A Case Study on the Selection and Evaluation of Software for an Internet Organisation

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Abstract: The authors conducted research to determine whether IT-managers, IT auditors, users, management, etc. (all decision-makers) use a certain evaluation and selection process to acquire software to meet business objectives and the requirement of users. An argument was used that the more thorough the software evaluation and selection process, the more likely it would be that the organisation will choose software that meets these targets. The main objective of the research was therefore to determine whether Media24 uses evaluation methods and obtain the desired results. Media24 is Africa's biggest publishing group and offers entertainment, information and education 24 hours a day and served as a good example of an Internet Service organisation that made their employees available for this research project. The results confirmed that Media24 uses suggested protocol as noted in the theory for software acquisition correctly during most stages.

Keywords: Black Box testing, business process, commercial software system, document, evaluation, request for proposal (RFP), requirements, selection, software, vendors.

1. Introduction

There is a wide variety of methods that can be used for selection of software in various fields of business (e.g. Manufacturing, Service providers, Insurance, Wholesale, Retail, etc.). This software is used for a variety of purposes in businesses. However, selecting the software that meets organisational requirements and business objectives could prove to be a challenge considering the number of vendors and software available.

> "Choosing the right software for your company can be bewildering. There are thousands of titles to choose from, and programs and their functionality differ frequently" (Buyerzone.com, 2002).

A hurried, uneducated choice could lead to various problems in the company. Some of these are: failing to support an important business process; supporting a process inaccurately or inefficiently; unhappy customers; disgruntled employees; loss of sales; and poor financial performance. Competition in the Western Cape requires good performance in all aspects of the electronic publication industry. Bad judgments or decisions in terms of software acquisition could cause a company some losses and complications in a company's daily operations. Choosing the right software is therefore important and can be achieved by using predetermined evaluation and selection guidelines.

2. Evaluation and selection of a commercial software system

2.1 Decisions made prior to the software evaluation process

As mentioned by Capterra's Software Selection Methodology (2002), certain procedures should be completed before the actual evaluation is conducted. It suggests that the company should start off by interviewing some staff members, addressing corporate vision, analysing existing systems limitations and features and looking at present policies and procedures. The company should also determine whether new software will help the business and if it will increase competitive advantage.

It argues that when the decision is made to purchase software, a project plan should be developed to evaluate and list the evaluation criteria that will be used during the process. A project team should also be selected to carry out the evaluation. This team must include representatives from all levels the organisation. If the proposed software incorporates financial aspects the audit team should also be included.

2.2 Determine requirements for the new software Package

The purpose would be to create a comprehensive and prioritised list of requirements to help evaluate the software. Base Consulting Group (BCG) (2000) state that the requirements definition should consist of several processes

(such as: Managerial Requirements (Budget/Timing, Reporting Requirements), Functional Requirements (Stated Business Needs, Technical Requirements) and IS Standards (Data Flow Diagrams, System Interfaces, and Hardware and Network requirements with emphasis on capacity). They also note that some companies do not develop detailed requirements and as a result may be dissatisfied with the final outcome. Romney and Steinbart (2000) support this statement and suggest that one or any combination of four strategies (listed below) should be used to determine requirements for the new software:

▪ Surveying end-users to determine what their requirements for software is by using questionnaires, personal interviews and focus group discussions.

▪ Analysing the existing system and eliminate requirements that already has been defined.

▪ Examine how the existing software is used and helps to determine the shortcomings of the system and identify any new requirements needed by users.

▪ Pilot demonstrations of applications/software systems could be utilised when there is a problem in identifying requirements.

