

ISO 37120, the WCCD & the new ISO Standard on Smart Cities

Thematic Roundtable and Institute Working Lunch
A Dialogue on Smart Cities in India
June 2015

Matthew Lynch
Global City Indicators Facility/World Council on City Data



MEMBERS - 256 CITIES ACROSS 82 COUNTRIES

Global Cities Institute & Data



100 STANDARDIZED INDICATORS

256 MEMBER CITIES



CITY DATA



DATA ANALYTICS



DATA VISUALIZATION



GOVERNANCE



PLANNING & DESIGN



MANAGEMENT



ISO 37120

Sustainable development of communities

Indicators for city services and quality of life

First edition
2014-05-15

PUBLISHED 2014

The first ISO Standard on
Global City Indicators



Manage

and make informed decisions through data analysis



Benchmark

and target



Leverage Funding

with senior levels of government



Plan

and establish new frameworks for sustainable urban development



Evaluate

the impact of infrastructure projects on the overall performance of a city



WCCD

**WORLD COUNCIL
ON CITY DATA**



WCCD FOUNDATION PARTNER CITIES

THE FIRST ISO 37120 CERTIFIED CITIES



OPEN DATA PLATFORM



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WCCD
ISO 37120

World Council on City Data
Created by Cities for Cities

**THE FIRST ISO
CERTIFIED CITY DATA**
[#dataforcities](#)

WWW.DATAFORCITIES.ORG



WCCD

ISO 37120

WCCD OPEN DATA PORTAL



CITY DATA FOR ALL

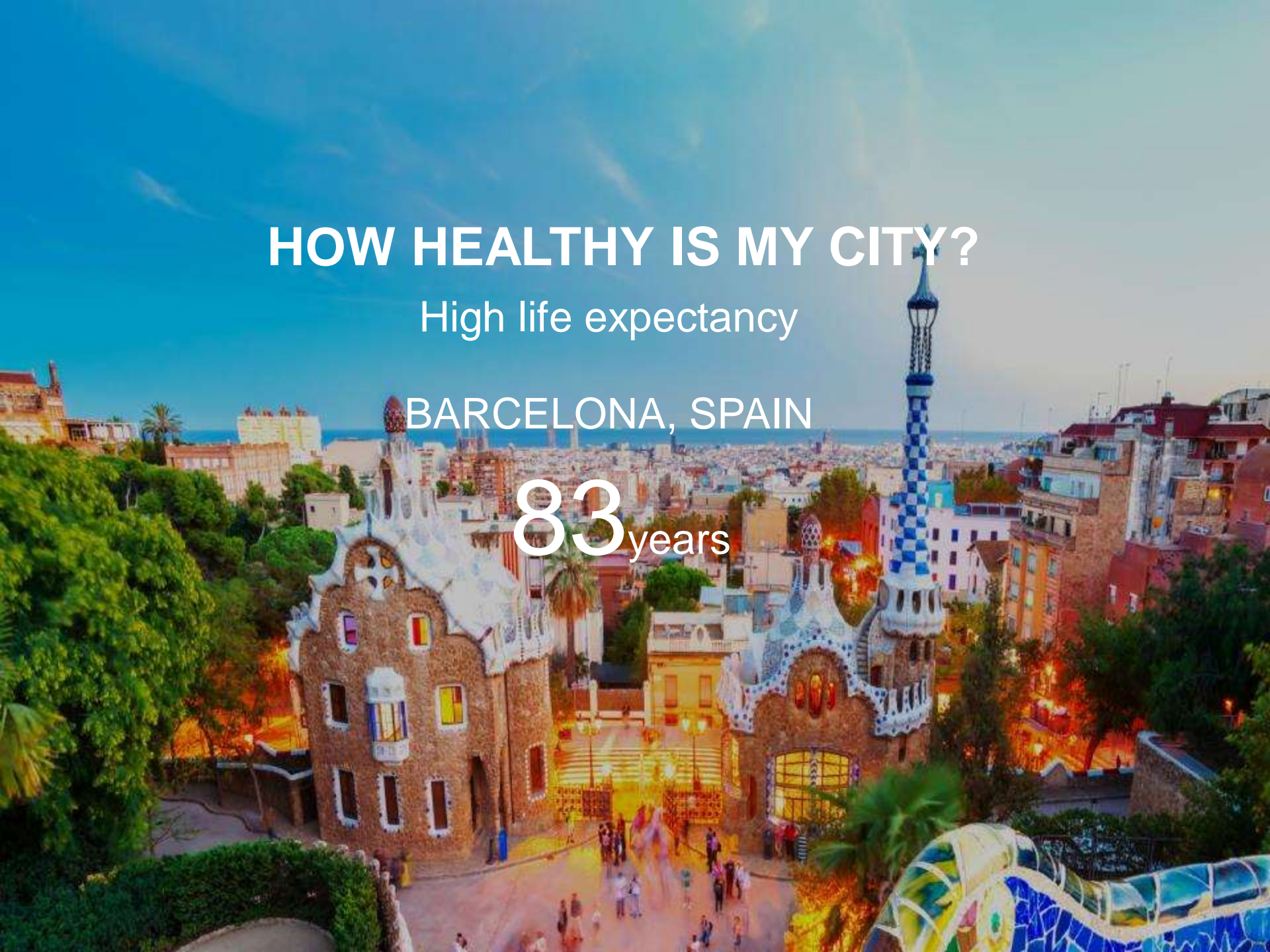
city leaders citizens industry leaders international agencies researchers

