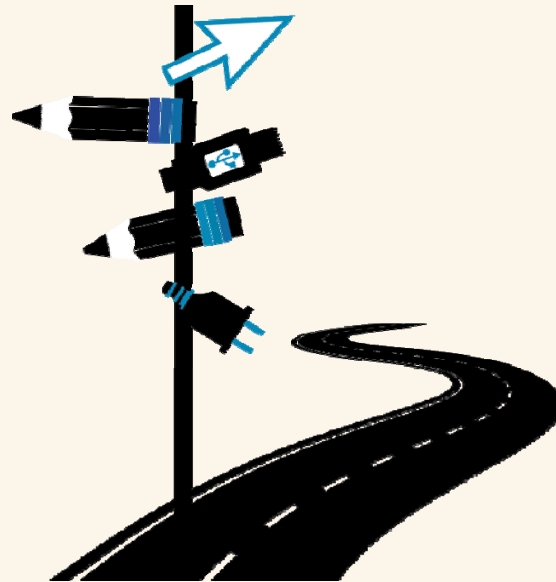


# ALWAYS LEARNING



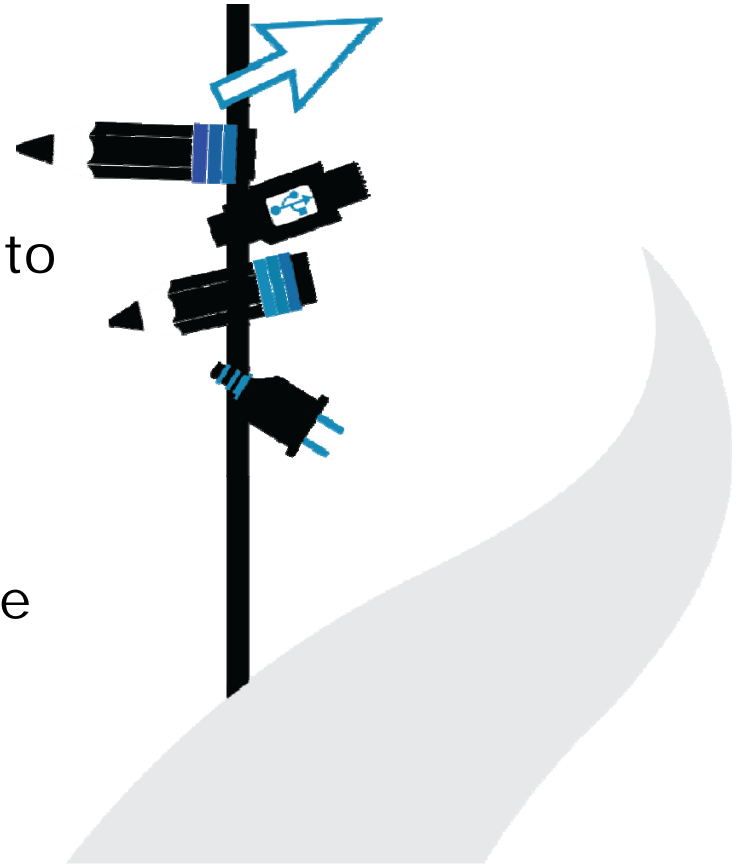
## Considerations for Next Generation Assessments: A Roadmap to 2014

**Step 3 “Ensuring Interoperability”  
Step 4 “Communicating Proactively” and  
Step 5 “Anticipating Ongoing Change”**

Bryan Bleil – VP, Online & Technology Implementation  
Wayne Ostler – VP, Technology Strategy, Data Solutions  
November 1, 2011

## Overview

- Introductory comments
- Five-step roadmap for transitioning to online assessments
- Step 3: Ensuring Interoperability
- Step 4: Communicating Proactively
- Step 5: Anticipating Ongoing Change
- Questions