2.3 Document the requirements

Table 1: Capterra's methodology (2002)

Column Name	Description
Functional department, business processes, and process.	This creates the requirements hierarchy and ensures that all processes are covered (e.g. would be creditors department, cheque printing, approving cheques for printing, etc.)
Requirement type	Identifies the requirement as functional, technical, vendor related, or contractual.
Requirement description.	This details the requirement itself and should be as descriptive as possible.
Priority and ranking	This could be used during the evaluation
Objective addressed	This could be used to match the requirement to a business objective.
Comments	This can be used for any additional comments or justifications

The systems requirement document or software requirement specifications should be the starting point for measuring performance, of the final system (Shelly et al., 1998). Users must understand the document to be able to improve the final version. The content of this requirements document will depend on the type of company and the complexity of the new system. BCG (2000)

states that the requirements document is the cornerstone to evaluate the software and should be used to identify requirements. Capterra (2002) argues that there is a methodological approach available to help with requirement analysis. This is listed in Table 1 Capterra's Methodology (2002).

3. Selecting vendors

3.1 Select list of possible vendors

Michell and Fitzgerald (1994) argue that the range of services offered by IT vendors is large and growing rapidly. They also note that while searching for the "best" vendor, it should be borne in mind that the process of selection and evaluation a vendor is important. BCG (2002) suggests that the project team's first step should be to identify the vendors who offer software solutions that could be used. It could be a high-risk approach not to properly evaluate vendor companies. The sources used to compile the list of vendors should be recent, and reliable. These sources include software user groups, databases, industry groups, research firms, consulting firms, trade shows, seminars and conferences, current users, personal recommendations and contacts, competitors, IT and business magazines as well as Web sites.

4. Preliminary evaluation of vendor companies and their product

Ward (2001) argues that selecting software from a vendor should be a simplified process. She suggests that vendors be invited to participate in a software demonstration because it reduces time spent on evaluations. Companies could work toward solving the business problems earlier resulting in faster return on investment. BCG (2002) states that inviting too many vendors to participate increases the costs and timelines of the project. Team members may also lose focus after seeing too many product demonstrations. In order to shorten the time of the process send the Request for Proposal (RFP) to a shortlist of 5 vendors, and do a preliminary evaluation of the vendors. The Evaluation Team should look at things like:

▪ The standard functionality and key features of the product;

▪ Technology requirements (hardware, additional software, database, operating system, network, development tools);

▪ Product considerations such as viability, stability and cost;

▪ Products targeting different, smaller or much larger companies or industries should be eliminated;

- Eliminate products that are in development or a recent release; and

- Licensing and support costs are examined and products that are over/under priced should be eliminated (licensing escalation must be considered).

4.1 Develop a request for proposal (RFP)

According to Levinson (2001) a RFP guides buyers through a process of tying business needs to technical requirements (i.e. as the particular platform on which the software needs to run on or the systems with which the solution must interface). It clarifies why they are undertaking a particular project. Schwalbe (2000) suggests that the RFP should include: statement of the purpose, background information on the company issuing the RFP, basic requirements for the products and/or services being proposed, HW and SW environment, description of the RFP process, statement of work (SOW), and other information added (as appendices). The SOW should describe the work required for the procurement of the software and help vendors determines if they can deliver required goods and services.

5. Evaluation preparations

5.1 Gather and organise resources

Lars and Matthew (2002) note that a reason for not detecting errors early is because the inadequacy of the test used by the team. The quality assurance of the evaluation project is jeopardised. To prevent this, the test team should ensure they have the resources to detect errors present. The adequacy of resources gathered should be determined at the same time potential vendors are identified. Resources could be added or updated to support the evaluation.

5.2 Determine the evaluation approach/technique

5.2.1 Restrictions on evaluating software

Dean and Vigder (1998) state that, while purchasing software, there are some unique constraints on the ability to conduct effective testing. In general it should be assumed that there is no access to the source code. If the source code is available it could not be modifiable and it means that the executable part cannot be tested internally and this rules out White Box testing. Documentation should consist of user manuals and advertising materials and is not directed at evaluating the software (e.g. it does not describe the behaviour of the software in response to abnormal input).

