STATE EDUCATION LEADERSHIP FOR INTEROPERABILITY

Leveraging Data for Academic Excellence

SETDA

Agenda

→ Welcome and Introductions, Dr. Tracy Weeks, SETDA

→ Data Interoperability National Perspective, Maureen Wentworth, Ed-Fi Alliance

→ State Interoperability Report, Dr. Tracy Weeks, SETDA

→ State Perspective, Georgia Department of Education, Bob Swiggum

→ State Perspective, Nebraska Department of Education, Dr. Dean Folkers

→ State Interoperability Recommendations, Dr. Tracy Weeks, SETDA

→ Question & Answer Discussion

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About SETDA

SETDA is a 15 year old non-profit that serves, supports, and represents U.S. state digital learning leaders.

Mission to build and increase the capacity of state and national leaders to improve education through technology policy and practice.

Forum for:
- Advocacy for policy and practice
- Professional learning
- Inter-state collaboration
- Public-private partnerships
- State - federal relations

Tools and Resources

SETDA has a track record of advocating for digital learning:

- Broadband
    - Broadband Imperative II 2016
    - State K-12 Broadband Leadership 2016
    - E-rate Modernization Toolkit 2015
    - Broadband Imperative 2012
- Interoperability State Teams
- Instructional Materials
    - Navigating the Digital Shift 2017 & 2015
    - Guide to Quality Instructional Materials 2017
    - Digital Instructional Materials Acquisition Policies for States Online Portal

Shift in Learning Models

- Personalized, Deeper Learning Experiences
- Content Development
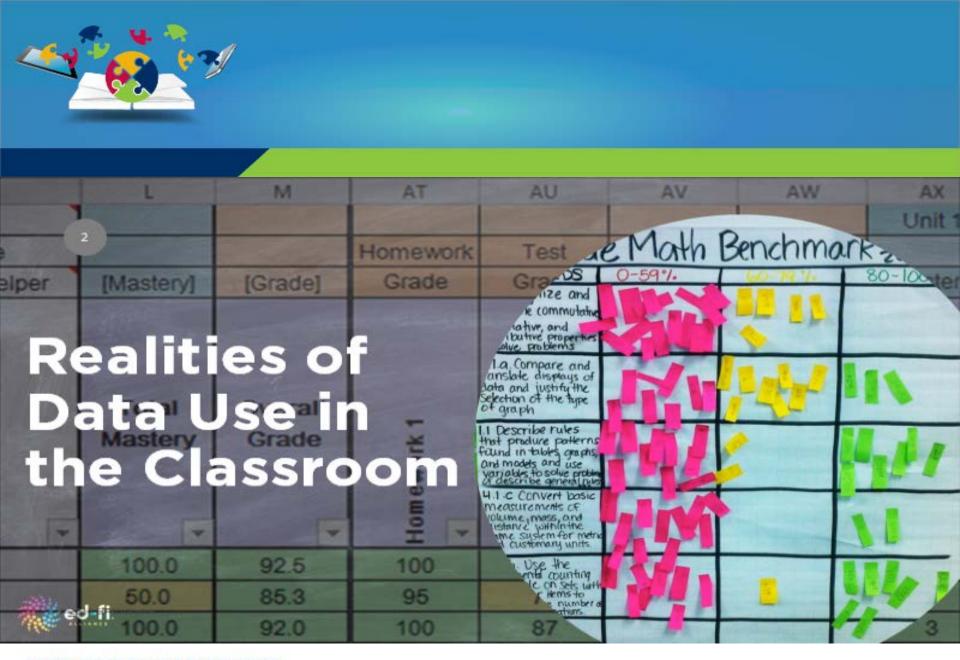- Hands-on Digital Learning Tools
- Online Collaboration
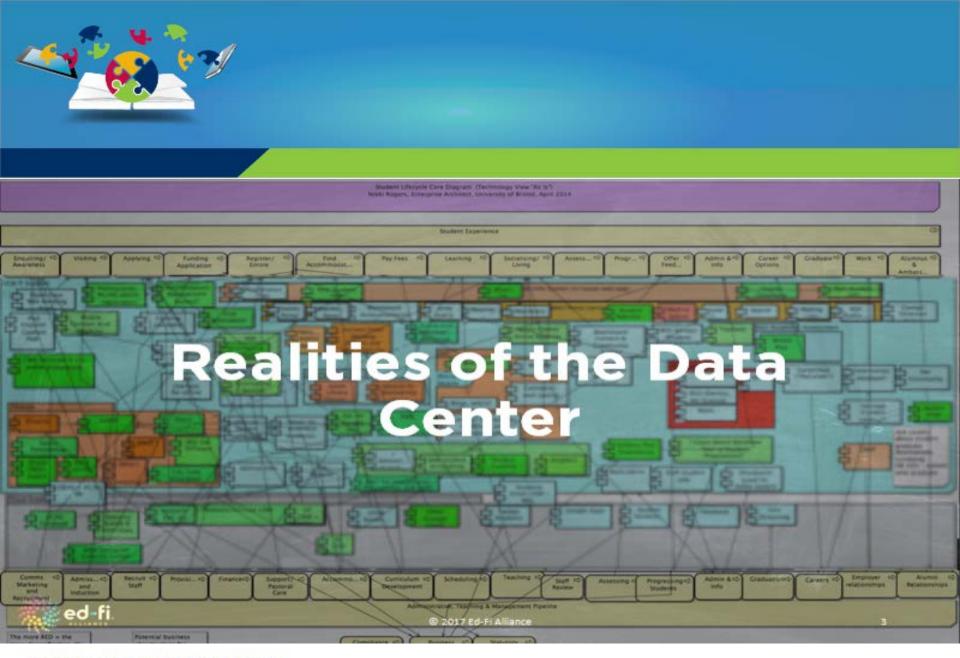
Data Interoperability National Perspective

