

City of Gainesville, FL

Fiber to the Home - Business Plan

January 2022



Agenda

- Review Key Objectives, Vision and Goals
- Review SOW and Work Completed to Date
- Review Market Analysis
- Review Project Maps
- Review Project Cost Estimates CAPEX
- Review Business Models, Compare and Contrast
 - **Amenity Model** – 50Mbps to everyone
 - **Utility Model**
 - **P3/PPP/Public Private Partnership Opportunities**
- Alternative Deployments
- Funding Options Review
- Regulatory/Legal Review
- Project Issues, Risks and Concerns
- Next Steps

Project Objectives, Vision and Goals

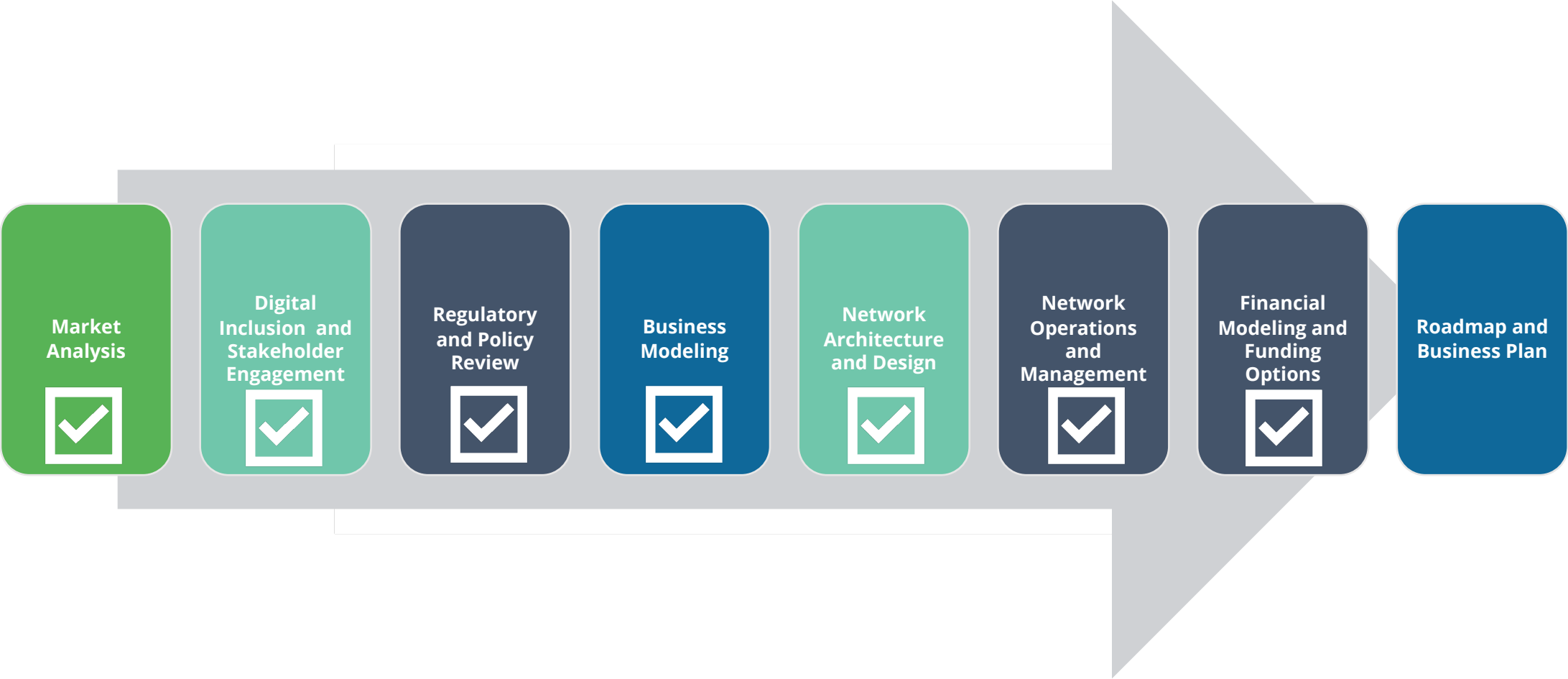
Make high-speed fiber Internet services available to all residents and businesses at an affordable price in order to address the digital divide. This is expected to:

