



# Eastport Fiber Workshop

## Eastport Fiber Connectivity Initiative (EFCI)

24 January 2023



# Rules of the Road

This is a structured, informal conversation

- **Hold your questions 'til the end** – there's time for Council and Residents
  - Write them down so you remember them, and can submit them if they aren't addressed in the limited meeting time
- This is our first community-level discussion of costs – **more detail and committed costs will come** from the Request for Proposal (RFP) process



# Agenda

- Agenda
- Introductions
- Outcomes
- EFCI Objectives
- Planning & Community Engagement Funds
- Implementation Cost Planning Estimate
- Funding Models
- Business Models
- Council Discussion and Questions
- Resident Discussion and Questions
- Next Steps



# Outcomes for Today

- Increased council understanding of the Fiber Initiative
- Initial visibility to estimated costs and timeline
- Business model to address costs
- Council and Committee in sync
- Committee available to Council and Community



# History Repeating Itself

- 1800's U.S. Government wisely invested in **cross-country rail system**
- 1930's U.S. Government invested in **Rural Electrification Act** that brought electricity to every corner of the country
- 1950's President Dwight D. Eisenhower invested in the **Interstate Highway System**
- Now, in the 21<sup>st</sup> Century, the U.S. is investing in **High-Speed Symmetrical Fiber Broadband Internet**

**The need is here. The money is available. The time is NOW.**



# Why fiber, why now?

## When compared to cable, fiber generally:

- Offers **greater bandwidth** than copper cables of the same diameter
- Has **faster speeds** – about 70% of the speed of light with less degradation than cable
- Can **carry signals farther** than copper cable
- Is **more reliable** – immune to temperature, weather, and moisture
- Doesn't carry a current so **not effected by electromagnetic interference (EMI)**
- Is **thinner and sturdier** – withstands more pull pressure than copper, less prone to damage & breakage
- Offers **flexibility for the future**
- Has a **lower total cost** of ownership (TCO)



# EFCI Mission

To provide access to **community-driven, affordable, end-to-end fiber optic-based** Internet connectivity providing **fast, tiered, reliable, symmetrical upload and download** to all Eastport residents and businesses

- **Symmetrical:** Same upload (Maine to the world) and download (world to Maine) speeds
- **Tiered:** Multiple offerings providing specific upload/download speeds and pricing to help users select the best cost/performance option for their needs



# Eastport Fiber Objectives

- Implement an **end-to-end fiber optic network** providing “future-proof” access for the next 60-75 years
  - *Optical Network Terminals determine system throughput, can be upgraded without touching the fiber*
- **Engage, educate, and involve** residents and businesses from the start
- **Tiered services** packaging **cost** and **symmetrical upload/download speeds**
- **Customers select** the best cost/performance option to meet their needs
- **Symmetrical (upload/download) performance** (1 GB or better top tier)
- Obtain **grants to minimize Eastport costs** (planning, implementation, community engagement, etc.)
- **No local tax impact** to residents  Tax



# Eastport Fiber Objectives

- Leverage **state and federal programs** to reduce access costs for qualifying residents
  - Affordable Connectivity Program (ACP)
- **Service Level Agreement (SLA)** with Internet Service Provider (ISP) partner to provide **high availability and performance** regardless of weather, time of day, system maintenance etc.
- **Firm partner commitment to a completion timeline**
- **Eastport-owned infrastructure**
- **Transparency and engagement** as the plan matures
- **Out-year revenue** to the City of Eastport once any loans/bonds are paid off
- **Council vote** approves the plan, authorizes partner contract & grant submission



