

APPENDIX C CASE STUDY

Introduction

Accurate Data Ltd is a company which develops and maintains inventory software (*MEDIN*) for hospitals and medical supply companies. The original system which has to be maintained is based on an Oracle database and DEC equipment and has a decidedly old-fashioned mainframe look to it. AD is planning a project to:

1. move to a client server environment using DEC servers and workstations
2. update the user interface to include graphics
3. provide running inventory control with scanners

AD has not had too many competitors until a few years ago, but now they must make these changes or lose their market share and probably go out of business. Newer systems are already Y2K compatible and one competitor is ISO 9001 certified. In the medical business this is starting to be important. AD has managed to keep their customers in spite of this because of frequent and regular presence at customer sites to understand any problems and keep au courant of the customer business needs. Software emergencies are dealt with quickly; regular maintenance releases deal with non-emergency bug fixes and minor upgrades. AD has the best reputation in the business for customer service, but that is not enough any more.

The AD customer base is two large hospitals, 32 medium sized hospitals, and 30 large clinics. The older product is sold in three 'sizes' to suite the differences in these markets. AD would like to take advantage of the new changes to move to only one product. Old customers can upgrade for a graduated fee, depending on their size. One of the medium sized hospitals has a specialist (Grace Ibeza) who is interested in being part of the development team for the new product, but most of the other users just meet in a User Group meeting once a year to formally submit suggestions for improvement and any complaints. AD has promised this User Group that a major upgrade will be released every 6 months with the entire project to be finished (and

Y2K compliant) by the year 2000. AD realises this is a very tight schedule, but they feel there is no choice. Somehow they have to make the schedule. AD has no long-term debt and could borrow money if they need to, but of course the less borrowed, the happier the Managing Director (Corbin Corvette) will be.

AD is not interested in being on the bleeding edge of technology. They want to use tested equipment that is upgradable and likely to be around for the next five years or that can easily be replaced with other brands if necessary. In the past, they satisfied these needs by using transportable COBOL. Now they are interested in a language like Java or something else which can cross platforms.

AD has 5 software employees:

- Jean Rolls, senior software engineer who has been with the company since its beginning,
- Mercedes Carrumba, system designer who is only a few years out of University but has a very good knowledge of software engineering in general and the languages and platforms being used at Accurate Data
- Haley Ford and Sue Subaru, junior software engineers who mostly code/test/document
- Tonya Trap, part-time student who is just starting out

In addition, there is a part-time software manager (Kelly Volvo) who is also supporting sales and a full-time sales manager (Volks Polo) who gets the customer requirements and does the acceptance testing of the products before they go to the customers.

This is a massive job compared to anything they have ever tried and the AD personnel are not sure how to begin the work. What do they do now? Can *Prompter* help?

Part I A bird's eye view of this project

I-1 When to start

The schedule is defined (18 months), the budget is flexible, although Corbin would like to see a solid estimate before they begin. The decision has already been made to do the following:

- No more fixes to the old system except for an emergency. The software is very stable and this should be possible so that the entire group is working on the new system.
- Document the processes the software people follow now, the location of hard copy/soft copy data that might be useful for employees, and generally 'clear the decks for action'.
- Hire from the outside a project manager who's sole responsibility is to make this happen, co-ordinating the new software releases through Kelly Volvo and Volks Polo. Corbin Corvette is talking to Grace Ibeza from Mercy Hospital about becoming the project manager and she looks like she will be hired.

I-2 Objectives of the project manager

Since the project manager hasn't been hired yet, Kelly and Volks worked together to develop a preliminary schedule. The initial tasks to document the current processes, inventory what exists and where it was located were scheduled to take place first and these did not require the project manager at first. Based on what had been done in the past, the activities were defined but only loosely scheduled. When Grace arrives in 4 weeks, she can put more detail to the schedule.

I-3 Where are the risks?

- Technical risks do not seem too high here; although nobody is an expert in Java, Jean and Mercedes both have a good background in other languages. They are not concerned about the client/server environment since Mercedes worked in such an environment while at University.
- Cost isn't the highest risk, although such an ambitious set of goals may have unknown and unexpected costs.
- Schedule is the highest risk, particularly for Y2K issues.
- Operational risk is also high since two of the three upgrades (graphics and scanners) require an new way for the user to view the system; they may not like what AD produces.

Grace will have to include risk management in the project plan and monitor the risks carefully during the project.

I-4 Making decisions

Grace has already started working on the project management plan, including:

- risk management
- control of processes and corrective actions when problems occur
- communications links to the customers, Corbin Covette and the rest of the staff
- analysis of options for make or buy decisions
- quality management
- design and development planning

Grace has experience with ISO 9001 and knows that these cover some of the key areas in that.

I-5 Managing expectations

Grace knows it is important to communicate to everyone the information they need to know. So she starts by proposing a public display of the schedule, metrics which show planned vs. actual work completed, and high-level bullet points of decisions made or project status, to be updated at the end of every day or two. This will provide the raw data to Volks and Corbin so they can communicate with the customers, the media, measure status against the promises made to the User Group. In addition, Grace plans a daily 'stand-up' meeting with the development staff to discuss any issues and prevent problems from growing too large. Other meetings will be held formally and informally, and technical and management reviews included on the schedule.

I-6 Managing change

Grace is not worried too much about organisational change because AD is such a small company, but she is very conscious of how dependent she is on each person in the staff. Everyone has their special skills that would be difficult to replace. Enough time will be scheduled for reviews and audits so that at least two people are aware of all parts of the new system.

Grace will depend very much on Kelly and Volks to keep up with customer requirements and needs. Grace comes from a hospital herself so she knows the business, but only at one place. She plans to go with Kelly and Volks on some of the customer visits so she can see for herself the differences and commonalities in the customer base.

I-7 Managing quality in your project

This is somewhat difficult to manage. Grace knows the processes which can be included to help ensure quality but AD is a small company and has always relied on the personal commitment to quality of its people. Is that good enough for this project? Nobody is quite sure how to set 'quality targets' or even define when is good, good enough?