OHP 01

DEFINE THE PROBLEM

OHP 02

MAIN TRAPS

Solution not problem

Issue too broad and general

OHP 03

SOLUTIONS NOT PROBLEMS

OHP 04

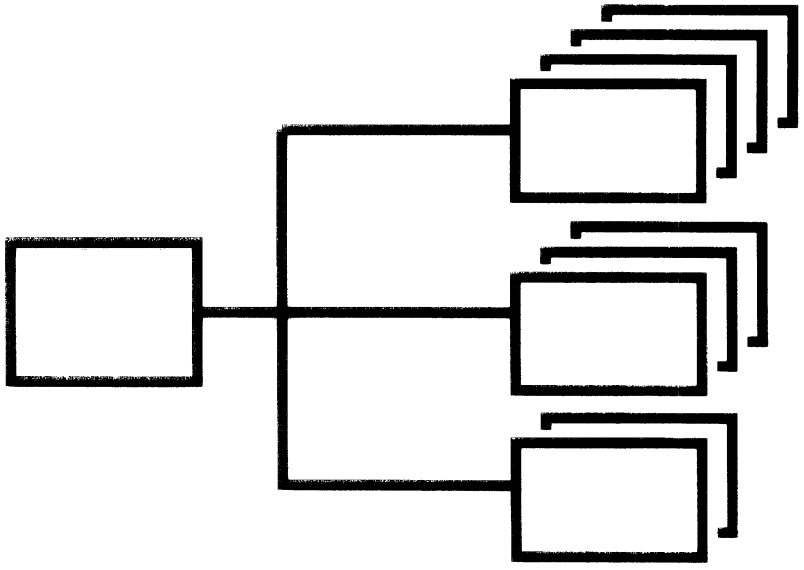
TOO BROAD AND GENERAL

"Communications"

"Attitudes"

OHP 05

OCCAM'S RAZOR



OHP 06

IF A SOLUTION

Ask:

"What is this the answer to?"

OHP 07

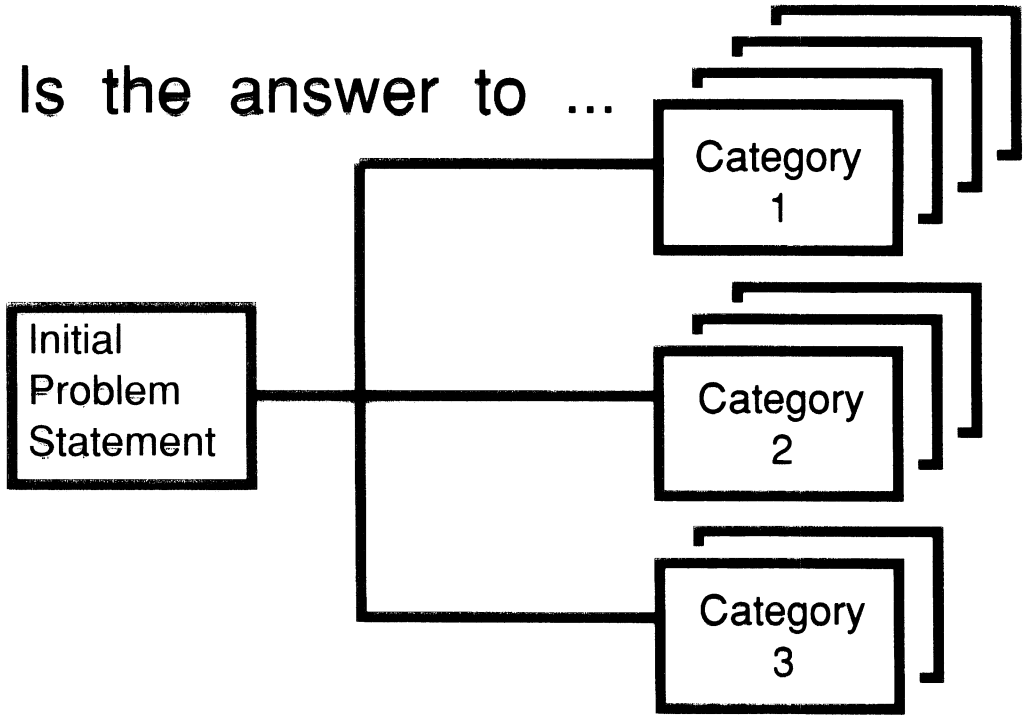
IF TOO BROAD AND GENERAL

Ask:

"What does this cause?"

