The Road to the Future: Saskatchewan Ministry of Highways and Infrastructure’s Intelligent Transportation Systems (ITS) Technical Strategy

CITE Annual Conference
Regina, SK
June 7th to 10th, 2015
Agenda

1. What is ITS?  
2. Why do we need ITS?  
3. On the Horizon in ITS  
4. Saskatchewan- A Superior Strategy – The Three Pillars  
5. Global Transportation Hub  
6. A Building Block – The Regina Bypass Project  
7. SK ITS Technical Strategy  
8. ITS Vision/Goals/Objectives  
9. ITS Strategies and ITS Projects  
10. General Benefits  
11. Data Management Centre and Network
What is ITS?

• Application of advanced technologies to transportation problems [communication systems, computers, electronics, information networks]

• Integrated approach to maximize the efficiency, safety and security of the transportation network

• Supports “seamless” transportation of goods and people between modes (auto, bus, rail, marine, air and non-motorized), ports and terminals
Why do we need ITS?
Why do we need ITS?

Growth + Prosperity = Traffic + Congestion + Safety Problems

• **In 2011 in the US:**
  - Cost of congestion = $121 billion ($27B for trucks).
  - Wasted time = 5.5 billion hours
  - Pollution = 56 billion lbs Co2.
  - Wasted fuel = 2.9 billion gal (4x Superdome)

• **In 2020 in the US:**
  - Cost of congestion - $199 billion
  - Wasted time = 8.4 billion hours
  - Wasted fuel = 4.5 billion gallons

*Source:* 2012 Urban Mobility Report, Texas A & M Transportation Institute, December 2012
Why do we need ITS? Safety!

• **In the US (2010):**
  
  • Cost of crashes = $871 billion
    
    • $277 billion in economic loss
    
    • $594 billion in loss of life, injuries, quality of life
  
  • Deaths – 33,000/year

*Source: The Economic and Societal Impact of Motor Vehicle Crashes, 2010, National Transportation Safety Administration, May 2014*
Why do we need ITS?

• **Cost of Congestion:**

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<tr>
<td>Vancouver</td>
<td>$2 billion/year</td>
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<tr>
<td>Toronto</td>
<td>$6 billion/year</td>
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Source: Toronto Deputy Mayor’s Roundtable on Gridlock and Traffic Congestion, February 28, 2014

• **In Saskatchewan:**

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<tr>
<th>Year</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>% change</th>
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<tbody>
<tr>
<td>Collision Rate (per MVkm)</td>
<td>0.85</td>
<td>0.74</td>
<td>0.82</td>
<td>10.81</td>
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<tr>
<td>Fatalities (urban st)</td>
<td>17</td>
<td>14</td>
<td>24</td>
<td>71.43</td>
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On the **Horizon** in ITS – Game Changers!

- Technologies → lower cost, more powerful
- Convergence
- Role of social media → business/personal
- Data, data, data
- Connectivity, proximity, mobility
- Connected + autonomous vehicles
Saskatchewan - A Superior Strategy

The 3 Pillars

1. Global Transportation Hub – anchor tenant
2. Regina Bypass – the ultimate lab
3. Provincial ITS Technical Strategy – the roadmap
Global Transportation Hub (GTH)

- World class intermodal hub (truck/rail)
- Logistics Centre
- Major tenants – Loblaws/Shoppers
- Traffic impacts in Regina AND other cities
- Affects communities
- Economic catalyst
A Building Block - The Regina Bypass Project
SK ITS Technical Strategy

- Key roadmap for ITS program
- Integrates Bypass with current/future ITS
- Supports SK Growth Plan
- Economic prosperity, better communities
- Efficient and safer network
Vision Statement

Supporting the economy and safe, efficient communities in a growing, prosperous Saskatchewan, with innovation and technology through ITS
Vision Statement, Goals & Objectives
Goals

1. Transportation System – improve efficiency, reliability, mobility
2. Public Safety – increase safety of road and highway network
3. Economic Growth & Prosperity – improve and support the economy
4. Community Development – enhance & improve communities
Goals

5. Data and Information Management – develop a coordinated data process

6. Institutional Management – improve coordination between agencies
Focused Strategies

- Traveller information
- Traffic management
- Public transportation
- Electronic payment
- Commercial vehicle operations and enforcement
- Emergency management
- Vehicle safety and control systems
- Information warehousing
General Strategies

• Data management
• Transportation & data management centre
• Institutional management
• Marketing and education
ITS Projects

Total of 61 ITS projects in 12 strategies

• Description
• Agency & Stakeholder Roles
• Users and Benefits
• Project Tasks and Phasing
• Related Projects
General Benefits of ITS in SK

• Integration of systems
• Improved efficiency, safety, mobility, and sustainability
• ITS supports all modes
• Cost effective – defers construction
Data Management Centre
Questions