



ADE Tech Task Force

Long-term Plan Subcommittee Recommendations

Vision Statement:

Every student has access to high quality teaching and learning resources at school and at home in order to have equitable opportunities for education success.

Background

The Covid-19 pandemic revealed longstanding issues of equity and technical obstacles in our K12 education system. The lack of broadband infrastructure and reliable internet connectivity often times is mis-portrayed as a rural issue. It is not. It is a statewide issue -- Urban and suburban areas experience similar challenges. In the spirit of local control, Arizona Local Education Agencies (LEA's) are implementing increasingly sophisticated, digitally-enabled or assisted teaching elements without the benefit of a statewide strategy or framework. While this can work for some, it does not work for most. Funding has not been available to provide consistent or adequate technical support/staffing for most LEA's even as technology has grown essential to all operations. Further, with the rapid pace of technology change, there has been and will continue to be an ongoing need for a commitment to teacher professional development around the best and most appropriate use of technology to engage the needs of students.

These recommendations are the result of intensive review of the State's existing educational technology profile, a review of previously published – but largely unimplemented – strategy documents, and a review of ongoing efforts being undertaken in other states, including Utah, New Mexico, Texas, Mississippi, Michigan and Massachusetts. We also compared school IT systems with “best in class” enterprise systems implemented by industries with similar size, scope, and complexity. With significant resources available from the American Rescue Plan Act (ARPA), and the previous two COVID-19 federal packages, it is both timely and urgent that Arizona have an intentional strategy for how to best utilize available state, local, federal, and philanthropic resources to have a meaningful impact on the transformation of our educational enterprise.

In laying out the foundations of a Long-Term Plan, our subcommittee recommends that the plan be carried out consistent with 3 guiding principles:

- 1) The Plan should be designed to address “digital” equity and inclusion throughout the state, both at school and at home.
- 2) Local control will be preserved; locally relevant service delivery will be enhanced and centrally shared support for universal activities will be established; and

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- 3) a “Framework Approach” to education technology will be focused on equity, quality, sustainability, simplified manageability, and robust information security.

The fundamental goal is to democratize effective access to education technology in Arizona.

Problem Statement

- Deficient broadband connectivity statistics reveal the equity challenges in Arizona (and many other states). According to [Common Sense Media](#), 37% of rural students have inadequate broadband¹, while 25% of suburban students and 21% of urban students also lack capable connections. This is a function of availability, affordability, and capability. But the broadband connection deficit is a proxy for a much deeper problem – the lack of digital equity and inclusion that includes devices, curriculum, technical support, and professional development to effectively utilize technology tools to their full potential.
- School Districts and Charters have limited access to centralized support or shared services, either from the state or regionally relevant institutions, to facilitate planning, resource sharing, asset management and service provisioning. This creates unnecessary redundancy, inefficient systems, and waste resources.
- The lack of a foundational framework for education technology, such as common minimum standards and shared support services also creates unnecessary complexity, cost, and risk. For example, according to the K-12 Cybersecurity Resource Center, publicly announced cyberattacks against school systems went up 20% last year. The typical school district has approximately 2% of the IT staff that corporations have to serve similarly sized organizations. It is unrealistic to expect every LEA to have a cybersecurity professional on staff. These recommendations assume that those services will be made available as a component of a statewide framework.

¹ “Inadequate broadband” is a subjective measure. The current federal definition is 25 Mbps download and 3 Mbps upload. But the practical definition is based on the ability of a connection to allow seamless, reliable access to teaching and learning materials, including simultaneous streaming video, video conferences, media, homework platforms etc. Mobile hotspots, or school bus or parking lot Wi-Fi connections, which have been creative and necessary temporary solutions, do not meet the standard intended in this document.

