PROJECT MANAGEMENT PLAN

FOR

ACIC PROJECT

Version 1.0 approved

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1. PROJECT SUMMARY

1.1 Project Overview

ACIC is a U.S.-based investment firm. This application has two components: first, a Brokerage Account Opening application on ACIC's Web site that allow any Internet user to open a Brokerage account with ACIC; second, an account and maintenance application, which is primarily for ACIC's representatives to open accounts for the applications received in paper format. This is an Intranet application. The application will provide features such as account history viewing and account balance, status, and activity information. This will allow ACIC to effectively evolve to a client/account servicing application in addition to being an account opening machine. This is an enhancement of an existing application; the earlier development was also done by Infosys.

Project Code	**Project Name**	**Customer**
xxxxxxxxx	ACIC Project	ACIC Corporation

Project Leader (PL)	**Configuration Controller (CC)**	**Business Manager (BM)**	**Backup PL**	**Backup CC**
BB	SB	HR	BJ	HP

Project Type	**Platform**	**Number of Phases**
Development	Java, Win NT, DB2	Four

Project Start Date (including onsite, offshore)		**Project End Date**	**Total Estimated Revenue**
Onsite	**Offshore**		
April 3, 2000	May 15, 2000	Nov. 3, 2000	US $ xxx,xxx

Project and Customer Contact Personnel			
Name and Designation	Phone Number	Fax Number	E-mail ID

Project Scope

- To provide an effective, efficient means of account maintenance activities
- To allow reps to access information
- To provide a complete picture to the client rep for account status, valuation, order status, and trade activity
- To increase the intelligence of the update process
- To provide an interface that can display required account history elements
- To provide the capability to close and reactivate an account

Project's Value-add to the Customer

- This project will allow ACIC to effectively evolve to a client account servicing application in addition to being the account opening engine

Infosys Objectives

- Strengthen relationship with ACIC by delivering high-quality software on time
- Become preferred vendor by developing expertise on ACIC products and systems

1.2 Commitments Made to the Customer

Sequence Number	Milestone Date	Milestones	Deliverables
1	26 May 2000	Inception: Requirements sign-off	Business analysis and requirements specifications, use case catalog, screens, iteration plan
2	15 May- 23 June 2000	Elaboration: Iteration 1	Sequence diagrams, class diagram, source code, plan for the next cycle
3	26 June- 7 July 2000	Elaboration: Iteration 2	Supplementary specifications, sequence diagrams, class diagram, architecture document, source code, iteration plan for the next cycle
4	10 July- 21 July 2000	Construction: Iteration 1	Source code, review reports, test reports, iteration plan for the next cycle
5	20 July- 28 July 2000	Construction: Iteration 2	Source code, review reports, test reports, iteration plan for the next cycle
6	31 July- 8 Aug 2000	Construction: Iteration 3	Source code, review reports, test reports, iteration plan for the next cycle, deployment plan for the product
7	9 Aug- 1 Sep 2000	Integration testing phase	Test plans, test reports
8	4 Sep- 15 Sep 2000	Onsite code delivery and setup	Code
9	18 Sep- 22 Sep 2000	Acceptance test and product migration	Test reports
10	18 Sep- 29 Sep 2000	Onsite reconciliation and regression test	Code
11	2 Oct- 26 Oct 2000	Acceptance test	Test results
12	27 Oct- 3 Nov 2000	Rollout and support	Project sign-off

Other Commitments

Sequence Number	Commitments
1	This project will follow the Rational Unified Methodology (RUP)

1.3 Assumptions

Assumptions Made while Planning

- Migration to Visual Age for Java 3.0 will not be done by this team
- Intelligent update to business partners will be incorporated in only the maintenance part of the application and not in the "Account Opening" engine
- Qualified people will approve Rational Unified Process methodology for implementing this project
- Changes in functional and technical requirements during the life cycle of the project may have an impact on the schedule. Any impact on cost or schedule due these changes will be intimated to ACIC
- ACIC reviewers will get seven days to approve a milestone document. If no comments are received within this time period, it will be considered as approved

2. PROJECT PLANNING

2.1 Project Processes

Standard Process Followed

The standard development process of Infosys will be followed. However, it will be enhanced with Rational Unified Process methodology (RUP), as it is a commitment. The development process will be tailored to match the RUP.

