

# ADE IT Modernization Effort Update



Presented to:

Arizona Data Governance Commission

December 21, 2012

Mark T. Masterson

Chief Information Officer

# Agenda

- AELAS Business Case
  - Discussion and possible direction to release executive summary
- Instructional Improvement System presentation
- Data Governance
  - Nancy Smith presentation
  - Ed Jung implementation plan/timeline
- PARCC guidelines
  - Discussion and possible adoption
- Ed-Fi Updates
  - Unique ID
  - Request to develop costs to implement Ed-Fi
  - Request to explore InCommon
  - Request for update on SAIS business rules validation process
- Budget Summary Update
  - Resource requests



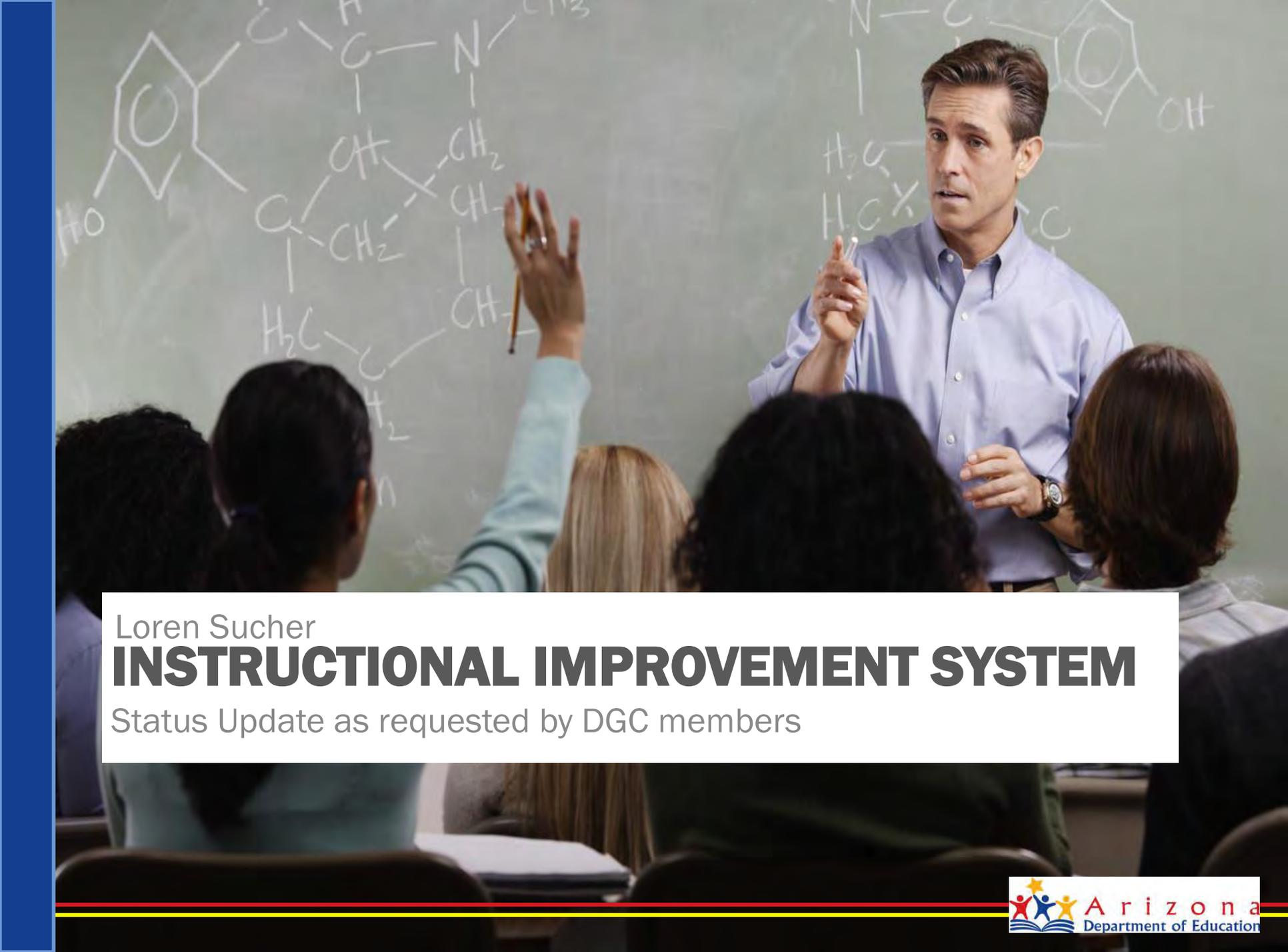
Jolene Newton

# **AELAS BUSINESS CASE**

Discussion and possible direction to release executive summary

# AELAS presentation

- See Attachment



Loren Sucher

# **INSTRUCTIONAL IMPROVEMENT SYSTEM**

Status Update as requested by DGC members

# Instructional Improvement System (IIS)

- What is IIS?
  - Collection of technology-based tools and supporting strategies
  - Provides educators with actionable data and processes
  - Improves student instruction and staff development
- Why IIS?
  - Mandated in Race to the Top (RttT) guidelines
  - FL, OH, MA, and NC among early leaders
- The Center for Educational Leadership and Technology (CELT) provides guidance on best practices

# IIS Components

## Observation/Evaluation

Evaluation and Appraisal  
Model Framework Management  
Educator Goal Planning

## Assessment

Author Questions and Tests  
Test Delivery & Scoring  
Question & Test Content Management  
Integration with Scanners & Hand-held devices

## Instructional Support Tools

Standards and Content Management / Content (Lessons, Videos, Skill Resources, Rubrics, etc.)  
Alignment & Meta-Tagging Management / Edit & Publishing Workflow  
Professional Development Registration & Scheduling / Course Catalog Management  
Content Delivery & Scoring (Learning Mgmt. System)

## Integration & Decision Support and Reporting System

Integration among systems for seamless end-user experience and data integration  
Analytics & Reporting, Dashboards, Custom Portal & Scoring, Data Verification

## Identity Management System

Role-Based Access & Permissions

## Training

Train-the-Trainer of ADE, Regional, and County Trainers who Train LEA and School staff