5.2.2 Evaluation techniques and methods

Romney and Steinbart (2000) suggest benchmarking while processing times of software are measured. Software with the lowest time is normally judged the most efficient. Oberndorf *et al.* (1997) engaged scenario-based testing methods to represent typical procedures for the software to be programmed and not the software undergoing tests. Test procedures are developed based on scenarios and each is evaluated against a set of criteria. In this case the initial scenarios are established using preliminary operational definitions. The results of this will serve as confirmation that the software performed satisfactory against set parameters.

Romney and Steinbart (2000) suggest a point scoring technique to evaluate the vendor. Each criterion is assigned a weight based on its relevancy. The vendor is assigned a score based on how their proposal measures up to each criterion. The vendor with the highest score is then judged the 'best'. They argue that 'requirements' costing is an alternative where the total cost of the proposed software is calculated. This provides an equitable basis for comparison. Another method suggested by Voas *et al.* (1997) is the use of fault injection techniques. This is effective when buyers do not have access to the source code. The method consists of inserting erroneous values into the control stream and checking the results. This technique is an example of evaluating (for discovery) to determine unknown or unexpected reactions of the product under evaluation.

Beizer (1995) suggests Black Box testing to allow a tester to treat each module as a unit which can be defined by its' inputs and outputs (the interfaces to the module) without considering the route by which an input is transformed into a particular output. Visibility into the internal workings of the code module is not necessary and source code not required. An example of black box testing is boundary value analysis where inputs are supplied to the software to be tested (these values represent valid, invalid and parameters). The outputs are measured and accepted if they fall within expected limitations. This type of testing is used during acceptance testing and is the basis of validation testing, confirming the software performed the required functions.

Other techniques (Hausen and Welzel, 1993) include analysing product documentation, presentations, using trial versions, scheduling demonstrations or attending training of the software. They suggest that one or, more of the above-mentioned techniques could be used to

supplement the evaluation of software. The project team should use discretion when selecting evaluation techniques as a company's approach and resources may vary.

5.2.3 Evaluation considerations

Hausen and Welzel (1993) mention that some of the following principles should be taken into consideration:

- Repeated testing of the same product using the same product specifications with the same testing techniques must deliver similar results (Repeatability).

- Repeated evaluation of the same product to the same product specifications by different parties must deliver similar results (Reproducibility).

- The evaluation is free from bias while achieving any particular result (Impartiality).

- The result is obtained with minimum subjective judgment (Objectivity).

5.2.4 Product evaluation

Hausen and Welzel (1993) state that the evaluation process should consider software features (compared to the requirements document), product information (acquired from the RFP, product demonstration, information gathered from investigating vendors, etc.), evaluation techniques and process information (e.g. results obtained from the testing techniques).

Capterra's methodology (2002a) states that all software should be evaluated to determine if it meets requirements (functional and technical). Any additional (functional/technical) requirements should be listed and re-calculated. Missing requirements should be listed and cost incurred to add these features should be calculated. Price and maintenance levels of the product have to be evaluated by totalling cost and maintenance levels. Firms must consider initial product costs (also long-term costs (such as training, implementation costs, maintenance, and upgrading costs). Project teams should keep in mind that software is expensive and by picking the wrong one could have costly repercussions.

5.2.5 Final evaluation of vendor companies providing possible software solution

Pollard (1999) suggested the evaluation of the support and maintenance staff of the vendor. He notes that it is necessary to know the number of people in customer support. The response time can be measured by calling the customer support department. The availability and quality of the implementation support also ought to be evaluated. The new software could have bugs and other problems (e.g. not meeting the required deadline). The vendor must provide training because users want to use the system properly.

He suggests following up on customer references, reviewing case studies and finding out how many companies are using the software. The financial stability of a vendor is an aspect to consider. Pollard (1999) supports this by suggesting the examination of the financial history and the long-term financial stability of the vendor.

5.2.6 Selecting the software system

The total score of the software should be recorded on a scoring sheet when a point scoring technique is used. All the software must be listed from the highest to the lowest. The software with the highest score would represent the best fit for the organisation. Although the software with the highest score might represent the best solution for the company, there may be reasons unrelated to the requirements that could prevent an organisation from selecting software. Inconsistencies should be identified (also extremes in scoring that may influence it - or a competency or deficiency within a single business function). Criteria such as a business partnership, potential future business, or other intangibles, must also be included.

