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CLARK COUNTY BROADBAND ACTION PLAN

COMMISSIONER BRIEFING

FEBRUARY 1, 2022

DRAFT- For Discussion Only

Context and project overview

HR&A Advisors and **CTC Technology and Energy** have spent the past few months working with Clark County on a **Broadband Internet Action Plan**

Key focus areas of the plan included

- **A baseline assessment** of broadband internet access, affordability, and adoption in Clark County
 - **Access** focused on current infrastructure capabilities and improvement opportunities
 - **Affordability** looked at competitive dynamics and pricing compared to peer counties
 - **Adoption** looked at demographic and geographic trends impacting take-up
- A **synthesis of key issues** that should be addressed
- **Policy recommendations** that could address these key issues

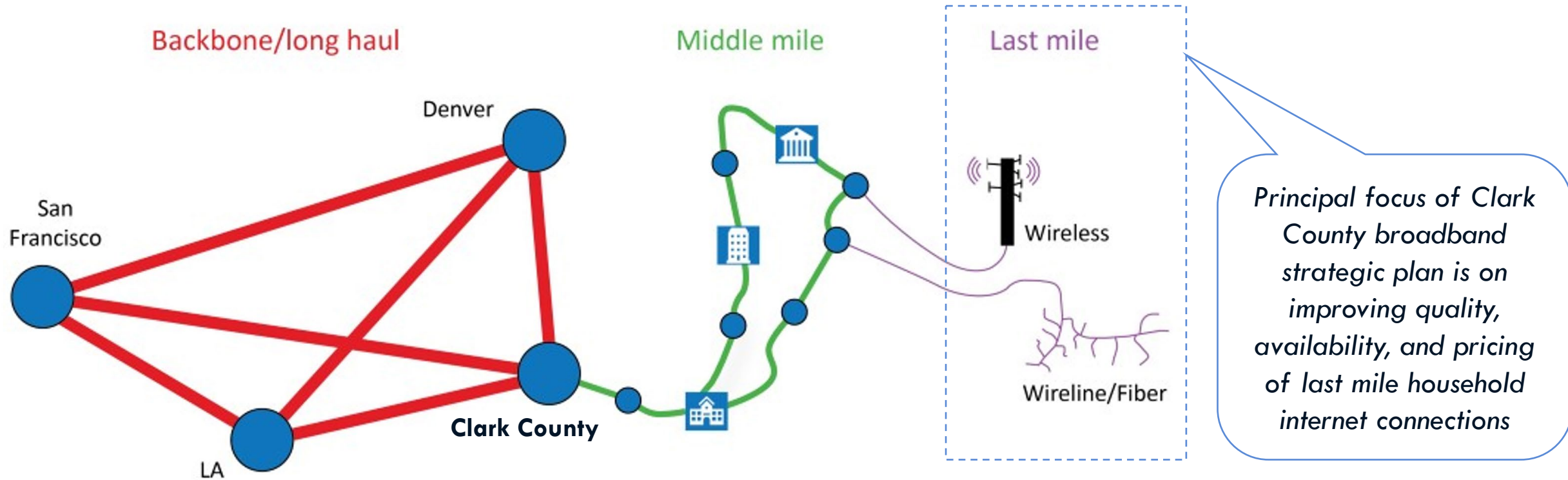
The plan primarily focused on internet access at the household level; it did not focus on mobile (e.g. cell phone) services or on end-user technology (e.g. computers or other in-home devices)

Glossary of key terms (1 / 2)

Broadband internet as a term is often used interchangeably with “high-speed” and describes a speed of data transmission fast enough to support high-quality internet services.