# IIS goals for Arizona

- Replace IDEAL system
- Support roll-out of Arizona's Common Core Standards and PARCC
- Support Teacher and Principal Evaluation framework
- Leverage national CCSS resources
- Support MCESA's TIF grant (REIL)
- Address top priorities in AELAS site-visit research

# IIS Funding

- State funded – IDEAL replacement modules
  - Instructional Support Tools RFP Underway
  - Professional Development & Learning Management – manage and deliver IDEAL courses
  - Content Management – manage ACCS resources, e.g., lesson plans, PD videos, links, etc.
  - Collaboration Tools – blog, Google Sites
- Opt-In LEA and ADE program area funded
  - Evaluation and Observation (vendor selection done)
  - Assessment System (vendor selection underway)
  - Data Management/Decision Support and Reporting System
    - ADE will build to support opt in LEAs

# Proposed IIS roll out

Phase 1	Phase 2 (Opt in)	Phase 3 (Opt in)
<ul style="list-style-type: none"><li>• PD course registrations and delivery</li><li>• Course certificates</li><li>• Online collaboration tools</li><li>• ADE curriculum resources (videos, lessons, links, etc.)</li><li>• National resources</li><li>• IIS data analytics</li></ul>	<ul style="list-style-type: none"><li>• Assessment tools for LEA, school, and classroom</li><li>• Educator observation and evaluation tools</li><li>• Local and regional PD management</li><li>• Local curriculum resources</li><li>• Curriculum design and review</li></ul>	<ul style="list-style-type: none"><li>• Student learning management system</li></ul>

# IIS Pilot

- MCESA is ADE's IIS partner and pilot site
  - Assisting in selection of vendors
  - Paying for initial module implementation (except IST)
  - Piloting IIS with 14 districts through their Teacher Improvement Fund grants

# IIS critical success factors

- ADE program area sponsorship (steering committee)
  - Contribute to requirements
  - Participate in the RFP process; provide official scorer(s)
  - Contribute to contract negotiations
  - Integrate IIS with key initiatives (ACCS, evaluation, etc.)
  - Collaborate on development of content and workflows
  - Build ADE and LEA awareness
  - Support funding
  - Provide ongoing support for content and training
- Fidelity of implementation
- LEA buy in



