Implementation Readiness Package Overview Document

Contents

Purpose

The purpose of the Implementation Readiness Overview is to connect the technical assessment implementation teams of Members and Service Providers with the resources that are necessary to administer a Smarter Balanced assessment. Please use this document as a preliminary tool in preparing for and maintaining Smarter Balanced Assessments.

The resources that the Smarter Balanced team has identified as necessary to implement Smarter Balanced Assessments are what comprise the Implementation Readiness Package (IRP).

Disclaimer

This document and the resources linked here-in are intended to be used with the understanding that they represent a subset of the necessary resources Members and Service Providers utilize within the planning, implementation, delivery, and reporting of Smarter Balanced Assessments. It is an active, dynamically changing resource that will be updated with new information and resources as they become available. The IRP, this document, or the resources referenced should not be considered as comprehensive and exhaustive resources for successful implementation at any point.

Understanding Smarter Balanced Assessments

Prior to ingesting, rendering, scoring, or reporting Smarter Balanced Assessments, the technical assessment teams - for both Members and Service Providers - should build a foundational understanding of Smarter Balanced Assessments. For details on Smarter Balanced Assessments, we recommend viewing additional resources available on the [Smarter Balanced Assessments website.](#)
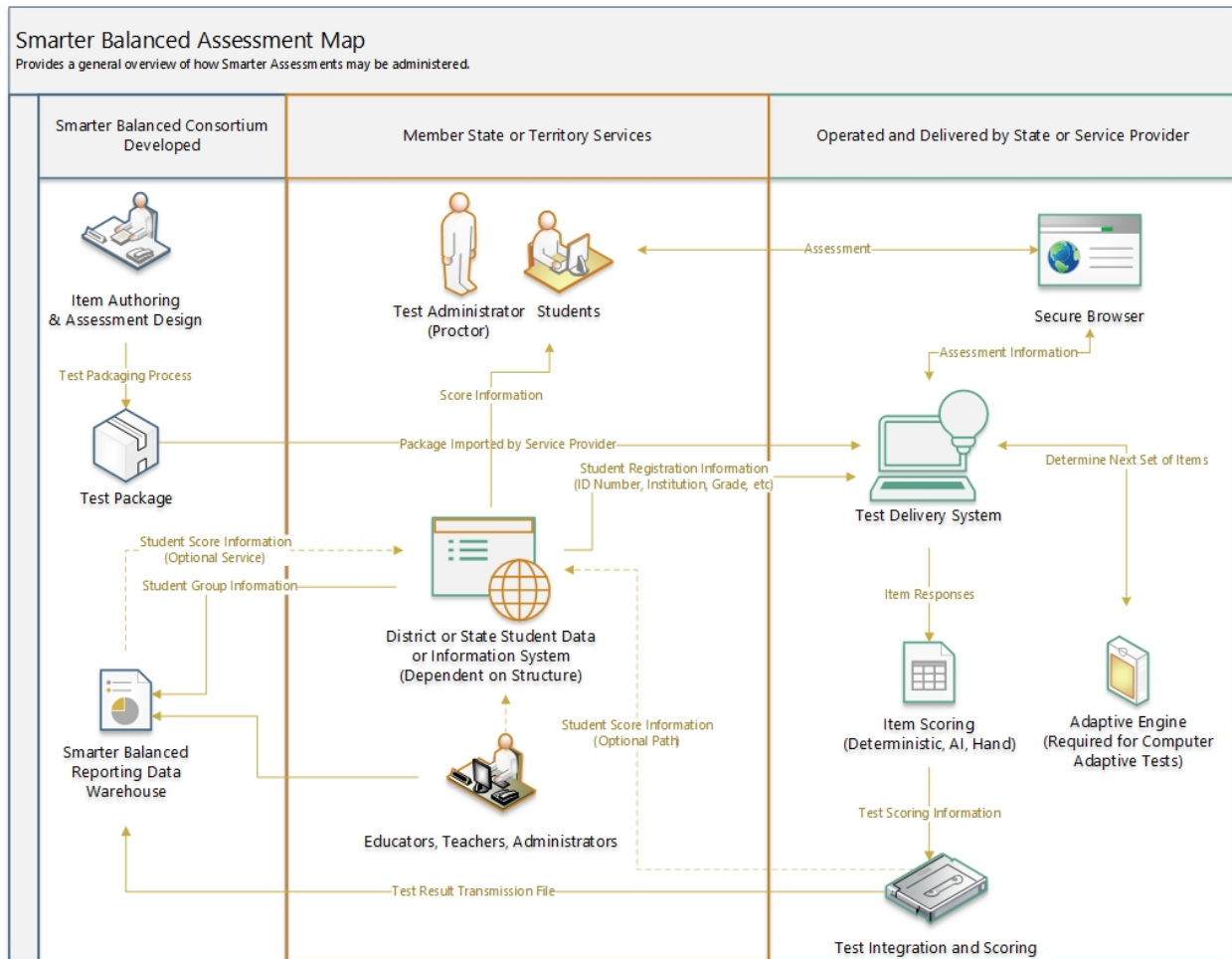
Smarter Balanced Role

