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**INFORMATION ARCHITECTURE
AND DESIGN OF FIS
RENNIES GROUP LIMITED CASE STUDY**

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INFORMATION ARCHITECTURE AND DESIGN OF FIS : RENNIES GROUP LIMITED CASE STUDY

SYNOPSIS

The background to the introduction of a Group-wide financial reporting and management information system for Rennies Group Limited (RGL) is outlined in the context of current thinking on the application of Financial Information Systems (FIS). The status of the Rennies Reporting System (RRS) at the time the decision was taken to develop an information architecture and design is summarized.

The desired components of a three year FIS strategy are presented together with the FIS strategy already in place at RGL.

Considerations with regard to the implementation at RGL are given with particular reference to the fact that a clearly defined customer focused business strategy was already in place and that an EVA™ programme was underway.

The procedure followed in undertaking the information architecture and design of the Rennies Group consolidation Master Chart of Accounts included extensive involvement of users and management, definition of a generic, structured business information classification scheme and building a framework to support future development. It is noted that provision is made for a future business model to be developed which will support full cascading of the chart of accounts down to the operational business unit level while maintaining the integrity of the consolidation process. Also revenue and cost driver classification was undertaken in a manner that was independent of individual business units and which will support restructuring, acquisitions, mergers and divestments in the final form of the business model.

A conceptual framework for inter-region, branch and subsidiary analysis has also been laid.

The manner in which RGL has integrated existing systems is outlined with particular reference to the upload of the financial intelligence of the software to assist with integration is described. The importance of the information architecture in achieving this objective is highlighted.

The benefits of implementing FIS are outlined and it is noted that certain flagship operations have leveraged the capabilities of the solution by moving their management reporting function onto the new system while it was still in pilot operation. These sites achieved considerable improvement in analysis and reporting capability with a resulting time saving that was used to free financial personnel up to undertake more effective analysis.

A summary of the benefits that RGL has obtained from FIS strategy is provided and it is noted that the current project has laid the foundations for a long term process of progressively improving management information delivery and decision support within the Group in a manner that has the potential to enable the Finance Function to add considerable value to the operating entities.

It is concluded that effective information architecture and design is vital to ensuring a return on investment in FIS and that, if this is correctly undertaken and implemented, it will enable the Finance Function to add considerable value to the organization at all levels.

1 INTRODUCTION

The concept of Financial Information Systems is well established as a result of many conferences and other development. Robertson has addressed a number of aspects of this subject, most recently at the Financial Management Information Systems Conference, held in Midrand in September 1994 at which a paper entitled, *Identifying Your Key Business Objectives to Develop a Coordinated FMIS Strategy that Meets Your Specific Needs* was presented. As a result of the presentation to this conference, it was decided to introduce some of the concepts addressed in the presentation into the "Rennies Reporting System" (RRS), which was currently being planned.

RRS is a group-wide consolidation and reporting system using a commercial consolidation product, Hyperion. RRS objective is to consolidate information from the approximately 220 operations in the Rennies Group up to Group Head Office in Johannesburg in a manner that will support Group reporting requirements and support the overall business strategy of the Group. This paper presents some of the concepts applied in the project to date in the form of a case study.

As noted above, the solution was implemented using commercially available software. This was installed on a client-server database platform. The subject of this case study is therefore not the design or selection of a software and technology solution but the information architecture and design of the business solution implemented using the product selected. It is hoped that this paper will serve to draw readers attention away from technology and cause them to focus on the business design issues surrounding the use of Information Technology (I.T.) in general and FIS in particular.

2 WHAT SHOULD FIS STRATEGY ENTAIL

Robertson, in the paper referred to above, recommends that a three year FMIS strategy should incorporate the following:

- a. Determine broad business objectives.
- b. Determine what financial information is required in order to give effect to these objectives.

