

Case Study

Modernizing K-12 Test Construction Through a Centralized Assessment Management Platform



The Client

The client is a U.S.-based K-12 assessment consortium delivering standards-aligned summative and interim assessments across participating states. The organization supports test construction, blueprint management, adaptive assessments, item metadata, and downstream assessment delivery workflows.

The Challenge

The client relied on a legacy test construction system, manual spreadsheets, and external scripts to manage complex assessment workflows. This made test construction difficult to scale, slowed operational processes, and increased the risk of data inconsistency across blueprints, metadata, historical test configurations, and downstream package generation.

Critical Success Parameters

- ✓ Move test construction workflows from the legacy system to one centralized platform.
- ✓ Enable adaptive test creation and management within the new system.
- ✓ Migrate blueprint data, metadata, item statistics, and historical test configurations.
- ✓ Automate blueprint mapping and metadata synchronization.
- ✓ Support review workflows, version control, configurable statuses, and role-based permissions.
- ✓ Generate standardized assessment packages for downstream systems.
- ✓ Maintain backward compatibility and preserve historical assessment data.

Our Approach

- ✓ Delivered the modernization through phased milestones covering data migration, adaptive test construction, test configuration management, integration, automation, UAT, and documentation.
- ✓ Built new database structures and migration services to move blueprint data, metadata, item statistics, and historical adaptive test configurations into the centralized platform.
- ✓ Developed adaptive test construction capabilities with interfaces for test, segment, item group, and item management.
- ✓ Introduced automated blueprint mapping based on item metadata to reduce manual updates and improve consistency.
- ✓ Implemented review workflows, versioning, status management, bulk operations, metadata refresh, Excel exports, and configurable result settings.
- ✓ Developed Admin XML generation to support downstream assessment delivery systems and service providers.
- ✓ Added regression testing and Playwright automation coverage to improve release confidence across critical workflows.



Key Result Highlights

Delivered **5** major milestones across migration, test construction, configuration management, integration, automation, UAT, and documentation.

Completed **7** business epics covering blueprint migration, metadata movement, historical configuration migration, adaptive test construction, review workflows, and Admin XML generation.

Implemented **20+** functional enhancements, including item grouping, blueprint mapping, versioning, bulk updates, Excel export, metadata refresh, and role-based permissions.

Transitioned legacy test construction workflows into a centralized platform-led operating model.

Automated key manual processes that previously depended on spreadsheets, external scripts, and separate systems.

Improved consistency across blueprint data, metadata, adaptive test configurations, and downstream assessment packages.

Strengthened QA coverage through functional testing, regression testing, UAT support, cross-browser testing, and Playwright automation.