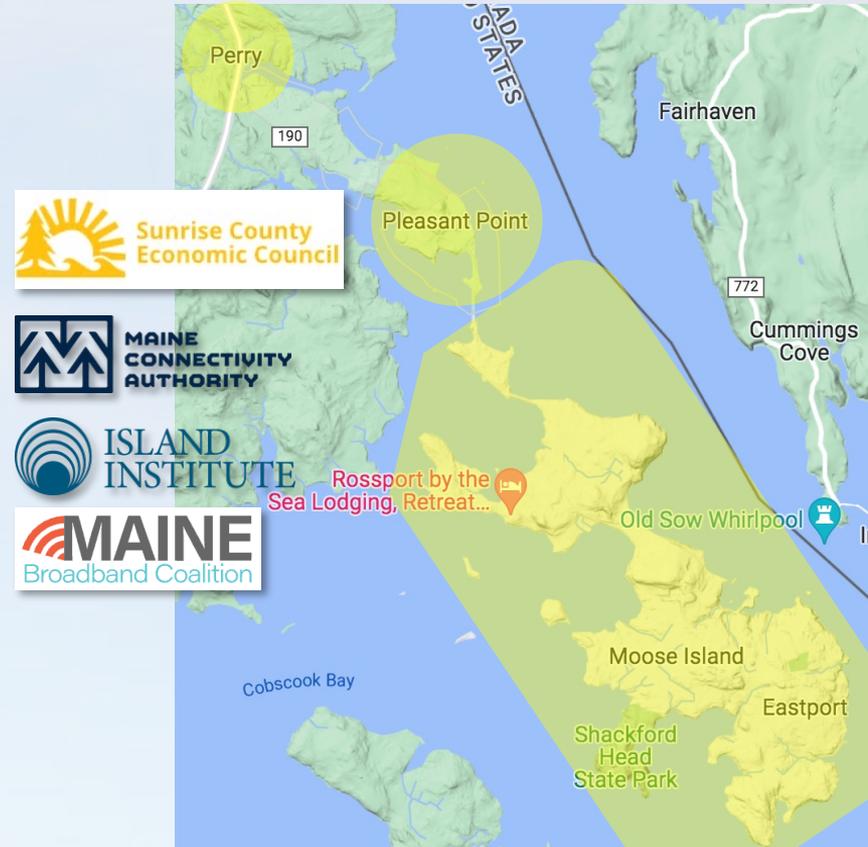
# Misconceptions

- Residents will be *forced* to give up their current ISP
  - **No**. If you're happy with your current service/ISP, you can keep it
- Eastport has to pay ISPs for loss of business with migration to fiber
  - **No**. The loss of customers to Eastport Fiber is just the nature of business
- Eastport faces costs approaching \$10M
  - **No**. We don't have final costs but current estimates are much lower
- The only way to pay for Eastport participation is by raising taxes
  - **No**. By working with a partner where Eastport owns the infrastructure and receives a monthly percentage of every subscription fee, we can pay off any loans without effecting taxes. The system pays for itself.



# Stakeholders: We're not in this alone

- Sipayik and Perry – collaborating on fiber initiative
- Eastport City Council & government
- Eastport residents, schools, and businesses
- Sunrise County Economic Council
- Island Institute
- Maine Connectivity Authority (MCA)
- Maine Broadband Coalition
- National Digital Equity Center (NDEC)
- Potential Industry partners (installation, support, ISP)



# Planning & Community Engagement Grants

- Island Institute planning grant \$ 5,500
    - Eastport matching funds (ARPA) \$ 5,500
  - Maine Connectivity Authority “Get Ready” grant \$10,000
- Working Total: \$21,000

<b>PLANNED SPEND</b>	\$2500 National Digital Equity Center (NDEC) <b>Digital Equity and Inclusion (DEI) plan</b>
	\$4200 Community engagement, education, communications
	\$1500 Broadband survey
	\$2000 supporting equipment for event recording/video/communications
	Total: \$10,200 [\$10,800 uncommitted]

- Gap (\$35,000 technical survey)



# Implementation Cost Planning Estimate

- Desktop survey numbers from Pioneer Broadband (no cost to city)
  - Same metrics as full engineering survey (need full survey for grant)
  - Reasonably accurate
- Initial cost estimate to begin exploring gap funding options
- Communities averaging +/- 75% of total cost via MCA grant process
- Eastport should plan to cover 25% of implementation cost



