KAIZEN Step 2: "Situation Analysis"

KAIZEN Training of Trainers

KAIZEN Facilitators' Guide
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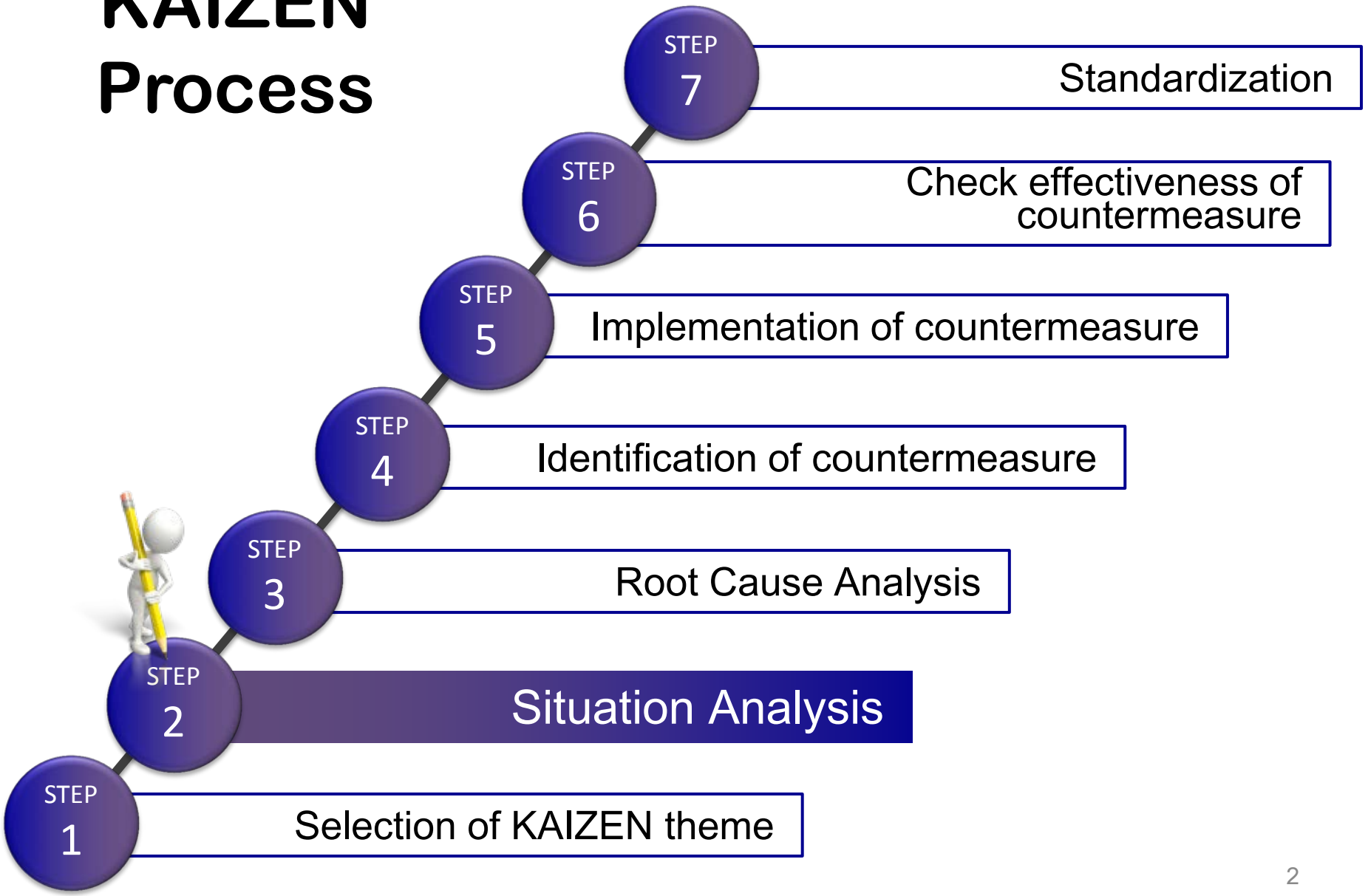
Objectives of the session

