SDLC IS Support System - Increment Two

ClearQuest Schema Specification

Version 2.6

Version Date: 2004.08.12

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Note: used by permission (Fonterra) as an example of technical documentation by Andrew Kouroupis. Primary document created in MS Word, diagrams created in Visio.

Revision History

Date	Version	Description	Author
2004/06/10	2.0	Draft. Initial content drawn from ClearQuest Usage Model Report v2.3	Andrew Kouroupis
2004.07.13	2.1	State transition models	Andrew Kouroupis
2004.07.18	2.2	Primary Record types	Andrew Kouroupis
2004.07.22	2.3	CAMS record type	Andrew Kouroupis
2004.07.25	2.4	Child record types	Andrew Kouroupis
2004.08.01-	2.5	Update select list values	Andrew Kouroupis
2004.08.12	2.6	Update with Appendices	Andrew Kouroupis

Summary Details

Property	Value
Document Title	ClearQuest Schema Specification
Filename	SDLC_CQ2_Design v2-4
Project Name	SDLC IS Support System - Increment Two
Author	Andrew Kouroupis
Last Saved By	Andrew
Last Save Date	9/16/2007 11:13 PM
Comments	<comments>
Keywords	SDLC, ClearQuest, Support, ITIL
File Size	1091584 bytes
Number of Pages	32
Version	2.6
Document ID	<0000>

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ClearQuest Schema Specification

1   Introduction

1.1   Introduction

This Increment Two specification describes the IS Support System (ClearQuest) implementation for Fonterra Global IS Support. The system is an aspect of the Fonterra Solutions Development Life Cycle (SDLC) program within the Enterprise Solutions Group. Prescribed business support processes and state transition models herein conform with ITIL best practice in IT Support.

New features in Increment Two include Change Management Records (approvals) and a CAMS Record for the coordination of support processes and incident records from the EDS CAMS Helpdesk, the initial point of contact for Fonterra staff.

This specification of the ClearQuest schema includes the following record types:

- CAMS (reflection of the EDS Helpdesk Incident record)
- Defect
- Enhancement
- Service Request
- Change Management
- KnowledgeBase

1.2   Purpose

This document provides a comprehensive process overview of the system, using models to depict aspects of the system. It is intended to capture and convey prescribed business processes and information that determine ClearQuest configuration:

- Business Process Model (Business Process Modelling Notation)
- State Transition Diagram (UML)

Audiences for this document include analysts, managers, and developers. It constitutes the primary reference model for configuring the ClearQuest environment.

Because the ClearQuest transition model, fields, and controls are to realised in the CQ Record Types within constraints of the ClearQuest API, this documentation constitutes the primary specification to be referenced in application interface design.

1.3   Scope

The scope of this document reflects Increment Two design and implementation, both for the ClearQuest desktop client and ClearQuest Web client.

1.4   References

- SDLC-CQ2_Vision Document.doc
- SDLC-CQ2_SUP Use Cases.doc
- SDLC-CQ2_CCM Use Cases.doc

1.5   Glossary of Terms

Term	Definition
ITIL	IT Infrastructure Library
CR	Acronym for Change Request
Change Request	Synonym: Enhancement. Request for alteration to a system. Not a Defect.
ESG	Acronym for Enterprise Solutions Group
Change Owner	The Change Control Manager (usually Support Analyst) who serves as queue manager and change manager throughout the change request lifecycle.
Role	Synonymous with "Group Membership", denoting an access profile.
Log a CR	An authorised ClearQuest user may log (initiate) a change request record.
Review	The SA will Review (to approve) all records submitted by authorized Submitters
View	The SA can view all change request records. Submitters can view (but not update) all change requests they or their workgroup have submitted.
Approval	Following Submission, a record enters the Review Queue and is subject to the Approval workflow.
Ownership (Change Owner)	The Change Owner (usually Support Analyst) owns change requests they initiate. Ownership may be transferred to another Change Owner, but it is not passed to an Assignee when they are assigned a task or begin work.

2 Process Entities

2.1 Support Process Models

A change request (CR) follows a process lifecycle that is captured in the ClearQuest state transition matrix. ClearQuest automatically controls states available, actions available, and event notification.

State Transition Diagrams (in UML statechart notation, below) describe how a CR may move from its initial problem state to its final concluded state. **State transitions are specific to each Record Type.**
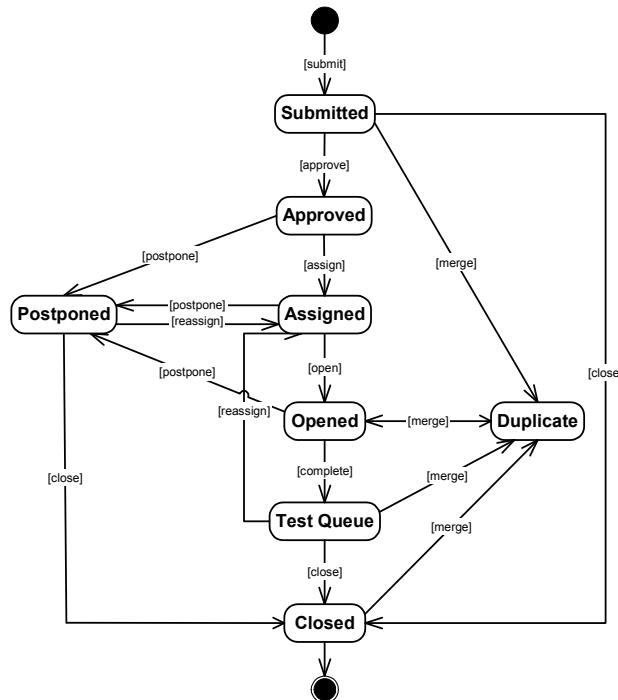
Business Process Diagrams in (Business Process Model Notation) describe the workflow activities, roles, and conditions that drive state transition. **Activities are specific to each Support Workflow.**

