



WCCD

THE WORLD COUNCIL ON CITY DATA

Communication : C1
Smart City Task Force
December 1, 2020
Item # 2

City Data Supporting Vaughan's Smart City Task Force

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December 1, 2020

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ISO 37120

The *1st* ISO Standard for cities

WCCD is implementing this global first in over *100 cities* across 35 countries



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ON CITY DATA

19 themes

104 indicators



Economy



Education



Energy



Environment & climate change



Finance



Governance



Health



Housing



Population & social conditions



Recreation



Safety



Solid Waste



Sport & Culture



Telecommunication



Transportation



Urban/local agriculture & food security



Urban Planning



Wastewater



Water



WCCD CERTIFICATION LEVELS

ISO 37120



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ASPIRATIONAL	BRONZE	SILVER	GOLD	PLATINUM
30-44 Core Indicators	45-59 Indicators 45 Core + 0-14 Supporting	60-74 Indicators 45 Core + 15-29 Supporting	75-89 Indicators 45 Core + 30-44 Supporting	90-104 Indicators 45 Core + 45-59 Supporting



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@wccitydata

**CITY OF VAUGHAN
WCCD ISO 37120
PLATINUM CERTIFICATION
THE HIGHEST LEVEL OF CERTIFICATION**



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ISO 37120

ISO 37120



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THE WCCD ISO FAMILY OF STANDARDS

THE ISO 37120 SERIES

SUSTAINABLE DEVELOPMENT OF COMMUNITIES

ISO 37120
Indicators for City Services & Quality of Life

ISO 37122
Indicators for
Smart Cities

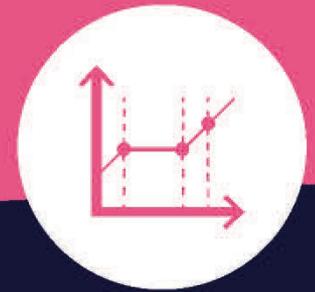
ISO 37123
Indicators for
Resilient Cities



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ECONOMY



ISO 37120 Sustainable Cities

- City's unemployment rate
- Assessed value of commercial and industrial properties as a percentage of total assessed value of all properties
- Percentage of persons in full-time employment
- Youth unemployment rate
- Number of businesses per 100 000 population
- Number of new patents per 100 000 population per year
- Annual number of visitor stays (overnight) per 100 000 population
- Commercial air connectivity (number of non-stop commercial air destinations)
- Average household income (USD)
- Annual inflation rate based on the average of the last 5 years
- City product per capita (USD)

ISO 37122 Smart Cities

- Percentage of service contracts providing city services which contain an open data policy
- Survival rate of new businesses per 100 000 population
- Percentage of the labour force employed in occupations in the Information and Communications Technology (ICT) sector
- Percentage of the labour force employed in occupations in the Education and Research & Development sectors

ISO 37123 Resilient Cities

- Historical disaster losses as a percentage of city product
- Average annual disaster loss as a percentage of city product
- Percentage of properties with insurance coverage for high-risk hazards
- Percentage of total insured value to total value at risk within the city
- Employment concentration
- Percentage of the workforce in informal employment
- Average household disposable income (USD)



ENVIRONMENT AND CLIMATE CHANGE



ISO 37120 Sustainable Cities

- Fine particulate matter (PM2.5) concentration
- Particulate matter (PM10) concentration
- Greenhouse gas emissions measured in tonnes per capita
- Percentage of areas designated for natural protection
- NO2 (nitrogen dioxide) concentration
- SO2 (sulphur dioxide) concentration
- O3 (ozone) concentration
- Noise pollution
- Percentage change in number of native species

ISO 37122 Smart Cities

- Percentage of buildings built or refurbished within the last 5 years in conformity with green building principles
- Number of real-time remote air quality monitoring stations per square kilometre
- Percentage of public buildings equipped for monitoring indoor air quality

