Smart Cities: A Framework for Unlocking Growth & Prosperity

Adam Beck, Executive Director

@adambeckurban
@smartcitiesanz

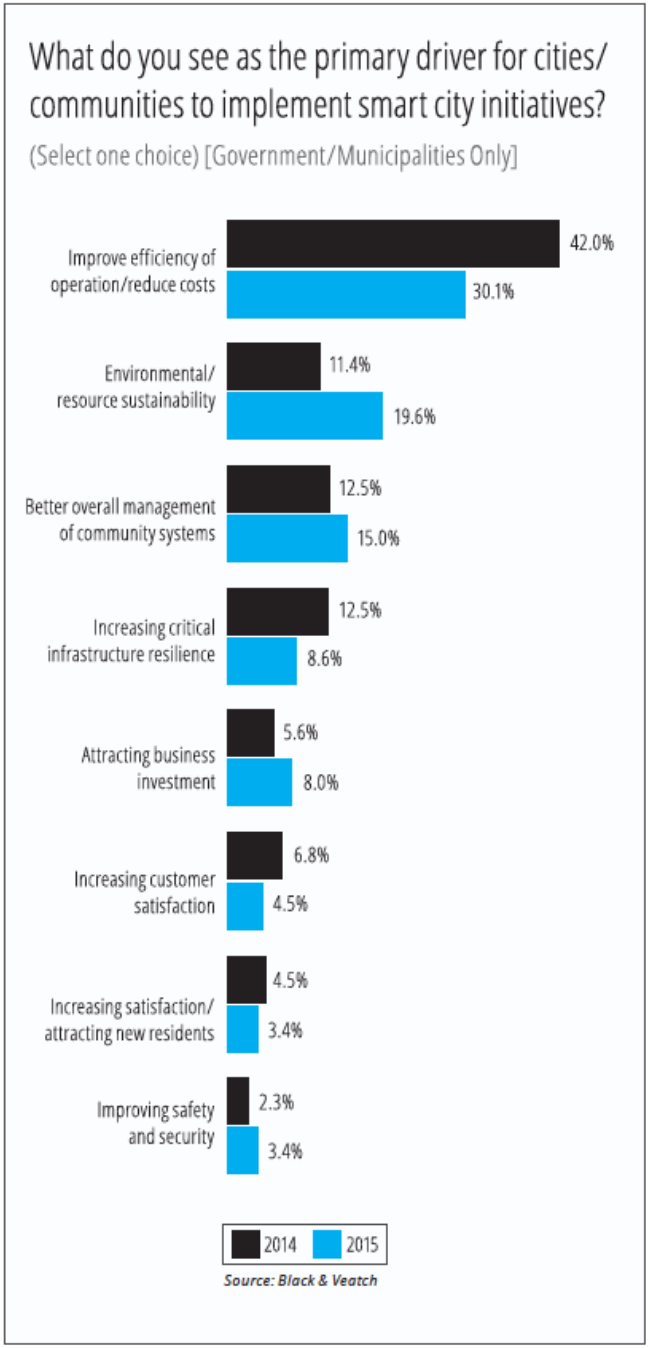
Our Vision

We envision a world where digital technology, data, and intelligent design have been harnessed to create smart, sustainable cities with **high-quality living** and **high-quality jobs.**

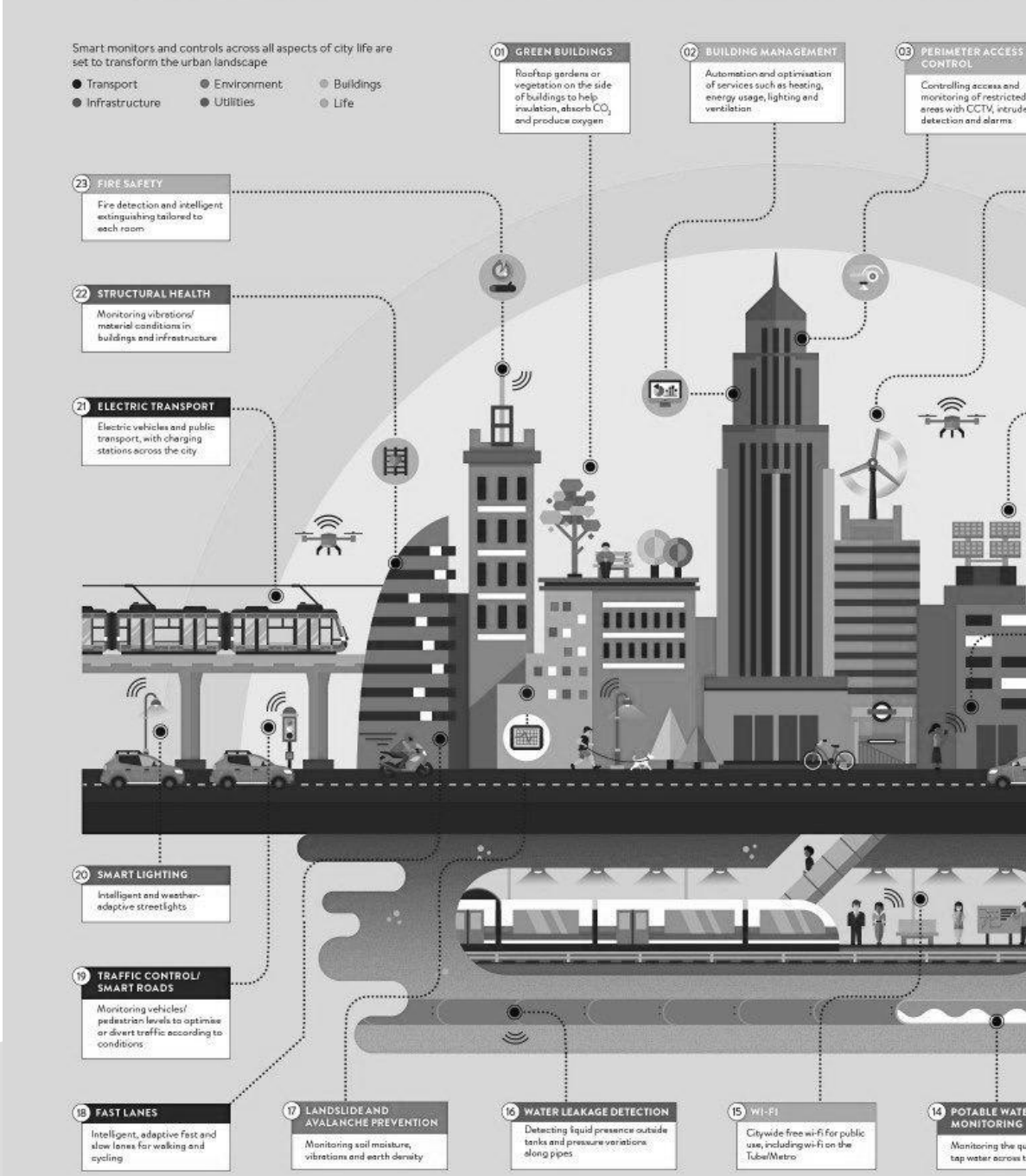
We promote cities that embody our three core values – liveability, workability, & sustainability

The world is **not waiting**…

What do you see as the primary driver for cities to implement smart cities initiatives?