5.2.7 Notify the vendor

Once the steering committee has approved the vendor, then the vendor should be notified and a contract drawn up. The diagram (on the next page) was derived from the theory to illustrate steps used during the evaluation and selection process.

6. Problem statement

Brown and Wallnau (1996) state that organizations should recognize the importance of technology 'refreshment':

- To improve the quality of their products and services;

- To be competitive with organizations providing similar products and services; and

- To remain attractive to investors.

Any organization should invest in appropriate software to stay in business. Careful decision-making on investment into software is therefore essential. Whether the release of an update, or the availability of new software, should force an organization to initiate an evaluation process that provides timely, balanced information on which decisions can be made. The problem statement was thus stated as:

> *…the more thorough the evaluation of software, the greater the chances could be for the organization to select the software that will meet their business objective and the requirements of the users.*

All the methodologies listed above were summarised in the figure in Appendix 1 at the end of the paper.

7. Research methodology

7.1 Objective

The objective of the study is to determine whether Media24 uses the correct software evaluation and selection guidelines when purchasing software from a vendor as prescribed in the theory and whether these guidelines have obtained results. Media24 is Africa's biggest publishing group and offers entertainment, information and education 24 hours a day (www.media24.com; www.news24.com, etc.). Based on the theory and the problem statement, the research questions were stated as follows:

- Is the software evaluation process of Media24 thorough enough to select software that fulfils their end-user requirements?
- Does the organisation pick software that meets the business objectives easily?

7.2 Limitations of the study

The researchers had decided to exclude legal procedures and only focussed on the project from a technical viewpoint. Also they were not allowed to use the name of any software used by Media24 as it might discredit the vendor or Media24. The research scope also does not include the processes (e.g. contract negotiation) followed after a decision has been made.

7.3 Development of questionnaire

The researchers compiled a questionnaire consisting of two sections (Section A and B). Section A contained 7 sub-sections, covering aspects of evaluation and selection processes. Section B contains the user satisfaction survey. The questionnaire was tested for any questions that might cause a problem with 5 academics from Cape Technikon who was not included in the sample. Any vague questions were also improved or removed. The questionnaire was handed to a Media24 IT Manager who reviewed it. He also identified people responsible for evaluating and selecting software in Media24 to be respondents while he completed a questionnaire himself.

Section A was sent out to 15 decision makers involved in acquiring software in Media24. The

objective was to measure whether they used the evaluation techniques as prescribed in the theory. Section B was sent to 50 users of the software. The objective was to determine whether they were satisfied with present software. All questions where derived from the theory described earlier. A five point Lickert scale was used in most of the questions (it included questions that required respondents to pick more than one answer). The reason is to evaluate areas where answers from the respondent indicates an in depth approach to the evaluation process. At the end of each section a section was dedicated to find out in more detail hat respondents think.

7.4 Analysis of data

The results of both sections were compared using cross tabulation. The data was captured and analyzed on an Excel spreadsheet. Twelve 'Section A' respondents returned the questionnaires and 74% of the respondents who received section B returned the questionnaire. It was decided not to conduct any association analysis as the mode of the study did not require it at this stage. It was rather decided to conduct a follow-up study at a later stage when the student will be employed at Media24.

7.4.1 Section A: Evaluation process

Table 2: Project management structure

	Strongly Agree	Agree	Neither agree or Disagree	Dis-agree	Strongly Disagree
There is a Steering Committee in place to oversee and direct the evaluation process	11	7	1	0	0
Sufficient resources are allocated to the evaluation process	4	8	0	0	0
A project team with the required expertise is assigned to conduct the evaluation and selection of the new software system.	3	5	1	3	0
Average	4	6	1	1	0

Nearly all the respondents agree that the Steering Committee correctly directs the evaluation process (11). This indicates that people realise that there is a structure in place that could oversee the evaluation of software and is in agreement with a similar comment by Capterra (2002). The process in Media24 is listed below (Table 2):

