



Threshold Consulting Services Project Management Framework

Threshold Consulting's Project Management Framework incorporates a methodology which we have developed and refined on numerous successful projects over the last decade. Our framework is based on an iterative approach and ensures real functionality is produced early into the project's evolution. The methodology is built upon an approach that integrates:

1. Our Process (Methodology)
2. the Project Plan and
3. the SOW (Statement of Work)

This integration ensures that the project plan's elements (e.g., tasks, deliverables and milestones) are supported by an underlying repeatable methodology that represents the collective knowledge of Threshold's prior experiences. To demonstrate conformance to the methodology, an explicit reference (attribute) is provided in the project plan to trace (i.e., backward trace) from the process to the plan. This provides an objective compliance standard. Additionally, the SOW incorporates a "Client Line Item Number" (CLIN) to bound the delivery elements of the solution. The CLIN is traced (i.e., forward trace) from the SOW to the project plan to demonstrate satisfaction of the SOW elements.

CLINs

In order to support a disciplined and structured project management approach to our engagements, client line item numbers (CLINs) will be associated with all tasks, deliverables and milestones necessary to achieve a successful project solution. The CLIN structure ensures that expectations are established and managed throughout the engagement and also ensures that requirements can be traced between this proposal and all related documentation (e.g., project plans, deliverables, etc.) Our CLIN nomenclature is characterized by a three (3) segment alphanumeric reference with the following syntax:

Segment	Definition	Values
1	Identifies the type of CLIN	<ul style="list-style-type: none">• T – Task• D – Deliverable• M - Milestone
2	Responsible Party	<ul style="list-style-type: none">• T - Threshold Consulting Services• C - Client
3	Sequence Number	<ul style="list-style-type: none">• Number – Identifies the CLIN in sequential order

For example, within the Tasks section of this document, “T.C.1” would refer to the first task, identified in the proposal, which is the responsibility of the client. Additionally, within the Deliverables section of this document, “D.T.1” would refer to the Threshold’s first deliverable.

Our Understanding of the BI / Data Warehouse Solution

A critical aspect of this process is to ensure that Threshold’s delivery objectives are aligned with Client’s core business requirements and strategic direction. A major objective of the majority of our engagements is to develop a solution for capturing the client’s business related data into a Data Warehouse to facilitate a Business Intelligence and Information Presentation environment

In some cases the solution will be designed to deliver a “quick win”. We can do this by interfacing the BI Tool directly with the Client’s current legacy data sources.

In efforts where a quick win is to be followed by a more “Enterprise Approach”, no trade-offs are made in the initial “quick win” solution with regard to long term initiatives (e.g., scalability, robustness, flexibility) including the potential for a data warehouse / data mart solution and the need to provide short term functionality.

Business Intelligence Solution Objectives

Threshold’s primary objectives are to provide expert technical engineering and project leadership in the developing and delivering the solution. These objectives, and others, are defined in the following list:

1. Implement a Business Intelligence tool that provides immediate information presentation capabilities given the current data sources (quick win scenarios).
2. Utilize best practice data warehouse solution development techniques to provide an efficient and well structured migration path for introducing additional technologies (ETL, for example) to create a more robust information presentation solution in subsequent phases – the Enterprise Solution approach.
3. Develop solid working relationships and processes with key Client personnel to enable consistent communications and productivity across this and all future efforts.
4. Plan and provide knowledge transfer to Client personnel to facilitate hand-off and maintenance activities
5. Deliver standardized project documentation that is timely, consistent, and accurate

Typical BI / Data Warehouse solution Approach

Our standard approach utilizes the project management framework, mentioned above, to establish a disciplined and structured approach as well as to provide a superior value proposition to our Client. This value (or additional benefit) is provided from a wealth of “best practices”, tools, and efficiencies gained through Threshold’s prior experiences.

The general approach builds upon a logical architecture in which Threshold has acquired an extensive and successful experience base. This will provide near term Business Intelligence functionality (quick win) while planning for an n-tier solution that has, as a minimum, an extract, transformation & load layer, data schema (dimensional model optimized for on-line analytical processing (OLAP)) and presentation layer. This architectural (logical, high level) is provided in figure 1 below.

