

June 24, 2021 @ 3pm

Summary

Location: Zoom

Agenda:

Overview of the meeting/Presentation

1. Magellan Presentation
2. Questions and Answers

Notes:

1. Introduction from Liza
2. Magellan presentation from Greg Laudeman
 - a. Magellan's Role
 - i. Analyze outreach data
 - ii. Compile asset inventory
 - iii. Identify potential funding options
 - iv. Develop a conceptual network design for Countywide broadband
 - v. Provide a range of best-practice business model options and make recommendations.
 - b. Targeted Areas/Areas of Opportunity
 - i. Marin City
 - ii. Canal District
 - iii. West Marin
 - iv. City of Novato (2 areas)
 1. Areas of disadvantage were less likely to respond.
 - c. These areas of opportunity should be thought of as provider business opportunities.
 - d. We had to dive deep in the data to show the five areas in need of investment. For example, the Canal area is intermixed with more affluent households so on average the data does not reveal the problem.
 - e. Smart corridor fiber is available to the County and local cities are authorized to use six of the twelve strands of fiber.
 - f. The resident survey showed that there are some respondents that said that they would be willing to pay more, but about a third of the respondents said they couldn't afford it. Cost is a big reason for some residents that don't have broadband, but availability is also a large factor.
 - g. Gap Analysis
 - i. Physical Infrastructure

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1. Pockets along 101 are underserved with little infrastructure in West Marin.
- ii. Accessibility of Services and Information
- h. These areas of opportunity should be thought of as provider business opportunities.
 1. Survey responses should be viewed as a best case scenario. The disconnected were less likely to participate.
 - ii. Digital Literacy
 1. A quarter of respondents indicated less than adequate ability to use the internet.
 - iii. End User Devices
 1. Survey responses suggested that the respondents are well equipped
 2. There is a trend toward wireless devices.
 - iv. Affordability
 1. A third of respondents said they'd pay more for better internet
 2. The underserved may be underrepresented in this process to date.
 - v. Sharing Information About network infrastructure.
 1. 139 cell sites were at one point owned by US TelePacific that were not able to be owner identified
 - vi. Network Design "Phases" (Network design phases visuals in video)
 1. Connect municipal facilities in 101 corridors via smart fiber
 2. Extend the backbone into underserved urban core areas
 3. Connect area schools and adjacent areas
 4. Connect County facilities and adjacent areas
 5. Deploy additional fiber to support services offerings in remote areas.
 - vii. Estimated Costs (Breakdown by phases in video around minute 41)
 - viii. Funding Opportunities
 1. Local Funding
 - a. Mello-Roos Community
 - b. Public Debt Funding
 - c. Joint Build/Joint Use
 2. State 7 Billion in State Funding
 3. Federal Funding
 - a. American Rescue Plan
 - b. Economic Development Administration

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- c. CDBG
- d. Emergency Broadband Benefit
- ix. Best Options for Digital Marin
 - 1. Independent Public Corporation such as an Authority of Special District
 - 2. Not-for-profit Benefit Corporation
- i. The governmental hoops that providers must jump through can be enough to deter them from working in the community.
- j. Recommendations
 - i. Evolve Digital Marin into a formal organization
 - ii. Establish a staff position to focus on funding
 - iii. Develop a business plan for digital inclusion
 - iv. Create a framework for cooperation on data
 - v. Establish common policies and standards
 - 1. i.e., if you are building a subdivision, you are building fiber and conduit, so it is internet ready
 - vi. Develop a “shovel-ready” high level design
- 3. Questions and Answers
 - a. Does underground take longer?
 - i. Underground does take more time, aerial can be substantially more money.
 - ii. The cost difference is large between the two.
 - b. Is there a time frame for each phase?
 - i. Typically, a fiber build takes 18-24 months but can be more because the demand is high.
 - c. How do we understand the experience from other communities that may not have answered the online survey?
 - 1. Digital Marin has done 13 different surveys and have reached out to communities that may not have participated digitally.
- 4. Demographics will be included in the plan

