

ESI ThoughtLab Reveals How 167 Cities Worldwide are Leveraging Technology, Data, and Partnerships to Drive Social Development Goals

Pandemic accelerates rise of Cities 4.0, propelling the development of a future roadmap toward urban prosperity, sustainability, and citizen well-being

- The pandemic spurred more than one-third of cities around the globe to give more priority to efforts to promote the social good
- 65 percent of city leaders said smart city programs were crucial to COVID-19 response
- 25 percent of city leaders said COVID-19 underscored the imperative to achieve the UN Sustainable Development Goals
- 20 cities globally were identified as Cities 4.0—those that are leaders in using smart technology, data, and partnerships to achieve their social, environmental, and economic goals

March 30, 2021 (Philadelphia, PA) – Today, ESI ThoughtLab released *Smart City Solutions for a Riskier World*, a forward-looking study that provides city decision-makers with an evidence-based playbook for driving better social, environmental, and economic outcomes in today’s transformed world. The research, based on a survey of 167 city leaders from 82 countries around the world, dramatically underscores the vital role of technology, data, partnerships, and citizen engagement in enabling municipalities to recover from the COVID-19 pandemic and helping give rise to a new class of cities—Cities 4.0.

To understand how cities are using the UN Sustainable Development Goals (SDGs) as a roadmap for the future, ESI ThoughtLab collaborated with a global coalition of government, business, and academic leaders to conduct a comprehensive benchmarking study of diverse cities across six world regions: Africa, Asia Pacific, Europe, Latin America, Middle East, and North America. The research also included AI-enabled sentiment analysis of citizen views on the SDGs and digital solutions.

“Our discussions with global city leaders have made it clear that the pandemic has been a catalyst for remarkable technological, business, and social change, which will continue even after the health crisis ends,” said Lou Celi, CEO of ESI ThoughtLab. “The most successful cities will be digitally transformed, citizen-centric, and fully sustainable, as well as skilled in the new ways of doing business. We call these cities, Cities 4.0.”

Rise of Cities 4.0 and Technology Investments Set to Fuel Change

ESI ThoughtLab researchers found that 20 of the 167 cities surveyed meet the definition of Cities 4.0—cities that excel at leveraging technology, data, ecosystems, and partnerships of all kinds, including those with businesses, universities, citizens, and communities. As a result, Cities 4.0 are further ahead in smart city initiatives than other cities. For example, they widely deploy 14 smart city projects versus an average of seven for other cities and they have superior infrastructure, better public transportation, roads, parks, healthcare, and digital connectivity.

In addition, Cities 4.0 have made the greatest headway on the SDGs, with 86 percent making progress across all 17 goals. And they are seeing higher ROI on technology investments made in all urban domains, including digital infrastructure; mobility and transportation; public safety; living and health; government and education; sustainability; and energy and water.

The 20 Cities 4.0 identified in the study are Aarhus, Athens, Baltimore, Barcelona, Berlin, Birmingham, Boston, Copenhagen, Helsinki, London, Los Angeles, Madrid, Moscow, New York, Orlando, Paris, Philadelphia, Singapore, Tallinn, and Vienna.

The research also found that cities are investing in an array of smart technologies. The largest investments are being made now in cloud (87% of cities), mobile (85%), IoT (81%), biometrics (72%), and AI (66%). Over the next three years, the technologies posting the largest increases in investment will be digital twins (+164%), 3-D printing (+125%), augmented reality/virtual reality (+63%), and data warehouses (+50%).

SDGs Are a Priority Moving Forward

City leaders are applying lessons learned during the pandemic to set a path to achieve the SDGs. They reported that they were doing the most with SDGs related to people, including no poverty (91% of cities), good health and well-being (89%), decent work (86%), and quality education (86%).

The survey respondents also identified hurdles to advancing on the SDGs over the next three years, including complex policies and regulations (52% of cities), finding the right partner or supplier (50%), and managing data security and privacy (44%).

Moving forward, city leaders can utilize the ESI ThoughtLab research as a roadmap to becoming Cities 4.0. They can also take the four steps that Cities 4.0 follow to advance their SDG agenda: (1) regularly monitor and assess SDG efforts, (2) ensure SDG programs are widely supported throughout government, (3) designate a department to take the SDG lead, and (4) undertake a voluntary local review of progress on the SDGs.

About Smart City Solutions for a Riskier World Research

ESI ThoughtLab's research for the *Smart Cities for a Riskier World* was based on rigorous analysis, including in-depth phone surveys of 167 smart city leaders around the world conducted during the fourth quarter of 2020. The full list of cities, which includes Abu Dhabi, Amsterdam, Atlanta, Bangkok, Beijing, Rio de Janeiro, Washington, DC, Cairo, and Libreville, can be found by visiting www.citysolutions.riskierworld.com

Urban experts and economists at ESI ThoughtLab benchmarked the cities on the use of smart technologies, data analytics, partnerships, and other levers of change across their urban ecosystems to develop this ground-breaking data and analysis. ESI ThoughtLab also correlated and integrated data on city services, demographics, and quality of life from the World Bank, Numbeo, IESE, and other well-respected sources. To gain a citizen perspective, ESI ThoughtLab is also conducting ongoing AI-enabled sentiment analysis of residents of 10 representative cities around the world, which is publicly available on www.citysolutions.riskierworld.com

All data and results from the study were reviewed by an independent advisory board of city leaders, corporate executives, and academic experts, including representatives from sponsoring companies Axis Communications, Bentley Systems, Cisco, Deloitte, Hatch, Honeywell, Intel, The International Finance Corporation, Microsoft, NTT, and Oracle.

About ESI ThoughtLab

ESI ThoughtLab is an innovative research firm providing fresh ideas and actionable insights through rigorous data analysis. The team of 30 economists and subject matter experts specialize in assessing the impact of technological, economic, and demographic shifts on companies, industries, and cities. Learn more at www.esithoughtlab.com.

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