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Brave New World - The Rise of Cities Globally: UrbanizationMeets Technological Innovation and Digitization

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BRAVE NEW WORLD

THE RISE OF CITIES GLOBALLY: URBANIZATION MEETS TECHNOLOGICAL INNOVATION AND DIGITIZATION

BY RHONDA BINDA, ESQ.

This OER material was produced as a result of the PIT-UN network Challenge Grant - New America

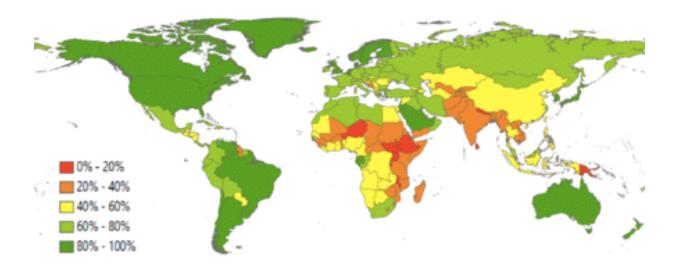
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CITIES ON THE RISE • GLOBAL CITY • TEAMS CHALLENGE

- Urbanization trends globally persist as more people seek work and educational opportunities in city centers
- The United Nation predicts that by 2050 about 64% of the developing world and 86% of the developed world will be urbanized



Global urbanization map showing the % of urbanization per country in 2015

GLOBAL TRENDS

GLOBAL CITY TEAMS CHALLENGE

- Cities have become models for governments across the world on how to address global challenges
- 100s of local/global organizations now exist
- Cities are adopting technology to improve lives and making a disproportionate impact worldwide



World Bank Headquarters, Washington, D.C.



In Jan. 2010, US Mayors upon returning from the COP climate change meetings in Europe, demanded that the US Department of State afford them the opportunity to join US diplomats in negotiations in future climate meetings.

Secretary Clinton created the Special Representative's Office for Global Intergovernmental Affairs, thus including for the first time local officials in international multilateral negotiations.

In 2017, Hidalgo and Horacio Rodríguez Larreta, Mayor of Buenos Aires, spearheaded the Urban 20 (U20), a platform for major cities in G20 countries to bring their "urban perspective" to the G20 member states in tackling common problems, showcasing their innovative approaches leveraging emerging technologies at the local level to tackle global issues.



In April 2018, mayors from 20 cities signed the U20's first Joint Declaration; six months later, representatives from more than 30 cities convened for the U20's inaugural summit in Buenos Aires.

Over recent years, cities —and especially "smart cities" are leapfrogging progress on several international metrics by leveraging technology to modernize their services and infrastructure- and have emerged as leaders on key issues of international concern.



This summer, Los Angeles, CA Mayor Eric Garcetti had a private audience the Pope Francis at the Vatican, where the two discussed climate change, poverty, youth, and immigration.

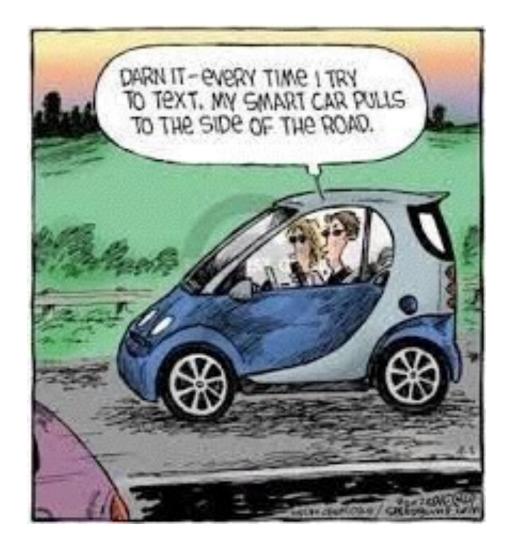


TECHNOLOGY MEETS URBANIZATION



There are over 200 localglobal organizations impacting international relations and policy, largely because of the pace at which cities are using and embracing technology and innovation.

