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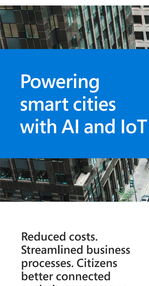


Powering smart cities with AI and IoT

Reduced costs. Streamlined business processes. Citizens better connected to their government.

Together, AI and IoT can fulfill the promise of the smart city by transforming every aspect of city government. But where do you start? The choices are overwhelming.

"By 2020, in 30% of smart city implementations, artificial intelligence (AI) will become a critical feature, up from less than 5% today."

Gartner[1]

Charts/graphics created by Microsoft based on Gartner research.
Source: Gartner, Inc., Three Rules When Using AI to Add Value to Your IoT Smart Cities, Milly Xiang, 29 March 2018.

What is a smart city?

A smart city uses information and communication technologies to improve the performance of urban services like energy, water, public safety and transportation, making cities safer, healthier, and more sustainable and resilient.

01/ Explore the full potential of AI

Look for new ways for AI to create business value and social impact.

Solve city challenges by driving IoT productivity solutions
From optimizing operations to protecting the environment, AI can be the new solution to old problems.

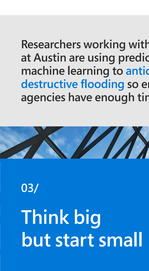
Manage AI implementations across organizational boundaries
A network of sensors intended to improve the flow of traffic could also relieve crime and help ambulances get to emergencies faster.

Traffic optimization
Adaptive traffic lights ease congestion at choke points.

Crime prevention
License plate recognition technologies help to find stolen cars.

Emergency response
Real-time data improves routing of ambulances.

Based on **a projected growth rate of 54.3%** through 2021, government cognitive and AI solutions will experience robust year-over-year growth for the next several years.[2]



02/ Ready. Set. Grow.

Choose your first use case carefully. Then extend your solution to new areas and technologies.

Prioritize high-value use cases
Should you start with a project that streamlines internal processes or one that improves the lives of your citizens? The answer: place the highest priority on initiatives that accomplish both.

Top-priority use cases for AI and IoT deployment

Public safety
Remote citizen alert

Infrastructure
Adaptive street lighting

Health
Disease management

Environment
Pollution control

Transportation
Parking management

> A survey with 83 Gartner Research Circle members indicates that, among 35% of the respondents, "identifying use cases for AI" was [ranked among] the top three challenges in exploring and adopting AI.
>
> Gartner[3]

Start with the most promising AI technologies
As you build your team's expertise, focus on AI technologies like deep learning, natural language processing, and computer vision.

Researchers working with the University of Texas at Austin are using predictive modeling and machine learning to anticipate potentially destructive flooding so emergency management agencies have enough time to take action.[3]

03/ Think big but start small

Share the long-term vision for your city, but start on a modest scale.

Set expectations
Underpromise, overdeliver. Take a look at what other cities are doing. Then use what you learn to work with municipal and department leaders to create a roadmap for the future.

Manage technology risks
Some AI technologies are immature. To avoid committing to a technology that might be rendered obsolete, select a project that can provide business value quickly.

70 percent of business executives are optimistic about AI's potential to increase efficiencies with automated communications and alerts.[4]

The Alaska Department of Transportation uses IoT to respond proactively to weather that can drop as low as 80 degrees below zero.[5]

Learn more about how smart cities can use AI and IoT in this Gartner report, *Three Rules When Using AI to Add Value to Your IoT Smart Cities.*

Read the report

Microsoft

1 Gartner, "Three Rules When Using AI to Add Value to Your IoT Smart Cities," Milly Xiang, 29 March 2018.

2 IDC, "U.S. Government Cognitive and Artificial Intelligence Forecast, 2018-2021: Federal and State and Local Should See Moderate Growth," Doc #US43521718, March 2018, https://www.idc.com/getdoc.jsp?containerId=US43521718

3 "Preventing Flood Disasters with Cortana Intelligence Suite," Microsoft Research Blog, 5 May 2016, https://www.microsoft.com/en-us/research/blog/preventing-flood-disasters-with-cortana-intelligence-suite-2/

4 "Be it be-bop artificial intelligence is pushing man and machine closer together," PwC Consumer Intelligence Series, April 2017, https://www.pwc.com/us/en/industry/entertainment-media/publications/consumer-intelligence-series/assets/pwc-kenne-booklet.pdf (PDF)

5 "How Alaska outsmarts Mother Nature in the cloud," Microsoft Corporation, 11 March 2016, https://customers.microsoft.com/en-US/story/alaskadot#gf government azure iot