



**ALLIANCE**  
**UNIVERSITY**


**Alliance College of Engineering and Design**

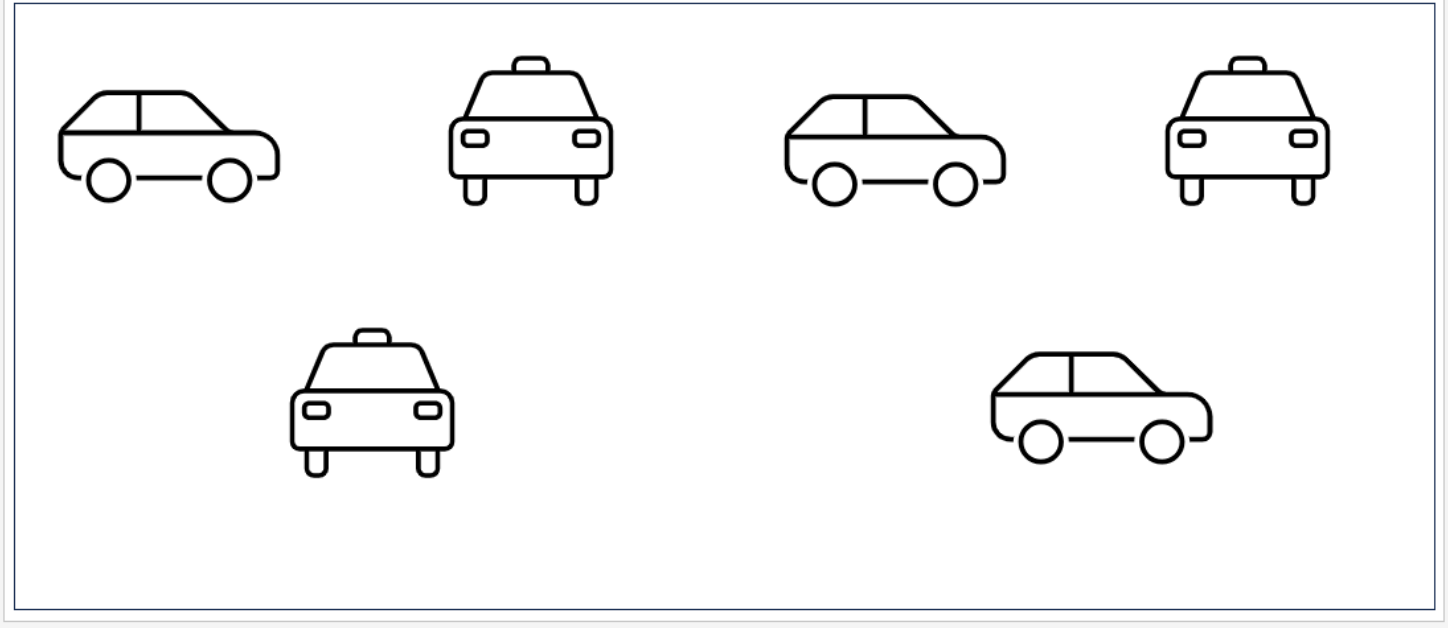
# INDUSTRY INTERNSHIP PROGRAM (IIP)

Presented By: Chandana MN

Under the Guidance of:

Dr. Shekhar R

Date:	DD-MM-YY	Division Name						RHS
Unique ID:	XXXXX							
Color:	YYYYY							
Code:	XXXY							



AUTOMATED VEHICLE  
INSPECTION SHEET  
STORAGE AND DATA  
MANAGEMENT SYSTEM

TOYOTA KIRLOSKAR MOTOR PVT LTD  
MENTOR:  
GEETHAMURTHY SB SAN



**TOYOTA**

# INDUSTRY PROFILE



Toyota Kirloskar Motors is an Indian subsidiary of Toyota Motor Corporation, Japan. established in 1997 (a joint venture)



Kirloskar Group was founded in 1888 in India.



Originated as the manufacturer of India's first iron plough.



Pioneer in industrial innovation and leading automobile producers.



Holds numerous patents.

