

Employee

Student Activity

Activity

THE OPTIMAL REFERENCE GUIDE

Project Scope Document Overview

with Detailed Descriptions for the Data Scope Documentation Section

Extraordinary insight™ into today's education information topics



ESP
Solutions
Group

Table of Contents

Introduction	1
Executive Summary.....	2
TABLE OF CONTENTS.....	3
Project Scope Document—Data Scope Section Table of Contents Samples	5
Exhibit 5.1.1 Data Source Documentation.....	5
Exhibit 5.1.1.2 Agreed-Upon Data Source List.....	7
Exhibit 5.1.2 Data Definition Documentation/Core Element Dictionary	8
Exhibit 5.2 Data ETL Data Mapping Documentation.....	9
Exhibit 5.3 Out-of-Scope Data Sources	10
Sample Project Scope Sign-Off Page.....	11

Introduction

ESP created “Project Scope Document Overview with Detailed Descriptions for the Data Scope Documentation Section” to provide an example of best practices for reducing risk in EdTech projects by achieving agreement on project scope. In our extensive experience with education information systems, we have documented that managing **Data Scope** is the key to successful on-time project delivery.

The purpose of the Project Scope Document is to reduce project risk and gain mutual agreement on project scope. The Project Scope Document provides all project partners with the specific details required to define the project’s deliverables and timelines.

The project scope document should include, but is not limited to the following:

1. Scope Management Plan
2. Project Vision and Goals
3. Project Deliverables
4. Project Design Plan
- 5. Data Scope Documentation**
6. Exclusions
7. Change Management Process
8. Assumptions and Risks
9. Project Constraints
10. Acceptance Process
11. Project Sign-Off and Approval Process

Before project execution can commence, the Project Scope Document must be agreed upon and signed off on by the project management team for both the contracting agency and the contractor. The Project Scope Document is a living document. As scope changes occur, the Project Scope Document is updated.

Data Scope is the definition and documentation describing the boundaries for ETL of required source data into the destination database for the project. Data scope is a key component of overall project scope in an EdTech project.

This overview provides ESP’s details for how Data Scope should be documented in the Project Scope Document.

Executive Summary

This Project Scope Document has been jointly created by the contracting agency's and the contractor's project management teams to reduce project risk and ensure mutual agreement on the scope of the project titled: _____. The Project Scope Document provides the project partners the specific details required to define the boundaries of the project's deliverables and timelines that form the basis for acceptance. Before project execution commences, the Project Scope Document will be agreed upon and signed off on by the project management team for both the contracting agency and the contractor. Additionally, the Project Scope Document will be a living document. As scope changes occur via the change management process, the Project Scope Document will be updated.

TABLE OF CONTENTS

- i. Executive Summary – *Describes the purpose of the Project Scope Document and summarizes the contents of each section*
- 1. Scope Management Plan – *Details the project scope management approach that will be undertaken to ensure project success*
- 2. Project Vision and Goals – *Describes the contracting agency's expectations for the outcomes of the project at a high level for stakeholders*
 - 2.1 Vision Statement – *Describes the aspirational outcomes the program will accomplish*
 - 2.2 Project Description and Purpose – *Describes what the project is and why it is being undertaken; the need and justification for the project*
 - 2.3 Project Management Approach – *Details the project management approach that will be followed to ensure project success*
 - 2.4 Project Goals and Objectives – *Describes the goals and desired outcomes for the project*
- 3. Project Deliverables – *Defines the scope of deliverables for the project*
- 4. Design Requirements – *Defines the architectural and technical needs of the project*
- 5. Data Scope – *Defines the data scope for ETL of required source data into the destination database for the project*
 - 5.1 Data Scope Discovery and Documentation – *Describes the discovery and documentation to assure the availability of required project source data*
 - 5.1.1 Data Source Documentation – *Identification of the project's data elements and sources*
 - 5.1.1.1 Potential Data Sources Validated – *Contracting agency's list of desired data elements and sources validated for availability, documentation, and alignment with destination solution functionality/definition and use*
 - 5.1.1.2 Agreed-Upon Data Source List – *Contracting agency and contractor's list of agreed-upon elements and data sources validated for availability, documentation, and alignment with destination solution functionality/definition and use—and for inclusion in project's data scope*
 - 5.1.2 Data Definition Documentation – *Population of the project's initial metadata dictionary of required data elements for ETL*
 - 5.2 Data ETL Mapping Documentation – *Defines data source to destination mapping of elements to validate contracting agency and contractor agreement on data scope*
 - 5.3 Out-of-Scope Data Sources – *Details out-of-scope data elements and sources*
- 6. Project Exclusions and Deliverables Out of Scope – *Details what is considered excluded from the project deliverables and functionality*
- 7. Project Change Management – *Details the project change management approach that will be undertaken to ensure project success*
- 8. Project Assumptions and Risks – *Describes the assumptions and risks upon which the project has been planned and around which the project will be managed to avoid problems, delays, and cost-overruns*
 - 8.1 Assumptions – *Describes how uncertainty will be addressed while the project is being conceived, planned, and executed*

