VALUE MANAGEMENT REVIEWED

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BACKGROUND:

The Value Management process was introduced into the Queensland Electricity Commission (QEC) in 1986 by David Gaff, one of the original facilitators of the process in the State Electricity Commission Victoria (SECV).

The results of the process in the Queensland Electricity Commission is impressive:

> Confirmed savings of $200 M in Power Station Construction from a base of $1 600 Million. Many additional millions of dollars were identified as savings but were precluded because of contact use arrangements.

> A refurbishment programme of Queensland's largest power station was formed around the results of series of value management studies where substantial availability and efficiency gains resulted with a saving on the original budget expectations.

> The Transmission Division and Domestic Distribution Boards used the process for amalgamation of their industries again with success through team involvement and again with functional and considerable cost benefits.

> In addition to these major Value Management projects many isolated studies in opportunity areas were carried out with functional and cost improvements.

The process extended from Generation and Transmission to the domestic distribution boards where the process was used in the late design stage and later was used in "greenfield concept" for distribution systems.

The South East Queensland Electricity Board (SEQEB) became a user in the concept stage and as an organisation which reviews the methods used within their industry, evaluated the worth of value management as a tool in their industry.

A previous review of the process had been carried out by QEC in 1988, a VM on VM, where cost savings were identified and the process challenged as to its suitability for the industry. Similar questioning received similar answers as resulted from the SEQEB Review.

The results of the SEQEB review were a critique on the process by those people who were involved and by those people who were affected by the results.

BACKGROUND: (CONT'D)

Many, if not all, of the review comments have been expressed many times in Value Management circles, however this review was not hindered by habits or attitudes of Value Management believers and is an honest attempt to see the process for what it could do for a large semi-autonomous government organisation. There are many lessons to be learned. The most important is to keep the process simple, isolate the functions into the basic form, cost the functions, remove the unnecessary functions and innovate on the essential functions.

THE TQM PROCESS - VM REVIEW:

The management section of SEQEB produced a number of subject headings which spread from "Choice of VM Projects to VM Reporting and compatibility with TQM.

The eleven subject areas were:

1. CHOICE OF VM PROJECT
    (incl. "at what stage of development is VM applied?" and "how far ahead do we look?")

2. ESTABLISHMENT OF THE VM TEAM

3. PREPARATIONS PRIOR TO THE TWO-WEEK SESSION (incl. the 'preliminary meeting')

4. THE TWO-WEEK CONTINUOUS SESSION

5. THE VM PROCESS (i.e. the job plan)

6. INTERVIEWS (incl. community group interviews)

7. THE TEAM/SPONSOR RELATIONSHIP

8. THE FINAL PRESENTATION

9. THE VM REPORT

10. APPRAISAL OF VM's EFFECTIVENESS

11. COMPATIBILITY WITH TQM

The staff was interviewed by the Business Systems Management Section and those interviewed represented a substantial cross-section of team members, team sponsors, team leaders and other persons with exposure to the SEQEB Value Management programme and the results of the studies.

As might be expected there are some conflicting views expressed. However, there are two key factors where a unanimous perception has been indicated and these are:

.   Value Management is totally compatible with, and complementary to, TQM philosophy and processes.

.   Benefits from the VM projects completed to date have substantially outweighed the cost of the human resource investment. This is true in terms of both cost savings and in less tangible benefits such as team-building and improved community relations.

THE TQM PROCESS - VM REVIEW: (CONT'D)

Given the above appraisal it seemed clear to SEQEB that VM should continue
to receive strong support from senior management regardless of any
improvements that may be made in the meantime. It must be pointed out that
several suggestions for improvements were made and a number of process
issues raised which were addressed.

The responses to each of the subject areas are worthy of recording and for
contemplating how each facilitator would handle each area of work. The
responses given have not been edited in any way and follow the subject
headings.

