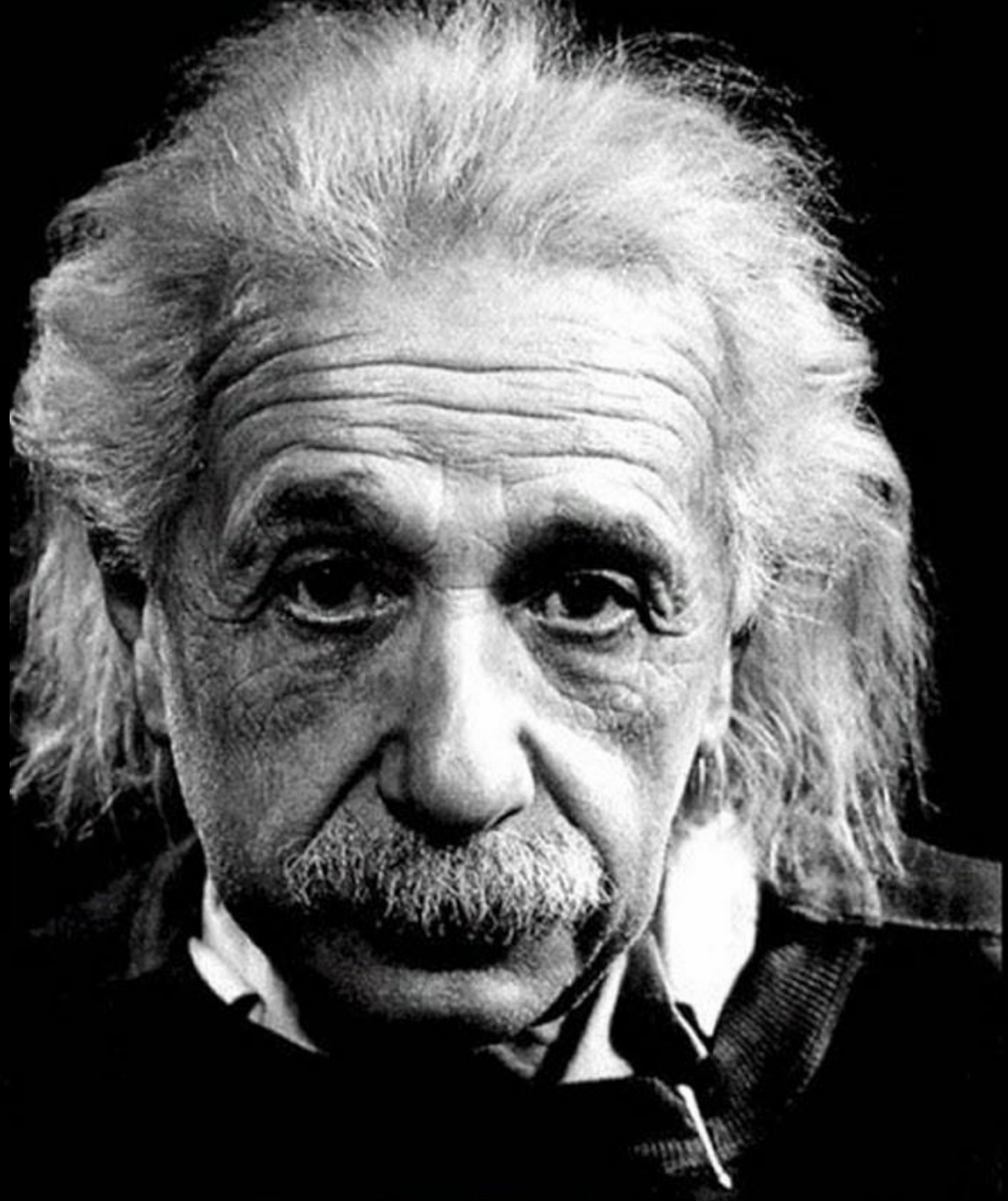


ALL PROBLEMS
ARE OPPORTUNITIES
IN DISGUISE

Monday Seminar

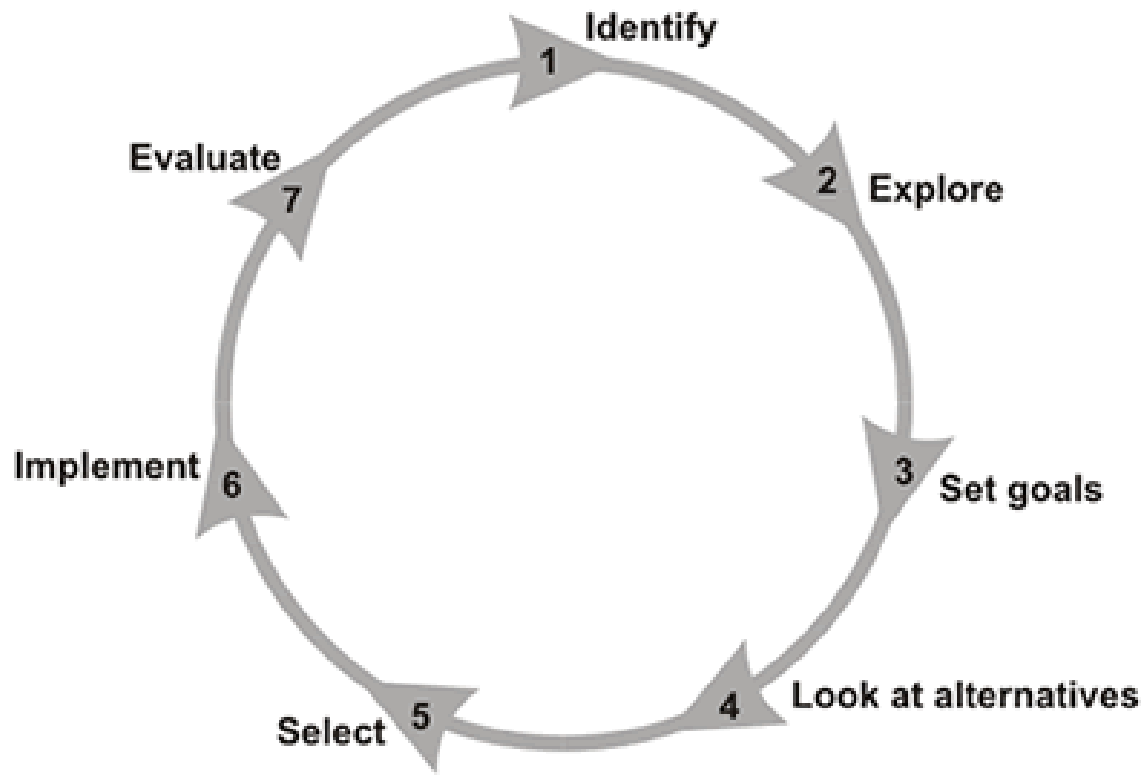
Problem Solving

*We cannot solve our
problems with the
same thinking we used
to create them*



What is problem solving?

→ Part of a larger **problem process** that includes problem finding and problem shaping



Barriers to problem solving?

- “He who asks a question may be a fool for 5 minutes, but he who never asks a question may be a fool forever”
- Failure to recognize the problem
- Conceiving the problem too narrowly
- Making a hasty choice
- Failure to consider all consequences
- Failure to consider feasibility of the solution