- **Increase** the number of **successful, sustainable, small and locally owned businesses**
- **Reduce** the **poverty level** in the Gainesville community
- **Ensure** **technology infrastructure/community broadband** that is fast, reliable, and affordable to support businesses and home offices
- **Support** a **diverse local economy** (industrial and business) insulated from economic trends
- **Attract** **new businesses** to Gainesville consistent with vision and “targeted” businesses
- **Support** a **successful MWBE (Minority and Women Owned Business Enterprise) program**

History of Project/Timeline

- **1996:** GRUCom is certificated by FPSC as a Telecommunications Provider
- **2016:** GRU leadership reorganization elevates GRUCom equal to other business entities
- **2018/2019:** City Commissioned CCG for Community Broadband Study
- **2019:** CCG Report delivered and presented
- **2019:** City Council requested more information
- **2020:** City releases RFP for a FTTH Business Plan | Magellan is selected and contracted
- **2021:** (May) Magellan starts project
- **2021:** (August) Magellan presented initial findings to DAC
- **2021:** (December) Magellan presents to City leadership

SOW Review



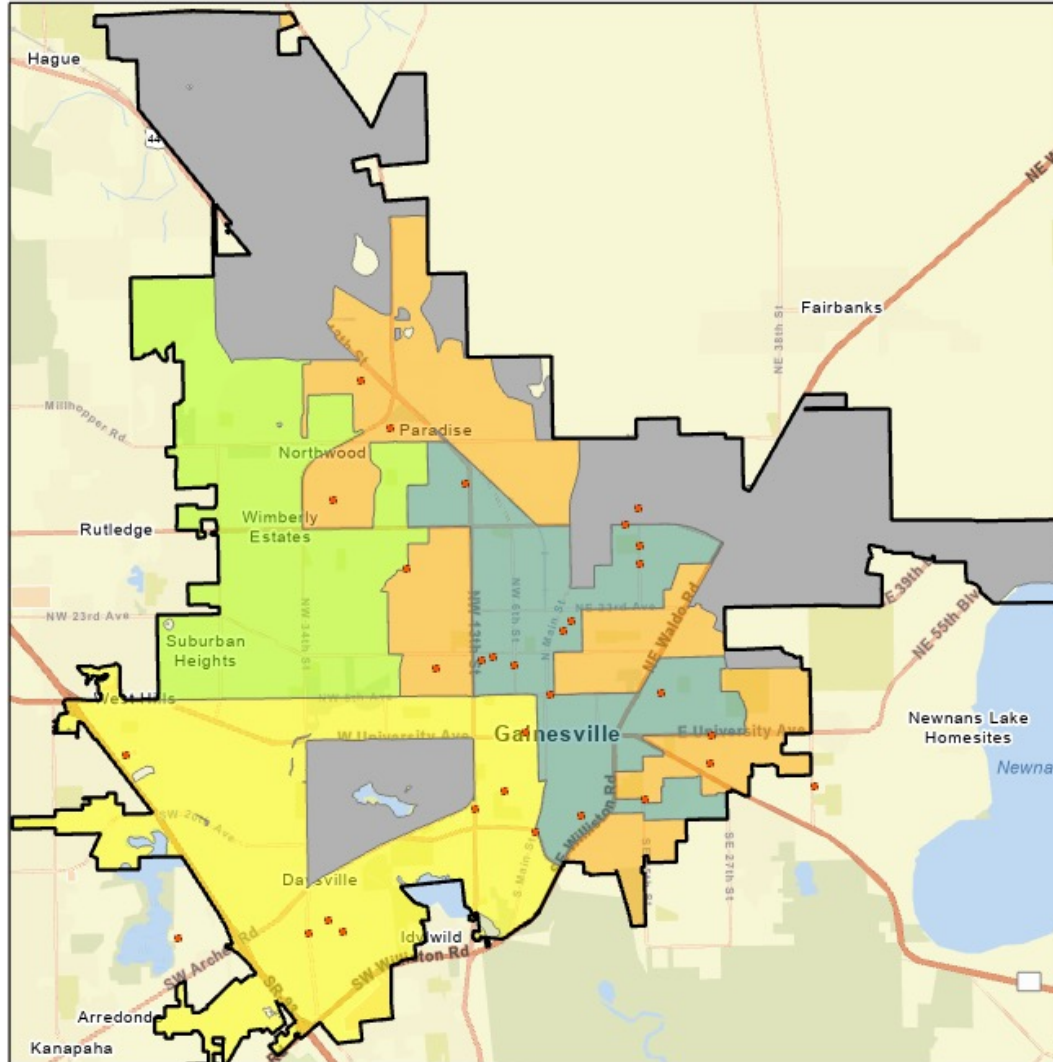
Market Analysis



AT&T	Cox
<p data-bbox="606 446 843 486">Residential</p> <p data-bbox="206 515 1225 644">\$60 for Gigabit service (\$75 total), advertised as 940 Mbps download, with up to 880 Mbps upload. \$20 price increase after 12 months. Available at 5 out of 8 addresses.</p> <p data-bbox="206 694 1187 865">The data cap for DSL is 150 GB, 350 GB for fixed wireless and 1TB to unlimited for AT&T Internet. Overage cost is \$10 per additional 50GB with a maximum charge limit of \$100-\$200 per billing cycle.