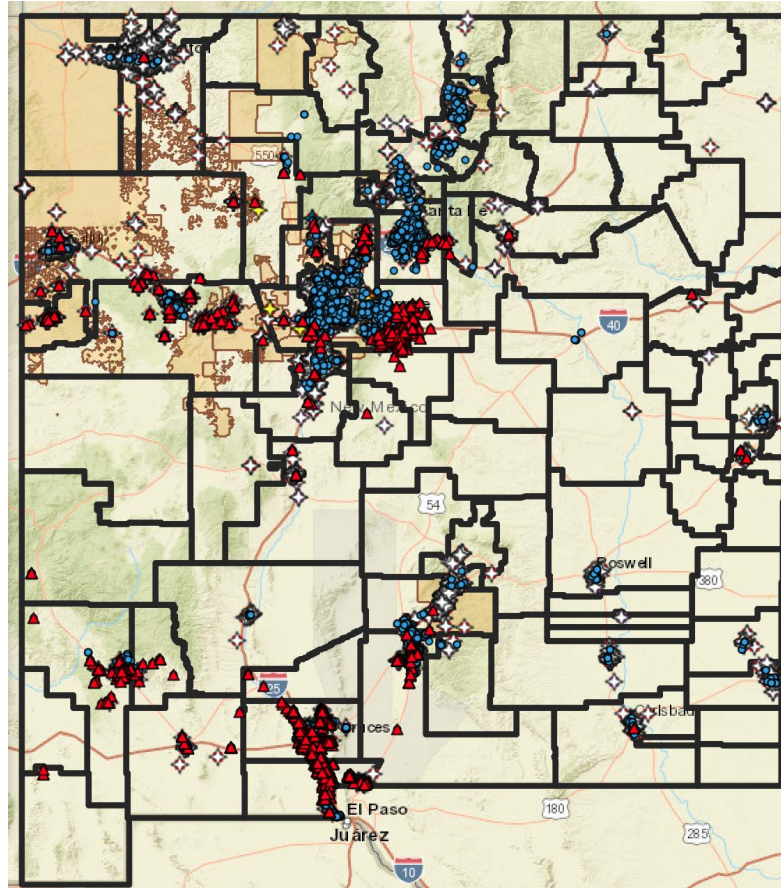


Mapping Data to Solve Student Broadband Challenges

Presented to the
Science, Technology, and
Telecommunications Committee

Chair: Rep. Debbie Sariñana
Vice Chair: Sen. Michael Padilla



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Call to Action

On May 18, 2021, Judge Wilson issued a ruling in the Martinez/Yazzie lawsuit ordering the state to immediately provide at-risk students and teachers of at-risk students the following:

1. **Access to Digital Devices**
2. **Access to High-Speed Internet**
3. **Sufficient IT Staffing**

The judge ruled that without these components, New Mexico students to not have access to their constitutionally guaranteed *sufficient* and *adequate* education.



Leveraging Existing Resources

Congress and the Federal Communications Commission expanded programs aimed at closing the digital divide, **increasing the amount of federal funding that will flow to New Mexico.**

Emergency Broadband Benefit (EBB) provides internet subsidies for low-income families and households.

- Over 45 thousand New Mexico families have qualified for support under the program
- Families will receive over \$25 million in federal funding to subsidize internet subscriptions

Emergency Connectivity Fund (ECF) provides modems and service agreements to schools with disconnected students.

- New Mexico will receive \$66.7 million from the ECF to provide devices and internet service to disconnected students.



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



New Mexico Student Connect has:

- Developed connectivity plans to leverage for 23 Martinez/Yazzie focus districts
- Activated comprehensive support for districts to access federal broadband funding
- Outreached to over 16 thousand student households to engage families on the federal Emergency Broadband Benefit, which provides a \$50 monthly benefit to low-income households
- Launched a multilingual “Help Desk” for families and districts
- Executed unprecedented broadband data collection and mapping to inform essential network infrastructure requirements



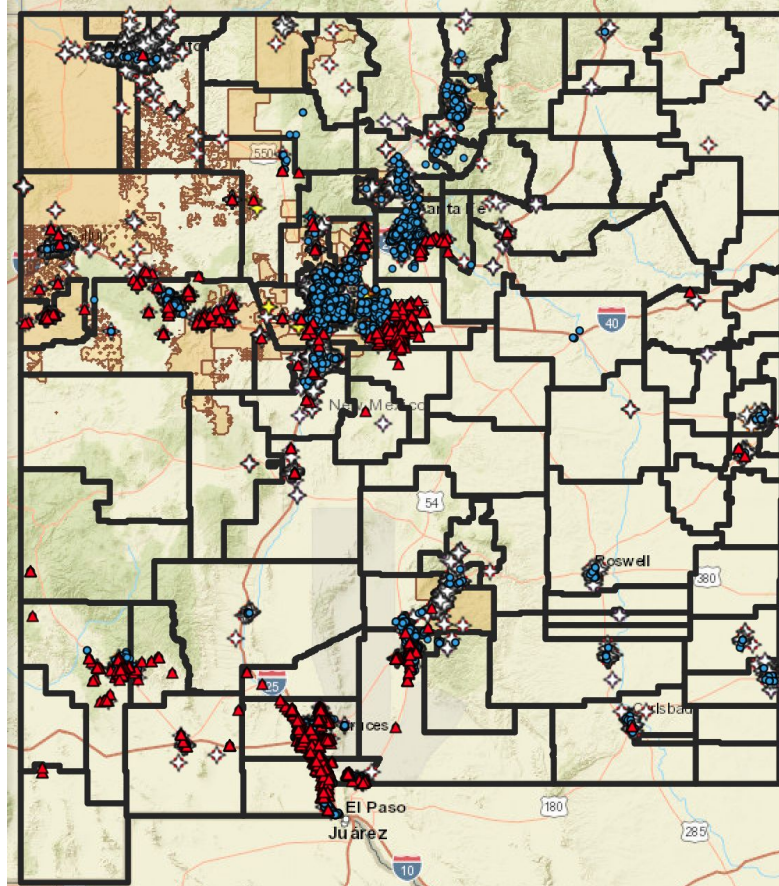
New Mexico Student Connect provides a platform for schools and families:

- To **leverage federal investments** addressing the digital divide
- To ensure **digital equity** for all students and families

Opportunities to Learn

Which students do not have:

- 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?

