# APPROACHES FOR INCREASING PUBLIC WI-FI SERVICE IN SEATTLE

**February 15, 2017**

POWERFUL TECHNOLOGY SOLUTIONS
FOR THE CITY AND PUBLIC WE SERVE

Seattle
Information Technology

# BACKGROUND

**Council Green Sheet 45-2-A-1 tasked Seattle IT (DoIT) with developing a public Wi-Fi strategy that would:**

1. Identify areas where Wi-Fi broadband can have a meaningful impact
2. Identify potential funding sources and partners
3. Develop RFI
4. Raise awareness

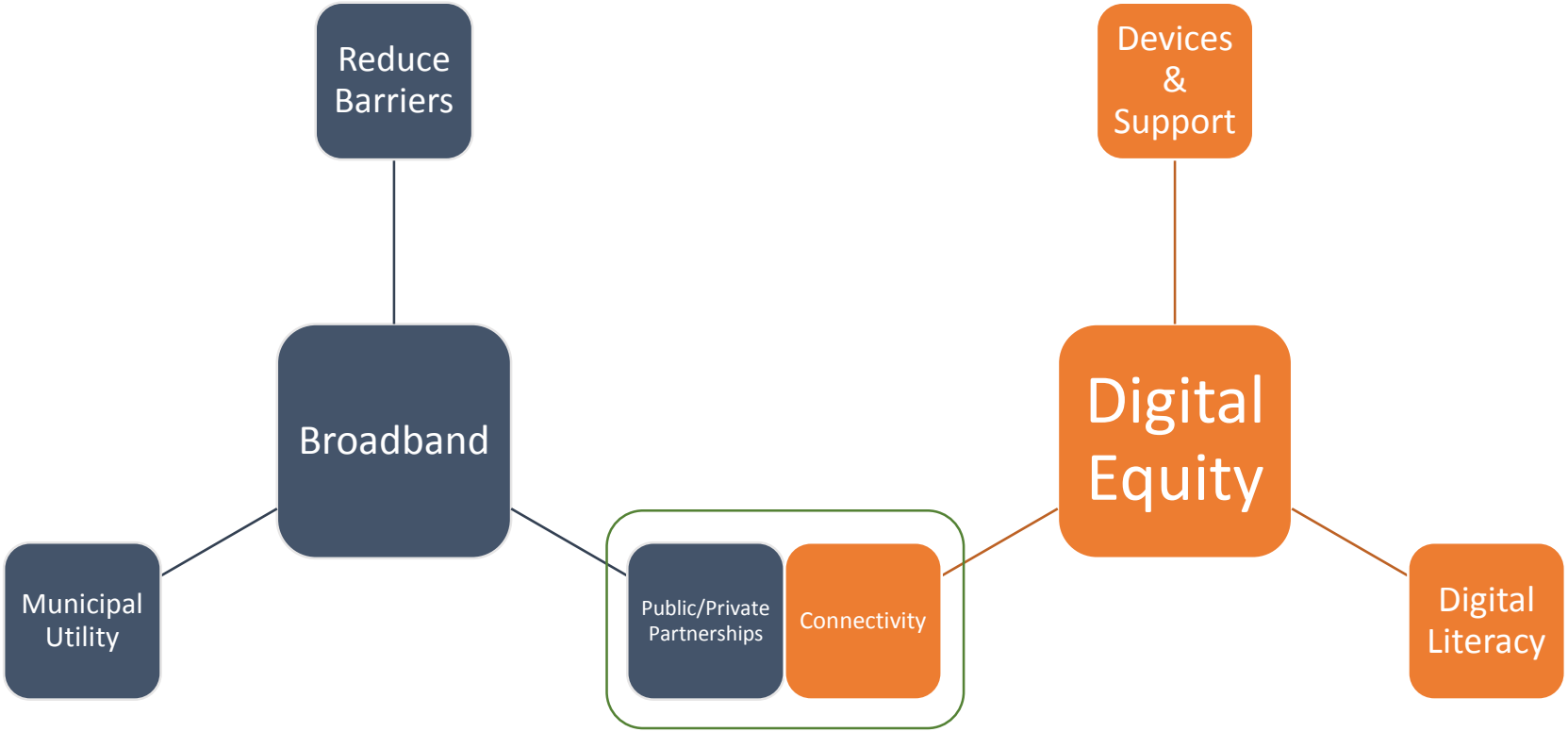
# THE CITY'S BROADBAND STRATEGY

- **Reduce regulatory barriers**: Take steps to increase access to city infrastructure and simplify our permitting processes.
- **Explore public/private partnerships**: Explore opportunities with commercial providers for improved Internet access in the city
- **Explore municipally provided broadband service**: A fiber-to-the-home