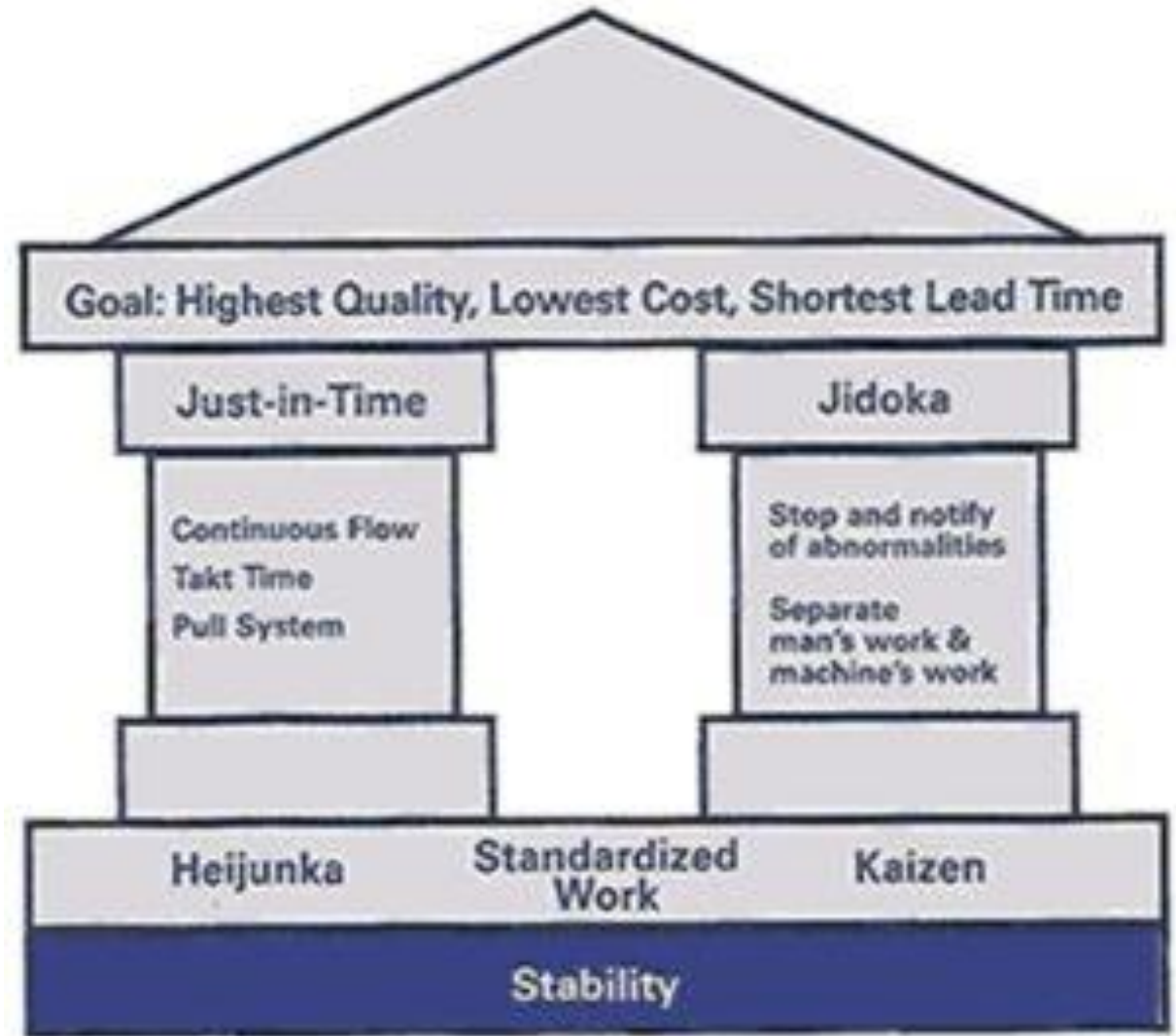


Received awards of excellence.



Recognized as a truly innovative company.

