

# **The Changing Of The Guard, Or : Moving From Print To “E” With A New Financial Model**

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## **Abstract:**

The Changing of the Guard, or Moving from Print to “E” with a new Financial Model. Johan Engelbrecht, Univ of Stellenbosch During the past decade academic libraries all over the world have been faced with escalating costs which made budgeting for information resources, and especially academic journals, a nightmare. Libraries in South Africa were no exception, and the matter was made worse by the continuous weakening of the South African currency against major overseas currencies such as the Dollar and the Euro. In 2002 alone the South African Rand weakened by as much as 40% against the American Dollar. This paper is presented in the form of a case study of how the problem has been addressed for the 2004/2005 budget at the University of Stellenbosch, South Africa, using a new model for budgeting, together with a rapid move away from printed journals in favour of full text electronic journals. The overall objective was to accomplish a 14% saving on the materials budget for 2004/2005, against the background of an annual increase of more than 20% during the past decade. The process of introducing the model of Responsibility Center Management (RCM) is being described. The model differs from the more traditional model where all the funds of the University went into a central pool from where it was allocated to the different faculties and service departments according to their needs. In the RCM model all the funds go to the faculties initially. Every Responsibility Center is responsible for its own funds, and budgets for service departments such as the library is made available in the form of levies. Whilst the former more traditional model used a very rigid budget allocation formula, the new model is much more flexible and the deans of faculties are more involved in the process. The project with the aim of moving away from printed journals to full text electronic journals and a pay per view document delivery process, which runs concurrently with the RCM project is also described. The involvement of the faculties in this process is described and some of the initial outcomes of the two projects are presented.

## **Introduction**

During the past decade academic libraries all over the world have been faced with escalating costs which made budgeting for information resources, and especially academic journals, a nightmare. Libraries in South Africa were no exception, and matters were made worse by the continuous weakening of the South African currency against major overseas currencies such as the American Dollar, the British Pound and the Euro. During the last ten years the South African Rand has weakened by 150% against these currencies and the situation became a crisis in 2002 when the Rand weakened by 35% against the Dollar and by more than 40% against the Euro in that year alone. At the University of Stellenbosch, for the past number of years, the budget for information resources had to be increased annually

by an average of 25% to cope with the exchange rate problem, inflation and steep price increases of especially academic journals. It was obvious that this situation could not be tolerated any longer and that a new model had to be sought that would be sustainable in terms of affordability but at the same time would not have a negative impact on the teaching and research functions of the University.

The University had already decided to introduce a new financial model for budgeting in 2003, called Responsibility Center Management (RCM), and the challenge would be to merge the two processes in a manner that would ensure a smooth transition.

## **1. Part One**

Part one of this paper deals with a process that was followed to design a new mechanism for budget allocation within the RCM budgeting model at the University of Stellenbosch.

### 1.1 Budgeting Models

It has always been a challenge to divide the university budget in an equitable way between the different faculties and administrative entities on campus. In the literature reference is made to three models:

#### 1.1.1 Item-For-Item Budgeting

In this model all the funds go into a central pool. From there allocations for faculties and administrative departments are made on an item-for-item basis and expenditures are monitored very strictly. The University Management is accountable for the total budget and decision making is centralized. At the same time it does not facilitate any initiative and productivity at faculty level.

#### 1.1.2 Block Allocations

In this model a block allocation from a central fund is made in consultation with each faculty and administrative department after their goals and needs for the budget year had been analyzed. The block allocations are not really limited, but the attainment of goals are closely monitored with a view to future allocations. Each faculty has autonomy as to the appropriation of funds, but has no responsibility or incentive in terms of cost effectiveness or the exploration of additional funds.

#### 1.1.3 Responsibility Center Management

In this approach the faculties and administrative entities (or groupings thereof) are seen as Responsibility Centers that take total responsibility for their income and expenditure. Indirect costs are included and these would be in terms of support services rendered by units such as the library. These costs are mutually agreed upon and recovered from the specific Responsibility Centers in the form of "levies." This model ensures total autonomy in terms of income and expenditure and increases the incentive to explore external funds and to operate as cost effective as possible. In the case of the University of Stellenbosch it is interesting to note that, prior to the introduction of Responsibility Center Management, all the faculties always used to complain about a lack of funds for the purchasing of books and periodicals, but now all of a sudden, in the RCM model, they are very concerned about the rising costs of library material. Whilst in the previous model they were very reluctant to cancel any journal titles, in the new model they are much more cooperative.