ISO 37123 Resilient Cities

- Magnitude of urban heat island effects (atmospheric)
- Percentage of natural areas within the city that have undergone ecological evaluation for their protective services
- Territory undergoing ecosystem restoration as a percentage of total city area
- Annual frequency of extreme rainfall events
- Annual frequency of extreme heat events
- Annual frequency of extreme cold events
- Annual frequency of flood events
- Percentage of city land area covered by tree canopy
- Percentage of city surface area covered with high-albedo materials contributing to the mitigation of urban heat islands



The WCCD and ISO 37120 Indicators help to:

- ✓ **Create Data-driven Municipalities and incentivize performance**
- ✓ **Inform and Direct Federal Spending Across The Country**
- ✓ **Showcase the impact of Federal spending to citizens and communities across the country**
- ✓ **Drive Job Creation And Economic Development**
- ✓ **Track progress by cities on our climate agenda**
- ✓ **Embrace the United Nations SDGs at a local level**



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Vaughan in a Global Context – Celebrating Successes

CITY OF VAUGHAN

DATA DRIVEN INSIGHTS



WCCD

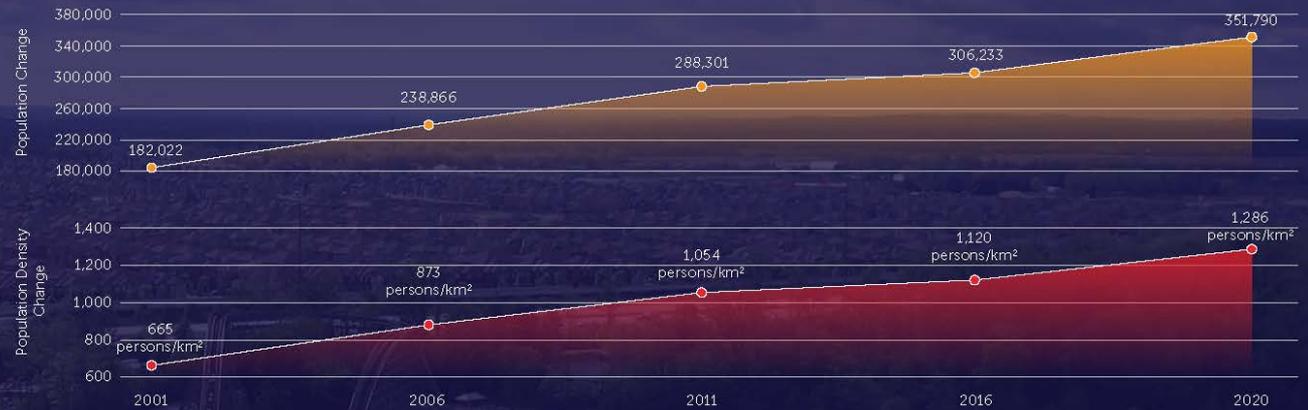
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VAUGHAN: EMBRACING URBAN GROWTH