# TOYOTA PRODUCTION SYSTEM (TPS)



# DEPARTMENTS

Production Department

Quality Control  
Department

Research and  
Development (R&D)  
Department

Marketing and Sales  
Department

Human Resources (HR)  
Department

Finance and Accounting  
Department

Supply Chain and  
Logistics Department

IT (Information  
Technology) Department

Legal and Compliance  
Department

Customer Service and  
After-Sales Department

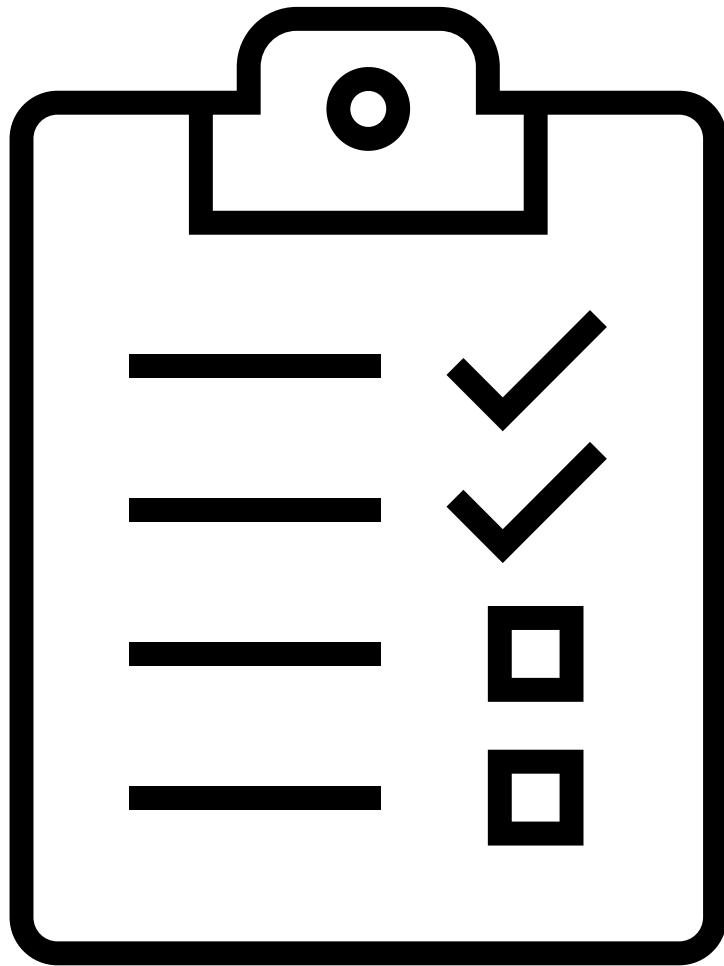
Safety and Environment  
Department

Body Shop Department

Paint Shop Department

Assembly Shop  
Department

Maintenance Department

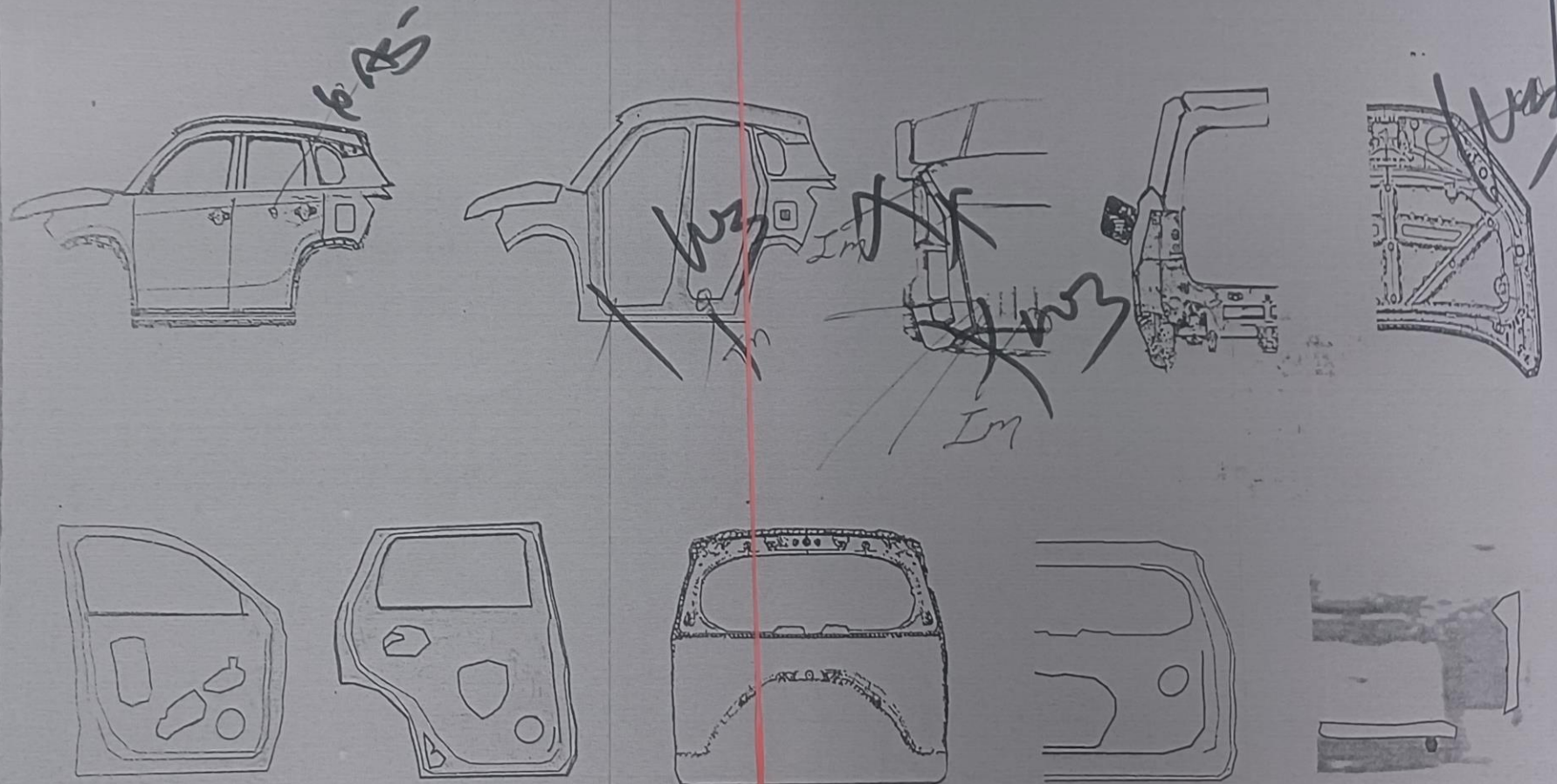


# WHAT IS A CHECK SHEET?

- Used to track defects in the paint shop during the paint process
- Two check sheets per body: one on the right side and the other on the left side.
- Information Captured: Date of inspection., Body number., Body color., Details of the booth from which it passes, Shift.
- Includes drawings of car parts.
- Defects marked on specific locations on the drawings where they occur.
- Enables efficient tracking of defects on a specific body.
- Aids in quality control and process improvement.



DATE:	27/11/25	<b>P2 PAINT INSPECTION CHECK SHEET</b>												
BODY NO:	1573	QG-W	<input checked="" type="checkbox"/>	Z-1	G1	Z-2	A7	Z-3	S3	Z-4	B10	Z-5		LH
COLOUR:	C9J	QG-Y	<input type="checkbox"/>											
QG CODE:														





