Six Sigma plus Lean

Strategisches Prozessmanagement

Agenda

DMAIC (continued)

Lean Management

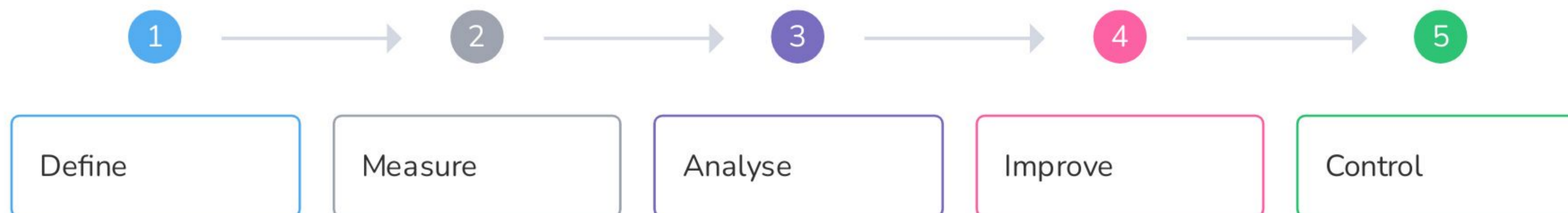Selected Tools

PDCA

Outlook

DMAIC (continued)

Improve and Control

Put the phases into the correct order.

1 → 2 → 3 → 4 → 5

| Define | Measure | Analyse | Improve | Control |

✅ 4 👤 | ❌ 7 👤

11

Leaderboard

11 players

1	🙃 wievielter werde i...	94p	+94
1	🐥 Lachs	94p	+94
3	👽 alien	92p	+92
4	🐐 CR7	80p	+80
5	🧟‍♀️ zombie	0p	+0
5	👹 taube	0p	+0

DMAIC

Define problem and initiative — Define (1)

Measure size of the problem — Measure (2)

Analyse reasons for problem — Analyse (3)

Implement solution — Improve (4)

Control success of initiative — Control (5)

DMAIC circle

AhaSlides

3
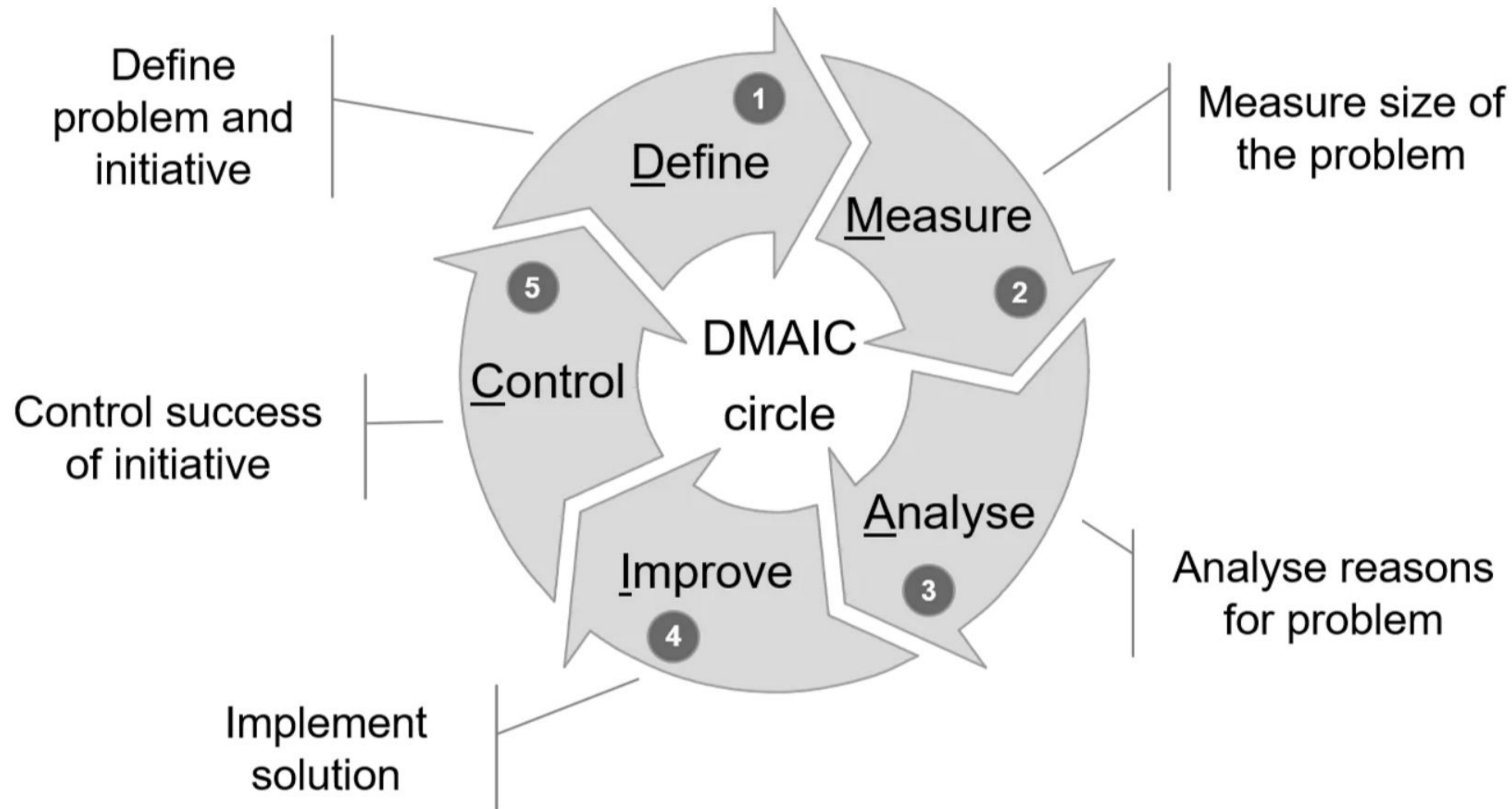
Improve: Methods for Finding Solutions

Brainstorming

- Any idea is valuable
- Ideas can be developed
- ➤ Facilitator required

Anti-brainstorming

- "How can we make the issue even worse?"
- Then, transfer into positive ideas
- ➤ Helpful if there is a negative atmosphere already

Ideas

Brainwriting

- Ideas are written down
- Passed to neighbor
- Ideas can be extended
- Can be used in distributed teams
- ➤ Also works with shy people