The smart ‘infrastructure’ lens



Planes, Trains and Automobiles

Image: Denis Carrascosa

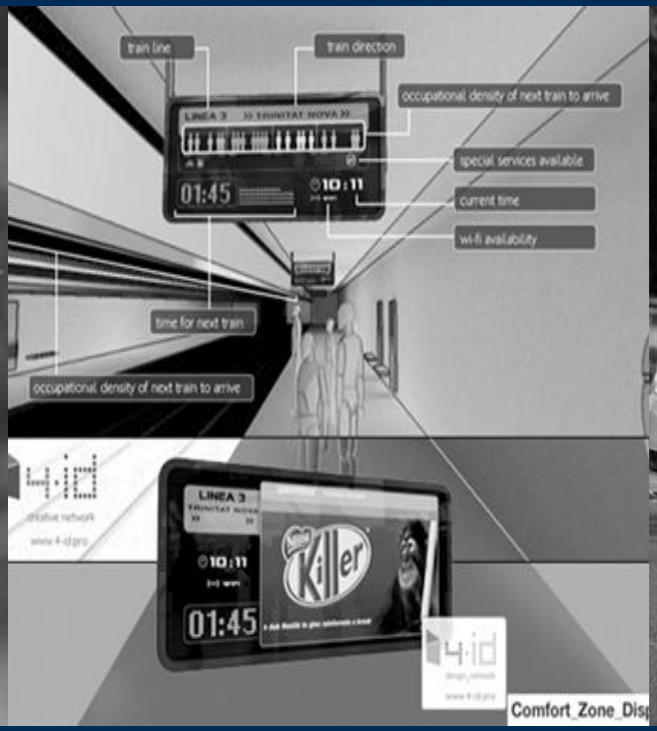


Image: Gizmodo Australia

Image: Wikipedia

The smart ‘people’ lens

A smart city is one that…

…**dramatically increases the pace** at which it improves its sustainability and resilience,

…by fundamentally improving how it **engages society**, how it applies **collaborative leadership** methods, how it **works across disciplines and city systems**, and how it use**s data, intelligent design and integrated technologies**,

…in order to **transform services and quality of life** to those in and involved with the city (residents, businesses, visitors).

Regions cannot compete without **smart infrastructure**

Regions account for a third of Australia's workforce

Accounts for approx. 40% of national economic output

Highest output per worker in a third of industries

Realising the potential of our regions is critical

Smart infrastructure is the foundation for future success, better paying jobs, & a new era of prosperity

smart city expo
WORLD CONGRESS
Fira Barcelona
CITIES FOR CITIZENS
#SCEWC16

Haas Alert offers a vehicle-to-vehicle, cloud-based communication platform to alert vehicles of an approaching first responder unit. With a proprietary method of determining whether or not a particular vehicle is Code 1 and at what speed it is traveling, Haas Alert helps increase response time, minimize collateral collisions, and save lives. Test programs are currently live in Chicago and Palo Alto.

RESPONDERS COMPANY SIGN UP

HAAS ALERT

In-road broadcasting service.

Keep personnel safe in the field. Broadcast incident locations, start sending motorist alerts today.

SIGN UP

Available to emergency services, utility fleets, construction fleets, tow fleets, highway services, city vehicles and others.

Smart infrastructure unlocks prosperity for our cities and towns

// 13,000 jobs for every $1B invested in federal highway & transit infrastructure

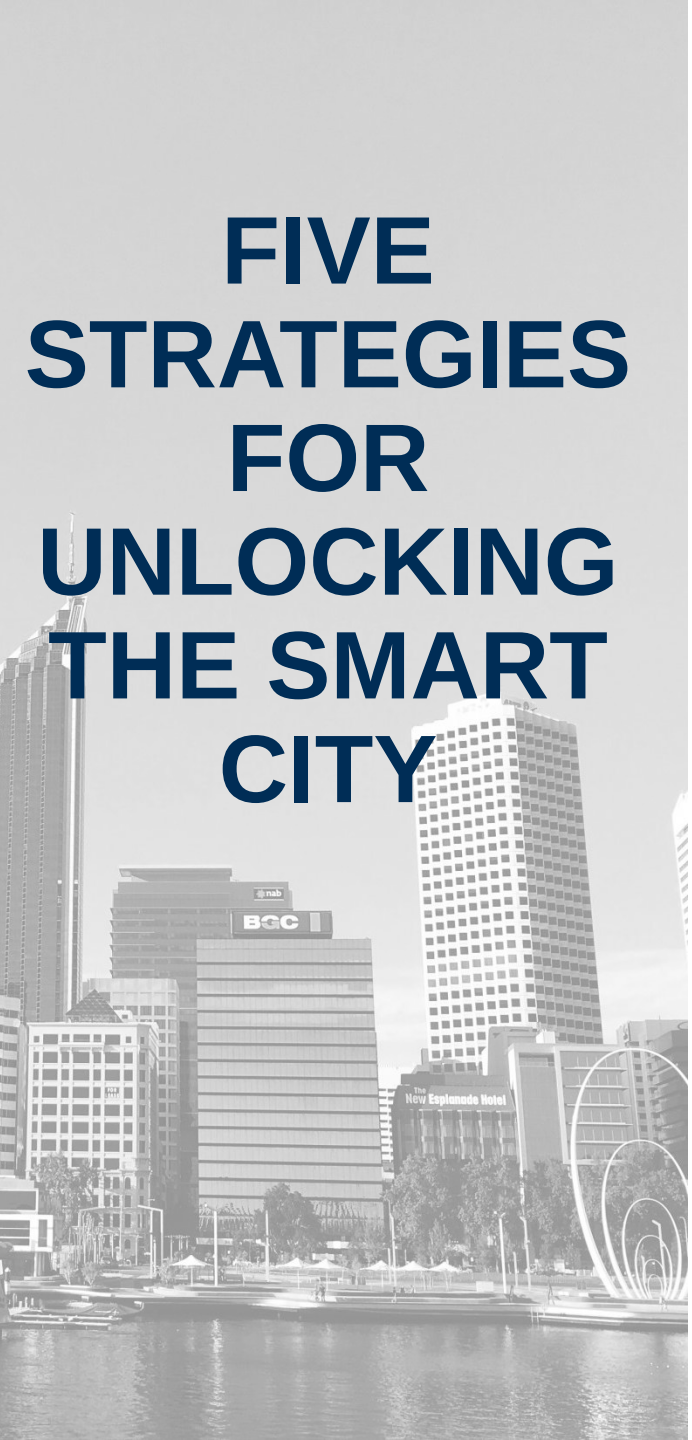
// 12,000 job-years of employment for every $1B investment in wireless infrastructure

// Nearly 50,000 jobs for smart grids funded through American Recovery Act

// 10-15 jobs per $1M investment in alternative water supply projects

// 5-20 jobs per $1M investment in stormwater management

FIVE STRATEGIES FOR UNLOCKING THE SMART CITY



1. Develop the vision & capacity to innovate
2. Aggregate demand
3. Rigorous sustainability metrics
4. Embrace new financial models
5. Urban transformation pilot projects

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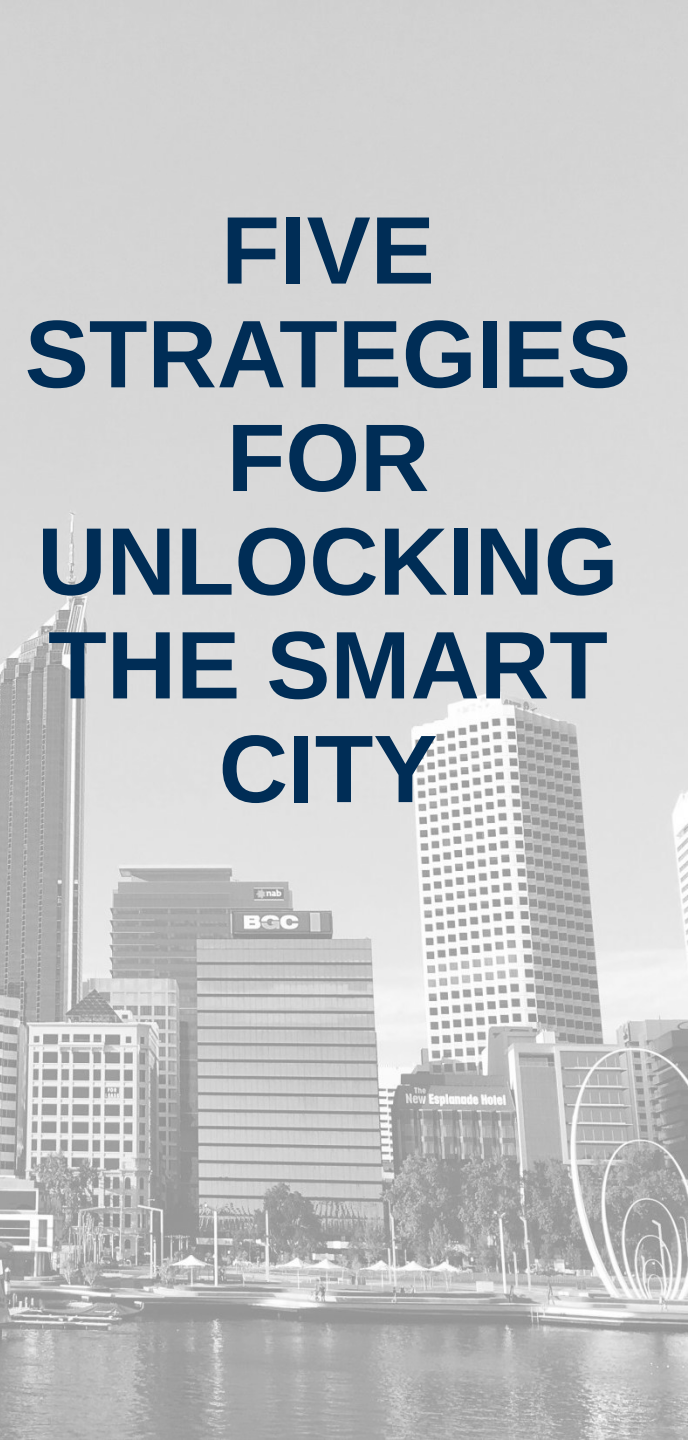