## Current Condition :



⑦ Check Sheet Storage Current

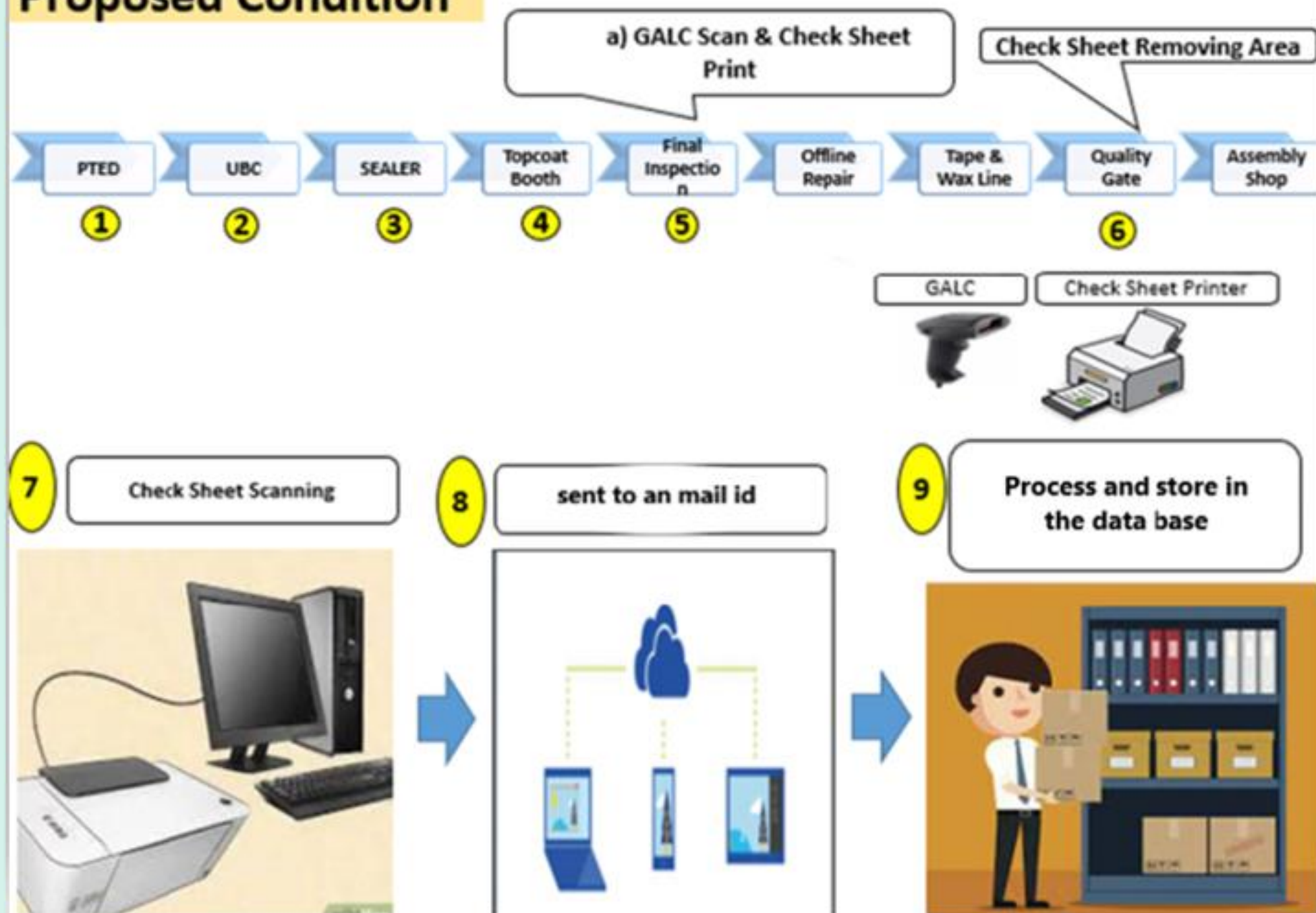


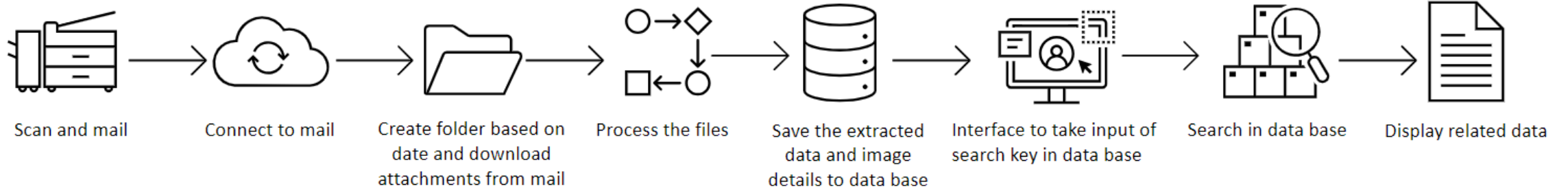
# PROBLEM STATEMENT

Current System of Hardcopy Document Management is not Suitable for High Volume Production.


