

## 9. DMAP: QUESTIONNAIRE METHODOLOGY

### 9.1. DMAP introduction

Drs. Harry Swart and Henk Greeff of Bentley West Management Consultants developed the DMAP technology utilised for this questionnaire. The DMAP (Diagnostic Management Application Profile) tool was designed to obtain a strategic view of an organisation, analysing the operating environment in an organisation as defined by management processes, styles, practices and systems associated with managing the organisational purpose, strategy, technology, human capital, business processes, financial systems as well as culture, climate and diversity, and profitable market growth in the workplace. The approach it utilises can, however, be adapted and customised to address problems not within its original scope. Examples of areas where the tool has been customised are as follows:

- The mining industry, where a strong emphasis is placed on the balance between operational and strategic issues.
- The IT industry, with reference to issues regarding competence profiles and governance.
- The retail industry, the focus being the balance between management and leadership and operational successes.
- ***The services industry, where strong emphasis is placed on knowledge management, intellectual capital and organisational culture (relevant to this study).***
- The financial services sector, with reference to capability studies.
- Technology transfer in the mining industry.

The DMAP questionnaire contains a standard set of closed questions, which test the dimensions of management processes, styles, practices and systems associated with managing the organisational purpose, strategy, technology, human capital, business processes, financial systems as well as culture, climate and diversity, and profitable market growth in the workplace, or alternatively, customised dimensions as required per individual DMAP. There are also a number of open-ended questions, which allows the respondent to give his or her views outside the frame of reference of the closed questions.

The power of the DMAP lies in its extremely powerful engine, which allows for the categorisation of results into a series of strategic themes. One of the many advantages of the technology is the fact that more than fifty applications of the technology have been made in South Africa and the United States of America, which allows for rapid customisation and benchmarking against other surveys.

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### 9.2. DMAP purpose

The *generic* purpose of the DMAP in the business environment includes the following:

- Provides a diagnostic template that simplifies the business planning process.
- Allows for repeated organisational dipsticks.
- Tests market perceptions.
- Allows qualitative assessment of intellectual balance sheet.
- Provides an evaluation of management processes, approaches, practices and philosophies.
- Rapid evaluation of strategic situation and operational environment.

### 9.3. DMAP process description

The DMAP process can be depicted as follows:

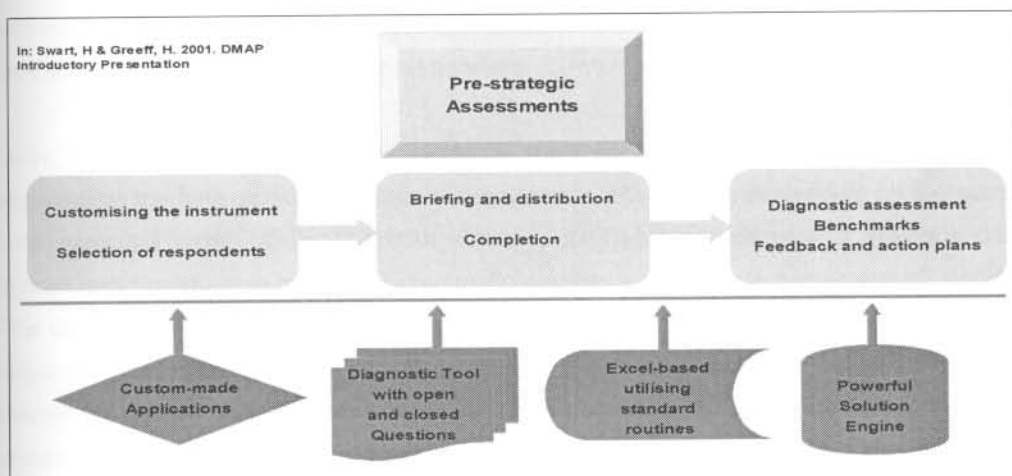


Figure 32: DMAP process description

Firstly, a pre-strategic assessment is performed to determine the potential strategic drivers in the targeted organisation(s). The strategic drivers and the main themes that characterise them are defined in detail to customise the strategic themes in the DMAP. These drivers are described in the questionnaire to respondents. This may seem to lead respondents, but the purpose is rather to ensure respondent understanding of the strategic drivers being tested. The descriptions of the dimensions or drivers can also seem fairly complex at first glance, as it is a one or two sentence description of an issue very strategic to the business. In this study, the basic strategic drivers of the DMAP tool, namely organisational purpose, strategy, technology, human capital, business processes, financial systems as well as culture, climate

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and diversity, and profitable market growth in the workplace, was not used. The DMAP was customised completely to adapt to the purpose of this study.