Recording

This meeting was recorded and can be viewed at

<https://www.youtube.com/watch?v=299PgTml2Qs>

Digital Marin Magellan/Workgroups Meeting



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DIGITAL MARIN




Needs & Options

June 24, 2021

Dr. Greg Laudeman
Senior Consultant
Project Manager


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ABOUT MAGELLAN

			
Jbry Wolf VP of Digital Innovation Project Executive	Dr. Greg Laudeman Sr Broadband Consultant Project Manager	Preston Young Sr Broadband Consultant Design Engineering	Melanie Downing Project Management Analyst Project Support

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MAGELLAN ADVISORS' ROLE




1. Analyze data collected by the Digital Marin team through outreach including surveys and workshops to assess needs
2. Compile an inventory of broadband assets and a gap analysis
3. Identify potential funding options including grant and loan programs from state and federal sources
4. Develop a conceptual network design for Countywide broadband infrastructure to support Digital Marin's goals
5. Provide a range of best-practice business model options and make recommendations for which will suit Digital Marin

Our report is not designed to be a standalone document. It is intended to be incorporated into a complete Digital Marin strategy.

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TARGET AREAS

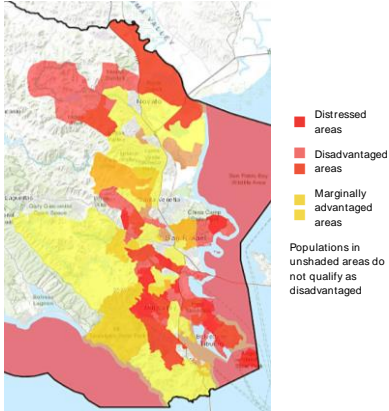


Marin City

Canal District

West Marin

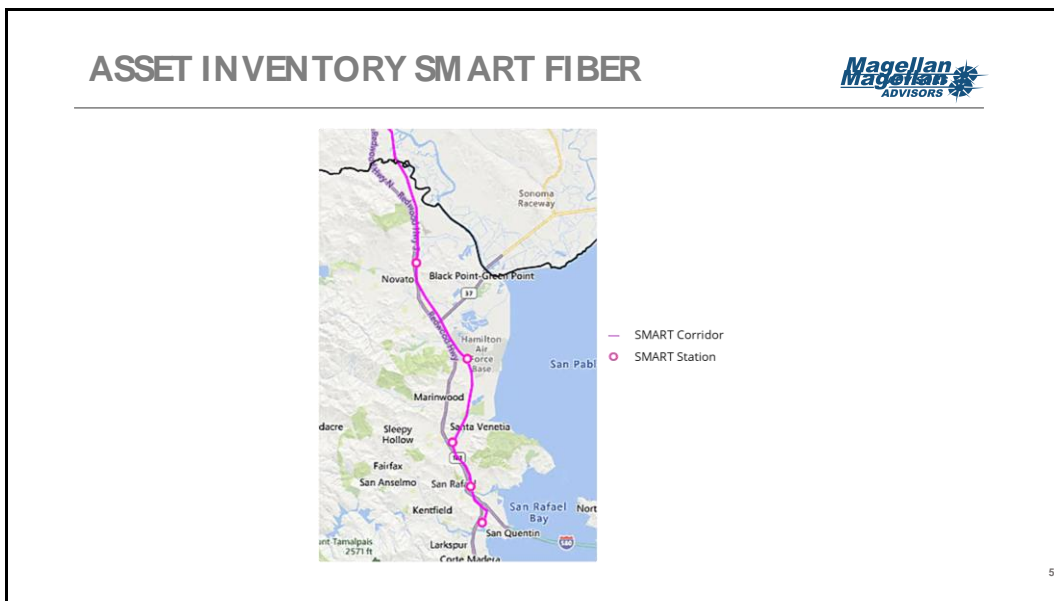
City of Novato (2 areas)