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Develop the **VISION**, and the capacity

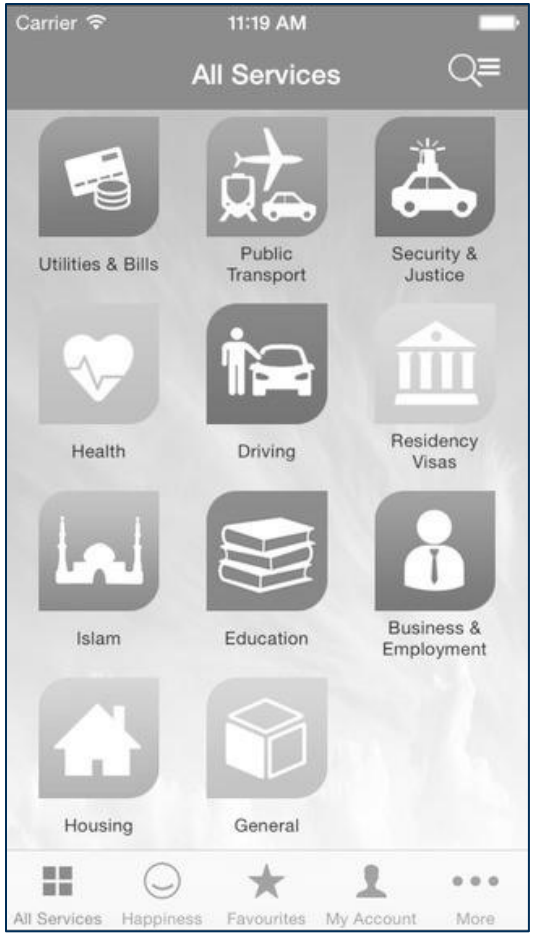
“We cannot allow regulation to catch up with innovation.”

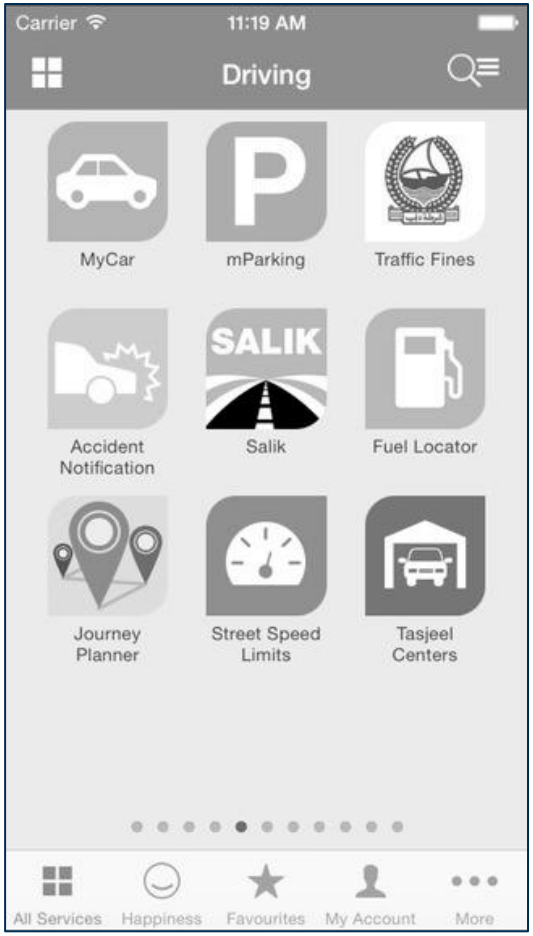
Debra Lam
Chief of Innovation & Performance
City of Pittsburgh

Happier for less in **Dubai**

DubaiNow smartphone app

$1 billion savings





…and on building capacity:

think big… but start small

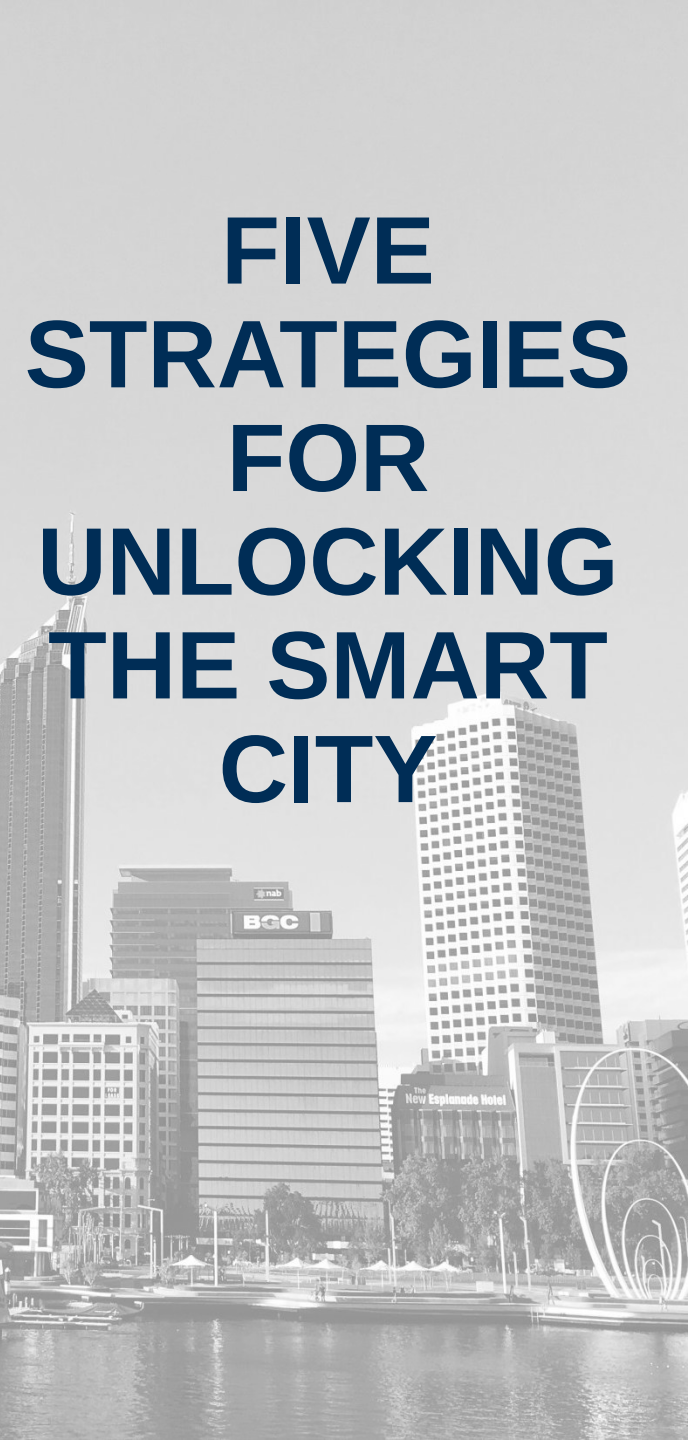
work together… but move fast

emphasise synergies & interdependencies

borrow from the past

harvest good ideas

FIVE STRATEGIES FOR UNLOCKING THE SMART CITY



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This is an idea whose
time has come