</p>	<p data-bbox="1676 446 1913 486">Residential</p> <p data-bbox="1276 515 2295 686">Cable services ranged from 25 to 940 Mbps download, with up to 30 Mbps upload, with pricing ranging from \$19.99 to \$99.99. Available at all addresses. Two addresses were \$10 more than the others. <u>Service is Asymmetrical</u></p> <p data-bbox="1276 736 2295 865">Data cap is at 1.25TB with an overage cost of \$10 per additional 50GB and a maximum charge limit of \$100 per billing cycle.</p>
<p data-bbox="631 893 817 933">Business</p> <p data-bbox="206 962 1225 1133">Fiber and wireless options ranged from 100 Mbps – 1 Gbps for \$50-\$120 per month. Fiber available at 2 out of 8 addresses, wireless at 4 out of 8 addresses. Two address only had Internet Basic available with >10 Mbps.</p> <p data-bbox="206 1183 1238 1355">The data cap for DSL is 150GB, 350GB for fixed wireless and 1TB to unlimited for AT&T Internet. Overage cost is \$10 per additional 50GB with a maximum charge limit of \$100-\$200 per billing cycle.</p>	<p data-bbox="1702 893 1888 933">Business</p> <p data-bbox="1276 962 2270 1090">Cable offerings ranged from 50 Mbps to 200 Mbps with pricing ranging from \$69-\$129 per month. Available at all addresses.</p> <p data-bbox="1276 1140 1849 1180">Fiber is ICB and built on demand.</p>

*Information gathered from BroadbandNow.com and providers' websites 7/2021

Broadband Priority Areas



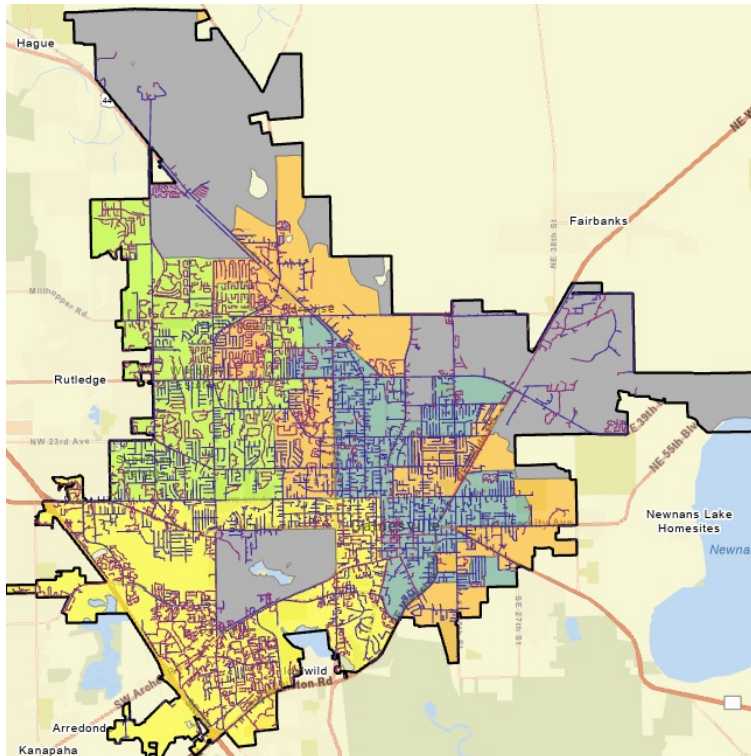
Priority Area	Total Units Throughout the City
1	12,058
2	10,144
3	35,388
4	12,016
5	1,120
●	Public Housing
—	City Boundaries

*Data sources used: Priority Area : HUD Low Mod, Household and Block Census, FCC Availability data, Units: GRUCom Data.