- **Speed** is generally measured in megabits per second (mbps) and is further divided into download and upload speed
- There is **no universal broadband definition**, but the FCC has used a 25 mbps/3 mbps (download/upload) standard to define broadband; others use higher speeds like 100/100 or 1 Gbps
- Broadband internet can be delivered to households via **different technology types**;
 - Technology types used to deliver internet can include **Fiber, Cable, DSL, Fixed Wireless, and Satellite**; often, multiple technologies are used to reach households
 - Technology used to deliver internet service is distinct from how individual devices ultimately access that internet service, e.g. **Wi-Fi or Ethernet** within a household
- While mobile networks can also provide broadband speeds (especially with 5G networks), these are generally focused on cell phones and were out of scope for this assessment and action plan

Glossary of key terms (2/2)



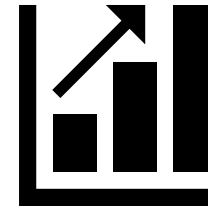
We are at an important moment in history to shape the future of broadband internet and the County's role in partnering with ISPs



Increased awareness about importance of reliable broadband, driven by COVID-19 and acceleration of remote work/education



Billions in funding available from ARPA & Bipartisan Infrastructure Law (IIJA) to help state/local governments improve broadband



Data needs will grow continuously as ongoing trends in digitalization, online services, streaming, and connected devices continue to grow



Digital divide contributes to significant inequality and will continue to get worse absent intervention to address root causes

Broadband actions that Clark County takes now will reverberate for generations

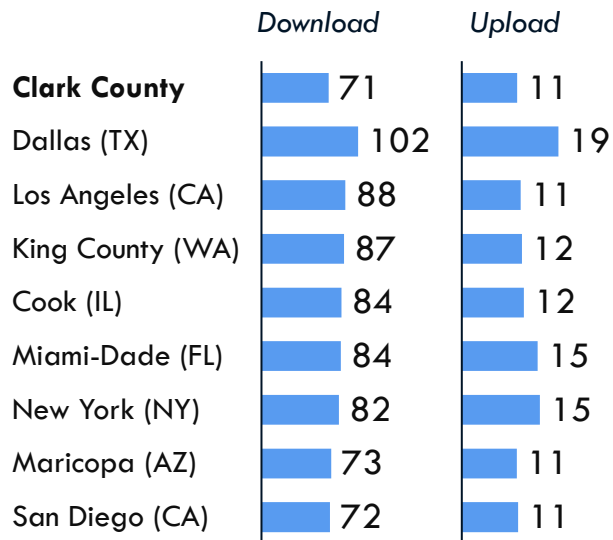
Efforts to close the digital divide must focus on three interdependent components



Clark County has below-average performance across access, affordability, and adoption metrics