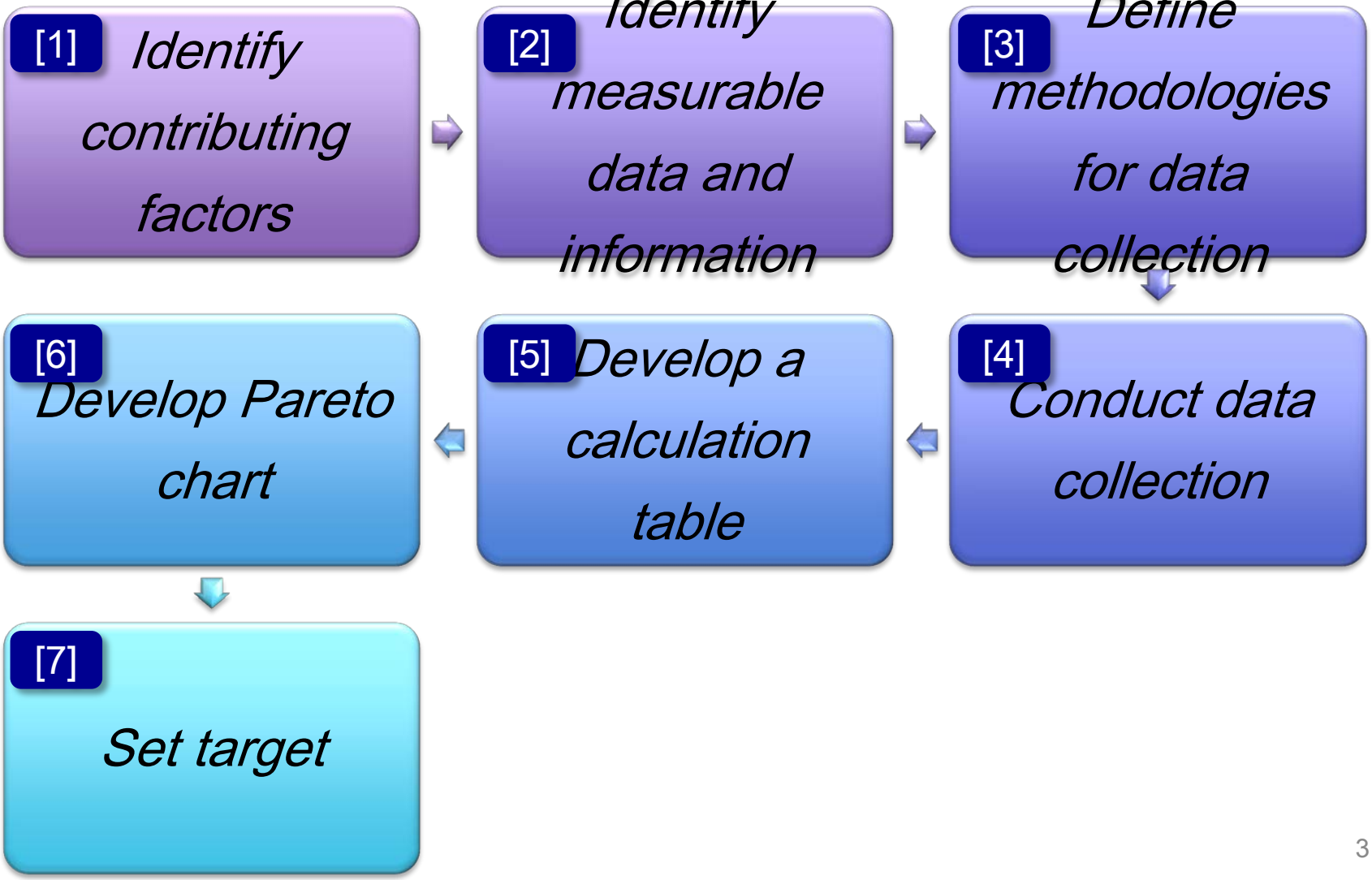
At the end of the session, trainees are able to:

1) Define what is situation analysis in KAIZEN process
2) Describe process of situation analysis
3) Describe how to develop and utilize Pareto chart properly
4) Demonstrate the process of situation analysis