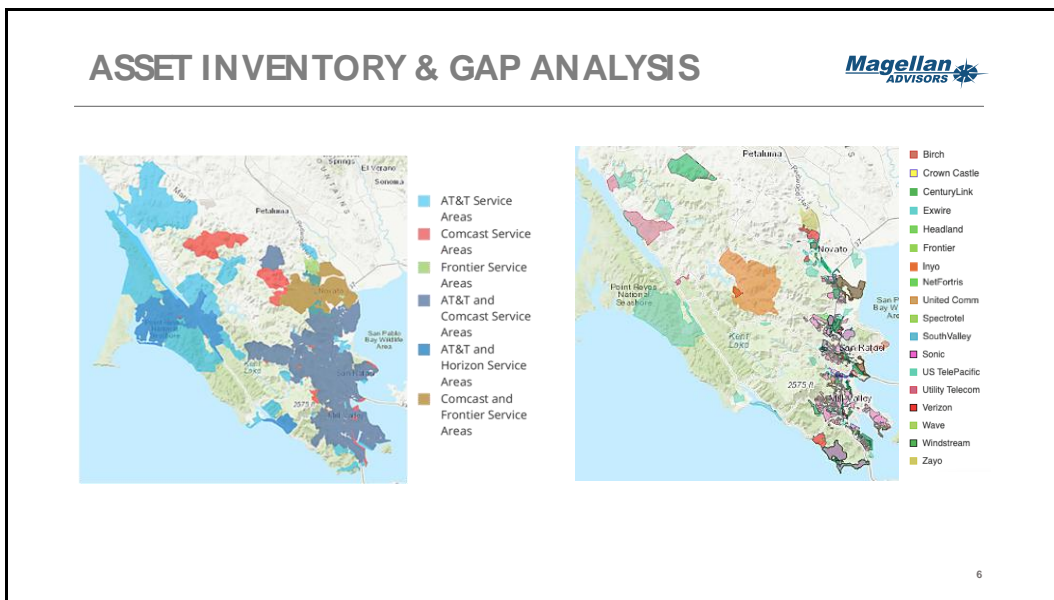
Broadband Availability by Provider from Data Provided to CPUC

Provider	Subscribers	Non-subscribers	Unservd	Blocks
AT&T Service, Inc.	45,377	18,908	29,898	1,380
Comcast	42,244	7,081	71,663	1,171
Dillon Beach Internet	5,985	-	21	143
Frontier	98	171	1,143	14
Horizon Cable TV	3,566	783	23,819	75
Inyo Networks	761	-	4,648	6
NONE	743	-	4,895	8
Sonic.net	15,845	5,324	53,622	485
Vista Broadband	11,242	57	416	261
WebPerception,	18,177	4,239	27,697	543

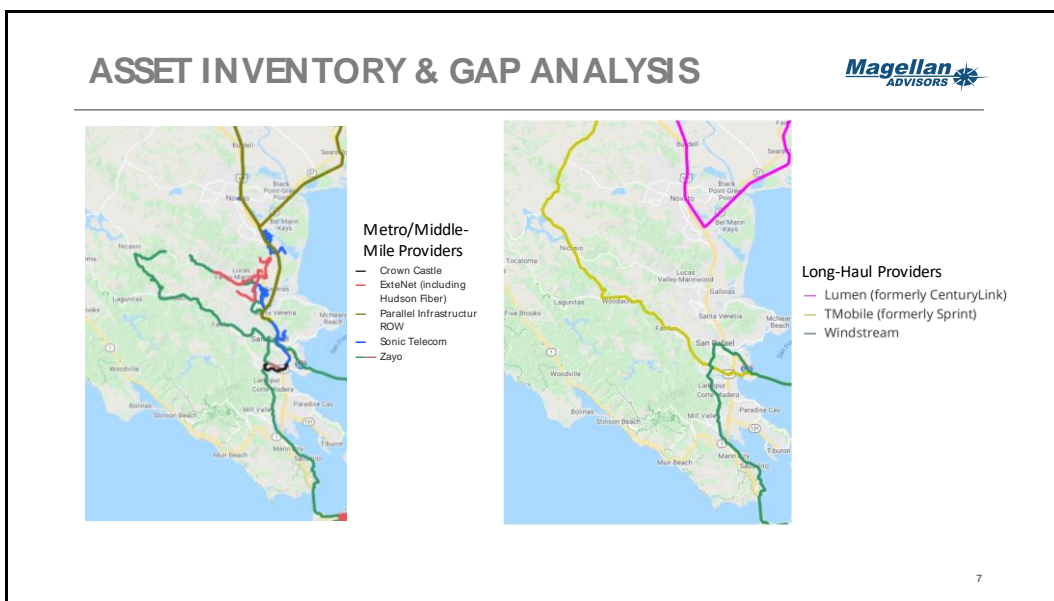
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ONLINE RESIDENTS SURVEY