A TRAJECTORY OF SUSTAINABLE GROWTH

Population and Population Density

ISO 37120

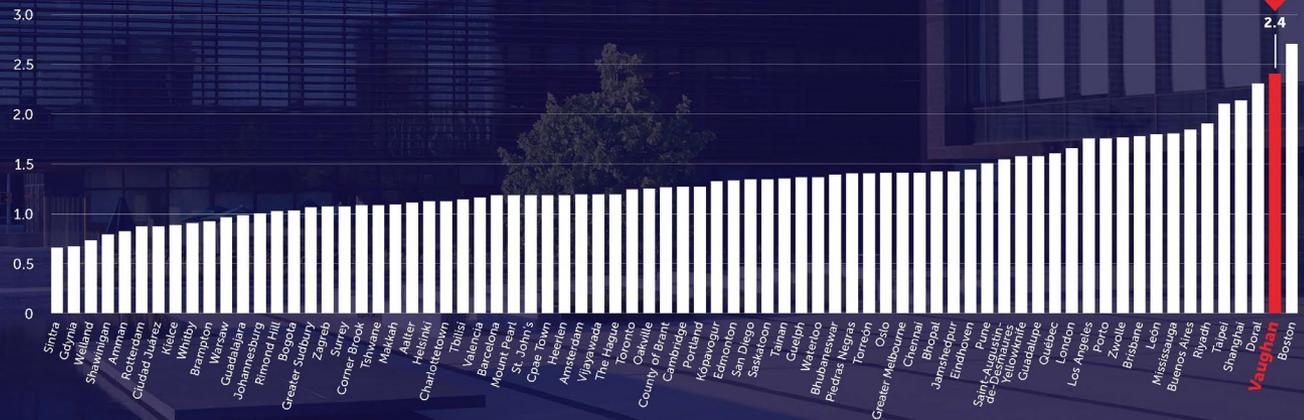


VAUGHAN: EMBRACING URBAN GROWTH

PLANNING AND DESIGN FOR A SUSTAINABLE FUTURE

Jobs/Housing Ratio

ISO 37120 Indicator 21.3



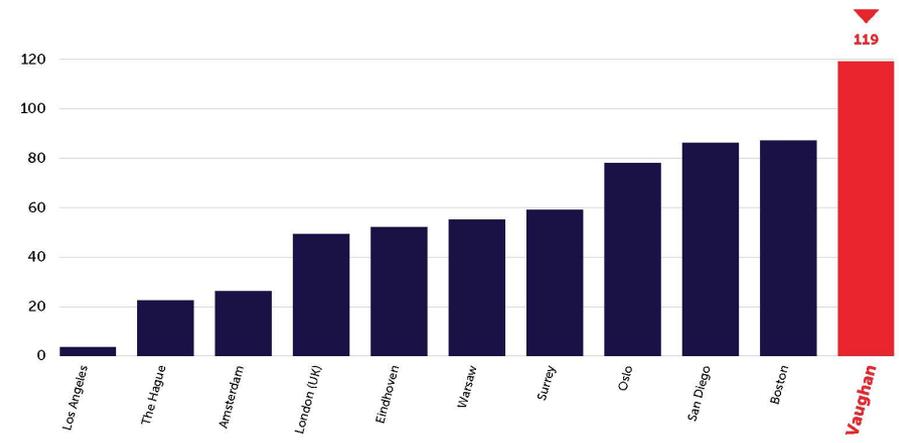


**VAUGHAN: SUPPORTING
TRANSPORTATION AND MOBILITY**

**DEVELOPING
TRANSIT
INFRASTRUCTURE**

Kilometres of Light Passenger Public Transport System per 100 000 Population

ISO 37120 Profile Data



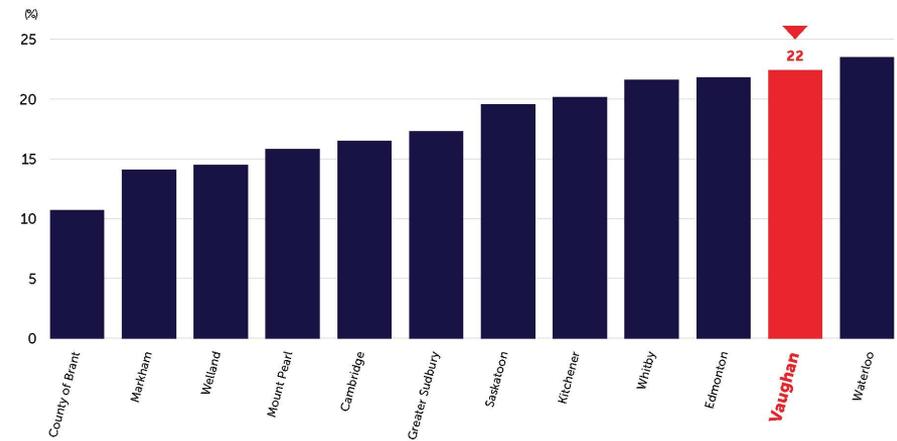


VAUGHAN: SUPPORTING
TRANSPORTATION AND MOBILITY

A CANADIAN
LEADER IN
RESPONSIBLE
COMMUTING

Percentage of Commuters Using A Travel Mode to Work Other Than a Personal Vehicle

