



MCESA

Maricopa County Education Service Agency

MCESA REILize Decision Support System Project Definition Document

Track A Project

Prepared By: R. Schnettler
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Arizona Department of Education
1535 W. Jefferson Street
Phoenix, Arizona 85007-3209



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1 Document Information

1.1 Version History

VERSION HISTORY			
ID	Date	Revised By	Reason for change
0.1	4-Jun-2012	Rich Schnettler	Initial version of document. DRAFT.
0.2	7-Jun-2012	Rich Schnettler	Modifications after reviewing with Al Dullum, Lori Renfro, and Kristine Morris at MCESA. DRAFT.
1.0	11-Jun-2012	Rich Schnettler	06-11-2012 - Modifications after reviewing with Al Dullum. Open questions were pulled out to a separate document at Al's request in order to expedite responses. 06-12-2012 – modifications made after internal ADE review with Dr. Alex Jones, Robin Lowe, Scott Pfeiffer, Ellen Grein-Bell, Marina Stover, Miruta Garg, Jolene Newton, and Christa Thompson. 06-13-2012 – modifications made based upon responses received back from MCESA and BASIS Research received late last night. This was followed by an additional internal ADE Review with Scott Pfeiffer, Marina Stover, Miruta Garg, Jolene Newton, and Christa Thompson. 06-14-2012 – modifications made after receiving responses to final set of questions from MCESA including the REIL Performance Scorecard that needs to be displayed to the US DOE. BASELINE version created.
1.1	18-Jun-2012	Marina Stover	6-18-1012 – Changes based upon final review meeting with A. Dullum, C. Thompson, J. Newton.
1.2	18-Jun-2012	Marina Stover	6-18-2012 – Further changes from K. Morris, C. Thompson, A. Dullum.
2.0	18-Jun-2012	Marina Stover	6-18-2012 – Incorporated minor changes to Appendix A1 and 4.4.1 per K. Morris. Submitting to stakeholders for signature.
2.1	19-Jun-2012	Marina Stover	6-18-2012 – Removed further references to percent score per K. Morris
2.2	19-Jun-2012	Marina Stover	6-19-2012 – Section 1.2 : Updated REIL Scorecard Document. Appendix A1: Removed reference to percentage points; modified the REIL Score Range values in all screenshots; struck out the Percentage column of all screenshots with a red X, and modified text in this section: <i>Body – REIL Score/View Observations</i>
2.3	19-Jun-2012	Marina Stover	Section 3.2.1: Removed sentence limiting BFK data to one school.

1.2 References

This section contains documents that are relevant to this project. **Note: All documents are posted on MCESA REIL SharePoint Site. All documents were also posted to the MCESA FTP site on 6/18/2012.**

REFERENCES		
Supporting Documentation Title	Purpose	Document
MCESA_REIL_Proof of Concept_Scope_Statement_V 1 1_06082012	Track A Scope Statement	MCESA-REIL Track A Scope Statement_v1 1_Final





REFERENCES

Supporting Documentation Title	Purpose	Document
TDV BRD Baseline v1.0	This document is supplemental to this BRD so that these two BRD's form a set of high-level business requirements. TDV is the Teacher Data Verification BRD that was previously approved by the stakeholders and it documents the key, high-level business requirements that are covered for the most part by the Batelle For Kids ("BFK Link") vendor product solution.	TDV BRD Baseline v1.0
Vendor Product Scorecard 20120606 - BFK	The completed business requirements scorecard for the BFK Link product after the product demo.	Vendor Product Scorecard 20120606 - BFK
MCESA Vision Conceptual Dashboard	This document is the vision statement of the fully integrated REIL solution.	
BFK Link CE Data Migration Guide	The BFK Link Community Edition data migration guide.	Batelle for Kids Product Docs
Installation and Configuration Guide	The BFK Link Community Edition installation and configuration guide.	Same comment as above
System Requirements and Deployment Guide	The BFK Link Community Edition system requirements and deployment guide.	Same comment as above
MCESA REIL Track A - DFD v0_3	High-level data flow diagram for Track A after reviewing with AI.	MCESA REIL Track A - DFD v0_3 NEW
Sample REIL Performance Scorecard	This is a sample spreadsheet file provided from BASIS Research to be used in the REIL Performance Scorecard.	REIL Scorecard – Sample v5.2

1.3 Stakeholders

STAKEHOLDERS

Organization	Stakeholder Name	Title	Email Contact
MCESA	Dr. Don Covey	County Superintendent of Schools	Don.Covey@mcesa.maricopa.gov
MCESA	Kristine Morris	Chief Deputy Superintendent	Kristine.Morris@mcesa.maricopa.gov
MCESA	Dr. Lori Renfro	Asst Supt, Performance-Based Management Systems	Lori.Renfro@mcesa.maricopa.gov
MCESA	Al Dullum	REIL Data Management System Project Manager	Al.Dullum@mcesa.maricopa.gov
MCESA	Dr. Lori Shough	Assistant Superintendent	Lori.Shough@mcesa.maricopa.gov
MCESA	Laurie King	Director of Innovative Practices	Laurie.King@mcesa.maricopa.gov
ADE	Mark Masterson	Chief Information Officer, Arizona Department of Education	Mark.Masterson@AZed.gov
ADE	Linda Jewell	Deputy CIO, Arizona Department of Education	Linda.Jewell@AZed.gov
ADE	Pamela Smith	Executive Director of Strategic IT Programs, Arizona Department of Education	Pamela.Smith@AZed.gov
ADE	Jolene Newton	Project Manager, Arizona Department of Education	Jolene.Newton@AZed.gov





1.4 Document Approvals

This document has been approved as the official Business Requirements Document (BRD) for the MCESA REILize Track A Project by the business stakeholders.

Following approval of this document, changes will be governed by the project’s change management process, including impact analysis, appropriate reviews and approvals, under the general control of the Master Project Plan and according to the Arizona Department of Education Project Management Office policy.

DOCUMENT APPROVALS

Approver Name	Project Role	Signature/Electronic Approval	Date
Kristine Morris	Business Partner Stakeholder / Advisor		
Al Dullum	MCESA Program Manager		
Christa Thompson	Program Manager		
Linda Jewell	Director of IT Development		
Jolene Newton	Program Director and Primary Stakeholder Liaison		
Pamela Smith	Executive Director of Strategic IT Programs and Stakeholder Liaison		





2 Introduction

The Maricopa County Education Service Agency (MCESA) has undertaken a five-year initiative aimed at improving student academic progress by increasing the effectiveness of teachers and principals. Six local school districts are engaged in the Rewarding Excellence in Instruction and Leadership (REIL) initiative, which is funded by a Teacher Incentive Fund grant from the U.S. Department of Education (“U.S. DOE”).

The purpose of the Proof of Concept project is to provide a working model of the data integration, validation and display of Teacher Observation and Student Assessment (AIMS) data for a specific grade level for two subjects to ensure the concept, design and tools identified will meet the project needs before the next school year begins.

The proof of concept will be conducted either via a WEBEX by MCESA personnel to the U.S. DOE or access may be actually provided to the U.S. DOE personnel and they will be shadowed by MCESA personnel. In either case, a teacher and/or principal will need to be able to login and walk through the process end-to-end for all the relevant views as scripted by MCESA:

- View and verify the accuracy of the REIL scores which should display in the REIL Performance Scorecard
- View and verify the accuracy of the section, student roster, and percentage of instructional time
- View and verify the accuracy of the learning observations
- Accept or report errors with the data by sending an alert or email for any of the following:
 - REIL Performance Scorecard (“Scorecard”)
 - Student roster and percentage of instruction time
 - Learning observation





3 Purpose and Scope

3.1 Purpose

The purpose of this document is to describe general business requirements and functional design, accurately to present a proof of concept demonstration to the capabilities being achieved through the objectives of this project. All attempts have been made in using mostly business terminology and business language while describing the requirements in this document. Very minimal and commonly understood technical terminology is used.

