

Arizona's Education Transformation



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Arizona Education Learning and Accountability System (AELAS)

- ARS 15-249 enacted in 2010
 - Maintain longitudinal, student level data, including student demographic, grade level, assessment, teacher assignment and other data required to meet state and federal reporting requirements (*AZDash, ODS, OEMS, AzEDS*)
 - Incorporate the student accountability information system (*SAIS replacement*)
 - Be accessible through commonly used internet web browsers to carry out the data collection, compilation and reporting duties (*AzEDS, AZDash*)

2012 AELAS Business Case

- Year-long research project surveying educators and administrators throughout state
 1. Replace SAIS
 2. Reduce data collections and redundancy
 3. Develop actionable dashboards for educators and administrators
 4. Create teaching and learning tools available by state

SAIS replacement

- Catastrophic failure inevitable on out-of-support technology
 - \$1,700,000 for basic system stabilization
 - \$1,500,000 to complete reverse engineering
 - \$ 650,000 for Enterprise-level architecture
 - \$ 500,000 for functional user requirements
- Stabilization efforts led to high-level design of 2 components of SAIS replacement
 - Student (AzEDS)
 - School Finance (APOR, CHAR, IIF, CSF, Data Push)

AzEDS development

- Adopted physical and logical data models
 - Implemented data governance program
- Ed-Fi Alliance provided Operational Data Store (ODS) framework and APIs for data transmission
 - ADE has customized to meet Arizona needs but is still a sharable standard across states
- 13 student information system vendors had to reconfigure their systems to meet new standards
 - Estimated a 6-12 month process but took 18 months to execute
- Required changes in way LEAs collect and transmit student-level data

AzEDS architecture components

- Operational Data Stores (ODS)
 - Development team working on connecting to other agency data systems
 - Making data consumable throughout the agency
- Organizational Entity Management System (OEMS)
 - Database structure governing entity attributes
 - Significant interface with payment systems that requires connections to AzEDS
- Fundamental change in way data is collected, stored and managed

School Finance refactoring

- Smaller payment streams have been automated
 - Automated and decommissioned 29 of 48 manual calculations
 - Processing times reduced from days to minutes
- Incremental approach to allow perfect and test technology before impacting major systems
- Funding commitment needed to begin work on remaining large payment streams
 - Focus on stand alone projects to ensure system continuity
- \$4,500,000,000 in state aid payments processed on 1990s technology
 - Remains a significant risk for catastrophic failure with no support

AZDash development and implementation

- Longitudinal data system required by AELAS legislation
- Leveraged federal grants to create connection to existing data warehouse and user-friendly visual reports
 - 11 pilot LEAs developed reports and visualizations
- Federated single-sign on security system
- Funding provided in FY 2015 to deploy statewide
- No new funding to incorporate new reports or user enhancements

