Continuous Improvement Toolkit
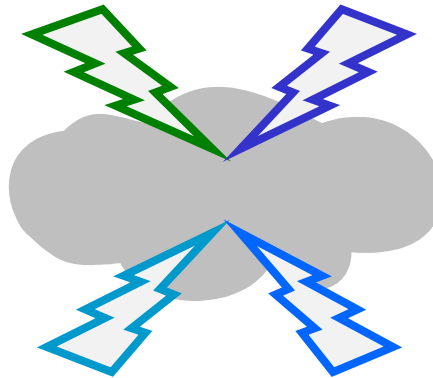
Brainstorming

Managing Risk

PDPC

FMEA

RAID Logs

Fault Tree Analysis

Risk Assessment*

Decision Tree

Traffic Light Assessment

Deciding & Selecting

Pros and Cons

Break-even Analysis

Importance-Urgency Mapping

Cost-Benefit Analysis

Force Field Analysis

Voting

SWOT

Pugh Matrix

QFD

Matrix Diagram

TPN Analysis

Kano Analysis

Prioritization Matrix

Critical-to Tree

Paired Comparison

Planning & Project Management*

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

Identifying & Implementing Solutions***

Simulation

TPM

Mistake Proofing

Pull Systems

JIT

Ergonomics

Work Balancing

Automation

Bottleneck Analysis

Visual Management

Flow

Value Analysis

5S

SMED

Wastes Analysis

Time Value Map

Process Redesign

Value Stream Mapping

SIPOC

Understanding Performance

Lean Measures

KPIs

OEE

Capability Indices

MSA

RTY

Descriptive Statistics

Cost of Quality

Reliability Analysis

Graphical Analysis

Run Charts

Control Charts

Benchmarking

Sampling

Cause & Effect Matrix

Pareto Analysis

Understanding Cause & Effect

Confidence Intervals

Probability Distributions

ANOVA

Hypothesis Testing

Design of Experiments

Scatter Plot

Correlation

Regression

5 Whys

Chi-Square Test

Multi-Vari Charts

Relations Mapping*

Fishbone Diagram

Data Collection

Focus groups

Interviews

Photography

Check Sheets

Measles Charts

Surveys

Critical Incident Technique

Observations

Brainstorming

Analogy

SCAMPER***

Nominal Group Technique

Mind Mapping*

Affinity Diagram

Attribute Analysis

Lateral Thinking

Visioning

Flowcharting

IDEF0

Creating Ideas**

TRIZ***

Designing & Analyzing Processes

Flow Process Chart

Process Mapping

Service Blueprints

Continuous Improvement Toolkit . www.citoolkit.com

- Brainstorming

- ❑ Used to generating a large number of ideas.
- ❑ All members of the team contribute ideas by rapidly generating and recording a variety of possible solutions.
- ❑ Needs careful **facilitation**.
- ❑ Typically takes around 30 minutes to an hour.
- ❑ It's recommended to include experts and several levels.
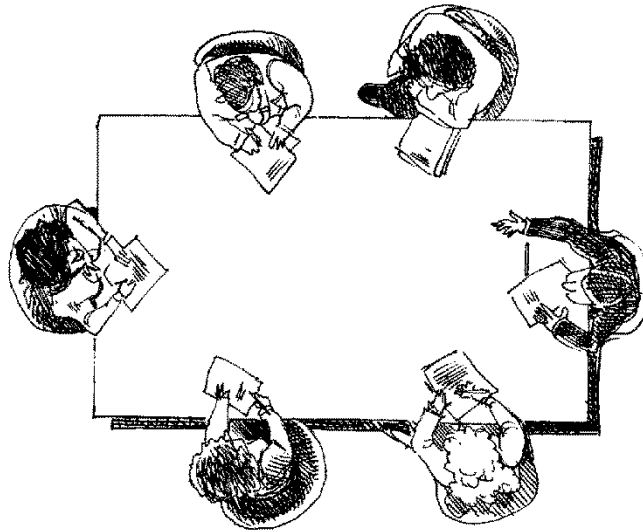
Brainstorming

- Brainstorming

When to Use:

❑ When a broad range of options is desired.

