

Calgary



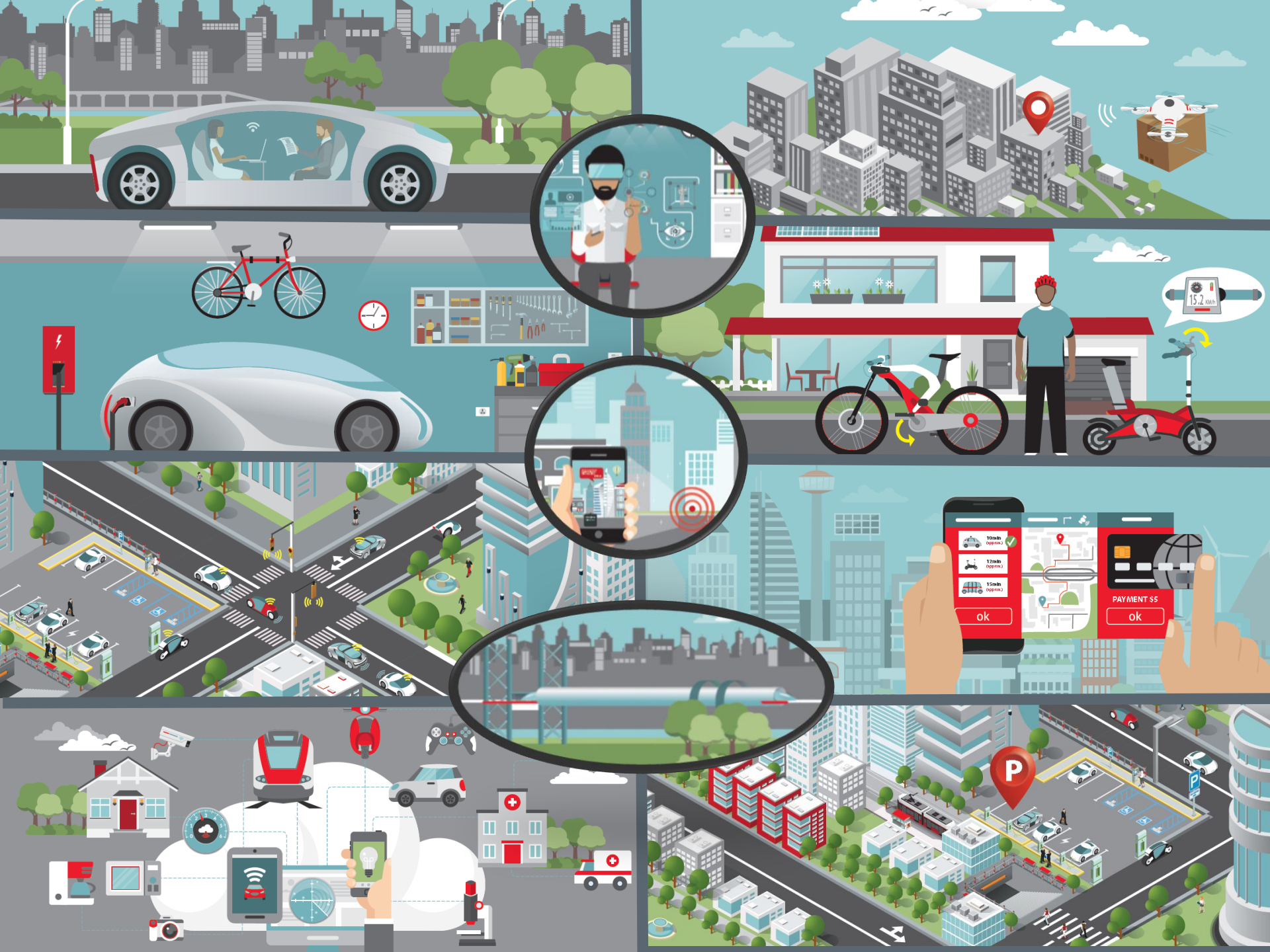
May 29, 2019

Calgary's Autonomous Shuttle Pilot





Background