# Implementation Cost Planning Estimate

- Pioneer Broadband desktop survey: \$1,755,929
  - Every house
  - Every small business
- \$35,000 technical survey
- Other costs: \$175,600

**\$1,967,000**  
Total

**\$491,750**  
25% not grant funded

**\$500,000**  
Gap

\$491,750



# Implementation Cost Planning Estimate

- Pioneer Broadband desktop survey: \$1,755,929
  - Every house
  - Every small business
- \$35,000 technical survey
- Other costs: \$175,600

- DBU buy-in
- Administration
- System management
- Maintenance
- Legal review
- Insurance
- Debt service & city payout

**\$1,967,000**

Total

**\$491,750**

25% not grant funded

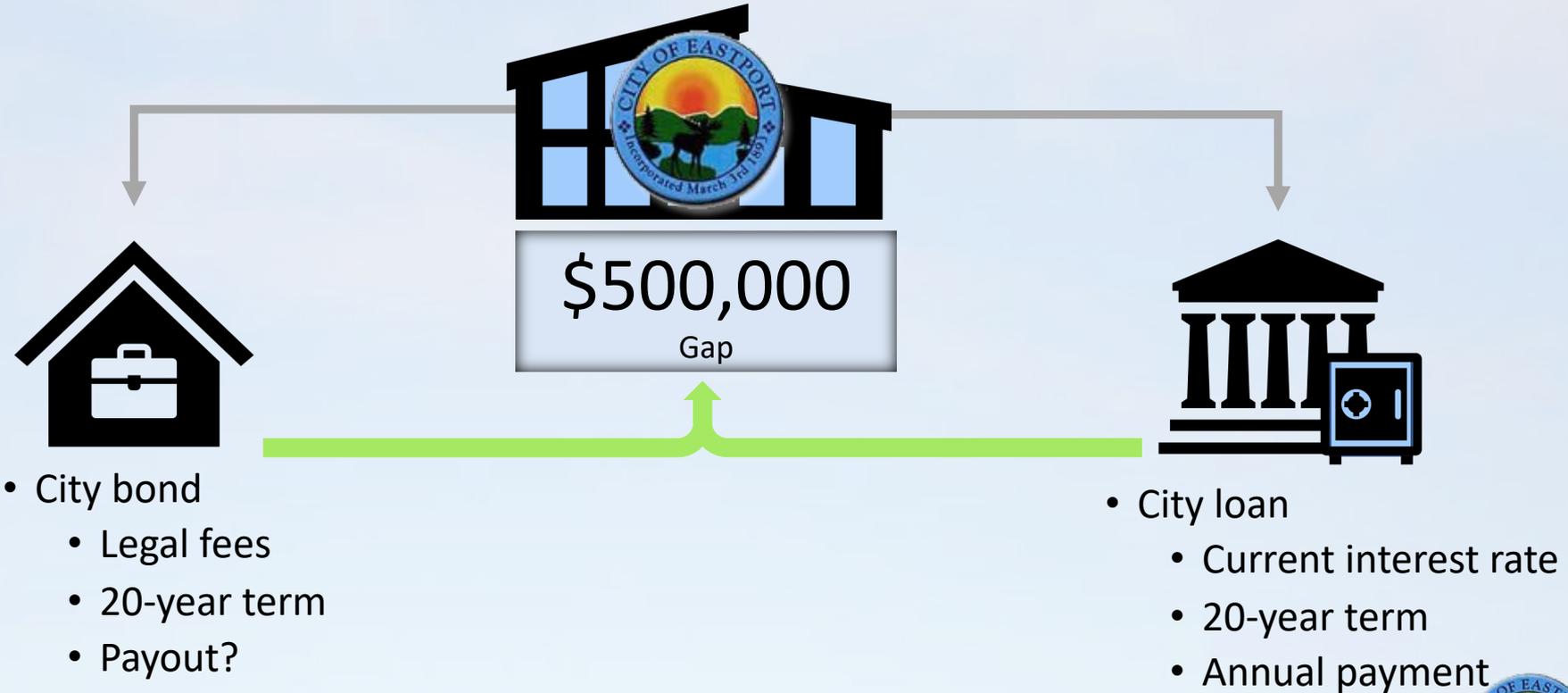
**\$500,000**

Gap

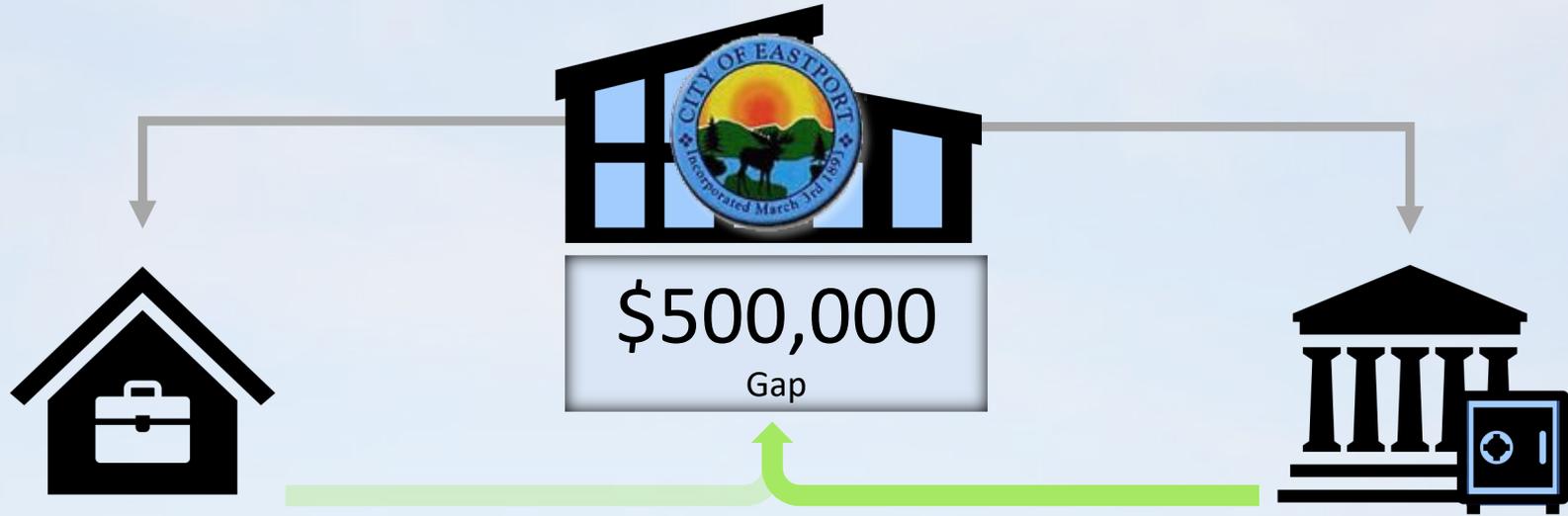
