

How Partnerships and Innovation Help Achieve the Smart City Goals Residents Demand





Lisa Brown has spent the past eight-plus years of her career working with mayors, city council members, county commissioners and other stakeholders to pursue smart city initiatives. Brown, who is senior director of local government for Sustainable Infrastructure at Johnson Controls, has seen firsthand the outsized impact local leaders have. "I always say that municipal government is where the work happens," Brown states.

Smart city initiatives stalled when COVID-19 hit, as municipal leaders dealt with lockdowns, delivering emergency services and other immediate challenges. But many leaders recognize the vital role smart city initiatives will play in making their cities attractive to businesses, workers and visitors – and in promoting equity for all citizens.

"Leaders realized they needed to start competing for their citizens and businesses because people could live anywhere in a hybrid world," Brown indicates. "They are now worried about providing adaptive workplaces, living spaces and technology to bring citizen and constituent confidence back."

But how can city leaders achieve these goals? The question proves tricky to answer for at least two reasons. First, local leaders continue to face competing priorities, especially as new economic challenges emerge. Second, smart city objectives are themselves evolving.

"The whole concept of creating a holistic end-to-end smart city has been morphing to smart neighborhoods, innovation districts, connected corridors and pilot projects,"

Brown states. To better understand the current state of smart city goals, studioID and Johnson Controls teamed up to survey more than 100 local government officials. The responses shed light on how leaders are approaching smart city objectives. They also highlight the pitfalls cities must avoid as well as the strategies and partnerships that drive meaningful progress.

Here are the four top takeaways from the survey:

Takeaway #1:

Smart cities prioritize their residents' quality of life

44%

of city leaders choose quality of life as the factor driving their cities' decisions to pursue smart city goals

Smart city objectives can take many forms for local government leaders. Brown says, "You hear folks say, 'I want to be resilient, I want to be net zero, I want to be digitally transformed.'"

But the vast majority of initiatives center on a common theme: developing a strong economy. "At the end of the day, those initiatives have to tie back to economic development," Brown explains.

"Everything city leaders invest in has to be directly related to developing vibrancy and helping their economy."

The survey results underscore Brown's point. More than two out of five municipal leaders said that quality of life was the factor driving their cities to pursue smart city goals. Even further, smart cities respond to resident input about 36 percent of respondents said citizen demand drove planning.

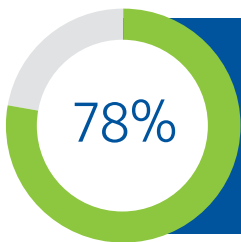
The survey results also show just how important it is to hardwire equity into smart city initiatives. In fact, 77 percent of respondents noted that their smart city plans include specific social equity and justice requirements. "More than ever before, I hear city leaders talk about creating equality across neighborhoods," Brown says. "They now apply a social equity lens to whatever types of investments they're making."





Takeaway #2:

Even in the face of COVID and other challenges, the vast majority of cities are making progress toward their smart city objectives



78% of city leaders are either on track or ahead of schedule in achieving their smart city objectives

Goals include:

Transportation	47%
Renewable energy	45%
Education	43%

Given the challenges municipal leaders have faced over the past few years, it would be understandable if progress toward smart city objectives had slowed.

But it hasn't, the survey reveals. In fact, 78 percent of respondents reported that their cities are either on track or ahead of schedule in achieving their smart city objectives. By delivering tangible benefits to residents, cities help build the community support needed to set and achieve even more ambitious goals.

The survey also provides a clear view of what smart city objectives look like. Not surprisingly, bolstering local economies topped the list. In fact, 41 percent of city leaders said that economic recovery plans guide their investments. Another 28 percent said that capital improvement plans provide the blueprint for smart city investments.

Survey respondents identified specific initiatives that contribute to achieving broader economic objectives. For example, 47 percent cited transportation as a top priority, 45 percent highlighted renewable energy and 43 percent selected education.

Takeaway #3:

Despite the headway made toward smart city goals, local leaders point to multiple issues that can derail progress

Smart city objectives can seem obvious. After all, who doesn't want an improved economy, safer and more vibrant streets and environmental sustainability? But local leaders face a steep challenge in reimagining how city governments operate while carrying out their everyday operational responsibilities. "I always say smart city initiatives are not for the weak of heart because it's really easy to find reasons not to do them," Brown says.

Survey respondents identified several hurdles they face in trying to achieve smart city objectives.

Perhaps the biggest obstacle comes from the significant changes smart city initiatives require governments to make. Nearly 70 percent of survey respondents reported that achieving their priorities would require either a moderate amount or a lot of change. Another 17 percent of leaders said extreme change would be necessary.

Survey respondents cited other hurdles. About half of city leaders mentioned a range of issues that found extremely or very challenging to navigate: competing priorities, changing market conditions, inadequate staff time and expertise, policy and regulatory uncertainty, a lack of private sector partnerships and poor coordination between regional and national governments.





