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14 Dec 2020

"MyCure : Lean Six Sigma Problem Solving Approach MPC Training Video Series.

By:
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TRAINING OBJECTIVES:

This video training is aimed to help participants to master MyCure principles and Lean Six Sigma methodology. As organizations strive for continuous improvement, they seek individuals that can employ problem solving and business know-how to enhance internal processes. This training will position participants of the training to take the lead in quality management projects.

Presentation Coverage

Module 1: Introduction to administrative red tape problems, MyCure philosophy and Lean Six Sigma Problem Solving Methodology.

Module 2: Define Phase-understanding the problem.

Module 3: Measure Phase- what the baseline and current performance.

Module 4: Analyze Phase- search for the root cause

Module 5: Improve and Control Phase- what need to be done and how to sustain it.

Module 1

GOOD REGULATION

Efficiency
in service

Protects
consumers, employees, industries and the environment

Prosperity
to society and nation

Regulations – and the inspections and bureaucracy that go with them – have piled up.
This has hurt business, doing real damage to the economy.

Legal is not the key issue….

REGULATORY DELIVERY

the means by which policy expertise and practical experience are brought together to ensure that regulation is **effectively delivered in ways that reduce burdens on business,** save public money and properly protect citizens and communities.

UK Government

An evidence based approach to establish trust by, of and in the regulated community and respond in a manner that is aimed at achieving the intended regulatory outcomes

-Proposed Definition by the International Network for Delivery of Regulation

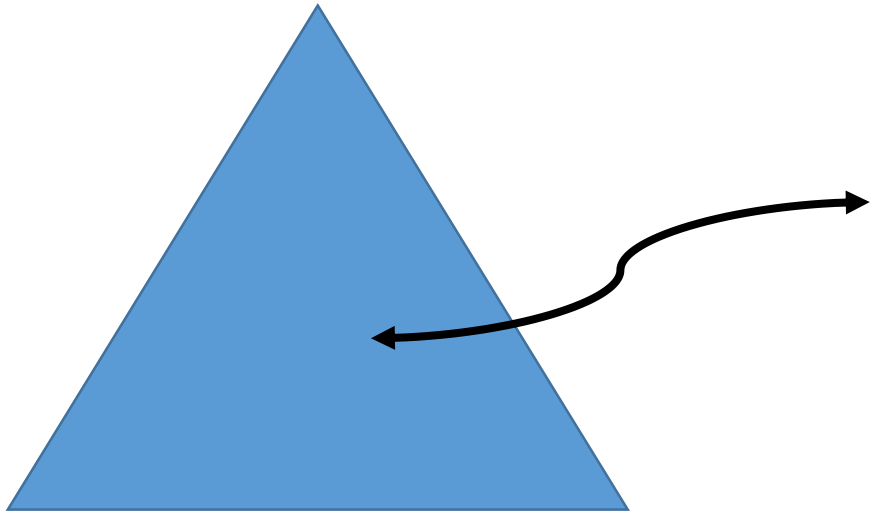
REGULATORY DELIVERY – RELEVANCY CRISIS

- **Agency "Overload"**
  - Overlapping mandates across agencies
  - Conflicting requirements
  - Misalignment with business models
  - Territorialism - National/sub-national/municipal

- **Mandate "Conflict"**
  - Public protection
  - Economic growth
  - Consumer choice
  - Political "wind"

Regulatory Delivery Issues…

stakeholders



Solutions

Issues

Value, Efficiency and Impact

Speed, Documents, Cost

Economic Impact…regulatory burdens…..

MyCure - How we do it..

1- We use Lean Management principles to learn how to identify waste in order to design faster and responsive processes.

2- We use Six Sigma principles to improve stakeholders satisfaction by delivering better services on a consistent basis.

We utilized a LEAN SIX SIGMA Culture and Methodology by emphasizing People/Team Ownership and Skills Development

What does MyCure actually brings ?

MyCure methodology are like teaching people **how to fish**..

Process mapping, data mining and data analysis in MyCure teach people **where** to fish"...

Read article:

http://www.leansixsigmabelgium.com/what-is-lean-six-sigma/

“What gets measured, gets managed.”

- Peter Drucker

MAKE WASTE MORE VISIBLE…..

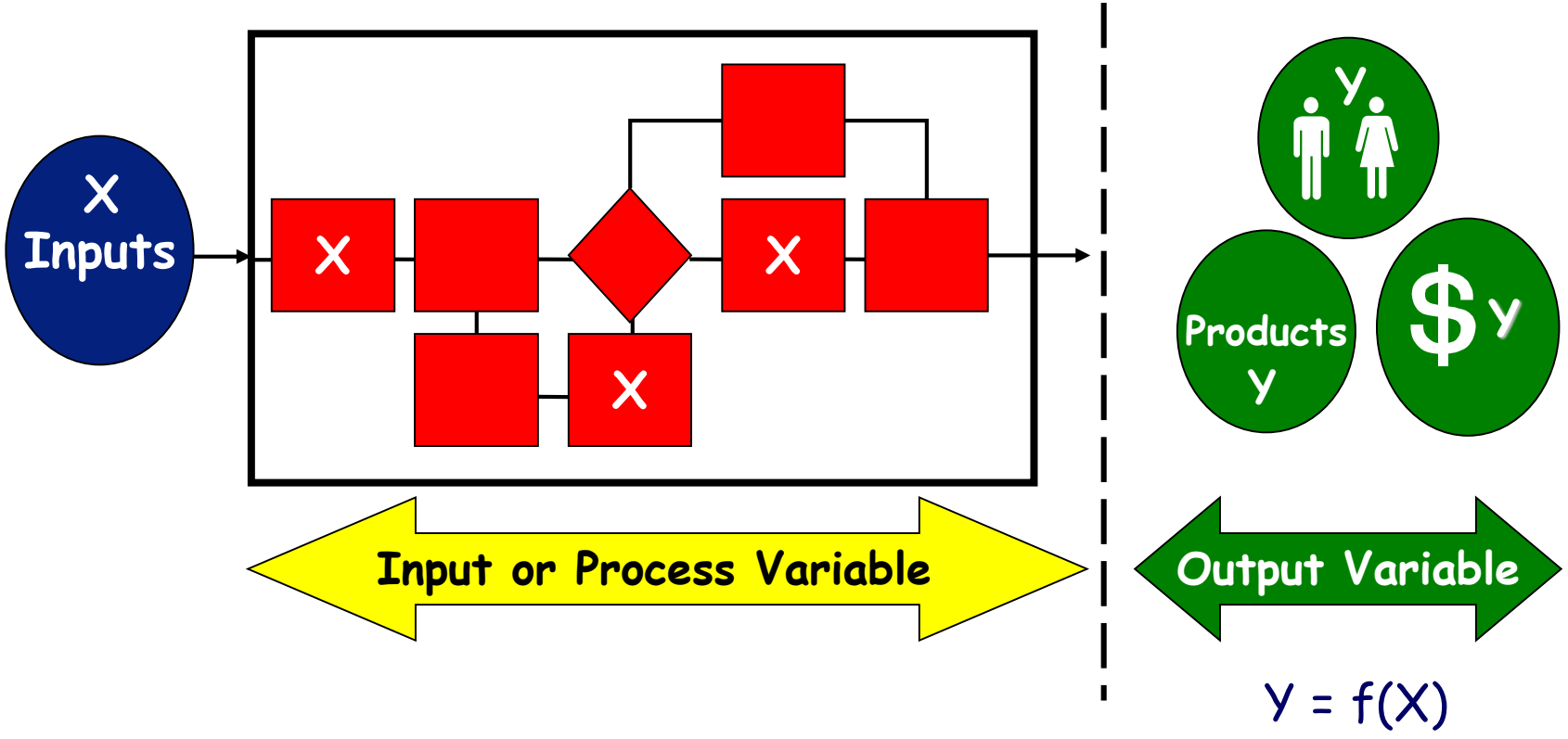
MyCure Philosophy on WASTE

Waste is defined as anything that **does not- add value** for the STAKEHOLDERS-waiting, over processing, defect, transportation etc.

"MyCure Thinking" requires an organizational/team culture that is **intolerant of all forms of waste.**

The goal of MyCure is to banish waste within the process.

MyCure Model

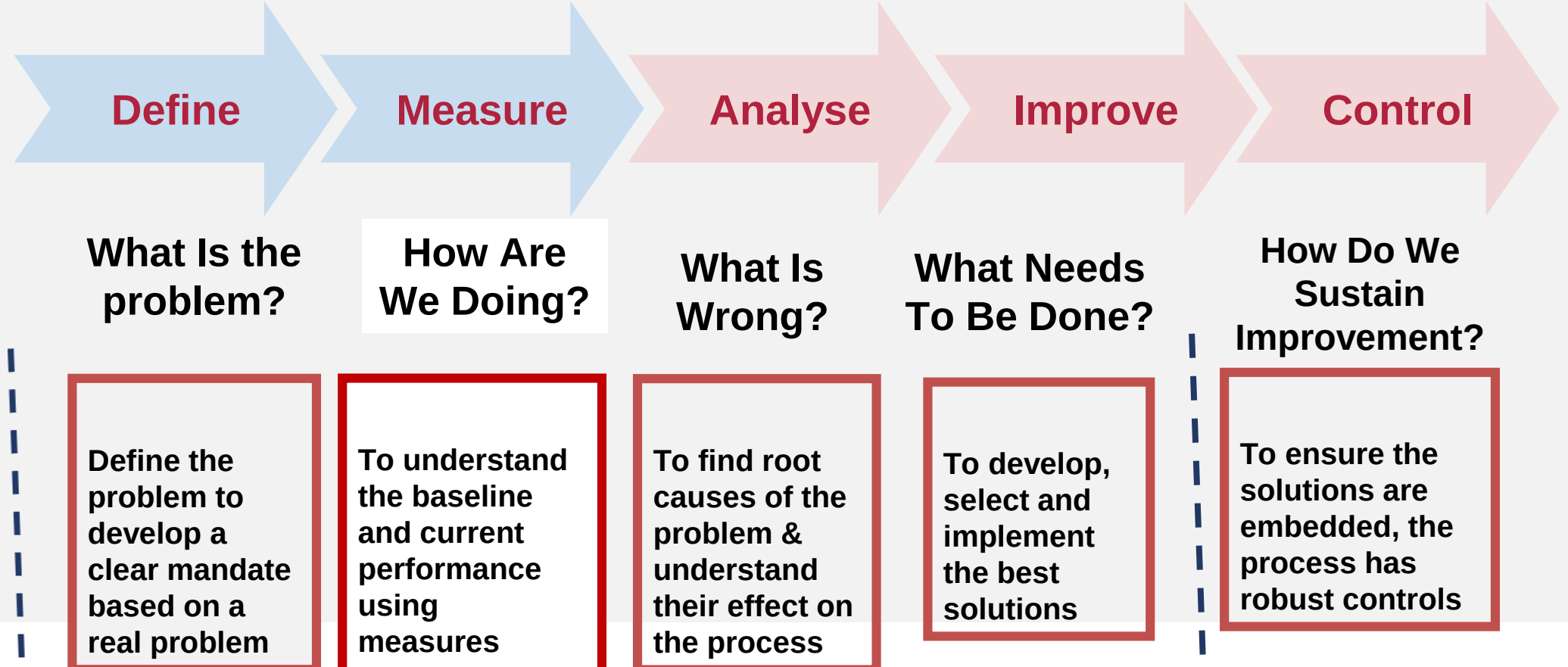


= CTQ
The Problem..

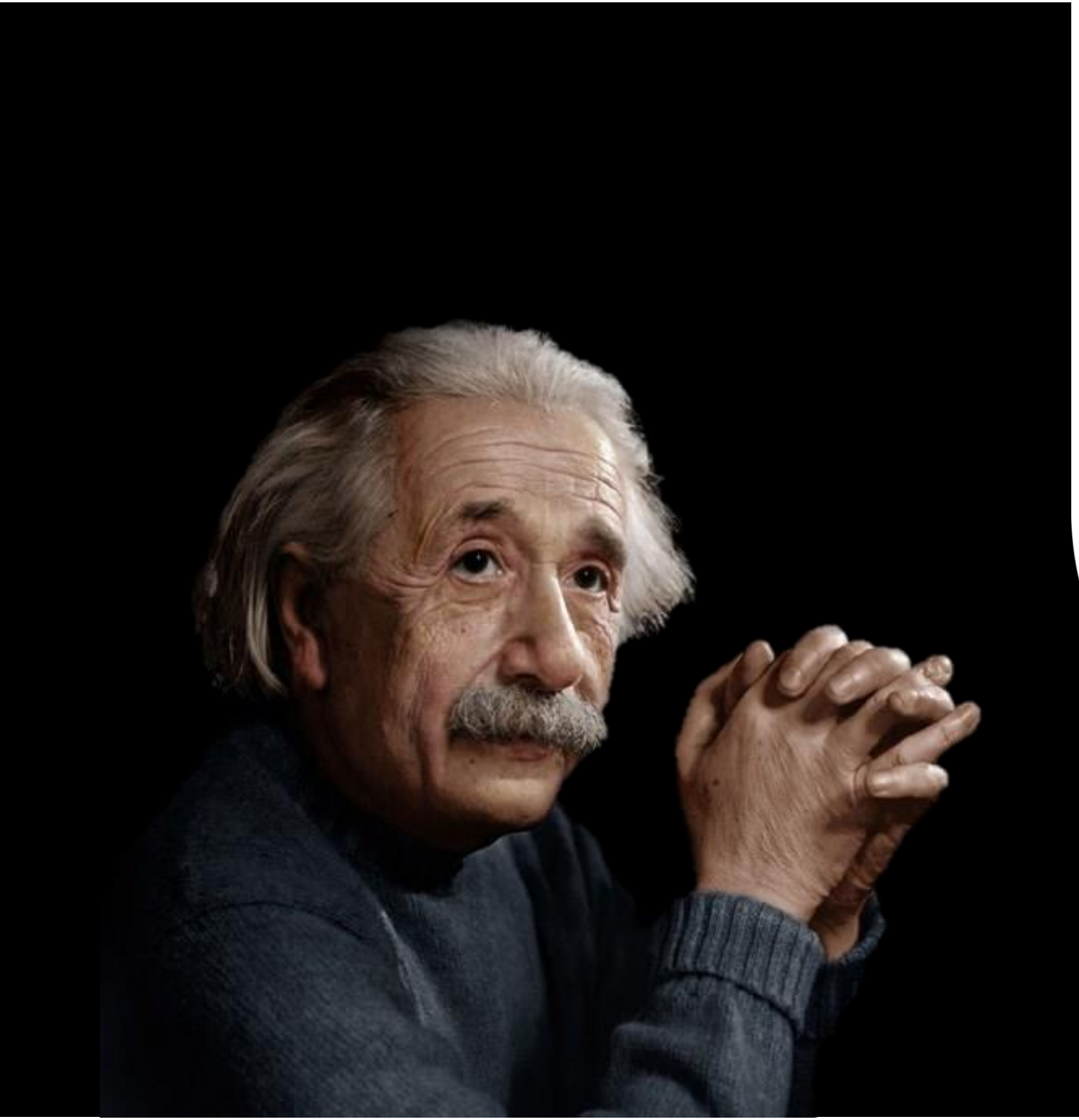
MyCURE focuses on the processes-find the Xs

The step-by-step approach (DMAIC)

FACT BASED DECISION MAKING….NEVER RUSH INTO A SOLUTION



Module 2



Problem Solving

“If I were given one hour to save the world, I would spend 59 minutes defining the problem and one minute solving it”

Albert Einstein

– Physicist –

MyCure PHASE 1: DEFINING AND QUANTIFYING THE ISSUES

I have to wait <u>too long</u> to see the doctor!

<u>Subjective</u>: "Too Long"

<u>Quantitative</u>:"total minutes lapsed until meeting the doctor"

DEFINING PROBLEM

S	M	A	R	T
Specific	**Measurable**	**Assignable**	**Realistic**	**Time-Bound**
Clear, simple and concise	To measure the accomplishment	Ambitious, not impossible	Related to capabilities	Short, subject to change
WHAT	**HOW MUCH**	**HOW**	**WITH WHAT**	**WHEN**

PROBLEM STATEMENT

As a company, we are experiencing a *problem* with: _____.
The *area* where this problem is occurring is: _____ . The problem has *existed* for at least:_____. The *magnitude* of the problem is: _____ and the *expected performance* is: _____. The *effect* this problem is having on our business is: _____. This is *costing* us a much as $_____ per_____.

Good Problem Statement Examples

Case 1

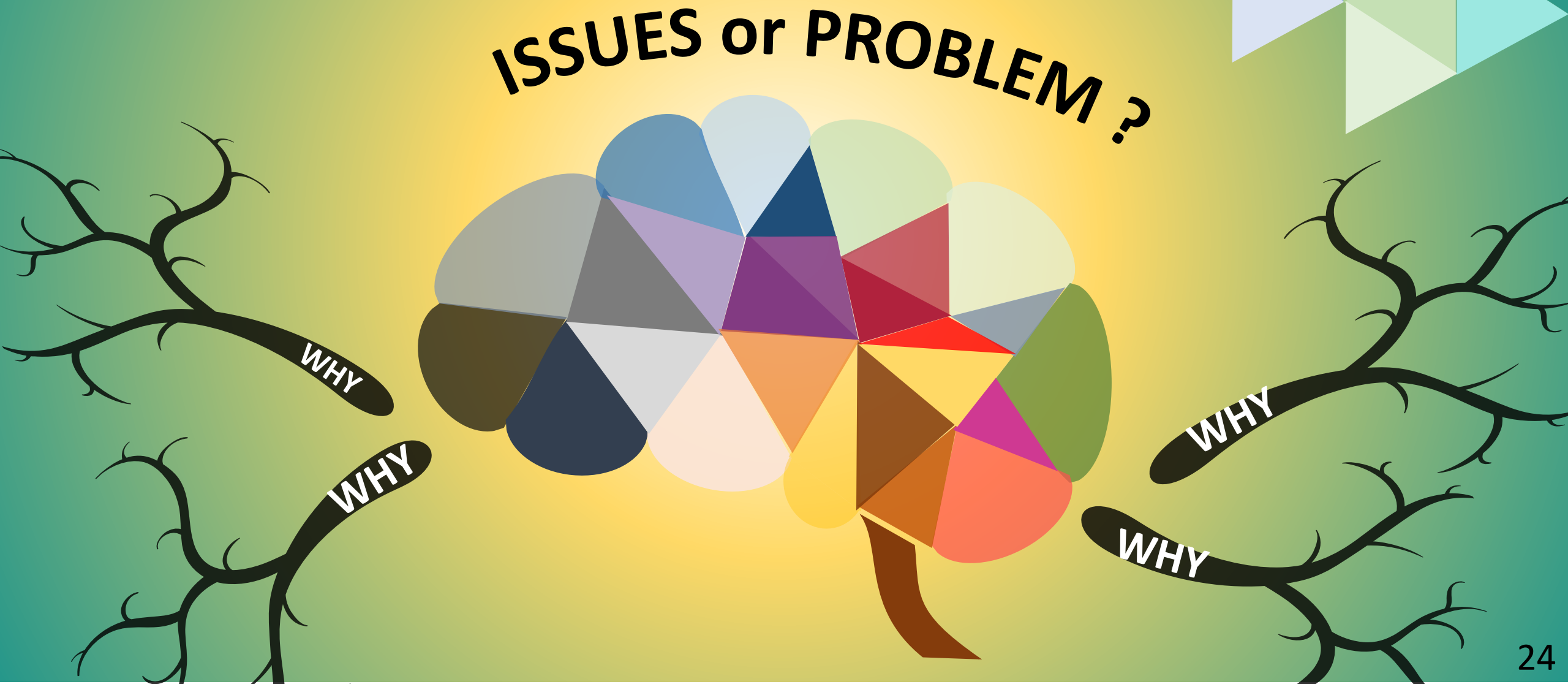
As a company, we are experiencing a *problem* with Merchandice (shortage). The area this problem is occurring is in various stores. The problem has *existed* for at least 180 days. The *magnitude* of the problem is unknown, and the *expected performance* is no shortages. The *effect* of this problem is having on our business is Lost sales & expedited delivery cost. This is *costing* Us as much as $25K per Month.

Good Problem Statement Examples

Case 2

As a company, we are experiencing a *problem* with *Open Maintenance Calls*. The area where this problem is occurring is *Companywide.* The problem has *existed* for at least *2 Years*. The *magnitude* of the problem is *average of 1.6 OMC per store,* and the *expected performance* is *<1.2 OPC per store*. The *effect* of this problem is having on our business is *systems inoperative causing lost sales*. This is *costing* us as much as *$35K* per *Month*.

BRAINSTORMING



Blame The Process, Not The Employee

"85% of the reasons for failure to meet customer requirements are related to deficiencies in systems and processes… rather than the employee. The role of management is to change the process rather than badgering individuals to do better."

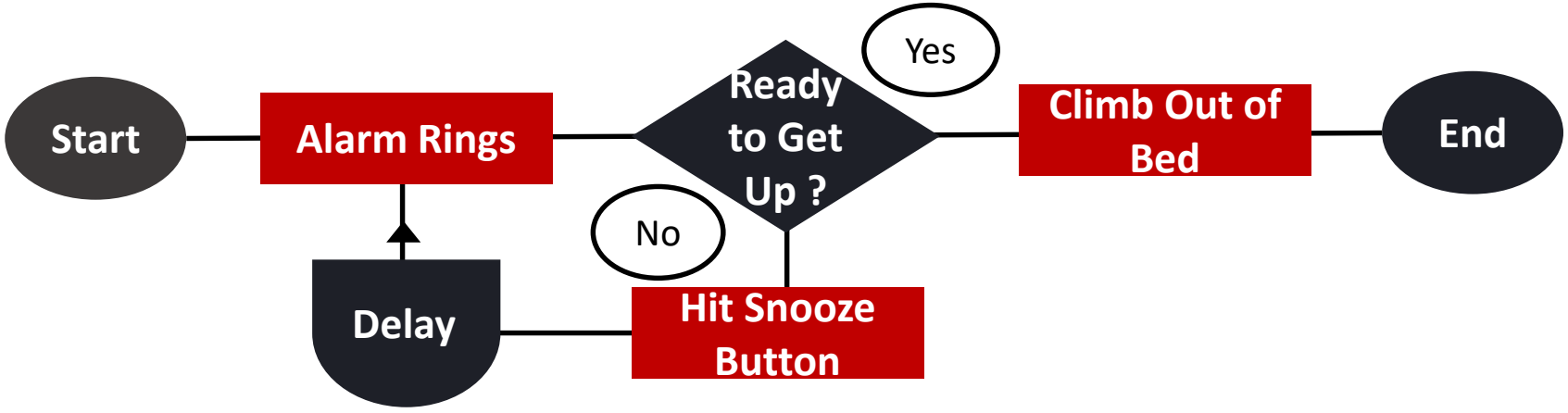
W. Edwards Deming

Process and Document Mapping

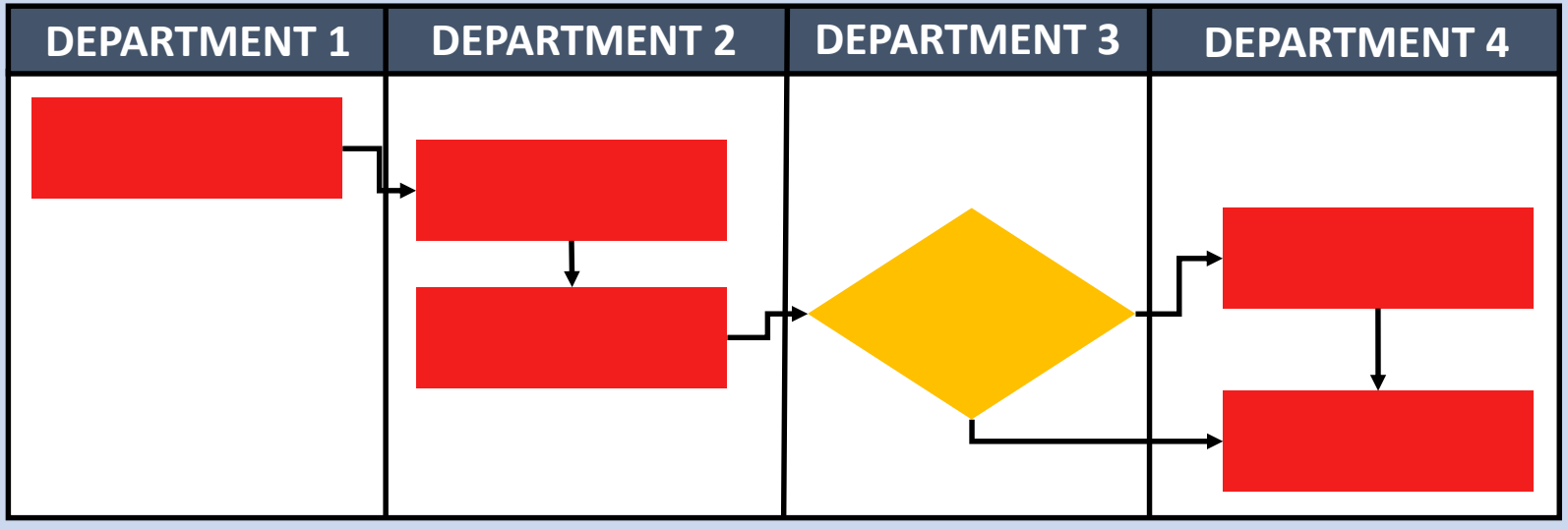
WHAT IS THE PURPOSE MAPPING

Immediately make problems visible

30,000 FEET VIEW



DETAILED PROCESS FLOW



SWIM LANE

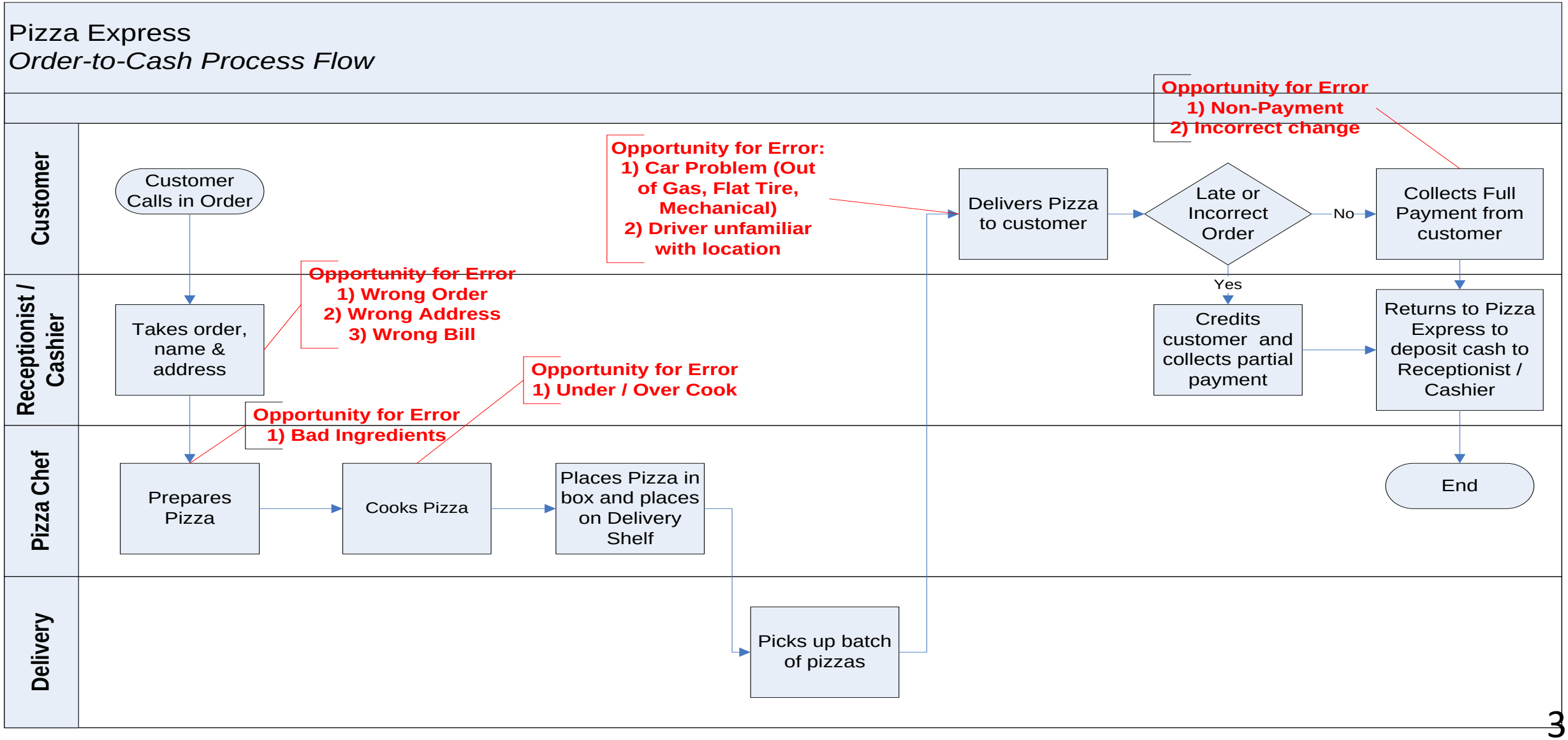
HIGH LEVEL PROCESS MAPPING

MEDIAN OF APPLICATION DAY > APPROVAL

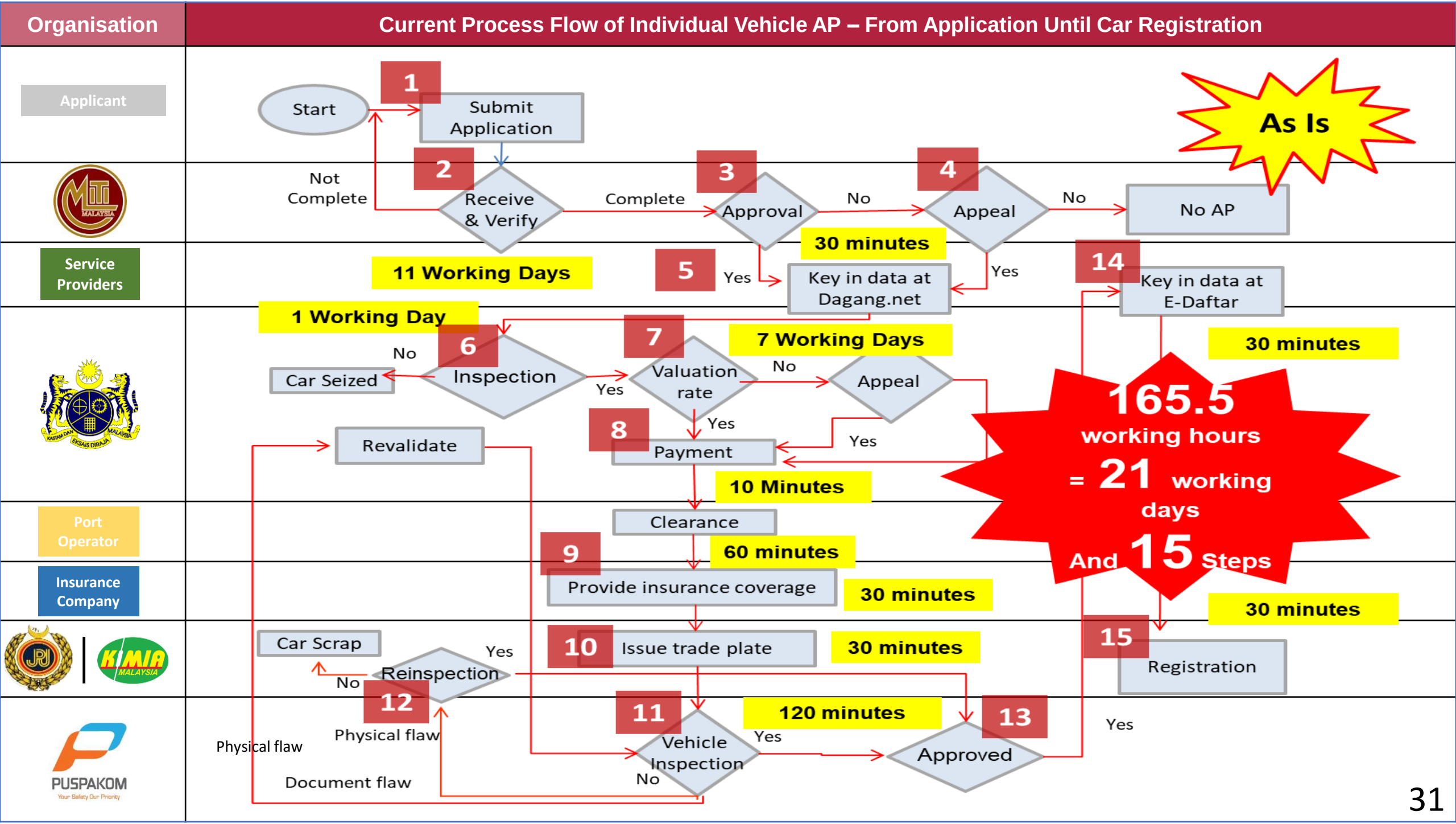
Application → Completed Document → Valid Payment → Audit Field → Approval

74 days

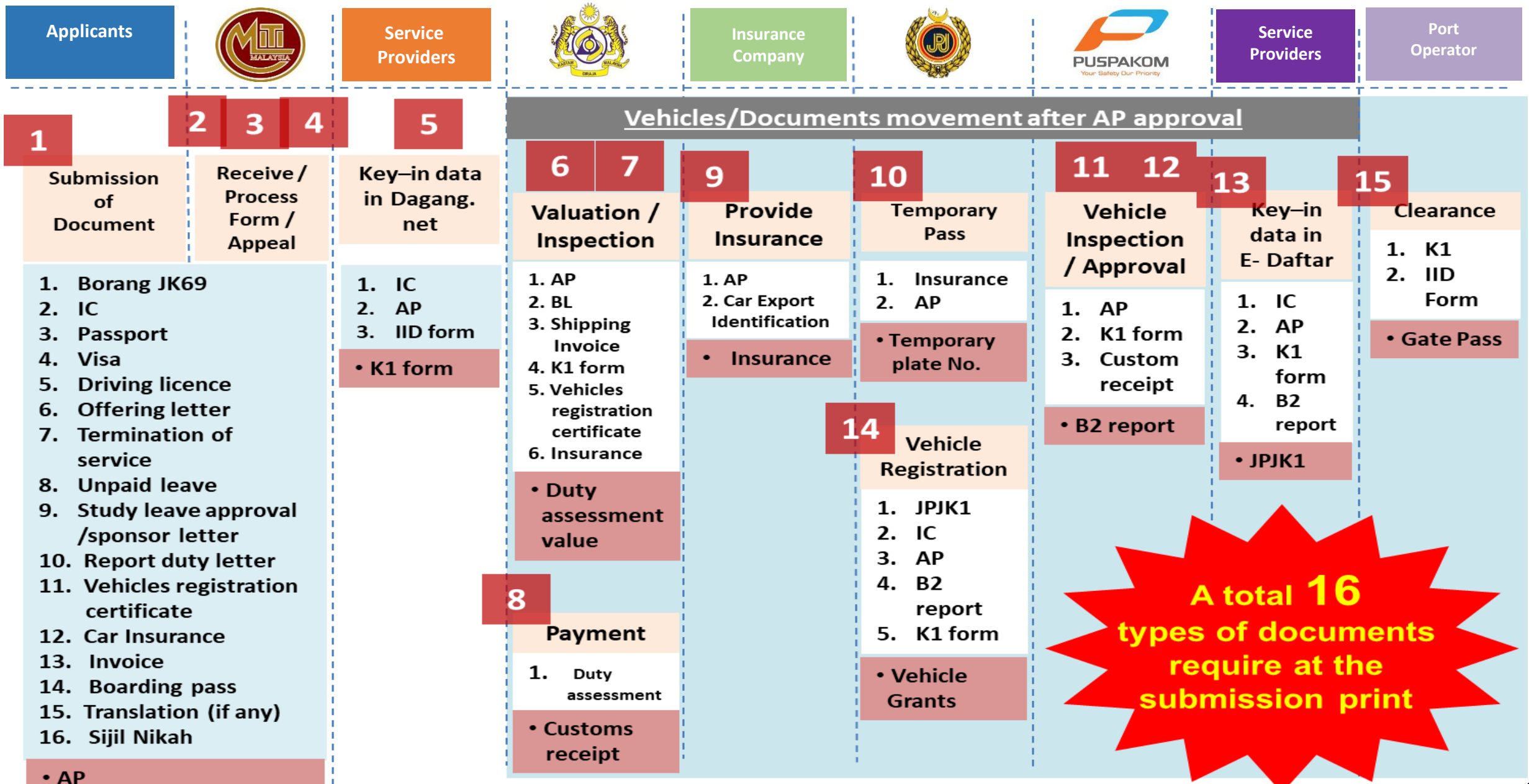
PIZZA DELIVERY CASE
DETAILS FLOW PROCESS CHART



Organisation	Current Process Flow of Individual Vehicle AP – From Application Until Car Registration



