THE VALUE MANAGER

The official publication of The Hong Kong Institute of Value Management

THE HONG KONG INSTITUTE OF VALUE MANAGEMENT

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COUNCIL MEMBERS OF THE HONG KONG INSTITUTE OF VALUE MANAGEMENT (HKIVM)

AIMS AND OBJECTIVES OF THE HKIVM

- To create an awareness in the community of the benefits to be derived from the application of Value Management in Hong Kong.

- To encourage the use of the Value Management process by sponsors.

- To establish and maintain standards of Value Management practice in Hong Kong.

- To contribute to the dissemination of the knowledge and skills of Value Management.

- To establish an identity for the Institute within Hong Kong and overseas.

- To encourage research and development of Value Management with particular emphasis on developing new applications of the process.

- To encourage and assist in the education of individuals and organisations in Value Management.

- To establish and maintain a Code of Conduct for Value Management practitioners in Hong Kong.

- To attract membership of the Institute to support these objectives.

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EDITORIAL

Welcome to the first issue of The Value Manager in 2006! The first paper entitled "Communicating Value Management Workshop Outcomes for Better Teamwork and Collaboration" examines the knowledge acquisition and transfer processes that take place during a value management workshop and looks at the sharing of implicit, explicit and cultural knowledge by workshop participants; fundamental to the workshop approach. The second paper entitled "An Integration of Value Management and Environment Sustainability" to Select Construction Materials introduces an integrated process model by combining the two approaches to select construction materials. It aims at find the best eco friendly materials, which gives value for money in construction projects. The third paper entitled "Managing Uncertainties Trust and Commitment Required" discusses how to combine and manage the threats (risks) and opportunities (value improvements) in an effective manner and efficient manner. It discusses the cultural changes that should be achieved and develop a range of proven tools for managing project uncertainties; thereby increasing the likely delivery of the project completion within the quality, cost and time parameters. Enjoy these papers!

Geoffrey Shen

Editor, The Value Manager

MESSAGE FROM THE PRESIDENT

Tony Wilson
President of HKIVM

Welcome everyone to our Spring edition. Spring is a season of change and for sure, Hong Kong is always changing. The impact changes have are often considerable on our everyday lives.

In our Institute, two members of our recently elected Council will be relocating to work further afield. Emma Harvey will be going to Shanghai and Steven Humphrey to the Middle East. Our thanks to both for all their hard work and very valuable input. We will update our HKIVM web site soon with our replacement Council members.

We have also had a change of approach to our next conference. We look on this as an opportunity and are "partnering" with the Institute of Value Management, Australia. We have a co-host in the Architectural Services Department, who in their 20th Anniversary year, continue their support for VM and improvements in the construction industry. Please make sure you will be able to attend to hear the futurist Jack Bacon speak. He is a member of NASA and highly entertaining. This is one not to miss.

For our construction colleagues, we are featuring Value Management, Risk Management, Partnering and Innovation combined as our theme. Jump to it everyone, submit a paper to stimulate our colleagues!! On the practical side, the Permanent Secretary for Works will also be a keynote speaker. Please see the separate details about the conference.

The infrastructure of Hong Kong is always undergoing "change" but something is different. South West and South East Kowloon Developments have revisited the drawing board. The harbour and final waterfront has become of paramount importance to the public. Thank goodness, because we want the best final waterfront to make us a world class city. There seems so many questions. What kind of identities will these new areas have? How will they be easily connected for public accessibility? What added value will the public get from it in the short, medium and long term? Do we need some public interest tests and are public / private partnerships the way forward? There are many questions and many stakeholders.

Not to worry, we do have a common goal of improving the environment and harbour front to give us a wonderful place for pedestrians. With this as a starting point, we can establish a common set of value objections through a series of well structured VM Workshops. Some of the major risks can be identified and a spirit of partnership / "can do" attitude built up. Through consultations, including the media, we should be able to move forward to achieve the best results possible to make our harbour front and associated new planned districts, sustainable and stunning!

Have a great spring and pleasant few days vacation over Easter, embrace change and see it as a opportunity not a threat.

Best Regards,

Tony Wilson
President, HKIVM

COMMUNICATING VALUE MANAGEMENT WORKSHOP OUTCOMES FOR BETTER TEAMWORK AND COLLABORATION

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ABSTRACT

It is proven that value management workshops provide an opportunity for the key stakeholders of any given project to meet together, share information, create synergy and generate new knowledge. At the concept/inception stage of a project this results in a shared understanding and mental model of the project's raison d'être and a consensus decision on the direction it will ultimately take. Further down the line, this shared knowledge is invaluable; especially when tough or sometimes controversial decisions need to be made regarding changes to designs, materials or even as personnel come and go. What is not clear is how this knowledge (and the decision making process used to reach it) is formally shared, if at all, with the other project stakeholders not participating in the workshop, stakeholders whose contribution may be paramount to the project's success. This issue is highlighted on large, multi-stakeholder projects which require end user or community consultation and projects which have a long lead-in and delivery programme, often resulting in changes in personnel amongst the key stakeholders. In this paper the authors examine the knowledge acquisition and transfer processes that take place during a value management workshop and looks at the sharing of implicit, explicit and cultural knowledge by workshop participants; fundamental to the workshop approach. Suggestions on how this information can be captured and presented to the wider project team and additional stakeholders following a value management study are made. It is demonstrated that by recognising the value of and need for these formalised knowledge management processes, the benefit of using value management will further increase.

INTRODUCTION

The rationale for this paper is to consciously combine value management with knowledge management for better knowledge utilisation, teamwork and collaboration, and ultimately enhanced project outcomes. This approach involves an exploration of the knowledge acquisition and transfer processes that take place during value management workshops and over the lifespan of a project.

Recommendations are made regarding how the information shared and new knowledge generated during a value management workshop can be captured and presented to the wider project team and additional stakeholders (those not directly participating in the workshops).

Ways of keeping the momentum of ideas generation and sharing alive outside of the value management workshops are also suggested.

INFORMED DECISION MAKING

Multi stakeholder projects embrace all types of capital projects: housing; public utilities; infrastructure; and government facilities. They are not just about lowest cost, they must be economical but also meet stakeholder expectations and consider their environmental impacts (e.g. ecological footprint); the client is accountable and the development must be sustainable. Taking the time to install a structured decision making process up front will help achieve 'best value'. Balancing social, economic and environment issues can be achieved using value management tools and techniques (Hayles, 2003).

Value management is all about making informed decisions at the right time in the project lifespan. At the concept/inception

stage of a project this requires a shared understanding and mental model of the project's raison d'être and a consensus decision on the direction it will ultimately take. Further down the line, this shared knowledge is invaluable; especially when tough or sometimes controversial decisions need to be made regarding changes to designs, materials or even as personnel come and go.

However this multi-faceted and deep-seated knowledge can be difficult to obtain on large, multi-stakeholder projects which require end user or community consultation and projects which have a long lead-in and delivery programme; often resulting in changes in personnel amongst the key stakeholders. There needs to be a collective understanding of the project, an open sharing of explicit and implicit knowledge, an audit trail of the decisions made, and a structure to the integration of information and new knowledge generated during a value management workshop.

KNOWLEDGE MANAGEMENT

Knowledge is information evaluated and organised in the human mind so that it can be used purposefully (The Association for Information Management, 2004). In short it is the psychological result of perception and learning and reasoning (Wordnet, 2003) by both individuals and groups.