Smarter Balanced will fulfill the following roles within the assessment delivery process:

- Build and maintain the assessment system which includes:
  - Tools for Teachers
  - Interim Assessments
  - Summative Assessments
- Test Item Authoring
- Assessment Design, Including Item and Test Format
- Assessment Content Distribution to Members
- Operating and Supporting Reporting Data Warehouse
  - Includes format definition(s) for data ingest
- Provide informational resources and support to Members and Service Providers to understand and implement the Smarter Balanced Assessment

The roles and responsibilities of Members and Service Providers within the delivery of Smarter Balanced Assessment are typically defined in the Member's Request for Proposal (RFP) process.

Assessment Delivery Design

Once items are authored and an assessment is designed, it will enter the Test Administration process. Below is a visualization that provides **an example** of how a Smarter Balanced Assessment and its delivery may be performed:

Smarter Balanced Assessment Map
Provides a general overview of how Smarter Assessments may be administered.

Smarter Balanced Consortium Developed	Member State or Territory Services	Operated and Delivered by State or Service Provider

Item Authoring & Assessment Design

Test Administrator (Proctor)   Students

Secure Browser

Assessment

Test Packaging Process

Score Information

Assessment Information

Test Package

Package Imported by Service Provider

Student Registration Information
(ID Number, Institution, Grade, etc)

Test Delivery System

Determine Next Set of Items

Student Score Information
(Optional Service)

Student Group Information

District or State Student Data or Information System
(Dependent on Structure)

Item Responses

Student Score Information
(Optional Path)

Smarter Balanced Reporting Data Warehouse

Item Scoring
(Deterministic, AI, Hand)

Adaptive Engine
(Required for Computer Adaptive Tests)

Educators, Teachers, Administrators

Test Scoring Information

Test Result Transmission File

Test Integration and Scoring

An additional resource technical assessment teams may utilize to understand the elements that comprise the process of "Item Authoring to Test Administration" is the Smarter Balanced Architecture Report (page 44 highlights interoperability information and the process). The Smarter Balanced Assessment process is designed in a manner that enables states to add or substitute their own component(s) (or vendor-supplied component(s)) as they deem necessary. The concept of interoperability is a factor in all design and development. Beyond component-level replace-ability, the system also provides integration into other systems, such as state data systems and Student Information Systems (SIS).

Implementation Resources

The resources linked-to in this document (and on the IRP section of SmarterApp) are presented to establish understanding and provide technical and functional information related to implementation of Smarter Balanced Assessments. They will not explicitly review platforms or provide explicit validation and approval of implementation readiness; that would likely occur via a member-initiated process, such as a formal Request for Proposal (RFP) process.