In RCM budgeting it is important that each Center should be able to survive as a separate entity, but that financial independence should not lead to opposing

“kingdoms” within the university. A certain level of central monitoring might still be needed to ensure that everybody works toward the central goal of the university, namely the exploration and dissemination of knowledge.

At the University of Stellenbosch 15 Responsibility Centers were identified, namely :

Faculty of Arts  
Faculty of Science  
Faculty of Agriculture  
Faculty of Health Sciences  
Faculty of Education  
Faculty of Theology  
Faculty of Law  
Faculty of Engineering  
Faculty of Economics and Management Sciences  
RC of the Vice Rector : Teaching  
RC of the Vice Rector : Research  
RC of the Vice Rector : Operations  
RC of the Manager : Innovation  
RC of the Executive Director : Finance

## 1.2 A Model For The Allocation Of Funds At The University Of Stellenbosch

The purpose of the library budget is to ensure an affordable academic information system for the university which would support the university’s mission in terms of teaching, research and community service. The challenge in this case was to develop a model that would maximize support to the academic community, that would still allow central bargaining power on a regional and national level with information providers, and that would also provide sufficient incentives for savings by the academic departments.

### 1.2.1 Historical Developments

Prior to 1990, the historical expenditure pattern of the different faculties served as the basis for the allocation of funds. As part of a strategic planning process in the late 1980’s, a formula for the allocation of funds was developed. Factors such as student numbers, average book prices, research outputs and a so called factor of comprehensiveness formed the basis of the formula. The fact that the formula became cumbersome, together with the introduction of RCM, necessitated the development of a new formula or model of allocation. A task group was therefore initiated to develop a new model for implementation in the 2005 budget. The task group consisted of three deans, the finance director, the head of the management information unit and four library staff members. As an interim measure, the funds for 2003 and 2004 were allocated, based on student numbers, by means of a ratio of 1:2,7 for faculties within the broad categories of arts and humanities on the one hand, and science and technology on the other hand. The ratio was based on the cost of providing tuition to students within the two broad categories.

### 1.2.2 Proposed New Model From 2005 Onwards

It was soon realized, that because of the nature of the different kinds of material in the library budget, it would not be feasible to place the entire budget under the jurisdiction of the faculties. There is a component that requires specialized management by library staff. It was therefore decided to divide the budget into two components:

- Central library budget consisting of reference works and electronic databases
- Faculty library budget consisting of books, paper journals, single subscription “e” journals, continuations and article-on-demand.

One foreseen outcome of the budget in the new model is that there should be a gradual scaling down of paper journals in favour of electronic journals. The library should play an important role in staying abreast of the latest developments in this regard. Electronic journals would also provide a better basis for measuring use. The task group felt that it would be important to note the following points of reference :

- As a guideline 15% of the total budget of faculty should go towards the purchasing of books. Faculties should however use their discretion, taking into consideration their obligations toward subscriptions
- Paper copies of journals that are available in full text as part of a database, should be cancelled
- In the case of lesser used journals, article-on-demand is preferred to a fixed subscription
- Any savings in this respect would be to the credit of the faculty for that particular year
- In the case of interdisciplinary journals, it would be possible to share the subscription costs between two or more departments.

