

Start simple.

Step by step.

Give understanding overall

Provide some _____ Eng. & Purch. Tech.

1 or 2

Ea. bus. perf. functions -- since customer wants

and

at prices he will pay

for instance - can of peas - tax collectioa bureau

Value app. perf. - app. cost

If handles perf. factors as well as competition no problem

motor - refrigerator (use - refig.; esteem - refig.)

If handles cost factors as well, no problem

For instance - Model T Ford and others

Assuring suitable sales

But there are problems

Perf. - adv. eng. - eng. - research

Measure

for example--turbines, elec, carving knives

Cost - good practices of ind. eng., WS, TS, processes - tooling

good buying - design for cost

Sometimes they are good enough

For example

for companies survived - they were

for others - they were not

Sometimes they are not

Three choices

Lower quality - which lowers volume

Lower selling price - which lowers volume

Remove cost

First two - short range - injure business

Third - short and long range - solves problem where it is

~~Example~~ - Radio - refrigerator

System - handle cost factors, decision making better

Before - during - after fact

Costs are last

Mgt. - Mkt. C. - Eng. C. - Eng. Design Detail - Mfg. C. - Mfg. O. - P

_____	terminal	Stud	Motor	Filter	32
	board	8¢	Shield		8
		<u>.8¢</u>			

Jan 1964

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Again

Costs remain because
Technical factors
Human factors

OF SYSTEM NEEDED
NOT INCLUDED

PARTS

Examples spot focuser TV knob

\$5000 concrete

25%/75%

VE complete system deals with area of need
1 of 7
Tech. or human

Like a piano
Trained op.
Environment

Definition

- Arrangement of tech.
- 1. Makes clear
- 2. Estab. proper cost by comparison
- 3. Causes

Examples

Switch blade
Motor Shield

Asbestos paper
2 tax collections/yr.

Sheet music
Skilled users

Like a new piano in a house where it is unknown
It is useless -
or.....much worse
But it makes mighty fine music
In an appropriate room
With a trained and skilled player

Problem solving

1. Problem definition
re-definition

\$10 or 10¢
ins. \$16.95-6¢

What function customer really wants

terminal board
insulation

2. Function identification
3. Function evaluation by a valid comparison
tie, etc.

Jan 1964 :

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-3-

4. Search orientation - ALL info in room -
5. Idea development
Creativity - seed planting
environment
development
Rope
6. Roadblocks - identify - deal with
Kirksite
Tools 75

SUMMARY

Extra cost because

Tech. lack

Psycho. factors

Psycho factors prolong tech. lack

prevent using tech. alternatives

Three controls

1. Tech. deal with psycho. factors by getting a different look.

Eval. function

J-bolt

Spot focuser

Switch blade

Filter circuit

2. Deal with technical lack by referring to one of seven
Stud 1¢ function costs 8
3. Finally by providing complete system - piano