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

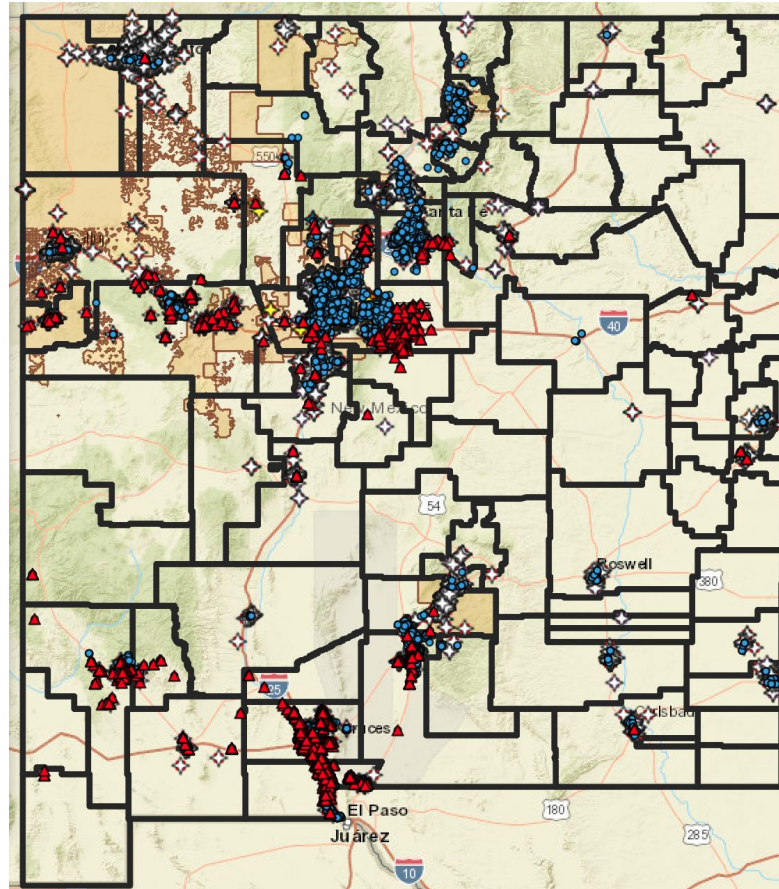
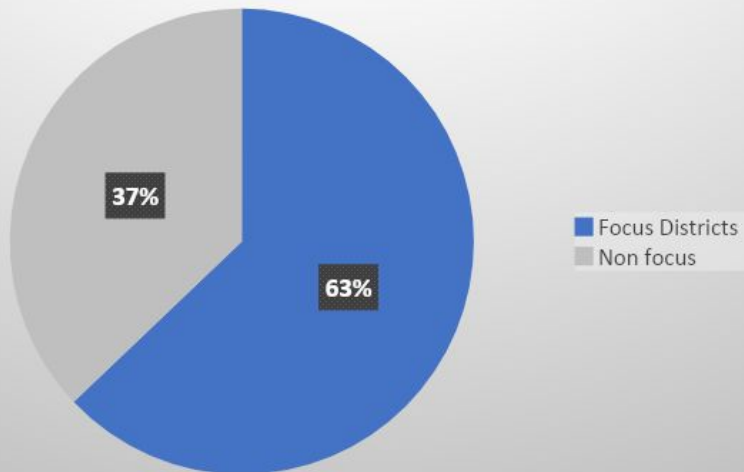
Opportunities to Learn

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)

