

# Broadband Public-Private Partnerships: Delivering Solutions for America's Communities

# **NTIA Webinar Series**

You must dial in to hear the webinar! Conference Line: 800-593-7190 Passcode: 984-4951#

March 21, 2018



# **Participants**

# **Moderator**

 Scott Woods, Manager, BroadbandUSA Technical Assistance, NTIA, Department of Commerce

# **Presenters**

- Kara Silbernagel, Management Analyst, Pitkin County, Colorado and Evan Biagi, Vice President of Colorado Operations, Mammoth Networks, Inc.
- James Fortune, Town Administrator, Town of Cranberry Isles, Maine
   & Mark Ouellette, President, Axiom Technologies
- Dennis Gakunga, Chief Sustainability Officer, Economic Development Department, City of Chula Vista, CA





# **Helpful Information**

### Questions

Please type questions in the Q&A box on the right hand side of the screen.
 Questions will be taken after the final presenter.

### **Presentation**

 The presentation along with a transcript and recording will be available on the BroadbandUSA website within 7 days of this webinar under Events/BBUSA Webinar Archives. (<a href="https://www2.ntia.doc.gov/webinars">https://www2.ntia.doc.gov/webinars</a>)

### Audio

Please dial in to hear the webinar: 800-593-7190 Passcode: 984-4951#





# **Presentations**

- Kara Silbernagel, Management Analyst, Pitkin County, CO & Evan Biagi, Vice President of Colorado Operations, Mammoth Networks
- James Fortune, Town Administrator, Town of Cranberry Isles,
   ME & Mark Ouellette, President, Axiom Technologies
- Dennis Gakunga, Chief Sustainability Officer, Economic
   Development Department, City of Chula Vista, CA





# Pitkin County Broadband Initiative



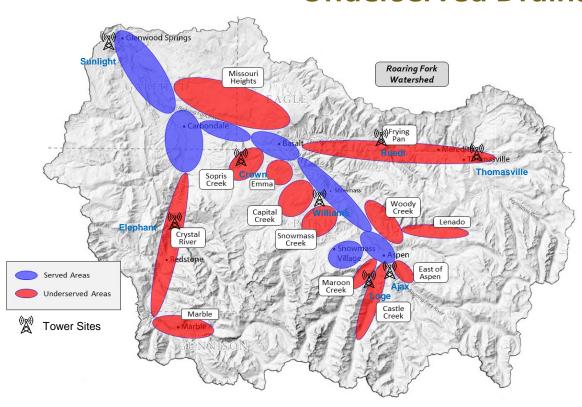
BroadbandUSA 03.21.2018







# **Underserved Drainages**





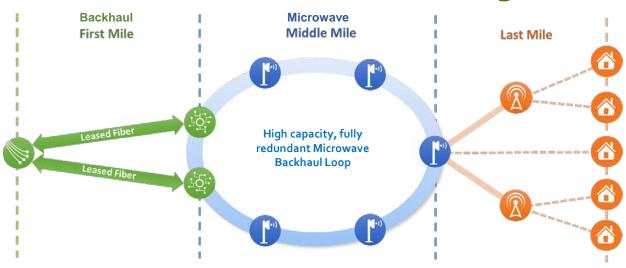
# **Goals and Objectives**

### Pitkin County Broadband Initiative (PCBI)

- Leverage existing infrastructure and partnerships to create an open access middle-mile network that enables high speed internet (Broadband) to homes, businesses, schools, libraries, medical facilities, government offices and other public places throughout Pitkin County & Roaring Fork Watershed
- Network must be:
  - Affordable (\$70 monthly)
  - Abundant (25 MBPS down / 3 MBPS up or FCC definition)
  - Redundant (Multiple paths in and out of the Roaring Fork Valley)
  - Resilient (Minimum service disruption)