HOW HEALTHY IS MY CITY?

High life expectancy

BARCELONA, SPAIN

83 years



HOW HEALTHY IS MY CITY?

High number of physicians per 100,000

BUENOS AIRES, ARGENTINA

1,339



HOW GREEN IS MY CITY?

High area of green space

HELSINKI, FINLAND

1,489

Hectares per 100,000



HOW DO PEOPLE MOVE AROUND MY CITY?

High kilometers of bike lanes

AMSTERDAM, NETHERLAND

76

per 100,000 population



HOW DO PEOPLE MOVE AROUND MY CITY?

High percentage of commuters using alternative transportation

LONDON, UNITED KINGDOM

74%



HOW CLEAN IS MY AIR?

Low PM2.5 concentration

MELBOURNE, AUSTRALIA

6.1 $\mu\text{g}/\text{m}^3$



HOW CLEAN IS MY AIR?

Low O₃ concentration

GUADALAJARA, MEXICO

40 $\mu\text{g}/\text{m}^3$



HOW INNOVATIVE IS MY CITY?

High number of new patents registered per 100,000 population

BOSTON, USA

43



HOW INNOVATIVE IS MY CITY?

High number of higher education degrees per 100,000

TORONTO, CANADA

45,875



HOW PROSPEROUS IS MY CITY?

High number of businesses per 100,000

LOS ANGELES, USA

12,316

HOW PROSPEROUS IS MY CITY?

