

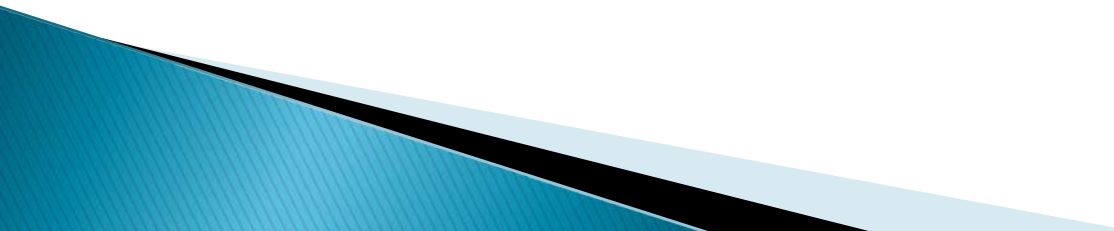
# Race to the Top 3: Illinois Shared Learning Environment

## Overview and LEA Expectations

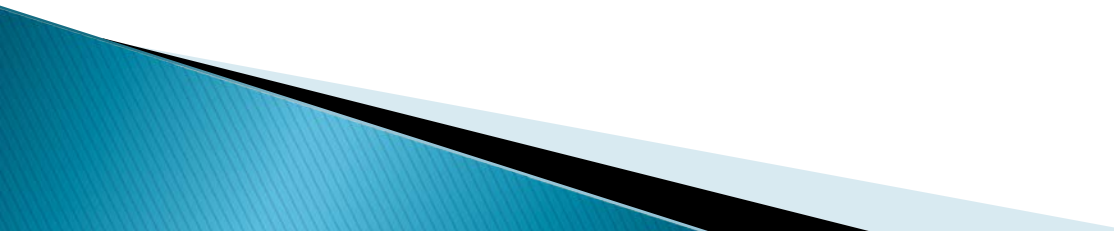
February 21, 2012



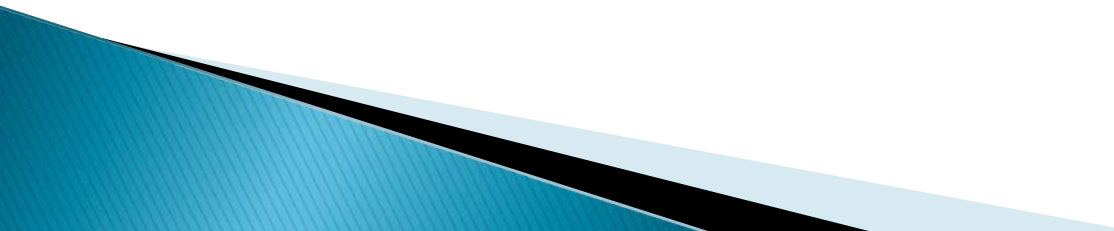
# Speakers

- ▶ **Brandon Williams** – Projects Administrator, ISBE
  - ▶ **Jonathan Furr** – Race to the Top Consultant
  - ▶ **Jim Peterson** – CTO, Bloomington D87 and IlliniCloud
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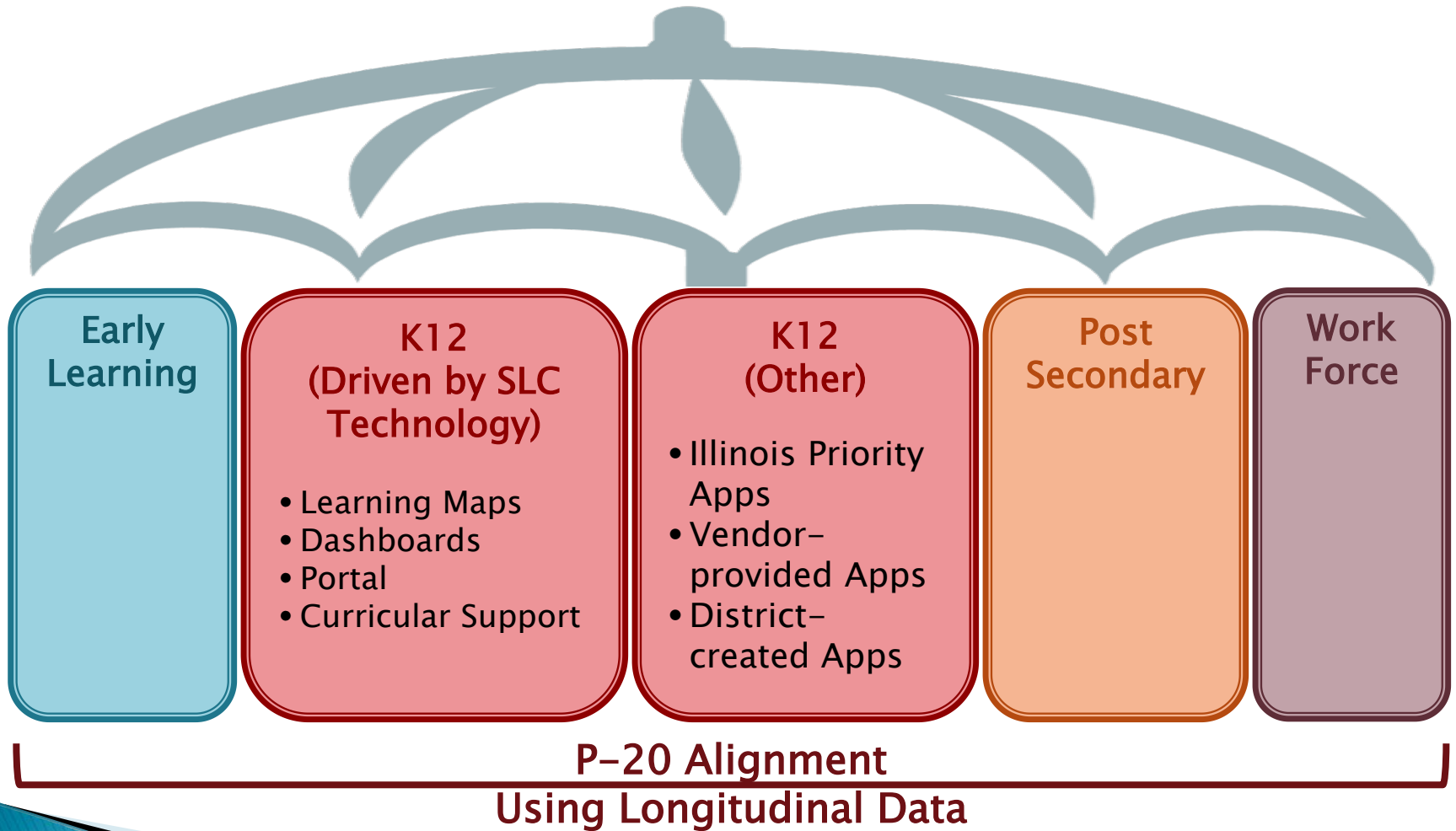
# Agenda

- ▶ Illinois Shared Learning Environment (ISLE)
  - ▶ Considerations & Expectations for Participating Districts
  - ▶ Pilot District Perspective
  - ▶ Q&A
- 