Tailoring Notes

Deviations from Standard Process	Added/ Modified/ Deleted	Reasons for Deviations
Only those use cases that are going to be taken up in a particular iteration will be elaborated at that point of time	Modified	Iteration-base development is being done
Development of logical object model will be done incrementally in the first few iterations	Modified	Conformance to RUP methodology
Development of physical object model will be done incrementally in the first few iterations	Modified	Conformance to RUP methodology
Physical database design may be refined in later iterations	Modified	Conformance to RUP methodology
Development of unit test plan will be done in each iteration	Modified	Iterative approach is being used
Logging of defects will be iteration-wise	Modified	Iterative approach is being used
Requirements traceability will be done through the Requisite Pro tool	Modified	Conformance to RUP methodology
No vision document and business case as we started with the Scope document, which serves the same purpose	Modified	Deviation from RUP

Requirements Change Management Process

Change Request Tracking

- Changes requested by customer will be logged in ChangeRequest.xls and analyzed for impact on the project. A change request form will be submitted to customer for approval. Change requests that are approved will be attached to the project contract as addenda
- Major changes usually have an effort/delivery-on-time impact on the project. The customer needs to formally approve these
- Because this is a short-duration project, if any one or a group of change requests takes more than 2% of the total estimated effort for the project, reestimation of the project schedule and effort will be done

Requirements Traceability

Requisite Pro tool will be used.

2.2 Estimated Size and Effort

Estimation Criteria

Program/Function (Use Case)	Criteria
Simple use case	3 or fewer transactions
Medium use case	4 to 7 transactions
Complex use case	> 7 transactions

Use Case Number	Description	Complexity
Use Case 1	Navigate screen	Complex
Use Case 2	Update personal details	Medium
Use Case 3	Add address	Medium
Use Case 4	Update address	Complex
Use Case 5	Delete address	Complex
Use Case 6	Add telephone number	Medium
Use Case 7	Update telephone number	Complex
Use Case 8	Delete telephone number	Complex
Use Case 9	Add e-mail	Medium
Use Case 10	Update e-mail	Medium
Use Case 11	Delete e-mail	Medium
Use Case 12	Update employment details of a party	Medium
Use Case 13	Update financial details of a party	Medium
Use Case 14	Update details of an account	Medium
Use Case 15	Maintain activities of an account	Complex
Use Case 16	Maintain memos of an account	Simple
Use Case 17	View history of party details	Complex
Use Case 18	View history of an account details	Complex
Use Case 19	View history of option level and service options	Simple
Use Case 20	View history of activities and memos	Simple
Use Case 21	View history of roles	Complex
Use Case 22	View account details	Simple
Use Case 23	View holdings of an account	Complex
Use Case 24	View pending orders of an account	Complex
Use Case 25	Close/reactivate account	Simple
Use Case 26	Make intelligent update to business partner of ACIC	Complex

Estimated Build Effort

Program/Function	Effort (Based on Data from Earlier Project)	Number of Units	Total Build Effort (in person-days)
Simple use cases	1 person-days	5	5
Medium use cases	5 person-days	9	45
Complex use cases	8 person-days	12	96
Total			146

Phase-wise Effort Estimate

Activity/Phase	**Person-days**	**% of total Effort**
Requirements	50	10
Design	60	12
Build	146	29
Integration testing	35	7
Regression testing	10	2
Acceptance testing	30	6
Project management	75	15
Configuration management	16	3
Training	50	10
Others	40	6
Estimated effort	501	100%

Effort Estimate by Iterations	**Person-days**	**% of total Effort**
Project initiation	25	5
Inception phase	24	5
Elaboration phase: Iteration 1	45	9
Elaboration phase: Iteration 2	34	7
Construction phase: Iteration 1	27	5
Construction phase: Iteration 2	24	5
Construction phase: Iteration 3	21	4
Transition phase	110	22
Project closure	10	2
Project management	75	15
Configuration management	16	3
Training	50	10
Others	40	8
Total estimated effort	501	100%

2.3 Schedule

Specified as milestones in the section on Commitments to the Customer.

