

Arab Knowledge and Management
Society (AKMS)


Value Engineering & Management

TVM (Total Value Management)
The New innovative VE-TQM integration in
Project Management

Presented By :

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Value studies are mandatory in ...

- ✓ *All US federal projects > \$ 2 M*
- ✓ *All Japan projects > \$ 2 M*
- ✓ *All Saudi Government Project > \$ 5 M*
- ✓ *All RC of J&Y projects > \$ 5 M*
- ✓ *All Saudi Aramco projects > \$ 10*
- ✓ *also in UK, Germany, Francs, Australia, Korea, India, Malaysia, ..etc.*

Why is that ?!!

VE Accomplishments in the Gulf Area

VE Studies Done

- ✓ ***More than 500 VE Studies***
- ✓ ***More than 6,000 participants***
- ✓ ***Done at the rate of 80-100 /year***
- ✓ ***Improved the Quality of the projects***
- ✓ ***Saved More than \$ 3 billion***
- ✓ ***Saving ranged from 5-30%***
- ✓ ***Rate of return is 1 : 100***
- ✓ ***7 official VE Program.***

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Saudi Ministry Of Finance Mandate *October 2001*

- ✓ ***Emphasis on Function, LCC and ROI***
- ✓ ***Perform VE during early design stages***
- ✓ ***Train employees on VE***
- ✓ ***Include VE Clauses in the Design contracts***
- ✓ ***Apply VE as follows ...***
 - ***Typical repeated projects that is > SR 5 M***
 - ***Projects that are > SR 20 M (about \$ 5 million)***
 - ***O&M Contracts that are > SR 5 M***

First three years was optional then became mandatory

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This presentation is about

What rather than How

Different?

M Benefits

Recorded results

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The 7 Phases of The VE Workshop

Information

Function Analysis

Value Circle

Creativity

Evolution

Development

Presentation

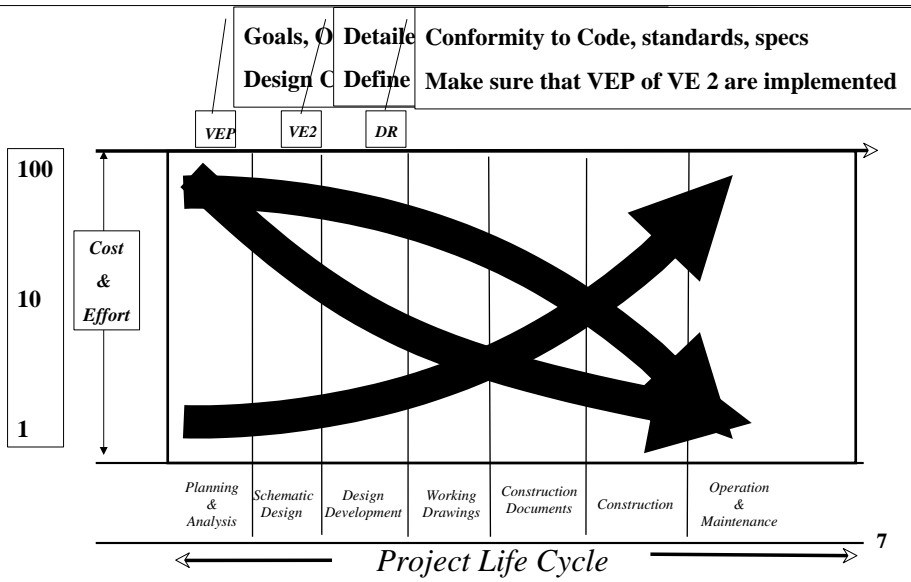
Decision

Implementation Follow up

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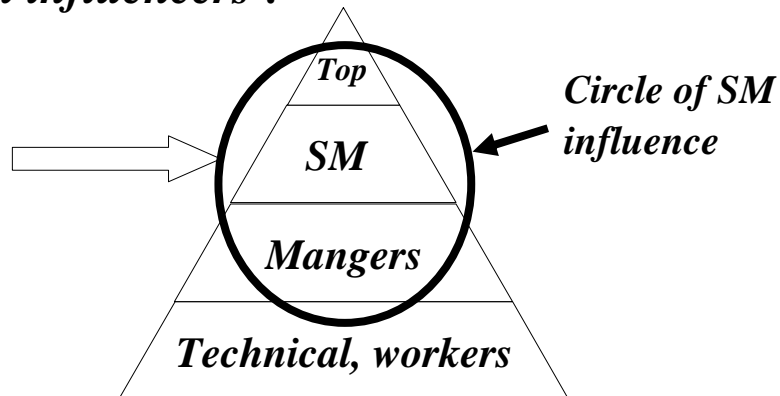
VE Job Plan

When to apply VE ?