Additionally, this document is to be used as the basis for proof of concept expectations, approaches, user stories and demonstration requirements. It will serve to identify core functions and features necessary to exhibit capabilities defined within the REIL grant agreements. This document will provide guidance to design and development teams, yet allow the development team to use creative freedom to build effective solutions in a short timeframe. In order to achieve success, the following information will be used to further define the boundaries of the project and set infrastructure, support and usage expectations for the short term implementation.

This document will require review and approval sign-offs in order to begin development and implementation of this project to proceed to the proof of concept demonstration phase.

The document contains the following sections: Document Information, Introduction, Purpose and Scope, Description of the Project, Business Requirements, Non-functional Requirements, Glossary of Terms, and if necessary, an Appendix.





3.2 Scope of Work

The scope of work used to generate this document is defined below as a basis of understanding of the extent of research, resources and information used to compile and prioritize each business requirement that the Track A Project needs to encompass. Each business requirement should be stated in clear, concise language and covering one discrete thought or idea. Each requirement should be numbered and associated with a corresponding User Story or expected experience in interacting with the Track A Project feature or function, as well as articulating any exceptions and rules. Requirements will be tied back to the Scope Statement goals and objectives to ensure complete coverage.

The Business Requirements that have been collected and defined in this document as a result of reviewing existing documentation and, face-to-face discussions, as well as email and phone dialogues with stakeholders. Existing documentation includes business requirement definitions for other related efforts, product analysis results, interviews with key stakeholders and user scenarios defined for longer term projects under analysis for replacement of this project's solutions. Data collection and template examination will be performed to determine import requirements where needed. REIL Scorecard example templates will be used to define the display requirements for the Proof of Concept effort.

Business owners and stakeholders from MCESA and ADE officials have specified business requirements, key features, and detail specifications for the delivery of the Track A Project. Due to the uniqueness of this project, it has already been determined that the BFK Link product will be used and installed to satisfy a portion of the business requirements while other custom development will be required to build out the minimum features and functions to cover the balance of the requirements. [Note: Refer to the previously approved TDV BRD Baseline v1.0 document that defined the business requirements for the teacher data verification component of this project as some of them may be superseded in this document.](#)

3.2.1 In Scope

This section generally describes what was "in scope" for tasks leading up to defining the requirements for this effort.

- Data Collection
 - Data for Alhambra, Gila Bend, Isaac, Nadaburg, and Tolleson school districts. This would include data collected from a School District and MCESA personnel from systems such as SIS, Gradebook or alternate system; AIMS; and ODCT for fourth grade teachers covering reading and math in the 2011-12 school year.
 - Teacher Observation data (maximum of two cycles recorded in ODCT)
 - Student Assessment data (AIMS)
- Product Analysis
 - Student-Roster Data Verificationⁱ features (BFK Link):
 - Includes the installation and configuration of the BFK Link product at ADE
 - All Business requirements defined in section 5 of the original BRD are "In scope" except where otherwise noted in the out of scope section below. Since a vendor product solution will be utilized, the satisfaction and implementation of the "in scope" business requirements may differ from the description and user story definitions in the original BRD
 - Teacher ability to verify the accuracy of their data including roster verification and submit to a principal for review



- Principal ability to review and accept or reject the teacher data verification submissions
- Account Management
 - User roles and access needed
 - Existing solution capabilities for enhancement
- Observation Data Verification (ODCT) tool capabilities and displays/reports
 - Teacher secure access, and;
 - Existing Summative Cycle report elements (for re-use)
 - Ability to verify the accuracy of their observation data
 - Principal ability to verify the accuracy of any teacher assigned to them and their observation data
- Display of Informatin
- REIL Performance Score Card
 - File upload and storage from BASIS Research which should contain the pre-calculated scores that display on the scorecard
 - Secured login and access to the Scorecard
 - Teacher ability to verify the accuracy of their Scorecard
 - Principal ability to verify the accuracy of any teacher assigned to them and their Scorecard





3.2.2 Out of Scope

This section generally describes what is “out of scope” for this requirement gathering effort.

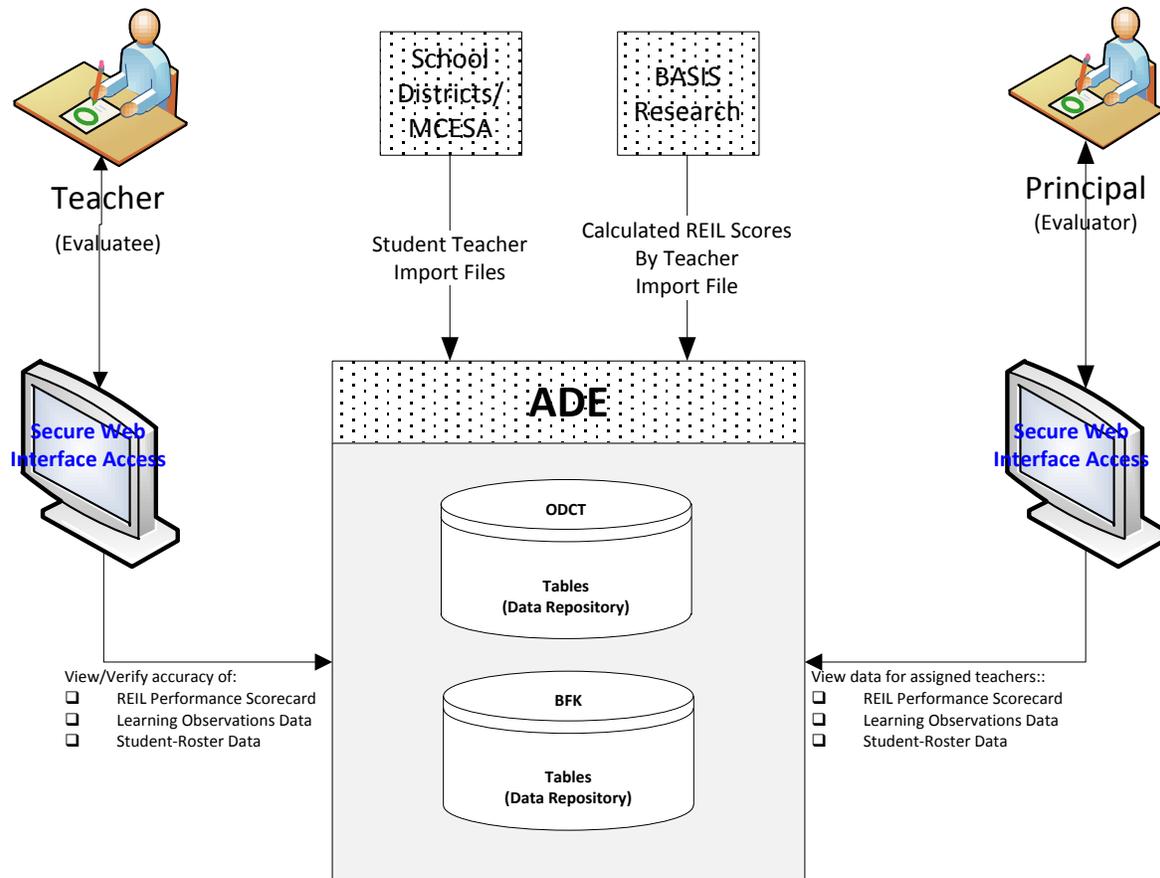
- Data collection and analysis for Phoenix Union since this is a high school
- Teacher Roster Data Verification features not covered by Battelle for Kids product:
 - Business requirement 5.8 – View/Print Data Discrepancy Log Report, since BFK Link does not satisfy this specific report requirement
- Teacher access to AIMS data (only available via common logon)
- ODCT changes or enhancements for the existing solution in Production. A copy of ODCT (named POC) will be used for any development needs to satisfy the Proof of Concept project.
- Production environments, support, availability, stability, release of work completed for the Track A Project.
- BASIS REIL Score algorithm, calculations, analysis or research
- Student Teacher Course Connection project requirements or artifacts, including ESP product analysis
- Federated Identity Management project requirements or artifacts
- Print capabilities for all solutions
- Long Term data storage and retention. Migration/Retention to be covered in Track B.
- System load, user capacity, availability exceeding 10 demonstration users





4 Description of the Project

4.1 Environment





4.2 User Characteristics

This section describes the Users and associated Roles that are expected to interact with the Track A Project.