2.4 People

People by Role

Role	Required Number	Date
Project leader	1	4 May 2000
Onsite coordinator	1 (50% time)	4 May 2000
Module leader	1	15 May 2000
Developers	3	15 May 2000
Developers	1	17 July 2000
Developers	1	1 August 2000
Developers	1	14 August 2000
Total	9 (actually 8.5)	

People by Skill and Experience

Area	Total #	0-12 months' experience	> 12 months' experience
Java	7	7	0
DB2	2	0	2
Total	9	7	2

People Requirement Plan

Month	Offshore	Onsite	Total
May 2000	4	1 (50%)	5
June 2000	5	1	6
July 2000	5	1	6
Aug 2000	8	1	9
Sep 2000	7	2	9
Oct 2000	3	2	5

2.5 Development Environment

Hardware	Software
NT Server	Win NT
Mainframe	DB2
Intel PC	VisualAge for Java, Java, Win NT

2.6 Hardware and Software Resources Required

Item Description	Required #	Date
PCs with 128 RAM	6	1 May 2000
1GB space on server	1	1 May 2000
VisualAge for Java	6	4 May 2000
DB2	6	4 May 2000
Rational Rose	5	15 May 2000
Requisite Pro	1	15 May 2000

2.7 Tools

Tools List	
Tools to be developed in the project	None
In-house tools to be used in the project	BugsBunny, WAR

2.8 Training Plan

Training Area	Duration	Waiver Criteria
Technical		
Java Language	7 days	If already trained
VisualAge for Java	3 days	Exposed as part of initial training
Java Applets	4 hrs	If already trained
Java Swing	4 hrs	If already trained
Persistence Builder	4 hrs	If already trained
Rational Rose and Requisite Pro	8 hrs	Mandatory
OOAD	1 day	If already trained
Business Domain		
System appreciation	7 days	If already trained
Process-Related		
Quality system	3 hrs	If already trained
Configuration management	2 hrs	If already trained for CC. For others, on-the-job training
Group review	4 hrs	If already trained
Defect prevention	4.5 hrs	Mandatory
SPC tool	4.5 hrs	If already trained
RUP methodology	2 hrs	Mandatory

2.9 Quality Plan

Project Quality Goals

Goals	Value	Basis for Setting Goals	Org.-wide Norms
Total number of defects injected	145	0.033 defects/person-hour. This is 10% better than Synergy, which is 0.036 defects/person-hour	0.052 defects/ person-hour
Quality (acceptance defect density)	5	3% or less of total estimated number of defects	6% of estimated number of defects
Productivity	57	3.4% productivity improvement over Synergy	50
Schedule	Delivery on time		10%
Cost of quality (in %)	32%	31.5%	32%

Estimates of Defects to Be Detected

Review/Testing Stage	Estimated Number of Defects to Be Detected	% of Defects to Be Detected	Basis for Estimation
Requirements and design review	29	20%	Referenced similar project estimations (Synergy) and PCB
Code review	29	20%	Referenced similar project estimations (Synergy) and PCB
Unit testing	57	40%	Referenced similar project estimations (Synergy) and PCB
Integration and regression testing	25	17%	Referenced similar project estimations (Synergy) and PCB
Acceptance testing	5	3%	Referenced similar project estimations (Synergy) and PCB
Total estimated number of defects to be detected	143	100%	

Strategy for Meeting Quality Goals

Strategy	Expected Benefits
Do defects prevention using the standard defect prevention guidelines and process; use standards developed in Synergy for coding	10-20% reduction in defect injection rate and about 2% improvement in productivity
Group review of program specs for first few/logically complex use cases. Group review of design docs/first time-generated code by project leader, developer, and one consultant	Improvement in quality as overall defect removal efficiency will improve; some benefits in productivity as defects will be detected early
Introduction of RUP methodology and implementing the project in iterations. Milestone analysis and defect prevention exercise will be done after each iteration	Approximately 5% reduction in defect injection rate and 1% improvement in overall productivity

Reviews

Review Point	Review Item	Type of Review
End of project planning	Project plan DCS set up Project schedule	Group review SQA review SQA review
End of project planning	CM Plan	Group review
End of 90% requirements (This should be at the end of first elaboration iteration)	Business analysis and requirements specification document, Use Case catalog	Group review
End of 90% design (This should be at the end of first elaboration iteration)	Design document, object model	Group review
Beginning of each iteration	Iterations plans	One-person review
End of detailed design	Complex/first time generated program specs incl. Test cases, interactive diagrams	Group review
After coding for first few programs	Code	Group review
After self-testing of a process	Code	One-person review
End of unit test plan	Unit test plan	One-person review
Beginning of integration test	Integration test plan	Group review