ISO 37120 Indicator 19.3



VAUGHAN

A LEADER IN
ENVIRONMENTAL
STEWARDSHIP

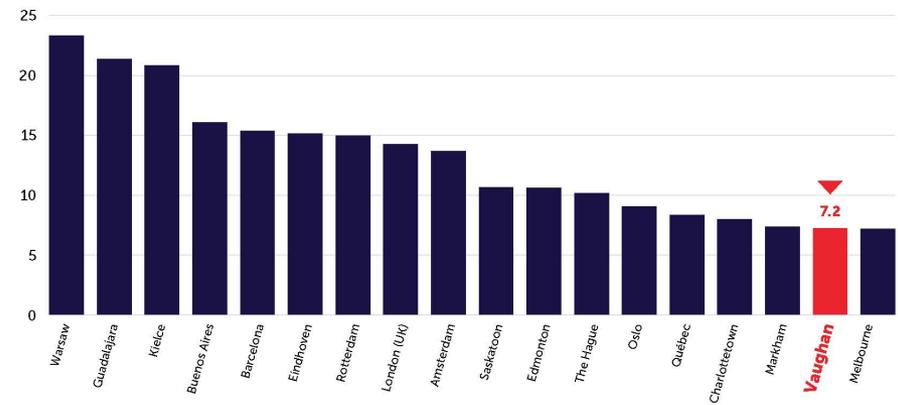


VAUGHAN: A LEADER IN ENVIRONMENTAL STEWARDSHIP

CELEBRATING AIR QUALITY

Fine Particulate Matter (PM2.5) Concentration

ISO 37120 Indicator 8.1



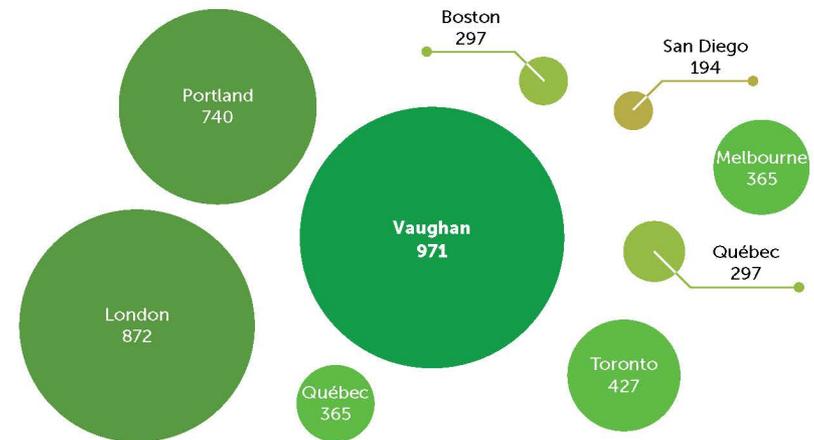


VAUGHAN: A LEADER IN ENVIRONMENTAL STEWARDSHIP

ACCESS TO URBAN NATURE FOR ALL

Green Area (hectares) per 100 000 Population

ISO 37120 Indicator 21.1



VAUGHAN

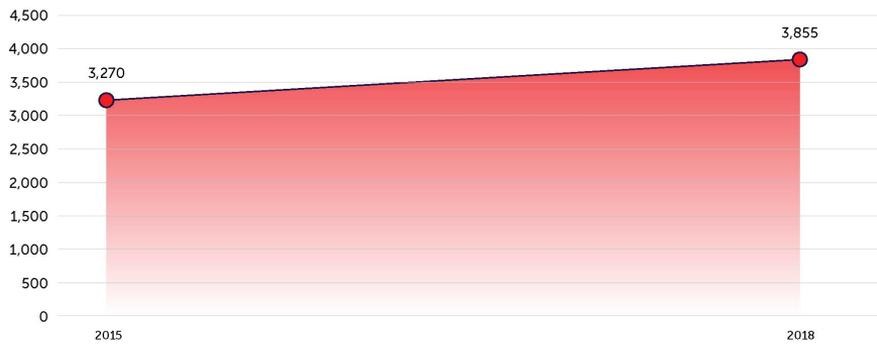
ENCOURAGING
PROSPERITY



