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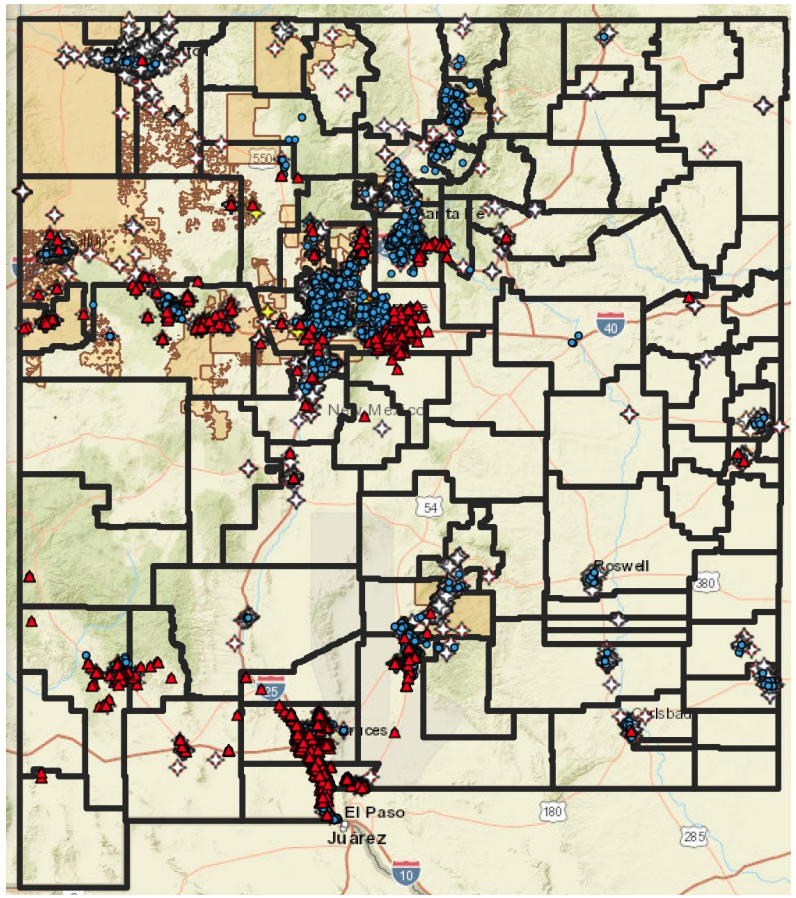
Mapping Data to Solve Student Broadband Challenges

Presented to the
Public School Capital Outlay
Oversight Task Force

Chair: Rep. Andres Romero
Vice Chair: Sen. William Soules



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The Public Education Department launched New Mexico Student Connect in June 2021

Contractual Staff: MAStrategies, LLC and CTC Technology & Energy

New Mexico Student Connect partnered with DoIT, PSFA, Department of Indian Affairs, Early Childhood, Local Districts and Charter Schools, and Families to:

- Address broadband connectivity challenges facing Districts, Schools, and Families
- Address support and collaboration to address the possibilities of providing every student access to broadband connectivity and devices necessary to access education materials

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New Mexico Student Connect has:

- Developed connectivity plans to leverage for 23 focus Districts
- Activated comprehensive support for Districts to access Federal Broadband funding
- Outreached to over 16k student households to engage families on the Federal Emergency Broadband Benefit, which provides a $50 monthly benefit to low-income households
- Launched a multi-lingual Help Desk for Families and Districts
- Executed unprecedented broadband data collection and mapping to inform essential network infrastructure requirements

New Mexico Student Connect provides a platform for schools and families:

- To leverage federal investments addressing digital divide issues
- To ensure digital equity for all students and families.

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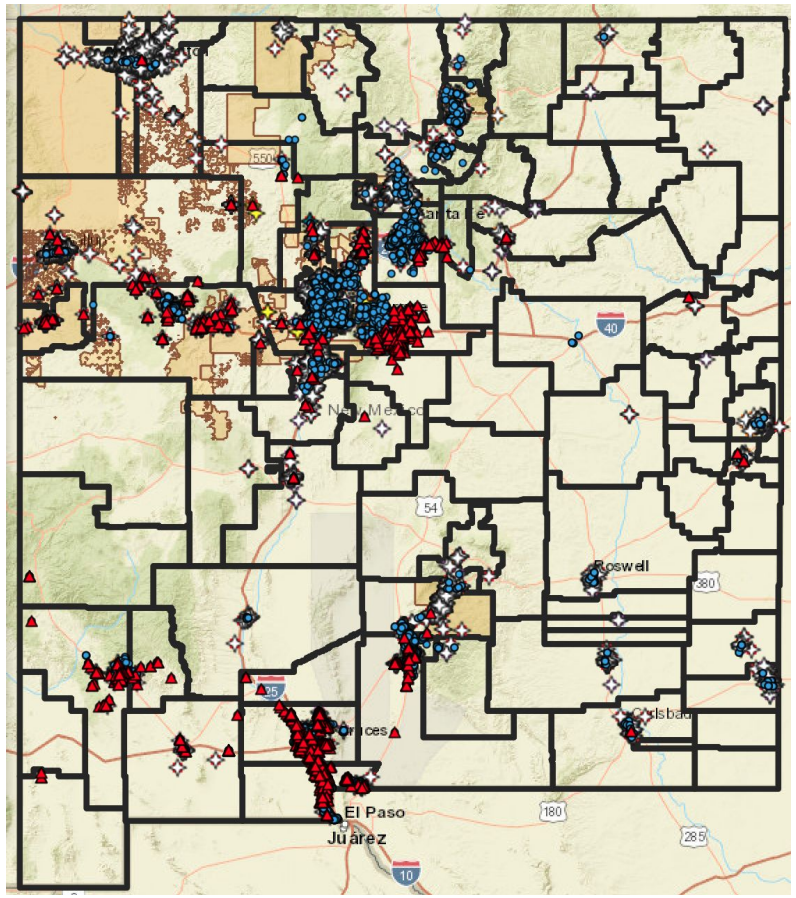
Opportunities to Learn

Who are students without:

- Computing devices
- Adequate connectivity
- Sufficient IT support



Where do they live?

What will it cost to fix?

What immediate, mid-term, long-term solutions can be provided?

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The Digital Divide is not New

- Prior to the pandemic we heard from parents that schools were assigning online tasks for homework students could not complete;
- Lack of infrastructure was a barrier for students in rural areas;
- Infrastructure continues to be an issue for rural areas;
- Urban connectivity deserts impact students in areas of our large districts