There are four general roles: Evaluatee, Evaluator, MCESA Administrator, and ADE Administrator. The Users may be physically located in schools, district offices, as well as the MCESA and ADE office.

The following table describes the Users identified, a description of the anticipated interactions and/or permissions, the skill level and their expected role. Skill level for each User is ranked high for requiring a significant amount of knowledge and skill to interact with the functionality; medium for a mid-level knowledge, to low, for a relatively small amount of knowledge and skill. The reason for the skill level rating is to aid in the planning and definition of a system training program as well as define a help system to adequately cover all of the Users that will potentially interact with the system.

User(s)	Description	Skill Level	Role(s)
School Personnel: • Teacher	<ul style="list-style-type: none"> Should have access to view and verify their REIL Scores in the Scorecard in the ODC T Should have access to view and verify the accuracy of their observation scores in the ODC T Should have access to view and verify the accuracy of their student-roster data in BFK Link 	Medium	Evaluatee
School Personnel: • Principal • Assistant Principal	<ul style="list-style-type: none"> Should have access to view the REIL Scores in the Scorecard for any of their assigned teachers Should have access to view the observation scores in the ODC T for any of their assigned teachers Should have access to view the student-roster data in BFK Link for any of their assigned teachers 	Medium	Evaluator
MCESA Personnel	<ul style="list-style-type: none"> Should be able to import data into the BFK Link Database 	High	MCESA Administrator*
ADE DBA	<ul style="list-style-type: none"> Should be able to import data received from BASIS Research into the MCESA Database 	High	ADE Administrator

*BFK 3rd Party Product provides self-contained user account management including role and permission assignments.





4.3 General Constraints

ID	Constraint
4.3.1	The BFK Link vendor product will be implemented since it was determined that its features and functions covered 100% of the business requirements either totally or partially for conducting the proof of concept and that no additional development work will be required with respect to the teacher data verification capability in this tool. The product also includes an import feature to load the necessary data.
4.3.2	The REIL Performance Scorecard should use the same stylesheet and UI conventions as the ODCT application.
4.3.3	The data used in the Proof of Concept must be accessible until another solution is selected and implemented. Then, after a final joint review by MCESA and ADE can the environment can be decommissioned and data archived and/or migrated.
4.3.4	This project will only utilize flat file formats when importing data to BFK Link and ODCT.
4.3.5	A single test/training environment will be used for BFK. No Development or Production environments will be utilized. Testing and Demonstration will be done from the same instance.



4.4 Assumptions and Dependencies

4.4.1 Assumptions

This section describes major assumptions that were made prior to or during this phase of the project.

ID	Assumption	Implications
4.4.1.1	Any data discrepancy dispute that is identified in BFK Link would require the data to be fixed in BFK Link.	If not true, and the data is only fixed at its source, then it will need to feed back into the BFK Link in order to reflect the correction that was made.
4.4.1.2	Any data import into BFK Link will be performed by MCESA personnel.	If not true, then an alternate person will need to be identified and trained to ensure correct execution and validation of the import program.
4.4.1.3	BASIS Research is expected to provide ADE with the file format(s) containing certain teacher information, the calculated overall REIL Score, as well as the value add and observation scores for each teacher.	If not true, then it is necessary to manage this through the change control process.
4.4.1.4	Names shall be changed or masked to protect sensitive and private information.	If not true, then personal data may be at risk to others that lack the actual authority to view it.
4.4.1.5	The Proof of Concept will be deployed and presented from a test/training environment.	If not true, then arrangements will need to be made to present from an alternate environment.
4.4.1.6	Any new ODCT-POC code used to support the Proof of Concept will be considered "throwaway." This is using a separate code branch from the ODCT being used in production.	If not true, then it is necessary to manage this through the change control process for ODCT in production.
4.4.1.7	All ODCT Developers will be assigned to the Proof of Concept development. All non-critical support and future enhancements for the ODCT will be suspended during the implementation of the Proof of Concept.	No non-critical work will be performed on ODCT for the duration of the Track A project. If development resources are required during the development phase of this project, schedule impacts will be realized.
4.4.1.8	Mock data will be used for school and team information defining the Value Added scores for the POC.	REIL score calculations may not be deemed official records or used in any way to provide performance evaluation to impacted teachers.
4.4.1.9	A MCESA representative shall be given a mocked-up teacher and principal login to demonstrate login capabilities.	If not true, then a principal or teacher representative will need to be engaged to perform the demonstration.

4.4.2 Dependencies

This section describes dependencies between the module for which these requirements and specifications are written and other applications, databases, and/or processes.

ID	Dependency
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4.4.2.1	BFK Link is dependent upon data manually prepared by school district and/or MCESA personnel. This data also requires that the student and teacher be linked and included in the import files.
4.4.2.2	The REIL Scorecard is dependent upon data manually prepared by BASIS Research. Example extracts have been used to identify requirements at this time.



4.5 Success Criteria

The success criteria for the MCESA REIL POC Project

Ability to demonstrate to US Department of Education that there is a working prototype of the following items:

ID	Constraint
4.5.1	Secured user authentication and login to REIL Score display and verification tools as a teacher or principal
4.5.2	Display of REIL Scores for 4th grade 2011-2012 MCESA-REIL district Teachers and Principals
4.5.3	Student-Teacher Course Connection and Roster Verification for 4th grade Reading & Math participants
4.5.4	Observation Data from 2011-12 school year (by cycle) Teacher Verification

4.6 Deliverables

ID	Constraint
4.6.1	Functioning web based solutions in MCESA Training environment that are accessible to external (to non-ADE network) users
4.6.2	Teacher login and authentication to view REIL Score results (Secure Account Management)
4.6.3	Graphical User Interface (GUI) for Teacher & Principal review of REIL Score and related components (ODCT, AIMS, Roster)
4.6.4	Battelle for Kids – Student-Teacher Roster Verification Tool (Data Upload, Display with email response)
4.6.5	ODCT – Observation Data Verification Tool (Display with email response)





4.7 Project Risks

This section describes the identified risks to success as determined during the course of requirements gathering and definition. The business may already be aware of some of these, but they will be listed here as a reminder and confirmation of MCESA business and ADE Information Technology awareness, even if the current status is “Retired”.

ID	Project Risk	Implications	Severity	Status
4.7.1	Need to finalize the BASIS Research file format that will be supplied.	If the file format is not finalized it will be difficult to complete the database design and import process in support of the REIL Performance Scorecard.	High	Closed
4.7.2	Need to ensure access to BFK technical resource to ensure proper installation and setup of the BFK Link product.	If a resource is not provided, then the implementation may be more at risk due to the lack of knowledge of this product and the aggressive timeline to turn this around.	Medium	Open
4.7.3	What is the certainty of BFK Link software being supported in the future?	If the funding of BFK by the various foundations ceases, then an alternative solution will need to be selected and implemented instead.	Low	Open
4.7.4	Does BFK Link satisfy broader business requirements of Track B and C?	If the product does not, then this software will only be useful for the Track A project.	Low	Open
4.7.5	If BFK Link needs to be installed on dedicated servers then this will require additional time to make available for external access.	If not, then it will reduce the time and effort to complete this task.	Medium	Open



5 Business Requirements

The priority definitions used in the business requirements are listed below. A traceability attribute is included to map the business requirement back to the goals that were defined in the scope statement for Track A.

Priority	Description
Critical	This level requirement meets MCESA REIL grant criteria and must be included in the initial release of the project.
High	This level requirement meets criteria to be vetted with business owners and stakeholders before inclusion in the initial release of the project.
Medium	This level requirement is considered a “nice to have” item that has been vetted with customer for possible inclusion within a future release of the project.
Low	This level requirement meets criteria to be excluded from initial release of project, but should be tracked as a potential enhancement to be vetted with business owners and stakeholders for possible inclusion with a future release of the project.