# Introduction – Paper to Online Assessments

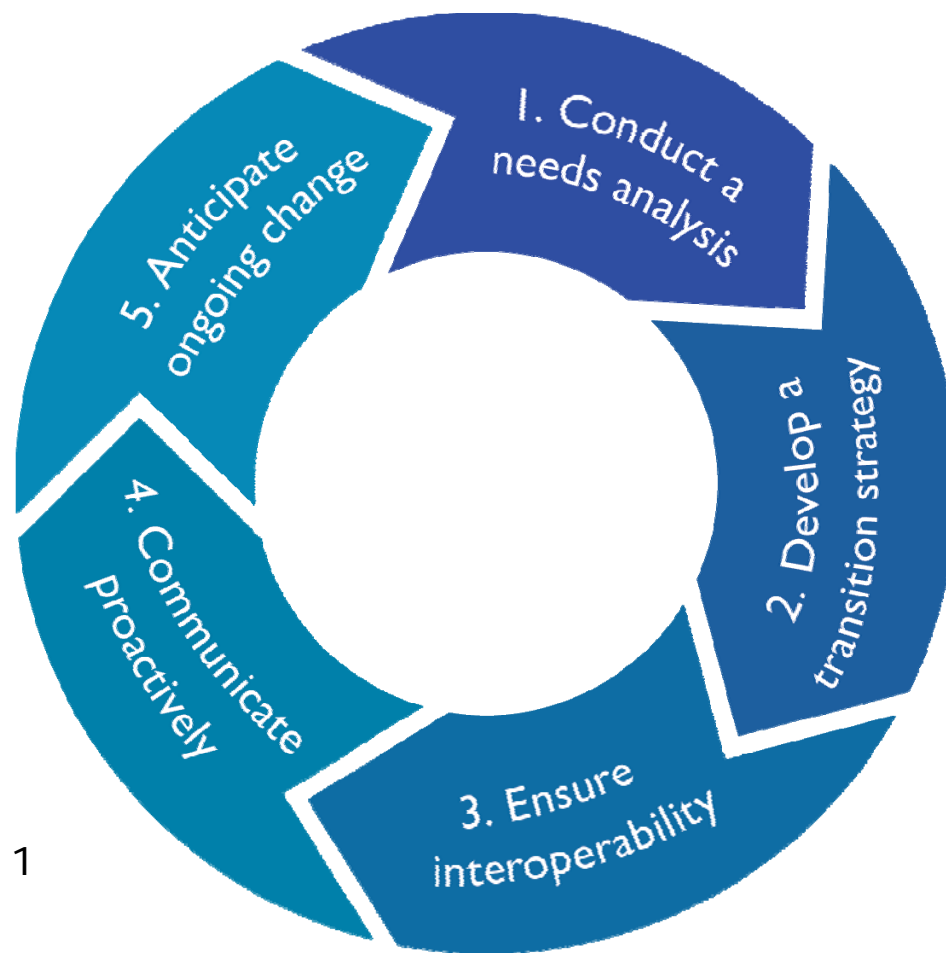
- Recurrent theme in next generation assessment strategies
- Leveraging advances in technology for greater efficiency, flexibility, and potential cost savings
- Benefits increasingly apparent
  - Opportunities for more effectively assessing student understanding and performance
  - Faster turnaround of scores
  - Improved security model
  - More efficient method of test delivery
  - Student motivation



- But... How to make such a large, complex transition?

# Five Step Roadmap for Transitioning to Online Assessments

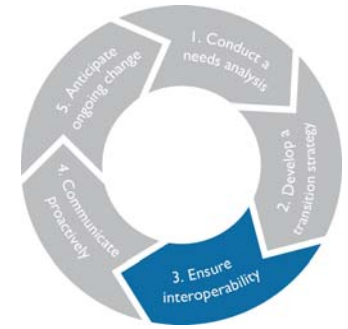
1. Conduct a Needs Analysis
2. Develop a Realistic Transition Strategy & Plan
3. Ensure Interoperability
4. Communicate Proactively
5. Plan for Ongoing Change



The full roadmap and additional resources, including the first webinar covering Steps 1 and 2, are available online at:

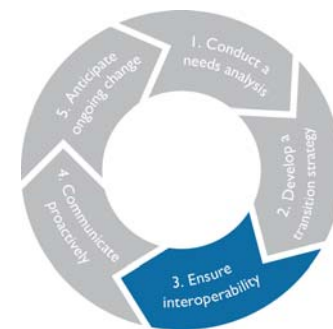
[www.PearsonAssessments.com/NextGenRoadmap](http://www.PearsonAssessments.com/NextGenRoadmap)