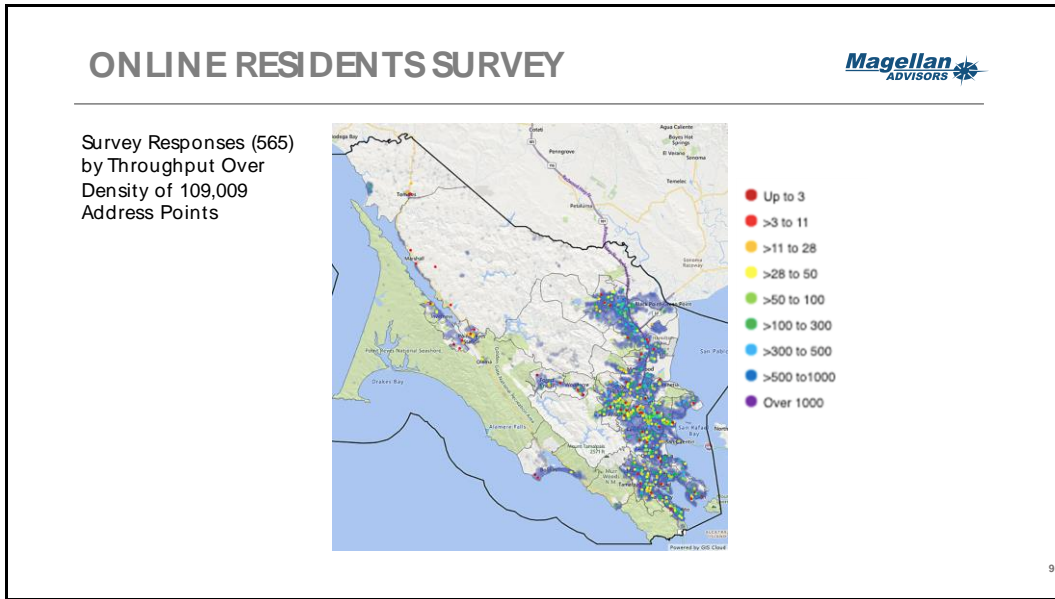
CITY/TOWN	RESPONSES
Belvedere	1.6%
Bolinas	1.4%
Corte Madera	0.4%
Dillon Beach	0.5%
Fairfax	5.0%
Forest Knolls	0.9%
Greenbrae	3.8%
Inverness	2.0%
Kentfield	2.0%
Lagunitas	0.4%
Larkspur	3.3%
Lucas Valley	0.2%
Marin City	0.4%
Marshall	0.9%
Mill Valley	12.9%
Muir Beach	0.2%
Nicasio	0.4%
Novato	1.1%
Olema	0.5%
Point Reyes	2.5%
Ross	0.2%
San Anselmo	16.5%
San Geronimo	0.2%
San Rafael	26.3%
Santa Venetia	0.2%
Sausalito	6.1%
Sebastopol	0.2%
Tamalpais Valley	0.2%
Tiburon	6.1%
Tomales	2.3%
Woodacre	1.4%

