

Testimony of **Kim Zentz**, Chief Executive Officer, Urbanova

Before the US Senate Committee on Commerce, Science & Transportation

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***Winning the Race to 5G and the Next Era of Technology Innovation in the United States***

Good morning Chairman Wicker, Ranking Member Cantwell, and honorable members of the committee. I am Kim Zentz, Chief Executive Officer of Urbanova, a nonprofit based in Spokane, Washington dedicated to harnessing data to gain insights, empower people and solve urban challenges in new ways.

I am both grateful for the invitation to address your committee and enthusiastic to lend the perspective of mid-market metro areas to the discussion of the country's next era of technology innovation in smart and connected communities.

**About Us:**

Urbanova leverages the vibrant urban advantages of Spokane, Washington to find new ways to make communities better for people. Spokane's 770-acre downtown University District (about the size of Central Park in New York) is the living laboratory for scalable, replicable solutions that aim for outcomes measured by enabling healthier citizens, safer neighborhoods, smarter infrastructure, a more sustainable environment and a stronger economy.

How do we do this? Urbanova was formed based on established long-term relationships and new partnerships with category-leading innovators who share a belief and a stake in the promise of mid-sized cities. Communities and their decision makers need experience and evidence upon which to make technology-enabled decisions for the future of their residents, businesses and visitors. Urbanova's community-scale proving ground and global reach partners provide a transparent way for decision makers to examine the strengths and potential pitfalls of smart city solutions before scaling them citywide.

Successful smart city projects are not just about technology and equipment, in fact, technology can be the "easy part". Equal measures of planning for integration with existing systems (interoperability) and managing change for the people who operate and depend on them are also required. That is why the Urbanova partnership includes the City, the regional utility, the research

**Key Points:**

- ◆ 5G and other smart and connected community enablers offer the promise to improve social, economic and environmental equity and resilience in communities of all sizes.
  
- ◆ Collaboration across all sectors and jurisdictions is required for success.
  
- ◆ Mid-sized cities are the perfect laboratory to demonstrate improved outcomes and health for residents, businesses and visitors.
  
- ◆ Impeccable end to end security and privacy practices are our collective responsibility to each other.

university, technology, services, global analytics, telecommunications and behavioral science leaders to ensure that we are examining opportunities holistically.

While I certainly do not speak for any one of Urbanova's partners, we are especially fortunate to count Avista Corporation<sup>1</sup>, Itron<sup>2</sup>, the City of Spokane<sup>3</sup>, Washington State University<sup>4</sup>, McKinstry<sup>5</sup>, The University District<sup>6</sup>, Gallup<sup>7</sup> and Verizon Smart Communities<sup>8</sup> among our invested partners.

### Rise of the Mid-sized City:

It's been said that the 21<sup>st</sup> century is the century of the city as the shift to urban areas continues to gain steam. Already, half of the world's population resides in cities of 500,000 or fewer residents. No matter how you count it, there are more than 3,000 communities in the United States with population greater than 10,000 and less than a million.

Cities of this type tend to be big enough for ambitious ideas to gain traction and small enough to form the necessary coalitions to embrace change and act fast. With the ever increasing

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<sup>1</sup> **Avista Corporation** is an energy company involved in the production, transmission and distribution of energy as well as other energy-related businesses. Avista Utilities is the operating division that provides electric service to 383,000 customers and natural gas to 348,000 customers. Its service territory covers 30,000 square miles in eastern Washington, northern Idaho and parts of southern and eastern Oregon, with a population of 1.6 million.

<sup>2</sup> **Itron** enables utilities and cities to safely, securely and reliably deliver critical infrastructure services to communities in more than 100 countries. Its portfolio of smart networks, software, services, meters and sensors helps customers better manage electricity, gas and water resources for the people they serve. Itron is dedicated to creating a more resourceful world.

<sup>3</sup> **The City of Spokane**, home to more than 220,000 people, is located in the heart of the Inland Northwest. Its 2,000 employees strive to deliver efficient and effective services that facilitate economic opportunity and enhance the quality of life for all citizens.

<sup>4</sup> **Washington State University** was founded in 1890 as Washington's original land-grant university. WSU's 11 colleges drive a preeminent research portfolio and provide transformational student education experiences on campuses throughout the state as well as graduate and professional programs that attract top minds from more than 90 countries.

<sup>5</sup> **McKinstry** is a national leader in designing, constructing, operating and maintaining high-performing buildings. From new construction and ongoing operations to adaptive reuse and energy retrofits, the company provides a single point of accountability across the entire building lifecycle. McKinstry focuses on people and outcomes to ensure the built environment serves owners, operators and occupants alike.

<sup>6</sup> **The University District** is a development association that also oversees the public development authority for Spokane's University District. The University District uses its unique connectivity to create shared community wellness and vibrancy by developing the infrastructure and programming that enable a globally-recognized hub of education, innovation, research, and health care.

<sup>7</sup> **Gallup** delivers analytics and advice to help leaders and organizations solve their most pressing problems. Combining more than 80 years of experience with its global reach, Gallup knows more about the attitudes and behaviors of employees, customers, students and citizens than any other organization in the world.

<sup>8</sup> **Verizon Smart Communities'** purpose is to improve the quality of life for people living in cities around the world and increase the ways and efficiency in which cities operate. It's not just about smart technology, connectivity or applications; it starts with a focus on the people and their basic wants and needs. We partner with each city to design infrastructure, systems and processes that elevate the way they provide services in new and cost-effective ways.

access to broadband services, already technology and talent are flocking to areas of the country with fewer headaches and challenges to daily life than those hindering quality of life in the very large metros. Furthermore mid-sized cities are actively willing to share lessons learned and insights with each other. Urbanova and Spokane hope to be a destination for cities on learning tours as we gain additional insights from on-the-ground project experiences.