- c. Determine what financially related business concepts should be introduced or enhanced in order to meet these objectives in support of improved management decision making.
- d. Evaluate the fundamental changes to financial operating procedures and systems required to support the objectives including:
 - i. First principles analysis of financial systems and coding systems.
 - ii. First principles analysis of the business model incorporated into the financial systems to support unambiguous ownership.
 - iii. Comprehensive review of up-stream and down-stream controls on the flow of information in the FIS.
 - iv. Evaluation of implementation considerations with regard to system acceptance.
- e. Investigate use of multiple bases of accrual.
- f. Develop overlay ledgers for different levels of adjustment, such as EVA.
- g. Develop a culture of future focused management applying these concepts to create and sustain competitive advantage in a manner that truly adds value to the organization.
- h. Consider the extension of the FIS to become part of a "Corporate Command Center"

This approach to FIS strategy is the vision of the Rennies Group and has the commitment of management. It also has the potential to truly differentiate the organization.

3 RENNIES GROUP IMPLEMENTATION CONSIDERATIONS

In the case of Rennies Group Limited (RGL), the project was undertaken as an extension of an existing project which was already underway. In particular, RGL had already clearly defined it's strategic objectives as a customer focused service organization and had appointed Stern Stewart and Company to implement a comprehensive Economic Value Added (EVATM) program. In addition, the technology platform and software

for the RRS had already been selected and a project plan had been drawn up.

The implementation was therefore undertaken on a limited scale with emphasis on first principles analysis of the information classification schemes and coding of the Group Consolidation Ledger to support the great diversity of businesses in the Group. The group ranges from well known operations such as Rennies Travel, Rent a Bakkie, Renfreight and XPS to less well known trading and freight management businesses such as Manica which operates throughout Southern and Central Africa.

Basic consideration was given to conceptualization of the business model and overlays for management accounting purposes but these will be designed in detail as part of a later phase of the project.

Implementation was undertaken by way of a multiple pilot site deployment in terms of the original project plan under the guidance of Group Information Services.

Accordingly, this paper concentrates on the information architecture and design of a Group Consolidation Chart of Accounts to serve the full diversity of companies within the group.

4 INFORMATION ARCHITECTURE AND DESIGN OF THE GROUP REPORTING GENERAL LEDGER CHART OF ACCOUNTS

Design was undertaken by way of a series of workshops with senior financial and operational managers of the larger divisions and companies within RGL. During these workshops, the following was achieved:

- a. Widespread consultation with senior end users.
- b. Development of a clear understanding of the diversity of businesses within the Group with a particular emphasis on determining business unit independent definitions of Revenue Drivers and Cost Drivers in a manner that would enable a generally applicable chart of accounts to be developed which would accommodate any change in organizational structure, including acquisitions, mergers and divestments.

- c. Design of a highly structured information classification scheme that supported full hierarchical analysis and drill down within the guidelines given by Robertson (1994⁹ and others).
- d. A design that supported both disbursement and expense orientated operations.
- e. A framework to support monthly, year-end, tax, management and EVA reporting requirements, amongst others.
- f. A clear understanding of the business model that should be implemented.
- g. Conceptual definition of a framework against which inter-region, inter-branch and inter-subsidiary analysis could be implemented at a later stage. This also provided a conceptual framework for definition of a market sector input : output analysis at the financial level.
- h. Definition of a solution that could be "cascaded" through the Group to individual operating companies and eventually to SBU level.
- i. Definition of a solution that would provide the foundation for business modelling and a broad based "Executive Information System" (EIS) at a later date in a manner that would enable Group Finance to add considerable value to individual operating companies in time.

The information architecture and design of the RRS Chart of Accounts was spread over a period of approximately two months with a high level of involvement from the Group Financial Manager, Project Manager, Consultant and other team members throughout this period. Approximately ten workshops of from two to eight hours duration were held with users and management of groups of subsidiaries and individual companies. Further project meetings took place throughout the period. The end result was a consolidation chart of accounts with approximately 700 posting level accounts suitable for implementation across the entire organization at a business unit level.