Organisational knowledge management and knowledge transfer has been described at length in the literature. However there is little research on how knowledge is managed or transferred between project stakeholders representing a number of different organisations including end user groups and client bodies, each with different skills, mental models, knowledge and experience to impart.

Knowledge management is defined as the way a company stores, organises and accesses internal and external information (MIT Sloan School of Management, 1994). Knowledge transfer refers to the effective sharing of ideas, knowledge, or experience between units of a company or from a company to its customers (MIT Sloan School of Management, 1994). This knowledge can either be tacit or explicit or a continuum of both.

Taking into account the above definitions, the acquisition and transfer of knowledge amongst stakeholders working on a discrete collaborative project is defined in this paper as Project Knowledge Management or ProjKM and is the way a project team/stakeholders chooses to organise and access internal and external information, tacit, implicit, explicit and cultural knowledge, for mutual gain. This includes the effective sharing of ideas, knowledge, or experience amongst the project stakeholders.

There is strong and compelling evidence that the effective management of knowledge sources and capabilities is vital for the delivery of best practice solutions (Hayles & Egbu, 2004) and to prevent a situation of 'reinventing the wheel'.

It is known that successful organisation-wide knowledge management initiatives provide competitive advantage (Grant, 1991), however it is not well documented how effect these initiatives are when on large and complicated construction projects, diverse stakeholders representing a range of different interest and organisations come together to exchange knowledge (Hayles & Fong, 2005).

In the case of discrete construction projects, it is important for project knowledge management to aim to tap into the existing knowledge amongst the key stakeholders, including the end users. Competences and capabilities (unlike resources) are unique to individuals, discrete project teams and stakeholders (Hayles & Egbu, 2004).

Previous research undertaken by Ruggles (1998) has determined 8 categories of knowledge-focused activities within organisations:

- Generating new knowledge;

- Accessing valuable knowledge from outside sources;

- Using accessible knowledge in decision making;

- Embedding knowledge in processes, products and/or services;

- Representing knowledge in documents, databases and software;

- Facilitating knowledge growth through culture and incentives;

- Transferring existing knowledge; and

- Measuring the value of knowledge assets and/or impact of knowledge management.

These are not only important on an organisation-wide basis, they are also of paramount importance in the delivery of successful facilities projects and therefore invaluable activities to be undertaken within project teams and between project stakeholders. After all, construction is a project-based industry where it does not support any natural transfer mechanism.

Figure 1 demonstrates how ProjKM is embedded within the value management framework for a project. In addition to generating new knowledge, knowledge-focused activities adopted during a value management workshop aim to tap into the project stakeholders' existing knowledge by introducing tools and techniques which exploit and improve the processes and capabilities already in place in order to enhance the project.

Creativity is an important element of the value management process. It is also vital in the transfer of knowledge between stakeholders as creativity encourages individuals to 'think outside the box' and this in turn assists in the transfer of both tacit and explicit knowledge as well as creating new knowledge. The model reproduced in Figure 1 is based on the analysis of a number of value management studies including public works, housing and infrastructure. It demonstrates how the value management workshop stages go hand-in-hand with knowledge management and the development of ProjKM (Hayles & Fong, 2005).

By establishing knowledge requirements and strategies for its management early on in a project (for example during a strategic-level value management workshop), the project stakeholders can tease out where additional knowledge is required, how this can be obtained, and by whom (action planning). This is increasingly important when social and ecological as well as economical considerations need to be tackled. This structure should ensure that projects meet sustainability targets through knowledge-based learning and by better utilisation of stakeholders' knowledge.

Re-visiting the team's knowledge management requirements (ProjKM) during the project, with additional value management workshops later in the project life cycle, and encouraging knowledge sharing outside of as well as within the value management workshops, will promote open dialogue. This will, in turn, enhance relationships within project teams and ultimately go some way to convey the cultural change required within the construction industry. Lessons learnt at each stage of the project can be fed back into future workshops and the workshop results can be used as an audit trail for decisions made and the options pursued.
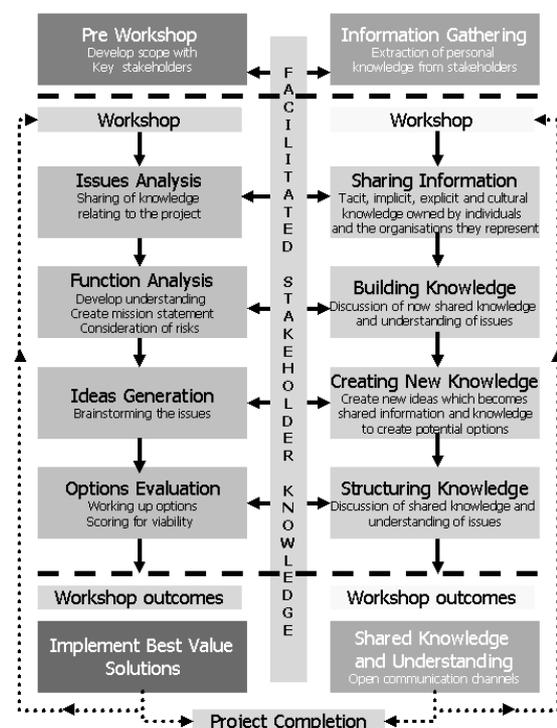
Figure 1: Knowledge acquisition and transfer during a value management workshop at any stage of the project lifecycle (Hayles & Fong, 2005)

This methodology ensures knowledge requirements (creation, securing, distribution and retrieval) are all captured during the workshop events and managed effectively to the advantage of the project, its stakeholders and the wider community via sustainable solutions.

TOOLS AND TECHNOLOGIES

There are a number of ways to organise the continued development and sharing of knowledge outside of the value management workshop for better project outcomes. It is essential that all stakeholders can access summaries of the workshop reports (not weighty tomes) via a designated project website or simple fact sheets so that the audit-trail is transparent. A presentation of the outcomes to the various stakeholder groups keeps everyone informed and involved in the process.

On large multi stakeholder projects there are a number of more involved ProjKM approaches - techniques and technologies that can be used to improve communication and enhance teamwork and collaboration. These range from creating a virtual organisation for the lifespan of the project (to encourage ownership and overcome any issues of knowledge creation and sharing across organisations) to employing a 'knowledge broker' for the duration of the project. Better ways of sharing knowledge in project teams as summarised by Egbu et al. (2004) include setting up:

- A designated website with regular up-loads;

- Collaborative technologies with access to intranets and groupware for rapid information access.

- Discussion forums to develop knowledge and understanding further, Setting up both real and virtual communities of practice;

- Knowledge databases;

- Knowledge 'gatekeepers' responsible for monitoring and redirecting information as and when;

- Mentoring programmes;

- Monthly project newsletters; and

- Networks of experts.

Not all of these will be applicable but may trigger ideas for where knowledge can be acquired, applied, communicated, created, exploited and organised outside of a workshop environment using a structured approach for the benefit of subsequent workshops and thus the project, its participants, and its final outcomes.

CONCLUSIONS

As increasingly complex multi stakeholder projects are undertaken using various decision-making teams whose members represent a range of organisations, it is more important than ever to bring key stakeholders together and build project teams. Value management brings people together to make informed decisions at the right time in a project's lifespan. An important part of this process is the open exchange of ideas and information to create shared knowledge.

The diverse knowledge, skills and experiences of the project participants are key assets to the value management workshop; neither an organisation nor an individual will own all the knowledge required. Formalising learning and knowledge exploitation adds value to the process.

