

June 19, 2017

CITY COUNCIL STUDY SESSION ITEM

SUBJECT

Bellevue Smart City Plan Update

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POLICY ISSUES

The Bellevue City Council Vision establishes a vision for a smart city. The two-year priorities addressing smart city are:

- Bring a Smart City strategy to the Council for its consideration for inclusion in the 2017/2018 budget.
- Identify and implement technologies that improve customer service.

The adopted Economic Development Plan also recommends a smart city strategy as part of the foundational strategy to “Provide a business climate and infrastructure that facilitates desirable business investment.”

DIRECTION NEEDED FROM COUNCIL

ACTION

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DIRECTION

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INFORMATION ONLY

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City staff will present the smart city plan titled, *Bellevue Smart: Planning for a Smarter City*, and provide an update on key accomplishments.

BACKGROUND/ANALYSIS

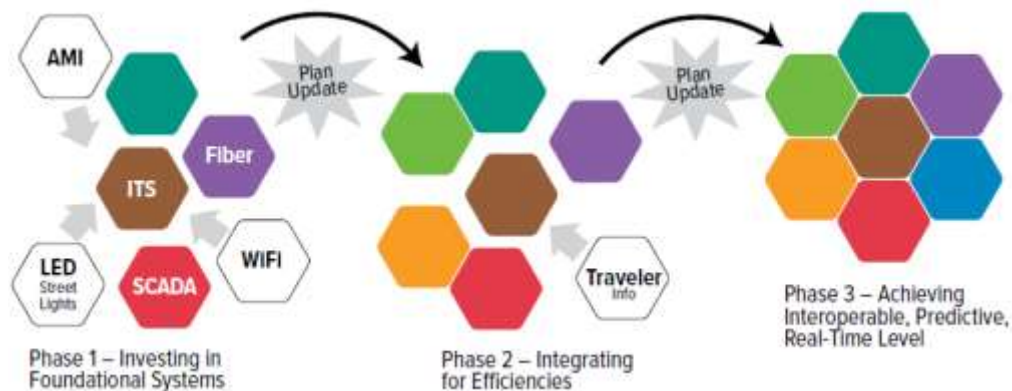
In the Bellevue City Council Vision, Council provided a vision for a smart city as, “Bellevue is a “smart city” with a clean, high-quality environment and excellent and reliable infrastructure that supports our vibrant and growing city, including high-tech connectivity. The city has a connected multi-modal transportation system, which blends seamlessly with its buildings, plazas and parks.” The Council 2017/18 priority also stated, “Bring a Smart City strategy to the Council for its consideration for inclusion in the 2017/2018 budget.”

The attached *Bellevue Smart* plan responds to Council’s Smart City vision and priority. It reflects the scope and approach as shaped by Council through two Council presentations on October 5, 2015 and

September 26, 2016, which laid the foundations for Council decisions on the smart city portfolio for the 2017/18 budget.

Phased Approach

Due to the complexity of integrating systems and adopting emerging technologies, becoming a smart city will take longer than a year or a single budget cycle, and must be done in a phased iterative approach that allows for planning of major projects while building in enough flexibility to take advantage of opportunities that arise or adjust tactics based on rapid changes. At least three phases are envisioned for smart city, with this version *Bellevue Smart* focusing on Phase 1, where major investments are being made in critical systems and plans, such as Advanced Metering, the Intelligent Transportation System Master Plan Update and others. Subsequent updates will follow the city's budget cycle and allow Council to revisit priorities, adapt to changing landscape and guide future direction as appropriate.



Desired Outcomes

Bellevue Smart describes the desired outcomes of the smart city effort and the benefits to the community. The plan includes how to achieve these outcomes and includes measures and indicators that help gauge the impact that smart city efforts are having. The desired outcomes are:

- **Livability:** Smart technologies improve the safety, health, convenience and quality of life for the community, while increasing our economic competitiveness.
- **Sustainability:** The city delivers excellent, long-term services by reducing waste, increasing efficiencies and protecting the environment.
- **Resiliency:** The city is able to respond more effectively to emergencies and recover faster from disruptive events.

Bellevue's reputation for innovation will also be enhanced as the city becomes a recognized leader in developing and implementing innovative smart city developments that support the city's economic development strategies of attracting and retaining technology companies and world-class talent to benefit businesses and residents.