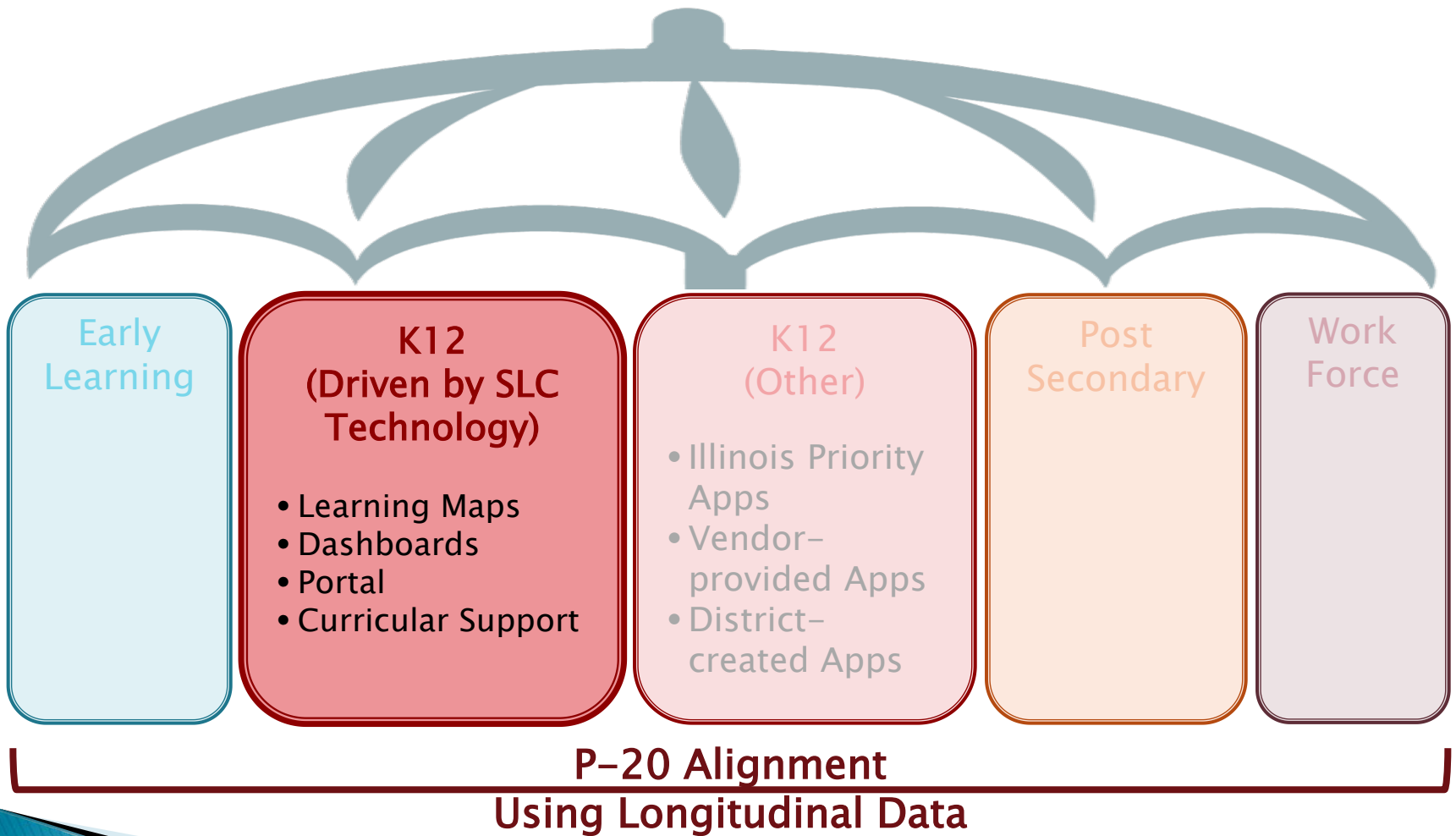
# Illinois Shared Learning Environment Overview



# Illinois Shared Learning Environment (ISLE) – What is it?



# ISLE Focus for RTTT3 Districts



# Shared Learning Collaborative

## Who is the SLC?

### Shared Learning Collaborative, LLC (SLC)

- Alliance of states, foundations, educators, content providers, developers and vendors
- Funded by Bill & Melinda Gates Foundation and Carnegie Corporation with support from CCSSO
- Temporary governing entity for project during design and development of the technology and long-term organizational model
- State representatives and other stakeholders will participate in technical advisory groups on a variety of issues (in development)

### Consortium of Pilot States

- Phase 1: Colorado, Illinois, Massachusetts, New York, North Carolina
- Phase 2: Delaware, Georgia, Kentucky, Louisiana

# Shared Learning Collaborative

## Common Core State Standards present new opportunities



Rather than having different standards in each state, 45+ will now use the same common standards

Economies of Scale: standards-aligned resources will grow exponentially

Will allow teachers to access more effective instructional content and assessments

Will support teachers in improving student achievement

But data aggregation and interoperability challenges must be addressed



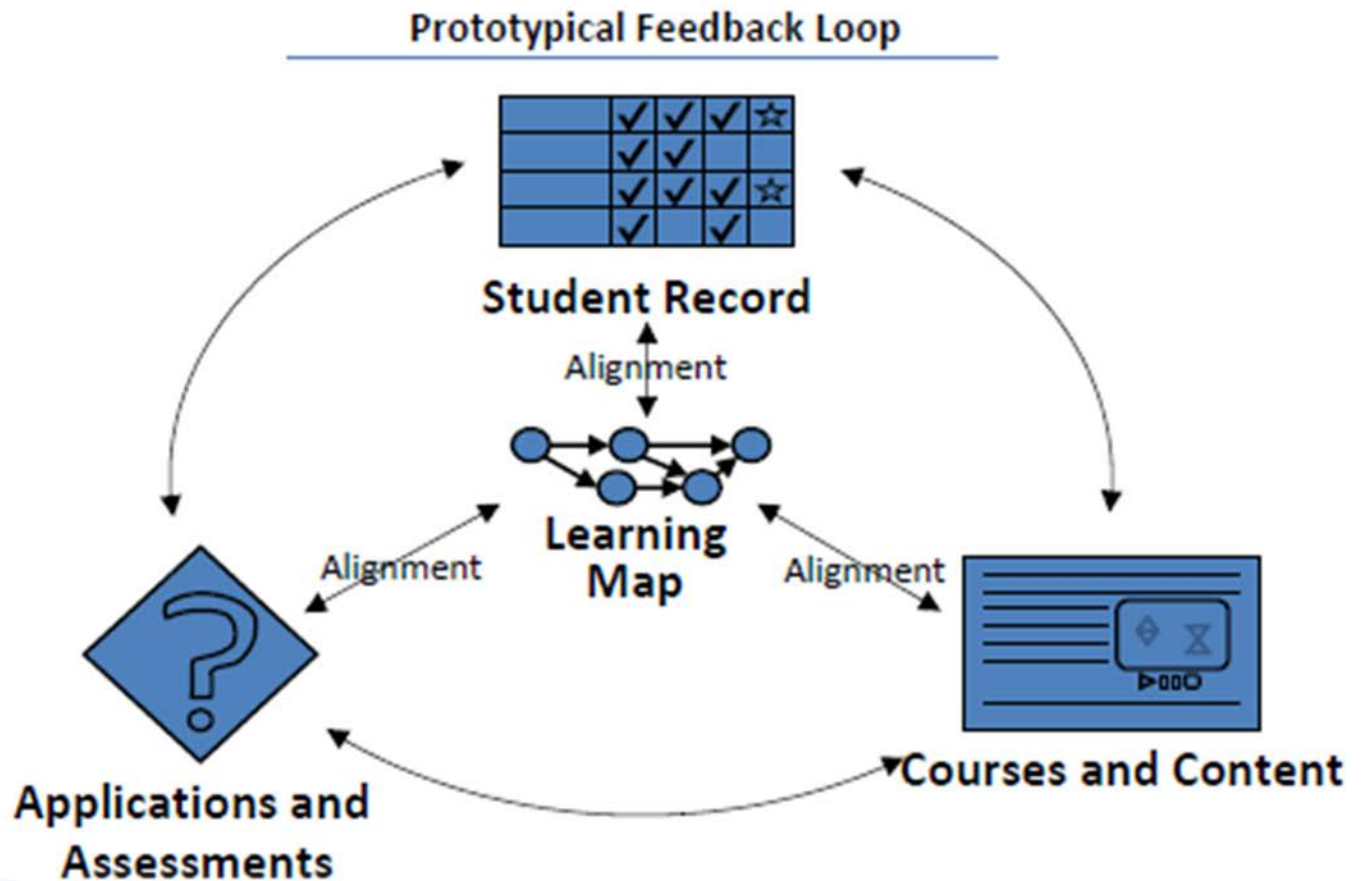
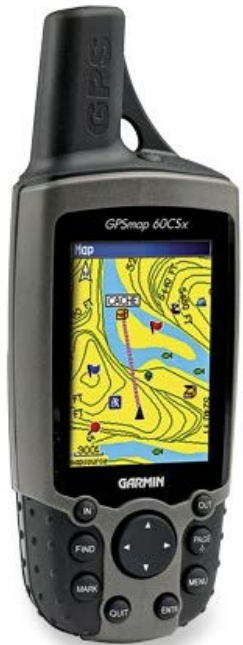
# Shared Learning Collaborative