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Realities of Data Use in the Classroom

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Realities of the Data Center

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Lets talk pain points . . .

1. Talk dirty. Data.
2. Manual data entry, many, many times.
3. What is the source of truth?
4. How long does it take for data to get where it needs to be?
5. Assessment platforms. Go.
6. Submission heroics for state/federal reporting.
7. Siloes. So many siloes.
8. The way we've always done it. For-ev-er!

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Enter Interoperability . . . .

barcod

Queue the angelic hymns . . .

1. Quality data in AND out.
2. Your data, your control of "data traffic"
3. We now have a source of the truth!
4. Data governance.
5. API. That means: real time or near real time data flow.
6. Shine a light on data by people close to it.
7. Value and use of your data goes UP! UP! UP!
8. Flexibility for reporting, best of breed tools, streamlining work, etc.

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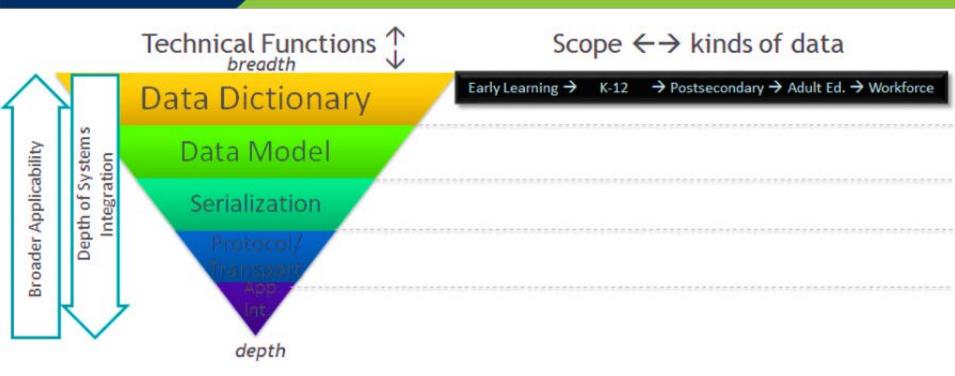FOR INTEROPERABILITY

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So, who's working on this?