DOCUMENT TRACKING



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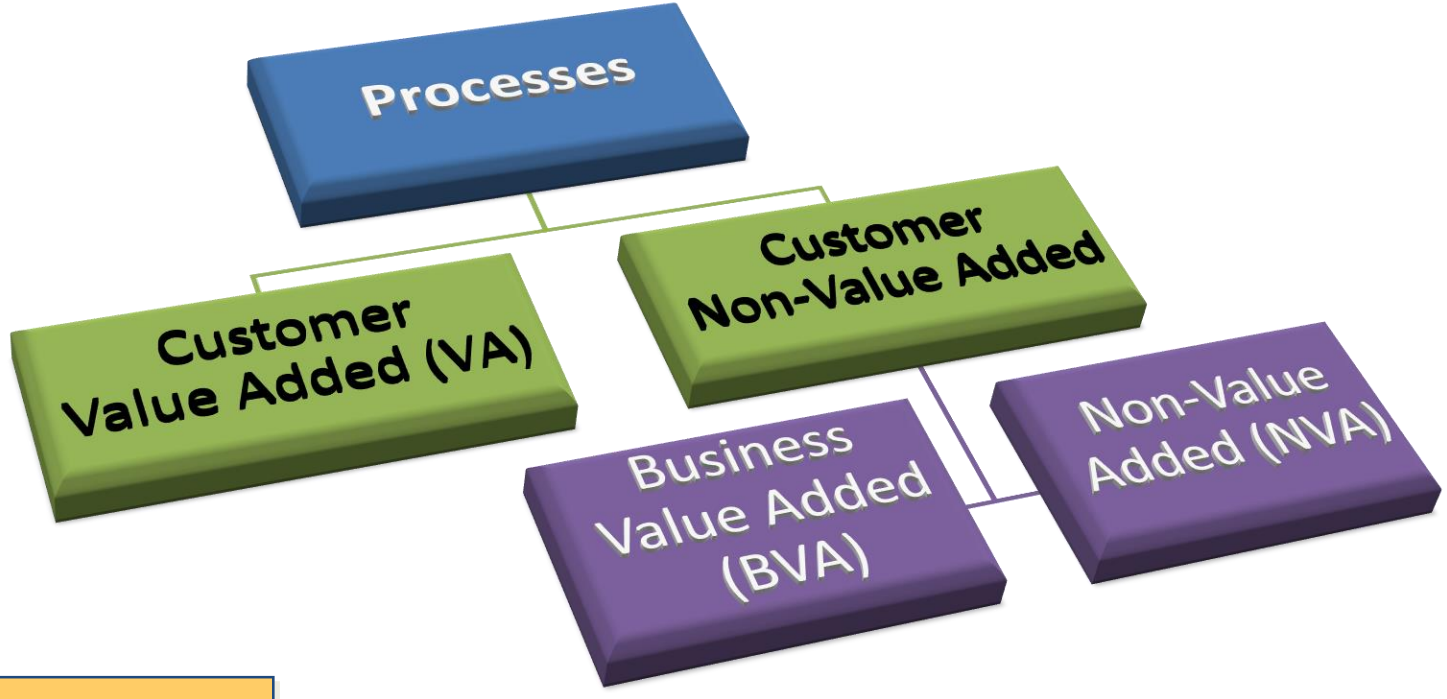
WASTE ANALYSIS

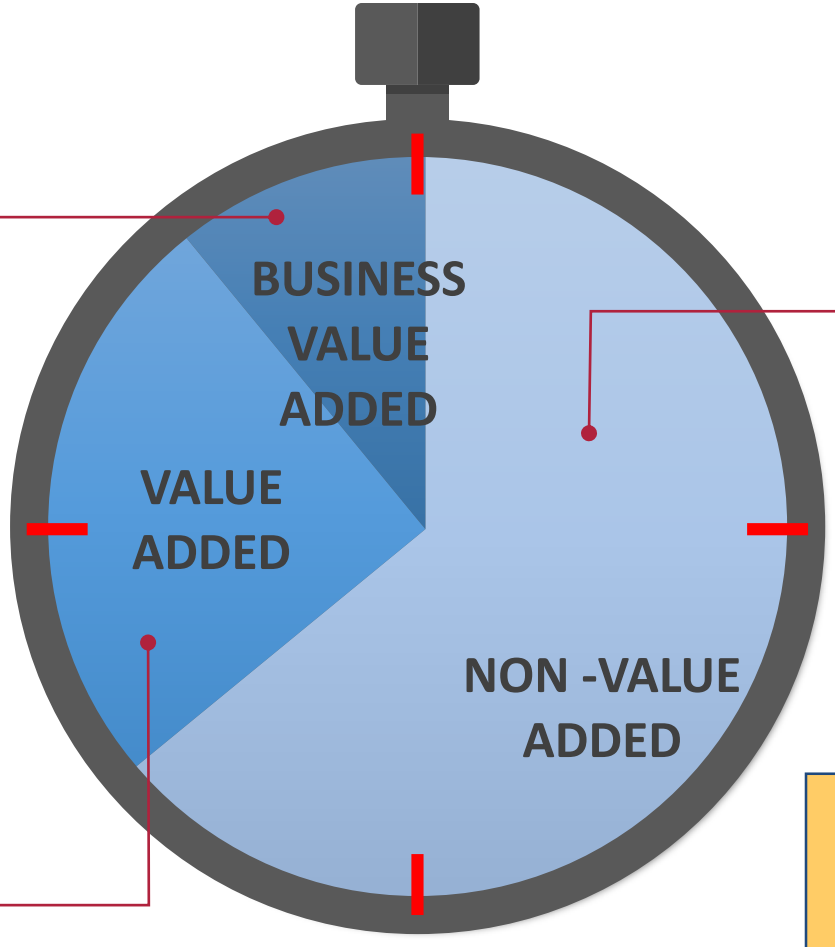


Definition of value:

1. Customer willing to buy
2. Change product characteristic
3. Do things right at the first time

WASTE ANALYSIS EXAMPLES

- Documentation
- Filing
- Installment reminder



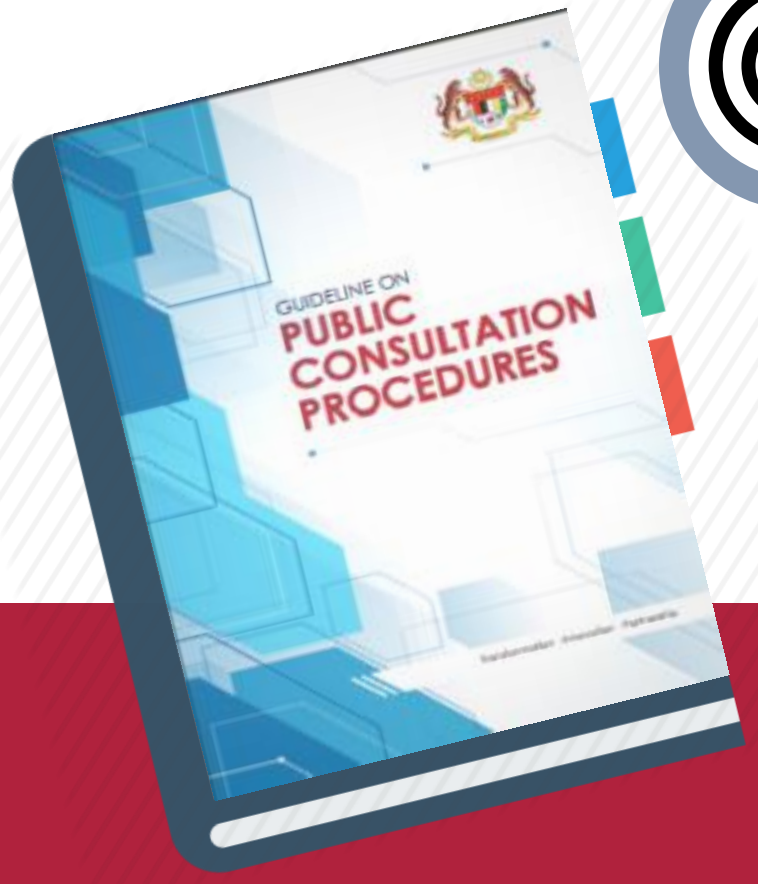
- Waiting
- Resubmission
- Multiple copies of form
- Error correction
- Checking
- Movement

- Approved loan
- Approved credit card
- Statement
- Auto bill payment

Rule of Thumb

- *NVA - Eliminate*
- *BVA & VA - Simplify & Optimize*

ORGANIZING PUBLIC CONSULTATION FOR BETTER UNDERSTANDING OF THE PROBLEM



To establish the guiding principles and requirements for carrying out an adequate public consultation exercise

Public consultation enables the regulator to :

- **Develop better and more practical regulations**
- **Identify the full range of effected parties**
- **Minimize the risk of unexpected consequences**
- **To discover better implementation methods**

Project Charter

Process Improvement and Halal Certification Procedures at JAIP

1 Issue

Process:
Starting:
End:
Within Scope:
Outer Scope:

2 Current Situation

3 Project Scope

Process:
Starting:
End:
Within Scope:
Outer Scope:

4 Project Target

5 Team Members

Champion:
Project Leader:
Project Assistant:
Members: 1.
2.
3.

6 Milestone Chart

7 Cost Compliance

Project Charter

PROBLEM STATEMENT

Time taken for the issuance of license **is over ONE(1) year.** Due to license delays, **The waiting period to get royalty payments are late** and it opens opportunities for **illegally sand dredging activities**.

PROJECT TARGET

Reducing the duration of license issuance of at 50%

PROJECT SCOPE

Process : License of sand in the sea-bed under continental shelf act 1966
Starting : Application of License
End : Issuance of License
Within Scope: Policy Approval Period
Outer Scope : Operation Approval

ISSUES ARISE

- Incomplete Application
- Applicant often relocate to different and overlapping areas
- Multi-level review and endorsement
- Delay in requesting technical review
- OSC meetings relies on complete technical reviews
- Frequent extended policy aproval

TEAM MEMBERS

Champion : En. Mahather bin Smoh
Project Leader : En. Kamarul Akhtar bin Idris
Project Assistant : Pn. Hani Mastura binti Hussain
Members : Pn. Khairulbariah binti Sa'fie
En. Nazri bin Abdul Rashid
Consultant : En. Khidzir bin Ahmad

Define	*Public Consultation*	*Formulating & Data Collection*	*Data Analysis*	*Improve Data & Benchmark*	*Recommendation & Solutions*
Oktober 2018		November 2018	Disember 2018 & Januari 2019		

Module 3

INTRODUCTION

1

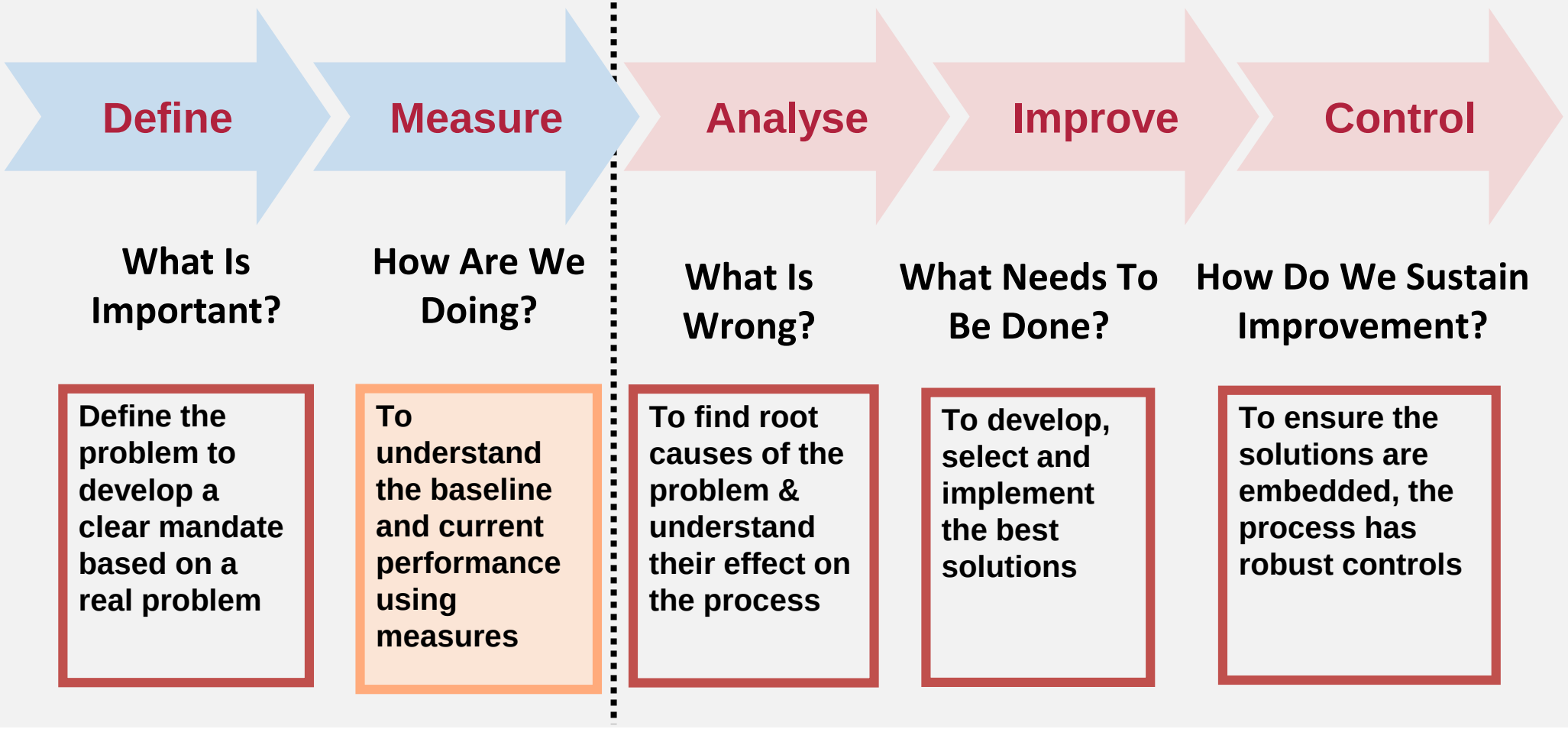
"In God we trust. All others must bring data"

W. Edwards Deming

Statistician

The step-by-step approach (DMAIC)

NEVER RUSH INTO A SOLUTION



Measure Phase

To establish techniques for collecting data about current performance in meeting Critical to Quality (CTQs)

It is all about data-driven (fact-based) decision making.

MEASURE ROADMAP

1. Accessing the baseline data & the performance gap

An analysis that involves the comparison of actual performance with potential or desired performance

2. Understanding type of data

a particular kind of data item, as defined by the values it can take, the programming language used, or the operations that can be performed on it.

3. Identify Key Input, Process and Output Metrics

Identify what metric information must be gathered to determine what are the 'root causes' of current process performance from process flow to excel.

4. Develop Data Collection Plan

Develop a formal Data Collection Plan, including 'stratification' factors to assist in the Analyze Phase

5. Develop Operational Definitions

Clearly, define each metric for which information will be gathered, to provide clarity

6. Data Sampling

A statistical analysis technique used to select, manipulate and analyze a representative subset of data points in order to identify patterns and trends in the larger data set being examined.

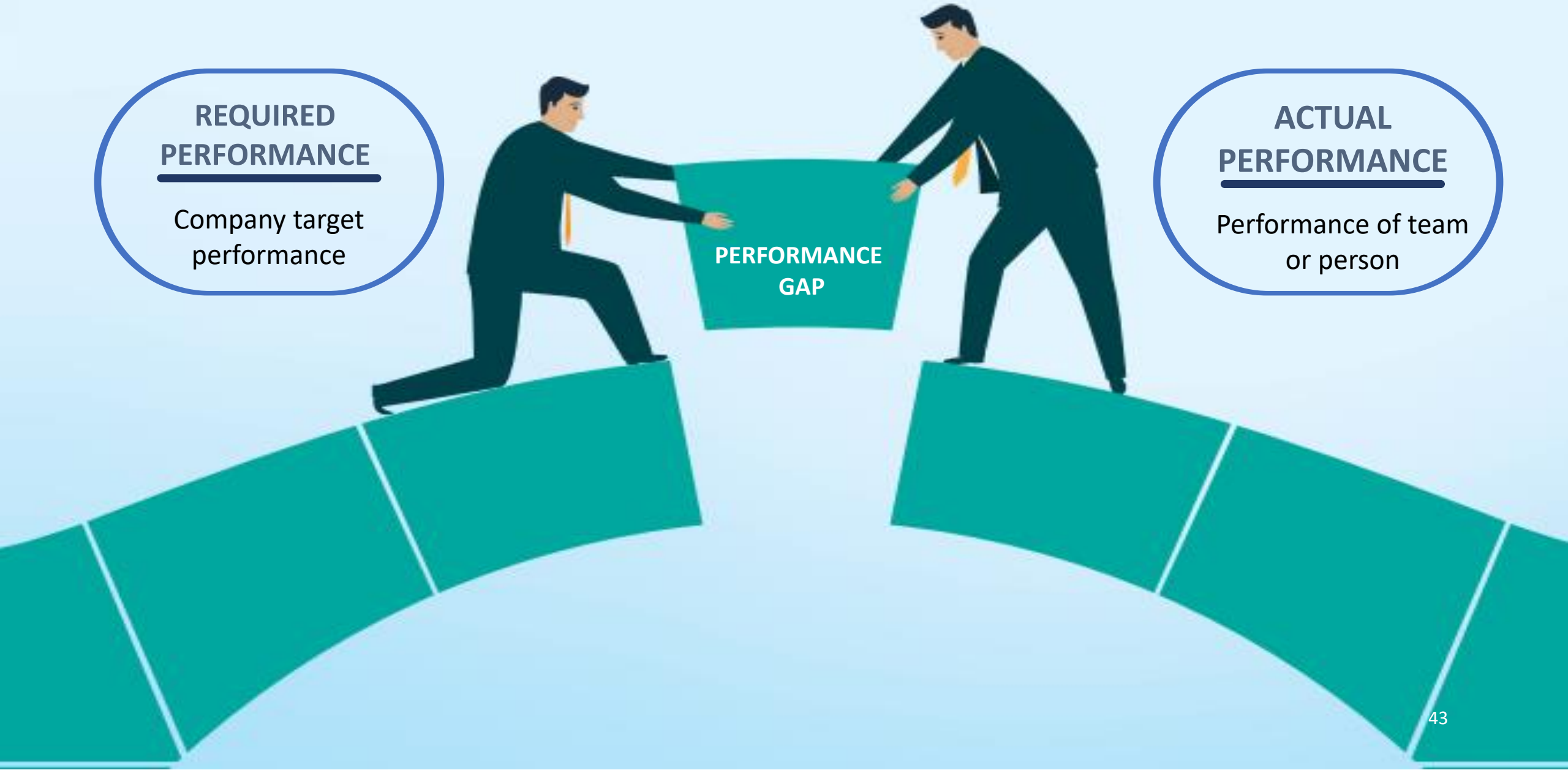
7. Introduction to Data Mining

the practice of examining large pre-existing databases in order to generate new information.

8. Basic Analysis Tools

A set of Tools and techniques identified as being most helpful in troubleshooting issues related to quality & performance

PERFORMANCE GAP



The Basic Problem

- Operational Systems
- Finance Systems
- CRM System
- HR System

"Fact Gap"

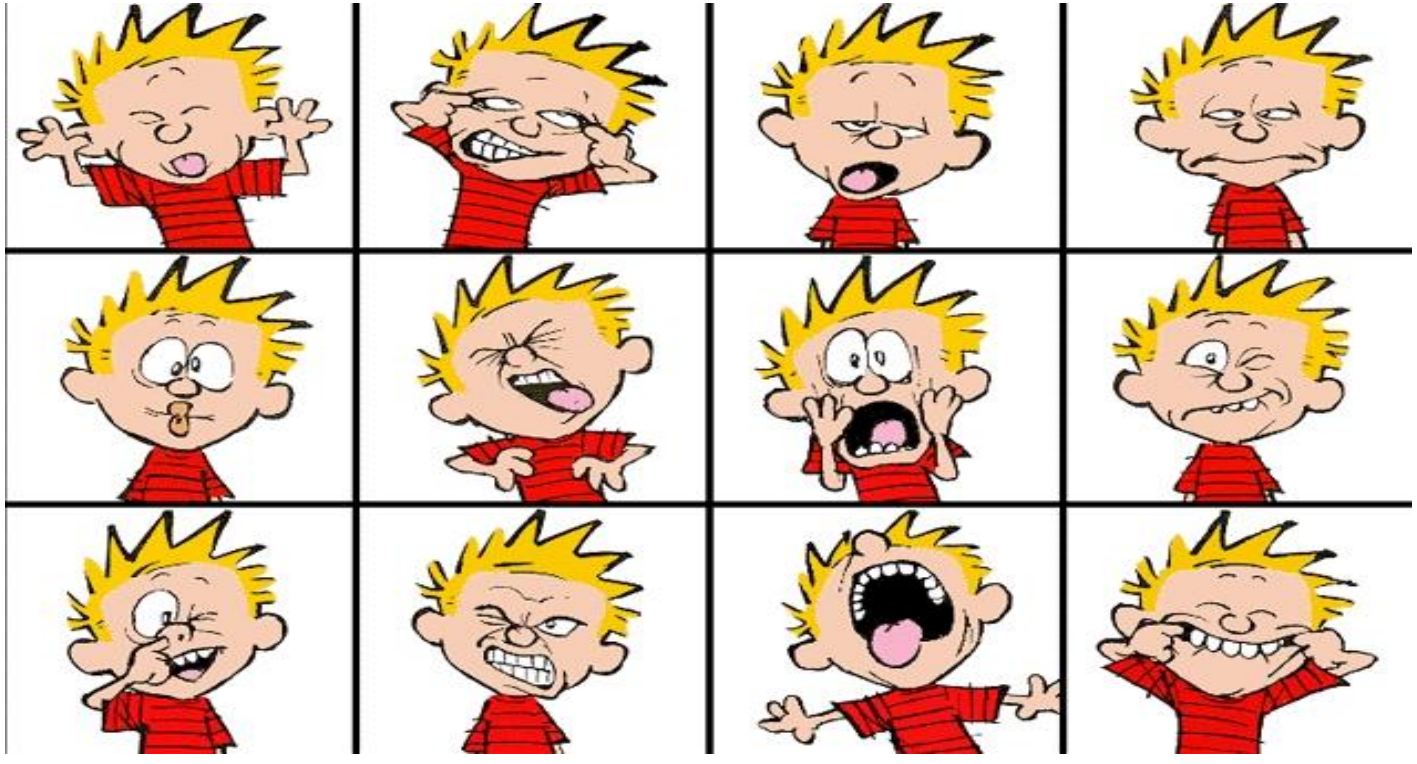
- Increase Efficiency
- Lower Costs
- Customer Satisfaction
- Employee Motivation

Scenario

More students are failing their courses this year compared to last year.

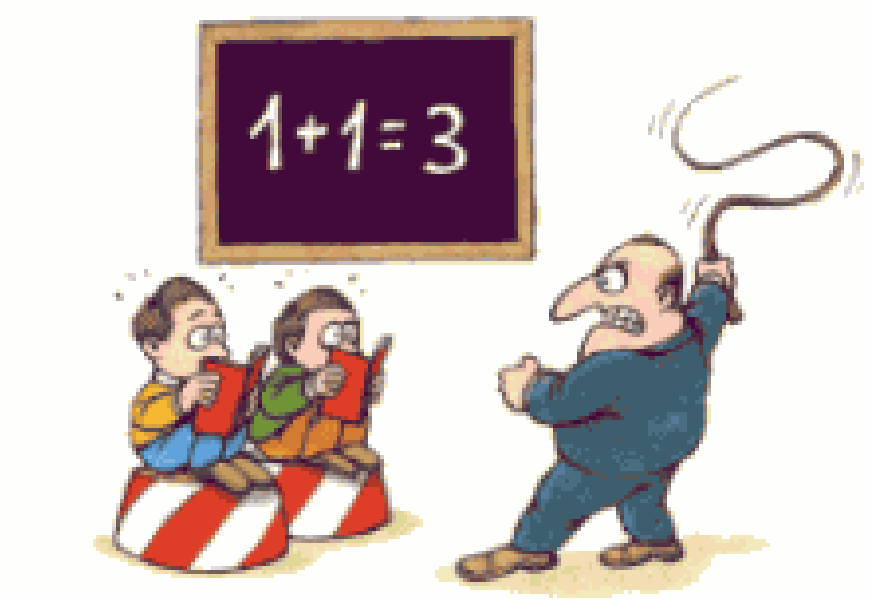
Who is to blame?

Student's Perspective



USM Courses and Lecturers' are so
BORING and DIFFICULT! HOW TO PASS?

Lecturer's Perspective



Students KNOW NOTHING! They are both LAZY and STUPID! What a perfect combination to become an employable graduate!

Yeah! Blame it on us!

What We Really Need Is DATA…

Classification of Data

2

PRIMARY DATA

- Data are collected under the control
- Data are collected specially for the purpose in mind
- This are generally afresh and collected for the first time
- Useful for current studies and for future studies
- For example: your own questionnaire.

SECONDARY DATA

- Data gathered by someone else prior to and for a purpose other than the current project
- Data that has been collected for another purpose.
- Involves less cost, time and effort
- This data is being reused. Usually in a different context.
- For example: data from a book.

Types Of Data

Qualitative	Quantitative	
	Attribute	Variable
This car has good acceleration	Accelerates 0-60 MPH in less than 6.2 seconds	Accelerates 0-60 mph in 6.2 seconds
This part is not good	Does not meet specs/deadline	Part is 3.75 mm wide; spec is 3.8 mm
He/she is very tall	He/she is tall enough to ride a roller coaster	He/she is 5’ 11’ tall

Whenever possible, capture data in variable form.
Convert qualitative data to quantitative data.

3

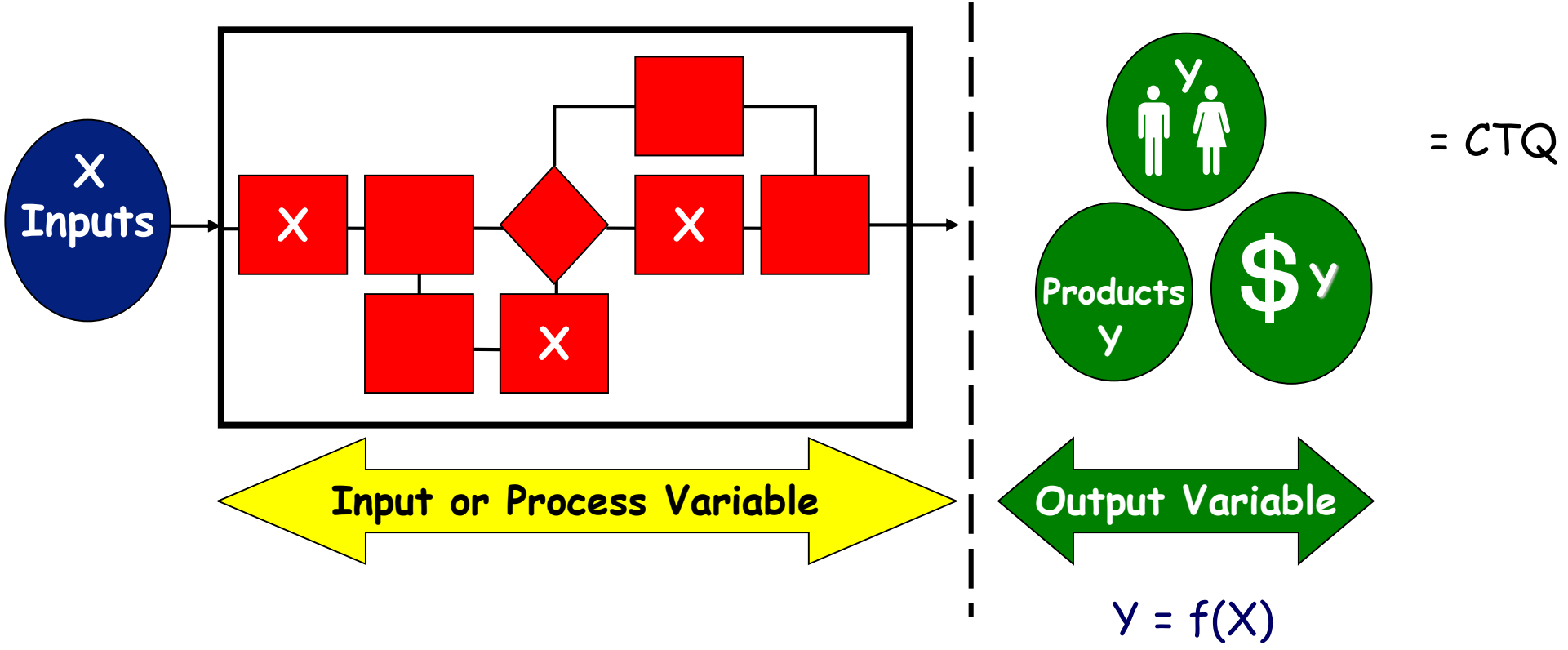
Data-Big Picture

Cause I'm thinking in a broader way, I feel like I am able to make better decisions.

- *Takafumi Horie* -

Entrepreneur,
Founder of Livedoor

The Model



MyCURE focuses on processes

Defines Problem Statistically

$$Y = f(X)$$

To get results, should we focus our behavior on the X or Y?

Y	$X_1 \ldots X_N$
◆ Dependent	◆ Independent
◆ Output	◆ Input-Process
◆ Effect	◆ Cause
◆ Symptom	◆ Problem
◆ Monitor	◆ Control

The output is used to evaluate the process.

If our processes to produce X is so good, why are we constantly inspecting Y?

Controlling the Output

Y = F (x)

- **Y** — OUTPUT SIGNAL
- **F** — RELATIONSHIP or EQUATION THAT EXPLAINS Y IN TERMS OF X
- **(x)** — IN-PROCESS PARAMETERS

Example

Distance traveled

Determined by

- Car Speed
- Amount of wear on brakes
- Selection of CDs available
- Amount of gas in the tank
- Time since last service
- Traveling time
- Number of passengers
- Weather
- Car inside temperature

Understanding the **Y**

gives insight into the right **(x)**s

4

Data Collection

“It is a capital mistake to theorize before one has data.”

Sherlock Holmes

Developing a Data Collection Plans

1. Develop Operational Definitions and Procedure

- Write and pilot operational definition
- Develop and pilot data collection forms and procedures
- Establish a sampling plan

2. Establish Data Collection Goal

- Clarify purpose of data collection
- Identify what data to collect

3. Collect Data and Monitor Consistency

- Train data collectors
- Pilot process and make adjustments
- Collect data

4. Ensure Data Consistency and Stability

- Test and validate measurement systems

Purpose of Data Collection

To determine the type of data to be collected, the Project Team must be able to answer the question,

“What do we want to know?”

Reviewing materials developed during the Define Phase (refined **Problem Statement, the CTQ operational definitions, and the process map**), the Project Team must determine which process/product characteristics they need to learn more about.

CTQ = Y (Reduced Cost / Reduced Time)

DATA COLLECTION RULES

An organised approach

best use of time and resources

All relevant data is collected

may be impossible to ‘go back’ to collect more

Data collected is reliable

is data precise, accurate, consistent, etc.?

The right quantity of data is collected

too much is as bad as too little

Summary of Data Collection Plans

WHAT DATA

What data to collect ?

Data on Payment Period, Cycle Time, Amount, Unit, Program Type, Customer Name and Type

WHY

How well we perform-process by process?

Analyze process cycle time

WHO

Who is going to be doing the measuring?

Dasina, Hilina, Halimah,Isa

WHAT EQUIPMENT

What equipment are you going to use?

Using Check Sheet

HOW MUCH

How long will the data collection run?

At least 2 years record case

WHEN

When will the data be collected?

Begin on May 15 and end on June 30

WHERE

Where will the data be obtained?

Log Book, Course File, Customer Interview

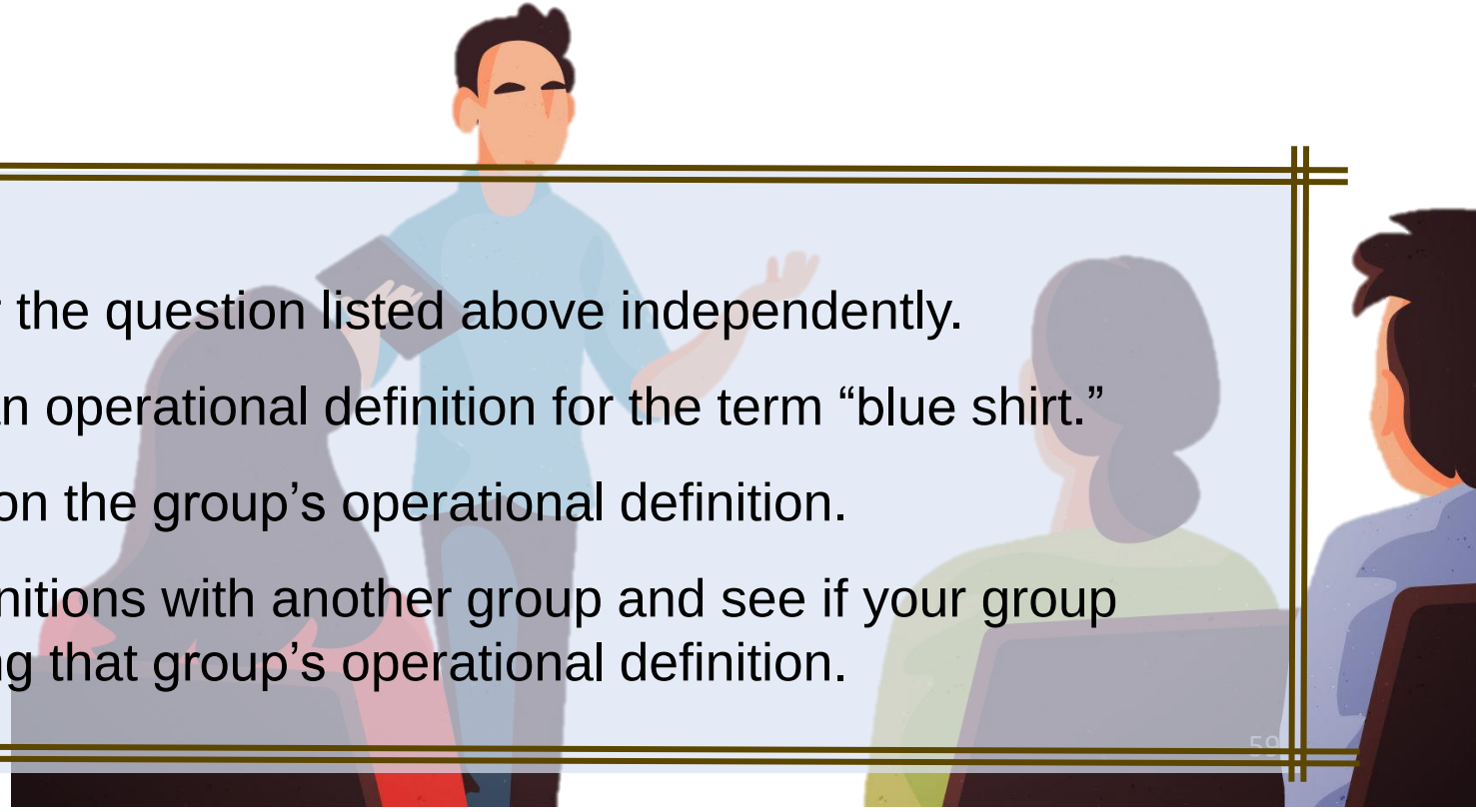
SAMPLING PLAN

What is your sampling plan to has an equal chance of being selected?

Only HQ Case Files

How many people are rich in the room?

How many defective candies are in each bag?



Team Activity

Each group will attempt to answer the question listed above independently.

First, each group need to create an operational definition for the term “blue shirt.”

Then answer the question based on the group’s operational definition.

Finally, exchange operational definitions with another group and see if your group reaches the same conclusion using that group’s operational definition.

Operational Definitions Example

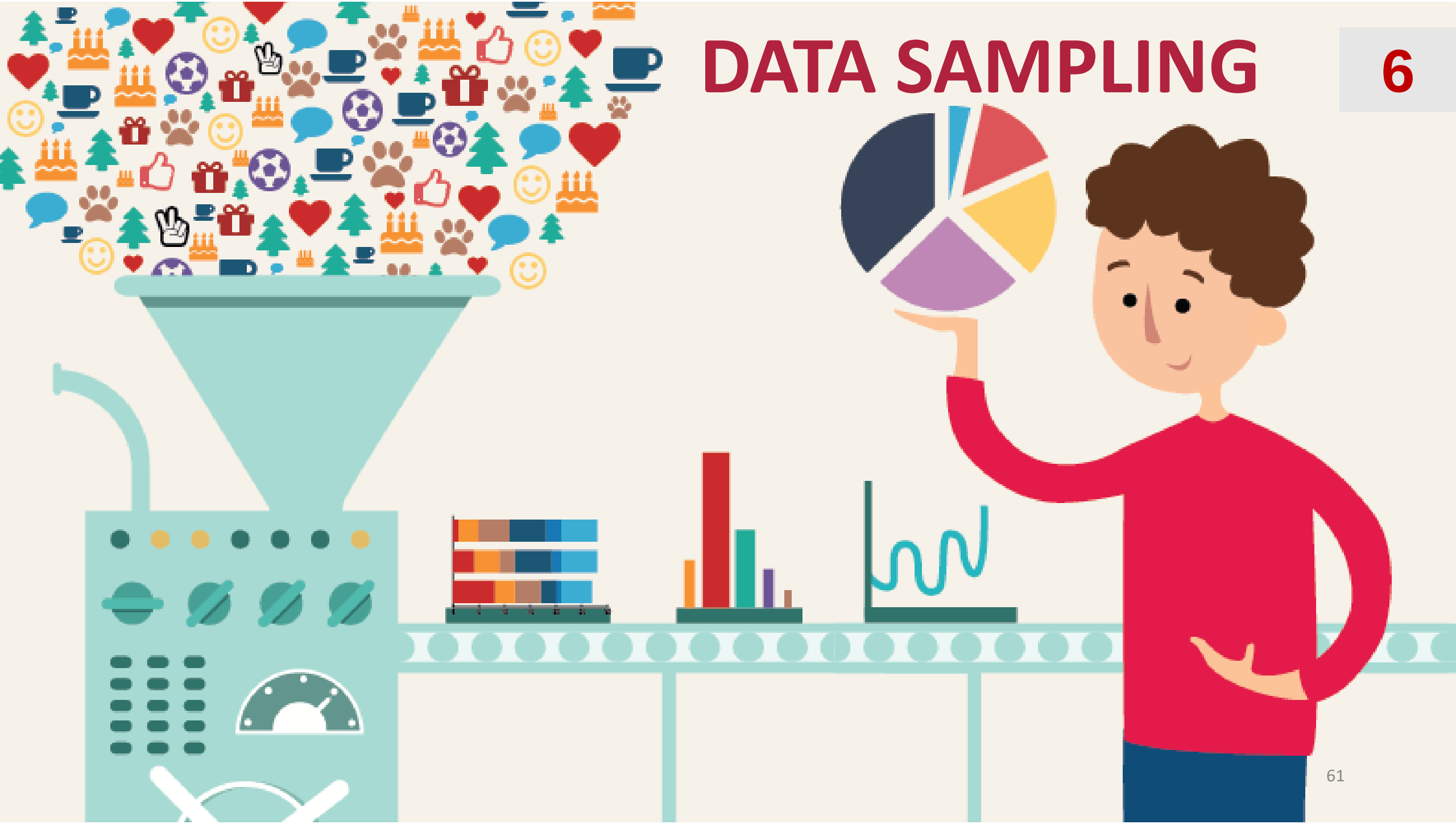
How many blue shirts are in the room?

