

Chapter 1

Information Systems Development Methodology for the Environmental Screening Tool

Chapter 1 Introduction (*Updated 7/31/2012*)

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The Information Systems Development Methodology (ISDM) documentation for the Environmental Screening Tool (EST) includes deliverables required by the Florida State Technology Office (STO) ISDM Version 1.13, dated May 10, 2004. The ISDM is a structured process for guiding application development from concept through maintenance. The STO ISDM includes the following stages:

- Project Proposal
- Needs Assessment
- Planning
- Design
- Development
- Testing
- Implementation
- Maintenance

The stages are iterative and a project may cross over into multiple stages simultaneously as new features are identified and added to the application. This documentation for the EST includes the required documentation for each ISDM stage.

The EST was developed under contract by the Florida Department of Transportation's Environmental Management Office to support Florida's new Efficient Transportation Decision Making (ETDM) process. Development occurred simultaneously with process engineering during the years 2000 through 2003. The EST was developed iteratively using an evolving prototype methodology. This strategy allowed the technology to adapt to refinements in the ETDM Process as the process was defined.

March 2003-2004 marked the first year of ETDM implementation, during which refinements to both the process and the EST were identified. In 2004-2005, the EST design was modified to reflect these refinements as well as integrate functionality. Based on feedback from users, the new integrated design of the EST was developed to improve the graphical user interface, code maintainability, and user work flow. The new design also took advantage of technology advancements and upgrades made available since the conception of the project. This new version of the EST went into production in December 2005. Subsequent to 2005, enhancements and additional functionality were identified and designed. ISDM deliverables included in this submittal for the Project Proposal Stage reflect the findings from the first iteration of EST development. Deliverables for the remaining stages, Needs Assessment through Maintenance, document the new design and the major enhancements and additional functionality identified subsequent to implementation of the new design.

This ISDM submittal includes documentation for the EST required for each ISDM stage for the period of January 1, 2010 through August 31, 2011, and is organized as follows:

Chapter 1: Introduction

Chapter 2: Project Proposal Stage

This chapter includes the Project Proposal Memorandum, Schedule for Needs Assessment and Planning Stages, and the Service Agreement for the original EST design.

Chapter 3: Needs Assessment Stage

This chapter includes the Needs Assessment Stage documentation for the new design that went into production in December 2005 and for major enhancements and additional functionality identified between December 2005 and the following periods.

December 2005 through September 30, 2007

Major enhancements for the period from December 2005 through September 30, 2007 were: **Agency On-line Invoicing, Public Access, EDMS Integration, Performance Management, Cumulative Effects, and AN/Federal Consistency**. Additional functionality for that period consisted of: **Summary Degree of Effect, New Screening Summary Report Interface, My GIS Analysis Results, Sociocultural Effects Summary Report, Degree of Effect = Dispute, Integrated Map Viewer, and Non-viable Alternatives**.

October 1, 2007 through June 30, 2008

Major enhancements for the period between October 1, 2007 and June 30, 2008 were: **Performance Management, AN/Federal Consistency, Security Enhancements, Invoicing Enhancements, Community Characteristics Inventory (CCI) Enhancements, Integrated Map Viewer, Cumulative Effects, and QA Reports**. Additional functionality for the period between October 2007 and June 30, 2008 were: **Eliminated Alternatives, Milestoning for Displaying Potential Lead Agencies (Public Site), Milestone Grouping, EDMS BLOB Viewer (Document Retrieval), Project Manager Tools and Reports Enhancements, Identifying Cooperating Agencies (for Class of Action), and Identifying No Further Agency Involvement**.

July 1, 2008 through December 31, 2008

Major enhancements for the period between July 1, 2008 and December 31, 2008 were: **Project Tracker Tools and Reports and Project Input Tools**. Additional functionality for the period between July 1, 2008 and December 31, 2008 consisted of: **Invoicing – Log Off-line Activities, Require Public Comment Summary or Justification for No Comments, AN Transmittal List – User Interface, AN Transmittal List – Excluded Jurisdictional Contacts, ISDM Page Description Tools, Performance Management – Project Schedule, Hardcopy Maps, and Project Website Links**.