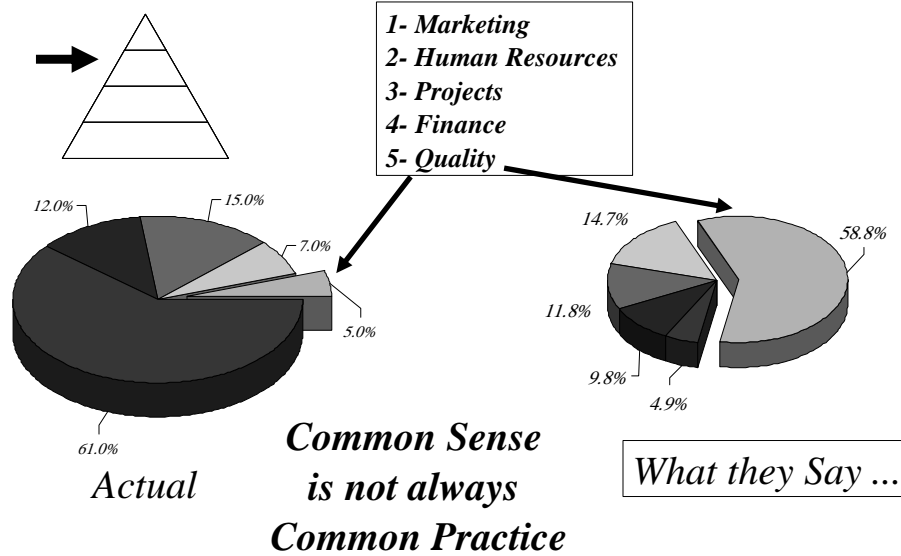
Who are the Decision Makers ?

Who are the most influencers ?



According to a survey (In Saudi Arabia, Dubai & USA 1996)

Where do senior managers invest their time ...



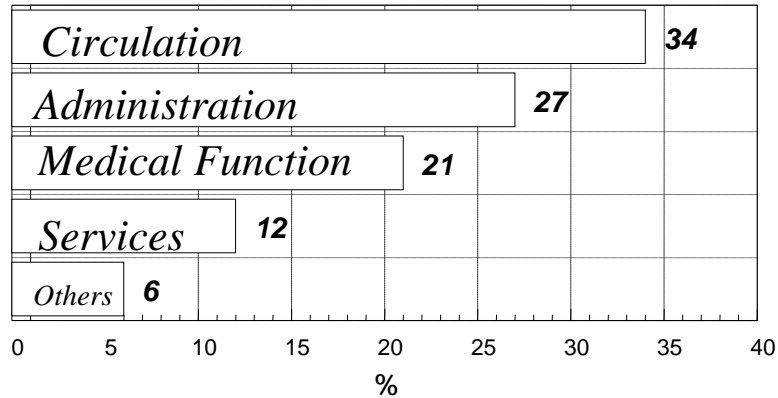
Reasons for unnecessary Costs (Poor Value)

- Shortage of time
- Misleading information
- Ambiguous goals, objectives, scope etc.
- Hasty decisions based on false assumption
- Lack of ideas
- Lack of funds
- Resistance to Change
- Unrealistic temporary circumstances
- Politics
- Bad habits and attitudes, beliefs
- Over design & Unrealistic safety factors
- Continues changing in the owner requirements
- Lack of communication coordination
- Using unsuitable standards & specification
- No LCC estimate and more....

How many projects do you know that have some of these?

Life Cycle Costing

Space distribution for a hospital in Riyadh



Can you believe it? It is true !!