- Common Education Data Standards (data standards/common language)
- The Ed-Fi Alliance (data standards/implementation tools)
- IMS Global (content/tools standards)
- Project Unicorn (interoperability pledge)
- Other professional groups and supporters (e.g. iNacol, Digital Promise, CoSN, SETDA, CCSSO)
- Philanthropic Organizations (e.g. MSDF, Gates Foundation, OverDeck, etc.)
- Visionary Vendors (e.g. SIS, assessment, analytics)

No single standard does it all

Technical Functions ↕ breadth

Scope ←→ kinds of data

Early Learning → K-12 → Postsecondary → Adult Ed. → Workforce

Broader Applicability

Depth of Systems Integration

Data Dictionary

Data Model

Serialization

Protocol/ Transport App. Int.

depth

Common Education Data Standards

ed·fi ALLIANCE

IMS GLOBAL Learning Consortium

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In Collaboration (not competition)

The Ed-Fi Perspective

Common Language

Ed-Fi surfaces all of your school's systems, tools, and software onto a single platform.

Know Everything

Ed-Fi finally delivers the comprehensive insights teachers need to deliver personalized learning.

Zero Fees

The Ed-Fi data standard is offered with no fees from Ed-Fi —making data integration affordable.

Secure & Protected

At every step, and at all moments, your data is safe and in your control.

Nonstop Improvement

An active community of educators and technologists advance Ed-Fi every day.

Teacher's Choice

Ed-Fi powers the finest technology on the market. Choose your favorite tools.

Who

State Teams
- Technology Leaders
- Academic Leaders
- State Partners

Private Sector Partners
- Instructional Content
- Assessment
- Applications
- Systems

Interoperability Leaders
- Ed-Fi Alliance
- IMS Global
- CEDS
- CCSSO

Delaware Georgia Michigan

Nebraska North Carolina Oregon

Utah Wisconsin Wyoming

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Leveraging Data
for Academic Excellence

- **WHAT?** – What is the best future state for teaching and learning if educators can leverage interoperable data?

- **WHY?** – Why is State Leadership for Interoperability important/necessary?

- **HOW?** – How will states get from their current level of interoperability to that best future state?

Background

- What is Interoperability?

- Common Data Standards

- Why Interoperability?

- What is the Best Future State?

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Interoperability in Action

Student Information Transfer

Data Collection and Reporting

Assessment Systems: Data Backpacks

Personalized Learning

College and Career Planning

Learning Object Repository

Quality Digital Content

Poll

Which is the greatest challenge when it comes to data interoperability for education applications?

A. Technology
B. Academics
C. Human Capacity
D. Policy
E. Budget/Procurement

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Interoperability Challenges

- ➢ Technology
- ➢ Academics
- ➢ Human Capacity
- ➢ Policy
- ➢ Budget/Procurement

State Snapshot: Georgia

Content Interoperability

What is it?

- A universal system for formatting content
  - Metadata
  - Packaging
  - Exchanging
- Defines relationships, option sets, and specifications
- Allows Application to show data

Why Use Interoperability?

- Allows for flexibility
- Enhances collaboration between providers and consumers
- Saves time when adding content to repository
- Provides a seamless integration between applications
- Improves user experience

Georgia

- SLDS-One Integrated Solution
  - Launched in 2010 – Before software available
  - Custom built in house based on district feedback and customized for Georgia
  - Has grown into more than a longitudinal data system
  - All Districts have access to SLDS system
  - Platform Agnostic/Connected to SIS's/Free/Voluntary
- Why did we build it inhouse?
  - Sustainability
  - Flexibility