- A shirt is any garment that covers 75% or more of the torso, above the skirt or pants of the wearer, and the lower extremity of such garment (when hanging freely) falls between 3 and 7 inches (inclusive) below the utmost line of the skirt or pants. If the wearer is wearing neither skirt nor pants, the garment in questions is not a shirt.
- Any shirt so defined will be considered to be blue if more than 50% of its outward and visible surface (as worn) is blue in color.
- Any color will be deemed to be blue if it matches any portion of the marked ranges on the color cards provided when both shirt and cards are judged by an inspector medically certified as having passed the airline pilot test for color-blindness.

The operational definition makes the CTQ measurable!!

DATA SAMPLING

6



POPULATION *VS* SAMPLE

POPULATION

Population is the broader group of people to whom your results will apply

SAMPLE

Sample is the group of individuals who participate in your study

Too much data...

...is as bad as too little!

Rule of Thumb

Attribute data : 50 to 100

Variable data : Minimum of 30

Determining Sample Size

Sample size can vary depending upon the purpose for selecting the sample and the type of data collected. The figures above represent a general “rule of thumb” for specifying sample size based on type of data.

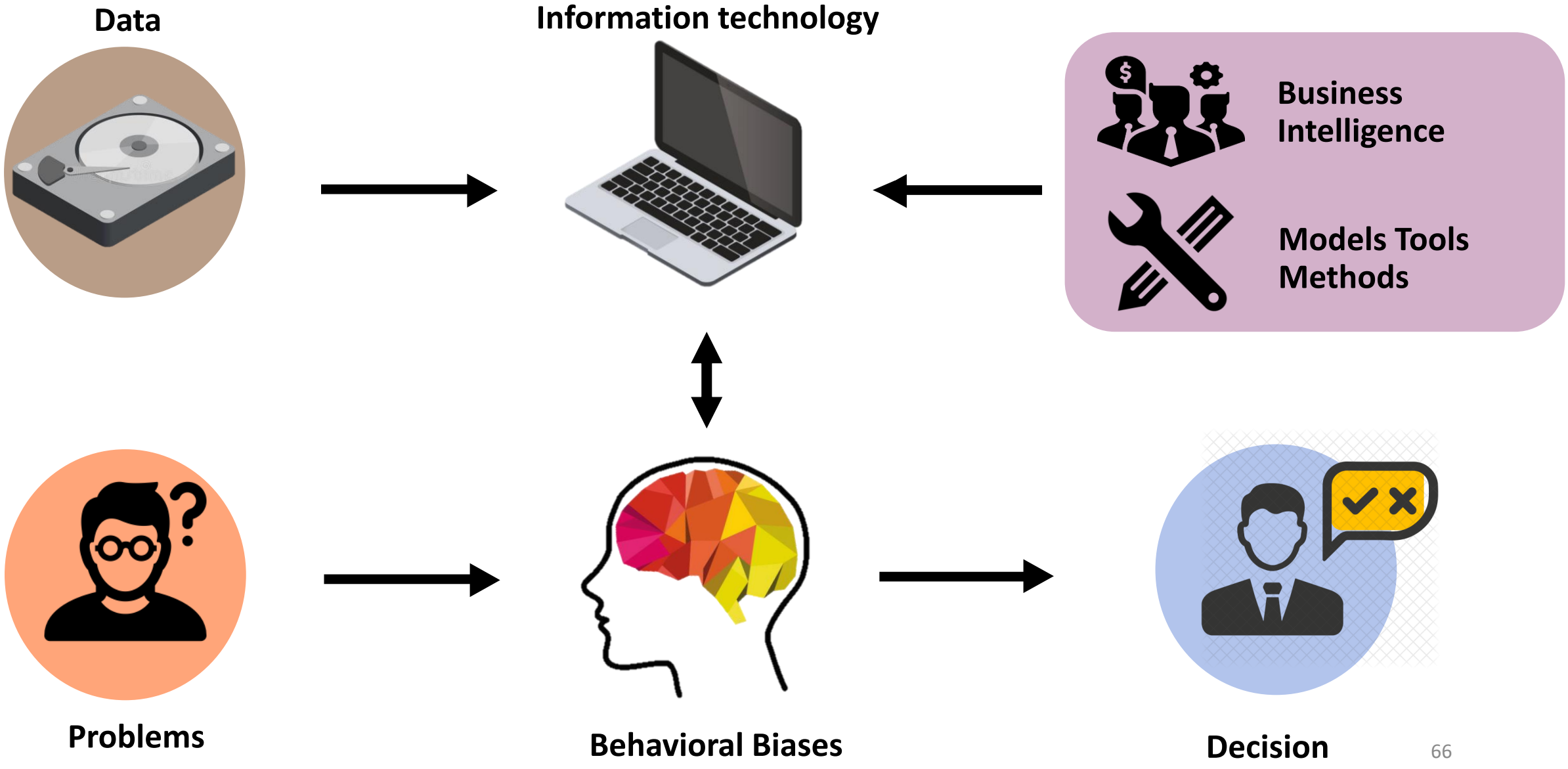
Data Mining

I'm a bit of a freak for evidence-based analysis. I strongly believe in data.

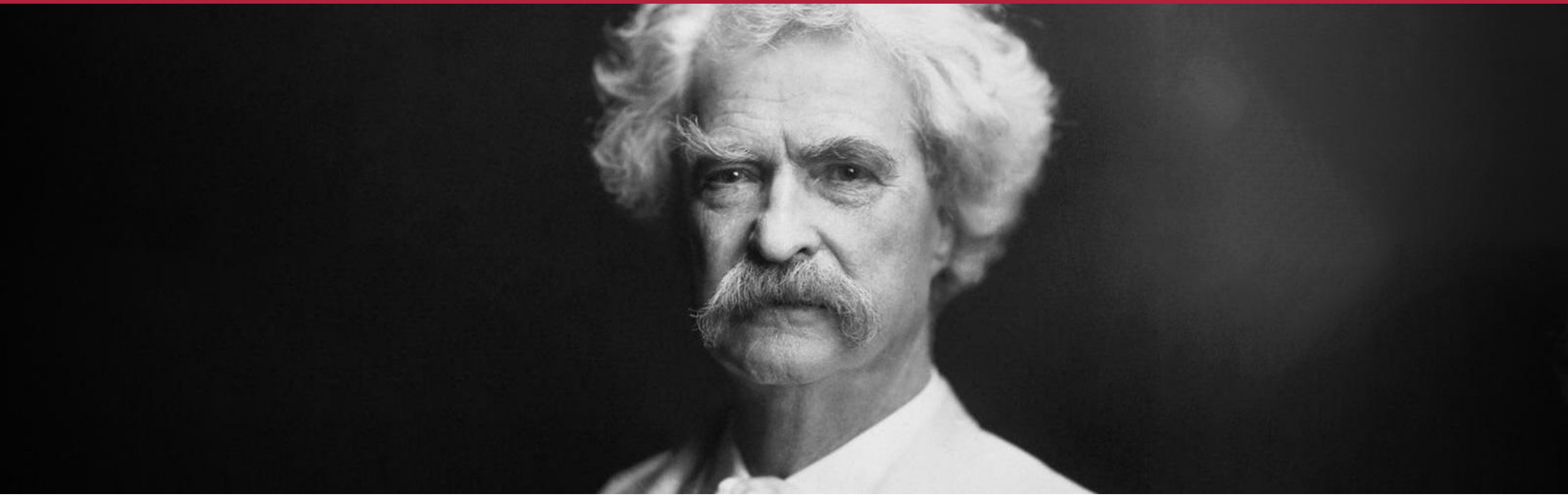
- Gus O'Donnell -

Economist

Data Mining and Decision Making



Data is like garbage



You'd better know what you are going to do with it before you collect it.

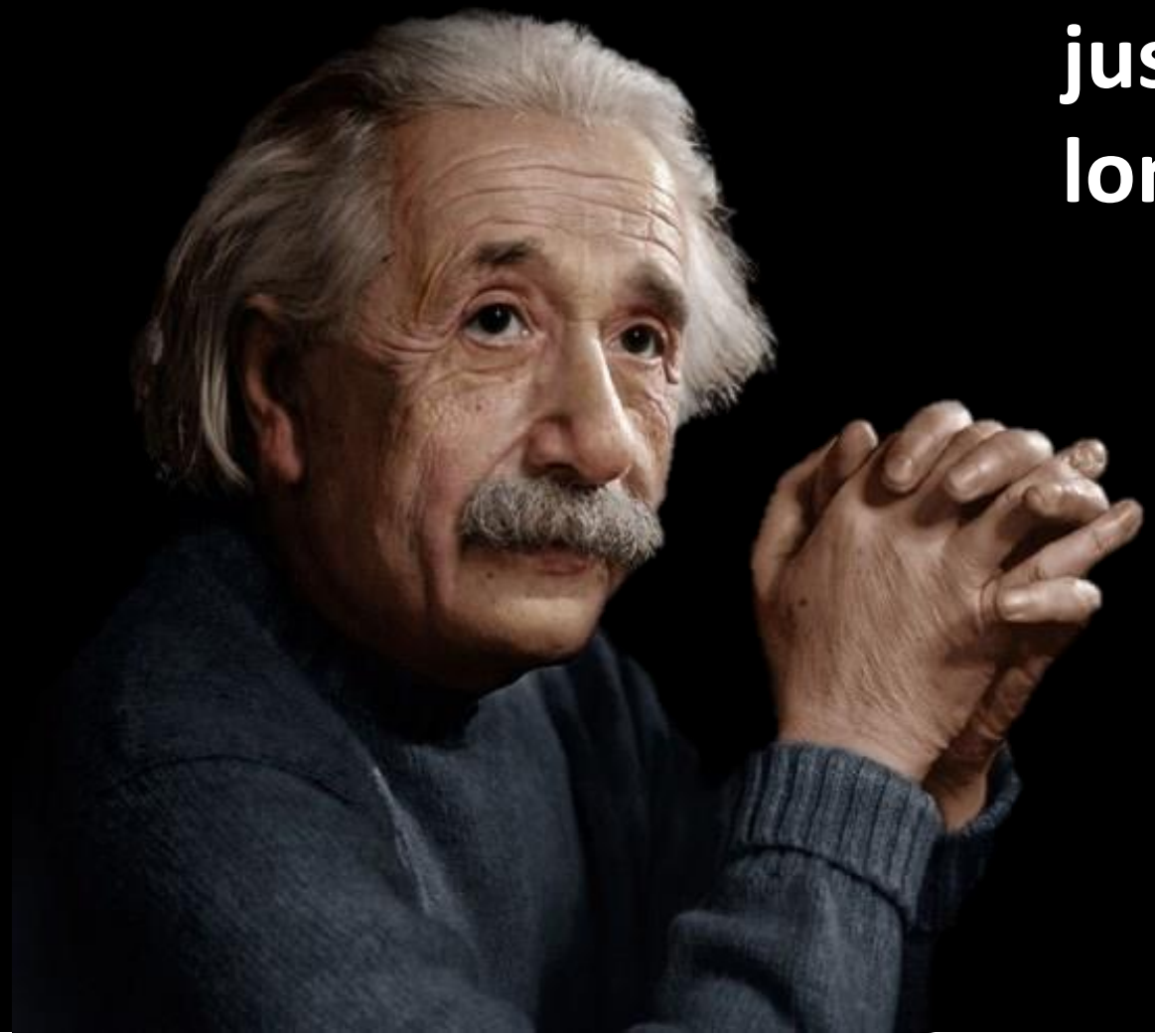
Mark Twain

Module 4

Analyze Phase

Data Analysis & Findings

Data Analysis



“It’s not that I’m so smart, it’s just that I stay with problems longer.”

Albert Einstein

– Physicist –

ANALYZE ROADMAP

1. Introduction to Data Analysis

Process of evaluating data using analytical and logical reasoning to examine each component of the data provided

2. Steps in Data Analysis

Describe and explore the data that is collected from the various sources and verify data quality to ensure it contains the data require to be selected later on

3. Making Sense of Data

Examining of the assembled and grouped data for studying the characteristics of the object under study

4. Basic Statistic

A set of Tools and techniques classified as being most helpful in identifying statistical research related to the data collected

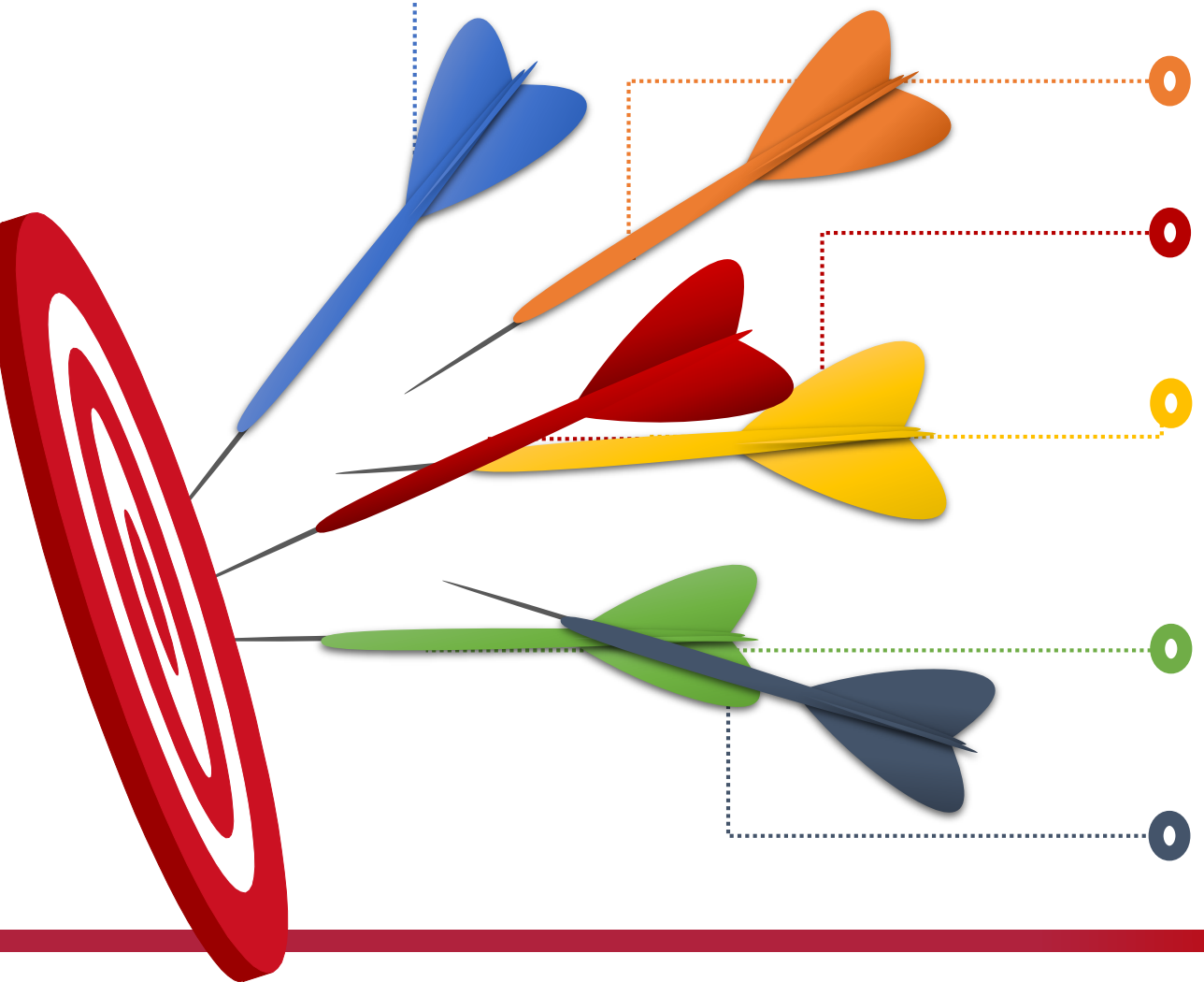
5. Univariate, Bivariate, Multivariate Analysis

Determining the patterns of relationship among each of the variable analysis

6. Examples of Data Analysis

Samples of Data collected from previous research as a guideline in understanding or having a clear picture of what to be expected

Goal of an Analysis



- To explain cause-and-effect phenomena
- To relate study with real-world event
- To predict /forecast thing
- Making conclusions about real-world event based on the problem
- Finding answers to a particular problem
- Learning a lesson from the problem

Issues to Consider in Data Analysis

- Not Providing honest and accurate analysis
- Not Following acceptable norms for data analysis
- Not Choosing the appropriate statistical software
- Not Having the necessary skills to analyze
- Lack of sense for data presentation

Knowing Your Data - Continuous & Discrete Variables

Continuous Variable

A variable can take on any value between two specified values.

An infinite number of values.
Also known as quantitative variable

E.g. Income & age
Scale: Interval & Ratio

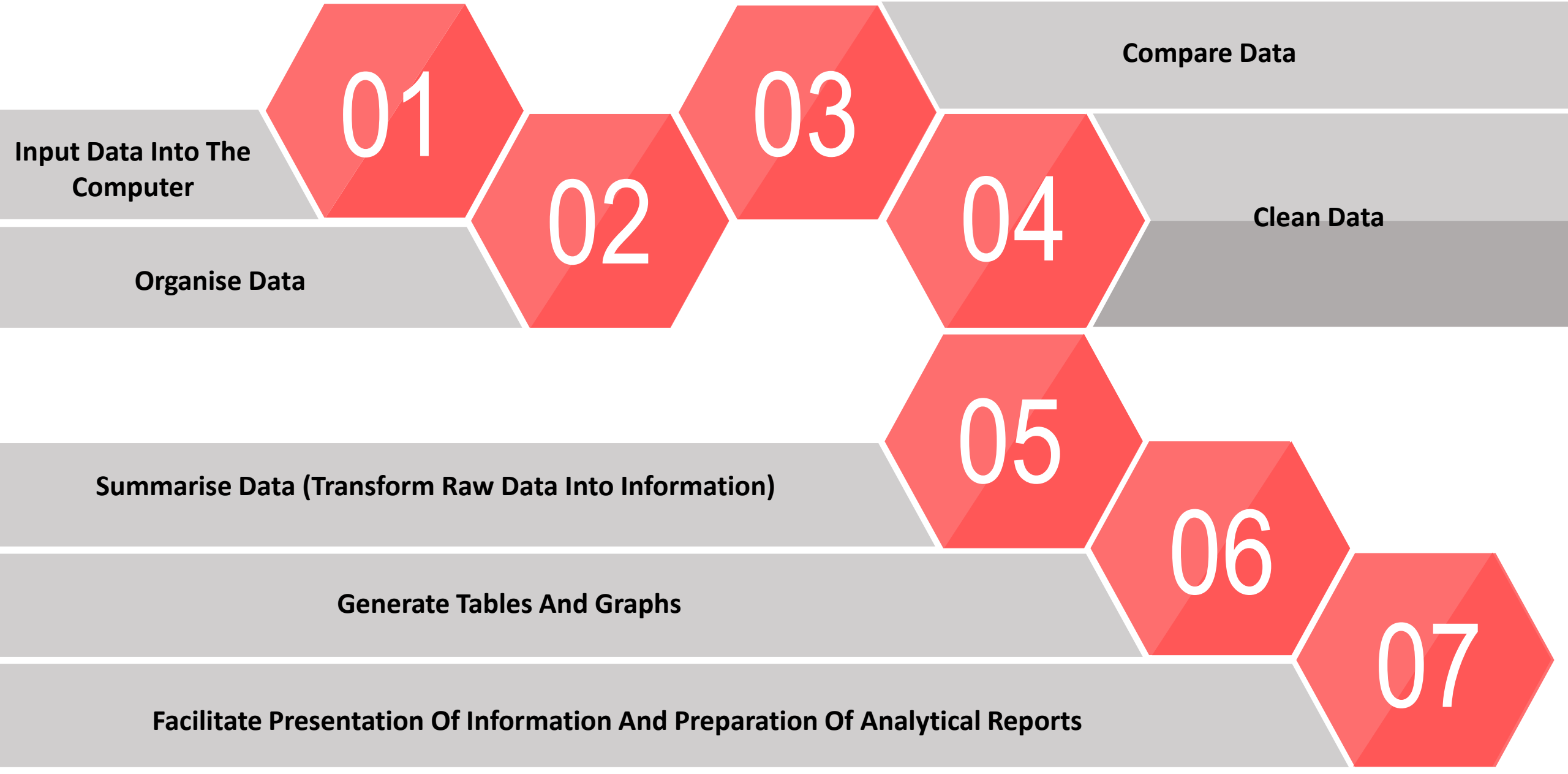
Discrete Variable

A variable whose attribute are separate from one another.

Also known as qualitative variable

E.g. Marital status, gender & nationality.
Scale: Nominal & Ordinal

Steps in Data Analysis



Getting Data Ready for Analysis

- Coded
  - Transcribe data from Questionnaire
    - Response
    - No Response
- Keyed
  - Software
  - first column for identification purposes
  - Method
- Edited
  - check 10% of questionnaires
  - Systematic sampling

Data Preparation

EDITING

- Data must be inspected for completeness and consistency.
- E.g. a respondent may not answer the question on marriage.
- But in other questions, respondent answers that he/she had been married for 10 years and has 3 children

MISSING DATA

- Elimination of questionnaire (missing >10% of the total response)

CODING & DATA ENTRY

- Involves quantification (process of converting data into numerical form)
- E.g. Male – 1, Female – 2

DATA TRANSFORM

- Changing data into new format.
- E.g. reduce 5 Likert-type Scale into 3 categories

“Collapsing” Response Categories

Combining the two appropriate range of variation to get better picture or meaningful analyses.

TABLE 1.1: Attitudes toward the United Nations. “ How is the UN doing in solving the problems it has had to face?

	West Germany (%)	Japan (%)
Very good job	2	1
Good Job	46	11
Poor Job	21	43
Very poor job	6	5
Don't know	26	41

TABLE 1.2: Collapsing Extreme Categories

	West Germany (%)	Japan (%)
Good job or better	48	12
Poor job or worse	27	48
Don't know	26	41

Making Sense of Data

Summary

Figure Measures

Visual Representation

Measures of Central Tendency

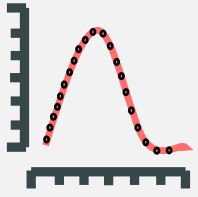
Measures of Dispersion

Graphs

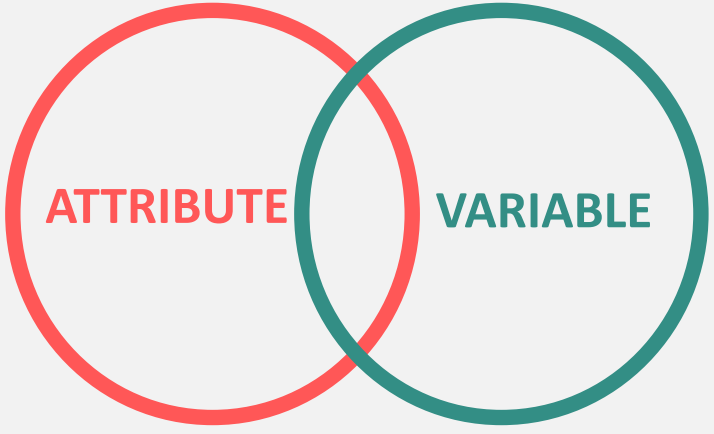
Basic Statistics

DATA

Counts (Poisson)



Proportions (binomial)



Location
- Mean
- Median
- Mode

Shape
- Skewness
- Kurtosis

Spread
- Range
- Standard Deviation
- Variance

Central Tendency

		Age	GPA	Gender	Hours
1	Dick	20	1.9	M	1
2	Edward	19	1.5	M	1
3	Emmett	20	2.1	M	2
4	Lauren	20	2.4	F	3
5	Mike	19	2.75	M	4
6	Benjie	18	3	M	4
7	Joe	19	2.85	M	5
8	Larry	17	2.75	M	5
9	Rose	18	3.3	F	5
10	Bob	18	3.1	M	6
11	Kate	19	3.4	F	7
12	Sally	21	4	F	8
13	Sylvia	23	3.9	F	8
	Sum	251	36.95		59
	Mean	**19.308**	**2.8423**		**4.5385**
	Variance	2.3974	0.5437		5.6026
	Std Dev	1.5484	0.7374		2.367
	Median	**19**	**2.85**		**5**

AGE OF RESPONDENTS

Mean = $\frac{\text{Sum}}{N}$ = $\frac{251}{13}$

Mode = Most frequent value = age 19 (4)

Median = 19

Location: Mean, Median & Mode

Consider a sample: 2,1,2,3,4,5

Mean

The total of values divided by the number of values;

- (2 + 1 + 2 + 3 + 4 + 5) / 6 = 2.83
- Is sensitive to extreme scores

Median

The middle value after a set of values has been sorted (low to high)

- 1, 2, 2, 3, 4, 5; the median is 2.5
- Is robust to extreme scores

Mode

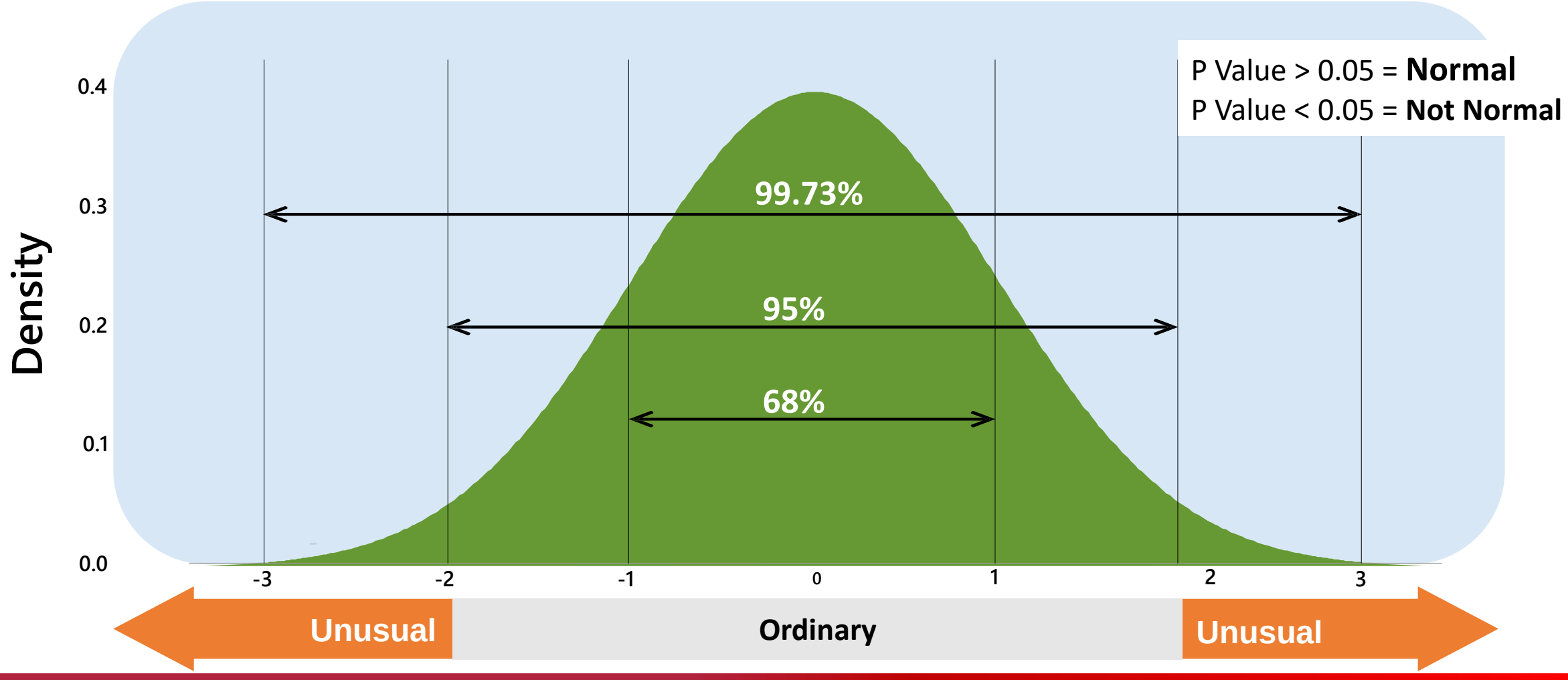
The value that occurs most frequently;

- 1, 2, 2, 3, 4, 5; the mode is 2
- A data set may contain multiple modes; multimodal

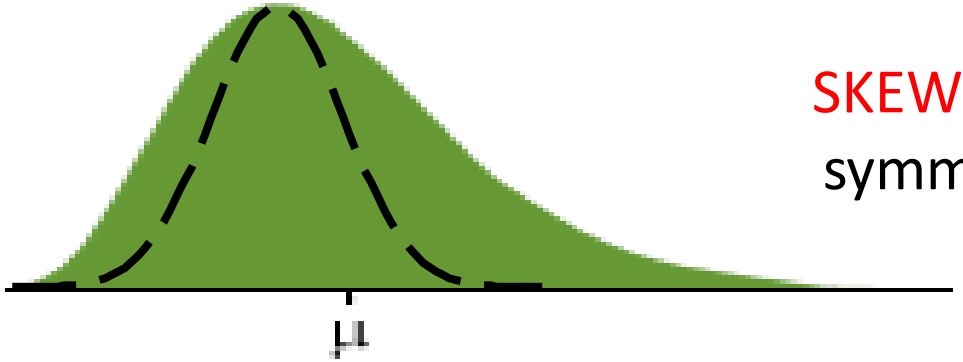
Property of Normal Distribution

The area under the normal curve can be used to estimate the probability of an "event" occurring.

If data is NOT normal (i.e. misshapen), these probabilities change.



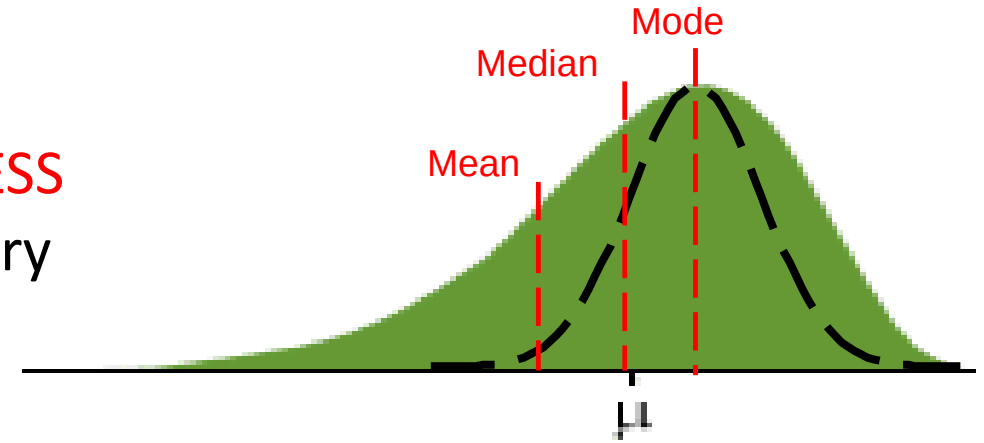
Shape



Positive

SKEWNESS

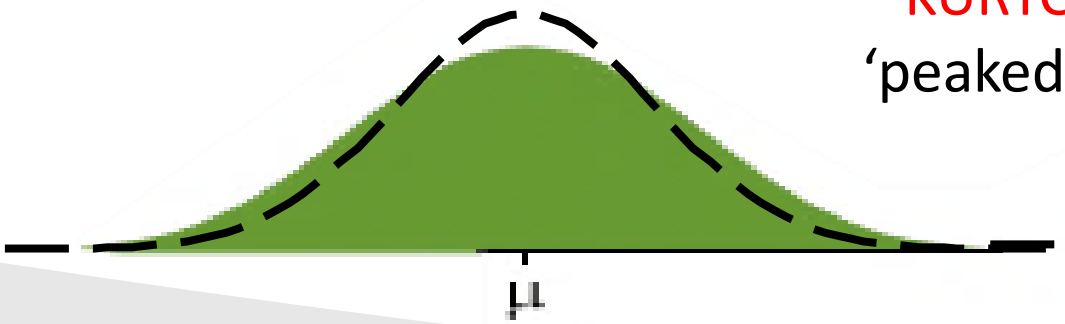
symmetry



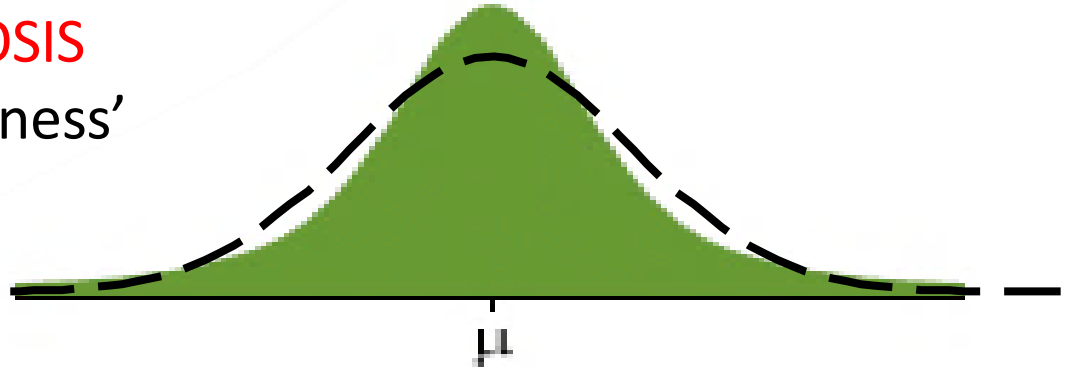
Negative

KURTOSIS

'peakedness'



Platykurtic



Leptokurtic

Dispersion

Distribution of values around some central value, such an average.

Example measure of dispersion:

Range

The distance separating the highest from the lowest value

Variance

To describe the variability of the distribution.

σ Standard Deviation

An index of the amount of variability in a set of data. Higher SD means data are more dispersed.

Lower SD means that they are more bunched together.

Spread: Range, Std Dev. & Variance

Consider a sample: 2, 1, 2, 3, 4, 5

Range

Max value – min value

- Range = 5 -1 = 4
- Is a poor estimator of variation; relies only on extreme values; ignoring most values

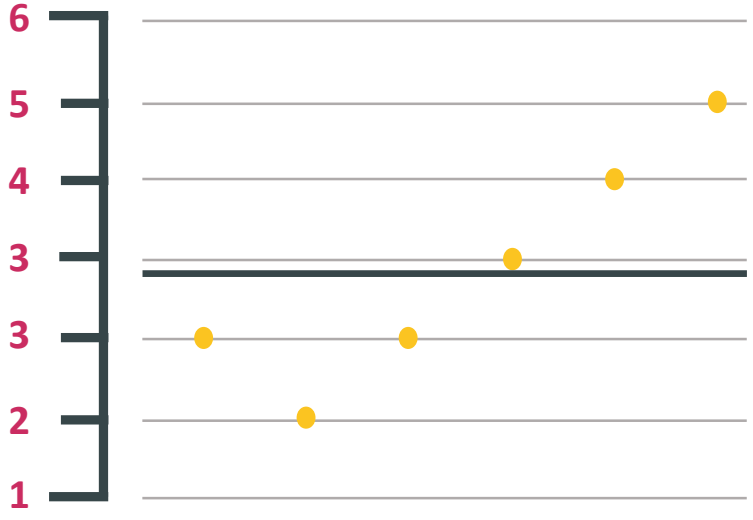
Standard Deviation

The average distance of a data point from the mean

- Most commonly used; has same units as the mean
- Average distance from the mean
- Less sensitive to outliers than the range

Variance

(standard deviation)^2



Basic statistic

GRAPHS

Graph of time series

Graph of one variable

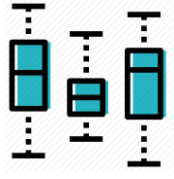
Control Chart

Line Chart

Bar Chart

Graph of frequency distribution

Histogram



Box Plot

Pie Chart

Dot Plot

Control Chart

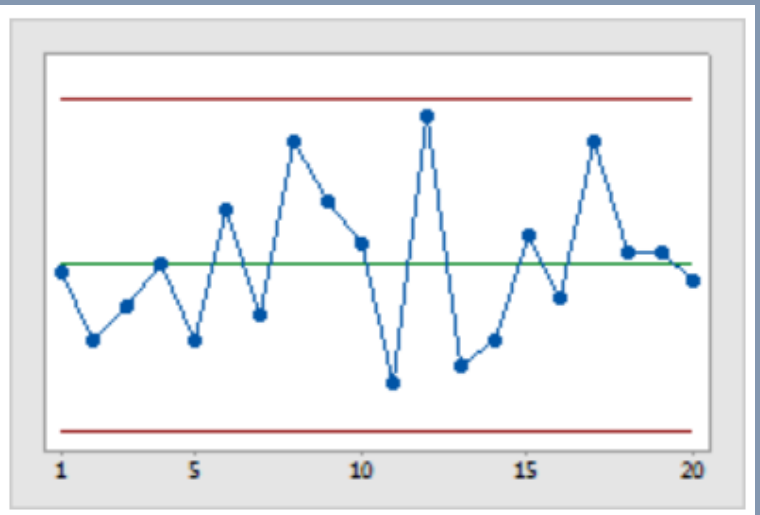
control chart indicates when a process is out of control and helps identify the presence of special-cause variation. When a special-cause variation is present, the process is not stable and corrective action is necessary.

