Micromobility at York's Living Lab

Research and Implementation of Sustainable Solutions

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YORK U

Sustainability Key to Our Goals and Decisions

- Net zero emissions by 2040

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- Campus as a Living Lab – UN SDG enabled

- Best University for Commuters

- York's Ranked Top 35 Globally in Impact Rankings for sustainability

- EV strategy on campus and for commuters

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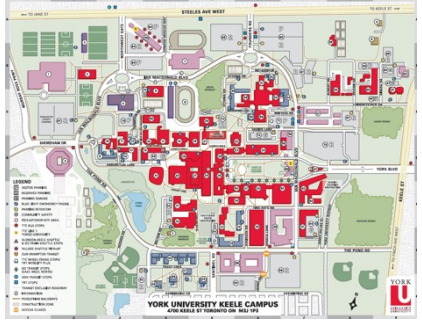
YORK AS A LIVING LAB



1. Addresses Mobility and Sustainability Issues on Campus
2. Offers a Testing/Enhancement) Facility for micromobility
3. Hands on Student Educational Experience & Multi-disciplinary research
4. Catalyzes move to ZERO-Emission Fleet
5. Transforms Nature of Industry/Government relations
6. Facilitates Community Engagement (expanding to Zoo/Exhibition Place)

SARIT DEPLOYMENT BENEFITS

Direct Benefits:

- Reduced Transportation/Delivery Costs
- Facilitated Campus Access/Enhanced Safety
- Reduced Noise/Congestion/Parking/Emissions

Indirect Benefits

- Economic impact/ cost reduction
- Enhanced mobility (integrates with transit)
- Showcases sustainability/innovation/equity

Strategic Benefits

- Opportunities for multi-disciplinary research
- Linked to provincial economic activities
- Community engagement (i.e. Toronto, Markham)

MULTIPLE USE CASES

- Food and catering delivery
- Parcel and equipment delivery
- Parking enforcement
- Emergency response
- Security
- Commuting
- Accessing local services
- Maintenance and groundskeeping
- Vehicle sharing
- Integrating with transit
- Travel between buildings
- Enhanced mobility

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Offer Living Lab to City/MTO to address and gather evidence on the challenges of transitioning to micromobility vehicles:

- Vehicle safety and performance (tipping, braking, crash worthiness)
- Safety standards on battery/charging
- Use concerns: bike lanes, speed differentials, crossings
- Concerns about vehicle silence, pedestrian safety, parking
- Concerns about regulations, licenses, insurance, registration
- New use cases require education and awareness

- And gather evidence on impact of micromobility electric vehicles on:
  - Environment, infrastructure, public transit, equity, economy

Feedback on City report:

Recommends approval of Low Speed Vehicles (LSV) – 4 wheel but not Urban Mobility Vehicles (UMV) – 3 wheel

Urban Mobility Vehicles

Low Speed Vehicles

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Request:

- Either add another trial category to the micromobility pilot (3 wheel UMV)
- Or approve a bylaw which requests LSVs with 3 or 4 wheels be included.

Will allow us to continue to develop safety technologies, such as:

- Pedestrian detection, collision avoidance
- Vehicle sharing, geo-fencing, smart trailer deployment

Gather evidence data on:

- Use concerns: bike lanes, speed differentials, crossings
- Safety Concerns: vehicle silence, pedestrian collisions, parking
- Regulatory Concerns: regulations, licenses, insurance, registration
- Benefits: use cases, congestion, mobility, economy
- Impact on: environment, infrastructure, transit, equity