Analogy Brainstorming

- Finding solutions for a similar problem
- Adapting existing solutions for similar problems
- "How does a polar bear stop?"
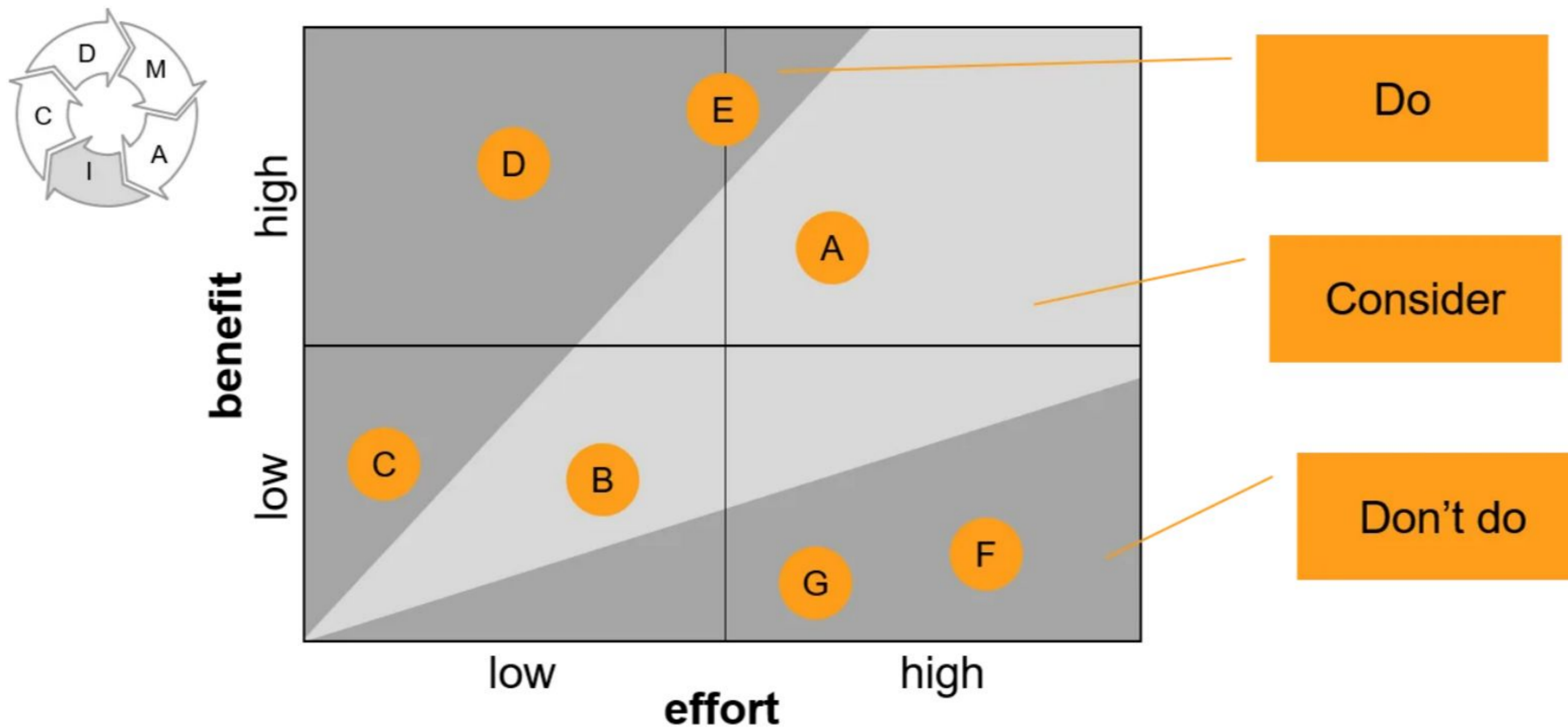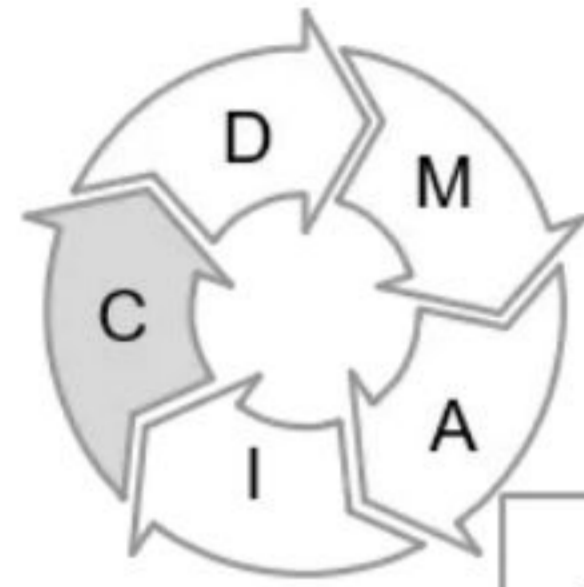
This usually results in several potential solutions.

Improve: Prioritising Solutions

All solutions should be reated with respect to **effort** and **benefit**.
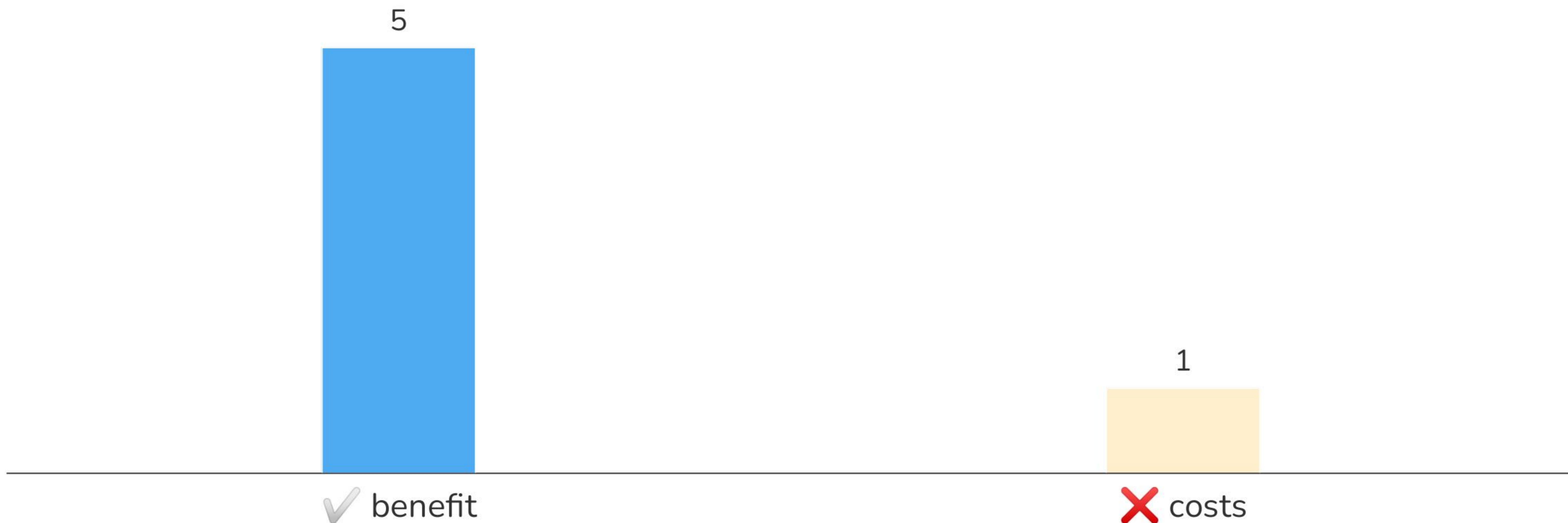
Control: Monitor New Process

Monitoring
- KPI from Measure phase
- Constant evaluation
- Identify deviations
- Responsibility of process owner

Reaction
- "What needs to be done if …?"
- Specific instruction for process owner
- Can be for example
  - Quick fix
  - Starting new DMAIC

During *Improve*, solutions should be rated against effort and ...