"THE REVIEW"

1. CHOICE OF VM PROJECT

    . We need to start applying VM to **future** projects, not ones that
       are already an urgent priority

    . To date the sequence **has** been -

       Collect data - develop options - optimise selected options -
       write planning report - **conduct VM study**

       The sequence **should** be -

       Collect data - **conduct VM study** (incl. development of a short
       list of options) - determine the best option - optimise selected
       option - write planning report

    . The VM exercise started after a study had already been completed.
       This left the planning engineer feeling more than a little
       defensive

    . If the VM approach was adopted 'up-front' then the
       cross-functional interaction would be much more effective and
       commitment to fresh ideas would occur more readily

    . At present VM studies are being started too late. Ideally they
       should be started at the very earliest stage before any
       conventional planning work is done. At the very least they
       should commence immediately following the preliminary development
       of possible schemes

    . 'Community sensitivity' should be one of the main criteria for
       project choice

    . We should be looking further ahead in our VM studies,
       particularly in areas of substantial population growth

    . The development period to be considered is project-specific, the
       main factor being the potential population growth rate in
       affected areas.

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"THE REVIEW" (CONT'D)

2. <u>ESTABLISHMENT OF THE VM TEAM</u>

. Critical to the success of the team is -

- team composition (expertise in all the essential areas)

- inclusion of a 'wild card' on the team

. Key people refuse to be on the team (mainly because of the time commitment)

. We failed to get the team composition we wanted because several people could not accept the two-week commitment

. Teams **must** have the right people on them. This has proved difficult to achieve, mainly because of the reaction to two weeks 'out of the system'

. It isn't necessary to have a team leader, as such, and in fact different people tend to become the leader at different stages of the process. However, the co-ordination role is an important one and someone should be allocated this responsibility, particularly at the early stage of data collection and organising interviews.

3. <u>PREPARATIONS PRIOR TO THE TWO-WEEK SESSION</u>

. Our pre-study data gathering and interview arranging was uncoordinated and ineffective. This was a result of there being no designated team leader to adopt the co-ordination role

. I wasn't informed that I was the team leader until half way through the study. Consequently the initial organisation/data collection, etc. was somewhat uncoordinated

. A 'community profile' should be prepared **prior** to a study. From this a decision can be made as to what degree of involvement corporate communications should have in the team process

. The start of our Study was badly organised, mainly due to poor communication

. There should be a much longer period between the preliminary meeting and the start of the study to allow time for adequate data collection and organisation of meetings.

4. <u>THE TWO-WEEK CONTINUOUS SESSION</u>

. Whilst two weeks was a long period for the group it really wasn't long enough to allow for a 'gestation' period to consider all the implications of new ideas. It would have been better if there was a break in the study period to accommodate this

. The process might be better having **two** shorter group periods with a 2/3 week break between them. This would facilitate extra data collection and an extra period for gestation of ideas being considered

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"THE REVIEW" (CONT'D)

4. <u>THE TWO-WEEK CONTINUOUS SESSION</u>   (CONT'D)

. Two weeks is too tight a time frame to enable the team to be confident they have considered all the ramifications of a chosen scheme

. Two weeks is too long in one unbroken group session.

Should be -

2 days	(break)	2 days	(break)	1 week
Team Building		Interviews and Devel. Ideas		Developing Solutions

. A **shorter** process can only be successful if the team are a group that normally work together anyway, i.e. they don't need 'team-building'

. The time pressure is primarily a positive force

5. <u>THE VM PROCESS</u>

. At the 'brain-storming' stage we need the involvement of senior managers because they are the people with 'vision'

. We found the 'FAST' diagram to be relatively unhelpful

. Cost estimates formulated under the time-constrained circumstances of the VM process tended to be significantly less accurate than those produced in ' normal' conditions

. The QEC facilitator didn't seem inclined to be 'structured'. It felt, at times, like we were just following a very informal process

. The 'FAST' diagram is of dubious value

. For system planners the frustrating part of the VM process is the fact that the rather lengthy 'FAST' diagram process produces the same range of functions for each study. Also the subsequent 'brain-storming' session then produces the same range of options (more or less) for the team to consider

. Several positive effects occur during the course of a VM study but we need to consider if these same benefits can be obtained with another process - one that is a more effective use of team members time whilst still maintaining a high 'profile' format

. The secretarial/administrative support provided by a secretary was invaluable and should be a permanent feature of VM studies

. Our facilitator was a 'driver' for the first three days

. Very little of what we generated in the first week was used in the second week

"THE REVIEW" (CONT'D)

5. THE VM PROCESS (CONT'D)

- The 'functional analysis' part of the process takes too long in proportion to the more productive parts

- Early parts of the VM process, such as the 'FAST' diagram, may seem prolonged and tedious - but that's when the 'team-building' is going on.