\$491,750



# Gap Funding Models



# Gap Funding Models

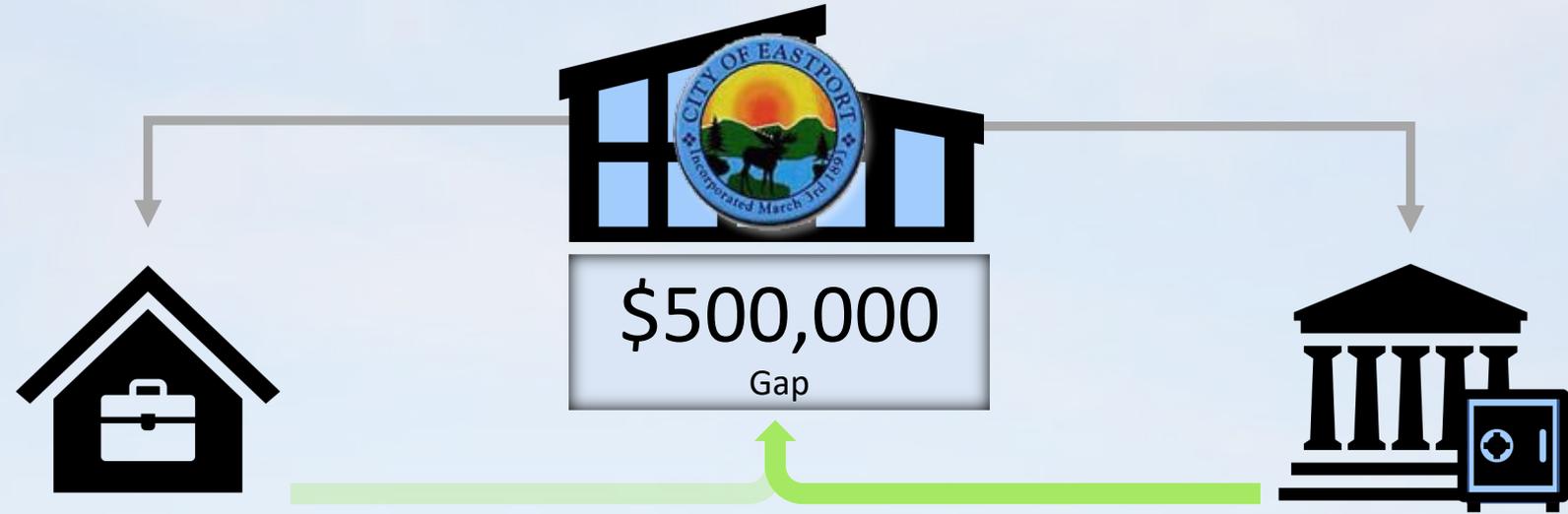


- City bond
  - Legal fees
  - 20-year term
  - Payout?

- City loan
  - Current interest rate
  - 20-year term
  - Annual payment



# Gap Funding Models



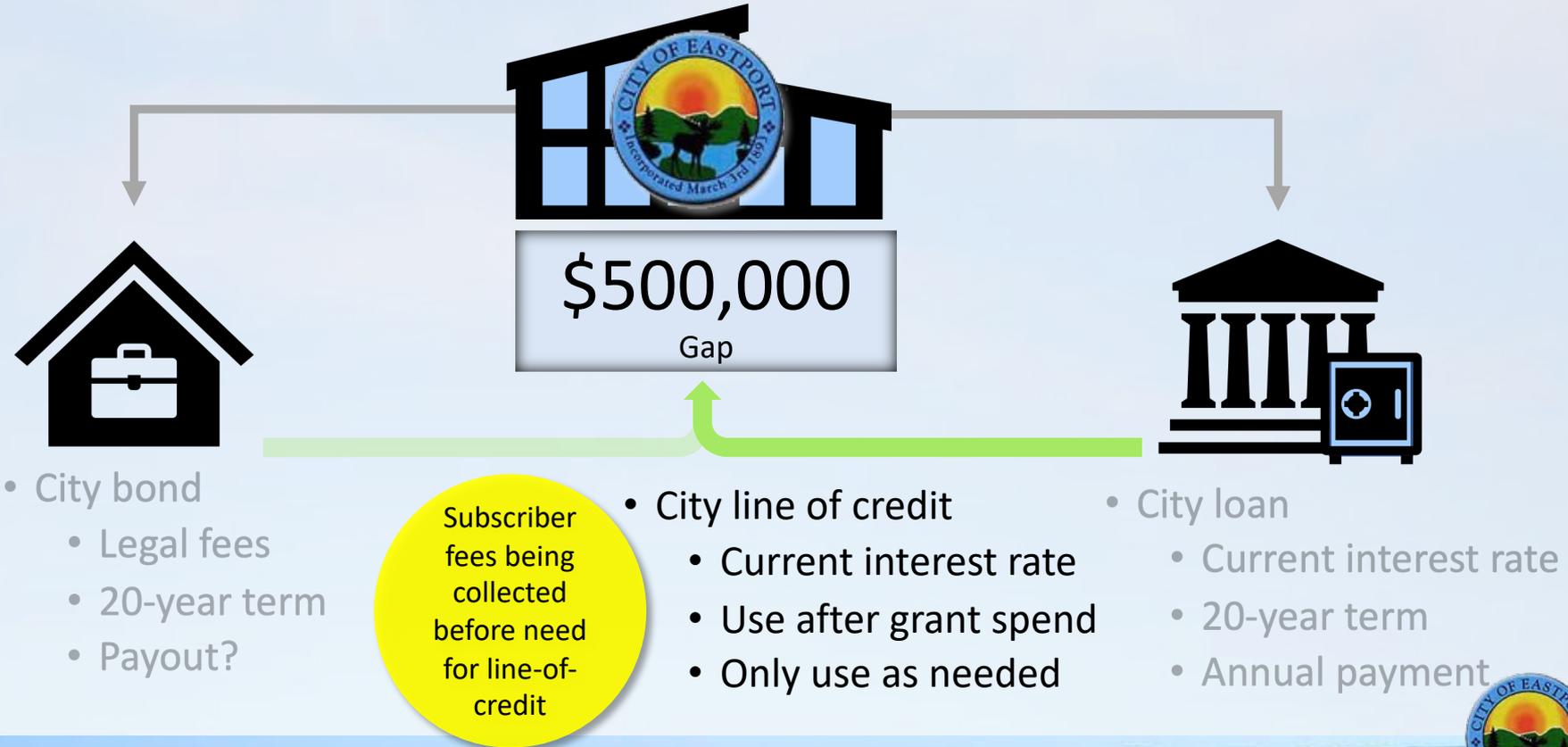
- City bond
  - Legal fees
  - 20-year term
  - Payout?