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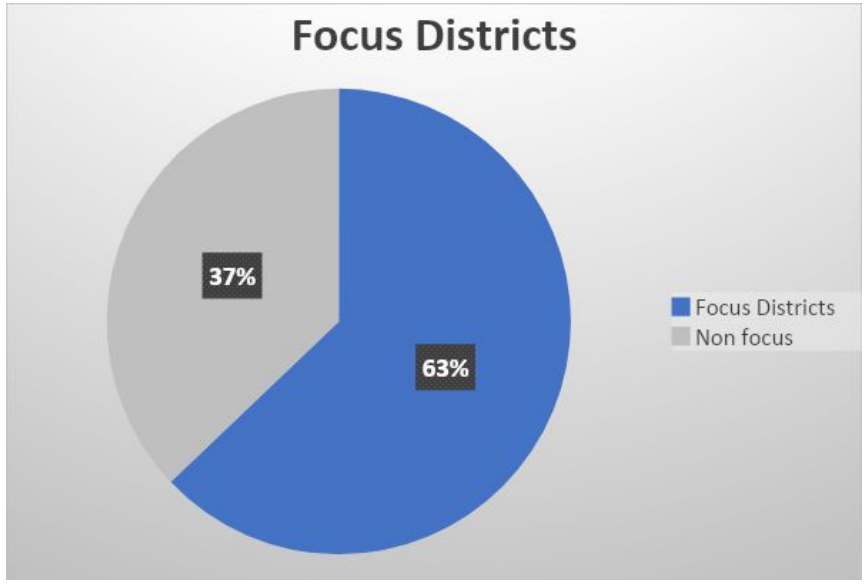
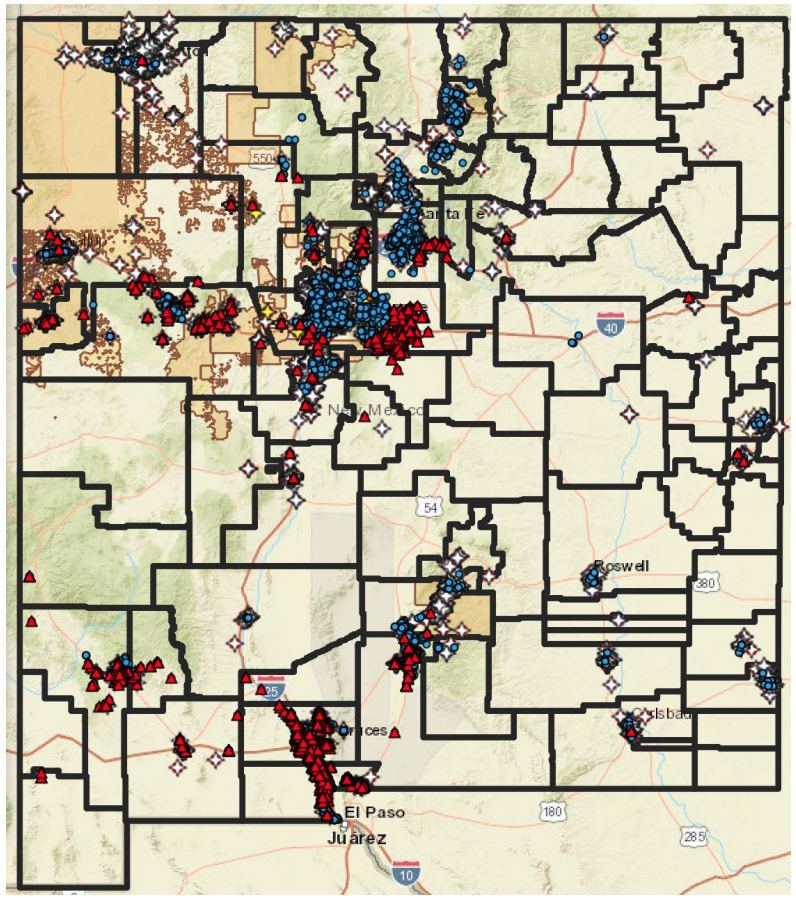
Opportunities to Learn

23 Focus Districts
(with 198,110 students)

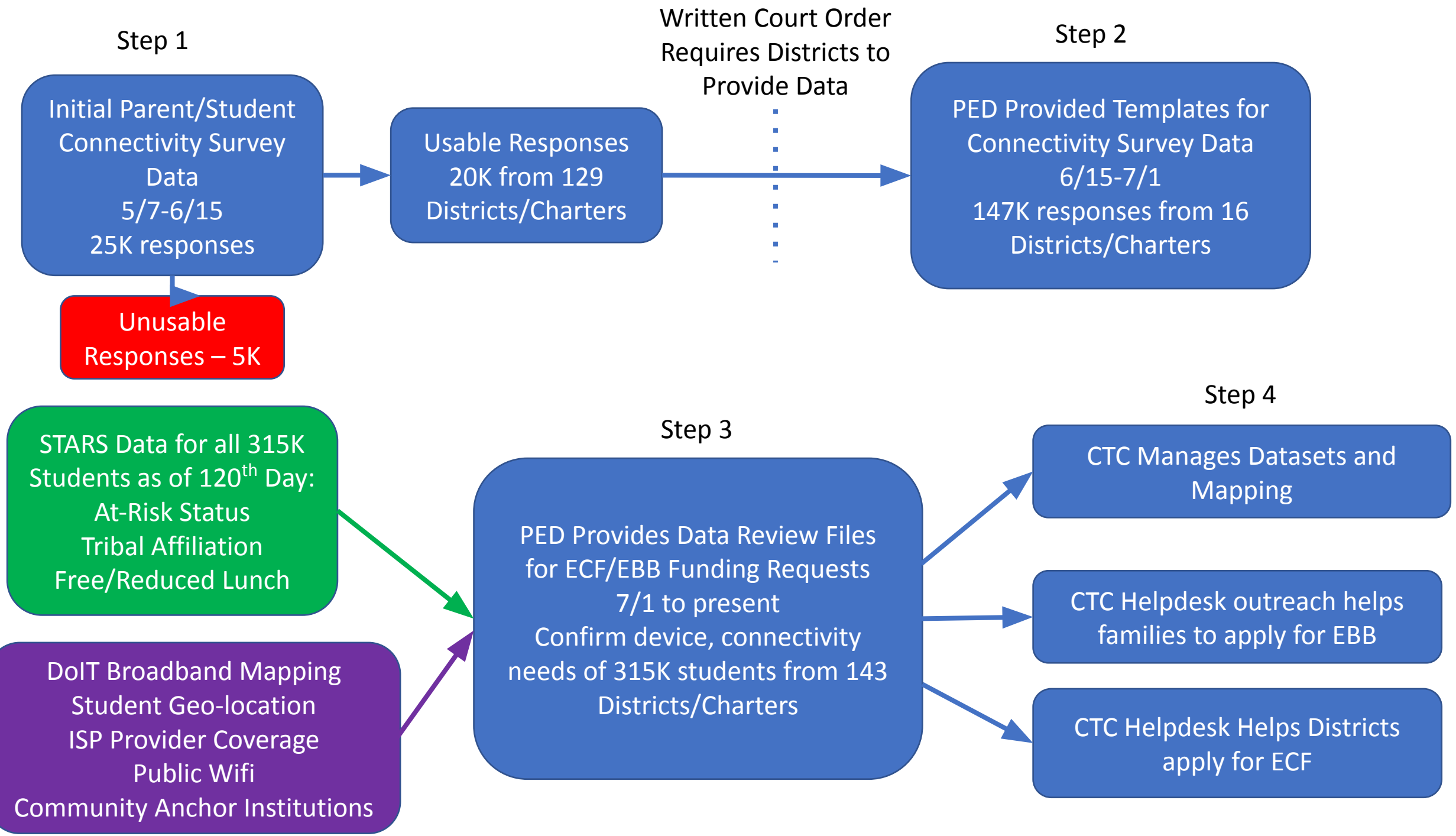
Alamogordo	Gallup-McKinley	Los Lunas	Santa Fe
Albuquerque	Grants	Magdalena	Silver City
Bernalillo	Hatch	Moriarty-Edgewood	Taos
Cuba	Jemez Valley	Penasco	Tucumcari
Espanola	Lake Arthur	Pojoaque	Zuni
Gadsden	Las Cruces	Rio Rancho	