By consciously combining value management with knowledge management, essential and hidden knowledge is gathered that facilitates the decision-making process, achieves optimum value for a project and in doing so delivers sustainable construction solutions. Additionally, the improved communication resulting from this approach promotes collaboration, which in turn strengthens the project team.

This paper demonstrates the strength of the value management process in considering the knowledge required (creation, securing, distribution and retrieval) to deliver complicated construction projects.

As knowledge management continues to be a favoured business improvement tool, embedding ProjKM within a value management framework can only further improve the construction process. A greater awareness of the combined strength of value and knowledge management will encourage uptake.

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AN INTEGRATION OF VALUE MANAGEMENT AND ENVIRONMENT SUSTAINABILITY TO SELECT CONSTRUCTION MATERIALS

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ABSTRACT

Value Management (VM) and Environmental Sustainability (ES) are increasingly becoming important tools to be considered in construction. At present the ES and VM have been practiced independently. This research is focused at producing an integrated process model by combining the two approaches to select construction materials. The proposed model is aimed at finding the best eco friendly materials, which gives value for money in construction projects. The material selection is based on the 'Combined Scoring Matrix', consisting of Green Labeling of materials and Multi Criteria Scoring. The model was verified through a case study for External Wall materials.

INTRODUCTION

The construction industry is one of the largest consumers of resources among all industries, both directly and from its supply chain. Making construction activity sustainable and achieving best value options in the long term is a major challenge. On the global scale, the construction industry and its products consume a critical amount of material and energy sources, and are responsible for a very significant portion of pollution by harmful and damaging emissions and wastes (Hajek, 2001). Therefore it is recognized that environmental sustainability is to be considered in the life cycle of a construction project. According to Gibbere (2003), Sustainability is the simple idea of ensuring a better quality of life for everyone now and for generations to come. Hayles (2003) further suggested that sustainability could be described in terms of social, economic and environmental states that are required in order for overall sustainability to be achieved. There are number of options to improve the environmental performance of buildings. According to Sturges (2004), application of environment friendly building materials is one of the best ways to improve environment performance.

With reference to Martin (1997), borrowing from the best of many different disciplines and management processes, Value Management (VM) is probably the most complete process available. McElligott and Norton (1995) have identified VM as a systematic, multidisciplinary effort directed toward analyzing the functions of projects for the purpose of achieving the best value at the lowest overall life cycle cost.

Martin (1997) further suggested VM started as a great concept, and has grown from both within it and from others. It was recognized that VM concept could be incorporated with environmental sustainability. The process brings right people together at the right time regardless of where they are located in the supply chain, is an integrating function within the project value chain (Kelly, Male and Graham, 2004). Therefore VM is always focused to achieve the sprit of every activity and attempt to eliminate unnecessary burdens and thereby making link between VM and ES is crucial.

The overall aim of this research is to develop a model to fulfill a best value option through selecting eco-friendly materials. Several milestones have been achieved in the study including the thorough investigation of how sustainability is currently viewed and in particular how it impacts on the built environment. The research is further attempted to discuss the applicability of VM

techniques in delivering the sustainable construction strategies.

RESEARCH METHODOLOGY

A comprehensive literature survey on VM, and ES was carried out in the beginning of this research study. The Criteria Scoring Matrix (CSM) and Material Green Labeling (MGL) were selected as the best tools to maximize best value options and environment sustainability respectively. Sixteen (16) structured interviews were conducted to explore the views of experts in Environmental Economics and VM in local context. A Functional Analysis System Technique (FAST) was used to identify the basic and secondary functions. As value added technique CSM was used to evaluate criteria and alternative materials, for each element. By allocating MGL techniques the concept of ES is embedded to the model. Previous studies on life cycle assessment and MGL were used to model the environment impact in terms of ES. Finally the model was tested through a case study to select the environment favourable and best value for external wall finishes.

THE PROCESS MODEL

The proposed model is aimed to find the best eco friendly materials, which gives value for money in construction projects.

The Model Development Phase

The model begins from Pre-study phase. At this stage, client's brief is thoroughly scrutinized. The preliminary understanding of the project, client's objectives, expected constraints and boundaries are critically evaluated at the orientation meeting. The Facilitator or Team coordinator leads the team, but the leader shall essentially a person who has handful of experience in both value management and sustainable construction. The ideas born through him supposed to eliminate environment hurdles, which will derive from the project. The quality of the final results highly depends on the depth of information availability. The identification of poorly valued areas, available alternatives, and material significance of elements is important.

The Study Phase is the next stage of this model. At this stage further attention should be paid to obtain more reliable information of cost significant areas and to identify a comparative importance of each alternative. Functional analysis is an important technique, which is frequently utilized in VM. The basic and secondary functions are scrutinized during this process. Calculation of Value Index is directed to persist the process further. The elements, which are having over '2' of value index (Cost/Worth), are subjected to further evaluation (McElligott and Norton, 1995). When an element performs several functions the cost of that element or item may be prorated across the functions. The worth is considered to be the lowest cost at which only the basic functions can be achieved. The secondary functions are allocated a worth of zero. Having identified the poorly valued elements they are then broken down in to components as material, labour and plant. This process is known as fragmentation. Materials account for the largest input in construction activities, in the range of 50% - 60% of the total project cost (Ganesan, 2000). Through fragmentation, the elements, which are having high material component, can be easily identified. In this case, if material component (X), is more than 1/2 of the total cost of that element it is included for further analysis.

The team leader is responsible to organize a brainstorming session and the team members are prompted to spontaneously produce ideas regarding the identified elements. The primary selection process is to ensure that only the credit enough ideas are carried forward through the process. This process is carried out on the basis of the main advantages and disadvantages of the alternatives generated. The significant impact will give in the analysis stage of the model. The proposed Integrated Process model for ES and VM is shown in Figure 1.

Analysis

The crust of the model is based on the analysis of the VM proposals and ES of selected alternatives. The Combined Matrix, which is an amalgamation of CSM and MGL processes. The significant criteria are listed out in the CSM. It is important to establish criteria, where each criterion is entirely independent from others, because any

overlaps will skew or bias the results (McElligott and Norton, 1995).

The next step is to assign a relative weight of importance to each and every criterion. This is an objective analysis and it commences with the comparison and rating of each criterion against all of the others. During comparison it is decided which of the two criteria is more important and the most important criterion is rated according to the key. When the comparison is over, the scores for each criterion must be totaled to provide a relative weighting for each of the criteria. This totaling provides the "raw score". After completing the criteria scoring exercise, the next step would be the comparison of design alternatives on the "Alternative Analysis Matrix". The multiplication of the criteria weight by the score for alternatives will reflect the degree of importance of each alternative. The unreasonable alternative scores would be analyzed further.

One of the tools to measure environment sustainability of materials is green labeling. It is embedded with most significant environment sustainable criteria. By considering these criteria the green points are

allocated. Element is taken as the simple arithmetic sum of the each individual materials which builds up the element. But there are several environmental impacts to be considered, when the constituting materials are compiled together to form an element and these impacts are difficult to quantify. Therefore green star is focused on the direct impacts encountered through the individual materials.