Low unemployment rate

SHANGHAI, CHINA

4.2%





WCCD

ISO 37120

CITY DATA FOR ALL



**EXPLORING THE WCCD
OPEN DATA PORTAL :
ANALYTICS AND GRAPHING**



ISO 37120 - 100 INDICATORS ACROSS 17 THEMES



Economy



Governance



Telecommunications



Education



Health



Transportation



Energy



Recreation



Urban Planning



Environment



Safety



Wastewater



Finance



Shelter



Water & Sanitation



Fire & Emergency
Response



Solid Waste

ANALYTICS - COMPARATIVE LEARNING TOOL



RESIDENTIAL SOLID WASTE COLLECTION

SOLID WASTE COLLECTED

SOLID WASTE RECYCLED

DISPOSAL BY LANDFILL

DISPOSAL BY INCINERATOR

DISPOSAL BY BURNING OPENLY

DISPOSAL BY OPEN DUMP

DISPOSAL BY OTHER

HAZARDOUS WASTE GENERATED

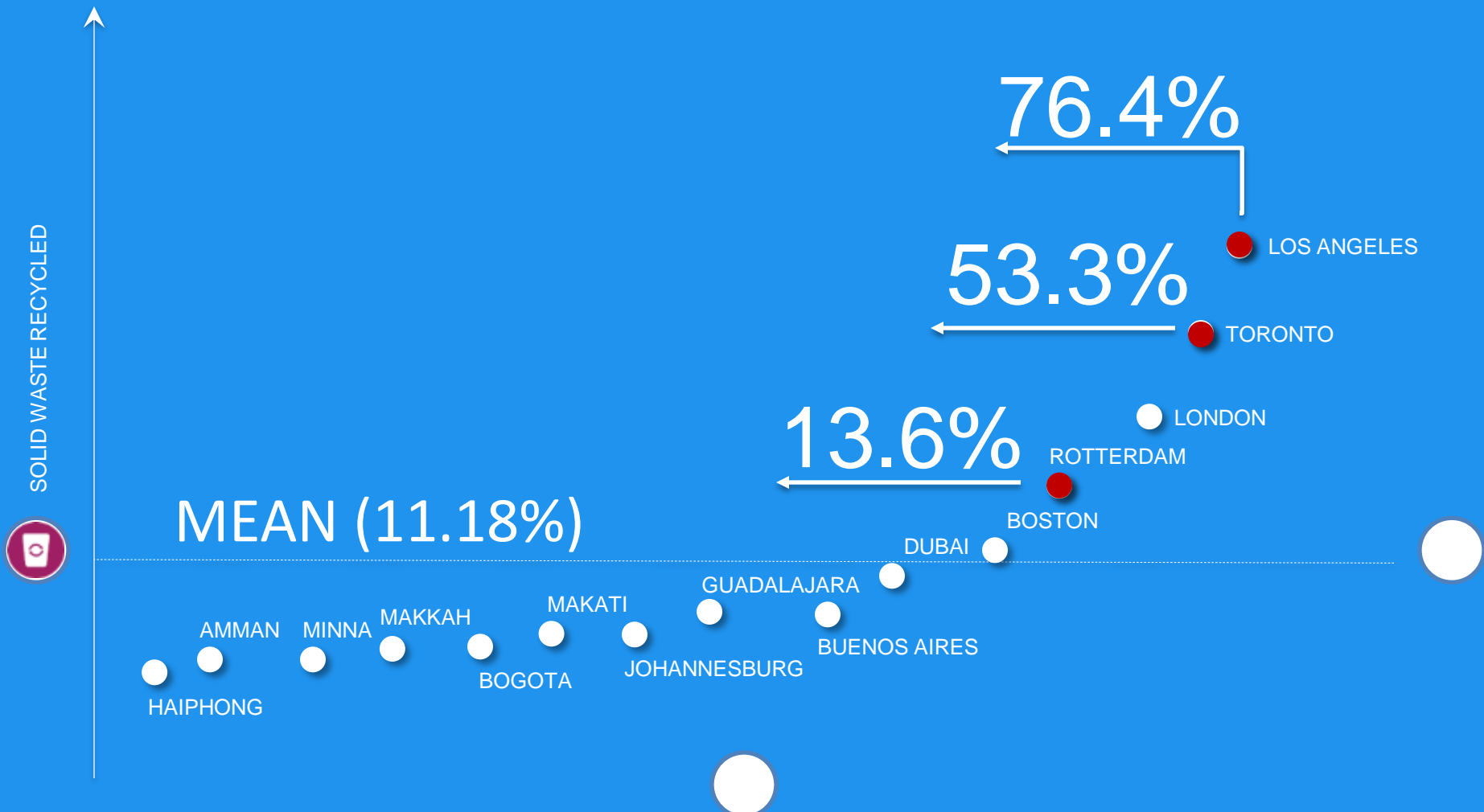
HAZARDOUS WASTE RECYCLED



SOLID WASTE RECYCLED