## 3 – Ensure Interoperability



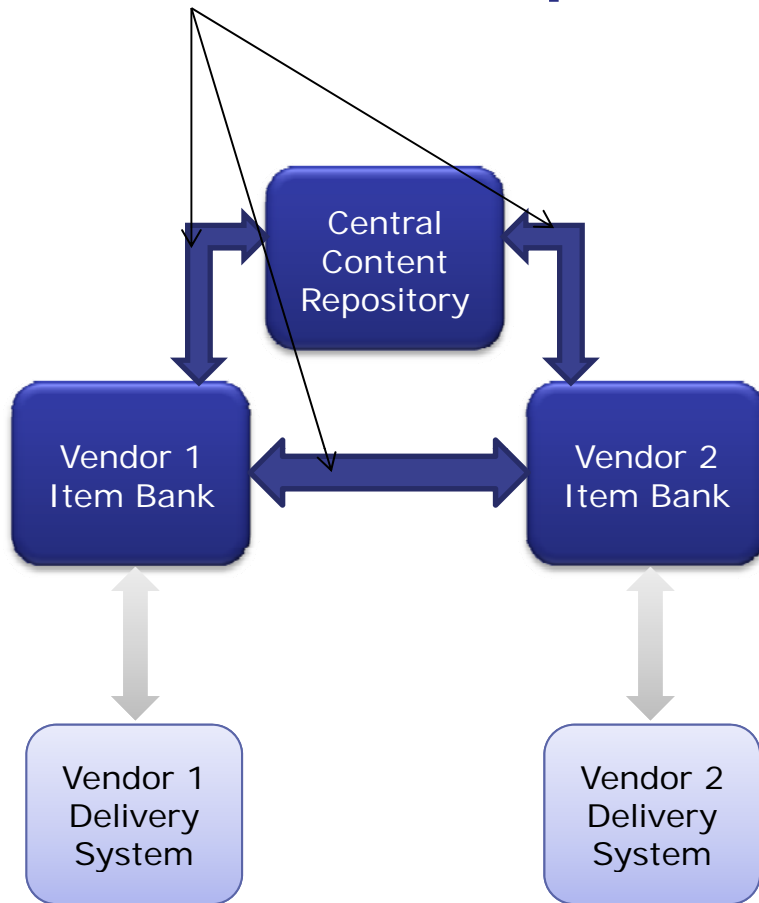
- Interoperability (wikipedia)
  - Interoperability is a property of a product or system, **whose interfaces are completely understood**, to work with other products or systems, present or future, without any restricted access or implementation
  - You can have an interoperable system that is proprietary
- Standard (dictionary.com)
  - Something considered by an authority or by general consent as a basis of comparison; **an approved model**
  - Standards are typically used to define the “**whose interfaces are completely understood**” in the above definition – i.e. an “interoperability standard”
- Open Standards, Open Interoperability Standards
  - In this context, “open” generally refers to standards that are free to use without restriction (such as licensing)
  - Do not confuse “open standards” with “open source” – You can have open source that is proprietary and not standards-based

## 3 – Ensure Interoperability



- Evaluate your interoperability needs
  - Content (items, test definitions, meta-data, statistics, etc.)
  - Registration, personal accessibility needs, enrollment, etc.
  - Results (score) data
  - Distribution / exchange (serialization, transport, security, etc.)
- Actively participate in defining interoperability standards
  - Open standards require active participation by the community (users, organizations, vendors)
  - IMS, SIF, PESC, and other organizations provide standards that can define some aspect of assessments
  - Open standards are generally funded by membership, grants.

# Content Interoperability



## Key considerations

- Separation of content and presentation
- No specific technology restrictions
- Allow for accessibility options
- Support all media (online, paper, mobile)