2.1.1   Business Process Diagram: SUP Defect Workflow
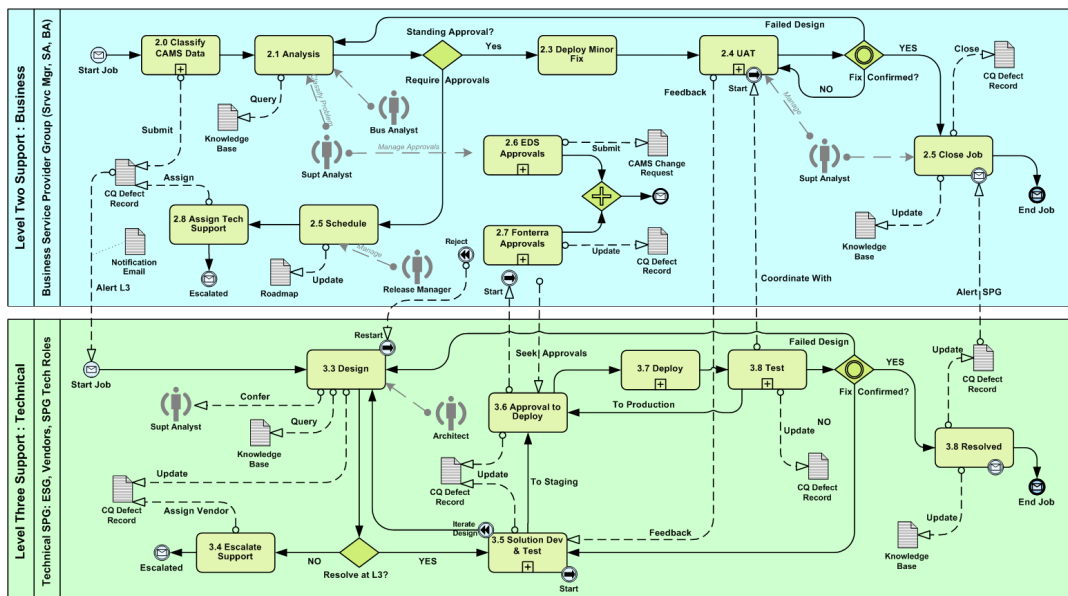
2.1.2   Business Process Diagram: SUP Enhancement Workflow
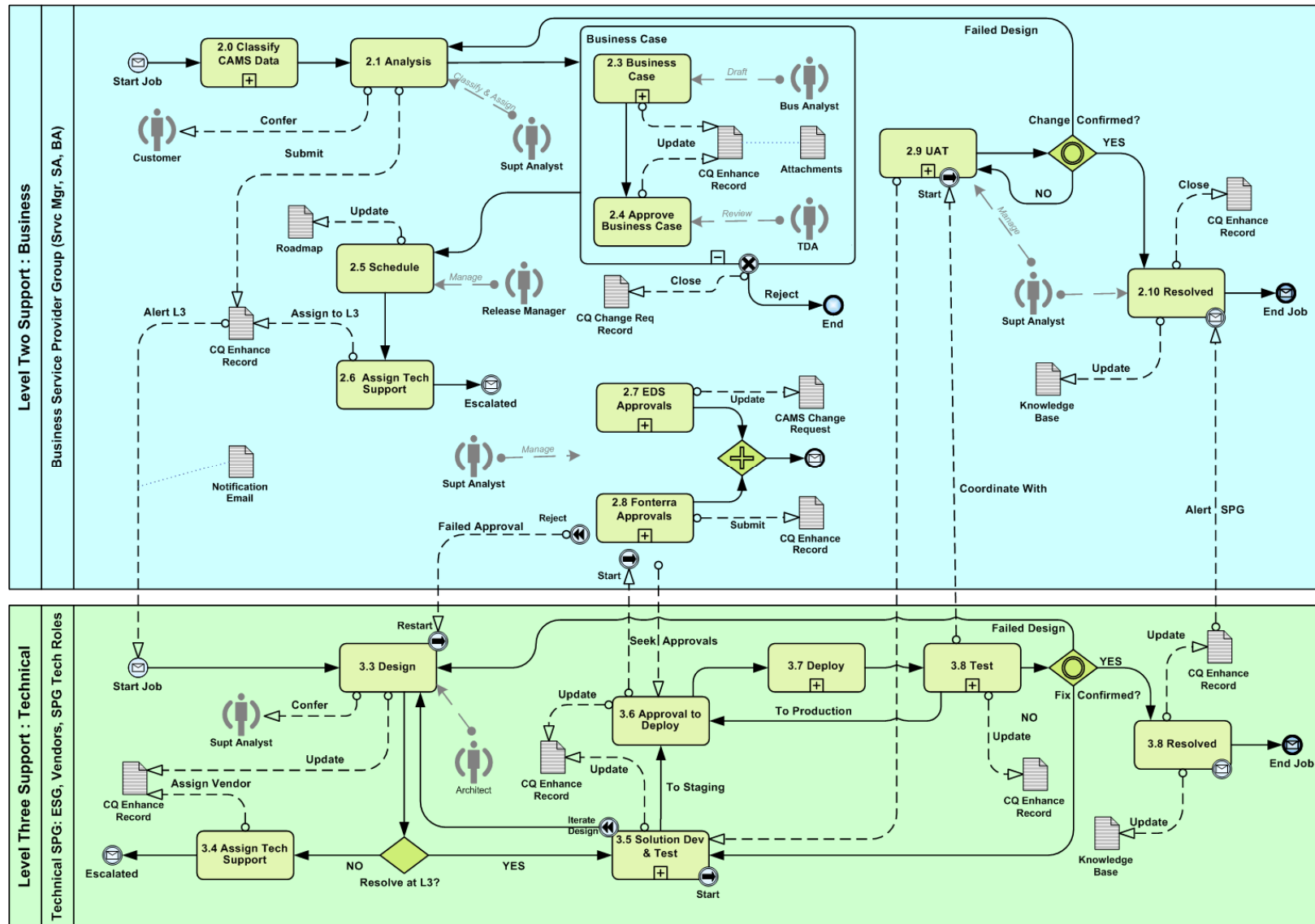
2.1.3 Business Process Diagram: SUP Service Request Workflow
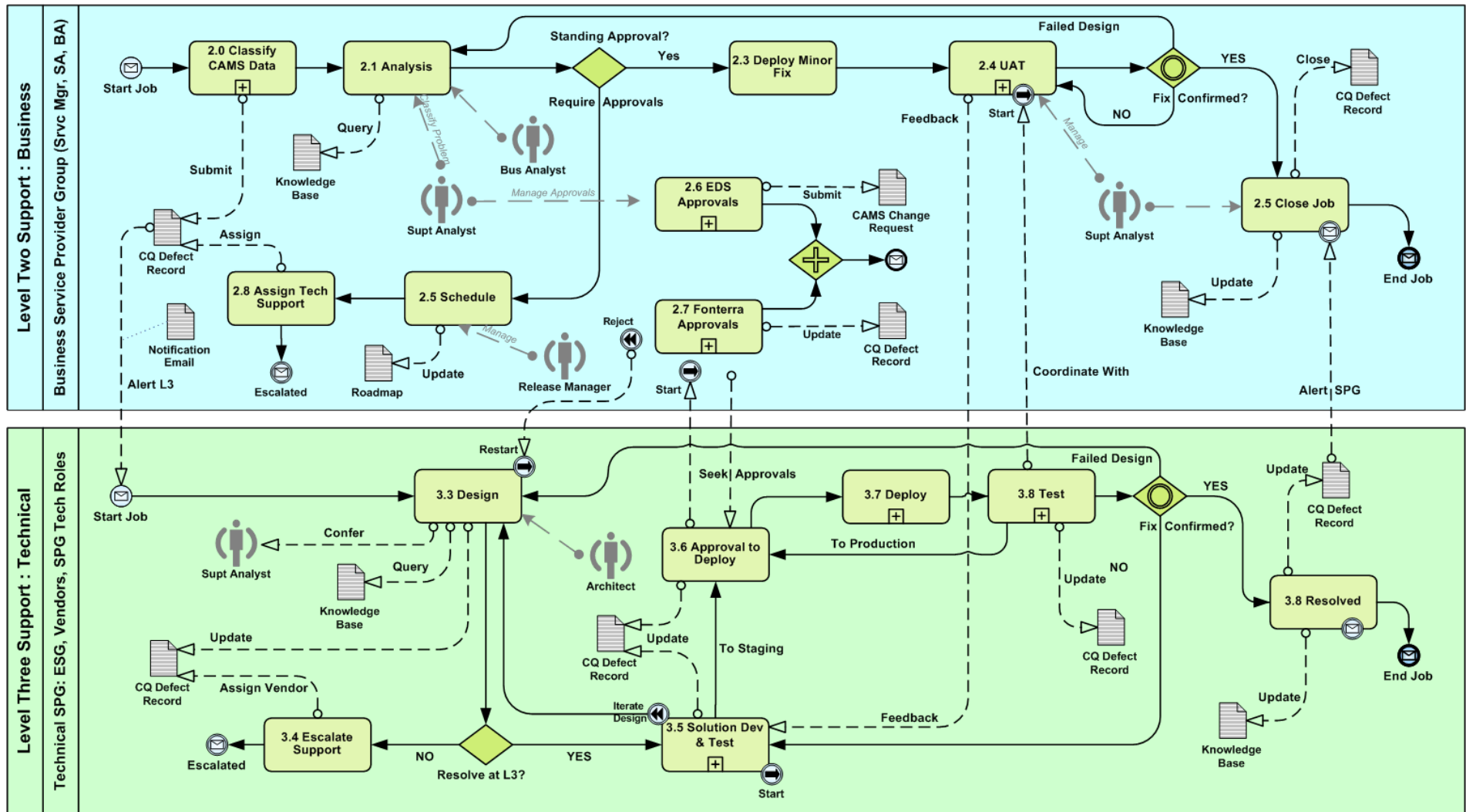
2.1.4 Business Process Diagram: CCM – Change Management Workflow
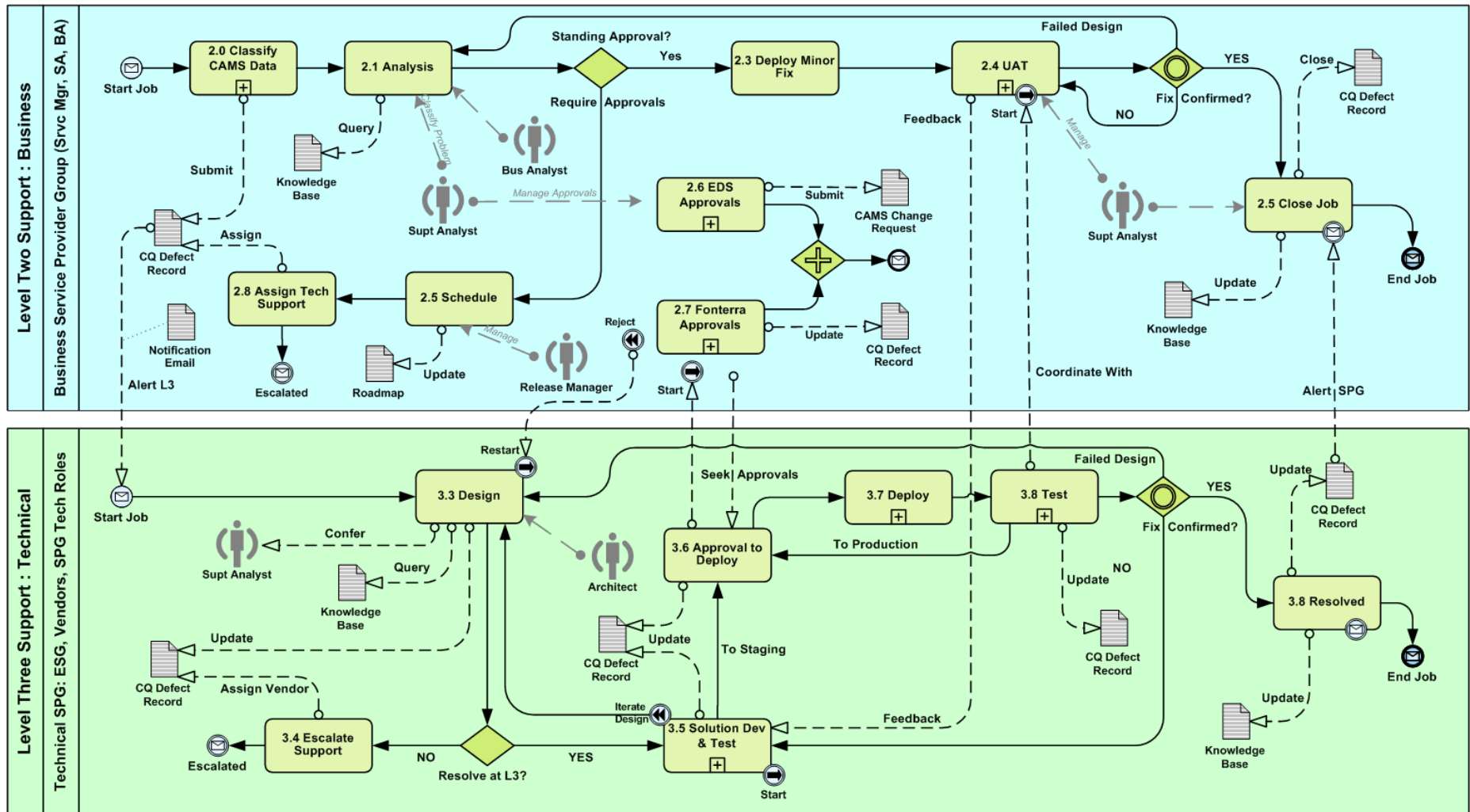
2.2   Databases