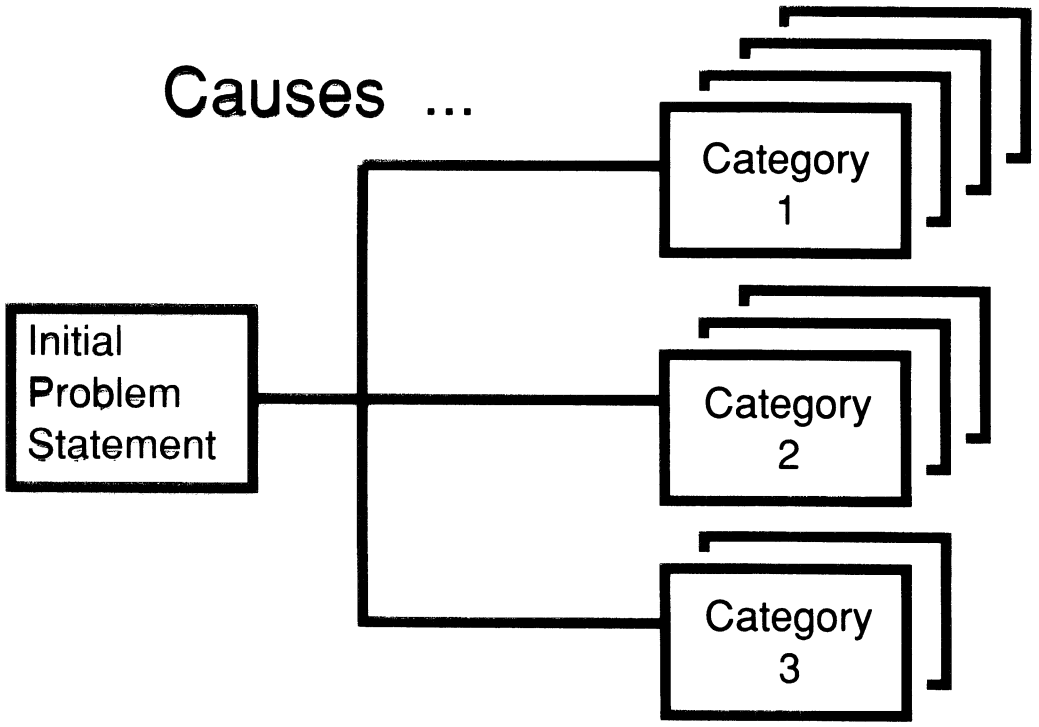
OHP 08

OCCAM'S RAZOR



OHP 09

OCCAM'S RAZOR



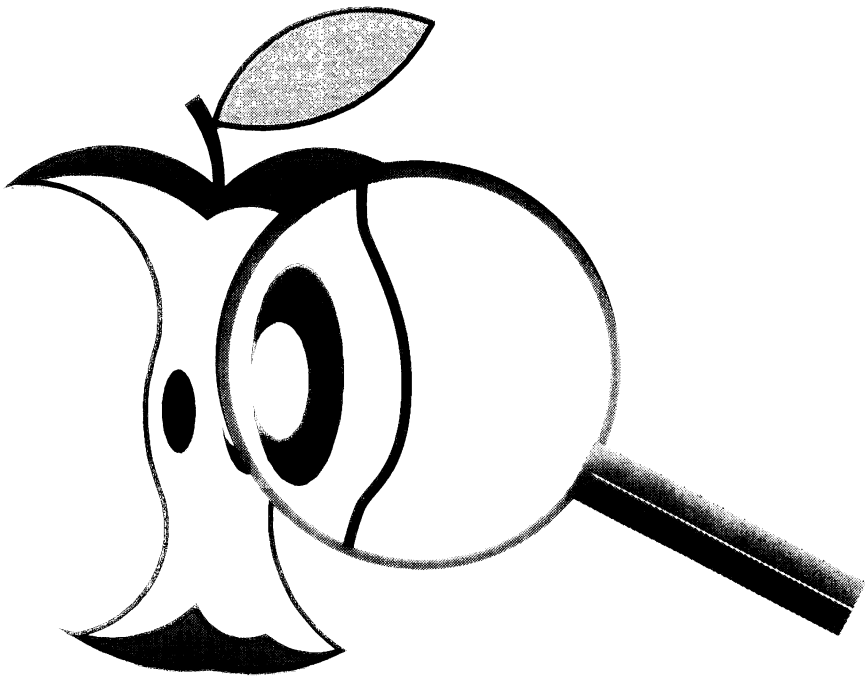
OHP 10

OCCAM'S RAZOR

What outcome do I want to see from this problem?