Nancy Smith and Ed Jung

# **DATA GOVERNANCE RECOMMENDATIONS**

Presentation and discussion



Recommendations for Implementing a Data Governance Program at ADE

# ADE Data Governance Review

Nancy J. Smith, Ph.D.  
DataSmith Solutions, LLC

# Overall Findings

- No formal governance processes around data decision making or communication
- No formal governance committees to oversee management, access, and use
- Initial activities to develop a process to respond to outside data requests, but not formalized or based on input from across ADE business units
- Need to bridge gap between IT and business units
- High level of desire across ADE to improve data governance and communication

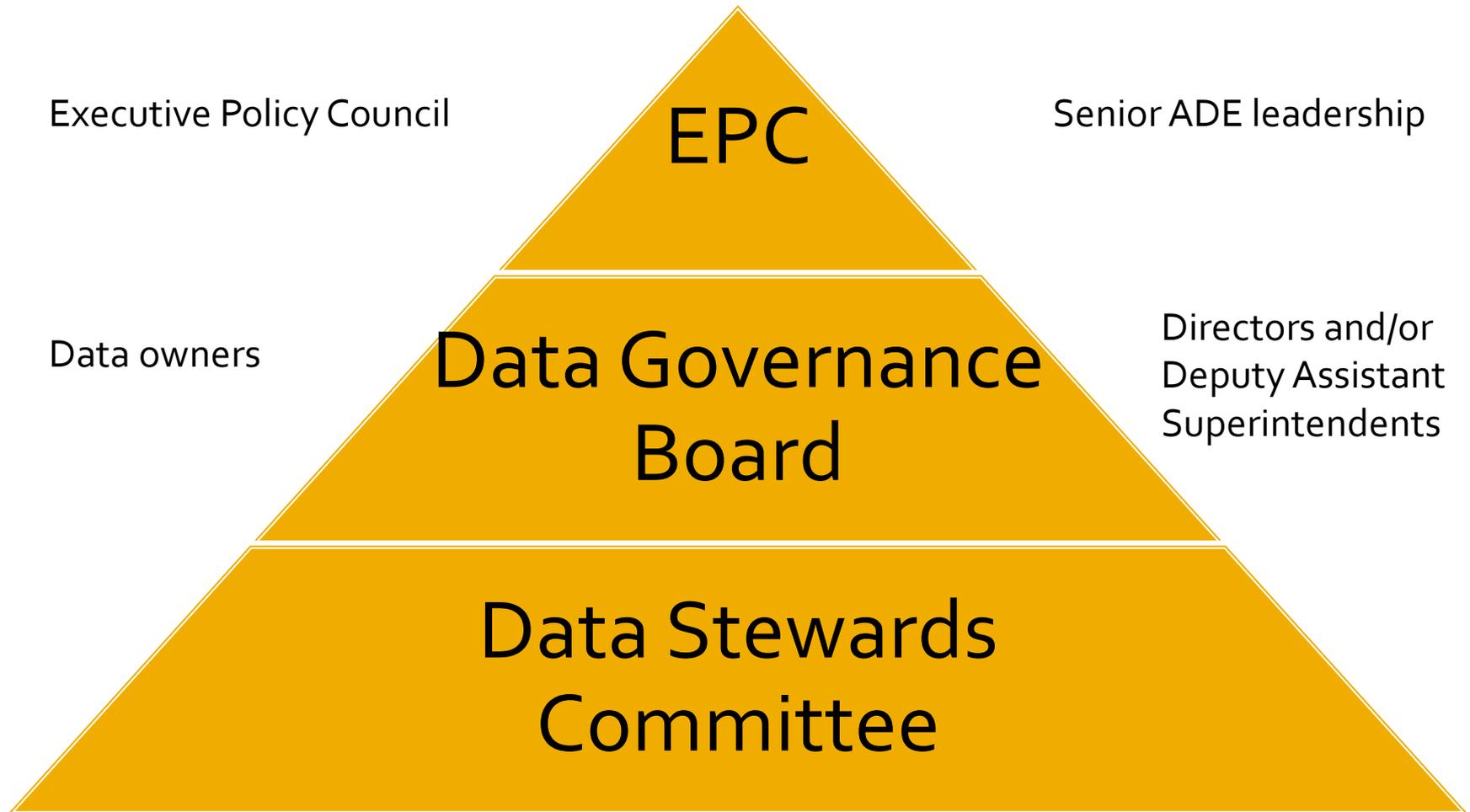
# 1. Designate a Chief Data Officer or Data Governance Director

