Talent Academy
Empowering future leaders
An initiative of excelencia

excelencia
People First IT Services Ecosystem

EPIC

Effective Professional Inspiring Competent

Project Management

Fundamentals

Quality Management

Agenda

- Quality Management
- Cost of Quality
- Total Quality Management (TQM) Tools
- Root Cause Analysis
- Verification & Validation

Quality Management

Talent Academy
Empowering future leaders
An initiative of excelencia

Let’s Think about Quality

Customer Requirement:

I want 100 squares of white chart paper with dimensions 5”x5” in 5 days

How will you ensure that you meet the customer’s requirement?

Quality

To improve the quality of the deliverable, what all requirements did you focus on?

Quantity	Dimensions	Colour	**Specified**
No Creases	Clean Paper	Neat edges	**Inherent**

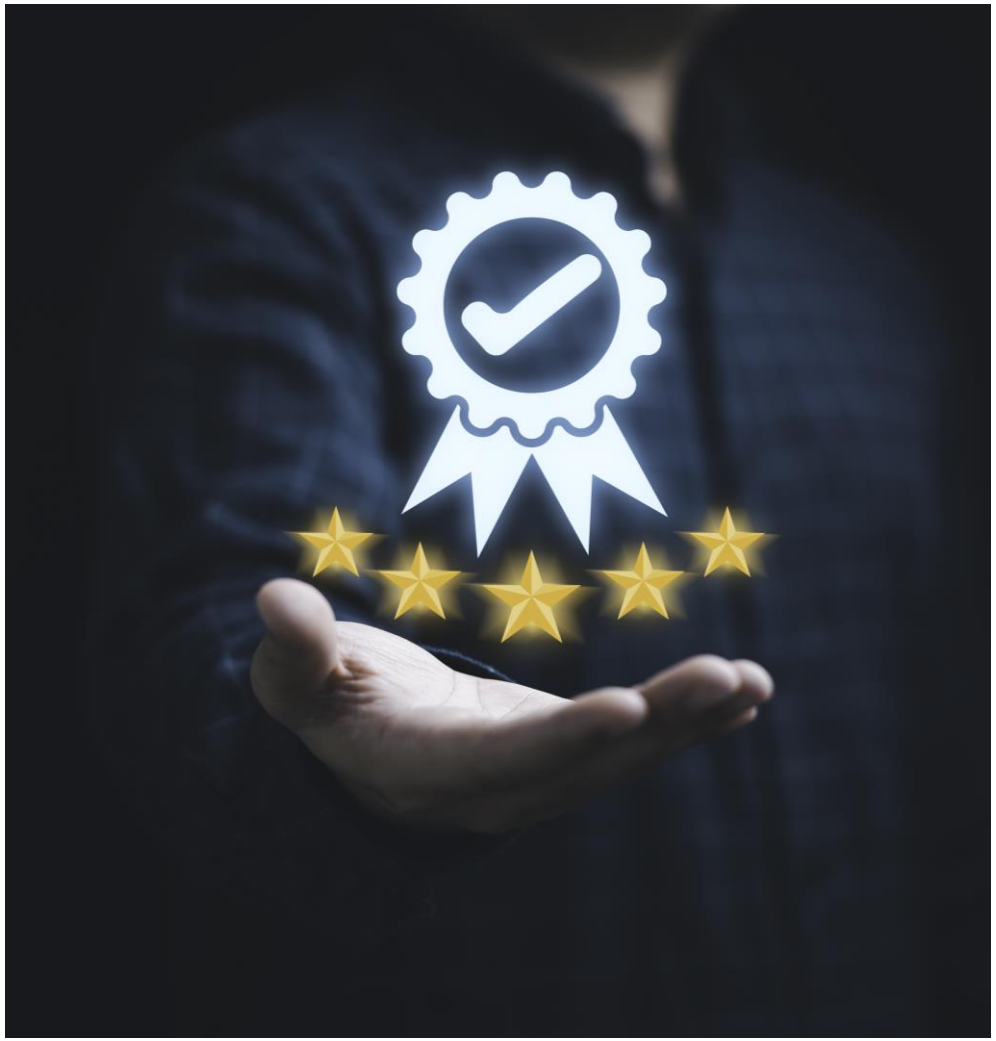
Quality

The degree to which a set of

specified & inherent

characteristics fulfill

requirements.