Stable

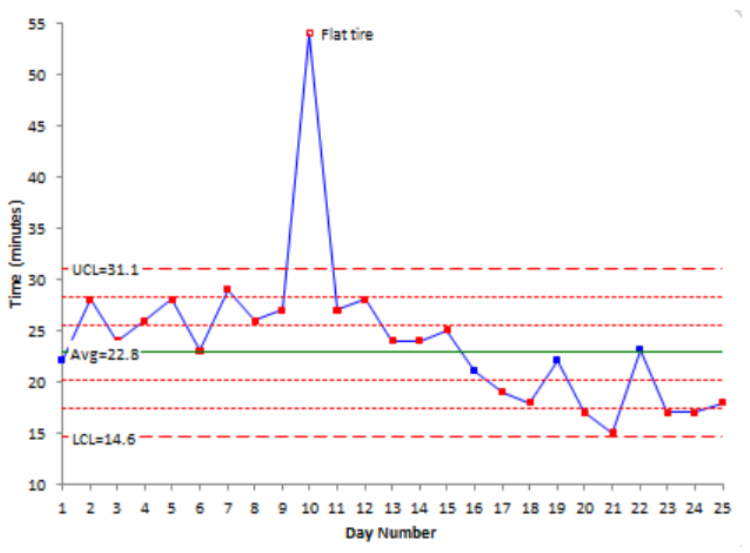
- A process must be stable before its capability is assessed or improvements are initiated. A stable process does not contain any special-cause variation; only common-cause variation that is present within the control limit.

Unstable

- Any points that is displayed outside of the control limits are considered unstable as it happened which is not part of the normal process and therefore violates the control chart test.



Example of stable process



Example of unstable process

Control Chart

Interpretation Of The Figure

Interpret the S chart first. None of the points are outside the control limits, and the points display a random pattern. Thus, the process variation is in control and the engineer can examine the process center on the Xbar chart.

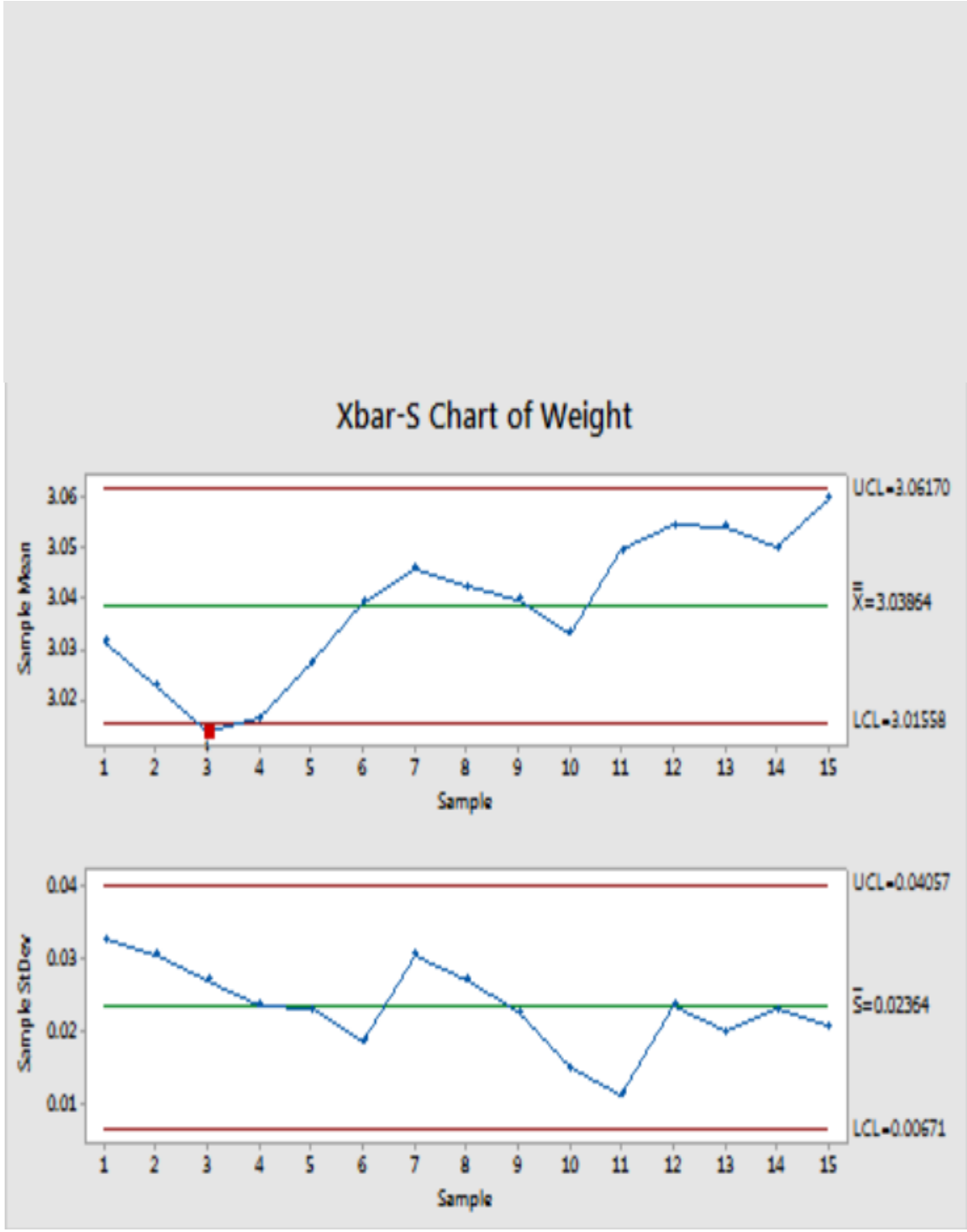
One points fails test 1 (one point more than 3 standard deviations from center line) on Xbar chart

Xbar-S Chart of Weight

Test Results for Xbar Chart of Weight

TEST 1. One point more than 3.00 standard deviations from center line.
Test Failed at points: 3

* WARNING * If graph is updated with new data, the results above may no longer be correct.

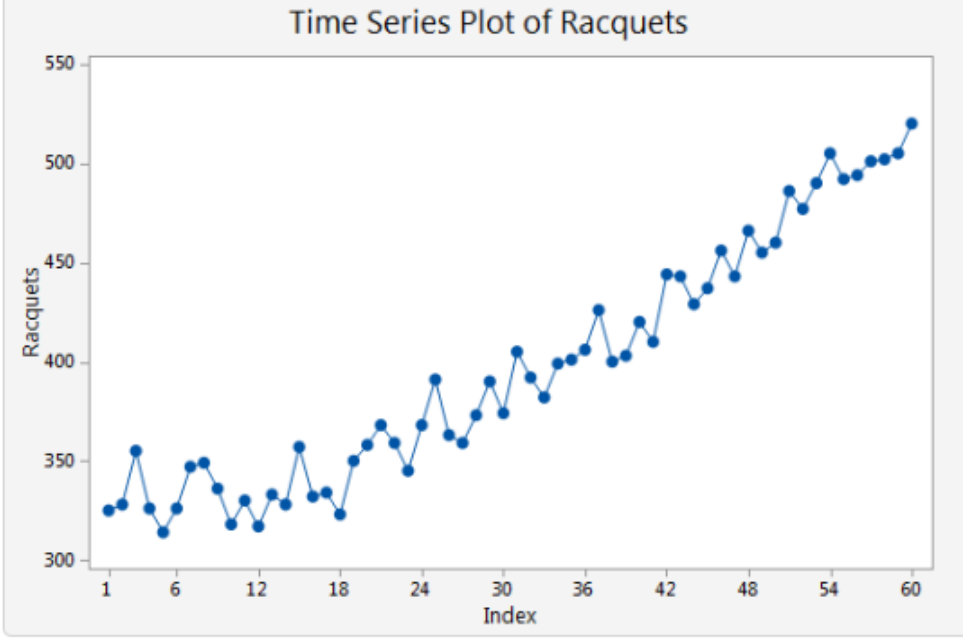


Line Chart

A line graph is commonly used to display change over time as a series of data points connected by straight line segments on two axes. The line graph therefore helps to determine the relationship between two sets of values, with one data set always being dependent on the other set.

Single Y Variable

C1
Racquets
325
328
355
...



Interpretation Of The Figure

The time series plot shows a clear upward trend. There may also be a slight curve in the data; the increase in the data values seems to accelerate over time.

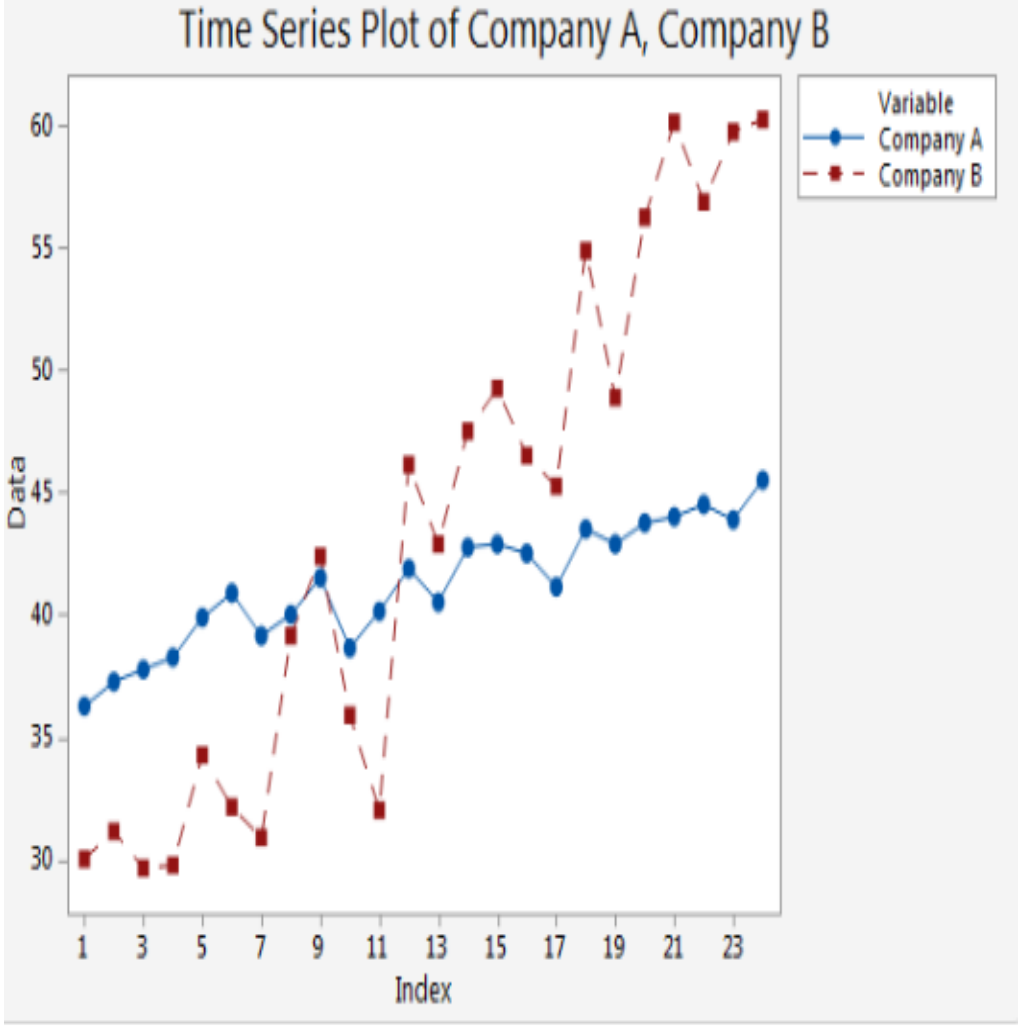
Summary Statistics

N	Mean	StDev	Minimum	Maximum
60	397.08	61.09	314.00	520.00

Line Chart

Single Y Variable With Groups

C1	C2	C4
Profit	Company	Date Labels
43	A	1
28	B	3
45	A	5



Interpretation of The Figure

The following time series plot shows the stock prices for two companies over time. The stock price for Company B appears to be growing in value faster than the stock price for Company A.

Bar Chart

Use Bar Chart to **compare the counts, the means, or other summary statistics using bars to represent groups or categories**. The height of the bar shows either the count, the variable function (mean, sum, standard deviation, and so on), or the summary value for the group

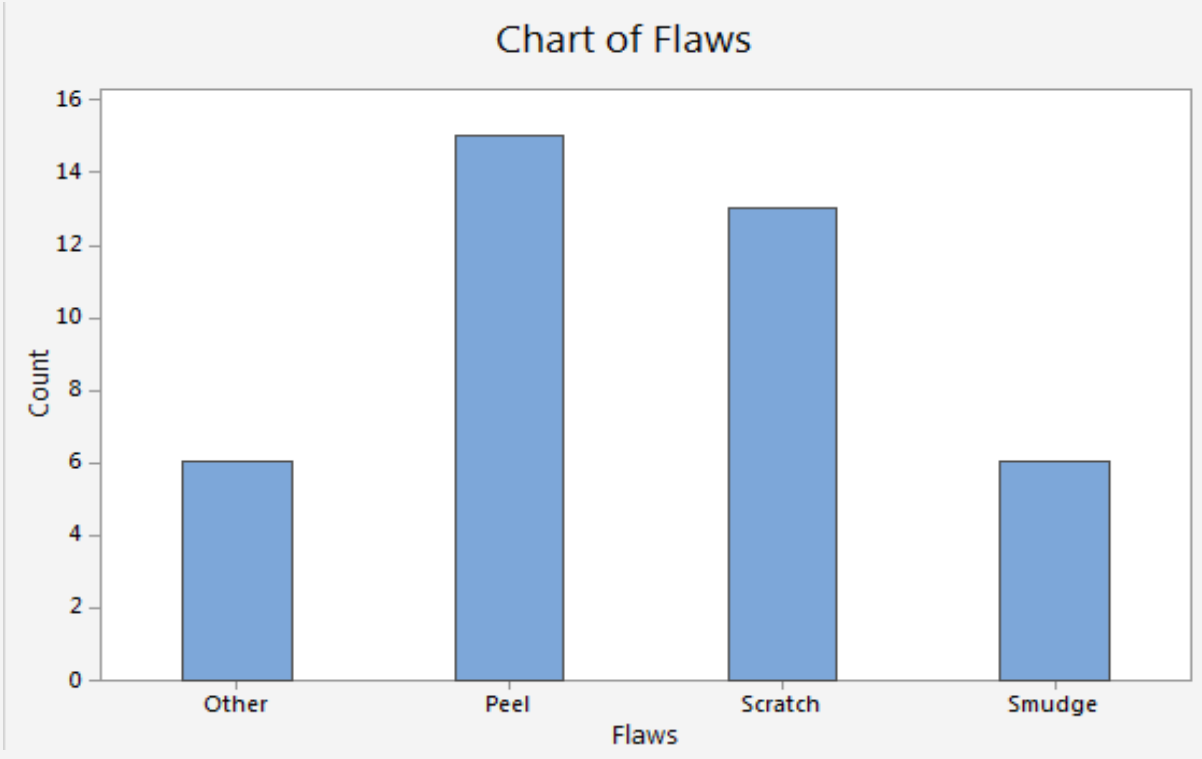
A Simple Bar Chart Of Counts Of Unique Values

Interpretation Of The Figure

This bar chart shows that Peel is the **most common paint flaw** and that Smudge and Other are the least common paint flaws.

Summary Statistics

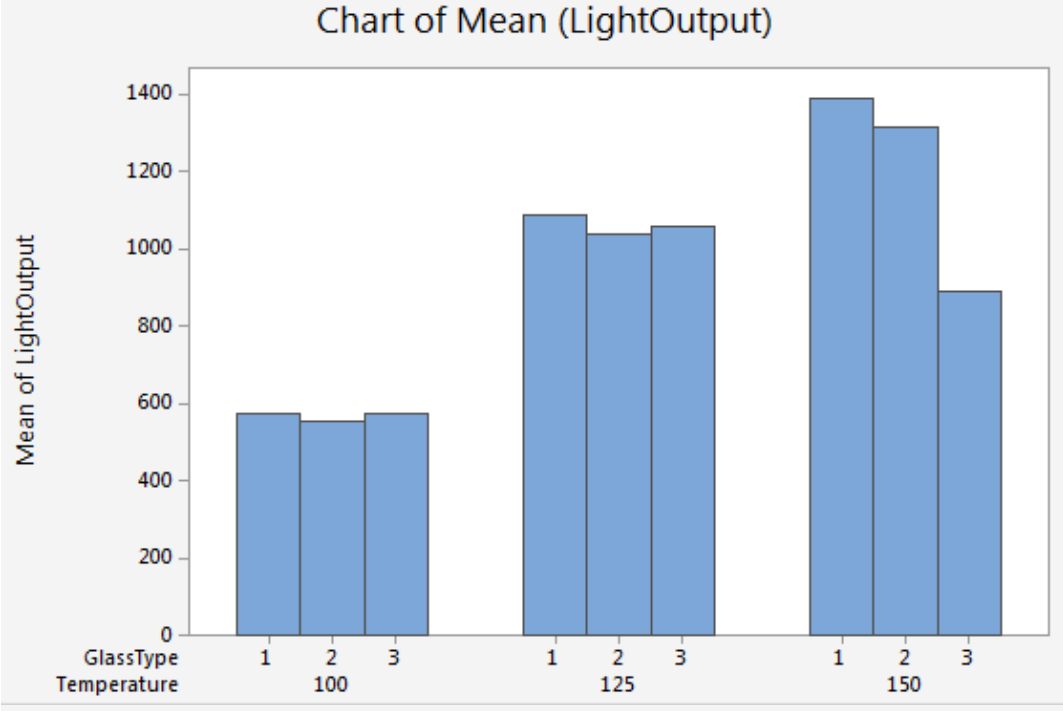
Flaws	Count	Percent
Other	6	15.0%
Peel	15	37.5%
Scratch	13	32.5%
Smudge	6	15.0%
Total	40	100.0%



Bar Chart

A Clustered Bar Chart Of A Function

Temperature	GlassType	Mean
100	1	572.67
	2	553.00
	3	573.33
125	1	1087.33
	2	1035.00
	3	1054.67
150	1	1386.00
	2	1313.00
	3	886.67



Interpretation Of The Figure

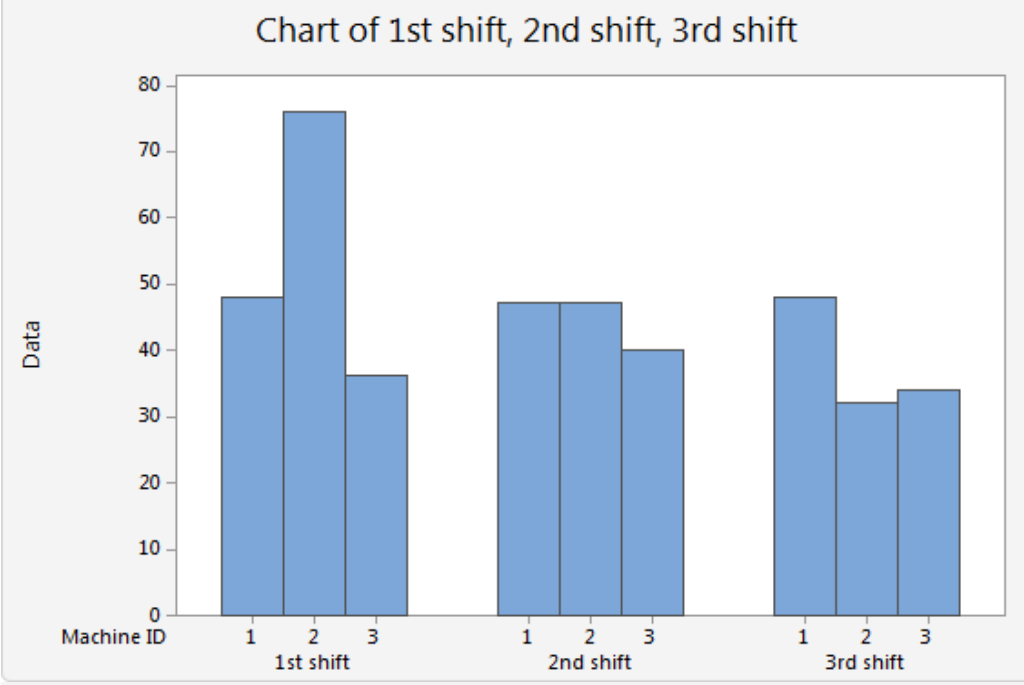
The temperature that produces the highest light output most often is 150 degrees. Although the difference in light output between glass types is small, the glass type that produces the highest light output most often is Glass type 1. Overall, the highest light output occurs with glass type 1 at 150 degrees.

Bar Chart

A Clustered Bar Chart Of Data In A Two-way Table

Summary Statistics

	1st shift		2nd shift		3rd shift	
Machine ID	Count	Percent	Count	Percent	Count	Percent
1	48	30.0%	47	35.1%	48	42.1%
2	76	47.5%	47	35.1%	32	28.1%
3	36	22.5%	40	29.9%	34	29.8%
Total	160	100.0%	134	100.0%	114	100.0%



Interpretation Of The Figure

A bar chart to compare the **number of rejected handles for each machine and shift**. The highest number of rejected handles is made by machine 2 during the first shift. The lowest number of rejected handles is made by machine 2 during the 3rd shift..

Histogram

Histogram examines the shape and spread of a data by using bars to show the frequency of data within each intervals

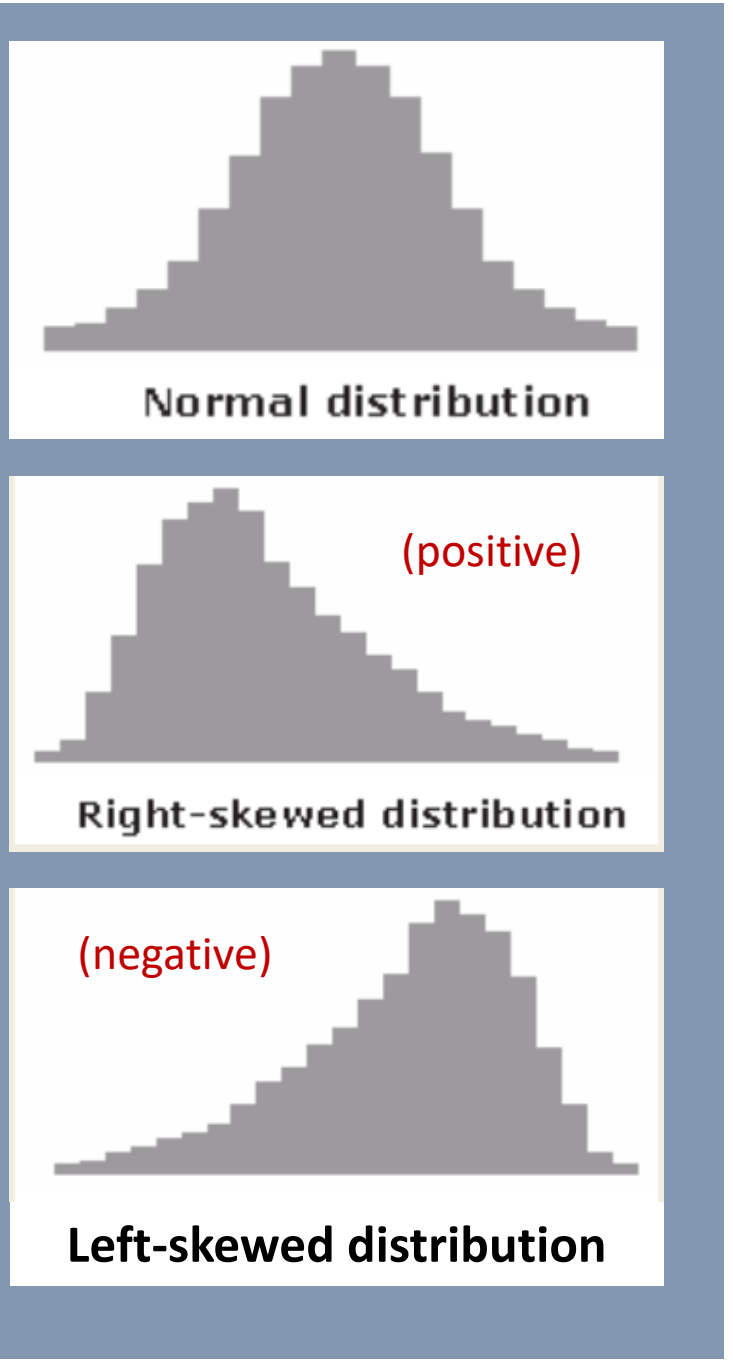
Normal distribution

- A pattern that is as likely to occur on one side of the average as on the other to form a bell-shaped curve.

Skewed

- The skewed distribution is asymmetrical because a natural limit prevents outcomes on one side. The distribution's peak is off center toward the limit and a tail stretches away from it.

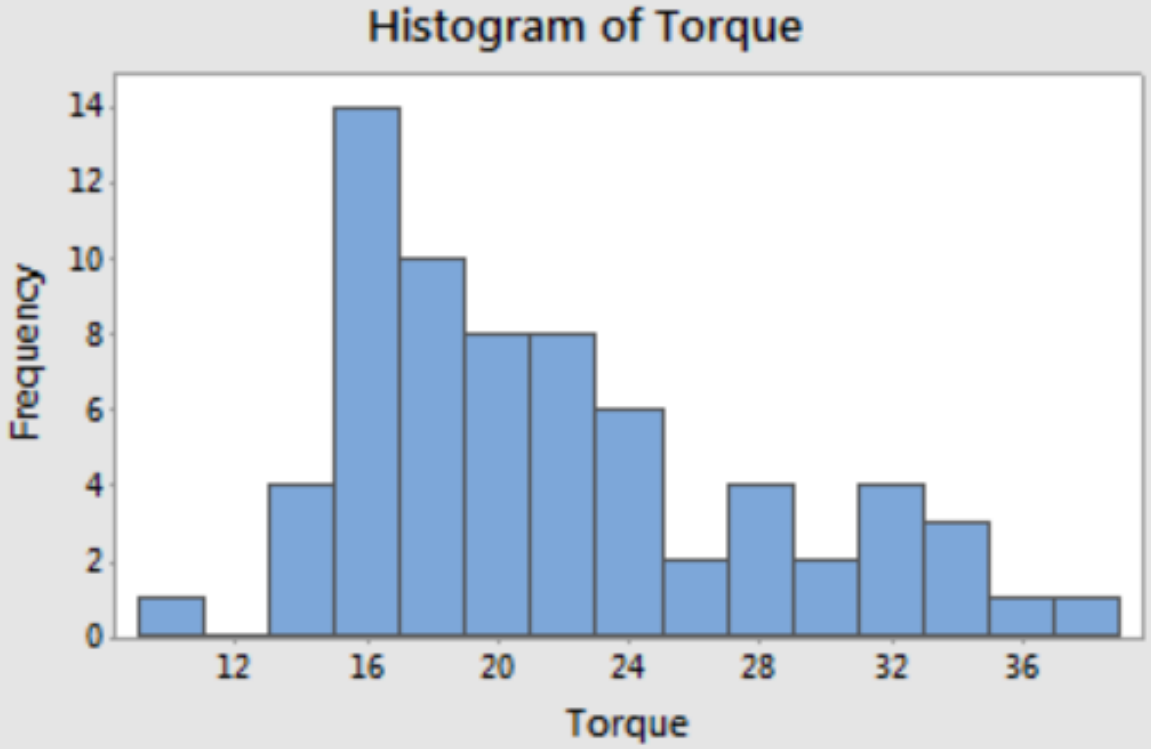
- A skewed distribution can either be positive or negative depending on the mean and median of the data



Histogram

Interpretation Of The Figure

Most caps were fastened with a torque of 14 to 24. Only one cap was very loose, with a torque of less than 11. However, the distribution is positively skewed. Many caps required a torque of greater than 24 to remove, and five caps required a torque of greater than 33, nearly two times the target value.

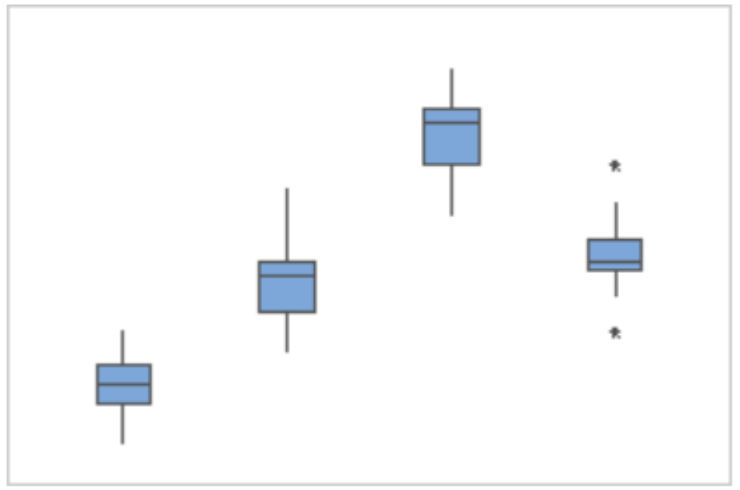


Box Plot

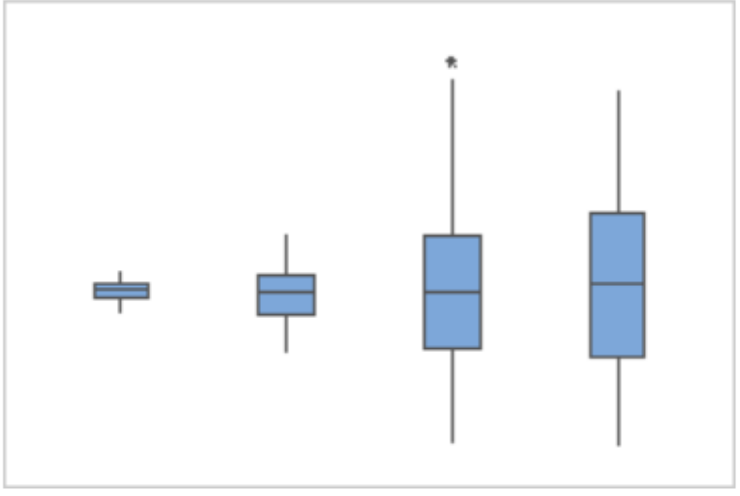
Box plot examines the center and spread of a data by plotting the median, quartiles, and any outliers as well as providing additional details while allowing multiple sets of data to be displayed in the same graph.

- Median is usually used to indicate as its centre value and gives a brief picture of the other important distribution values

- Spread on the other hand uses the mean and standard deviation to decipher the spread of data.



Example of Centers



Example of Spreads

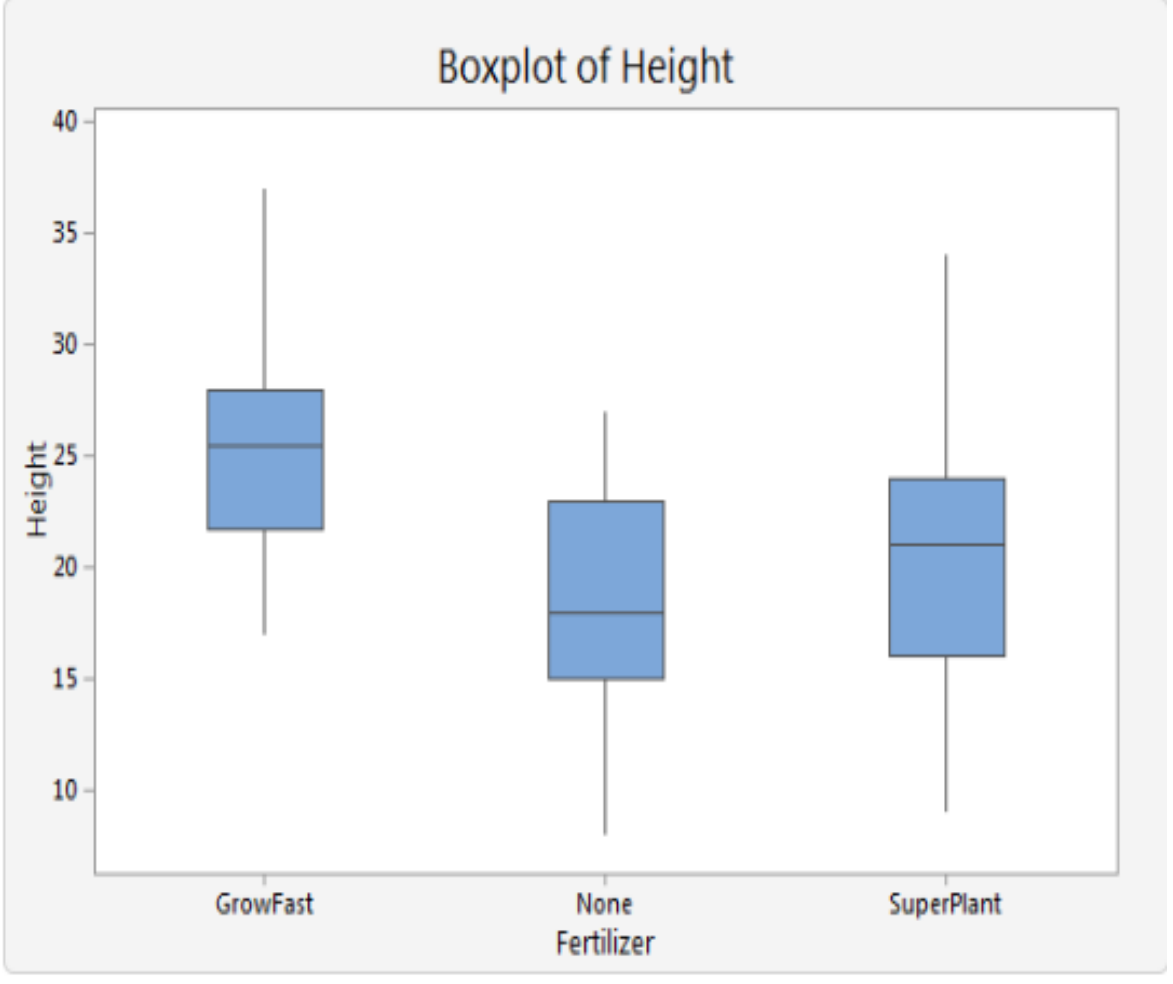
Box Plot

Interpretation Of The Figure

Summary Statistics

Fertilizer	N	Minimum	Q1	Median	Q3	Maximum	95% Median CI
GrowFast	50	17.0000	21.7500	25.5000	28.0000	37.0000	(23.0000, 27.0000)
None	50	8.0000	15.0000	18.0000	23.0000	27.0000	(17.0000, 20.0000)
SuperPlant	49	9.0000	16.0000	21.0000	24.0000	34.0000	(19.0000, 22.7856)

GrowFast produces the tallest plants overall. SuperPlant also increases plant height, but its variability is greater, and SuperPlant does not have a positive effect on a large proportion of the seedlings. The graph shows that GrowFast causes a greater and more consistent increase in plant height.



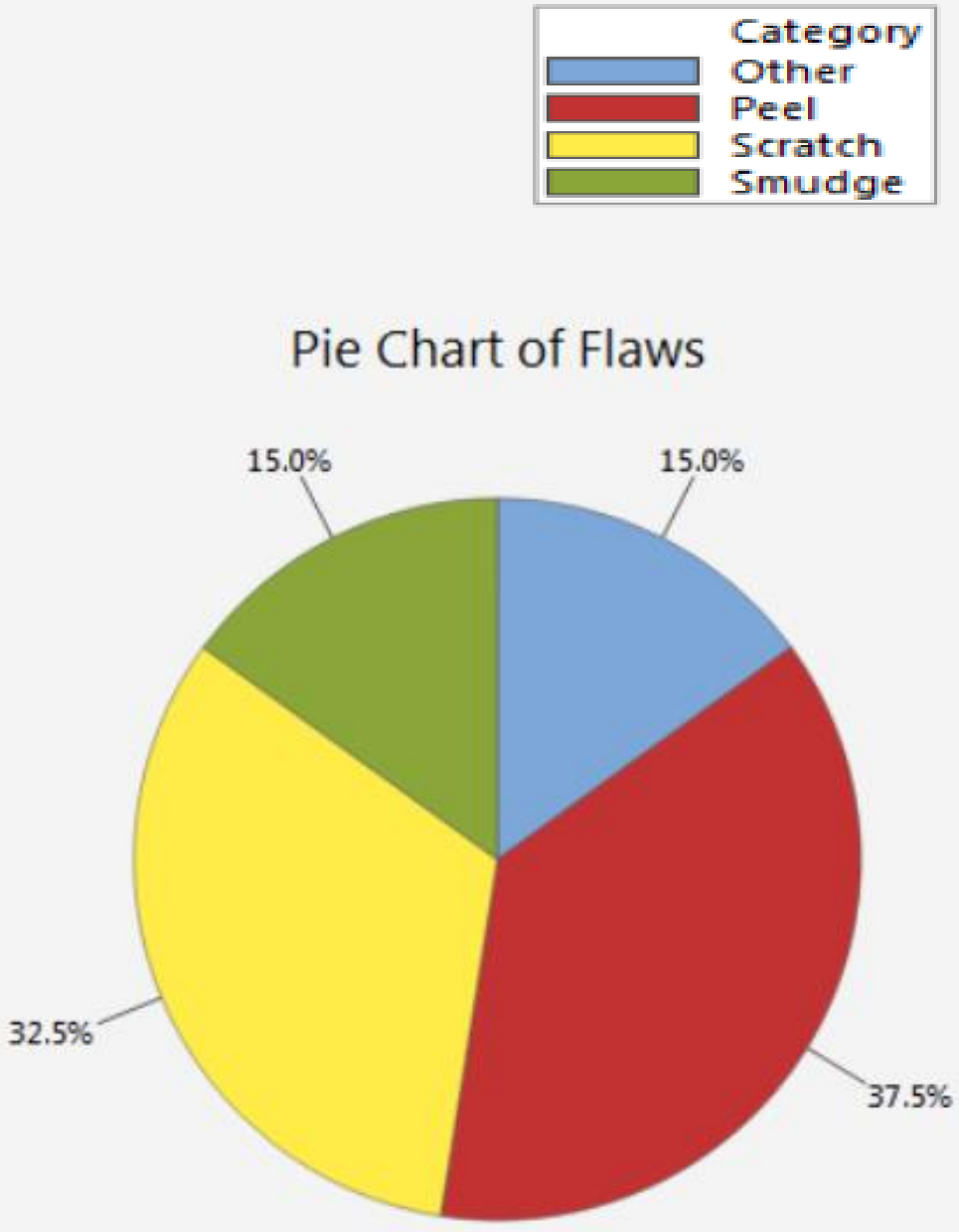
Pie Chart

A pie chart is a circle ("pie") that is divided into segments ("slices") to represent the proportion of observations that are in each category.