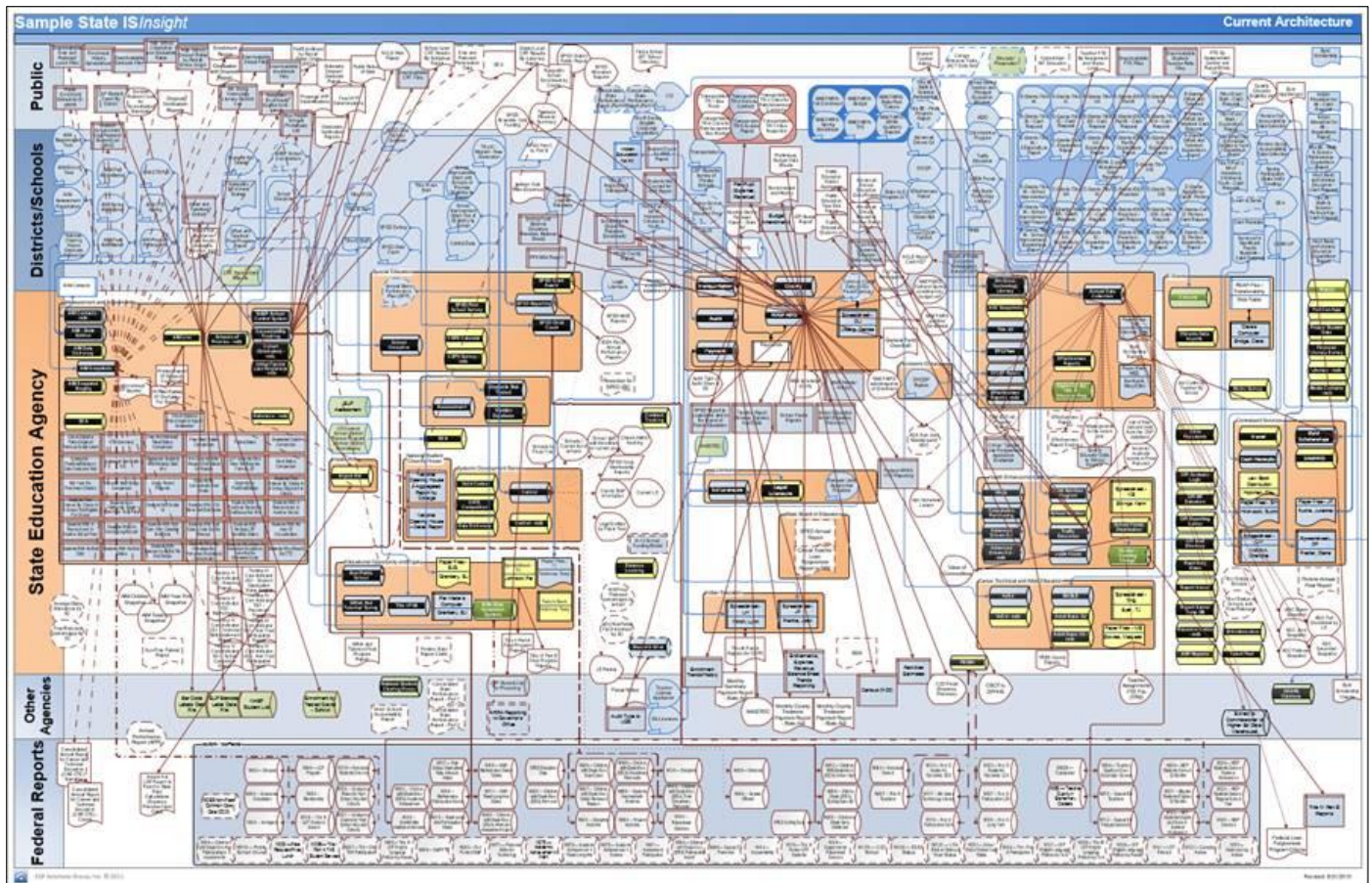
- 8.2 Project Risk – *Describes the real, unavoidable, or potential problems that the project will need to manage*
 - 8.2.1 Risk Management - *Details of the project risk management approach that will be undertaken to ensure project success*
- 9. Project Constraints – *Describes restrictions that limit what can be achieved (for instance missing data sources), how and when it can be achieved, and how much achieving it can cost.*
- 10. Deliverable and Project Acceptance – *Details the deliverable and overall project acceptance process*
- 11. Project Scope Sign-Off and Project Approval Process – *Details the conditions that must be met before project deliverables are accepted*
 - 11.1 Project Scope Sign-Off Agreement Document – *Contains the signatures of the contracting agency and contractor agreeing to the terms of the Project Scope Document*