Focus Districts



*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

Step 3

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

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

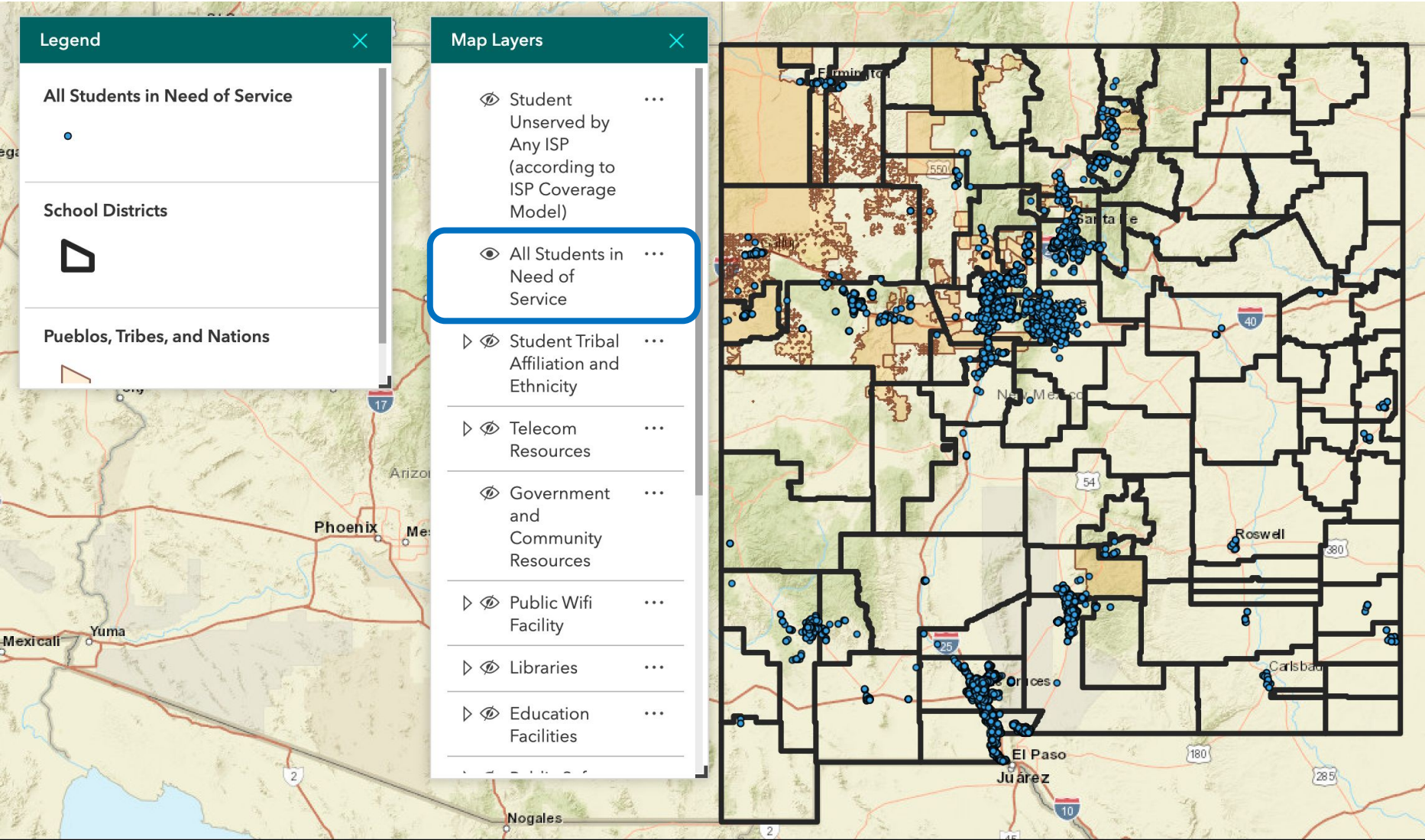
Step 4

CTC Manages Datasets and
Mapping

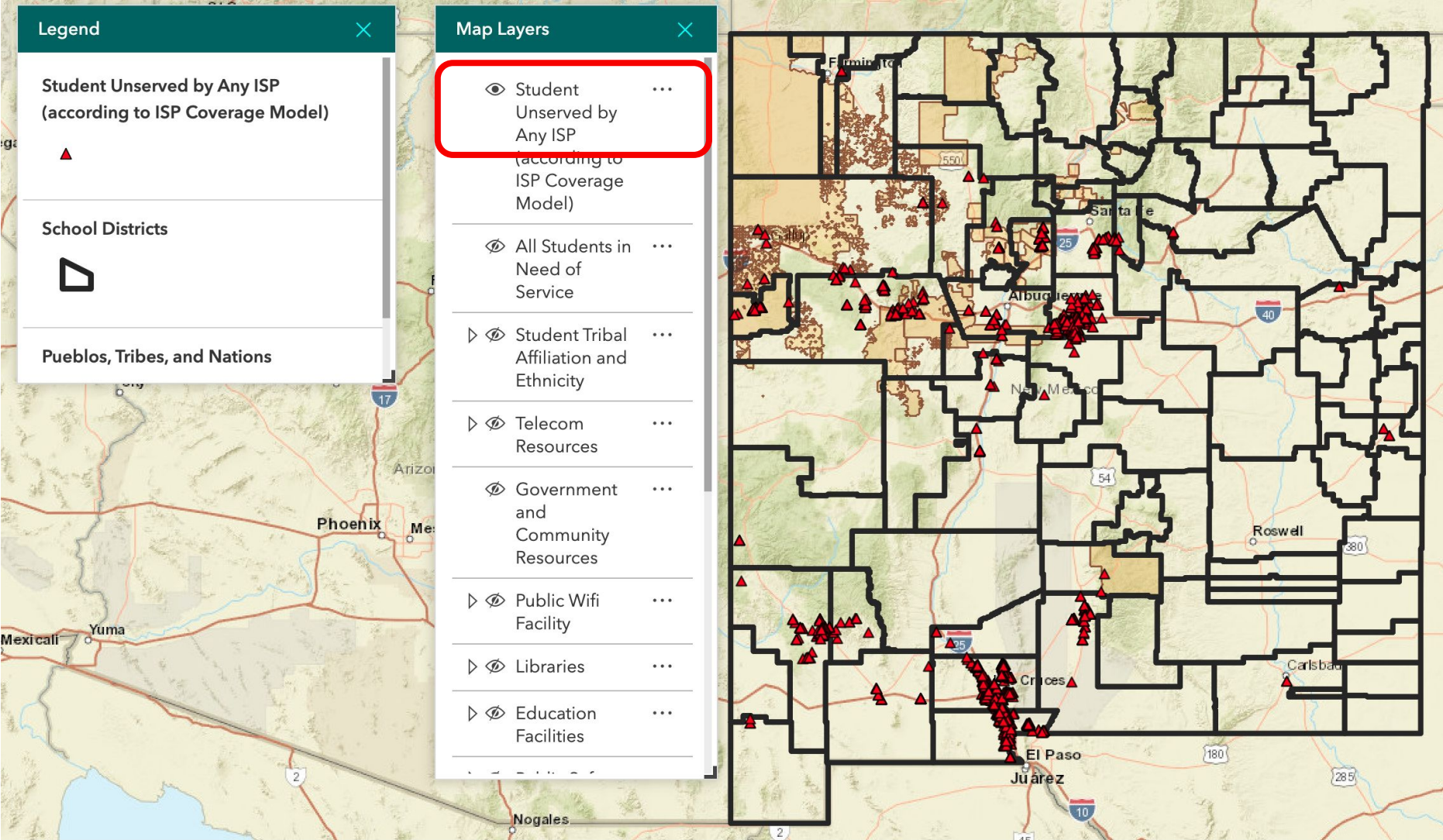
CTC Helpdesk outreach helps
families to apply for EBB