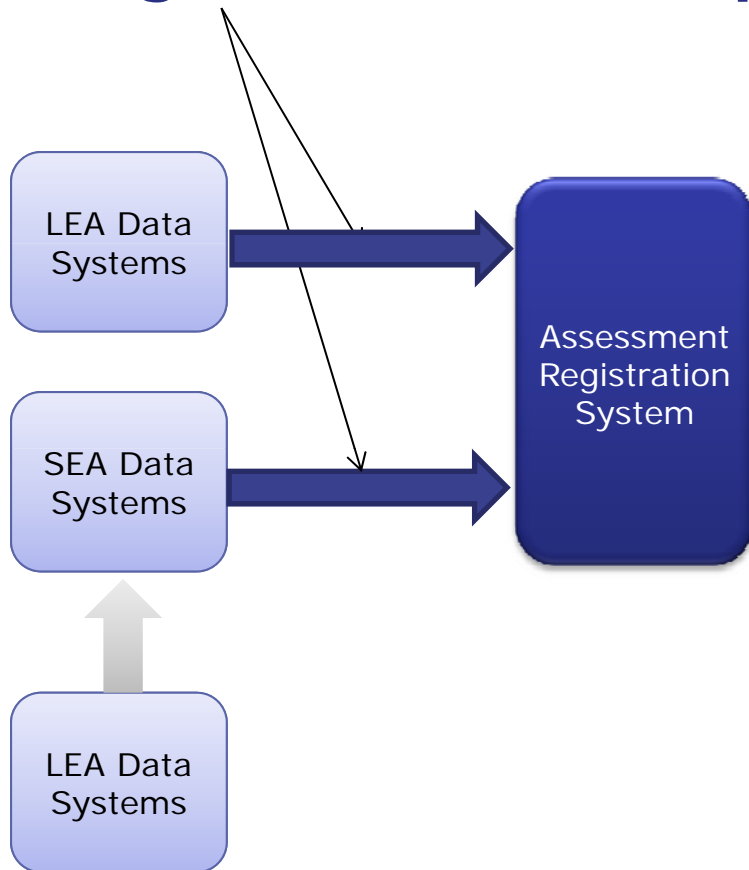
## Elements

- Item content
- Shared content (ex: passages, art)
- Tool identification (ex: ruler, calculator)
- Alternate representations (accessibility)
- Scoring information
- Test form maps /definitions
- Adaptive algorithms
- Structure (ex: sections, navigation, timing, review options, tools available)

## Standards

- IMS QTI/APIP (most robust)
- SIF (good reporting structures)

# Registration Interoperability



SEA may collect data on behalf of LEAs prior to loading registration data

## Key considerations

- Data to support reporting
- Accountability – snapshot of data
- Links to teachers
- Accessibility data