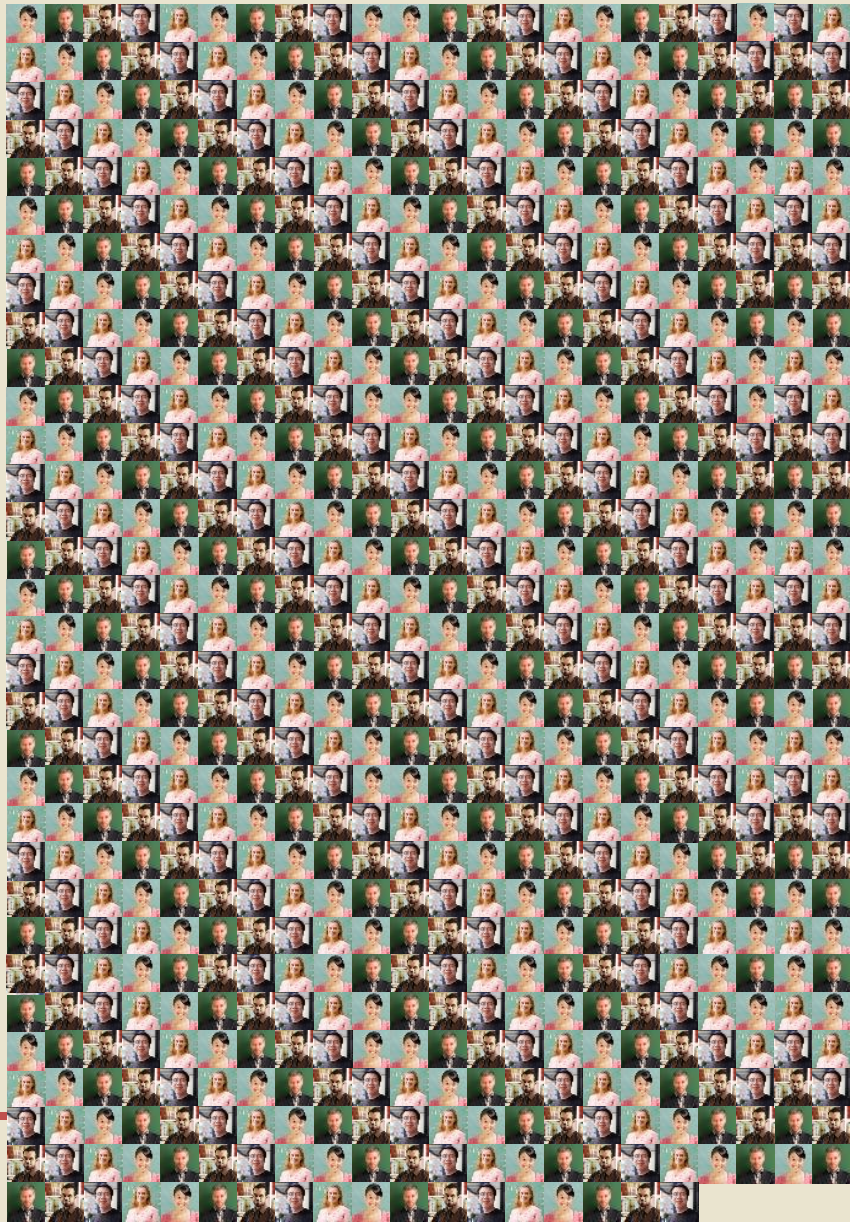
## What is the SLC Technology?

<i>What</i>	Set of data, reporting, and identity/access management services for participating states and their districts, vendors and partners
<i>Challenge</i>	Connecting disparate student data to the educational assessment and content tools to make it easier for teachers to create personalized instruction maps for each child mapping to the Common Core State Standards.
<i>Benefits</i>	<ul style="list-style-type: none"><li>• Help teachers provide richer, more engaging and personalized learning experiences</li><li>• Create new innovation opportunities for a larger and more diverse field of vendors and content creators</li><li>• States will maintain their ability to tailor the program to their existing systems, preferences and requirements</li></ul>