6. INTERVIEWS

- Where public sensitivity is an issue (e.g. environmental impact) we **do** need to have community involvement. However, it is important that this be handled by 'experts' and **not** left to the VM team

- The **stakeholders** should be identified **before** the study commences. These would be the decision-makers and those that will influence the decision-makers including community representation where this is appropriate. These stakeholders should be given the opportunity 'up-front' to tell the team what expectations they have and what, if anything is simply 'not on'

- Team members met with community groups - and this went o.k.!

- The decision as to **who** is allowed to be involved in discussion with community action group representatives, or with politicians, should be made by corporate communications

- Interviews must be done **early** in the process.

7. THE TEAM/SPONSOR RELATIONSHIP

- There is pressure to find a unique solution

- Sponsor **influence** can have a positive **or** negative result

- Mid-study presentations to sponsors are a waste of time. A better process would be short but regular visits by sponsors to check on how the team is progressing

- Should have ½ hour visits from sponsors every second day for guidance, **not** 'ad hoc' presentations to sponsors

- The organising of sponsor/team meetings was not done well

- SEQEB's VM process should be documented and should 'spell out' sponsor commitments so that these can be planned ahead once the study date has been set.

8. THE FINAL PRESENTATION

- Preparation for the presentation was 'a bit rushed'

- We possibly should have a set format and/or process for preparing and delivering the final presentation

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"THE REVIEW" (CONT'D)

8. <u>THE FINAL PRESENTATION</u> (CONT'D)

   . The final presentation should focus on any changes to accepted practice plus community involvement - **not** a 'technical overview'

   . Invitees to the presentation should be told the team's **task statement** in advance of the presentation

   . Presentations are too formal

   . The question of 'who will give the presentation' should be decided at the earliest opportunity in the study

   . VM teams do **not** have to recommend a 'preferred scheme' at their final presentation. It is quite acceptable for them to present 2 or 3 feasible options for a final decision after a more detailed and time-consuming analysis.

9. <u>THE VM REPORT</u>

   . A summary report should be written and issued prior to the final presentation (with enough time for attendees to read it)

   . The VM Report should be issued no later than two weeks after the final presentation.

10. <u>APPRAISAL OF VM's EFFECTIVENESS</u>

   . The main benefit from the VM process is the level of commitment to the final proposal and the greater awareness by interested parties about 'what is being planned, and why'

   . A major benefit of the VM process is the focussing on facts to support conclusions rather than on eloquent wording

   . One of the more 'controversial' aspects of our final proposal was left out of the submission that finally went for board approval

   . Nothing **new** seems to come out of the process

   . The main benefit is from the wider range of perspectives considered and from the increased commitment of interested parties

   . Value management has produced some very worthwhile results

   . Interviewing 'outsiders' provides a valuable perspective that would not otherwise be considered

   . A strength of the VM process is that it forces the team to develop a clear statement of **'what the system is required to do!'**

   . Possibly the most important enhancement VM makes to the planning process is in its encouragement of the 'cultural shift' towards risk management

"THE REVIEW"   (CONT'D)

10. <u>APPRAISAL OF VM's EFFECTIVENESS</u>   (CONT'D)

.   VM aside, our formal planning process is now considerably more oriented towards effective communication and involvement of interested parties. The 'community involvement' element, though, is a positive new initiative that's been added to VM but not, as yet, to the normal planning process

.   The VM 'participative' approach should be part of the normal SEQEB planning system

.   Getting the right people on the team gives the team **confidence** and this is a very positive aspect of the VM process

.   Another positive aspect of the process is the degree of contact with the community it encourages

.   The strengths of the VM programme are:

-   a wide range of interested parties are involved

-   the process attacks 'sacred cows'

-   VM is a 'team-building' process.