2.10 Risk Management Plan

Sequence Number	Risks	Probability	Impact	Risk Exposure	Mitigation Plan
1	Support from database architect and the database administrator of the customer	0.5	8	4	Plan carefully for the time required from each of these groups and give enough prior notice. Onsite coordinator to work closely with these groups
2	As RUP is being used for the first time, the understanding of the team may not be complete	0.9	3	3.7	Work closely with experts in the R&D lab of Infosys. Keep the customer in the loop throughout the project and escalate for any schedule/effort deviations. Train the team on RUP methodology
3	Personnel attrition: Team members might leave on short notice	0.3	7	2.1	Assign tasks so that more than one person is aware of the units/use cases in the project
4	Working with customer's mainframe DB2 over the link; link may not be as efficient as it is expected	0.1	8	0.8	Do extra code reviews, desk checking, etc. to minimize the reliance on link. Escalate as soon as the link goes down.

3. PROJECT TRACKING

3.1 Measurement Plan

Metric to Be Collected	Unit of Measurement	Tools Used
Size	LOC, FP, S/M/C count	Line counters
Effort	Person-days	WAR
Defects	Number of defects	BugsBunny
Schedule	Elapsed time	MSP

3.2 Task Tracking

Activity	Procedure
Task scheduling	The PL schedules tasks using MS project. Refinement and rescheduling will be done when necessary.
Task assignment	The latest schedule is made available to the team members. Once the schedule is uploaded to WAR-MSP system, the tasks will show in their respective WARs.
Task status tracking	Task tracking is done daily
Project meeting	Once a week
Causal analysis meeting	After every iteration

3.3 Issues Tracking

Issues Types	Where Logged	Who Can Log	Who Reviews, When	When Escalated
Onsite issues	IssueTracker.xls	Any member of the project	PL, daily	2 days
Customer issues	IssuesLog.xls	Onsite team, PL	PL, daily	2 days
Business manager issues	Weekly Status report	BM	BM, PL weekly	5 days
Issues with support services	Request Tracker	Any team member	Support services, daily	2 days

3.4 Customer Feedback

Item	Logging and Tracking Process
Customer Feedback	The AM/PL gets the customer feedback. The BM files it.
Customer Complaints	Customer complaints received will be entered and tracked using CustomerComplaints.xls

3.5 Quality Tracking

Quality Activity	Action
Defect Tracking	Use DCS for logging defects and tracking them to closure
Reviews (requirements, high-level design, detailed design)	Check against project goals in quality plan.
Code review	Check against limits for each program through SPC tool
Independent unit testing	Check against limits for each program through SPC tool
Integration testing/System testing	Check against project goals in quality plan.

3.6 Review by Senior Management (BM)

Sequence Number	Item for Review	Frequency of Review
1	Schedule	Every version of change
2	Project plan	When significant changes are made
3	Milestone report	End of milestones

3.7 Status Reporting

Report to	Frequency
Business Manager	Weekly on Monday by e-mail
Customer	Weekly on Monday

3.8 Deviation Limits at Milestones

Actual vs Estimated of:	For the First Five Milestones	For the Rest of Milestones
Effort	10%	5%
Schedule	10%	5%
Defects	20%	20%

3.9 Report to the Customer

- Milestones Reports and weekly status reports
- Issues requiring clarifications
- Escalation, if any