Finally Points are allocated for the alternatives as per the score they have obtained both in VM scheme and ES scheme. The team can decide the final selection of alternatives. The alternatives that have scored fairly high can be selected to proceed with development phase. The objective of this phase is to develop the selected ideas as practicable proposals. The selected ideas present as proposals to the decision makers in Presentation phase. Generally those proposals will embedded with description of the original and proposed material composition of the element, advantages and disadvantages of each, life cycle cost implications and supportive technical back – ups.
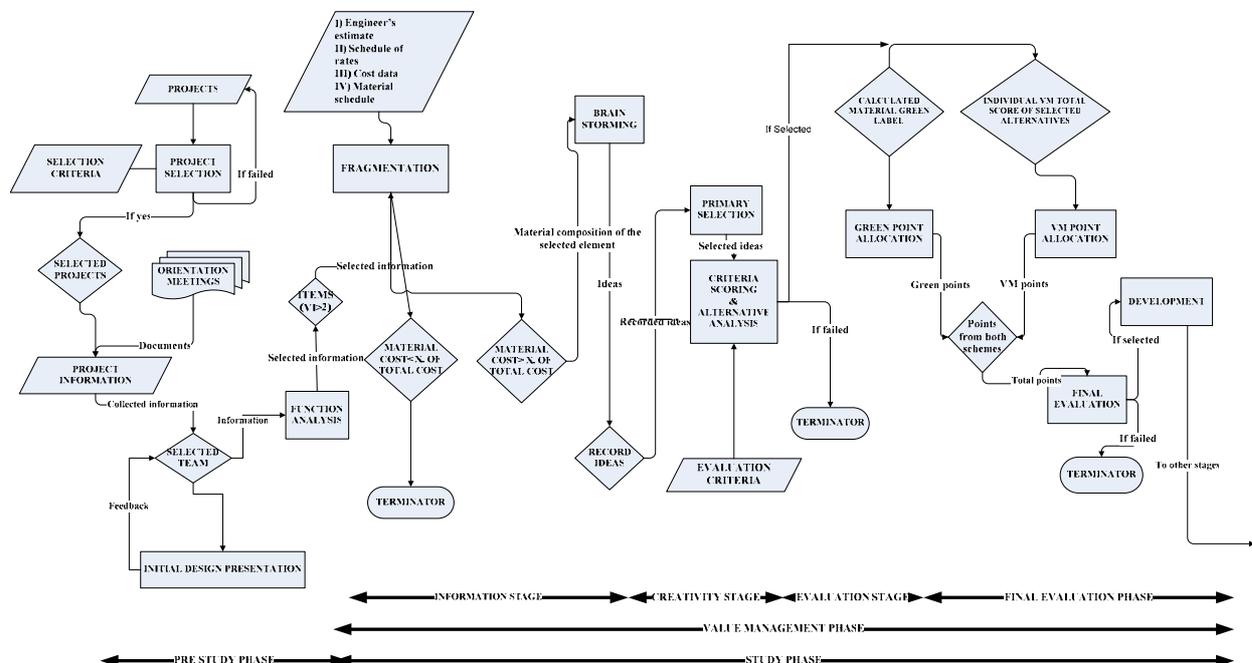
Figure 1: An integrated process model

ADVANTAGES OF THE MODEL

The Pure VM and ES material selection processes are aimed at one aspect only, either value maximization or the environmentally sustainability. But this model focused on both aspects simultaneously.

- The model retains the client's original requirements effectively.

- Ensure the functionality of the end product.

- The scope can be narrow down up to a manageable level by means of selecting the cost significant materials.

- Provide chance to developer to enjoy the real value of the investment.

- Flexible enough to use any of the VM techniques available.

A CASE STUDY

A case study was carried out to select the environment friendly material for external walls through VM. The selected project was an apartment complex, which is located in Colombo metropolitan area. The calculated value index of external walls is 2.12 and it was decided as a critical element to further evaluation. In brainstorming sessions it was identified initial cost, maintenance cost, aesthetic, insulation properties, time for construction, durability, acoustic properties and weather resistance as the significant criteria for external walls which can be added value to the project. Using CSM the total VM score was calculated. The relative weighting for VM scores is assigned in a range between one and ten. The highest raw score belongs to a weighting of ten and the lowest is (including zero) one. Others will be assigned prorated weightings between one and ten.

The green labeling scores is based on the results obtained from Life Cycle Assessment (LCA) by Rameezdeen and Sandanayake (2002). The weights are determined in accordance with the importance of selected criteria for the decision maker. The reusability, renewability and recyclability of raw materials, total energy consumption of them and average wastes and pollution effects to the environment were selected as the most significant criteria which causes direct effect to environment. The comparative percentage scale was used to measure the raw material reusability, renewability and recyclability. The quantification of remaining impacts was based on the previous research findings. The green score is the amalgamating of above set of criteria. Then relative weighting is assigned in a range between one and ten. Thus the highest raw score will be assigned a weighting of one and the lowest (including zero) ten. Others will be assigned prorated weightings between one and ten.

Four types of external wall materials are studied and 1 m2 of wall area was chosen as the functional unit. The Alternative Scoring Matrix in Figure 2 highlights the identical alternatives proposed by the Value Management team. The reinforced concrete, bricks, solid blocks, and hollow block were identified as the most common alternatives for external walls used in Sri Lanka for apartment complex.

RESULTS AND DISCUSSION

Alternative analysis shows that the reinforced concrete walls are the most suitable alternative when considering the economical and functional

viability using VM. The brick walls found to be the best choice from the environmental point of view since it obtained lowest green score value.

Further the results elaborated there is a need to introduce new materials, which is environment sound and in terms of reusability, recyclability and low energy consumed.

Table 1: Combined Scoring Matrix

Selected alternatives	Green scores	Points (I)	VM scores	Points (II)	Total (%)
R/F concrete	127	1	98	10	55
Brick walls in 1:6 C: S mortar	71	10	95	8	91
Solid block walls in 1:6 C: S mortar	84	7	88	7	70
Hollow block walls 1:6 C: S mortar	84	7	74	1	40

CONCLUSION

The VM is one of the decision techniques, which is commonly used in construction industry to achieve best value options. The proposed integrated process model has been developed and applied on a case study in which a decision should be made on four types of external wall materials. The case study showed that the process can be successfully implemented and it is possible to have the middle path, which will stand as value added sustainable selection. It is found brick as the best material, which fulfills both options effectively. The process is aimed at the VM techniques, which will be adding value to the selected environmentally sound material. Tools that help the selection of sustainable construction ingredients can advance the cause of sustainable development. Further the environment sustainability and economical viability of a project is primarily connected with the material selection. Therefore it is important to formulate a decision support tool, which facilitates the comparison between environmental and other desired aspects. Therefore a new way of thinking must be adopted to redirect the development towards sustainability in each activity of construction.

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MANAGING UNCERTAINTIES
TRUST AND COMMITMENT REQUIRED

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ABSTRACT

Value management and risk management are well defined techniques utilised by project managers and included within a range of leading standards. Value and Risk management combined as Uncertainty Management is a process that delivers considerable benefit for project teams in terms of communication, delivery effectiveness, commitment and trust and is therefore growing in popularity. Can you afford not to develop trust and commitment or ignore your uncertainties? Even before the implementation of Uncertainty Management procedures it was known that both Risk and Value Management systems worked more effectively when the relationships between teams and individual team members was based on trust, but there is perhaps little understanding or confidence in how this can be achieved. In order for both threats (risks) and opportunities (value improvements) to be managed effectively it is important that the two processes are combined in an effective manner and efficient manner. This paper and its associated presentation identify the real changes required within the team to ensure that this is achieved as well as outlining the benefits that can be developed within the team from a successful uncertainty management system. In doing this the paper will also discuss the cultural changes that should be achieved and develop a range of proven tools for managing project uncertainties; thereby increasing the likely delivery of the project completion within the quality, cost and time parameters.