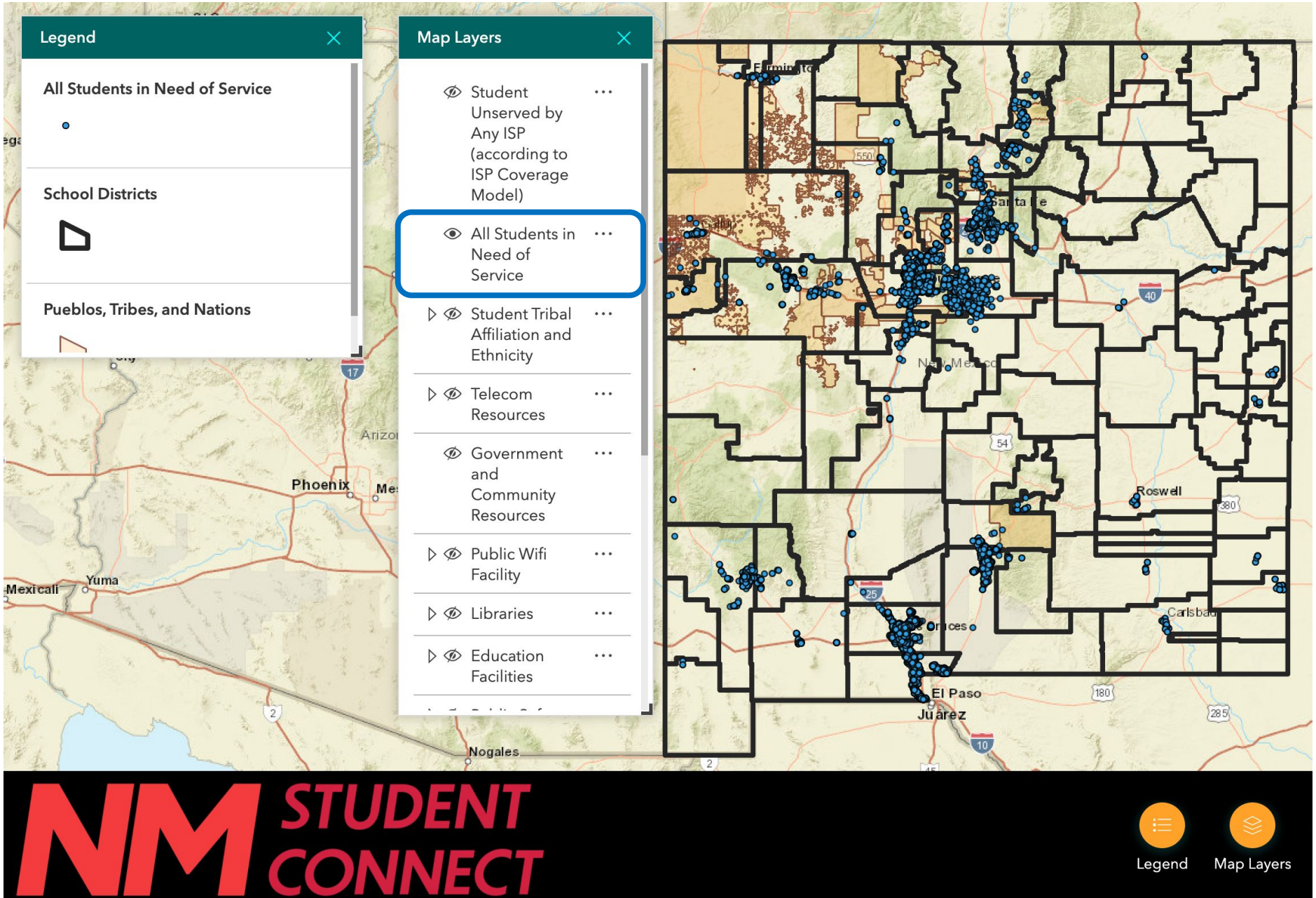


All other Districts/Charters
(123 with 116,890 students)

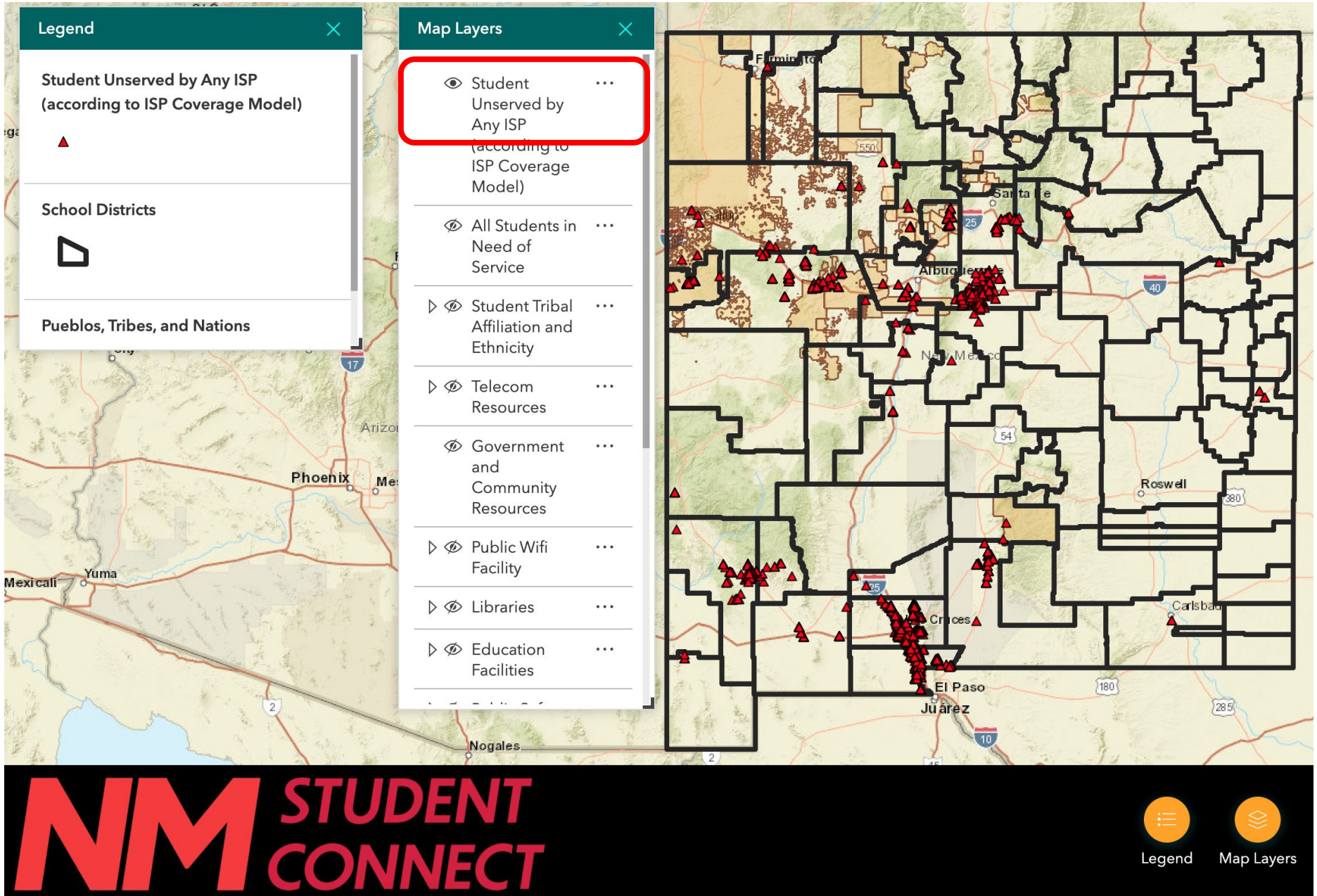
Meeting challenges for Focus Districts helps provide validated solutions for all students.