- Goal – a person or office responsible for coordinating, documenting & communicating about agency-wide governance
- Status – no data governance director or centralized division/staff to oversee and coordinate agency-wide data activities
- Recommendation – designate a data governance coordinator that sits under Deputy Superintendent. Does not need to be IT representative.
- Risk – continued disorganization, duplication of effort and threats to data quality and timely data reporting

## 2. Implement a formal data governance committee structure

- Goal – develop a process for reviewing data collection elements & processes with input from business units, IT, and policy representatives to ensure agency-wide needs are met
- Status – no formal governance committees for oversight purposes
- Recommendation – 3-tiered structure engaging data stewards, data owners, and policy/administration staff
- Risk – lack of efficient and cost effective decision making and collection processes that add burden to ADE and LEA staff

# Recommended Committee Structure



### 3. Establish task forces to address specific data collection and reporting processes

- Goal – in addition to permanent standing governance committees, establish task force with ADE IT, business unit and LEA representation to address specific collections, especially large-scale projects
- Status – IT division defines, designs & develops new collections involving separate communications with business units and some LEA engagement.
- Recommendation – establish task force or advisory committee with users/stakeholders from business units and LEAs to ensure all perspectives are addressed in design & implementation phases
- Risk – development of collections that don't meet stakeholder needs, increase time & resource burden, duplicate data requests

## 4. Create and publish a collections calendar for all ADE data collections

- Goal – have clear, concise documentation of all data collections, including details on what elements and when collected
- Status – efforts are underway to document collections
- Recommendation – Publish a calendar for internal & external stakeholders (LEAs, researchers, policymakers) as a way to reduce duplicate collections & improve planning & resource allocation. Make this available on website as a communication tool.
- Risk – confusion among internal & external stakeholders, redundant collections

## 5. Document and establish an approval process for non-SAIS collections

- Goal – effective & efficient management of all data collections from ADE, including program area collections (which might be eliminated) and others associated with specific grant requirements, program evaluation or periodic surveys
- Status – documentation efforts have begun, although it is not clear if they include surveys or grant requirements. No clear approval process in place for non-SAIS collections.
- Recommendation – establish a sub-committee under Data Governance Board to document collection, eliminate unnecessary collections, and implement a review & approval process for new data requests
- Risk – continued duplicate collections, undue burden on districts, threats to data quality and coordinated data access & use

## 6. Review and update SAIS data standards and collection information

- Goal – maintain and publish publicly up-to-date and easily accessible/usable data standards about data elements, code sets & format, collection timelines & processes, purpose & rationale for each element & collection and guidelines for data submission
- Status – an 800 page PDF for FY12
- Recommendation – update & publish annually, with a special section that highlights changes from previous year. Ability to publish addendum during the year as needed
- Risk – confusion on part of LEAs on what to submit, threats to data quality, development of non-SAIS collections because of lack of understanding of SAIS

# 7. Maintain engagement of district representatives and other external stakeholders

- Goal – build trust and partnership with all stakeholders, improve quality & timeliness of data submissions, benefit from their expertise & perspective, build efficient & cost effective tools
- Status – ADE has reengaged with ASCUS with positive results; LEAs are eager to engage more deeply in planning & development processes
- Recommendation – establish two permanent standing advisory committees that serve data governance board: 1) LEA superintendents & assistant superintendents for policy perspective and 2) data coordinators and IT representatives for technology perspective
- Risk – developing ineffective tools, continued resistance or lack of trust & cooperation with districts, threats to data quality

## 8. Establish a strong enterprise-wide data culture at ADE

- Goal – have all ADE employees and stakeholders understand the purpose and importance of high data quality, efficient and cost effective tools, and coordinated efforts agency-wide
- Status – there is not an agency-wide perspective; there is a program-specific or business unit perspective which leads to independent & duplicative efforts. There is a desire for better agency-wide coordination.
- Recommendation – include data governance handbook in all new employee packets, develop agency-wide governance & communication, develop process to accept suggestions for efficiency & cost effectiveness. Need to institutionalize focus.
- Risk – data governance programs die if dependent on a single dynamic personality

