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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

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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

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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

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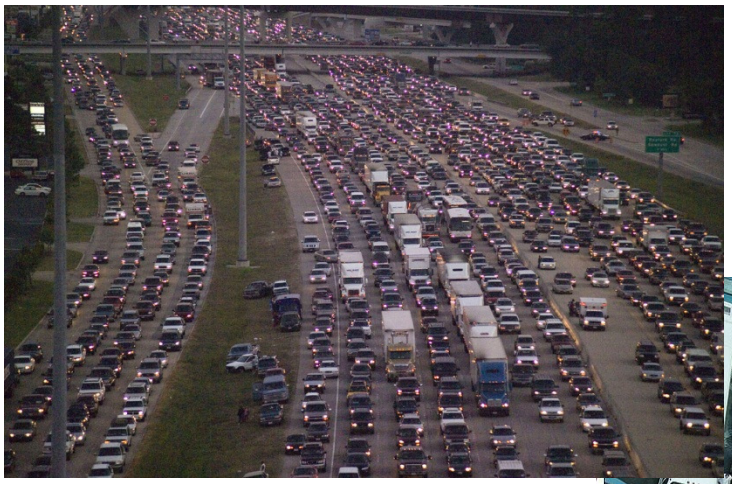
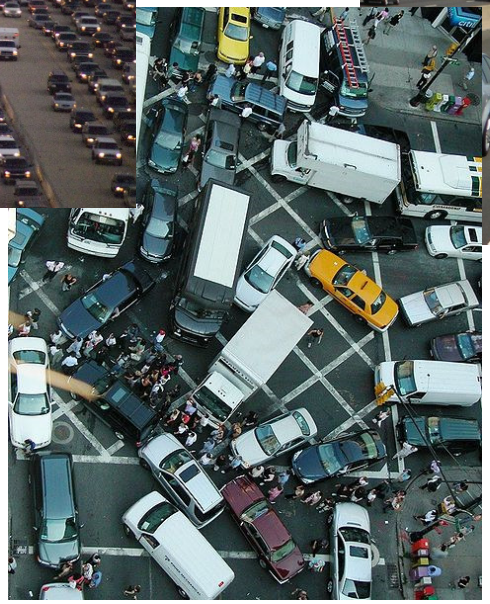
Why do we need ITS?





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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

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Why do we need ITS? Safety !

- ***In the US (2010)***:
  - Cost of crashes = $871billion
    - $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

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Why do we need ITS?

- ***Cost of Congestion:***

Vancouver	$2 billion/year
Toronto	$6 billion/year

Source: Toronto Deputy Mayor's Roundtable on Gridlock and Traffic Congestion, February 28, 2014

- ***In Saskatchewan***:

Year	2011	2012	2013	% change
Collision Rate(per MVkm)	0.85	0.74	0.82	10.81
Fatalities (urban st)	17	14	24	71.43

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Source: 2013 Saskatchewan Traffic Accident Facts, Saskatchewan General Insurance, December 2014

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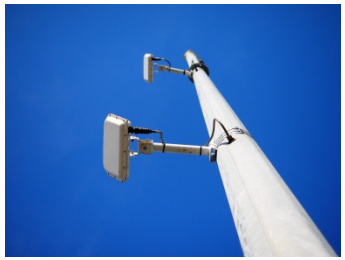
On the Horizon in ITS – Game Changers!

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



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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

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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