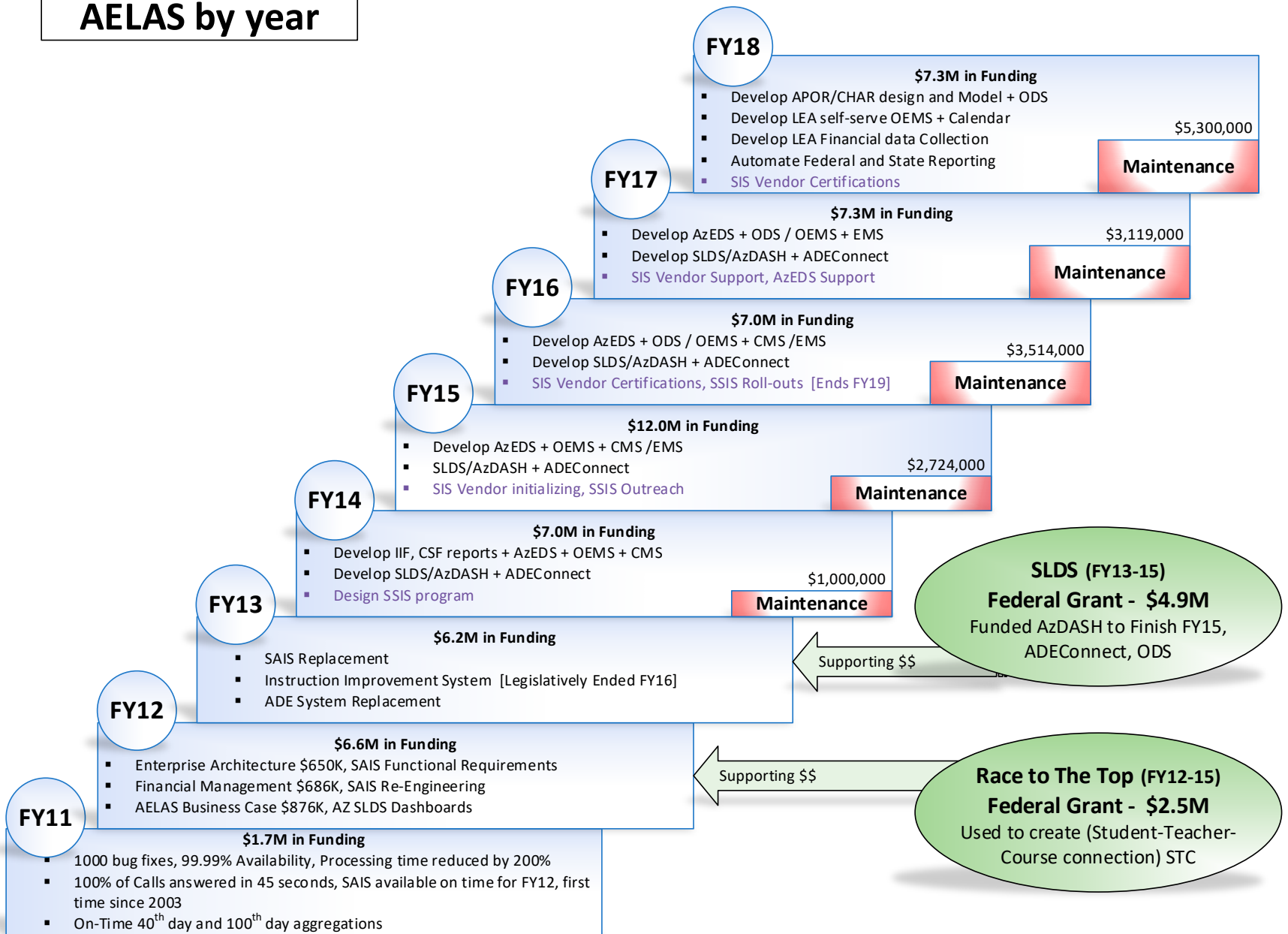
Teacher and Learning tools (opt-in)

- Leverage state purchasing power and technological expertise to procure cost-effective educational software solutions
 - Limited legislative support for initiative
 - Focus shifted to SAIS replacement
- Instructional Improvement System
 - Interconnected and interactive tools to allow educators to make data-driven decisions
 - Highest priority identified by AELAS Business Case researchers
- Statewide Student Information System (SSIS)
 - Negotiate a state rate for student management system needed for day-to-day school operation
 - LEAs opt in to solution, not a state mandate

Ongoing maintenance and operations

- Never accounted for in AELAS Business Case
- ADE has no baseline technology funding like other state agencies
- Systems that process millions of daily transactions with no technical support identified

AELAS by year



Differences between AELAS Business Case and implementation

- System maintenance was not accounted for
 - Yearly deferring that created SAIS' problems
- Overestimated ability of LEAs to take on new systems/processes
 - Changes have been rolled out more slowly than estimated
- Software vendors unable to keep pace with ADE's timelines
 - ADE and LEAs had to maintain 2 systems during AzEDS transition
- Teaching and learning tools were not supported by Legislature
 - Limited time and resources have been dedicated to the top need identified