Smart City Elements

Six elements were identified that best align with the Council vision. These elements provide a structure that focuses efforts and leverages existing programs and projects. While each element focuses on a set of objectives, strategies and indicators, they are intended to be integrated with other elements to form a smarter Bellevue over time.

<p>CONNECTIVITY</p> <p>Improve consumer services and communications infrastructure, through an emphasis on increasing high-speed communications:</p> <ul style="list-style-type: none"> ▪ Expand Wi-Fi to reduce digital divide ▪ Grow fiber-optic network ▪ Increase high-speed broadband availability ▪ Integrate smart city networks to increase efficiencies and monitor emerging capabilities ▪ Provide improved citizen-information access 	<p>TRANSPORTATION</p> <p>Improve ways for people to move around the city:</p> <ul style="list-style-type: none"> ▪ Enhance adaptive traffic signal operations ▪ Improve traveler information ▪ Integrate multi-modal travel options to improve mobility ▪ Advance Vision Zero to provide safer mobility for vehicles, pedestrians and bike riders 	<p>PUBLIC SAFETY</p> <p>Further integrate infrastructure, services, agencies, and personnel that cities call on to keep their citizens safe:</p> <ul style="list-style-type: none"> ▪ Improve 911 services ▪ Enhance communications networks for greater interoperability and backup ▪ Increase incident situational awareness for effective response ▪ Enhance data-driven policing practices ▪ Improve hazmat awareness and mitigation
<p>WATER</p> <p>Ensure high-quality delivery of water services to homes and businesses to minimize disruptions and increase customer service:</p> <ul style="list-style-type: none"> ▪ Integrate asset management to improve efficiencies ▪ Enhance smart system operations ▪ Increase customer service with frequent readings, leak detection and usage data access with smart water metering 	<p>BUILDINGS</p> <p>Enhance building systems and analytics to improve building systems performance and resource conservation and efficiencies:</p> <ul style="list-style-type: none"> ▪ Building energy data benchmarked to influence conservation/ resource savings ▪ Building water data benchmarked to influence conservation/ resource savings 	<p>ENERGY</p> <p>Improve and integrate energy systems to ensure sufficient, efficient and reliable energy that power all systems our modern digital society uses:</p> <ul style="list-style-type: none"> ▪ Implement smart grid system operations for increased reliability ▪ Increase energy conservation and renewables ▪ Increase efficiencies with advanced metering through PSE

Principle Strategies

Bellevue Smart is centered on four principal strategies that apply across all elements of the plan:

- Focus on proactive and adaptive. Provide proactive and adaptive urban systems that create interoperable systems for the highest levels of performance, optimal customer experience and resiliency from major disruptions.
- Drive with data. Turn the enormous volume of data coming from smart city systems into useful information to optimize systems and drive decision making to achieve the desired outcomes of the smart city plan.
- Pursue partnerships. Foster public-private partnerships that are advantageous to deploying

emerging technologies, align with the city's interests, mission and objectives and allow Bellevue to continue being a technology leader and innovator.

- Leverage regional relationships. Advance smart city interests through regional relationships and cultivate a shared vision for smarter communities throughout the region.

Accomplishments

Since the last Council presentation on smart city in September 2016, progress has continued on major initiatives. Here are some key activities:

- Transportation Technology Partnership Manager has been hired as a result of the investment Council made to enhance public private partnerships in the rapidly changing transportation sector as part of the 2017-18 budget.
- Advanced Metering Infrastructure request for proposals has been released with contract expected by end of 2017.
- Expanded Wi-Fi at Spiritwood Manor has been installed in partnership with King County Housing Authority and Bellevue School District to address digital divide issues for low income families and students.
- ITS Master Plan Update is under way with completion by end of 2017.
- Development of a water quality module for a smart city dashboard with grant funding from the National Institute of Standards and Technology (NIST).

Next Steps

Council will continue to receive briefings on various smart city initiatives throughout the year. For example, Council will see the AMI contract for award, the ITS Master Plan for approval, and additional smart city updates as major milestones in the plan occur.

ALTERNATIVES

N/A

RECOMMENDATION

N/A

ATTACHMENTS

- A. *Bellevue Smart: Planning for a Smarter City* – Executive Summary and Background ([full document available on City website](#))

AVAILABLE IN COUNCIL DOCUMENT LIBRARY

N/A