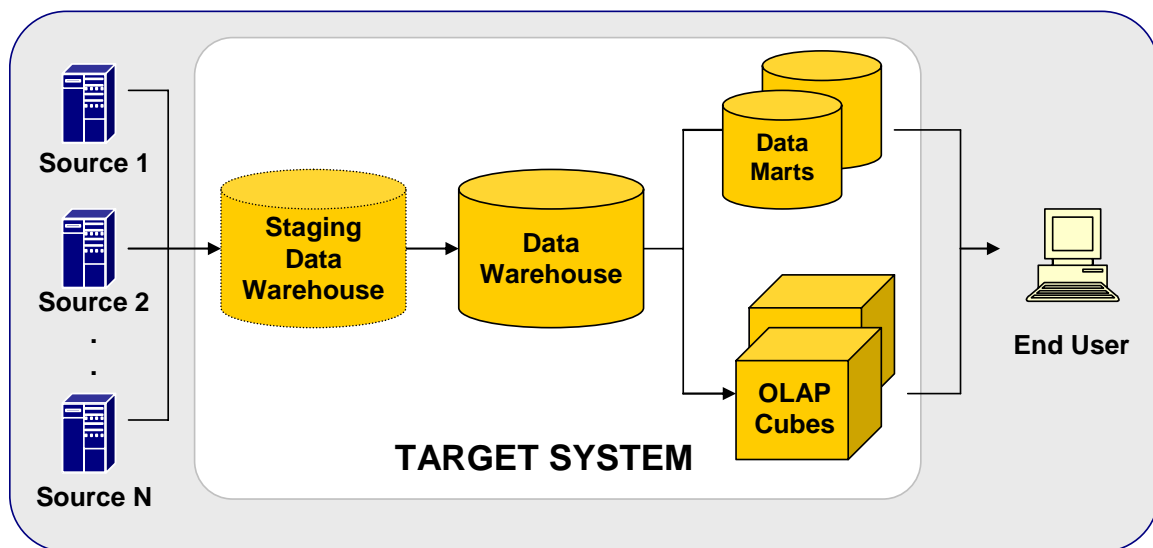


Figure 1 Logical Software Architecture

This architecture is recommended as a target because we have found it to ensure that the production solution conforms to industry best practices and result in an optimum solution. Additionally, this architecture provides a platform optimized for performance and scalability and ensure that the solution can be extended for future enhancements.

Methodology Components

The following are the tasks, deliverables and milestones that will be tracked and delivered through the project management framework. This is an important subset of the Threshold methodology that can be used to trace through the project management deliverables for statement of work compliance.

1) Anticipated Tasks

The following table lists essential high-level activities, activity groups and responsibilities that our methodology defines, and in our experience is typical of engagements of this type.¹ These tasks form the foundation of the Statement of Work.

CLIN	Key Activities	Description
	Threshold	
T.T.001	Requirements Gathering	Define the end-user business and technical requirements.
T.T.002	Analysis	Model the requirements into business and system models.
T.T.003	Design N-Tier Architecture – planning model	Design an architecture-centric solution with business, data and presentation tiers. Additionally, as required, a tools implementation effort will be included as part of the architecture.
T.T.004	Build Production Artifacts	Develop the solution deliverables.
T.T.005	System Integration	Integrate the software artifacts into a complete solution.
T.T.006	System Test	Test the solution exhaustively through end-to-end testing.
T.T.007	Deployment	Provide training, software and other related solutions to the client for operation.
T.T.008	Training	Provide materials and, as appropriate, instructor led classroom training.
T.T.009	Project Management	Provide standard project management planning, monitoring and control activities.
	Client	
T.C.001	SME Support	Provide subject matter experts to assist in the engagement.
T.C.002	Review and Acceptance	Review, provide comments and accept the intermediate deliverables.
T.C.003	Conduct UAT	Conduct User Acceptance Testing.
T.C.004	Extract File Development	Provide Extract Files per Data Migration and Integration Specification (D.T.004)

2) Typical Deliverables

¹ The project plan has a further decomposition of the CLINs within the iterations. Each of the CLIN items are extended with an attribute to identify the iteration (e.g., T.T.A-001 identifies CLIN T.T.001 for iteration A.)

These are the standard best practice deliverables provided in the Threshold methodology. This list of deliverables would be tailored to each particular engagement based on the clients objectives and needs.

CLIN	Title	Description
D.T.001	Requirements Document	Provides the business and technical requirements that the system will pertain to.
D.T.002	Architecture Specification	Defines the systems (e.g., hardware, software, communication, services and processes) that the solution will reside in. Also, includes a section detailing the tools trade-off, recommendation(s) and selection.
D.T.003	Data Model	The dimensional model.
D.T.004	Data Migration and Integration Specification	The high level view of data movement and integration. A section of the document contains the source-extract mappings necessary to build the extract files.
D.T.005	User Interface (UI) Specification	The specification for the presentation layer.
D.T.006	Data Definition Language (DDL) Scripts	The SQL scripts to build the physical schema(s).
D.T.007	Extract-Transformation-Load (ETL) Scripts	The scripts to execute the ETL process.
D.T.008	User Interface	The physical presentation layer.
D.T.009	Project Plan	Detailed Project Plan.
D.T.010	Project Status Report (PSR)	Project Monitoring, Control and Status Document

3) Standard Milestones

CLIN	Title	Description
M.T.001	Project Begin	Project kick-off date.
M.T.002	Beta Deliverables	Completion of all production artifacts (Beta Version.) Consists of Architecture (DDL), ETL Scripts and UI Presentation layer.
M.T.003	Production Deliverables	Completion of all production artifacts (Production Version 1.0.) Consists of Architecture (DDL), ETL Scripts and UI Presentation layer.
M.T.004	Project Completion	Delivery of all SOW CLINs and satisfaction of

CLIN	Title	Description
		UAT.
M.C.001	Extracts Available	The client prepared extracts are available for the ETL routines.
	Iteration Milestone CLINs	
M.T.X-001	Subject Iteration Begin.	Iteration kick-off date.
M.T.X-002	Extracts Available	Client prepared extracts are available for the ETL process.
M.T.X-003	Beta Deliverables	Completion of all production artifacts (Beta Version.) Consists of Architecture (DDL), ETL Scripts and UI Presentation layer.
M.T.X-004	Production Deliverables	Completion of all production artifacts (Production Version 1.0.) Consists of Architecture (DDL), ETL Scripts and UI Presentation layer.
M.T.X-005	Subject Iteration Completion	Iteration completion date.

About Threshold

Threshold Consulting Services is a leader in Data Warehousing (DW) and Business Intelligence (BI) solutions. Since 1995 Threshold consultants have delivered pragmatic solutions that leverage corporate data to deliver insights and improve business results. Threshold understands how to acquire information, edit it, organize it, store it and make it easily accessible to those who need it – when they need it. We utilize a tools-centric, cost-effective approach which leverages industry leading solutions and minimizes labor intensive programming.



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