It is the beginning of
digital government and
it's only going to accelerate

Megan Smith
Chief Technology Officer
White House OSTP

The market **by the numbers**

$1.13 trillion by 2019

- Markets & Market
- 20.5% CAGR (compound annual growth rate)

$1.38 trillion by 2020

- Mordor Intelligence
- 20% CAGR overall, 38% CAGR Asia-Pacific

$1.56 trillion by 2020

- Frost & Sullivan

$2.1 trillion by 2020

- The Climate Group

The benefits of demand aggregation

Collaborating leads to greater innovation

Scaling leads to inclusion

Reducing duplication of effort

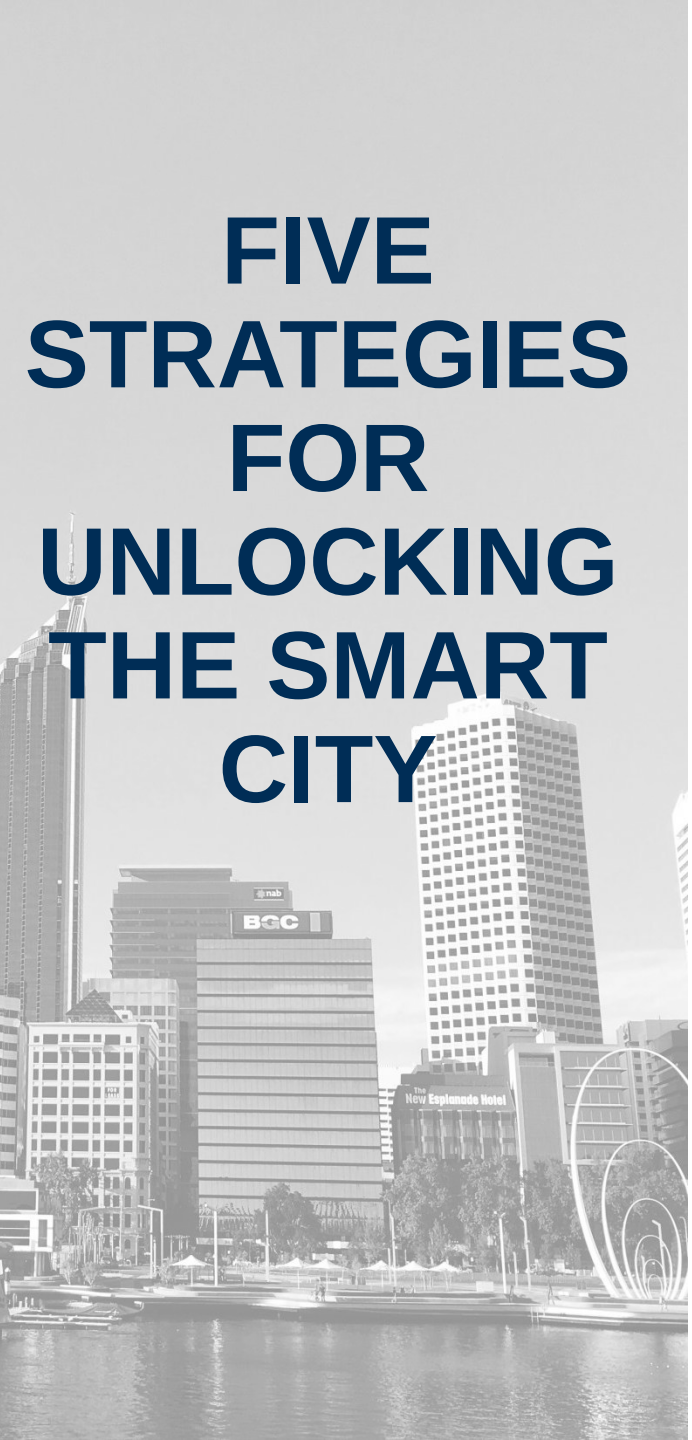
Reducing costs through infrastructure sharing

Increasing economies of scale

Squeezing maximum value from assets

Opportunities for collaborative purchasing

FIVE STRATEGIES FOR UNLOCKING THE SMART CITY



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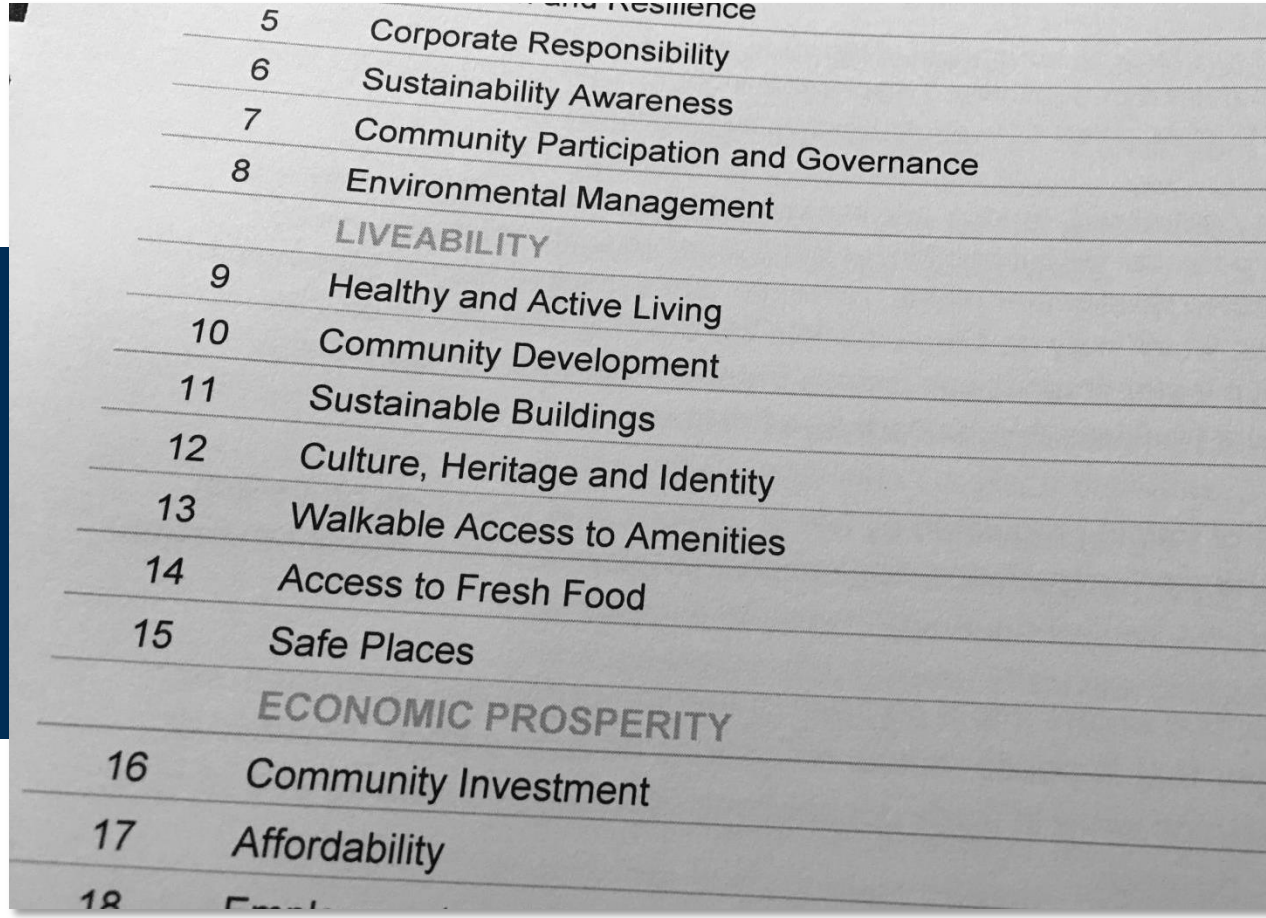
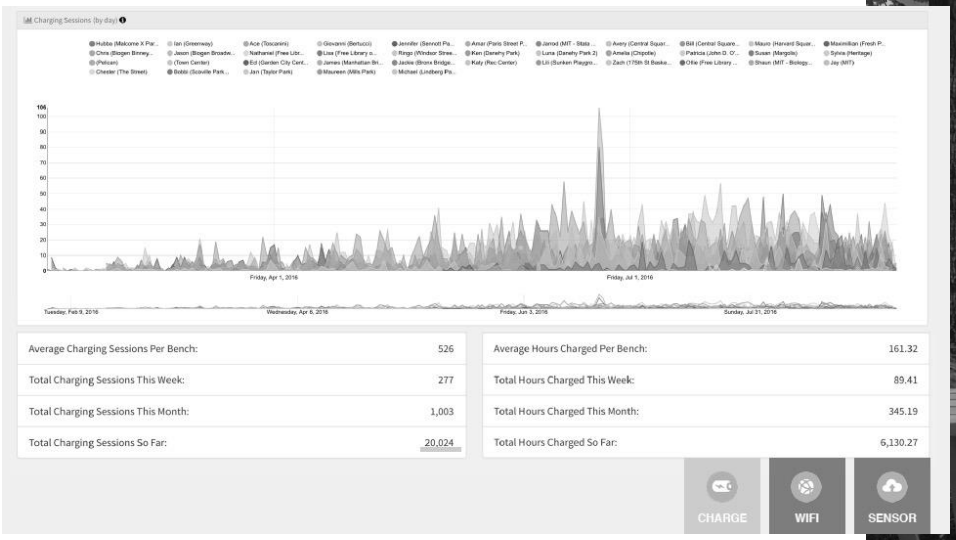
Unlock the limitations of one-dimensional metrics