Problem solving tools

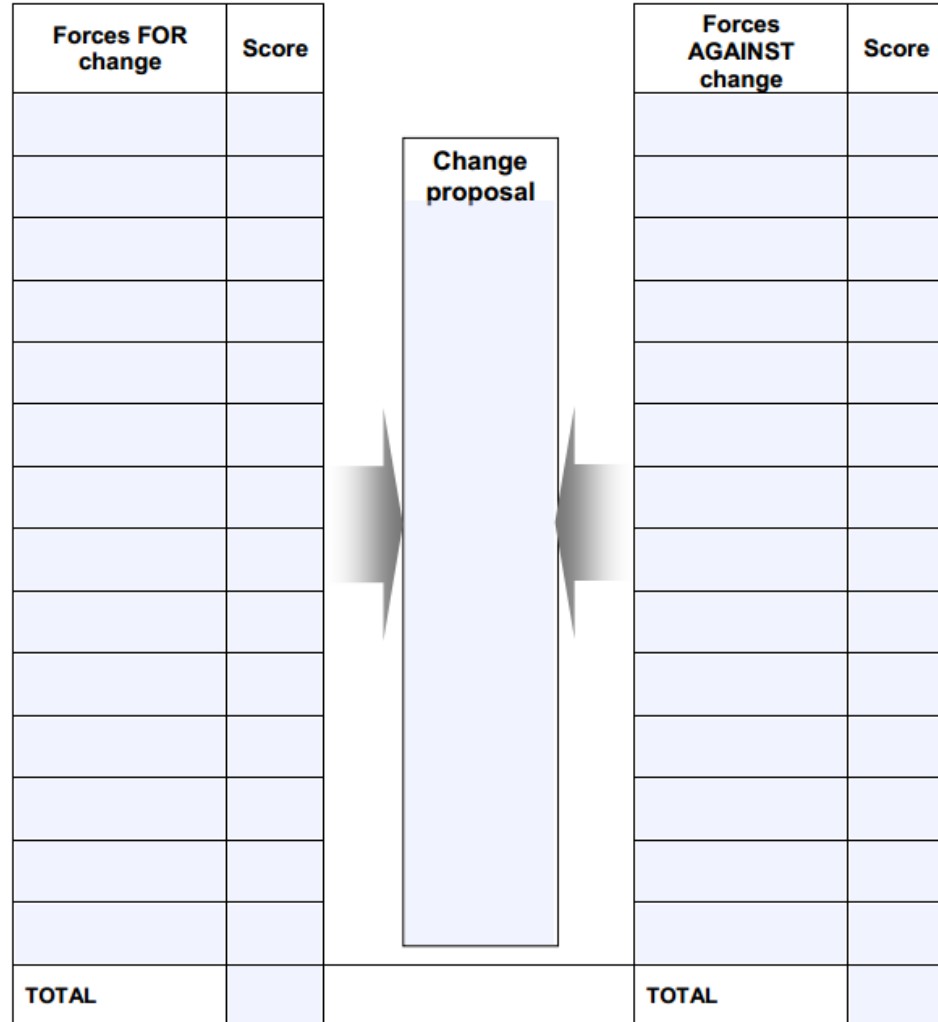
Force field analysis

- Decision-making technique, developed by Kurt Lewin
 - Analyzing the forces for and against a change
 - Helping to communicate the reasoning behind a decision
- +** Possible to strengthen the forces supporting change and to weaken those against it

