



WCCD

THE WORLD COUNCIL ON CITY DATA

City data for low carbon development

Nico Tillie, Director European Office of the World
Council on City Data & Urbanism, TU Delft
Rotterdam 21th of June 2018

<http://www.dataforcities.org/>

Twitter: @WCCityData

Facebook: WCCityData

Cities and the Challenges of Data



ISO 37120

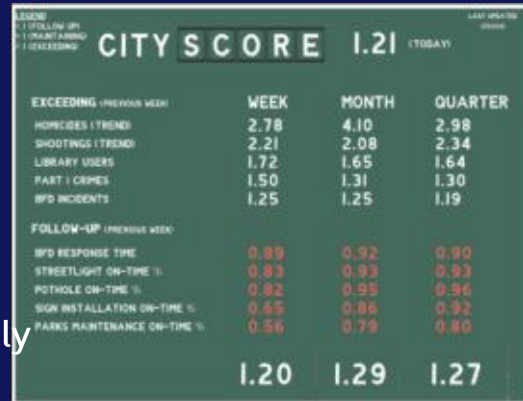
World Council on City Data

It is about improving. How do you perform, challenges, targets, actions? Knowing where to invest



For this you need standardised globally comparable city data,

comparing apples to apples
third part verified data
feedback on our score...





The **first** ISO
standard for cities.



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**ISO
37120**

100
Indicators



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17 themes



Economy



Education



Energy



Environment



Finance



Governance



Health



Recreation



Safety



Shelter



Solid Waste



Telecommunications



Transportation



Urban Planning



Wastewater



Water & Sanitation



Fire & Emergency
Response



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ISO 37120

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**WELCOMING CITIES OF ALL SIZES
TO BECOME ISO 37120 CERTIFIED**

0 – 50,000
50,000 – 100,000
100,000 – 250,000
250,000 – 500,000
500,000 – 750,000
750,000 – 1,000,000
1,000,000 – 5,000,000
5,000,000 – 10,000,000
10,000,000 +

WCCD CERTIFICATION LEVELS

ISO 37120



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ASPIRATIONAL	BRONZE	SILVER	GOLD	PLATINUM
30-45 Core Indicators	46-59 Indicators	60-75 Indicators	76-90 Indicators	91-100 Indicators
	46 Core + 0-13 Supporting	46 Core + 14-29 Supporting	46 Core + 30-44 Supporting	46 Core + 45-54 Supporting



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@wccitydata

WCCD ISO 37120 CERTIFIED CITIES



NEED FOR STANDARDS, INDICATORS 'FRAMEWORK' !

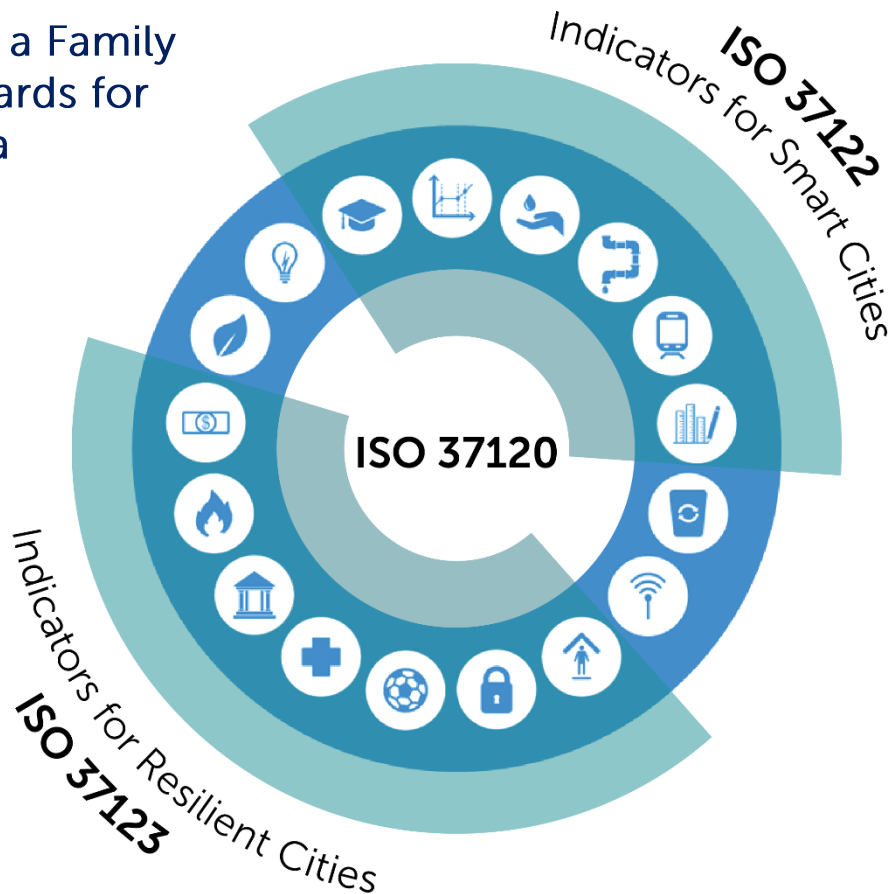
Global
Cities
Institute

Global City
Indicators
Facility

SINCE 2008

MEMBERS - 255 CITIES ACROSS 82 COUNTRIES

Creating a Family of Standards for City Data



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HOW FINANCIALLY INDEPENDENT IS MY CITY?

High own-source revenue
as a percentage of total
revenues

83.2%

Tshwane



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HOW CONNECTED IS MY CITY?

Number of non-stop
commercial flights
annually.

212,792

Amsterdam



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HOW INCLUSIVE IS MY CITY'S WORKFORCE?

Percentage of women
employed in the city
government workforce

41.87%

Minna



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HOW 'TRANSIT-FRIENDLY' IS MY CITY?

High percentage of commuters using a travel mode to work other than a personal vehicle

71.28%

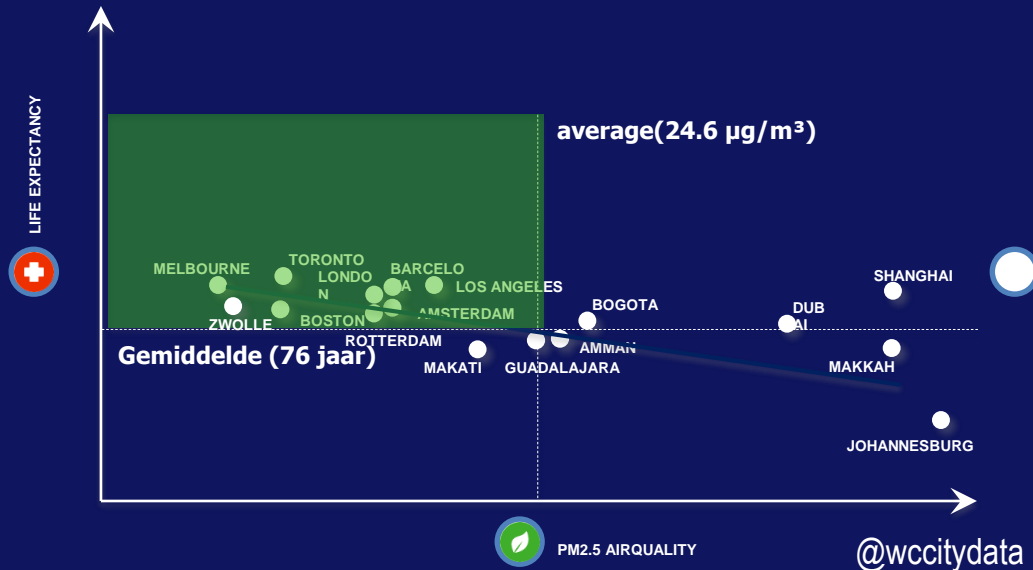
Cape Town



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DATA PLATFORM FOR ANALYTICS, EXPLORING RELATIONS WITH 100 DATA POINTS