SMART CITIES OF THE FUTURE



THREE PILLARS FOR A SMART AND CONNECTED CITY OR COMMUNITY

100% CONNECTED 100% MOBILE 100% RESILIENT

US EXAMPLE: JAMAICA, QUEENS, NYC

- **3T Strategy**
- Technology
- Tourism
- Transportation



US EXAMPLE: JAMAICA, QUEENS, NYC

Technology: Universal Broadband and Digital Literacy Movement



Tourism: Jameco Exchange Art Gallery inclusive of Digital Art



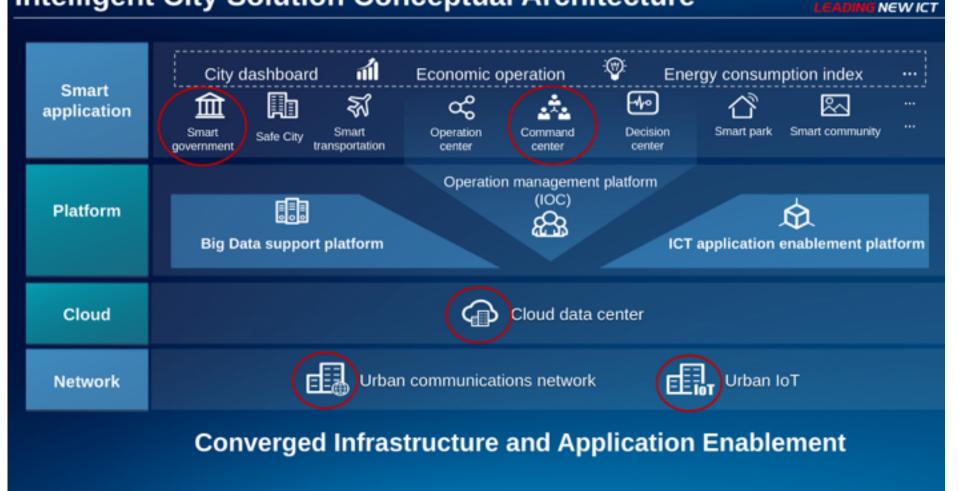
ASIAN EX: SHENZHEN, CHINA

Safety, central nerve
Transportation
Tourism adding green spaces throughout



ASIAN EXAMPLE: SHENZHEN, CHINA

Intelligent City Solution Conceptual Architecture



EUROPE: E-ESTONIA SMART COUNTRY

- 99% Gov Services on-line
- 98% Electronic identity cards
- 46.7% i-Voting
- In 2017 became legal to test self-driving vehicles on all roads





SMART VILLAGES AND TOWNS

- 3.4 billion rural people in the world that do not have access to global markets
- Enabling entrepreneurship, job training and onboarding to open innovation platforms



• Low cost and low energy

"The internet is becoming the town hall of the global village of tomorrow" Bill Gates, Business Magnate & Philanthropist

www.smartvillagemovement.org/

FROM CITIES TO SMART REGIONS

- Smart Regions 2018 Infrastructure Challenge
- Economies of Scale
- Wider impact
- Leveraging resources
- Leveraging collective data



Slovakia Smart Regions

GLOBAL STANDARDS

Smart Cities Standards

IEEE-SA P2784: The Guide to the Technology and Process to Build A Smart City helps planners create interoperable and resilient smart city success stories

IEEE Standards Help Enable Smart City Technologies for Humanity

Smart Grid . IEEE 1547[™] Series DER IEEE 1815[™] Distributed Network Protocol IEEE 2030[™] Series Interoperability IEEE C37[™] Series Grid Critical Infrastructure

Intelligent Transportation •

IEEE 1609[™] Series Wireless Access Vehicle Environment **IEEE 1901[™]** Series Power Line Communications (PLC) IEEE 802.15.4p[™] WPAN Rail Communications and Control IEEE 1512[™] Emergency Management System

eHealth •

IEEE 11073[™] Series Medical Devices **IEEE 139™** RF Emission from ISM Equipment **IEEE 602[™]** Healthcare Facilities **IEEE 1363[™]** Series Encryption

Energy Efficiency •

IEEE 1801[™] Low Power, Energy Aware Electronic Systems **IEEE P1889™** Electrical Performance of Energy Saving Devices IEEE P1823™ Universal Power Adapter for Mobile Devices IEEE P1922.1™-IEEE P1929.1™ Series for **Energy Efficient Systems**

Internet of Things (IoT) • IEEE P2413[™] IoT Architecture

IEEE 1588[™] Precision Time Stamp IEEE 1451[™] Series Sensor Networks IEEE P1451-99™ Harmonization of IoT Devices and Systems

Smart City

<u>_</u> IEEE P1914.1[™] Fronthaul IEEE P1918.1™ Tactile Internet IEEE 802[®] LAN/MAN IEEE P1915[™]-IEEE P1921.1[™] Series Software Defined Networks

Learning Technologies

IEEE 1484[™] Series eLearning Technologies IEEE 1278[™] Series Distributed Interactive Simulation **IEEE 1516™** Series Modeling and Simulation **IEEE 1730[™]** Series Distributed Simulation Engineering and Execution Process



IEEE 802[®] LAN/MAN IEEE 1901[™] Series PLC IEEE 1905.1™ Home Network for Heterogeneous Technologies IEEE 2030.5[™] Smart Energy Profile

eGovernance

IEEE P7002[™] Data Privacy Process IEEE P7004[™] Child and Student Data Governance IEEE P7005[™] Transparent Employer Data Governance IEEE P7006[™] Personal Data Artificial Intelligence (AI) Agent

Cyber Security

IEEE P802E[™] ePrivacy IEEE 1363[™] Series Encryption IEEE 1402[™] Physical Security IEEE 1686[™] Intelligent Electronic Devices (IEDs)

IEEE STANDARDS ASSOCIATION



GLOBAL TREND: USE OF AI/ML

In 2019 US Dept. of **Commerce's Global Cities** Teams Connect, launched two new superclusters on AI/ML and Smart Buildings with hundreds of cities and mayors around the world to create global standards from the bottom up, local to global



THE BEST WAY TO PREDICT THE FUTURE IS TO DESIGN IT YOURSELF!

THANK YOU!

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