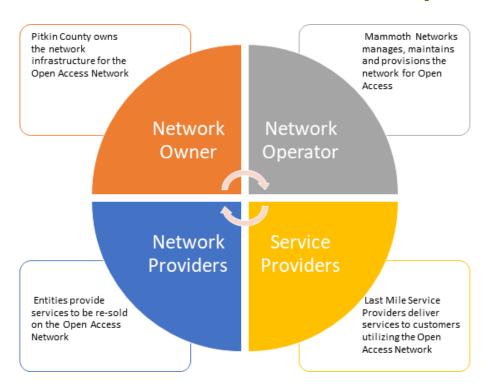
# **Network Design Overview**



- Lease lit fiber to feed the microwave middle-mile
- Use multiple carriers for diversity
- Add fiber aggregation points into middle mile
- Leverage existing mountain top infrastructure
- Deploy a flexible, open-access network that can serve a variety of project models
- Fully-redundant, self-healing 4GB microwave loop for high availability
- Identify relay tower location, types and cost
- Determine ownership and capital risk
- Develop ISP standards (equipment, location on tower, cost for access, etc.)



# **4-Layer Approach**





# **PPP Revenue Share Model**















Middle-Mile Infrastructure

Middle-Mile Backhaul

Last Mile

End User

5% of Revenue



Network Owner

45% of Revenue



Network Operator

### 50% of Revenue

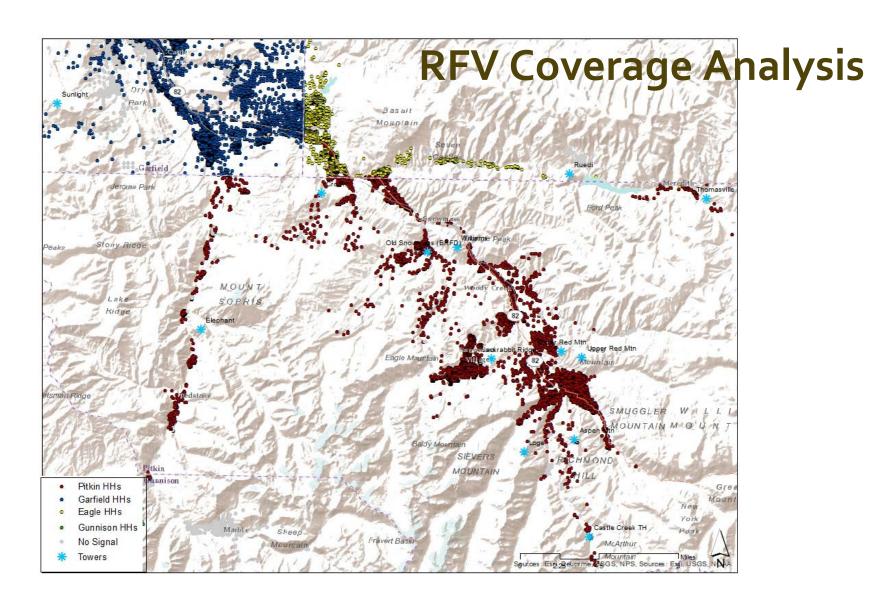


Internet Service Provider



# **Tactical Plan Stages**

# Coverage Maps Household / Population Data Analysis Stakeholder Analysis and Outreach Cost Modeling Scenarios / Sustainability Business Case Development / Roles Valuating Various Funding Sources Labor and Support Expenses Finalize Network Operator Agreement (Summer 2018) Begin Service Deployment (Summer/Fall 2018)





# **Network Deployment**

M = Meet Me Center

P = Primary Tower

S = Secondary Tower

Microwave Link

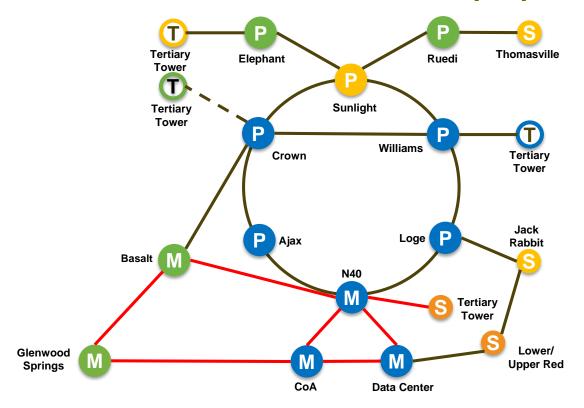
Fiber

Phase 1 (7/18)