INTRODUCTION

The management of project uncertainties is of key importance to the project management community as a whole from the funder and client to the stakeholders and end users. The clients and project managers that are subject to uncertainty need to learn how to manage them whilst building trust within the team; risk and value managers should look beyond the time and cost issues to also manage the people and communication problems; project team members must understand how they as individuals can influence the management of project uncertainties; and project stakeholders are interested in increasing the chances of project success and therefore achievement of the specified goals.

Uncertainty Management is broadly defined as the identification, assessment, planning and management of opportunities and threats on a project, programme or business.

It has been developed as a methodology from both risk and value management processes combining the beneficial aspects of each and ensuring the optimum management of risks and value ideas and development and implementation of beneficial actions.

Even before the implementation of Uncertainty Management procedures it was known that both Risk and Value Management systems worked more effectively when the relationships between teams and individual team members was based on trust, but there is perhaps little understanding or confidence in how this can be achieved. Whilst accepting the principle that a culture of trust promotes cooperation within the team it also enhances the identification process; eases the assessment of the risks and values; optimises management systems and increases efficiencies and communication with third parties and stakeholders.

In a paper that is to discuss the effective collaborative relationships that are an important requirement for building and sustaining trust within an Uncertainty Management system, it seems logical to define what we mean by trust.

There are three forms of trust:

- Competence trust which suggests that the other party is competent to carryout the activities they have agreed to (e.g. Uncertainty Management)

- Contractual trust which implies that the other party will keep their formal and legal promises (e.g. working arrangements)

- Goodwill trust which is based on the belief that the other party will behave appropriately and will be a good partner without the need for specific promises (e.g. partnership)

However trust is broader than this and can also be defined as:

- Sharing your feelings and thoughts with others with the belief that they will retain respect for you and not spread them indiscriminately or take advantage of you.

- Placing confidence in others so that they will be supportive and reinforcing of you, even if you let down your "strong" mask and show your weaknesses.

- Assuming that others will not intentionally hurt you if you should make a mistake.

- The ability to let others into your circle so that you and they can create a team built on an understanding of mutual respect and concern to assist one another.

- The glue or cement that allows you to need others to fulfill yourself.

- The act of placing yourself in the vulnerable position of relying on others to treat you in a fair, open, and honest way.

UNCERTAINTY MANAGEMENT

Risk and Value Management are effectively applied as individual techniques. They each examine the uncertainty associated with projects and could therefore be considered as a joint technique, Uncertainty Management.

Risk Management (RM) is a core element of project management, concerned with resolving the uncertainty in the project and its outcomes, ensuring the specification is achieved within prescribed time, cost and quality constraints. Value Management (VM) is concerned with motivating people, developing skills, advancing teams and promoting innovation in order to maximise the overall project performance. It is concerned with resolving the uncertainty in the project objectives and ensuring that the project is delivered as value for money.

Prior to implementing Uncertainty Management on a project it is important to understand the terminologies and processes within RM and VM techniques. Risk Management refers to risks, defined as uncertain events that have an effect on project objectives. Value Management refers to value, the relationship between the requirements and the required resources. RM minimises any threats to the project; whilst VM maximises possible project opportunities. One manages the negative effects whilst the other identifies benefits; they are opposing and complimentary and as such should be jointly implemented as Uncertainty Management.

The Uncertainty Management process is a conglomeration of the Risk and Value Management processes.

It uses the facilitated workshop format to bring together the key stakeholders to agree the project objectives, identify the project function, identify areas of possible improvement and develop management responses to improve the probability of delivering a project to the specified quality within the prescribed timescales and budget. The process reduces the volume of abortive work and allows the team to understand the direct relationship between positive uncertainties (value) and negative uncertainties (risks). In other words it brings the project team together to focus on the right way forward rather than segmenting the team into two camps; improving delivery and reducing risk. The Uncertainty Management process can be broken down into five key stages as detailed below.

Identification

The first key step in the uncertainty identification process is to confirm the project objectives and agree the project function; what is the project to achieve and what are its outcomes? The identification process itself

generates a comprehensive list of all the relevant uncertainties that might have an impact on the project. For a construction project one uncertainty could be "unforeseen weather conditions"; this could be either a threat of high winds and unseasonable snow fall, or an opportunity of prolonged dry and sunny periods.

Assessment

Once the uncertainties have been identified it is necessary to develop an understanding of each in terms of their probability of impact and consequence upon the project. This can be either a qualitative (descriptive) or quantitative (numeric) assessment, as appropriate for the project in question, but it should ensure that a prioritisation of the list can be developed.

Planning

Once a prioritised list has been developed it is necessary to determine appropriate responses to each uncertainty. This will ensure that any threat is minimised and opportunity optimised. The process identifies actions to be undertaken and agrees timescales for their completion.

Implementation and Management

In order for benefits to be achieved and threats eliminated effective actions must be taken within specified timescales by the appropriate team players. These should be planned carefully ensuring that individual project effects are maximised and monitored throughout. Appendix A outlines the activities to be applied at specific project stages and the associated benefits that will be achieved for the project. It is important to remember that in order to ensure that a project provides the best Value for Money the major value opportunities and key risks need to be identified and assessed at the earliest possible stage.

Review

The final stage in the process is to review the process and its outcomes. The benefits of this are two fold. Firstly an ongoing review process will allow improvements to be implemented through the project and secondly lessons learned can be taken forward to future projects.

The key benefits resulting from the application of Uncertainty Management studies include:

- Improved project decisions backed up by a developed understanding of project requirements

- Enhanced project team communication

- Clarity and transparency of decision making and option selection

- Greater understanding of the risks involved in the project

- Raised awareness of the relationship of value opportunities and associated risks

- Reduced resource requirements due to the economies of scale that result from combined studies

TRUST & COMMITMENT REQUIRED

Most people view teams as rigid, bureaucratic, hierarchical structures, which is in fact a mirror image of how people view organisations. Roles and titles convey status and power; the flow of information is tightly controlled through policies, processes and procedures; and decisions and instructions are typically passed down.

Within this environment people learn the habits of personal survival characterised by:

- Preference not to trust too quickly

- Avoidance of risk taking and responsibility

- Lack of willingness to share information or resources

- Primary focus on pleasing 'the boss' who has power over how one is rewarded –or not!

- Maximise personal gain irrespective of whether it is achieved at the expense of someone else or an 'agreed objective'

Such attitudes, and the corresponding behaviours, are inevitably destructive and wasteful. They are destructive in the sense that they profoundly impact on the individuals' willingness and ability to work co-operatively with others, as a result of which working

relationships suffer. They are wasteful because blame for poor performance is apportioned, and we lurch into a negative cycle of adversarial working that is self-perpetuating. Inevitably this will impact the 'bottom line' of the project as people's willingness to fully commit to the project is adversely affected and as a consequence costs go up and quality goes down.

If projects are ever to improve both in terms of their risk management and their value enhancement, project managers must come to understand that the process of uncertainty management cannot wholly be managed through focussing on improving technical skills. While the processes are important and necessary they need to be underpinned by measures which connect with the emotional side of project life. This includes co-operative ways of working built on foundations of mutual trust; a commitment to achieving a common aim; and work for an enabling environment built on a spirit of continuous improvement.

