Welcome to

SMART FLOOR

Comprehensive Enterprise Solution

Converting Your Shop Floor into a Smart Floor !

Tarka Infotech Private Limited

Why smartFLOOR?

Every Manufacturer wants to achieve

ZERO PPM

with

Reduced Machine Downtime

and

Improved Cost Effectiveness.

Why smartFLOOR?

The first step towards

achieving the goal is

"MEASUREMENT"

because

You can't fix what you don't measure

Challenges in the Manual System

Ensuring that the operator uses the latest release of the control plan, SOP and Drawings.

Measuring the quality parameters and accurate recording as per Control plan SOP at the prescribed frequency

Ensuring the tool is not used beyond the prescribed life time

Getting Gauges Calibrated on time

Tracking the machine downtimes with proper reasons

And many more challenges that can hamper the overall plant efficiency thereby increasing the cost of goods sold ...

Why smartFLOOR?

The most Efficient and Reliable

Method of Measurement

is

Automatic Shop Floor Data Collection

Challenges overcome by smartFLOOR

Get accurate/latest version of Control plan, SOP and Drawings online at a touch of a button

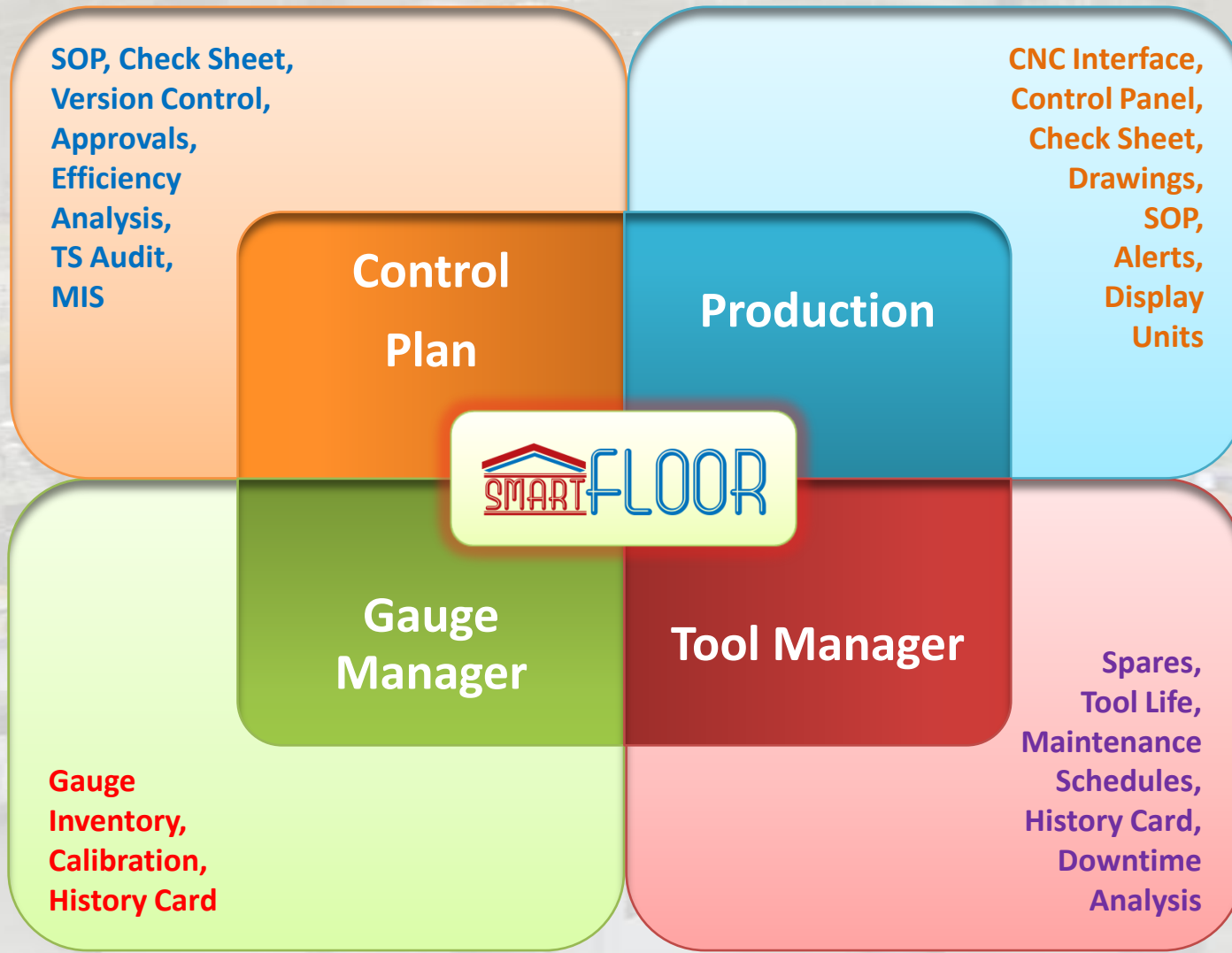Automatically get the Part Counts and alert user for QA readings at appropriate Intervals