3.10 Report to the BM

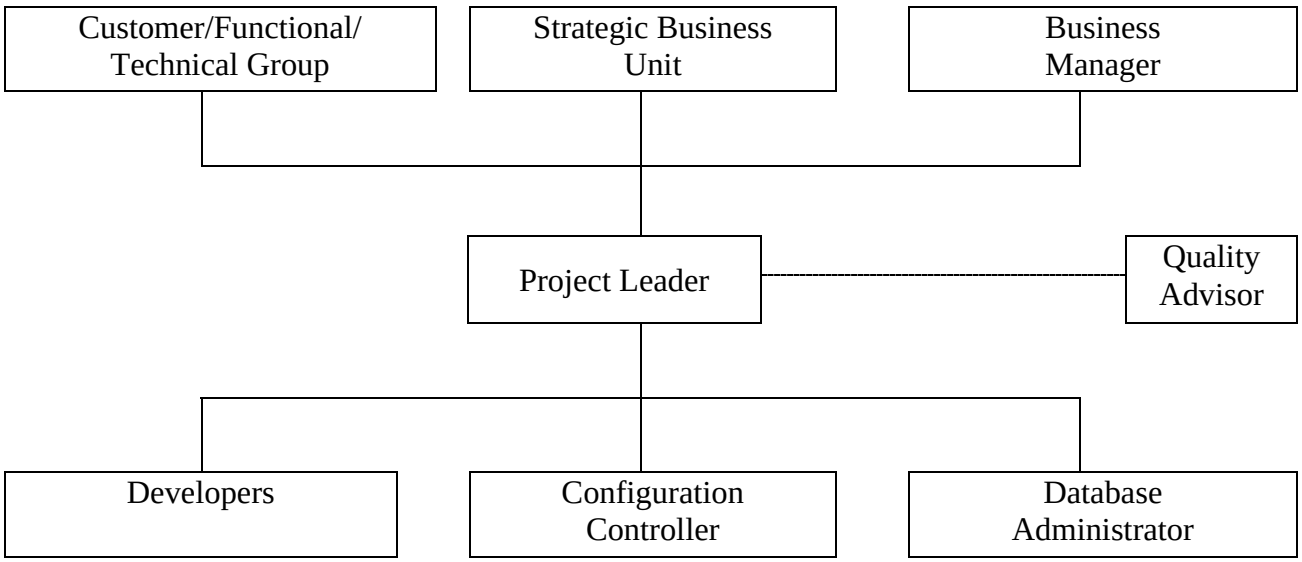
- Customer feedback
- Milestones and weekly status reports
- Issues requiring clarifications/attention
- Escalation, if any
- Number of requirement changes and estimated effort for them
- Major changes in plan

3.11 Escalation Procedures

Escalate Where	**Threshold Period**	**Name of the Person**	**Designation of the Person**
At ACIC	3 days	Xxxx	Project manager
At Infosys	3 days	Xxxx	Account manager
At Infosys	3 days	Xxxx	Business manager

4. PROJECT TEAM

4.1 Project Organization



4.2. Project Team

Sequence Number	Initials	Responsibility	Start Date	Expected End Date
1	BB	Project Manager	4 April 2000	3 November 2000
2	KP	Onsite Coordinator	4 April 2000	3 November 2000
3	BJ	Module Leader, backup project leader	15 May 2000	3 November 2000
4	SP	Configuration controller	22 May 2000	13 October 2000
5	DD	Developer	22 May 2000	29 September 2000
6	HP	Developer, backup configuration controller	22 May 2000	29 September 2000
7	NA	Developer	17 July 2000	3 November 2000
8	SH	Developer	1 August 2000	15 September 2000
9	AL	Developer	14 August 2000	31 August 2000
10	JP	Developer	1 September 2000	22 September 2000
11	SDS	Account manager	4 April 2000	3 November 2000
12	SB	SQA	15 May 2000	3 November 2000

4.3 Roles and Responsibilities

Role	Responsibilities
Business Manager (BM)	• Resolve escalated issues • Review project status • Participate in critical technical reviews
Customer	• Review design • Resolve escalated issues • Acceptance test planning and testing
Account Manager (AM)	• Customer satisfaction • Business growth • Project financial plan • Interface with sales and marketing • Training-related issues • Employee-related issues

Project Manager (PM)	• Project planning and scheduling • Design • Customer interaction • Reviews • Testing • Reporting • Task assignment and tracking • Interact with software quality adviser from SPEG • Ensure delivery as per contract • Interface with other departments as per need • Ensure open issues/customer complaints are closed properly • Ensure project members are adequately trained
Module Leader (ML)	• Design • Development • Testing • Reporting
Defect prevention (DP) team	• Spread awareness in the team on defects and their prevention • Analyze defect data • Identify methods to reduce defect injection
Developer (DV)	• Detailed design use cases • Development • Unit testing and integration testing
Configuration controller (CC)	• Prepare the CM plan • Manage the configuration as per the CM plan
Software quality adviser (SQA) from SPEG	• Process consultancy • Quality assurance (audits) • Install measurement tools and train project personnel • Participate in reviews of project plan and processes as necessary
Onsite coordinator	• Resolve any issues from customer/offshore • Support during development

5. REFERENCES

Omitted.

6. ABBREVIATIONS USED

Omitted.