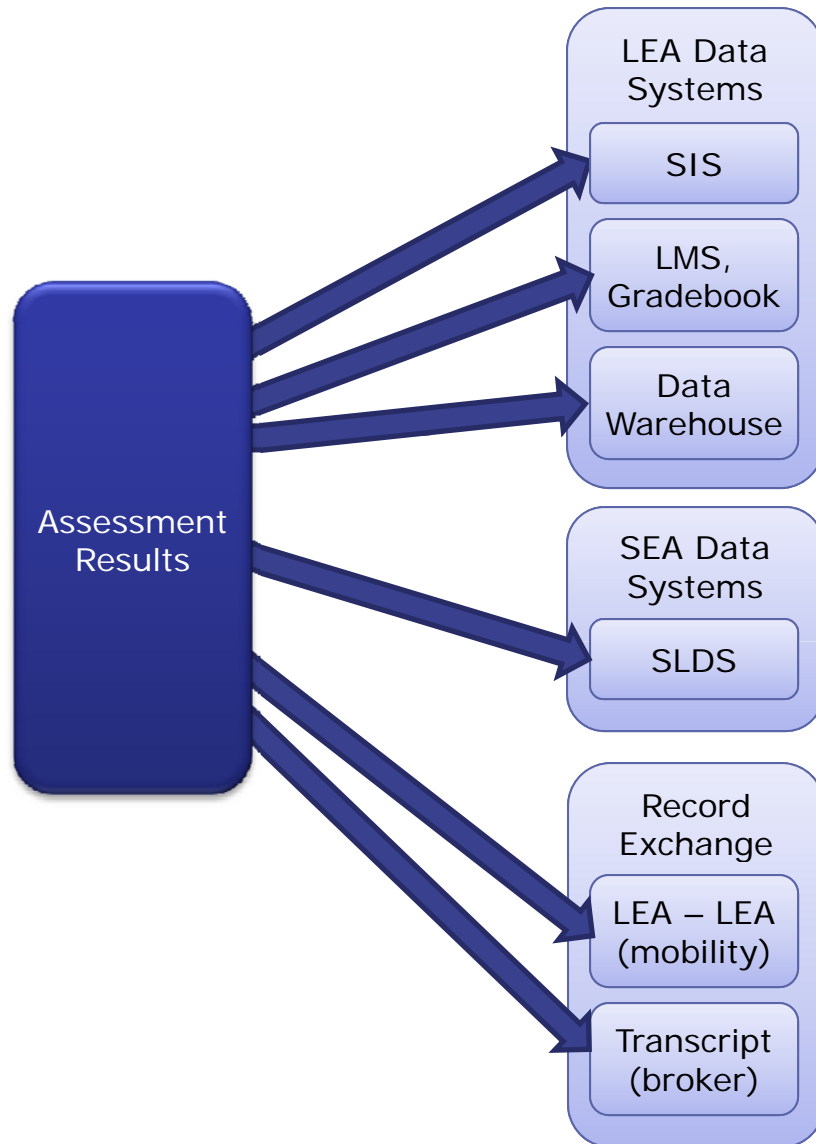
## Elements

- Student identifiers and demographics
- School enrollment
- Course data
- Teacher identifiers
- Program participation data
- Accessibility profile

## Standards

- SIF (supports data and transport)
- IMS PNP (supports accessibility profile and mapping to APIP)
- CEDS (SLDS requirements)

# Results (and Distribution) Interoperability



## Key considerations

- Security (right group receives the right data)
- Timing (how fast?)
- Preliminary and final scores
- Resend (rescore – never happens right?)

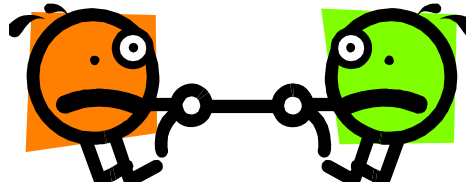
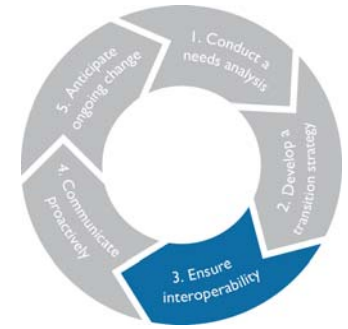
## Elements

- Returns all registration data
- Raw scores, scale scores, etc.
- Performance levels
- Total, strand/sub-test
- Links to standards, instruction
- Item details
- Summary data (class/school/LEA/SEA)
- Feedback

## Standards

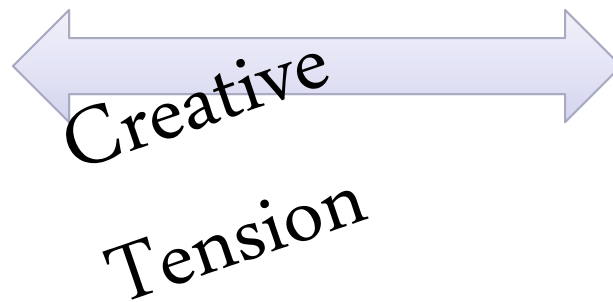
- SIF (supports data and transport)
- PESC (transcripts)
- IMS LIS (emerging)
- Ed-Fi (metrics, dashboards)
- CEDS (SLDS)