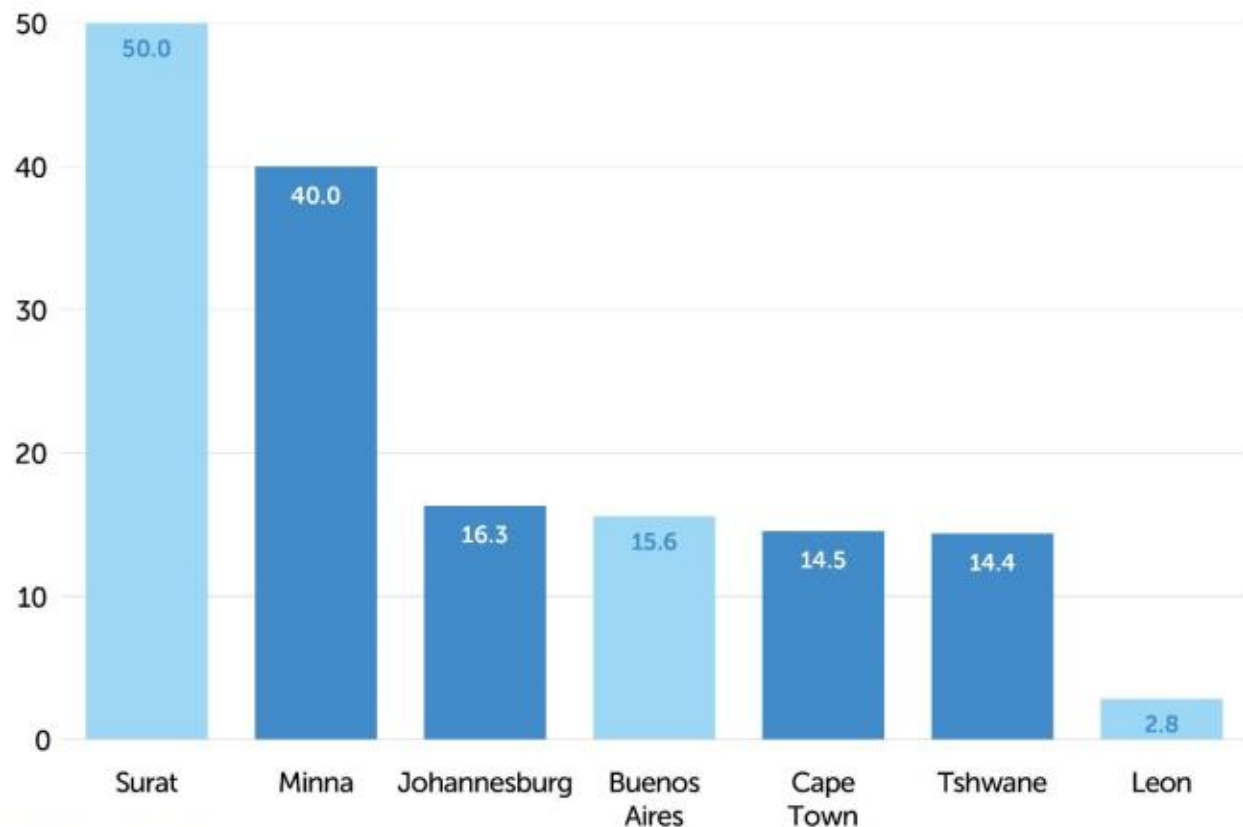


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EXPLORING WCCD ISO 37120 DATA IN AFRICAN CITIES

ISO 37120 Indicator 9.2:

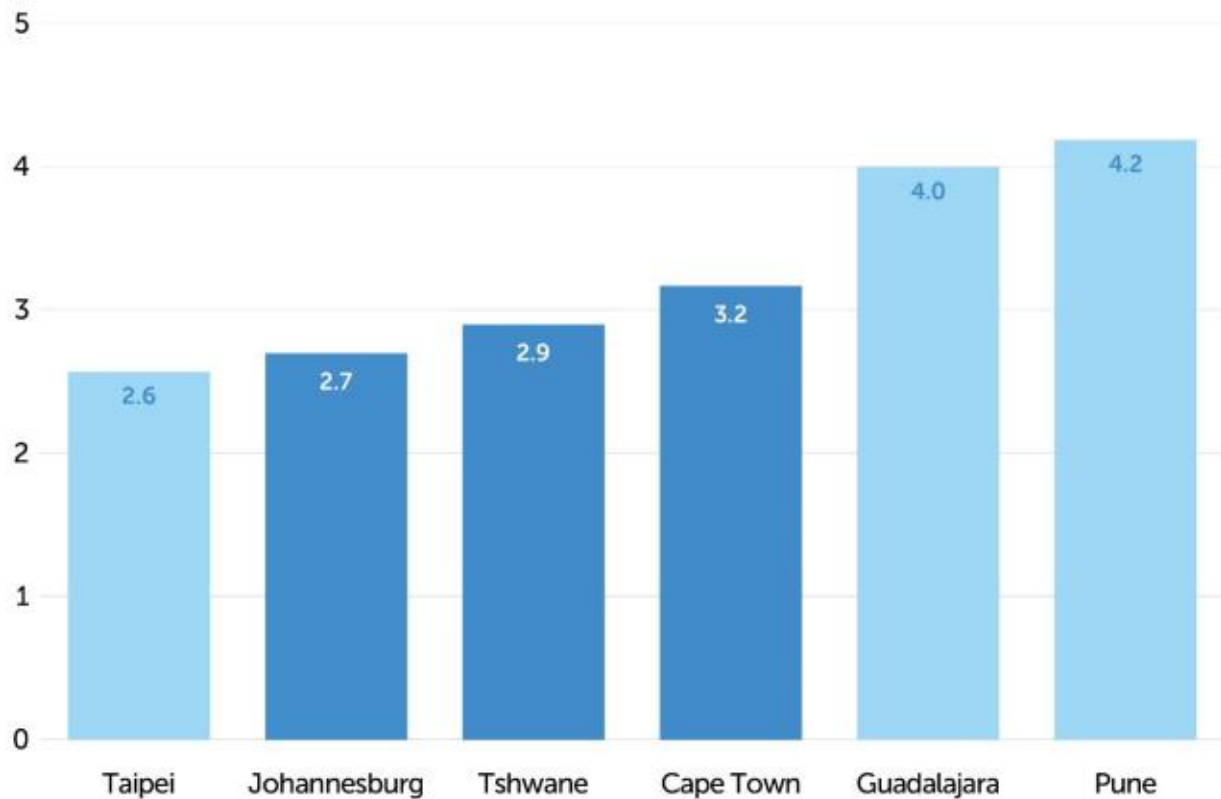
Capital spending as a percentage of total expenditures



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ISO 37120 Indicator 4.28:
Persons per unit