However, the human and capital resource situation in mid-sized cities is substantially more challenging. In order to realize the vast benefits of smart infrastructure, thoughtful city leaders are in need of innovative financing mechanisms, a coordinated and cooperative policy environment, support for workforce training and development programs and development of coherent standards and interoperability frameworks across jurisdictions.

In the accelerated run to 5G and other connected city deployments, it must not be overlooked that the city's primary asset is its locally controlled rights of way (ROW). Collaborative right of way management that includes cities' oversight to ensure public safety, equitable and inclusive space allocation and local spectrum management is vitally important to keep in perspective.

#### **Smart City Enablers:**

With the adoption of breakthrough enablers like 5G infrastructure and devices, cities like Spokane have the opportunity to capitalize on years of intelligent operations, creative problem solving, integrated planning/asset management and responsive citizen engagement to systematically adopt durable solutions to the pain points identified by the citizens – the ones with the lived experience in neighborhoods. City leaders are and will always be focused on ensuring that public benefits remain at the forefront of government operations. Approaching challenges holistically – employing tools like crowd sourcing prior to designing solutions and using decision criteria that ensure the outcomes are measured in terms of improving economic, social and environmental equity and resilience will be the expectation. There is a tangible opportunity to move public engagement from an episodic to a continuous experience.

As consumers and citizens we are living in a time of unprecedented acceleration of change - socially, economically and environmentally. Additionally we are experiencing the increasing availability of choices to meet every subset of our needs. As solutions informed by massive amounts of data become the norm, we have adjusted our expectations that everything become more personalized, more participatory, more predictive, and more preventive. Communities will increasingly have more comprehensive inputs to fully understand complex, personalized and localized systems. At Urbanova we think of this opportunity akin to “mapping the city genome” so that communities are no longer faced with one-size fits most prospects when charting the course of the future for residents, businesses and visitors.

5G promises to accelerate the smart city applications that rely on high speed, high bandwidth and low latency. This includes a spectrum from widespread self-driving mobility to AI-powered image recognition shifting city services and industries into the realm of real-time, authentically data-driven operations. The efficiency and effective use of edge computing and edge intelligence opens the door to use cases that dramatically improve operational metrics.

In addition, even smart city applications that do not depend upon the high speeds delivered with 5G will benefit from the experience gained as cities, businesses and people adjust to doing things with a greater degree of inputs from a greater number of devices. The behavioral changes will take longer than the adoption rate and infrastructure modifications needed to realize the full benefits of 5G.

### **Economic Benefits:**

The promise of smarter and more connected communities is fundamentally a leveling of the playing field. In their 2018 Book: *The New Localism – How Cities Can Thrive in the Age of Populism*, Bruce Katz and Jeremy Nowak assert: “This new locus of power—this new localism—is emerging by necessity to solve the grand challenges characteristic of modern societies: economic competitiveness, social inclusion and opportunity; a renewed public life; the challenge of diversity; and the imperative of environmental sustainability.” And “Power now belongs to the problem solvers.” Those problem solvers, equipped with high-speed, secure broadband services will live where the quality of life suits their needs.

In Urbanova’s Spokane University District proving ground, we’re fortunate to have a confluence of six higher education institutions (including two medical schools) co-located in an area adjacent to our thriving downtown and a medical district which serves as the medical hub for the multi-state region of the Intermountain Northwest. This 770 acre area is poised for intelligent, connected commercial and residential development. For example, Washington State University’s Elson S. Floyd College of Medicine was founded in 2015 and is a community-based medical school dedicated to rural and underserved populations. Students are immersed in team-based delivery techniques which prepare clinicians to improve health and wellness for individuals and populations.

Mid-sized cities have the greatest potential to lead an economic future that bridges the urban-rural divide. Communities which are presently less densely populated will benefit from the lessons learned and intelligence gathered by nearby cities experiencing growth. In fact, a 2017 report published by the National League of Cities noted that more than half of the people who live in rural areas also live in counties that are part of a metropolitan area.

### **Security and Privacy:**

Virtually every service provided by a city, utility or other service provider is done so only with and at the consent of the people served. In the case of technology-enabled services the potential is and always will be dependent upon the faith people have in the service to improve some aspect of collective or individual well-being. Apple CEO Tim Cook, speaking in Brussels late last year said: “...*At its core technology promises to learn from people individually to benefit us all...For artificial intelligence to be truly smart it must respect human values - including privacy. If we get this wrong, the dangers are profound. We can achieve both great artificial intelligence and great privacy standards. It is not only a possibility – it is a responsibility.*”

Essential security and privacy practices are not significantly different from one communication transport infrastructure to another – be it WiFi, 4G LTE, DSL, etc.

The security of telecommunications networks begins at the origin of the supply chain for each piece of equipment. The key area of support for secure and successful realization of the potential of 5G deployments is ensuring that suppliers are motivated to make verifiably secure products. Procurement language must support evaluation before purchase and sufficient time must be built into schedules for trust-but-verify functionality prior to commissioning.

**Conclusion:**

Communities empowered by the insights provided by quantitative and qualitative data can capitalize on their unique strengths to continuously improve the health and well-being of residents while businesses grow and thrive and visitors return. Thoughtfully deployed 5G networks help make this tangible future a reality for all.