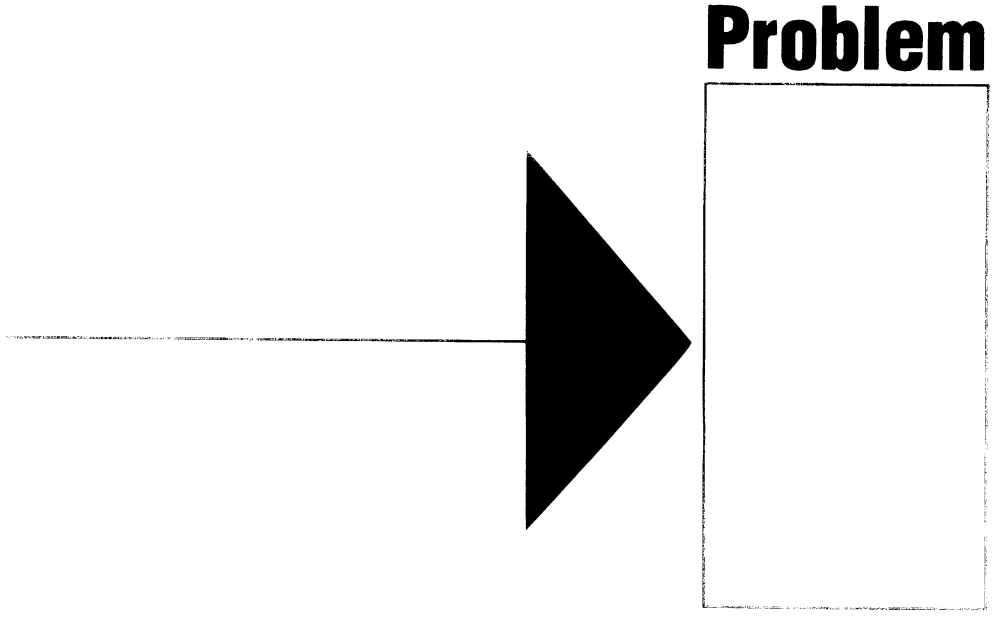
OHP 11

ANALYSE THE PROBLEM



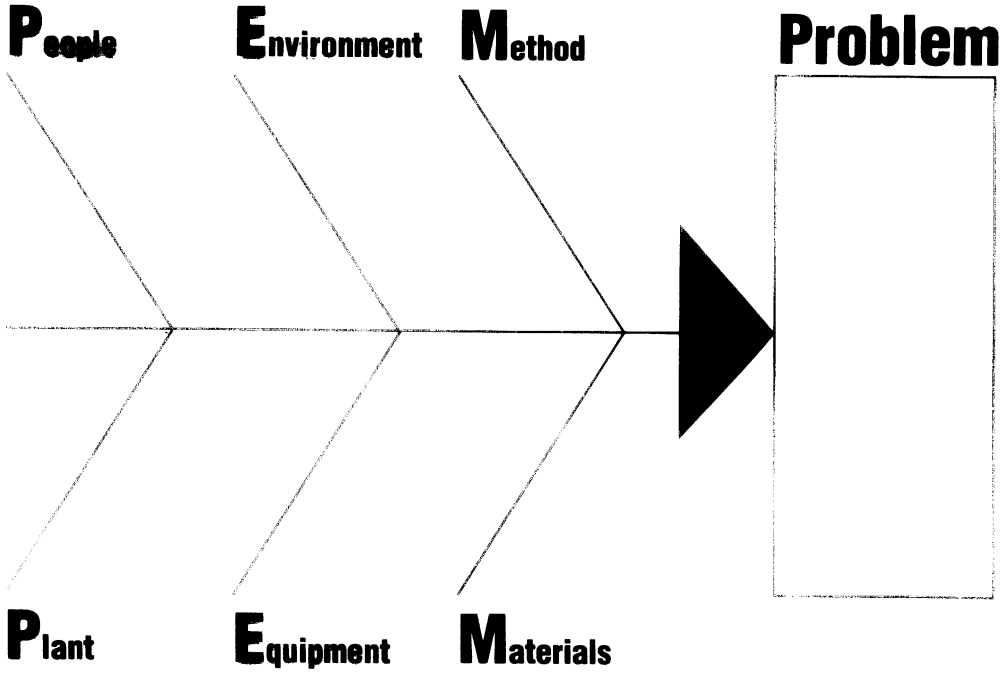
OHP 12

FISHBONE DIAGRAM



OHP 13

FISHBONE DIAGRAM



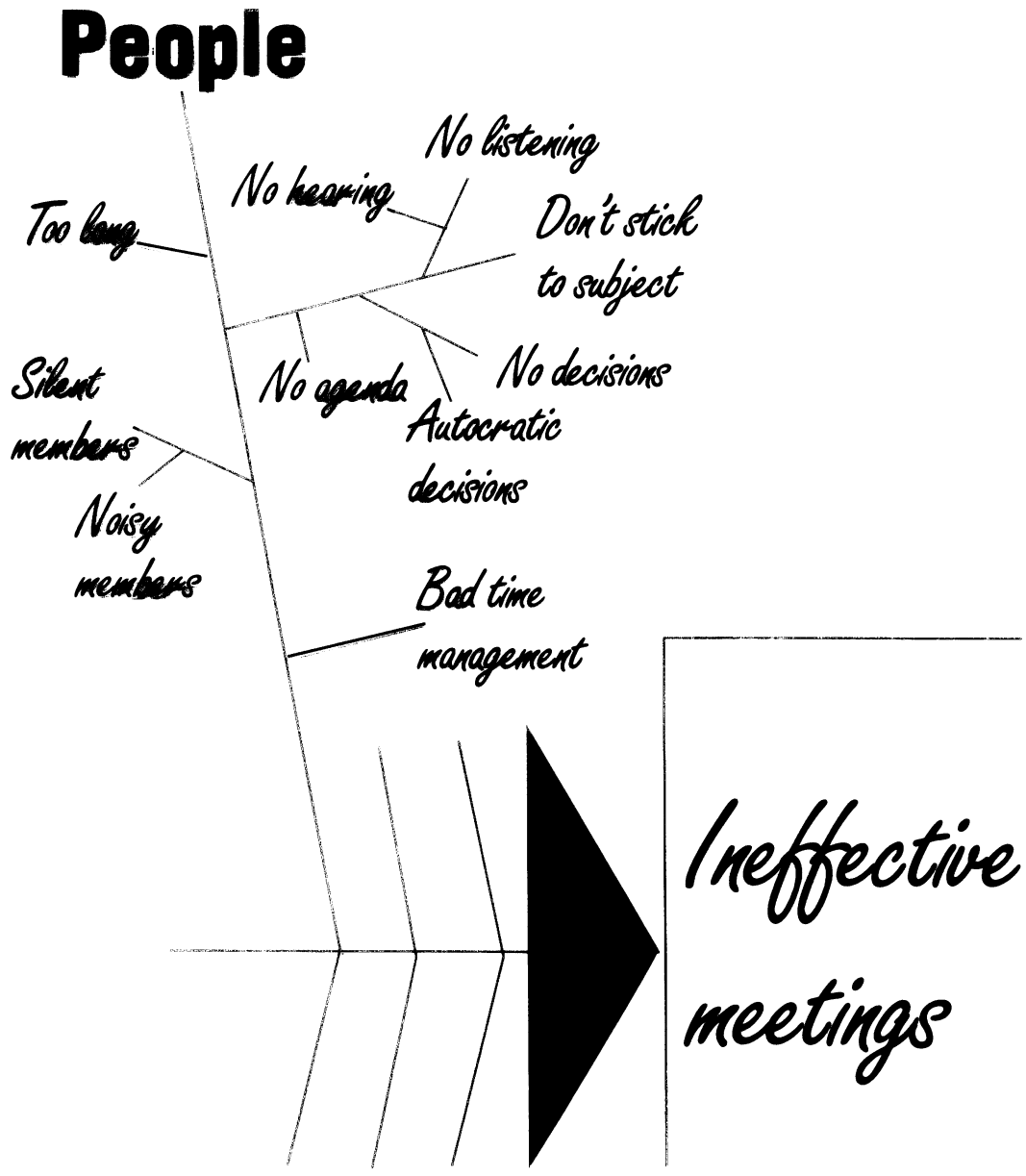
OHP 14

BRAINSTORMING