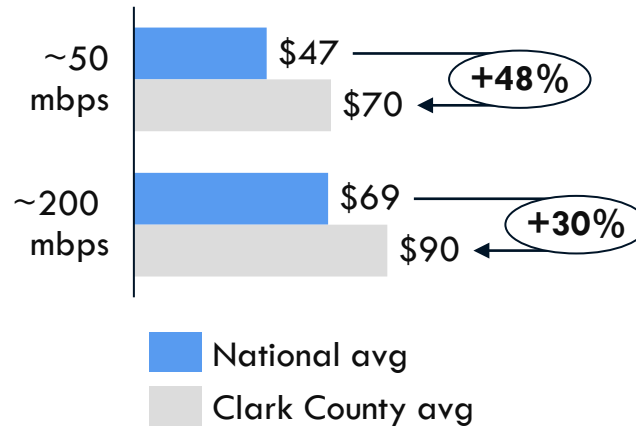
Access

Clark county under-performing peer counties on median speeds:*



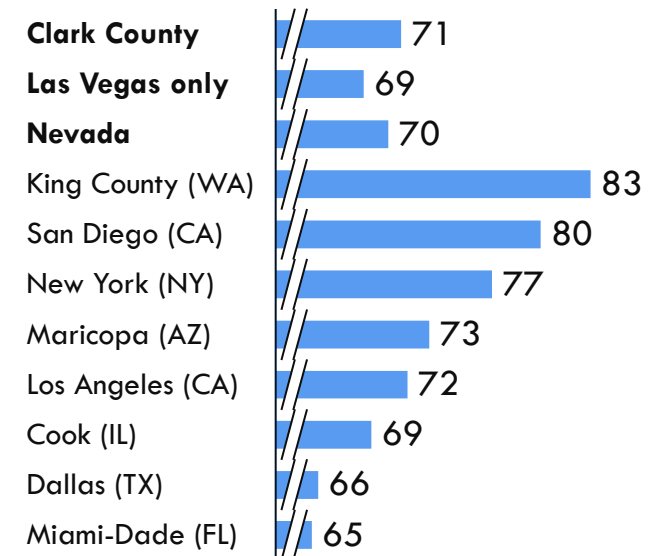
Affordability

Plan prices average ~30-50% above national average*



Adoption

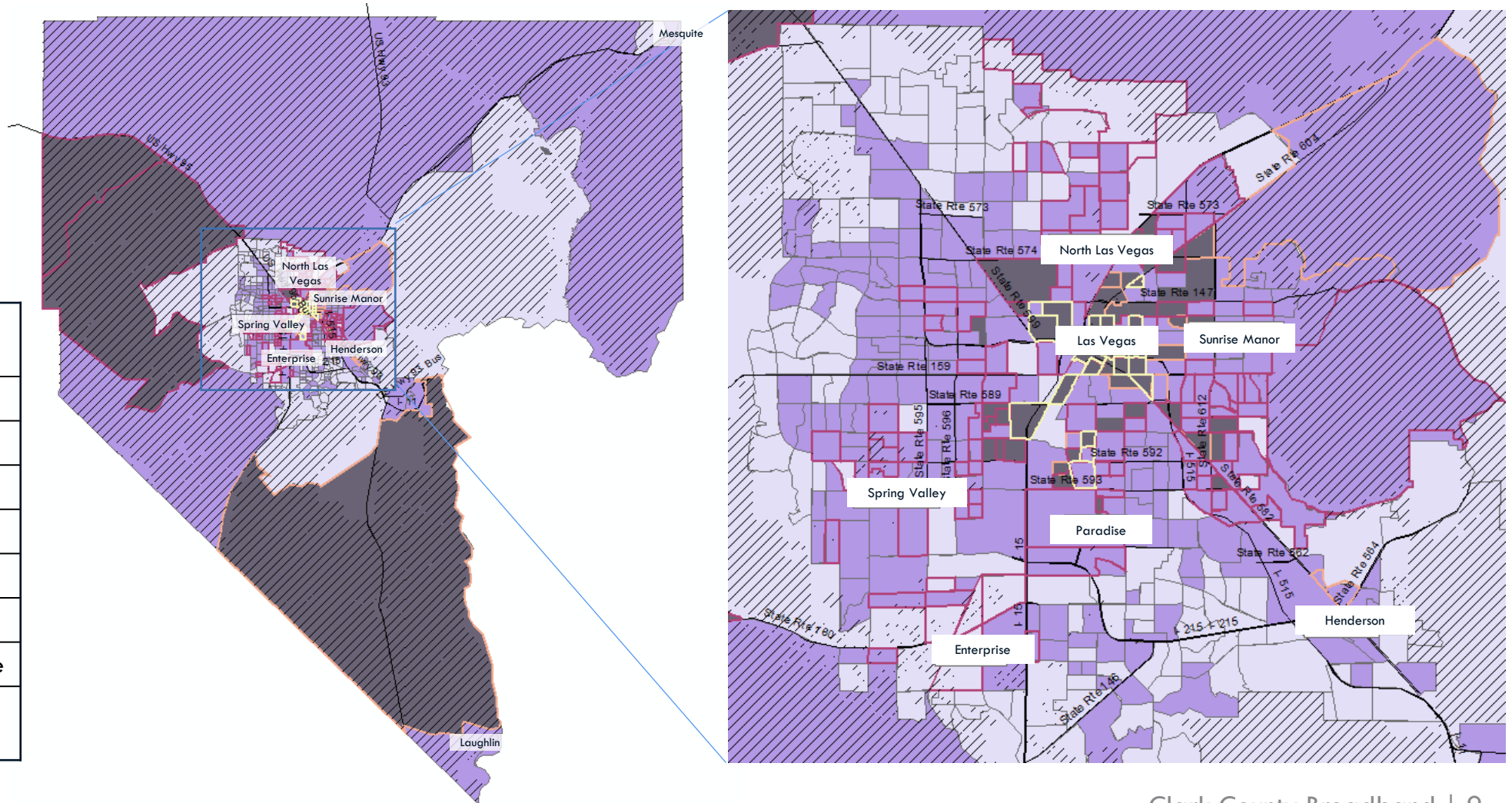
Clark County under-performing peers on % of residents with broadband internet service*