Quality Management

Creating and following

policies and procedures

to meet the project's

defined quality needs.

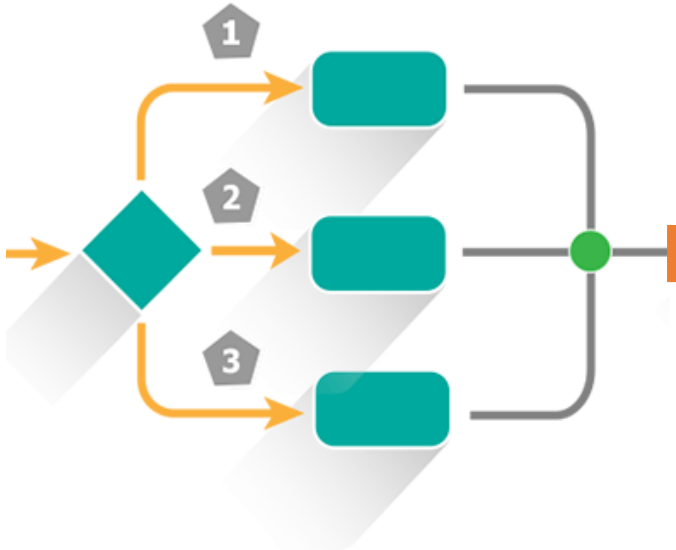
Quality Management

Planning	• **Plan Quality Management** – quality related processes & activities are planned
Executing	• **Manage Quality** – quality assurance is done to ensure that defined quality processes are being followed
Monitoring & Control	• **Control Quality** – periodic checks to check the quality & ensure improvements

What is the difference?