All the respondents agree that there are sufficient resources available to ensure that the evaluation

process runs smoothly. Nine of the respondents indicated that the project team has enough expertise to conduct an evaluation. Three has indicated that they disagree with this. There might be a problem that falls outside the scope of this study and needs to be addressed by management. The organisation therefore needs to assemble a project team that is representative of the people working in the organisation (see also Dean and Vigder, 2002). Nine of the respondents indicated that Media24 used the interview method to determine requirements. The same respondents have also used the present system to ensure that they meet the correct requirements (see Figure 4 later). Six respondents have indicated that they use questionnaires to collect requirements. It seems that project teams in Media24 prefer to use three methods to determine software requirements.

All respondents have indicated that technical requirements are determined beforehand (systems interface). Ten of the respondents are happy that business objectives have been met while determining functional requirements. All agree that managerial requirements should be met when requirements are defined. Nine of the respondents noted that requirements are properly documented. Media24 needs to address this to ensure that people are in agreement otherwise it can become a problem. The requirements definition as applied in Media24 (as reflected by the respondents) is listed in Table 3 below.

Table 3: Requirements definition

	Strongly Agree	Agree	Neither agree or Disagree	Dis-agree	Strongly Disagree
Technical requirements are determined (e.g. the system interface)	5	7	0	0	0
The Functional requirements are determined (e.g. business objectives system has to fulfil)	5	5	2	0	0
Managerial requirements are determined (e.g. reporting capabilities, budget, timing)	4	8	0	0	0
Requirements are properly documented and easy to understand	2	7	1	2	0
Average	4	7	.5	.5	0

Ten of the respondents agree that many sources should be investigated to identify correct software. The same number agrees that Media24 should ensure that software that meets requirements is evaluated. This is done to limit the number of products to be considered. On the other hand, 11 of the respondents agree that the support/ maintenance staff provided by the vendor is evaluated on response time while the quality of support is rated high by 10 of the respondents. It seems to the authors that 'old fashioned' values are still important while looking at new IT investments. This is in agreement with the statement made by Capterra (2000) that end-users value help provided by the supplier. The importance of vendor identification by Media24 is reflected in Table 4.

Table 4: Vendor identification and evaluation

	Strongly Agree	Agree	Neither agree or Disagree	Dis-agree	Strongly Disagree
Various sources (e.g. web sites) are investigated in order to identify the software available.	3	7	2	0	0
A preliminary evaluation is conducted to limit software that is going to be extensively evaluated.	3	7	0	1	1
The support and maintenance staff provided by the vendor is evaluated based on…					
…response time	4	7	1	0	0
…quality of support	1	9	2	0	0
…number of people	0	1	1	8	2
…cost	1	10	1	0	0
The company providing the software system is evaluated based on….					
...long term Financial stability	5	5	0	2	0
...customer References	4	7	1	0	0
...number of clients	4	5	3	4	0
...long and short term strategic planning	0	2	2	8	0
Average	2	7	1	.7	.3

The respondents do not regard the number of people working for the vendor as important; as long as their service is not affected by it (quality is

rated higher). Eight stated that cost plays a role while maintenance is evaluated. Most of the respondents noted that the vendor should be evaluated on financial stability and customer references. The number of clients and long term strategy of the vendors were not used when looking how reputable the vendor is. This is something that Media24 and similar organisations need to investigate. The importance of a request for proposal is listed in Table 5.