LOCATION	RESPONSES
Home	94.3%
Work	3.1%
Both	1.5%
Mobile	0.6%
Other	0.0%

PROVIDER	RESPONSES	AVERAGE THROUGHPUT (MBPS)
All	565	146.7
Comcast/Xfinity	71.7%	159.0
AT&T	18.1%	144.9
Sonic	4.4%	90.0
Other	3.5%	42.3
Horizon Cable	2.3%	48.8


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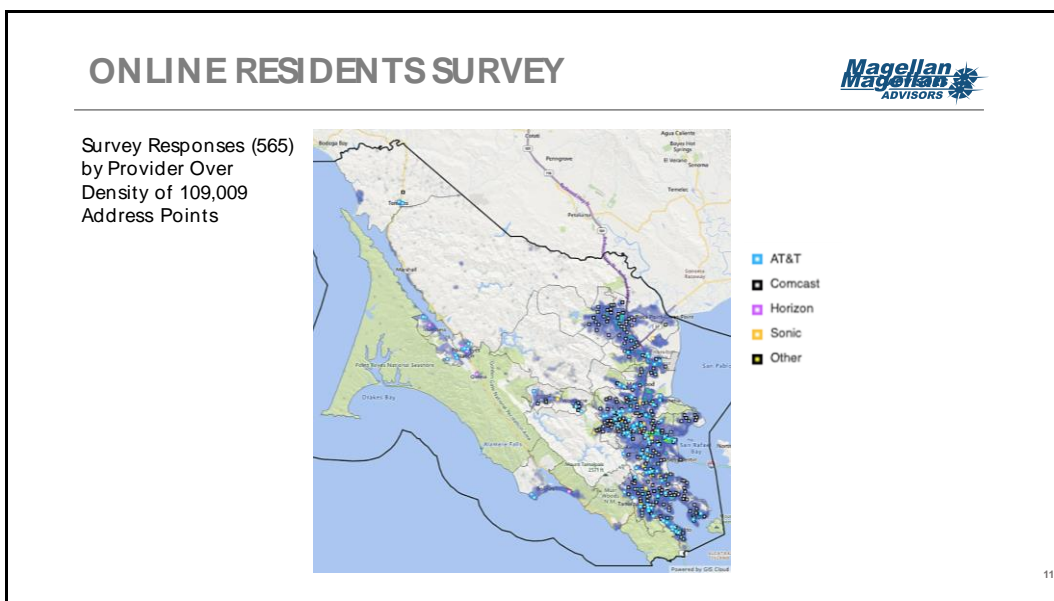
ONLINE RESIDENTS SURVEY



PROVIDER	COUNT	AVERAGE MRC	MRC/MBPS'
All	599	\$124.36	\$0.85
Comcast Xfinity	422	\$140.67	\$0.89
AT&T	112	\$85.40	\$0.59
Sonic	26	\$71.00	\$0.79
Horizon	13	\$112.08	\$2.30
Tomales Bay LAN	4	\$55.67	\$6.47
LMI	3	\$66.67	\$8.32
WebPerception	3	\$93.00	\$5.96
Frontier	2	\$70.50	\$19.64
Other	2	\$128.00	\$0.89
Verizon	2	\$140.00	\$5.07
Dillon Beach Internet	2	\$55.00	\$0.42
BayLan	1	\$45.00	\$2.39
Local LAN	1	\$105.00	\$13.48
Mint Mobile	1	\$20.00	\$1.22
Muir Beach LAN	1	\$30.00	\$0.27
Myself	1	\$1.00	\$0.05
Rteck	1	\$90.00	\$4.08
T-Mobile	1	\$65.00	\$5.97
Viasat	1	\$200.00	\$5.43


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ONLINE RESIDENTS SURVEY



ITEM	ALL	TERRIBLE	BAD	NEUTRAL	GOOD	EXCELLENT
Service overall	593	5.1%	14.0%	25.8%	43.7%	11.5%
Price	588	12.6%	32.0%	31.6%	17.3%	6.5%
Reliability (up time)	590	4.9%	14.4%	24.9%	40.8%	14.9%
Speed	592	6.8%	16.7%	27.0%	36.8%	12.7%
Customer Service & Technical Support	575	13.9%	20.3%	33.2%	21.9%	10.6%