The ClearQuest schema repository provides a template for all process models defined and used at Fonterra. Only ClearQuest administrators interact directly with the schema repository. Individual user databases are derived from a single schema version.

A User Database contains the collection of change request records for a particular project or team. The ClearQuest administrator must grant database access to a user before the user can operate on a change request record. A database inherits all the Process Elements defined in the schema and configured in each record type.

Database Name	Type	Description
A	Master	ClearQuest primary database, the schema repository
B	User	ClearQuest user database for development and training
C	User	ClearQuest user database for production

2.3   Roles

Workers operating in a specific development role perform the activities described in the usage model. A single worker can perform many roles. However, any given task is performed in the context of only one role. The ClearQuest usage model defines the following process roles:

1. **Support Analyst** – Level Two Queue Manager– logs change requests, approves CRs (Assign, Postpone, Close, Duplicate), assigns requests to developers, and manages the testing/validation workflow with help-desk staff and the customer. All states either progress forward in the workflow cycle or back to the Analysis state, where the Support Analyst is alerted.

2. **Owner** – Level Two – designation of the process manager, usually the Support Analyst, although the Owner may be changed, indicating a shift in management responsibilities.

3. **Submitter** – Level Two – role functioning in restricted access mode (non-licensed), who may submit records, search for records, and view records from a default query.

4. **Assignee** – Level Two and Three – support role tasked with a change request solution. This group may include Analysts, Developers, Application Administrators, or external vendor staff.

5. **Approver** – Level Two and Three – completes approval assignments in the Change Management record, which is an aspect of activities in the Defect, Enhancement, and Service Request workflows.Access Model

2.4   Operations

ClearQuest roles conduct actions according to policies and rules that apply in the context of the workflow state and other conditions. Access to the change state and modifying actions for the schema can be controlled at multiple levels:

- Access to the user database is controlled through database subscriptions. Only authorised users are allowed to log in and operate on the records within the database.

- Within a database, access to specific actions is controlled based on the user role (that is, group membership).

- At the lowest level, control can be implemented at an individual user basis using the login id.

- Who is authorised to log an action and change the Change Request state.

2.5 Roles, Groups, and Access Rights

CQ Role	Group Name	Group List Values	Access Rights
Submitter (restricted license)	Restricted	Specific users and outside parties	submit records view a preset query report on a preset query
Change Owner	Assigned	Record attribute identifying the change owner role (SA)	(See SA)
Support Analyst	SA	All SPG Support Analysts	submit records process CAMS records view all records view all task queues assign all records modify all states report on all records
Assignee	Assignee	All ClearQuest Users	open assignment (dynamic) complete assignment (dynamic) change state (available options) modify record (assigned records)
Approver	Approver	All Approvers	Dynamic access rights specific to an assigned record

2.6 Record Type Overview

The following is an overview of record types and general attributes as process entities.

Type	Mode	Purpose
CAMS	Stateless	Receives email-based interface from CAMS record system. Carries functions for elected submission of Defect, Enhancement, or Service Request; also automates reassignment to another SPG
Defect	State-based	Management of IS solution defect resolution requests
Enhancement	State-based	Management of IS solution enhancement requests
Service_Request	State-based	Management of IS solution service requests
Assignment	State-based	Tracks IS solution assignments within the Defect, Enhancement, and Service Request records
Approval	Stateless	Dynamic management of IS solution approvals within the Defect, Enhancement, and Service Request records
KB_Submit	Stateless	Includes a data model subset of the Defect record type. Allows for submission of knowledge base records other than by defect resolution. Includes other knowledge base data classes.
KB_Query	Stateless	Query a data model of the knowledge base (KB_Submit), using metadata such as system, problem type, and resolution type. Used in researching Defect resolution issues from historic data and KB_Submit data.
System	Stateless	Manages a list of all Fonterra IS Solutions
Subsystem	Stateless	(System dependent) data management: sub-parts of IS solutions (such as major system modules).
Function	Stateless	(Subsystem dependent) data management: interface components (such as tabs or other functional area).
Users	Stateless	Management of ClearQuest user-base and defined groups

3   Record Type Definitions

The following record types are defined by the purpose of change request, information model, and state transition model that constitutes the process workflow in each case.

