

European Business Improvements



“Improve constantly and forever”

Edwards Deming



Basic Problem Solving

Presented By...

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There is a pack of excel forms available to supplement this presentation, these are free.

Customisable copies of this presentation can be made available at nominal cost.

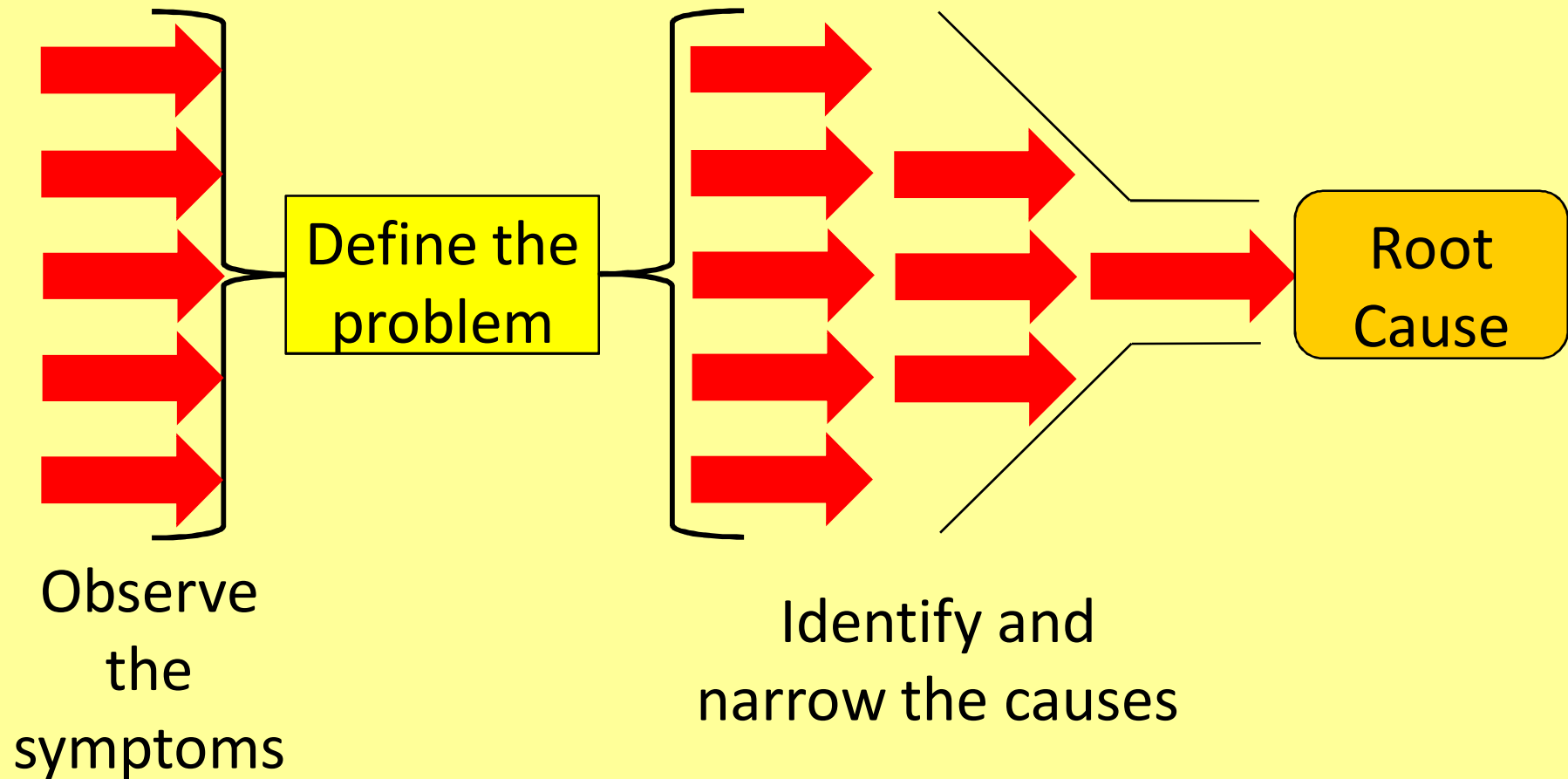
Further instructional material (customisable) on these topics is available at a small cost.