Interpretation Of The Figure

Summary Statistics

Flaws	Count	Percent
Other	6	15.0%
Peel	15	37.5%
Scratch	13	32.5%
Smudge	6	15.0%
Total	40	100.0%

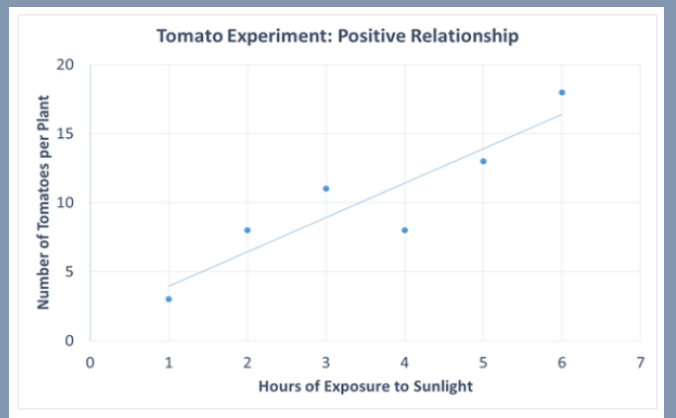


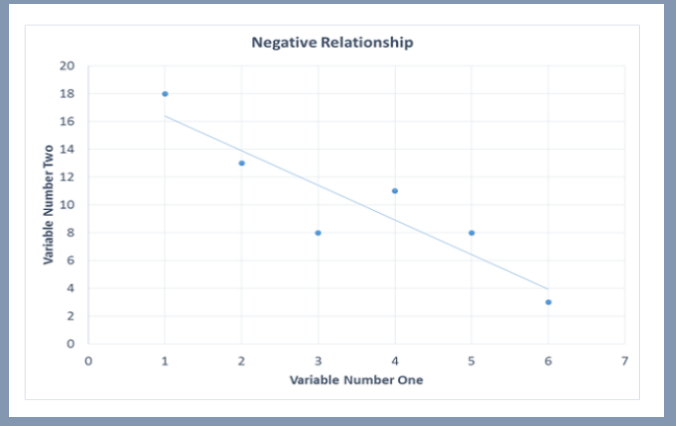
The pie chart shows that Peel is the most common paint flaw and that Smudge and Other are the least common paint flaws.

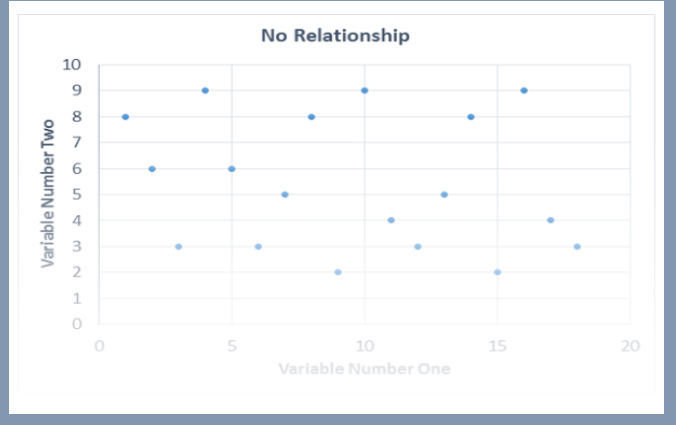
Scatter Diagram

Scatter Diagram examines the relationship between a Y-variable and X-variable to find out weather both of the variables are related

- An upward trend direction usually indicates that there is a positive relationship exists on the x-y axis.
- A scatter diagram showing a negative relationship has a downward trend. In other words, the slope of the best-fit trend line is negative or pointing in the south east direction
- If the data points on a scatter diagram do not seem to have any kind of linear positive or negative trend, then there is no connection between the two variables that are plotted.



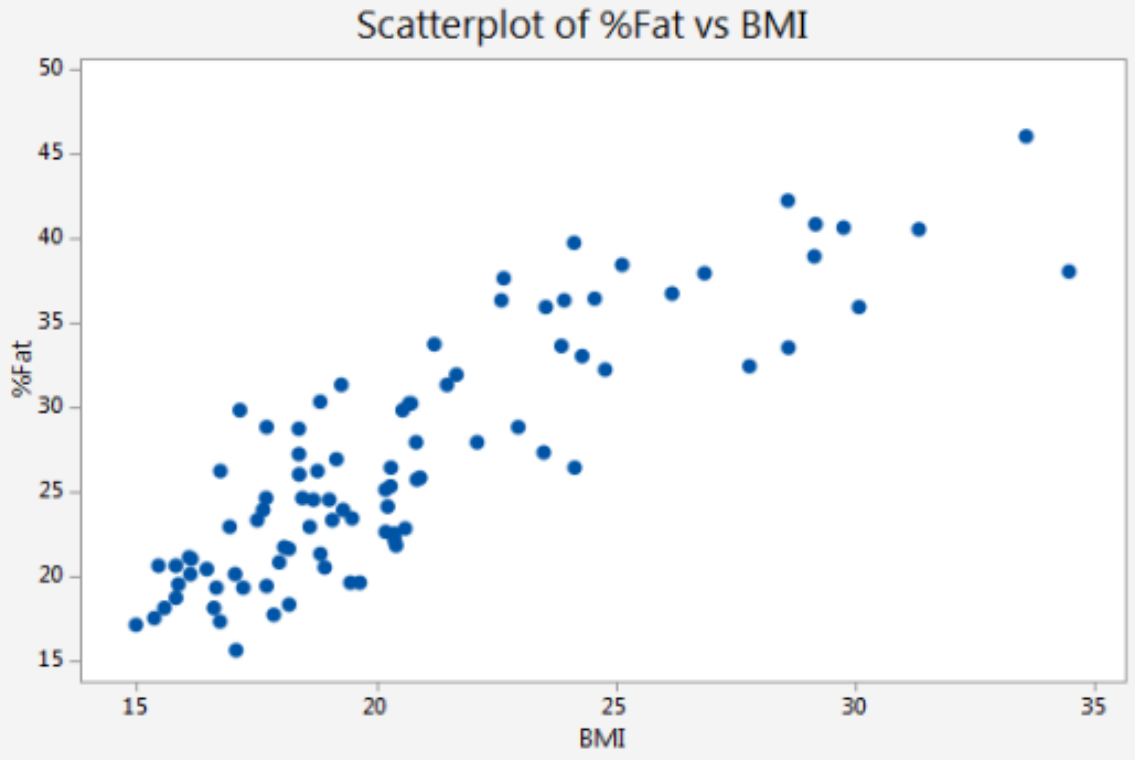




Scatter Diagram

Interpretation Of The Figure

The scatterplot for the BMI and body fat data shows a strong positive and linear relationship between the two variables. Body mass index (BMI) may be a good predictor of body fat percentage.



Summary Statistics

Variable	N	Mean	StDev	Minimum	Maximum
%Fat	92	26.9620	7.1429	15.6000	46.0000
BMI	92	20.7058	4.3251	14.9863	34.4610

Univariate, Bivariate, Multivariate Analysis

1 UNIVARIATE ANALYSIS

- One variable (Univariate)
- Example

Age

Gender

Income

2 BIVARIATE ANALYSIS

- Two variable (Bivariate)
- Example

Gender

&

CGPA

3 MULTIVARIATE ANALYSIS

- Several variable (Multivariate)
- Example

Age + Education + Prejudice

Univariate Analysis

UNIVARIATE ANALYSIS

is the analysis of a single variable.

Because Univariate Analysis does not involve relationships between two or more variables, its purpose is more toward descriptive rather than explanatory.

Distribution

1. What is your religious preference?

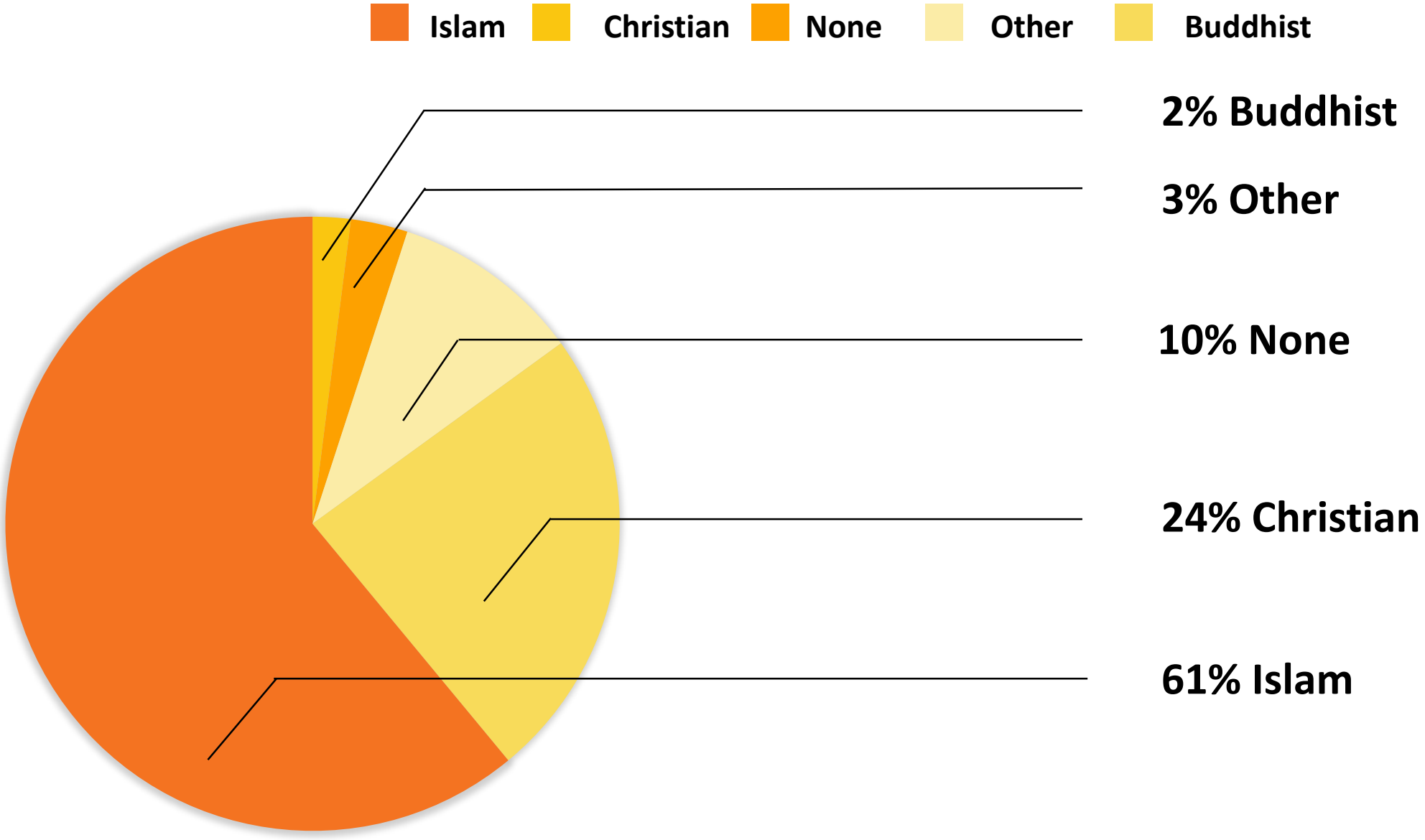
☐ Islam ☐ Christian ☐ Buddhist ☐ None ☐ Others

TABLE 3.1: Religious Preferences

		Frequency	Percent	Valid Percent	Cumulative Percent
1 Islam		886	59.6	60.0	60.0
2 Christian		367	24.7	24.8	84.8
3 Buddish		26	1.7	1.8	86.6
4 None		146	9.8	9.9	96.5
5 Other		52	3.5	3.5	100.0
Total		**1477**	**99.4**	**100.0**	
Missing	**9 NA**	**9**	**0.6**		
Total		**1486**	**100.0**		

Distribution

Figure 1 : Religious Preferences



Bivariate Analysis

- In contrast to univariate analysis, subgroup comparisons involve two variables.
- Subgroup comparisons constitute a kind of bivariate analysis – the analysis of two variables simultaneously.
- However, as with univariate analysis, the purpose of subgroup comparisons is largely descriptive.

Bivariate Analysis

Table 2: Religious Class Attendance Reported by Men and Women in 2017

	Men (%)	Women (%)
Weekly	22	39
Less Often	78	61
100% =	1,276	1,525

- Table describes the religious class attendance of men & women as reported in 2017 General Social Survey.
- It shows: comparatively & descriptively – that women in the study attended religious classes more often as compared to men.
- The existence of explanatory bivariate analysis suggests: gender has an effect on the religious attendance.

Bivariate Analysis

Theoretical interpretation of Table 2 might be because:

1. **Women are still treated as second- class citizens in Malaysian society**

2. **People denied status gratification in the secular society may turn to religion as an alternative source of status.**

3. **Hence, women should be more religious than men.**

Constructing and Reading Bivariate Tables

Steps involved in constructing of explanatory bivariate tables

1. The **cases are divided** into groups according to attributes of the independent variable.

2. Each of these subgroups is then **described in terms of attributes** of the independent variable.

3. Finally, the table is read by **comparing the independent variable subgroups with one another** in terms of a given attribute of the dependent variable.

TABLE 3: Gender and attitudes toward equality for men and women.

	Women (%)	Men (%)
Favor Equality	80	40
Don't Favour Equality	20	60
TOTAL	100	100

Interpretation of the above…??

Multivariate Analysis- to get new example

The analysis of the simultaneous relationships among several variables

E.g. The effects of ***Religious Class Attendance, Gender,*** and ***Age*** would be and example of multivariate analysis.

TABLE 4: Multivariate Relationship: Religious Class Attendance, gender, and Age

	"How often do you attend religious classes" (%)			
	Under 40		*40 and older*	
	Men	*Women*	*Men*	*Women*
About weekly	22	30	33	45
Less often	78	70	67	55
Total	100	100	100	100

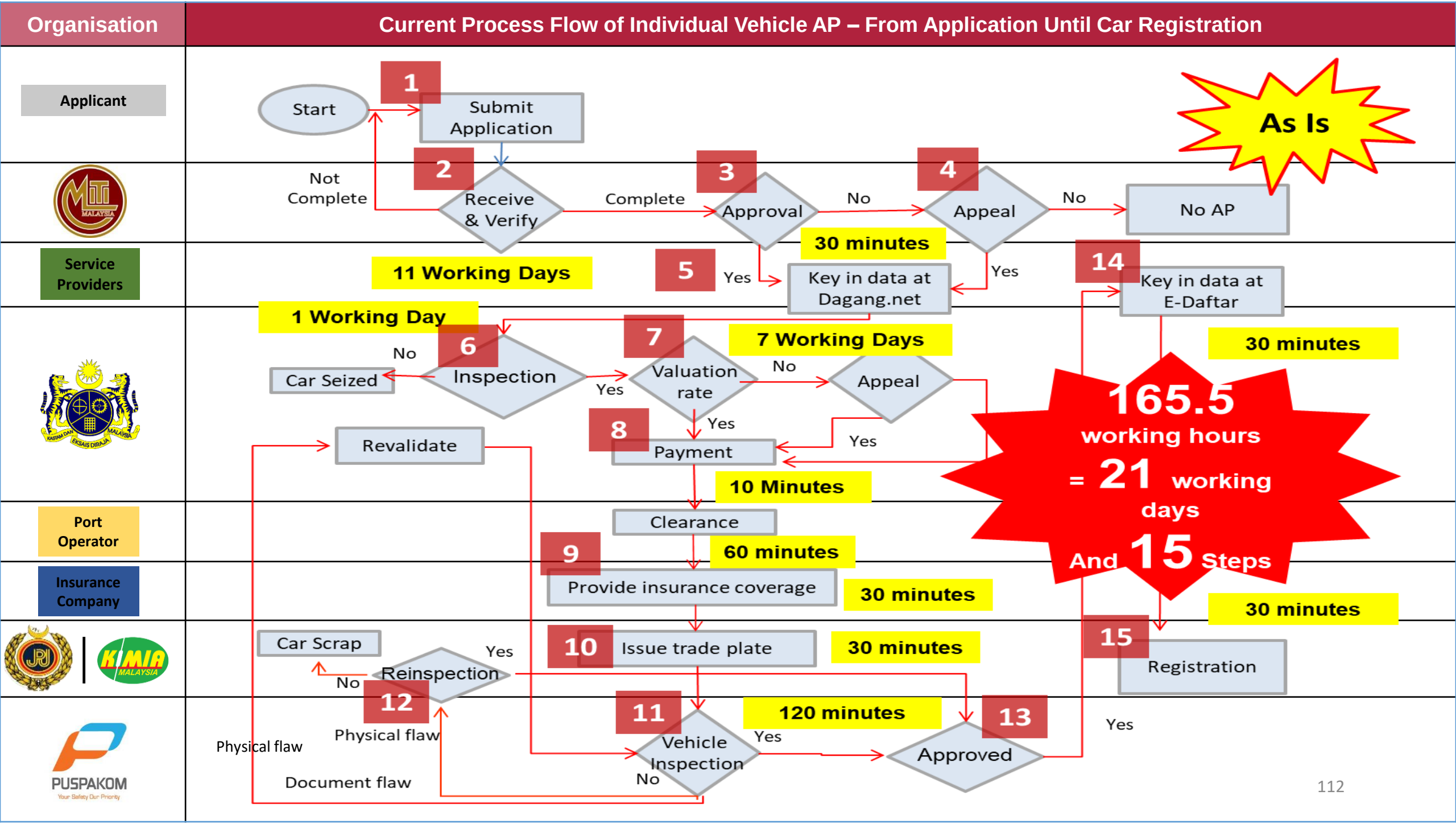
Age

Gender

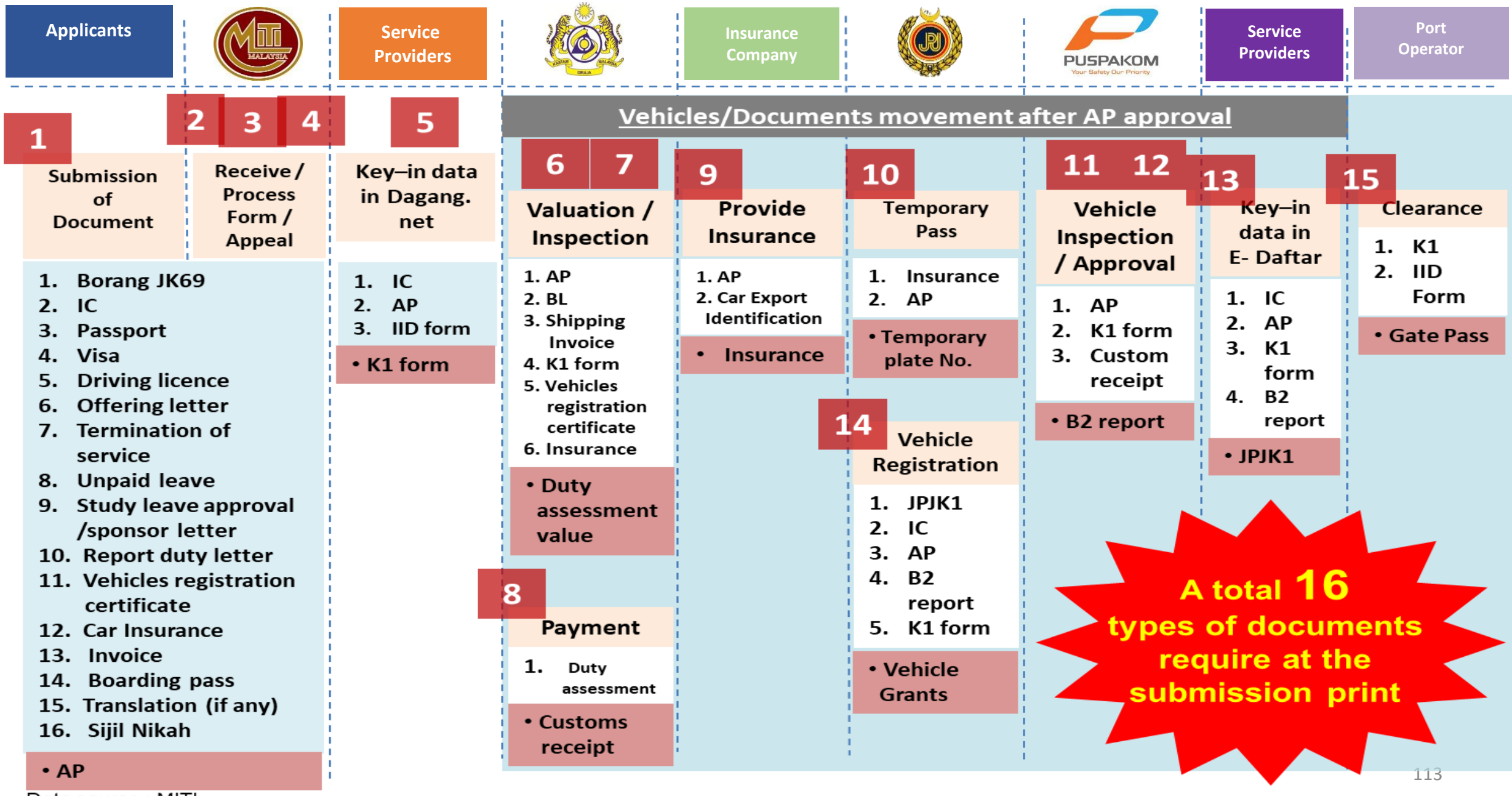
Religious Class Attendance

Interpretation …??

Examples of Data Analysis

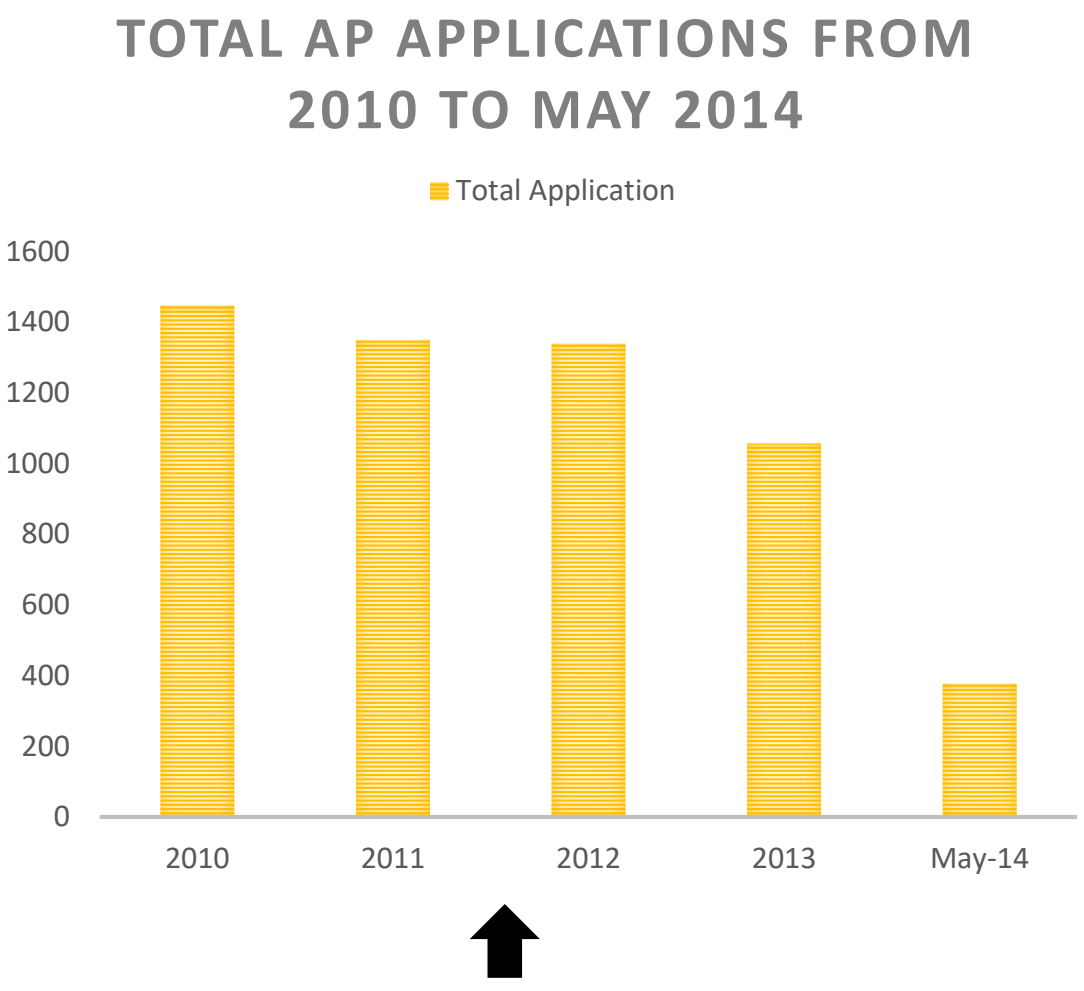

Organisation
Current Process Flow of Individual Vehicle AP – From Application Until Car Registration
Applicant
Service Providers
Port Operator
Insurance Company
As Is
Start
1
Submit Application
2
Receive & Verify
Not Complete
Complete
3
Approval
No
4
Appeal
No
No AP
Yes
30 minutes
11 Working Days
5
Yes
Key in data at Dagang.net
14
Key in data at E-Daftar
1 Working Day
6
Inspection
No
Car Seized
Yes
7
Valuation rate
7 Working Days
No
Appeal
Yes
8
Payment
Yes
Revalidate
10 Minutes
Clearance
9
60 minutes
Provide insurance coverage
30 minutes
10
Issue trade plate
30 minutes
Car Scrap
Yes
Reinspection
No
12
Physical flaw
Physical flaw
Document flaw
11
120 minutes
Vehicle Inspection
Yes
No
13
Approved
Yes
30 minutes
165.5 working hours = 21 working days
And 15 Steps
30 minutes
15
Registration
PUSPAKOM
Your Safety Our Priority

Documents Required for Individual Vehicle AP Application

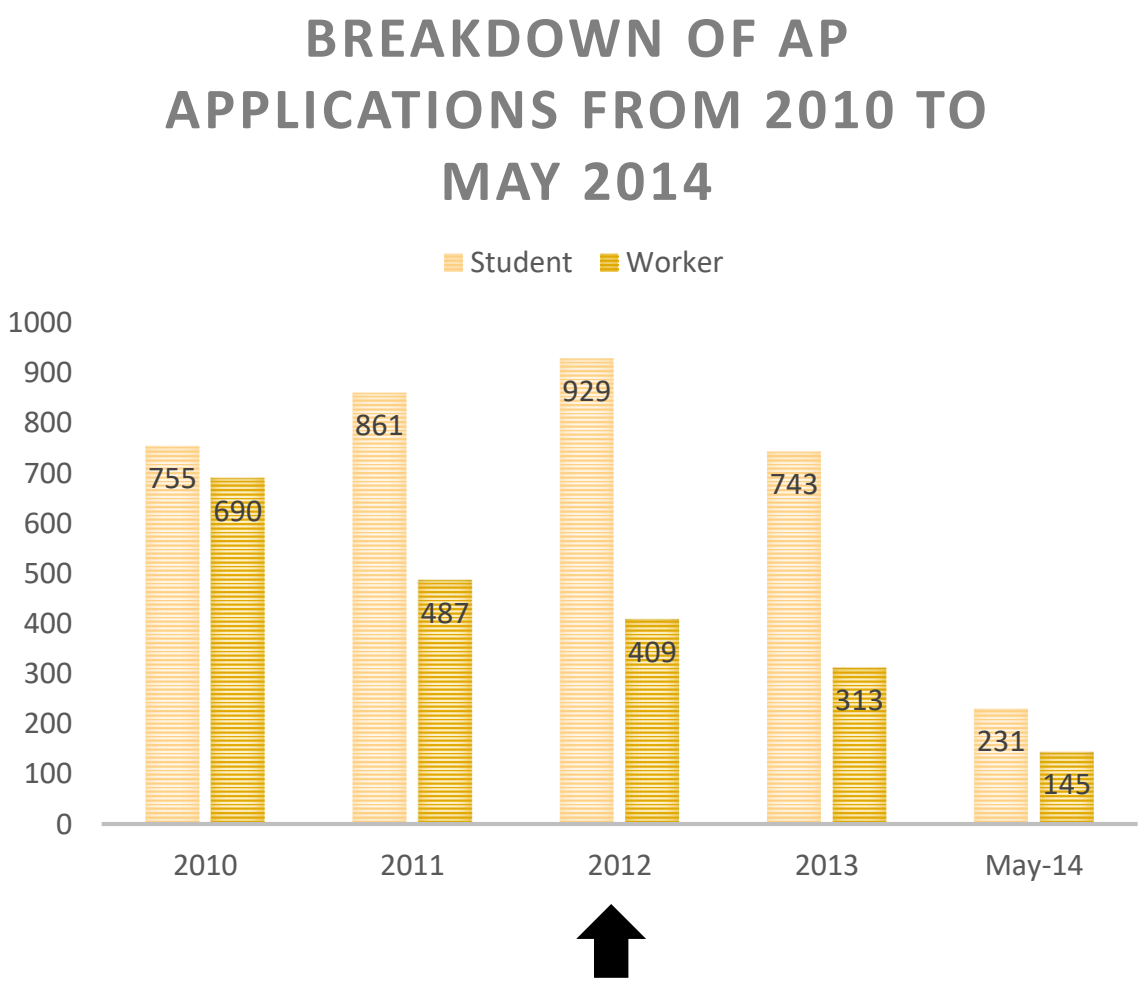


Data source : MITI

Trend and Breakdown of Total Applications for Individual Vehicle AP from 2010 to May 2014

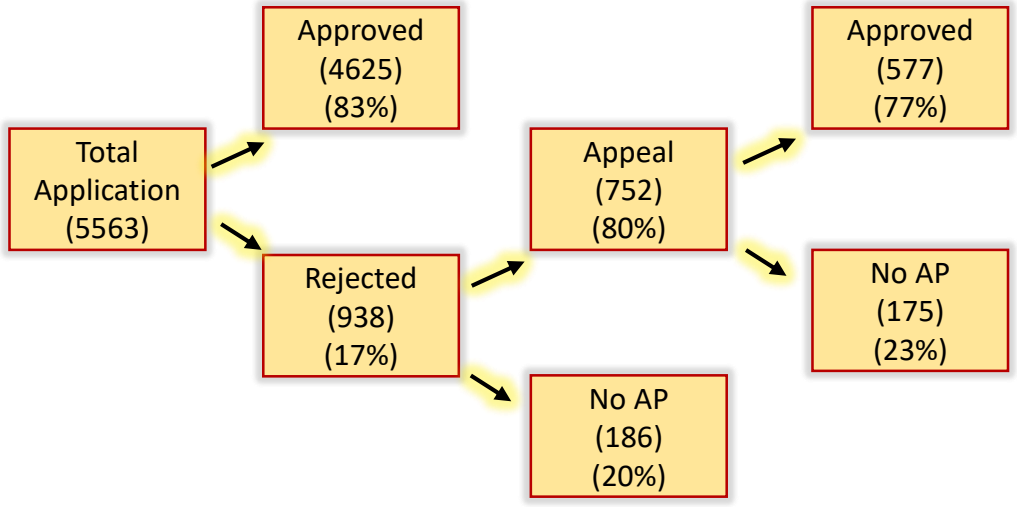


Average of **1297** AP applications received each year

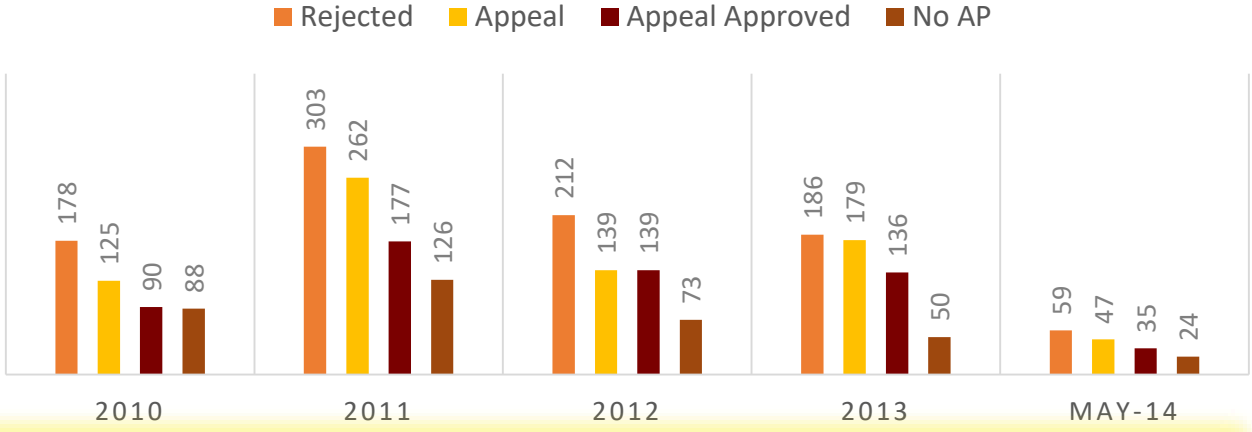


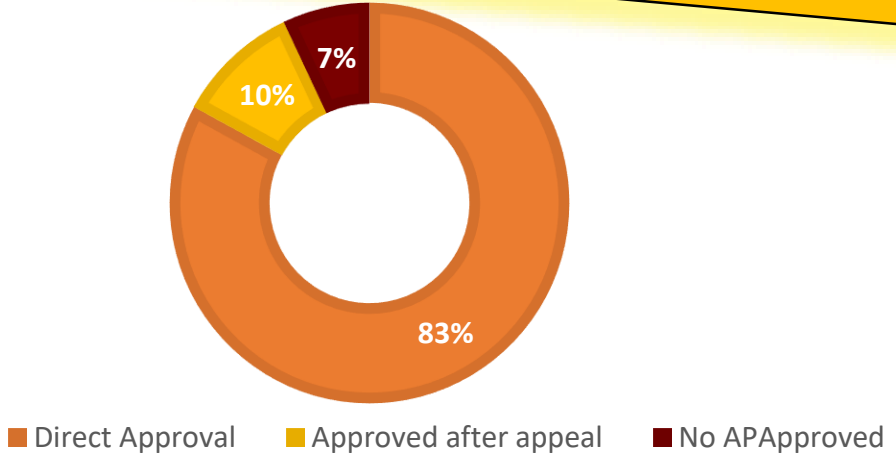
Applications from student were higher than employed staff

Breakdown of Individual Vehicle AP Application Status from 2010 to May 2014



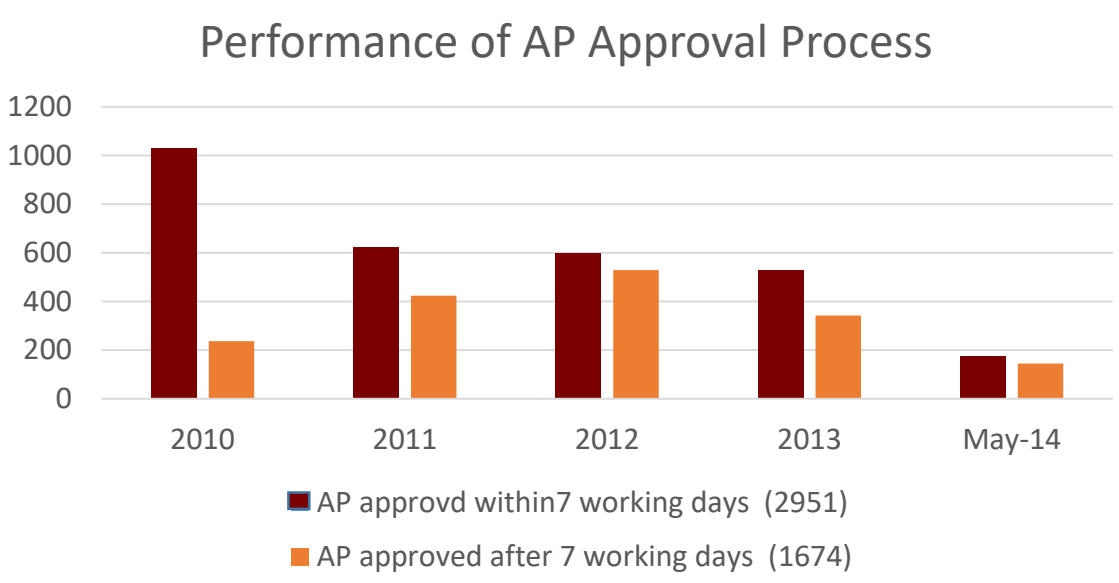
Almost 83% of the total AP applications were approved within 5 years