# THE CITY'S DIGITAL EQUITY STRATEGY

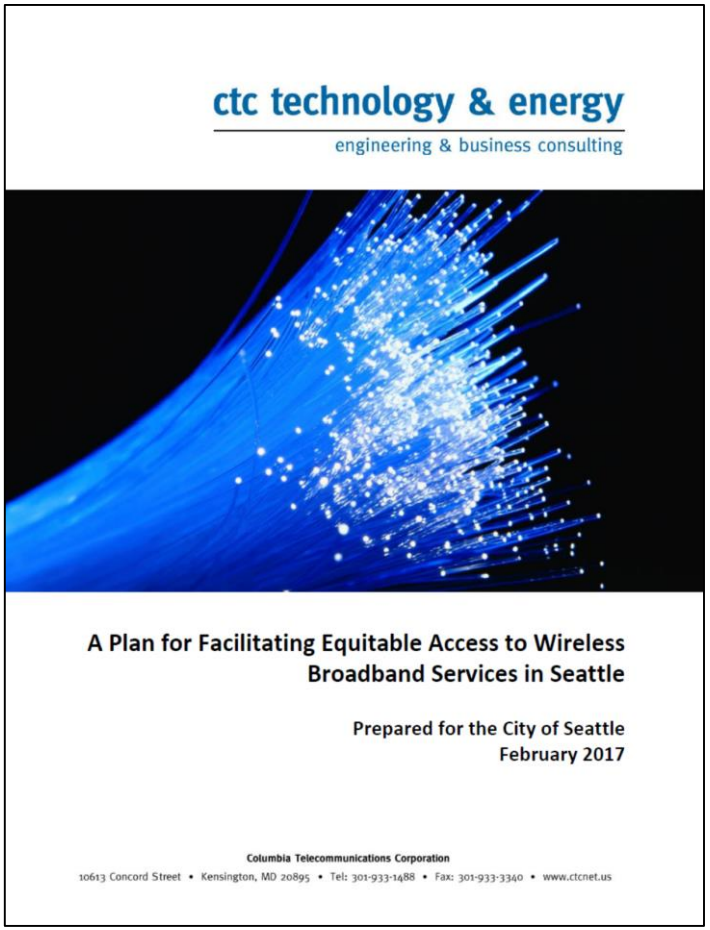
- **Connectivity**: Ensure sufficient options for affordable and available internet connectivity.
- **Skills Training**: Create and deliver educational opportunities for residents to gain technology skills, be successful in employment, entrepreneurship, lifelong learning, civic engagement, and use of essential online services.
- **Devices and Support**: Ensure affordable, available, and sufficient devices and technical support.

# DIGITAL EQUITY AND BROADBAND



# PUBLIC WI-FI

- Developed a strategic approach for deploying Wi-Fi as a tool for addressing Seattle's **digital equity and digital inclusion needs**.
- Approach balances the City's two key project goals:
  - Serve the public by **filling broadband gaps**
  - Deploy services through a **financially sustainable business model**.



# METHODOLOGY

- CTC researched **lessons learned** and **best practices** worldwide, including state of the art in Wi-Fi and wireless technologies
- Met with **City departments** and examined the feasibility of leveraging diverse City assets, including fiber networks
- Met with **King County agencies** to identify current programs, future plans, and potential areas of collaboration
- Met with representatives of the **University of Washington**, non-profits, and local institutions to share the City's vision and identify projects and possibilities for collaboration
- Conducted outreach to **private sector entities**, wireless carriers, and internet service providers
- Prepared a **Request for Information** to gather information and insight about the private sector's interest in contributing to the City's plans

# TECHNICAL TRENDS

- Densification of cellular networks to support 5G
  - More equipment
  - More fiber
  - More pole attachment applications
- Carriers offloading cellular traffic to Wi-Fi
  - “Passpoint” systems allow consumers to share Wi-Fi in exchange for ability to roam to other Passpoint customers
- Millimeter Wave technology
  - In future, will allow gigabit wireless service
  - May present a new, competitive home internet service

# PRIORITIZED AREAS FOR STUDY

- Selected via research conducted as part of Digital Equity Initiative, and in collaboration with Seattle Parks and Recreation.
- Intended to provide respondents with a representative selection of sites to consider.
- There is no City commitment to provide WiFi to these sites.

## Digital Inclusion Areas

- Yesler Terrace
- High Point
- South Park
- Rainier Vista
- Othello
- Rainier Beach
- Lake City
- SW Roxbury Street Corridor
- 23rd Avenue Corridor
- Judkins Park
- Jimi Hendrix Park
- Pratt Park

## Seattle Parks

- Camp Long
- Discovery Park
- Occidental Park
- Walter E. Magnuson Park
- Waterfront Park
- Westlake Park

# CONCEPTUAL WIFI DESIGN EXAMPLE

- Digital Inclusion area coverage would require 332 wireless access points
- Parks would require 121 WAPs
- 25% of WAPs need to be connected to fiber backhaul
- WAP's require power
- Costs, feasibility, utility work, and labor still need to be estimated

*Yesler Terrace*

# RFI RESPONSES: SUMMARY

Of the 23 responses, most can be groups into one of the following categories:

- **Access to assets/permitting.** Increasing Wi-Fi availability in City designated corridors at no cost to the City in exchange for expedited permitting processes and potential access to City facilities.
- **Advertising supported.** Company will pay to constructing and operate the network in exchange for publicly displaying advertising on kiosks.
- **Reduced costs.** Company will build and/or operate a network at costs below what the City might expect if offering the service directly, in exchange for access to City assets or if the service is bundled with other infrastructure purchases (e.g. sensors, street furniture, LTE service).
- **Leaseback/financing.** Company will help the City access financing to build out the Wi-Fi network and telecommunications assets, such as small cells and fiber optic cabling. The City would lease the asset to the Company for a period of time, guaranteeing revenue.

# TAKEAWAYS AND NEXT STEPS

- Some respondents have existing cable near the City's priority areas and want to work with the City due to their near-term network expansion plans
- Great deal of interest in accessing City fiber, real estate, street furniture, ROW, and other assets – City must determine value of these assets appropriately
- Some opportunities exist for increasing public Wi-Fi at low or no cost to the City. Understanding privacy and advertising practices, and related user protections, are key.
- Additional community engagement is necessary to determine how these approaches would work in Seattle.

# QUESTIONS?

Jim Loter
Director of Digital Engagement
**SEATTLE INFORMATION TECHNOLOGY**
T: 206.684.8328 | M: 206.612.9587 | jim.loter@seattle.gov

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# THANK YOU