- No criticism
- Freewheel
- Quantity
- Record all ideas
- Incubate

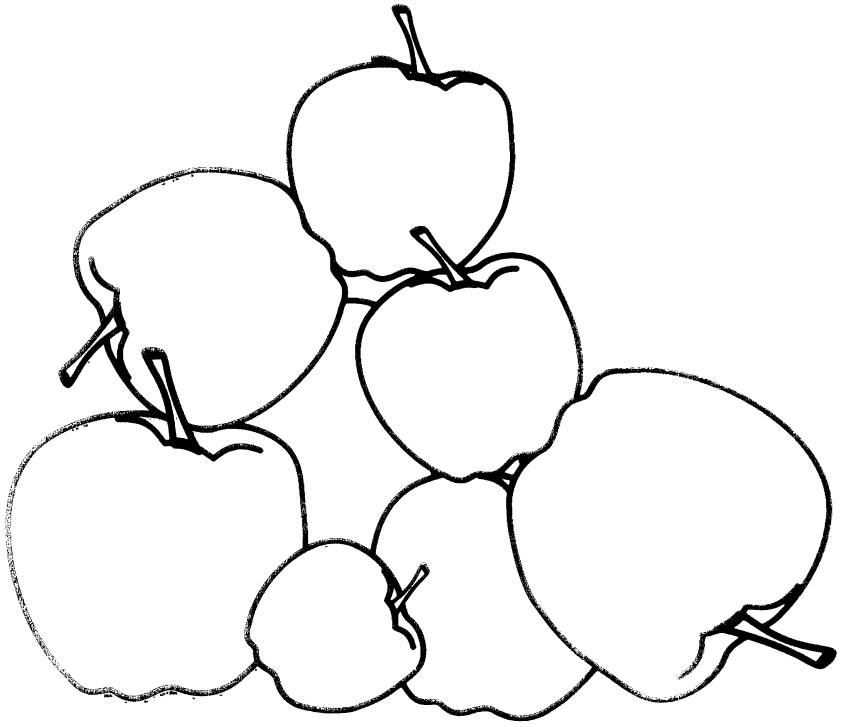
OHP 15

FISHBONE DIAGRAM



OHP 16

COLLECT DATA



OHP 17

DATA COLLECTION

ANALYSIS OF INCOMING CALLS

DATE