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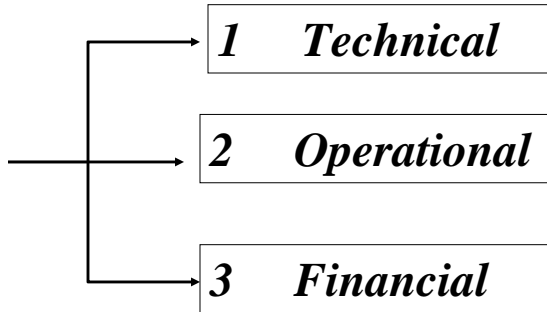
Value Engineering

***What
makes it
different?
Tools & Techniques***

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VE Objective is ...

**To evaluate
Three issues**



QBS, Laptop Computer

Quantifying Quality

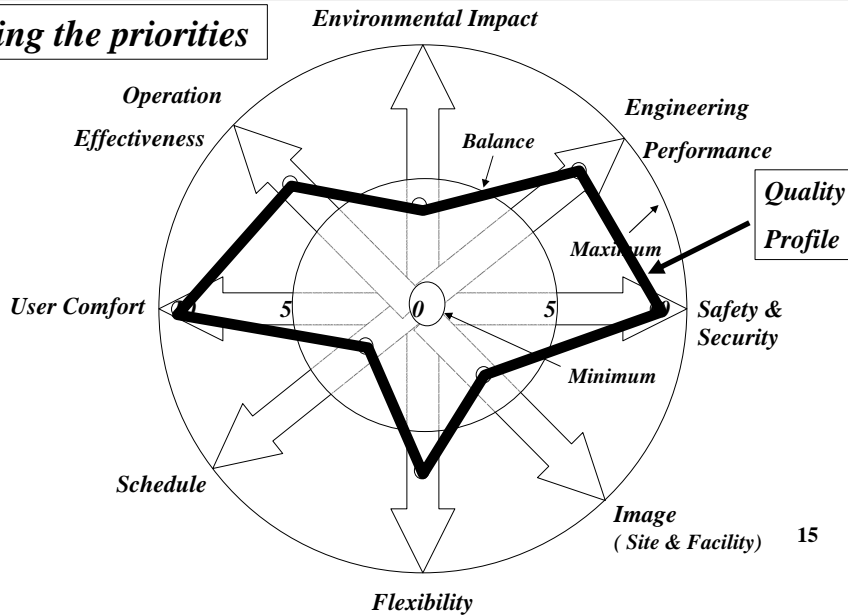
Non-Monetary Criteria

						<u>How Important</u>		
A. Speed	A					2 points for Major Preference		
B. HD Capacity	A/1	B				1 points for Minor Preference		
C. Cash Memory	A/1	C/1	C			1 point each for Same preference		
D. Wireless, LAN	A/D	B/D	C/D	D				
E. Warranty	A/1	E/1	C/E	D/E	E	Q	C	V = Q / C
<i>Weight</i>	4	2	3	4	3	Quality	LCC	Value Index
<i>% of the total</i>	25	12	19	25	19	Points	SR	Q / C
TOSHIBA	5	5	5	4	5			
<i>Satellite M30-114</i>	125	60	95	100	95	475	7.79	61
DELL	5	5	5	5	4			
Inspiron 6000/2	125	60	95	125	75	480	4.99	96
IBM	5	5	5	4	5			
ThinkPad T42	125	60	95	100	95	475	8.99	53

Rates : (5) Excellent, (4) Very Good, (3) Good, (2) Fair, (1) Poor

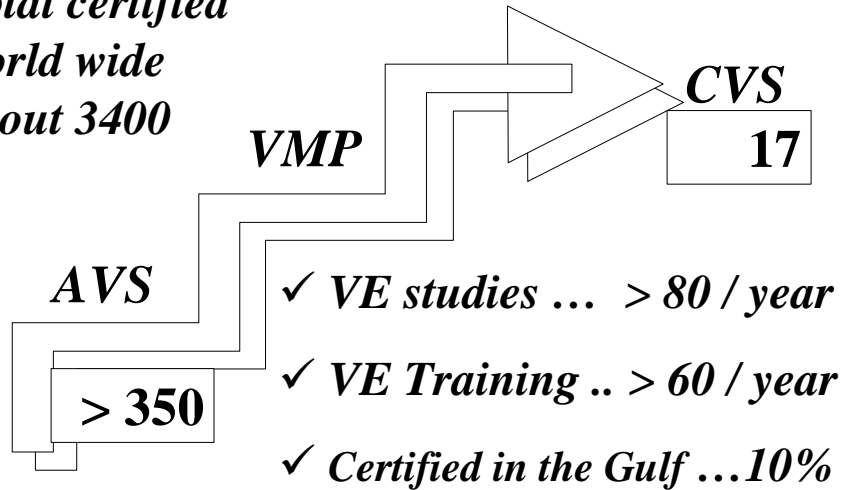
*Quality Model (Star Diagram for a **Housing** Project)*