Problem solving tools

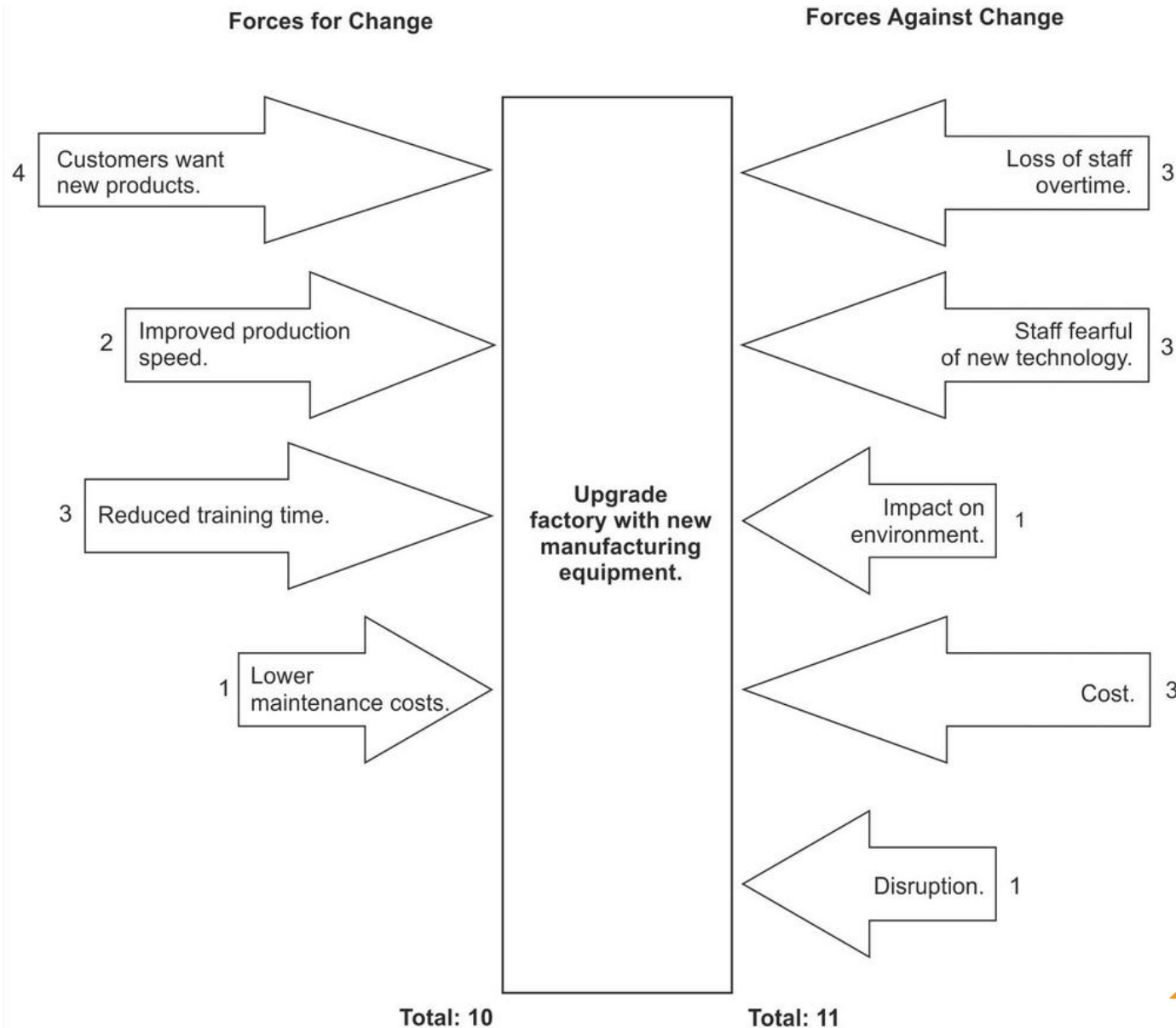
Force field analysis

1. List all of the factors (forces) **FOR**
2. And all factors **AGAINST** decision or change.
3. **Score** each factor based on its influence,
4. **Add up the scores** for and against change to find out which of these wins.