CTC Helpdesk Helps Districts
apply for ECF

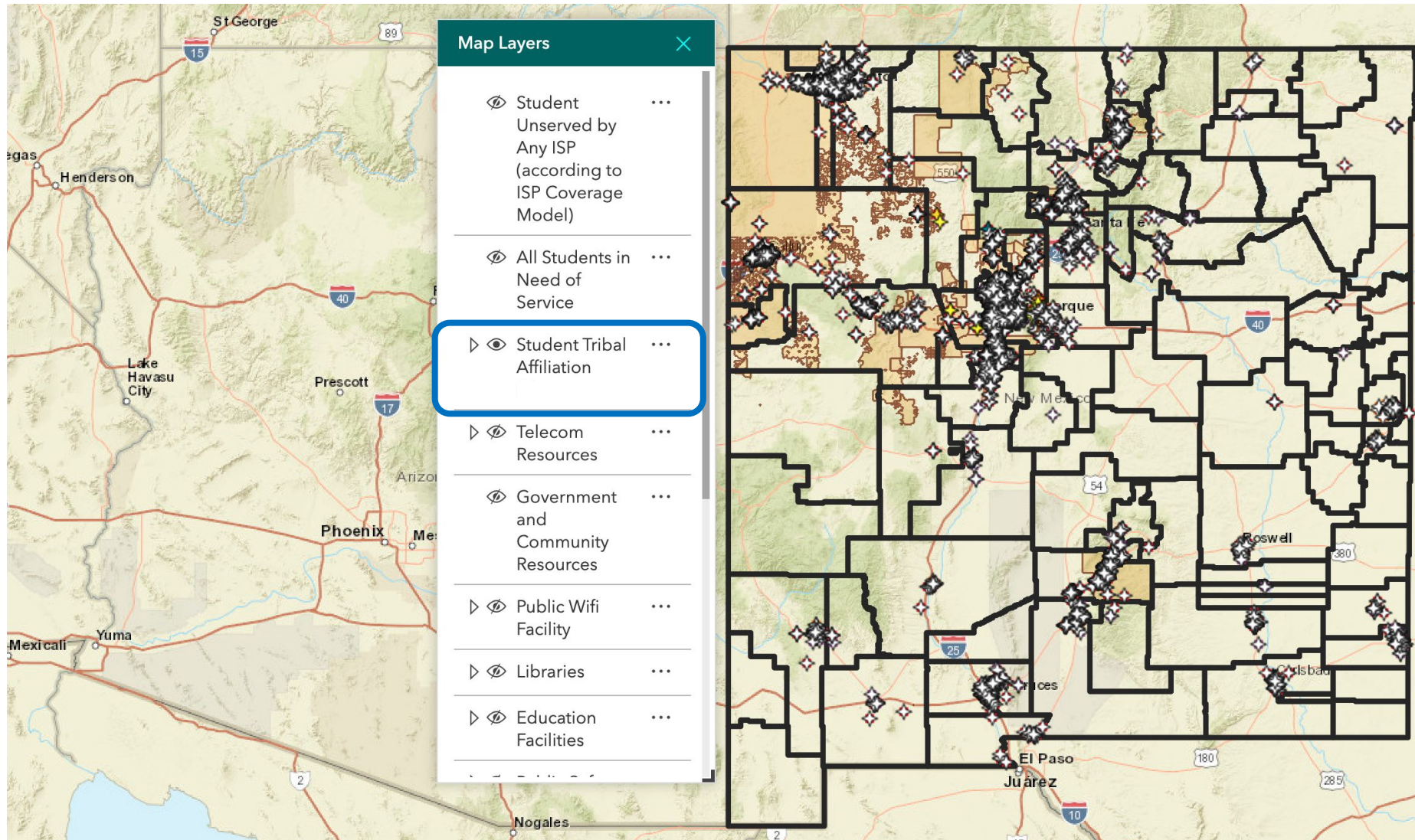
Students in need of consistent connectivity (43K)



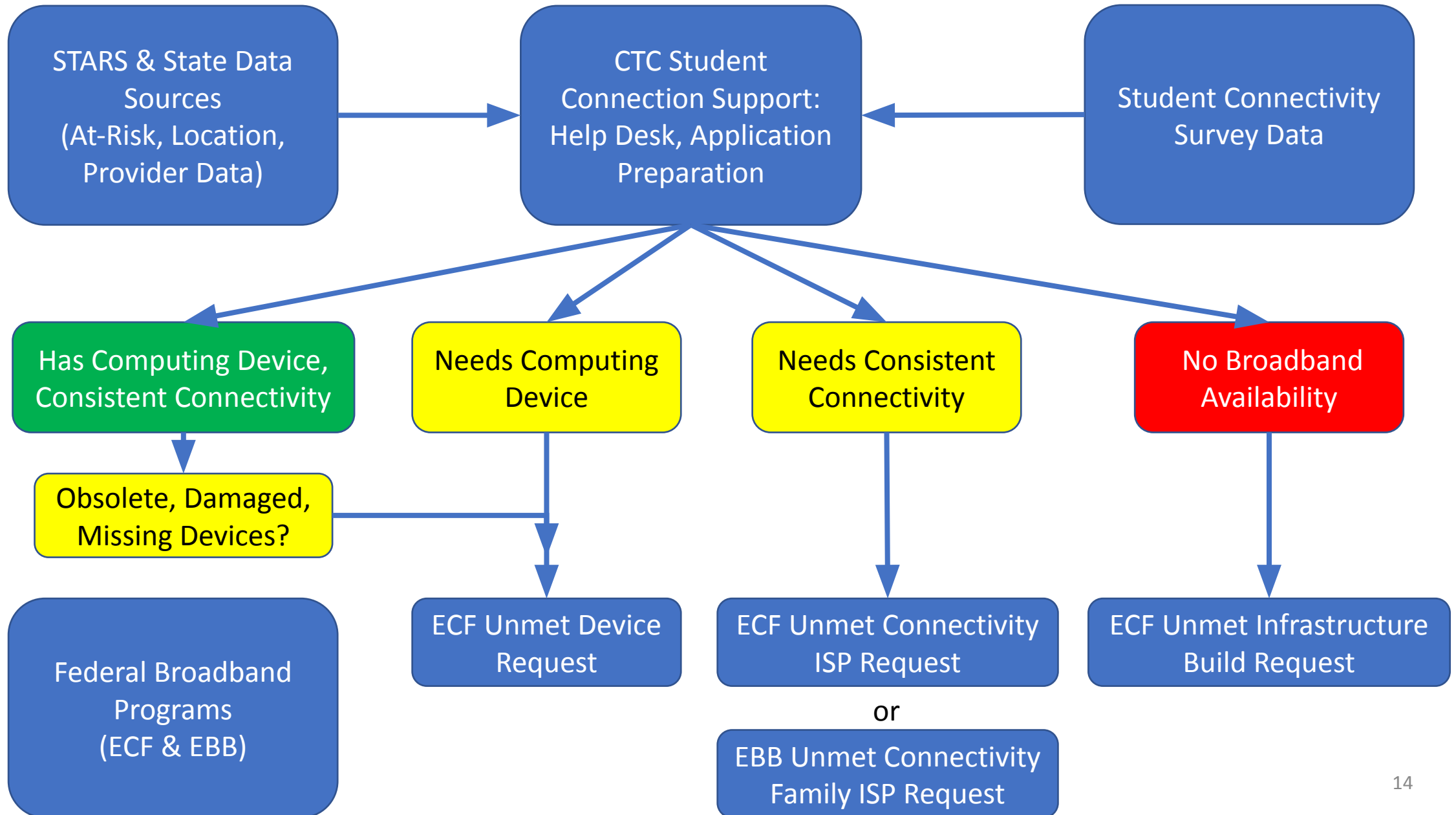
Students unserved by any Internet Service Provider (2.7K)