ANALYTICS - COMPARATIVE LEARNING TOOL



ANALYTICS, EXPLORING RELATIONS WITH 100 DATA POINTS

LIFE EXPECTANCY



PM2.5 CONCENTRATION

PM10 CONCENTRATION

GHG EMISSIONS

NO2 CONCENTRATION

SO2 CONCENTRATION

O3 CONCENTRATION

NOISE POLLUTION

CHANGE IN NATIVE SPECIES



LIFE EXPECTANCY

IN-PATIENT HOSPITAL BEDS

NUMBER OF PHYSICIANS

UNDER AGE 5 MORTALITY RATE

NUMBER OF NURSES/MIDWIVES

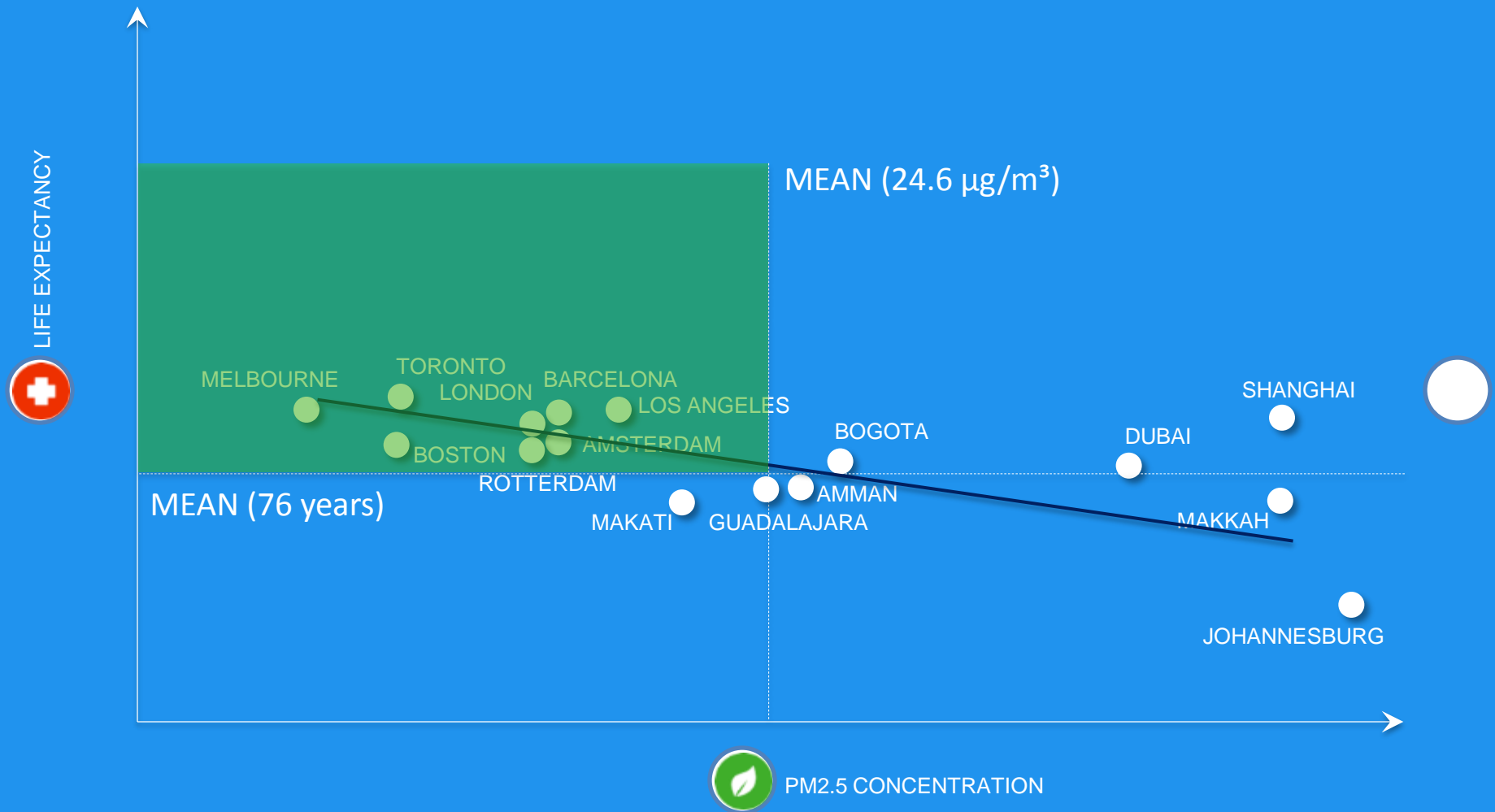
NUMBER OF MENTAL HEALTH PRACTITIONERS

SUICIDE RATE



PM2.5 CONCENTRATION

ANALYTICS, EXPLORING RELATIONS WITH 100 DATA POINTS



WCCD WEB PORTAL – FUTURE DEVELOPMENT



OPEN DATA PLATFORM



STANDARDIZED DATA



ANALYTICS



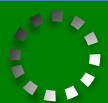
INNOVATION



INFOGRAPHICS



APPS



CITY DIALOGUES

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Sustainable Cities
ISO 37120