Respondents are carefully selected according to criteria relevant to the organisation. These criteria are selected to ensure the highest quality output from the questionnaires. In the case of this study, the organisations were selected due to the fact that they are all knowledge rich organisations, and the respondents themselves were selected according to their level of knowledge and understanding of the topic of knowledge management. The DMAP is therefore not a scientific sample, but aimed at providing case studies to prove or disprove the hypothesis. The respondents requested to remain anonymous, therefore the organisations participating in the DMAP are not mentioned anywhere in the study.

Secondly, all potential respondents are briefed as to the background of the questionnaire, its aim and the purpose of the application of the data obtained from it. This can be done in presentation format, e-mail or normal mail format. Respondents are then provided with the electronic or hard copies of the questionnaires and required to fill them. An applicable time frame with clear cut-off date is set for respondents to return questionnaires.

Thirdly, a diagnostic assessment is made of the data obtained via the questionnaires, depending on the data selections made by the analyst. This is highly dependent on the needs of the particular organisation. The data can also be benchmarked against previous data obtained and stored within the DMAP diagnostic memory if required, to further test the validity of the data and to enable more in-depth analysis. The purpose of the DMAP is to enable the analyst to provide feedback and solutions to the organisation in question based on the data obtained through the questionnaires, together with an objective analysis and interpretation of the data in relation to the strategic themes identified.

These three main steps are executed and supported by a custom made Excel application utilising standard routines, which acts as a powerful solution engine to enable diagnostic assessments of data.

### **9.4. Framework for analysis**

The interpretation of the questionnaire is based on the following statistical data and principles of analysis (Swart, 2001, p.12) (see over page):



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The Mean (average scores) = Level of Satisfaction
Standard Deviation (variation among scores) = Level of Agreement
The 95 % confidence level is used to determine meaningful differences between samples. At a 95 % confidence level, significant differences occur between two means for this data set when the difference between values exceeds 10% of the sample standard deviation. This value is a compromise between total accuracy of statistical representation and the comparing of different "subsets" of the same population, of widely differing sizes. In this study this measure is used as a wide-band approximation of the 95% confidence level. The results of the survey were expressed as numbers between 0 and 5 (with 0 being poor and 5 excellent.) For the purpose of the report these results are expressed as percentages (where 0% equates to the previous 0 and 100% to the previous 5.) This conversion can be made without affecting the statistical integrity of the data and /or statistical comparisons of the data.
Mean scores above 75% denote exceptional agreement or satisfaction with the situation under review. Mean scores between 65% and 75% normally denote that the respondents are satisfied with conditions. A mean score of 65% is the 'cut off between low and acceptable scores. A score between 65% and 60% show that the respondents are not entirely satisfied with how the area is being managed. A mean score of less that 60% is usually indicative of severe problems. A value below 40% usually indicates a problem of extreme severity and urgency, which can mostly only be solved by a change of management.
When more than 50% of the respondents rate an item as 3.00. It is usually indicative of confusion or uncertainty about a particular item.
When the standard deviation exceeds 24% it means that the respondents differ significantly in as far as their ratings are considered. Standard deviations between 20% and 24% show a reasonable degree of agreement, whilst values of the standard deviation less than 20% signify good correspondence.
If less that 35% of the respondents choose a 3 or less as their score, it is assumed that the situation is reasonably under control as far as agreement between respondents is concerned. It is not yet necessary to take serious, urgent action. For values of 35% to 45%, the matter requires careful management but if more than 45% of respondents chose a 3 or less, the matter is considered serious and urgent action is required.
The open questions allow respondents the opportunity to verbalise their feelings. Sentences with comments are gathered in the survey. These are classified into themes pertaining to the study.
The number of responses per dimension is taken as indicative of the top-of-mind issues.

Figure 33: DMAP framework for analysis