Future of Transportation in Calgary



Technologies Studied

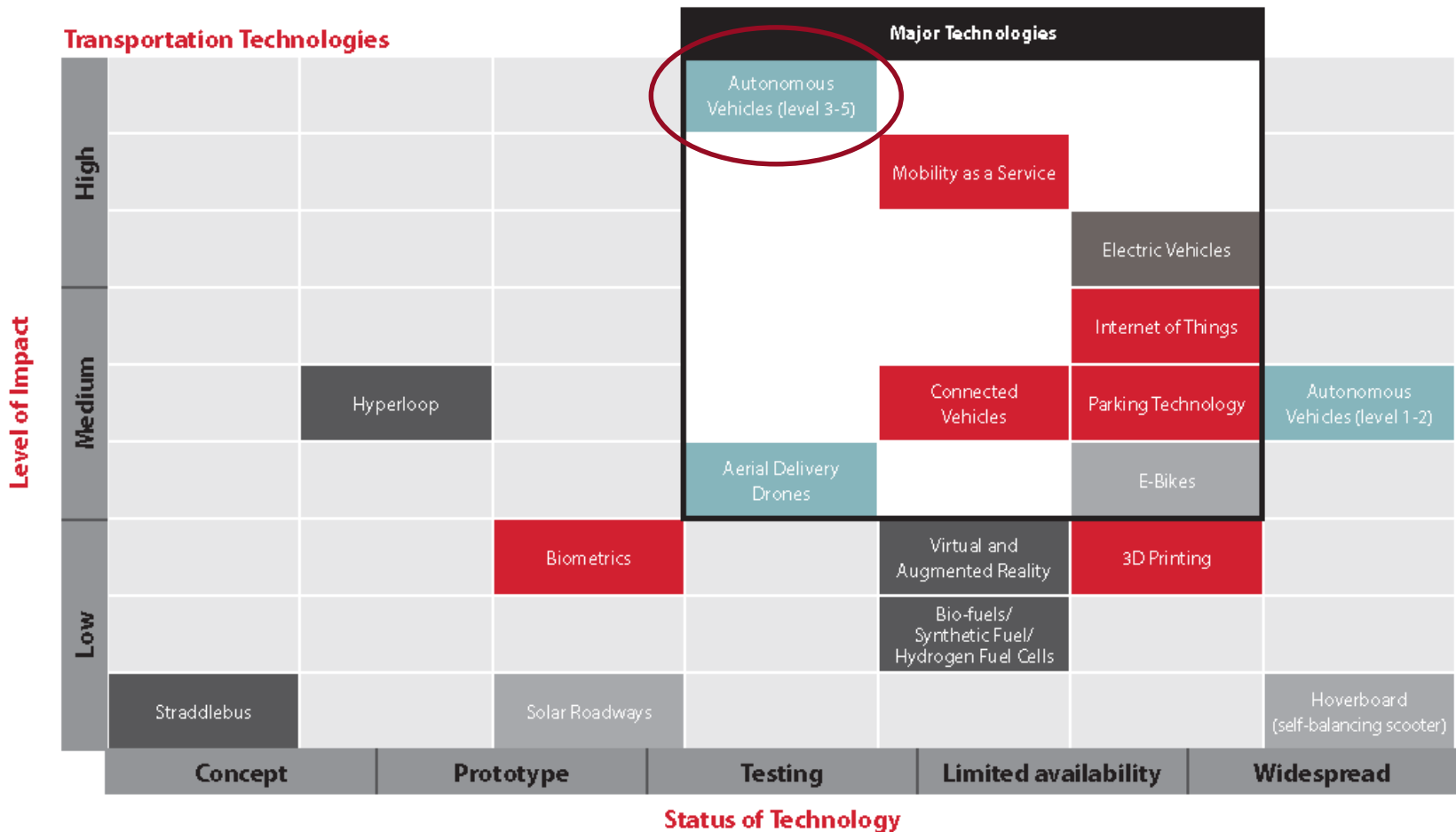
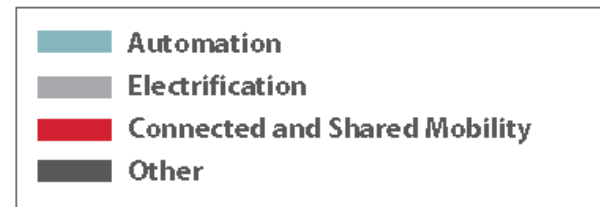