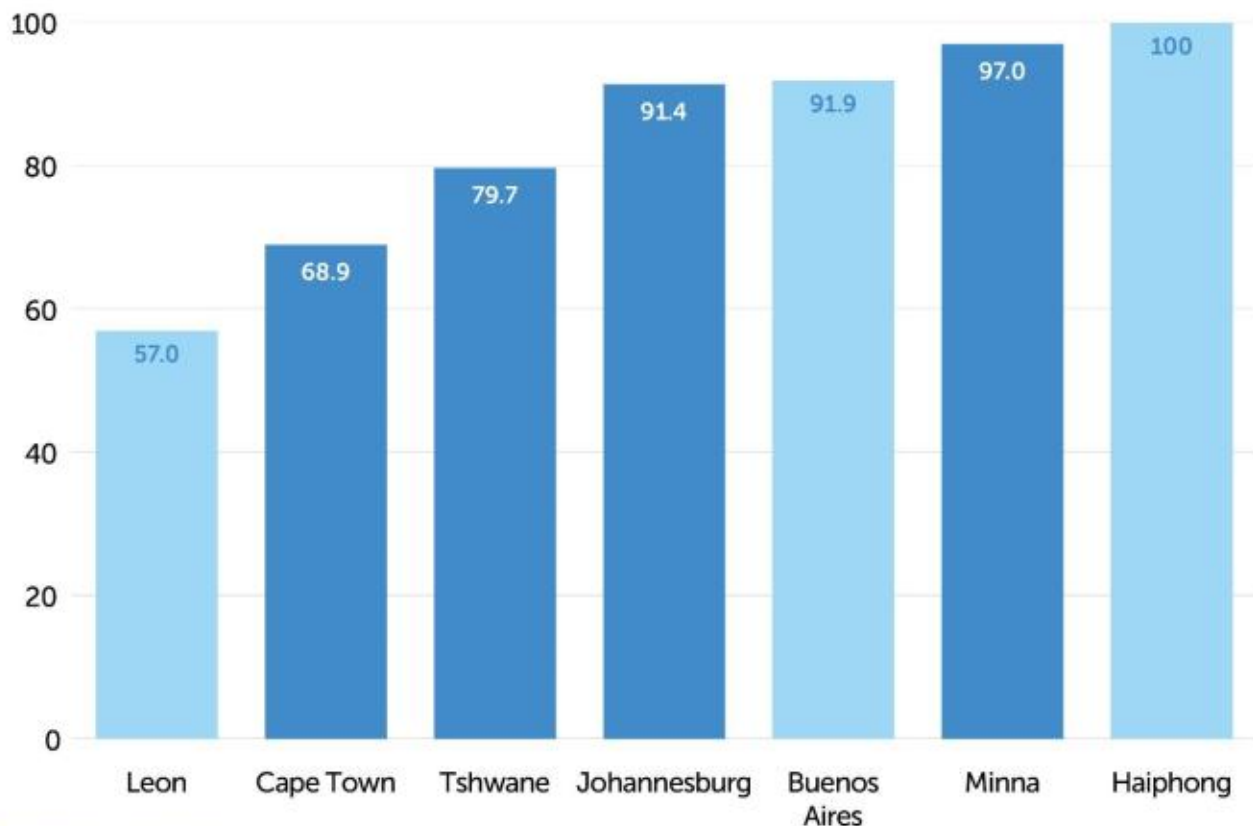


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ISO 37120 Indicator 7.2:

Percentage of city population with authorized electrical service

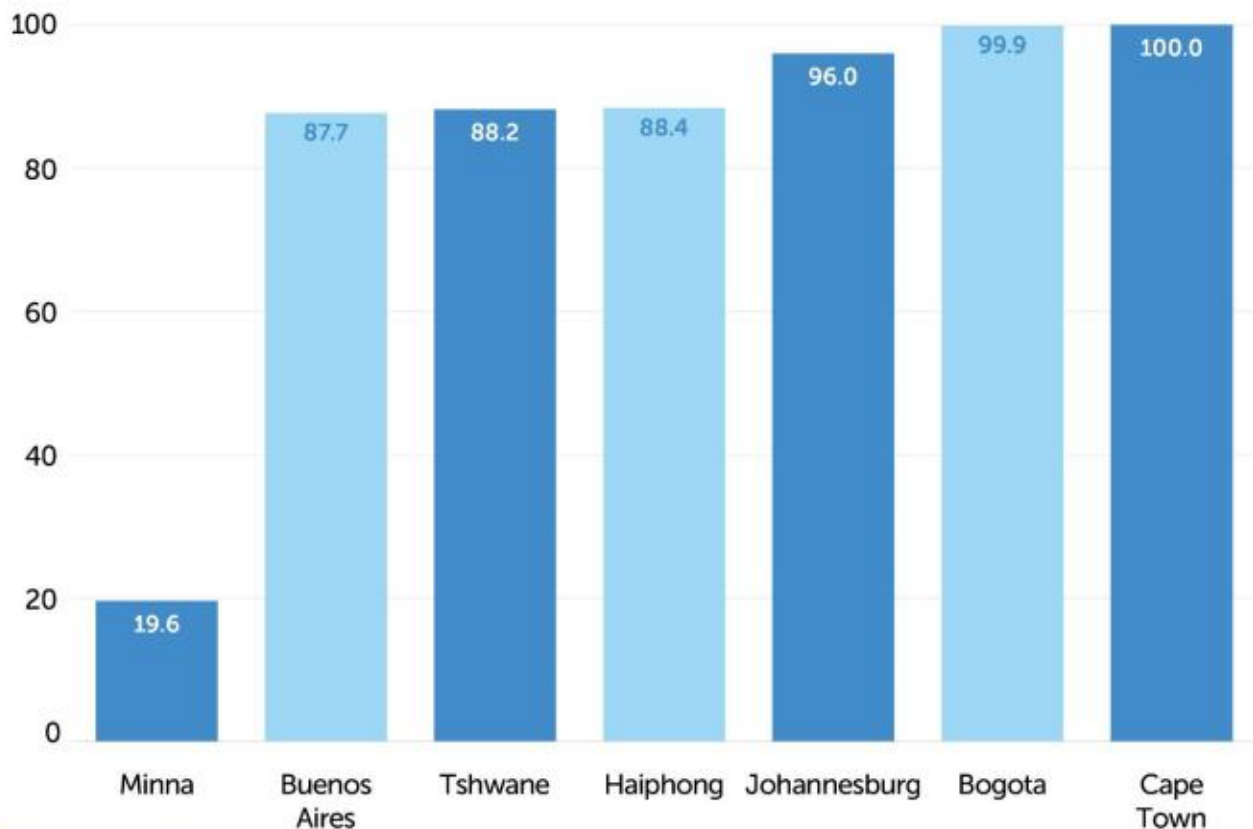


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ISO 37120 Indicator 16.1:

Percentage of city population with regular solid waste collection (residential)

