

# Perspectives on the Report and Joint Opportunities for Collaboration

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### Perspectives on the report



Future of Transportation in Calgary

- Disruptive transportation technologies
   will bring lots of opportunities, challenges and uncertainties
- Opportunities to shape how these technologies can be:
  - integrated with existing urban forms in the City
  - Incorporated as part of future transport/transit planning, policies and infrastructure decisions

# Opportunities highlighted in the report

- Need to be proactive in responding to/shaping these technologies to harness their potentials:
  - Reclaimed Inner City space and urban densification
  - seamless integration between LRT/transit and shared mobility and autonomous vehicles (last mile problem)
  - Wealth of new Data that can be used for transit/traffic operation and Planning
  - Calgary future economy and job creation



http://automotivedigest.com/



www.calgarysun.com



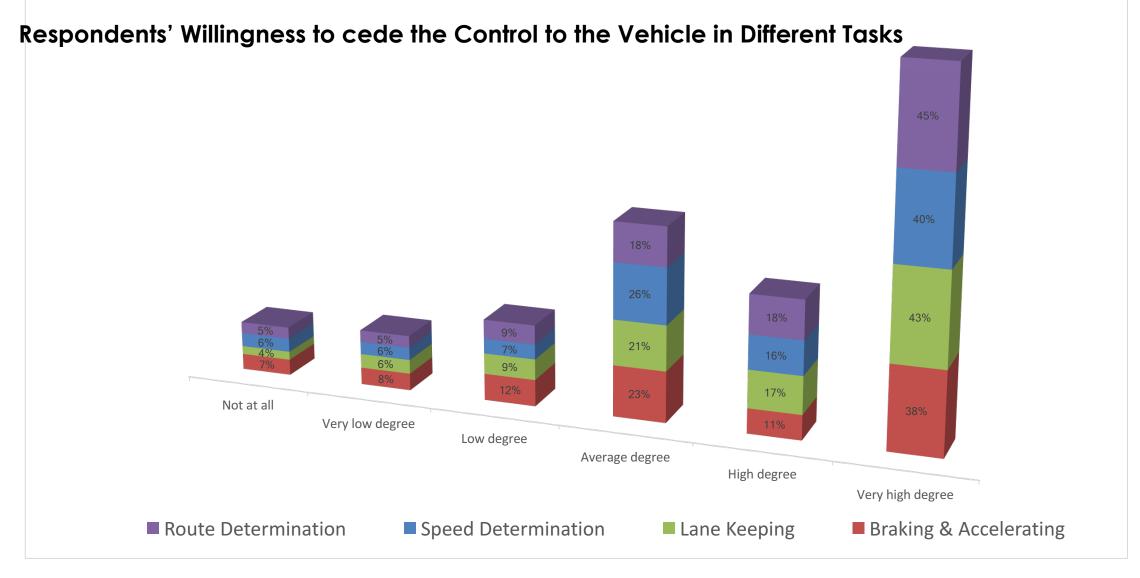
www.google.com

# Results of a Recent survey

- A recent survey conducted by the University of Calgary:
  - 25% of the respondents will **definitely** and 50% will **probably** sell one of their cars when shared autonomous vehicles become available
    - Huge impact on residential and downtown parking demand
  - Willingness to Pay for Different Levels of Automation per Year

Level 2	Level 3	Level 4
\$3529	\$2691	\$4349

# Results of a Recent survey (contd.)



# Report Aligned with the new Smart City Challenge

\$300 million over 11 years

- Mobility is #1 priority in Smart Cities!
- Collaboration: Municipalities, Universities and Industries
- The City of Calgary is well positioned as a potential candidate for Smart City Challenge.
- Synergies between the City of Calgary and the University of Calgary to undertake this Challenge





### **Urban Alliance**







#### Vision

• The Urban Alliance is a world leader in **collaborative research partnerships** between municipal governments and their local educational/research institutions

#### Mission

• The Urban Alliance is a model for urban sustainability, achieved through innovative research collaborations, education and applicable outcomes that enhance our quality of life.

### Long standing history of Collaboration

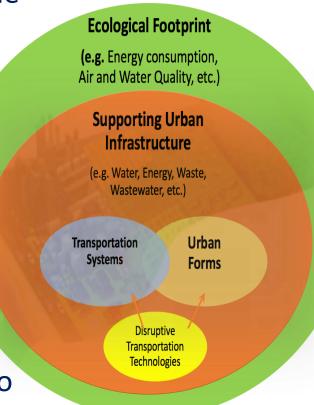
Urban Alliance was **instrumental** in establishing:

- Urban Alliance Professorship in Transportation System Optimization (> 9 years)
- PUTRUM (Public Transit for Urban Mobility) research program supported by Calgary Transit
- ACWA research facility with a \$38 million capital expenditure
- Calgary Biocell project
- CRC Chair in Sustainable Water

### **VPR Human Dynamics - Smart Cities**

**Integrated Infrastructure for Sustainable Cities** in partnership with the City of Calgary through Urban Alliance

- A focus on how disruptive transportation technologies:
  - can be integrated in our transit/transportation framework, policies, infrastructure planning, etc.
  - Seamlessly integrated with transit (Last mile problem)
  - Impacts on transport infrastructure, urban form, supporting infrastructure, Ecological footprint, Climate Change, etc.
  - Internet of Things (IoT), Big Data, Cloud Computing as applied to Transportation/Transit applications



### **Cross Disciplinary Expertise — Integrated Infrastructure for Smart Cities**



**Economics** 

**Public Transit** 

**Planning and** 

**Operation** 

Computer Science and Computer

(Internet of Things (IoT) - Cloud Computing - Data mining, Artificia Intelligence

Engineering



**Road Safety** 

and Security

Transportation Planning



Sustainable Urban Infrastructure



**Urban Forms** 

**Environmental** 

Design



Freight and Logistics Haskane Business School



Travel Behavioural Modelling



Active Modes
Cycling and
Walking

Policy Analysis

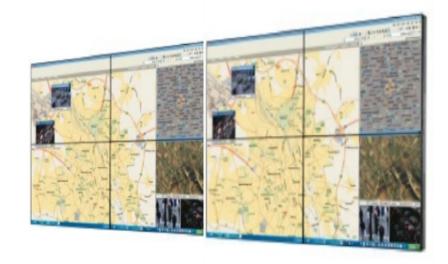


### **University of Calgary lab Facilities**



#### Research infrastructure that **exceeds \$40 million**:

- Advancing Canadian Wastewater Assets (configurable wastewater treatment plant with 9 post treatment test streams),
- Active Traffic and Demand Management Lab (simulation of real traffic and effects of different variables/traffic controls),
- Sustainable Landfill Technology,
- Laboratory for Integrative Design,
- New Driving simulator,
- High Performance computing through West Grid









### **Training Future Professionals**











Research Thesis and project based thesis

Research collaborations

Technical & Professional development Courses

Industrial
Placement and
Internships

Alignment
Workshops with
academics,
governmental /
municipal
agencies &
industries

Thank you!