



Illinois Department of  
Innovation & Technology

# Illinois Smart State Initiative

NASCIO Award Category  
State CIO Office Special Recognition  
State of Illinois

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## **EXECUTIVE SUMMARY**

The State of Illinois (SOI) is becoming the first Smart State in the nation aligning with the Smarter State strategy established by Governor Rauner and the State CIO's Office. Illinois established the vision, plan, and execution road map to enact the digital transformation of government by investing in 3rd Platform information and communication technology (ICT) and the necessary large-scale changes in leadership, information management, workforce development, operations, and customer experience. 3rd Platform ICT includes mobile technologies, big data and analytics, and cloud services as the foundation for a set of innovation accelerators, such as the Internet of Things (IoT), blockchain, cognitive computing, augmented reality, robotics, and next-generation security, that enable the development of new work processes, services, and products.

### **Smarter State Goals**

- Improve overall efficiency, effectiveness, and accessibility of government services
- Create an attractive environment for businesses and entrepreneurs
- Increase GDP/economic value of Illinois over a decade
- Establish a leadership position across the nation and world as a Smart State
- Create a tangible platform for global competitiveness

As part of its Smarter State priorities, Illinois identified nine key initiatives distributed among three strategic areas. Aligning with DoIT's agile approach to projects, all of the initiatives are scheduled in 75-day implementation sprints for fast innovation, iteration, and delivery of milestones. The three strategic areas are:

- Smarter technology
- Smarter business and regulations
- Leading the nation while building the workforce of the future

The State of Illinois identified the Smart Street Lighting Initiative as an early win for the program through utilization of this smarter technology. Illinois is taking a more global view by utilizing its procurement power to enable its cities and constituents to easily join the Smart State movement. The Smart Street Lighting Initiative is an example of this approach.

## CONCEPT

The Smart Street Lighting initiative is the first in a series of planned statewide master contracts designed to accelerate the adoption of smart technologies across Illinois. This key project is intended to facilitate Illinois municipal upgrades of street lights to cost-efficient light emitting diode (LED) based lighting, and to provide a foundation for additional smart city advancements. The initiative is a best-in-class procurement, utilizing three vendors for street light upgrades, including turnkey services with energy performance contracting and financing options, luminaires, adaptive controls and value-add applications and services.

An smart street lighting advisory board was created and the industry was researched to develop the requirements and specifications in the Smart Street Lighting Request For Proposal (RFP). The advisory board had representation from municipalities, the Illinois Department of Transportation (IDOT), the Illinois Commerce Commission (ICC), the University of Illinois Urbana Champaign and the Illinois Department of Innovation & Technology (DoIT). In “researching the industry” to gather requirements and specifications, the following actions were taken (i) research smart street lighting projects and procurements across the US and world, extracting best practices and lessons learned (ii) review US Department of Energy Street Light Specifications (iii) review IDOT’s Street Light Specifications (iv) review relevant standards, noting current and future standards work (iv) review industry trade journals (v) review industry conferences (vi) review procurement approaches by other entities.

The Request for Proposal was issued in January, 2017. Based on industry standard criteria, the evaluation team awarded the contract to three vendors.

## **SIGNIFICANCE**

Outside of the Chicago metro area, many rural municipalities lack the experience, technical knowledge, budget and expertise necessary to chart a path and implement smart technologies to improve the quality of life for their citizens. The Smarter Illinois Initiative seeks to advance the use of smart technologies across all communities. This initiative includes the strategy for the State of Illinois to serve as both an enabler, as well as a platform, and to accelerate the adoption of smart technologies across the state. Through the establishment of state master contracts for smart technologies and services, Illinois aims to accelerate street light upgrades by all Illinois municipalities and provide a platform on which to build additional smart city applications and services.

The state developed the business case that upgrading street lights could serve as a first important step toward becoming a Smart City. This initiative provides all Illinois units of government with the unprecedented opportunity to improve the quality of life for their citizens while significantly reducing costs. The reduction of utility costs and expensive maintenance of current, inefficient street lights will bring fiscal value to municipalities while addressing any disparity of quality of life for our citizens in smaller communities.

There is a Department of Energy excel based business case that helps municipalities determine the cost savings, and it is widely recognized in the industry that significant cost savings are achieved by upgrading to LED based street lights. Also, we would expect each of the vendors to work with the municipality to develop the business case specific to that municipality.

## IMPACT

A collaborative approach resulted in the development of comprehensive requirements and the completion of a competitive procurement, resulting in the issuance of state master contracts to three separate vendors. Use of three vendors provides municipalities with access to key products and services which can advance the smart city strategies of the unique units of government. The smart street lighting master contracts include; 1) LED luminaires and adaptive controls including central management systems, backhaul communications network and field devices; 2) Turnkey services including inventory audit, infrastructure stabilization, photometric design, energy savings analysis, installation, acceptance, test, operations and maintenance; and, 3) Financing options including energy performance contracting and other vendor proposed financing. The financing options are a key component to the overall strategy, as financing can enable a street light upgrade with no upfront charges to the municipality. Based on typical energy savings and decreased maintenance costs, the monthly charges to the municipality, with financing implemented, may be less than before the upgrade. Cost savings, due to reduced energy usage, reduced maintenance and reduced operational costs, are typically at least 50 percent.

While the procurement is targeted to Illinois municipalities, the state master contracts will also be available to all Illinois governmental entities, including municipalities, state agencies, school districts and universities, further advancing the vision for an overall Smart State.

With a networked street lighting architecture, backhaul communications, street lighting real estate and available power, the necessary components will be in place for a municipality to implement additional quality-of-life enhancing applications such as vehicle and pedestrian occupancy and environmental sensors, cameras, small cell antennas, audio speakers and smart parking.

Over forty Illinois municipalities have expressed interest in utilizing the state master contracts to advance their smart city initiatives. The State of Illinois is currently scheduling workshops for municipalities to assist with contract utilization, with the prospect of aggregating municipal initiatives to target additional cost-savings.

Piggybacking off the Smart Street Lighting State Master Contract, the SOI is also drafting an RFP for Digital Kiosks that will be released in early summer 2018. The SOI will continue to explore other new and innovative purchasing methods to enable state agencies and Illinois communities as we continue to uphold Illinois as the first Smart State.

More information on the Smarter Illinois Initiative can be found at [Smarter Illinois Initiative](#) .