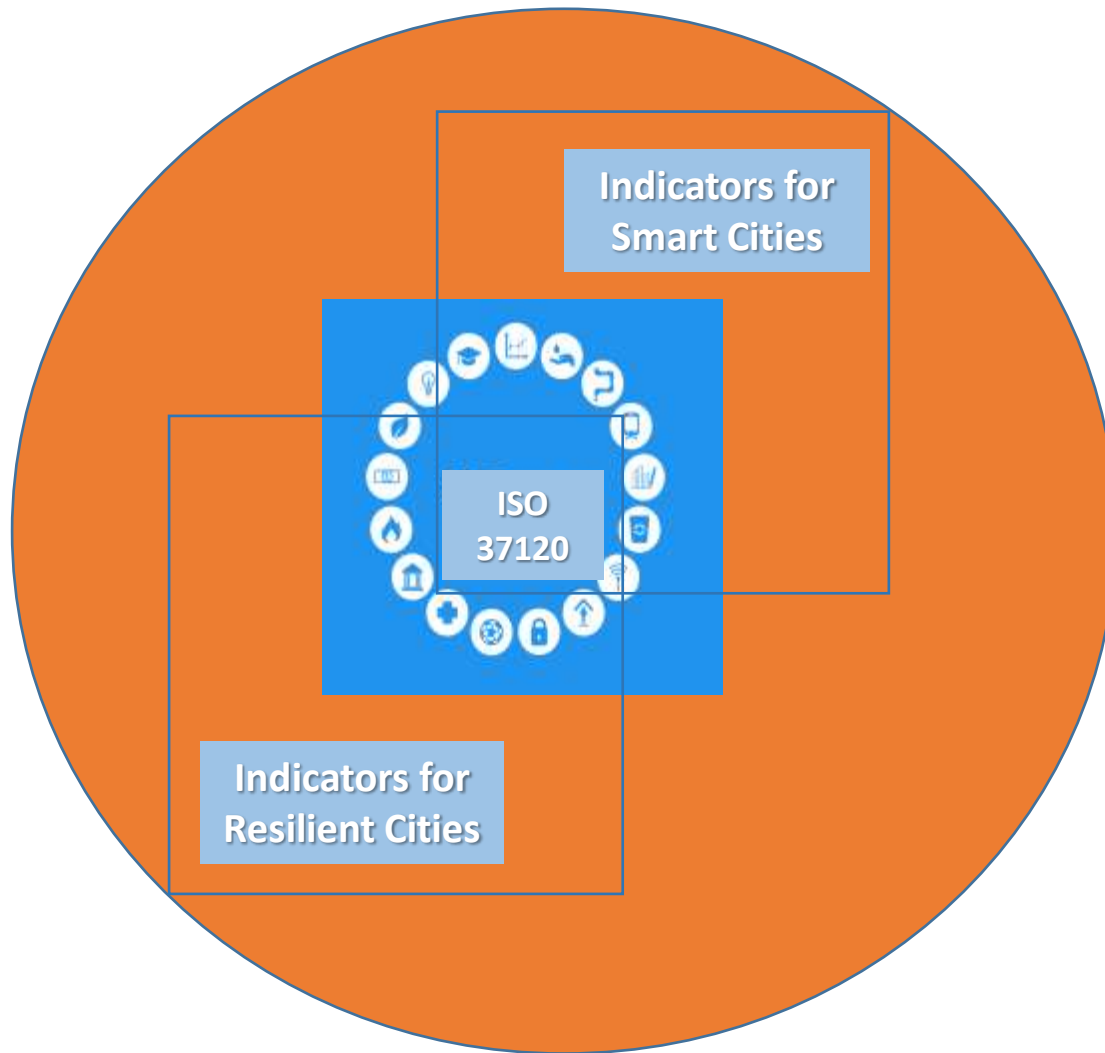
NEXT STEPS AT THE ISO

A new family of ISO Standards
on City Indicators

Smart Cities
(Approved)