Figure 1 - Matrix of transportation technologies



“Hands on” demonstration



Singapore Experience

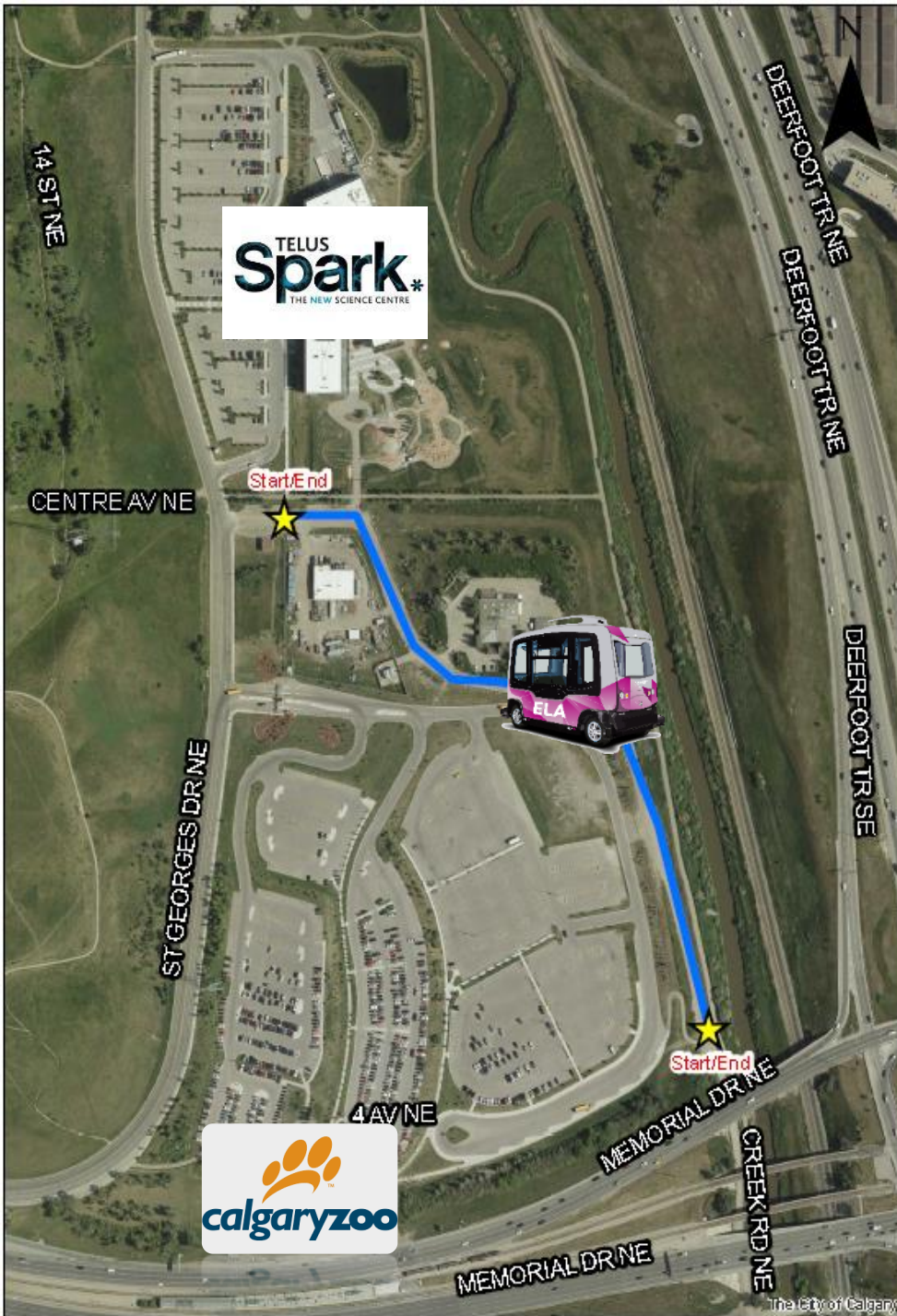


Las Vegas Experience





“Endorse the City of Calgary’s participation in field trials of a low-speed autonomous vehicle pilot project...”



