



Preparing for Smart City Infrastructure

@ ITS Technology Workshop

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Information Technology @ The City of Calgary



- Preparing for now – and the future
- Smart mobility
- Digital infrastructure is fundamental
- Role of a municipality – City of Calgary’s approach



Calgary is a Smart City

What is a smart city?

A smart city uses **technology** and **information** to:

- enhance performance/quality of City operations and services
- reduce costs/resource consumption
- engage more effectively and actively with its citizens
- improve quality of life
- respond to real-time challenges
- increase competitiveness now and into the future

We are already a smart city

- information age is upon us and the City has been preparing for this for many years
- built out our digital infrastructure and continue to do so
- delivered many smart city initiatives, building our smart city story

Benefits

- collaboration
- marketing
- funding
- opportunities



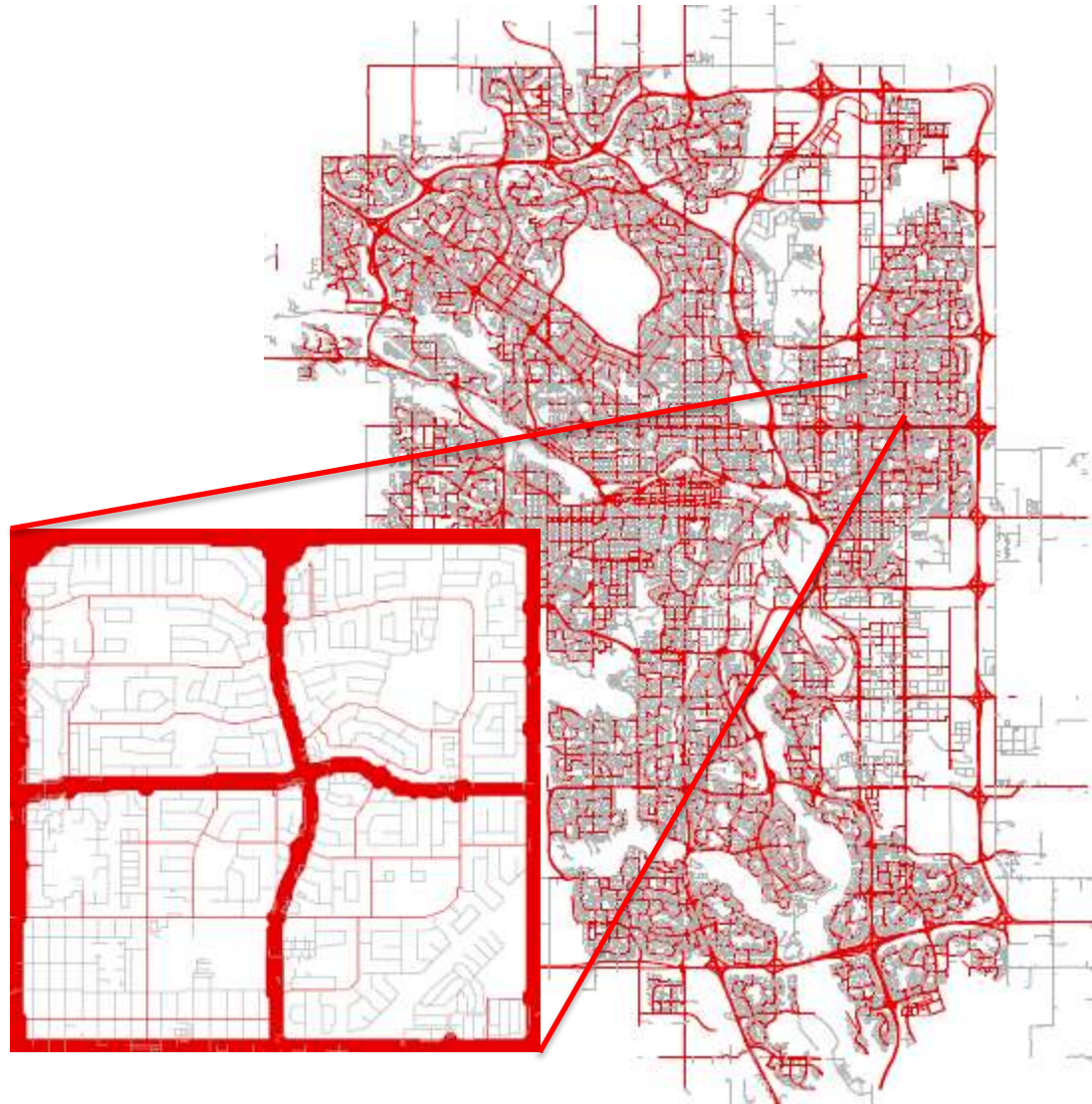
Planning the Infrastructure – last 17 years

Fibre infrastructure strategy ...