VAUGHAN: ENCOURAGE PROSPERITY SUPPORTING ENTREPRENEURIALISM

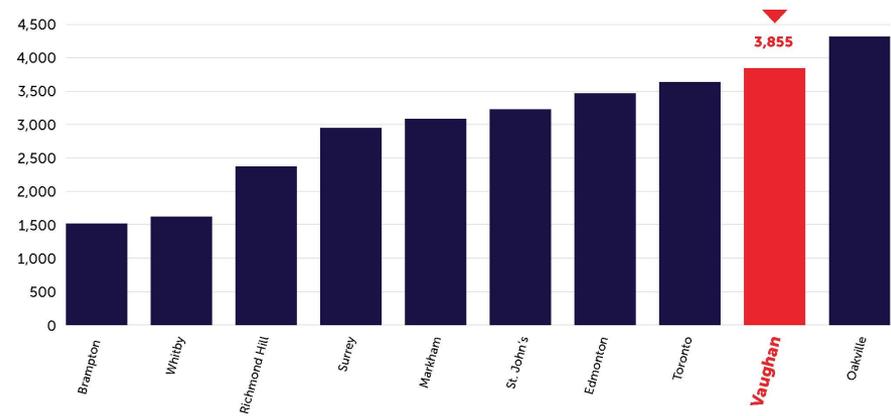
Number of Businesses per 100 000 Population - Trend

ISO 37120 Indicator 5.5



Number of Businesses per 100 000 Population

ISO 37120 Indicator 5.5

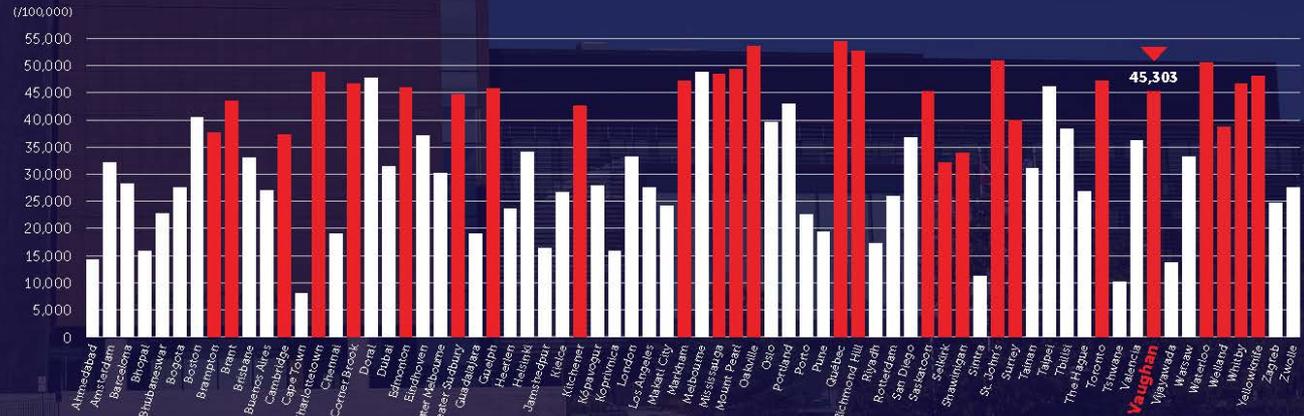


VAUGHAN: ENCOURAGING
PROSPERITY

A HIGHLY
QUALIFIED
WORKFORCE

Number of Higher Education Degrees per 100 000 Population

ISO 37120 Indicator 6.6





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**Harnessing WCCD Data to
Support Vaughan's
TERM OF COUNCIL
STRATEGIC PRIORITIES**