## 9. Hire a skilled trainer to develop data-related training for internal and external stakeholders

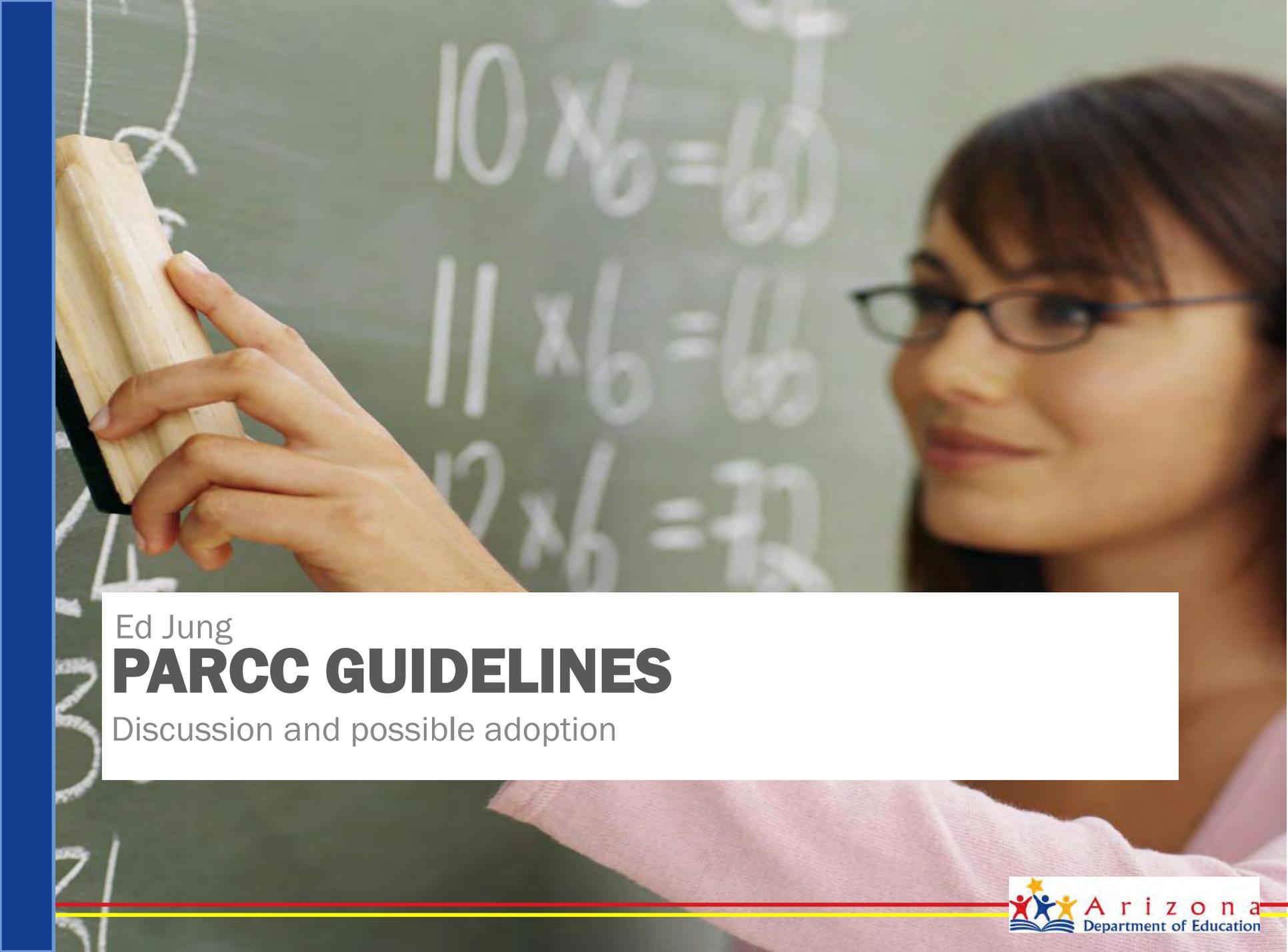
- Goal – develop clear, concise and effective communication and training materials to increase data quality
- Status – documentation about data tools and standards has a strong IT feel. They may be technically correct, but may not match how non-IT stakeholders learn or interpret the material
- Recommendation – as ADE implements significant changes in tools, communication & engagement, take the opportunity to make communications & training effective with end-users (i.e., data quality training for data entry staff). IT staff do not usually communicate the same way end users do.
- Risk – confusion, increased help desk requests, threats to data quality and validity, threats to appropriate data use