Project CAPEX Estimates

CAPEX for premise drops is dependent on number of connected premises – only Single-Family home considered.

- **Amenity option** = 100% connections (*as depicted below*)
- **Utility option** = Dependent on customer uptake percentage



OSP Construction (681 miles)	\$ 74,905,876
Buildings	\$ 2,480,000
PM/CM/CI	\$ 2,012,500
Network Equip/Systems/Refresh	\$ 5,271,635
General Equipment/Other CapEx	\$ 1,923,600
100% Premise Drops	\$ 70,473,676
	<u>\$157,067,287</u>

Business Model Options



	City Amenity	City Utility	Public Private Partnership (P3/PPP)
Description	City funds buildout of City-wide network including drops to every residential premise using a Special Assessment or some other financing mechanism. Every house receives connection for 50Mbps as a baseline service.	City builds network throughout the City limits using traditional muni/revenue bonds, and markets/sells services, only connecting residential subscribers who sign up for paid service.	City funds buildout of all or portions of the network – or none, and selects a P3/PPP partner through a competitive process, and negotiates a lease/revenue share for compensation.
Strengths	<ul style="list-style-type: none"> City uses other funding mechanisms like Special Assessments (offset by ARPA) to fund initial CAPEX, not requiring other means of financing Addresses Digital Divide, serves all unserved locations 100% of homes connected, likely driving higher paid take rates for Gigabit and other services CAPEX paid by other means, drives the cost for services lower 	<ul style="list-style-type: none"> City maintains full control over its destiny City receives 100% of revenue generated from system City brand and image is strong and can be used in this project City/GRU already has legal authority to build a telecom utility Model not burdened with CATV offering 	<ul style="list-style-type: none"> Reduces operational risk Introduces existing network operator into the Gainesville market, deploying fiber to the home New competition in the market
Weaknesses	<ul style="list-style-type: none"> Highest CAPEX among alternatives, connects every home with service drops 50Mbps baseline service as amenity is not free, costs must still be recovered, source must be determined Subsidy of baseline service requires increase to other rates unless other source is used Devices and training still required for adoption 	<ul style="list-style-type: none"> City has to compete for business, marketing and customer service skill sets will have to be acquired/honed City has to manage and operate a retail "business" – these skill sets will have to be acquired/honed 	<ul style="list-style-type: none"> Lessens City control to that which can be assured by contract Loss of revenue opportunity – Partner keeps all upside Partner may/may not provide CAPEX contribution to the project Partner may not be interested in serving just residents – without business/enterprise also
Opportunities	<ul style="list-style-type: none"> Universal availability improves broadband access and adoption across the City Facilitates broad use of online resources for education, health, employment, public services Provision of voice services 	<ul style="list-style-type: none"> City participates in all upside and generates new revenue streams to support the local community Revenue stays in the community City can leverage City-wide network assets as needed for City and utility operations Provision of voice services 	<ul style="list-style-type: none"> Reduce overall direct City project costs New competition Expanded high speed broadband coverage of City
Threats	<ul style="list-style-type: none"> Legal and political challenges by incumbents may be more likely Highest investment requirement City must execute the construction and operations of a new utility Technology risk? What does the future hold? Staffing/resourcing the right talent - City pay rates 	<ul style="list-style-type: none"> City must bond/finance the entire cost of the project - including working capital (offset by ARPA) City must execute the construction and operations of a new utility Technology risk? What does the future hold? Staffing/resourcing the right talent - City pay rates 	<ul style="list-style-type: none"> Legal issues and hurdles/Legal Risks City must invest, bond/finance portions or all of CAPEX City may be required to be the backstop should the partner fail or abandon market Possible operating costs borne by the City

Business Model – Amenity Concept



- City offers free 50Mbps service to all its current 31,972 households
- Estimated 681 miles of distribution fiber build over 5 phases
- All households will be connected to the network (100% drops)
- All initial Cap-EX will be paid through grants or other funds – no debt service tied to FTTH financial model*
- Project that 50% of households will take the free service; 50% will subscribe to a higher speed product (500Mbps or 1Gbps) with or without phone service for a nominal additional fee