For details, please contact the author at the email address on the last but one slide.

Roadmap



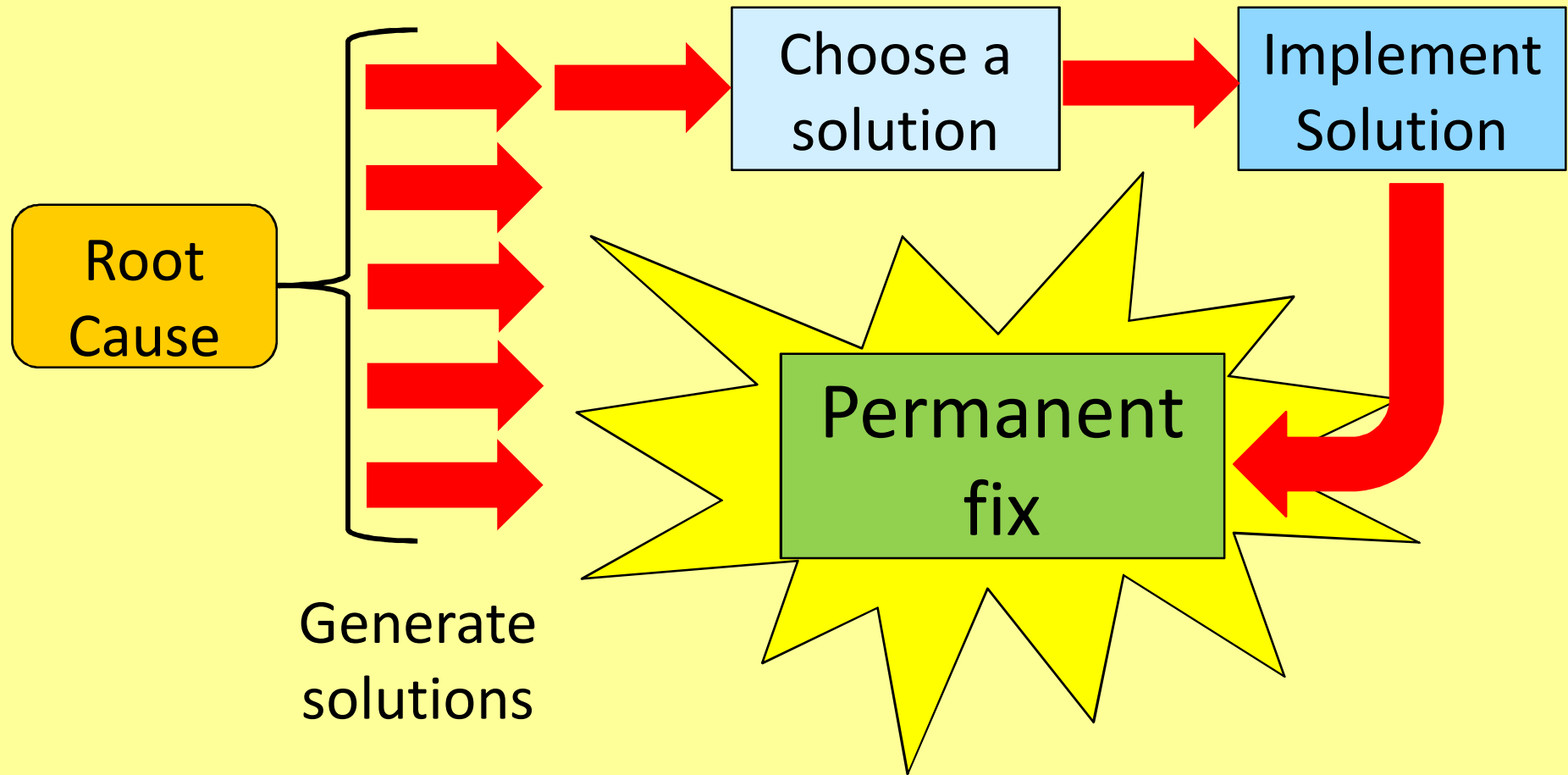
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Roadmap Cont'