WCCD

Transportation and Mobility

Strategic Goal Statement: To be a fully connected and integrated community, the City will undertake initiatives to improve the municipal road network, support the development of transit and increase cycling and pedestrian infrastructure.

Objectives:

- Improve local road network
- Support regional transportation initiatives
- Advance active transportation



Objective: Advance Active Transportation

Vaughan In a Canadian Perspective

ISO 37120 Indicator 19.4 Kilometers of Bicycle Paths and Lanes per 100,000 population

Kilometres of bicycle paths and lanes per 100 000 population

ISO 37120 Indicator 19.4



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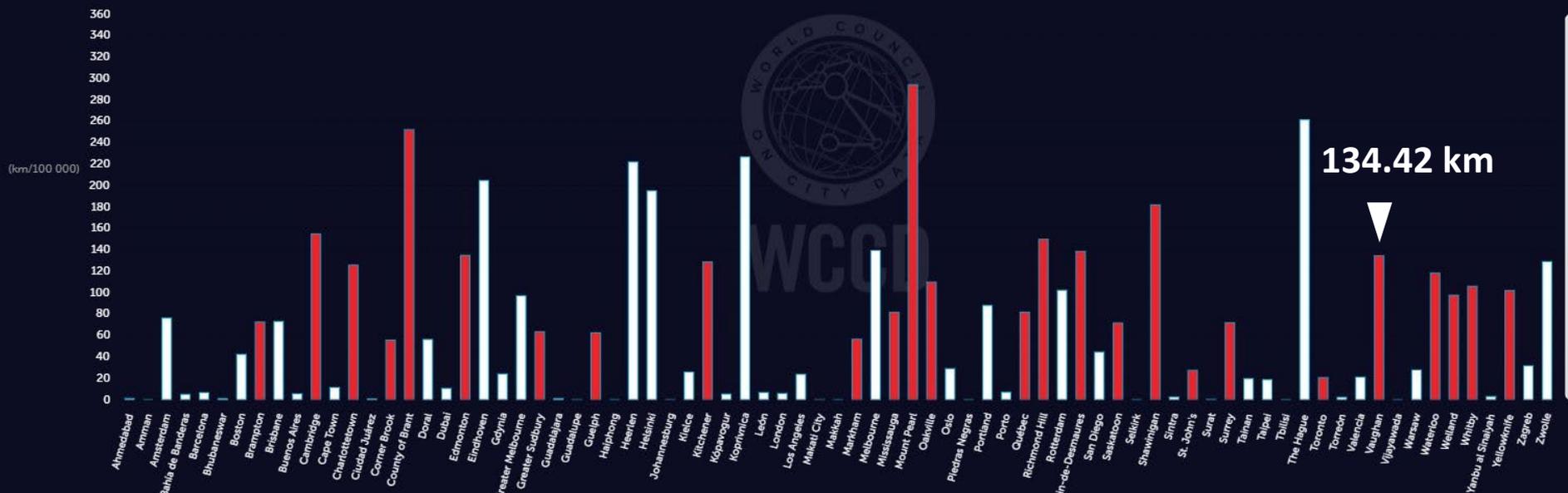
Objective: Advance Active Transportation

Vaughan In a Global Perspective

ISO 37120 Indicator 19.4 Kilometers of Bicycle Paths and Lanes per 100,000 population

Kilometres of bicycle paths and lanes per 100 000 population

ISO 37120 Indicator 19.4





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Environmental Stewardship

Strategic Goal Statement: To protect the environment and foster a sustainable future, the City will act as a steward to preserve the natural environment by encompassing principles of environmental protection into our social and economic initiatives.