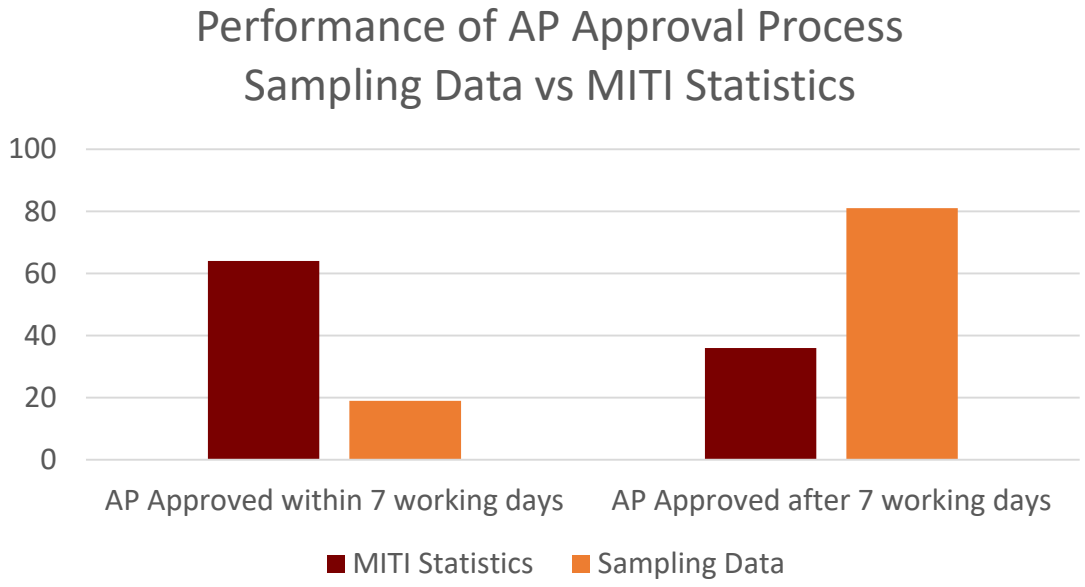


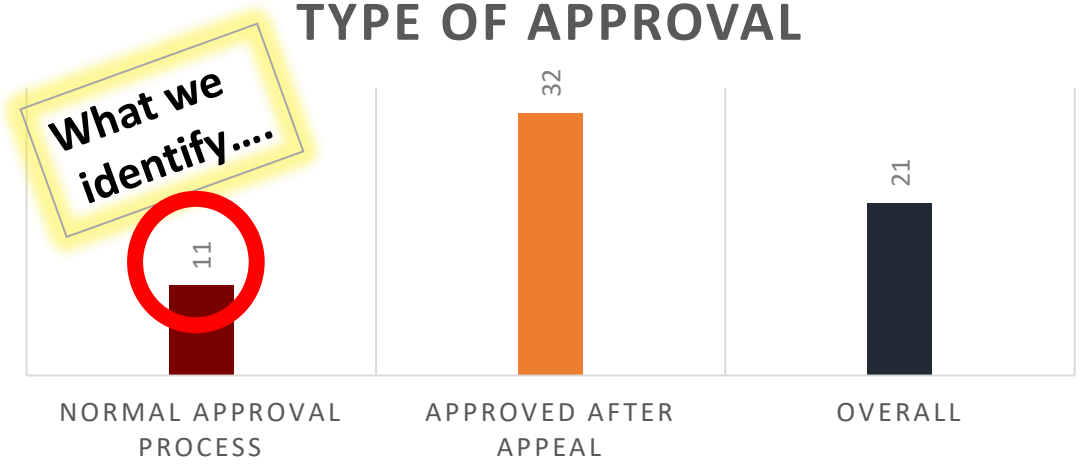


Approximately 93% (5202) of the applications submitted from 2010 to May 2014 were approved and only 7% (361) were rejected with no AP approved

Analysis on Performance of Individual Vehicle AP Application Process



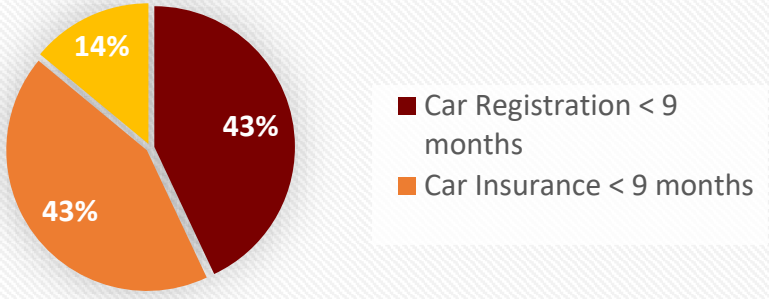




Percentage of Individual AP Application Approval	
MITI Statistic	=<7 Days (64%)
	> 7 Days (36%)
Sampling Data	=<7 Days (19%)
	> 7 Days (81%)
Median of AP Approval Process	
Sampling Data (Normal Approval Process)	11 Days
Combined Average (Normal + After Appeal)	21 Days
RMCD Data (Arrival Discharge)	19 Days

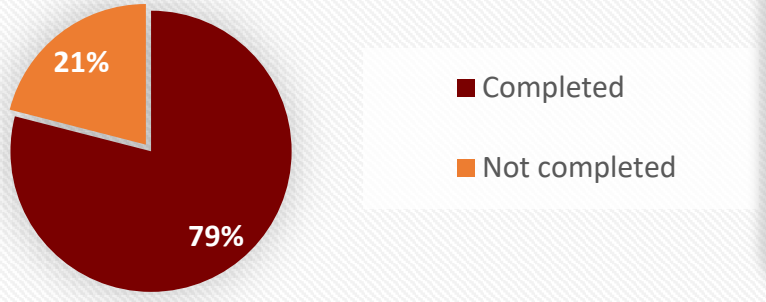
Non-compliance on Individual Vehicle AP Application Conditions

JUSTIFICATION FOR AP REJECTED



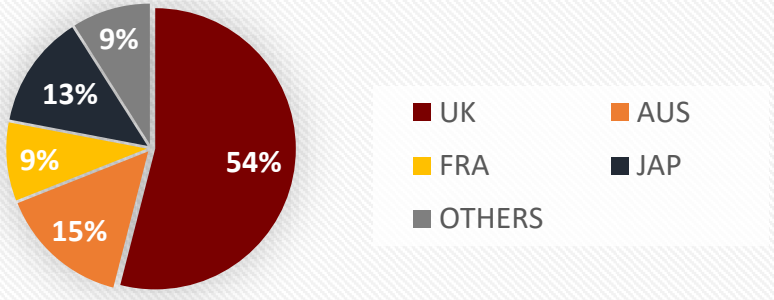
Almost **86%** of AP applications rejected due to issues related to **Car Registration and Insurance that is less than 9 months**

SUBMISSION OF DOCUMENTS

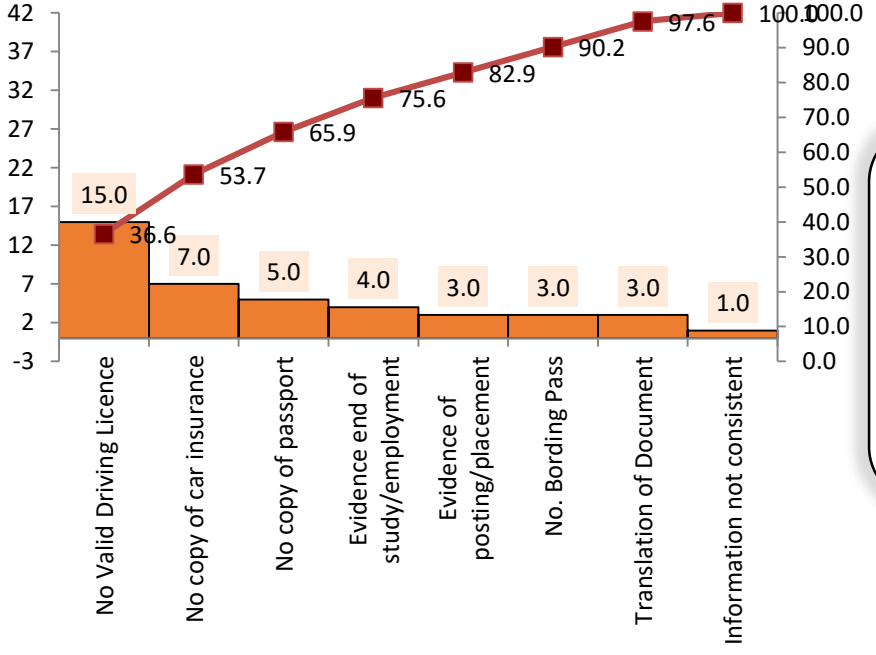


79% of applicants **fail to submit a complete documents** at the first interface with MITI

EARLY REJECTION ON AP APPLICATIONS BY CARS COUNTRY OF ORIGIN



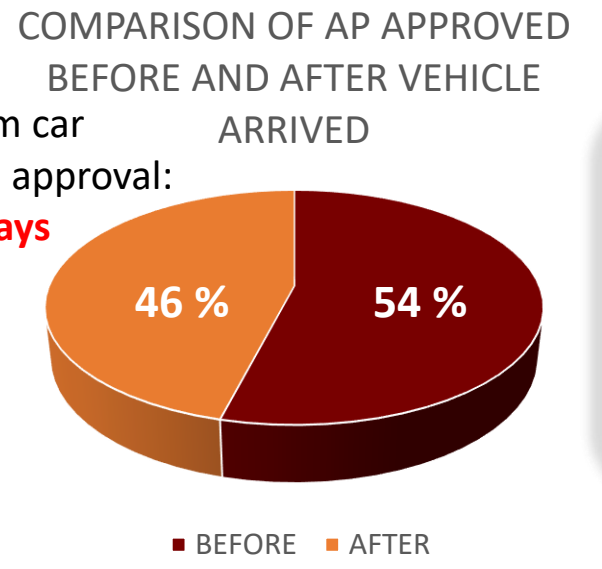
54% of the rejection is originated from the applicants from the **United Kingdom**



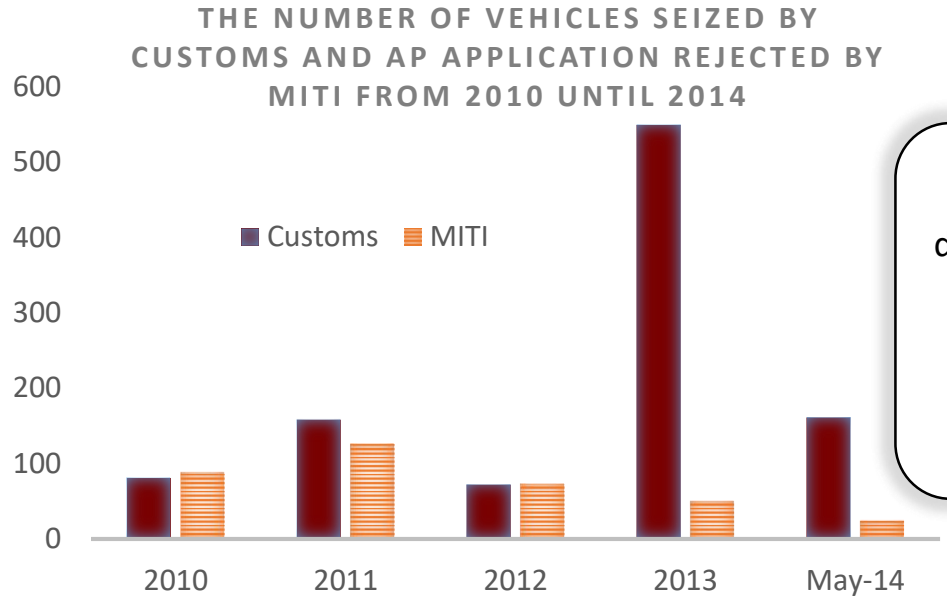
54% of applicants unable to attach a **copy of driving licence & insurance**

Time spent and Regulatory Burdens to Applicants Upon Vehicle Clearance

No. of days from car arrived until AP approval: Median = **19 days**

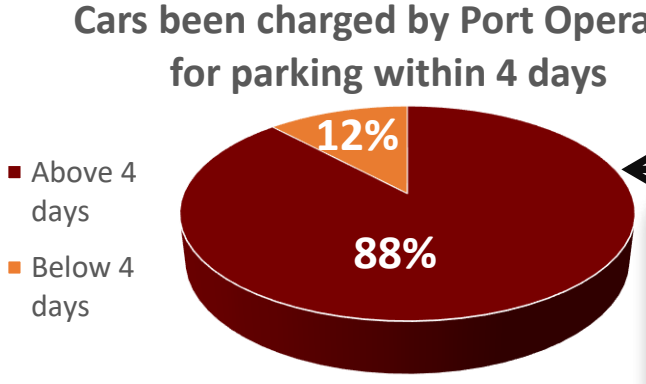


46% of vehicles arrived without AP

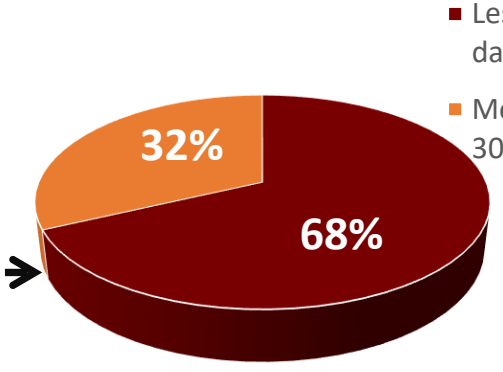


Applicants loss due to car seized by RMCD **RM17.5m** (Based on MITI Data)

*** Info : > 4 days – Storage Charge - RM8/per day by Port Operator**
> 30 days - A fine of RM 500 charge by RMCD



Only 12% of the applicants managed to **clear the vehicle within 4 days**. For the remaining 88%, **32% were fined** by RMCD for **not having APs within 30 days** of vehicle arrival



32% of applicants **were fined by RMCD** and paid for daily parking charges to port operators

BACKGROUND OF INDUSTRIAL COURT PROCEEDING

Register

- The Industrial court register's a case after receiving a reference letter from MOHR. Serves a notice to plaintiff with form H (Statement Of Case) and form F (1st mention date).
- Form A and B if wishes to appoint a lawyer

Mention

1st mention

- The Chairman will instruct the Statement of Case (SOC) to be filed by the Claimant within a month through form H.
- Parties desiring representation by Advocates & Solicitors are required to fill up Forms A and B.

2nd mention

- Attended by lawyer to represent plaintiff and defendant.
- Defendant to submit Statement in Reply (SIR) through form J.

1 month

3rd Mention

- Inform chairman SIR has been serve to court.
- Plaintiff to submit Rejoinder.

1 month

4th Mention

- Plaintiff update status on Rejoinder to court.
- If no agreement achieved through settlement, hearing process will be proceed (**Form G).**

Hearing

The Hearing is where both parties present evidence and arguments for the judge to use in making a final decision.

Submission

Submission is a document/oral intended for the court which summarizes the relevant facts, the law and a proposed analysis to bring to the two, on behalf of a litigant.

Award

A decision made by the Court in respect of any trade dispute or matter referred to it or any decision or order made by it under this act.

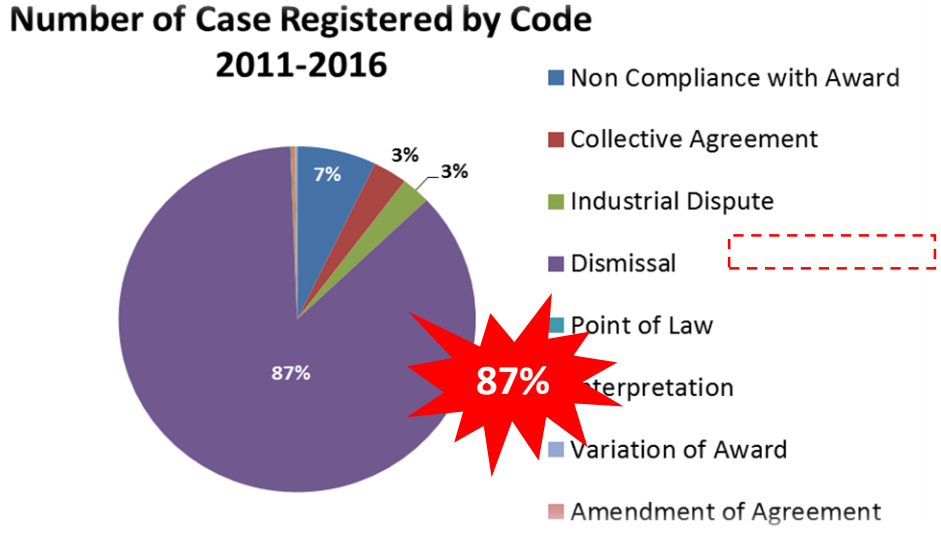
FORM	REMARKS
SOR & SIR	• A Statement of all relevant facts and arguments • Appendix or attachment, a bundle of all relevant documents relating to the case and which have not already been included in the statement of case.
REJOINDER	• Rejoinder shall relate only such of the matters as have been raised or alluded to in Statement in Reply and in other respects the provisions of Rule 10 (SIR)

ANALYSIS OF CASES HEARD IN INDUSTRIAL COURT

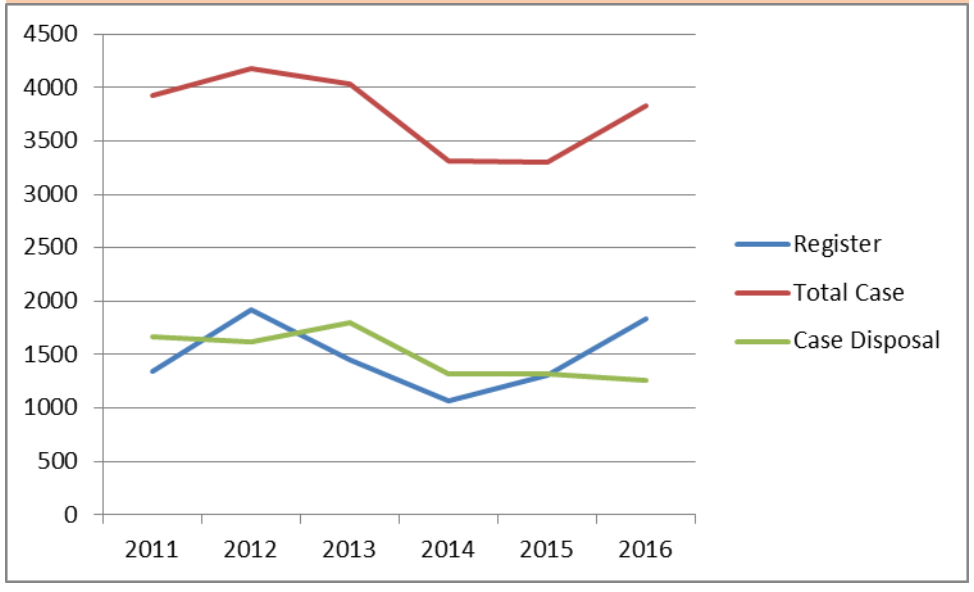
Year	Register	Carry Forward from Last Year	Revival Case	Others	Total Case per Year	Case Disposal	Others	Remaining Cases
2011	1346	2552	25	0	3923	1670	2	2251
2012	1918	2251	5	1	4175	1615	1	2559
2013	1456	2559	16	0	4031	1794	0	2237
2014	1062	2237	8	1	3308	1321	1	1986
2015	1303	1986	14		3306	1320	1	1985
2016	1832	1985	12		3829	1254	1	2574

171 case / court

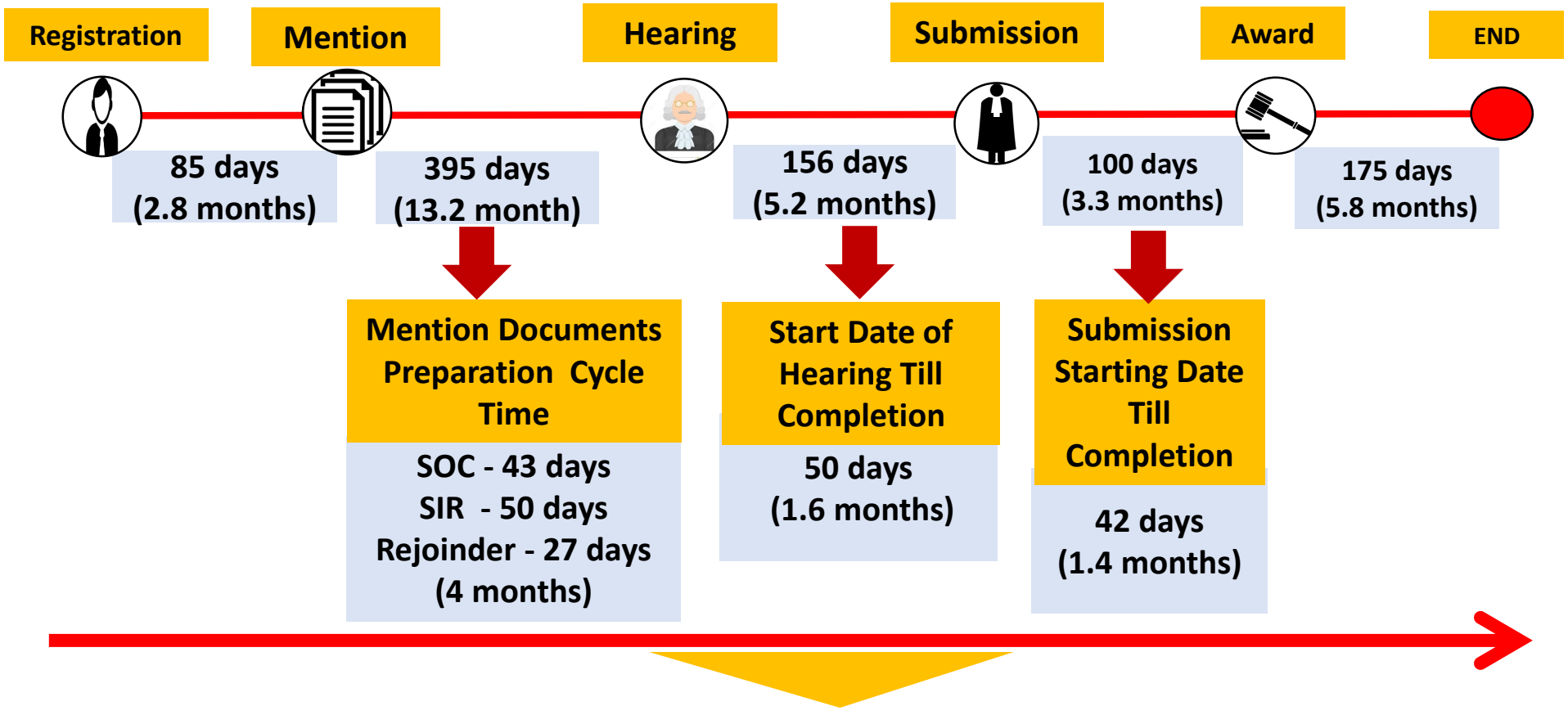
Backlog cases carry forward on average about 2,262 yearly. Under the current approach and strength it is impossible for IC to remove the backlog.



Case resolved performance reduce from **40%** in 2014 to **32.7%** in 2016



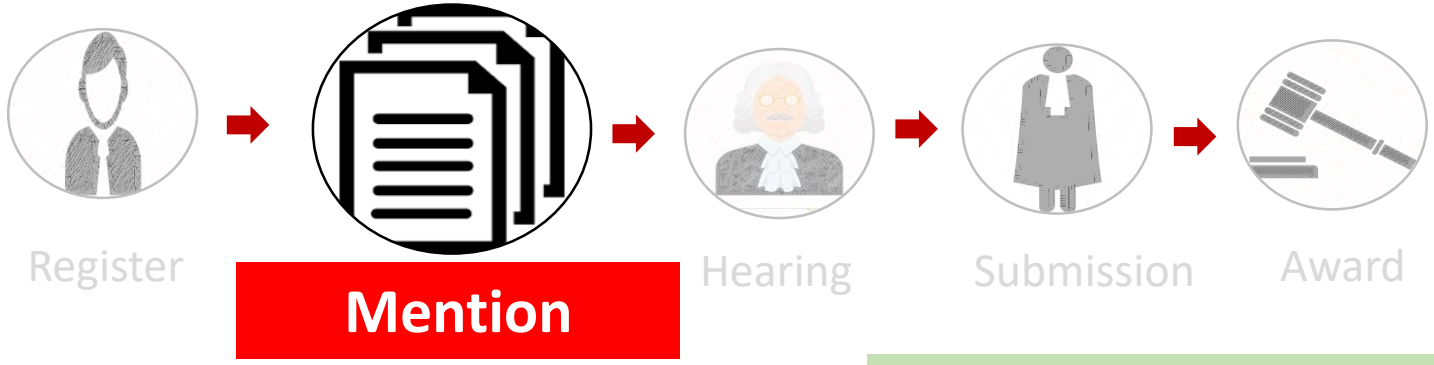
OVERVIEW OF CURRENT INDUSTRIAL COURT PERFORMANCE



From a sample data analysis of Dismissal court case (86 sample case), it took about **911 days (2.5 years)** from lodgment to closure.

DETAILS INFORMATION ON *MENTION* STAGE

INDUSTRIAL COURT PROCEDDING PROCESS



SOC — 43 Days

SIR — 50 Days

Rejoinder — 27 Days

It takes almost **4 months** to complete a **MENTION** stage

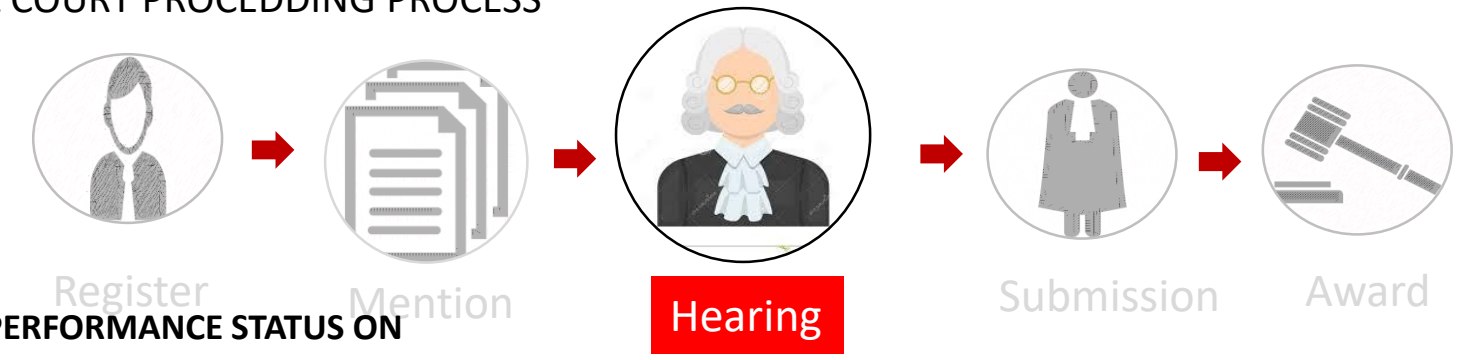
Time take for SOC, SIR and Rejoinder preparation are very much depend on the performance of the earlier process

78% of SOC and **89%** of SIR failed to be submitted before or on the first mention scheduled date by the Court

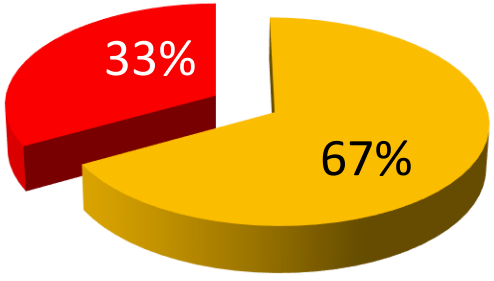
There is **no standard time stipulated by court** for the **maximum allowable time for documents preparation (SOC, SIR and Rejoinder)**

DETAILS INFORMATION ON *HEARING* STAGE

INDUSTRIAL COURT PROCEDDING PROCESS

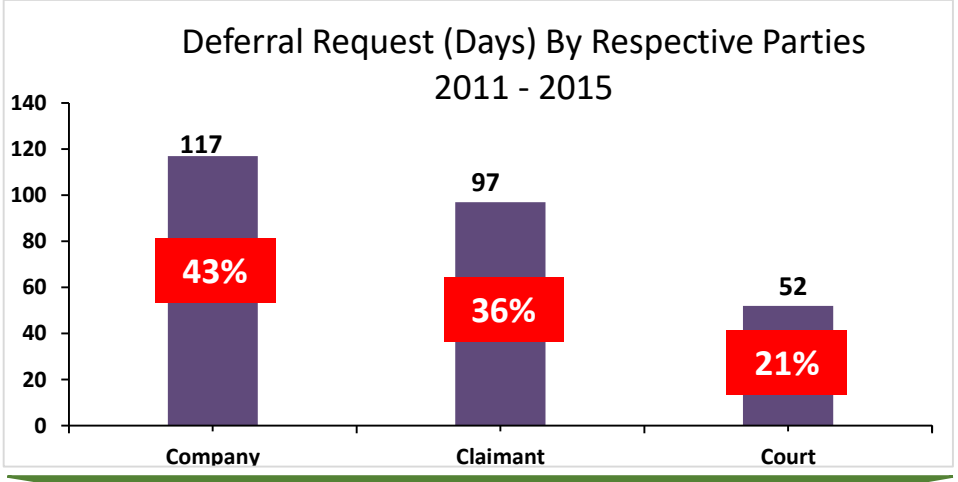


PERFORMANCE STATUS ON HEARING PROCESS



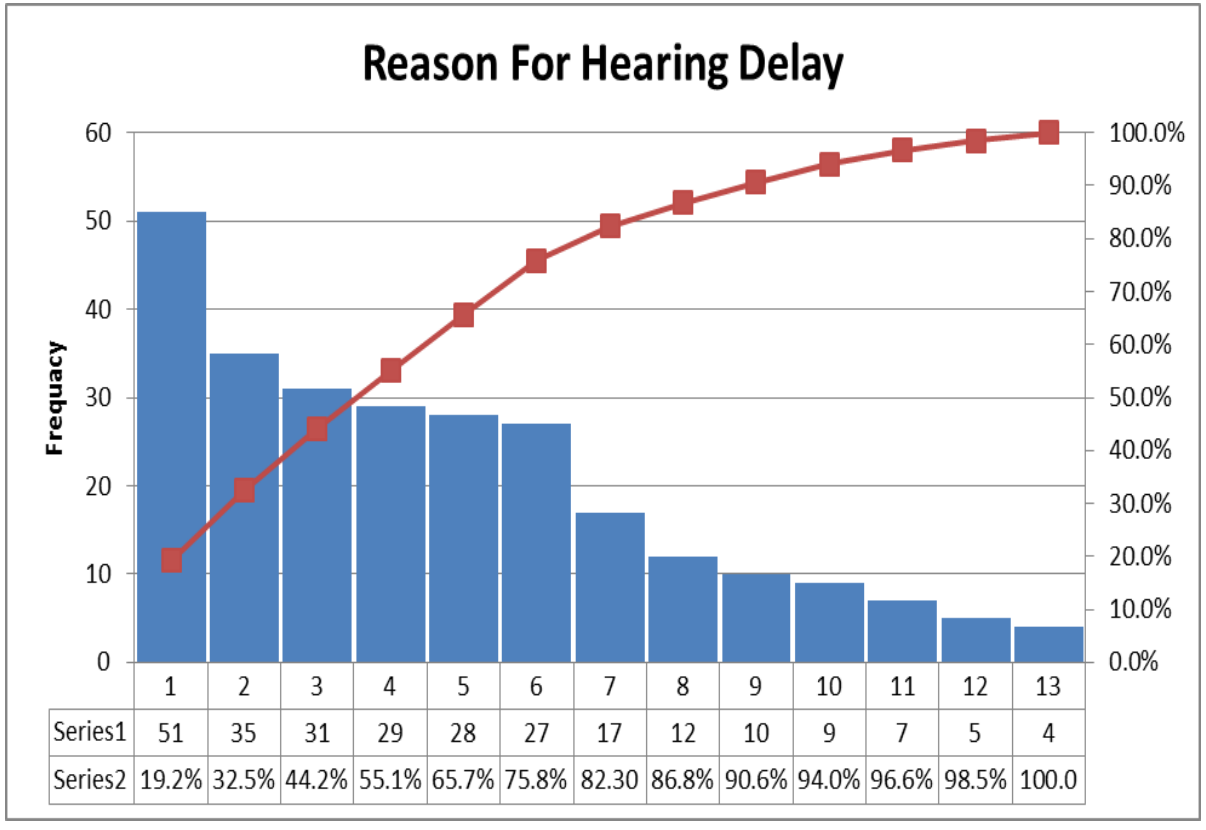
	Days	Month
Median	50	2
Max	779	26
Min	1	1

On the average cases was postponed about **4X**



The highest request for postponement is by company

DETAILS INFORMATION ON *HEARING* STAGE



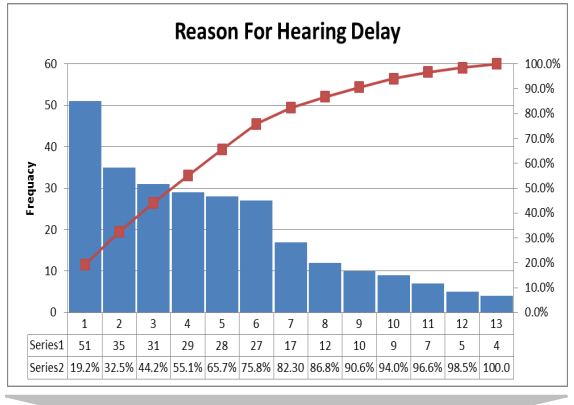
	1	2	3	4	5	6	7	8	9	10	11	12	13
Series1	51	35	31	29	28	27	17	12	10	9	7	5	4
Series2	19.2%	32.5%	44.2%	55.1%	65.7%	75.8%	82.30	86.8%	90.6%	94.0%	96.6%	98.5%	100.0

No	Reason
1	Priority to other cases
2	Witness not ready
3	Medical leave (MC)
4	Pending for settlement
5	Parties concern absent
6	Attending meeting/program
7	Incomplete document
8	Annual Leave
9	Personal matters
10	Chairman post vacant
11	Case transfer to other court
12	Others
13	Withdraw

Reason 1 to 6 contributed about **76%** of the postponement problem.

'Priority to Other Cases' contributed as the highest frequency for reasons of hearing postponement. (Lawyers – 19.2%)

DETAILS INFORMATION ON *HEARING* STAGE

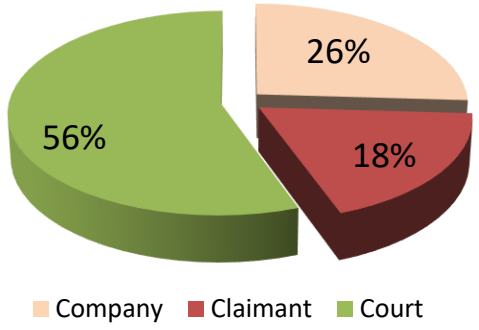


Cycle Time of Case Completion That Consist of Waiting for Pending Settlement

	Days	Month
Average	1202	40
Max	1768	59
Min	827	28
Median	1158	39

Median = More than 3 years to complete

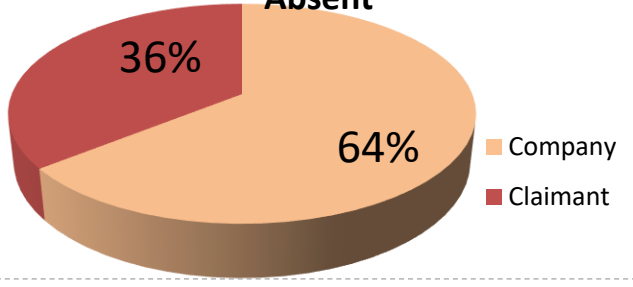
Breakdown of Attending Meeting / Program



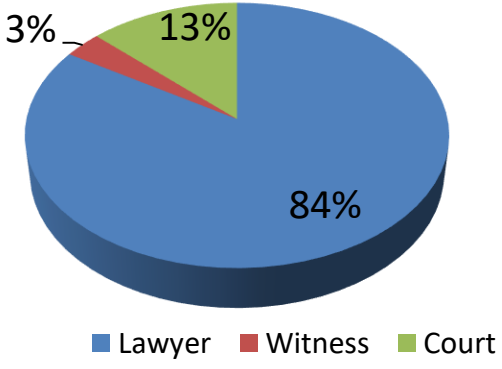
56% of reasons for postponement was due to the **Court Official attending others meeting & programs**

64% of Parties Concern Absence was due to the **Company Representatives absent**

Breakdown of Parties Concern Absent



Breakdown of Medical Leave Reason

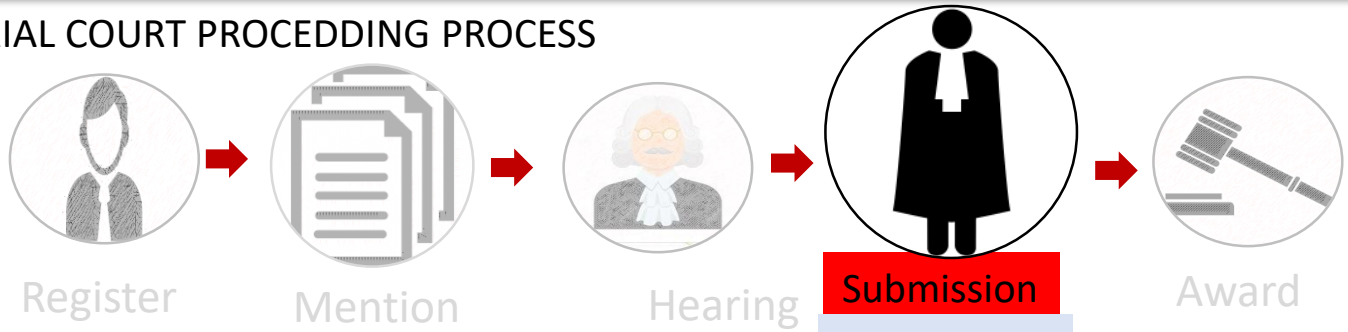


84% of postponement due to Medical Leave was contributed by the **Lawyers**

74% contributed by **Company Lawyer**

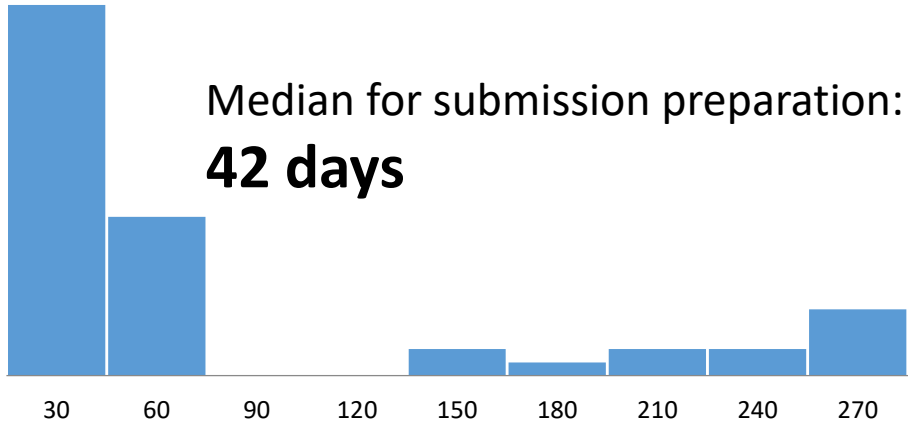
DETAILS INFOARMATION ON *SUBMISSION* STAGE

INDUSTRIAL COURT PROCEDDING PROCESS



100 days (3.3 months)

Distribution of Submission (Days)

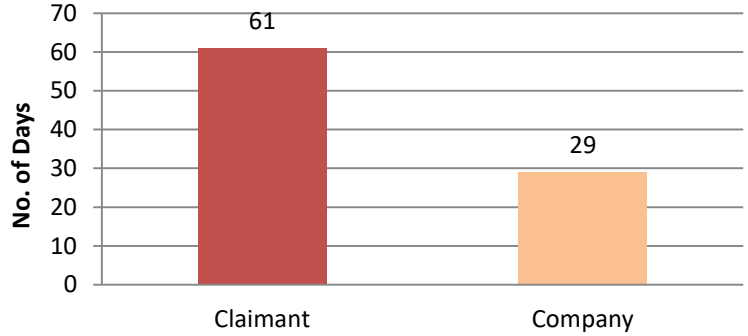


	Days
Median	42
Average	90
Max	512
Min	1

ays

- 30 days is standard given by court

Comparison of Preparing Documents for Submission (Average)

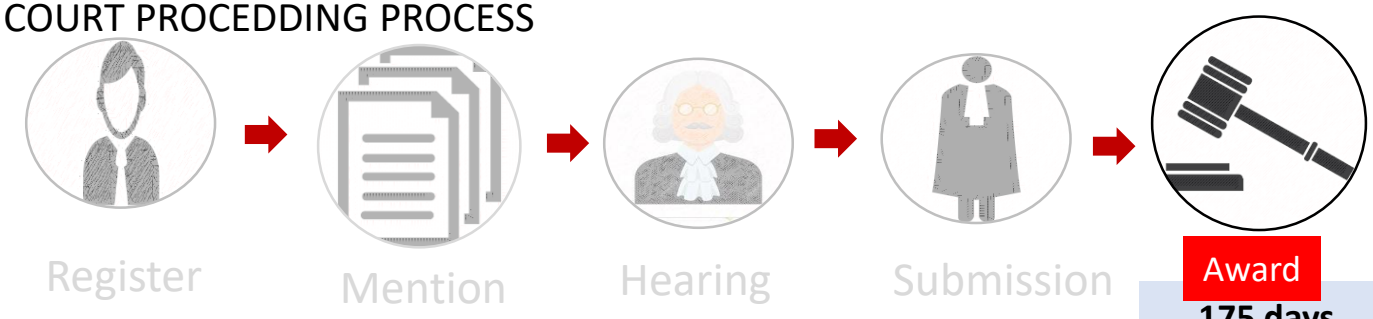


2X Submission by Lawyer appointed by Company is faster than Lawyer appointed by Claimant

Due to the tight schedule of Court Chairman, on average it took about **58 days** from the completion date of hearing to find the availability date for the submission date.