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Recommendations to Achieve Long Term Goals & Increased Learning Opportunities

Establish an Office of Digital Teaching and Learning (ODTL) within ADE. This office would serve multiple functions:

- 1) as the single point of contact for LEAs seeking assistance, support or coordination.
- 2) as the lead within ADE to coordinate different agency divisions of expertise, and
- 3) as a bridge to other organizations and institutions with concurrent and overlapping responsibilities. For example, the AZ Dept of Administration (ADOA) including the State Procurement and CIO offices; and the AZ Department of Homeland Security including the chief information security officer.
- 4) The ODTL would be a hybrid role would need to include information technology advisory functions while maintaining a keen focus on supporting educator excellence and LEA capacity building.



The ODTL Director would serve in a **consultative** role to help identify best practices, shared service opportunities, coach LEA's on effective strategies, and connect/bridge schools to expert resources within and outside of the ADE. The ODTL would establish regular communications with key stakeholders and implementation partners, including but not limited to, the County School Superintendents, educational associations such as the Arizona School Administrators and the Arizona Charter School Association, major philanthropic entities, the federal congressional delegation, the Arizona Commerce Authority (Broadband Director) and others.

The ODTL will establish a process to ensure that LEA's have the tools and resources to monitor their progress in addressing the issues raised in the needs assessment. This could include procurement and implementation project status tracking, managing help needed requests (e.g., barriers and obstacles), and utilizing local and state data to improve the benefits to student learning outcomes as gaps are closed.

To support the Office, the Superintendent should appoint an advisory board consisting of individuals with both education and business technology expertise.

The office should utilize Sun Corridor Network, Arizona's Research and Education Network, and the County School Superintendent's Service Centers as implementation partners on strategic priorities as defined below.

Tasks and Timeframes

- Conduct a thorough technology needs assessment of every LEA, utilizing a real time online survey instrument that provides deep and timely insights on current LEA technology architectures, assets, networks, gap analysis and information security capability assessment. This process will help assess where to maximize ARPA funding to close the divide. (Day 1-60)

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- Publish a recommended strategy for technology and service acquisition with a goal to address equity gaps, simplify and secure the technology environment in a manner that provides an equitable framework within which LEA's can safely and effectively innovate and operate. Include recommendations for any necessary legislative or regulatory changes to reduce barriers for the plan's implementation. (Day 61-120)

This strategy MUST:

- Work with relevant entities to publish a Cloud migration strategy for LEA's still utilizing on-premises servers and equipment.
 - Appropriately define distinctions between "edge" functions and duties – those unique to LEA expertise; and "core" functions – those which are almost universally common.
 - Assist with the identification, organization and enhancement of regionally deployed service centers or consortia to provide timely and relevant support (e.g., through County School Superintendents)
 - Assess and recommend a "device as a service" model that would provide flexible, scalable, and affordable IT capability to every LEA that chooses that option. The ideal outcome would be an environment in which every student handed a laptop would need only hit the power on button to have everything they need to connect to high quality educational resources.
- Advance statewide contracts through competitive bids for devices, connectivity solutions, digitally enabled curriculum, and analytics resources with the goal of advancing equity through bulk buy pricing to deliver consistent pricing for hardware, software, and services for every student anywhere. (Day 121-180)
 - Coordinate with relevant state and federal entities on grant identification, management, and outreach (Day 1-90)
 - Improve e-rate utilization. This includes but is not limited to maximizing current LEA E-Rate dollars, explore LEA partnerships/consortia; coordinating with local and state entities to maximize LEA E-rate dollar effectiveness within communities; and, including promotion of federal changes to allow e-rate dollars to be used for connectivity at home. (Day 30-90)
 - Establish professional learning community opportunities for education technology staff to enhance skills, share best practices and identify shared innovations. (Ongoing)
 - Advance and promote efforts to enhance digital literacy and technology skills micro certifications for teachers and staff (Ongoing)
 - Establish collaboration with other entities supporting digital literacy to the home, such as the libraries and non-governmental organizations. (Ongoing)

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Funding

\$1M for ADE Office of Digital Teaching and Learning



\$1M for school district and charter technical needs assessment (utilizing contractor resources)