❑ When creative ideas are desired.

❑ To consider a whole range of possible root causes to a problem.

❑ When the participation of the entire team is desired.

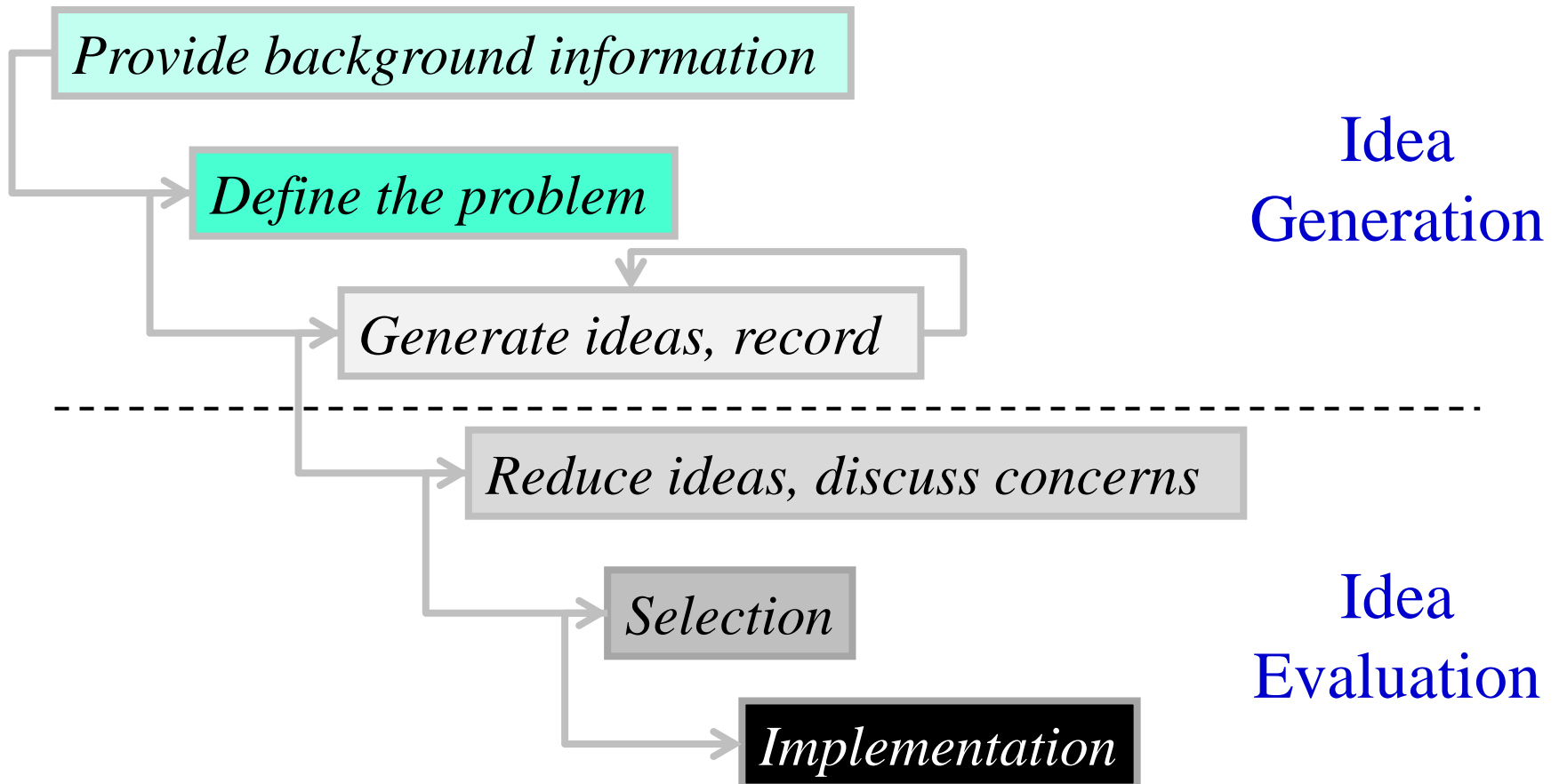❑ Boosting morale and enhancing work enjoyment.