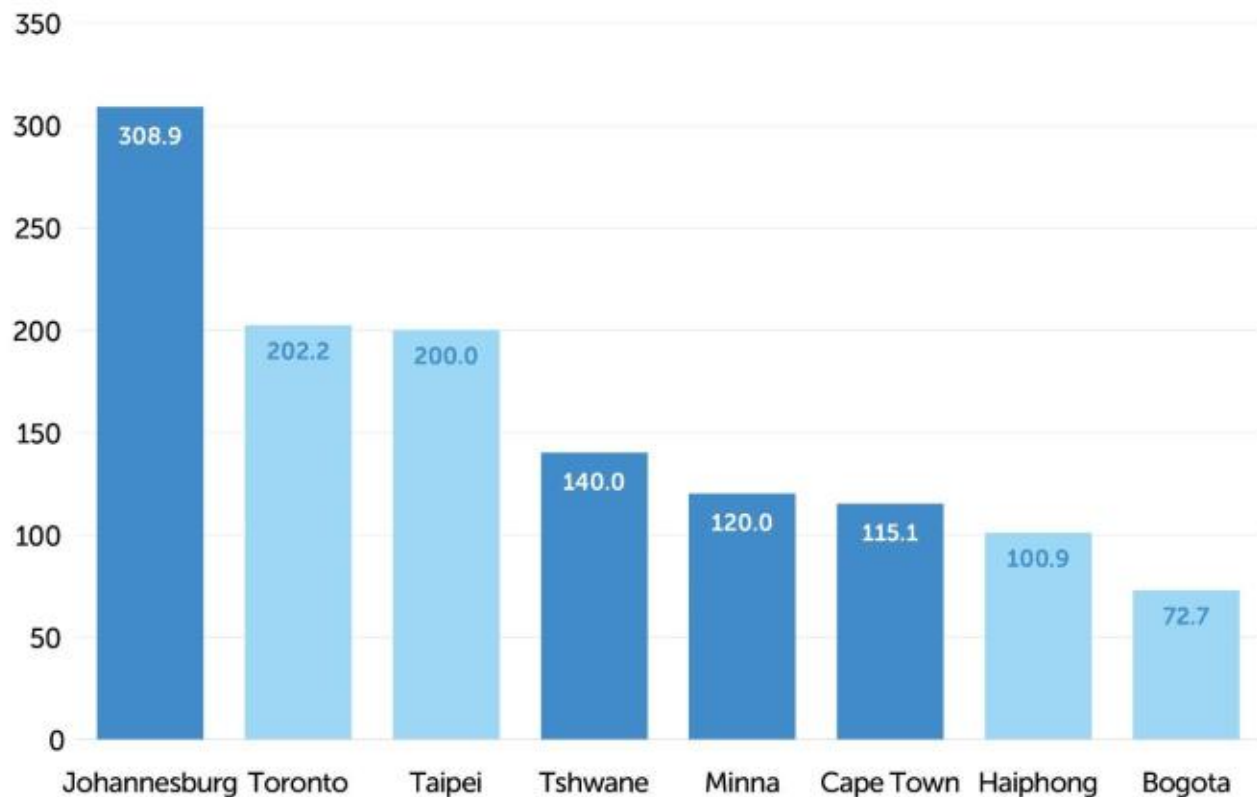


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ISO 37120 Indicator 21.4:

Total domestic water consumption per capita (litres/day)



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JOHANNESBURG



HOW INCLUSIVE IS
JOHANNESBURG?

38.5%

OF TOTAL ELECTED CITY-LEVEL
OFFICIALS ARE WOMEN

ISO 37120



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38.5% OF TOTAL ELECTED CITY-LEVEL OFFICIALS ARE WOMEN HOW DID JOHANNESBURG ACHIEVE THIS?

ISO 37120 11.2
WOMEN AS A PERCENTAGE OF
TOTAL ELECTED TO CITY LEVEL
OFFICE



THE INCLUSION OF WOMEN IN CITY GOVERNMENT

Johannesburg is a strong performer in the inclusion of women in city government, with **one of the highest percentages of women elected to municipal government**. The **City of Johannesburg's Women's Development Strategy** was first drawn up in 2005 as part of a renewed drive to **promote the development and inclusion of women in the highest echelons of decision-making**. Women's participation in government has been fostered by policies that promote gender inclusion in a wide range of areas.

INCLUSION ACROSS DIFFERENT AREAS

The City of Johannesburg approved a **Gender Policy Framework** in 2013. Its gender mainstreaming programme will be fully incorporated in the Growth and Development Strategy and Integrated Development Plan. The City of Johannesburg continues to work with marginalized women groups, while also establishing further partnerships to drive social inclusion across civil society and business. **Policies seek to encourage women's self-empowerment, improve the economic status of women through skills development and training, alleviate poverty and increase access to improved healthcare and safety.** The City is also emphasizing the linkages between different sectors and gender inclusion. For instance, large-scale transport improvement programmes are considered an ideal opportunity for the empowerment of vulnerable women.

GENDER EMPOWERMENT FOR HEALTH

Developing a sense of personal empowerment amongst women – and networks of social support – will **support a reduction of major communicable disease and health risks by 2040**. HIV, in the short to medium term, will be addressed through dealing with the often-neglected social and psychological contexts that place vulnerable groups such as women at higher risk.



38.5% OF TOTAL ELECTED CITY-LEVEL OFFICIALS ARE WOMEN WHAT DOES THIS MEAN FOR THE PEOPLE OF JOHANNESBURG?



WCCD INDICATORS AS A TOOL FOR BENCHMARKING AND MONITORING

INDICATORS ARE ONE OF THE KEY ELEMENTS OF JOHANNESBURG'S 2040 STRATEGY PLAN, as the measures through which the City plans to assess progress against its desired outcomes. A number of WCCD indicators have been selected and reorganized into the 2040 Strategy's four pillars (Economic Growth, Human and Social Development, Sustainable Services, and Governance). WCCD indicators will therefore be instrumental in reviewing the strategy and tracking its progress. Women as a percentage of total elected to city-level office is one of the WCCD indicators included in the Governance cluster.



"Africa urgently needs to industrialize"

...To make this happen, we need investments in infrastructure. At the African Development Bank, we are talking about using aid to massively leverage private capital to fund Africa's development"



Akinwumi Adesina, President, African Development Bank,
May 7th 2018



WCCD ISO 37120 DATA CAN HELP

CITY DATA FOR INFRASTRUCTURE INVESTMENT

- A. Pre-Investment Support: Building a Robust Baseline for **Evidence Based Decision Making**
- B. Post-Investment Support: Measuring Infrastructure Investment **Impact** Across Ontario and Canada



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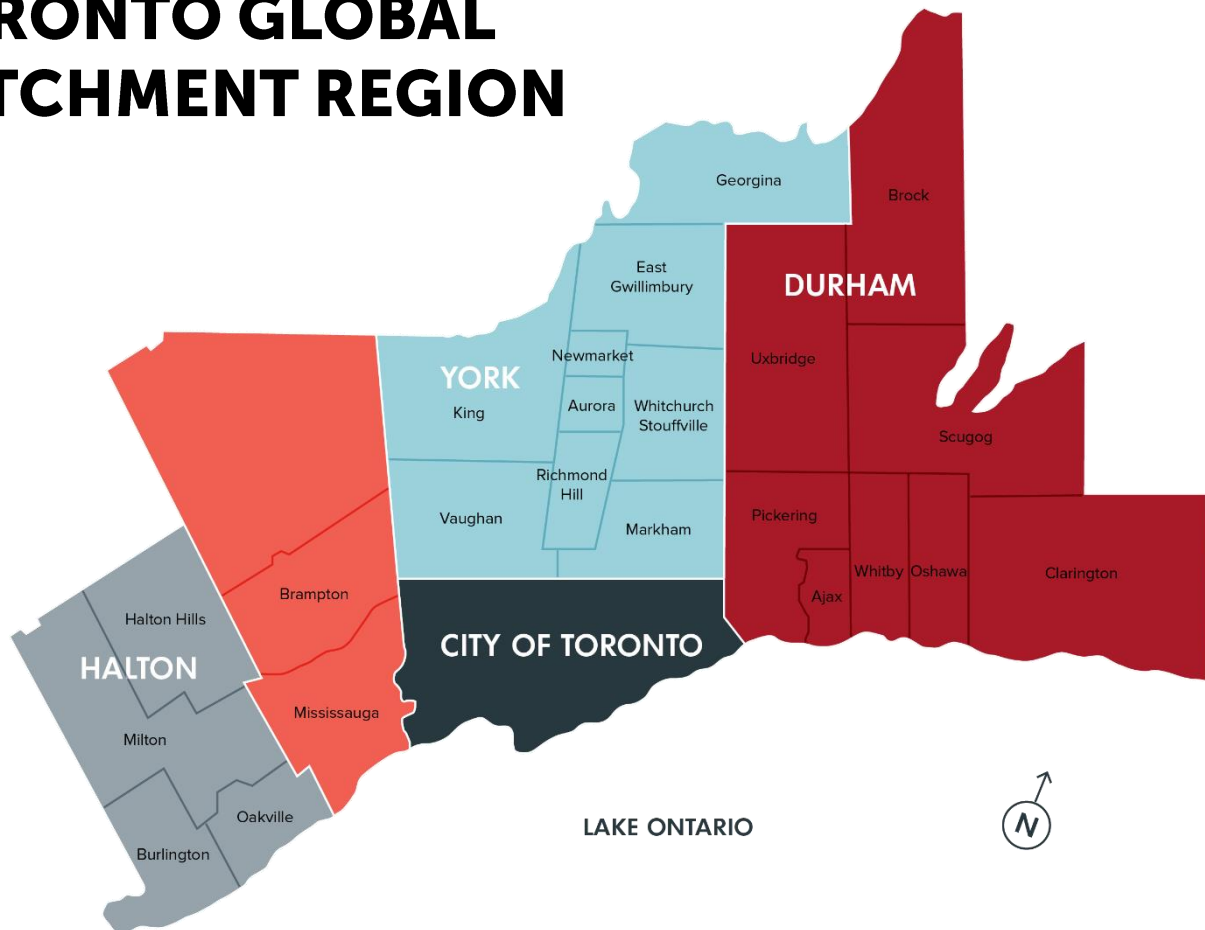
@wccitydata

