication is easier, through cell phones and “Blackberry”-type devices. • Inter-agency support is high. • Online chat line – travel counselor can respond to your directly (during office hours) | <ul style="list-style-type: none"> • Lack of interoperability and information sharing • Policies/legislation do not support partnering • Lack of inter-agency co-ordination • No real time information. • Lack of internal funding. | <ul style="list-style-type: none"> • Travel information distribution for tourism/trade • Lessons learned from others – e.g. TRIP USA • Using/increasing capabilities of commercial products/services • Increased penetration of mobile communications devices • Web-based products • Agencies have databases – can now link with the other agencies that are compatible. • Funding streams available for RWIS • Not currently linked to road conditions but the opportunity is there.. | <ul style="list-style-type: none"> • Funding • Protection of intellectual property • Inability to form partnerships • Inability to establish business case • User end beyond their control. • Not taking advantage of available funding. |

STRENGTHS, WEAKNESSES, OPPORTUNITIES & THREATS (SWOT) ANALYSIS

User Services: Traffic Management

| Strengths | Weaknesses | Opportunities | Threats |
|---|---|---|---|
| <ul style="list-style-type: none"> • Public acceptance • Fewer agencies to co-ordinate • Mature ITS industry • Some RWIS experience • Specific needs to address – rural safety, operations and maintenance, extreme climate • Skill sets. | <ul style="list-style-type: none"> • Perception that ITS only applies to urban congestion • No process to focus funding at the provincial or municipal level • Lack of inter-agency coordination • Policies/legislation do not support partnering • Politicians and public do not fully understand the benefits of ITS | <ul style="list-style-type: none"> • Lessons learned from others e.g. US rural corridors • Focus on improved safety and incident response • Federal interest is growing, which may be tied to federal funding • Opportunity to demonstrate ITS as an environmental program • Opportunity to demonstrate ITS as a tool to enhance effective and efficient use of existing infrastructure. | <ul style="list-style-type: none"> • Funding • Perceived lack of demand |

STRENGTHS, WEAKNESSES, OPPORTUNITIES & THREATS (SWOT) ANALYSIS

User Services: Public Transport Services

| Strengths | Weaknesses | Opportunities | Threats |
|---|---|--|--|
| <ul style="list-style-type: none"> • Various scheduled and charter intercity services • Ongoing demand • IT expertise • Unified transit agency. | <ul style="list-style-type: none"> • <i>Flat</i> ridership • Provincial incentive for expansion is reduced • No link between transit funding and gas taxes • Lack of dedicated funding. | <ul style="list-style-type: none"> • Help improve attractiveness of transit option • Smartcard/fare integration expansion • Commitment to Kyoto standard • Opportunities to reduce costs of service delivery • Changing attitudes to environment. • Changing demographics. | <ul style="list-style-type: none"> • Reduced transit funding • Vehicle-centric environment • Urban sprawl. • Cheap parking and fuel. |

STRENGTHS, WEAKNESSES, OPPORTUNITIES & THREATS (SWOT) ANALYSIS

User Services: Electronic Payment Services

| Strengths | Weaknesses | Opportunities | Threats |
|---|--|--|--|
| <ul style="list-style-type: none"> • Strong industry (tolling, Smartcard) • Societal acceptance of electronic tolling • Banking structure within Canada • Revenue application • Manitoba Smart Network. • Expertise available for system integration. | <ul style="list-style-type: none"> • Lack of integration amongst required parties (e.g. financial institutions, payment systems, etc.) • Institutional issues • Lack of universally accepted standards • Electronic tolling not currently accepted in Manitoba. • Expensive for implementation. | <ul style="list-style-type: none"> • International standard movements (ISO, ASTM) • Commitment to Kyoto standard • Reducing operating costs • Partnering with various related stakeholders e.g. parking, retailers • Aging fare collection equipment. | <ul style="list-style-type: none"> • Institutional barriers (lack of autonomy) • Public concerns about privacy issues • General acceptance. • Potential for fraud. |