Project Scope Document—Data Scope Section Table of Contents Samples

This section provides samples of the formats ESP uses to prepare and present the documentation for the Data Scope section of the Project Scope Document. The exhibits below map back to the Project Scope Document Table of Contents.

Exhibit 5.1.1 Data Source Documentation

Below is an example of a state-level *ISInsight* diagram. ESP's *ISInsight* is a graphical representation of an agency's data sources, repositories, and outputs/reports.



Copyright 2016 ESP Solutions Group
6



Exhibit 5.1.1.2 Agreed-Upon Data Source List

The sample Repository List report below was extracted from ESP's DataSpecs® metadata dictionary. The agreed-upon data source list documents the contracting agency and contractor's universe of authoritative data sources that will be used in the project. These sources are agreed upon to be documented and available within the timeframe of the project.

Repository List		ESP Solutions Group DataSpecs
The DataSpecs Repository List report lists all the repositories in DataSpecs with the option of only listing the active repositories. Expanding a repository displays the high-level information for that repository.		Report Parameters
		Active: <All> Office: <Any>
EDFacts - V8		
EDFacts_Admin - V8		
EDFacts_Submission - V8		
EdFi Dashboard Database - V1		
Education Directory - V1		
Education Information System (EIS) - V2		
EduDirectory - V1		

The Expanded Repository List Detail Information report below is expanded from the DataSpecs® Repository List report above.

EDFacts_Submission - V8

Basic Information:

Description:

EDFacts_Submission schema designed to mirror the EDFacts formats as much as possible.

Repository Type:

Operational Data Store

Status:

Retired

Effective Date:

1/1/2016 12:00:00 AM

Expiration Date:

10/1/2099 12:00:00 AM

File Server Information:

File Server Name:

EDUSQL04

IP Address:

1234567890

Database/Instance Name:

EDFacts

Database Software Information:

Database Software Title:

Microsoft SQL

Database Software Version:

2008 R2

Ownership Information:

Office:

Repository Owner Information

Owner

Phone

E-Mail

Associated Office

Exhibit 5.1.2 Data Definition Documentation/Core Element Dictionary

The sample DataSpecs® data definition documentation below details the project's initial metadata dictionary of required data elements for ETL from sources to the destination database.

Repository

EDFacts_Submission- V8

Table

S002 - V8

View Report

1 of 1

Select a format

Export

#	Field Name Definition	PK	Type	Length	Precision	Min / Max	Required	Option Set	Element	Effective Expiration
1	reportLevel		varchar	3		/	True			1/1/2016 6/30/2099
2	schoolYear		varchar	9		/	True			1/1/2016 6/30/2099
3	FIPS		varchar	2		/	False			1/1/2016 6/30/2099
4	stateAgencyNumber		varchar	2		/	False			1/1/2016 6/30/2099
5	stateLEAId		varchar	14		/	False			1/1/2016 6/30/2099
6	stateSchoolId		varchar	20		/	False			1/1/2016 6/30/2099
7	tableName		varchar	20		/	False			1/1/2016 6/30/2099

Exhibit 5.2 Data ETL Data Mapping Documentation

ETL mapping documentation defines the data source-to-destination mapping of elements to validate contracting agency and contractor agreement on data scope. The mapping captures source tables and fields, filter conditions, processing parameters, aggregation groupings, how source tables need to join, and whether different destination rows come from different sources.

For example, ESP's *EDFacts* Shared State Solution (ES3) mapping package populates the S052 table from the *EDFacts* staging table *Unit_StudentDemographics*.