Product	MRC
500x500MB	\$ 29.00
1x1GB	\$ 49.00
Internet 50x50MB + Phone	\$ 21.99
Internet 500x500MB + Phone	\$ 50.99
Internet 1x1GB + Phone	\$ 70.99

% of Single-Family Homes Connected	100%
Estimated Premise Connections	31,972
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20-Year Projected Revenue	\$ 130,983,539
20-Year Projected Cap-Ex	\$ 157,067,287
20-Year Projected Op-EX	\$ 116,078,605
Funding	
Initial Cap-Ex To Be Funded	\$ 132,650,200
City Contribution	\$ 132,650,200
Net To Be Funded	\$ -
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Projected Working Capital Needed	\$ 16,600,000
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Projected 20-Year End-of-Year Cash	\$ 2,926,310

*Assumes a non-ad valorem Special Assessment or other funding raising \$132.6M to cover initial capital buildout- 10

Business Model – Utility Concept – Residential Only



- Estimated 681 miles of distribution fiber build over 5 phases
- All initial Cap-Ex will be funded through bonds or loans (Model assumes \$15M in funding from ARPA, Grants and other sources)
- Residential Passings: 31,972

Services – Residential - Internet	MRC
Internet 300x300Mbps	\$50.00
Internet 500x500Mbps	\$60.00
Internet 1x1Gbps	\$75.00
Concierge Services	\$9.95

Services – Residential – Double Play	MRC
Internet 300x300Mbps+Phone	\$64.99
Internet 500x500Mbps+Phone	\$74.99
Internet 1x1Gbps+Phone	\$89.99

Projected Uptake	45%	55%	65%
Premises	14,387	17,585	20,782
20-Year Projected Revenue	\$ 197,805,859	\$ 241,386,407	\$ 284,862,242
Cap-Ex + 20-Yr Op-Ex	\$ 108,287,359	\$ 208,953,118	\$ 215,169,229
Debt Service Total P & I	\$ 83,297,070	\$ 106,751,688	\$ 110,292,824
Working Capital P & I	\$ 23,657,399	\$ 31,939,520	\$ 31,939,520
20-Year End-of-Year Cash	\$ 5,314,523	\$ 43,940,399	\$ 82,580,702

Business Model – Business Services Impact



- Business Passings: 7,685

Services - Business	MRC
Internet 300x300Mbps	\$129.00
Internet 500x500Mbps	\$175.00
Internet 1x1Gbps	\$250.00
Business Phone (per line)	\$18.00
Concierge Services	\$29.95

	Residential Only at Breakeven Uptake	With Business Added at Uptake	With Business Added at Uptake	With Business Added at Uptake
Projected Uptake	45%	10%	20%	30%
Premises	14,387	765	1,531	2,297
20-Year Projected Revenue	\$ 197,805,859	\$ 234,737,401	\$ 271,353,286	\$ 308,714,575
Cap-Ex + 20-Yr Op-Ex	\$ 108,287,359	\$ 110,487,691	\$ 112,716,018	\$ 114,924,780
Funding Needed After Contribution	\$ 83,297,070	\$ 84,612,464	\$ 85,954,634	\$ 87,278,187
Working Capital Needed	\$ 23,657,399	\$ 23,657,399	\$ 23,657,399	\$ 23,657,399
20-Year End-of-Year Cash	\$ 5,314,523	\$ 39,646,574	\$ 73,692,714	\$ 108,472,094
Increase Over Residential Only	\$ -	\$ 34,332,051	\$ 68,378,191	\$ 103,157,571

FTTH Case Studies

- **Chattanooga EPB, TN**

- 2002 – Initial explorations of providing Internet Services.
- 2008 – Began providing Internet.
- 2019 – Among the fastest bandwidths in the nation, with broadband net revenues exceeding their net electric revenues. Surpassed 100,000+ customer connections.

- **City of Palo Alto, CA**

- 2000 – Began deploying fiber-optics for electric utility and began a dark fiber utility.
- 2013 – Reported the dark fiber utility fund generated over \$2.1M in revenue annually and had amassed a reserve of nearly \$15M.
- 2020 – Fiber fund reserves grow to \$30M, and the City began full design, engineering and permitting to deploy FTTH citywide.