5.1 Import Student-Teacher Data into BFK Link Database

BR-1	
Priority:	Critical
Release:	Initial
User Story:	As a MCESA Administrator, I want to import flat data files provided by the School District and/or MCESA into BFK Link in order to set up the proof of concept for student roster data verification.
Module:	Track A Project
Traceability:	Goal 1 – Proven capability to accurately connect 4 th grade teachers to their respective students for 2011-12 school year observation and assessment data collected.
Description:	The system shall provide the capability to allow the logged in User with appropriate authority or permissions to import of flat data files into BFK Link using manually prepared and provided by the School District and/or MCESA. <i>Note: BFK does provide an import file upload tool and therefore no development work should be required.</i>
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:





BR-1	
5.1.1	<p>BFK Link requires multiple files in its import process. It should be expected that all file naming conventions followed exactly as the import process expects. It should be expected that all fields should be included in the respective import files regardless if they are supplied or not. If the field is not to be populated then it may be blank or null as per BFK specs. The import files consist of the following:</p> <ul style="list-style-type: none"> • Organization - general information about each school in each district • Student - each student in each school including demographics • Employee - each employee (i.e. teachers, principals, etc.) in each school • Student Roster - each student in each class section
5.1.2	The Organization import file <u>requires</u> the following fields to be present: DistrictID, DistrictName, SchoolID, SchoolName, and PrincipalEmail.
5.1.3	The Student import file <u>requires</u> the following fields to be present: DistrictID, StudentID, StateStudentID, LastName, FirstName, Grade, Gender, and BirthDate.
5.1.4	The Employee import file <u>requires</u> the following fields to be present: EmployeeID (StakeholderID), DistrictID, LastName, FirstName, and EmployeeEmail (Email). Other fields that may be optionally provided include Middle Name, Birthdate, SchoolID, InitialPaswd (blank) and Job Title.
5.1.5	The Student Roster import file <u>requires</u> the following fields to be present: DistrictID, SchoolID, EmployeeID, CourseID, CourseName, TestedSubjectArea, SectionNumber, Term, and StudentID.

5.2 Import BASIS Research Data into MCESA Database

BR-2	
Priority:	Critical
Release:	Initial
User Story:	As an ADE Administrator, I want to import flat data files provided from BASIS Research into the the MCESA Database in order to allow Evaluatees and Evaluators to view REIL Scores in the Scorecard that were calculated by BASIS Research.
Module:	Track A Project
Traceability:	Goal 3 – Proven ability to gather and upload data from ODCT, AIMS, and teacher/student connection in extractable format for BASIS upload.
Description:	<p>The system shall provide the capability to allow the import of flat data files provided from BASIS Research into the MCESA Database for the population of the REIL Performance Scorecard.</p> <p><i>Note: It may be necessary to load/reload the data until the file content is finalized.</i></p>
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:





BR-2

5.2.1 BASIS Research will provide one import file to ADE as follows:

- REIL Scorecard - all information needed to produce the REIL Performance Scorecard

5.2.2 The REIL Scorecard import file requires the following fields to be present:

Field Name	Field in Scorecard Visual
id_t	
schid	
distid	
grade	
firstname	Teacher First Name
lastname	Teacher Last Name
academic_yr	Academic Year
dist	District
school	School
assignment	Assignment
exp_t	Teaching Experience
loi_tot	Learning Observation Instrument - Component Score
ind_grwth	Individual REIL Growth - Component Score
team_grwth	Team REIL Growth - Component Score
sch_grwth	School REIL Growth - Component Score
loi_tot_weight	Learning Observation Instrument - Component Weight
ind_grwth_weight	Individual REIL Growth - Component Weight
team_grwth_weight	Team REIL Growth - Component Weight
sch_grwth_weight	School REIL Growth - Component Weight
loi_tot_pts	Learning Observation Instrument - REIL Points Earned
ind_grwth_pts	Individual REIL Growth - REIL Points Earned
team_grwth_pts	Team REIL Growth - REIL Points Earned
sch_grwth_pts	School REIL Growth - REIL Points Earned
loi_tot_pos	Learning Observation Instrument - Total REIL Points Possible
ind_grwth_pos	Individual REIL Growth - Total REIL Points Possible
team_grwth_pos	Team REIL Growth - Total REIL Points Possible
sch_grwth_pos	School REIL Growth - Total REIL Points Possible
total_reil	Total REIL Points Earned
total_pos	Total REIL Points Possible

5.3 Secured Login Credentials

BR-3

Priority:	Critical
Release:	Initial
User Story:	As an Evaluator or Evaluatee, I want to be able to login with secured credentials in order to access and view the Scorecard.
Module:	Track A Project
Traceability:	Goal 2 – Provide access to MCESA-REIL observation and roster verification information to Teachers, Principals, and Administrators at LEA site.
Description:	The system shall provide the capability for an authorized User to sign-on with their login credentials with the role or permissions they have been assigned. Note: Login and access to the Scorecard should be limited to principals and teachers. The implementation is “open” to development as to the fastest but most stable approach to take to allow the user to login and access the new Scorecard display either as a standalone application, integrated with ODCT, or via another viable option.
Exceptions:	None defined at this time
Rules:	The following business rules apply to this requirement:





BR-3

5.3.1 The system shall validate that the User ID and Password combination are in the database for an active user account otherwise access will be denied.

5.4 Browse Teachers

BR-4

Priority:	Critical
Release:	Initial
User Story:	As an Evaluator (e.g. Principal), I want to browse my assigned teachers in order to locate, select, and view their Score in the Scorecard display.
Module:	Track A Project
Traceability:	Goal 2 – Provide access to MCESA-REIL observation and roster verification information to Teachers, Principals, and Administrators at LEA site.
Description:	The system shall provide the capability for a person to view a list of all their assigned evaluatee (e.g. Teacher).
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:
5.4.1	An Evaluator (e.g. Principal) should be able to view all available teachers assigned to them in their school.
5.4.2	This feature <u>should not</u> be available to an Evaluatee (i.e. Teacher).

5.5 View REIL Performance Scorecard

BR-5

Priority:	Critical
Release:	Initial
User Story:	As an Evaluatee (e.g. Teacher), I want the ability periodically to verify my Scorecard for the school year in order to ensure accuracy and completeness.
Module:	Track A Project
Traceability:	Goal 4 – Gather BASIS data with calculated REIL Score and display it in a web based environment for Principals and Teachers to review and verify.
Description:	<p>The system shall provide the capability for a logged in User to access and view Scorecard display appropriate to the role and/or permissions they have been assigned.</p> <p>Additionally the system should provide:</p> <ul style="list-style-type: none"> • navigation link in order for the User to access and view supporting information (i.e. learning observations and student rosters). • a method for a principal to select teachers assigned to them in order to view the teacher’s Scorecard. <p>Notes:</p>





BR-5	
	<ol style="list-style-type: none"> Please refer to Appendix Section A1 for Scorecard data requirements and detail specifications. The Scorecard <u>will not</u> feature any drill down or navigation to further detailed reports. BASIS Research will provide <u>all of the necessary data</u> having already performed all calculations which will be included in the import file that they provide ADE. The file that they provide will contain the pre-calculated results which should display for the teacher to which it relates. Hence: <u>no other calculations</u> should need to be performed or developed by ADE.
Exceptions:	None defined at this time
Rules:	The following business rules apply to this requirement:
5.5.1	An Evaluatee (e.g. Teacher) should only be able to view their own Scorecard.
5.5.2	An Evaluator (e.g. Principal) should be able to view the Scorecard for any teacher assigned to them in their school.