5 HOW RENNIES GROUP LIMITED HAS INTEGRATED EXISTING SYSTEMS

Existing general ledger systems were integrated in the following way:

- a. Existing general ledger charts of accounts were mapped onto the Hyperion consolidation chart of accounts in paper mapping exercises facilitated by the project team.
- b. ASCII upload files were generated from the existing systems in a format that could be uploaded into the Hyperion software.
- c. The functionality of Hyperion permitted a direct link between existing systems such as Accpac, Accountability and Millennium through account conversion and name conversion tables.
- d. The upload used as building blocks groups of accounts classified into categories including:
 - i. Income statement accounts (revenue, disbursement and expense).
 - ii. Balance sheet accounts (intangible assets, assets, liabilities).
 - iii. Reporting accounts such as cash flow and budget.
 - iv. Balance and control accounts.
 - v. Non-financial, derived and other information for purposes such as tax, year-end, EVATM, etc.
- e. A basic business entity model was implemented in order to provide systematic consolidation into Divisions and from Divisions to Group. This model reflects the organizational structure of the group.
- f. Separate input and adjustment entities are defined for use in different stages in the process.
- g. Input ledgers are maintained in the currency of origin and foreign currency translation takes place at the appropriate location in the organizational structure.
- h. Reporting is performed using the reporting capabilities of the tool used together with dynamic linking to the Microsoft Excel Spreadsheet package.

The project team is currently busy with the deployment of the application to further sites and the extension of the application to more fully support all aspects identified.

Business modelling, market modelling, geographic analysis and the introduction of an EIS are scheduled to take place in the second half of the year.

Effective integration was made possible by the structured financial information classification contained in the Master Chart of Accounts referred to previously. This structure ensures that, while individual subsidiaries may apply different accounting treatments with regard to aspects such as disbursements, the Group consolidation figures are based on a uniform treatment which accommodates the diversity of business operations.

6 BENEFITS OF IMPLEMENTING FIS

While the RRS system will only run live from 1 July 1995, it is currently in use for budget purposes for the 1995/96 financial year. It is currently deployed at the Divisional Level as well as at 18 major operations.

Benefits that are anticipated from the RRS include a saving in the production of the Group Tax statements of approximately three weeks at year-end, a saving in producing the year-end pack of approximately two weeks together with a considerable reduction in reconciliation and manual reprocessing effort. A monthly saving of 3 days per month at Group Level in producing consolidated Group Financial Reports is anticipated.

It has been found that all operations have been able to map their existing general ledger accounts onto the consolidation chart of accounts successfully, although individual entities have experienced some difficulty where more detail has been requested than they are accustomed to providing.

More tangible benefits have been experienced at certain pilot sites where enthusiastic and proactive involvement by financial management and the executive of the companies concerned has resulted in the full potential of the system being realised. In one notable case, a subsidiary moved its management reporting off their existing bureau based general ledger systems onto the new system while still in the pilot stage because of the greatly improved reporting capabilities of the new system.

In this case, the time saving resulting from improved ease and effectiveness of reporting has

been beneficially utilized in undertaking more detailed analysis in support of management effectiveness. This is expected to give rise to better decision making with regard to branch viability and competitiveness and an increase in market share is projected as a result.

In another notable case, a one-to-one link between the existing general ledger system and RRS has created a powerful reporting tool which is exploited fully by this operation. Furthermore, by efficiently using the name structure capabilities of the tool, reporting of profit centres by region, product type and executive is simple and flexible and is empowering the user in preparing financial information.

In flagship cases such as the above sites, a major benefit to Group Finance has been an opportunity to be seen by subsidiaries to be adding value to the operations of the Group. This demonstrates the potential synergy of a forward thinking central Group Finance Department anticipating the decision support information needs of subsidiaries.