3.1   CAMS Record Type

The CAMS record type is created from data emailed from the upstream CAMS system. It captures all relevant data from the CAMS record for Support Analyst review to determine the issue type: Defect, Enhancement, Service Request, or Reassignment.

This record has no state The CAMS record type has functions to automate the submission of each record type or to send as a CAMS record to another SPG. The CAMS record type is not intended to be created independently by a user for the submission of records, so will not show in a New Record list..

3.1.1   CAMS Record Functions

Function	Interface	Description
Submit Defect	Button	Populate a new Defect record with CAMS data
Submit Enhancement	Button	Populate a new Defect record with CAMS data
Submit Service Request	Button	Populate a new Defect record with CAMS data
Assign to SPG	Button	Resubmit the CAMS data as per interface process Sends an automated alert to the SPG as per CAMS assignment process

3.1.2   CAMS Record Fields

Field	Type	Description
Submit Tab		
CAMS_ID:	Text	ID of the originating CAMS record
Svc_Task_ID:	Text	ID of the IMAC record if a service request or enhancement request
Svc_Type:	Text	IMAC type that differentiates between service request and enhancement request
CAMS_DATE:	Text	Date of the originating CAMS record
Customer_Name:	Text	Name of originating customer from CAMS customer base
Cust_ID:	Text	ID of originating customer from the CAMS customer base
Customer_Phone	Text	Phone number of customer from the CAMS customer base
Customer_Email:	Text	Email address of customer from the CAMS customer base
CAMS_Notes:	Text	Notes from the CAMS record prior to assignment to SPG
SPG:	Text	Fonterra Service Provider Group assigned the case
Subject:	Text	From CAMS Subject line to all Subject lines
Description:	Text	From CAMS Description line to all Description lines
Priority:	Text	IMAC Customer Priority carries over as Priority for a Service Request or Enhancement request
Severity:	Text	From CAMS Severity to Defect Severity

3.2   Defect Record Type

3.2.1   Record Fields

Field	Type	Description
Submit Tab		
ID:	Read Only	CQ Generated
State:	Read Only	Workflow based, current state
Subject	Free Text	Short problem description for reference
Type:	MultiSelect	Multiple Defect Types. Provides metadata for KB query.
Severity	Select List	Based on assessment of business impact, assigned a Severity of 1 to 4 reflecting Service Levels with rules for email notifications and alerts, and time-limits for response. Severity provides a date for the DateDue field
System	Select List	List of supported Fonterra IS solutions
Subsystem	Select List	Dependent list of subsystems for each solution, as available (optional)
Function	Select List	Dependent list of functional areas within a subsystem, often an interface element such as a Tab
Cams ID	Read Only	From the helpdesk CAMS system
Customer GUID	Free Text	Usually from CAMS. Fonterra userID
Customer Name	Free Text	Usually from CAMS. First name, last name
Customer Phone	Free Text	Usually from CAMS. Phone number
Customer Email	Free Text	Usually from CAMS. Full email address
Change Owner Name	Select List	Picked up from record submission action
Change Owner Phone	Free Text	Populated from CQ user base
Change Owner Email	Free Text	Populated from CQ user base
CAMS Notes	Free Text	All available notation from the CAMS (or other level-one intake) is captured in the Call Notes field.
DueDate	Date Format	A issue's Scheduled Completion Date is based on Severity, and results in various email alerts being generated on the date if the CR is not advanced to Closed. • Severity 1: one day • Severity 2: three days • Severity 3: ten days • Severity 4: 30 days
Description	Free Text	Full description of the problem

Field	Type	Description
Resolution Tab		
Resolution Type	Select List	Class of work performed to resolve the problem.
Description	Free Text	Verbose description of the work performed to achieve resolution
Duplicate Of	Read Only	Record ID of which the current record is a Duplicate
Duplicates	Read Only	List of record IDs designated as duplicates of the current record
Resolved Date	Date Format	Date on which the issue was resolved (went to testing)
History Tab		
Action Timestamp	Read Only	Records each action, including state transitions.
User Name	Read Only	Records the userID of the ClearQuest user initiating the action
Action Name	Read Only	Records the action name.
Old State	Read Only	If the action results in a state transition, records the original state
New State	Read Only	If the action results in a state transition, records the resulting state
Assignment Tab		
Sent	Date Format	Date/Time each assignment was sent
Completed	Date Format	Date/Time each assignment is completed
Note	Free Text	Comments from the Sender to the Assignee
Sender	Read Only	Populated from the userID of the sender.
Assignee	Select List	ClearQuest user who receives the assignment. This user must also receive an automated email notification.
Assignment Log	Read Only	Records all completed assignments
Approvals Tab		
Sent	Date Format	Date/Time each approval request was sent
Completed	Date Format	Date/Time each approval is completed
Note	Free Text	Comments from the Sender to the Approver
Sender	Read Only	Populated from the userID of the sender.
Approver	Select List	ClearQuest user who receives the approval request. This user must also receive an automated email notification.
Approval Log	Read Only	Records all completed Approvals
Notes Tab		
New Note	Free Text	Allows any user with access to the record to record a note.
Notes Log	Read Only	A persistent record of all notes submitted.
CAMS Notes	Free Text	All available notation from the CAMS (or other level-one intake) is captured in the Call Notes field.

Field	Type	Description
Attachments Tab		
Add	Button	Starts a Browse dialog to locate a file in a network location
Delete	Button	Deletes the highlighted attachment from the CQ database
Save As	Button	Save As dialog to save the highlighted file to a network location
Open	Button	Opens the selected file in it's default application
File List	Document List	Presentation pane listing all attached files

3.2.2 Problem Dependent Lists (Call Types)

IS Problem	Data Maintenance	Access Query	Business Support
Application not available	Data Corruption	New Account	Training required
Application not working as intended	Data Missing	Change Existing Account	Database Refresh
Automated Warning/Alert	Data Incompatible	Delete Account	Reports Requested
Printer not printing	Data Duplicated	Password Reset	Application Installation
When printing, not printing intended	Data Extraction Requested	Exceeded License Agreement	Functionality Assistance
		Access Denied for Valid Account	

3.2.3 Defect Select List Values

System, Sub-system, Function are featured in Appendix: System, Sub-system, Function.