Resilient Cities
(ISO 37121)

ISO FAMILY OF STANDARDS



SMART CITIES DEFINITION

ISO Technical Management Board Smart Cities Advisory Group definition of Smart Cities:

A Smart City dramatically increases the pace at which it improves its social economic and environmental (sustainability) outcomes, responding to challenges such as climate change, rapid population growth, and political and economic instability...

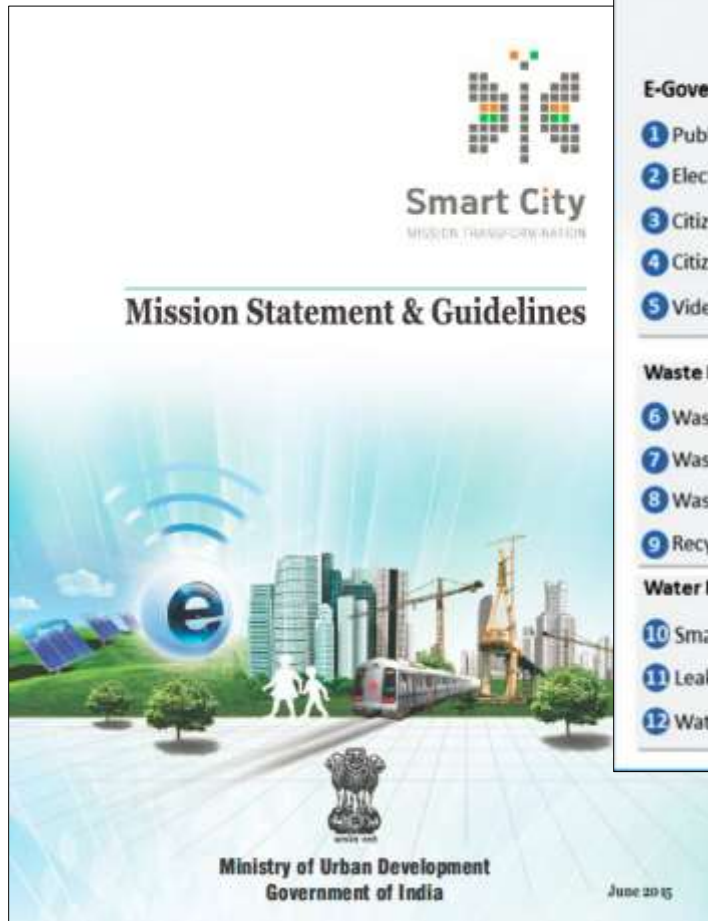
...by fundamentally improving how it engages society, how it applies collaborative leadership methods, how it works across disciplines and city systems, and how it uses data information and modern technologies....

... in order to provide better services and quality of life to those in and involved with the city (residents, businesses, visitors), now and for the foreseeable future, without unfair disadvantage of others or degradation of the natural environment.

STANDARD PURPOSE

- Will enable cities to work with a standardized set of indicators to measure their performance in the overarching theme of Smart Cities
- Will allow cities to draw comparative lessons from other cities globally
- Will enable cities to share best practices
- Will help cities to innovate and find technological and knowledge base solutions to address their main challenges.

SIGNIFICANT ALIGNMENT: SMART CITIES MISSION



SMART CITIES MISSION: INFRASTRUCTURE & SERVICES

- adequate water supply
- assured electricity supply
- sanitation, including solid waste management
- efficient urban mobility and public transport
- affordable housing, especially for the poor
- IT connectivity and digitalization
- good governance
- sustainable environment
- safety and security of citizens
- health and education



Thank you!

Global City Indicators Facility
University of Toronto
170 Bloor Street West, Suite 1100
Toronto, Ontario M5S 1T9 CANADA

TEL	+1 416 966 2368
FAX	+1 416 966 0478
Email	matthew.lynch@globalcities.ca
Web Page	www.globalcitiesinstitute.org www.dataforcities.org