5 — ✔️ benefit

1 — ❌ costs

Leaderboard

11 players

1	🙃	wievielter werde i...	174p	+80
1	🐥	Lachs	174p	+80
3	🐐	CR7	162p	+82
4	👽	alien	92p	+0
5	👹	taube	88p	+88
6	🧛	Ghost	83p	+83

Lean

Selected tools

Lean Management: Spirit

Improve customer satisfaction by solving technical problems

Improve profitability by eliminating waste in the manufacturing process

Develop people by kaizen so that they know more
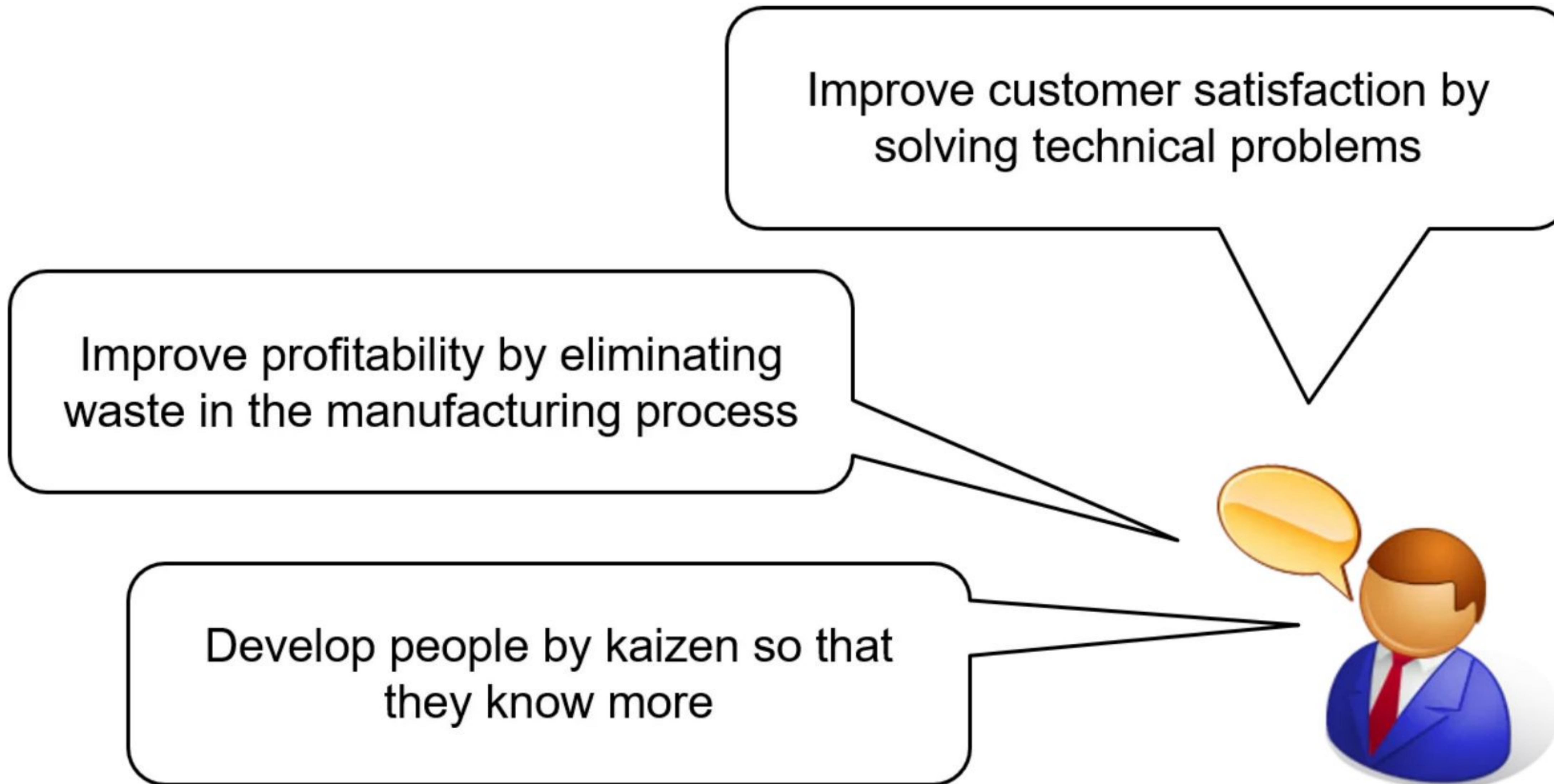
Ballé/Ballé: The Lean Manager, 2009, p. 260

Objective

Lean Management is an approach supporting
- Delivering value to the customer
- Reducing operational expenses

Approach

- Offers several useful tools
- However, benefit is not only achieved by applying tools
  - Implemented throughout the organization
  - Requires cultural change

Lean Management

- Origins in Toyota Production System
- Methods and tools widely used

Popularity

Identifying Waste: TIM WOOD

T Transport – moving parts or exchanging information

I Inventory – storing parts or complete products not sent to customers

M Movement – moving parts around workspace

W Waiting – Interrupting processing, waiting for items or information

O Overproduction – performing work before it is required

O Overprocessing – performing more work than required

D Defects – mistakes that require rework

Waste

Workspace Organisation: 5S

Sort	• Remove unnecessary items from workplace • Leave only bare necessities
Set in order	• Arrange items for easy access • Label items for easy identification
Shine	• Sweep and clean work area • Helps with inspecting items and work conditions
Standardise	• Define the normal condition • Define how to correct abnormal conditions
Sustain	• Implement solutions to prevent workplace issues • Train people with visual management techniques

Poka Yoke

- Also known as "error proofing" or "fool proofing"
- Objective: *Error proof* or *Zero defect*
- Based on root cause analysis for common mistakes