This of course is easier said then done and requires everyone to take risks in doing things differently from how they have worked in the past. In particular project managers need to adopt measures that seek to break and reverse cycles of mistrust and reward people's willingness to engage in initiatives.

Creating a supportive atmosphere in a technically challenging environment which encourages people to take risks would be an important first step. But what is sought to be achieved is not merely a change in the approach to risk and value, but in the very way people think and behave when engaged in that process. This requires them to be both aware of the impact of old 'habits' of working on projects, which traditionally have been characterised by 'win/lose' attitudes; and to have a willingness to invest in the knowledge and skills to build new habits of thinking based on trust and collaboration. This is achieved when individuals not only believe it is the right thing to do but also when it makes clear commercial sense.

However, the comfort of doing what you always done is a powerful attraction, not to mention illusion, particularly in moments of confusion and chaos which any project may face from time to time. Dealing with the 'soft'

issues are in fact the new 'hard' choices that all project managers have to make at some point in the life of a project. Without the right attitude towards mutually rewarding collaboration, the processes and procedures we put in place will not work as efficiently and effectively as they are designed to do.

Those teams who have already chosen to invest resources into challenging existing belief systems and build co-operative relationships amongst their own staff, as well as externally with suppliers and customers, are finding that the potential benefits are worth the effort.

Some benefits identified from such projects are listed below.

- The end product quality improves to meet specified requirements

- Productivity is increased and as a result efficiencies achieved

- The overall cost of activities reduces as waste is removed

- People become more willing to share their knowledge

- Projects are delivered on time and within budget

On the less tangible side of projects, people working in this way have reported a heightened sense of the value of collaborative working in creating a more trusting environment, where mistakes are seen as an opportunity to improve and not as an opportunity to blame or punish. This adds to an increase in the general motivation and morale of the workforce, with reductions in stress related problems. When looking at Uncertainty Management it is obvious that the enhanced trust within a team would enhance the risk management process and allow potential value opportunities to be embraced and discussed without constraint.

The overall purpose of collaborative working relationships is to harness the full potential of the workforce and focus it toward achieving extra-ordinary performance. The concept is to create the right environment, supported by appropriate mechanisms that will maximise the potential value of a team's human resources; thus bringing projects managers, team players and suppliers closer together in a

mutually supportive partnership. Through established internal and external trusting relationships the potential for achieving win\win outcomes is significantly increased.

DEVELOPING TRUST AND COMMITMENT

As already identified, project managers find it easier to identify potential threats than to recognise possible opportunities for two reasons. Firstly there is a wider knowledge of Risk Management and broader experience within teams; secondly the majority of projects are managed in traditional adversarial ways of meeting set cost and time constraints and controlling threats. The former of these reasons can be overcome through training in the specific techniques of Uncertainty Management; however the latter requires a cultural step change towards taking risks in building collaborative relationships based on trust with project partners in order to maximise potential benefits.

Trust, and the willingness to take risks within relationships, remains the cornerstone of social interaction.

Project teams impose an expected level of trust on team members every time they assign them to a team; they are saying 'trust these people, whether or not you know them'. When that doesn't work out and trust is not achieved problems occur, project management processes are inhibited, uncertainties are insufficiently identified and ineffectively managed and therefore the project suffers.

Prior to examining how trust can be developed it is important to identify the factors that can both assist and constrain the development of trust and commitment. Specific characteristics that help build trust and which are commonly identified by project teams include:

- Honesty
- Valuing others
- Clear communication
- Sense of humour and perspective
- Vulnerability (willingness to share strengths and weaknesses)
- Awareness (being attuned to others' needs, perceptions, and reactions)

- Involving others (drawing out others, asking for ideas, input, and feedback)
- Self-disclosure (sharing personal information, thoughts, and beliefs)
- Accepting others (valuing differences and unique characteristics)
- Loyalty to the team and its members

Whilst traits that can inhibit the development of trust are:

- Experience of non-provoked hostility
- Having been chronically put down for behaviour
- Being part of a failed team that destroys the belief in co-operation
- Experiencing let down and not being willing to risk suffering this again in the future

Many books and papers have been written on effective methods for developing trust and commitment within and between teams.

Most agree four factors that contribute:

- Clear definition of roles and responsibilities since a lack of clarity may lead to confusion, frustration, and disincentive.
- Ensuring that team members have an understanding and buy-in to the core objectives and share in the overall aim of the team will help prevent the occurrence of desultory participation.
- An agreed conflict resolution process that enables parties to resolve issues as early as possible since emotions that are left unchecked might erupt into sequences of negative comments which will be difficult to resolve asynchronously.
- To communicate as frequently as possible, so as to deal with any misunderstandings before they escalate into possible conflict situations

The final issue to address when developing trust within a team is to remember that not all individuals may be equally adept at handling individual responsibilities. Project Managers should carefully choose individuals for the team with the specific qualities necessary for

their role and responsibility such as dependability, independence and self-sufficiency.

Jarvenpaa and Leidner identified the key behaviours and actions that effectively develop and maintain trust within project teams, all as shown in Appendix B. Bearing this in mind there are specific steps that can be used to improve trust within a team. These are best completed under the guidance of a trained facilitator and the first step is to be more aware of the trust issue.

Trust is that intangible quality/emotion that everyone instinctively understands and defines in terms of personal experience. An individual's willingness to take a risk in a relationship and trust someone else is very much influenced by their past experience. This shapes their beliefs about their current reality. The quality of beliefs (both conscious and sub-conscious) are very powerful in determining attitudes (how we think), which in turn influence actions (how we behave). If it is believed that people can't be trusted, evidence will be sought that supports this belief and evidence to the contrary ignored.

Consequently a 'vicious cycle' based on beliefs can potentially develop determining actions which may be inappropriate to the situation being faced. Actions and responses of beliefs, commonly known as the self fulfilling prophecy, will look for the evidence that supports beliefs.

For those whose experience says that it is difficult to trust people, moving from that position to adopting a more trusting approach is a difficult journey and it involves risk. The tendency is to put the responsibility on the other party to make the first move. Unfortunately if the other party is feeling the same way, nothing changes, and the relationship remains locked in this cycle of mistrust. The worst effects of this process only become apparent when faced with a crisis and at that point the relationships may not be strong enough to survive.

The question is how to take responsibility in a project environment and create the right conditions to encourage real trust and observe demonstrable value. In order to receive trust, and be perceived as trustworthy, trust needs first to be given out. Cooperation is founded

on trust; in his book 'The Evolution of Cooperation' Robert Axelrod said that for cooperation to exist there has to be four behaviours present in any interaction:

- Be Cooperative - be prepared to initiate trust in the relationship by being the first to act, in a prudent way, in the interest of the other party. The belief is that they will reciprocate, which will lead to a win/win outcome.

- Be Provocable – If the other party takes advantage and acts in a way that threatens a win/lose outcome, describe how their behaviour prejudices further cooperation, and describe what the outcome will be if this behaviour continues. Also state how you feel about their actions and seek to understand the issues that caused them to act in a way that threatened the relationship.

- Be Forgiving- Resist the temptation to 'get even'. Make it obvious that your intent is to remain unconditionally constructive in your relationship, and resume cooperation when they too have returned to cooperative behaviour.

- Be Consistent – establish the pattern of behaviour above in the beginning of each situation, and consistently practice these behaviours in your response to others in order to make yourself more predictable to them.