Why this route?

- Worked with the Province
- City owns the land
- Solves a last mile problem, without detracting from walking and cycling
- Promotes our partners
- Science Centre exhibit
- Operated during September 2018



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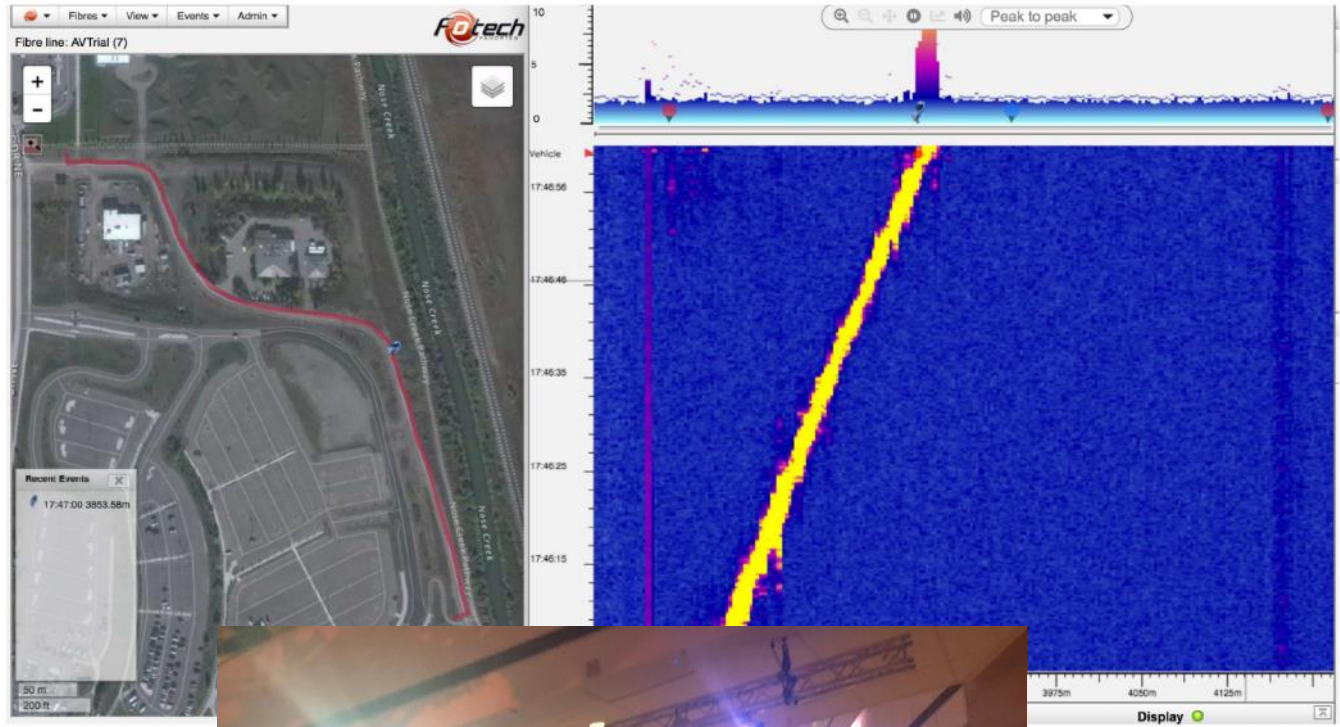




Fibre as a Sensor – Screen Capture



UNIVERSITY OF CALGARY



Site set up



Media!



f t e
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Kent Hehr, Liberal MP for Calgary Centre, boards Electronic Autonomous, known as ELA. It's a self-driving shuttle providing passengers between 1111 & 850th and their stops. On for most of September as part of a pilot.