11. <u>COMPATIBILITY WITH TQM</u>

.   The VM process 'sits well' with TQM principles already in that it:

-   is a team process

-   relies heavily on the establishment of facts

-   uses the TQM 'tools'

The process is also 'results oriented' which is generally regarded as a 'plus'.

.   The concept of 'block-time' team-work should be considered for other team projects (e.g. quality improvement task teams) but should only be used to resolve major organisational problems, not general improvement exercises

.   The VM process is totally 'in tune' with TQM principles

.   We should be able to compress the QI 'storyboard' process into a condensed version similar in principle to the current VM studies

.   There are a lot of similarities between VM and TQM and VM is **complementary** to TQM, **not** an alternative.

"THE REVIEW" (CONT'D)

Author's Note:

The TQM Process required that once the questionnaire was completed a formal meeting to address critical issues would meet. The attendees of the meeting were the teams, sponsors and managers of sections affected by VM Study results. The following section shows the items considered by the TQM committee to be critical and the issues where greatest diversity of opinion occurred. Each item listed to be discussed by the meeting is followed by the meeting comments.

VM PROCESS REVIEW - ISSUES TO BE ADDRESSED:

1. **PROJECT CHOICE**

    Question:

    What criteria should be applied to a project to determine its suitability for a value management study?

    Response:

    Value Management proposals will normally originate from one of two sources -

    .   from the **planning input meeting**

        or

    .   from **consultation between the Chief Project Design Engineer (CPDE) and a Regional Manager**

    The final approval to proceed with organising a VM study would be the joint authority of the CPDE and the Regional Manager.

    Regardless of the origin of the proposal, however, its suitability and priority is to be determined by subjecting the proposal to a pre-determined evaluation criteria. The following criteria were determined to be appropriate:

    .   the extent of system planning that has already taken place, i.e. the study should commence **before** a system planning report has been produced.

    .   the degree of urgency that exists for some action to occur

    .   the overall projected cost of the system upgrade, i.e. a minimum of $2 Million is a guide.

    .   the potential benefits anticipated from a VM study (including benefits from replication).

VM PROCESS REVIEW - ISSUES TO BE ADDRESSED: (CONT'D)

1. **PROJECT CHOICE** (CONT'D)

Response (Cont'd)

. the expectation there will be benefits 'beyond the normal planning process' (i.e. the perceived opportunity for innovation, risk management, etc.).

N.B. The 'indicators' of this are -

. the length of time that current practices and procedures have remained unchallenged

. the presence of 'issues' arising for the first time

. the extent of the 'future impact' from development in the area being considered

. the presence and degree of political, community and/or organisational sensitivity.

2. **TEAM COMPOSITION**

Question:

What guidelines should be applied to the choice of team members, including the 'wild card' member?

Should there be a team leader appointed? Alternatively, should the co-ordination role be allocated to different team members for different stages of the VM study?

Response:

The following 'ground rules' were agreed in respect to the desirable composition of a Value Management Team and the basic responsibilities of the different roles involved. The separate roles considered are -

Team Membership (incl. the 'wild card' member)
Team Leadership
Admin./secretarial Support
Group Facilitation

Ground Rules:

. There should be a minimum of 5 (and a maximum of 7) team members excluding the facilitator and the 'secretary'.

. The team should have representation of all the critical elements of the study subject. For example, if there are underground mains involved then the Underground Engineer should be a member and if community involvement is required then a Corporate Communications representative should be on the team.

. The team should include in its membership a representative of the 'customer' (The Region) and the 'supplier' (System Planning).