ABILITY LEVEL	RESPONSES
Terrible	3.0%
Bad	7.0%
Neutral	15.1%
Good	45.2%
Excellent	29.8%


WILLINGNESS TO PAY	RESPONSES
No, what I have today is good enough	25.5%
No, I consider my current service fast and reliable	10.3%
No, I can't afford to pay more	30.4%
Yes, I would pay a little more (5% to 10%)	20.4%
Yes, I would pay somewhat more (15% to 20%)	9.6%
Yes, I would pay much more (25% or more)	3.7%

REASON	RESPONSES	1-3 RANK
Access elsewhere	10	4
Too expensive	25	24
Too slow or unreliable	20	16
Not available	20	17
Do not need	5	0
Smartphone access	9	1
Other reason	8	3

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GAP ANALYSIS



1. Physical Infrastructure

- Pockets along 101 corridor are underserved
- Little infrastructure in West Marin

2. Accessibility of Services and Information

- Physical internet access remains an issue but is relatively minor for the survey respondents
- Likely that some community members did not participate in survey due to lack of broadband
- Survey responses should be viewed as a “best case scenario”


3. Digital Literacy

- A quarter of survey respondents indicated less than adequate ability to use the internet
- Wired vs wireless connections and what this means for survey respondent demographics

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GAP ANALYSIS



4. End User Devices

- Responses to the online Residents survey suggested that the respondents are well-equipped
- Trend toward wireless

5. Affordability

- Over a third of respondents said they would pay more for better internet
- Those who are challenged to afford internet access may be under-represented in the process to-date.


6. Sharing Information about Network Infrastructure

- Permits, including process information, real asset (e.g., cell sites) ownership, and traffic management assets and systems, as well as availability and quality of network services

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NETWORK DESIGN “PHASES”




- 1. Connect municipal facilities in the 101 corridor via SMART fiber.**
- 2. Extend the backbone into underserved urban core areas.**
- 3. Connect area schools and adjacent areas**
- 4. Connect County facilities and adjacent areas**
- 5. Deploy additional fiber to support services offerings in remote areas**