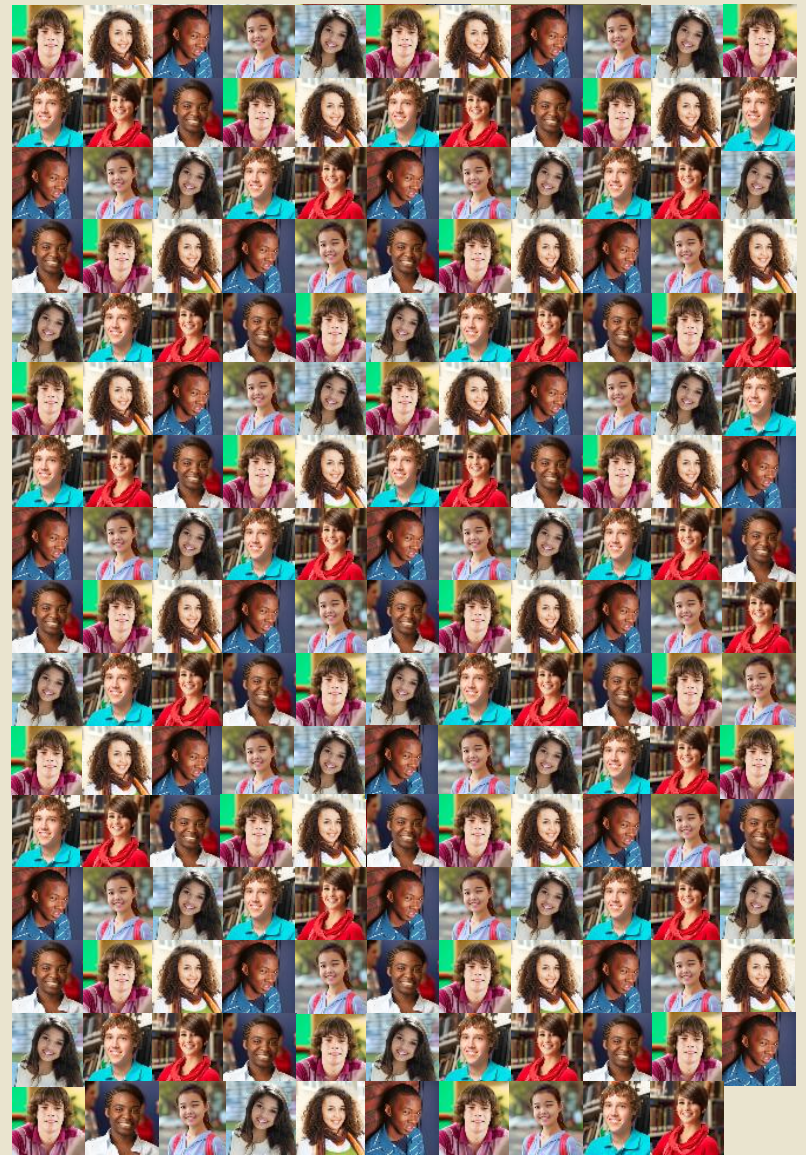
# Shared Learning Collaborative

Greater personalization requires improved interoperability between data, content, assessments and applications





700 Teachers



175 Students

Ms. Harrison



SLC technology

Vendor Data  
Source Systems

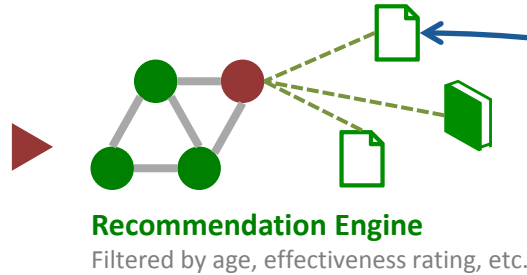
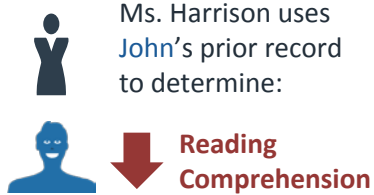
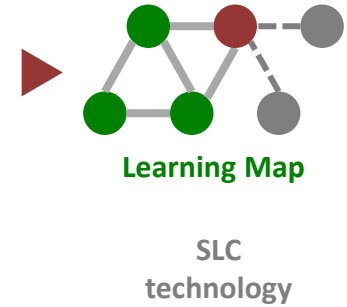
**Student Data**

**Dashboard**

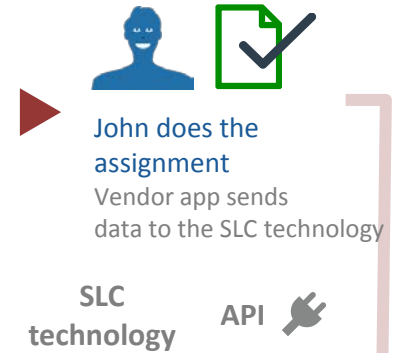
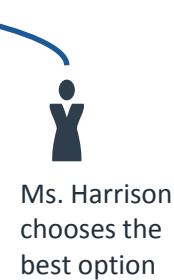
John

English  
Social Studies  
Math

Viewing all classes



SLC technology From multiple sources, such as the LRMI and Data Store



SLC technology API

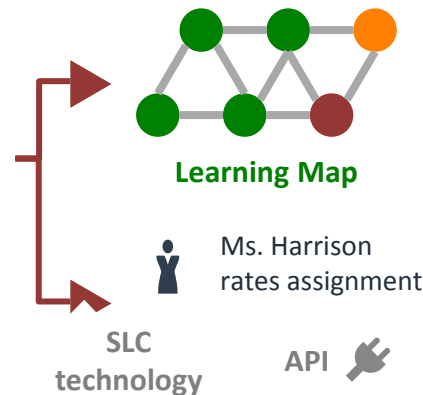
**Dashboard**

John

English  
Social Studies  
Math

Viewing all classes

SLC technology





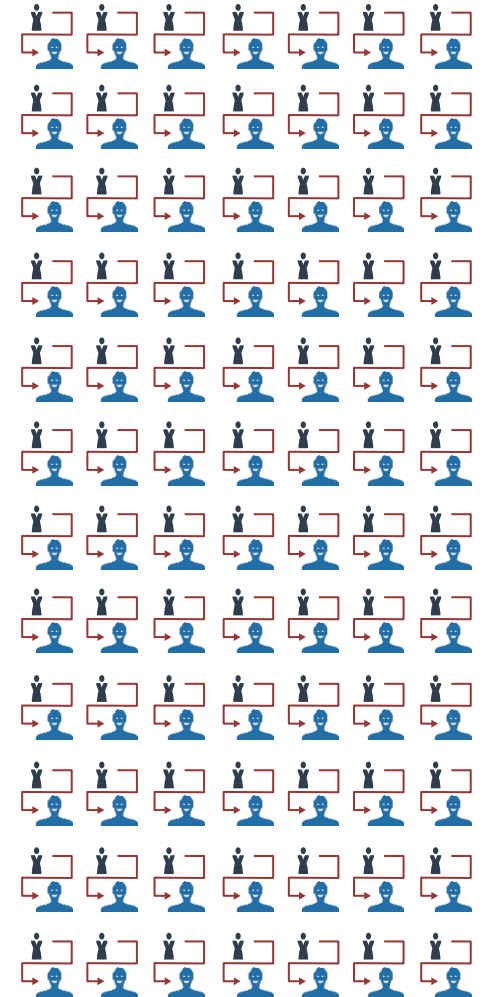
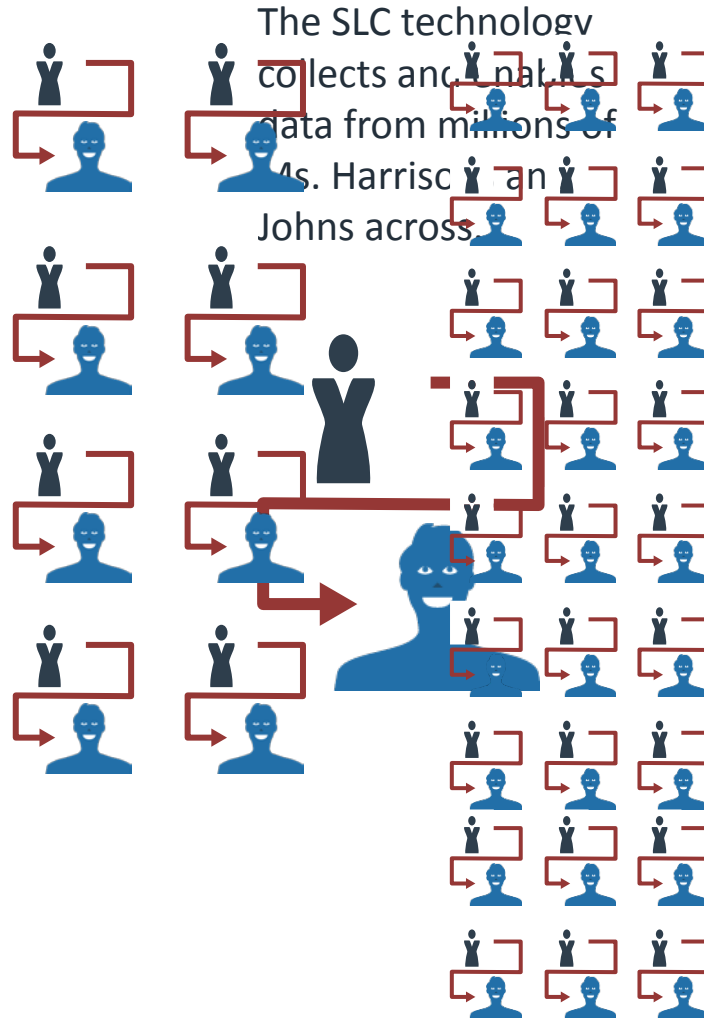
...districts...