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A Look at Each Step in Detail



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- What is involved
- Typical tools



The Symptom(s)



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- Use the 3 Reals
 - The Real place – *Gemba*
 - The Real thing – *Genbutsu*
 - The Real fact – *Genjitsu*

- Go and physically see what is happening
- Record your observations

Symptoms are not causes, do not treat symptoms



Defining the Problem



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- Understand where you are
- Use:
 - Is/is not analysis
 - 5W 1H
 - Fishbone diagram
 - Run chart
- Know where you need to be
 - Look at where you are Vs where you need to be
- Understand the requirements
 - Look at any deviation from the requirements

Recognise you may not have all the information you need



Identifying and Narrowing the Causes



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- Best done as a team
 - Beware of group speak etc.
- Use:
 - Fishbone diagrams
 - Brainstorms
 - Check-sheets
 - Use the data

As each potential cause is eliminated cross it out

May need to carry out experimentation

May need more data

Might not be only one cause



Root Cause



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If you have true root cause you can turn things on and off at will

Always verify root cause

How will you verify it?



Solution(s) Generation



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- Best done as a team

- Use:
 - Brainstorms
 - Fishbone diagrams
 - Scatter diagrams
 - Ranking sheets

May need experimentation



Selecting a Solution



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- More teamwork
- Use
 - Ranking sheets
 - Cost benefit matrices
 - Ease of implementation matrices

Think about how you might stop this issue ever occurring again



Implementing the Solution



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- Measure before and after
 - Verification
- Pilot the improvement
 - Talk to all affected
 - Involve all interested parties where possible
- Use:
 - Check sheets
 - Run charts

Be prepared to react if things go wrong
Be there where it's happening



The Permanent Fix



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- Monitor the outcome
 - Put some monitoring in place....Run chart?
 - Explain to the people using the monitoring what it's all about
 - Explain what to expect
- Verify that things aren't slipping
- Beware the Hawthorn effect
- If things go wrong, be there

Remove monitoring after a suitable time





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The Tools



Is / Is not Analysis



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	Is	Is Not
What	What is the area or object with the problem?	What is not the area or object with the problem?
Symptoms	What are the symptoms of the problem?	What are not the symptoms of the problem?
When	When is the problem observed?	When is the problem not observed?
Where	Where does the problem occur?	Where does the problem not occur?
Who	Who is affected by the problem?	Who is not affected by the problem?



5W 1H



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Kipling's Men

I keep six honest serving-men
(They taught me all I knew);
Their names are What and Why and When
And How and Where and Who.

From Kipling's "The Elephant's Child"

Ask the questions:-

What is happening?

Why is it happening?

When does it happen?

Where is it happening?

Who is it happening to? **Who** found it?