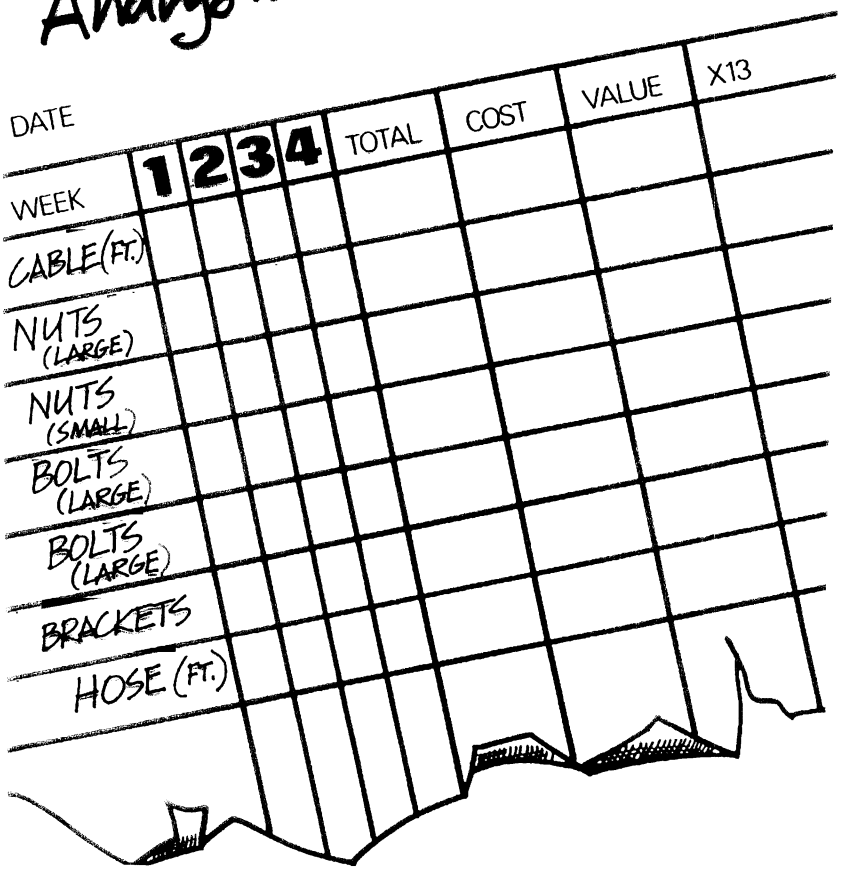
NAME

TIME	9·11	11·1	1·3	3·5	TOTAL
POTENTIAL CUSTOMERS					
SERVICING					
CUSTOMERS' ORDERS					
SALESMEN'S ORDERS					
CALLS FOR MANAGER					
PRIVATE CALLS					
OTHER CALLS					
TOTAL					