Destination Table Name		EDFacts_Submission.S052
Iteration (if any)		school level, by grade, racial ethnic, and sex (category A)
Parameters		Reporting Period e.g. '2015-2016'
Field		
reportingPeriod	passed in reporting year parameter	
reportLevel	'SCH'	
categorySortOrder	'A'	
stateCode	EDFacts_Admin.StateConfig.stateFIPSCode	
stateAgencyNumber	EDFacts_Admin.StateConfig.stateAgencyNumber	
stateLEAIdentifier	EDFacts_Staging.Unit_StudentDemographics.stateLEAIdentifier	
stateSchoolIdentifier	EDFacts_Staging.Unit_StudentDemographics.stateSchoolIdentifier	
gradeLevel	EDFacts_Staging.Unit_StudentDemographics.gradeLevel	
racialEthnic	EDFacts_Staging.Unit_StudentDemographics.racialEthnic	
sex	EDFacts_Staging.Unit_StudentDemographics.sex	
totalIndicator	'N'	
explanation	"	
totalCount	Count (Distinct EDFacts_Staging.Unit_StudentDemographics.stateStudentIdentifier)	
Source Table Joins		
none		
Source Table Filters		
EDFacts_Admin.StateConfig.reportingPeriod = [passed in Reporting Period parameter]		
EDFacts_Staging.Unit_StudentDemographics.reportingPeriod = [passed in Reporting Period parameter]		
EDFacts_Staging.Unit_StudentDemographics.includeInSCH in ('Y', 'I', 'Yes', 'T')		
Iteration Aggregation		
stateLEAIdentifier, stateSchoolIdentifier, gradeLevel, racialEthnic, sex		
Aggregation Filters		
COUNT > 0		

Exhibit 5.3 Out-of-Scope Data Sources

The detail in the table below is extracted from Exhibit 5.1.1 - Data Source Documentation. ESP's *ISInsight* process details current data sources whether they are in scope or future and excluded. "Future" sources that are considered out of scope will be denoted in the contracting agency and contractor's list of agreed-upon elements and data sources validated for availability, documentation, and alignment with destination solution functionality/definition and use. The "Out-of-Scope" designation can also be used for data that are unavailable, inaccessible, and/or confidential.

Out-of-Scope Data Source	Expected Usage	Source Contact	Expected Date of Availability
Educator Preparation	Future	IT	TBD
ACT Data Set	Not Planned	IT	TBD
Learn & Serve	N/A	IT	TBD

Sample Project Scope Sign-Off Page

The Project Scope Sign-Off and Deliverable Approval Process details the conditions met for project deliverable and scope acceptance. The Sign-Off Page denotes acceptance of the agreed upon project deliverables and scope and states that outcomes have been measured against prescribed project acceptance criteria. Sign-Off denotes formal project acceptance, and agreement that the respective project may now be closed.

IN WITNESS WHEREOF, the parties have caused their duly authorized representatives to execute this Agreement as of the date first set forth above. The project deliverables and scope described herein are hereby formally accepted.

ESP Solutions Group, Inc.

State Department of Education

Name

Name

Signature

Signature

Title

Title

Date

Date

About ESP Solutions Group

ESP Solutions Group provides its clients with *Extraordinary Insight™* into P20W education data systems and psychometrics. Our team is comprised of industry experts who pioneered the concept of “data-driven decision making” and now help optimize the management of our clients’ state and local education agencies’ information systems.

ESP personnel have advised school districts, all state education agencies, and the U.S. Department of Education on the practice of P20W data management. We are regarded as leading experts in understanding the data and technology implications of ESSA, SIF, EDFacts, CEDS, state reporting, metadata standards, data governance, data visualizations, and emerging issues.

Dozens of education agencies have hired ESP to design and build their longitudinal data systems, state and federal reporting systems, metadata dictionaries, evaluation/assessment programs, and data management/analysis and visualization systems.

To learn how ESP can give your agency *Extraordinary Insight* into your P20W education data, contact us at (512) 879-5300 or info@espsg.com.

This document is part of *The Optimal Reference Guide Series*, designed to help decision makers analyze, manage, and share data in the 21st Century.

Project Scope Document Overview © 2016 by ESP Solutions Group, Inc. All rights reserved. No part of this paper shall be reproduced, stored in a retrieval system, or transmitted by any means, electronic, mechanical, photocopying, recording, or otherwise, without written permission from the publisher.



ESP Solutions Group