Phase 2 (11/18)

Phase 3 (7/19)

Phase 4 (11/19)





# **Contacts**

Evan Biagi

Mammoth Networks

Ebiagi@mammothnetworks.com

Kara Silbernagel
Pitkin County
Kara.silbernagel@pitkincounty.com



# **Presentations**

- Kara Silbernagel, Management Analyst, Pitkin County, CO & Evan Biagi, Vice President of Colorado Operations, Mammoth Networks
- James Fortune, Town Administrator, Town of Cranberry Isles,
   ME & Mark Ouellette, President, Axiom Technologies
- Dennis Gakunga, Chief Sustainability Officer, Economic
   Development Department, City of Chula Vista, CA



# Public-Private Partnership Town of Cranberry Isles

### PRESENTED BY:

JAMES FORTUNE, CRANBERRY ISLES ADMINISTRATOR

&

MARK OUELLETTE, PRESIDENT OF AXIOM

# **Cranberry Isles Facts**

5 Islands off the coast of Bar Harbor, Maine

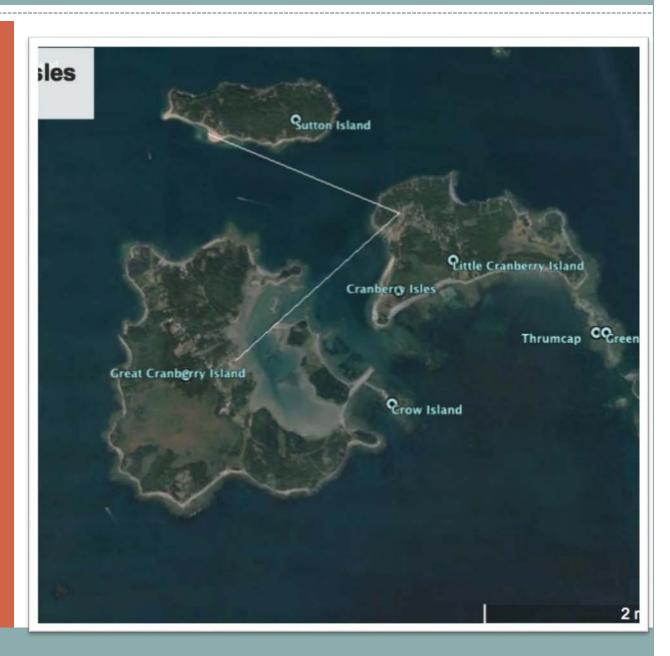
2 islands year roundcommute via ferry

Year round population-Approximately 140

Robust summer population- 600-800

Internet provider was leaving-

Poor service



# **Town Process**

- Broadband Committee formed 2 years to discuss how to deal with inadequate service
- Unfortunate event of removal of equipment from home that was used to accept signal on Islesford
- Sense of urgency of what to do?
- Not a significant amount of interest from providers

# **Town Goals**

- Preserve island way of life
- Attract new families to island
- Help islanders create their own economy
- Keep summer visitors longer
- Internet system built to last- invest in our future
- Telemedicine-Education-Ecommerce-Netflix

# The Axiom Process



# Public-Private Partnership-Axiom's commitment

- 5-10% of yearly gross revenue to a community directed and controlled Technology Fund
- Committing up to 20% of our labor cost to the project construction
- An evaluation of equipment every three years
- Potential for Community HotSpots, Digital Literacy classes or other resources at Axiom expense
- Identified and supported efforts to secure grant funding
- Hired on-island installer and troubleshooter

# Public-Private Partnership-Town's Commitment

- Committed \$1.3M to build system
- Create a Technology Fund for 10 years
- Work closely with Axiom to identify barriers
  - Utility Right of Way
  - Property boundaries
  - Pole and cable placement
- Leverage town assets-Website/town bulletin board to promote service and other announcements

# **Issues**

- Revenue projections
  - Summer resident discounts
- New Poles
- Placement of tower
- Sutton Island