- a) Longer lead time for investigation & action during defect outflow.
- b) Hardcopy/Document misplace /miss due to multiple handling in different locations.
- c) Space constraint for document storage (retention period 2 yrs)


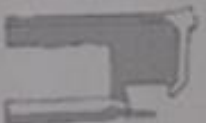



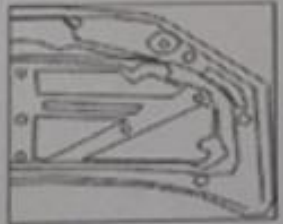




# Proposed Condition





# PROBLEM BREAK DOWN

DATE:	20230812	P2 PAINT INSPECTION CHECK SHEET										LH
BODY NO:	R7648	ED-W										
COLOUR:	C9J	ED-Y										
QG CODE:		GCC	EXPORT	A BOOTH	B BOOTH							

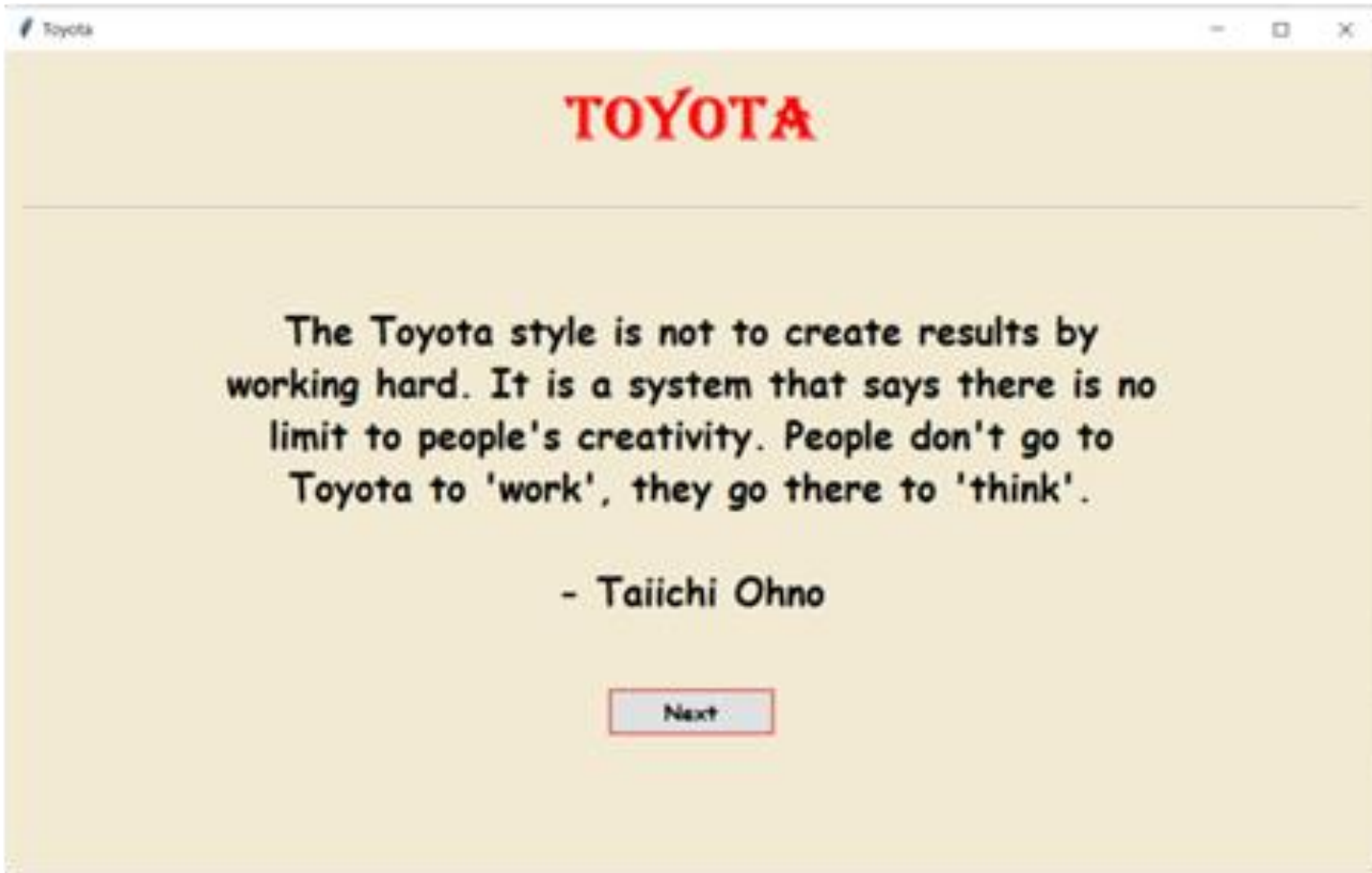


UPDATED CHECK  
SHEET

```
1  import tkinter as tk
2  import os
3  import time
4  import imaplib
5  import email
6  import zipfile
7  import tempfile
8  import datetime
9  import sqlite3
10 import io
11 import fitz
12 import webbrowser
13 import cv2
14 import numpy as np
15 import pandas as pd
16 import pyzbar.pyzbar as pyzbar
17 from tkinter import ttk
18 from PIL import Image
19 from threading import Thread
20 from queue import Queue