Objectives:

- Protect and respect our environment
- Proactive environmental management
- Build the low-carbon economy and a resilient city



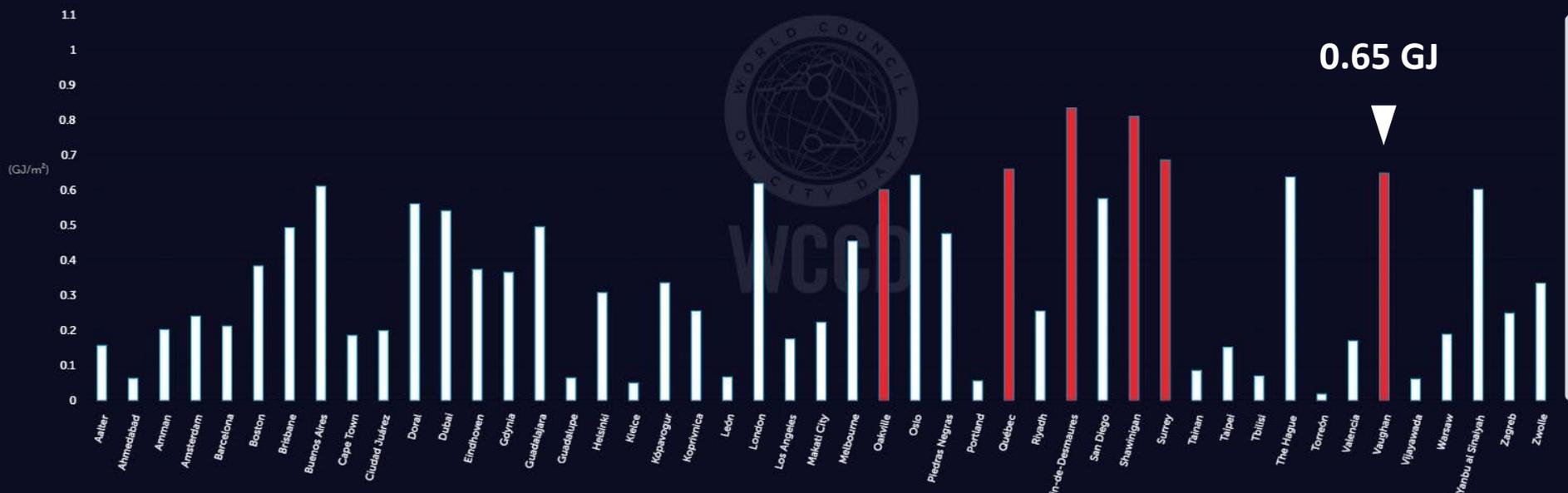
**Objectives: Protect and respect our environment
Proactive environmental management**

Vaughan In a Global Perspective

ISO 37120 Profile Data – Energy (Electricity) Consumption of Public Buildings Per Year

Energy (electricity) consumption of public buildings per year

ISO 37120 Profile Data





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Active, Safe and Diverse Communities

Strategic Goal Statement: To ensure the safety and well-being of citizens, the City will commit to engagement and cohesiveness by supporting and promoting community events, arts, culture, heritage, sports and fire prevention awareness.