- **City of Ocala, FL**

- 1995 – Ocala Fiber Network (OFN) replaced copper connections with fiber for better SCADA operations.
- 1997 – City was connecting Community Anchor institutions and started seeing medical professionals welcoming dark fiber connections.
- 2014 – A Fiber Network Business Plan was conducted.
- 2015 – Reported a revenue of \$3.1M with 693 customers covering 440 miles.
- 2019 – Launched residential service with a pilot neighborhood targeting a 30% uptake which resulted in 42% take rate and a revenue of \$6.8M. (no voice services offered)
- 2021 – Now serving 2,500 residents around 4 neighborhoods with 850 miles of fiber including aerial and underground facilities.



Business Model – P3/PPP

Scenario 1: City Funded

- City funds CAPEX/Debt Service
- P3/PPP Partner leases access to infrastructure using monthly/annual payment for all or parts of the network
- City may/may not be responsible for O&M
- City may keep portions of the infrastructure for government use, smart city, etc.
- City would need to cover any remaining debt service/operating costs
- Revenue share and upside participation is negotiable
- Residents receive FTTH with competitively priced Gbps+ services

Scenario 2: Partner Funded

- City leases existing backbone fiber where possible
- City makes permitting, and other aspects of construction throughout the City as easy as possible with non-discriminatory terms
- City provides feedback on priority areas and jointly plan
- City applies for and uses any available grant funding available to support buildout
- Partner funds all aspects of buildout over some predefined timeline
- Partner may contribute something financially or in-kind to the City

P3/PPP Case Studies

- **City of Rancho Cucamonga, CA**

- 2018: City signs exclusive P3 agreement with Inyo Networks for Business and Residential Service Provider Role
 - City funds all CAPEX – OSP, equipment, facilities
 - Partner provides revenue share of 50% of Internet/Transport based services to the City
 - Partner markets, sells, provides services, bills and provides customer service
- 2022: Over 500 customers served, growing by dozens each month

- **City of West Des Moines, IA**

- 2020: City signs non-exclusive P3 agreement with Google Fiber for Residential Service Provider Role
 - City funded community wide vendor-neutral communications conduit bank and boxes
 - Partner provides a per passing lease fee for each household the network passes as its built out
 - Partner builds its fiber network, and markets, sells, provides services, bills and provides customer service
- 2022: Network is under construction and is not active yet

- **City of Lakeland, FL**

- 2019: City signs exclusive P3 agreement with Summit Broadband for Business and Residential Service Provider Role
 - City fixes and improved existing network at its cost, and leases all excess fiber capacity to the Partner
 - Partner pays a base \$144K lease payment to the City or 10% revenue share of Internet/Transport based services
 - Partner builds its fiber network, and markets, sells, provides services, bills and provides customer service
- 2022: Network is under construction and is not active yet