- City line of credit
  - Current interest rate
  - Use after grant spend
  - Only use as needed

- City loan
  - Current interest rate
  - 20-year term
  - Annual payment



# Gap Funding Models



# Business Model to Fund Gap

- ~~Tax~~ No tax impact
- Monthly per subscriber revenue pays loan/bond costs
  - Downeast Broadband Utility
  - Axiom
- Once loan/bond is paid, becomes recurring city revenue
  - Capital asset
  - Money to enterprise fund initially for fiber needs/costs only



# Business Model to Fund Gap (Loan)



ISP Partner

Fiber Offer

\$59/mo

Average  
100/100



# Business Model to Fund Gap (Loan)



ISP Partner

Fiber Offer

\$59/mo

Average  
100/100



12%

Take rate  
= 135

$135 \times \$25 = \$3,375/\text{mo}; \$40,500/\text{yr}$

- Loan payment
  - \$3,373/mo
  - \$40,475/yr

Note: Per subscriber return to Eastport: \$25



# Business Model to Fund Gap (Loan)



ISP Partner

Fiber Offer

\$59/mo

Average  
100/100

DBU model: DBU bills, collects fees, services loans with city's 25% cut

30%

Take rate  
= 327

- Loan payment
  - \$3,373/mo
  - \$40,475/yr

$327 \times \$25 = \$8,175/\text{mo}; \$98,100/\text{yr}$

Note:

- Per subscriber return to Eastport: \$25
- After loans paid, funds to an enterprise fund – sole use is fiber connectivity