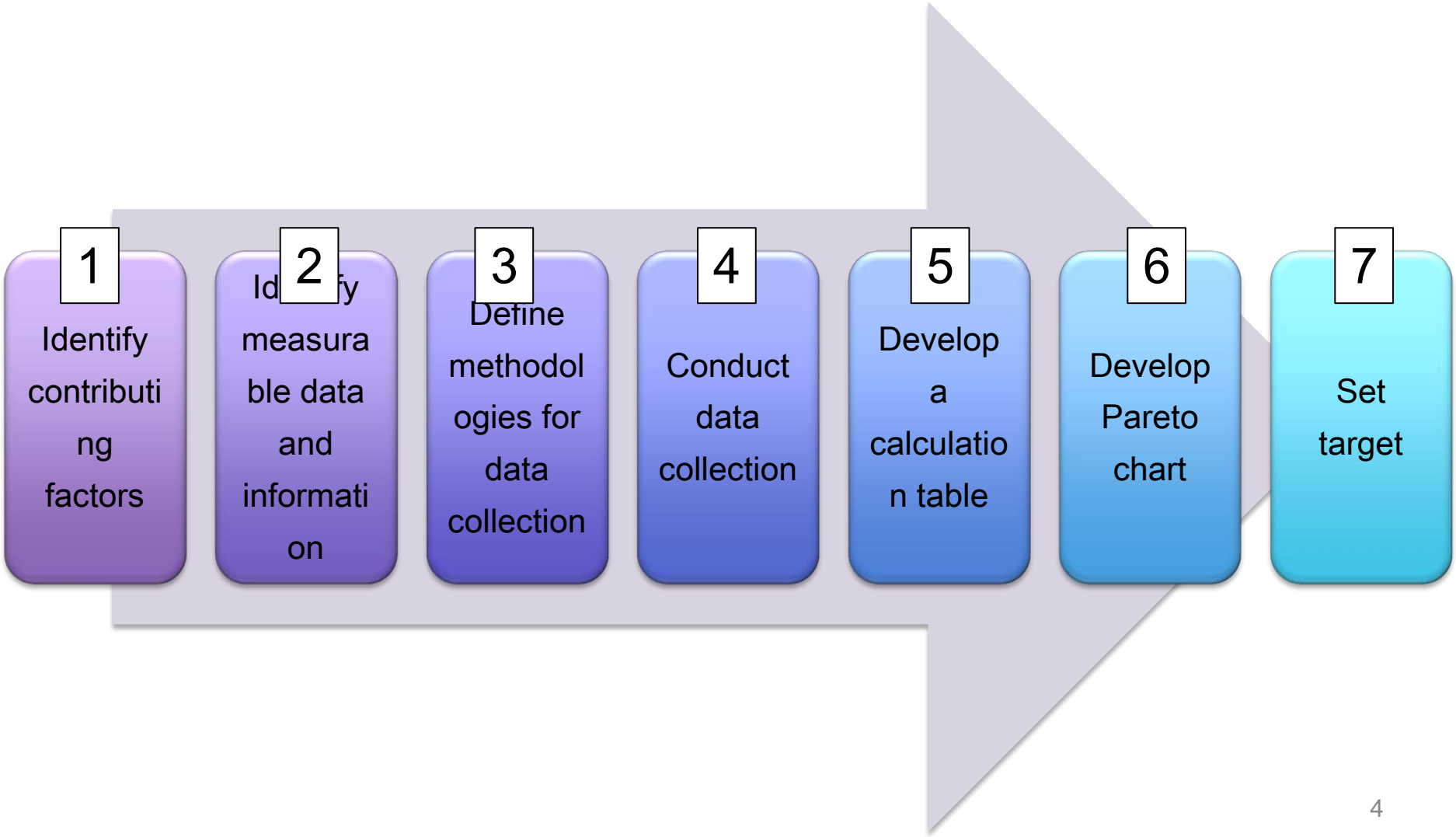
KAIZEN Process



Steps of situation analysis in KAIZEN process



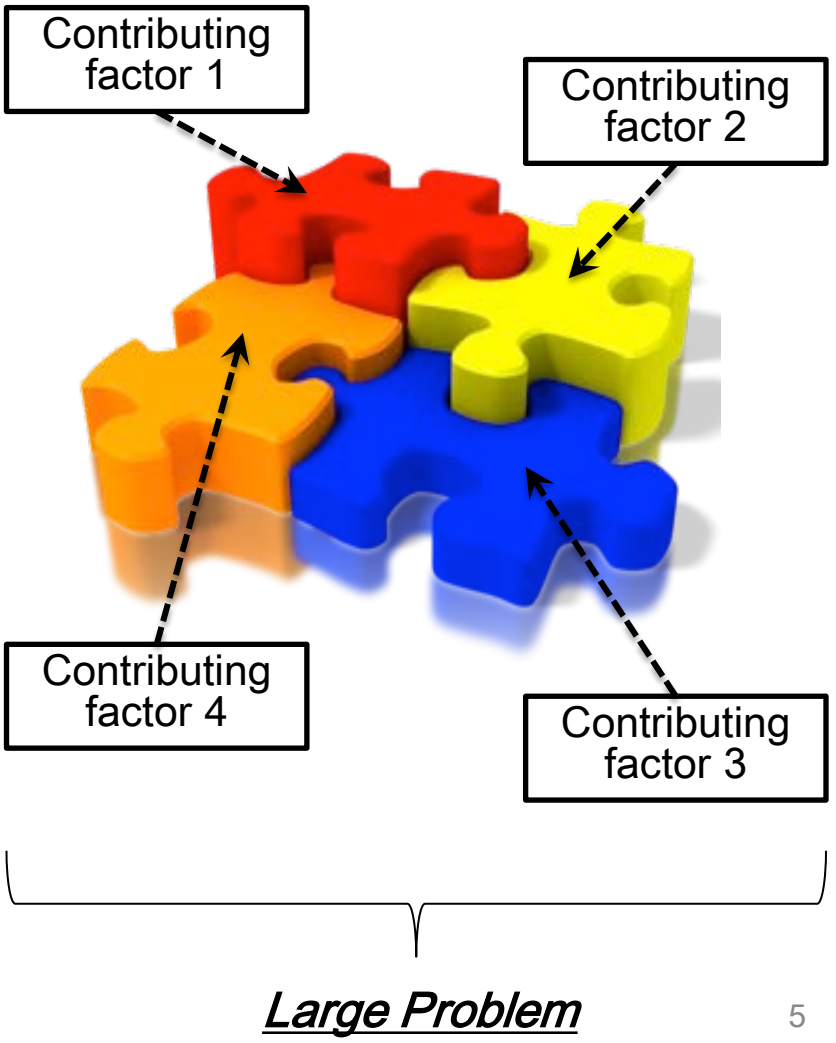
Steps of situation analysis in KAIZEN process



Steps of situation analysis (1)

1. Brainstorm to identify contributing factors of the problem (KAIZEN theme)

"Large problem" is composed of several contributing factors.



Steps for Situation analysis (2)

2. Identify measurable data and information of each identified contributing factor

3. Identify methodologies of the data collection;
   - *Period of data collection (maximum 1 months)*
   - *Kinds and number of data source: retrospective data or prospective data*
   - *Collection method*

Steps for Situation analysis (3)

4. Conduct data or information collection according to the methodologies

5. Develop a calculation table of frequency and its accumulation ratio to compile the data

Example of calculation table

*KAIZEN Theme is "**Giving wrong medication is reduced**"*

SQ #	Contributing factors	Before KAIZEN		
		Frequency	Cumulative frequency	Accumulation ratio
1	Number of giving wrong injectable medicines	25	25	46%
2	Number of giving wrong inhale medicines	16	41	76%
3	Giving wrong oral medicines	6	47	87%
4	Giving wrong volume of insulin	5	52	96%
5	Number of giving wrong ointment	2	54	100%
	Total	54	-	-

Descending order

Calculation formulas will be explained on the next slide

Points of development of calculation table

- Contributing factors will be put in descending order of its frequency
- Cumulative frequency = (its frequency) + (the previous cumulative frequency)
- Accumulation ratio = (each cumulative frequency) ÷ (Grand total of frequency) × 100

Please see next slide!!