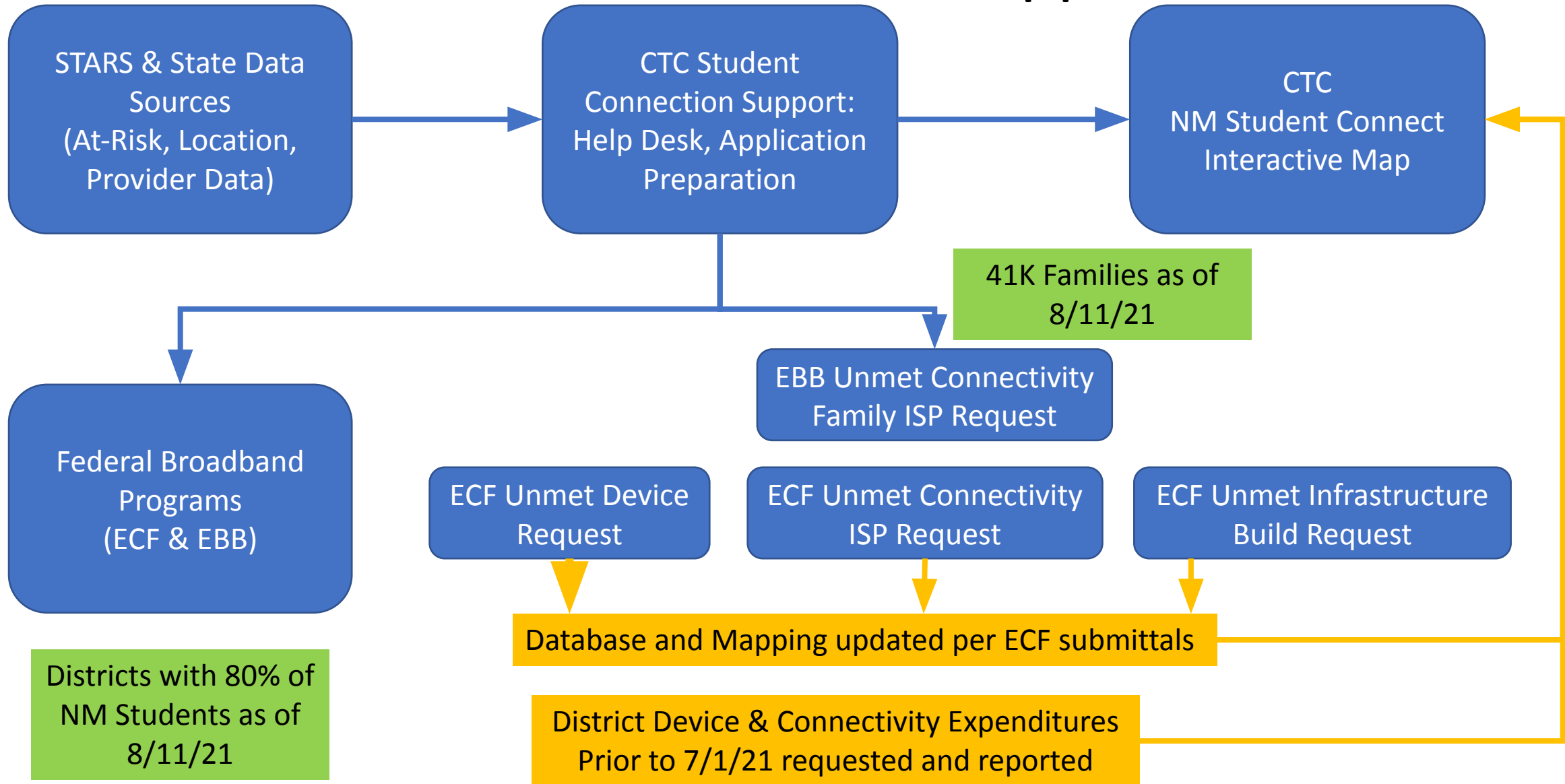
Tribally Affiliated Students (35K)



