



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

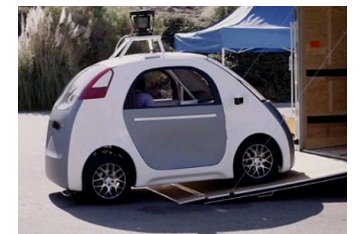
- **Need to be proactive** in responding to/shaping these technologies to harness their potentials:
 - **Reclaimed Inner City space and urban densification**
 - **seamless integration between LRT/transit** and shared mobility and autonomous vehicles (last mile problem)
 - Wealth of new **Data** that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



<http://automotivedigest.com/>



www.calgarysun.com



www.google.com

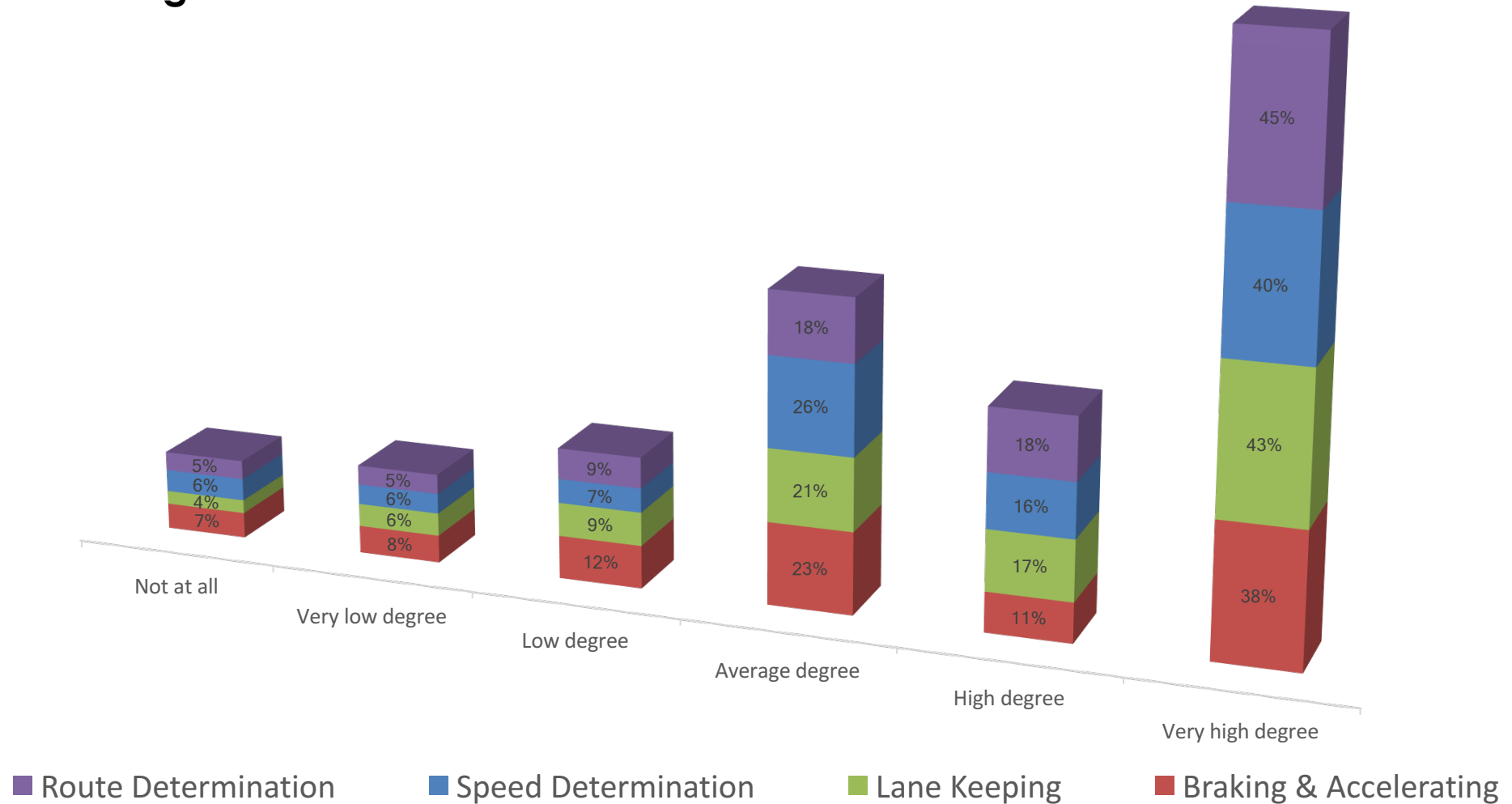
Results of a Recent survey

- 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.)

Respondents' Willingness to cede the Control to the Vehicle in Different Tasks



Need to train a new group of **highly qualified professionals** capable of responding to this **paradigm shift**

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

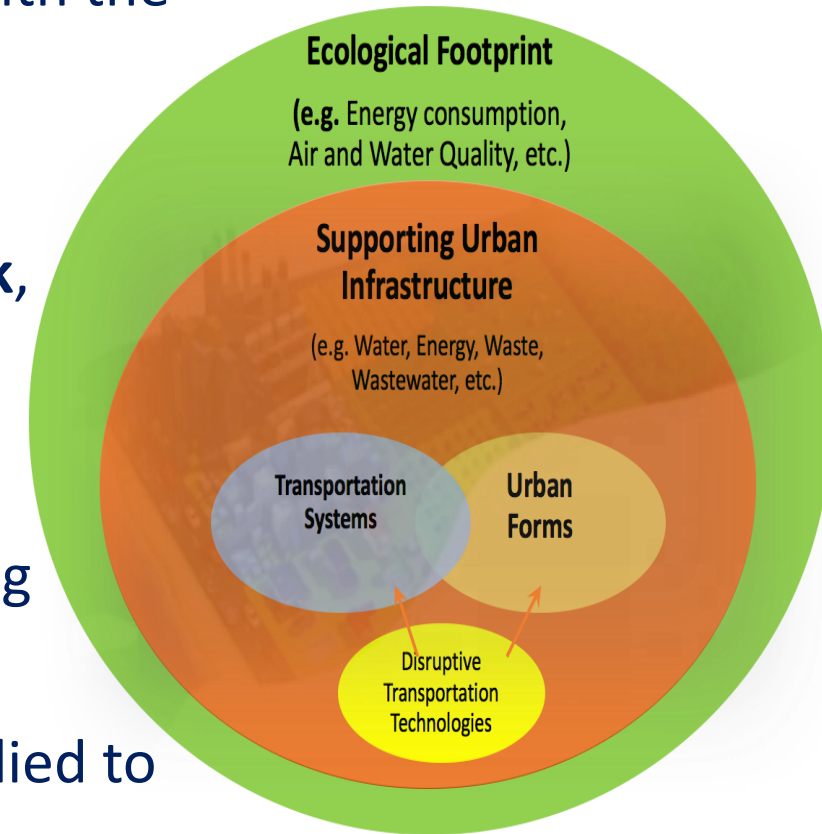
Urban Alliance was **instrumental** in establishing :

- 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



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!