5.6 Verify Learning Observation Data

BR-6	
Priority:	Critical
Release:	Initial
User Story:	As an Evaluatee (e.g. teacher), I want to periodically review my completed learning observations that were recorded by my evaluator (e.g. principal) in order to verify the accuracy of the data and correlation to the Scorecard.
Module:	Track A Project
Traceability:	Goal 2 – Provide access to MCESA-REIL observation and roster verification information to Teachers, Principals, and Administrators at LEA site.
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:
5.6.1	An Evaluator (e.g. Principal) should be able to view completed learning observations for any teacher assigned to them in their school.
5.6.2	An Evaluatee (e.g. Teacher) will see exactly what an Evaluator (e.g. Principal) should see on the Summative Cycle Report.

5.7 Verify Student Roster Data

BR-7	
Priority:	Critical
Release:	Initial
User Story:	As an Evaluatee (e.g. teacher), I want to periodically review my student roster data in order to verify the accuracy of the data and correlation to the Scorecard.





BR-7	
Module:	Track A Project
Traceability:	Goal 1 – Proven capability to accurately connect 4 th grade teachers to their respective students for 2011-12 school year observation and assessment data collected. Goal 2 – Provide access to MCESA-REIL observation and roster verification information to Teachers, Principals, and Administrators at LEA site.
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:
5.7.1	An Evaluator (e.g. Principal) should be able to view student roster data for any teacher assigned to them in their school..



6 NON-FUNCTIONAL REQUIREMENTS

The availability, backup and restore, capacity, resource constraints, response time, scalability, security, and stability are in accordance with the limited life of this proof of concept project as noted in the Scope Statement document.

6.1 Availability

ID	Requirement
6.1.1	The system needs to be accessible 24x7x365 except for previously scheduled maintenance windows.

6.2 Backup and Restore

ID	Requirement
6.2.1	The application server and the associated data should have backup and restore capabilities that are part of the ADE Information Technology Department’s approved server backup plan.
6.2.2	In the event of a catastrophic failure, the application should be fully functional within 24 hours.
6.2.3	Business expectations for restoration capabilities are that backup and restore processes will be tested for viability once a quarter, beginning with Q3 2012.

6.3 Capacity

The current capacity that the system needs should be based in part on the following estimated for the initial release of the Vi Teacher Data Verification module. The future capacity is the projected or estimated requirements.

6.3.1 Current

ID	Requirement
6.3.1.1	# of Logged In Users. The number of people expected to need login credentials is less than ten for this proof of concept project.

6.3.2 Forecast

ID	Requirement
6.3.2.1	# of Logged In Users. Not applicable.
6.3.2.2	The infrastructure should support the storage capacities required for this proof of concept.
6.3.2.3	A mutually agreeable archiving strategy has yet to be determined between ADE and MCESA; however, the business has determined that whatever archive management approach is decided upon, archived data must be accessible within a reasonable amount of turnaround time, secure, and available to users of the Scorecard. The data to be archived should include the import files as well as the databases that house the respective BFK Link and BASIS Research import file data used in the Proof of Concept. See General Constraint 4.4.3.





6.4 Response Time

ID	Requirement
6.4.1	Page refresh should be at ± 10 seconds.

6.5 Scalability

This section describes the business expectations for IT management of the anticipated growth for the Track A Project. Since this is a Proof of concept project there should not be any need for the overall infrastructure to support vertical and horizontal scalability.

6.5.1 User Scalability

ID	Requirement
6.5.1.1	Not Applicable

6.5.2 Application Scalability

ID	Requirement
6.5.2.1	Not Applicable

6.5.3 Data Scalability

ID	Requirement
6.5.3.1	Not Applicable

6.6 Security

6.6.1 Authorization and Access Controls

This Authorization and Access Control requirements associated with the roles and permissions for the Scorecard component of the Track A Project should be similar as to those defined for the ODCT to ensure consistency in the overall solution. The BFK Link provides its own built-in Authorization and Access Control functionality and will be managed separately.

6.7 Stability

ID	Requirement
6.7.1	The system should be designed such that time-out events and other unexpected system errors are non-occurring or minimally occurring events, with the expectation that the performance is that of a test environment.

6.8 Minimum User System Capabilities

ID	Requirement
6.8.1	The system should be designed such that it includes the best practices recommendations of a User Centric Design Team to ensure consistency, ease of navigation and intuitiveness.

7 Glossary of Terms

For definitions of terms, acronyms, and abbreviations used in this document, please refer to the DMAR BRD.





APPENDIX A. Supporting Documentation

A1. Scorecard Data Requirements & Detail Specifications

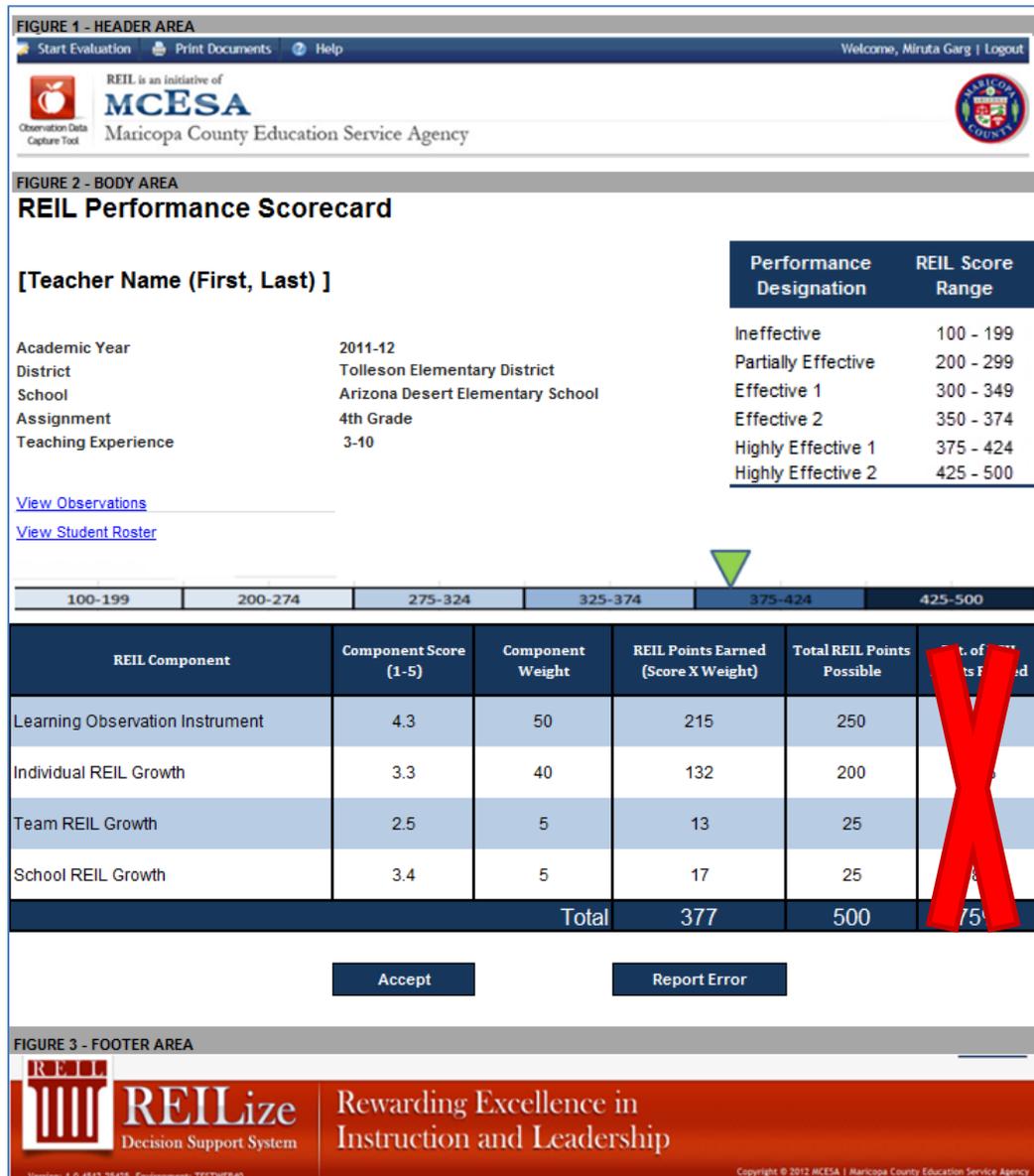
The following figure lists the sections of the proposed Scorecard along with data requirements and detail specifications. [Note: See BR 5.5 for detail business requirements and business rules definition. This proposed wireframe/mockup does not necessarily reflect UCD best practices or recommendations.](#)