...states...



...an most importantly,  
**multi-state.**





What the SLC technology will enable



What the SLC technology will include



LRMI metadata schema

Application Programming Interface (API)

Secure multi-tenant data store

Source systems data  
*(classroom, schools, districts, state)*

Vendor Data

# SLC Dashboard

- ▶ Presents data about students individually and by class, school, etc.
- ▶ District administrators can create lists and profile views with targeted data (special ed, assessment results, credits, etc.), and choose from data visualization options (scaled numeric value, or graphs)
- ▶ Much of the look and feel will be customizable

The screenshot displays the 'STUDENT SNAPSHOT' for Tyson Jones, a Grade 9 student in Mrs. Reynolds' Homeroom. The dashboard is organized into several sections:

- Navigation:** Includes 'Hello, Allison Reynolds | Help | Log out', 'Switch Dashboard Level...', 'Select a Student...', and a 'PRINT' button.
- Profile:** Features a photo of Tyson Jones and his name 'Tyson Jones'.
- Academic Dashboard:** Contains a 'Tyson Jones Profile' section with a red flag icon. The text states: 'Tyson is currently at grade level and has performed well; however, recent scores show that he is falling behind in math:' followed by a bulleted list:
  - TAKS scores declining to near fail for the last three years
  - Received D in 8th grade pre-Algebra
  - Failing first six-weeks benchmarks in Algebra I
  - Missed 6 Algebra class periods in the last six weeksA note below reads: 'Students who exhibit this profile may benefit from early intervention.' A link 'View full profile and suggested interventions' is provided.
- Summary:** A section with tabs for 'SUMMARY', 'STATUS', and 'PEER COMPARISON'. It includes:
  - Student Engagement:** 'Student is actively and productively engaged' with a green 'ABOVE GOAL' status and a 'Top 1/4' peer comparison.
  - Academic Progress:** 'Student is making appropriate progress' with three sub-sections:
    - Assessments:** 'Student performance on state and benchmark assessments' with a green 'ON TRACK' status and 'Second 1/4' peer comparison.
    - Course Grades:** 'Course grades and credit accumulation' with a green 'ON TRACK' status and 'Second 1/4' peer comparison.
    - Growth:** 'Student progression' with a green 'ON TRACK' status and 'Second 1/4' peer comparison.

# SLC Portal

The screenshot shows the myIIRC portal interface. At the top, there is a yellow navigation bar with the myIIRC logo and the text "Your customized portal for the Illinois Interactive Report Card". A "Log Out" button is in the top right. Below the navigation bar is a menu with items: MyIIRC Home, Data Services, Student Data, E-Plans, Public Report Card, Resources and Research, and Contact Us. The main content area is titled "John Doe's Data Dashboard Little John Elementary, Some District." and is divided into several sections:

- Welcome John Doe!**: School Principal, Little John Elementary Some District.
- Latest News**: A list of news items with links, including "The New Design for IIRC 2011", "District Technology Plan now available on MyIIRC.", "Coming Soon - Report Card 2011 release!", "2011 Student-level PSAF Results Available", and "2011 Student-level IAA Results".
- DSI Data Services**: "Upload your Assessment files securely to our data warehouse. Click Here." with an icon of data disks.
- Student Data**: "Assessment Results", "Student Reports", "School Rosters", "Reports and Charts", "View Classes". "Click Here." with an icon of three people.
- E-Plans**: "Improvement plans for your school or district. Click Here." with an icon of a folder and laptop.
- Public Report Card**: "Performance trends over time on state assessments for your school or district by grade, subject, student subgroups. Click Here." with a bar chart icon.
- Resources and Research**: "Resources with access to Common Core Standards, Item Analysis Summaries, Rtl, PLC's, and ISLE, to help aid teaching & learning. Click Here." with a notepad icon.
- SLC**: "Dashboard Integration and Customization." with two buttons labeled "App #1" and "App #2" and a circular icon.

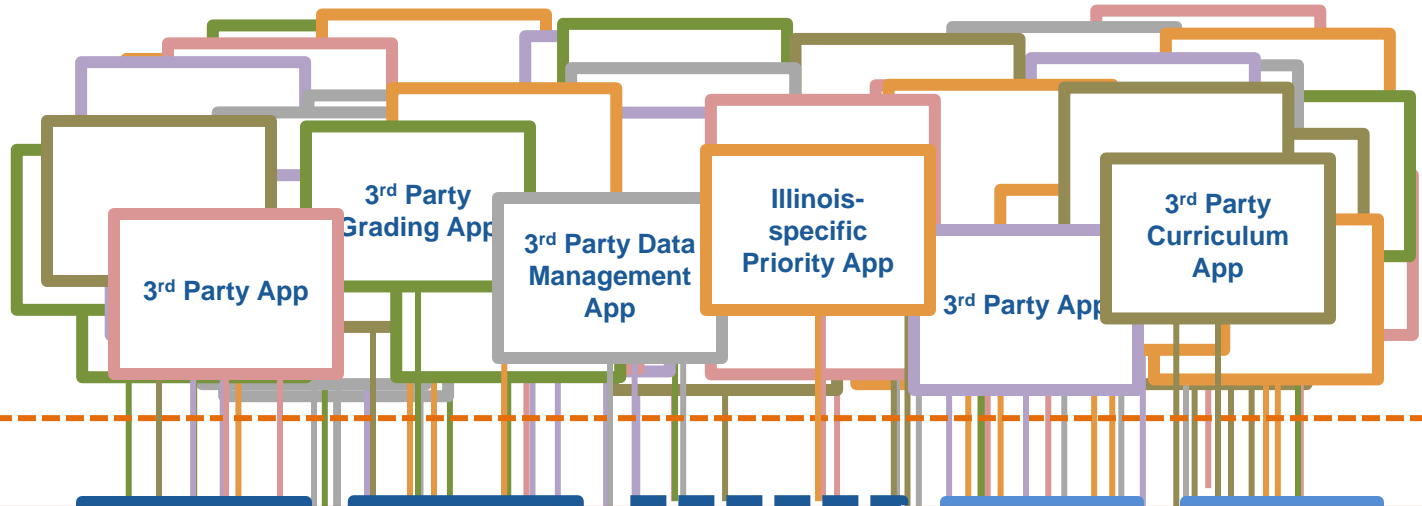
At the bottom, there is a footer with copyright information: "© 2012 Illinois Interactive Report Card, Northern Illinois University, with support from the Illinois State Board of Education." and the Illinois State Board of Education logo.

SEA or LEA admins can include web apps on the portal page

Admins may customize design elements in the portal



What the SLC technology will enable



What the SLC  
te  
in

### Third Party Apps / SLC API

- Application Programming Interface (API) strictly controls access by third-party applications to data within ISLE
- Broad effort to engage vendor community to make offerings “SLC-compatible”
- **“Metadata”** strategies to connect to universe of content and resources, based on needs of individual students or groups of students as identified through learning maps

### Illinois-specific Priority Apps

- Collaboration tools
- IIRC/myIIRC
- Career planning & development
- Principal and teacher evaluation web-based supports
- Learning content repository
- STEM applications
- Assessment item bank
- Learning management system

# Metadata: “Data about data”

## Metadata schema

*Aspiration:* Faster discovery of relevant, Common Core-aligned resources



## Data

It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light...