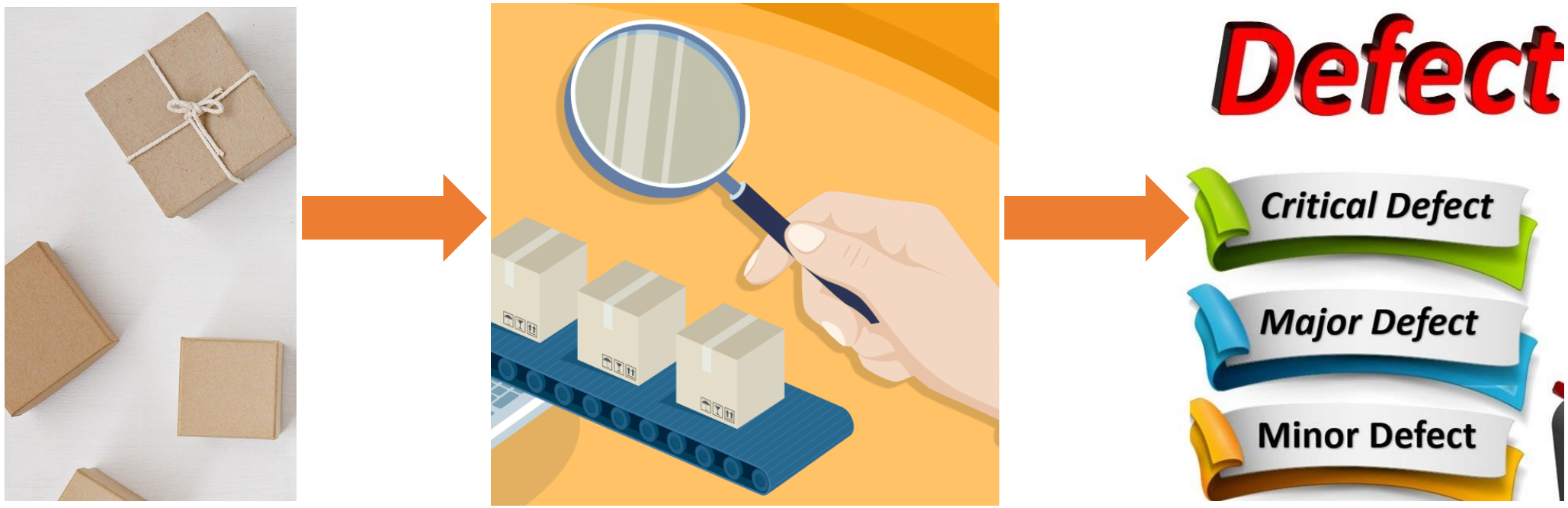
Quality Assurance

Auditing the quality Process to identify Process Gaps
i.e. deviations from defined quality processes



Quality Control

Inspecting the Product to identify Defects
i.e. deviation from specifications & requirements



Quality Assurance (QA) vs Quality Control (QC)

Cost of Quality

Talent Academy
Empowering future leaders
An initiative of excelencia

Cost Of Quality (CoQ)

Cost of Conformance

Money spent during project to avoid failure

Prevention costs (Build a quality product)
- Training
- Document processes
- Equipment
- Time to do work “right”

Appraisal (quality assessment)
- Testing
- Inspections

Money spent during/after project because of failures

Internal failure costs
- Rework
- Scrap

External failure costs
- Liabilities
- Warranty work
- Lost business

Cost of Non-Conformance

Total Quality Management (TQM) Tools

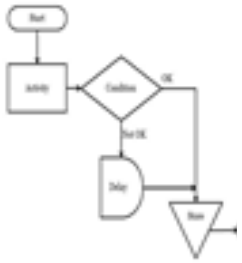
Talent Academy
Empowering future leaders
An initiative of excelencia

QC Tools

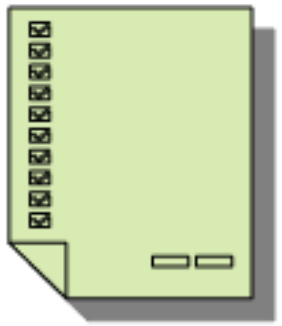
It is believed that the **7 QC tools** were introduced by Kaoru **Ishikawa** in postwar Japan, inspired by the seven **famous weapons of Benkei**.

Benkei was a Japanese warrior monk who owned 7 weapons which he used to win all his battles.