<u>VM PROCESS REVIEW - ISSUES TO BE ADDRESSED</u>: (CONT'D)

2.   TEAM COMPOSITION (CONT'D)

<u>Response</u> (Cont'd)

Ground Rules (Cont'd)

.   One member of the team should be someone who can be considered as a 'wild card', i.e. this team member has a role in the organisation which is sufficiently divorced from the subject of the study to enable him or her to be free from pre-conceived notions and values about that subject. Alternatively the 'wild card' may be from outside the organisation (e.g. QEC).

.   Team leadership is to be considered a dynamic role that will be naturally adopted by different people as the focus of attention changes during the various group processes. No formal team leader will be appointed.

.   A secretarial/clerical/admin. person shall be appointed to look after the logistics of the team's operation during the study period and to be responsible for production of the report once the study is complete.

.   The team shall have a facilitator whose responsibilities include ensuring an effective 'preliminary meeting' takes place.

The final decision on team composition will be made by the study sponsors. Thereafter it is expected that all team members will be fully committed to the study and will be present at the preliminary meeting as well as being in attendance for the whole of the study duration.

3.   GROUP SESSION TIME FRAME

<u>Question</u>:

Should the main group session:

- remain at a period of 9 working days
- have some other fixed period (what?)
- be a period determined by some formula applied to the specific project

Should the main group session remain as one continuous period or should it be two or more shorter periods (and what should these be)?

<u>Response</u>:

The duration of the main group session of the VM study is to be **ten (consecutive) working days**.

In exceptional circumstances it may be appropriate to reduce the study period. This would be at the discretion of the sponsor and would be discussed with the team at the preliminary meeting.

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VM PROCESS REVIEW - ISSUES TO BE ADDRESSED: (CONT'D)

4. **INVOLVEMENT WITH POLITICIANS AND/OR COMMUNITY GROUP REPRESENTATIVES**

Question:

Should a 'community profile' assessment be a pre-requisite of all VM projects?

Should direct team member involvement with politicians and/or community group representatives be in any way subject to corporate communications advice or influence (and if so, what form)?

Response:

When an intended VM study is perceived as having the potential to attract the interest of the community and/or their political representatives a request will be made to the Corporate Communications Department to prepare a **'Community Profile'** for the affected region. This profile will identify the various community groups and/or politicians who may be directly interested in the environmental impact of proposed works in the region.

Where potential issues can be foreseen the inclusion on the team of a Corporate Communications representative is essential. In addition to his or her role as a VM team member this person would be expected to **provide advice and assistance** to the team on such matters as:

-   an assessment of the 'political scene'

-   background information about affected community groups

-   background information about influential individuals

-   any useful information to assist the team in preserving or enhancing SEQEB's corporate image as an organisation that cares about the environment and the community.

5. **PREPARATION AND DATA COLLECTION**

Question:

What should the sponsor(s) and the facilitator be able to give to the team at the 'preliminary meeting'?

What should the team have accomplished by day one of the main group session?

What is the ideal period between the 'preliminary meeting' and the commencement of the main group session?

Response:

The Role of the Sponsor

The Sponsor of a Value Management Study has an overall role of 'enabling the team to carry out its task effectively'. In particular, the Sponsors will provide, at the 'preliminary meeting' -

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VM PROCESS REVIEW - ISSUES TO BE ADDRESSED: (CONT'D)

5.   PREPARATION AND DATA COLLECTION   (CONT'D)

Response: (Cont'd)

The Role of the Sponsor   (Cont'd)

-   a clear **task statement**

-   the **parameters of the study**

-   a specific **list of concerns** that the Sponsor(s) may have.

Timing

When it has been established that a VM study is required the study shall be organised to occur as soon as possible so as not to delay project approval.

Team members will be notified **at least 4 weeks before the start of the VM study.**

The 'preliminary meeting' will be held **one week before the VM study commences.**

6.   **THE VM PROCESS**

Question:

Can the functional analysis methodology (the 'Fast' diagram) be redesigned to eliminate the need for re-identifying repetitive elements whilst still enabling project-specific elements to be clearly identified?

Should Kepner Tregoe continue to be an integral part of the VM process, or merely considered as one of a number of decision-making techniques that can be used for evaluation of developed solutions?