- Brainstorming

Two Methods:

(1) Participants can be asked to give an idea each in turn:

- Better for ensuring everyone feels able to participate.
- Can be intimidating.

(2) Free contribution of ideas.

- Brainstorming

How to do it?

Provide background information

Define the problem

Generate ideas, record

Idea
Generation

Reduce ideas, discuss concerns

Selection

Implementation

Idea
Evaluation

- Brainstorming

Guidelines:

- ❑ Ensure everyone understands the problem.
- ❑ There are no stupid or bad ideas.
- ❑ No criticizing while generating ideas.
- ❑ No discussion or evaluation of any kind.
- ❑ All ideas are recorded and kept for future.
- ❑ Encourage everyone to participate and speak up.
- ❑ Don't stop the brainstorming sessions too soon. Allow those ideas to develop by themselves.
- ❑ Team members might build on others ideas.
- ❑ Quantity over quality.

- Brainstorming

Reducing Ideas and Selection:

❑ Ideas need to be **reduced**.

❑ **Selection** often done through voting.

❑ Use the following to filter the list:

- Is the problem under the control of the team?
- Is it likely to solve the problem?
- Could the problem be solved by the team?
- Is it worth solving?

❑ Sometimes this is best done another time, another day or even by another team.
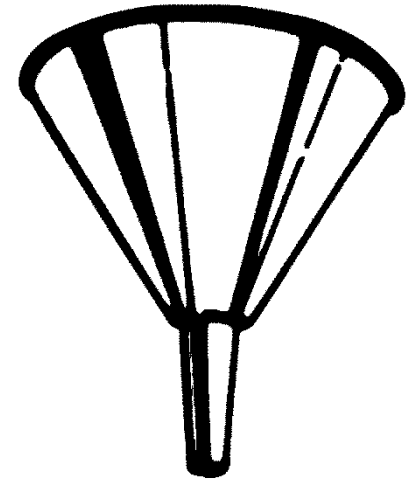
- Brainstorming

The Facilitator Should:

❑ Prepare for the meeting.

❑ Set up ground rules

❑ Lead the implementation.

❑ Listen and check for understanding.

❑ Consider all opinions of others.

❑ List all answers.

❑ Clarify wording.

❑ Merge similar entries.

❑ Ensure that everybody has a similar understanding of the result.
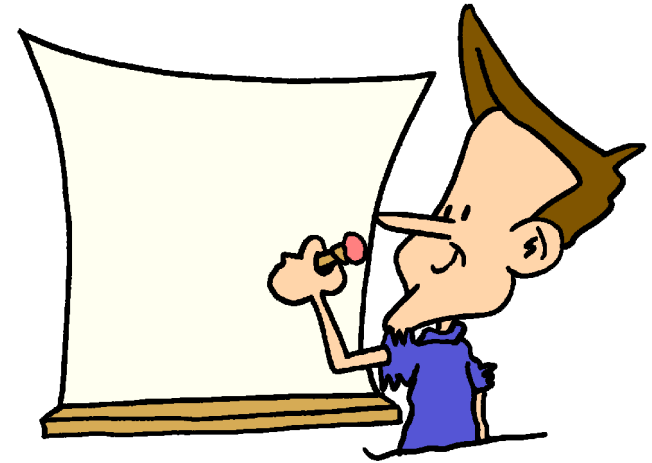
- Brainstorming

Variations of Brainstorming:

❑ **Idea Writing:**
- A group of people passes around a paper of the possible solution.
- Can be done via email.

❑ **Tree Diagram:**
- Linking ideas, goals or activities in greater details.

❑ **Idea map:**
- Allows structured brainstorming based on a central question.