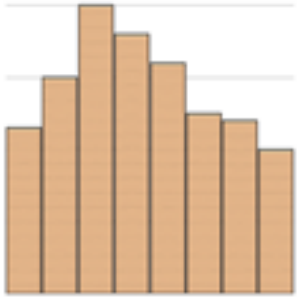
Process Flow Chart



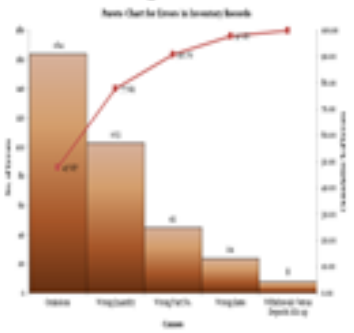
Check Sheet



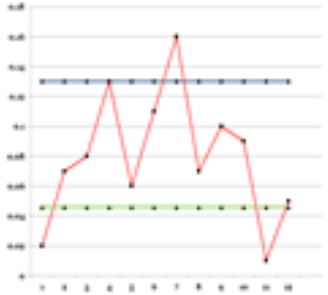
Histogram



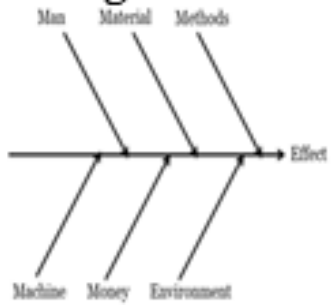
Pareto Analysis



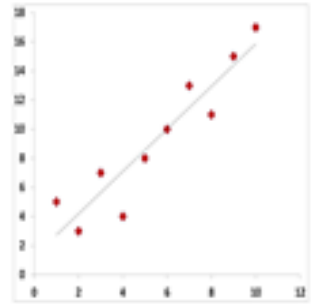
Control Charts



Cause and Effect Diagram

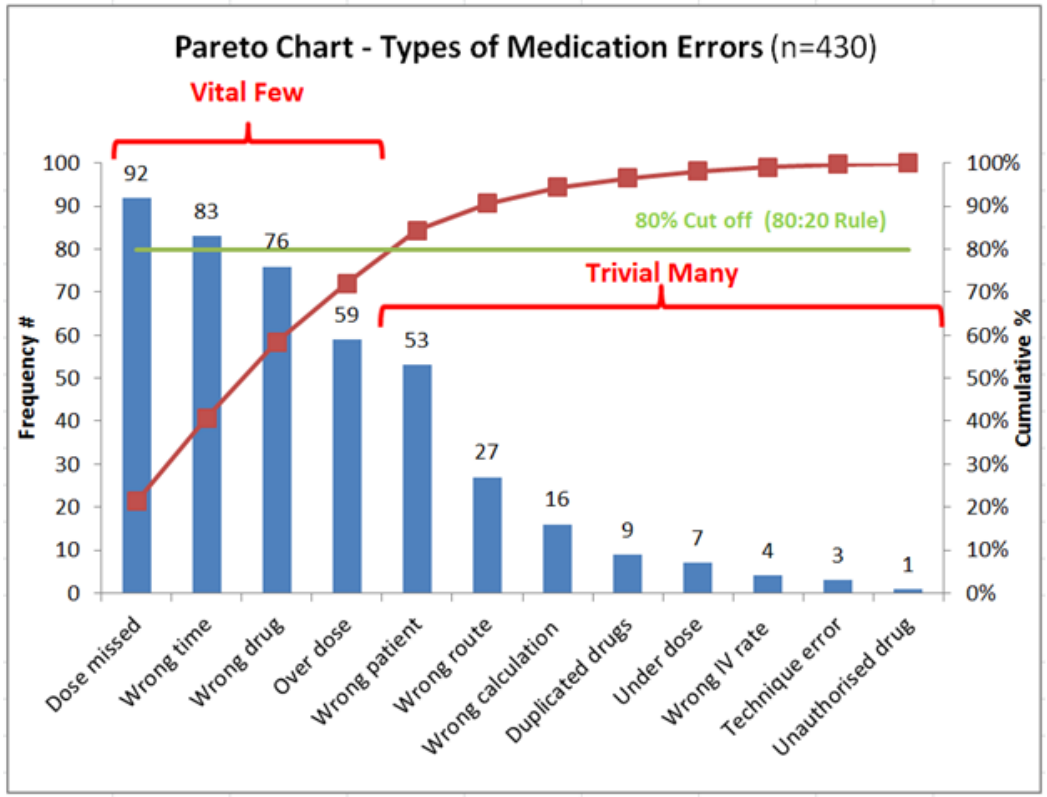


Scatter Diagram



Pareto Chart

Find the causes which are contributing to maximum problems / defects



80-20 Rule

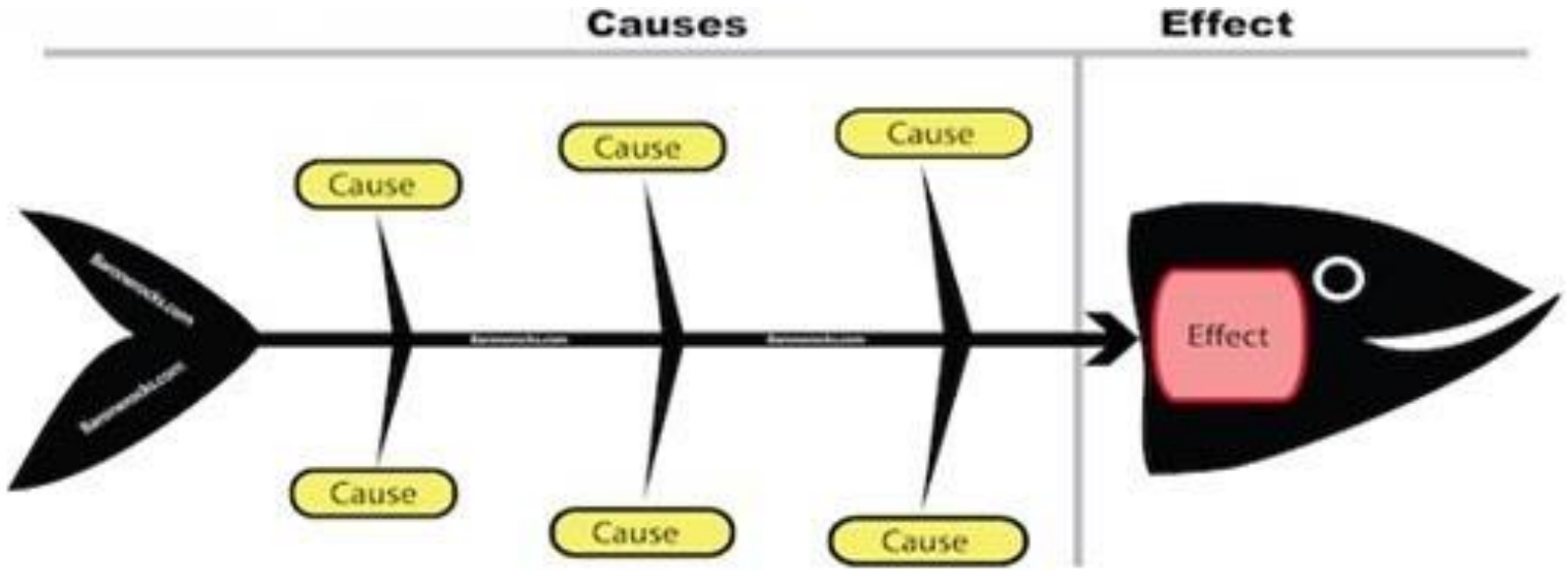
80% of the problems are due to 20% of the root causes

Root Cause Analysis

Talent Academy
Empowering future leaders
An initiative of excelencia

Fish Bone Diagram

Pictorial presentation of the causes for a certain effect by brainstorming



aka **Cause & Effect Diagram** or **Ishikawa Diagram**

Activity

The vehicle will not start.

How will we find out Why!?

Talent Academy
Empowering future leaders
An initiative of excelencia

Why-Why Analysis

Failure Definition: The vehicle will not start.

