# Common Boundary Methodology (CBM)

**Version 1, Revision 2**

**February, 2007**

**L. F. Coppenrath & Associates**
**12502 SE 273rd Place**
**Kent, WA 98030**
**Tel: 206-883-6700**

# Publication History

| Version | Date | Author | Description of Changes |
|---|---|---|---|
| V 0, Rel 1 | January 30, 2005 | Larry Coppenrath | Initial Draft |
| V 1, Rel 1 | September 11, 2006 | Larry Coppenrath | Ascentium Changes |
| V 1, Rel 2 | February 27, 2007 | Larry Coppenrath | Diagram Updates |

# Legal Notices, Disclaimers, Trademarks

**Notices:**     New publications incorporate all updates issued since the previous publication.  Update packages, issued between publications, contain additional and/or replacement pages which should be merged into the most recent version of the publication.

**Disclaimer:**     L. F. Coppenrath & Associates assumes no legal liability or responsibility for the accuracy, completeness, or any third party's use or the results of the use of information, product, or processes disclosed by this document. L. F. Coppenrath & Associates waives any responsibilities incurred by anyone outside the company for labor or material cost as a result of using this document.  Tiburon and any of its employees shall not be held liable for any damages including, but not limited to, consequential, incidental special damages or loss of profits as a result or in connection with this document or its use.

**Disclosure:**     The information presented here, either in tangible or verbal form, and so identified is CONFIDENTIAL and PROPRIETARY and shall not be disclosed outside L. F. Coppenrath & Associates.  No part of this document may be reproduced in any form, including photocopying or translation to another language, nor disclosed in whole or in part for any purpose beyond the information exchanged, without the prior written consent of L. F. Coppenrath & Associates

Copyright © 2006 by L. F. Coppenrath & Associates

Printed in the United States of America.

® Registered Trademarks go here

All other brand and product names referenced in this guide are trademarks of their respective companies.

This document was printed on **May 11, 2007**

# Table of Contents

# Preface

The goal of a Common Boundary Methodology (CBM) is to provide a corporate client loyalty superstructure that functions with practically any methodology or processes.  Its intent is to preserve existing culture while expanding to multiple locations and a 5 fold increase in employees.

In order to be useful a methodology must be brief, clear, and precise.  It must accommodate both large and small projects. It must define the deliverables mandated by the methodology including the tasks and activities required to produce those deliverables.  In addition to defining the deliverables, the methodology must provide tools that ease the burden of performing those defined tasks.  Of course a proper level of training must be provided to ensure the institutionalization of CBM and its continual evolution.

CBM provides a roadmap to the entire project life cycle and each of those processes culminates in a Boundary Transition so that the Project Manager and any corporate over-sight always have a fix on project evolution.  It is very important to remember what CBM is NOT:

- The software development process
- The creative or marketing process
- The Software Quality Assurance process
- A Financial Management process

It simply avoids the 'how and with whom' questions.  That is left to individual organizations; frankly we don't give a damn how your team completes a CBM event, only that it is complete prior to a Boundary transition.  In this way, no matter how diverse we get there is a common platform that unites us around the consistency required to excel at Client Loyalty.

# Objective

The principle objective of Common Boundary Methodology (CBM) is to enable project teams to conceptualize, design, test, implement, document, and deliver projects that are reliable, predictable, easy to maintain, and profitable. In short, provide a result the client values. These best practices projects establish the foundation that allows the company to enhance the level of client loyalty as it expands.

# Scope

CBM is designed to cover the project life cycle from the definition of user requirements to client acceptance.  It covers all the technology, user, and managerial elements involved in the creation and delivery of a complete project.  The methodology provides for the informed participation of users and their management to ensure client loyalty.

It is not the intent of this methodology to predetermine every work item leading to the client signing off on a project.  That sort of process undermines the breath and depth of our employees knowledge and experience.  It also takes away the sort of innovation that projects need to deliver a valued result.  Valued results = Employee Pride and Client Loyalty.