Posted: Wed 5:57 AM Sep 05 2018
[f](#) [t](#) [in](#) [g](#) [e](#)
 NBC - A Canadian city is introducing a driverless shuttle. It's a pilot project that uses an electric mini-bus to carry passengers on a short ride to the city zoo.

The National for September 03, 2018

[f](#) [t](#) [v](#) [in](#) [e](#)

Posted: Sep 03, 2018 10:00 PM ET | Last Updated: September 4



Welcome to The National, the flagship nightly newscast of CBC News 46:34

 **Jenny Howe** 
 @CBCJenny 

Okay, so a @RideWithEla might not be at breakneck speed... but when you don't have a driver, 12 km/h feels just about right.

5:41 PM - Sep 7, 2018

 12  See Jenny Howe's other Tweets



Open to the public!!



Daily shuttle service between the Calgary Zoo and TELUS Spark!

- Tuesday - Sunday 10AM to 4PM
- Walk on or book at RIDEWITHELA.CA





City of Calgary's Goals with the pilot

1. Introduce the technology to the public
2. Bring more people to the Zoo and Science Centre
3. Help with future planning efforts
4. Brand the city
5. **Understanding AV legislation with the Provincial and Federal Government - case study to deal with legal hurdles**
6. **University research + showcase Alberta's talent**



Key lessons learned

- Transit vehicles will very likely still need an operator in the near future
- Technology is here ... almost
- Any long term pilots will have to solve a problem
- AV's will likely come in a variety of shapes and sizes to solve different problems
- You NEED partners if you are going to do a trial
- Give the vehicle a name



Thanks!



BACK of DECK – City of Calgary



What are your next steps?