Phase 1 – Survey Data Mapping



Phase 2 – Data Guides ECF & EBB Applications

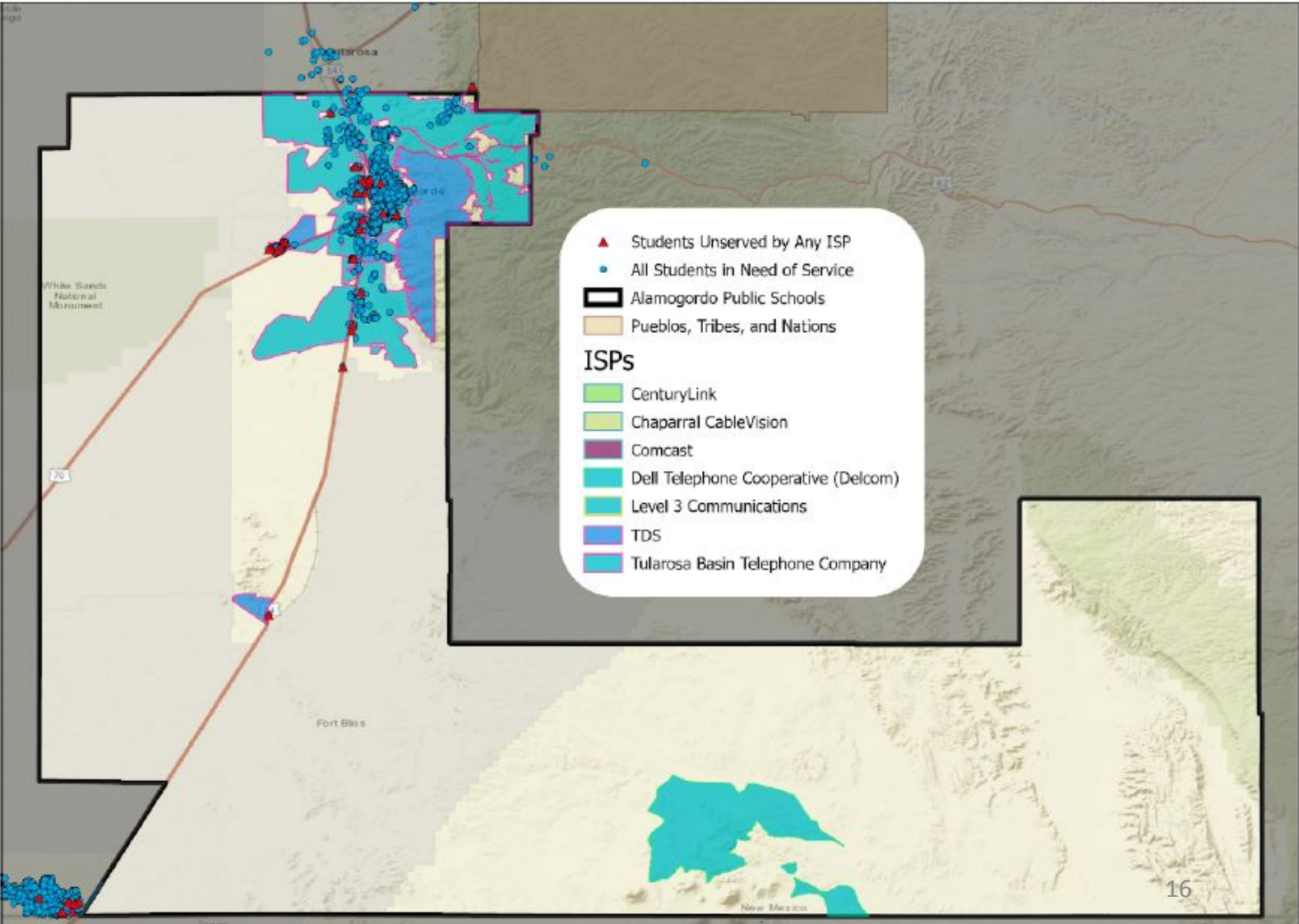


CTC Sample District ECF Plan Report

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

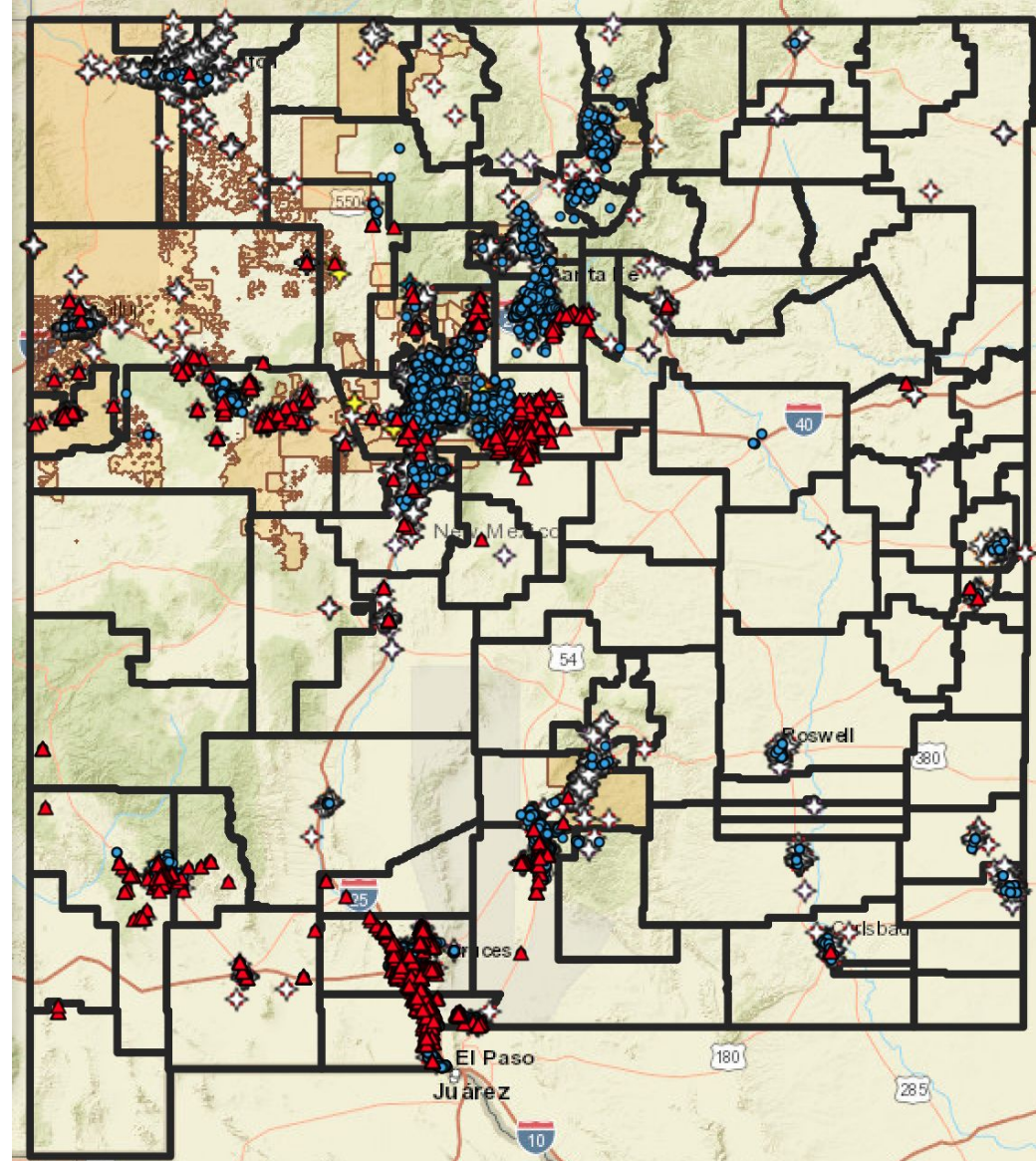
Estimated costs to close student internet access and device gaps

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.