Axelrod concluded that cooperation based on trust comes from one condition, anticipated, reciprocal cooperation. For this to succeed there must be a willingness to take a risk and the ability to generate trust; this is an inherent quality and a skill that can be improved upon. Looking for opportunities to achieve win/win outcomes in a project will enhance the quality of relationships. Creating the conditions for trust to grow will optimise robust uncertainty management processes by helping to reduce waste caused by adversarial behaviour.

Literature within the field of industrial psychology is increasingly showing that the skills to act with emotional intelligence is defines individuals and organisations that are achieving extra-ordinary levels of performance. In his book 'Emotional Intelligence' David Goleman considered that the ability of one individual to show empathy

toward another and to have the ability to be flexible in adjusting his communication style in order to better understand the needs and motivational drivers of the other person will build and sustain trust.

Using emotional intelligence to understand how the other party sees a particular issue through their unique belief window will enable project managers to address issues by checking out perceptions, test assumptions and their underlying beliefs and thus avoid wasteful conflict. However, bringing about transformational change in the way people think and behave, causing them to move from 'old habits' of adversarial thinking to 'new habits' of cooperation is an 'inside-out transformational process'.

If a project manager is to proactively influence the quality of project relationships, it is his ability to use a robust process for managing uncertainty, applied with emotional intelligence, which will increasingly become an important variable in determining the outcome.

To be more effective in this pursuit, and change people's perception of trustworthiness, requires greater self awareness of the emotions that direct personal behaviour. Change begins with the individual becoming aware of how they feel in a given situation and how that affects emotions, which in turn drives personal behaviour.

Emotional intelligence can be learnt and changed. Everyone has the potential to change their behaviour. Building effective relationship based on trust will dramatically improve the efficiencies of project processes in order to achieve extra ordinary performance. To equip project managers with the ability to find that balance between the 'rational' and the 'emotional', between good processes and relationships, begins with a degree of introspection based on feedback and reflection. This demands a willingness to take a risk and the evidence increasingly suggests that the risk is worth taking and indeed this would be the 'intelligent' way forward.

OPPORTUNITIES FROM TRUST AND UNCERTAINTY MANAGEMENT

It has been shown that trust increases the effectiveness of uncertainty management and uncertainty management increases trust within the team. Successful teams which operate in a spirit of trust and commitment achieve:

- Improvements in individuals' confidence, attitudes, motivation, and satisfaction

- Broader ideas and better decisions than individuals working in isolation

- Optimism of positive opportunities and mitigated threats

- Effective responses to changes through adaptation

- Greater clarity of problems and ideas

- Efficient use of resources

One of the many benefits of trust building for project management is the cooperative identification of project uncertainties. Through a better understanding of the individuals, their responses and the team operations achieved threats and opportunities will be identified, assessed, developed, planned and managed appropriately for the benefit of the time, cost and quality delivery of a project.

Conversely, through the effective implementation of uncertainty management processes the project team can deliver possible opportunities with greater certainty and mitigate any potential threats. This not only results in an optimally performing project and team but further builds the trust and commitment that has been commenced within the team. A team that is delivering best in class will be more content with themselves, proud of their achievements and thus will trust each other to continue the improving performance trend.

Many projects and business implement uncertainty management techniques however many of these fail for a variety of reasons including bureaucracy, lack of buy in and a range of misunderstandings. Increasingly the evidence is that if the quality of the relationships are such that the team, tasked with implementing the UM systems, do not trust that it will deliver effectively then they will not put 100% effort into its operation. It can therefore be seen that it is imperative to build trust within the team and with its management structure prior to the

implementation of new techniques such as UM. Once the team trusts the project manager and itself then it can embrace new systems for the benefits that they are promising and the potential they are expecting.

A key part of the UM system is the identification of uncertainties. This is best undertaken by all project stakeholders and therefore requires a level of trust to be bestowed on the team. If all the people actively involved in identifying uncertainties trust each other and participate in a culture of co-operation without blame, then free thinking brainstorming can be achieved. Similarly the assessment and evaluation of uncertainties and the subsequent planning and management of their development and mitigation require that the team trust each other to complete their allocated tasks and be open about the potential benefits and risks.

It has been shown that where a team trust the managers, themselves and the uncertainty management specialist a greater speed and depth of implementation is achieved.

In such situations it has also been observed that the uncertainties identified are broader and further reaching than expected and therefore potentials maximised, threats minimised and trust enhanced.

CONCLUSIONS

For those project managers who have the responsibility to set direction, understanding the need to balance accepted ways of management with the 'emotional' side of life, is not a situation that they may easily recognise or are necessarily equipped to handle. Their framework of reference is often based on familiar approaches which, while of value, may exclude a serious consideration of what some dismissively refer to as the 'softer' issues.

If the benefits of initiatives such as uncertainty management, designed to improve overall business performance, are not to be wasted, project managers must recognise and work with the emotional impact of change on those who have the responsibility to 'make it happen'. Collaborative working based on trust and commitment offers a way forward.

By implementing uncertainty management techniques in an environment of developed trust and commitment a series of benefits can be achieved including:

- Identification of uncertainties within and upon projects

- Prioritisation of the uncertainties to assess those requiring action

- Identification of the responses to reduce uncertainty and develop team trust

- Progression of management responses for each of the key uncertainties identified

- Monitoring of each of the responses to ensure that the uncertainties are being managed

- Understanding how personal beliefs influence the quality of relationships based on trust

- Production of uncertainty management registers and understanding their use

- Feedback of performances and uncertainties to develop processes

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Appendix A – Uncertainty Management Intervention Points

Project Stage/Phase	UM Activity	Benefits for the Project
Definition/Feasibility	UM Strategy	Consensus of project strategy
Conception	Agree Function & Objectives. Initial UI	Identification of the high level option to be developed to meet the project objectives
Preliminary Design	2nd UI and UA	Maximum value and minimum risk for the project options
Detailed Design	3rd UI and UA	Maximum value and minimum risk for the design options and details
Procurement	UA and UM	Assists contracted selection
Delivery	UM	Incentivises contractors and deliverers
Project Completion	UM Review	Performance Review, Evaluation and Feedback

Key: UM – Uncertainty Management   UI – Uncertainty Identification
        UA – Uncertainty Analysis

Appendix B – Key Behaviours and Actions to Develop and Maintain Trust

Communication that facilitate trust	Communication that maintains trust
Social communication	Predictable communication
Communication of enthusiasm	Substantial and timely responses
Actions that facilitate trust	**Actions that help maintain trust**
Coping with technical uncertainty	Positive leadership
Individual initiative	Phlegmatic response to crises

CONSTRUCTION VALUE MANAGEMENT CD PACK

Mei-yung LEUNG
City University of Hong Kong, H.K.

The PSDAS project entitled "Enhancement of Construction Value Management Professionalism for the New Generation" funded by the Hong Kong Institute of Surveyors and the Commerce, Industry and Technology Bureau, HKSAR is nearly finished. In the last two years, the Hong Kong Institute of Surveyors, the City University of Hong Kong and the Hong Kong Institute of Value Management successfully indicated the importance of professional development via a series of VM activities consisting of seven seminars, three '5-day module I' workshops and an international conference. In total, over 500 construction professionals participated into our Value Management (VM) activities in Hong Kong and Mainland China.