DRIVING SUSTAINABILITY

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TORONTO

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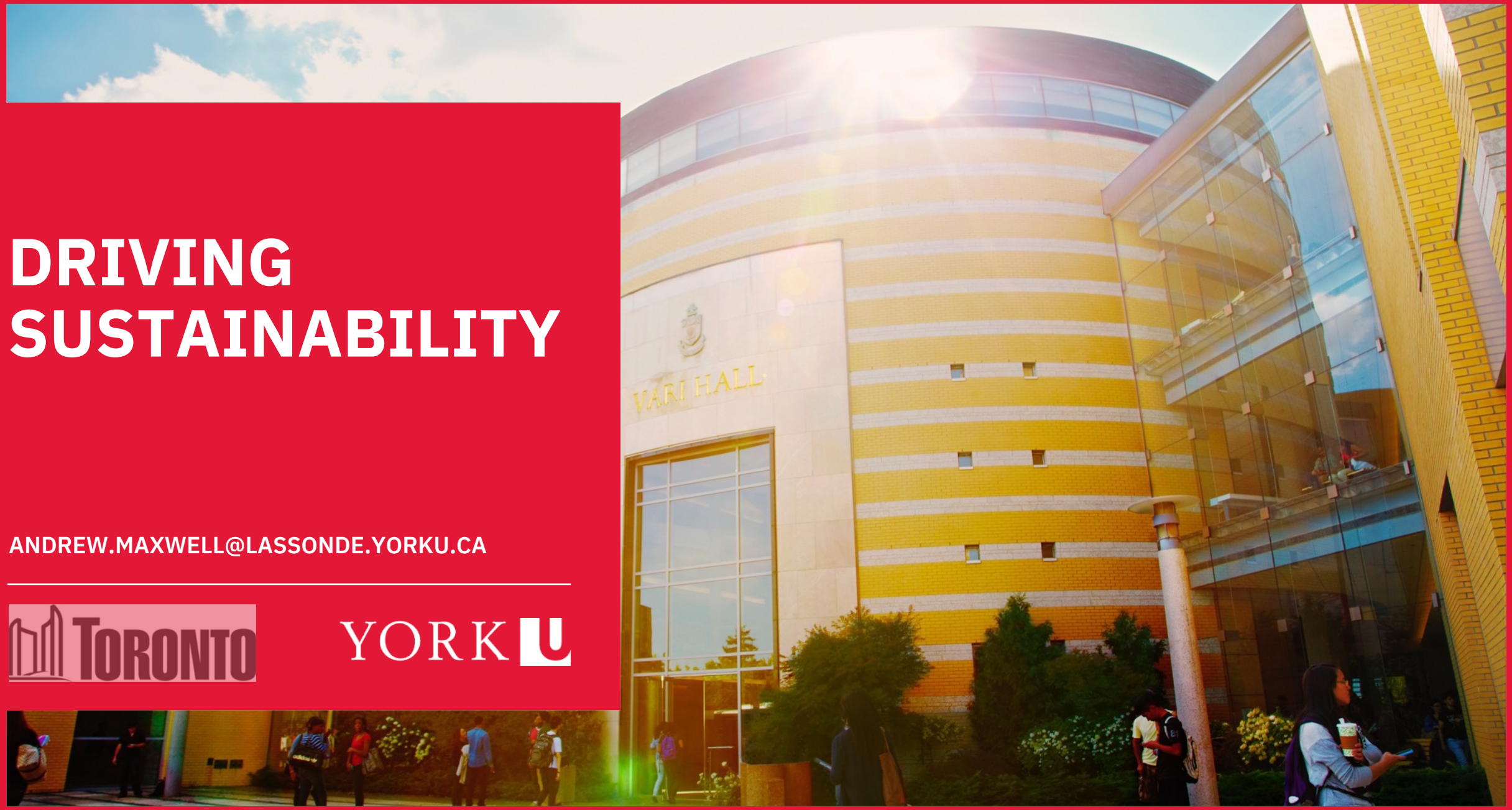

Differences between	LSV	UMV
VIN	Yes	No
Driver’s License	Yes	Yes
Insurance /Registration	Yes	No
License plate	No	No
Odometer/Speedometer/Mirror	Yes	Yes
Headlights /Turn Signal/Parking Brake	Yes	Yes
Seat Belt	Yes	No
Windshield / Safety triangle	Yes	Yes
Wipers	No	No
Defogger	Yes	No
Crash Test	No	No
Crash Helmet/Peddles	No	No
Driving location	With traffic	Side of road
Wheels	4	3
Max Speed	32 km/hr	32 km/hr