# 10. Establish a formal process for responding to data and information requests

- Goal – have a standardized process for receiving & responding to information requests, including those that come from legislature, governor, newspapers, researchers, and others
- Status - staff in R&E have begun to develop a process, but it is not finalized nor has it included input & participation from other business units. Many requests go unanswered.
- Recommendation – engage a communication director who is responsible for receiving requests & determining which unit(s) to engage in the response. Consider a data request review board to evaluate privacy/FERPA issues. Develop a tracking system for documenting request, approval/denial of request, units engaged in response, response, and dates at each decision point along the way
- Risk – duplicate/contradictory responses to similar requests, no ability to track number/type/frequency of requests, lack of response to critical requestors

# ADE action

- Data Officer: Edward Jung
- Data Officer will
  - Create implementation plan to execute recommendations
  - Provide updates to DGC
  - Make policy recommendations for DGC to adopt

A woman with dark hair and glasses is shown in profile, looking towards the left. She is holding a wooden eraser in her right hand. In the background, a chalkboard is visible with several multiplication problems written in white chalk:  $10 \times 6 = 60$ ,  $11 \times 6 = 66$ , and  $12 \times 6 = 72$ . The woman is wearing a light pink sweater. The overall scene is a classroom setting.

Ed Jung

# PARCC GUIDELINES

Discussion and possible adoption

# LEA technology purchases

- LEAs have been asking for guidance on technology purchases for PARCC
- Current PARCC technology guidelines are broad and evolving
- Will today's purchases support tomorrow's needs?

# Technology purchase guidelines for PARCC

- Purchase devices that can serve a broad range of instructional needs for teachers and students
- Emphasis on mobility AND manageability
- Encourage infrastructure upgrades

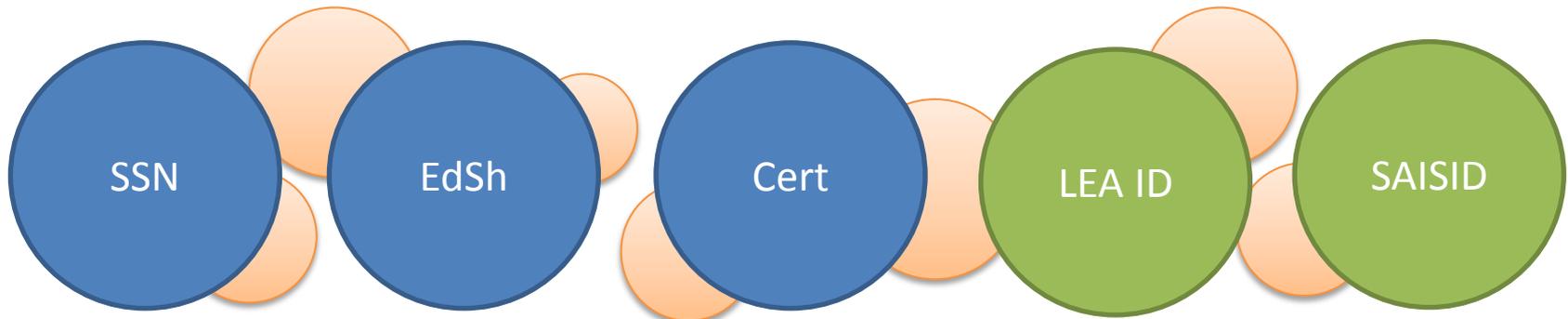
Action Requested: Approve “Technology Purchases to Support Arizona Common Core Standards and PARCC” guidelines.

A photograph of three students in a classroom. A young woman with dark hair, wearing a white sweater, is leaning over a laptop. A young girl with blonde hair, wearing a dark sweater, is pointing at the screen. A young man with dark hair, wearing a white jacket, is looking at the screen. They are sitting at a desk in front of a window. There are posters on the wall behind them, including one that says "Knows to Fast" and another that says "Healthy Kids Healthy Future".