Steps for Situation analysis (4)

6. Develop “Pareto chart” based on the data table, to identify prior contributing factor(s) to be solved

SQ #	Contributing factors	Before KAIZEN		
		Frequency	Cumulative frequency	Accumulation ratio
1	Number of giving wrong injectable medicines	25	25	46%
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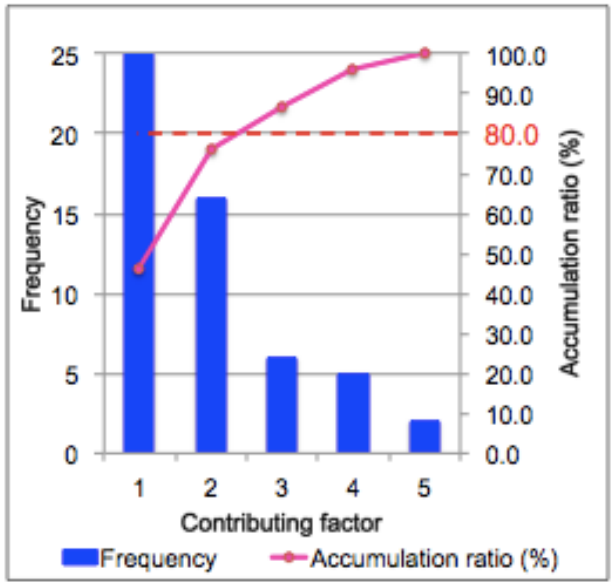
	Total	54	-	-

“Calculation table”

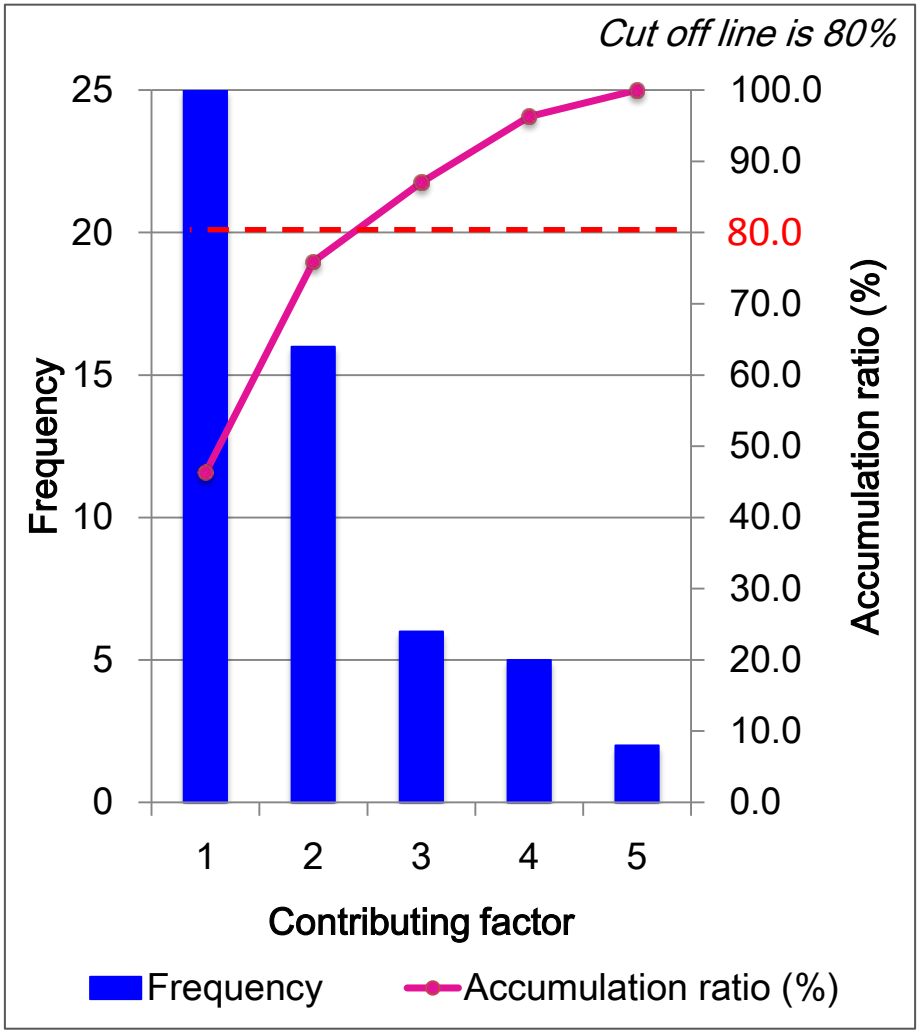


“Pareto chart”

What is Pareto chart?