OHP 18

DATA COLLECTION

Analysis of usable waste



OHP 19

DATA COLLECTION

MACHINE BREAKDOWN ANALYSIS

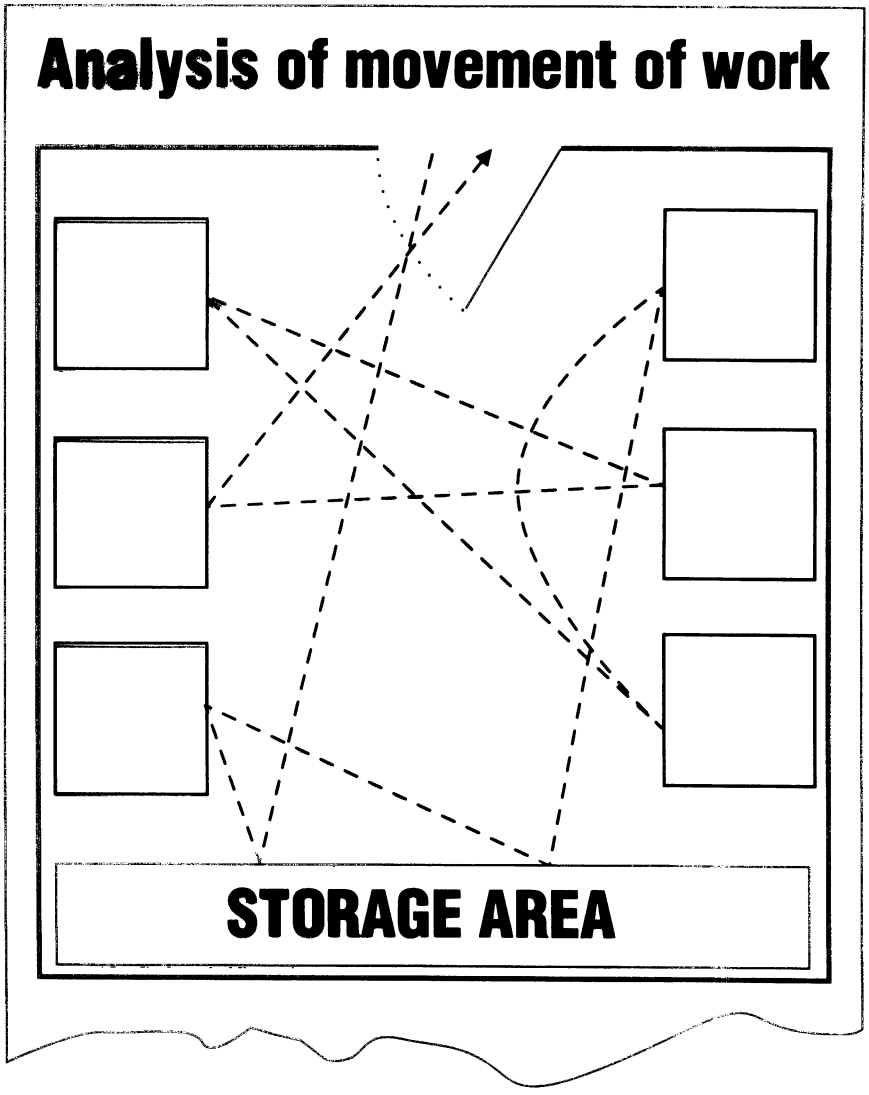
MACHINE :

DATE :

TIME MACHINE DOWN	TIME FITTER ARRIVES	TIME MACHINE ON	TOTAL DOWNTIME	REASON FOR BREAKDOWN

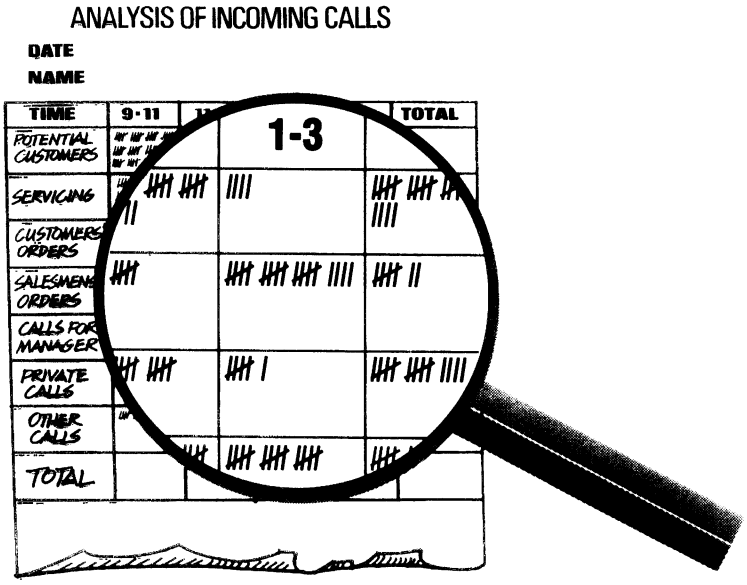
OHP 20

DATA COLLECTION



OHP 21

INTERPRET DATA



OHP 22

PARETO DIAGRAM
STEP 1

Problem	No of occasions	
Bad caps	58	
Bad containers	46	
Broken bottles	8	
Wrong labels	5	
Glue problems	4	Others 15
Jammed bottles	3	
Broken conveyor	3	
Packer breakdown	2	
Operator error	2	
Oil leak	1	
Total occasions	132	