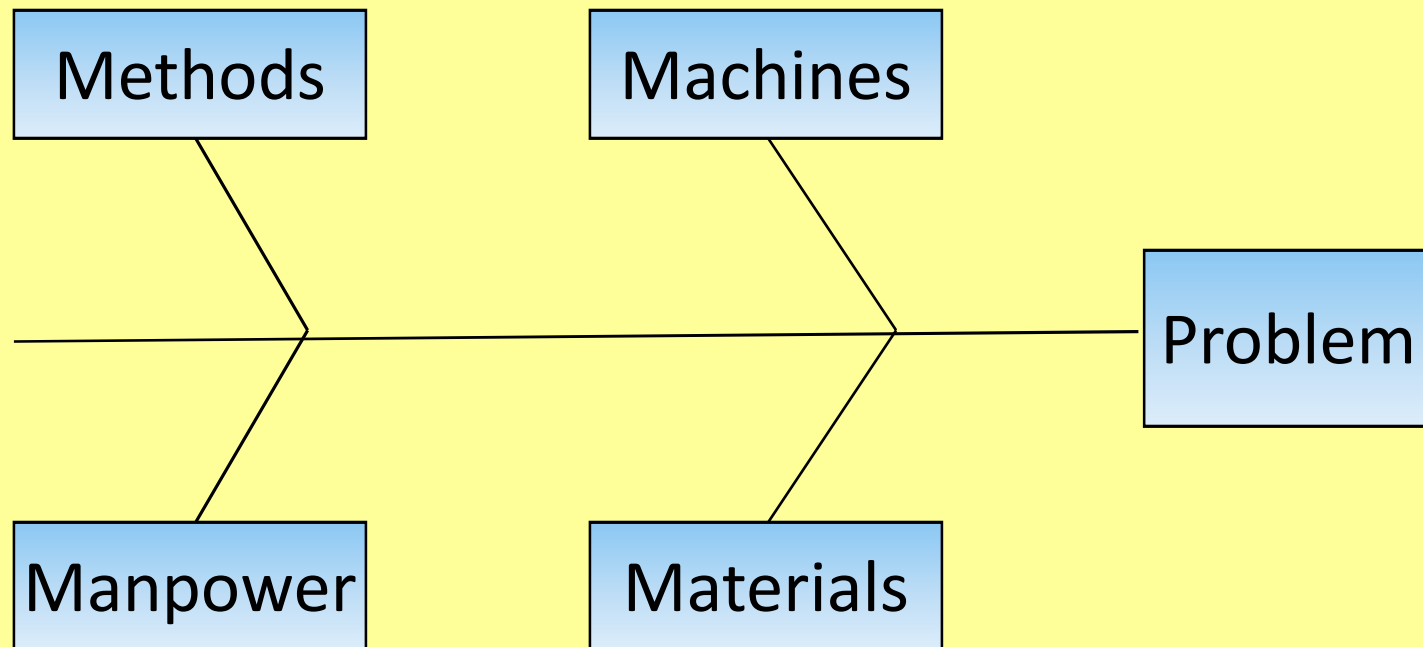
How is it happening? **How** big is it? **How** much is it costing?