# Common Boundary Methodology Overview

Common Boundary Methodology (CBM) [hereafter referred to as CBM] has been developed to be flexible and easy to use for the software engineering professional and selectively by the participating user.

The methodology is organized around a set of five (5) boundaries that provide the basic structure to gauge the performance and client loyalty (in the form of an NPS score) of corporate projects.  The Boundary's also:

- Establish a set of formal deliverables that are required by each project team before proceeding to the next Boundary

- Requires that a formal decision is made to accept (or reject) the conclusions and plans defined to that point.  Approval is a commitment to resources required to successfully meet the requirements of the next Boundary.

- Demand that each Boundary deliverable is either under "code control" or "document control".  This allows each deliverable to be used as the baseline for the start of the next Boundary's activities.

All of the events in CBM are extracted from the CBM Work Breakdown Structure (WBS) so that issues such as cost can be traced directly to a Boundary or event within a Boundary.  The actual work for each event is defined by that events WBS e.g. the work required for Boundary 1 "Definition and Acceptance" is defined as task 1.1.1.  If you look at the WBS under 1.1.1 you will find a link to the "Market Requirements" document that outlines what content is required at what specific Boundary.

Figure 1 "CBM Overview" provides a visual of the methodology at the major Boundary level.
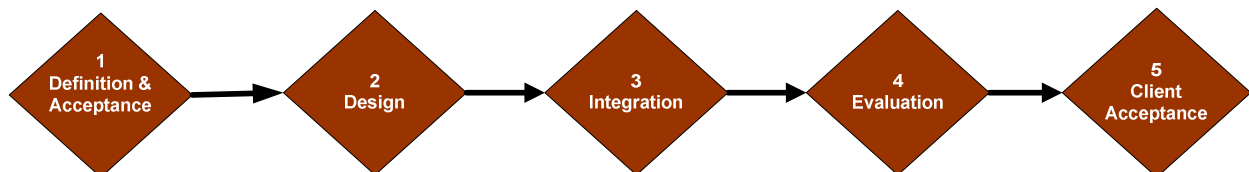


**Figure 1.  CBM Overview**

# Overall Boundary Descriptions

The following describes the purpose and general content of each Boundary. It is intended to quickly provide the reader with a context for the particular Boundary so that events and WBS tasks support the stated purpose.

## Boundary 1 "Definition & Acceptance"

*Purpose:* Ensure that proposals come forward for approval with a fundamental business basis and have been reviewed and accepted by the major operating functions of the Company.

The major deliverable at Boundary 1 is a "Project Proposal" document that is presented by the Project Manager. The project manager is responsible to ensure that all necessary organizational impact statements are included in the fabric of the proposal and associated estimates

## Boundary 2 "Design"

*Purpose:* Utilizing the RFP, Agreed upon SOW, and any other client information available, begin to define the actual project deliverables.

In every occasion were company products/artifacts are being leveraged to provide a solution. It is mandatory that a "Best Practices System" be utilized as the $1^{st}$ "client visible model". This foundation is then leveraged to provide all client requirements defined for the project.

A "Pre-Design Sign-Off" with the client signals the beginning of many "code / build / test cycles (Iterations) that quickly elevate to a functional model that the client can play with. The "Client Visible Model Available" milestone. Again this is always the "best practices system" version of the company's product being leveraged.

## Boundary 3 "Integration"

*Purpose:* The output of the "integration" boundary is a "Delivery Candidate" (prototype) of the project. User Requirements, Client Expectations, and Functional Requirements are incorporated in this release of the project.

The major deliverable at Boundary 3 is a Demonstrable Delivery Candidate of the Project.

## Boundary 4 "Evaluation"

*Purpose:* Produce a "Production" version of the Project that has been used to validate all client requirements and expectations.