Section of Report	Data Requirements & Detail Specifications
Header – Banner	<ul style="list-style-type: none"> • Start Evaluation – navigation link • Print Documents – navigation link • Help – navigation link • User Name (Logged In User Name) – First Name concatenated with Last Name • Logout – navigation link used to exit the system
Header – Branding	<ul style="list-style-type: none"> • Observation Data Capture Tool icon • REIL Initiative MCESA co-branding images • Maricopa County seal image • Report Title – REIL Performance Scorecard • Teacher – drop down list (displays for Principal’s only to select any teacher assigned to them)
Header – User Information	<ul style="list-style-type: none"> • Teacher – First Name concatenated with Last Name • Academic Year – Academic school year • District – District Name associated with the teacher • School – School Name associated with the teacher • Assignment – Grade Level of teacher • Teaching Experience – Teaching experience of teacher
Body - REIL Score	<ul style="list-style-type: none"> • REIL Score Range Gauge – Should consist of the Performance Designation and associated REIL Score Range (see mockup) for each of the six levels of performance. • View Observations <ul style="list-style-type: none"> • Teacher: should provide navigation to view observation ratings recorded in the ODC • Principal: Should navigate the principal to the ODC Teacher Selection Page, where they may select that teacher in order to view their reports. If possible, it would be preferable if the page loaded with the teacher already selected. • View Student Roster – should provide navigation to view and verify accuracy of student roster data • Data grid should include the following data points from the BASIS Research import file for each of the REIL Components: <ul style="list-style-type: none"> ○ REIL Component should contain one of the following values: Learning Observation Instrument (i.e. observation data), Individual REIL Growth (i.e. mockup data), Team REIL Growth (i.e. mockup data), and School REIL Growth (i.e. AIMS data) ○ Component Score should contain the actual score recorded which may be a value from 1 to 5 with one significant decimal digit ○ Component Weight should contain the weight attached to the Component which may be from 1 to 50. ○ REIL Points Earned should contain the pre-calculated result of Score * Weight ○ Total REIL Points Possible should contain the maximum score for the measure ○ Total should contain the cumulative or average for Score, Weight, REIL Points Earned, and Total REIL Points Possible for all Measures within the Learning Observations component. • Total should contain the cumulative or average for REIL Points Earned and Total REIL Points Possible for all REIL Components. <ul style="list-style-type: none"> ○ Accept. If this is selected, then the system should log that the teacher has accepted their Scorecard in its entirety. ○ Report Error. If this is selected, then the system should log that the teacher has reported an error with their Scorecard and send an alert and/or email to their principal. ○ Business rules for Accept and Report Error buttons: <ul style="list-style-type: none"> ○ Both buttons should display for teachers. ○ Both buttons should only display for teachers if the teacher has not yet accepted the Scorecard results. ○ Only the Report Error button should display for principals. ○ When Accept button is selected then <ul style="list-style-type: none"> ○ Have the system display a confirmation popup that could contain a message comparable to “Please click on the OK button in order to indicate understanding and acceptance of both your learning observation and student roster in the REIL Performance Scorecard. If you are not certain, then please check your learning observations and/or student roster data first and return here later. Click the Cancel button to exit.” ○ Have the system display “Accepted on “ <date/time>” somewhere on the REIL Performance Scorecard page





Section of Report	Data Requirements & Detail Specifications
	<p>When Report Error button is selected then</p> <ul style="list-style-type: none"> Use this message as a possible email template which the User could customize prior to sending "<first name> <last name> from <School name> in <School district> has reported an error for their REIL Performance Scorecard on <Date> at <time>." Have the system display "Error reported on " <date/time>" somewhere on the REIL Performance Scorecard page <p><i>Note: Functionality associated with these two buttons that may be "nice to have" are listed below in the next section and could be developed if MCESA confirms these would be needed and time permits.</i></p>
Footer – Banner	<ul style="list-style-type: none"> REIL Initiative MCESA co-branding images Build/Version # Environment – "Training" Copyright statement





REILize
Decision Support System

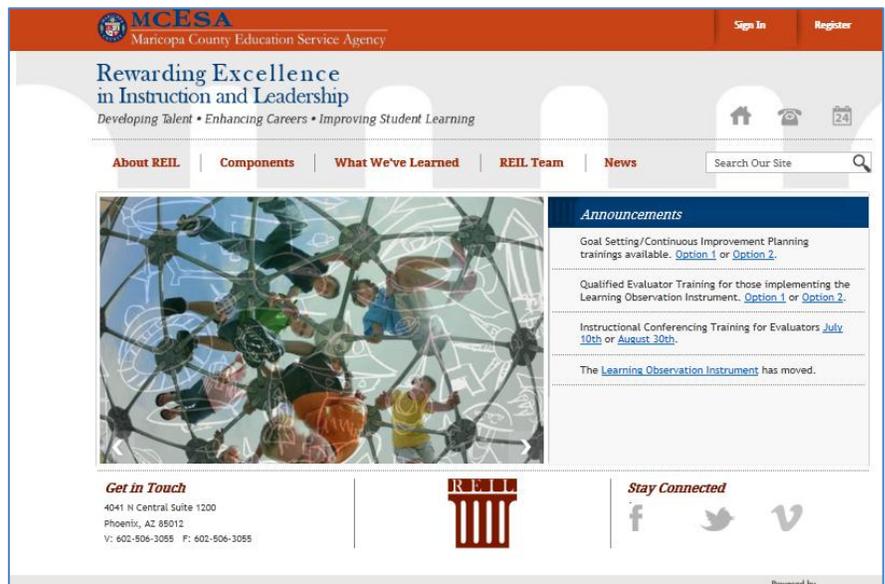
Program: MCESA REILize Decision Support System
Module: Track A Project
Release:
Document: Project Definition Document
Version: 2.3

A2. Script

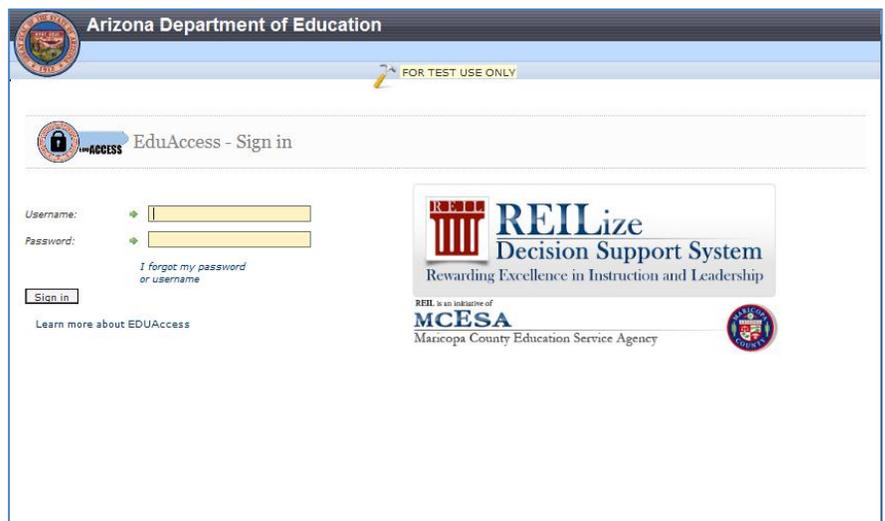
Developer Notes: These screens are intended as a guide for needed elements and functions. Do not follow the UI design literally, please use the existing style established for the ODCT Teacher. All language shown in new modals is only suggested, please use the best language that will communicate the function to the user. **Please note that the final column for the REIL Performance Score Card “Pct. of REIL Pts. Earned” has been removed as a requirement. That column has been struck out of the screenshots with a red X, and should not appear in the tool.**

Teacher View

Evaluatee visits MCESA Website, clicks Learning Observation Instrument link.