Should 'presentations' to sponsors during the main group session remain a feature of the VM process? What is the ideal sponsor role?

Should there be a standardised final presentation process or should it remain at the discretion of the team? If the process should be standardised, what form should it take?

Should the final presentation remain as the last day of the main group session or should there be a period for preparation?

Is it really o.k. to just present the developed options without deciding on a 'best' option?

Who should take care of the administration and 'team welfare' role? (The facilitator?, or a separate person with secretarial skills?)

VM PROCESS REVIEW - ISSUES TO BE ADDRESSED: (CONT'D)

6.   THE VM PROCESS   (CONT'D)

Response:

The 'FAST' Diagram

A separate small committee will review the detailed elements of the process currently used for functional analysis, i.e. the 'FAST' Diagram. Whilst the requirement to identify the functions to be value analysed is vital, and the benefits of ensuring all team members have a full knowledge of 'what's involved' is recognised, it is felt that some of the more basic elements of the project can be established in a more effective way.

Author's Note:

The committee, although nominated, has not met.

7.   OUTPUT STATUS - FINAL COMMENTS

The goal of a Value Management Study Team is to **generate ideas** so that all feasible options will be considered before a final decision is made. The VM process makes it highly probable that this will be done effectively because it forces the team to challenge established principles and methods.

It is **not** the responsibility of the team to make the final decision on how the project will eventually be carried out. However, if any of the team's recommendations are not to be followed then the reasons for this will be explained to the team once the decision has been made.

Author's Note:

The VM process is continuing with most, if not all, of the TQM responses being put in place.

As a final comment without any reflections on SEQEB but to all organisations that use or may use value management, one area worthy is the formulation of Task Statements and the associated team selection.

My experience after many VM workshops is that a study is only as good as the task allows it to be. There can only be one main task at any one time and a misdirection in the task decision can easily result in a team not addressing the real issues, this causes teams to redirect efforts during the workshop leaving them somewhat dispirited at the lack of effective direction from the beginning.

In selecting tasks and teams, consideration needs to be given to the levels at which the results are to be directed, in policy, structure or hands on change.

VM PROCESS REVIEW - ISSUES TO BE ADDRESSED: (CONT'D)

Author's Note: (Cont'd)

The opinion ventured is that the whole art or strategy depends on the right objective and the correct collection of talent needed to fulfil the task being selected. Sound judgement on questions of this type require a wide knowledge of VM experience, a knowledge of the talent available and of the talent's characteristics. Adequate information is vital and the writing of task statements with associated team selection should not be treated lightly.

Task statements and team selection are the result of a strategy meeting held between management, sponsors and facilitator. This is potentially the most critical event involved in a successful study.

At this meeting managers and sponsors should be challenged and the real reasons behind the task statement openly discussed.

Often there will be hidden agendas when studies are first suggested and teams selected to meet the agenda. It is essential that the task statement is an honest expression of management's expectations and team selection should reflect this honesty.

This honesty in the task selection particularly when there are social and political overtones, enables cooperation to be developed which is a fundamental requisite for a successful workshop. Unless cooperation exists (managers, sponsors and teams) the workshop can never develop its full strength and effectiveness.

In its wider sphere harmony must also exist between the stakeholders. Sometimes this is difficult to achieve and secure, departmental divisions, pride and prejudices have to be overcome, so it is necessary for the facilitator to extract the true objectives and the agendas of the task and set in place the correct team and for the sponsors to give openly all the agendas at the team preliminary meeting.

The FAST diagram caused considerable debate in the review and remains an integral part of the process. As recent studies have been on concepts and not reviews of existing systems or what has been done in the past or what is done now, the FAST diagram has been used to expose the width of opportunity and develop the needed objectives. Once the objectives are identified it becomes relatively basic how to achieve the needed result. Creativity is used to obtain the volume of alternatives and the evaluation process identifies the cheapest, achievable recommendations.

"His horses did not stumble when his armies rose".

C.C. Walker on Genghiz Khan

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