SLDS and Interoperability

Longitudinal data	Real Time Data	Resources
Attendance	Student Schedules	Digital Content
Grades	Class Roster	Professional Learning
Enrollments/Withdrawals	Individual Education Plans	Learning Object Repository
Post Secondary	Individual Graduation Plans	
High School Feedback	Formative Assessments	
Demographics	Local District Assessments	
Instructional Improvement System	Counselor Companion	
Lexile	Career Pipeline	
Transcripts	Teacher/Leader Evaluation	
Summative Assessments	Comprehensive Needs Assessment	

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Interoperability

- GA LOR can accommodate any file type
- Clearly defined data reporting system for student demographics
- Current formats in use within SLDS

Packaging	Assessment	Metadata
SCORM	QTI	CEDS
IMSCC		Ed-Fi
		DCMI
		Case
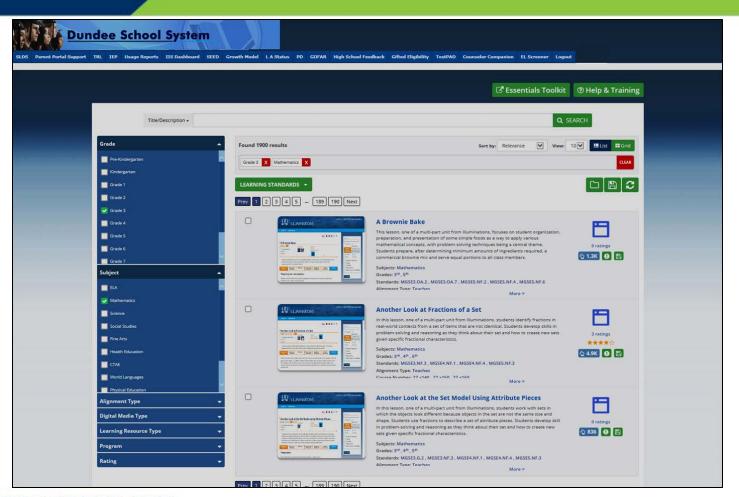
Teacher Resource Link

- Georgia's Repository for K-12 public educators, parents, and students.
- Established partners with several OER content creators
- Use GA educators to evaluate and align content
- TRL has a rating and comment section for each resource
- Report an issue feature is available next to each object in TRL
- Over 33,000 resources in TRL

Teacher Resource Link
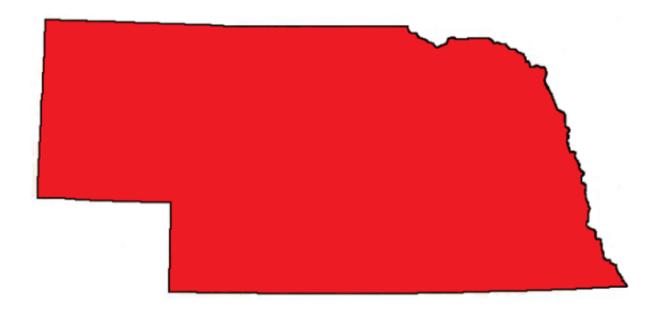
Georgia Open Content

- Georgia has shared content created by Georgia Virtual School
  - All content is provided through Teacher Resource Link
  - Currently published on the Learning Registry
  - Cross-states
  - [Shared Learning website](#)

State Snapshot: Nebraska

- 318,000 public students
- 30,008 educators
- 244 public districts
- 17 regional service units
- Different systems and approaches locally