Step 1
Initial Parent/Student Connectivity Survey Data
5/7-6/15
25K responses
Unusable Responses – 5K
Usable Responses
20K from 129 Districts/Charters
Written Court Order Requires Districts to Provide Data
Step 2
PED Provided Templates for Connectivity Survey Data
6/15-7/1
147K responses from 16 Districts/Charters
STARS Data for all 315K Students as of 120th Day:
At-Risk Status
Tribal Affiliation
Free/Reduced Lunch
DoIT Broadband Mapping
Student Geo-location
ISP Provider Coverage
Public Wifi
Community Anchor Institutions
Step 3
PED Provides Data Review Files for ECF/EBB Funding Requests
7/1 to present
Confirm device, connectivity needs of 315K students from 143 Districts/Charters
Step 4
CTC Manages Datasets and Mapping
CTC Helpdesk outreach helps families to apply for EBB
CTC Helpdesk Helps Districts apply for ECF

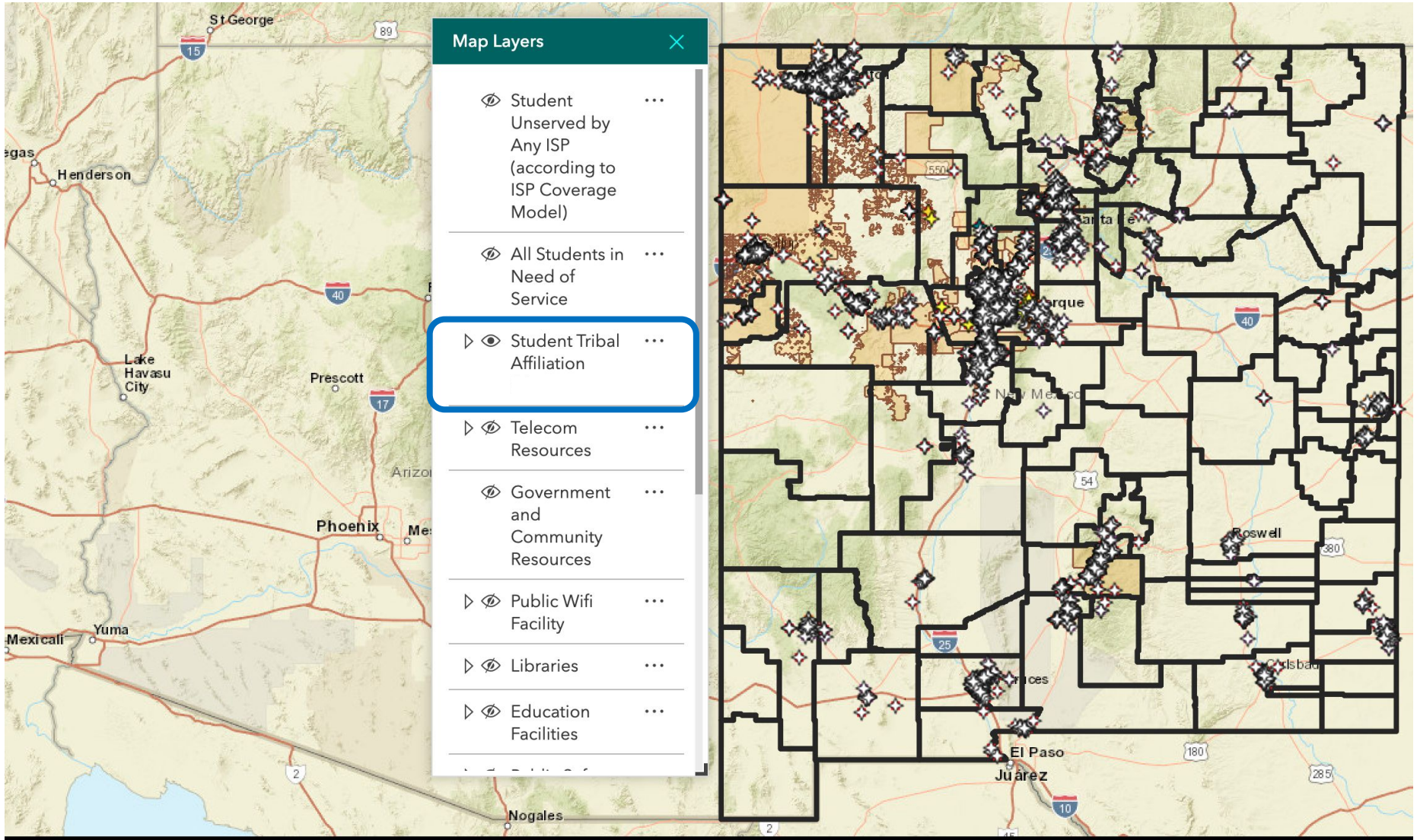
Students in need of consistent connectivity (43K)



Students unserved by any Internet Service Provider (2.7K)



Tribally Affiliated Students (35K)



