

# **Community Collaboration Project**

# Winter-Spring 2012

Alliance for Education

University of Washington Bothell

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## INTRODUCTION

The Education Research Data Center (ERDC)<sup>1</sup> was established with the mission to, "to promote a seamless, coordinated preschool-to-career (P-20) experience for all learners by providing objective analysis and information." In 2009, the United States Department of Education Institute of Education Sciences awarded a \$17.3 million grant to Washington State to continue to work on the design and implementation of the P-20 longitudinal data system. The goal of the system is to "provide a wider array of data, improved analytic capability, and greater access while continuing to include protections for individual privacy and confidentiality in compliance with state and federal regulations.<sup>2</sup>" ERDC will become a data warehouse for educational data across the state.

The data provided by ERDC will be extremely valuable for Alliance For Education (A4E) as is moves to achieve it mission to "To ensure every child in Seattle Public Schools is prepared for success in college, career and life.<sup>3</sup>" Currently, A4E must manually locate, parse, and collate numerous different data sources in order to create a data set that serves their mission. In the future, however, the ERDC would become the data custodian of the data from those 50 sources and many more. In short, A4E will have one source of data with information about many more categories than is currently available. Furthermore, the process of accessing that data will be automated which will increase accuracy and reduce staff costs.

The purpose of this roadmap is to provide A4E management with a timeline for integrating with the ERDC. This guide outlines both the internal processes and decision points as well as the touch points with ERDC that will be necessary to move toward automated data collection.

NAME	ORGANIZATION	ROLE / TITLE	CONTACT INFORMATION
Carol Jenner, Ph.D.	ERDC	Data Architect	(360) 902-0601
Melissa Beard	ERDC	SLA/ Contracts	(360) 902 0584
Mike Barta	UW Bothell	A4E representative to ERDC	bartab@uw.edu
Karen Tollenaar Demorest	A4E	Vice President, Programs	(206) 205-0333
			karen@alliance4ed.org

### POINTS OF CONTACT

<sup>&</sup>lt;sup>1</sup> http://www.erdc.wa.gov/

<sup>&</sup>lt;sup>2</sup> http://www.erdc.wa.gov/

<sup>&</sup>lt;sup>3</sup> http://www.alliance4ed.org/aboutus/strategic-plan.asp

# **CURRENT CAPACITY**

When the ERDC data store comes online, A4E is going to need some database programming / graphical user interface (GUI) programming expertise to build a tool that can interface with the ERDC. This tool will grab the data from the ERDC and present the data for use by A4E in their projects. The creation of this tool will require some programming capabilities (SQL / PHP / HTML etc.) or might take the form of an Excel add-in that would require Visual Basic programming skills. In any case, A4E does not have those skills in house so the software development will be carried out by a vendor. A4E's role will be to outline their own needs and wants and to create the request for proposal (RFP).

# DATA REQUIREMENTS

The ERDC is a state level initiative with federal funding. It will be Washington State's single point of data for a range of P-20 (preschool to graduate school) data. The goal is to gather data from federal, state and non-governmental organizations on all contact points that a student has while in the public school system.

This data will be made available in aggregate in the form of pre designed 'cubes'. This aggregated data will contain no personally identified information (PII). The cubes will allow data consumers to view commonly requested datasets with minimal requirement specification time. The process for requesting data cubes is yet to be determined.

If a data consumer needs a dataset not commonly available or requires access to PII data, the ERDC Data Steward will act as a liaison between ERDC and the customer. Further information on this process is yet to be determined.

### TIMELINE

The latest information indicates that the ERDC had not yet signed a contract for the development of the data warehouse. Tentative dates indicate a beta release in September 2012 and public release Spring of 2013. The beta release would not have a complete data set. Instead, it will likely contain only post-secondary data.

The ERDC is planning on having their data warehouse vendor use the software development process known as "Agile". This should make planning and estimation more transparent than might be expected from a typical government project.

### DATA REQUIREMENTS ANALYSIS – SEPTEMBER 2012 (ESTIMATED)

#### TASK 1

Description:	Identify required data items from existing data spreadsheet
Owner:	Karen Tollenaar Demorest
Dependency:	None

Each column within the existing spreadsheet shall be reviewed and a determination made as to its ongoing utility. If the column's data item is required it shall be entered into a table of data requirements as outlined in the table below. Developing these requirements will help facilitate discussions with the ERDC staff who will have to develop the interface (a.k.a. "cube") and the contract for A4E's use of that data.