Historically... Record Collection System
Accountability Focus only
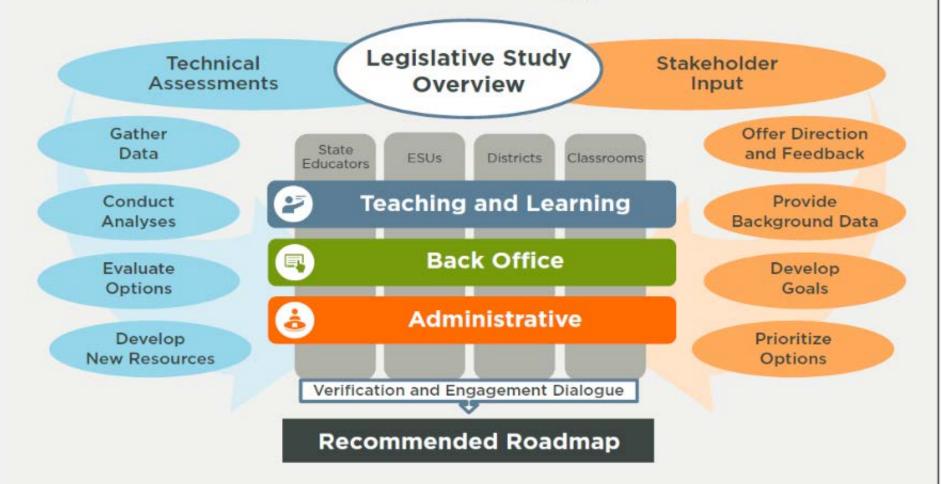
Figure 1: Assessment Methodology Framework

LR 264
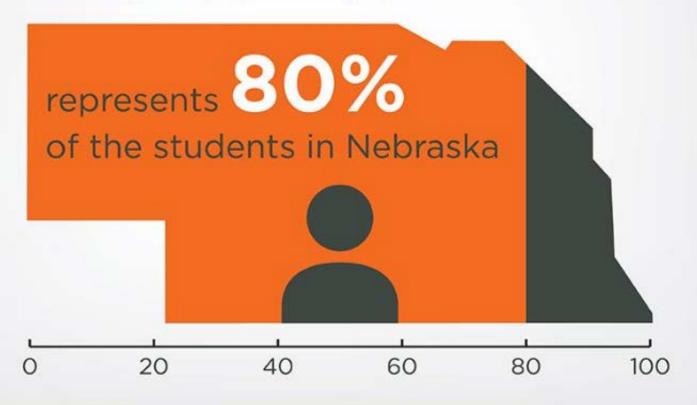
Teaching and Learning Systems
- Data Management
- Student Centric Assessment Tool
- Learning Management System – Teacher centric
- Professional Development
- Educator Evaluation
- Content Management
- Progress Monitoring/Response to Intervention System
- Credit Recovery
- Career Readiness

Administrative Systems
- Student Information System
- Test Analysis
- Transportation
- Nutrition Management
- IEP Management
- Guidance and Counseling
- Library Management

Back Office Systems
- Finance System
- Human Resource System
- Procurement
- Substitute Management

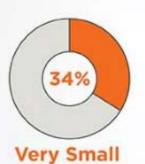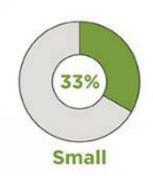Nebraska districts are **SPENDING** $100M on data and systems

$246/student on systems = $75M ON DIGITAL SYSTEMS
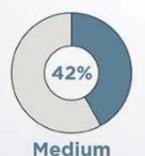
455 FTE's = $25M ON ACCOUNTABILITY SUBMISSIONS

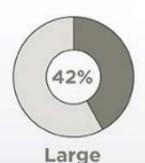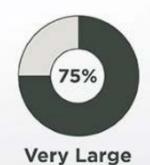Districts have **LESS ACCESS** to Teaching and Learning systems than they need

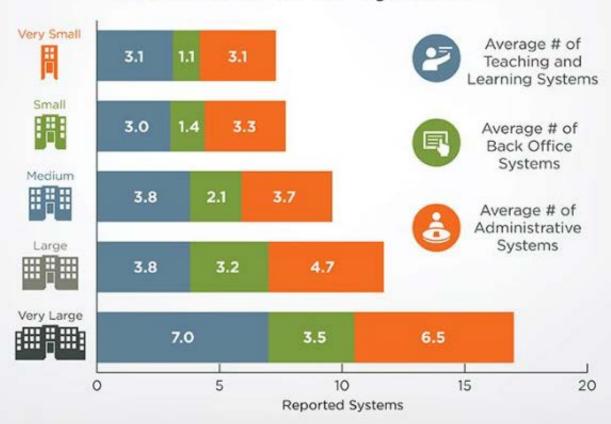**34%** — Very Small

33% — Small

Smaller districts have only about **⅓** of the systems for teaching and learning than they might need