The major deliverable is a "Production" version of the project that is ready to meet the needs of the client.

## Boundary 5 "Client Acceptance"

*Purpose:* Focus on Client Acceptance is to complete all project testing; demonstrating expectations and requirements so the client receives a valued outcome.

The major deliverables at Boundary 5 are the completion of Acceptance Test, the general availability of the of the project, Client Acceptance of the Project, the Financial Closeout of the project, and a Project Post-Mortem

# CBM Events and Tasks

CBM provides the logical workflow that enables ever increasing levels of detail to be described within the CBM WBS.  The events and tasks associated with this Global Process will not present either Methodology or WBS entities below the 1.1.1.1 level.  It is quite possible that the work description documents will indicate tasks one or two levels below this but these tasks are considered subordinate to those shown in the Methodology.

# Boundary Descriptions

The methodology diagrams (Figure 2 through Figure 8) provide the map of major events that are to be completed prior to the next Boundary transition.  It is possible to be transitioning to the next Boundary for quite a while.  For example, moving from Boundary 3 "Integration" to Boundary 5 "Customer Acceptance" is essentially the entire project life.

## Boundary 1 "Definition & Acceptance"

The objective of Boundary 1 is to provide enough information to the corporation so it can make an informed decision on whether or not to bid or accept the project.  Although information at this Boundary can be very soft it is important to document the requirements, the assumptions, risks, and expectations so that the proposal / project team start from the same base.
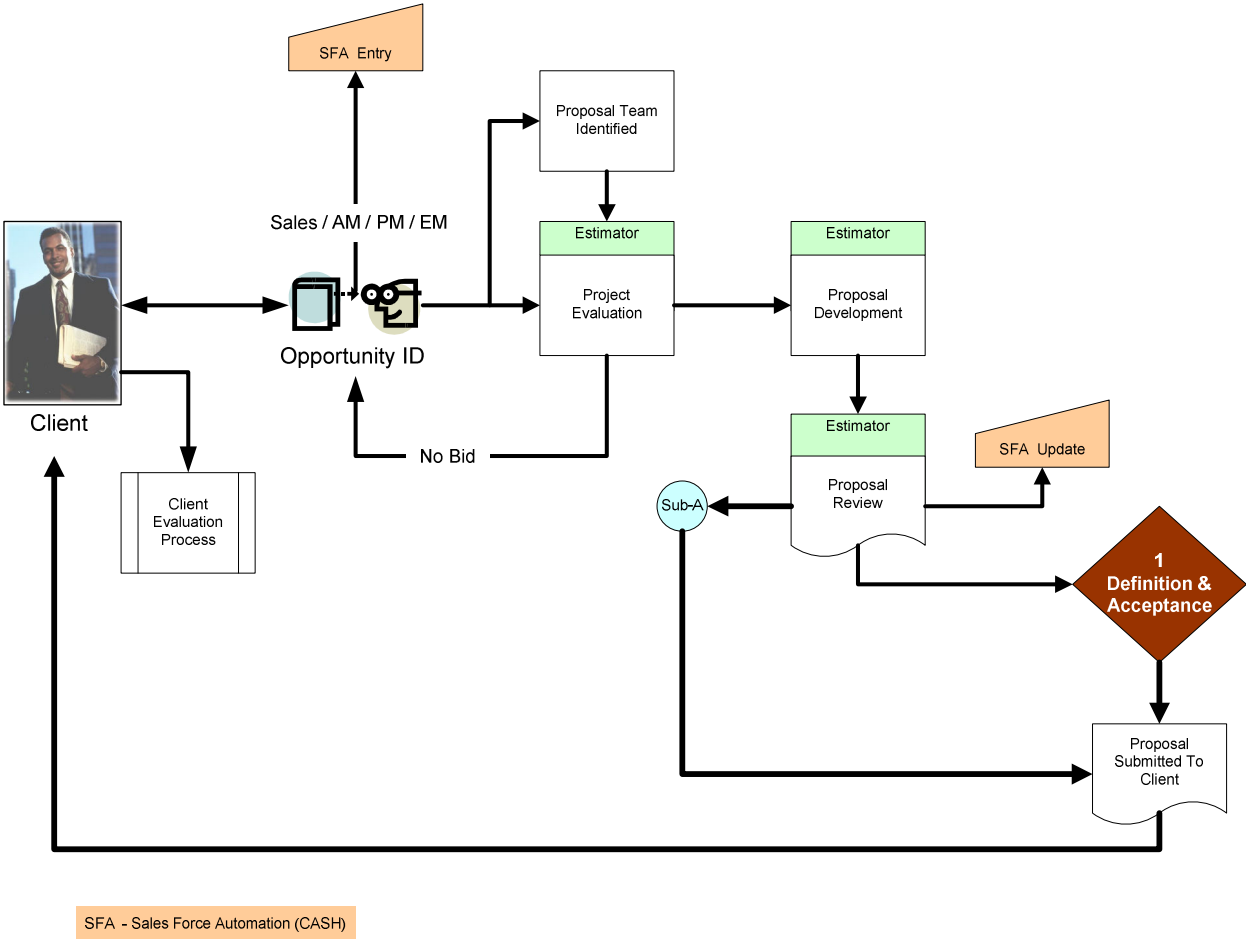


