

## Database Rationalisation Approach Paper

### **Problem statement:**

Organisations use many applications and databases to support various business functions. Over the time applications and databases may have grown to a very high number, partly due to mergers and may contain duplicate and confusing data leading to business sub-optimisation.

Researches show that only about 5% organisations have successfully implemented the data rationalisation, and about 25% are at initial stages whilst rest of them are beginning to think. In most cases databases are mix of Oracle, SQL Server, DB2, Sybase, MySQL etc and data rationalisation could bring down the overall cost of deployment by reducing the use of licenses, resources, and hardware cost. Most importantly, this enhances the operational effectiveness of the organisation by enhancing reliability of information leading to better decision making and customer satisfaction.

### **Business Objective:**

Following are the key business objectives:

1. Database **Rationalisation** to significantly reduce the overall number of different databases
2. Improve **Data Management** aspects and thus ensuring **Data Integrity**.
3. Improve upon **Data Governance** aspects to facilitate more control over the data store.

### **Our Approach:**

We would start by carrying out the analysis to address the following:

1. Develop appreciation of the history behind such a large growth.
2. Understand the existing and end point application landscape
3. Review of various business processes to ascertain their Information needs by interacting with users, application owners and tracing the data flows.
4. Identify live vs dead databases and find the opportunity to archive any unused databases left behind over the time or made redundant by new applications.

### **Database Rationalisation:**

Following are the high level approaches for various activities to be undertaken:

1. Consolidation and centralisation of databases and underlying data in line with the scope specific to business functions. This will enable us to ensure data integrity and enforce who sees what.

Our objective will be the identification and review of data / databases based on Domain and Functional Breakdown.

2. Scenario based exploration of data needs and how these can be fulfilled from a central location or by creating pockets of data store.
3. Possibly facilitate centralised Data Warehouse/s or creation of Data Warehouse pockets for fulfilling information needs of various business units.
4. Segregation of environments e.g. Live, Reporting, Test, Dev, etc.
5. Identify duplicate data sources; sometimes security and access restrictions may force duplication of information.

In order to achieve the outcome for above activities, we will take following action:

- Collect Data
- Analyse data
- Identify and mark the unused data for archival
- Consolidate databases
- Monitor and Maintain
- Document the work

### **Data Rationalisation:**

We will analyse data rationalization for addressing low value or (zero value) data within a business context by:

- Determining assessment criteria and weightings – Based on criteria such as business benefit, maintenance cost, data quality, technology platform, age and user satisfaction.
- Quantifying the value of each data element within the company's data portfolio.
- Eliminating underperforming, redundant and end-of-life data elements.
- Eliminating disparate and incompatible data – Data portfolios commonly accumulate isolated and incompatible data structures that require costly special skills and hardware/software requirements.
- Eliminating all non-core functions – Remnants of non-essential data (or applications) that support de-emphasized corporate strategies are prevalent throughout organizations.
- Eliminating non-core technologies – Expensive and outdated data items within your portfolios on non-core technologies.
- Develop an action plan to facilitate implementation.

Recommendations to help manage your data portfolio:

- Implement quick hits – Eliminate data that has no relevant business function or value.
- Eliminate redundant data – Identify instances of overlapping and redundant functionality and select the strongest system to support them, merging functionality and migrating data when necessary before eliminating the unnecessary applications
- Retire end-of-life database – Retire databases whose operation and support costs exceed business value, sometimes replacing them with new, less costly applications.

- Empower the end user to create the own data portfolios (scorecards) based upon their department's overall needs and objectives.

## **Risk Management:**

Whilst we work on the data rationalisation, we give emphasis on underlying risk factors:

- Archival of any data is made future proof i.e. future retrieval of the old data in absence of underlying platform to access the data.
- Data protection is achieved by keeping data security and access strata appropriately maintained.
- Well established means to classification of data, their sensitivity and handling.
- Ability to meet the future request of any data post consolidation as part of Freedom of Information act.

## **Methodology:**

For performing more detailed analysis we will adopt 2 stage actions. First gather useful statistics from various databases using SQL based Analyser and second to fill up the questionnaire. Based on the information received from these two sources, business will be presented with the rationalisation/consolidation opportunities in reducing the total size of the deployment.

### **SQL Powered analyser to gather useful data:**

1. Analyser to checks all the databases and report frequency/Intensity plot in 2D and bar diagrams. The bigger the circle more the usage.
2. Databases that are not used or exist as duplicate copies will be blank which can be discarded.

SQL based scripts to scan system level information, which widely exist inside the databases as core, and extract below information from the underlying databases.

- Frequency, showing number of times the database is accessed for a time period.
- Intensity, showing level of activity performed on a given database for a time period.

### **Questionnaire for collecting Audit Information:**

The Application Rationalization Questionnaire is designed to be used at the discretion of Functional Area Managers (FAMs) to supplement information requirements that are needed to make effective application/database disposition decisions. This questionnaire was also designed for FAMs to gather supplemental information necessary to prepare a meaningful functional area application migration plan that is directed toward Enterprise wide consolidation.