Alternative Deployments

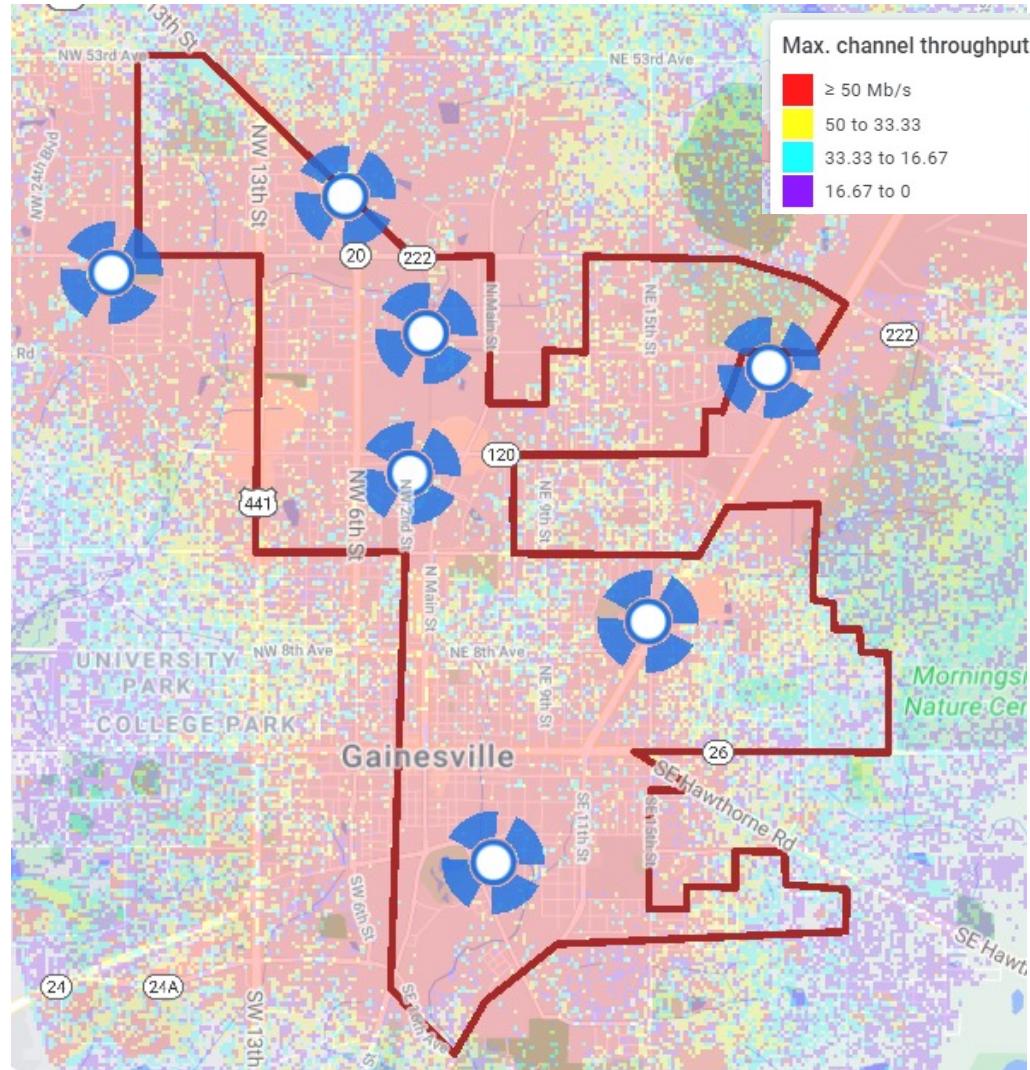
- **Priority Area 1 Limited Deployment**

- Focus efforts only in Priority Area 1 – or key areas of demonstrated need
- Consider FTTH deployment as a Pilot project
- Expand construction based on opportunities and success

- **Wireless Deployment**

- Focus efforts only in Priority Area 1 – or key areas of demonstrated need
- Deploy fixed wireless broadband solution to deliver a wireless Internet service to residential units that qualify or have been provided MiFi devices in the past.
- Structure partnership with Gainesville Library or Alachua Schools

Priority 1 Area Wireless Overlay



Gainesville Priority Area 1 Estimated CBRS Fixed Wireless Overlay Cost-CAPEX

Item	Cost	Units	Total Cost
Commercial Towers used \$0 Capex	\$ -	4	\$ -
City Owned/GRUTowers	\$ -	3	\$ -
Base Station Cost	\$ 12,500	28	\$ 350,000
Base Station Installation	\$ 2,000	7	\$ 14,000
Microwave Equipment	\$ 3,000	-	\$ -
Outdoor Router	\$ 1,000	-	\$ -
Outdoor Cabinet	\$ 1,000	-	\$ -
CPE cost (\$356 equipment, \$350 labor)	\$ 706	-	\$ -
EPC Access Fee Per CPE	\$ 35	-	\$ -
Subtotal			\$ 364,000
Engineering, Project & Construction Mgmt			\$ 154,600
Total Estimated Capex Cost			\$ 518,600

Estimated CBRS Wireless Overlay Cost-OPEX/Month

Item	Cost	Units	Total Cost
Tower Rental for Commercial Towers	\$ 700	4	\$ 2,800
Utilities All Towers	\$ 100	7	\$ 700
Internet Data 1 GB per tower	\$ 1,500	7	\$ 10,500
Subtotal			\$ 14,000
Contingency	15%		\$ 2,100
Total Estimated Cost /Month			\$ 16,100

Funding Options Review

- **Bonds** – Municipal, Revenue
- **Special Assessments**
- **State of Florida** – Department of Economic Opportunity Grants
- **Federal**
 1. CARES
 2. ARPA
 3. EDA
 4. Infrastructure Investment and Jobs Act (IIJA) through NTIA
 - \$42.5B in Broadband Grant Funding to the States
 - To connect Unserved, anchor institutions, Wi-Fi in eligible areas,
 - \$1B for Middle-mile broadband projects
 - FCC previously directed to improve broadband mapping, must be used for IIJA funding