Fishbone Diagram



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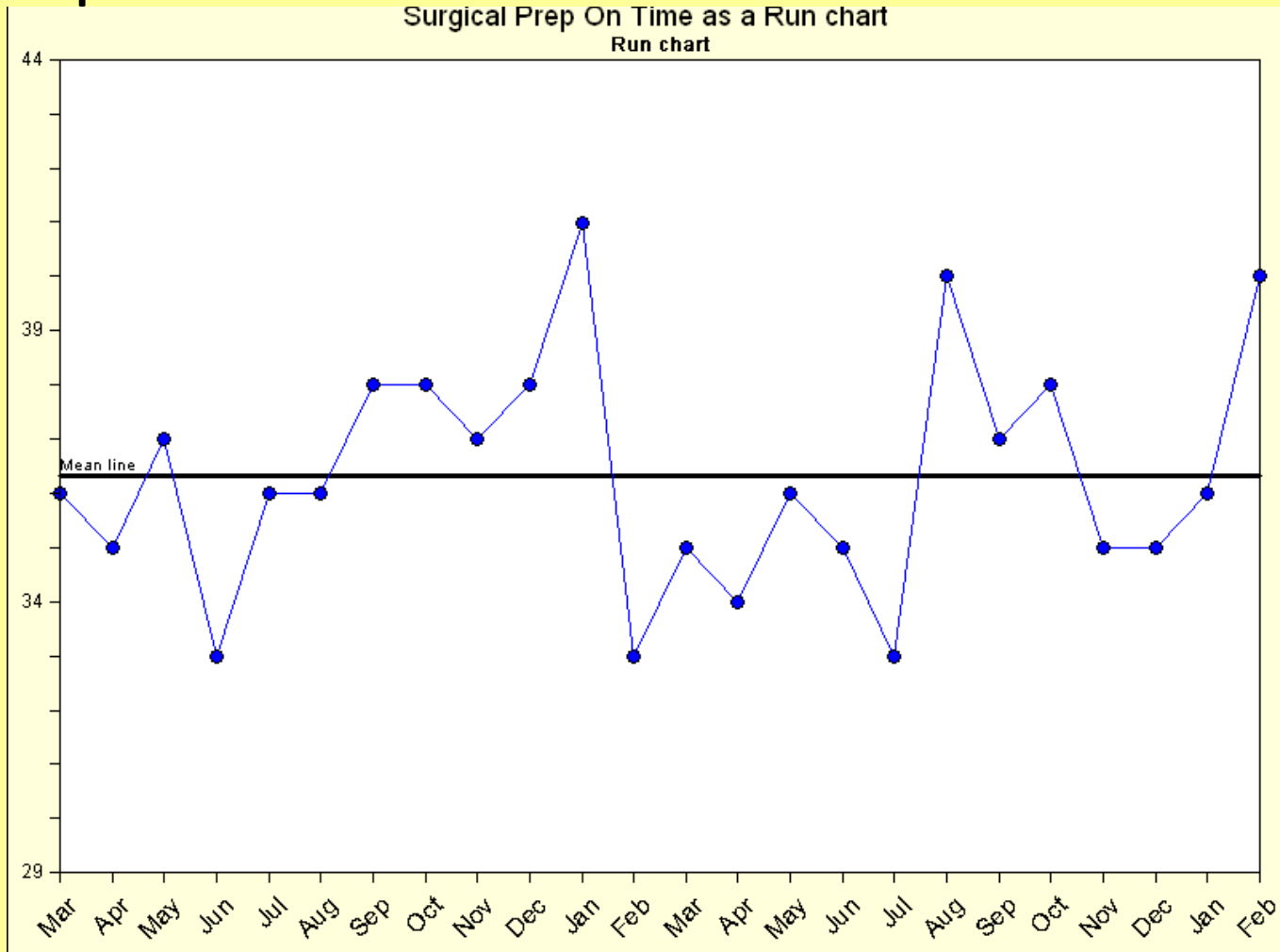


Run Chart



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Look for patterns



- Brainstorming is useful when there is a wide range of possible issues and solutions
 - It is used to generate ideas
- There are numerous brainstorming techniques, which include group brainstorming, individual brainstorming, and storyboarding
- Individual brainstorming is usually not recommended unless time is tight, (participants are not available, group is too large, etc.)

Remember, no criticism of the ideas as they are generated

Check Sheet



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Plant Pots sold in one week	
Day	No. of packs
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