- *It is a type of chart that contains both bars and a line graph, where individual values are represented in descending order by bars, and the cumulative total is represented by the line*
- *One of the seven basic tools of quality control*

http://en.wikipedia.org/wiki/Pareto_chart



Example of Pareto chart

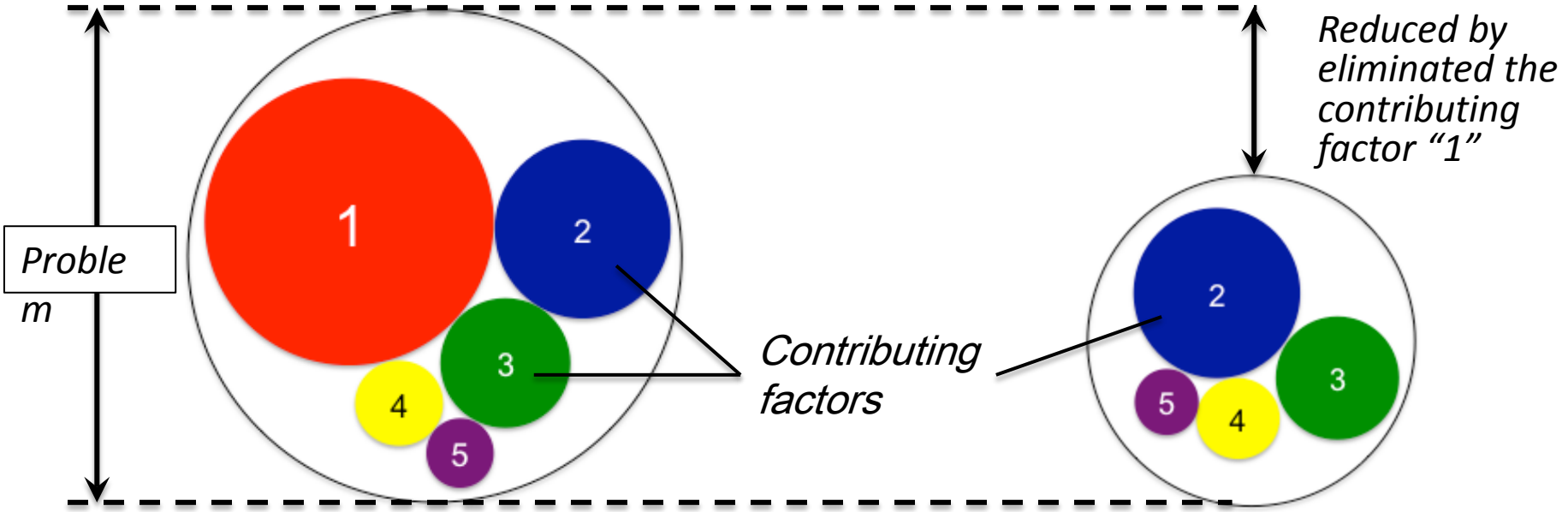
Pareto principle

Vilfredo Federico Damaso Pareto, Italian economist, developed this concept

- It is also called as **"80:20 rule"**
- It is a technique helps to identify the top 20% that needs to be addressed to resolve the 80% of the problems

Necessity of Pareto chart in KAIZEN Process

- To identify “large contributing factors”
- If the large contributing factor(s) is solved, the situation with the problems will be improved effectively and easily



Situation with problems before KAIZEN (100% of the problem)

Situation with problems after KAIZEN (reduced problem)