## Metadata

Title: A Tale of Two Cities  
Author: Charles Dickens  
Publication Date: 1859  
Pages: 400

# Potato Salad Demo

## Metadata schema

*Aspiration:* Faster discovery of relevant, Common Core-aligned resources

The screenshot shows a Google search for "potato salad" on a Windows browser. The search results include several ads and organic results. A magnifying glass is positioned over the first organic result from Food Network, highlighting the recipe details.

**Search Results:**

- Traditional Potato Salads** (Ad) - www.idahopotato.com
- Potato Salad** (Ad) - www.hiddenvalley.com/VeggieMonthly
- Potato Salad** (Ad) - www.kraftrecipes.com
- Easy Potato Salad** (Ad) - www.pillsbury.com/Salads
- Easy Potato Salad Recipe** (Ad) - www.ask.com
- Organic Results:**
  - Potato Salad** (www.foodnetwork.com) - 259 reviews - 30 min. Ingredients: potatoes, mayonnaise, milk, mustard, dill, pepper, celery, onion.
  - Potato Salad** (www.foodnetwork.com) - 146 reviews - 40 min.

**Recipe Details (Magnified):**

**Ingredients**

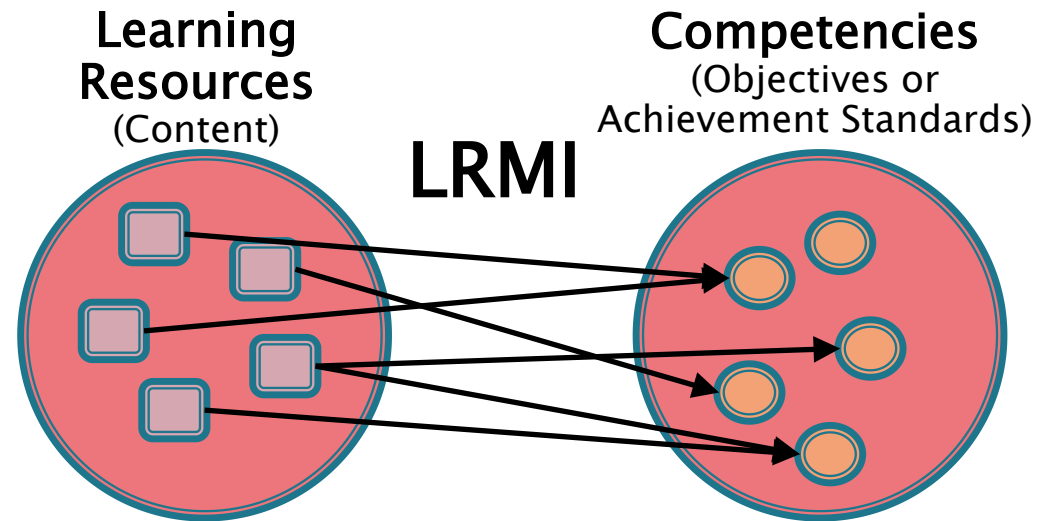
Ingredients	Yes	No
mayonnaise	<input type="checkbox"/>	<input type="checkbox"/>
mustard	<input type="checkbox"/>	<input type="checkbox"/>
celery	<input type="checkbox"/>	<input type="checkbox"/>
dill	<input type="checkbox"/>	<input type="checkbox"/>
horseradish	<input type="checkbox"/>	<input type="checkbox"/>

# Aligning Content to Competencies

## Metadata schema

*Aspiration:* Faster discovery of relevant, Common Core-aligned resources

Learning Resource Metadata Initiative (LRMI) addresses those metadata **properties** that distinguish content **deliberately** used for **learning**.



# ISLE with SLC Technology

## Value for Key Stakeholders

### *Students*

- Easier identification of instructional content that adapts to their learning needs
- Better understanding of their own academic progress and needs
- More personalized support from teachers

### *Teachers*

- Clearer understanding of progress and needs of individual students, classes and cohorts
- Access to instructional content that is relevant, aligned to the Common Core and easier to discover
- Presentation of information in ways that are useful and actionable


### *Education leadership*

- Better visibility of programs and content that work
- More efficient use of resources
- Collaboration across LEAs and SEAs to aggregate demand and meet common needs (apps, content, services)

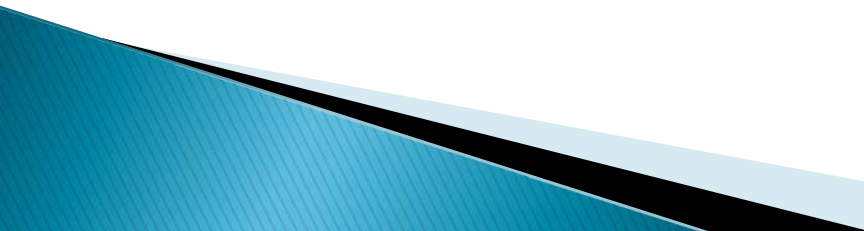
### *Education tech and content providers*

- Consolidated demand with common requirements across a greater number of customers
- Decreased integration costs
- More robust marketplace that lowers barriers for application developers and publishers of all sizes

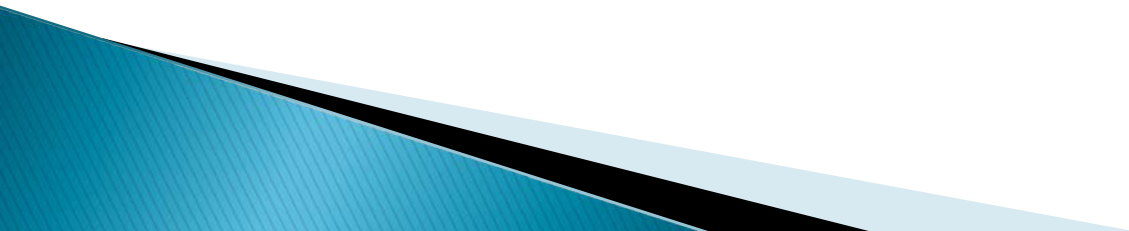
# Illinois Shared Learning Environment (ISLE) – Who is it?

- ▶ State Agencies: ISBE, DCEO, ICCB, IBHE
  - ▶ IlliniCloud
  - ▶ Representatives of small rural school districts, mid-size districts, and Chicago Public Schools
  - ▶ Regional offices of education/LTCs
  - ▶ National Center for Supercomputing Applications (NCSA); Illinois Interactive Report Card (IIRC); Illinois workNet
  - ▶ P-20 Council
  - ▶ Early Learning Council
  - ▶ Representatives of workforce development interests
- 

# What are the objectives for the ISLE consortium?

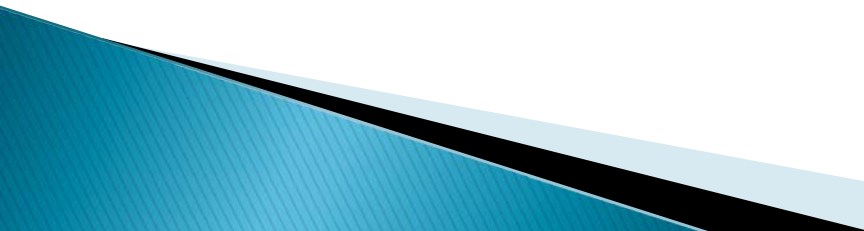
- ▶ Oversee the development of ISLE and deployment of SLC technology in Illinois
  - ▶ Coordinate the project management structure needed for implementation, building off of existing assets like IlliniCloud, NCSA, IIRC, and Illinois workNet
  - ▶ Support the “on-boarding” of Illinois users onto ISLE
  - ▶ Transition to a long-term business and governance model in 2015
- 