- 400+ Km of municipally-owned fibre
- Municipal MPLS network (Calgary City Net)
- World class data centre
- 11 wireless towers
- Public WiFi (through Shaw)
- 450 connected remote sites/offices
- 3000 plus connected vehicles (buses, fleet vehicles, snow plows, etc)
- 700 connected traffic controllers
- 3000 security and safety camera's (LRT, pathways, buildings, intersections)
- 1000's of sensors and devices
- 100 Resilient Cities member

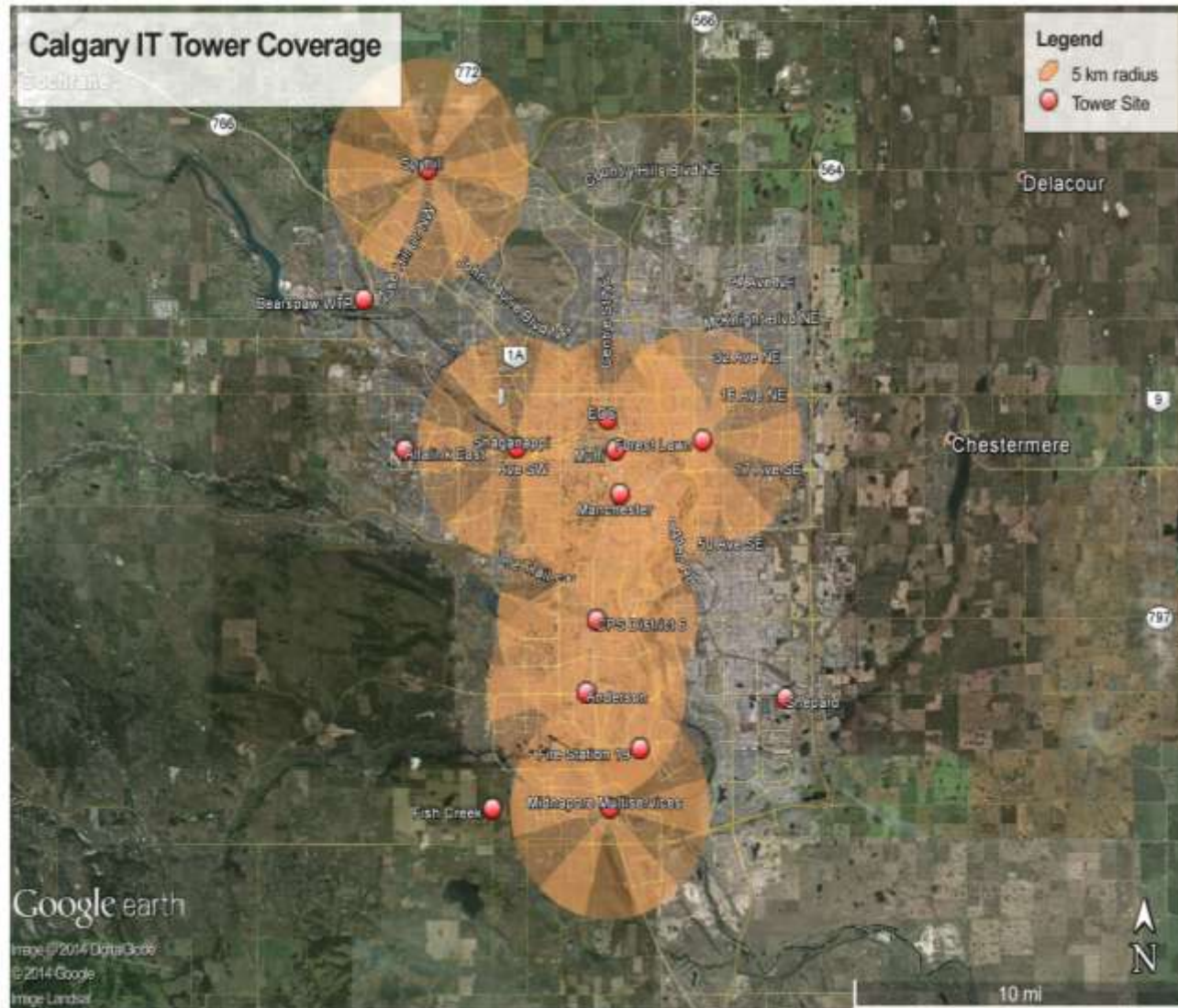


Pervasive Connectivity Requires Foundational Infrastructure



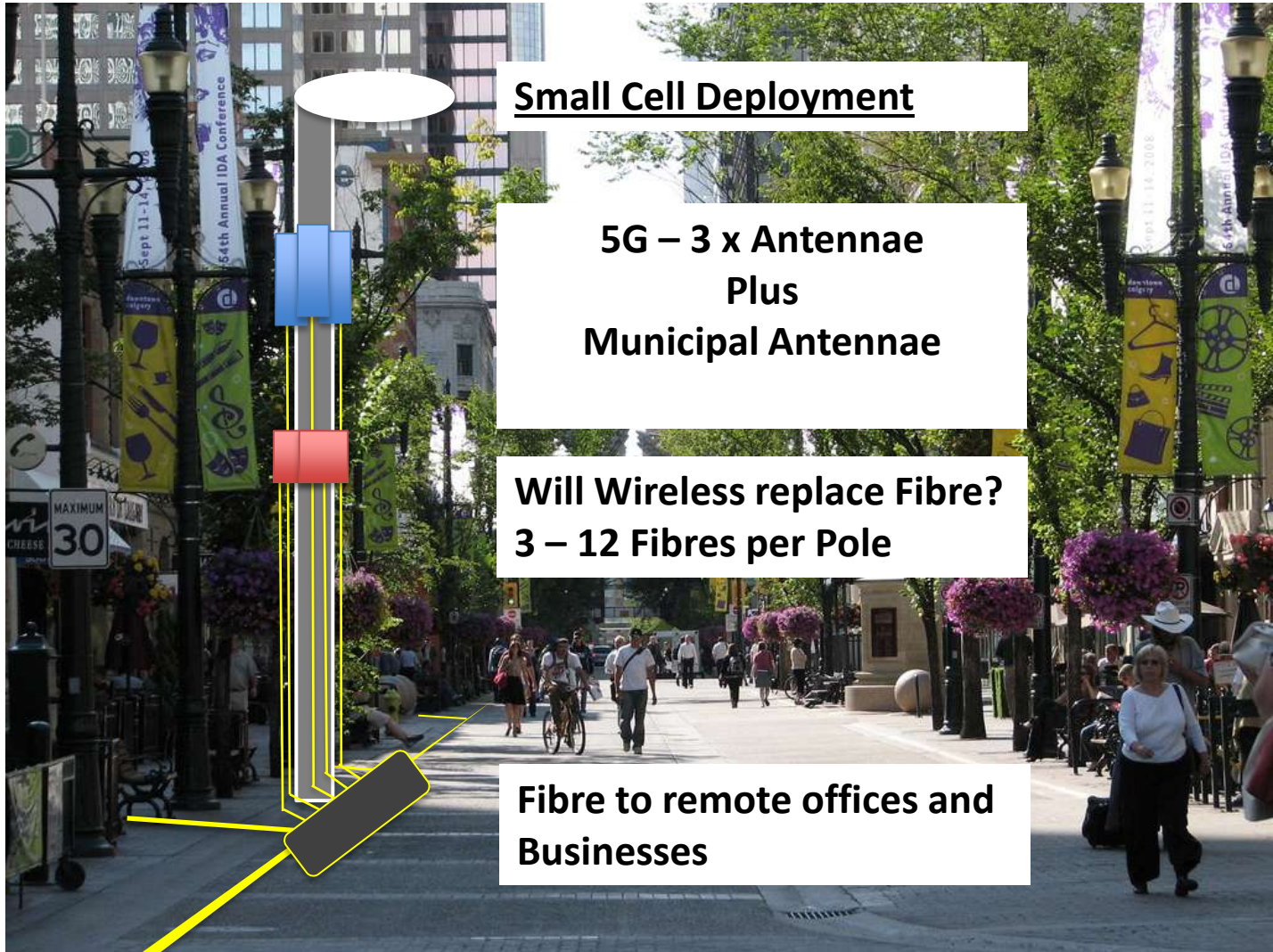


Pervasive Connectivity - Wireless





5G: Wireless Densification



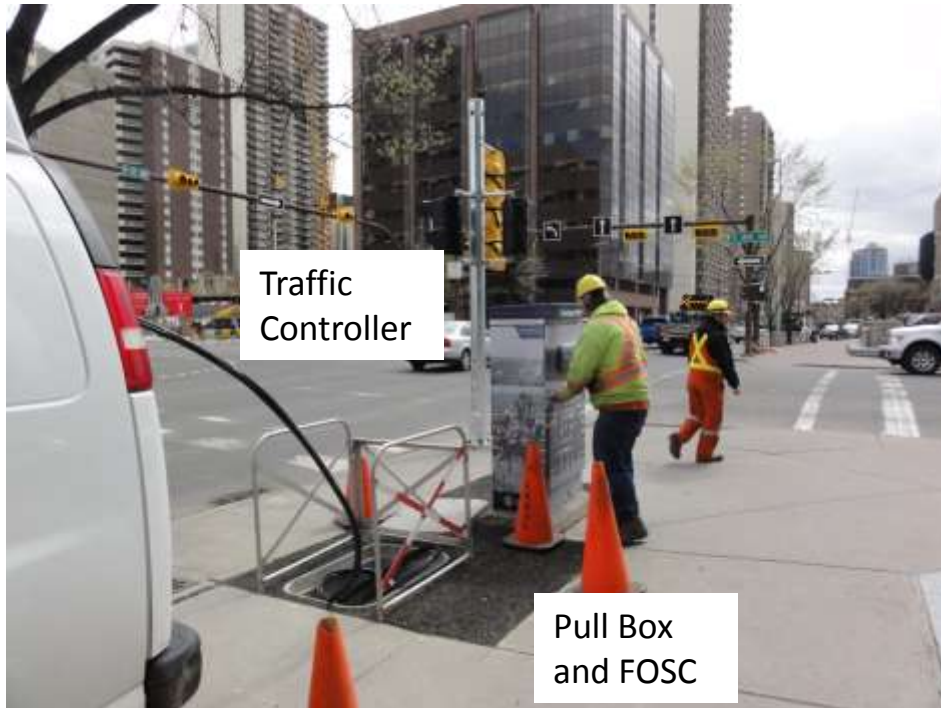
Small Cell Deployment

5G – 3 x Antennae
Plus
Municipal Antennae

Will Wireless replace Fibre?
3 – 12 Fibres per Pole

Fibre to remote offices and
Businesses

Municipal Services – SMART, IOT, ITS



Internet of Things Demands



Telematics / Fleet Management



Transportation and Traffic Management



Water Quality Monitoring



Air Quality / Noise / Heat Island / Green Building *

Smart City Projects – Tree Watering





Smart City Projects – Civic Innovation

Civic Innovation NYC [beta]
The City of Calgary's innovation platform.
Your ideas can make our city even better!