January 1, 2009 through December 31, 2009

Major enhancements for the period between January 1, 2009 and December 31, 2009 are: **Document Review, SCE Participation Report, and Performance Management Report Enhancements**. Additional functionality for the period between January 1, 2009 and December 31, 2009 consists of: **2010 ETDM Survey Updates, Hardcopy Maps, Project Website Links, Welcome Page Enhancements, Name Alternatives, and Quarterly Participation Report Enhancements, and Invoicing Enhancements (Agency Activities and Activity Upload Batch)**.

January 1, 2010 through August 31, 2011

Major enhancements for the period between January 1, 2010 and August 31, 2011 are: **Map Editor Tools, Map Viewer User Interface, ETDM Calendar Enhancements, GIS Analysis Results Report Enhancements (Feature Level), Performance Management Report Enhancements, and SCE Participation Report**. Additional functionality for the period between January 1, 2010 and August 31, 2011 consists of: **AN Transmittal List Batch Uploader, Update Data FAQs (Questions 1-3) to be interactive, Search Function for Finding Forms and Reports, Quarterly ETAT Participation Reports, Updates to the**

Navigation Menus and GUI, New On-line Help Interface (Doc2Help), Track Local Agency Program (LAP) Projects, Training Videos Page, Enhancements to Edit AN Package Tool, EDMS Process Fixes and Enhancements, and FTA Exemption and Notification Enhancements.

The Requirements Document for the new design has been updated to reflect refinements; and requirements for the subsequent major enhancements and additional functionality are included in the Enhancements Requirements Document. A List of Customer Deliverables (those subsequent to the new version of the EST that went into production in December 2005) is included, as well as Project Review Issue Lists, Project Review Management Reports, and Project Revision Logs for the updated Requirements Document and Enhancements Requirements Document, and Stage-end Walk-through Forms.

Chapter 4: Planning Stage

This chapter includes the Project Plan and associated Project Revision Log for the new design that went into production in December 2005. It also includes the updated Project Schedule, Updated Service Agreement, and Stage-end Walk-through Forms to reflect the new design and the subsequent major enhancements and additional functionality.

Chapter 5: Design Stage

This chapter includes the updated Design Document for the new design that went into production in December 2005. The Design Document also includes information about subsequent refinements to the new design, as well as information about the major enhancements and additional functionality designed subsequent to December 2005. The Draft Test Plan included in this chapter is for the new design. The Updated Project Schedule includes the new design and the subsequent major enhancements and additional functionality. A Project Review Issue List, Project Review Management Report, and Project Revision Log for the updated Design Document are included, as well as Stage-end Walk-through Forms. This chapter also includes a statement about the Draft User Manual (which is provided as **Appendix E**).

Chapter 6: Development Stage

This chapter includes the Implementation Plan for the new design that went into production in December 2005 and documentation for Unit Testing Results. It also includes the updated **System Test Plan**, including the updated Acceptance Test Approach. The updated **System Test Plan** includes **Test Plans** for the major enhancements for which Development was complete as of September 30, 2007 (**Agency On-line Invoicing, Public Access Site, EDMS Integration, and Performance Management**); June 30, 2008 (**Performance Management, AN/Federal Consistency, Security Enhancements, Invoicing Enhancements, Community Characteristics Inventory [CCI] Enhancements, and Integrated Map Viewer**); December 31, 2008 (**Quality Assurance Reports and Project Tracker Tools and Reports**); and December 31, 2009 (**Document Review and SCE Participation Report**). For the current submittal, **Test Plans for Map Editor Tools, Map Viewer User Interface, ETDM Calendar Enhancements, GIS Analysis Results Report Enhancements (Feature Level), and Performance Management Report Enhancements** have been added to the **System Test Plan**. A description of the updated User Manual (which is provided as **Appendix E**) and a Project Review Issue List and Project Review Management Report for 10% Code are included, as well as a Project Revision Log for the updated System Test Plan and EST Handbook, and Stage-end Walkthrough Forms.