TORONTO REGION

RESPONSE TO AMAZON HQ2 RFP



TORONTO GLOBAL CATCHMENT REGION



Investable Cities Index

City Data for City Leaders



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To harness standardised, globally comparable, city data as essential to tackling global, national and local agendas

WCCD Announces the Launch of Local Data Hubs Around the World at the United Nations

Thursday, 20 July 2017 WCCD/UN/CD/100, Foundation Cities, Partnerships, Press Releases, SDGs 7 comments



Location of the first WCCD Local Data Hubs to be hosted in WCCD, ISO 37120 certified cities throughout the world.

On Monday, July 17th, the WCCD was in New York at the United Nations, participating in [Local2030 – Hubs for Sustainability Solutions](#). At this event, organised by the Executive Office of the UN Secretary General, the WCCD announced the establishment of eight, “Local Data Hubs” around the world to harness standardised, globally comparable, city data as essential to tackling global, national and local agendas.

WCCD LOCAL DATA HUBS SUPPORTING DATA FOR AFRICAN CITIES

DUBAI

MINNA

JOHANNESBURG



WCCD CEO and Governor of Niger State sign MOU to establish the Minna-WCCD Local Data Hub

[Monday, 31 July 2017](#) [#DATAFORCITIES](#) [Blog](#) [Foundation Cities](#) [Local Data Hubs](#) [Partnerships](#) [SDGs](#) [No comments](#)



Patricia McCarney (front row, left) signs the MOU towards the establishment of the WCCD-Minna Local Data Hub with Professor Abdul Husaini (front row right), alongside His Excellency Abubakar Sani Bello, the Governor of Niger State, Nigeria (second row, second from left), the Nigerian Consul General (second row, third from left) and members of his Cabinet at the Nigerian Mission to the United Nations in New York.

On Friday, July 28th, the WCCD President and CEO, Dr. Patricia McCarney, was in New York to sign the initial MOU towards establishing the Minna-WCCD Local Data Hub with His Excellency Abubakar Sani Bello, the Governor of Niger State, Nigeria.

The United Nations Sustainable Development Goals - 17 Goals for 2030



WCCD CITY DATA FOR THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS 2017



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WCCD SUPPORTS THE SDGS

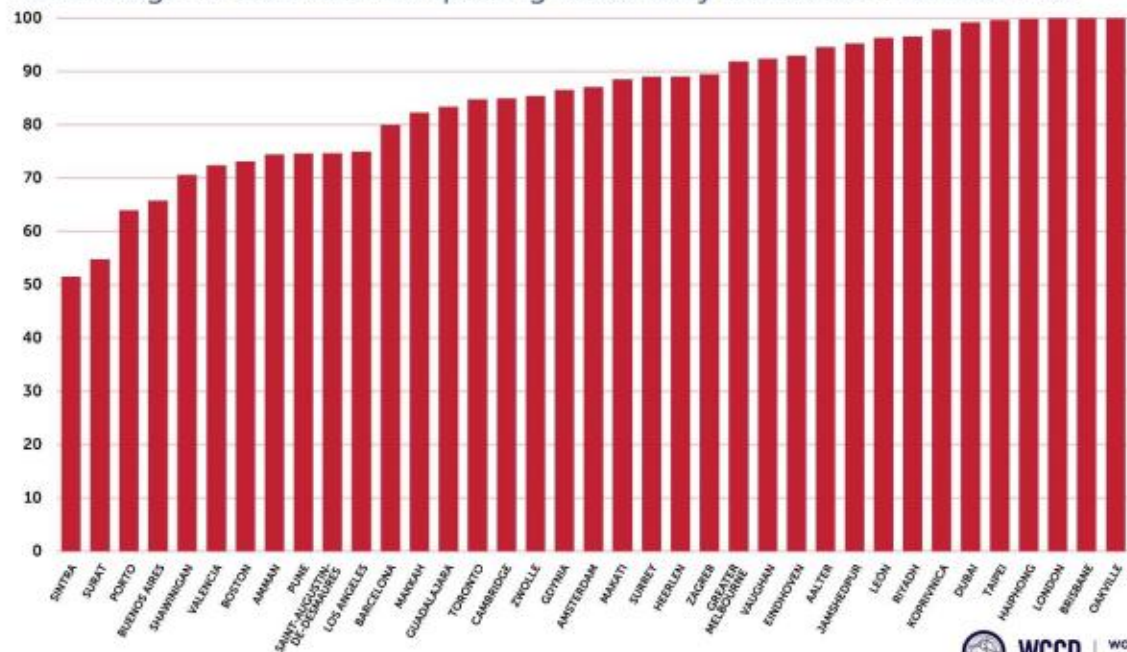


WCCD CITY DATA SUPPORTING SDG 4 – QUALITY EDUCATION

ENSURE THAT ALL COMPLETE
QUALITY PRIMARY AND SECONDARY EDUCATION

ISO 37120 Indicator 6.3:

Percentage of students completing secondary education: survival rate



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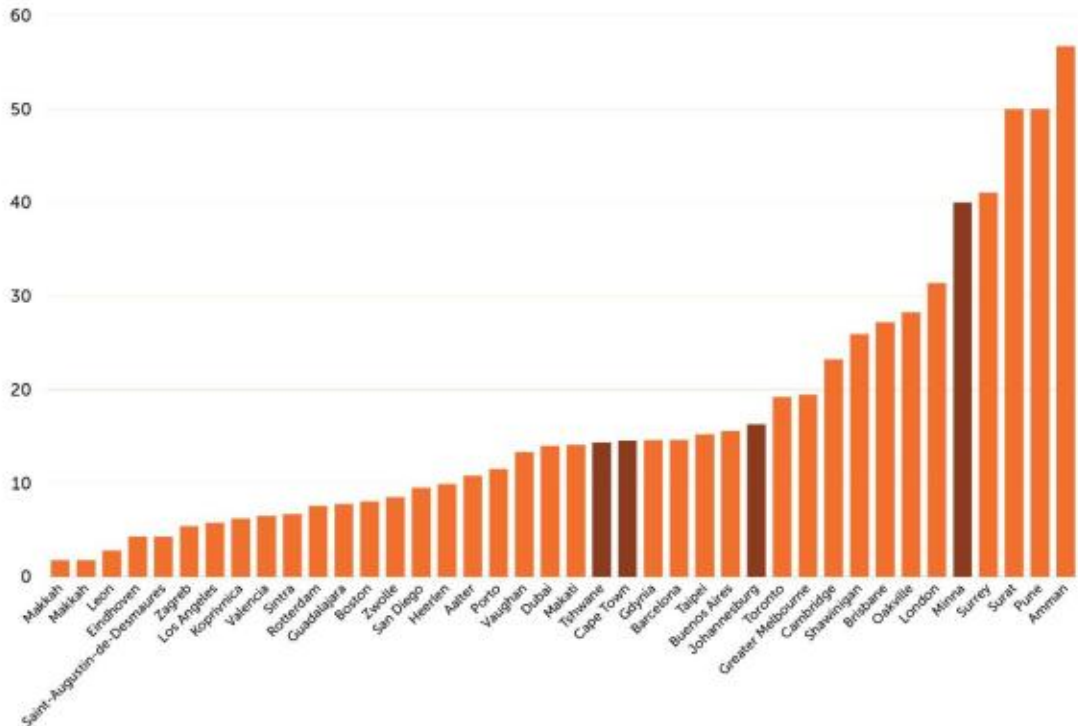
WCCD CITY DATA SUPPORTING SDG 9 – INDUSTRY, INNOVATION AND INFRASTRUCTURE SUPPORT ECONOMIC DEVELOPMENT