# Considerations and Expectations for RTTT3 Participating Districts





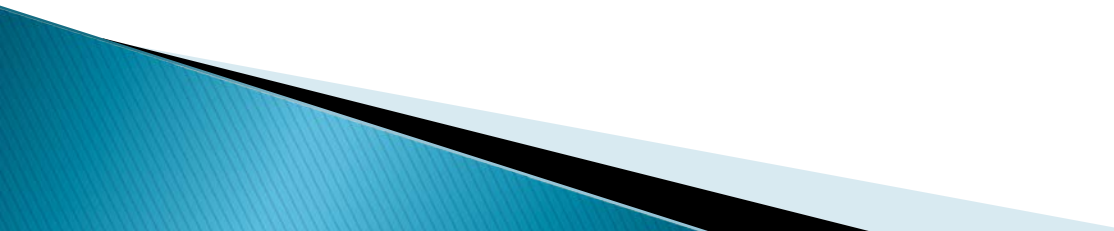
# RTTT3 Participating LEA Requirements

- ▶ Must leverage and utilize ISLE, participating in the post-pilot phase of implementation
    - Use of freely available ISLE resources only, focused on Standards Implementation and Educator Quality & Effectiveness RTTT3 strategy areas
  - ▶ Link student data across local systems to create integrated learner profiles
  - ▶ Embed ISLE learning maps as a central part of instructional practices
- 

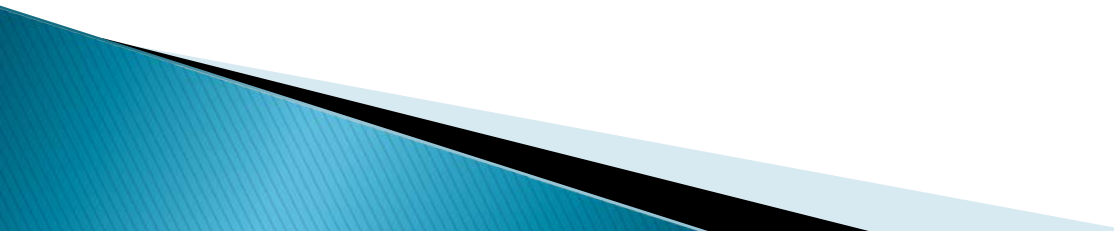
# What level of ISLE use meets RTTT3 expectations?

- ▶ Expectation is a meaningful use of instructional applications, dashboards and supports that are freely available on ISLE, but extent will differ for each district
- ▶ Will require Participating LEAs to:
  - Map local data to SLI CEM
  - Implement a data integration strategy
  - Integrate LEA directory/identity system
  - Participate in PD and training needed for effective use

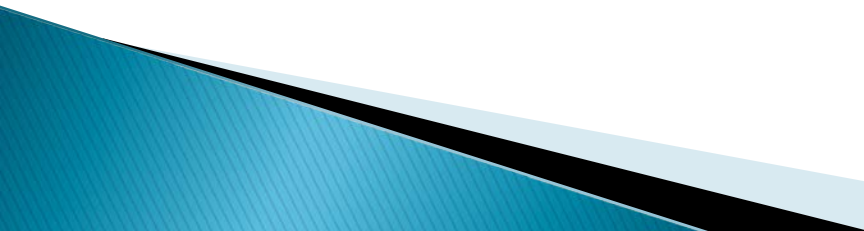
# What supports will exist for local ISLE implementation?

- ▶ IlliniCloud/ISLE Consortium to support K–12 data integration activities
  - ▶ Support from SLC multi–state resources
  - ▶ Lessons from pilot will support broader implementation
- 

# How is ISLE funded at the multi-state and state level?

- ▶ Leverage the \$100 million multi-state investment in the SLC
  - ▶ \$12 million state capital commitment
  - ▶ RTTT3 funds allocated to professional development supports
  - ▶ Re-allocate other state and federal funding streams
- 

# ISLE Costs at the District Level

- ▶ General cost categories:
    1. Data preparation/integration
    2. Application purchases
    3. Professional development for end-users
    4. Technology upgrades to support ISLE local implementation (broadband, laptops, tablet computers, etc.)
  
  - ▶ The Participating LEA's share of RTTT3 funds can be used for any of these costs
- 

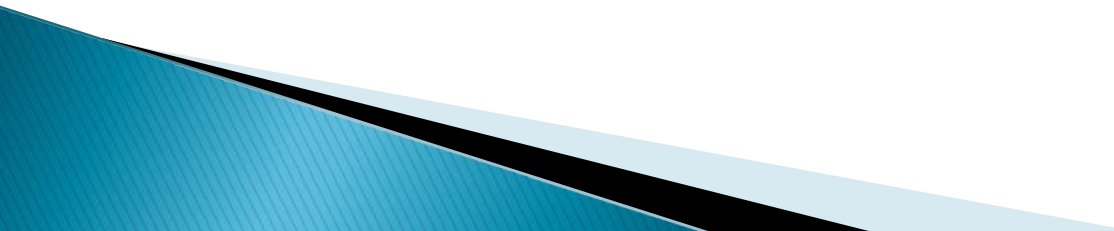
# ISLE Costs at the District Level

- ▶ No annual fee to store data in ISLE and access its application environment
- ▶ The State capital commitment will be used to support data preparation/integration, but there will be local costs
- ▶ Use of freely available ISLE applications will meet all RTTT3 expectations. Districts may elect, at their discretion, to purchase other applications and services available through ISLE addressing local needs.
- ▶ The State, through the Center for School Improvement and LTCs, will support PD on ISLE. However, districts may determine additional PD is needed to support effective local implementation.

# Data “ownership” and privacy protection

- ▶ SLC & ISLE recognize LEAs as the ultimate arbiter of who is able to view the LEA’s data
- ▶ Built to facilitate district control over data: LEAs may permit applications or ISBE to access data for specific purposes
- ▶ “Super Administrator” within the district controls permissions to use data
  - Can delegate a subset of the administrative privileges
  - Default principal and teacher roles within ISLE
  - Super Administrator can create custom roles via the administrative interface
- ▶ School districts may opt out of ISLE. Student data can be exported to LEA, and will be deleted from the data store.