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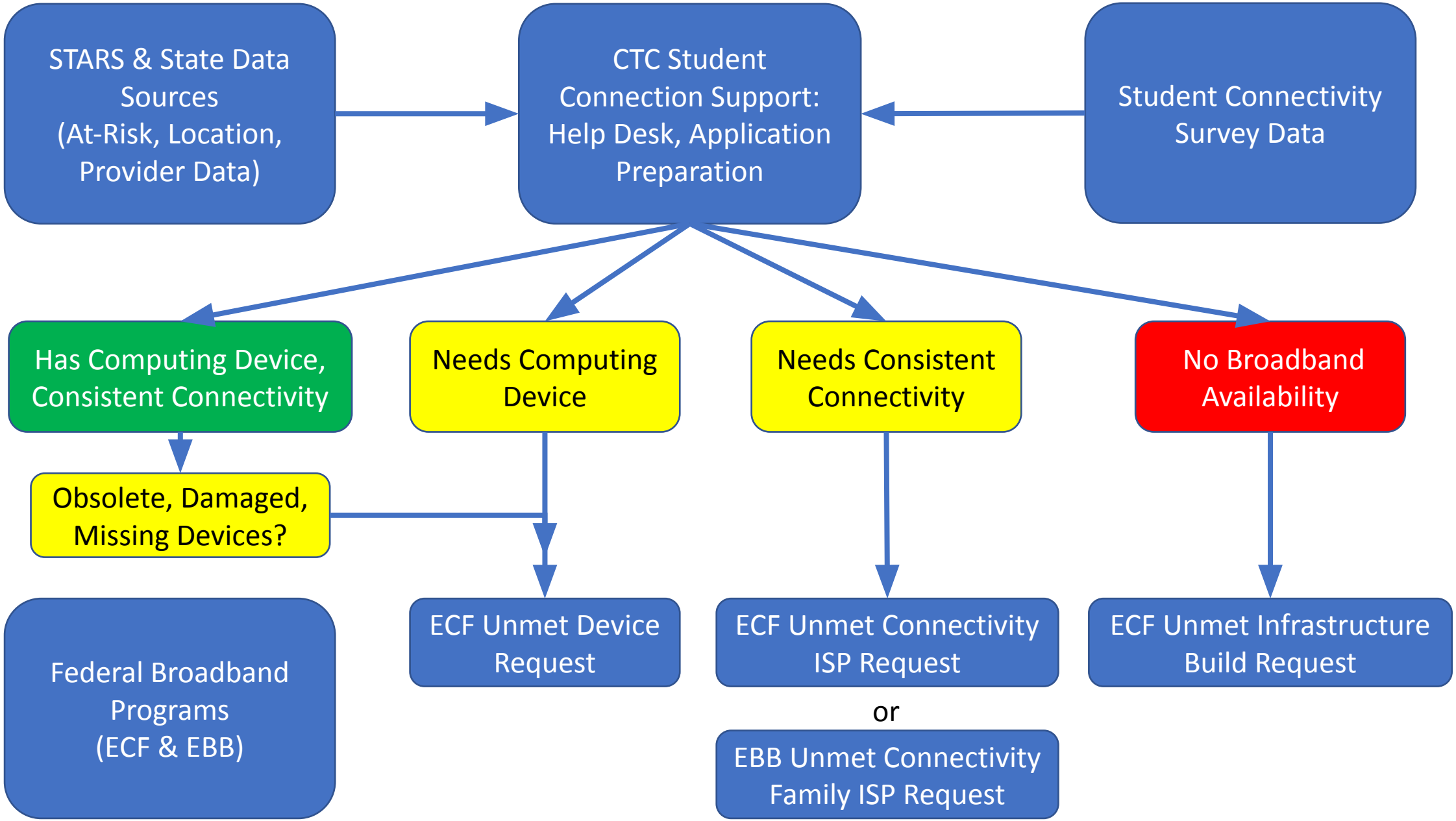
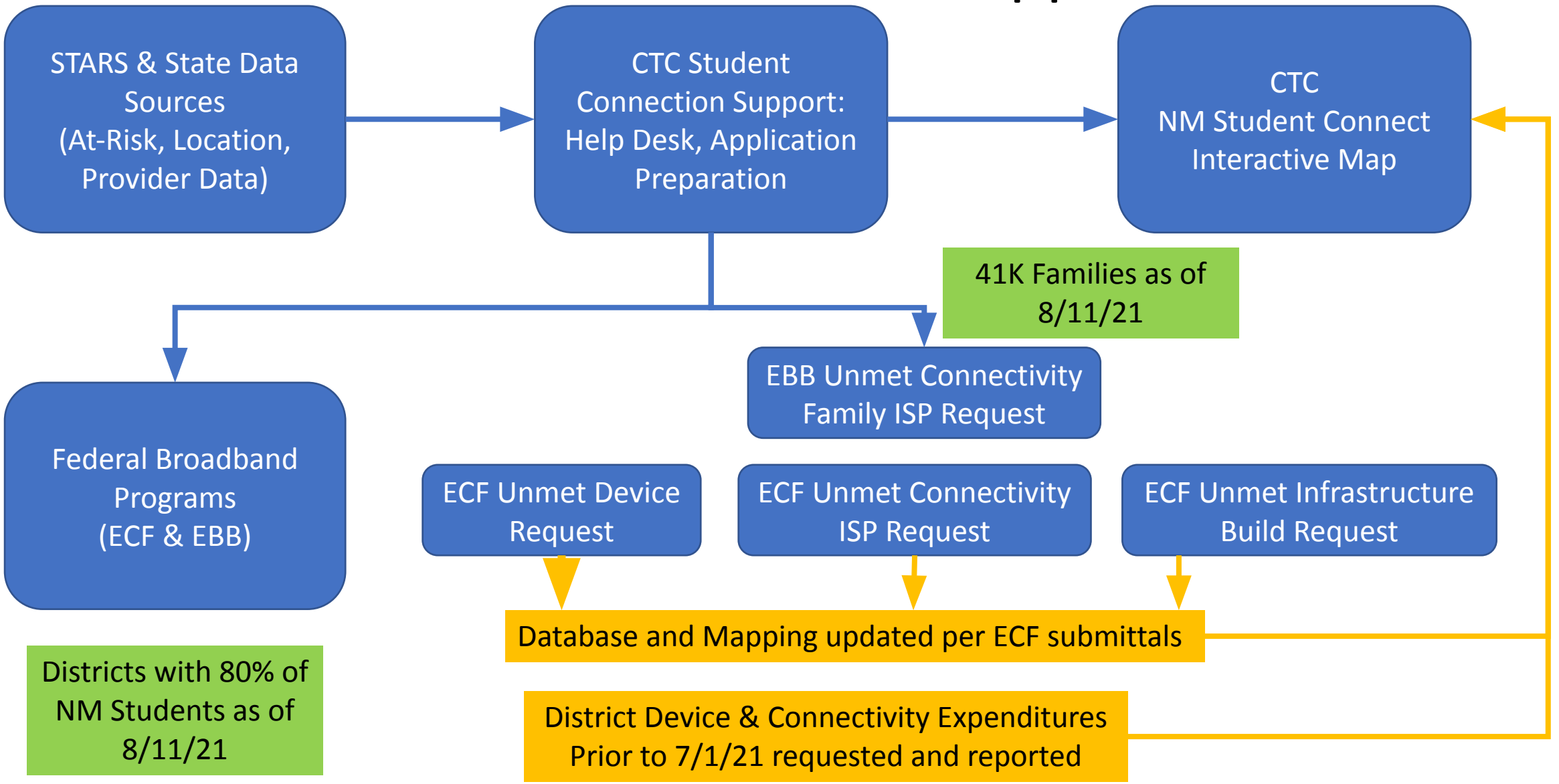
Phase 1 – Survey Data Mapping