1. Why? – The battery is dead. (First why)

2. Why? – The alternator is not functioning. (Second why)

3. Why? - The alternator belt has broken. (Third why)

4. Why? – The alternator belt was beyond its useful service life and not replaced. (Fourth why)

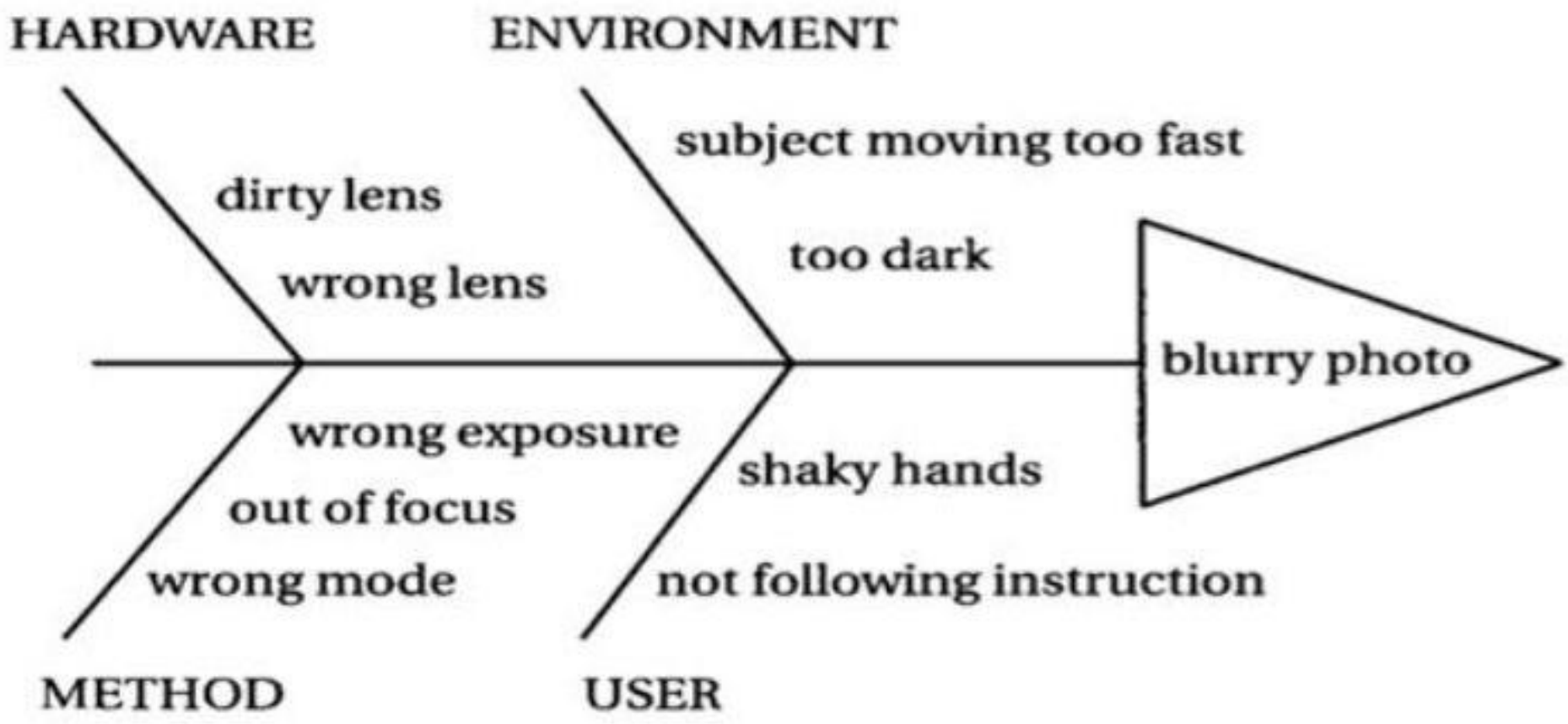
5. Why? – The vehicle was not maintained following the service schedule. (Fifth why, a **root cause**)