OHP 23

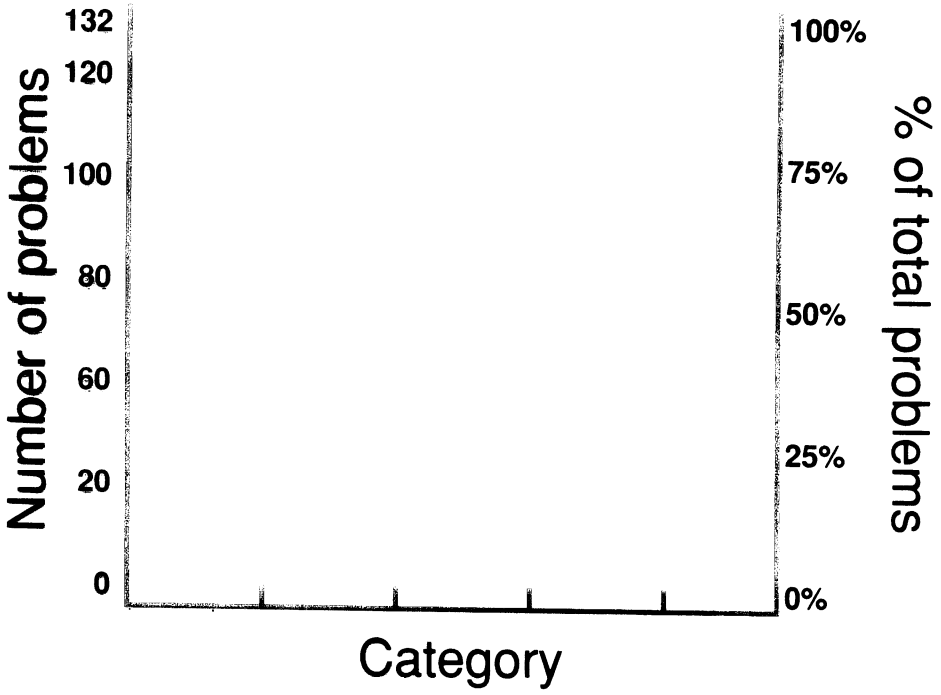
PARETO DIAGRAM
STEP 2

Problem	Lost production (value)	
Broken bottles	45,000	
Packer breakdown	37,000	
Broken conveyor	10,000	
Glue problems	5,000	
Bad caps	4,000	
Jammed bottles	2,000	
Bad containers	1,000	Others 9.000
Wrong labels	1,000	
Operator error	500	
Oil leak	500	

