Tool: AI Use Cases for Smart Cities and Intelligent Urban Ecosystems

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> This Tool is a companion to the AI use-case prism for smart cities and intelligent urban ecosystems. CIOs can use it to support decision making and determine the benefits and impacts of AI against technical maturity and stakeholder readiness.

When to Use

This is a companion document for Infographic: Artificial Intelligence Use-Case Prism for Smart Cities, driving more context behind our use-case business value and feasibility assessments. CIOs can use this Tool as a means to understand the risks and opportunities for AI usage in smart cities and urban ecosystems.

This Tool describes the AI use cases for smart cities and intelligent urban ecosystems and their business benefits as well as their feasibility. For the infographic, see Infographic: Artificial Intelligence Use-Case Prism for Smart Cities. The economic and societal business value in smart cities is generated through an adaptive and contextualized service delivery environment, with assets and infrastructure operating at efficient and sustainable speed. AI represents itself as a catalyst for contextualization of locations; crowd movement analytics; and interactive alignment of transportation, mobility, security, utilities and sustainability processes.

AI in smart city and intelligent urban ecosystem use cases will streamline the complexity of available data, applying data governance and policies to facilitate complex business models or quick operational efficiency wins (see Establish an Urban Data Exchange for Smart Cities). The Tool will support the decision making of CIOs to understand the risks and opportunities, as well as the organizational requirements, to invest into AI.

The scalability of use cases can be achieved only by forgoing proofs of concept that may be a bleeding edge in terms of technology — but this will face hurdles in terms of ecosystem value, data privacy or cost-benefit. In particular, the social credit use case should be assessed by CIOs from a regional perspective, weighing privacy concerns against economic or security benefits.

Directions for Use

CIOs can use this slide deck to determine:

1. **Ecosystem:** Contributors, ecosystem partners and government agencies that can leverage the use case.

2. **Business benefits:** Government agencies will be looking for benefits related to social and economic factors, including operational efficiency and transparency. Private-sector partners will be interested in contextualization, attractiveness of location, workforce and business operations that will generate revenue, and market penetration or customer attractiveness.

3. **Data privacy and cybersecurity:** Given the depth of the data exchange and the machine learning technology, the implementation of AI use cases need to be affiliated with a clear governance and policy on the legal and societal buy-in.

4. **Edge vs. core:** Based on the development of intelligence and contextualization of smart city services, the development of algorithmic computing and analytics at the edge may require more infrastructure capacity, but will have less latency for AI.

These examples of AI use cases are representative of cities and organizations, but do not constitute an exhaustive list. We are continuously building this research and will be interested in new case studies on an ongoing basis.

Recommended by the Authors

Establish an Urban Data Exchange for Smart Cities

3 IoT Innovations That Should Be on Your Smart City Solution Roadmap

Predicts: Smart City Resilience and Citizen Experience Will Drive Sustainability and Urban Attractiveness

Infographic: Artificial Intelligence Use-Case Prism for Smart Cities