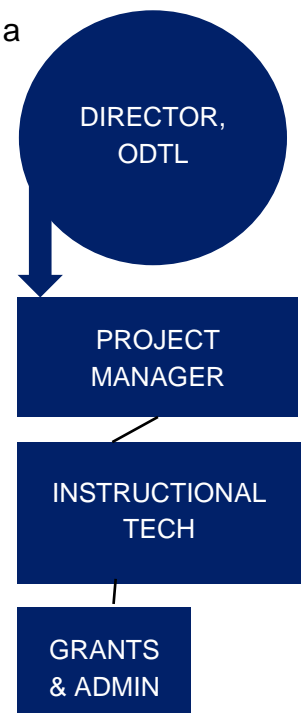
\$2M for Sun Corridor to seed their transition to a consortium lead and shared service provider



Staffing Model

Director Job Description:

- Assist ADE in achieving its vision and mission of student success, with a specific focus on statewide educational technology systemic enhancement. Provide leadership in the development and implementation of strategic initiatives to achieve objectives. Serves as a consultative authority (a “HUB”) working with LEA’s, other divisions within ADE, and other relevant state and local agencies with overlapping operational and governance authority.
- Work collaboratively with diverse stakeholders to establish priorities, sequence of deliverables, effectively communicate progress to internal and external stakeholders. Ability to negotiate, advocate and establish systems of accountability to measure office performance.
- Key skills will be familiarity with Information Technology Management standards, tools and best practices as well as a consultative approach to utilize and maximize expertise in Arizona’s business and educational sectors to implement the Arizona vision for equitable education technology shared services statewide.
- The ODTL would benefit from the capabilities of 1) a project manager, 2) an individual with professional experience in instructional technology (e.g. edtech coach/library media specialist), and 3) someone who can provide grant and administration support.



Sun Corridor Network (SCN)

Strategic Partnership Opportunity:

- SCN is Arizona’s Research & Education Network (REN), established within the Arizona Board of Regents as a collaboration between Arizona’s three universities. The Sun Corridor Network presents a unique opportunity to partner with ADE and to advance many of the ideas presented above.
- Sun Corridor Network currently operates a statewide high-capacity network with a presence in every Arizona county. Enabling Arizona’s K12 schools to better leverage this network and

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the embedded carrier relationships will provide for improved connectivity, improved pricing, and better service.

- ADE is currently limited in ability to partner with SCN due to SCN's nature as a provider (vendor) in E-Rate transactions with schools and districts.
- As a component of the recommended planning we encourage ADE to explore avenues for partnership with the SCN. One such avenue would be for SCN to transition from provider to statewide consortium lead. This approach would require one-time financial support for the following purposes:
 - Hiring E-Rate coordinator(s)
 - Bridge funding for existing circuits (as a consortium SCN cannot bill schools for existing service)
 - Project management & outreach
 - Annual investment would help to ensure sustainability and take the following shape:
 - E-Rate coordinator(s)
 - Community outreach & coordination
- SCN already provides the following shared IT services to member universities:
 - Wide-Area-Network aggregation & support
 - IT procurement aggregation
- Additionally, the Education Technology Consortium at Northern Arizona University delivers many IT services to K12 schools and districts throughout Arizona. As part of the strategic planning efforts above we would bring their expertise in this area to assist in determining the appropriate statewide solution(s).

Conclusion

The impact of the Covid-19 pandemic on education was not to create the imperative for a statewide systems approach to education technology; it revealed it. Concurrently, the risk of cyber-threats to public and private institutions is on the rise and our education system is not adequately coordinated, staffed or prepared to prevent or respond to these attacks. This strategy does not recommend a massive centralization of the education IT environment. Transformation is not a top-down exercise. It relies instead on system enablement where innovation and transformation can grow in every community. This strategy would build on the expertise, success and lessons learned that our LEA's have already experienced. And, it supports a collaborative approach to assembling and optimizing resources, managing initiatives to ensure accountability for progress and driving toward a goal in which every student has what they need to effectively learn wherever they are.

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**Awaiting formal consent*