Approvers are featured in Appendix: ClearQuest Approvers

Assignees are featured in Appendix: ClearQuest Users

Service Provider Groups are featured in Appendix: SPG List

Defect Resolution Type

3.2.4 Defect Process States
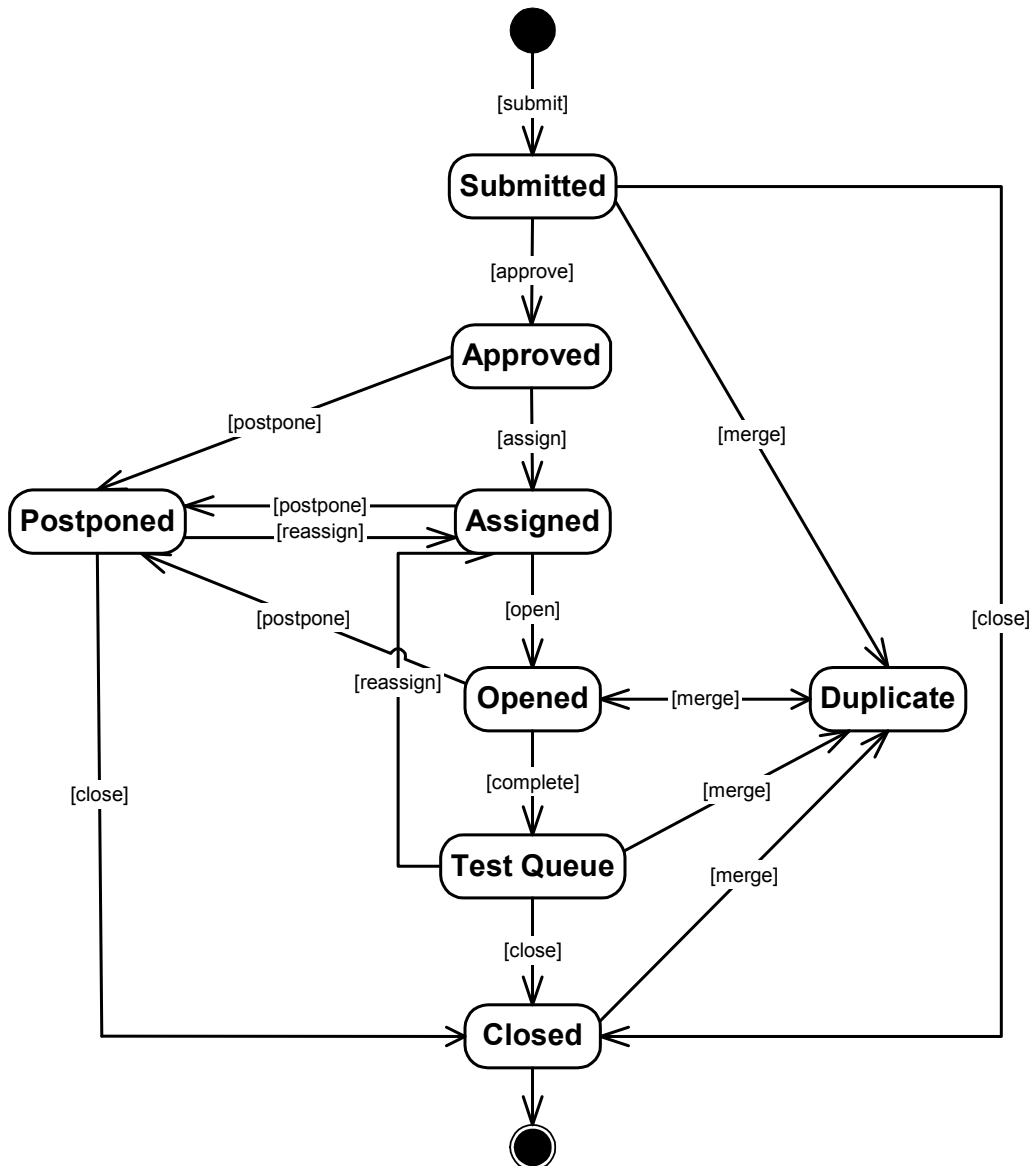
3.3 Enhancement Record Type

3.3.1 Enhancement Record Fields

Field	Type	Description
Submit Tab		
ID:	Read Only	CQ Generated
State:	Read Only	Workflow based
SPG:	Select List	Populated from assignment
Subject	Free Text	Short problem description for reference
Type:	Select List	Enhancement Types
Priority	Select List	Based on business need, as originally expressed by the customer.
System	Select List	List of supported Fonterra IS solutions
Subsystem	Select List	Dependent list of subsystems for each solution, as available (optional)
Function	Select List	Dependent list of functional areas within a subsystem, often an interface element such as a application tab
Cams ID	Read Only	From the helpdesk IMAC system. Task ID
Customer GUID	Free Text	Usually from CAMS. Fonterra userID
Customer Name	Free Text	Usually from CAMS. First name, last name
Customer Phone	Free Text	Usually from CAMS. Phone number
Customer Email	Free Text	Usually from CAMS. Full email address
Change Owner Name	Select List	Populated from record submission action (userID)
Change Owner Phone	Free Text	Populated from CQ user base
Change Owner Email	Free Text	Populated from CQ user base
DueDate	Date Format	Critical due date as expressed by the customer. Relates to Priority
Description	Free Text	Full description of the problem
Resolution Tab		
Resolution Type	Select List	Class of work performed to perform the enhancement.
Description	Free Text	Verbose description of the work performed to achieve resolution
Duplicate Of	Read Only	Record ID of which the current record is a Duplicate
Duplicates	Read Only	List of record IDs designated as duplicates of the current record
Resolved Date	Date Format	Date on which the issue was resolved (went to testing)

Field	Type	Description
History Tab		
Action Timestamp	Read Only	Records each action, including state transitions.
User Name	Read Only	Records the userID of the ClearQuest user initiating the action
Action Name	Read Only	Records the action name.
Old State	Read Only	If the action results in a state transition, records the original state
New State	Read Only	If the action results in a state transition, records the resulting state
Assignment Tab		
Sent	Date Format	Date/Time each assignment was sent
Completed	Date Format	Date/Time each assignment is completed
Note	Free Text	Comments from the Sender to the Assignee
Sender	Read Only	Populated from the userID of the sender.
Assignee	Select List	ClearQuest user who receives the assignment. This user must also receive an automated email notification.
Assignment Log	Read Only	Records all completed assignments
Approvals Tab		
Sent	Date Format	Date/Time each approval request was sent
Completed	Date Format	Date/Time each approval is completed
Note	Free Text	Comments from the Sender to the Approver
Sender	Read Only	Populated from the userID of the sender.
Approver	Select List	ClearQuest user who receives the approval request. This user must also receive an automated email notification.
Approval Log	Read Only	Records all completed Approvals
Business Case Tab		
Attachments Tab		
Add	Button	Starts a Browse dialog to locate a file in a network location
Delete	Button	Deletes the highlighted attachment from the CQ database
Save As	Button	Save As dialog to save the highlighted file to a network location
Open	Button	Opens the selected file in it's default application
File List	Document List	Presentation pane listing all attached files
Notes Tab		
New Note	Free Text	Allows any user with access to the record to record a note.

Field	Type	Description
Notes Log	Read Only	A persistent record of all notes submitted.
CAMS Notes	Free Text	All available notation from the CAMS (or other level-one intake) is captured in the Call Notes field.

3.3.2   Enhancement Select List Values

System, Sub-system, Function are featured in Appendix: System, Sub-system, Function.

Approvers are featured in Appendix: ClearQuest Approvers

Assignees are featured in Appendix: ClearQuest Users

Service Provider Groups are featured in Appendix: SPG List

Enhancement Type	Priority	
New Content	1	
Updating Existing Content	2	
Deleting Content	3	
Security Upgrade	4	
New Functionality	5	
Modify Functionality		
Delete Functionality		