Phase 2 – Data Guides ECF & EBB Applications

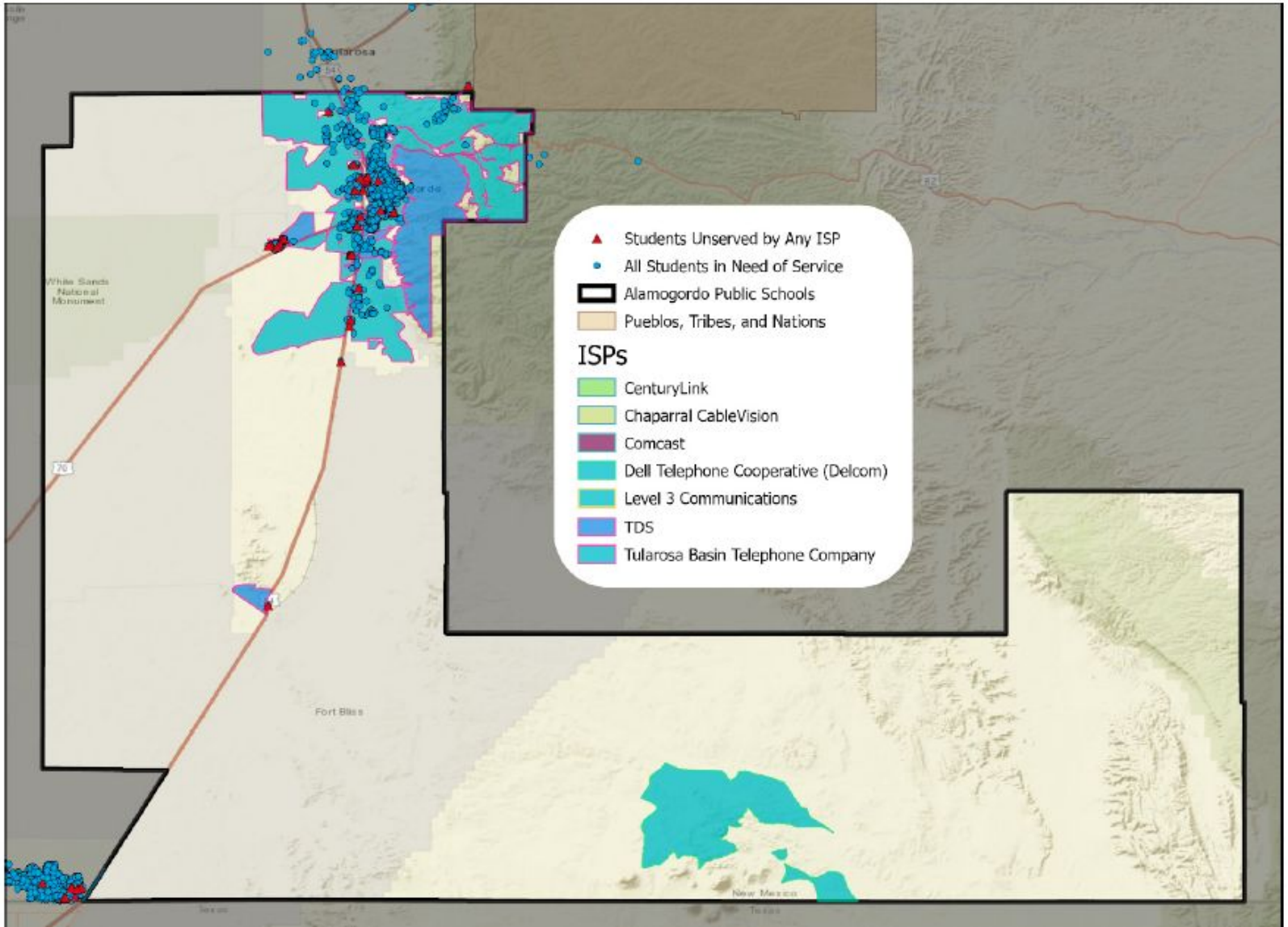


CTC Sample District ECF Plan Report

Map of internet service availability in proximity to students

The following map illustrates the current internet service availability in proximity to the district students who reported lacking adequate internet service.

Figure 2: Internet service available in proximity to students without adequate internet access



CTC Sample District ECF Plan Report

Recommended strategy to close student internet access and device gaps

The following table lists the estimated number of district students who currently lack adequate internet service or devices (i.e., laptops)—and recommends possible strategic approaches to closing those gaps. In brief summary, students who lack internet service but who live in served areas could be provided a mobile hotspot; those who live in unserved areas with unusable mobile service could be provided Starlink satellite internet service.

Table 1: Recommended strategy to close student internet access and device gaps

Gap	Estimated number of students	Recommended solution
Students without devices	3,500	Purchase laptops from Dell Direct or CDW-G
Students without internet access in served areas	1000	Purchase mobile hotspot service
Students without internet access in unserved areas	367	Purchase Starlink service

CTC Sample District ECF Plan Report

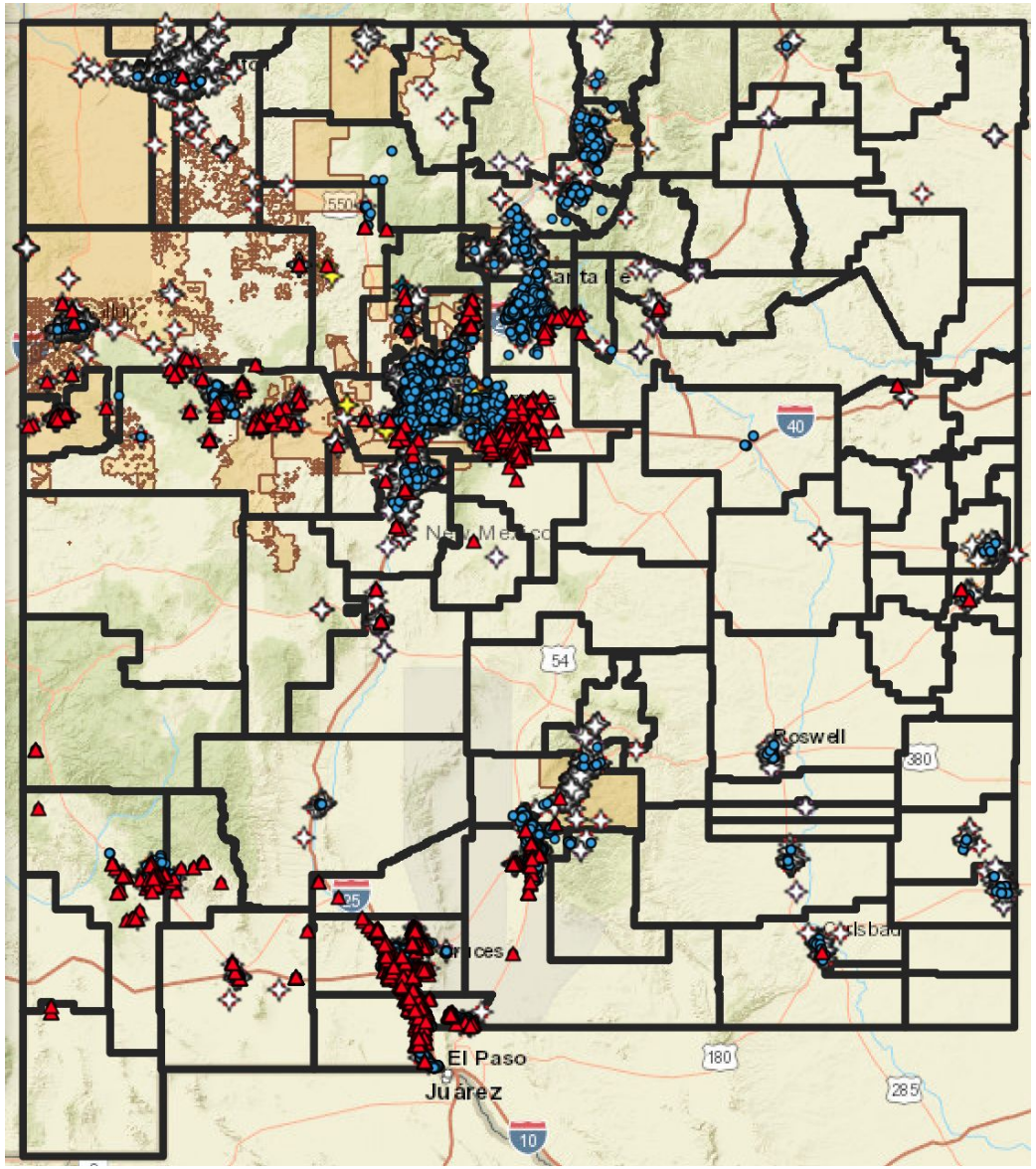
Estimated costs to close student internet access and device gaps

The following table lists the district's estimated costs for closing its student internet access and device gaps. This table reflects the projected costs for services, equipment, and devices recommended above. If the district has conveyed to CTC's analysts that it has already selected providers and options, the costs reflect those district selections. Similarly, if the district has conveyed to CTC's analysts that it does not intend to purchase a certain service or device, the table does not include those costs. These estimated costs are subject to change pending the district's decisions.