Table 5: Request for proposal

	Strongly Agree	Agree	Neither agree or Disagree	Dis-agree	Strongly Disagree
A Request for proposal is sent to Vendors.	10	1	1	0	0
The RFP includes……					
the purpose of the RFP	1	9	2	0	0
...all necessary background information of the company issuing the RFP	1	4	6	1	0
...the requirements for the new system	4	7	1	0	0
...the hardware and software environment currently being used	3	4	4	1	0
...instructions on how to reply and a description of how responses will be dealt with	9	2	1	0	0
...a statement of work (SOW) that includes the required work needed for the procurement of the new software solution.	1	9	2	0	0
Average	4	5	2.6	.4	0

Table 5 displays the data collected on the RFP. Most of the respondents agree that this is complied with by Media24. Many (10) stated that the evaluation processes are properly documented while thought is given to objectivity (11) and impartiality (9). Most (10) of them agree that repeatability is lacking while reproducibility (7) is important and needs careful attention. Impartiality is an aspect that needs to be addressed as a third of the people noted that it is lacking. The averages for the request for proposal can be improved but because there are individual items that management of Media24 needs to pay attention to as stated. The common method used to evaluate the software is the point scoring technique (Figure 2). Trial versions of software have a better chance to be selected if it was analysed previously or used. The other method

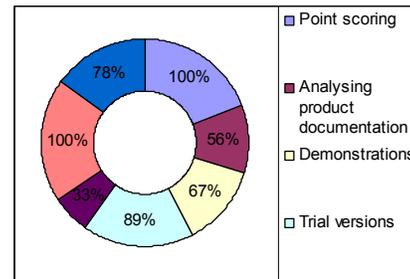that Media24 uses to evaluate software is the expertise of their staff in a particular field.

Figure 2: Techniques used while evaluating software

Table 6 shows the evaluation process. The respondents were positive that the final score used to determine how well the software product meets the requirements is a good method. Nine respondents are in agreement that the documentation to do this evaluation is well laid out beforehand. Management needs to convince the 3 that does not agree to accept the documentation as presented. Objectivity is complied with but repeatability of the evaluation is not highly thought off (and the same for reproducibility). Nine of the respondents noted that the tests were impartial. Again it would be a task for management to convince the remaining three that this is the case before problems are experienced (also supported by Shelley et al. (1998)).

Table 6: Evaluation of the product

	Strongly Agree	Agree	Neither agree or Disagree	Dis-agree	Strongly Disagree
The evaluation score of the product is determined based on how well it meets the pre-determined requirements.	1	11	0	0	0
The evaluation process and results are properly documented	1	8	2	1	0
When conducting the evaluation thought, is given to………					
...Objectivity	7	4	1	0	0
...Repeatability	0	0	4	7	1
...Reproducibility	0	6	4	2	0
...Impartiality	7	2	2	1	0
Average	3	5	2	1.8	.2

Most of the people agree that the final decision to acquire software is based upon the evaluation results (Table 7). Eleven of the respondents agree that they are happy with the results achieved by Media24. Agreeing meant that they use the

methods as prescribed in theory but there are some methods that are not used presently (e.g. benchmarking and black box testing). These should be investigated and used to ensure that the methods presently being used are still considered the best (Beizer, 1995).

Table 7: Results obtained from decision makers

7.5 User satisfaction and overall effectiveness of evaluation process used

Nearly all the respondents (11) at Media24 are satisfied with the software that was purchased by Media24. Eight of the respondents have agreed that it falls within the parameters set by the organisation (as displayed in Table 8). The rest that does not agree (4) may be users that were not part of the project team. They should be convinced that the software is of benefit to Media24. Eleven of the respondents agreed that the software meet their requirements. This is supported in their article by Michel and Fitzgerald (1997) who stated that normally most of the users who were part of the process are happy with the software.

Table 8: User satisfaction

	Strongly Agree	Agree	Neither agree or Disagree	Disagree	Strongly Disagree
I am satisfied with the software I am using.	2	9	0	1	0
The commercial software system fulfils the business objective it was assigned to	1	7	3	1	0
The commercial software system adheres to my requirements	2	8	0	1	0
There is no room for improvement for the commercial software system I am using	0	4	2	5	1
Average	1.5	7	1.25	2	.25

This could mean that the individual user requirements agree with Media24's requirements. However, 7 of the respondents agree that there is room for improvement. This should be investigated in another study as this falls outside