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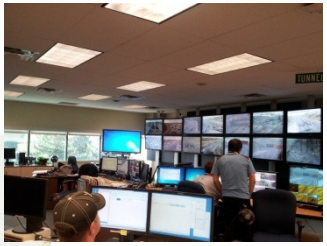
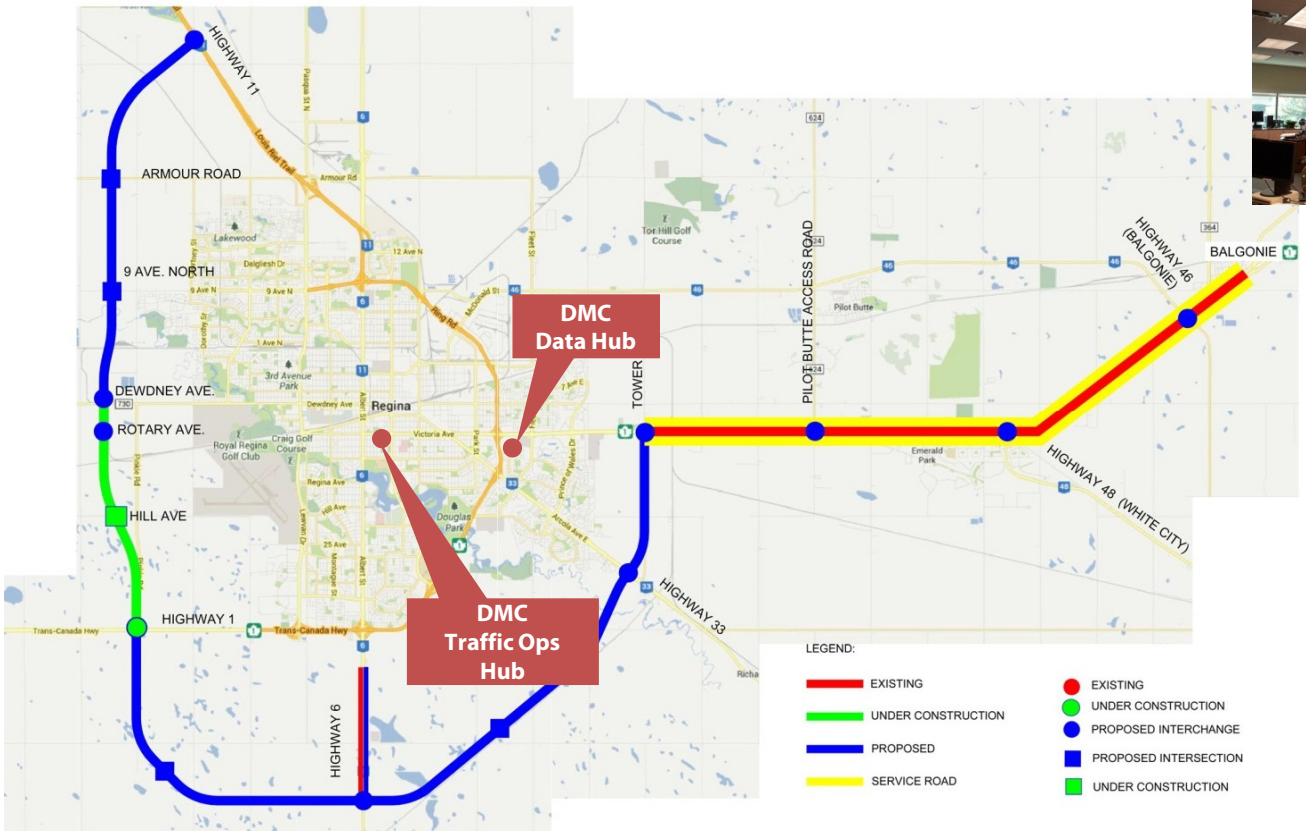
A Building Block - The Regina Bypass Project





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

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Vision Statement

Supporting the economy and safe, efficient communities in a growing, prosperous Saskatchewan, with innovation and technology through ITS

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Vision Statement, Goals & Objectives

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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

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Goals

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

6. Institutional Management – improve coordination between agencies

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Focused Strategies

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

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General Strategies

- Data management
- Transportation & data management centre
- Institutional management
- Marketing and education

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ITS Projects

Total of 61 ITS projects in 12 strategies

- Description
- Agency & Stakeholder Roles
- Users and Benefits
- Project Tasks and Phasing
- Related Projects

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General Benefits of ITS in SK

- Integration of systems
- Improved efficiency, safety, mobility, and sustainability
- ITS supports all modes
- Cost effective – defers construction