# Ingredients for success- Rule #1

Need a champion

A BB Committee



# Ingredients for success-Rule #2

Lady Gaga Rule



"I've got a 100 million reasons to walk away, I just need one good one to stay"

Good goals will carry you through the negative

# Ingredients for Success- Rule #3

Talk about money last



# **Contacts**





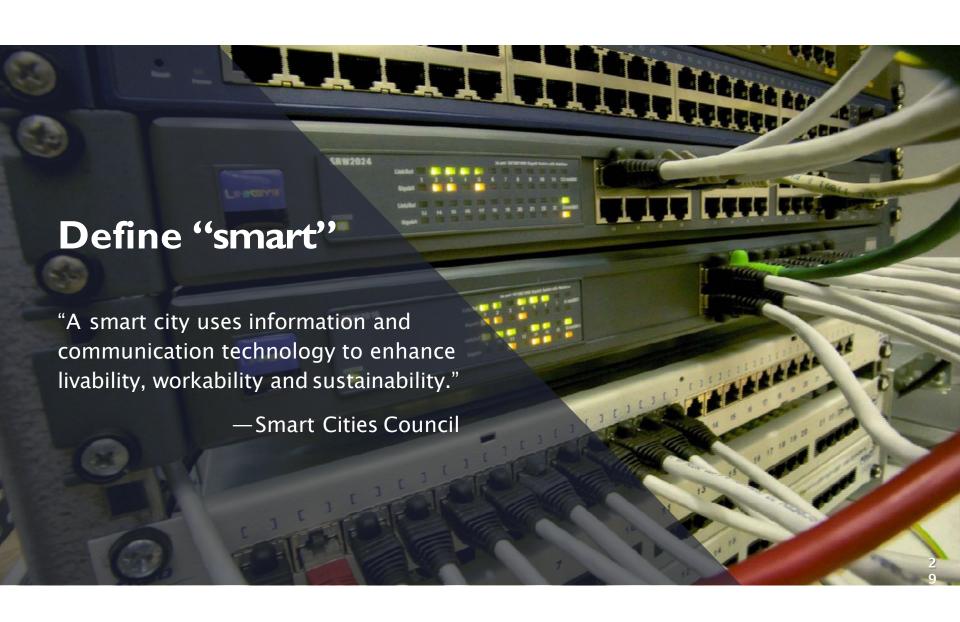


# **Presentations**

- Kara Silbernagel, Management Analyst, Pitkin County, CO & Evan Biagi, Vice President of Colorado Operations, Mammoth Networks
- James Fortune, Town Administrator, Town of Cranberry Isles,
   ME & Mark Ouellette, President, Axiom Technologies
- Dennis Gakunga, Chief Sustainability Officer, Economic Development Department, City of Chula Vista, CA