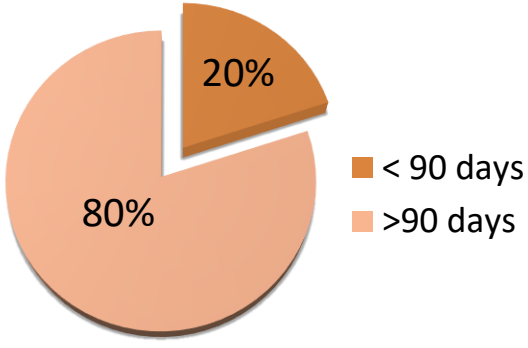
TIME TAKEN TO PREPARE *AWARD* REPORT

INDUSTRIAL COURT PROCEDDING PROCESS



175 days (5.8 months)

Award Preparation Time



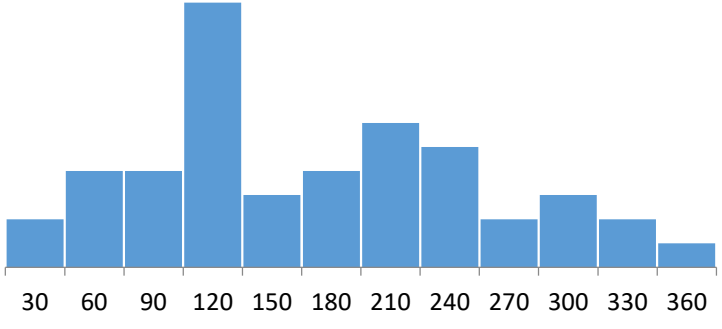
90 days set by Court

80% award completed more than **90** days

Usually Award contain **Average 23** pages. **Max 67** pages , **Min 5** pages

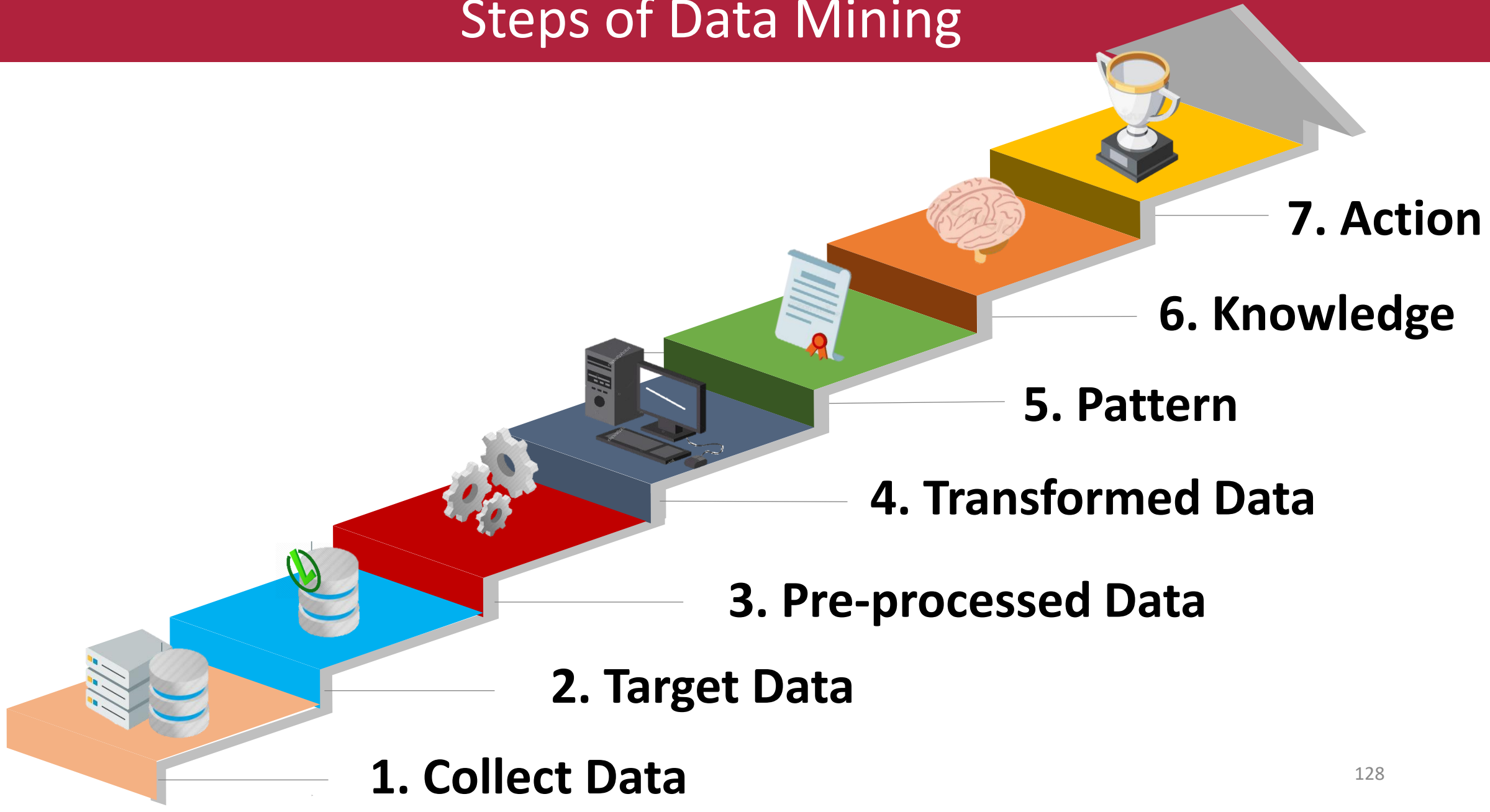
20% of the cases transferred to other court. The new appointed chairman takes time to read previous proceeding notes and preparing the award.

Distribution of Award Report (Days)



	Days	Month
Average	196	7
Median	175	6
Max	587	20
Min	17	1

Steps of Data Mining



8

Basic Tools For Analysis

Check Sheet

Defect Types/ Event Occurrence	Dates					TOTAL
	Monday	Tuesday	Wednesday	Thursday	Friday	
Supplied parts rusted	IIIIIIIII	IIIII	IIII	II		20
Misaligned weld		III			II	5
Improper test procedure						0
Wrong part issued	I		II			3
Incorrect dimensions					II	2
Masking insufficient				I		1
Spray failure		IIIII				5
TOTAL	10	13	6	3	4	

The check sheet is a simple document that is used for collecting data in real-time and at the location where the data is generated

Pareto Chart

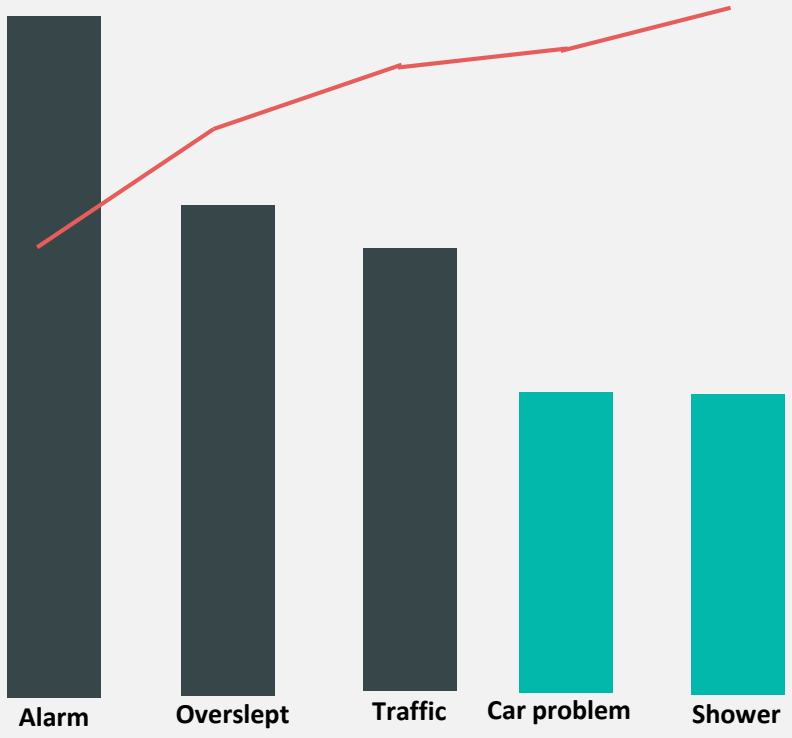
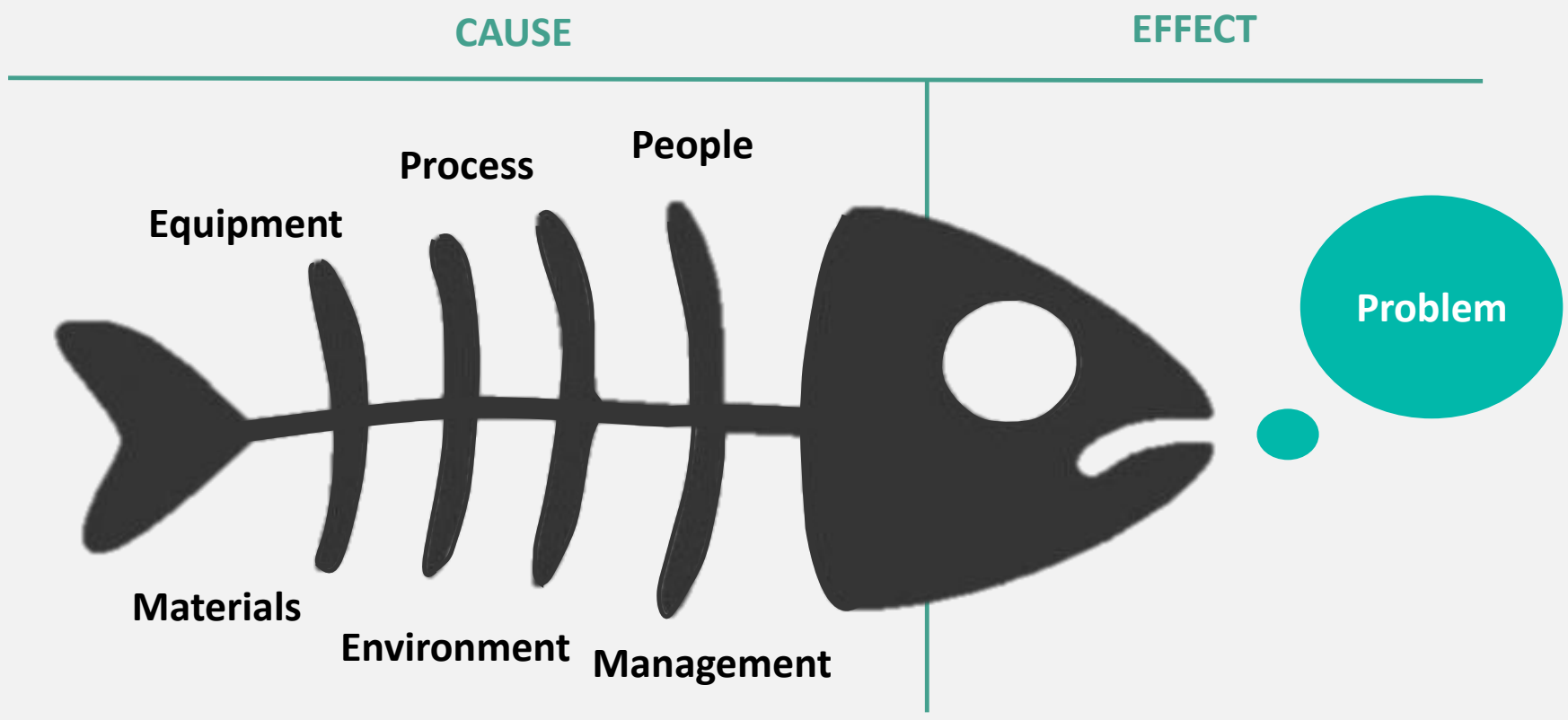


Chart for late arrival to work

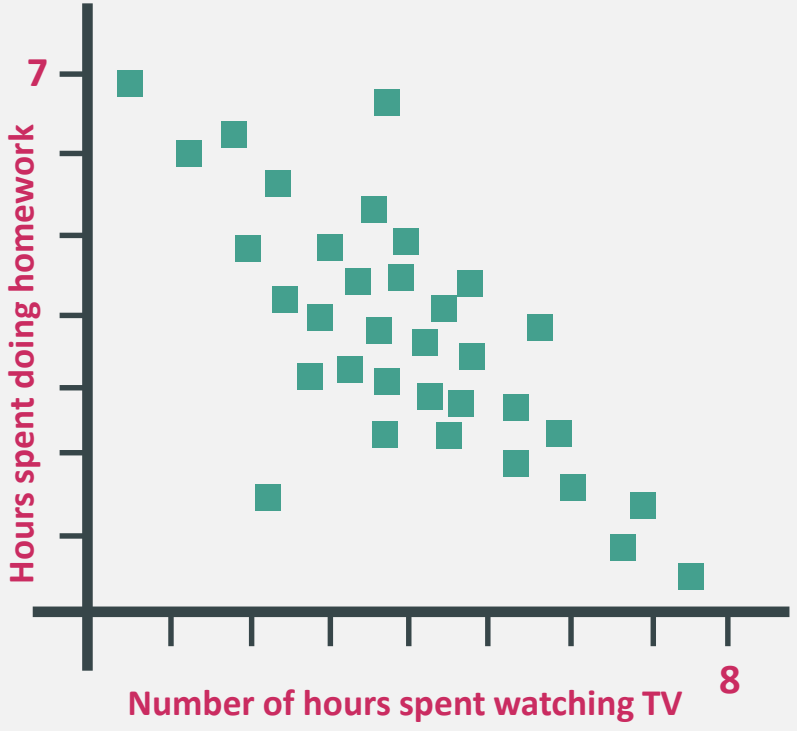
A Pareto analysis is a statistical way to identify the 20% of tasks or problems by listing all categories of what is taking up the time/resources along with a relative frequency (adding up to 100%). This allows a clear view to see on which tasks or resources make up the top 80% where the situations is more significant to a problem.

Cause & Effect Diagram - Fishbone



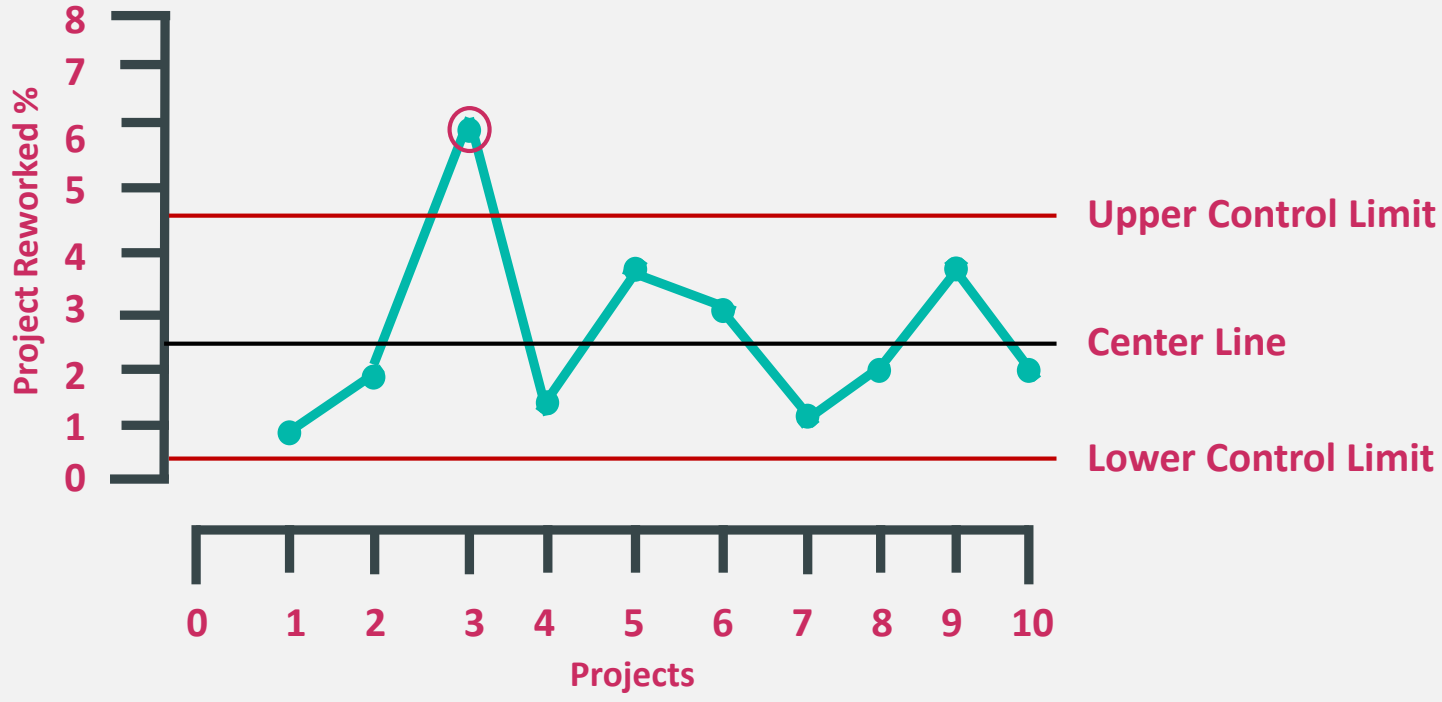
The fishbone diagram identifies many possible causes for an effect or problem. It can be used to structure a brainstorming session. It immediately sorts ideas into useful categories.

Scatter Diagram



The scatter diagram graphs pairs of numerical data, with one variable on each axis, to look for a relationship between them. If the variables are correlated, the points will fall along a line or curve.

Control Chart

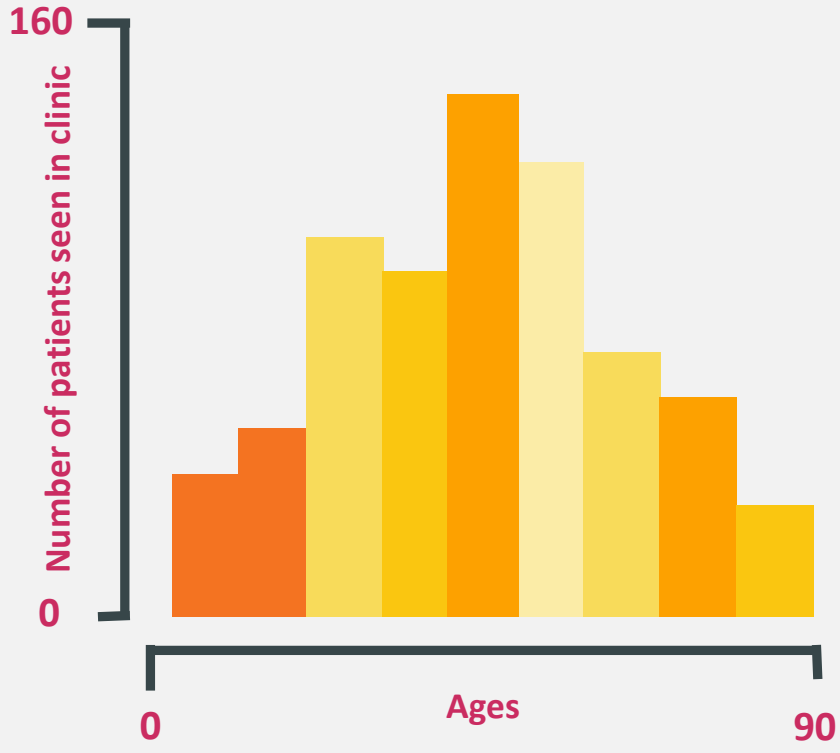


The control chart is a graph used to study how a process changes over time. The diagram always consist of a central line for the average, an upper and lower line for the control limit and by comparing current data to these lines, one can draw conclusions about whether the process variation is consistent (in control) or is unpredictable (out of control, affected by special causes of variation).

Histogram

The general purpose of a histogram is to present an easily understood summary about certain type of data. The written data is transposed onto a chart that has vertical blocks; the number of blocks depends on the categories of data collected. Using data presented in the histogram, a statistical information can also be determined. This includes :

- **mean value**
  the average across all the blocks
- **median**
  the central tendency of the arranged block
- **modal value**
  most common number in the data set
- **standard deviation**
  a number used to tell how measurements for a group are spread out from the average (mean), or expected value.



Box Plot Diagram

A Box plot diagrams are especially valuable to compare the output of two processes creating the same characteristic or to track improvement in a single process by indicating whether a distribution is skewed and whether there are potential unusual observations (outliers) in the data set.

Questions ?

“He who asks a question may be a fool for five minutes, but he who never asks a question remains a fool forever.”

Tom J Connelly

Financial Analyst

Module 5

Improve and Control Phase

Verify, Recommendations and Sustain

RECOMMENDATION & SOLUTIONS

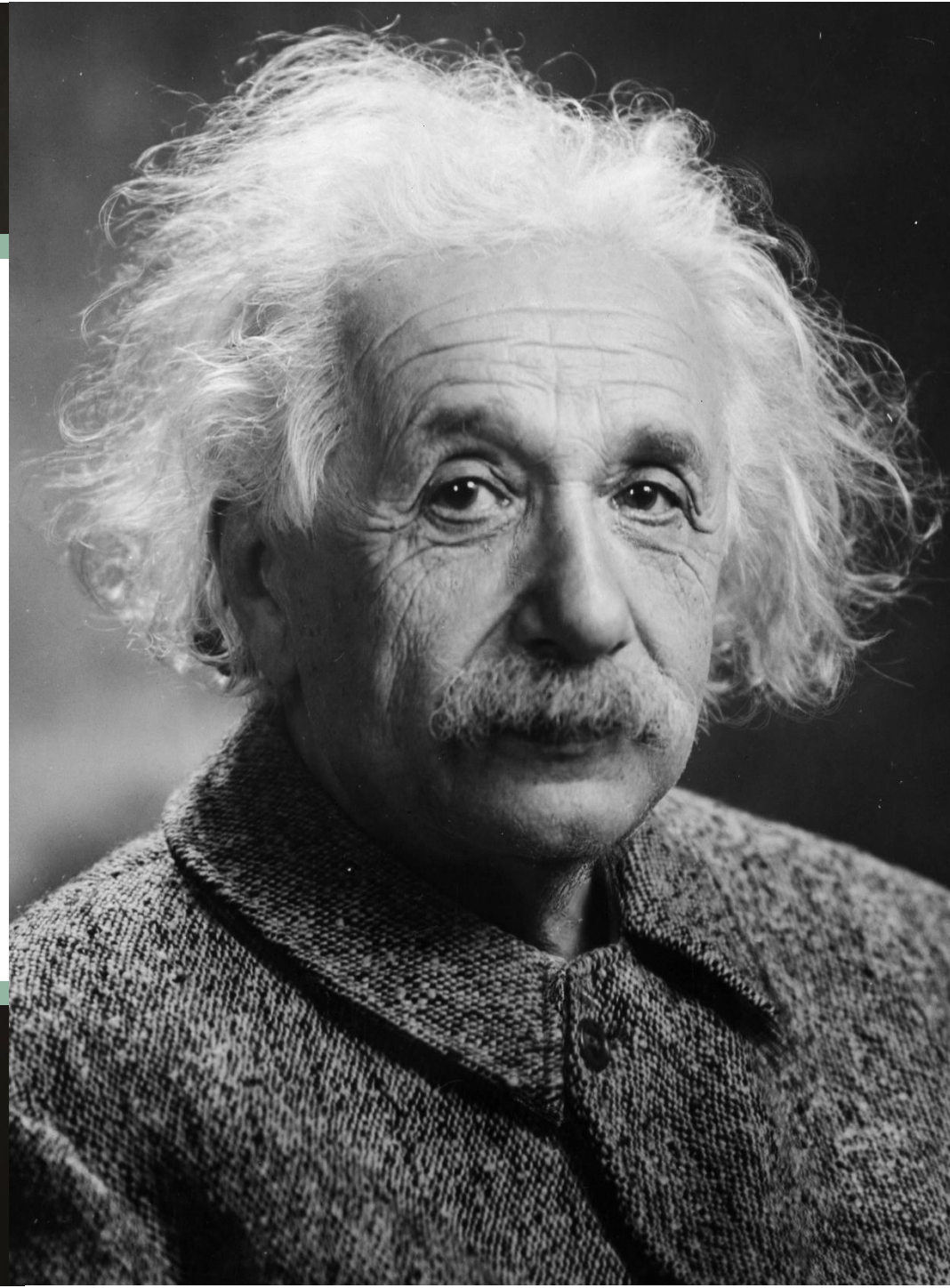
TO CHALLENGE THE STATUS QUO AND BE BOLD ABOUT IT

THE GREATEST INHIBITOR OF IDEA GENERATION. . .

NEGATIVITY…

“Problems cannot be solved by thinking within the framework within which the problems were created”

Albert Einstein

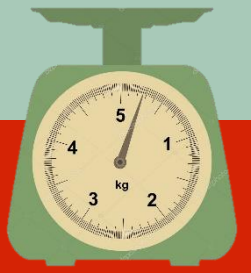


Ideas vs. Answers

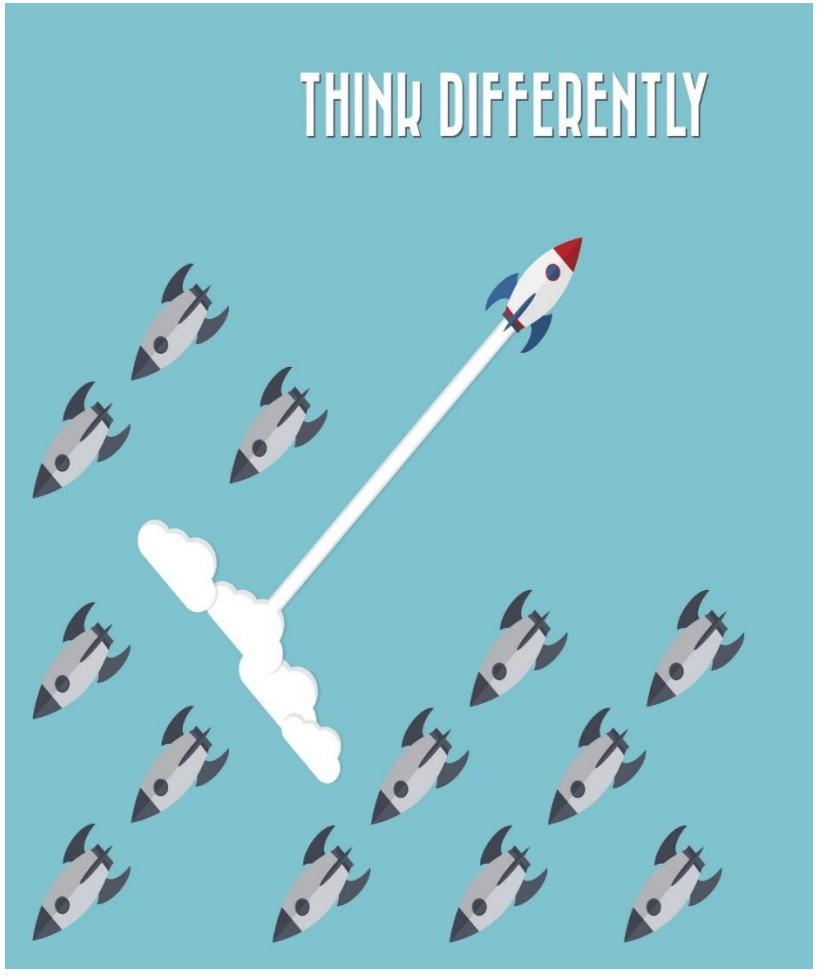
Be creative

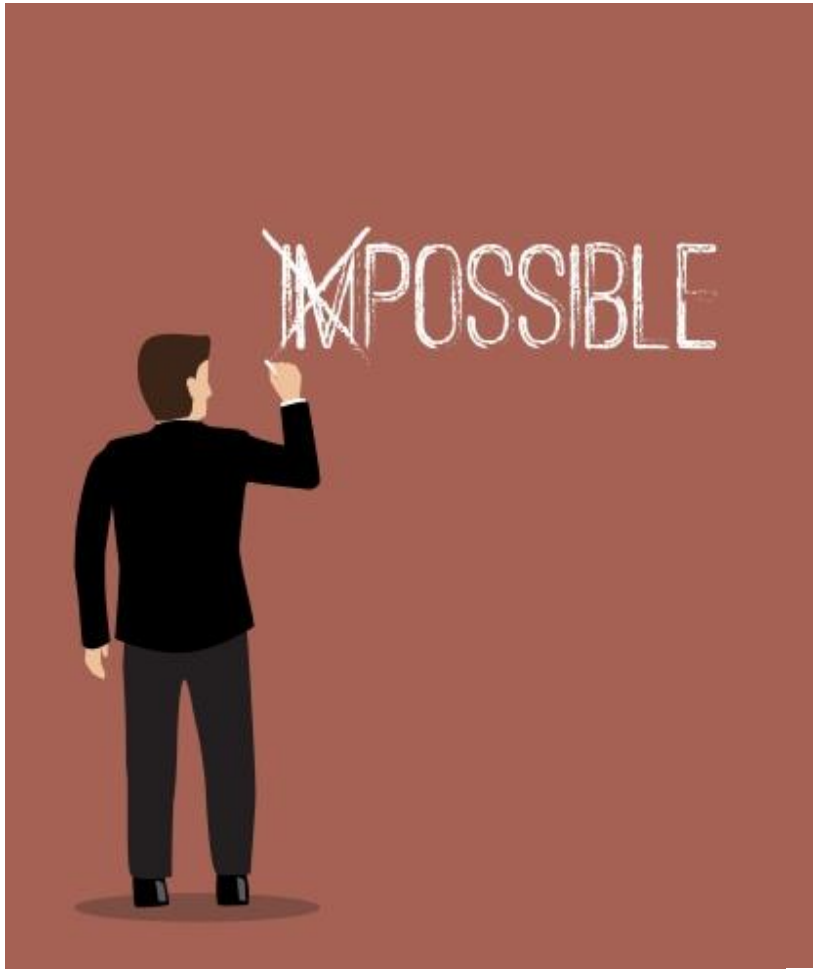
Never Be Satisfied with one idea

Go for Quantity...