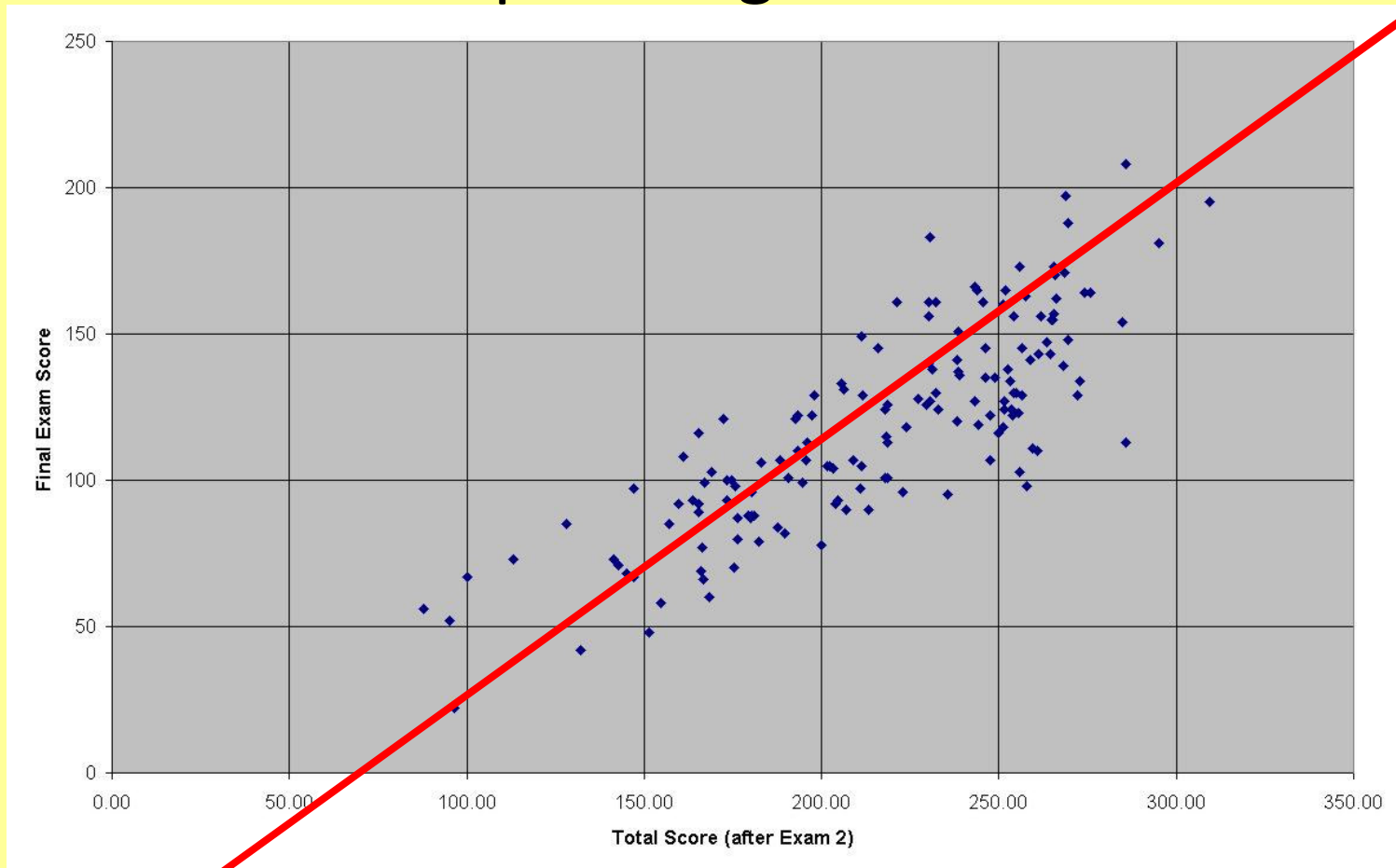


Scatter Diagram



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Look for relationships as regards X and Y



Ranking Sheet



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Option A

Option B

Option C

Desirable Criteria	Weights	Score	Wtd. Score	Score	Wtd. Score	Score	Wtd. Score
Battery Life	7	7	49	4	28	10	70
Memory Size	5	10	50	4	20	9	50
Case Style	9	9	81	10	90	6	54
Display	8	10	80	5	40	7	56
Network freedom	3	1	3	2	6	10	30
Ease of use	10	5	50	4	40	10	100

313

224

360



Cost Benefit Matrix



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High Return



Low Cost



High Cost



Low Return



Ease of Implementation Vs Benefit matrix



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High Benefit



Easy



Difficult



Low Benefit





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