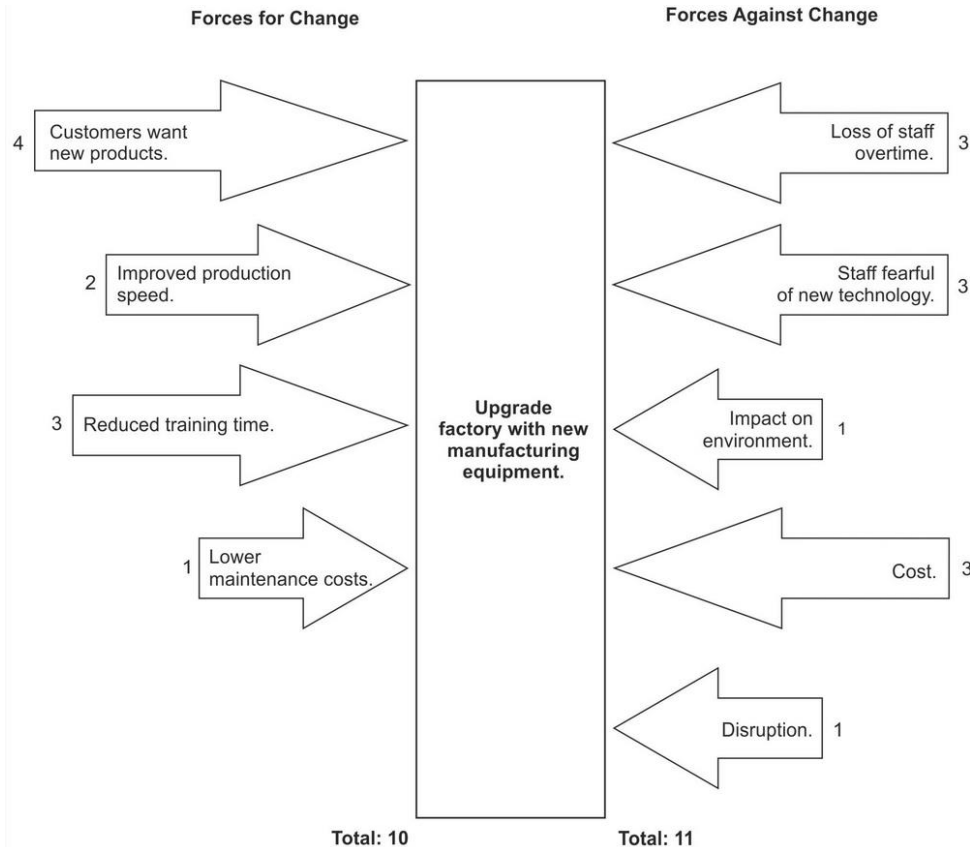
Problem solving tools

Force field analysis



Problem solving tools

Force field analysis



What can you do?

- Train staff ("Cost" +1) to minimize the fear of technology ("Staff uncomfortable with new technology" -2).
- Show staff that change is necessary for business survival (new force that supports the change, +2).
- Show staff that new machines would introduce variety and interest to their jobs (new force that supports the change, +1).
- Raise wages to reflect new productivity ("Cost" +1, "Loss of overtime" -2).
- Install slightly different machines with filters that eliminate pollution ("Impact on environment" -1).

→ **From 11:10 (against the plan) to 13:8 (in favour of the plan).**



Tip 1:

Some factors – such as those affecting people's health and safety – don't fit well with this approach. Make sure that you deal with these appropriately, whatever the outcome of your analysis.

Tip 2:

Bear in mind that while Force Field Analysis helps you understand the impact of different factors on your decision or change, it can be quite subjective.

Tip 3:

Don't underestimate how much work a Force Field Analysis can involve.

Problem solving tools

6 thinking hats

- Developed by Edward De Bono
- Used to look at decisions from a number of important perspectives. This forces you to move outside your habitual thinking style.
- Advantages:
 - Role-playing
 - Encouraging creative, parallel and lateral thinking
 - Improving communication
 - Avoiding debate
 - No egos allowed!

Problem solving tools

6 thinking hats



Objective

Facts
Data
Figures

What information do I have?
What are the facts?
What information do I need?
What do I need to know?



Intuitive (Gut)

Emotions
Hunches
Feelings
Instincts

How do I feel about this?
What do I like about the idea?
What don't I like about this?



Negative

Critic
Analyst
Caution

What is wrong with this?
Will this work?
Is it safe?

Edward de Bono's Six Thinking Hats



Positive

Logical
Optimistic

What are the good points?
Why can this be done?
Why is it a good thing?



Creative

Lateral
Growth
Ideas
Fertility

What new ideas are possible?
What is my suggestion?
Can I create something new?



Process

Agenda
Decision
Global
Overview

What thinking is needed?
Where are we now?
Where do we go from here?

Problem solving tools

6 thinking hats

Gathering new ideas:

White	Gather available information.
Green	Explore and generate alternatives.
Yellow	Assess the benefits and feasibility of each alternative.
Black	Assess the weaknesses of each alternative.
Green	Further develop the most promising alternatives and make a choice.
Blue	Summarize and assess what has been achieved so far.
Black	Make the final judgment on the chosen alternative.
Red	Find out the feelings on the outcome.

Problem solving tools

6 thinking hats

Deciding upon an existing idea:

Red	Find out the existing feelings about the idea.
Yellow	Find out the benefits in the idea.
Black	Point out the weaknesses, problems and dangers in the idea.
Green	See if the idea can be modified to strengthen the yellow-hat benefits and to overcome the black-hat problems.
White	See if available information can help in modifying the idea to make it more acceptable.
Green	Develop the final suggestion.
Black	Judge the final suggestion.
Red	Find out the feeling on the outcome.

And now let's practice!