Cost for defect resolution

Time of defect detection
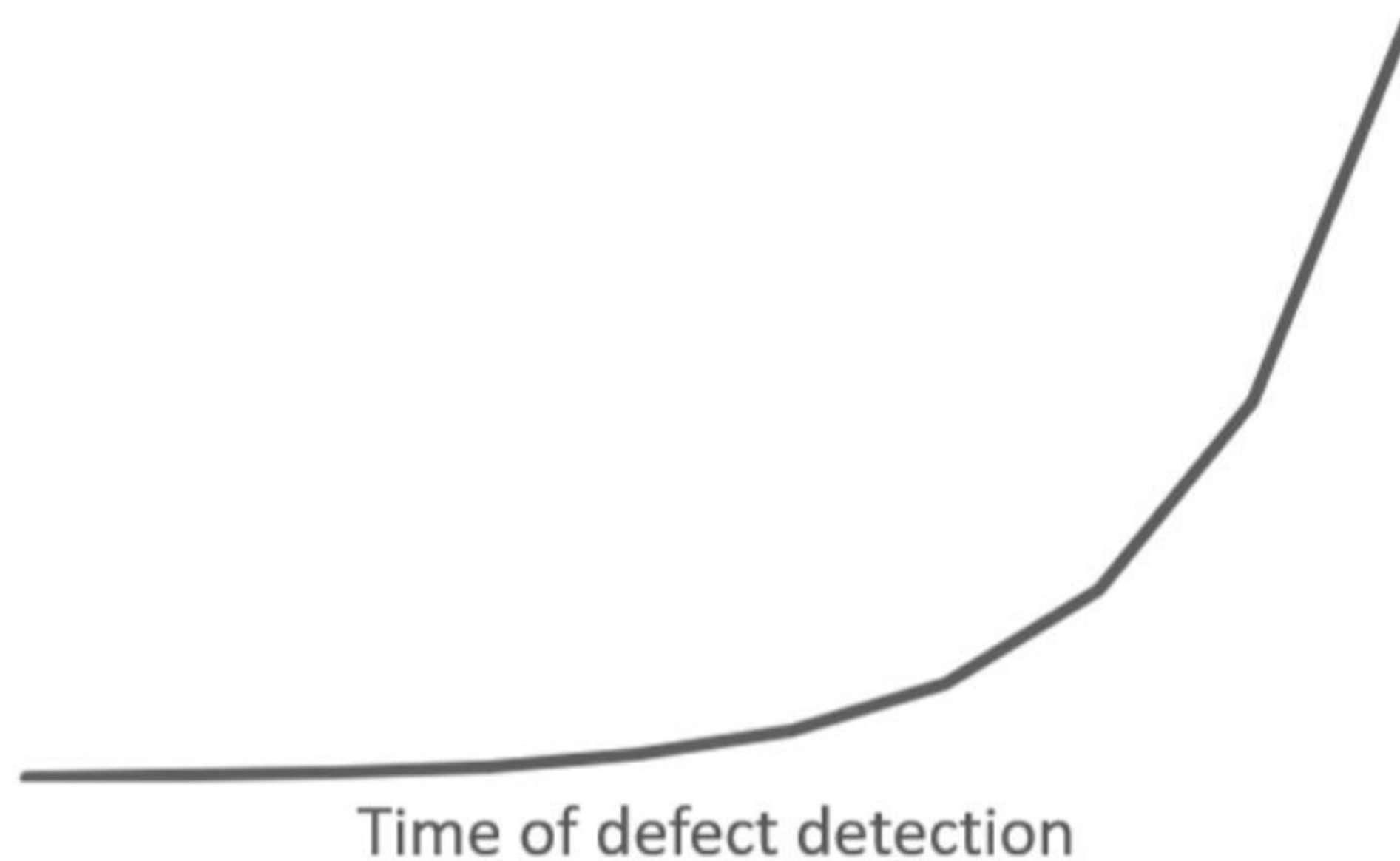
- Prevent errors
- Design robust processes

- Detect errors as early as possible
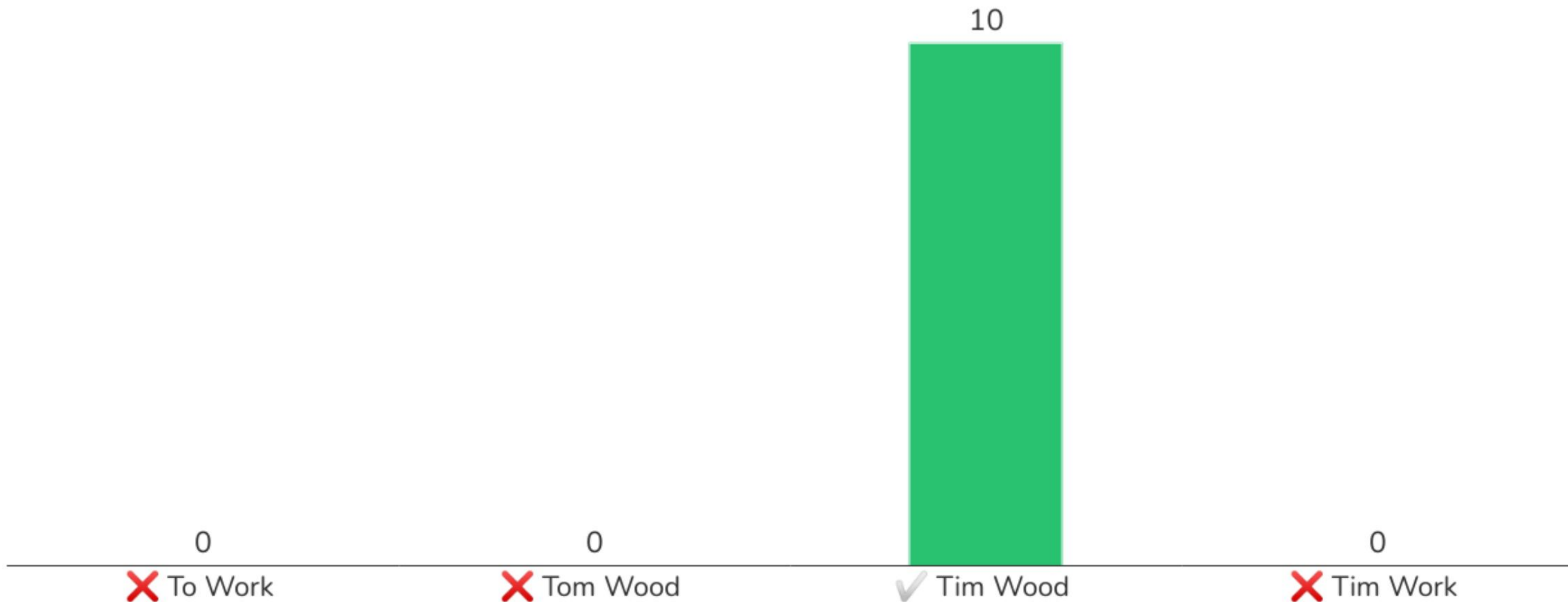- Fix immediately

Gemba Walk & Kaizen

GEMBA

- Japanese: „where the real work takes place"
- Usually: the shop floor
- Value production as the fundament of business and value creation
- Establish culture of management going to the work places