The last answer, Root Cause, should point toward what failed: 5M+1E

Man | **Machine** | **Measurement** | **Method** | **Material**

Environment

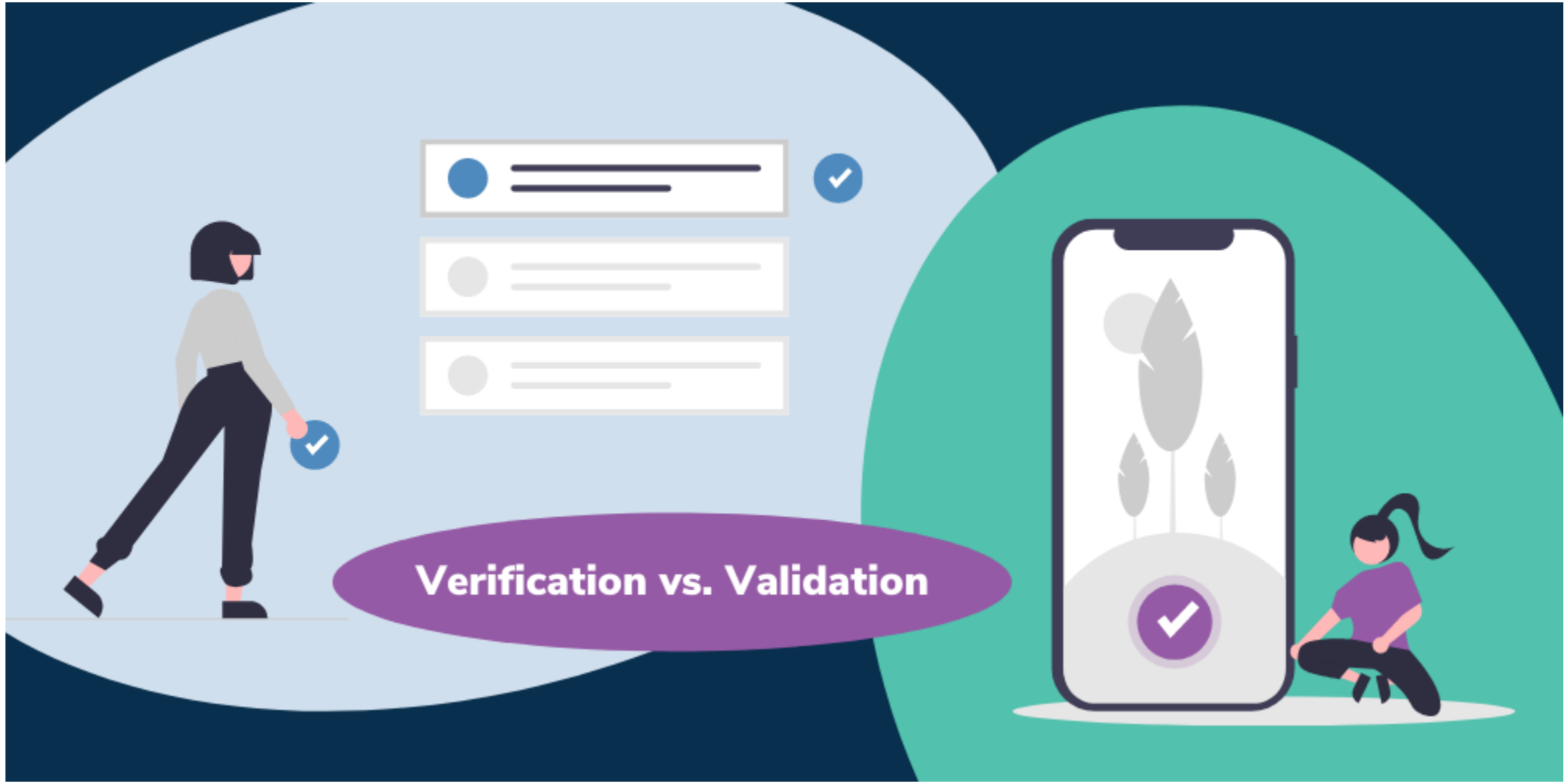
Example


HARDWARE
ENVIRONMENT
dirty lens
wrong lens
subject moving too fast
too dark
blurry photo
wrong exposure
out of focus
wrong mode
shaky hands
not following instruction
METHOD
USER