**Figure 2.  Boundary 1 Definition & Acceptance**

## Opportunity Identification

Once an opportunity has been identified it is critical that all relevant information get entered in the Sales Force Automation (CASH) system. A proposal team is identified and an initial evaluation is made including a rough cut cost estimate. This coupled with account knowledge allows a bid/no bid to be made during Project Evaluation.

Assuming a bid decision the proposal team then develops this answers the question "why do we want to do this?" What problem does it solve? What does it have to do? Is this a competitive differentiator or a client viability issue?

## Proposal Team Identified

This team answers the question "How can we do this?" Do we understand the business? Does it fit with our capability? Is it a technological fit? Is there a technology advantage we can provide? Can it be provided in a viable timeframe? Are there infrastructure issues that need to be addressed?

## Project Evaluation

The primary output of this event is "do we bid or not." Is this something that falls in our homerun zone or bunt zone.

## Proposal Development

Assuming a bid decision. The team engages the client and goes about the business of identifying the business problem and providing an "out-of-the-park" solution.
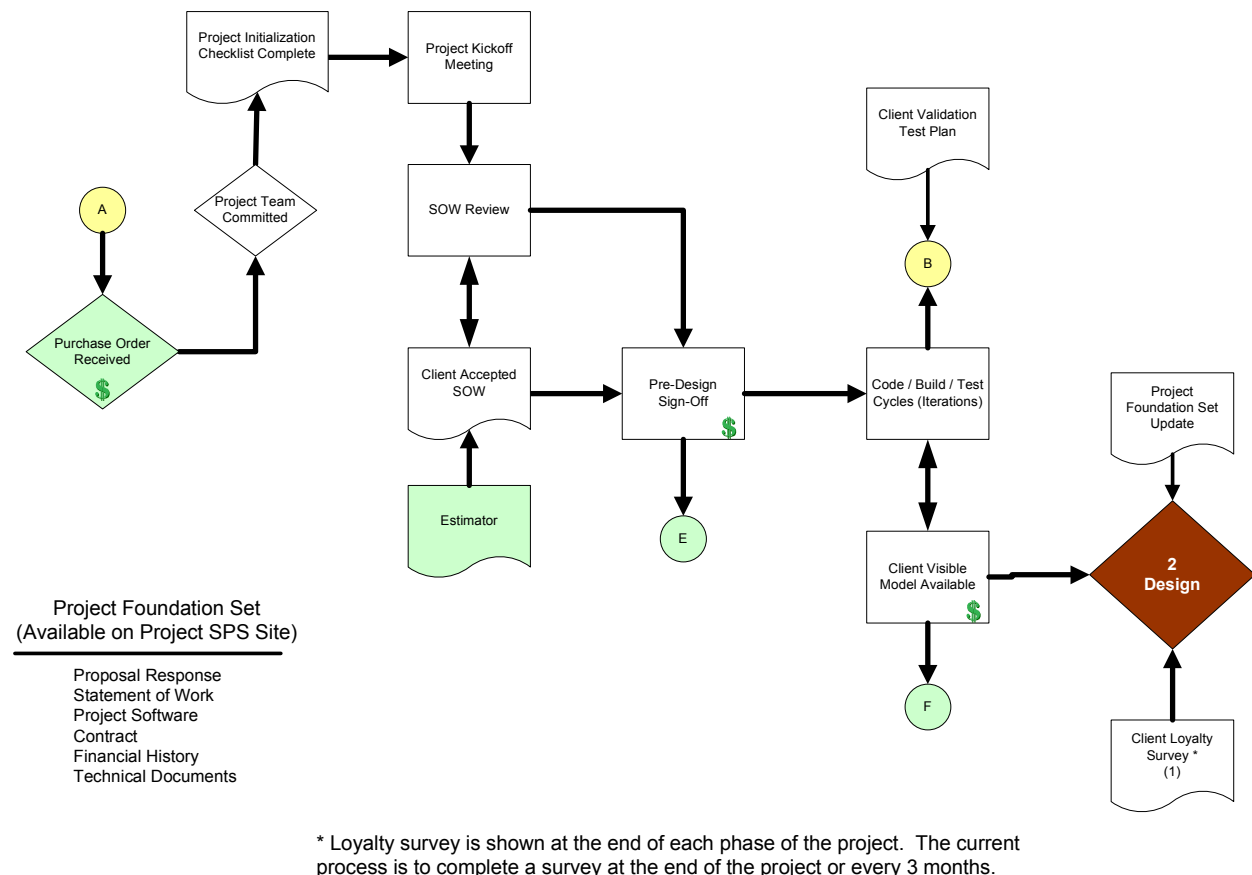
## Proposal Review

This answers the question "Can we make money at this?" Are there client issues being addressed? Does this provide strategic leverage? Is this a single client solution or are there cross client opportunities? What are the known competitive advantages and risks? What might the numbers look like? Is this required to meet revenue targets or does it represent a potential up tick?