Total lost production (value) 106,000

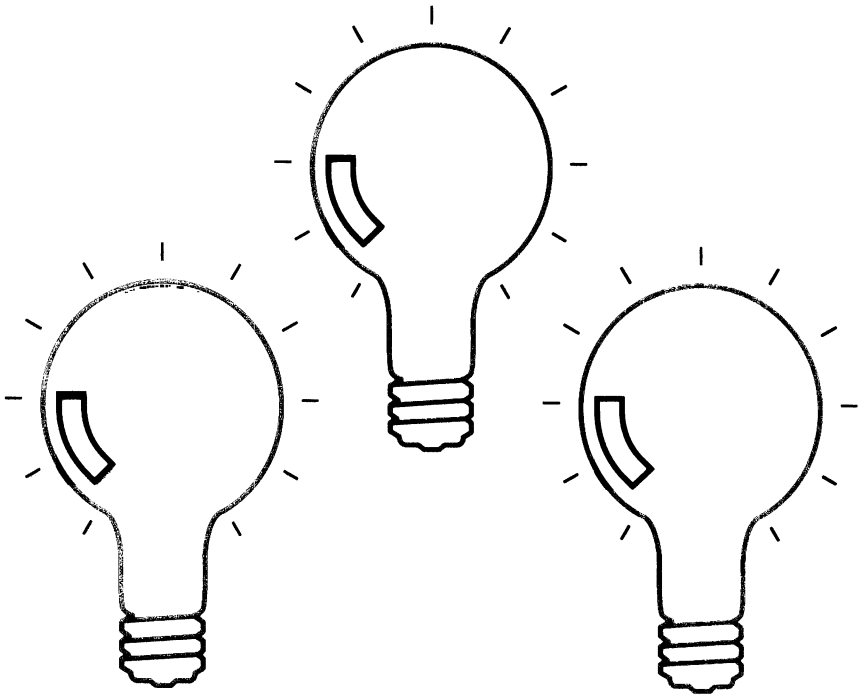
OHP 24

PARETO DIAGRAM
STEP 3



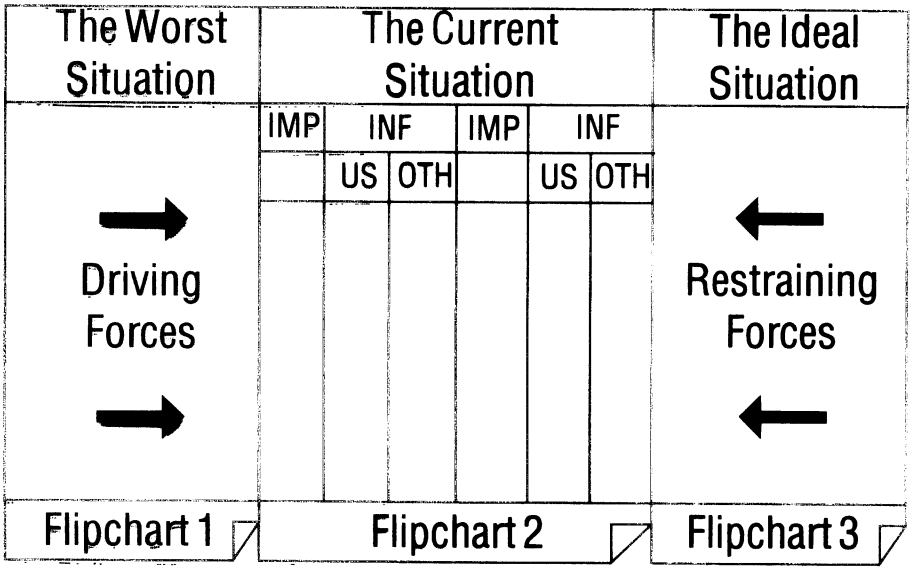
OHP 25

POSSIBLE SOLUTIONS

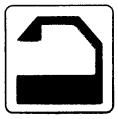


OHP 26

FORCE FIELD ANALYSIS



Key: IMP = Importance of the forces
INF = How much can the forces be influenced by ...
US = The group
OTH = Others outside the group



OHP 27

FORCE FIELD ANALYSIS

Rating of importance

Definition	Rating
A key influence - vital to shift this force if the problem is to be solved	4
An important influence - will definitely help if we can change this force	3
Useful progress could be made by changing the force, but not likely to be of great importance overall	2
Little influence on the problem	1

OHP 28

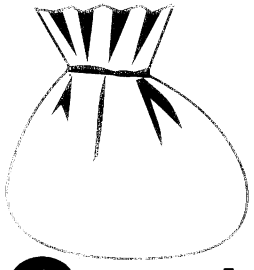
FORCE FIELD ANALYSIS

Rating of how easy to change

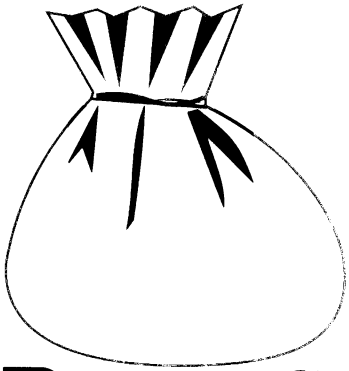
Definition	Rating
A force that is easily changed	4
A force that would change with effort	3
A difficult force to change entirely, but possible with much effort to change a little	2
A fixed unchanging force	1

OHP 29

COST BENEFIT ANALYSIS



Cost



Benefit

OHP 30

COST BENEFIT ANALYSIS

Are the benefits

- one off?
- ongoing?

OHP 31

COST BENEFIT ANALYSIS

$$\frac{\text{Costs}}{\text{Annual benefit}} = \text{Payback period}$$

OHP 32

PRESENT THE SOLUTION

OHP 33

THE PROBLEM SOLVING PROCESS

1. Define the problem
2. Analyse the problem
3. Collect data
4. Interpret data
5. Possible solutions
6. Cost benefit analysis
7. Present the solution
8. Follow up

OHP 34

VISUAL AIDS

- overheads
- flip charts
- slides
- working documents

"A picture is worth a thousand words"

OHP 35

FOLLOW UP