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NETWORK DESIGN PHASE 1



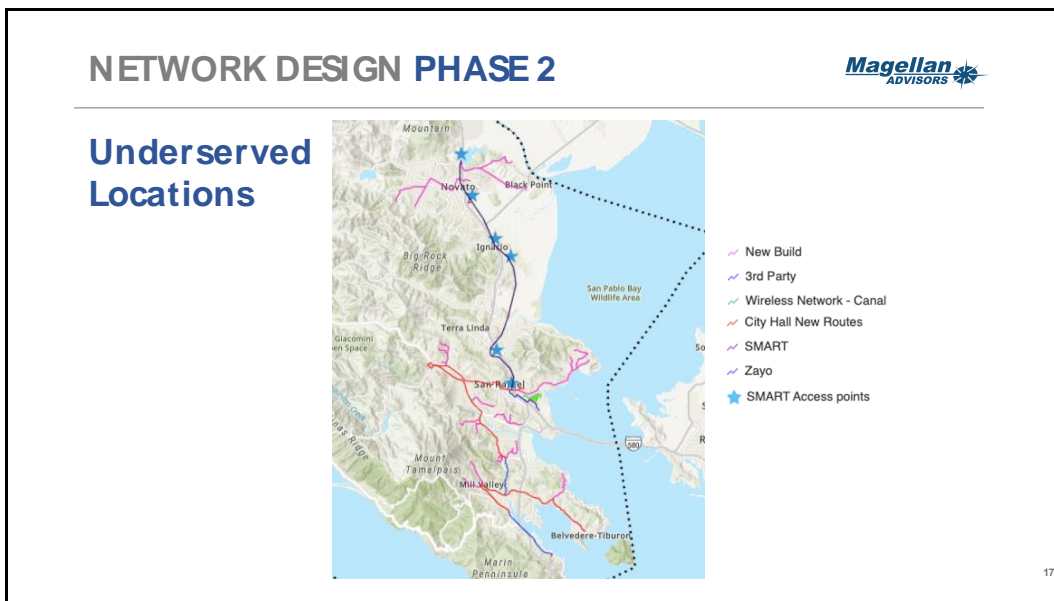
Municipal Facilities



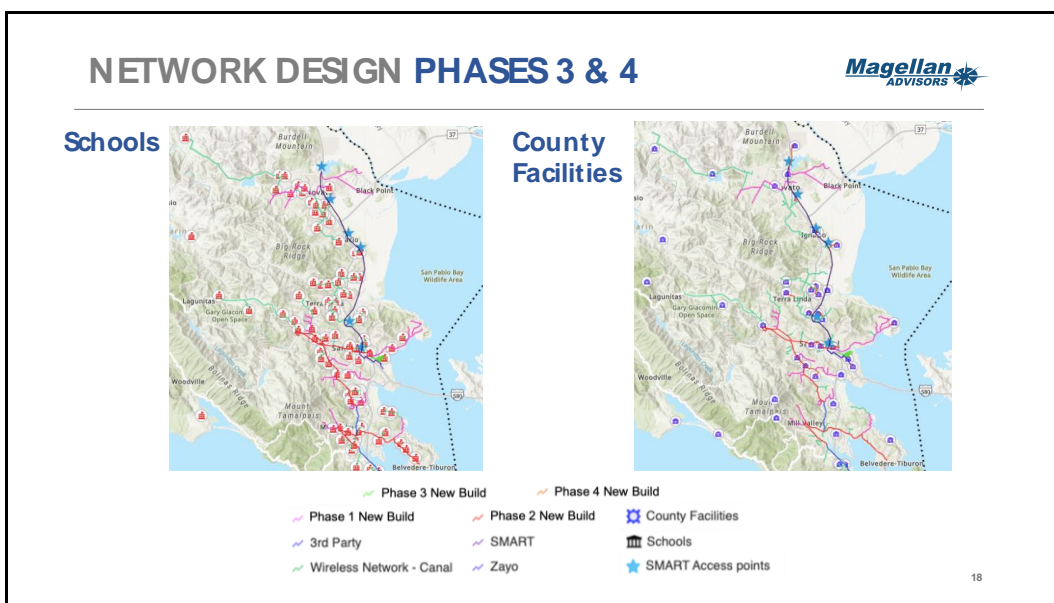
-  City & Town Halls
-  City Hall New Routes
-  SMART
-  Zayo
-  SMART Access points

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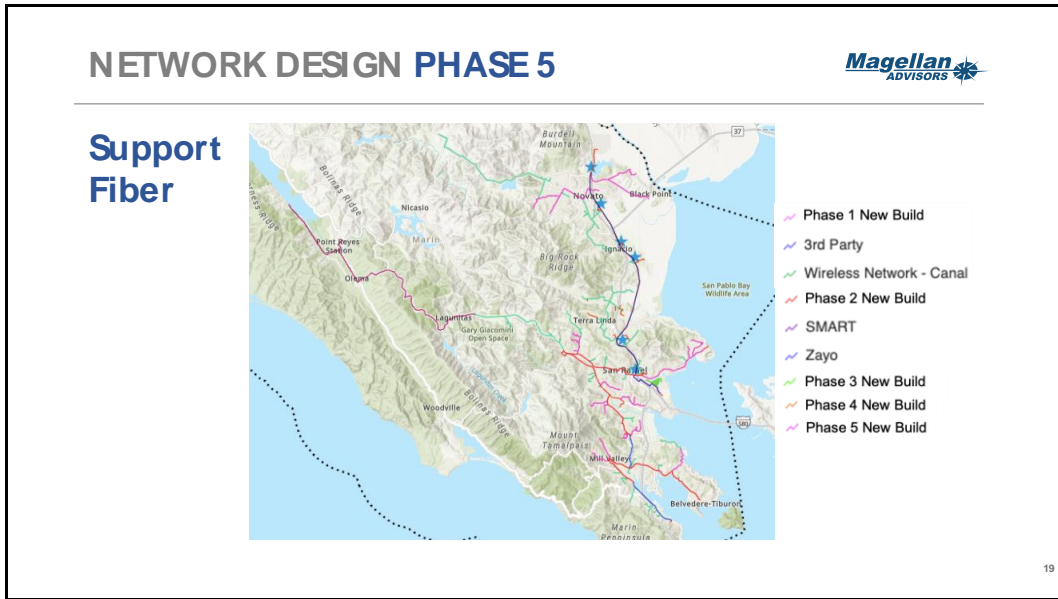