## Proposal Submitted to Client

This is the end-game for Boundary 1

# Boundary 2 "Design"

The objective of Boundary 2 is to provide is to set the desired client result and produce a working model of that valued result in a baseline that matures as we move from Boundary to Boundary.



\* Loyalty survey is shown at the end of each phase of the project.  The current process is to complete a survey at the end of the project or every 3 months.

**Figure 3.  Boundary 2 Design**

## Purchase Order Received
In a perfect world, no work begins until a Purchase Order is received

## Project Team Committed
An Engagement Manager and Project Manager are committed; the required resources have been forecasted, any necessary internal negotiations have taken place and known issues have a known resolution path.

## Project Initialization Checklist Complete
This checklist is simply to ensure that any required internal information is provided and any pre-purchase order activity is captured or resolved.

## Project Kickoff Meeting
The project kickoff meeting is the 1st step on the road to delivering a client valued result.  It aligns client expectations with team competencies and outlines internal team logistics.  All available client expectation material is made available to the team.  Any known areas of concern are highlighted.

## Feasibility Study Available

A "Feasibility Study" brings together the Requirements from the RFP, our Proposed Solutions, any negotiated deviations from the proposed solution (Client Approved SOW), and any other client expectations form the 1st common event "Pre-Design Sign-Off".

## Client Accepted SOW

The result of our proposed solution and any client negotiations.