### 3 – Ensure Interoperability



Unbridled Innovation

New item types, simulations, gaming

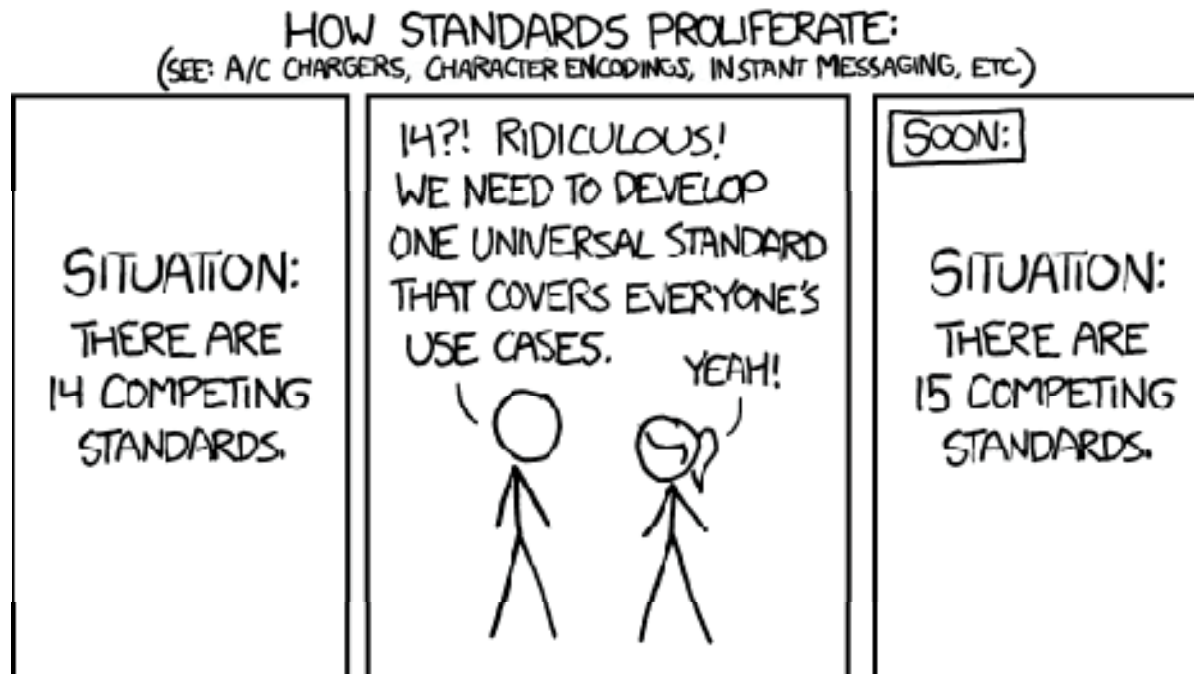


Strict Adherence to Standards

Full interoperability!

- Standards, by their very nature, impose limits
- Standards cannot define or anticipate everything
- Standards generally allow for custom or user-defined “extensions”
- Custom or user-defined extensions immediately reduce the level of interoperability

### 3 – Ensure Interoperability

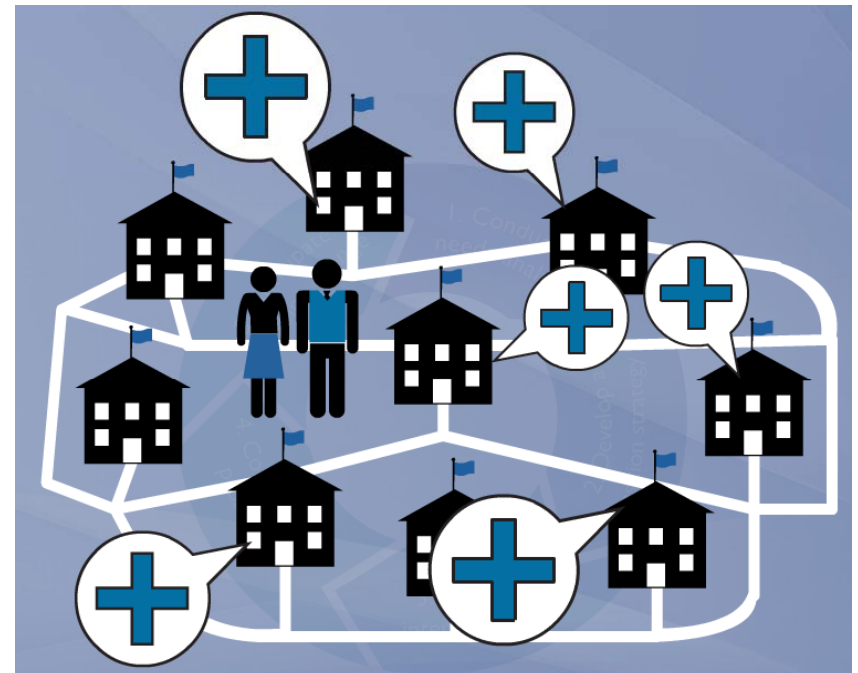


- Work with existing standards to enhance / advance them
- Proliferation of multiple standards confuses the market and complicates interoperability
- Where standards overlap or “compete” encourage collaboration

## 4 – Communicate Proactively



- Partnership & Collaboration is crucial
- Create and be involved in forums for technical knowledge sharing
- Provide a training plan for both assessment and technology staff – together, whenever possible
- Engage across districts and across states



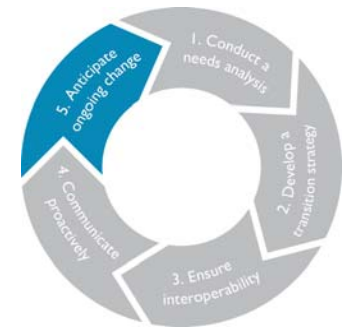
# Developing a Communication & Training Plan