Metrics that matter…



Are you ‘situationally aware’?

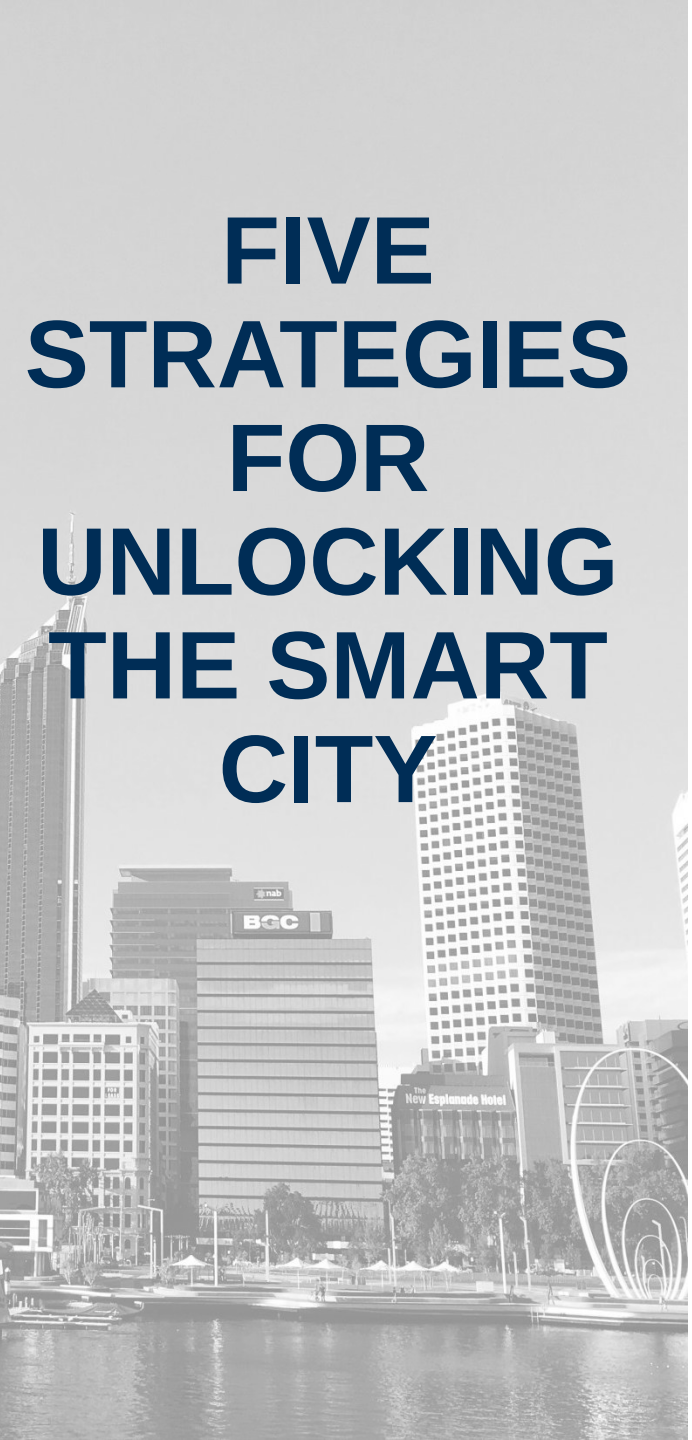
- Collect
  - Crunch
    - Communicate
- Sensors
  - Analytics
    - User Interface



Average Charging Sessions Per Bench:	526	Average Hours Charged Per Bench:	161.32
Total Charging Sessions This Week:	277	Total Hours Charged This Week:	89.41
Total Charging Sessions This Month:	1,003	Total Hours Charged This Month:	345.19
Total Charging Sessions So Far:	20,024	Total Hours Charged So Far:	6,130.27

CHARGE WIFI SENSOR

FIVE STRATEGIES FOR UNLOCKING THE SMART CITY



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Those of us living in cities need to make sure they are smart cities.