Challenge the Status Quo





IMPROVEMENT TECHNIQUES

BRAINSTORMING

ECRS

E = Eliminate
C = Combine
R = Rearrange
S = Simplify

BENCHMARK

IMPROVEMENT STRATEGIES - ECRS

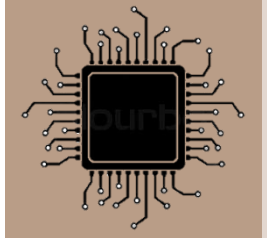
Handoffs and batching are common barriers to process flow

1 Eliminate

Too Many Approval Levels

Rule out Non- Value Added Task

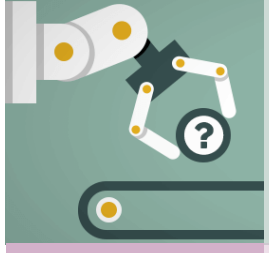
2 Combine Task



Using Concurrent Processing

Solve Problems

3 Rearrange



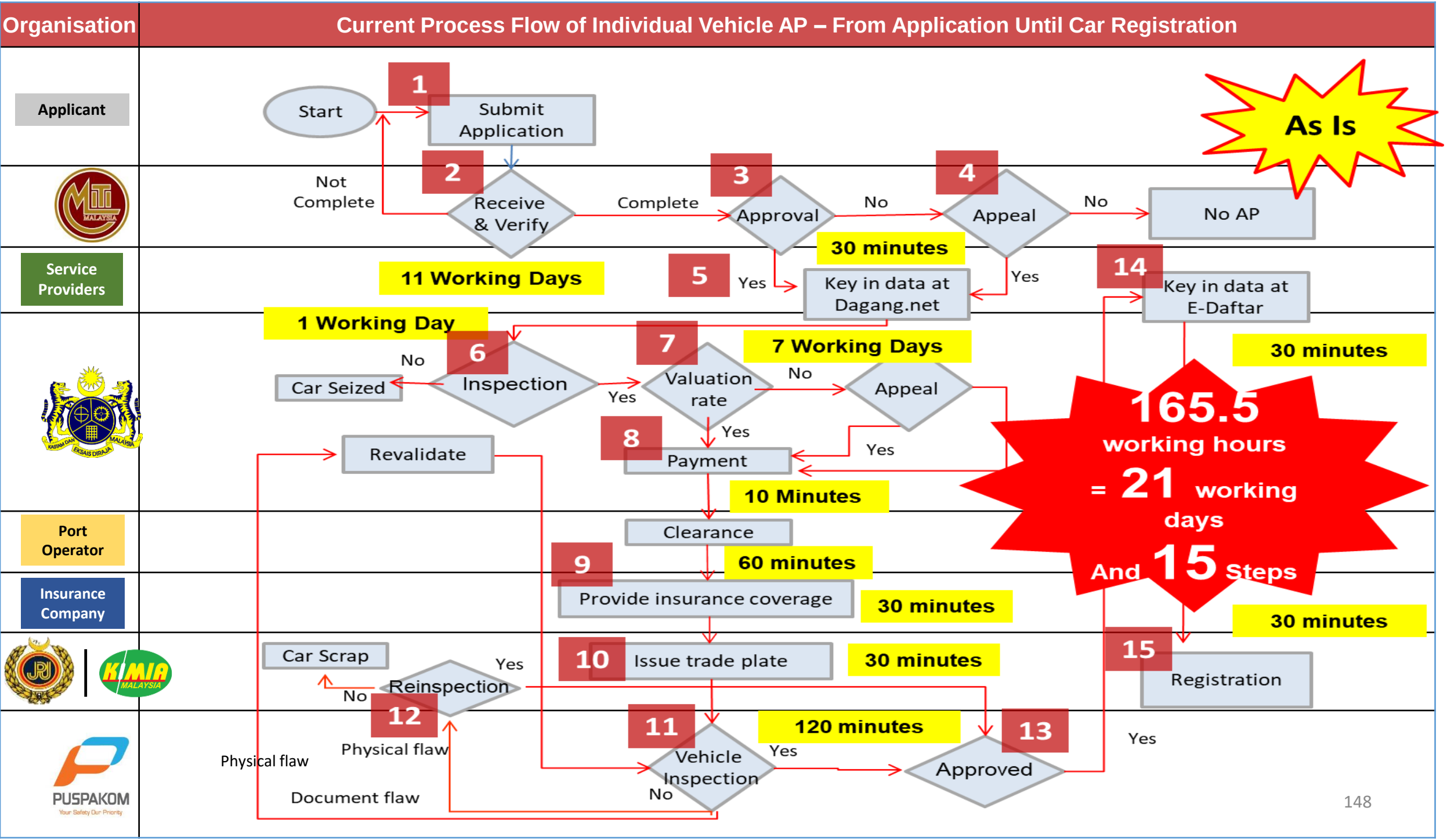
Automate

Relocate Works

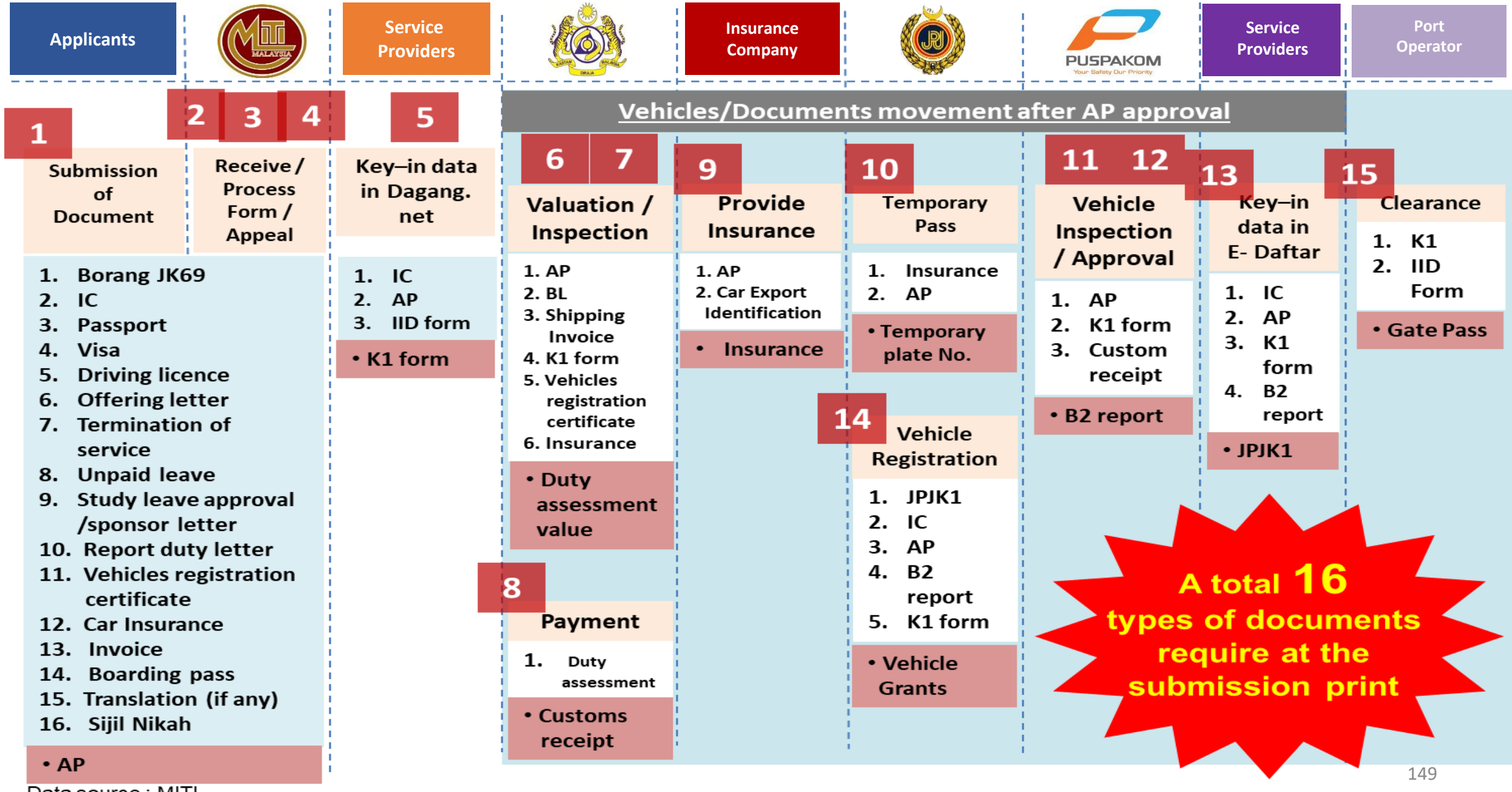
4 Simplify the Process

Shift Roles & Responsibilities

Eliminate Unnecessary Steps

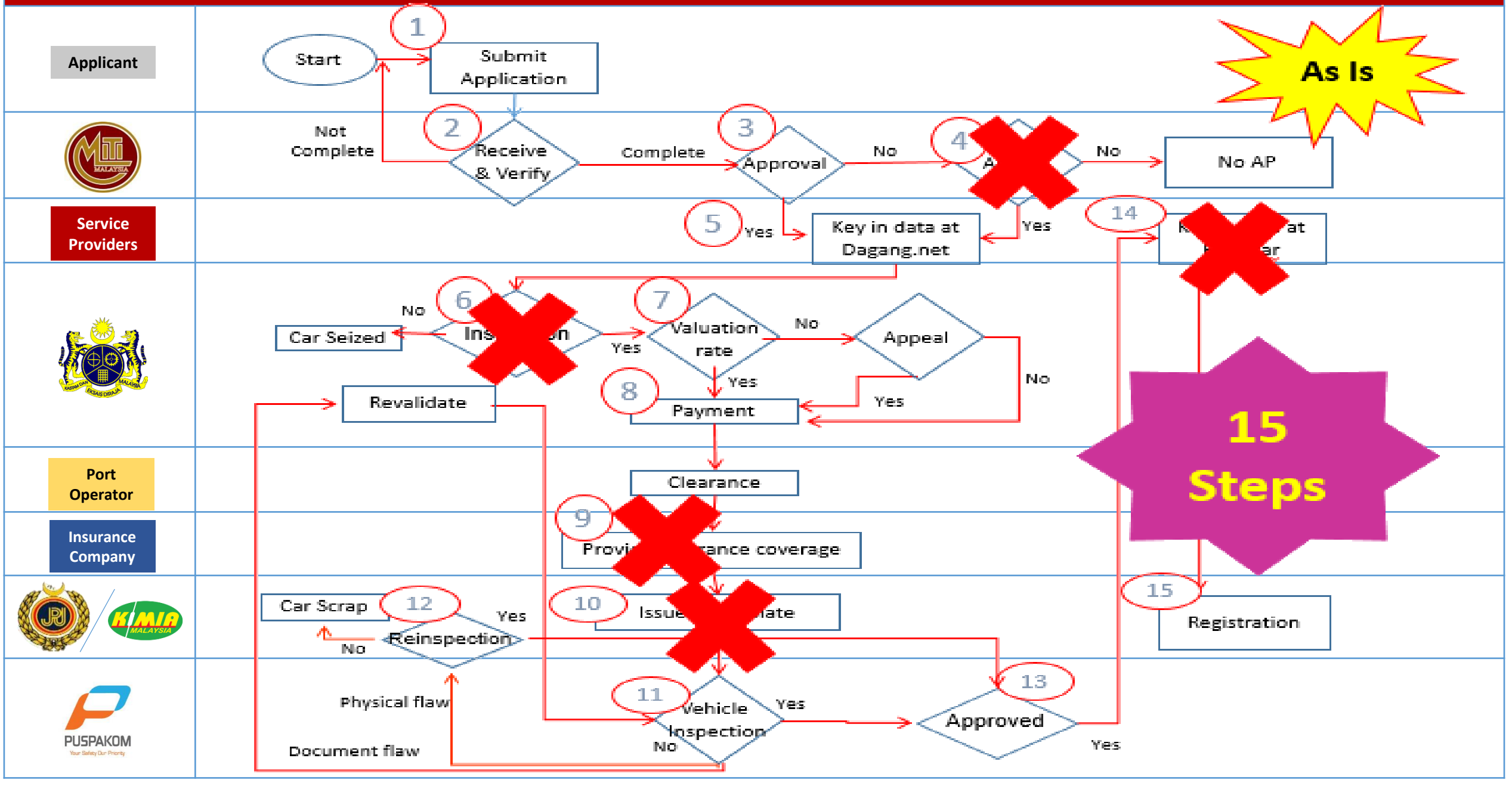

Organisation
Current Process Flow of Individual Vehicle AP – From Application Until Car Registration
Applicant
Service Providers
Port Operator
Insurance Company
PUSPAKOM
Your Safety Our Priority
As Is
Start
1
Submit Application
2
Receive & Verify
Not Complete
Complete
11 Working Days
3
Approval
No
4
Appeal
No
No AP
Yes
30 minutes
5
Yes
Key in data at Dagang.net
14
Key in data at E-Daftar
30 minutes
1 Working Day
6
Inspection
No
Car Seized
Yes
7
Valuation rate
7 Working Days
No
Appeal
Yes
Yes
8
Payment
Yes
Revalidate
10 Minutes
Clearance
9
60 minutes
Provide insurance coverage
30 minutes
10
Issue trade plate
30 minutes
Car Scrap
Yes
Reinspection
No
12
Physical flaw
Physical flaw
Document flaw
11
120 minutes
Vehicle Inspection
Yes
No
13
Approved
Yes
15
Registration
30 minutes
165.5 working hours = 21 working days
And 15 Steps

DOCUMENT TRACKING



Data source : MITI

Simplification of Current Application Process Flow of Individual Vehicle AP to Further Address Issues 4 & 5

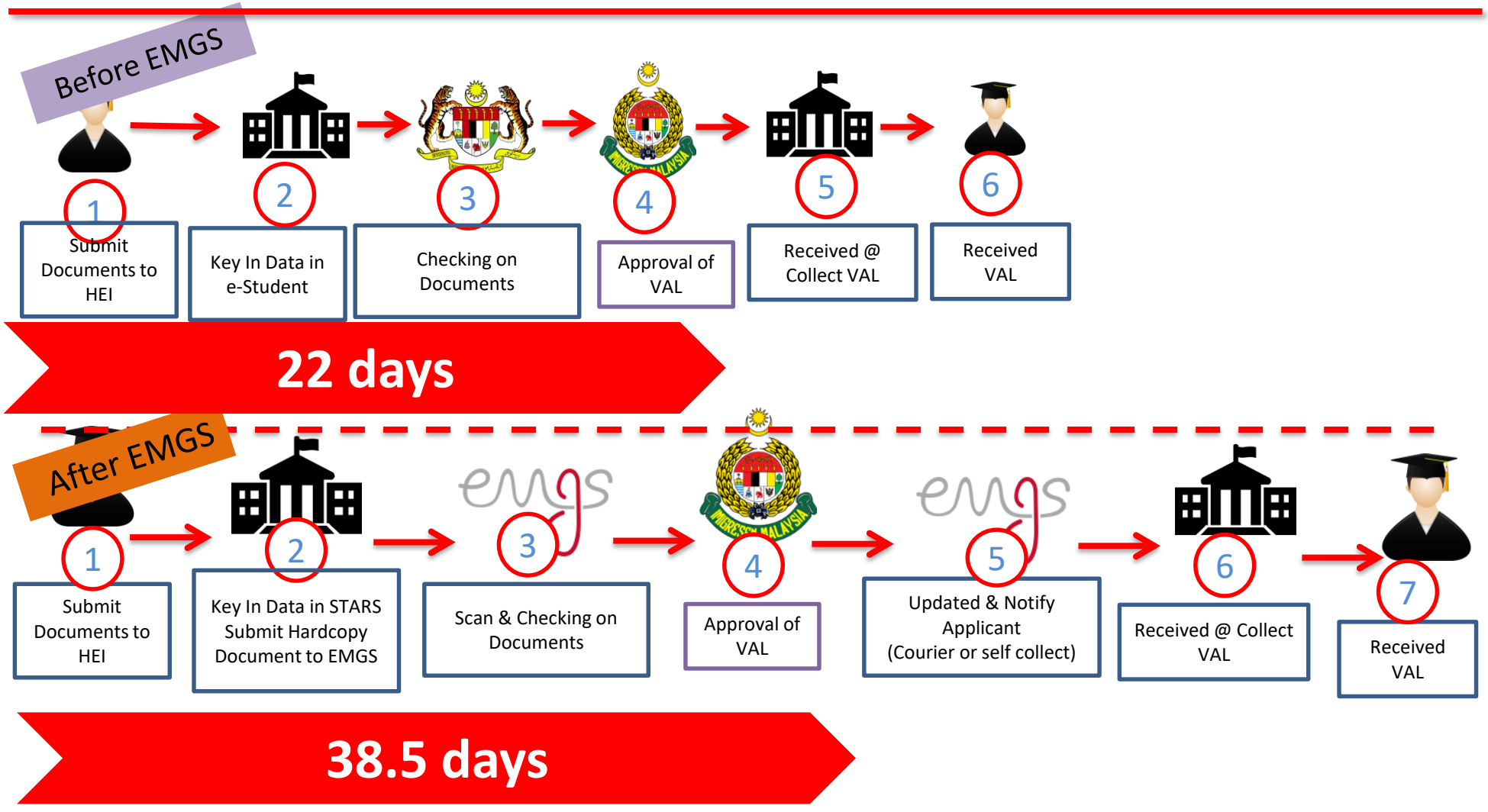


Thank You

kabir.jamil@yahoo.com

MPC MYCURE TEAM

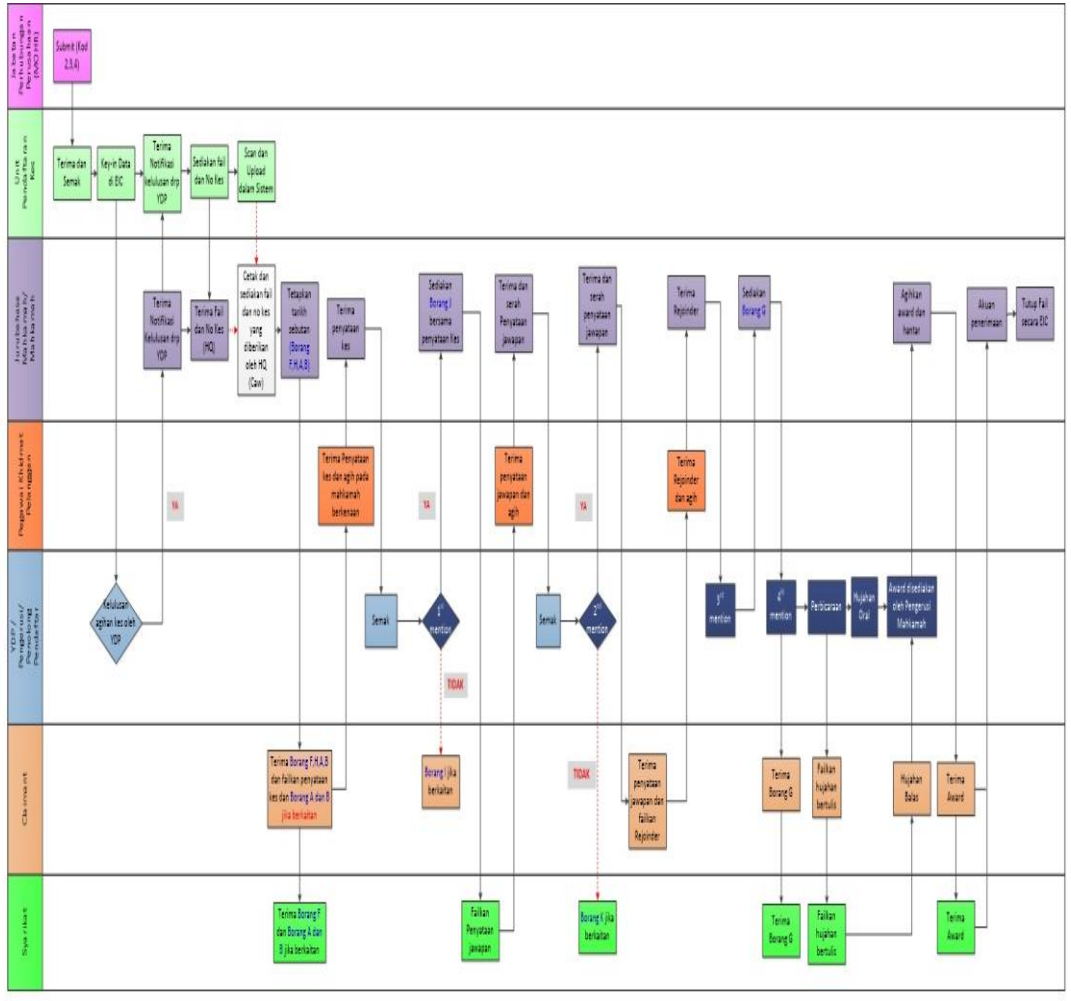
PROCESS DELAY PHASE I : PRE ARRIVAL - APPROVAL OF VAL



Finding 1 : Time taken for VAL Approval took **16.5 days longer** as compare to the previous process.

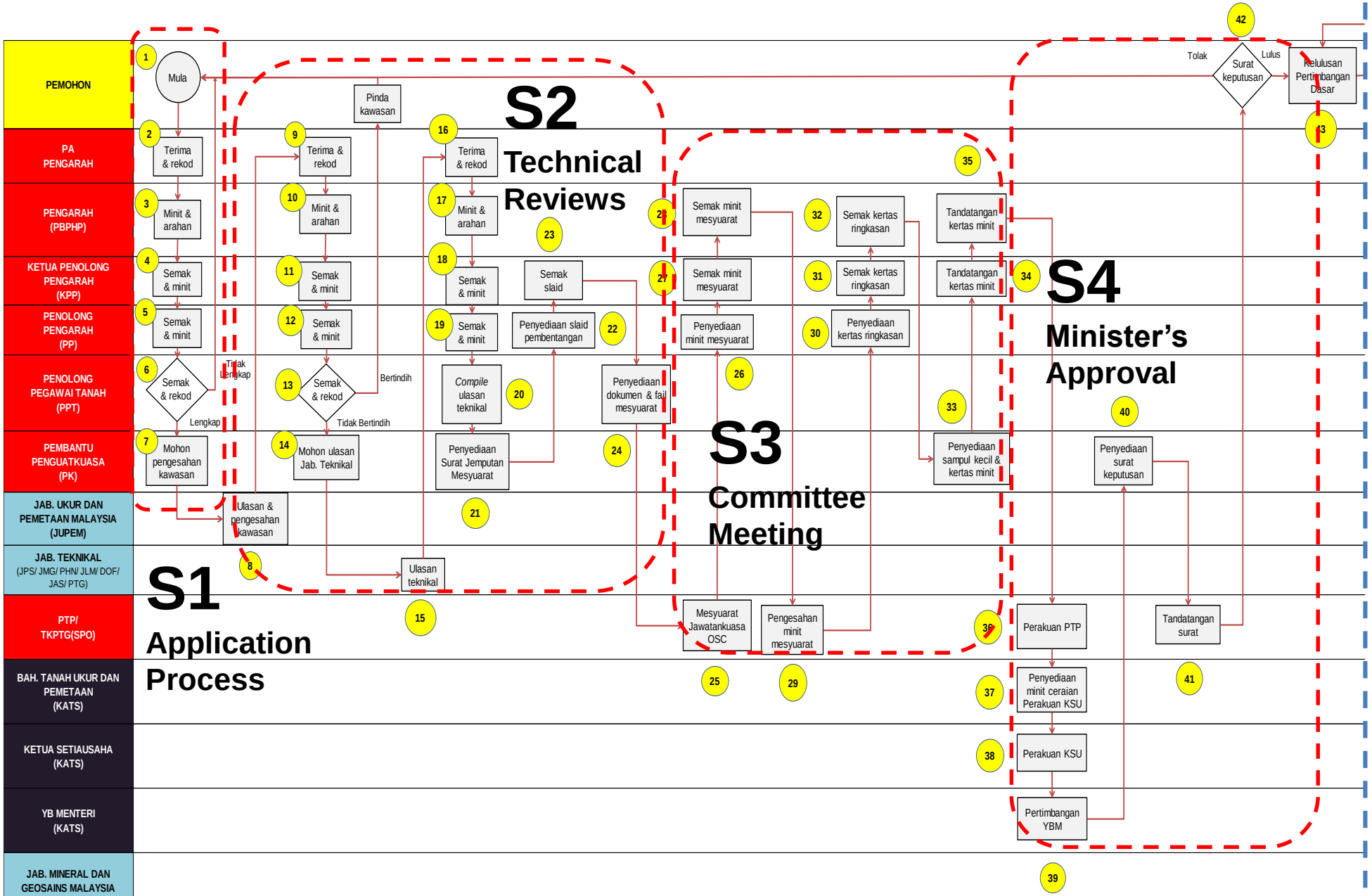
MyCure PHASE 2: Assessing the Current Status

…. from Process Mapping to Data Collection

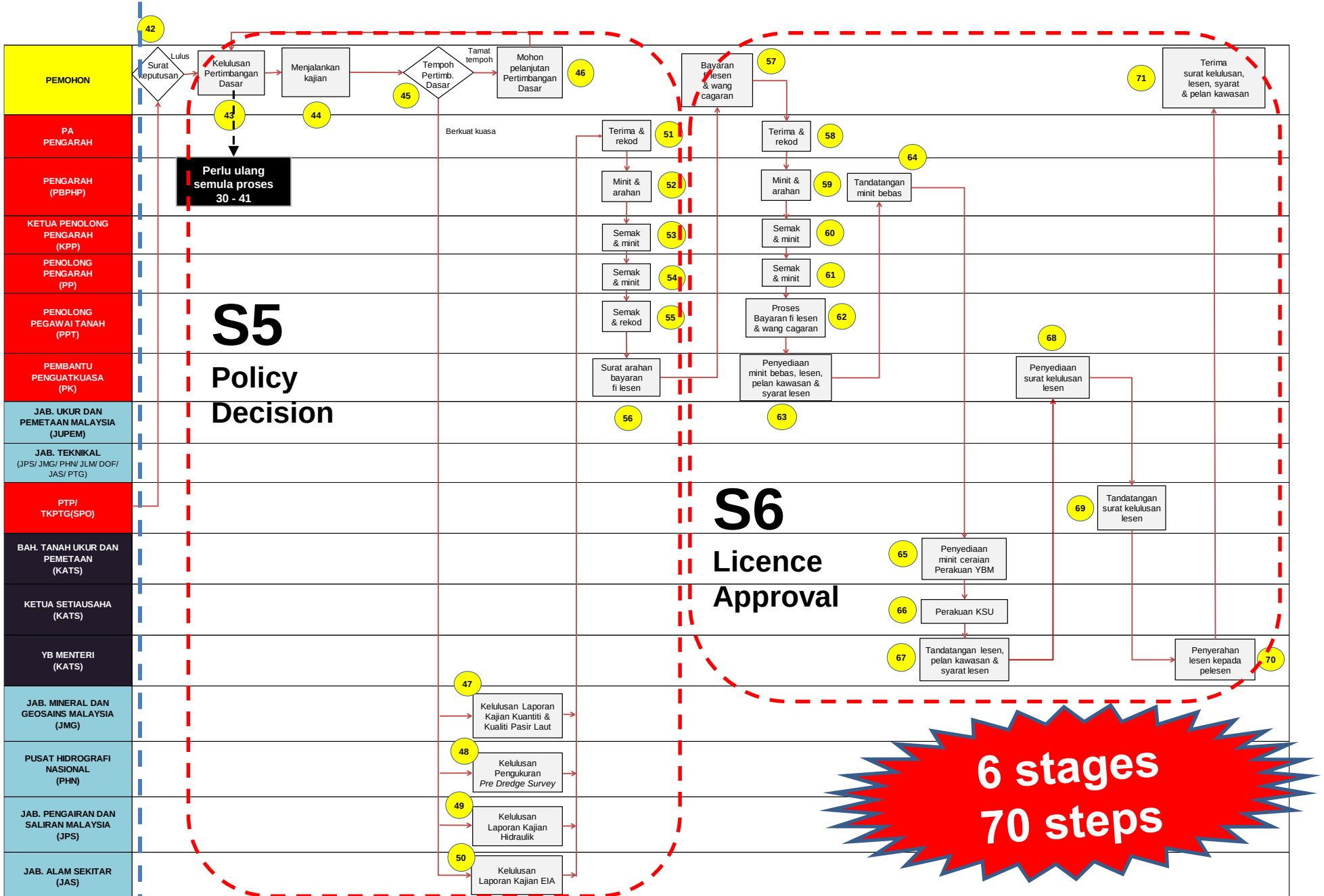


		01/01/00	01/10/00		01/26/00		01/27/00	02/01/00
Bil.	No Kes (No Fail)	Tarikh terima surat JPP	Tarikh Penetapan Pemfailan SOC	Tarikh Penetapan Pemfailan Hujahan Balas (Asal)		Tarikh Pemfailan Hujahan Balas (Sebenar)		Tarikh Award dikeluarkan
				Syarikat	Claimant	Syarikat	Claimant	
1	3/4-425/16	02/12/16	03/09/16	01/25/17	01/25/17		01/17/17	04/05/17
2	3/4-781/15	10/08/15	11/16/15	11/29/16	11/29/16		12/07/16	02/17/17
3	3/4-1436/13	05/12/13	01/15/14	08/28/15	08/28/15		09/15/15	12/18/15
4	3/4-257/14	01/04/14	05/29/14	01/09/15	01/09/15		01/09/15	08/12/15
7	3/4-625/13	01/04/13	06/17/13	07/29/15	07/29/15		08/03/15	11/05/15
8	5/4-196/11	02/14/11	04/28/11	08/29/12	08/29/12		09/18/12	11/30/12
9	5/4-307/12	04/02/12	06/04/12	–	03/06/15		05/05/15	08/27/15
10	5/4-272/13	02/21/13	05/17/13	–	10/27/14		11/24/14	05/28/15
11	5(6)(25)/4-261/13	02/25/13	05/29/13	–	09/17/14		04/15/15	07/07/15
12	5/4-716/11	06/07/11	08/25/11	–	07/07/14		11/13/14	11/16/15
13	6(20)(16)/4-873/11	07/26/11	10/03/11	–	05/05/14		11/20/14	03/26/15
14	6(23)/4-1796/12	11/12/12	12/21/12	–	03/30/15		04/30/15	02/15/16
16	6(19)(25)(19)/4-1215/	09/17/13	10/22/13	07/31/15	07/31/15	09/01/15	09/01/15	06/10/16
21	7/4-783/12	06/18/12	07/19/12		05/07/15		06/08/15	12/14/15
22	7/4-1382/13	11/04/13	01/03/13	01/18/16	01/18/16	02/11/16	02/11/16	08/15/16
23	7/4-459/13	03/14/13	05/27/13	08/05/15	08/05/15	08/21/16	08/21/16	12/02/16
24	7/4-767/13	04/10/13	07/04/13		09/14/15		10/19/16	10/06/16
26	7/4-14/15	01/19/15	04/08/15		05/31/16		05/27/16	10/12/16
28	11/4-182/12	03/02/12	04/16/12	05/29/13	05/29/13		06/12/13	12/08/13
29	11/4-787/13	04/10/13	06/03/13	09/09/15	09/09/15	09/09/15	09/09/15	08/26/16
31	11/4-373/14	06/11/14	07/21/14	11/26/15	11/26/15	12/09/15	12/09/15	01/05/17
32	11/4-238/14	03/14/14	04/28/14	05/06/15	05/06/15		05/06/15	12/08/15
34	12/4-417/11	04/04/11	5/26/11	04/17/15	04/17/15	04/02/15	04/02/15	11/11/15
35	12/4-1304/11	12/23/11	1/26/12	03/05/15	03/05/15		03/05/15	06/26/15

OVERALL APPLICATION PROCESS OF THE MARINE SAND LICENSE

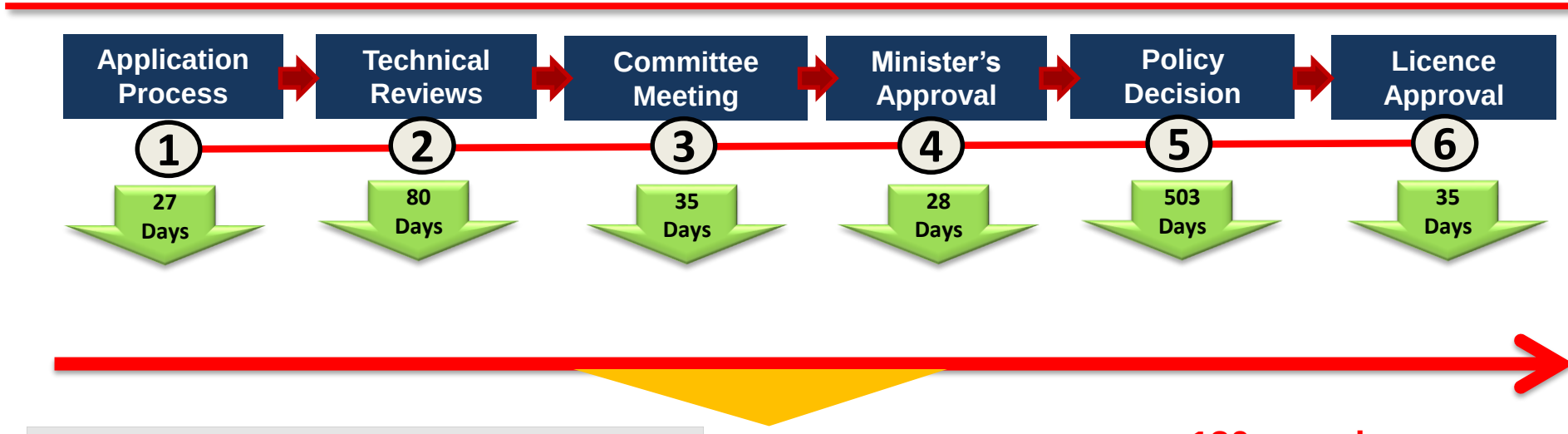


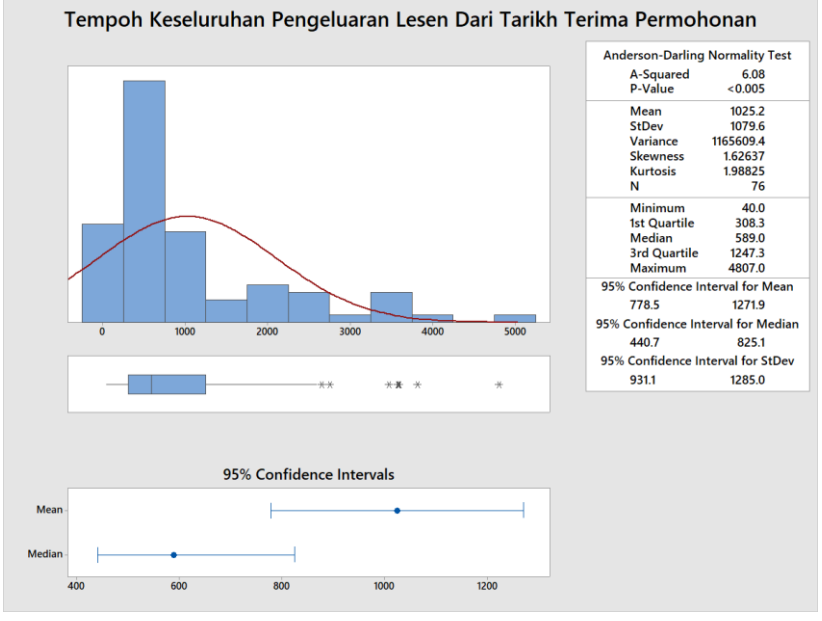
OVERALL APPLICATION PROCESS OF THE MARINE SAND LICENSE



PHASE 3: ANALYSIS AND FINDINGS

OVERALL ANALYSIS OF MARINE SAND LICENCE APPLICATION PROCESS UNDER CONTINENTAL SHELF ACT 1966





Data analysis from 130 samples of marine sand license application

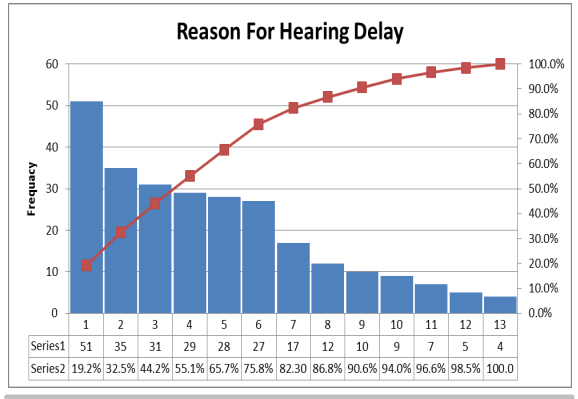
Time taken to approve a licence

708 days = 1.9 years

from the date of receiving applications in BPHP, JKPTG

Almost 2 years

DETAILS INFORMATION ON *HEARING* STAGE

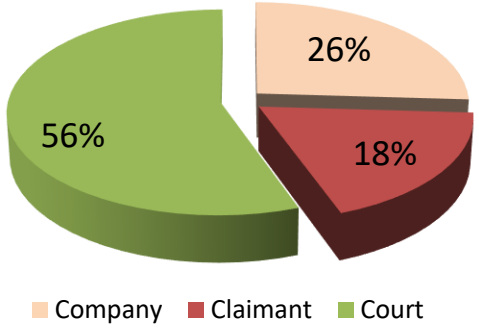


Cycle Time of Case Completion That Consist of Waiting for Pending Settlement

	Days	Month
Average	1202	40
Max	1768	59
Min	827	28
Median	1158	39

Median = More than 3 years to complete

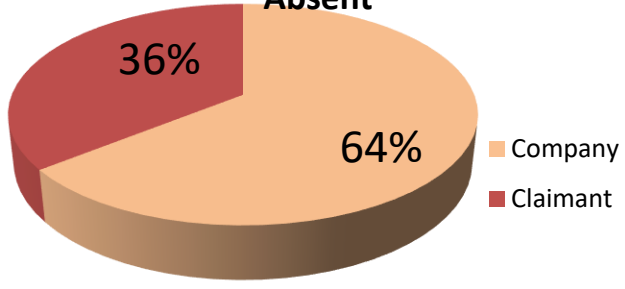
Breakdown of Attending Meeting / Program



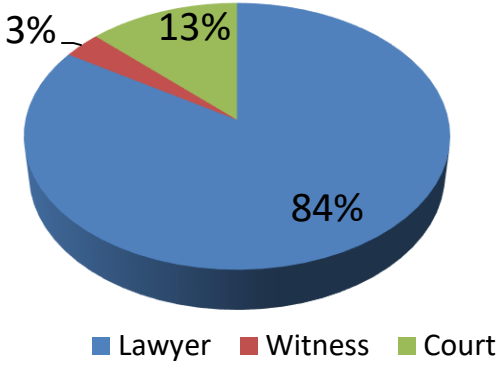
56% of reasons for postponement was due to the **Court Official attending others meeting & programs**

64% of Parties Concern Absence was due to the **Company Representatives absent**

Breakdown of Parties Concern Absent



Breakdown of Medical Leave Reason



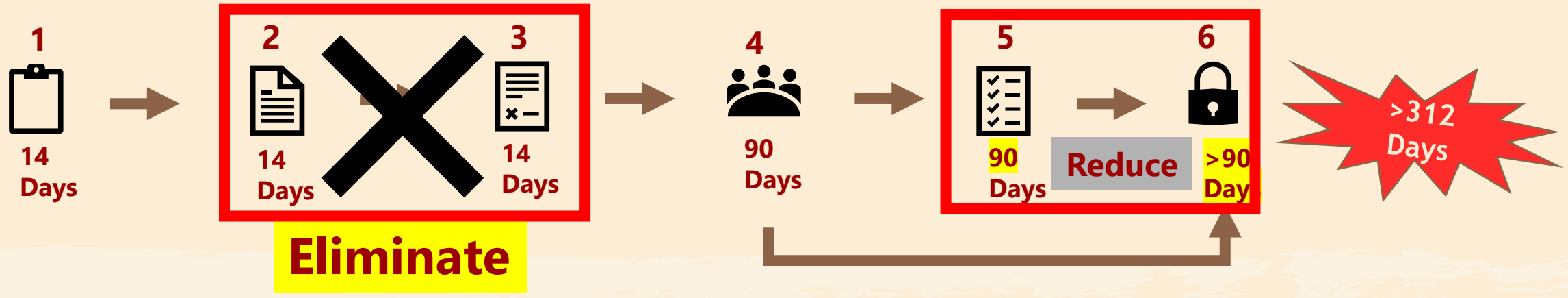
84% of postponement due to Medical Leave was contributed by the **Lawyers**

74% contributed by **Company Lawyer**

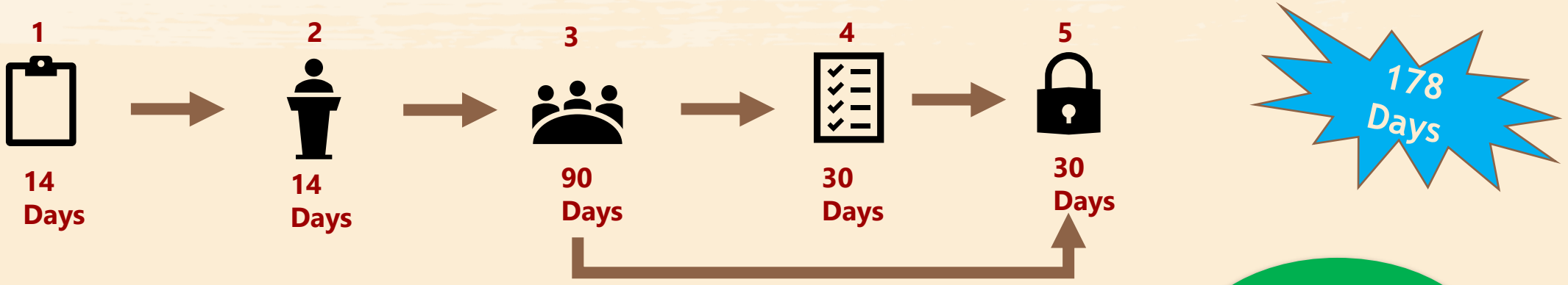
MyCure PHASE 4: RECOMMENDATION OF SOLUTIONS

NEW ENFORCEMENT PROCEDURE

OLD PROCEDURE



NEW PROCEDURE



1. Notice 14 Days
2. Coordination wih YB ADUN before present in the Enforcement Meeting
3. Enforcement Meeting (4 times/year)
4. Conditional approval letter
5. Eviction operation

Save 134 Days

TIME SAVING

BEFORE	AFTER
708 days (1.9 years) time required for issuance of a licence.	**229 days (7.6 months)** time required for issuance of a licence.

TIME SAVING
479 days (reduce
67% waiting time in
issuance of licence)