3.3.3 Enhancement Process States

```
                              ●
                              │ [submit]
                              ▼
                        ┌───────────┐
                        │ Submitted │────────────────────────────┐
                        └───────────┘                            │
                              │ [approve]                        │
                              ▼                                  │
                        ┌───────────┐                            │
                        │ Approved  │                            │
                        └───────────┘         [merge]            │
            [postpone]        │ [assign]                         │
      ┌──────────────┐        ▼                                  │
      ▼        [postpone]  ┌──────────┐                          │ [close]
 ┌───────────┐◄────────────│ Assigned │                          │
 │ Postponed │────────────►└──────────┘                          │
 └───────────┘ [reassign]      │ [open]                          │
      │   [postpone]           ▼                                 │
      │     [reassign]    ┌────────┐   [merge]   ┌───────────┐    │
      │                   │ Opened │◄──────────► │ Duplicate │    │
      │ [close]           └────────┘             └───────────┘    │
      │                       │ [complete]       [merge]          │
      │                       ▼                                   │
      │                 ┌────────────┐  [merge]                   │
      │                 │ Test Queue │─────────►                  │
      │                 └────────────┘                            │
      │                       │ [close]                           │
      │                       ▼                                   │
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      └──────────────────►│ Closed │
                          └────────┘
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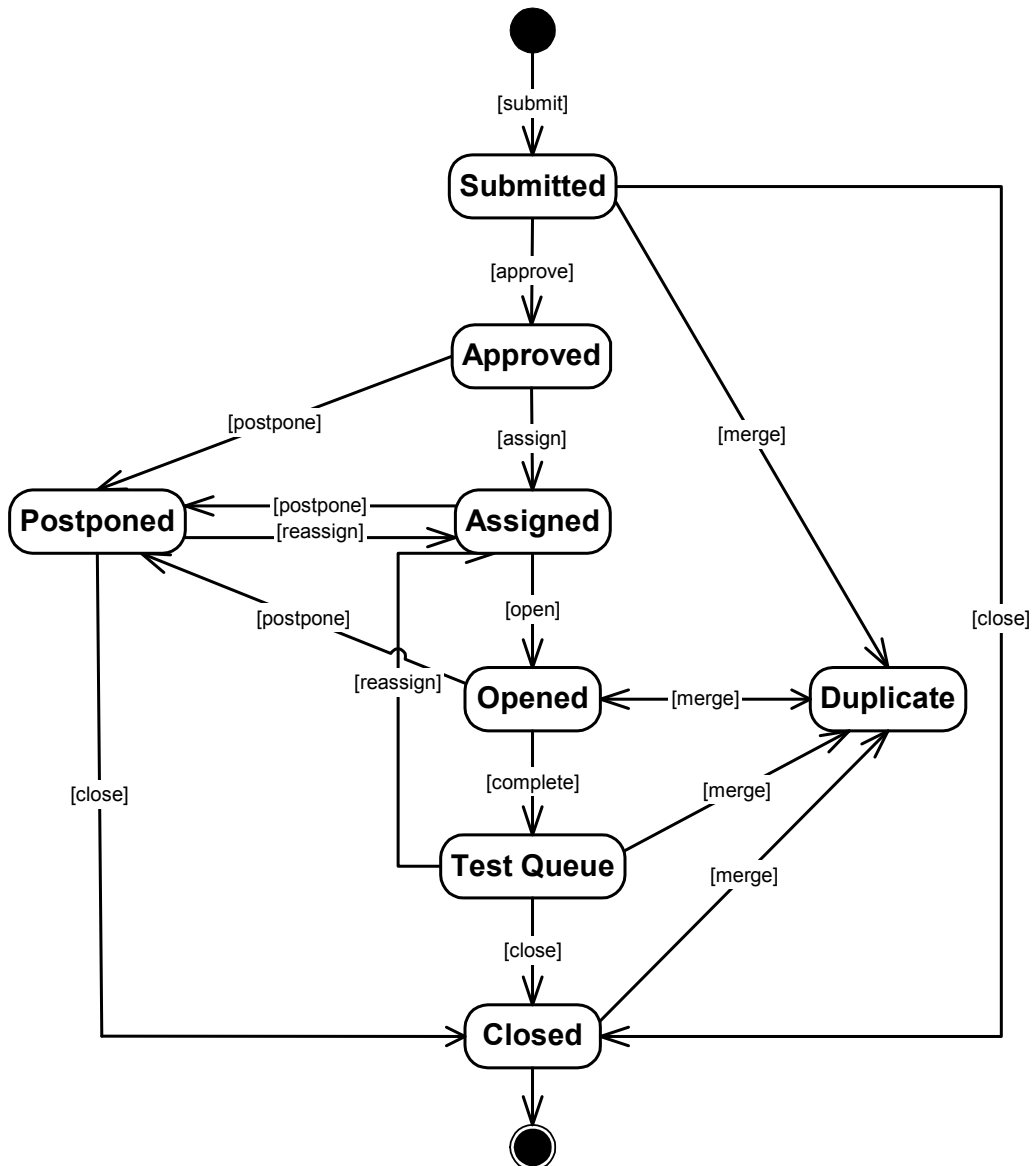
3.4 Service Request Record Type

3.4.1 Service Request Record Fields

Field	Type	Description
Submit Tab		
ID:	Read Only	CQ Generated
State:	Read Only	Workflow based
Subject	Free Text	Short problem description for reference
System	Select List	List of supported Fonterra IS solutions
Subsystem	Select List	Dependent list of subsystems for each solution, as available (optional)
Function	Select List	Dependent list of functional areas within a subsystem, often an interface element such as a Tab
Cams ID	Read Only	From the helpdesk CAMS IMAC system
Customer GUID	Free Text	Usually from CAMS. Fonterra userID
Customer Name	Free Text	Usually from CAMS. First name, last name
Customer Phone	Free Text	Usually from CAMS. Phone number
Customer Email	Free Text	Usually from CAMS. Full email address
Change Owner Name	Select List	Populated from record submission action
Change Owner Phone	Free Text	Populated from CQ user base
Change Owner Email	Free Text	Populated from CQ user base
CAMS Notes	Free Text	All available notation from the CAMS (or other level-one intake) is captured in the Call Notes field.
Description	Free Text	Full description of the service request
Resolution Tab		
Resolution Type	Select List	Class of service performed
Description	Free Text	Verbose description of the service performed
Duplicate Of	Read Only	Record ID of which the current record is a Duplicate
Duplicates	Read Only	List of record IDs designated as duplicates of the current record
Resolved Date	Date Format	Date on which the service was performed (went to testing)
History Tab		
Action Timestamp	Read Only	Records each action, including state transitions.
User Name	Read Only	Records the userID of the ClearQuest user initiating the action

Field	Type	Description
Action Name	Read Only	Records the action name.
Old State	Read Only	If the action results in a state transition, records the original state
New State	Read Only	If the action results in a state transition, records the resulting state
Assignment Tab		
Sent	Date Format	Date/Time each assignment was sent
Completed	Date Format	Date/Time each assignment is completed
Note	Free Text	Comments from the Sender to the Assignee
Sender	Read Only	Populated from the userID of the sender.
Assignee	Select List	ClearQuest user who receives the assignment. This user must also receive an automated email notification.
Assignment Log	Read Only	Records all completed assignments
Approvals Tab		
Sent	Date Format	Date/Time each approval request was sent
Completed	Date Format	Date/Time each approval is completed
Note	Free Text	Comments from the Sender to the Approver
Sender	Read Only	Populated from the userID of the sender.
Approver	Select List	ClearQuest user who receives the approval request. This user must also receive an automated email notification.
Approval Log	Read Only	Records all completed Approvals
Attachments Tab		
Add	Button	Starts a Browse dialog to locate a file in a network location
Delete	Button	Deletes the highlighted attachment from the CQ database
Save As	Button	Save As dialog to save the highlighted file to a network location
Open	Button	Opens the selected file in it's default application
File List	Document List	Presentation pane listing all attached files
Notes Tab		
New Note	Free Text	Allows any user with access to the record to record a note.
Notes Log	Read Only	A persistent record of all notes submitted.
CAMS Notes	Free Text	All available notation from the CAMS (or other level-one intake) is captured in the Call Notes field.

3.4.2   Service Request Process States