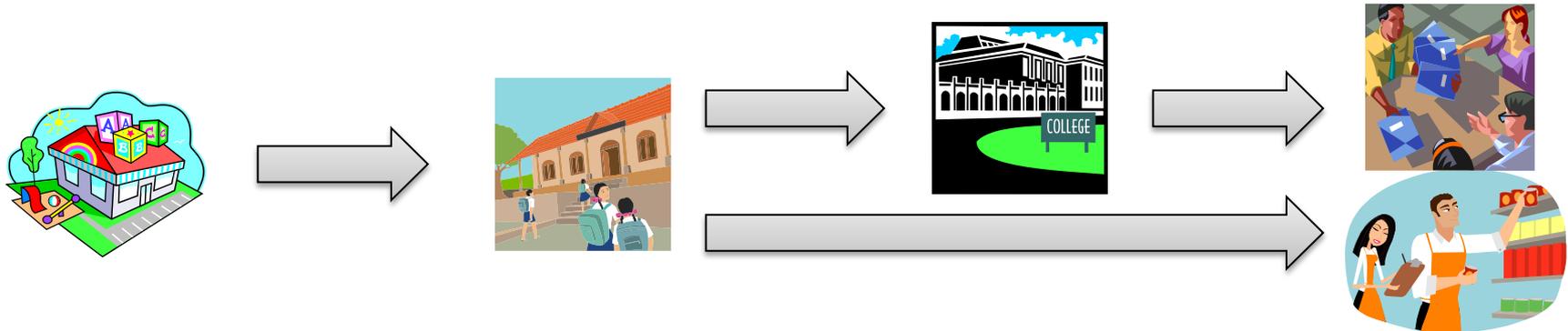
Ed Jung

# **ENTERPRISE ARCHITECTURE UPDATES**

# Problem with Identifiers



First Name – Last Name – Birth Date



How do we track the effectiveness of Arizona’s educational investments as stakeholders transition from Pre-K, K-12, Higher Ed, and Workforce?

# Fixing the ID problem

- Reduce the number of different ID systems used within the ADE
- Identify Policies and Procedures that promote the entry of clean data
- Investigate the practices and results of other states implementing statewide educational identifiers
  - Idaho EDUID
  - North Carolina UID

# Status updates

- Request to develop requirements (costs) for a statewide implementation of Ed-Fi Transmission Layer between LEA and SEA (LEA Data Extractors)
  - In progress
  - All-day working session with Michael and Susan Dell Foundation (Ed-Fi)
- Direction to investigate InCommon as federated IMS solution
  - Post-secondary focus (not targeted to LEAs)
  - ADE can participate as source of data
  - What ADE is trying to provide for LEAs

# SAIS business rules process outline

- Commission requested update on the validation process
- Targeting 4<sup>th</sup> quarter
- Proposed process
  - Identify who should be the owner of each rule or law
  - Work with owners to validate that their interpretation is what its applications are executing on.
  - Create business requirements for what is not meeting the interpretation of the owner of the rule/law



Mark Masterson

# **BUDGET UPDATE**

Review and possible adoption of resource requests

# AELAS FY2013 program budget

<b>FY 2013 Goal</b>	<b>Approved Budget</b>	<b>YTD Spend</b>	<b>Remaining Budget Authorization</b>
SAIS Phase I Replacement	\$950,000	\$538,159	\$411,841
Instructional Improvement System	\$550,000	\$130,550	\$419,450
Improve internal ADE programs	\$1,450,000	\$498,108	\$951,892
<b>Total</b>	<b>\$2,950,000</b>	<b>\$1,166,817</b>	<b>\$1,783,183</b>

<b>FY2013 AELAS BUDGET SNAPSHOT</b>	
<b>AELAS FY2012 Carryover</b>	\$2,056,537
<b>AELAS FY2013 Allocation</b>	\$6,200,000
<b>AELAS FY2013 Total Available Funding</b>	\$8,256,537

# SAIS Phase I Replacement

**Goal:** Begin to ensure accurate student payments

Budget	YTD Spend	Variance
\$ 950,000	\$ 538,159	56.6%

- Completed Enterprise recommendation document
- Selected approach for Enterprise from recommendation document
- Three projects selected to pilot new Enterprise approach. The three pilots are
  - Event Management
  - Move on When Reading
  - Unique ID
- Continuing working on standards and documentation for IT development processes to avoid repeating SAIS “mess” in new design
- Completed gathering requirements for data attributes, screen layouts for applications accessing Enterprise
- Completed first version of SAIS Payment recommendation document
- Completed a number of standards documentation reviews for IT development processes
- Completed Legal Statutes updates from last State Legislation session