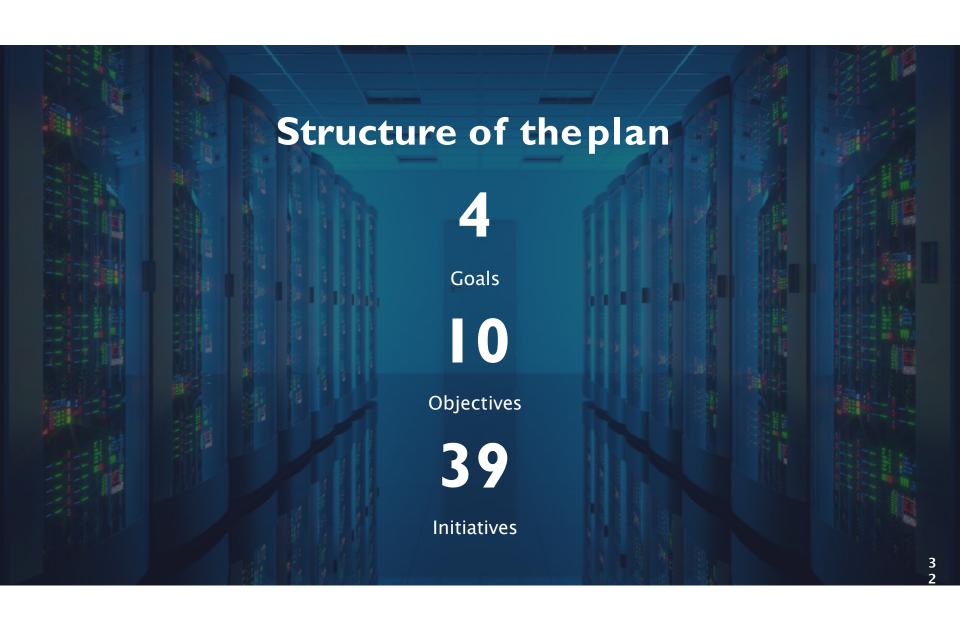








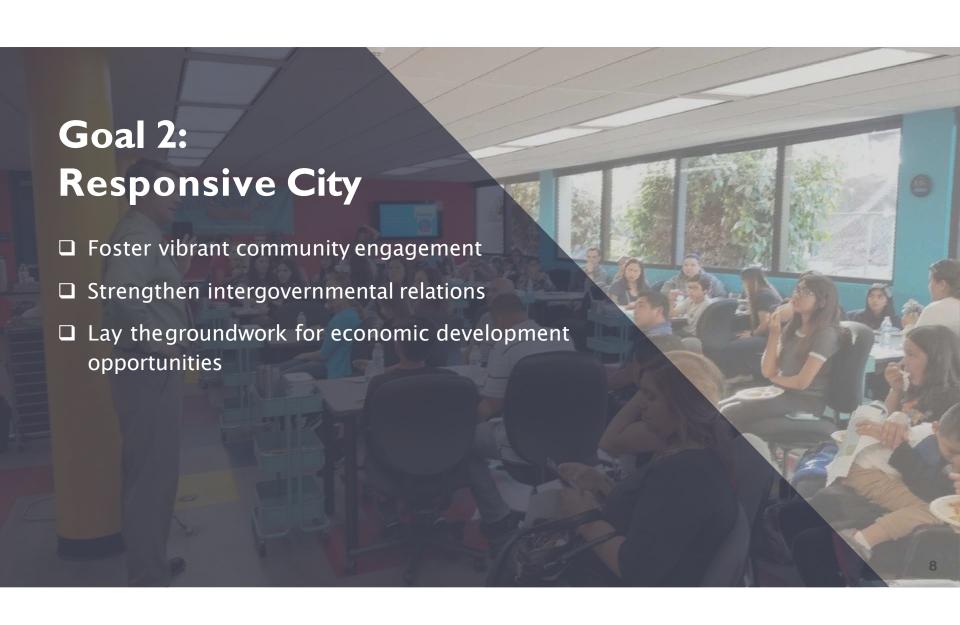




# If you want to go fast, go alone. If you want to go far, go with others.

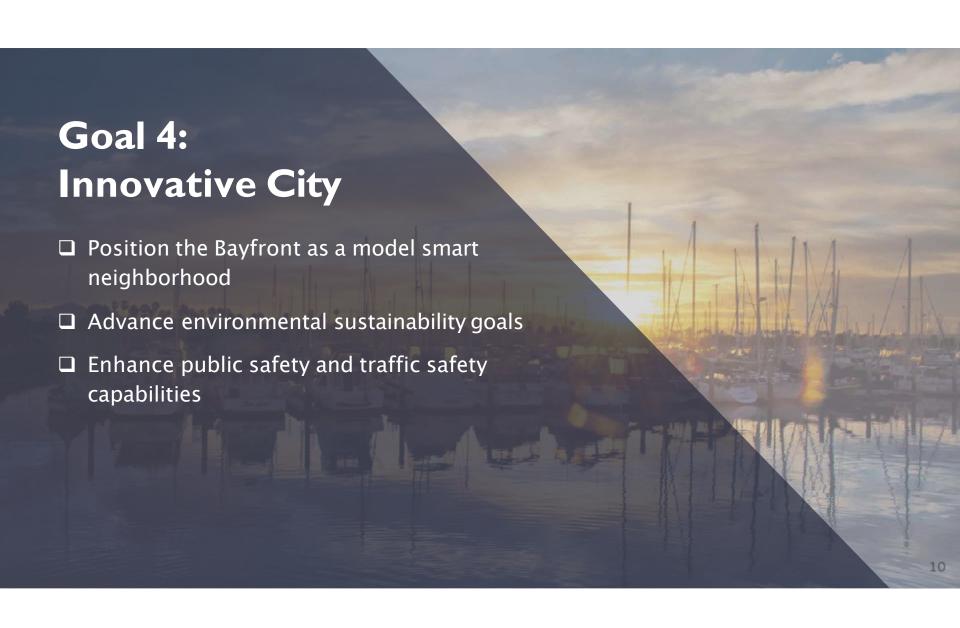
African Proverb.