Financing also remains a big challenge for cities. Just under half of survey respondents said financing stands in the way of achieving smart city objectives. Similarly, 52 percent of city leaders said that competing budget priorities create a barrier to securing necessary financing. Another 43 percent cited limited access to debt financing, and 41 percent pointed to a dearth of information about funding options.

City leaders routinely cite financing as a barrier to achieving objectives.

Commonly cited obstacles include:



Cities do have potential sources of funding for smart city initiatives. The biggest might be the Bipartisan Infrastructure Law passed last year. The law provides billions in financing for a host of smart city objectives, including the creation of electric vehicle (EV) charging networks, modernized and decarbonized bus fleets and expanded access to high-speed Internet.

But the survey reveals the challenges city leaders face in accessing that funding. Two-thirds of officials say their cities don't have the tools to track stimulus funding or quantify its impact in their communities. An overwhelming 91 percent say they do not have the necessary tools.



Takeaway #4:

Cities are embracing partnerships and alternative financing options



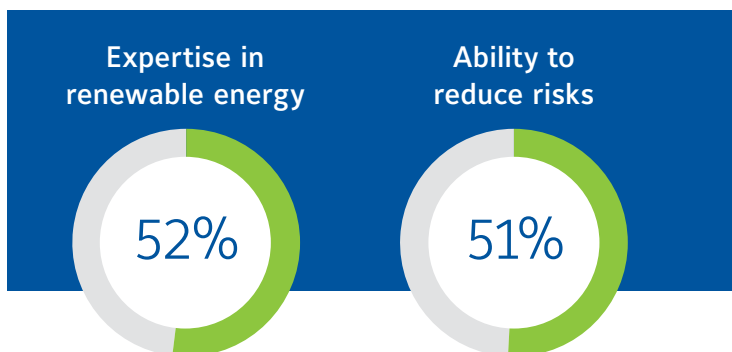
More than 4 out of 5
city leaders say that partnerships
are extremely or very important to
achieving their cities' goals

In many cases, achieving smart city objectives requires a deep understanding of cutting-edge technologies and how they integrate into cities' existing tools and systems. Increasingly, municipal leaders understand that they cannot rely exclusively on internal expertise to achieve big goals like decarbonization – especially at a time when city budgets are strained.

As such, most leaders are exploring partnerships to achieve their smart city objectives. The survey reveals that 82 percent of respondents say that partnerships are extremely or very important to achieving their cities' goals.

City leaders see the value that comes from both the expertise and the financing options that partners deliver. Indeed, seven out of ten respondents said they were extremely or very familiar with public-private partnerships and performance contracting. Two out of three say their cities are likely to pursue such opportunities over the next 12 months. And nearly half said they are using (or plan to use) an energy savings performance contract to pay for infrastructure improvements.

City leaders say two criteria are extremely important when cities are seeking partners:



From her work with cities, Brown has found that the most successful partnerships create a broad, holistic ecosystem to achieve smart city objectives.

“It’s when cities pick the right ecosystem partners that things work,”

she explains. “That could be technology companies, advisory service companies, integration partners, equipment companies and utilities. But it’s also about bringing in community advocates, faith-based organizations and sustainability advocates. It’s not one size fits all, but I think the more voices you have at the table, the more you will lift up your community.”

Embracing an ecosystem approach can also break down the silos that exist in many city departments, because it requires city staff to work together and with external partners. Brown says, “I walk into meetings all the time and by the time I leave, people will say, ‘I didn’t know my colleague was working on a very similar initiative. It took this meeting to bring us all together and align.’”





Progress in Philadelphia

Philadelphia offers a great example of how cities can work with partners to achieve smart city objectives that benefit all residents.

As the place where the Declaration of Independence and the U.S. Constitution was signed, Philadelphia has always maintained a visible connection to its past by preserving many of its historic buildings.

The one problem? The historic building stock is highly energy inefficient, which hinders Philadelphia's ability to achieve its aggressive climate change goals and puts stress on city budgets.

In 2015, the city launched the \$1 billion Philadelphia Energy campaign to invest in energy efficiency and clean energy over 10 years. The investments were targeted at city buildings, schools, affordable housing and small businesses. The Philadelphia Museum of Art – famous both for its collection of 240,000 works of art and for Sylvester Stallone racing up its front steps in the first Rocky movie – was one of the first buildings to get an energy efficiency upgrade.

The city worked with Johnson Controls to implement a wide range of energy efficiency measures, including 11,000 new LED lights and building automation and chiller upgrades. The goal was to reduce energy costs by 24 percent. The museum used an energy savings performance contract that generates \$750,000 in guaranteed annual savings. Over time, these savings will far exceed the \$11.3 million the city invested to pay for the efficiency improvements.

There are plenty of other examples of how cities are listening to residents and pursuing smart city goals. Demand from constituents for more sustainable, equitable and economically-thriving cities provides leaders with the kind of support that makes real progress possible.

Still, this survey makes it clear that many obstacles stand in the way of achieving ambitious smart city goals and that municipal leaders need to think innovatively to overcome them. One innovation cities should embrace is working with partners who have the expertise and access to financing that can turn smart city aspirations into reality.

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