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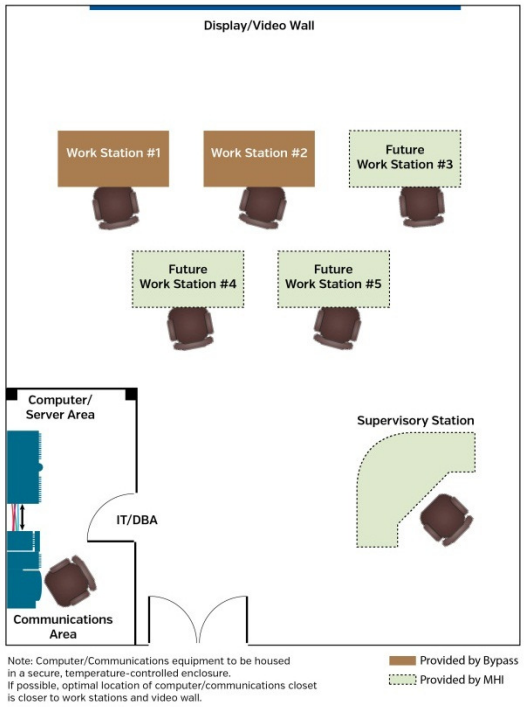
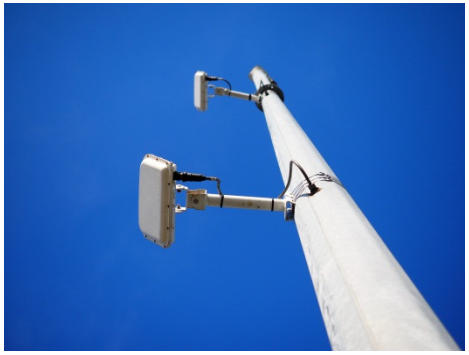
Data Management Centre





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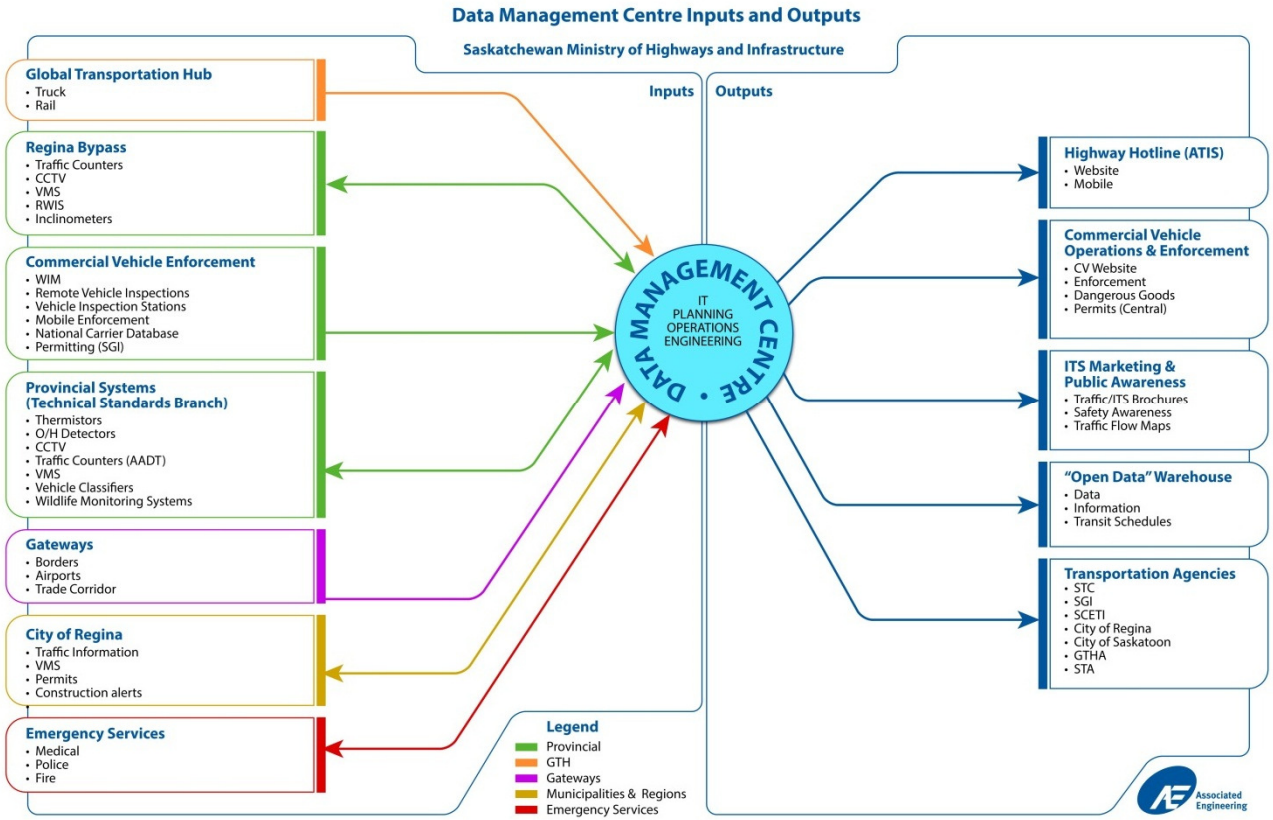
DMC Network Diagram



Questions

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