Nothing else makes sense

And nothing else is such a world-wide

economic opportunity

Neelie Kroes
Vice President
European Commission

Barcelona 2014

56,000 jobs, **$3.6 billion** in benefits

// 1,500 New Companies

// 56,000 New Jobs

// Mobile Collaboration: $1.6B

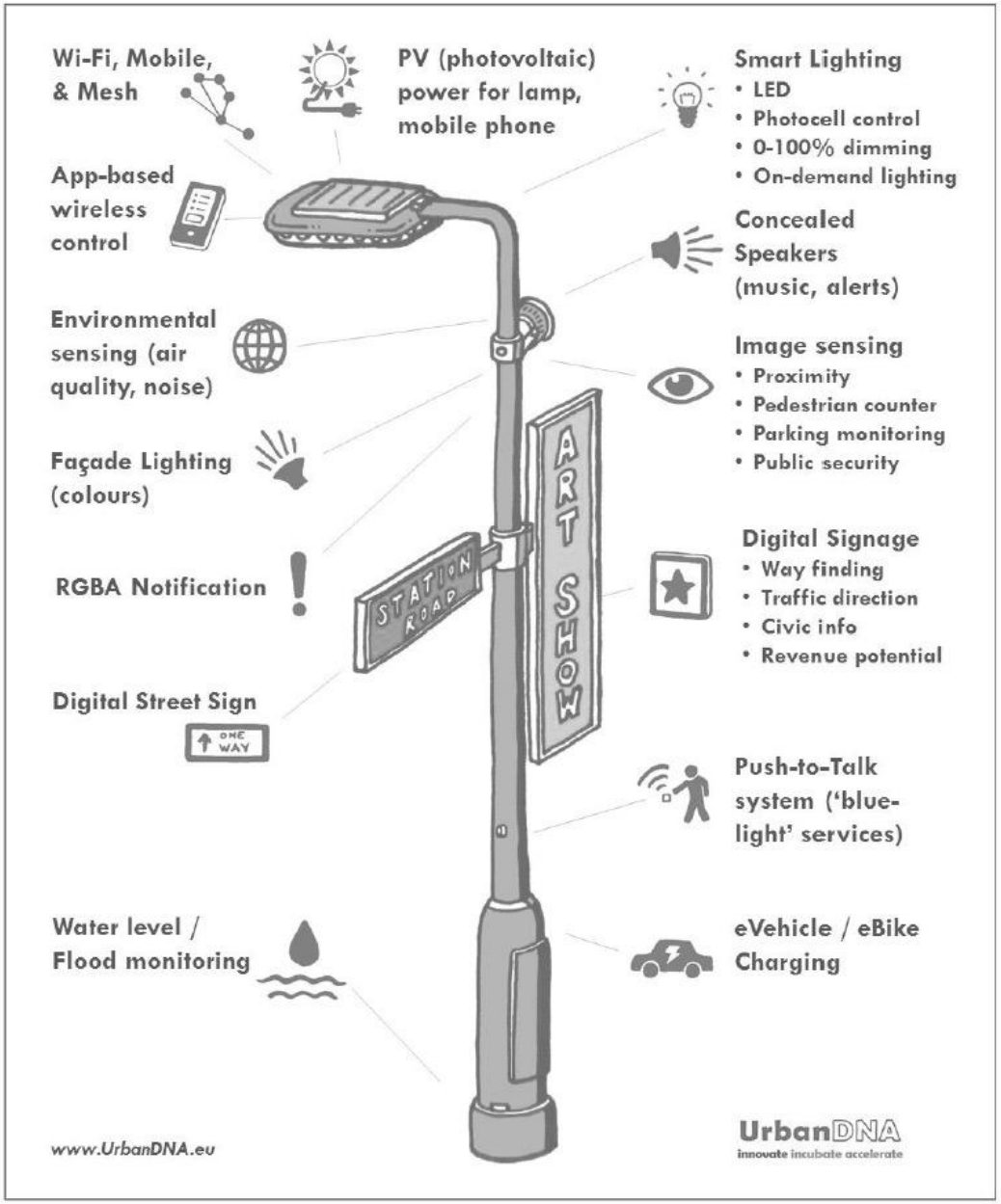
// Telework: $199M

// Smart Parking: $67M

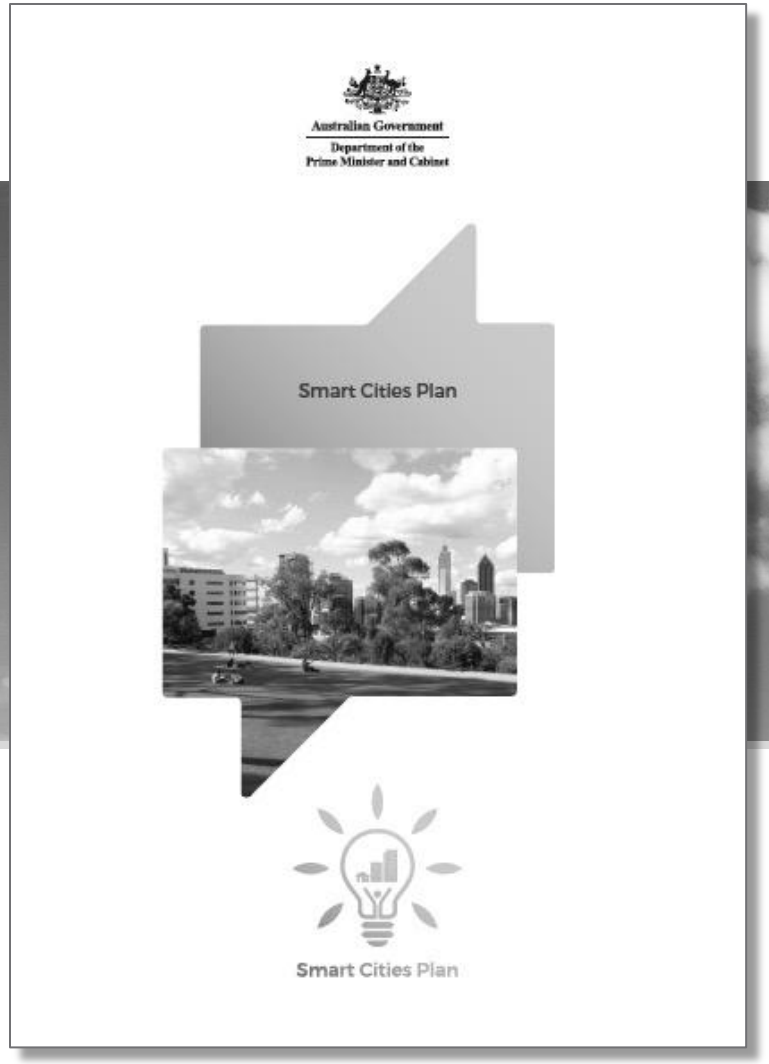
// Smart Water: $58M

// Smart Lighting: $47M

The light post is merely the backbone structure for more than 12 other urban performance management functions



Australia's Smart Cities Plan



Smart Investment - Infrastructure Financing Unit

Smart Policy – City Deals

Smart Technology – Smart Cities & Suburbs

Smart Cities & Suburbs Program

“…will support local governments to fast-track innovative technology solutions that improve long-standing urban problems.”

“…seeks to increase the efficiency and effectiveness of urban service delivery, infrastructure and planning to improve the liveability of cities and their suburbs.”

City Deals

1. Based on a partnership model, coordinated government decision making
2. An integrated investment plan, deeply rooted in performance metrics
3. Focused on unlocking economic potential and investment attraction
4. Improved sustainability outcomes

“Australia has an estimated $800 billion infrastructure deficit…”

Australian Financial Review, 2015

Therein lies the opportunity for the smart cities movement

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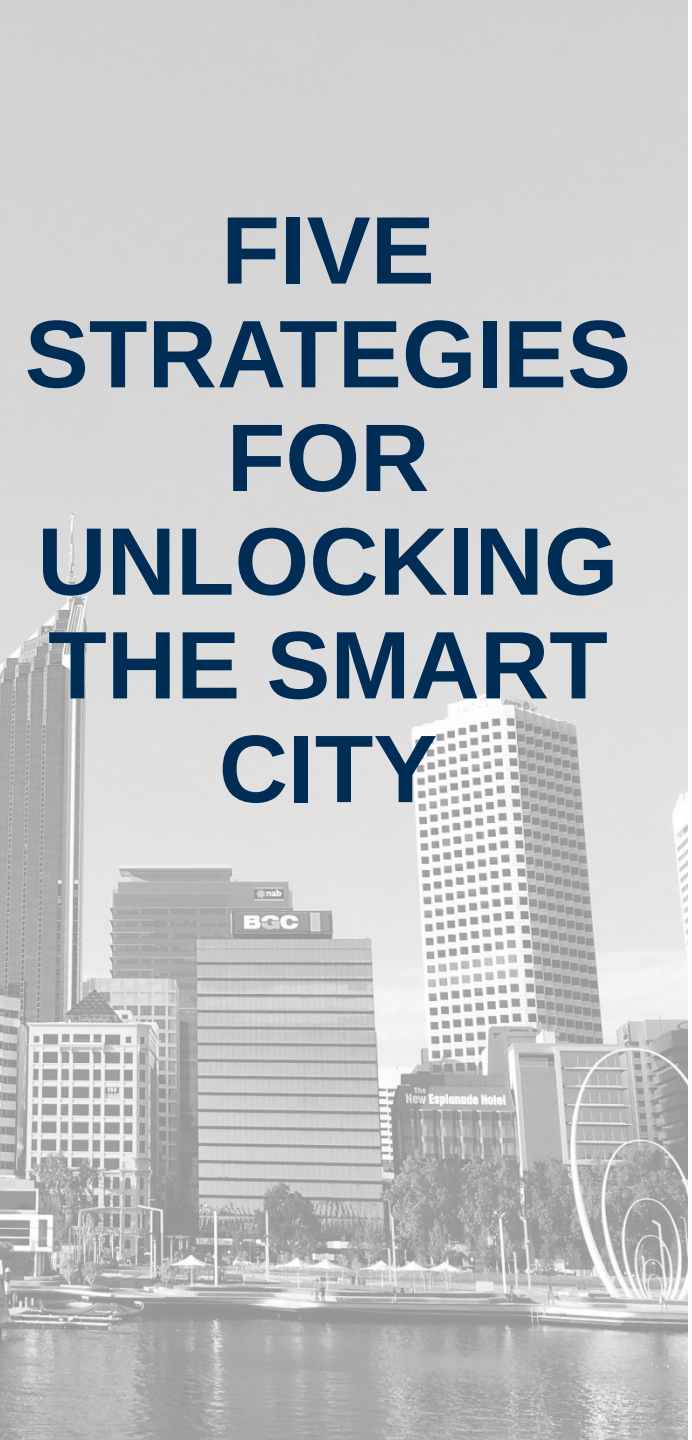