- What is the preferred mechanism or forum within the state to best facilitate knowledge sharing?
  - Inter-district and inter-state discussions
  - Existing groups vs. new groups or structures
- What are the best opportunities to communicate out to the different stakeholder groups within the state?
  - Administrators, teachers, parents, students
  - Breadth of audience & input – eg, post-secondary and workforce representatives, CIOs, advocacy organizations
  - Existing communication pathways or strategies vs. new ones
- Does the training plan sufficiently encourage joint collaboration between both assessment and technology staff members?
  - Security/policy training for technology staff
  - Technical training for assessment staff
  - Use of assessment data for student/instructional improvement
  - Trial runs and “dress rehearsals” to establish readiness and build confidence prior to online administrations



## 5 – Plan for Ongoing Change

- A transition to technology-based assessments is not a one-time change
- Technologies, markets, platforms, and capabilities grow and evolve – the testing environment will, too
  - Incremental updates: OS's, browsers, Flash, Java, HTML
  - New hardware & devices: netbooks, tablets, smartphones
  - New architectures: thin clients, virtualization, cloud computing
  - New human/computer interfaces: speech recognition, motion-controlled interaction (ala Wii and Kinect gaming)
- Key to managing this change – stay close to what is happening at the district & school level
  - Plan for recurring technology “readiness” assessments



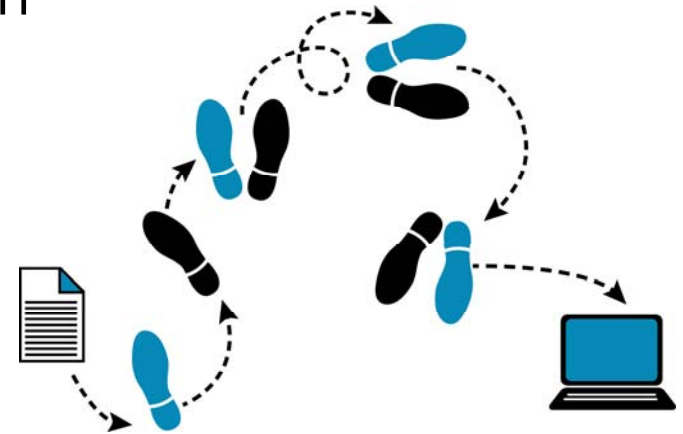
# Considerations for Ongoing Changes

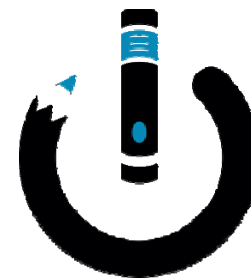


- How should you balance current “readiness” efforts against future needs or technology changes?
  - Current requirements vs. future needs and/or capabilities
  - “Trends” vs. “fads,” & determining appropriate support thresholds
  - Data collection – balancing statewide information needs against burden on local staff; determining what constitutes “actionable data”
- What is the right level of information to provide districts with guidance about future statewide needs for near-term and long-term technology upgrade plans?
  - Realistic hardware/software/platform options (looking one, three, and five years out)
  - Pathway for districts to provide guidance up to the state
- How can psychometric research stay ahead of a changing technology market?
  - Paper/online vs. device/capability comparability
  - Balancing comparability needs against ongoing tech-driven improvements
- What state-level funding initiatives or sources should be considered?
  - Potential to use or redirect funds from broader instructional-improvement efforts to which online assessments are aligned?

## Recommendations for States & Districts

- Encourage active engagement between state/districts/schools and others
- Forge partnerships between assessment and technology groups
  - Both across and within states
- Consider funding needs and potential sources
  - Note savings and efficiencies as testing shifts from paper (e.g., materials handling & management)
- Consider/revisit policies that may impact testing window, testing platforms, and technology infrastructure
- Encourage & support assessment/technology research





## Questions?

NOTE: Slides from the presentations, as well as the recording of the webinars, can be found at: [www.PearsonAssessments.com/NextGenRoadmap](http://www.PearsonAssessments.com/NextGenRoadmap)

October 6<sup>th</sup>, 2011

Step 1 "Conducting a Needs Analysis" and  
Step 2 "Developing a Transition Strategy"

November 1<sup>st</sup>, 2011

Step 3 "Ensuring Interoperability"  
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