# SAIS Phase I Replacement

**\$200,000 for quarter**

**YTD allocation: \$950,000**

**Goal: Begin build of new “Enterprise”; Define future student “Unique ID” process**

- Third quarter objectives
  - Continuing technical staff to shadow business units to validate current business process
  - Continue on developing the SAIS payment recommendations document on how to process payments directly to Great Plains
  - Working on obtaining a Great Plains resource from Microsoft. Great Plains resource needed for expertise and validation of selected approach
  - Starting work efforts to stream line SAIS payment Data Push process. This includes the removal of integrity rules from the Data Push and restoring them to the integrity segment
  - Continue to identifying any existing legislation and policies for inconsistencies, so that recommendations can be made to close gaps
  - Starting to work with Microsoft on how to ‘stand up’ a customer relationship management (CRM )
  - Starting to identify data elements that are needed for the success of all three pilots. The three pilots are Event Management, Move on When Reading and Unique ID
  - Starting documenting enrollment process to support the Unique ID pilot
  - Start developing plans for Design on the three projects that were selected to be piloted on Enterprise.
  - Continue standards and documentation for IT development processes

# Instructional Improvement System

**Goal: Tools for teachers to grow student success (REPLACE IDEAL)**

Budget	YTD Spend	Variance
\$ 550,000	\$130,550	23.8%

- Second quarter accomplishments
  - Obtained ADE Program Sponsorship from Jennifer Johnson/Elliott Hibbs
  - Worked with ADE program area to create and administer LEA survey to identify and prioritize IST requirements (initial LEA feedback has been positive)
  - Analyzed IDEAL capabilities and MCESA REIL requirements against NC IIS requirements. Incorporated lessons learned from previous RFPs and created IIS-IST Request for Proposal (RFP) draft
  - Created IIS-IST Project Investment Justification (PIJ) and initiated ADOA GITA approval process

# Instructional Improvement System

No request for quarter

**YTD allocation: \$550,000**

**Goal: Tools for teachers to grow student success (REPLACE IDEAL)**

- Third quarter objectives
  - Solicit RFP Response
  - Review & Score RFP Responses
  - Identify Top Tier IIS-IST Vendors
  - Complete Vendor Demonstrations & Technical Reviews
  - Select preferred vendor/solution(s)
  - Begin vendor negotiations

# Improve internal ADE programs

## Goal: Create reliable, integrated technology services

Budget	YTD Spend	Variance
\$1,450,000	\$498,108	34.4 %

- Second quarter accomplishments
  - Synthesized and documented EA findings for the AELAS business case
  - Developed ADE Conceptual Architecture
  - Deployed resources to projects to implement components of the conceptual architecture
    - Implemented SLDS Pilot
    - Developed ADE's first Ed-Fi compliant data store (for assessment data)
  - Develop pilot plan for SAIS replacement
  - Primed the agency for Data Governance implementation
  - Tested process for LEA access management
  - Tested process for ADE internal Employee and contractor management
  - Production configure of IMS environments
  - Password policy management

# Improve internal ADE programs

**\$200,000 for quarter**

**YTD allocation: \$1,450,000**

**Goal: Create reliable, integrated technology services**

- Third quarter objectives
  - Develop and execute Data Governance implementation plan
  - Develop and execute Ed-Fi implementation plan
  - Implement Software Development Life Cycle
  - Continue implementing ADE Conceptual Architecture
  - Initial IMS rollout for ED<sup>3</sup>S (SLDS) and MECSA Assessments
  - Common logon Linking of accounts to IMS
  - Assessments and integration of common logon systems to IMS
  - Training for LEA access management

# Resource requests

- SAIS Phase I Replacement \$ 200,000
- Improve internal ADE programs \$ 200,000

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TOTAL \$ 400,000

# AELAS FY2013 program budget

Project	Approved Budget	YTD Spend	December Request	Updated Approved Budget	Remaining Budget Authorization
SAIS Phase I Replacement	\$950,000	\$538,159	\$200,000	\$1,150,000	\$611,841
Instructional Improvement System	\$550,000	\$130,550	\$0	\$550,000	\$419,450
Improve internal ADE programs	\$1,450,000	\$498,108	\$200,000	\$1,650,000	\$1,151,892
<b>Total</b>	<b>\$2,950,000</b>	<b>\$1,166,817</b>	<b>\$400,000</b>	<b>\$3,350,000</b>	<b>\$2,183,183</b>

FY2013 AELAS BUDGET SNAPSHOT	
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# Questions



Contact

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