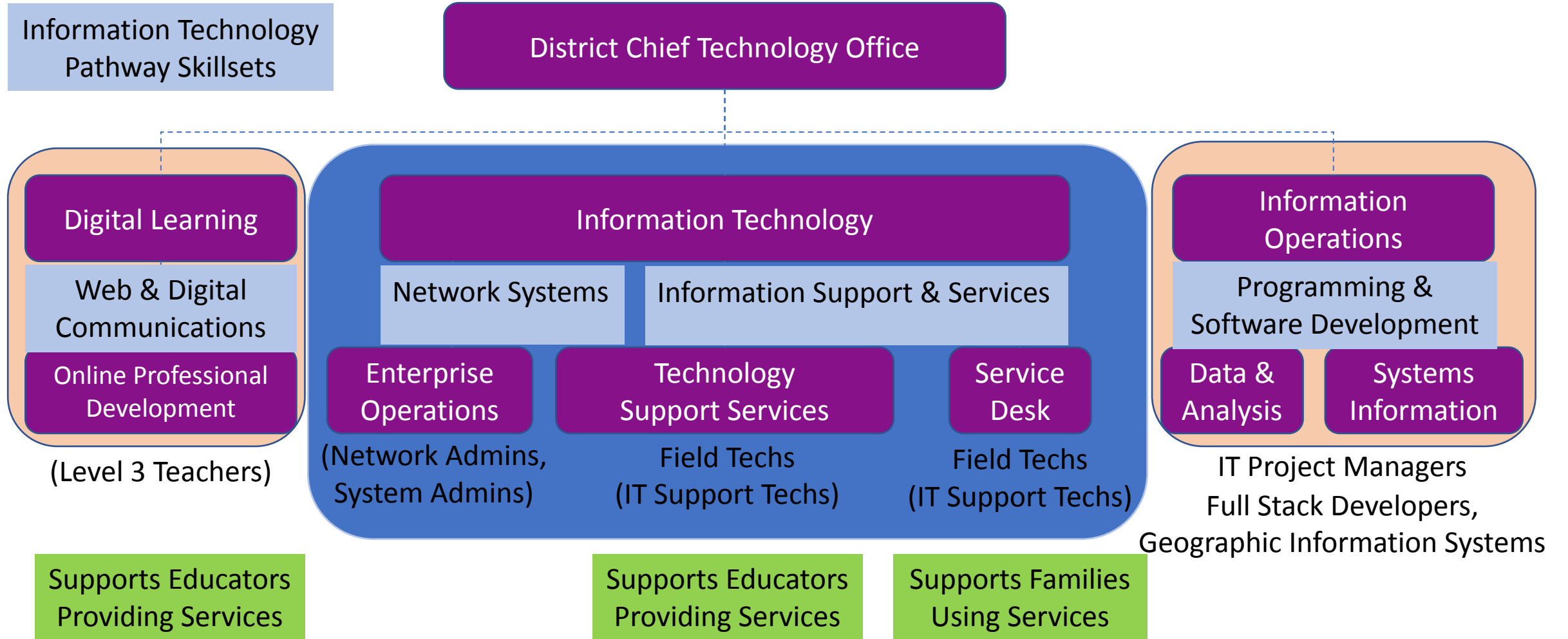
Table 2: Estimated costs to close student internet access and device gaps

