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# Continuous Improvement Toolkit

## **Paired Comparison**

**Managing Risk**

PDPC  
FMEA RAID Logs  
Fault Tree Analysis  
Risk Assessment\*  
Traffic Light Assessment

**Deciding & Selecting**

Pros and Cons  
Break-even Analysis  
Force Field Analysis  
Decision Tree  
QFD  
Kano Analysis  
Critical-to Tree  
Paired Comparison  
Cause & Effect Matrix

**Planning & Project Management\***

Importance-Urgency Mapping  
RACI Matrix  
Stakeholders Analysis  
PEST  
PERT/CPM  
Activity Diagram  
Roadmaps  
Project Charter  
Gantt Chart  
PDCA  
Control Planning  
Gap Analysis  
Hoshin Kanri  
Kaizen  
How-How Diagram  
Tree Diagram\*\*  
Standard work

**Understanding Performance**

Lean Measures  
KPIs  
OEE  
Capability Indices  
MSA  
RTY  
Descriptive Statistics  
Cost of Quality  
Probability Distributions  
ANOVA  
Reliability Analysis  
Graphical Analysis  
Hypothesis Testing  
Run Charts  
Scatter Plot  
Correlation  
Control Charts  
5 Whys  
Chi-Square Test

**Understanding Cause & Effect**

Confidence Intervals  
ANOVA  
Design of Experiments  
Regression  
Multi-Vari Charts  
Relations Mapping\*  
Fishbone Diagram  
TRIZ\*\*\*

**Identifying & Implementing Solutions\*\*\***

Simulation  
TPM  
Mistake Proofing  
Pull Systems  
JIT  
Ergonomics  
Work Balancing  
Automation  
Bottleneck Analysis  
Visual Management  
Flow  
Value Analysis  
5S  
Wastes Analysis  
SMED

**Understanding Performance**

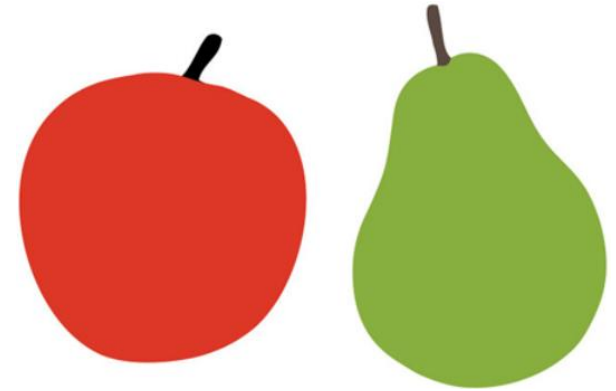
Benchmarking  
Sampling  
Focus groups  
Interviews  
Brainstorming  
Analogy  
SCAMPER\*\*\*  
Photography  
Check Sheets  
Nominal Group Technique  
Mind Mapping\*  
Measles Charts  
Surveys  
Affinity Diagram  
Attribute Analysis  
Data  
Critical Incident Technique  
Lateral Thinking  
Visioning  
Collection  
Observations

**Creating Ideas\*\***

**Designing & Analyzing Processes**

## - Paired Comparison

- ❑ Compares a number of options relative to one another.
- ❑ The scoring is done on the basis of one item versus the other in turn.
- ❑ This provides a rank order based on the preferred item or solutions.
- ❑ **Makes it easy to choose the most:**
  - Important problem to solve.
  - Effective solution.



## - Paired Comparison

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### When to Use It?

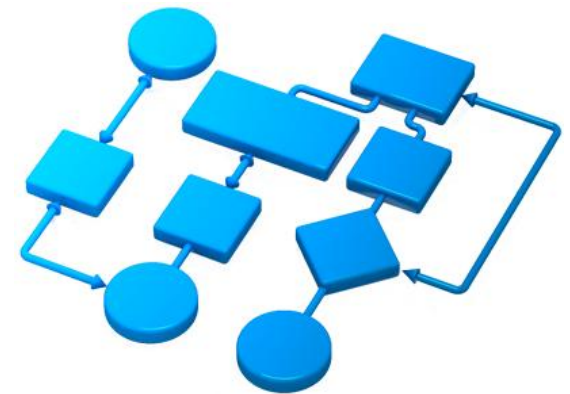
- ❑ Used to arrange issues in priority order.
- ❑ Used to select and make decisions.
- ❑ Useful when you don't have objective data to use to make your decision.
- ❑ Helps also to prioritize where there are conflicting demands of resources.



# - Paired Comparison

## Approach:

- ❑ Make a list of all of the options that you want to compare.
- ❑ Assign each option a letter (A, B, C, D, and so on).
- ❑ Mark the options as both the row and column headings on a flipchart.
- ❑ Within each of the blank cells, compare the option in the row with the option in the column.
- ❑ Decide which of the two options is most important.
- ❑ Write down the letter of the most important option in the cell.
- ❑ Score the difference in importance between the options.
- ❑ Consolidate the results by adding up the values for each of the options.



## - Paired Comparison

**Example: The Likelihood of Success (Four Projects).**

|          | Option 1 | Option 2 | Option 3 | Option 4 | Total |
|----------|----------|----------|----------|----------|-------|
| Option 1 |          | 2        | 4        | 5        | 11    |
| Option 2 | 1        |          | 5        | 9        | 15    |
| Option 3 | 3        | 6        |          | 4        | 13    |
| Option 4 | 2        | 4        | 1        |          | 7     |

## - Paired Comparison

### Example – What is the Team's Biggest Motivator?

1: Low 2: Medium 3: High

|                                 | A | B  | C  | D  | E  | F  | G  | H  | I  | Score | %  | Rank |
|---------------------------------|---|----|----|----|----|----|----|----|----|-------|----|------|
| <b>A: Appreciation</b>          |   | A3 | A3 | A1 | A3 | A2 | A2 | A3 | A2 | 19    | 23 | 1    |
| <b>B: Achievement</b>           |   |    | C3 | B2 | B3 | B2 | G2 | B3 | B3 | 13    | 15 | 4    |
| <b>C: Work conditions</b>       |   |    |    | C3 | C3 | C3 | G2 | C3 | C3 | 15    | 17 | 3    |
| <b>D: Power &amp; Influence</b> |   |    |    |    | D3 | D2 | G3 | D2 | I1 | 7     | 8  | 6    |
| <b>E: Creativity</b>            |   |    |    |    |    | F2 | G3 | E2 | I2 | 2     | 2  | 8    |
| <b>F: Interest</b>              |   |    |    |    |    |    | G3 | F1 | I3 | 3     | 3  | 7    |
| <b>G: Financial benefits</b>    |   |    |    |    |    |    |    | G3 | G3 | 19    | 22 | 1    |
| <b>H: Relationships</b>         |   |    |    |    |    |    |    |    | I3 | 0     | 0  | 9    |
| <b>I: Self development</b>      |   |    |    |    |    |    |    |    |    | 9     | 10 | 5    |