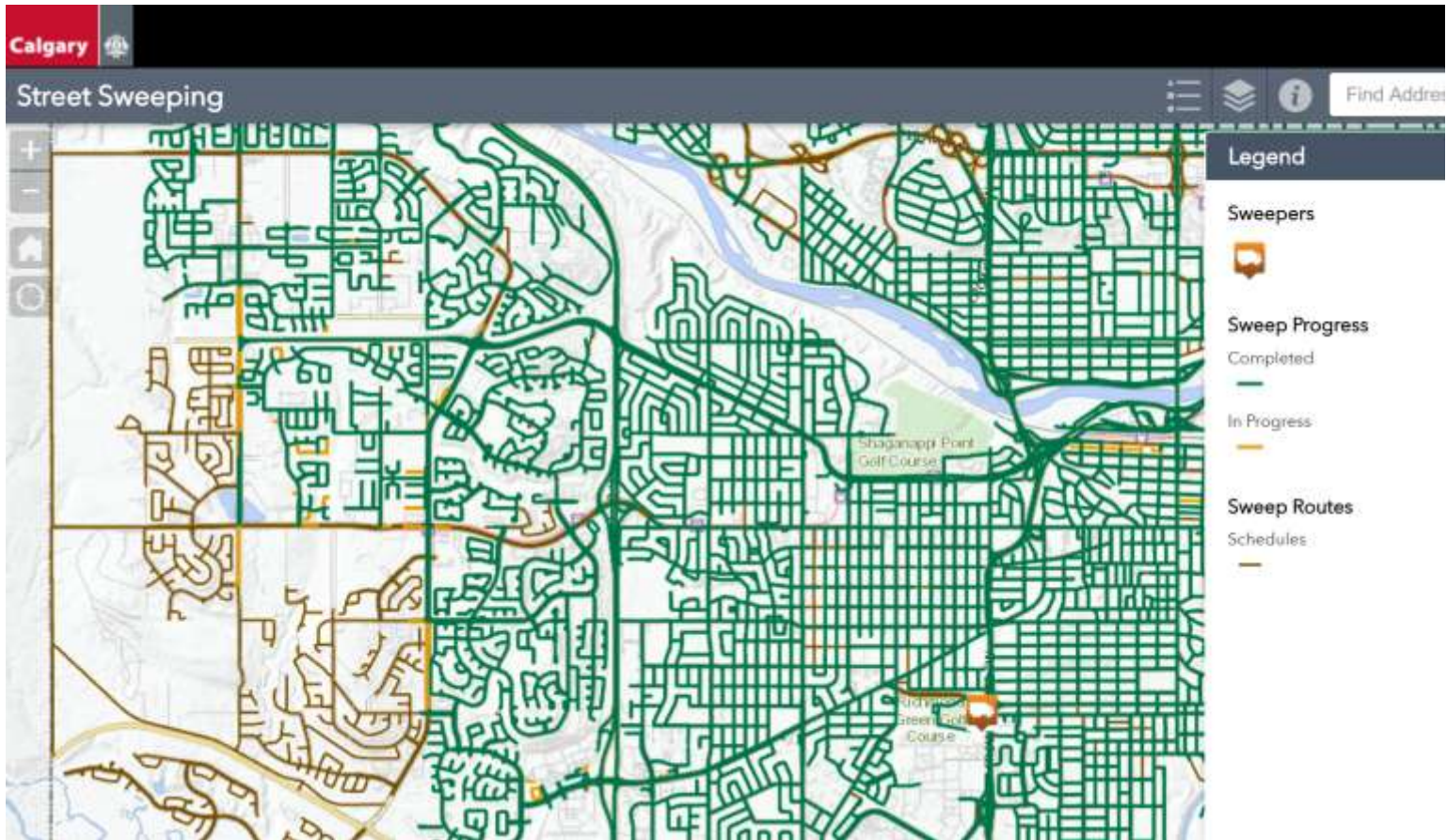
[View Ideas](#) [Submit New Idea](#)

HOME CHALLENGES IDEAS ABOUT CONTACT

WELCOME!

The image shows a website overlay on a photograph of a meeting room. The room has a white wall with colorful sticky notes, a blue and green ottoman, and a door in the background. The website overlay is semi-transparent and features a dark background with white text and red buttons. The text includes the title 'Civic Innovation NYC [beta]', a subtitle 'The City of Calgary's innovation platform. Your ideas can make our city even better!', two buttons labeled 'View Ideas' and 'Submit New Idea', a navigation menu with 'HOME', 'CHALLENGES', 'IDEAS', 'ABOUT', and 'CONTACT', and a large 'WELCOME!' message at the bottom.

Smart City Project – Street Sweeping



Smart City Projects – Street Lights



Smart City Projects – Pet Licensing



Opportunities

Smart Cities Challenge 2017

On March 22, the Federal government announced (2017 budget) their commitment to smart cities. The Impact Canada Fund will include two streams, one of which is dedicated to smart cities (other is clean technology). \$300M over 11 years

Smart technologies can help us live better lives and prepare for the challenges ahead. By finding the most innovative and creative ways to put them to work for our towns and cities, we can reduce traffic, create safer neighbourhoods, breathe cleaner air, drink cleaner water, and grow our communities more sustainably. To unleash the most creative minds and encourage cities to adopt new and innovative approaches to city-building, the Government will launch a Smart Cities Challenge, where local governments will be invited to work with citizens, businesses and civil society to submit their best ideas as part of a nationwide, merit-based competition.

Smart City Alliance

The City of Calgary will be joining the Smart City Alliance Board along with the City of Edmonton.

Living Labs

Conceptual stage currently.

Test

Finding value and investing in infrastructure



Three Messages

1. The City of Calgary is ready
2. Advancements in technology
3. Investment in infrastructure



Questions?