21 from email.header import decode_header
22 from pdf2image import convert_from_path
23 from tkinter import messagebox
24 from tkinter.scrolledtext import ScrolledText
```

# IMPLEMENTATION





FRONT PAGE



SECOND PAGE



PROCESS PAGE

Check sheets



RHS



LHS

Scanner

Mail

Model

Input



PDF



img

Extract

QR code data

Output

1. Date
2. Body Num
3. File name
4. File location

Save to data  
base and  
Excel sheet



FLOW CHART OF THE SAVING PROCESS

Toyota

# TOYOTA

## Enter Search Details

Date Range:

date format-DD-MM-YYYY

Body Num:

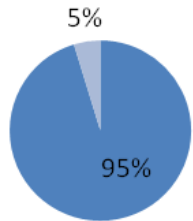
[Search Images](#)

[Back](#)

SEARCH PAGE

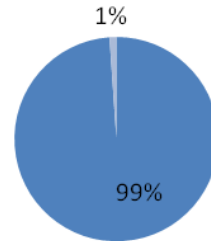
Time Spent on Storage per pair of sheets (in mins)

■ Before ■ Now



Time Spent on Searching per pair of sheets (in mins)

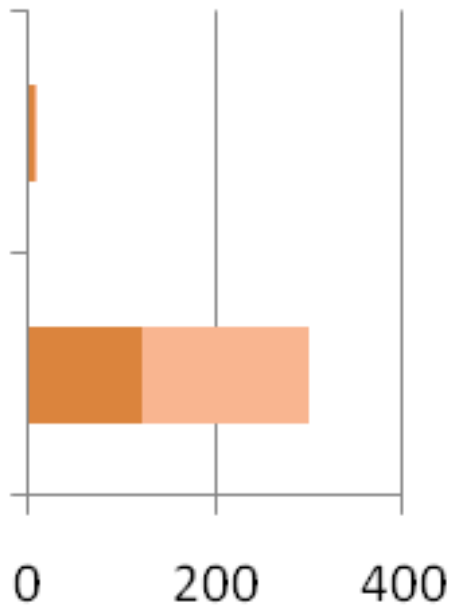
■ Before ■ Now



COMPARISION

Now

Before



■ Time spent on storage

■ time spent on Retrivel



# ADVANTAGES



Easy storage of data.



Less time consumption.



Less manpower required.

Thank  
you!