Kaizen

- Japanese: "improvement/change is good"
- Integrated into daily work
- Discuss customer value, quality and waste after management's GEMBA walk
- Establish a culture for continuous change
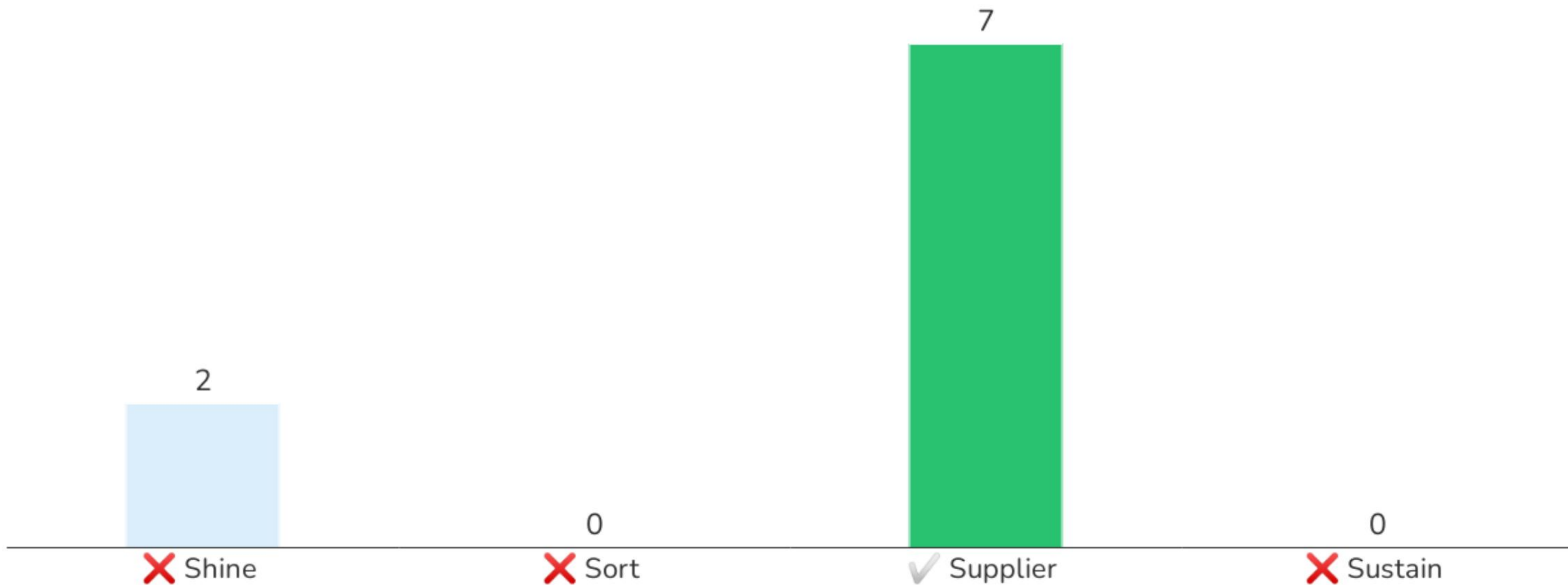
Continuous Improvement
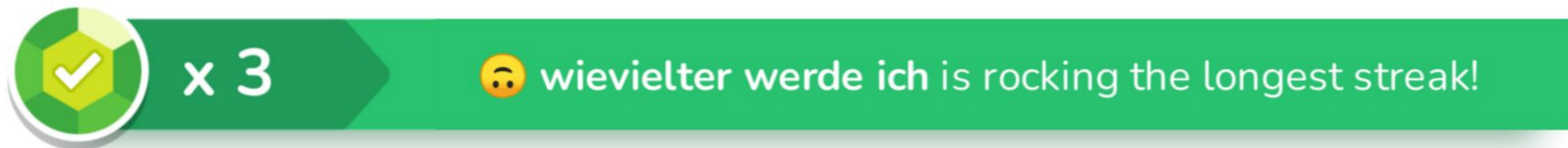
Which one does <u>not</u> belong to the 5S?

AhaSlides

7

2

0   0

❌ Shine   ❌ Sort   ✔️ Supplier   ❌ Sustain

Leaderboard

11 players

x 4   🐥 **Lachs** is rocking the longest streak!
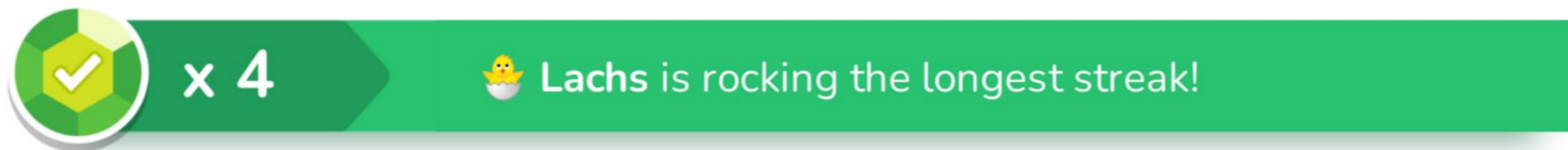
1	🐥 Lachs	353p +90
2	🙃 wievielter werde i...	344p +80
3	👽 alien	265p +89
4	👹 taube	264p +86
5	👻 Ghost	256p +85