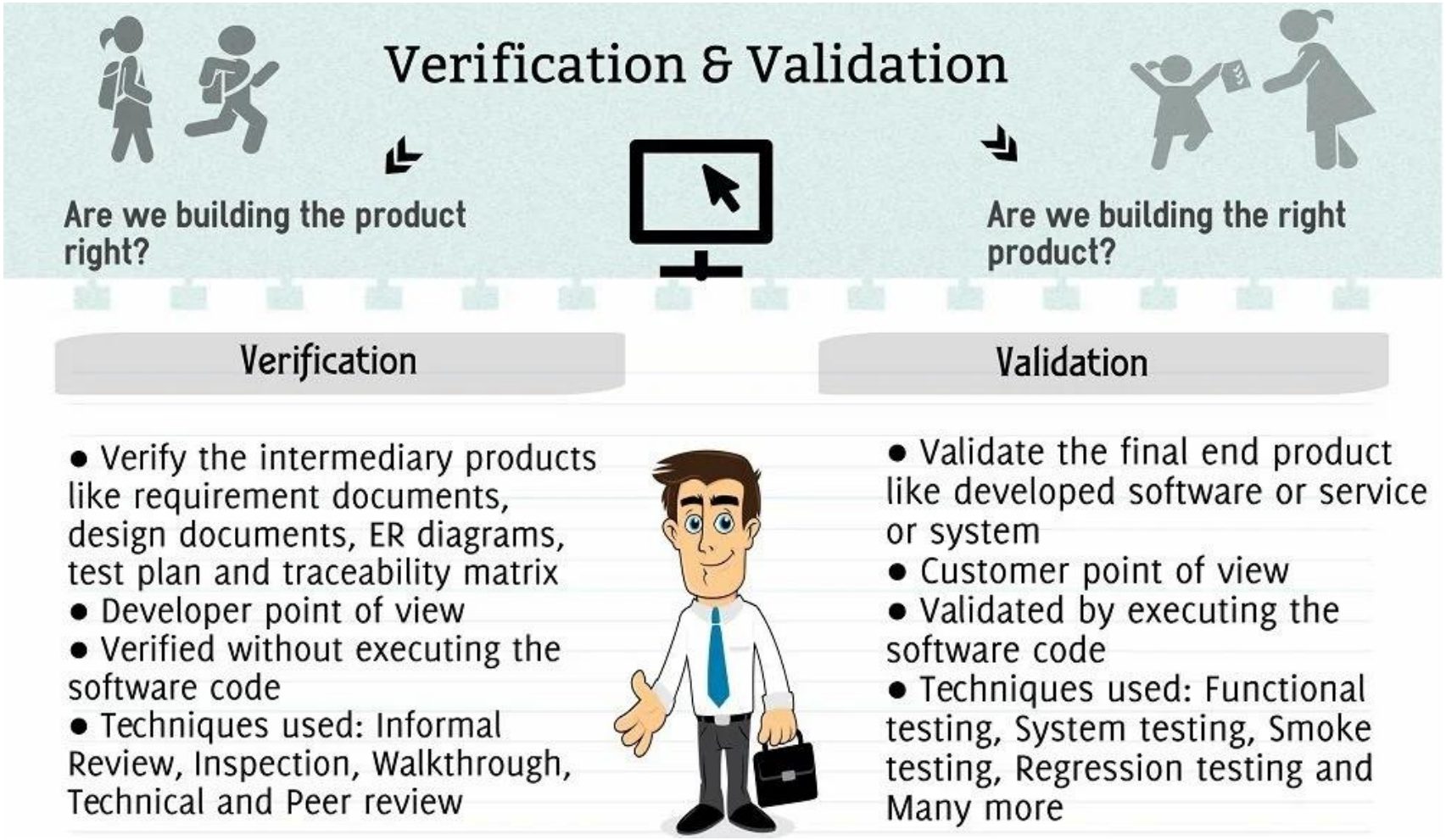
Verification & Validation

Talent Academy
Empowering future leaders
An initiative of excelencia

Verification vs Validation



Verification vs Validation



Key Take-aways

Note down the top 3 Key Take-aways for you from this session

Thank You

Talent Academy

Empowering future leaders

An initiative of excelencia

https://www.linkedin.com/company/talent-academy-taualpha/