WCCD SUPPORTS THE SDGS

ISO 37120 Indicator 9.2:

Capital spending as a percentage of total expenditures



WCCD CITY DATA SUPPORTING SDG 11 – SUSTAINABLE CITIES AND COMMUNITIES

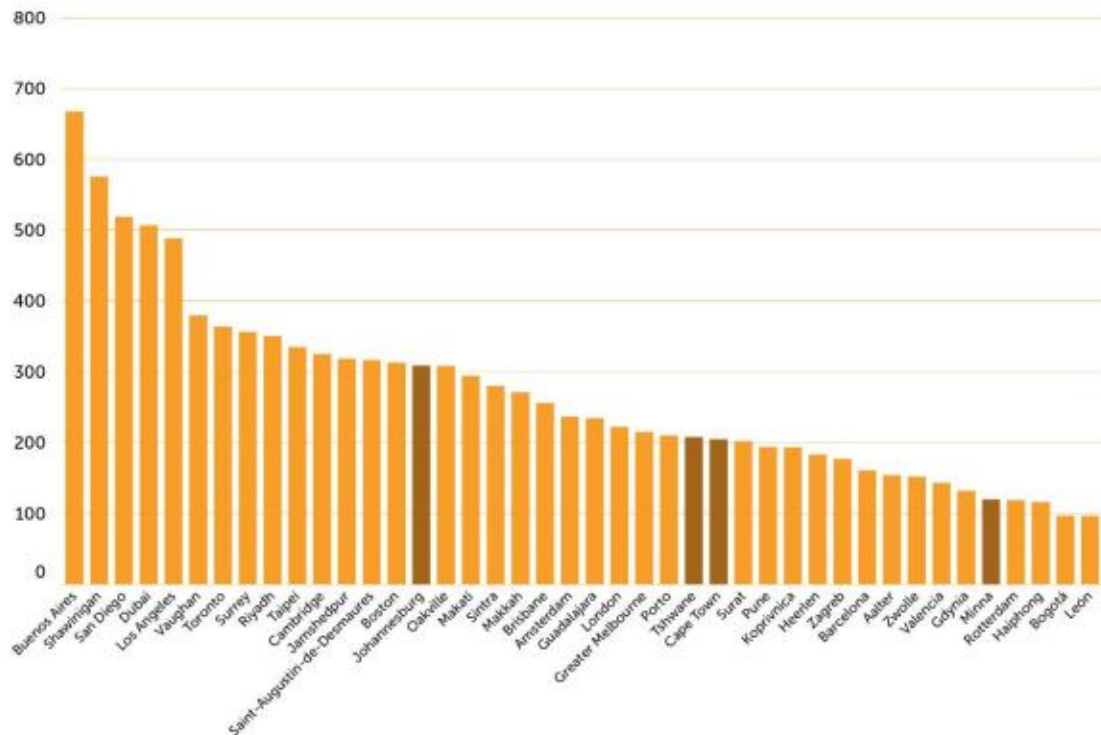
ACCESS TO BASIC SERVICES



WCCD SUPPORTS THE SDGS

ISO 37120 Indicator 21.4:

Total domestic water consumption per capita (litres/day)