## Pre-Design Sign-Off

This is the 1$^{st}$ of two Boundary 2 events that could have progress payments associated with them. The "Pre-Design Sign-Off" answers the question "Do we have a common understanding of the problem being solved and an initial model that will provide this valued result. This is a real sign-off.

## Code / Build / Test Cycles (Iterations)

As an event this "code / build / test cycle"(Iterations) occurs as part of Boundaries 2-5. This particular cycle produces the 2$^{nd}$ progress payment event the "Client Visible Model".
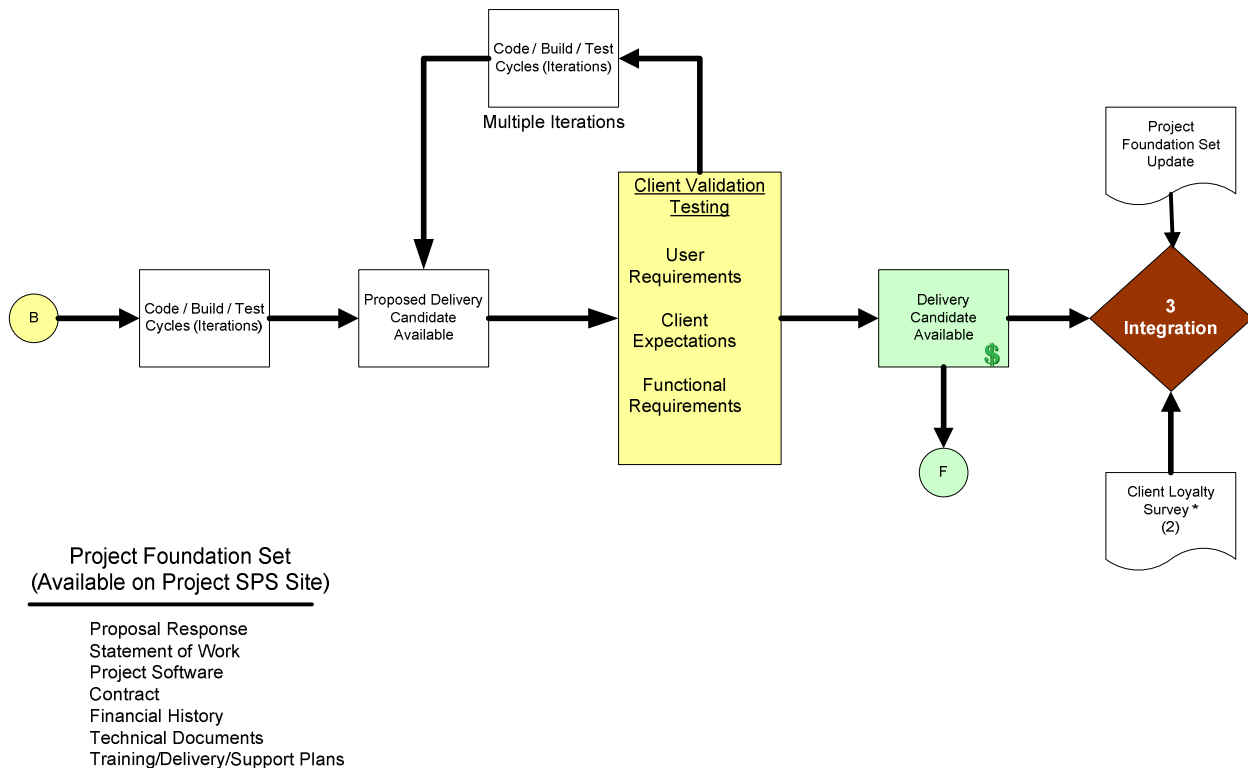
## Client Visible Model Available

The "Client Visible Model" is the initial delivery of working software. The intent is to provide this version of the software as soon as possible so the client can start adjusting to a new reality and so demonstrable project progress can be clear.