42% — Medium
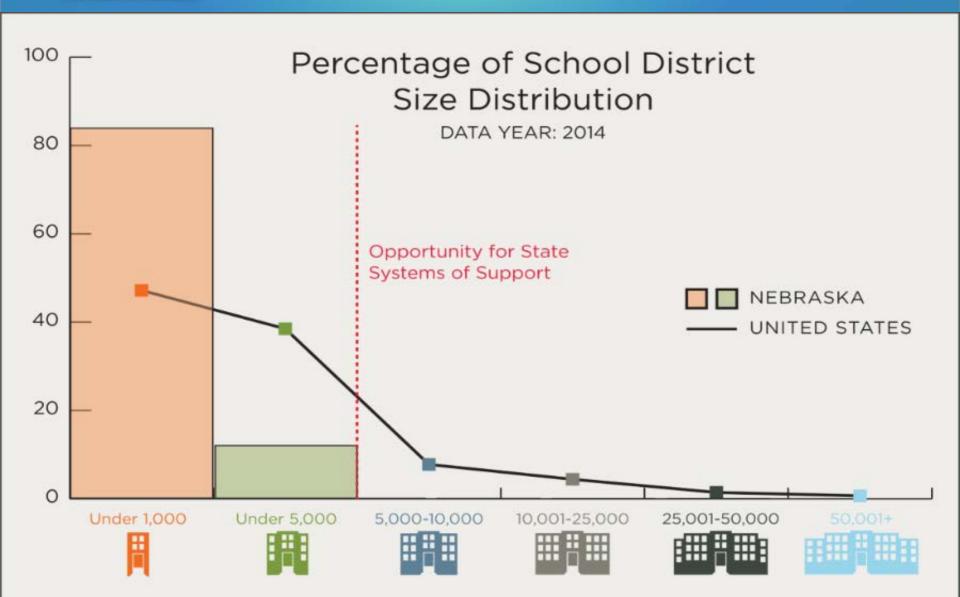
42% — Large

75% — Very Large

Opportunity

Percentage of School District Size Distribution
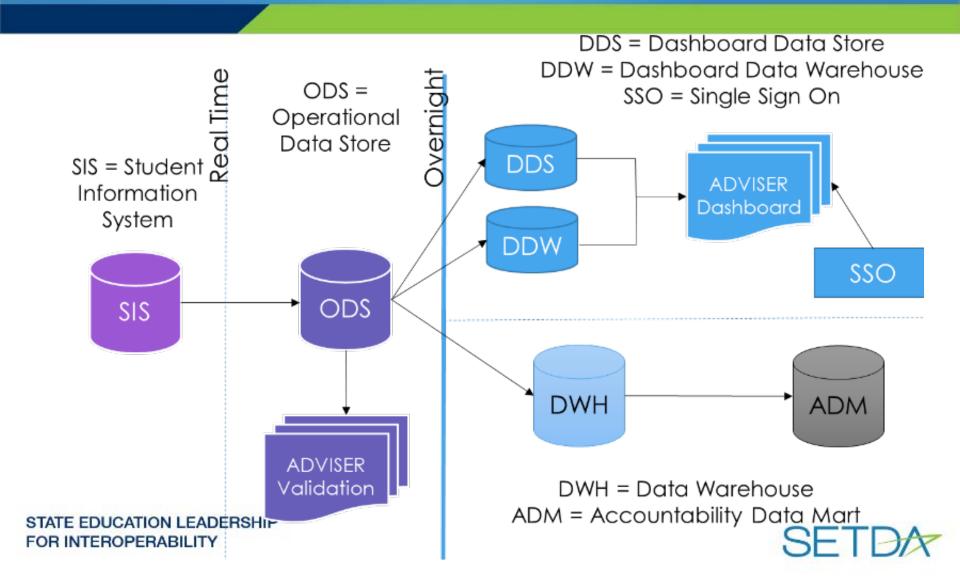
DATA YEAR: 2014

- Increase security and privacy controls
- Reduce Burdens
- Adopt and apply Standards (Ed-Fi, CEDS)
- Ensure Interoperability (Ed-Fi, IMS, LTI, QTI, etc.)
- Increase focus on using data to support Teaching and Learning
- Vendor Partners supporting the vision

Ultimately can we enable the foundation for creating a digital ecosystem in Nebraska...