Economic Angle

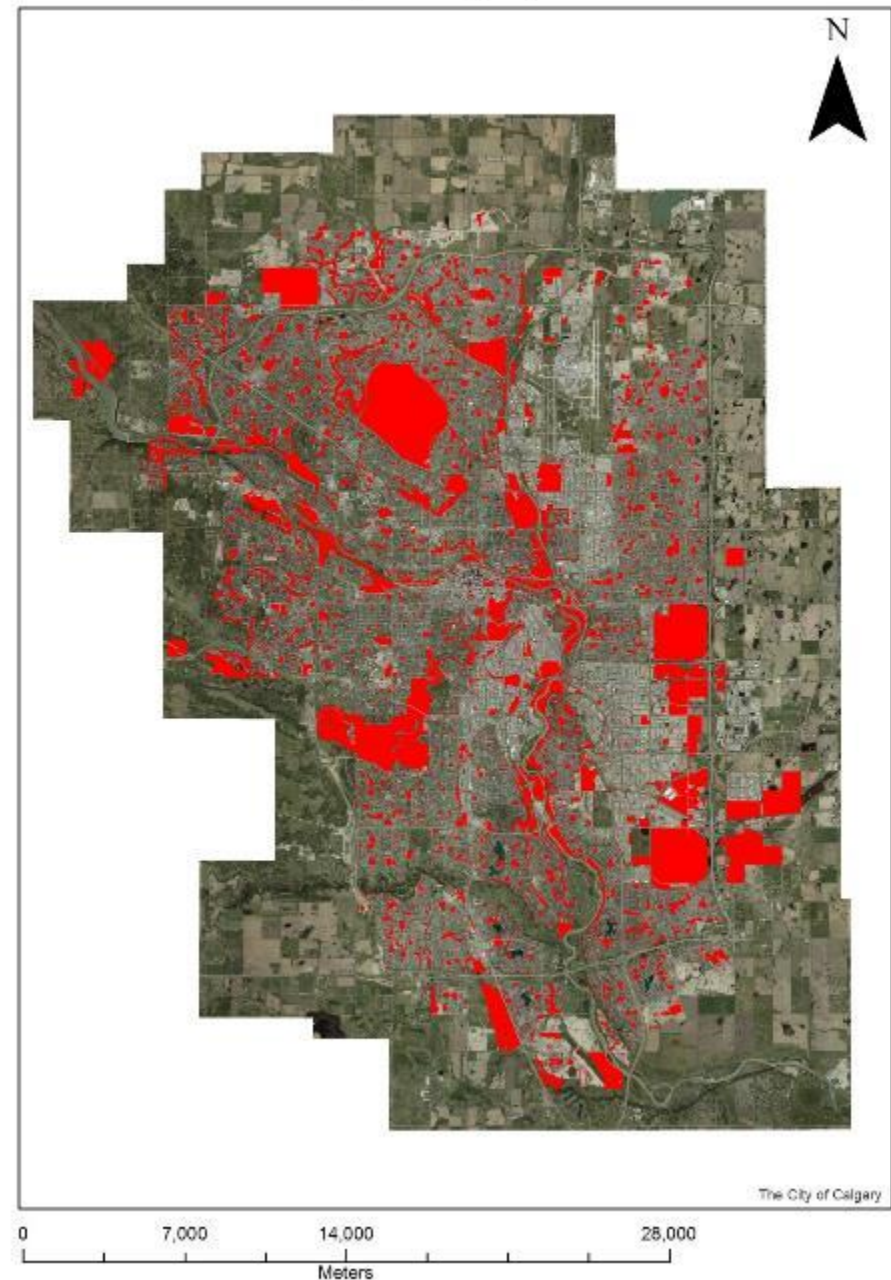


How do we support the tech industry in Calgary?



What do they need? - Industry Wish List

- a) Roadways & City personnel
- b) Parkades & personnel supporting the parkade
- c) Traffic lights/signals staff and equipment
- d) Parking lots
- e) Public Parks (Open Space tests wireless communication systems)
- f) Fleet vehicles maintenance personnel & operators & equipment
- g) Vehicle operators & maintenance staff
- h) Police & Fire Dept personnel & training facilities





Autonomous Systems Testing



- MANDATORY FORMS
- + COMMONLY USED FORMS
- + OTHER INFORMATION
- + MAPS OF CALGARY PARKS

Mandatory Forms

The following documentation must be on file with The City of Calgary or the Film, Television & Creative Industries Commission before any permits will be issued.

Please complete and submit the following forms.

1. Film Production Information Form

This form provides basic information about the production and the production company; a brief outline of all planned activities; the initial shooting schedule; and approximate number of cast and crew members.

2. Acceptance of Terms and Conditions Form

This form must be downloaded and can be emailed to film@calgaryeconomicdevelopment.com or faxed separately to (403) 221-7828

a) A location agreement (Acceptance of Terms and Conditions) with the City of Calgary must be signed for productions of 10 days or less. For productions of more than 10 days, a long form Location Agreement must be signed.





Shepard Landfill - UAV

Closest thing, drone help Calgary's water tech footprint reputation

Science Centre / Zoo - Autonomous Vehicles

Science Centre / Zoo - FaaS

Sky's the limit as Calgary opens testing area for drones and new technologies

IN-FLIGHT Data

AERIUM ANALYTIC

SAIT

Devonian Gardens - IoT (Smart Agriculture)

TEKTELIC communications

The City's award-winning Internet of Things (IoT) network

Municipal Excellence Award

Adopting LoRaWAN

Manchester Building E - LoRaWAN

Point Trotter - UAV

VIZWORX Visibly Better Solutions

Calgary becomes living lab for augmented reality

Calgary Film Centre - Augmented Reality

7th Avenue - LiDAR

takemetuit

Furniture Warehouse - Indoor GPS

Shouldice Aquatic Centre - IoT (Water)

What benefits have you experienced from working with us?

“Having the Living Lab as a partner allowed our product to mature in a realistic environment, demonstrated to our future customers that we were beyond the prototype stage and allowed our customers to better visualize how the final installation would look in their environment.

We were able to access the setup during the day – something we would not have been able to do in an operating store, and we were able to leave the setup in place over a longer duration. We really enjoyed the City’s active role in helping us and were able to take our learnings from our experimentation and further evolve and enhance our product”.