7 WHAT HAS RENNIES GROUP LIMITED GAINED FROM FIS?

The expected benefits of the RRS FIS and those experienced to date are set out in the preceding section.

In addition, Rennies Group has gained a platform on which a wide variety of value adding services can be delivered by Group Finance and financial management of individual operating companies. This business solution platform provides a basis on which:

- a. Improved Group reporting can be built.
- b. A corporate business model can be implemented.
- c. Group-wide EVATM analysis and reporting can take place.
- d. Reporting of Key Performance Indicators (KPI's) including non-financial components can be undertaken.
- e. Regional and market based analysis can be designed and implemented.

- f. Improved reporting effectiveness at the operational level and improved management decision support.

Significant further analysis and design of the business model and other components referred to above will be required before these can be implemented. Much of this is planned for the second half of 1995.

8 CONCLUSION

The background concepts and business environment surrounding the Rennies Reporting System have been outlined together with major considerations taken into account in the information architecture and design of the system. Particular emphasis is placed on the importance of effective information classification and the approach adopted in developing a Group-wide Master Chart of Accounts is set out in some detail.

Principal strategic considerations and factors to be taken into account in planning the FIS project have been summarized.

Certain initial benefits experienced by Rennies Group Limited, including dramatic improvement in financial management reporting capability of flagship sites are outlined. Other expected benefits are summarized. Opportunities to develop market focused analysis and reporting capabilities are identified as a particularly important component of future opportunities.

It is concluded that effective information architecture and design of an FIS can give rise to significant benefits and are vital if the Finance Function is to be seen as adding value to the organization.

ACKNOWLEDGMENTS

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The contribution of dS²'s clients, associates and staff, without whom it would not have been possible to evolve and develop these concepts is gratefully acknowledged.

FOOTNOTE

Rennies Group Limited is an investment and management company in a multi-business network focusing on freight management, travel and other related services. The Group provides resource backing to autonomous operating companies operating in Southern Africa through ownership and internationally through alliances.

Rennies Group Limited is jointly controlled by two major South African corporations, namely Safmarine and Rennies Holdings Limited and Anglo American Industrial Corporation Limited.

The Rennies Group has operated in Southern Africa for 146 years and is a regional force in the transport services industry. Employing some 10,200 people, Rennies offers in excess of 30 different services through more than 350 locations in eight countries in Southern and Central Africa.

The Group's current strength and future strategy hinges on three crucial factors:

- A single-minded focus on managing the movement of people & freight.
- The depth of its skills.
- The breadth of its network.

Differentiated Strategic Solutions (Pty) Ltd is a firm of independent business information system specialists, management consultants and software developers. They are able to provide the full range of professional services necessary to architect, design and implement financial information systems and to integrate existing systems including all aspects outlined in this paper.

Particular emphasis is placed on aspects of design and implementation necessary to improve business process and maximize information return on investment. Products and services include the information and systems architecture, design and implementation of financial information systems from a fundamental first principles basis, the conceptualization, specification, construction and implementation of integrated information systems, enterprise information systems (EIS), corporate command centres and other business information systems.

They also offer a range of services with regard to strategically focused financial management

information determination and linking financial planning to business strategic and macro economics in terms of the capability of the balance sheet and economy to sustain strategic objectives. System audits, development of IT strategies and business system feasibility analysis are other services.

Together with associates in **The MaXus Group** and other associated specialists they are able to provide a wide range of additional consulting and other services in support of the concepts outlined in this paper extending to comprehensive Business Process Optimization services applying techniques developed through an international network of expertise. dS² can be contacted on Johannesburg 886-9863 or fax 787-0132.

REFERENCES

Robertson, J A (1994⁹) *Identifying Your Key Business Objectives to Develop a Coordinated FMIS Strategy that Meets Your Specific Needs* Presented at Financial Management Information Systems Conference, Midrand, September 1994.