```
                              ●
                              │
                          [submit]
                              ↓
                        ┌───────────┐
                        │ Submitted │──────────────────────┐
                        └───────────┘                      │
                              │                            │
                          [approve]                        │
                              ↓                            │
                        ┌───────────┐                      │
                        │ Approved  │                      │
                        └───────────┘                      │
                    [postpone]      │                      │
                  ←───────────   [assign]   [merge]        │
                                    ↓                      │
  ┌───────────┐  [postpone]   ┌───────────┐                │
  │ Postponed │ ←───────────  │ Assigned  │                │
  └───────────┘  [reassign]   └───────────┘                │[close]
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        │   [postpone]          [open]                      │
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        │                     [complete]    [merge]     │    │
        │                           ↓                   │    │[merge]
        │                     ┌────────────┐            │    │
        │                     │ Test Queue │────────────┘    │
        │                     └────────────┘                 │
        │                           │                        │
        │                       [close]                      │
        │                           ↓                        │
        └──────────────────→  ┌──────────┐ ←────────────────┘
                              │  Closed  │
                              └──────────┘
                                    │
                                    ↓
                                   ◉
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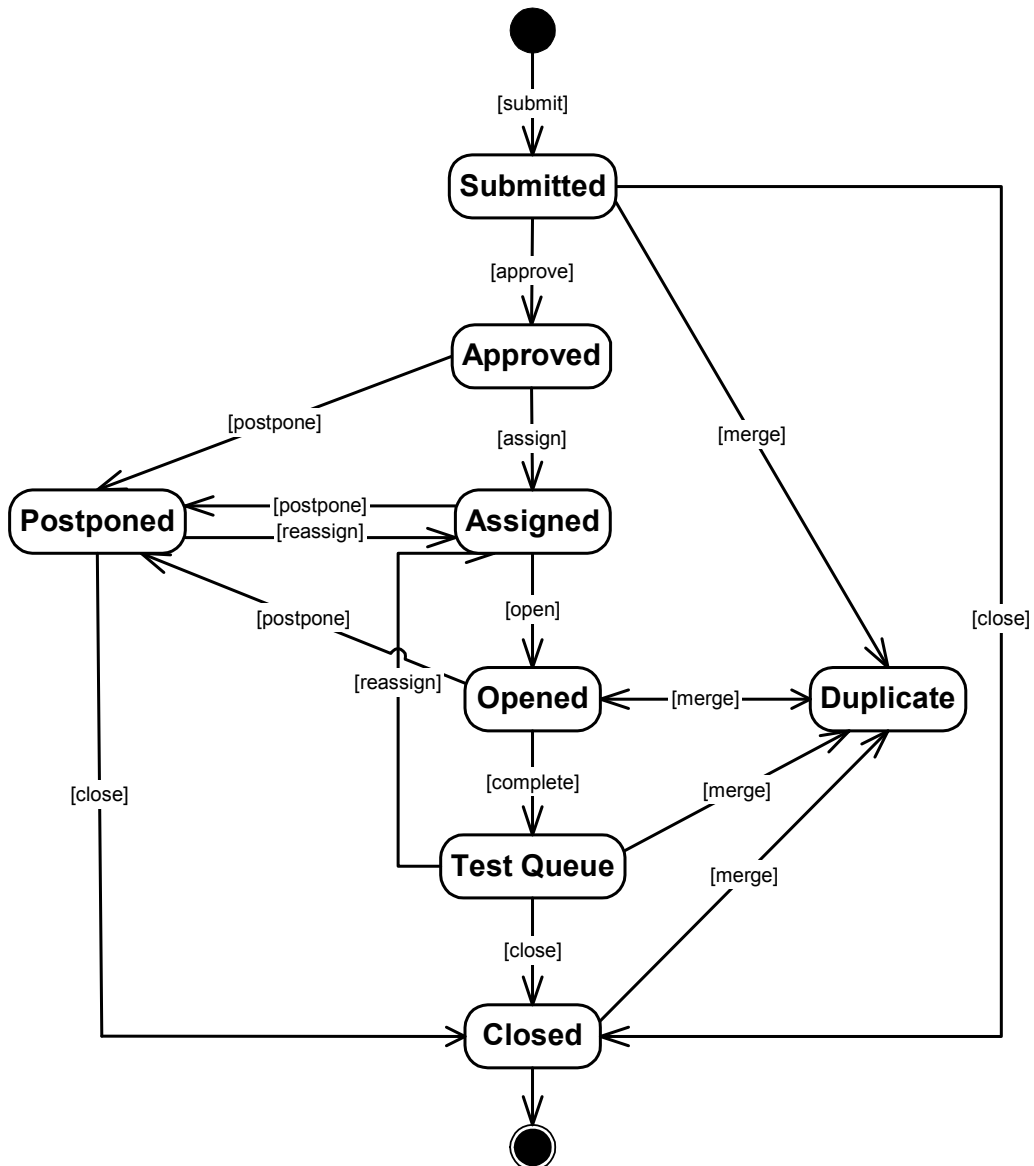
3.5   Assignment Record Type

The Assignment record type is a state-based child record of the Defect, Enhancement, and Service Request record types, driven from controls in the Assignment Tab in each parent record.

The Assignment record type is not meant for viewing or entering data in fields. The purpose of the Assignment record is to provide sub-states for tracking and reporting service levels of the Assignment lifecycle without needing to move out of and into the primary workflow states to achieve that traceability.

3.5.1   Assignment Record Fields

The date/time fields may be set to read-only, driven only programmatically by state changes – or they may be editable by the assignee – depending on business preferences.

Field	Type	Description
State	Read Only	The state of the record: Open, Paused, Resumed, Resolved
Date Open	Time/Date Format	Date and time the assignee started work (start the clock)
Date Paused	Time/Date Format	Date and time the assignee paused work (pause the clock)
Date Resumed	Time/Date Format	Date and time the assignee started work (restart the clock)
Date Resolved	Time/Date Format	Date and time the assignee started work (stop the clock)

3.5.2   Assignment Process States
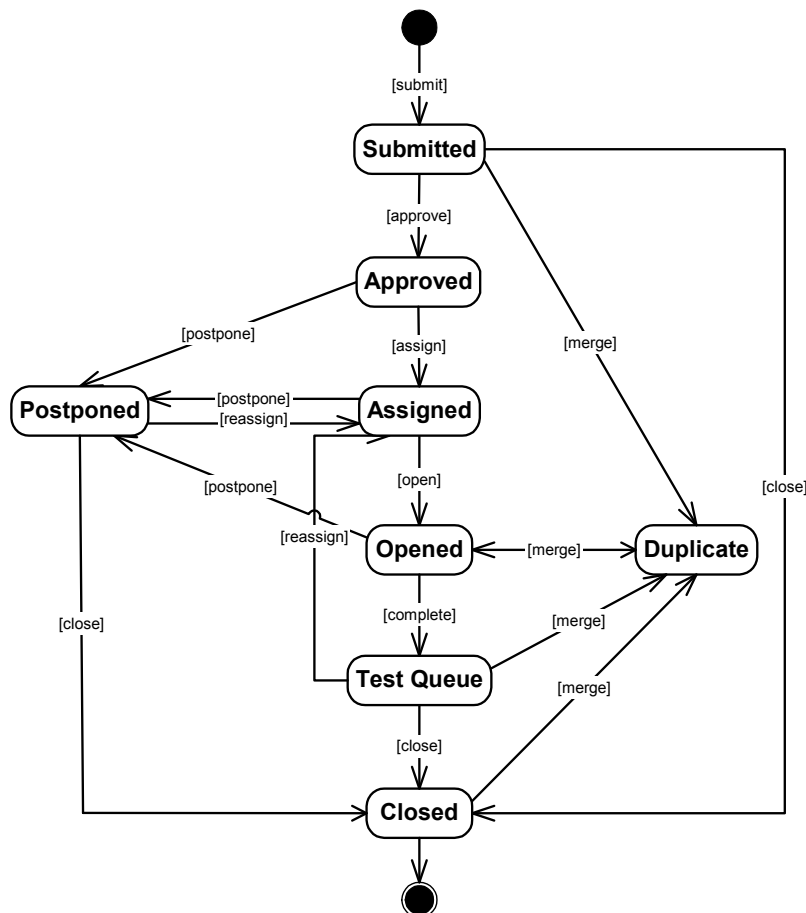
3.6   Approval Record Type

The Approval record type is a stateless child record of the Defect, Enhancement, and Service Request record types, called from the Approvals Tab in each record. The Approval record presents a dynamic structure, dependent on System and Type.

3.6.1   Approval Record Fields

Field	Type	Conditions

3.7 Knowledge Base

The Knowledge Base record is comprised of two forms: KB_Query and KB_Submit.

KB_Submit	Stateless	Includes a data model subset of the Defect record type. Allows for submission of knowledge base records other than by defect resolution. Includes other knowledge base data classes.
KB_Query	Stateless	Query of the knowledge base (KB_Submit), reliant on metadata such as system, problem type, and resolution type. used in researching problem resolution issues from historic data and KB_Submit data.

3.7.1 KB_Submit Fields

Because the KB_Query form leverages the Defect record data model, the Knowledge Base grows as the body of Defects grows. However, the KB_Submit form provides a means by which a knowledge base record may be submitted without being derived from a Defect issues. Examples include:

- Technical bulletins (notes and attachments)

- Problem resolution summary (notes, attachments, record numbers of Defect instances).