AELAS funding history

Original spending plan for AELAS: Budget Request

	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Total
AzEDS				\$3,052,554	\$2,900,000	\$3,800,000	\$2,750,000	\$2,250,000	\$3,500,000	\$18,252,554
ADEConnect					\$0	\$0	\$0	\$0	\$0	\$0
AZDash				\$3,870,555	\$2,750,000	\$500,000	\$1,250,000	\$0	\$0	\$8,370,555
SSIS				\$3,432,554	\$1,400,000	\$500,000	\$0	\$0	\$0	\$5,332,554
LMS				\$1,326,065	\$1,200,000	\$0	\$0	\$0	\$0	\$2,526,065
School Finance				\$899,433	\$2,750,000	\$2,500,000	\$3,500,000	\$3,500,000	\$2,000,000	\$15,149,433
Other				\$1,675,000	\$1,500,000	\$500,000	\$0	\$0	\$0	\$3,675,000
Total Development	\$6,200,000	\$5,150,000	\$23,800,000	\$14,256,161	\$12,500,000	\$7,800,000	\$7,500,000	\$5,750,000	\$5,500,000	\$53,306,161
Maintenance/Support				\$2,200,000	\$3,000,000	\$3,675,000	\$5,800,000	\$5,800,000	\$5,800,000	\$26,275,000
Total	\$6,200,000	\$5,150,000	\$23,800,000	\$16,456,161	\$15,500,000	\$11,475,000	\$13,300,000	\$11,550,000	\$11,300,000	\$79,581,161

Original Spending Plan for AELAS: Approved Funding

	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Total
AzEDS	Budget	\$1,700,000	\$2,000,000	\$2,200,000	\$2,000,000	\$3,120,000	\$1,500,000	XXXXX	XXXXX	\$12,520,000
ADEConnect	Budget	\$800,000	\$500,000	\$0	\$0	\$0	XXXXX	XXXXX	XXXXX	\$1,300,000
AZDash	Budget	\$0	\$1,500,000	\$1,900,000	\$0	\$0	\$0	XXXXX	XXXXX	\$3,400,000
SSIS	Budget	\$0	\$450,000	\$800,000	\$1,400,000	\$180,000	XXXXX	XXXXX	XXXXX	\$2,830,000
LMS	Budget	\$0	\$0	\$450,000	\$0	\$0	XXXXX	XXXXX	XXXXX	\$450,000
School Finance	Budget	\$0	\$800,000	\$1,500,000	\$1,700,000	\$740,000	\$500,000	XXXXX	XXXXX	\$5,240,000
Other	Budget	\$2,200,000	\$1,750,000	\$2,950,000	\$750,000	\$700,000	XXXXX	XXXXX	XXXXX	\$8,350,000
Total Development		\$4,700,000	\$7,000,000	\$9,800,000	\$5,850,000	\$4,740,000	\$2,000,000	\$0	\$0	\$34,090,000
Maintenance/Support	Budget	\$300,000	\$0	\$2,200,000	\$1,150,000	\$2,560,000	\$5,300,000	XXXXX	XXXXX	\$11,510,000
Total	\$6,200,000	\$5,000,000	\$7,000,000	\$12,000,000	\$7,000,000	\$7,300,000	\$7,300,000	\$0	\$0	\$45,600,000

Estimated AELAS development completion budget

Project	FY18	FY19 Estimated	FY20 Estimated
AzEDS Finalize database structure and create reporting tools that eliminate redundant data collections	\$1,500,000	\$3,500,000	\$3,500,000
APOR/CHAR Complete replacement of manual tools currently used for APOR, CHAR and Annual Budget calculations	\$ 500,000	\$5,000,000	\$3,750,000
AZDash Provide requested educator, public-facing parent, legislative and post-secondary reports	\$0	\$1,250,000	\$0
Total	\$2,000,000	\$9,750,000	\$7,250,000

AzEDS Completion



APOR/CHAR Completion



AzDash Completion



AELAS completion challenges

- System design created technology interdependencies that funding has not kept pace with
- Introduction of Current Year Funding payment process without funding or work plan
- Incomplete funding pushes back work year over year
- Lack of maintenance funding takes away ability to continue development at same pace/level
 - Further adds to timeline delays
- Dashboards become obsolete as educators become more data savvy

Thank You



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