Transitioning Boundary 2 commits all resources required for Boundary 3 Integration where the actual delivery candidate (production release) will be developed and delivered.

# Boundary 3 "Integration"

The objective of Boundary 3 is to provide the Delivery Candidate that will evolve into the client accepted production system.



**Figure 4.  Boundary 3 Integration**

## Code / Build / Test Cycle (Iterations)

This cycle is a continuation, extension if you will, of the "Client Visible Model" cycle that yields the 1st real "Delivery Candidate.

## Proposed Delivery Candidate Available

This base level of the software is the 1st to be declared a project Delivery Candidate and as such it will be used for Client Validation Testing.  As this Delivery Candidate proceeds through the Validation Testing all issues will be addressed in the Code / Build / Test cycles (Iterations) until the actual "Delivery Candidate" is declared.

## Client Validation Testing

Is a set of tests that demonstrate that the "Proposed Delivery Candidate" is capable of meeting all User Requirements, Functional Requirements, and Client Expectations.  The successful completion of this testing is the actual "Delivery Candidate".

## Delivery Candidate Available

The actual "Delivery Candidate" is the system that will be submitted to whatever Client Acceptance testing required by the contract Statement of Work.  It is this version of the software that will evolve into the final deliverable of the project.

Transitioning Boundary 3 "Integration" the client accepts the "Delivery Candidate" as the next Base Level of the software solution to be evolved into the "Production System".  A progress payment is made and the resources for Boundaries 4 and 5 are committed.

## Code / Build / Test Cycles (Iterations)
This particular cycle resolves any issues relating to Client System Integration.

# Boundary 4 "Evaluation"
The objective of Boundary 4 is to provide the Production System that the client submits for Final Acceptance Testing.
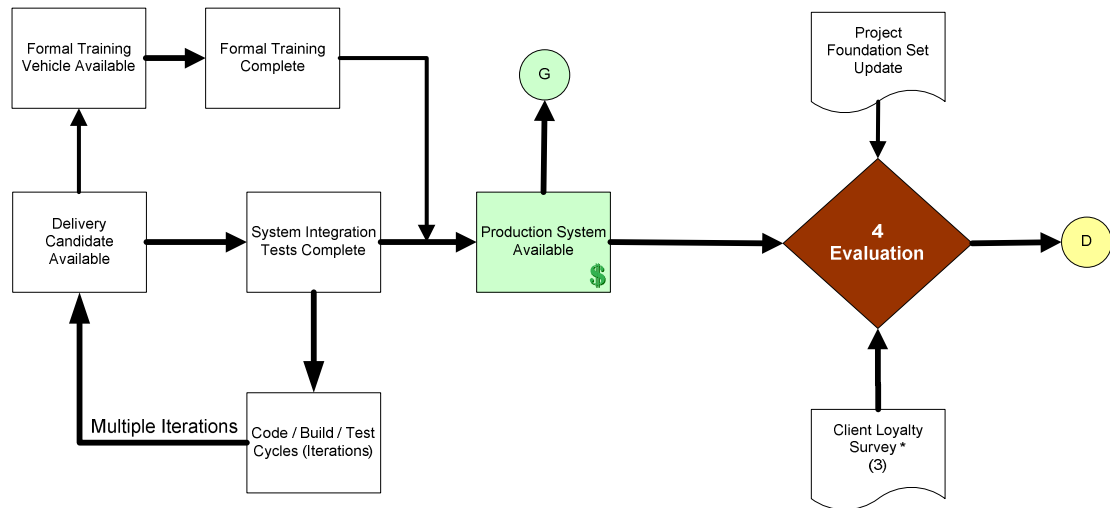


**Figure 5. Boundary 4 Evaluation**

## Code / Build / Test Cycle (Iterations)
This particular cycle resolves any issues relating to Client Production System Integration.