IRP Resource List

Resource Item	Description	Element Supported
Overview document (This document)	This document serves as a guide to outline the importance of the documents utilized within the IRP.	General Understanding
Smarter App Assessment Item Format (SAAIF) Supporting Resource(s): • Item Types and Features • Item Metadata Specifications	The SmarterApp Assessment Item Format Specification (SAAIF) defines an XML document structure for the encoding and representation of assessment items. Item Types and Features document lists how each type of Smarter Balanced items are constructed (also referenced in the Accessibility Features section). Item Metadata Specifications provides the specifications for the metadata that are used within Smarter Balanced items and stimuli.	Test Delivery
QTI Information	While Smarter Balanced Items are currently issued in a SAAIF format, Smarter Balanced will be adopting a QTI 3.0 format beginning in the 2021 academic year. Please review this resource (contacting IMS Global may be required) to better understand QTI 3.0 and how it may impact test items. For draft-versions of items in this format, please feel free to contact Smarter Balanced at sb@smarterbalanced.org.	Test Delivery
Test Package Format 1.0	Provides the format specification that defines the test and guidance in how to load the test into a Test Delivery System. May be used to inform when using a proprietary system.	Test Delivery
IRP Test Package Includes: Test Administration Packages: • Interim Assessment Block (IAB) Package • Interim Comprehensive Assessment	Fixed-form test administration and content packages designed to provide a comprehensive demonstration of the different types of questions from each claim type for different grades. The IAB and ICA packages contain the administrative information necessary for issuing these tests. The administration packages must be used in accord with the Content Package. The Content package contains the test items for both the Interim Assessment Block and the Interim Comprehensive Assessment. They are	Test Delivery, Test Administration

(ICA) Package and Content Package	machine scored items with scoring rubrics. The items are drawn from publicly available test items. Organizations are permitted and encouraged to use this content package for development, testing, and demo purposes. Note: Smarter Balanced Summative Assessments should be administered via a Computer Adaptive Test (CAT) format. For more information on the development and design of summative assessments please visit http://www.smarterbalanced.org/assessments/development/ or contact Smarter Balanced at sb@smarterbalanced.org.	
Item Rendering Information	Provides a list of the items that comprise the test packages and links to how the variety of items and rendering examples of each via the Smarter Balanced Sample Items Website.	Test Delivery
Accessibility Features Supporting Resource(s): • ISAAP Accessibility Feature Codes • Item Types and Features • Illustration Glossary • Braille Transcripts	Smarter Balanced Items require accessibility features per our Member's requirements. Resources provided here are the: Individual Student Assessment Accessibility Profile (ISAAP) process which describes the approach to addressing student access needs for Smarter Balanced assessments. Item Types and Features document which lists how each of type of Smarter Balanced items are constructed (same as what is referenced in the SAAIF section). Illustration Glossary which details the necessary requirements for how illustration glossary content is displayed. Braille Transcripts which details the necessary steps in providing tests which require the use of Braille in the test administration process.	Test Delivery, Student Support
Secure Browser Supporting Resource(s): • Browser Implementation Readiness Test (BIRT)	Information with details in how secure browsers should function and be able to provide assessment questions. BIRT is a tool that may be used to preliminarily review browser compatibility to the Smarter Balanced Open Specification for Secure Browsers (OSSB) for communication with educational software.	Test Delivery, Test Administration
Item Response Samples	These samples can be used to test response scoring and rendering systems to gain insight into the format in which item responses are stored.	Item Scoring, Test Reporting

Item Scoring Custom Operators	Assessment items are scored using rubrics encoded in IMS QTI Response Processing format. Custom operators support advanced item types such as Equations and Graphic Response items.	Item Scoring, Test Reporting
Test Result Transmission (TRT) File Format Supporting Resource(s): • Test Result Data Dictionary and Logical Data Model	TRT document details how information needs to be communicated to the Smarter Balanced Reporting Data Warehouse in order for a Member that is using the Smarter Balanced Reporting Data Warehouse. Test Result Data Dictionary and Logical Data Model details information and definitions for data transmission formats.	Test Reporting
Federated SSO Overview	Details the way educators authenticate with Smarter Balanced resources utilizing the same username and password issued for accessing their assessment system. Includes hi-level information related to role information and designing a tenancy chain.	Test Reporting, Smarter Balanced Application Access

Test Delivery System

As of April 1, 2020 the Smarter Balanced Test Delivery System (TDS) is no longer supported. The code base and documentation for the TDS is available within the Smarter Balanced GitHub repository.