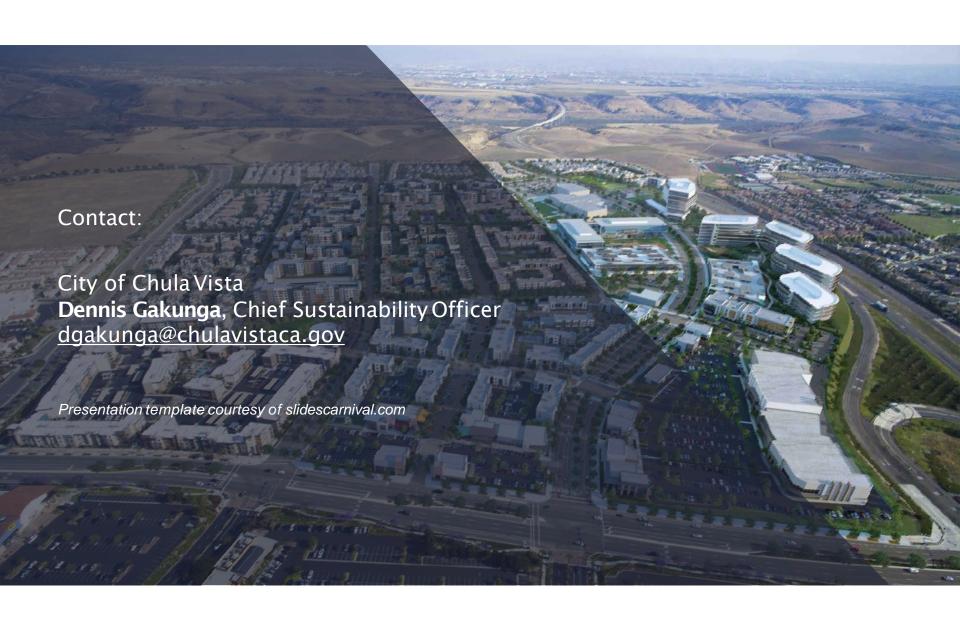




# Goal 3: Transparent City

☐ Use data and analytics to improve City services and broaden public access to information about City performance







# Broadband Public-Private Partnerships: Delivering Solutions for America's Communities

# **Questions and Comments**

- Please type your questions in the chat or Q&A box.
- Slides and Transcript will be posted on the BroadbandUSA website within 7 days after the webinar.

http://www2.ntia.doc.gov/





# **Broadband USA**

Thank you for attending.

Tune in for the next Practical Conversations Webinar

Topic: Smart States
April 18, 2018
2:00 pm EST

Registration is required for each webinar:

http://www2.ntia.doc.gov/ under Events





# BroadbandUSA is available to help communities with their broadband access and digital inclusion efforts

# **BBUSA Resources:**

- Implementing a
   Broadband Network
   Vision: A Toolkit for
   Local and Tribal
   Governments
- Community Broadband Roadmap Toolkit
- Guide to Federal Funding of Broadband Projects
- <u>Using Partnerships</u>
   <u>to Power Smart</u>
   <u>Cities</u>

# For General Information:



202-482-2048



broadbandusa@ntia.doc.gov



http://www.ntia.doc.gov/broadbandusa

# To Request Technical Assistance:



Submit Intake Form