High Level Architecture

DDS = Dashboard Data Store
DDW = Dashboard Data Warehouse
SSO = Single Sign On

ODS = Operational Data Store

SIS = Student Information System

Real Time

Overnight

DDS

DDW

ADVISER Dashboard

SSO

SIS

ODS

ADVISER Validation

DWH

ADM

DWH = Data Warehouse
ADM = Accountability Data Mart

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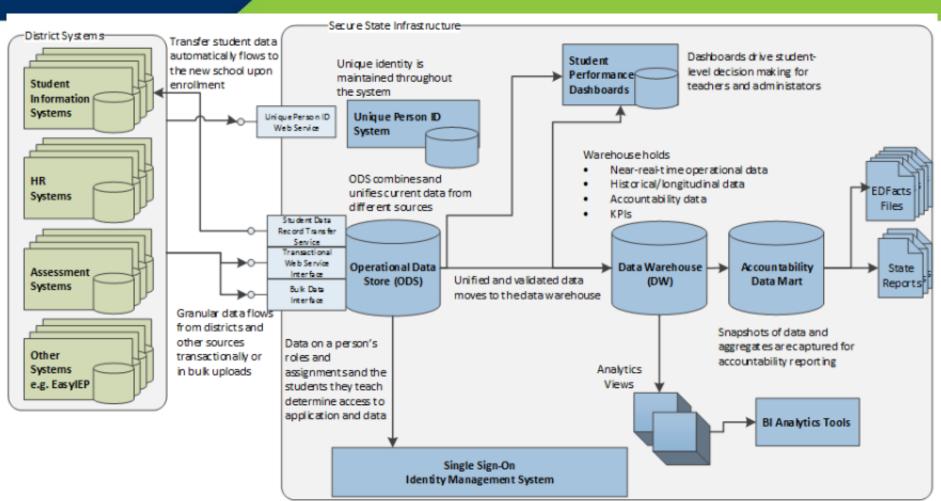
Deeper High Level Architecture

Interoperability must be more than efficient data reporting to the state department of education!

- What opportunities are there to achieve supports at scale?
- How can we collectively leverage the ecosystem for future "plug and play" integrations?
- Can we leverage different funding sources and priorities to move forward?
- How can we align state, regional, and local priorities and work?

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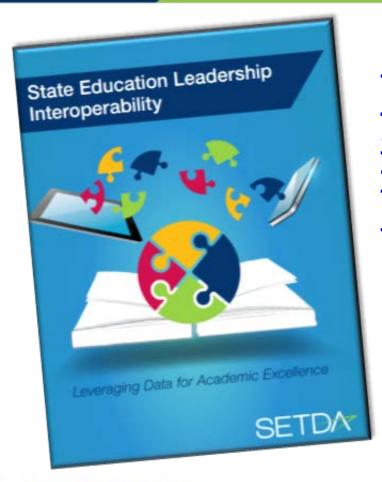
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Recommendations

- ➜ Leverage ESSA
- ➜ Share Best Practices
- ➜ Collaborate with Districts
- ➜ Develop Open Communication between States and Vendors
- ➜ Develop a Flexible Implementation Plan
- ➜ Establish Data Governance Structure
- ➜ Encourage Stakeholder Buy-in

SETD/A

Read more . . .

https://www.setda.org/master/wp-content/uploads/2018/05/State-Leadership-Interoperability.pdf

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Questions

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