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Infrastructure vs urban transformation

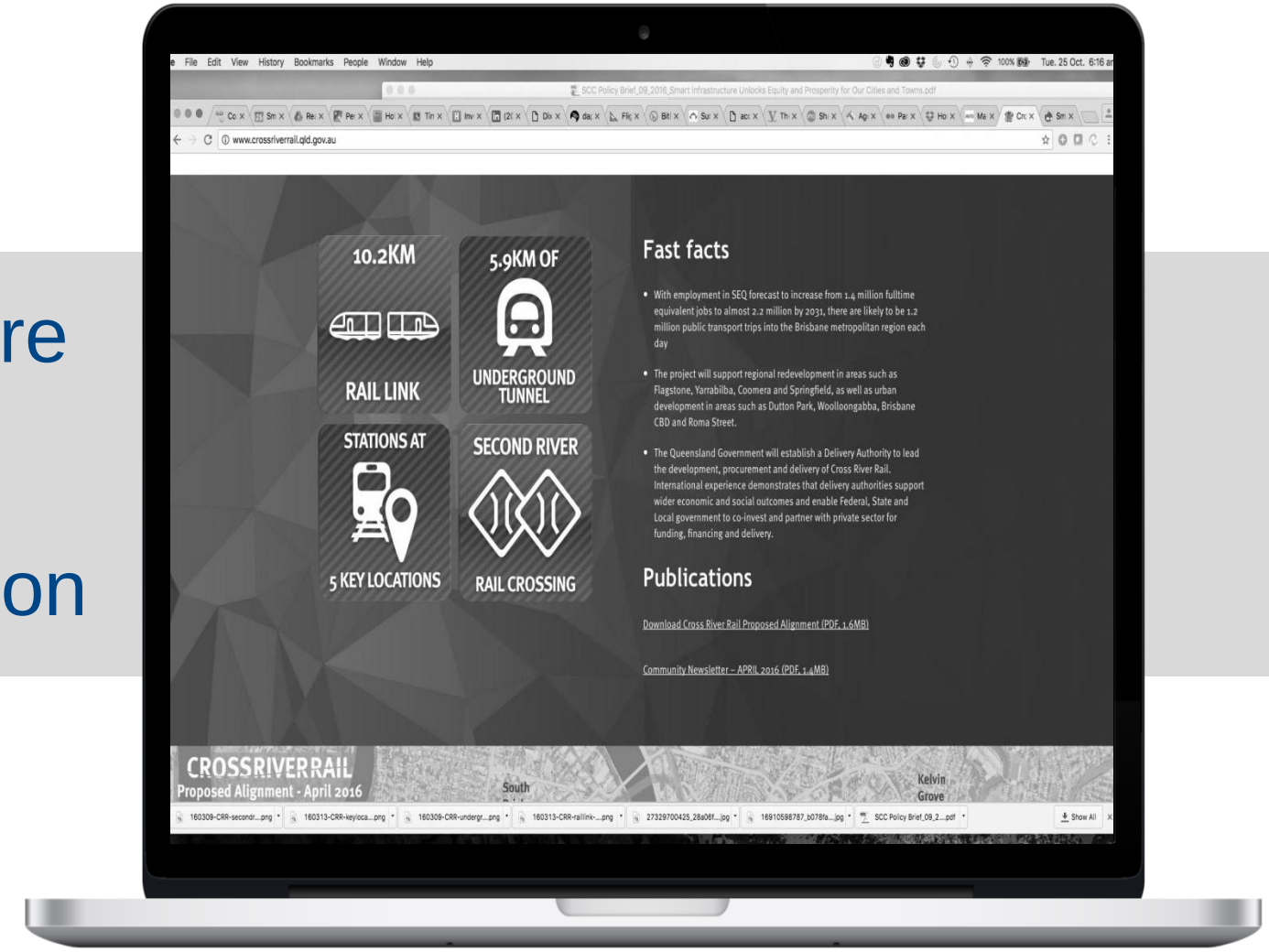


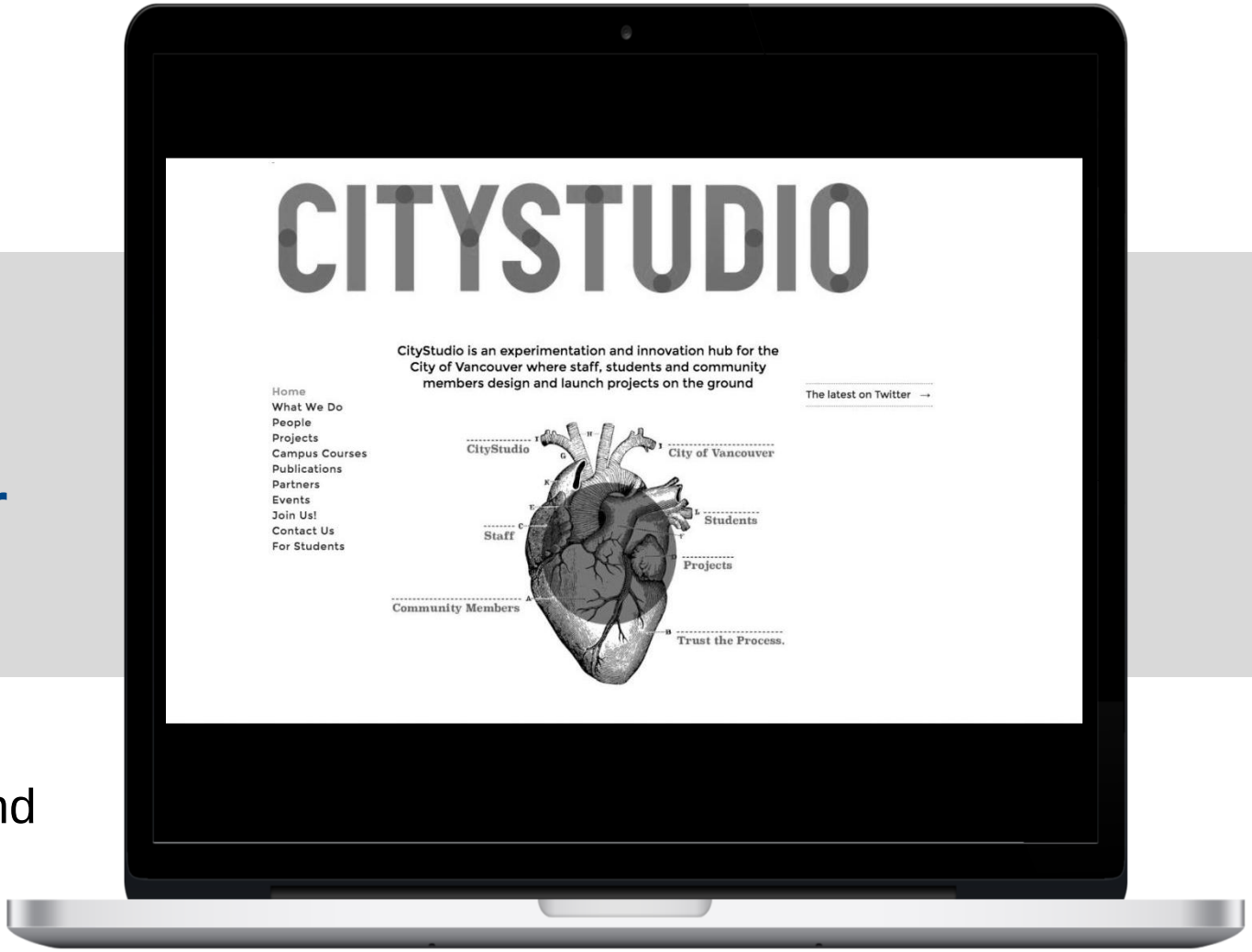
Image: EcoDistricts

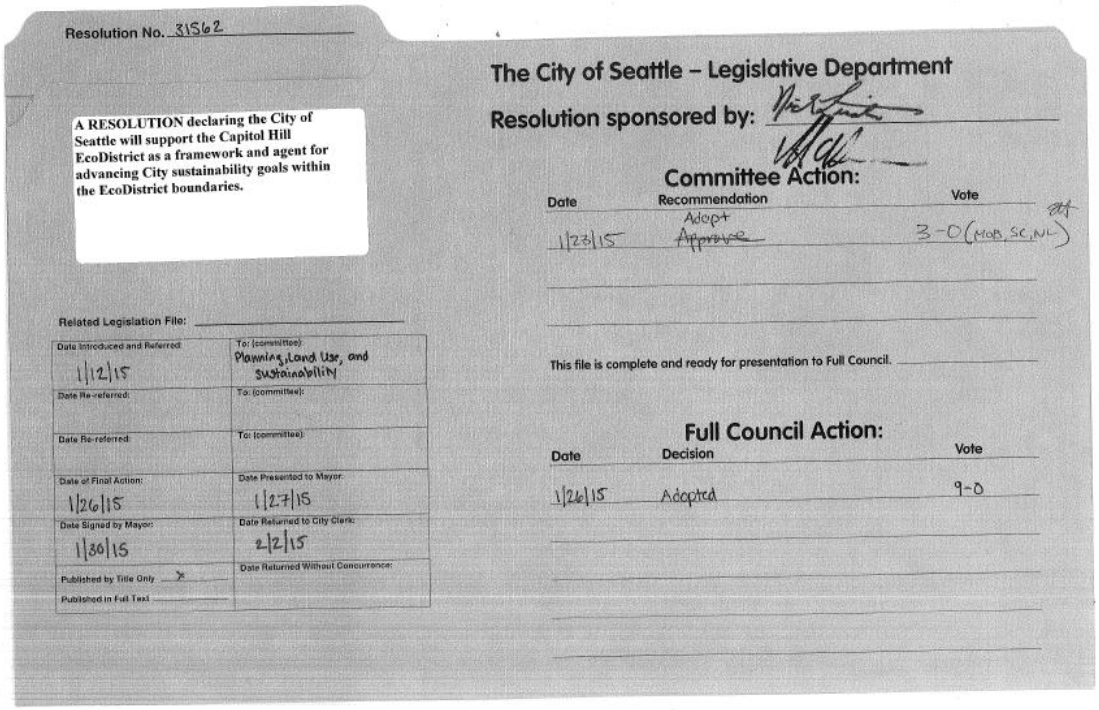
P
CRANE

FRESH
OREGON GROWN
BERRIES

City of Vancouver

A laboratory for experimentation and innovation, in partnership with universities and the community





Resolution No. 31562

A RESOLUTION declaring the City of Seattle will support the Capitol Hill EcoDistrict as a framework and agent for advancing City sustainability goals within the EcoDistrict boundaries.

The City of Seattle – Legislative Department

Resolution sponsored by:

Committee Action:

Date	Recommendation	Vote
1/27/15	Adopt ~~Approve~~	3-0 (MOB, SC, NL)

This file is complete and ready for presentation to Full Council.

Full Council Action:

Date	Decision	Vote
1/26/15	Adopted	9-0

Related Legislation File:

Date Introduced and Referred: 1/12/15	To: (committee): Planning, Land Use, and Sustainability
Date Re-referred:	To: (committee):
Date Re-referred:	To: (committee):
Date of Final Action: 1/26/15	Date Presented to Mayor: 1/27/15
Date Signed by Mayor: 1/30/15	Date Returned to City Clerk: 2/2/15
Published by Title Only: X	Date Returned Without Concurrence:
Published in Full Text:	

City of Seattle

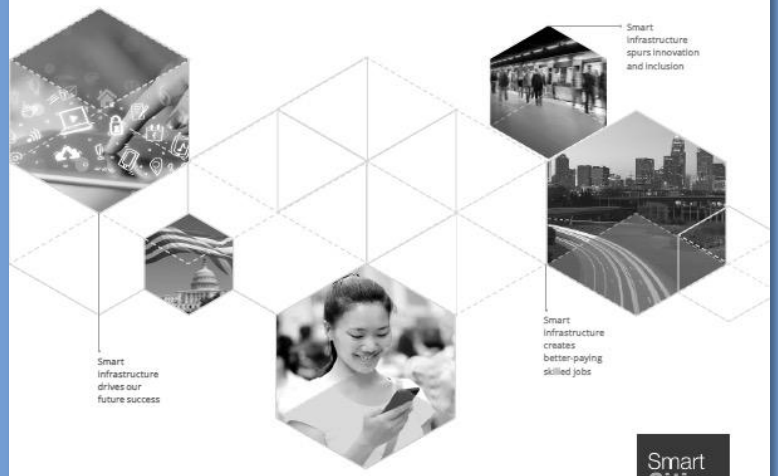
"A Resolution declaring the City of Seattle will support the Capitol Hill EcoDistrict as a framework and agent for advancing City sustainability goals…"

“Automated vehicle technology has the potential to **transform transportation systems and land use patterns** and land use patterns to a level not seen since the mass production of the private automobile a century ago

Jeremy Crute
Florida State University

Smart Infrastructure Unlocks Equity and Prosperity for Our Cities and Towns

How state and federal government can help cities of all sizes create greater equity – and prosperity – with technology that provides jobs for American workers



Smart Cities Council

September 2016 | Produced by the nonpartisan Smart Cities Council

Smart infrastructure ROI in action

11 case studies from around the world

1. **New York City:** Setting the standard for urban connectivity
2. **Orlando:** Building retrofits drive an energy efficient future
3. **University:** Gets an A for illuminating next-gen public safety
4. **Worcester:** Utility customers pitch in to save energy and money with remarkable results