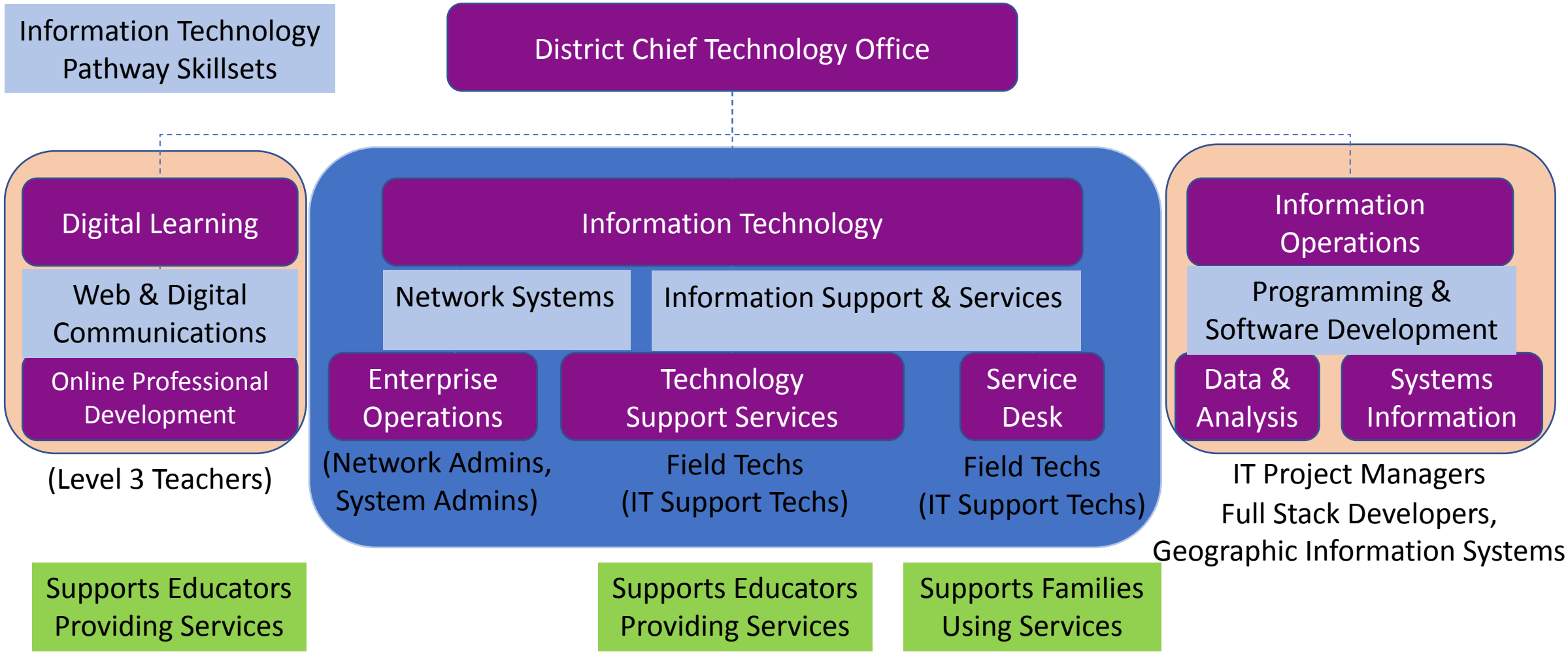
Table 2: Estimated costs to close student internet access and device gaps

Product	Number of units	Equipment cost per unit	Total equipment cost	Monthly service cost per unit	Total 10-month service cost	Total cost
Connectivity (hotspot)[2]	1000	$60	$60,000	$15	$150,000	$210,000
Connectivity (Starlink)	367	$500	$183,500	$100	$367,000	$550,500
Devices[3]	3,500	$400	$1,400,000	$0	$0	$1,400,000
Total			$1,643,500		$517,000	$2,160,500