Setting the priorities

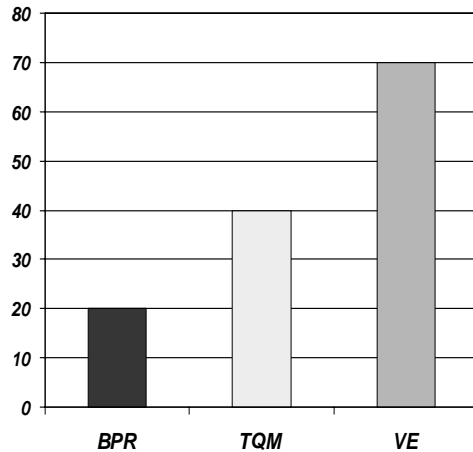


Certification in VE

*Total certified
world wide
about 3400*



Success rates – Research



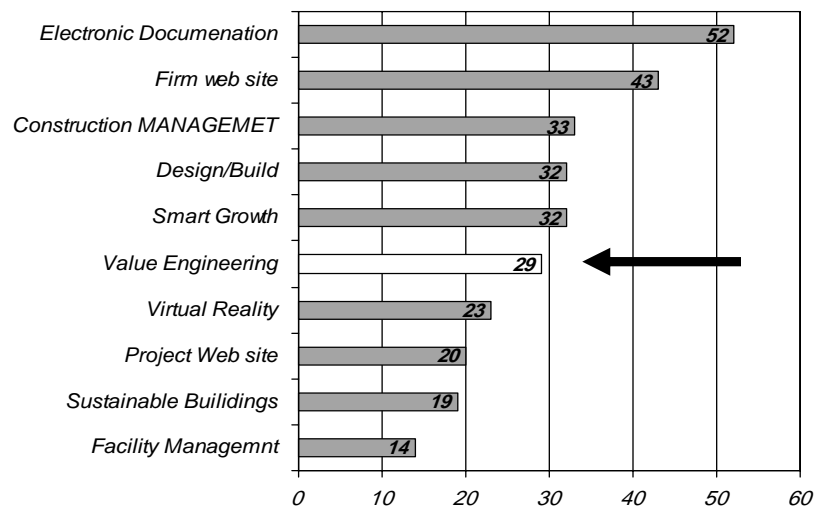
Why VE is successful

- ✓ Team effort
- ✓ It is Task oriented
- ✓ It takes short time
- ✓ It gets Quick results
- ✓ Many new ideas
- ✓ Acceptable Solutions

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Future Top 10 Emerging trends

2000 and beyond ... 1999



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***TVM
Benefits***

***Do not worry
We are going to finish shortly
please be patient***

Benefits for your organization

- ✓ *Improve your project performance.*
- ✓ *Come up with many practical solution in short time.*
- ✓ *Improve your project design*
- ✓ *Customize your project Quality and scope*
- ✓ *Save Money, time and effort (5-10%)*
- ✓ *Avoid unnecessary cost during O&M*
- ✓ *Minimize risk*
- ✓ *Simplify complicated ad open ended issues*

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Benefits for your organization MOF circular

- ✓ *Generate many ideas and alternative using scientific approach.*
- ✓ *Define suitable solutions at the least possible cost.*
- ✓ *Reduce cost in positive ways.*
- ✓ *Maintain project life span, functions, goals and objectives.*
- ✓ *Avoid phasing the project or deleting some of its components*
- ✓ *Assure best investments for government resources.*
- ✓ *Optimize cost of the government projects.*

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Benefits for individuals

- ✓ *Certify in VE (AVS, VMP, CVS) ... and PMP.*
- ✓ *increase your decision making ability.*
- ✓ *Differentiate between alternatives using VE tools.*
- ✓ *Enhance your team work participation.*
- ✓ *Gain new innovative management techniques.*

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That's Why

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