Field	Type	Description
General Tab		
Subject	Free Text	Search on text in the Subject field of a Defect
Defect Type	Select List	Restrict search to a particular Defect type
Related Records	Free Text	CQ IDs of known examples related to a knowledge base entry
System	Select List	Search on a particular Fonterra IS solutions
Subsystem	Select List	Restrict search to a subsystem
Function	Select List	Restrict search to a functional area of a subsystem
Description	Free Text	Search within the Description text of Defect records
Resolution Type	Select List	Restrict search to a single Resolution type among Defect records
Resolution Description	Free Text	Search on text in the Resolution Description field among Defect records
Notes Tab		
New Note	Free Text	Allows any user with access to the record to record a note.
Notes Log	Read Only	A persistent record of all notes submitted.
Attachments Tab		
Add	Button	Starts a Browse dialog to locate a file in a network location
Delete	Button	Deletes the highlighted attachment from the CQ database
Save As	Button	Save As dialog to save the highlighted file to a network location
Open	Button	Opens the selected file in it's default application
File List	Document List	Presentation pane listing all attached files

3.7.2   KB_Query Fields (stateless record)

The KB_Query form provides search functions over fields listed below (subset of the Defect record type). The fields constitute Boolean "and" operators, so more conditions yield more focussed and fewer returns.

Field	Type	Description
Subject	Free Text	Search on text in the Subject field of a Defect
Defect Type	Select List	Restrict search to a particular Defect type
System	Select List	Search on a particular Fonterra IS solutions
Subsystem	Select List	Restrict search to a subsystem
Function	Select List	Restrict search to a functional area of a subsystem
Description	Free Text	Search within the Description text of Defect records
Resolution Type	Select List	Restrict search to a single Resolution type among Defect records
Resolution Description	Free Text	Search on text in the Resolution Description field among Defect records
Notes	Free Text	Search Defect Notes fields
Related Record	Free Text	CQ IDs of a known example related to a knowledge base query
Attachment	Free Text	Search Defect Attachments filenames

4   Appendix: CAMS to ClearQuest Interface

4.1   Interface Description

Independent of any future requirement for back-end integration between CAMS and ClearQuest, an immediate requirement exists for an email-based interface between CAMS and ClearQuest. This interface must be enacted only at the point where a support issue is escalation from Level One to Level Two support. Through this interface, specified information captured by Helpdesk staff in a CAMS Case record or CAMS Service Request will be passed automatically to ClearQuest to be read into a new ClearQuest record.

4.2   System Use Case

Precondition 1: all Fonterra SPGs and primary-contact email addresses (groups) are configured in CAMS.

Precondition 2: all SPG assignments in CAMS result in an automated email to the SPG initial contact email group as a notification of escalation. This is out of scope for change.

Precondition 3: a CAMS Case or Service Request requires escalation to Fonterra Level Two support for resolution by a Fonterra Service Provider Group (SPG).

1.   Trigger: the issue in CAMS is assigned to a Fonterra SPG, and the record is committed.

2.   An email script runs, triggered by the SPG assignment.

3.   Specific field data are extracted from the CAMS database.

4.   The field data is written into the body of an email per Fonterra technical specification.

5.   The email subject line is populated per Fonterra technical specification.

6.   The email is addressed to a single ClearQuest system account for all instances.

7.   The email is sent.

8.   ClearQuest receives the email.

9.   ClearQuest interprets the subject-line and body content to create a new CQ record with all CAMS provided fields populated.

10.   The SPG support analyst, having received the normal CAMS escalation notification, locates the newly created ClearQuest record, continuing the case or service request escalation.

4.3   Solution Responsibilities

1.   Fonterra will specify a delimited text format for the email message body.

2.   Fonterra will provide a ClearQuest system email address.

3.   Fonterra will design and conduct all work on the ClearQuest side to receive the mail interface.

4.   Fonterra will consult with EDS to agree all Requirements prior to development. These are contingent on helpdesk processes and CAMS system parameters.

5.   Fonterra will specify the required CAMS/ClearQuest field mapping, in consultation with EDS.

6.   EDS will commission and manage the required development work on the CAMS side.

7. The solution will be available for testing by Fonterra as soon as possible, no later than 15 July 2004.

8. The solution will be available for production no later than Friday 30 July 2004.

9. Fonterra will be responsible for providing a list of the SPGs (Service Provider Groups) designated 2nd Level Support. These SPGs must have their Group Notification methods for Cases and Tasks set to email.

4.4 Information Model

4.4.1 From CAMS Case record data to ClearQuest email

Email subject-line: cams submit.   Email body content as follows:

CAMS Fieldname	CAMS Label	CQ Fieldname	Notes
C.swCaseId	Case ID	CAMS_ID:	
C.swDateCreated	Date Created	CAMS_DATE:	dd.mm.yyyy hh:mm:ss
CC.swReportedBy|SW_CONTACT_VW.swFirstName	End User Name	Customer_Name:	Concatenate FirstName Last Name separated by space
CC.swReportedBy|SW_CONTACT_VW.swLastName			
CC. swReportedBy|SW_CONTACT_VW.tsEDSNetID	Customer ID	Cust_ID:	Fonterra userID
CC.swReportedby|SW_CONTACT_VW.swOfficePhoneCntry	Customer Phone #	Customer_Phone:	<cnty><area><phone number>
CC.swReportedby|SW_CONTACT_VW.swOfficePhoneArea			
CC.swReportedby|SW_CONTACT_VW.swOfficePhone			
CC. swReportedBy|SW_CONTACT_VW.swExtEmailAddress	Customer Email	Customer_Email:	
C.swRepeatability	Case Severity	Severity:	
C.swProviderGrpId|SW_PROVIDER_GRP.swName	SPG	SPG:	Fonterra SPG
C.swSubject	Subject	Headline:	Truncate to 125 characters
C.swNote	Description	Description:	No char limit Embedded {} will be replaced by []
E.swCreatedby, E.swCreatedBy,E.swSubject,E.swNote	Notes	CAMS_Notes:	Multiple logs, Limited to100K, and annotated if truncated.Embedded {} will be replaced by [].
CC indicates from TS_CASE_CONTACT			
C indicates from SW_CASE			
E indicates from SW_WORK_LOG			

4.4.2 From CAMS Service Request/Task record data to ClearQuest email

Email subject-line: cams submit Email body content as follows:

CAMS Fieldname	CAMS Label	CQ Fieldname	Notes
S.swWorkOrderId	SR ID	CAMS_ID:	
T.swTaskId	Task ID	Svc_Task_ID:	
S.swType	Type	Svc_Type:	
T.swDateCreated	Date Created	CAMS_DATE:	dd.mm.yyyy hh:mm:ss
S.swPersonId|SW_PERSON.swFirstName	Customer Name	Customer_Name:	Concatenate irstName Last Name separated by space
S.swPersonId|SW_PERSON.swLastName			
S.swPersonId|SW_PERSON_ID.tsEDSNetID	Customer ID	Cust_ID:	
S.swPersonId|SW_PERSON.swOfficePhoneCntry	Customer Phone #	Customer_Phone	<cnty><area><phone number>
S.swPersonId|SW_PERSON.swOfficePhoneArea			
S.swPersonId|SW_PERSON.swOfficePhone			
S.swPersonId|SW_PERSON_ID.swExtEmailAddress	Cust Email	Customer_Email:	
S.swPrioirty	Priority	Priority:	
T.swProviderGrpId|SW_PROVIDER_GRP.swName	SPG	SPG:	Fonterra SPG
S.tsDescription	Description	Headline:	Truncate to 125 characters
S.swLocNote	Notes	Description:	Embedded {} will be replaced by [].
T indicates from SW_TASK			
S indicates from SW_WORK_ORDER			

Notes: Missing data must have placeholder text '<xxxx>'. Fields can be in any order in the email.

4.4.3 Example

Subject Line:	cams submit
Body Content:	Headline: Can't log on

                Severity: 1-Critical

                {Description: there's more than one line to this, so it needs two curly brackets, the closing one following the last line
}

                {Notes_Log: there's more than one line to this, so it needs two curly brackets, the closing one following the last line
}