The aim of the project is to update and disseminate the VM knowledge and skills as required of construction professionals so as to enhance the competitiveness of professional services in a regional context. Through this project, professional surveyors both in Hong Kong and the Mainland gained the benefits in team decision-making. Further information could also be viewed via the web-site http://bcm.cityu.edu.hk/newevents/newevent.php.
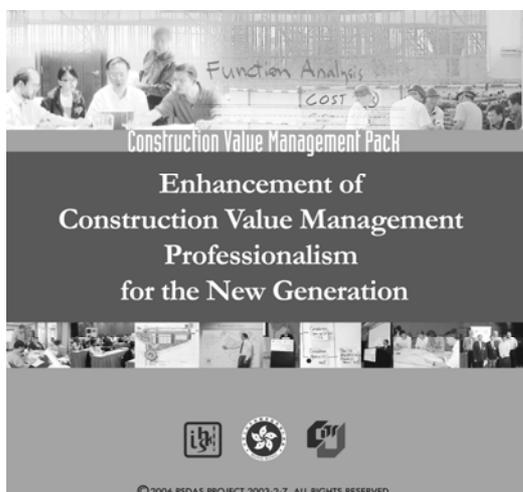
To disseminate the basic and updated VM knowledge and skills to construction professionals in the industry, a 'Construction VM' CD pack containing the VM speeches, the VM training course content and the VM conference papers have been produced. For collection, please contact:

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INAUGURAL ASIA PACIFIC VALUE CONVENTION

CALL FOR PAPERS

"The World of Innovation" has been adopted as the main title because for the first time this year, the highly successful Hong Kong Institute of Value Management (HKIVM) International Conference extends its remit to the Asia Pacific region and also aims to draw in new industries to participate in what promises to be a major business and educational event. Co-hosted by the Institute of Value Management Australia (IVMA), the Convention invites you to come along and stretch your perceptions and explore the potential of applying Value Management (VM), Risk Management (RM) and Partnering within your organization or business.

The convention programme will include sessions at which regional and international speakers will present case studies and papers. The sessions will be organized under key themes and sub-themes relating to manufacturing, services, projects, construction and community involvement in the decision making process and using the following methodologies:

- Value Management (VM) can be used to provide a direct and highly efficient way to solve problems, ratify solutions and keep business processes on track in a fully encompassing and systematic manner. More than this, it also invariably enables significant cost cutting, whilst at the same time adding value to outcomes as well as expediting processes and has become a highly successful change-management methodology across a wide range of businesses.

- Risk Management (RM) is the systematic application of management policies, procedures and practices to the tasks of establishing the context, identifying, analysing, evaluating, treating, monitoring and communicating risk. The HKSAR Government has recommended that all major construction projects should adopt a risk-managed approach as a way to improve budget certainty. Risk management allows both quantitative and qualitative methodologies to be applied to the culture, processes and structures that are directed towards the effective maximization of potential opportunities and minimization of adverse effects.

- Relationship Management is a term that covers the diverse range of interactions in practically any management process and one typical example of its use is in project partnering in the construction industry. Partnering is a set of collaborative processes rather than simply a form of relationship; it is a co-operative arrangement between two or more organisations based on mutual objectives and increased efficiency through shared resources, open communications and continuous improvement.

The Convention Committee welcomes submission of abstracts consisting of no more than 300 words in English relating directly to the main theme and generally within the following sub-themes:

- "Promoting and Sustaining VM Globally across Industries and Nations"

- "How to Integrate your Value, Risk and Relationship Management Strategies"

- "Training and Education in Value and Risk Management"

- "Facilitated Workshop Tips, Techniques and War Stories"

All abstracts submitted will be reviewed by at least two referees independently and a final decision will be made by the Convention Director, in consultation with relevant reviewers.

Important dates:	
Deadline for Abstracts Submission	May 15, 2006
Notification of Abstracts Acceptance	June 1, 2006
Deadline for Full Papers Submission	July 15, 2005

HKIVM NEWS

- 2-3 November 2006, Call for Paper. **Inaugural Asia Pacific Value Convention** "Managing Value, Risk and Relationships" will be held at the Hong Kong Convention and Exhibition Centre. For enquiry, please contact Vaughan Coffey (vaughan.coffey@housingauthority.gov.hk) or David Baguley (vmqld@ozemail.com.au).

FORTHCOMING EVENTS

- 19 May 2006, **First Brazilian International Conference of Value Engineering/ Value Analysis** will be held in Belo Horizonte, Brazil. Please visit http://www.value-eng.org/pdf_docs/INTERNATIONALCONFERENCEDER-MG.PDF for further information.

- 4-7 June 2006, **SAVE International's 46th Annual Conference** "Managing Projects to Maximize Value" will be held at the Savannah Marriott Riverfront, Savannah, Georgia, USA. Please visit http://www.value-eng.org/2006conference/details.php for further information.

- 14-15 Sept 2006, **European VM Conference Student Paper Competition**. This competition invites all undergraduates and post-graduates in full-time education to submit papers in English to be presented at the conference. Papers for the competition can address any aspect of achieving better value in the delivery of services, projects, or products by the application of analytical or structured approaches, and need not necessarily be directly concerned with the Value Management techniques. Please visit http://www.value-eng.org/pdf_docs/Student_Comp_Flyer.pdf for details.

CALL FOR ARTICLES

THE VALUE MANAGER is the official publication of the Hong Kong Institute of Value Management. It intends to provide a lively forum and means of communications for HKIVM members and those who are interested in VM. To achieve this objective, we need your support by sharing with us your articles or comments. The following are the notes to contributors:

1. Articles submitted to the journal should fall in one of the following categories: New VA/VE/VM techniques or methodologies, Review of conference VM papers, VM case studies, VM research trends and directions, Reports of innovative practice.
2. Papers or letters should be submitted on a 3.5" disc for IBM PC and A4 hard copy. Discs will be returned to authors after editing. Figures, if any, should be sent separately, in their original and preferred sizes. The length of each paper should be around 1000-1500 words.
3. The preferred software for processing your article is Word, other packages are also acceptable. If the above word processing package is not available, please find a computer with scanning capabilities; the typewritten copy can be transferred to a file as specified.
4. All articles and correspondences should be sent directly to The Editor, Prof. Geoffrey Q.P. Shen, c/o Department of Building and Real Estate, The Hong Kong Polytechnic University, Hung Hom, Kowloon. Tel: (852) 2766 5817, Fax: (852) 2764 5131.

APPLICATION FOR MEMBERSHIP OF HKIVM

If you are interested in knowing or joining the Hong Kong Institute of Value Management (HKIVM), please download the membership application form from HKIVM website http://www.hkivm.com.hk. Alternatively, please fill in the reply slip below and return it to the membership secretary of HKIVM.

Membership requirements are as follows:

Member (MHKIVM)	This classification is available to individuals who can demonstrate an acceptable level of knowledge and experience in the field of Value Management. For admission, details on the Application Form are to be completed and copy of CV outlining professional employment, experiences and value management background enclosed. **Value Management Background** incorporating details of VM training and courses in VM process, application and techniques, number of studies, types of studies, role in process, days and dates should be stated clearly in the CV.
Associate Member	The Associate Member classification is available to any individual who can demonstrate interest in the objectives of HKIVM, but may not have had sufficient Value Management experience to qualify as a Member.

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Request of the HKIVM Membership Application Form

To: **Dr. Frederik Pretorius**
Department of Real Estate and Construction,
The University of Hong Kong
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Please send an application form for membership to the undersigned:

Name: **Company:**

_____   _____

Address:

_____   _____

_____   _____
                                                           Title:

_____   _____

Tel: **Fax:**

_____   _____

Signature: **Date:**

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