

## **2. Problem domain and motivation**

### **2.1. Introduction**

The main problems in the current process are discussed in this chapter. A sample was taken for the average times taken to execute a single request by the management in order to justify the need for a new solution.

### **2.2. Problem domain**

As mentioned in the above chapter, there are multiple applications in both banks. In order to analyze and scrutinize the customers, products or branch behaviors, management needs various reports from multiple systems.

To elaborate the main weak points,

- Both banks use Online Transaction Processing Systems (OLTP) systems fine tuned [3] to give the maximum performance for the banking application. When trying to get Online Analytical Processing (OLAP) kind of reports, they will try to query many tables, do large calculations thus the banking application get slow and occasionally stuck as of my experience.
- There is no centralized point to view the customer portfolio as the data are in several systems. This will cause the management to make inaccurate view of a customers' credit worthiness.
- The Central Bank of Sri Lanka keeps track of black listed clients (people who have defaulted in loan payments) and they regularly request various ad-hoc reports (eg. Anti money laundry reports) that need information from all the systems in order to track these customers.
- Customers' requests bank statements for their outstanding balances for tax purposes or for foreign embassies. Inaccuracies will arise as they need to be taken from several systems and joined together. These could also be manipulated by the issuing officer as they are done manually.
- There is no method of getting financial intelligence reports. Eg. Customer Global position, consolidated customer position.

- No easy way to get Risk management reports as well. Eg. Asset and liability reports.
- In order to overcome the above briefly mentioned problems a management information system is very much needed.

### 2.3. Time taken for an on-demand request by a customer

The following table summarizes the time taken for an executive to generate a customer outstanding statement.

Task #	Task	Time spent on a request
1	Customer request for an outstanding statement from the DVB counter	5 mins
2	Request sent the back office for processing	15 mins
3	Collection officer routes the request to DVB executive	10 mins
4	DVB executive generate the report for DVB data	2 hours
5	DVB executive generate the report for DFCC data	1 hour
6	DVB executive generate the report for Banktrade data	1 hour
7	Executive consolidates the data from 3 systems and print the statement	30 mins
		<b>Total Time :</b> 5 hours

Table 2-1: Time taken for an on demand request by a customer



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### 2.4. Alternative solutions

Alternative solution for the project was to acquire a Business Intelligence solution from a vendor which required for the vendor to conduct a requirement analysis and suggest a solution. The provider of SYMBOLS package did have a module named "Knowledge Manager" at an exorbitant price. Other than the financial cost for the product itself, the interface needed to be created by the non-Symbols packages to pump in compatible data proved to be elusive.

### 2.5. Motivation

To provide an integrated information system for the management and other users, thus reducing the overhead on the OLTP systems and to simplify the OLAP reporting process at a cheaper cost.