Evaluatee logs in using EduAccess.





Evaluatee landing page is the REIL Performance Scorecard.

Interactive elements:

1. Link: View Observation
2. Link: View Student Roster
3. Button: Accept
4. Button: Report Error

FIGURE 2 - BODY AREA
REIL Performance Scorecard

[Teacher Name (First, Last)]

Academic Year: 2011-12
District: Tolleson Elementary District
School: Arizona Desert Elementary School
Assignment: 4th Grade
Teaching Experience: 3-10
[View Observations](#)
[View Student Roster](#)

Performance Designation	REIL Score Range
Ineffective	100 - 199
Partially Effective	200 - 299
Effective 1	300 - 349
Effective 2	350 - 374
Highly Effective 1	375 - 424
Highly Effective 2	425 - 500

REIL Component	Component Score (1-5)	Component Weight	REIL Points Earned (Score X Weight)	Total REIL Points Possible	Percentage
Learning Observation Instrument	4.3	50	215	250	86%
Individual REIL Growth	3.3	40	132	200	66%
Team REIL Growth	2.5	5	13	25	52%
School REIL Growth	3.4	5	17	25	68%
Total			377	500	75%

Buttons: Accept, Report Error

FIGURE 3 - FOOTER AREA

REILize Decision Support System
Rewarding Excellence in Instruction and Leadership
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When evaluatee clicks the Accept button, the system displays modal that contains a message comparable to "Click OK to indicate understanding and acceptance of both your learning observation and student roster in the REIL Performance Scorecard. If you are not certain, then please check your learning observations and/or student roster data first and return here later. Click the Cancel button to exit."

FIGURE 2 - BODY AREA
REIL Performance Scorecard

[Teacher Name (First, Last)]

Academic Year: 2011-12
District: Tolleson Elementary District
School: Arizona Desert Elementary School
Assignment: 4th Grade
Teaching Experience: 3-10
[View Observations](#)
[View Student Roster](#)

Performance Designation	REIL Score Range
Ineffective	100 - 199
Partially Effective	200 - 299
Effective 1	300 - 349
Effective 2	350 - 374
Highly Effective 1	375 - 424
Highly Effective 2	425 - 500

Please click OK to indicate understanding and acceptance of both your learning observation and student roster in the REIL Performance Scorecard. If you are not certain, click Cancel and check your learning observations and/or student roster data first and return here later.

Buttons: OK, Cancel

REIL Component	Component Score (1-5)	Component Weight	REIL Points Earned (Score X Weight)	Total REIL Points Possible	Percentage
Learning Observation Instrument	4.3	50	215	250	86%
Individual REIL Growth	3.3	40	132	200	66%
Team REIL Growth	2.5	5	13	25	52%
School REIL Growth	3.4	5	17	25	68%
Total			377	500	75%

Buttons: Accept, Report Error

FIGURE 3 - FOOTER AREA

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When the evaluatee clicks the Report Error button, the system displays the Report an Error modal.

FIGURE 2 - BODY AREA
REIL Performance Scorecard

[Teacher Name (First, Last)]

Academic Year
District
School
Assignment
Teaching Experience

[View Observations](#)
[View Student Roster](#)

REIL Component	Earned (weight)	Total REIL Points Possible	Percentage
Learning Observation Instrument	4.3	50	215
Individual REIL Growth	3.3	40	132
Team REIL Growth	2.5	5	13
School REIL Growth	3.4	5	17
Total			377

Performance Designation **REIL Score Range**

Ineffective	100 - 199
Partially Effective	200 - 299
Effective 1	300 - 349
Effective 2	350 - 374
Highly Effective 1	375 - 424
Highly Effective 2	425 - 500

Report An Error

Please identify the data fields containing incorrect information. Provide both the incorrect data and the correction in the details section at the bottom of this screen.

Your Name: MCESA User
Your Email:

Please list the **field name** with the incorrect data, the **incorrect data value**, and the **correction you expect**.

Submit Cancel

FIGURE 3 - FOOTER AREA

REILize Decision Support System
Rewarding Excellence in Instruction and Leadership

When the evaluatee clicks Submit on the Report and Error modal, a success message appears.

FIGURE 2 - BODY AREA
REIL Performance Scorecard

[Teacher Name (First, Last)]

Academic Year: 2011-12
District: Tolleson Elementary District
School: Arizona Desert Elementary School
Assignment: 4th Grade
Teaching Experience: 3-10

[View Observations](#)
[View Student Roster](#)

REIL Component	Earned (weight)	Total REIL Points Possible	Percentage
Learning Observation Instrument	4.3	50	215
Individual REIL Growth	3.3	40	132
Team REIL Growth	2.5	5	13
School REIL Growth	3.4	5	17
Total			377

Performance Designation **REIL Score Range**

Ineffective	100 - 199
Partially Effective	200 - 299
Effective 1	300 - 349
Effective 2	350 - 374
Highly Effective 1	375 - 424
Highly Effective 2	425 - 500

Success
Your save was successful!

Accept Report Error

FIGURE 3 - FOOTER AREA

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When the evaluate clicks the View Observation link, the user sees Summative Cycle Report as the Evaluator user sees it.

Interactive elements:

1. Return to Scorecard – returns user to the REIL Performance Scorecard page.

Summative Cycle Report

Teacher: Nicole A. Anguiano
School: Carl Hayden High School
District: Phoenix Union High School District

RUBRIC	POINTS EARNED	POINTS POSSIBLE
Content	18	25
Professionalism	15	20
Instructional Strategies	19	30
Learner Engagement	18	25
Learning Community	12	20
Points	82	120
Cycle Summative Total	POINTS EARNED: 189	POINTS POSSIBLE: 240

[Return to Scorecard](#)

Get in Touch
4041 N Central Suite 1200
Phoenix, AZ 85012
T: 402-506-3055 F: 402-506-3055

Stay Connected
f t v

When the evaluate clicks the View Student Roster link, they are taken to the BFK application.

BFK

- Roster Verification Process happens here all with inside BFK software.
- The results of this will be explained to the DOE of how this relates to the REIL Score components

Battelle for Kids | DEMO

Student Roster

I taught these students





REILize
Decision Support System

Program: MCESA REILize Decision Support System
Module: Track A Project
Release:
Document: Project Definition Document
Version: 2.3

Principal View

Evaluator visits MCESA Website, clicks Learning Observation Instrument link.

Evaluator lands on Evaluation Start page. Evaluator has the option to View REIL Scores.

Evaluator makes the appropriate selections to proceed to the REIL Performance Scorecard





Evaluator will select a Teacher on the REIL Performance Scorecard page.

The screenshot shows the REIL Performance Scorecard interface. At the top, there are navigation links: Start Evaluation, Print Documents, and Help. The user is logged in as Marina Stover. The page header includes the MCESA logo and Maricopa County Education Service Agency name. The main heading is 'REIL Performance Scorecard'. Below this is a dropdown menu labeled 'SELECT A TEACHER' with a search prompt 'Search by Last Name or ID number -->'. A footer banner contains the REILize logo and the slogan 'Rewarding Excellence in Instruction and Leadership'.

Evaluator sees the REIL Scorecard for the selected Evaluatee.
 Evaluator may select another evaluate from the dropdown, which will refresh the Scorecard to the selected evaluatee.

