INFOST 340 Systems Analysis
Case Scenario: Darla Dunn's Dairy

Introduction

Darla Dunn's Dairy (DDD) is a small dairy farm that is owned and operated by Darla Dunn, her husband Don, her teenage son Danny, and their adult daughter Denise. The dairy is located in western Wisconsin in the small town of Dunnville. Darla inherited this business from her parents, Harry and Helen Hobart. The dairy has been in continuous operation since 1946.

DDD makes most of its revenue by selling its milk to a milk processor and marketing co-operative named CO-OP. Cows are milked daily by automated equipment. Unprocessed milk is collected in containers. The truck from CO-OP picks up the unprocessed milk once per day. DDD is issued monthly checks from CO-OP for the milk that it has sold to COOP.

Don is eager to create another revenue source for DDD. Wisconsin is a state with strong tourism and Don hopes to attract some of those tourism dollars to DDD. His current idea is to offer tours of the dairy and its operations. Tours would take place on Weekends during the cold seasons and all week long during the summer season. Don believes that cows alone may not be enough of a draw to tourists, so he is planning to create a farm animal petting zoo attraction that will include sheep, goats, and a donkey. Darla is pleased at Don's new entrepreneurial spirit and would like to support his idea. Yet, she is unsure what infrastructure DDD will need to create to support the tour concept and she is concerned about the initial cash outlay.

Problem or Opportunity Background

Darla usually writes the number of milk containers and the date of shipment for each load given to COOP on a yellow legal pad. When one of the other family members oversees the loading of the shipment, they sometimes forget to record the shipment on the legal pad. Even when all of the shipments are logged, Darla finds it difficult to reconcile the monthly payment checks from CO-OP to her shipments. Darla is convinced that some level of computer system automation is needed to make DDD's record keeping more reliable and to make the payment reconciliation process easier. Don agrees, since this revenue stream represents their primary support.

Another problem at DDD is accounting for milk containers. Containers are owned by CO-OP. Yet, DDD is charged by COOP when containers go missing. At the time of each milk pickup, CO-OP drops off a quantity of clean containers to be used the next day. Darla suspects that the problem of missing containers is caused by CO-OP dropping off too few containers. She also believes that some automated system support for milk container accounting could reduce charges for lost containers.

Don has many ideas about system support needed for the tour and petting zoo business. He believes that DDD finally needs an attractive Web site, that the Web site ought to provide for tour bookings, and that they could also use mailing list support in order to promote seasonal tour events at DDD with regular customers. Yet, both Darla and Don are not sure how much of this systems support should be built how soon. They need to conserve their cash and spend wisely at the same time that they pursue expansion.

Scope-Related Background

Both Don and Darla are convinced that the milk shipment accounting application should be included in the project. They are fairly sure that the milk container accounting application should be included as well. They are unsure about how much support to provide for Don's plans tourist business at this time. They are open to ideas from the analysis team.

Known Functional Requirements

1. Accounting and payment reconciliation for milk shipments
2. Accounting application for milk containers.

Known Non-Functional Requirements

1. Support of up to 5 simultaneous system users.
2. System outages should be resolved within one day.
3. Data should be backed-up frequently to avoid data loss.