AhaSlides

Continuous Improvement: PDCA

Plan process changes

Execute changed process

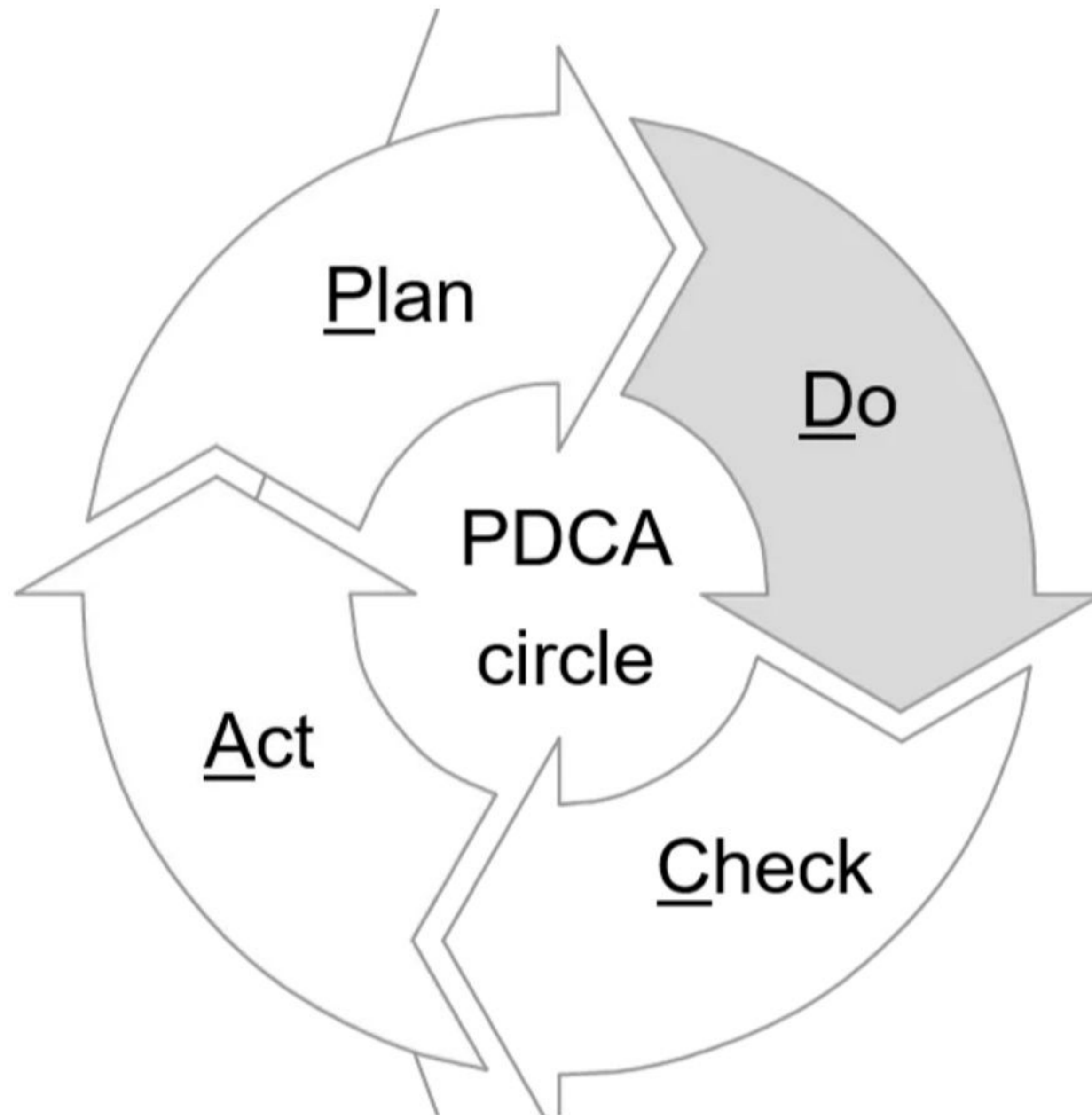Implement changed process

Measure improvement
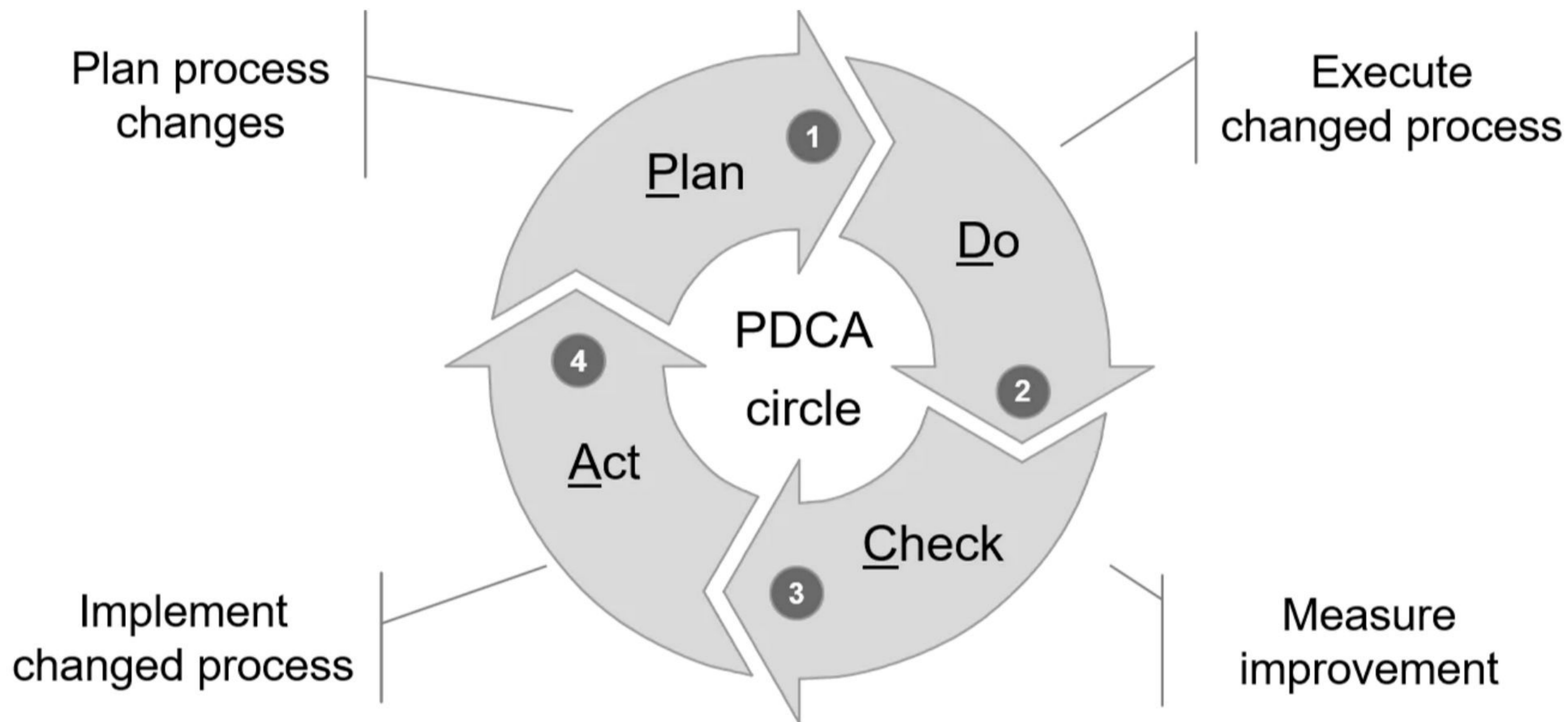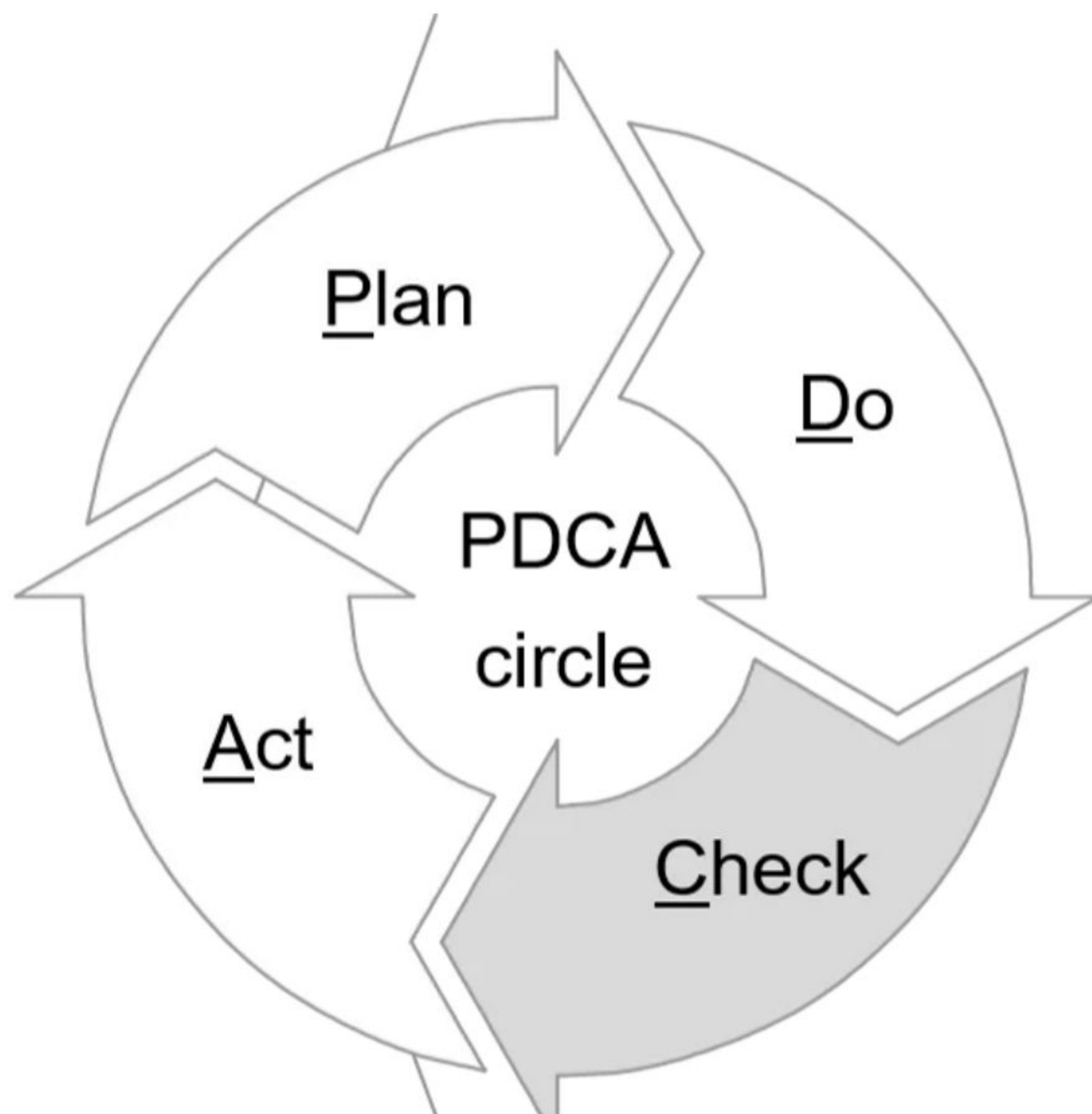