### 1.2.3 Timeline Of The Budget Cycle

- Middle May : Library compiles lists with ranking order of journal titles for each faculty
- End of first semester : Faculties return lists to library
- End of July : Library sends processed information to faculties and finance dept
- End of September : Finance dept supplies provisional budget allocations to faculties and library
- October : Faculties inform library and finance dept of their budgetary requirements and any adjustments
- October : Information from faculties and library are tabled at various committees and form part of the University budget
- November : Finance dept use information as part of their documentation for Annual Budget Forum
- Monthly/On request : Library performs bookkeeping and faculties receive reports with management information

### 1.2.4 A Formula For Allocating Funds To Faculties

A critical component in the new model is a mechanism for allocating funds to faculties. From the historical perspective it was clear that a host of factors have to be considered in this regard: the number of students (undergraduates and post graduates), number of lecturers and researchers, research output, the nature of the discipline, the typical needs for various resources, the relative cost of resources, etc. The task group was of the opinion that there is no single measure that can string together this complexity. The proposed mechanism would therefore be to use a common measure that is available and applicable to all faculties, taking into consideration the historical patterns of expenditure. The measure should ideally also be reconcilable with the general mechanisms used for budget allocation at the University. Furthermore it was decided to do the allocation to the faculties, and not

to the departments. The deans of faculties would have the discretion to do allocations to departments within their faculties.

### 1.2.5 Possible “Drivers” For Library Costs

The main users of library services at the University of Stellenbosch are students and lecturers/researchers. The most important candidates for the roll of driver were obviously FE-students, weighted FE-students and FE C1 staff (lecturers and researchers). Correlation analyses that were done for these different user groups to determine the relationship with library expenditure indicated that in 7 of the 9 faculties, the weighted FE-students showed a higher correlation than any of the other groupings. Weighted FE-students is also the basis of the government’s new funding framework for tertiary institutions and it became apparent that weighted FE-students would be the obvious choice as a driver for library fund allocation.

As an experiment the latest available data (2002) was applied to the different faculties to determine a library budget allocation. The results showed a remarkable correspondence to the actual allocation that was done with the previous formula:

	<b>Old model</b>	<b>New model</b>
Faculty of Arts	2 362 000	2 574 000
Faculty of Science	8 378 000	8 177 000
Faculty of Education	474 000	452 000
Faculty of Agriculture	1 733 000	1 542 000
Faculty of Law	694 000	771 000
Faculty of Theology	193 000	204 000
Faculty of Economics and Management Sciences	1 446 000	1 346 000
Faculty of Engineering	2 933 000	2 817 000
Faculty of Health Sciences	3 632 000	3 963 000

## 2. Part Two

Part two of this paper describes the measures that were taken to effectuate a substantial saving towards the budget for information resources of the library, with a purposeful effort to replace a major part of it’s print subscriptions in favour of electronic journals at the same time.

### 2.1. Moving From Print To “E”

The application and development of the information technology, as well as new trends within the scientific communication system (i.e. full text electronic information, the downloading of scientific articles on pre print servers and mergings and takeovers within the international publishing industry) added a new element to an already challenging environment within which the Library Service of the University of Stellenbosch had to operate. Coupled to the problem of the ever weakening South African Rand, which has already been mentioned, this situation forced the management structures in the library to adopt drastic measures to survive in a hostile environment.

The point of departure was the amount of R35m which was made available for information resources in 2003. The university management made it very clear that this was a worst case scenario, and in the case of a more stable Rand, this amount would have to be reduced to R30m, with a zero growth for two years. This was quite a challenge for a budget that showed increases of 25% on average during the past decade!

This project formed part of a broader strategic planning process in which the Library Service was engaged at the time, called "Strategy for the Millennium." This report was entitled "The transition to the electronic information environment", and was adopted by Senate in June 2003. The strategy was based on the following fundamentals:

- To replace single paper subscriptions of journals with electronic versions where the latter would be more cost effective
- The elimination of duplication where electronic full text versions of paper subscriptions would be available as part of a larger electronic database
- The cancellation of lesser used titles in favour of *article-on-demand* document delivery
- A two year moratorium on new subscriptions, subject to a trial period of free document delivery of articles from these titles.