Interactive elements:

1. Dropdown: Select a Teacher
2. Link: View Observations
3. Button: Report Error
4. Link: View Student Roster

This screenshot shows the REIL Performance Scorecard for John Smith. The dropdown menu is now populated with 'Smith, John'. To the right of the dropdown is a table for Performance Designation and REIL Score Range. Below the dropdown, a summary table lists the evaluator's details: Academic Year (2011-12), District (Tolleson Elementary District), School (Arizona Desert Elementary School), Assignment (4th Grade), and Teaching Experience (3-10). A 'View Student Roster' link is present. A score range bar highlights the 375-424 range. The main scorecard table is as follows:

REIL Component	Component Score (1-5)	Component Weight	REIL Points Earned (Score X Weight)	Total REIL Points Possible	% of Total
Learning Observation Instrument	4.3	50	215	250	
Individual REIL Growth	3.3	40	132	200	
Team REIL Growth	2.5	5	13	25	
School REIL Growth	3.4	5	17	25	
Total			377	500	75%

A red 'X' is overlaid on the right side of the scorecard table. A 'Report Error' button is located at the bottom of the scorecard area.





REILize
Decision Support System

Program: MCESA REILize Decision Support System
Module: Track A Project
Release:
Document: Project Definition Document
Version: 2.3

When the evaluator clicks the View Observations link, the user is taken to the existing ODC Teacher Selection screen. From here, the evaluator may choose a teacher and view the Summative Cycle Report.

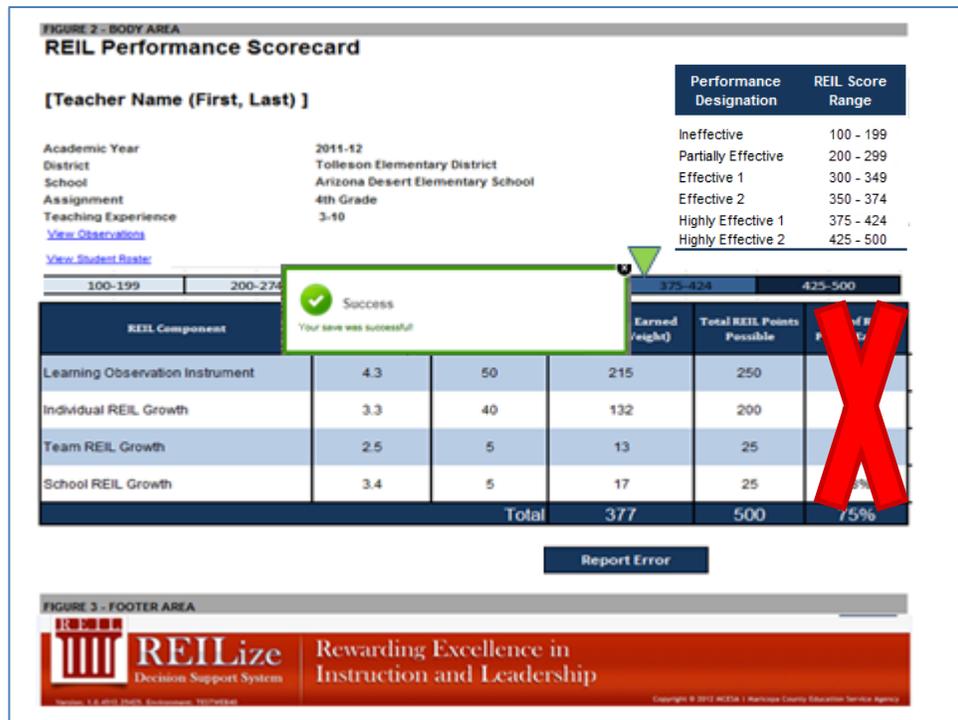
Please note: It would be preferable if the teacher selected in the previous page were automatically selected when the user reached this page, so that they do not have to select the name again.

When the evaluator clicks the Report Error button, the system displays the Report an Error modal





Evaluator user sees a Success message after submitting an Error Report.



When the evaluator clicks the View Student Roster link, they are taken to the BFK application.

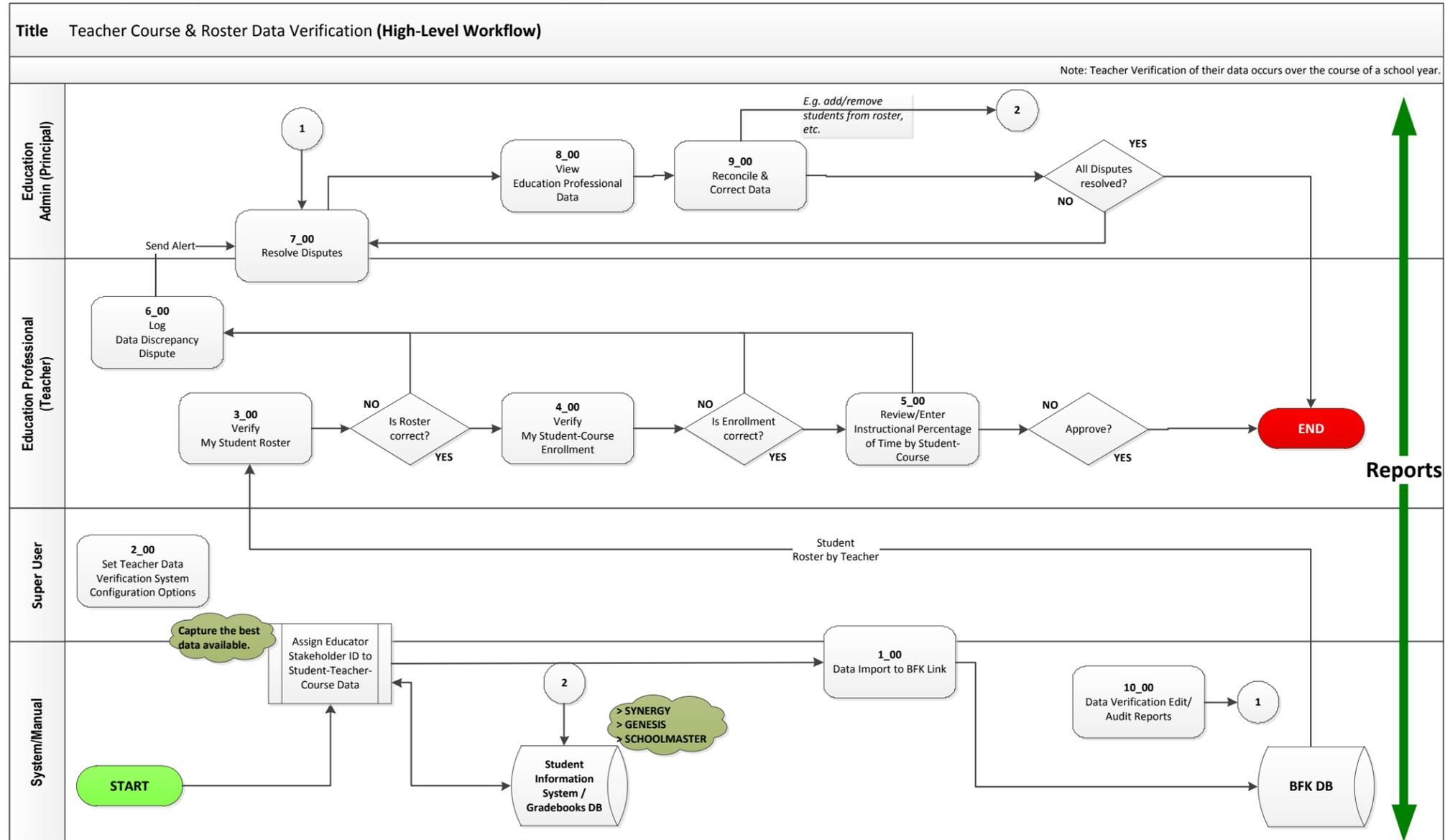
BFK Screens here

- Roster Verification Process happens here all with inside BFK software.
- The results of this will be explained to the DOE of how this relates to the REIL Score components



A3. Teacher Data Verification High-Level Workflow

The figure in this section defines the workflow that may be required to support the teacher's course and roster data verification process. This supersedes the workflow included in the TDV BRD Appendix.
Note: This diagram may not describe all verifications that will actually be performed.



ⁱ See TDV BRD Baseline v1.0