# Data Security

- ▶ ISLE data store will segregate each LEA's data from that of other LEAs
  - ▶ Will only accept API calls from approved applications that have been approved by the LEA
  - ▶ Will utilize extensive industry-leading information security mechanisms
- 



# ISLE Time Frame

- ▶ Pilot of SLC Technology in Bloomington (D87) and McLean County (U5)
  - Alpha Release – June 2012
  - Version 1 Release – December 2012
- ▶ ISLE/SLC Expansion to RTTT3 Districts:
  - 2012: Outreach, requirements gathering, IT systems analysis
  - 2013: Data/technical integration
  - 2014: Initial ISLE launch in early 2014, full implementation in 14–15 SY
- ▶ Statewide Implementation: 14–15 SY and beyond

# Data and Identity Integration

- ▶ SLC Core Entity Model
  - ▶ Data Ingestion
  - ▶ Identity integration
- 

# SLC Core Entity Model

- ▶ SLC Core Entity Model (CEM) includes various Domain, Association, and Descriptor types
  - Will use the Ed-Fi specification of the Common Education Data Standards (CEDS)
  - SLC CEM is fully described on the SLC website, under “Technical Specifications” :  
[www.slcedu.org/technology/technical-specifications](http://www.slcedu.org/technology/technical-specifications)
- ▶ ISLE data store can also store “custom data” developed by an LEA/SEA not defined by the SLC CEM

# SLC Core Entity Model (cont'd)

- ▶ Some data maintained by ISBE can be provided to ISLE data store: student identification and demographics, enrollment
  - ISBE to minimize redundant reporting through SIS and to ISLE data store
- ▶ Much of data needed to impact instruction maintained locally: Gradebook Entry, Bell Schedule, Student Academic Record, Student Attendance
- ✓ *Participating LEAs must map local data to the SLC CEM*

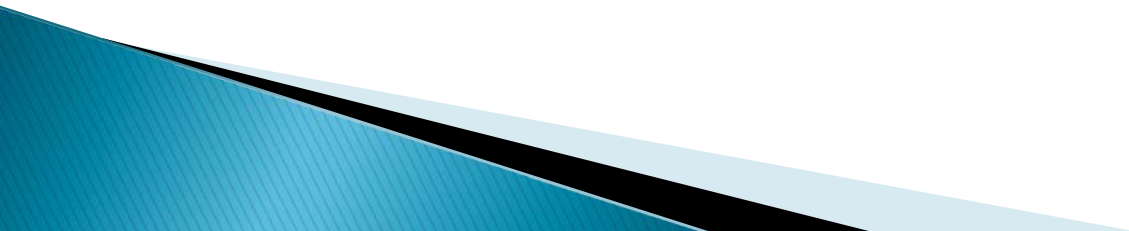
# Data Ingestion

- ▶ ISLE will support various data ingestion approaches
  - Batch uploads, web-based submissions, SIF
  - Data ingestion specification available on SLC website
- ▶ The ISLE consortium, working closely with IlliniCloud, will develop processes and tools to support local integration with the SLI/ISLE data store
- ▶ SLC technologies will include data validation functions and provide error reports
- ✓ *Participating LEAs will need to identify and execute an integration strategy*


# Identity System Integration

- ▶ Identity integration enables ISLE to reliably identify a user, and to establish what actions the user is permitted to take
- ▶ Also facilitates Single Sign-On: sharing of identity information among applications
- ▶ Each Participating LEA must have a directory that stores all user identities that will access ISLE
  - ISLE will include a “State default” for LEAs that do not have an existing directory system
- ✓ *Participating LEAs must integrate local directory/identity system with ISLE*

# Pilot District Perspective

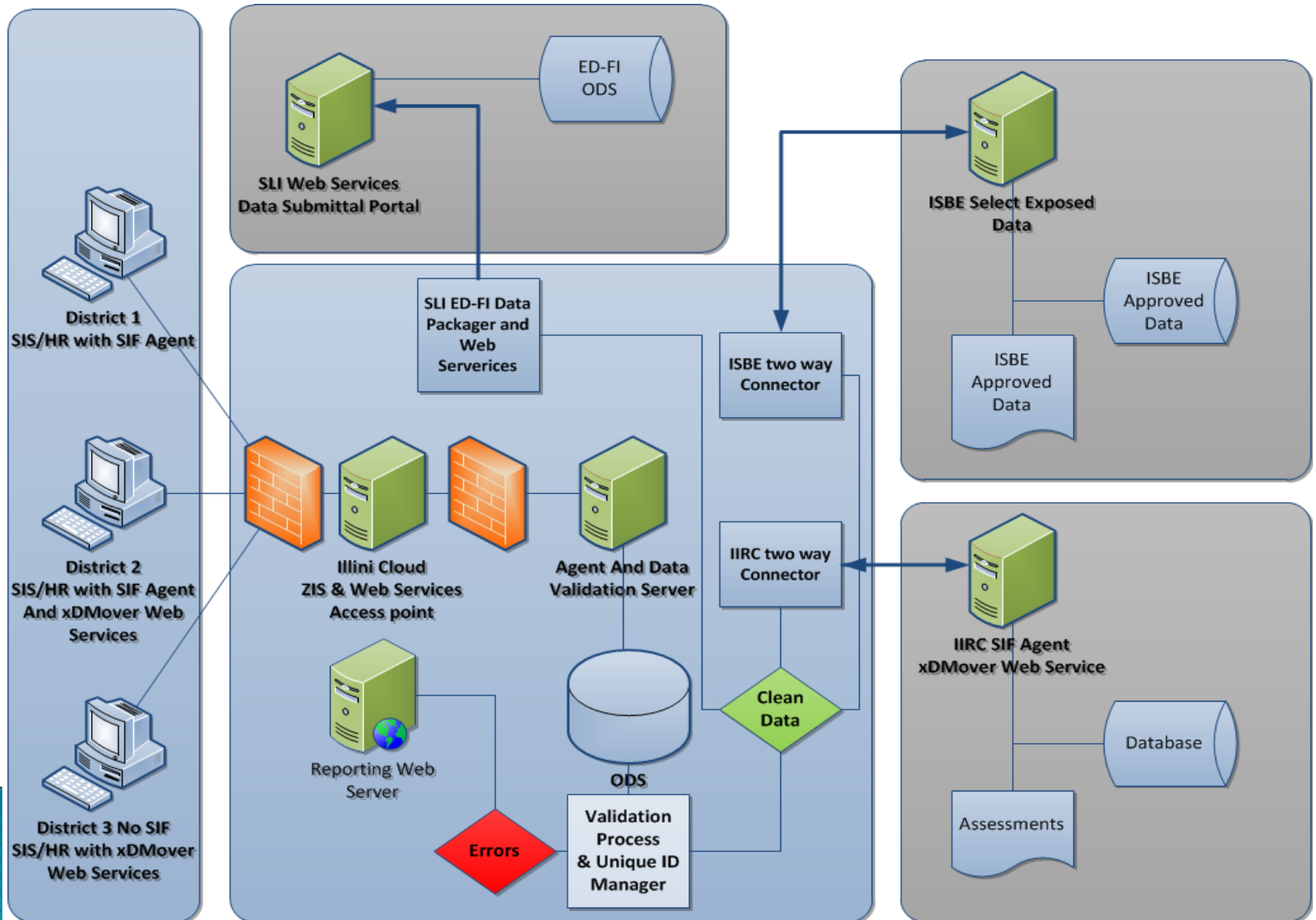


# Bloomington District 87

- Pilot Districts Perspective
    - Extending data-driven efforts in the districts with SLI
  - IlliniCloud Cooperative Perspective
    - Realizing mission – vendor neutral / standards based solutions to help reduce burden for K12
    - Providing the needed integration for SLI
    - Providing a cost-effective / sustainable solution for districts looking to on-ramp
    - Partnering in the governance, development, and operations of ISLE to make K12 projects successful
- 



# Data Ingestion Architecture



# Where I can find more information?

**Shared Learning Collaborative**

[www.slcedu.org](http://www.slcedu.org)

**IlliniCloud**

[www.illinicloud.org](http://www.illinicloud.org)

**ISBE RTTT3 Information**

[http://www.isbe.net/racetothetop/PDF/phase3\\_appendices.pdf](http://www.isbe.net/racetothetop/PDF/phase3_appendices.pdf)

**Brandon Williams – ISBE Project Administrator**

[bwilliam@isbe.net](mailto:bwilliam@isbe.net)

Q & A