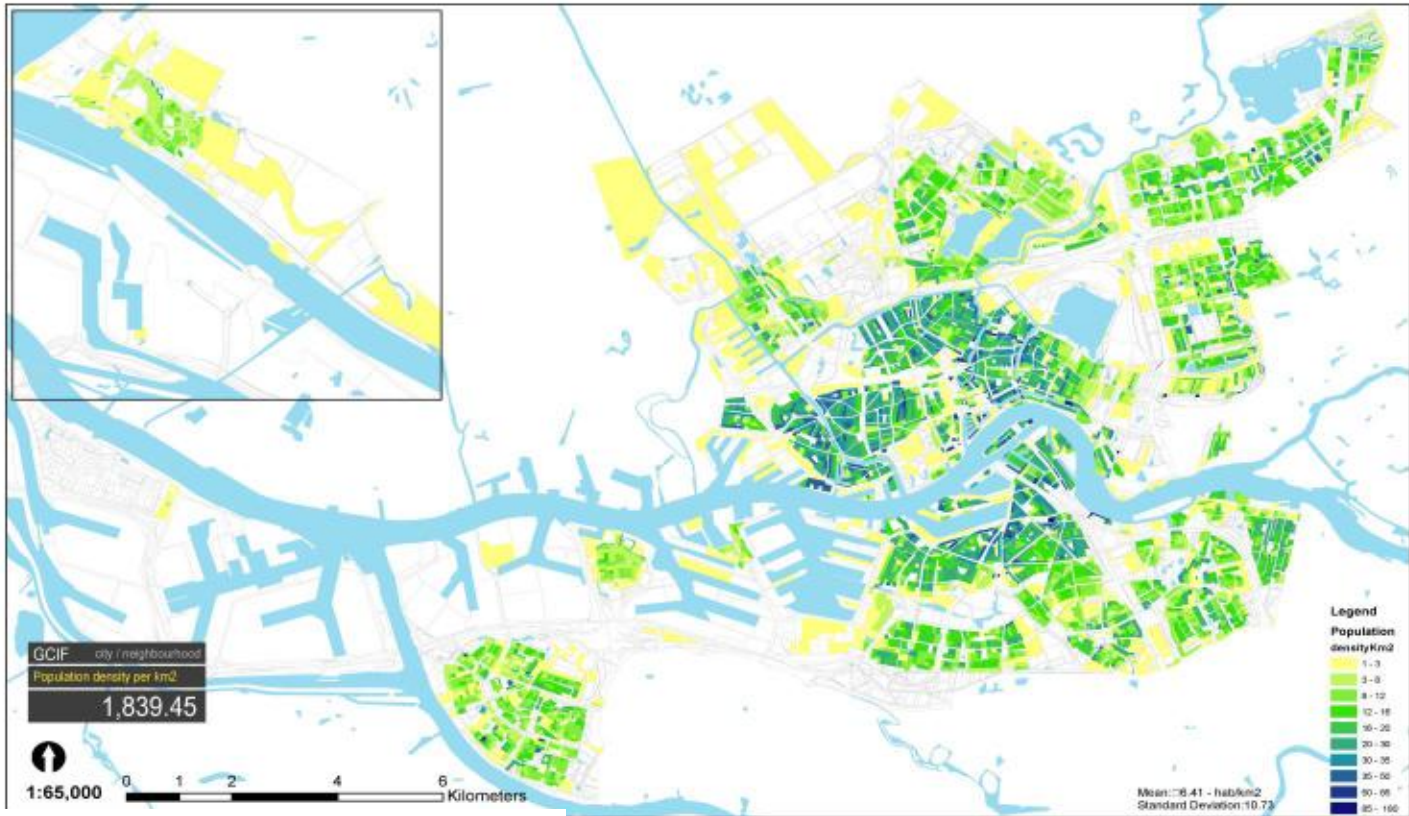




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**USING THE DATA:
EXAMPLE OF
LOCAL USE IN
CITIES**

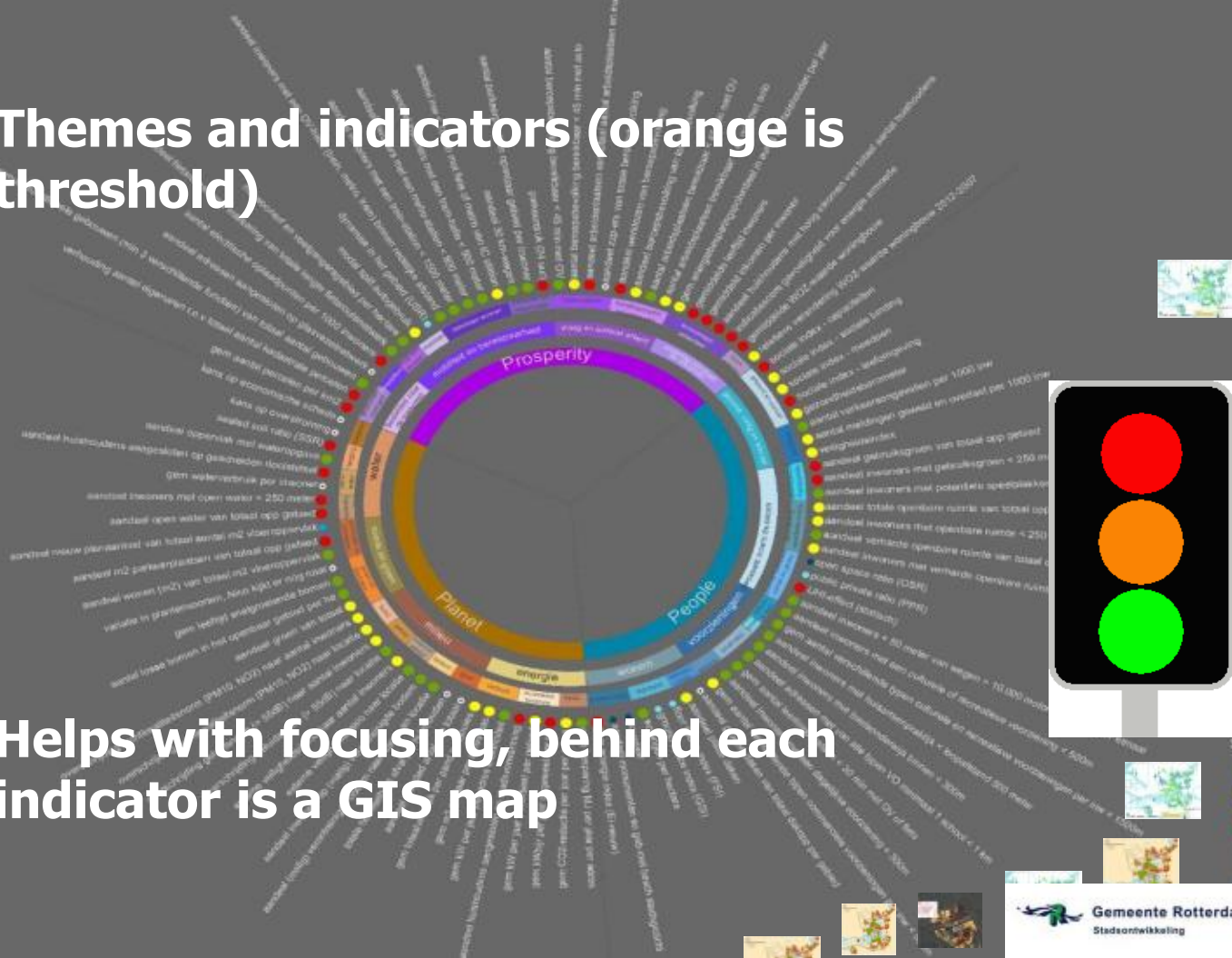
A MAP IS EASIER TO READ THAN MANY EXCELL SHEETS



ISO37120 indicator

Urban Planning, Shelter and Environment - Population density per Km²

Themes and indicators (orange is threshold)

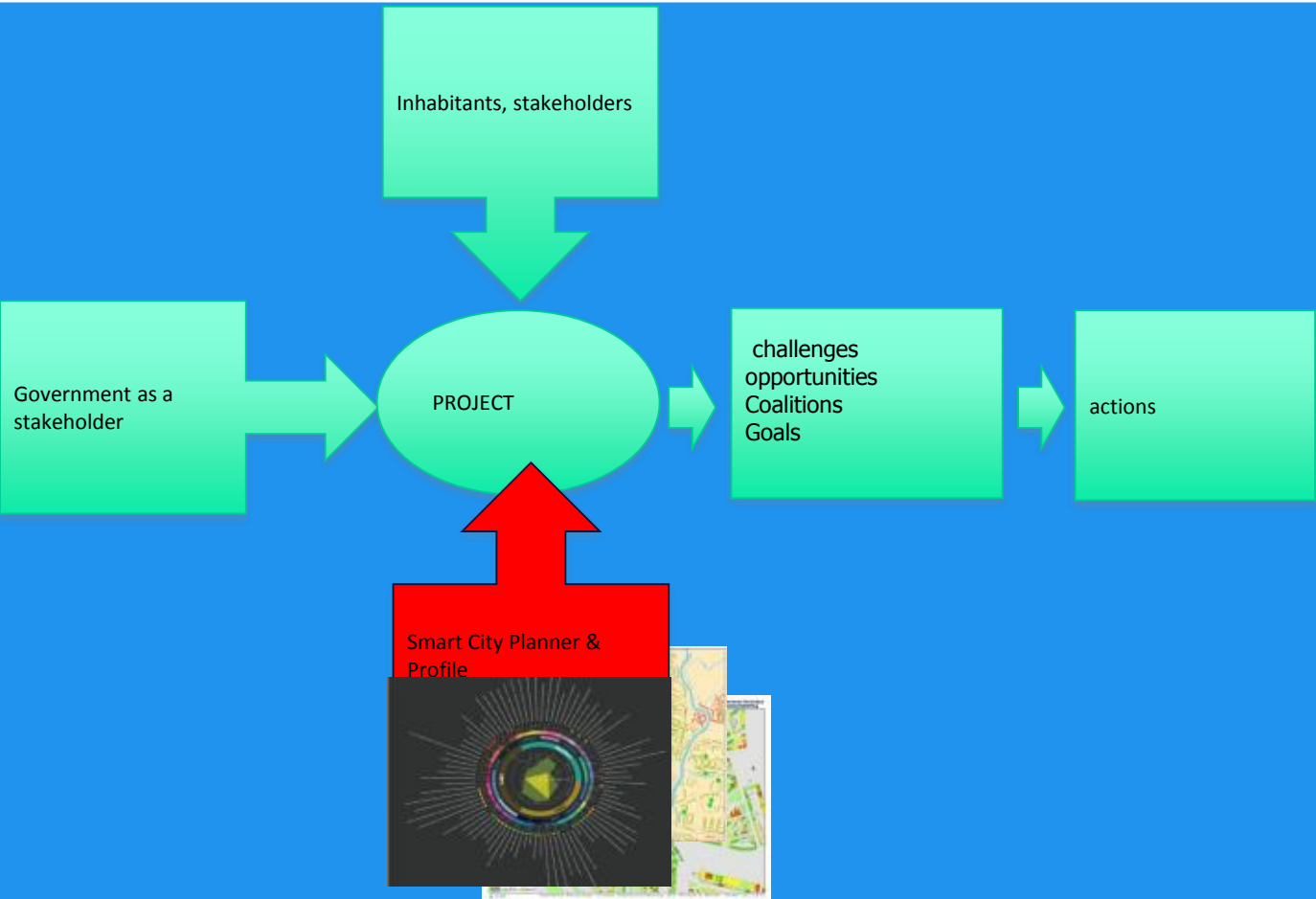


Helps with focusing, behind each indicator is a GIS map

Sustainability and Quality of life performance for whole city and for all 90 neighborhoods



Facilitate the transition use data and gis mapping

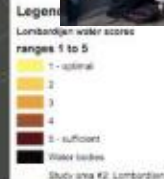


Put open, objective data on the table

DATA KNOWLEDGE THAT LEADS TO INFORMED INVESTMENT DECISIONS

Waterproblems, recreation shortage, poor public space

Possible solution : watergarden, water square (resilience!)