DATA ITEM	DESCRIPTION
Data Name	The name used by A4E to uniquely refer to this data item
Data Format	What is the storage format: Boolean, Integer or string most likely
Data Type	What does the data represent (grade, SES, FARL, etc.)
Data Purpose	Why is this data important to A4E
Current Data Source	Where is the data currently acquired
Level of Analysis	Is the data individual, school, district or state level of analysis
PII	Is the data item personally identifiable information

#### TASK 2

Description:	Determine availability of required data
Owner:	Karen Tollenaar Demorest
Dependency:	Melissa Beard

The required data items shall be sent to ERDC for a determination of which items will be available in current and immanent ERDC releases. For unavailable data items a plan shall be put in place specifying how data from existing sources will be integrated into the dataset returned from ERDC. The ERDC dataset shall be considered the canonical source of data. Merged data from legacy sources will over time diminish as a concern. Existing or planned public data cubes that contain A4E's required data shall be identified to reduce work by both parties.

#### TASK 3

Description:	Determine PII exposure and develop SLA
Owner:	Karen Tollenaar Demorest
Dependency:	Melissa Beard
	A4E SLA Signatory Authority

The required data items shall be reviewed with ERDC to identify any unexpected expose of Personally Identifiable Information (PII). This review should also establish the contractual obligations and process for acquiring the required data from ERDC. This discussion will likely culminate with the creation of a Service Level Agreement (SLA) between ERDC and A4E. The SLA shall be sent for review by appropriate A4E authorities.

TASK 4

Description:	Confirmation of ERDC release estimates
Owner:	Karen Tollenaar Demorest
Dependency:	Carol B. Jenner Ph.D.

ERDC release dates shall be confirmed for:

- 1. Release of public web services definition language (WSDL) or equivalent web service descriptor. This language is a necessary for A4E's vendor to know how to interface with the ERDC data warehouse.
- 2. Date of availability of the required data identified in Task 1

### **REQUEST FOR PROPOSAL – DECEMBER 2012 (ESTIMATED)**

#### TASK 5

Description:	Scope of work document
Owner:	Karen Tollenaar Demorest
Dependency:	None

Following A4E contracting norms, a scope of work document shall be created detailing the following deliverables:

- 1. An Excel plugin
  - a. Written in the C# programming language (to reduce maintenance costs)
  - b. With a property screen (to allow for changes of the ERDC WSDL)
  - c. Which queries ERDC web service to populate required data items
  - d. For queries not yet supported by ERDC data the query shall be coded against WSDL
  - e. Errors returned from supported data item queries shall be presented to user
  - f. Errors returned from unsupported queries shall be suppressed
  - g. Data will be populated into the spreadsheet as defined by A4E
  - h. Unavailable data will be left blank
- 2. Windows installer for Excel plugin

Note that merging of additional data from legacy sources will be done by A4E staff not the Excel plugin.

#### TASK 6

Description:	Vendor selection
Owner:	Karen Tollenaar Demorest
Dependency:	None

Vendor shall be selected per existing A4E process and policies.

### **PROJECT VIABILITY CONFIRMATION – MARCH 2012 (ESTIMATED)**

#### TASK 7

Description:	Development plan verification
Owner:	Vendor
Dependency:	Karen Tollenaar Demorest, Carol B. Jenner Ph.D.

Vendor shall review development plan with A4E and ERDC for completeness and viability. ERDC to confirm data availability and correctness / fit of WSDL usage. A4E to confirm acceptability of resulting dataset. Any changes or optimization discovered shall be reviewed and addressed with vendor.

### **PROJECT EXECUTION – MAY 2013 (ESTIMATED)**

#### TASK 8

Description:	Principal development
Owner:	Vendor
Dependency:	None

Vendor shall implement the product as specified in Task 5 and Task 7. Due to the small scale of the product, no milestone phases are necessary. Any unexpected issues with ERDC shall be messaged to A4E within 2 days of discovery.

#### TASK 9

Description:	Delivery and acceptance
Owner:	Vendor, Karen Tollenaar Demorest
Dependency:	None

Vendor shall provide documentation outlining product usage and all source code to A4E.

Deliverable items:

- Documentation of product usage
- Source code including relevant build scripts
- Windows installer for the Excel plugin

Vendor shall install and demonstrate the product on an A4E computer connecting to the ERDC data service. A4E shall verify acceptance of the product against specified requirements.

## CONCLUSION

As mentioned above, the ERDC has not yet begun development of their data warehouse so any assumptions at this time are suspect. We have developed this roadmap based on estimated release dates but they are tied to ERDC progress. However, the ERDC organization is quite small and the roles are clearly defined which should make it simple to get updated on their progress as A4E moves forward with this roadmap.