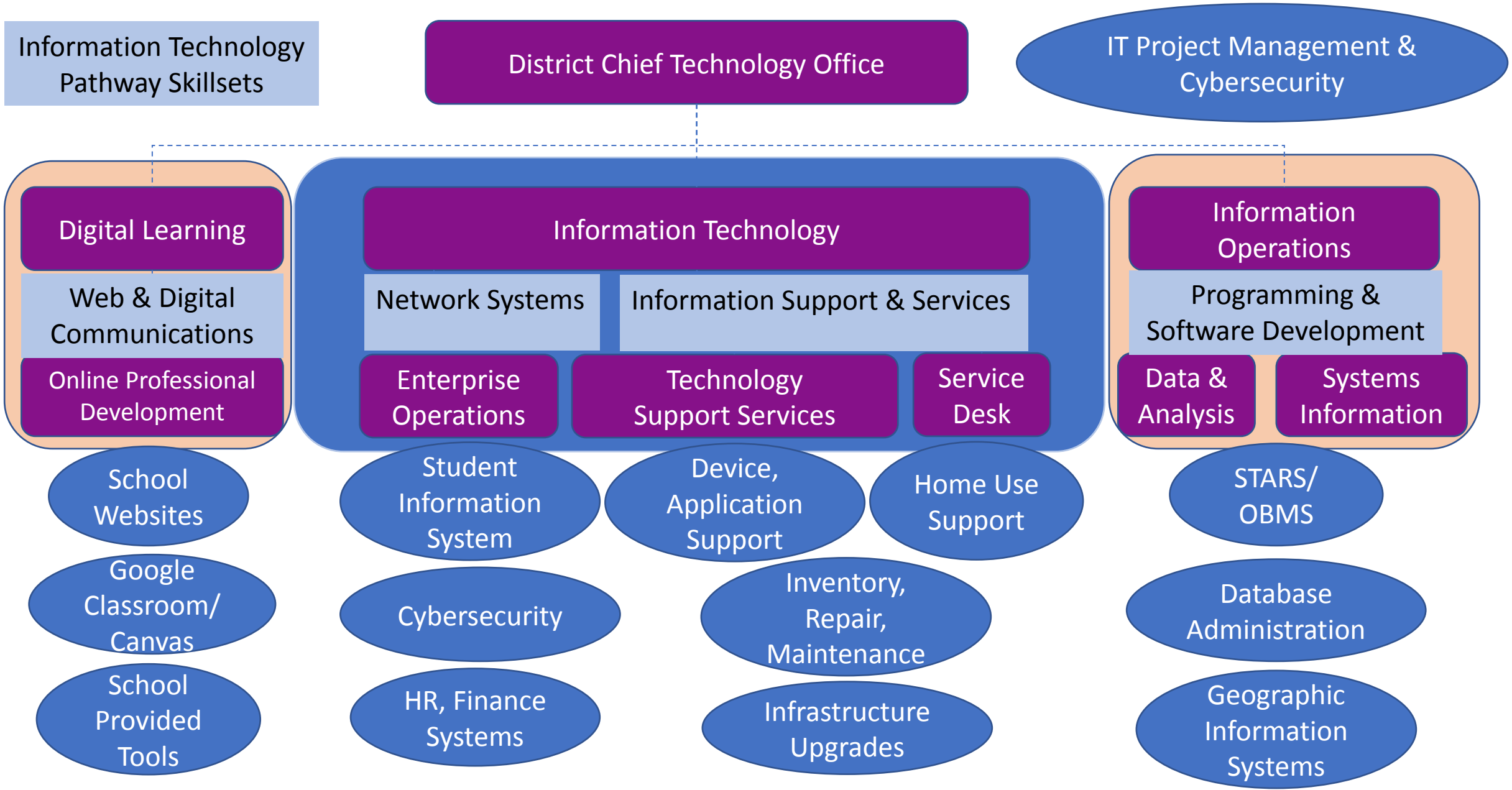
IT Staffing Plan: An Ecosystem Approach



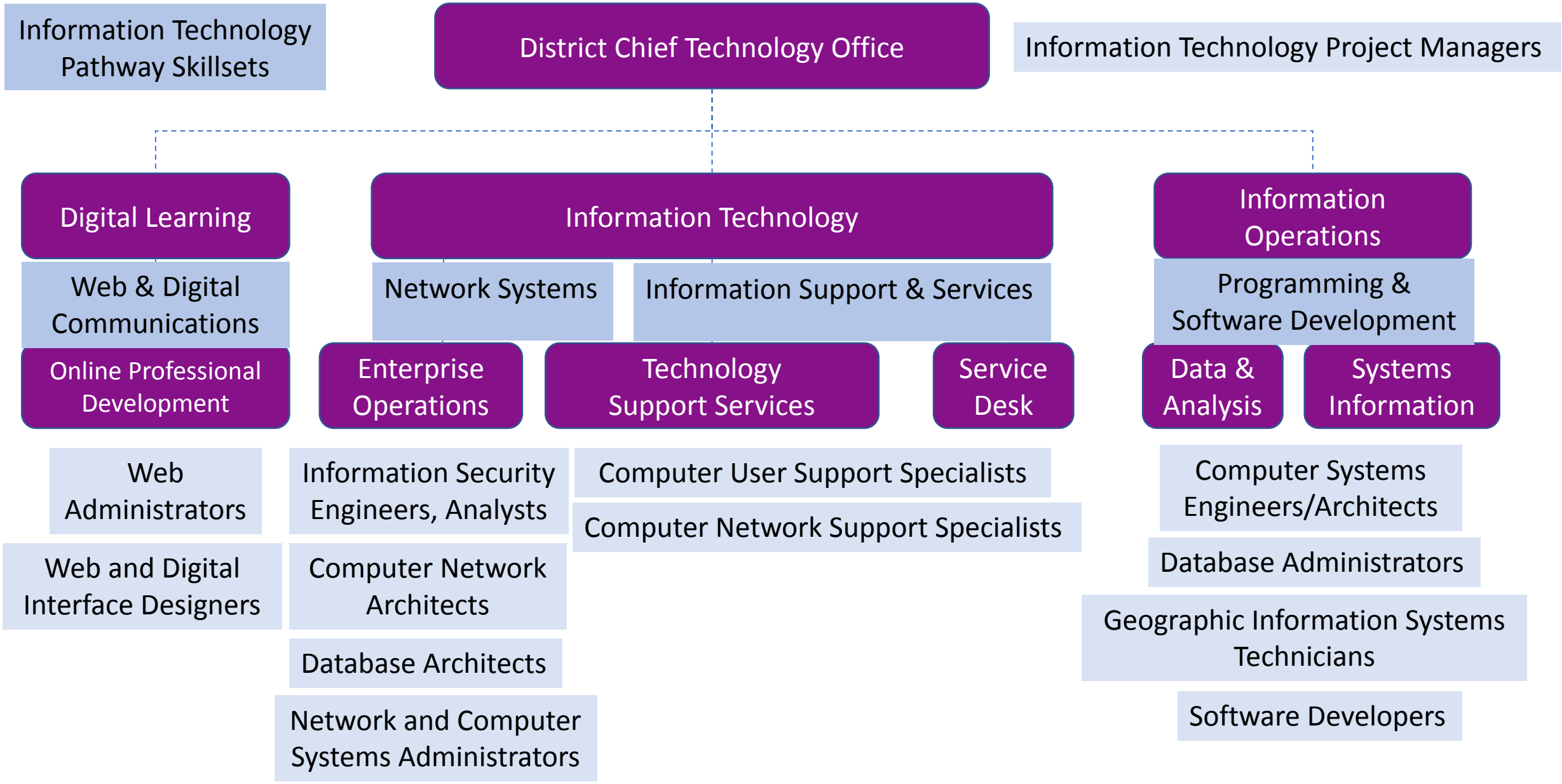
District IT Ecosystem: Staffing Domains



Information Technology Systems and Responsibilities



Information Technology Positions and Skillsets



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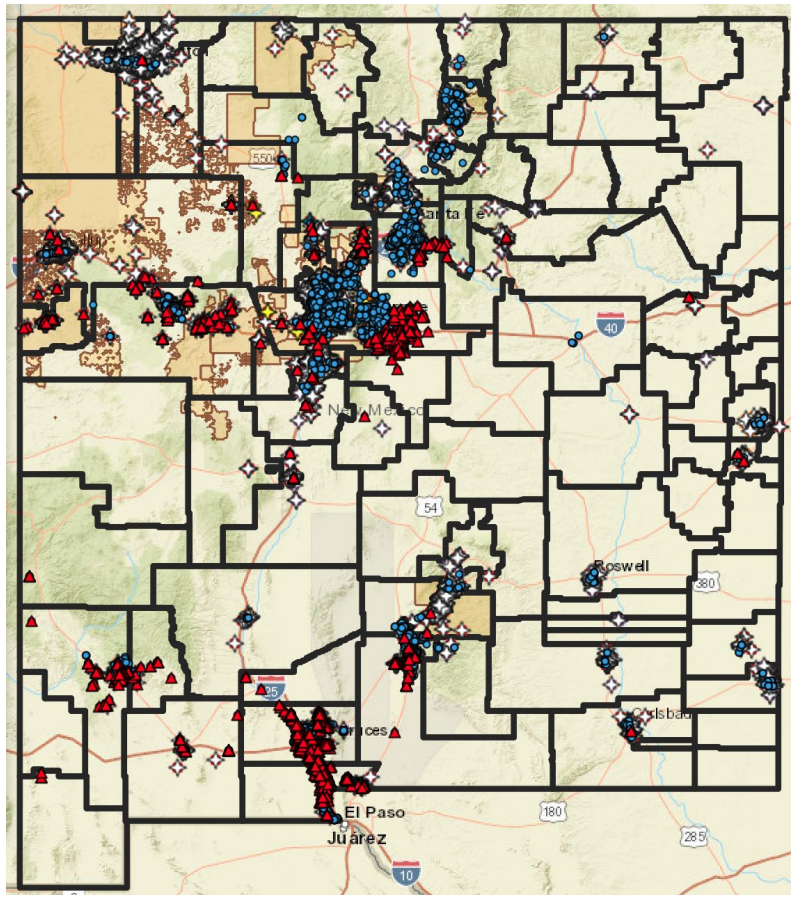

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Thank You!