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ESTIMATED COSTS

	PHASE	TYPE	FOOTAGE	COST
All Underground	Phase 1 - City Halls	New	106,218	\$7,019,948
		SMART/SONIC	53,002	\$26,501
		ZAYO	26,983	\$26,174
	Phase 2 - Underserved Areas	New	168,290	\$11,122,286
	Phase 3 - Schools	New	247,447	\$16,353,772
	Phase 4 - County Facilities	New	97,658	\$6,454,217
Phase 5 - Support Fiber	New	87,170	\$5,761,065	
	Total		786,768	\$46,763,963
40% Aerial / 60% Underground	Phase 1 - City Hall	New	106,218	\$4,904,085
		SMART/SONIC	53,002	\$26,501
		ZAYO	26,983	\$25,962
	Phase 2 - Underserved	New	168,290	\$7,769,949
	Phase 3 - Schools	New	247,447	\$11,424,628
	Phase 4 - County Facilities	New	97,658	\$4,508,870
Phase 5 - Support Fiber	New	87,170	\$4,024,639	
	Total		786,768	\$32,684,634

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FUNDING OPPORTUNITIES



Local Funding Mechanisms

- Mello-Roos Community Facilities District
- Public Debt Financing: Bonds and Loans
- Joint Build and Joint Use
- Private Investors

State Funding

- \$7 Billion in broadband funding pending


Federal Funding

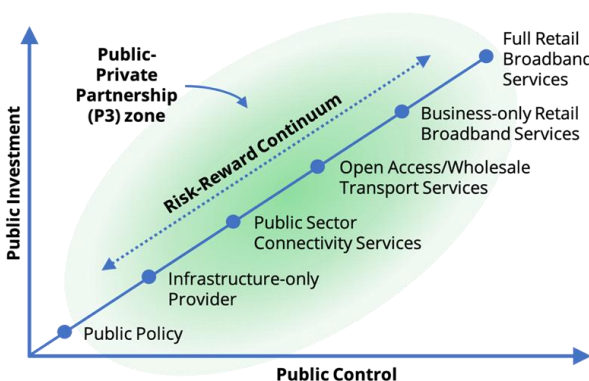
- American Rescue Plan Act
- Economic Development Administration
- CDBG
- Emergency Broadband Benefit

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GOVERNANCE & MANAGEMENT





The graph plots Public Investment (y-axis) against Public Control (x-axis). A diagonal line represents the Risk-Reward Continuum, with points for: Public Policy, Infrastructure-only Provider, Public Sector Connectivity Services, Open Access/Wholesale Transport Services, Business-only Retail Broadband Services, and Full Retail Broadband Services. A shaded green area labeled 'Public-Private Partnership (P3) zone' encompasses the latter three models.

Best Options for Digital Marin:

- Independent Public Corporation such as an Authority or Special District
- Not-for-profit Benefit Corporation


Active Models

Passive Models

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RECOMMENDATIONS



- 1. Evolve Digital Marin into a formal organization.**
- 2. Establish a staff position to focus on funding.**
- 3. Develop a business plan for digital inclusion.**
- 4. Create a framework for cooperation on data.**
- 5. Establish common policies and standards.**
- 6. Develop a “shovel-ready” high-level design.**

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QUESTIONS?