(Example) Data table and **Pareto Chart**

Maximum number of the axis shall match with the frequency of the first faactor

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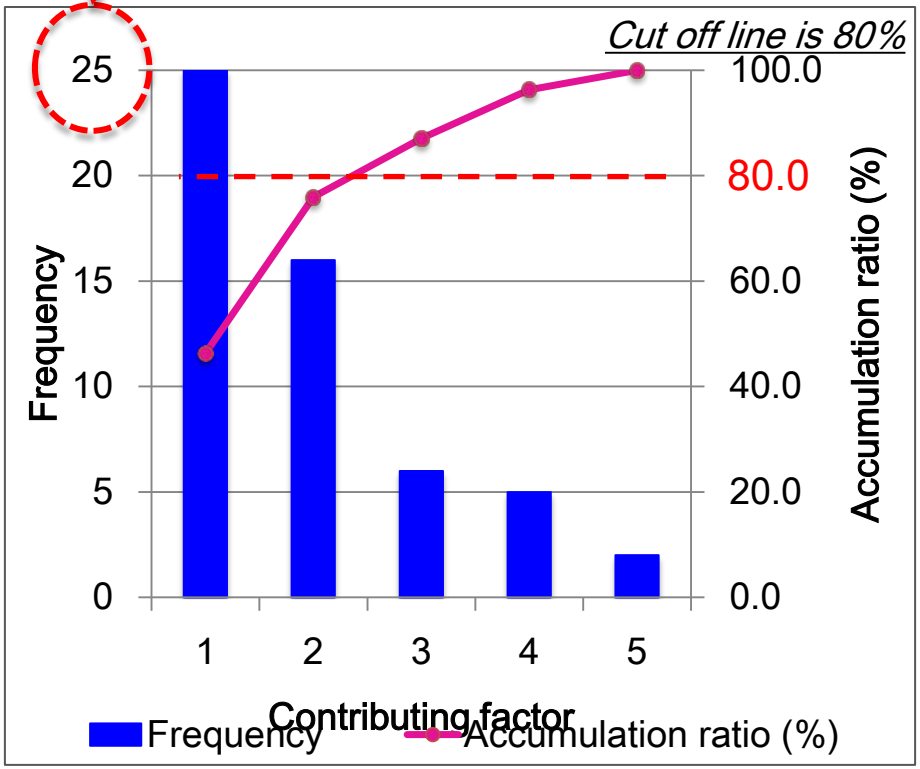
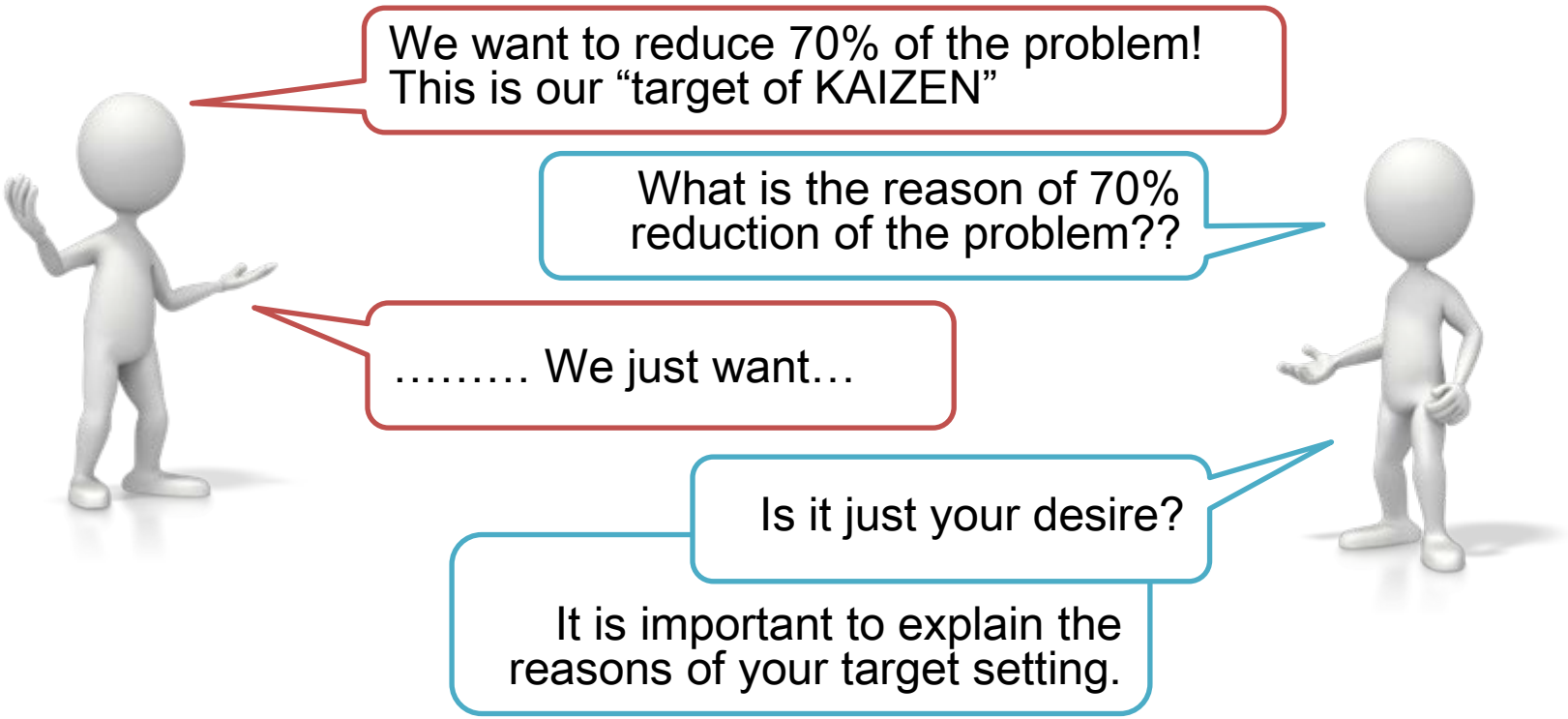