STRENGTHS, WEAKNESSES, OPPORTUNITIES & THREATS (SWOT) ANALYSIS

User Services: Commercial Vehicle Operations

| Strengths | Weaknesses | Opportunities | Threats |
|--|--|---|---|
| <ul style="list-style-type: none"> • Experience with continental programs • International co-operation efforts (NAFTA) • Good regulatory environment – <i>over regulated</i> • Significant focus on truck safety • Significant fleet management technology in place | <ul style="list-style-type: none"> • Lack of funding limiting full implementation • Institutional differences between Canada/US for information sharing • Legislative restrictions on data exchange • Ability of independent truckers to access programs | <ul style="list-style-type: none"> • Expand into courier industry • Provide real time information • Partner with existing fleets • High cross-border traffic demand • High percentage of commercial vehicles • Expand WIM • Federal and provincial government interest in gateways and priority corridors • Increased needs for efficient movements at border crossings in light of delays related to security concerns. • Optimization of multi-modal terminals • National CVO programs • Ongoing movement to Electronic Data Interchange | <ul style="list-style-type: none"> • No buy-in from the user community • Privacy, loss of competitive advantage • Funding • Increased security concerns at border crossings |

STRENGTHS, WEAKNESSES, OPPORTUNITIES & THREATS (SWOT) ANALYSIS

User Services: Emergency Management Services

| Strengths | Weaknesses | Opportunities | Threats |
|---|--|---|---|
| <ul style="list-style-type: none"> • Small number of agencies involved • Existing provincial emergency management organizations • RCMP-regional coverage • Brandon central education resource. • Fleet managed EMS system. | <ul style="list-style-type: none"> • Interagency barriers – information sharing, control at the scene • Minimal focus of emergency agencies on transportation • Lack of agreed-upon incident management procedures • Lack of management of towing industry • Lack of standards for in-vehicle applications e.g. Mayday • Lack of dedicated response personnel. • Lack of map (electronic) systems for response. | <ul style="list-style-type: none"> • Renewed focus on emergency preparedness • Onboard equipment of emergency vehicles (in-vehicle navigation, communications) • Apply commercial fleet management systems to public services • Signal pre-emption programs • Penetration of E911 • Commercial Mayday services • Improved and enhanced operational communication system, i.e. same radio frequencies, direct links between different responders. • Incident command system. | <ul style="list-style-type: none"> • Lack of available funding • Terrorism • U.S. influence. |

STRENGTHS, WEAKNESSES, OPPORTUNITIES & THREATS (SWOT) ANALYSIS

User Services: Information Warehousing Services

| Strengths | Weaknesses | Opportunities | Threats |
|-----------|---|---|---|
| | <ul style="list-style-type: none"> • Lack of traffic data • No incentive to coordinate data • Legislative restrictions regarding Canada/US information sharing in CVO • Province does not have an RWIS program. • Funding required. • No incentive to take ownership. | <ul style="list-style-type: none"> • Better information from various ITS applications • Work with private fleet information systems to provide accurate real-time information • Planned national RWIS program • Good with other agencies outside of government. | <ul style="list-style-type: none"> • Funding • Reduced funding affects quality of data (e.g. collision reporting centers) • Lack of lead agency • Policies for data distribution • Lack of understanding of the value of the information • Sensitive information. |

STRENGTHS, WEAKNESSES, OPPORTUNITIES & THREATS (SWOT) ANALYSIS

User Services: Vehicle Safety and Control

| Strengths | Weaknesses | Opportunities | Threats |
|--|---|--|--|
| <ul style="list-style-type: none"> • Automotive manufacturers – ability to influence future designs | <ul style="list-style-type: none"> • Automotive manufacturing oriented only • Lack of public infrastructure support • Market driven, public willingness to pay • Due to demand, may result in some innovations not proceeding if not ‘popular’ with the public. • Public/driver perceptions of and reliance on technology. | <ul style="list-style-type: none"> • Early applications for specialty vehicles e.g. snow ploughs, heavy vehicles • Research initiatives • Reduced safety issues such as driver fatigue. • Commercial, trucking: <ul style="list-style-type: none"> • Improved safety • Public perceptions of large trucks/drivers | <ul style="list-style-type: none"> • Legal liabilities • Other countries (Europe, Japan, US) taking lead in product development • Privacy issues • Reduces independence. |