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

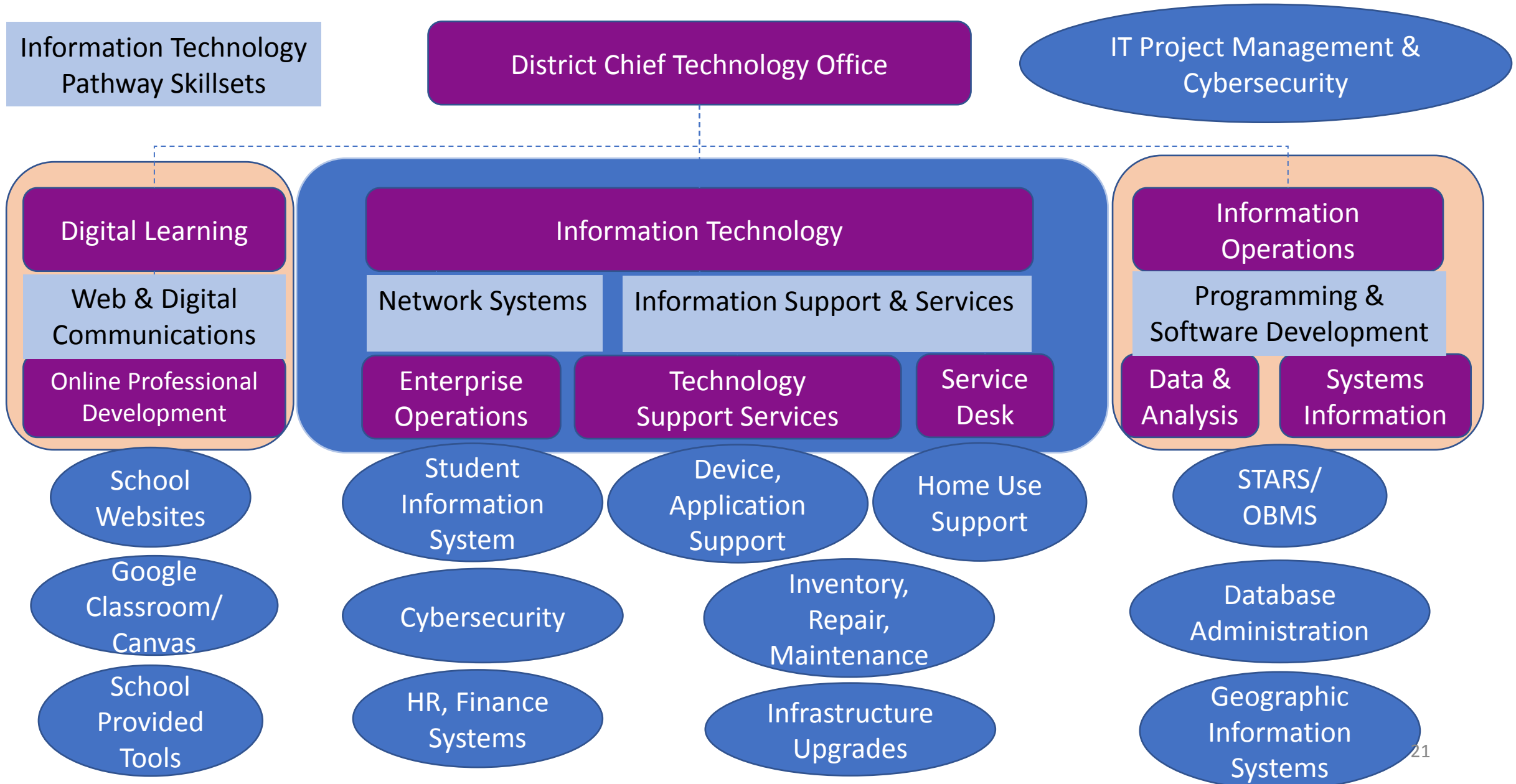
IT Staffing Plan: An Ecosystem Approach



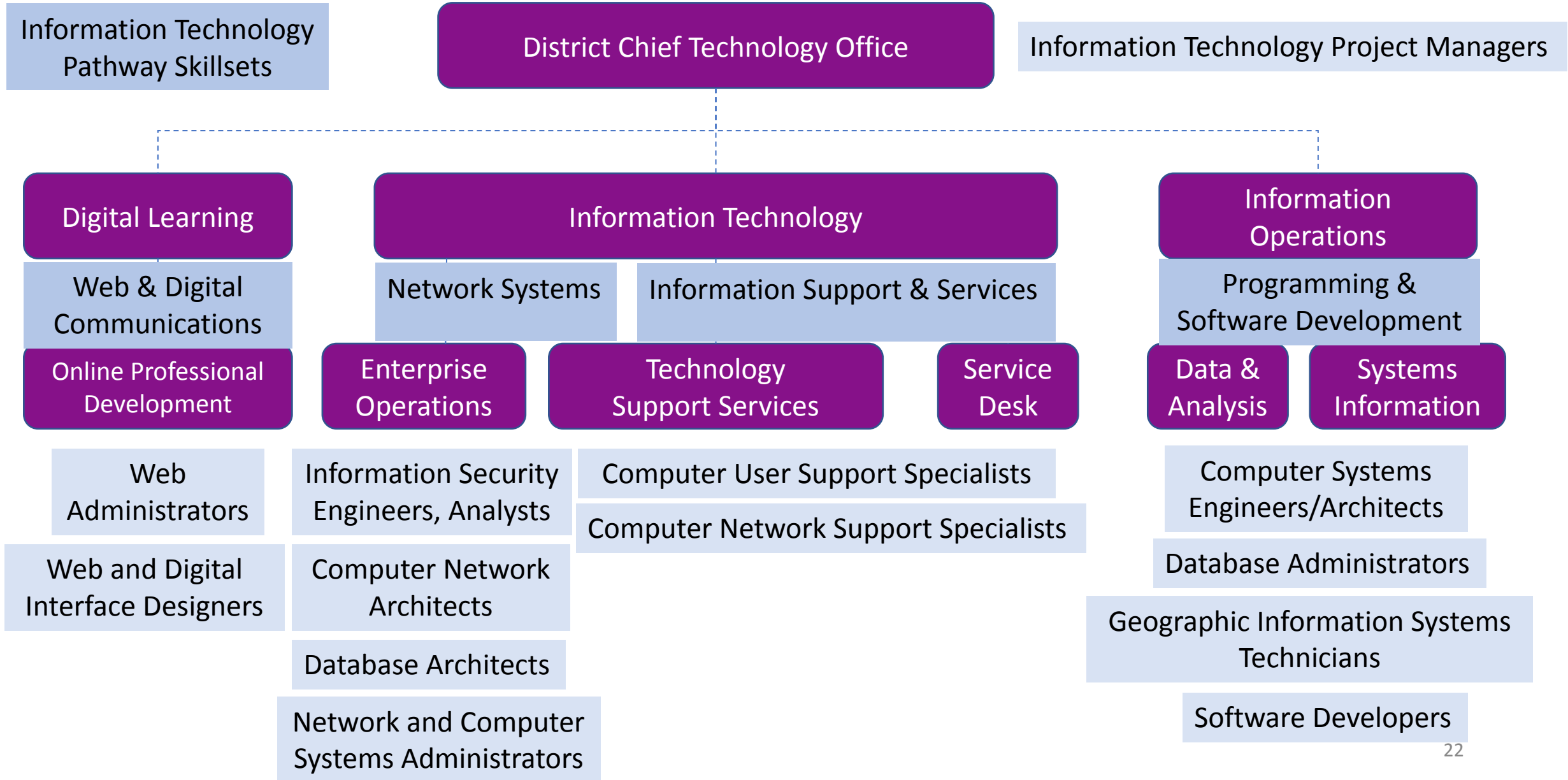
District IT Ecosystem: Staffing Domains



Information Technology Systems and Responsibilities



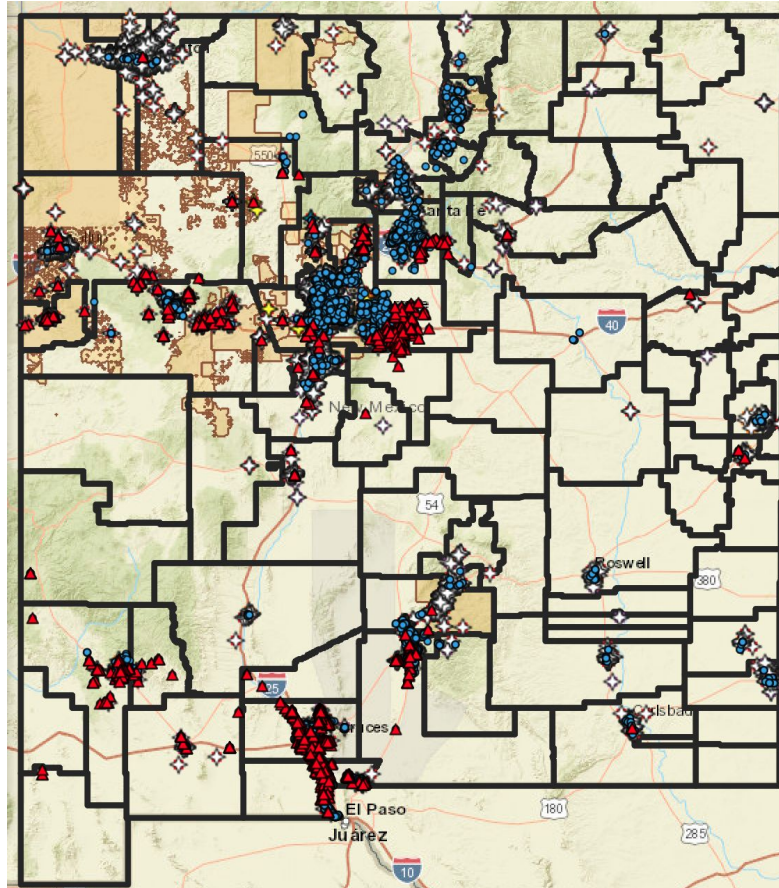
Information Technology Positions and Skillsets



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*Thank
You!*