- *Period of data collection: 31st January 2014 to 30th February 2014 (30 days)*
- *Data source: medication and treatment chart*
- *Number of investigated patient (chart): 50*

Methodologies of data collection need to be described clearly.

Target setting

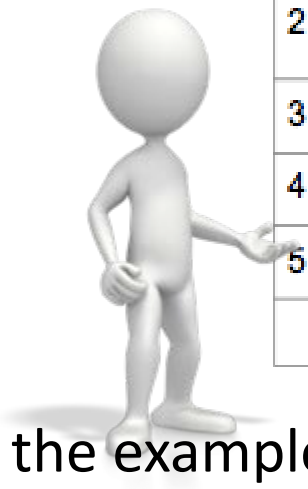
- The last step of KAIZEN Step 2 is “target setting”
- “Desire” and “target” is different



Pareto rule can be useful for target setting

Ideally, 80% of the problem (vital few) is the target of the KAIZEN based on Pareto rule.

But it is difficult!!



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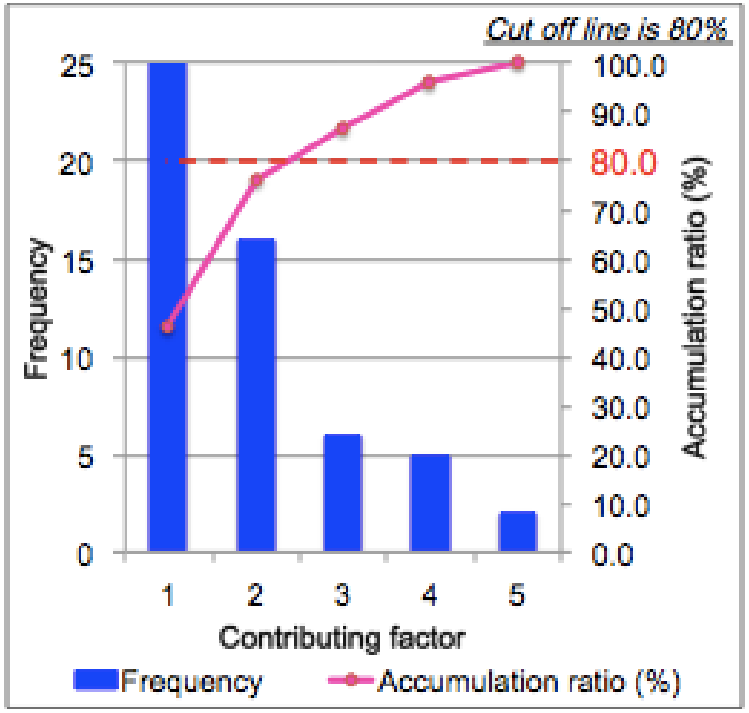

In the example above, if your target is

- "46% reduction" *it means to solve all of the 1st contributing factor*
- "87% reduction" *it means to solve all of the 1st, 2nd and 3rd contributing factors)*

Cont.

Target setting	
By when?	By September
What?	Number of giving wrong injectable medicines
How?	46% reduction

** Do not forget: Need to consider "the problem is still remained even if you achieve your target*

Thank you for listening