Chapter 7: Testing Stage

This chapter includes the Test Results for testing conducted by the Development Team; a reference to the updated Test Plan provided in **Chapter 6**; and the updated **Customer Training Plan**, which includes sections for the major enhancements that were in Testing as of September 30, 2007 (**Agency On-line Invoicing, Public Access Site, and EDMS**

Integration); between October 1, 2007 and June 30, 2008 (**Performance Management, AN/Federal Consistency, and Invoicing Enhancements**); between July 1, 2008 and December 31, 2008 (**Community Characteristics Inventory [CCI] Enhancements, Integrated Map Viewer, Quality Assurance Reports, and Project Tracker Tools and Reports**); and between January 1, 2009 and December 31, 2009 (**Document Review**). For the current submittal, plans for **Map Editor Tools, Map Viewer User Interface, ETDM Calendar Enhancements, GIS Analysis Results Report Enhancements (Feature Level), Performance Management Report Enhancements, and SCE Participation Report** have been added to the **Customer Training Plan**. This chapter also includes the updated Project Schedule, a reference to the updated User Manual (which is provided as **Appendix E**), Project Revision Logs for the updated Customer Training Plan, and Stage-end Walkthrough Forms.

Chapter 8: Implementation Stage

This chapter includes the **Acceptance Testing Results** from User Testing for the Beta test of the new design; and for the major enhancements that were in production as of September 30, 2007 (**Agency On-line Invoicing, Public Access Site, and EDMS Integration**); between October 1, 2007 and June 30, 2008 (**Performance Management, AN/Federal Consistency, Security Enhancements, and Invoicing Enhancements**); between July 1, 2008 and December 31, 2008 (**Community Characteristics Inventory [CCI] Enhancements, Integrated Map Viewer, Quality Assurance Reports, and Project Tracker Tools and Reports**); and between January 1, 2009 and December 31, 2009 (**Document Review**). For the current submittal, testing results for **Map Editor Tools, Map Viewer User Interface, ETDM Calendar Enhancements, GIS Analysis Results Report Enhancements (Feature Level), Performance Management Report Enhancements, and SCE Participation Report** have been added. The **Acceptance Testing Results** document also includes references to the test results for additional functionality in production as of September 30, 2007; between October 1, 2007 and June 30, 2008; between July 1, 2008 and December 31, 2008; between January 1, 2009 and December 31, 2009; and between January 1, 2010 and August 31, 2011.

This chapter also includes the Updated Project Schedule and Customer Sign-off on Project and Project Close-out Forms for the major enhancements that were in production as of September 30, 2007; between October 1, 2007 and June 30, 2008; between July 1, 2008 and December 31, 2008; between January 1, 2009 and December 31, 2009; and between January 1, 2010 and August 31, 2011.

Chapter 9: Maintenance Stage

This chapter includes a description of the procedure used for request and approval of changes to the EST. It also includes a section for documentation of the Change Requests and Approvals deployed up to September 30, 2007; between October 1, 2007 and June 30, 2008; between July 1, 2008 and December 31, 2008; between January 1, 2009 and December 31, 2009; and between January 1, 2010 and August 31, 2011. Chapter 9 also includes the Maintenance Log and Development Procedures for the EST.

Appendices: **Appendix A** is the Data Dictionary for the EST database. The Data Dictionary for the Public Access site is provided in a separate section of Appendix A.

Appendix B is the EST Class Model for the EST. The Class Model for the Public Access Site is provided as a separate diagram.

Appendix C consists of the Schema Design Diagrams, referred to in this documentation as Entity Relationship (ER) Diagrams. The ER Diagrams are for the production EST. The ER Diagram for the Public Access Site is provided as a separate diagram.

Appendix D consists of page-by-page documentation of the EST data assemblies that were in production as of August 31, 2011.

Appendix E is the EST User Handbook.