Objectives:

- Enhance community well-being
- Enrich our communities
- Maintain safety in our community



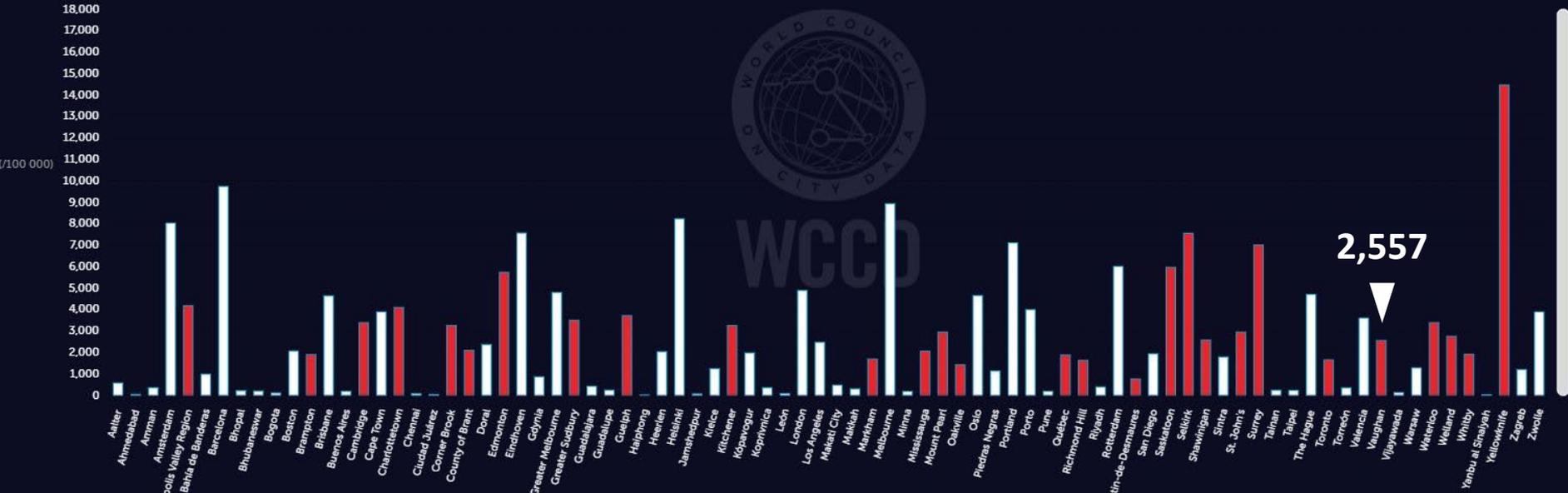
Objectives: Enhance community well being
 Maintain safety in our community

Vaughan In a Global Perspective

ISO 37120 Indicator 15.8 – Crimes against property per 100,000 population

Crimes against property per 100 000 population

ISO 37120 Indicator 15.8



Objectives: Enhance community well being
 Maintain safety in our community

Vaughan In a Canadian Perspective

ISO 37120 Indicator 15.8 Data – Crimes against property per 100,000 population

Crimes against property per 100 000 population

ISO 37120 Indicator 15.8





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Economic Prosperity, Investment and Social Capital

Strategic Goal Statement: To ensure Vaughan continues to be the place to be, the City will undertake initiatives to ignite economic prosperity and social capital, and celebrate Vaughan as an entrepreneurial city and the gateway to economic activity in the Greater Toronto Area, Ontario and Canada.

Objectives:

- Advance economic opportunities
- Attract new investments
- Enable a climate for job creation



Objectives: **Advance economic opportunities**
 Attract new investments
 Enable a climate for job creation

Vaughan In a Canadian Perspective

ISO 37120 Indicator 5.1 – City’s unemployment rate

City’s unemployment rate

ISO 37120 Indicator 5.1



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Objectives: **Advance economic opportunities**
 Attract new investments
 Enable a climate for job creation

Vaughan In a Canadian Perspective

ISO 37120 Indicator 5.5 – Number of businesses per 100,000 population

Number of businesses per 100 000 population



Objectives: Advance economic opportunities
 Attract new investments
 Enable a climate for job creation

Vaughan In a Canadian Perspective

ISO 37120 Indicator 5.8 – Commercial Air Connectivity (number of non-stop commercial air destinations)

Commercial air connectivity (number of non-stop commercial air destinations)





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