5. **Las Vegas:** Using wireless connectivity to conserve water
6. **San Diego:** Electric 'superhighway' brings clean energy to San Diego
7. **Gresham:** Achieving energy net-zero in wastewater treatment
8. **Barcelona:** Taking the Internet of Things to new levels
9. **Medellin:** Driving mobility with inclusion and intelligence
10. **Dubai:** Embracing smart technology for a happier city
11. **Chattanooga** Smart grid and gigabit service bring jobs

Smart Cities Readiness Guide

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SMART CITIES READINESS GUIDE

The planning manual for building tomorrow's cities today

Login to Print PDFs
Login and you can print custom PDFs of each of the Readiness Guide Chapters

READINESS GUIDE TOC

Introduction to Smart Cities
How to Use the Readiness Guide
Smart People
Universal
Built Environment
Energy
Telecommunications
Transportation
Water and Wastewater
Waste Management
Health and Human Services
Public Safety
Smart Payments and Finance
Ideas to Action

Welcome to the Readiness Guide. This document was assembled with input from many of the world's leading smart city practitioners – the members and advisors of the Smart Cities Council. It will help you create a vision for the future of your own city. Equally important, it will help you build an action plan to get to that better future.

The first goal of the Readiness Guide is to give you a "vision" of a smart city, to help you understand how technology will transform the cities of tomorrow.

The second goal is to help you construct your own roadmap to that future. It suggests the goals to which you should aspire, the features and functions you should specify, the best practices that will gain you the maximum benefits for the minimum cost, at reduced risk.

The Readiness Guide is intended for mayors, city managers, city planners and their staffs. It helps cities help themselves by providing objective, vendor-neutral information to make confident, educated choices about the technologies that can transform a city.

Cities around the world are already making tremendous progress in achieving

PDF and online.

World's leading smart city handbook, now in its second edition.

Australia/New Zealand Version to launch in 2017.

Thank You

Adam Beck, Executive Director
adam.beck@anz.smartcitiescouncil.com
www.anz.smartcitiescouncil.com

SmartCitiesCouncil
Australia New Zealand