## System Integration Test Complete
These tests deal with the ability of the Delivery Candidate to perform in the Client environment.  This includes all Client interfaces and external system requirements

## Production System Available
Upon completion of the System Integration Tests this Base Level of the software will be considered the Production System targeted for Final Acceptance Testing.

Transitioning Boundary 4 "Evaluation" the client accepts the "Production System" as the next Base Level of the software. A progress payment is made.

## Boundary 5 "Client Acceptance"

The objective of Boundary 5 is to provide the Production System that the client accepts and authorizes the final project payment.
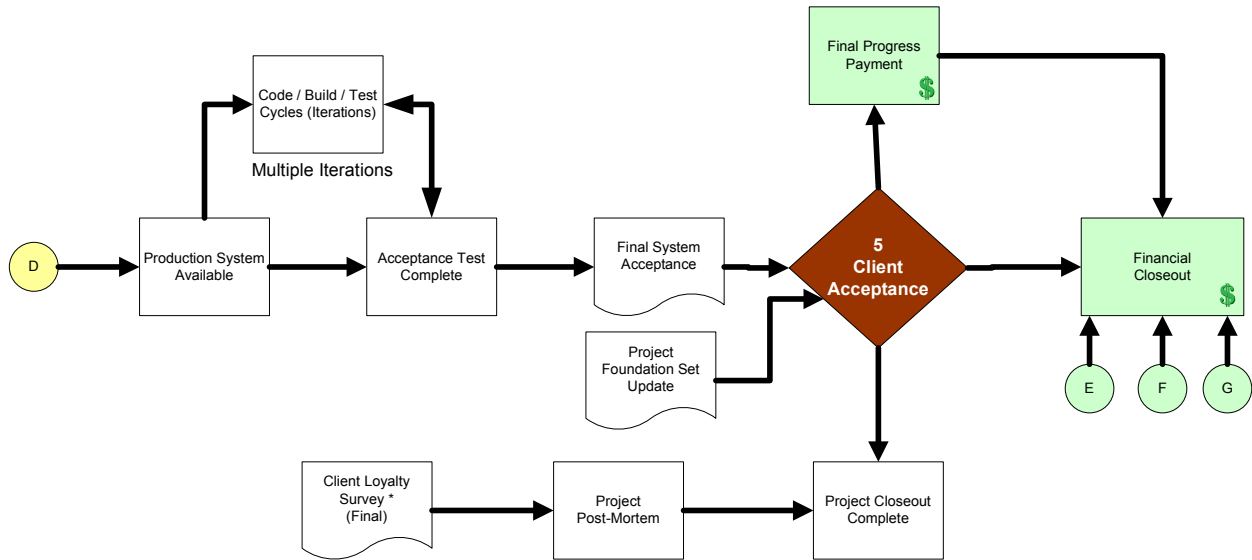


**Figure 6.  Boundary 5 Client Acceptance**

## Code / Build / Test Cycle (Iterations)

This particular cycle resolves any issues relating to Client Acceptance.

## Acceptance Test Complete

These tests deal with the ability of the Production System to provide the client with software that is viewed as a valuable result.

## Client Project Acceptance

Upon completion of the Project Acceptance Tests this System is accepted as the final delivery against the project.

Transitioning Boundary 5 "Client Acceptance" the client accepts the "Production System" as the final project delivery.  The Final Project payment is authorized.

## Financial Closeout

A final audit of the project is made and a Final Invoice is made detailing any or all adjustments.

## Project Post-Mortem

Within 30 days of the final project invoice being sent a Project Post-Mortem is held to review team performance (including client).  The objective is to ensure future projects achieve higher valued results.

## Client Loyalty Survey

The objective of the Client Loyalty Survey is to ensure that this basic tenet of the company is being constantly addressed and measured.  It is the Engagement Manager's (or designate) responsibility to ensure that his client is contacted.  The high preference is to have an administrative resource make the contact to ensure the objectiveness of the survey content.  This task is a pre-requisite to the Post-Mortem