Regulatory Review

- **GRUCom** granted *telecommunications certificate* by Florida Public Service Commission on December 17, 1996, GRUCom begins providing telecom services including residential as “alternate telecom provider”
- **F.S. 350.81** *“Communications services offered by governmental entities”* passed by Florida Legislature, imposes procedures before city or county can provide cable or telecom services – but exempts cities providing telecom services prior to April 1, 2005 from many provisions
- **Remaining Section 350.81 provisions** would be adhered to by City anyway as good practice
 - Accounting requirements, separate books and records, cost allocation plan
 - Use of enterprise fund
 - Adoption of separate operating and capital budgets
 - Provisions for review of financial results after four years of providing telecom services
- **Waiver provisions** provide relief from most onerous obstacles in Section 350.81
 - Two public hearings at least 30 days apart with specified notice provisions
 - Disclosure of mandatory business plan items in public hearing, exposing business plan details which no other telecom provider is required to do
 - Vote on specific findings regarding business plan details
 - Formal annual review in public meeting of financial statements, exposing detailed financial statements which no other telecom provider is required to do
- Waiver provisions also apply to 2(f), **prohibition on pricing** “any service below the cost of providing the service by subsidizing ... with moneys from rates paid by subscribers of a noncommunications services utility or from any other revenues”. However, this is best practice and GRUCom should have a policy of avoiding subsidization except for explicit subsidy for any amenity services

Project Issues, Concerns, Risks

- GRU and the City Attorney's Office recommended "compliance with the **[Section 350.81]** statutory requirements in order to avoid legal challenges, carefully and publicly assess the risks and develop a solid business plan prior to moving forward". [Memo to Mayor and City Commissioners dated June 16, 2020]
- Ad valorem taxes become applicable to GRUCom or GRU property
- Financing source: Use of Ad Valorem, ARPA, Special Assessments, or other public funding
- GRU's outstanding debt
- GRU's position on expansion, FTTH and the overall goals of the project
- GRUCom's staff reorganization plan and voice services business plan
 - Must be approved and implemented for proper foundation for broadband service offering

Next Steps

Presentation
January 10, 2022

- Present findings
- Determine next steps
- Develop consensus with the City's Digital Access Committee (DAC)

Presentation
January 27, 2022

- Present findings
- Determine next steps
- Develop consensus with the City's Policy Committee

Finalize
Business Plan

- Finalize Business Plan document based on direction from City leadership and Committees

Presentation of
Final Report
***TBD**

- Present to City leadership and the City Commission
- Determine next steps

Process to Proceed Under Business Plan



- Finalize Decisions on Infrastructure and Business Plan
 - Fiber and/or Wireless Options
 - P3/PPP or Utility/Amenity Model
- Finalize Governance and GRUCom's role
- Begin Design/Engineering/Permitting for FTTH or Wireless to finalize costs and to develop Shovel Ready plans
- Develop and Market Survey of Citizens
- Begin Sec. 350.81 process if City provider option selected:
 - Two public hearings at least 30 days apart with specified notice provisions
 - Disclosure of mandatory business plan items in public hearing, exposing business plan details which no other telecom provider is required to do
 - Vote on specific findings regarding business plan details
 - Formal annual review in public meeting of financial statements, exposing detailed financial statements which no other telecom provider is required to do
- Release RFPs and begin Construction/Implementation

F.S. 350.81 Steps

- Notice 2 public hearings at least 30 days apart, predominant newspaper
 - Notice must include geographic area proposed to be served, and identify the services not currently being adequately provided
- Required subjects of public hearing:
 - Whether proposed service is currently offered, generally available
 - Does any service provider propose to offer that service, what assurances can be offered
 - Capital investment, realistic cost of operation and maintenance, estimated realistic revenues and expenses (“full-cost accounting”)
 - Private and public costs and benefits including effect on existing and future jobs, actual economic development prospects, tax base growth, education, public health.

F.S. 350.81 Steps (continued)

- Provide to public a written business plan
 - Projected number of subscribers to be served
 - Geographic area to be served
 - Types of services to be provided
 - Plan to ensure revenues exceed operating expenses and debt service
 - Estimated CAPEX and operational costs and revenue for the first 4 years
 - Projected network modernization and technological upgrade plans
- Specific findings on these items and City Commission vote
- Bonding: bond referendum must be conducted if revenue bonds with maturity > 15 years

THANK YOU