Fiber assets are limited to ~30% of households in the County; expanding fiber is critical to the County's economic future.

Connection Technology	CC % Coverage	Typical Speeds	Upgrade Path	Potential Role in Clark County Plan
Fiber	~30%	1GB+	Infinitely upgradable	Optimal future-ready technology to deploy, but high upfront costs
Cable	~96%	< 1GB	Upgradable, but with meaningful cost and with technical limits	Potential opportunity for partnership to upgrade network with public funding
DSL	~65%	< 25MB	Cannot be further upgraded	Phase out - inadequate for 2022+
Fixed Wireless	~40%	<100MB	Primarily dependent on dense fiber networks	Potential means to deliver new options to the underserved quickly
Satellite	>90%	<100MB	Dependent on innovation; satellite proximity and density	Useful technology to fill connectivity gaps in very rural areas
Cellular	>90%	Varied	Primarily dependent on dense fiber networks	Valuable option for some subscribers, with new in-home devices

Broadband adoption varies widely across the county, with over 10% of census tracts with less than half of households connected



Action Plan focuses on 5 primary, interdependent issues

	Key Issue	Description	Current impact on		
			Access	Affordability	Adoption
1	Lack of meaningful competition	Limited number of providers offering fixed-line internet access throughout Clark County			
2	Underbuilt infrastructure	Older and more rural parts of the county have under-built infrastructure, with limited fiber availability and some areas with little to no coverage			
3	Limited government capacity for intervention	Challenging regulatory environment and lack of dedicated County office focused on broadband and digital equity			
4	Limited consumer/resident awareness	Some residents are unfamiliar with what broadband internet products they need or where to turn when they have issues working with providers			
5	Limited consumer/resident financial resources	Some residents are unable to afford broadband internet plans and/or to use existing subsidy programs			

Developing a multi-pronged approach for Clark County

	Potential Policies and Initiatives	Near-term action plan
Infrastructure	<ul style="list-style-type: none"> Ⓐ Fund middle and last-mile fiber build-out in key under-served areas Ⓑ Invest in end-user access infrastructure (e.g. CBRS) Ⓒ Match funds for initiatives in Clark County led by other gov. entities 	Discuss opportunities for partnership with Clark County ISPs and other ISPs that may be interested in P3 structures
Programmatic	<ul style="list-style-type: none"> Ⓓ Develop programs to improve adoption of existing subsidies Ⓔ Develop digital literacy/education programs for residents 	
Regulatory	<ul style="list-style-type: none"> Ⓕ Update building codes to require provisions for fiber service Ⓖ Require affordable housing developments to include fiber connections Ⓗ Standardize construction/permitting processes related to broadband 	Establish cross-functional working group to identify specific changes to codes, standards, and processes
Governance	<ul style="list-style-type: none"> Ⓘ Build broadband program team within County government Ⓙ Launch dedicated entity committed to closing the digital divide 	Confirm org structure and begin recruiting/hiring for key roles
Overall	Actively coordinate with State OSIT to identify/secure funding and complement State programs	