Continuous Improvement: PDCA
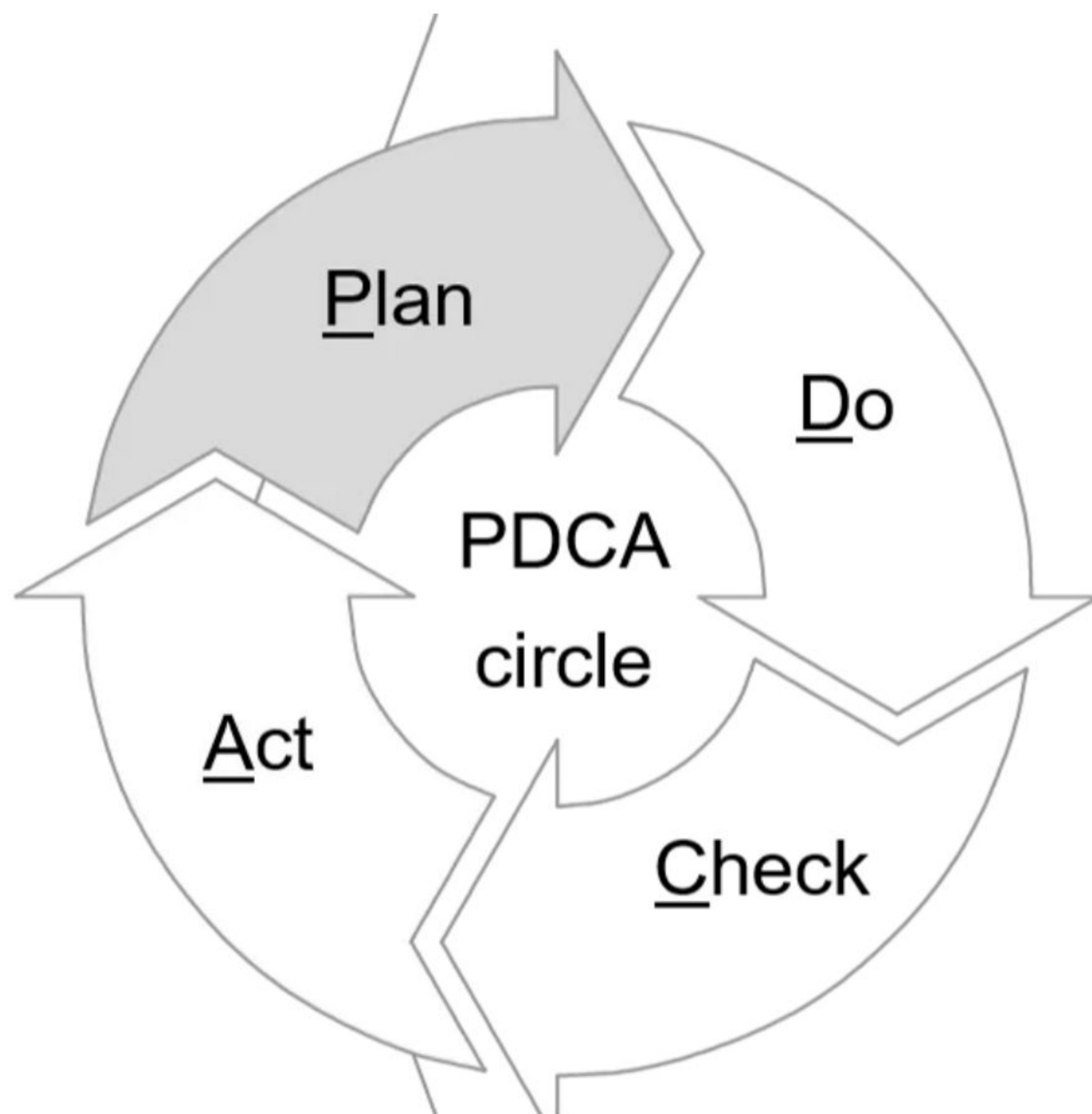
- Recognise improvement potential
- Develop solution
- Determine measurement for improvement
- Plan implementation of solution
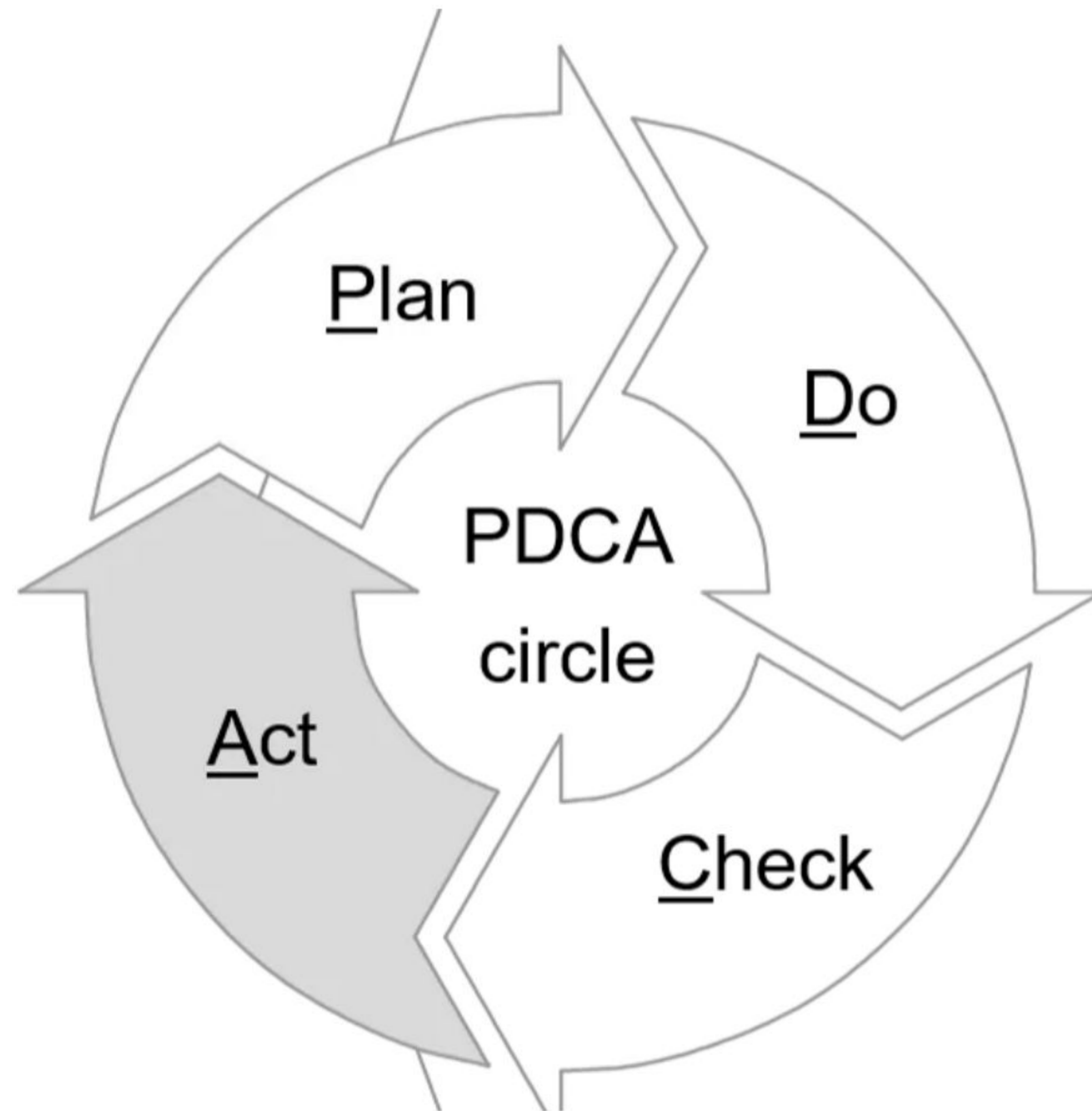
Continuous Improvement: PDCA