#### 2.1.1 Environmental Scan

An environmental scan was firstly conducted as part of the project which tested the views of the participants on issues such as the future development of the scientific communication system, information literacy and archiving of electronic information. The more noticeable findings were:

- Scientific journals are the most important source of information for researchers
- People are comfortable with access to full text electronic journals, although there is still a need for the paper format in the Humanities
- The levels of information literacy have to be improved
- Books are still an important source of information
- There are concerns about the archiving of electronic journals

#### 2.2 Core Journals Project

The aim of this project was to compile a list of core journals for each department. These lists constitute the different departments' own view of these titles that are considered indispensable for their research and teaching needs. Spreadsheets in Excel-format which contained information about the journal titles that each department subscribed to, were sent electronically to all the deans. These journals had to be ranked using a numerical value from 1-5, where 1=most important and 5=least important. The spreadsheets could be completed online and contained information about paper subscriptions, electronic subscriptions, titles that were full text available on a database (such as Ebscohost) and information about the availability of the title in the Cape Library Consortium (CALICO). In accordance with the Senate decision of June 2003, all titles with a ranking of 4 or 5 would automatically be cancelled.

### 2.3 Moving To “E”

The Senate decision of June 2003 meant that all paper subscriptions should, where at all possible and financially advantageous, be replaced with the equivalent in electronic format. To this end the library would review this situation constantly and strive to stay abreast of developments in this respect. Similarly, all titles that are duplicated in full text as part of large databases would be cancelled automatically. Databases themselves would be evaluated regularly to ensure the best coverage at the best price.

### 2.4 *Article-On-Demand*

According to studies that have been undertaken, it is under no circumstances economically viable to subscribe to lesser used journals when it is compared to unmediated document delivery of articles from these journals. When making these comparisons the cost of processing, binding, storage and maintenance have to be added to the subscription costs. At the University of Stellenbosch it was decided to use this form of unmediated document delivery as a substitute for the journals that were cancelled as part of the core journal project. An amount of R750 000 were budgeted for this service in year one which meant that each lecturer and researcher would be able to order two articles from journals via this service. This project will be closely monitored for the first two years to establish its sustainability.

### 2.5 New Subscriptions

The Senate decision of June 2003 also meant that no subscription for new journal titles would be entered. Departments would be encouraged to establish through document delivery over a period of two years whether it would be more cost effective to subscribe to such journals.

### 2.6 Cooperation With Other Libraries And Role Players

It is not possible for any library in South Africa to be self sufficient in terms of information provision for it's users. To this extend it is also important for the University of Stellenbosch to cooperate within CALICO, as well as other consortia in South Africa, and with role players such as the South African Site License Initiative (SASLI). The role of SASLI is to negotiate favourable terms for site licenses for electronic information resources.

### 2.7 Risks

It is obvious that there would be risks involved in an electronic information environment:

- The clients would be totally dependant on the speed and stability of the campus network
- Users have no guarantees with regard to the permanency of electronic titles
- Simultaneous access for clients are in many cases limited and remote access ore sometimes problematic
- No guarantees in terms of archiving are available

## 3. Conclusion

The question that remains after all this, is : how far has this process gone to meeting the goals that were set? The one thing to remember is that, although the process was started in 2003, it will only come to full fruition in 2005. At this stage it is however noteworthy to report that by eliminating duplication, by replacing lesser used journals with document delivery, by replacing a major part of the print

subscriptions in favour of electronic subscriptions and by benefiting from a more stable Rand, the budget for 2004 was reduced from R35m to just under R30m! This represents a saving of nearly 15%. It must also be said that the introduction of Responsibility Center Management also played a part in achieving this. The fact that faculty now has ownership of the budget for information resources, means that they are much more willing to look at measures to reduce the budget, where previously they were constantly complaining of a lack of resources. In the previous model it was virtually impossible to convince them to cancel any subscriptions, and there was also a reluctance to move towards electronic journals. In the new model that reluctance has virtually changed overnight!

So, finally, what about the guard? Who was the guard? Why has it changed? And who is the new guard? In the old model the finance department guarded the central budget with everything they could muster. The library did the same with regard to the budget for information resources and the faculties guarded their precious journals (mainly in paper format) with a passion. All of a sudden the finance department has let go of it's role as the strict custodian. The faculty and the library now has a shared responsibility in the guard room where the atmosphere has become much more relaxed. But the faculties have now started appointing faculty managers. I fear them. They look like auditors. Maybe the guard will change yet again!