	Strongly Agree	Agree	Neither agree or Disagree	Dis-agree	Strongly Disagree	Total
The final decision is not made solely based on the evaluation result, but also includes other intangible aspects (e.g. potential future business)	1	9	2	0	0	12
I am satisfied with the evaluation results obtained by our company	4	7	0	1	0	12
Average	2.5	8	1	.5	0	12

the scope of this study. This does not agree with previous statements made by the respondents. Maybe the present evaluation procedure should be extended to inquire about reasons why the respondents argue that there is room for improvement. This should be included as part of the evaluation and is displayed in Figure 3.
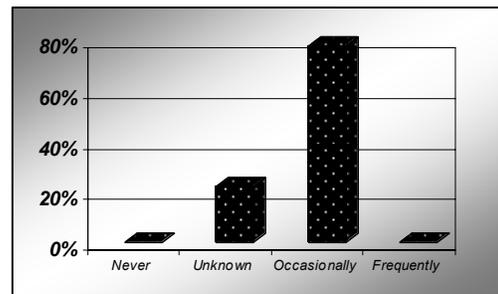

Figure 3: Number of complaints from users

The respondents (9) complain about the software occasionally to ensure that management pay attention. Seven of the users argue that there is room for improvement. This would require another survey to find out why users complain about the software and if there is room for improvement.

7.5.1 Section B

The main objective of the section B was to assess whether the users where satisfied with the software acquired by Media24. There are some complaints lodged by the respondents (e.g. the systems response time and redundant processes and procedures included in the current system and that the software does not integrate with other software). The figure on the next page illustrates the percentage respondents who agreed that they use the correct evaluation techniques. The results are summarized according to key areas in Figure 4.
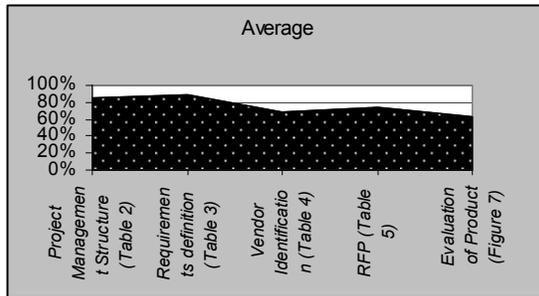
Figure 4: Key area's average

An area of concern should be the evaluation of the product for management (only 63% average with some areas that were identified that needs attention). Eighty six percent of users agreed that they where satisfied with the software obtained. Sixty-five percent of users verified that the software systems meet the business objective and 84% noted that the software they are using meets their requirements (also supported by Voas *et al.*, 1997).

8. Discussion and conclusion

From the findings the researchers conclude that Media24 has identified and used the better-suited evaluation techniques as described in the theory. End-users were generally satisfied with the software and agreed that the software meets their requirements and business objectives. The above-mentioned statement answers the first research question. It is evident that software that helps Media24 achieve its goal has a better chance of being selected (answer to the second research question).

The researchers note that there were some complaints mentioned by end-users. They feel that this 'unhappiness' could be because not all employees were actively involved in determining the requirements or because the requirements were not communicated to all users. A manager, during an interview, noted that the software he was using does not integrate with one of the sub-systems. This eventually leads to more work, as manual reconciliation has to be done between the sub-system and the software. This could be because the requirements or the software weren't described properly in the Request for Proposal. Most of the statements indicated that e-Commerce organisations should be careful how they select software (Capterra (2002), Hausen and Welzel (1993) and Lars and Methven (2002)). This was also supported by the research findings of this study.

9. Future research

Further research might be needed to refine or redesign the evaluation approach used by Media24. The reason is that the current software will be outdated soon and with the rise of new technology the evaluation and selection process might have to be adjusted. There were also some issues that were not picked up before the installation of the product (e.g. integration with sub systems). This indicates why the evaluation and selection process might have to be revised. Other studies could help place emphasis on the use of specific evaluation models. In order to speed up the process and to gather more data more respondents will have to be included in the sample before the next survey is conducted.

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Appendix 1: Graphical Summary of Software Selection