- Perform change as planned
- Execute process (using a sample)
- Record measurements (quality, performance)
- Document further observations (unplanned effects)
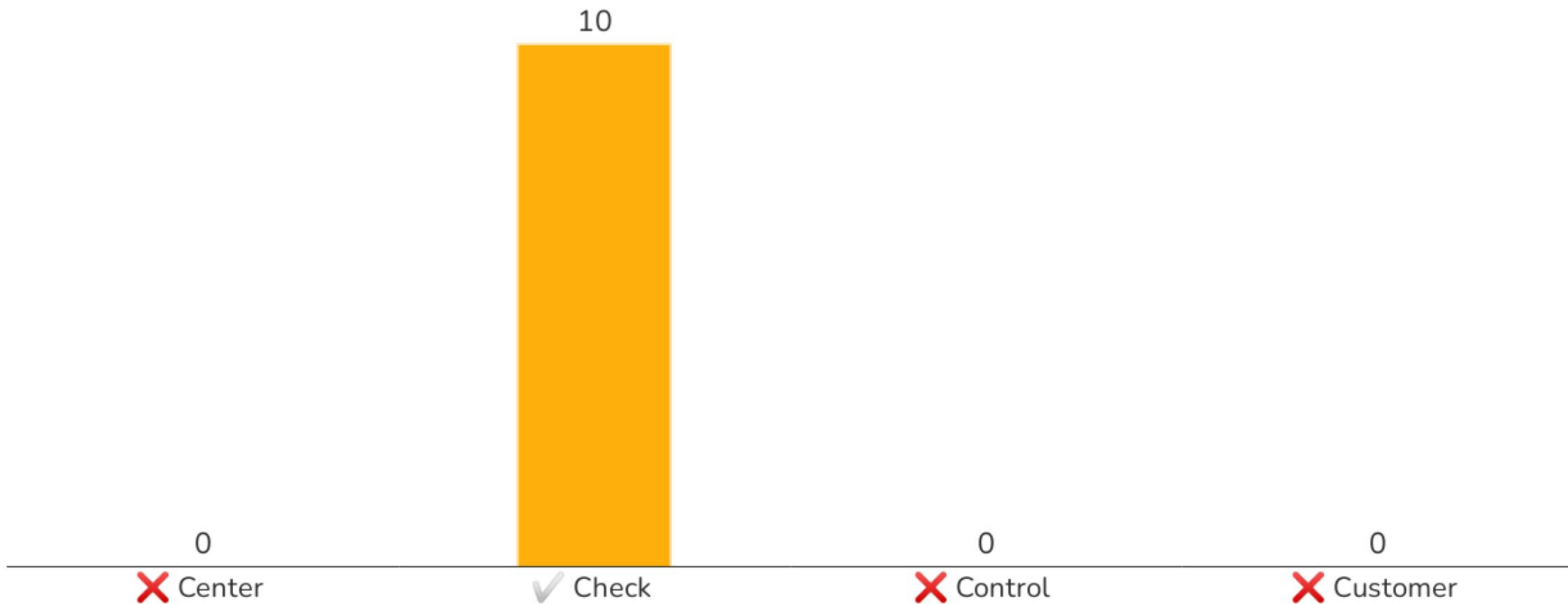
Continuous Improvement: PDCA

- Evaluate measurements
- Determine improvement
- Decide on next step, e.g.
  - Keep solution: Act
  - Abandon solution: Stop PDCA
  - Adjust solution: New PDCA

Continuous Improvement: PDCA

Plan

Do

PDCA circle

Act

Check

- Finalise change
- Continue work with improvement
- Constantly observe performance/quality

Plan	1

D	Plan process change

Check	2

B	Measure improvement

Do	3

C	Test changed procass

Act	4

A	Act with new process

Leaderboard

11 players

x 6 🙃 **wievielter werde ich** holds the longest streak record!

wievielter werde ich

🙃 **503 points**

1	🙃 wievielter werde i...	503p +66
2	🐣 Lachs	479p +42
3	👹 taube	436p +81
4	🦙 CR7	416p +85
5	👽 alien	393p +37

AhaSlides

Where we are in the lecture.

| Introduction	• Digital Transformation and Process Management • Strategy and Management • Strategic Process Management
Describe	• Describing business processes • Business process models and documentation
Measure	• Quality management and business processes • Key Performance Indicators
Analyse	• Methods and tools for analyzing processes • Improving business processes
Change	• Managing process changes • Changes in an organisation
Sustain	• Implement corporate process management • BPM Centre-of-Excellence
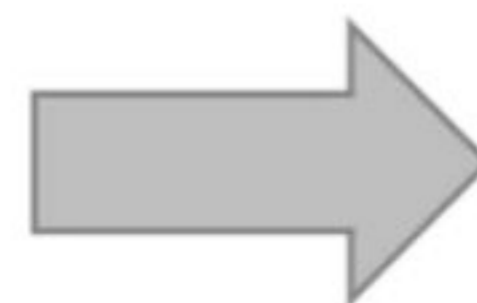
Questions and Answers

Top questions (3)

Pinned

Newest

Oldest

Answered

T taube a day ago   1 👍

Ist nächste Woche nur offline? Wenn ja, kann die Besprechung zum 2.
Assignment noch online erfolgen?

👤 Anonymous a day ago   1 👍

Wann können wir voraussichtlichen Termin für die mündliche Prüfung erfahren?

👤 Anonymous a day ago   1 👍

Für den 2.Assignment dürfen wir 12 Seiten überschreiten?