This leads back to the basic indicators in the standard37120



Ontario



UNIVERSITY OF
TORONTO

PHILIPS



UNISDR
The United Nations Office for Disaster Risk Reduction



SIEMENS
Ingenuity for Life

TATA TRUSTS



Statistics
Netherlands

المجلس التنفيذي
THE EXECUTIVE COUNCIL



CITYNET
THE REGIONAL NETWORK OF LOCAL AUTHORITIES
FOR THE MANAGEMENT OF HUMAN SETTLEMENTS

جسٹس شہر
WORLD ASSEMBLY OF ISLAMIC CITY

I.C.L.E.I
Local
Governments
for Sustainability

South African
CitiesNetwork



CITY INFRASTRUCTURE

Data-driven Investment & Decision Making

WCCD ISO 37120 CERTIFIED CITY DATA

SIEMENS
Ingenuity for life

ISO 37120



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the value of municipal data generated by The World council on City data

DATA THAT IS:

- Globally Standardized (ISO 37120)
- Regularly Reported (Annual Reporting)
- Independent and Third Party Verified (WCCD + Externally Audited)
- Open (Housed on the WCCD Global Open Data Portal)
- Drives informed infrastructure investment
- Pre-requisite for sound investment and smart city development



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THE WORLD COUNCIL ON CITY DATA

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A photograph of two young children riding bicycles on a red brick path. The child in the foreground is a boy with blonde hair, wearing a dark jacket and a red scarf, riding a black bicycle with a red basket. The child behind him is a girl with dark hair, wearing a dark jacket, riding a red bicycle with a red basket. They are riding on a wide, red brick path that runs alongside a modern brick building with many windows. There are green bushes and yellow flowers in the foreground, and several cars parked in a lot behind the path. The sky is overcast.

**Thank you for your
attention!**

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n.m.j.d.tillie@tudelft.nl
Twitter: @nicotillie72

ISO 37120 INDICATORS

Theme	Core Indicator	Supporting Indicator
ECONOMY	<ul style="list-style-type: none"> City's unemployment rate Assessed value of commercial and industrial properties as a % of total assessed value of all properties % of city population living in poverty 	<ul style="list-style-type: none"> % 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
EDUCATION	<ul style="list-style-type: none"> % of female school-aged population enrolled in schools % of students completing primary education: survival rate % of students completing secondary education: survival rate Primary education student/teacher ratio 	<ul style="list-style-type: none"> % of male school-aged population enrolled in schools % of school-aged population enrolled in schools Number of higher education degrees per 100 000 population
ENERGY	<ul style="list-style-type: none"> Total residential electrical energy use per capita (kWh/year) % of city population with authorized electrical service Energy consumption of public buildings per year (kWh/m²) % of total energy derived from renewable sources, as a share of the city's total energy consumption 	<ul style="list-style-type: none"> Total electrical energy use per capita (kWh/year) Average number of electrical interruptions per customer per year Average length of electrical interruptions
ENVIRONMENT	<ul style="list-style-type: none"> Fine particulate matter (PM2.5) concentration Particulate matter (PM10) concentration Greenhouse gas emissions measured in tonnes per capita 	<ul style="list-style-type: none"> Nitrogen dioxide (NO₂) concentration Sulphur dioxide (SO₂) concentration Ozone (O₃) concentration Noise pollution % change in number of native species



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ISO 37120 INDICATORS

Theme	Core Indicator	Supporting Indicator
FINANCE	<ul style="list-style-type: none"> Debt Service ratio (debt service expenditure as a % of a municipality's own-source revenue) 	<ul style="list-style-type: none"> Capital spending as a percentage of total expenditures Own-source revenue as a percentage of total revenues Tax collected as a percentage of tax billed
FIRE AND EMERGENCY RESPONSE	<ul style="list-style-type: none"> Number of firefighters per 100 000 population Numbers of fire related deaths per 100 000 population Number of disaster related deaths per 100 000 population 	<ul style="list-style-type: none"> Number of volunteer and part-time firefighter per 100 000 population Response time for emergency response services from initial call Response time for fire department from initial calls
GOVERNANCE	<ul style="list-style-type: none"> Voter participation in last municipal election (as % of eligible voters) Women as a % of total elected to city-level office 	<ul style="list-style-type: none"> % of women employed in the city government workforce Number of convictions for corruption and/or bribery by city officials per 100 000 population Citizen's representation: number of local officials elected to office per 100 000 population Number of registered voters as a % of the voting age population
HEALTH	<ul style="list-style-type: none"> Average life expectancy Number of in-patient hospital beds per 100 000 population Number of physicians per 100 000 population Under age five mortality per 1 000 live births 	<ul style="list-style-type: none"> Number of nursing and midwifery personnel per 100 000 population Number of mental health practitioners per 100 000 population Suicide rate per 100 000 population



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ISO 37120 INDICATORS

Theme	Core Indicator	Supporting Indicator
RECREATION		<ul style="list-style-type: none"> Square meters of public indoor recreation space per capita Square meters of public outdoor recreation space per capita
SAFETY	<ul style="list-style-type: none"> Number of police officers per 100 000 population Number of homicides per 100 000 population 	<ul style="list-style-type: none"> Crimes against property per 100 000 Response time for police department from initial call Violent crime rate per 100 000 population
SHELTER	<ul style="list-style-type: none"> % of city population living in slums 	<ul style="list-style-type: none"> Number of homeless per 100 000 population Percentage of households that exist without registered legal titles
SOLID WASTE	<ul style="list-style-type: none"> % of city population with regular waste collection (residential) Total collected municipal solid waste per capita per year % of the city's solid waste that is recycled 	<ul style="list-style-type: none"> % of the city's solid waste that is disposed of in a sanitary landfill % of the city's solid waste that is disposed of in an incinerator % of the city's solid waste that is burned openly % of the city's solid waste that is disposed of in an open dump % of the city's solid waste that is disposed of by other means Hazardous Waste Generation per capita (tonnes) % of the city's hazardous waste that is recycled
TELECOMMUNICATIONS AND INNOVATION	<ul style="list-style-type: none"> Number of internet connections per 100 000 population Number of cell phone connections 	<ul style="list-style-type: none"> Number of landline phone connections per 100 000 population



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ISO 37120 INDICATORS

Theme	Core Indicator	Supporting Indicator
TRANSPORTATION	<ul style="list-style-type: none"> Kilometres of high capacity public transport system per 100 000 population Kilometres of light passenger public transport system per 100 000 population Annual number of public transport trips per capita Number of personal automobiles per capita 	<ul style="list-style-type: none"> Percentage of commuters using a travel mode other than a personal vehicle Number of two-wheel motorized vehicles per capita Kilometres of bicycle paths and lanes per 100 000 population Transportation fatalities per 100 000 population Commercial air connectivity (number of non-stop commercial air destinations)
URBAN PLANNING	<ul style="list-style-type: none"> Green area (hectares) per 100 000 population 	<ul style="list-style-type: none"> Annual number of trees planted Areal size of informal settlements as a percentage of city area Jobs/housing ratio
WASTEWATER	<ul style="list-style-type: none"> % of city population served by wastewater collection % of the city's wastewater that has received no treatment % of the city's wastewater receiving primary treatment % of the city's wastewater receiving secondary treatment % of the city's wastewater receiving tertiary treatment 	
WATER AND SANITATION	<ul style="list-style-type: none"> % of city population with potable water supply service % of city population with sustainable access to an improved water source % of population with access to improved sanitation Total domestic water consumption per capita (litres/day) 	<ul style="list-style-type: none"> Total water consumption per capita (litres/day) Average annual hours of water service interruption per household % of water loss (unaccounted for water)



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