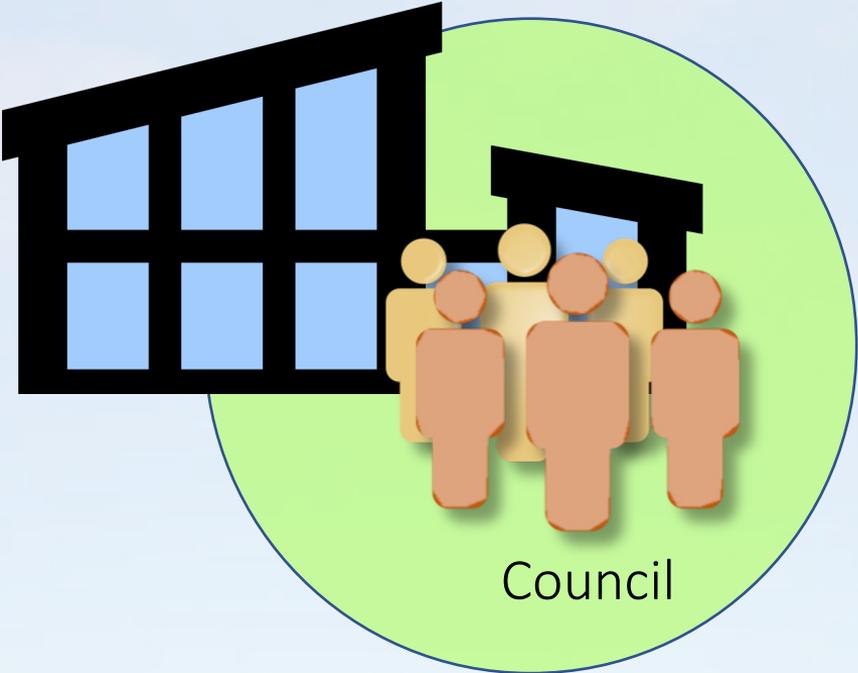


# What's Next?

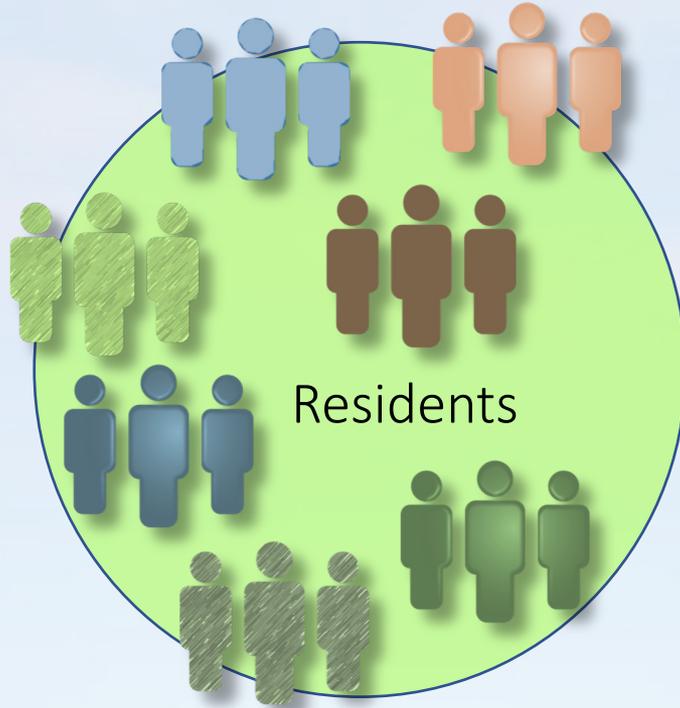
- RFP to candidate ISPs – lock-in costs & commitment
  - Downeast Broadband Utility (DBU)
  - Axiom
  - Fidium (Consolidated Communications)
  - Spectrum
- Publish Facebook group
- Community engagement events & activities
  - Community chats about Fiber and Eastport
    - General
    - Specific audiences (youth, small business owners, older residents, etc.)
  - Learning events on Internet, leveraging best value from fiber, etc.
  - Informational flyers, posters, and FAQ info sheets



# Council Discussion & Questions



# Resident Discussion & Questions



Fiber connectivity committee members:

- Ken burke - vice chair/secretary
- Melissa mitchell
- Josh nicholson
- Paul sheehy
- Mark wigley – chair

Council liaison

- Jeanne peacock

# END

## Eastport Fiber Workshop

Eastport Fiber Connectivity Initiative (EFCI)

23 January 2023