Monitor the life of Tools and alert user for tool change

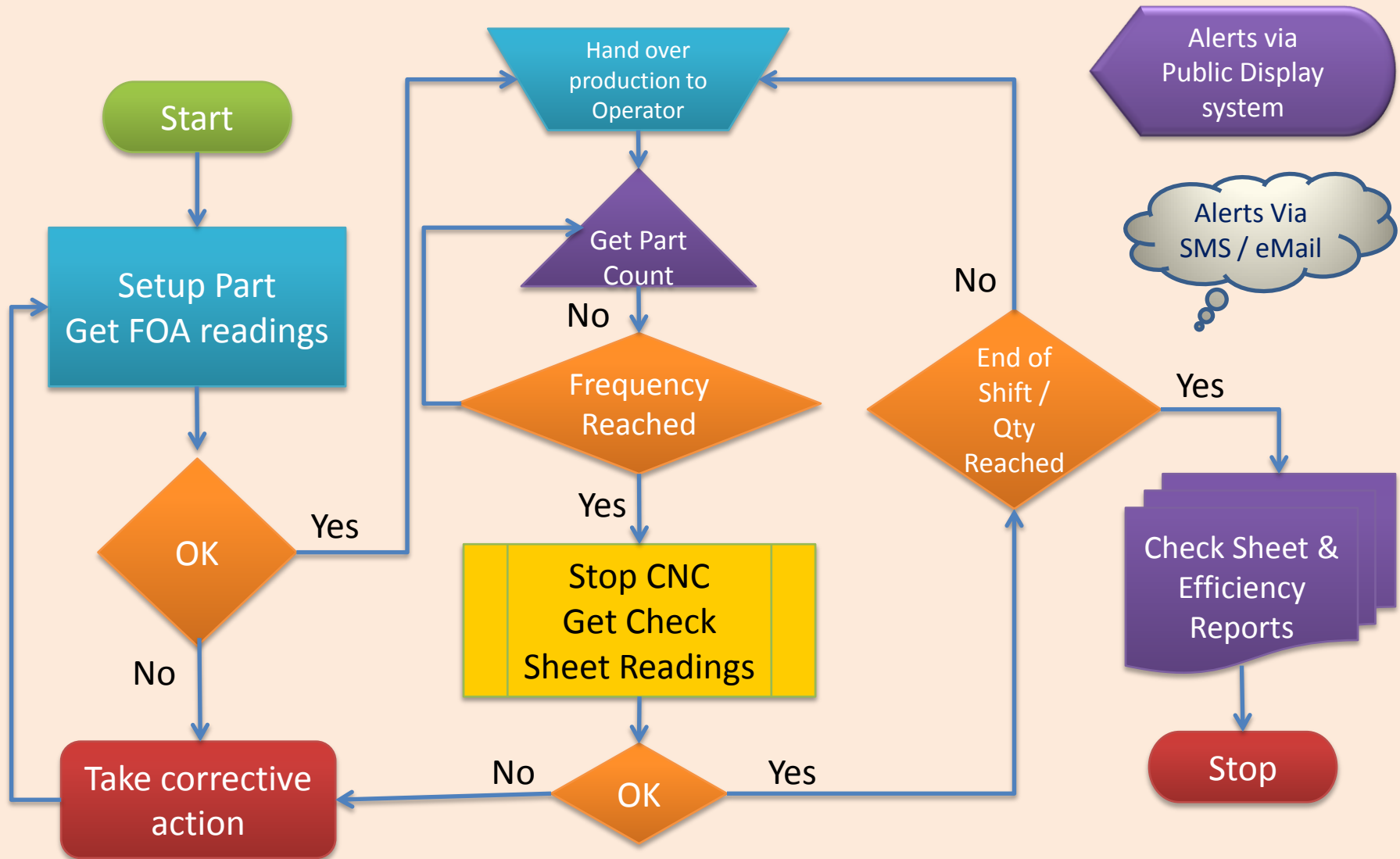Periodic and Timely alerts to Supervisors on the overall performance of the shop floor

Alert users on Gauge Calibration

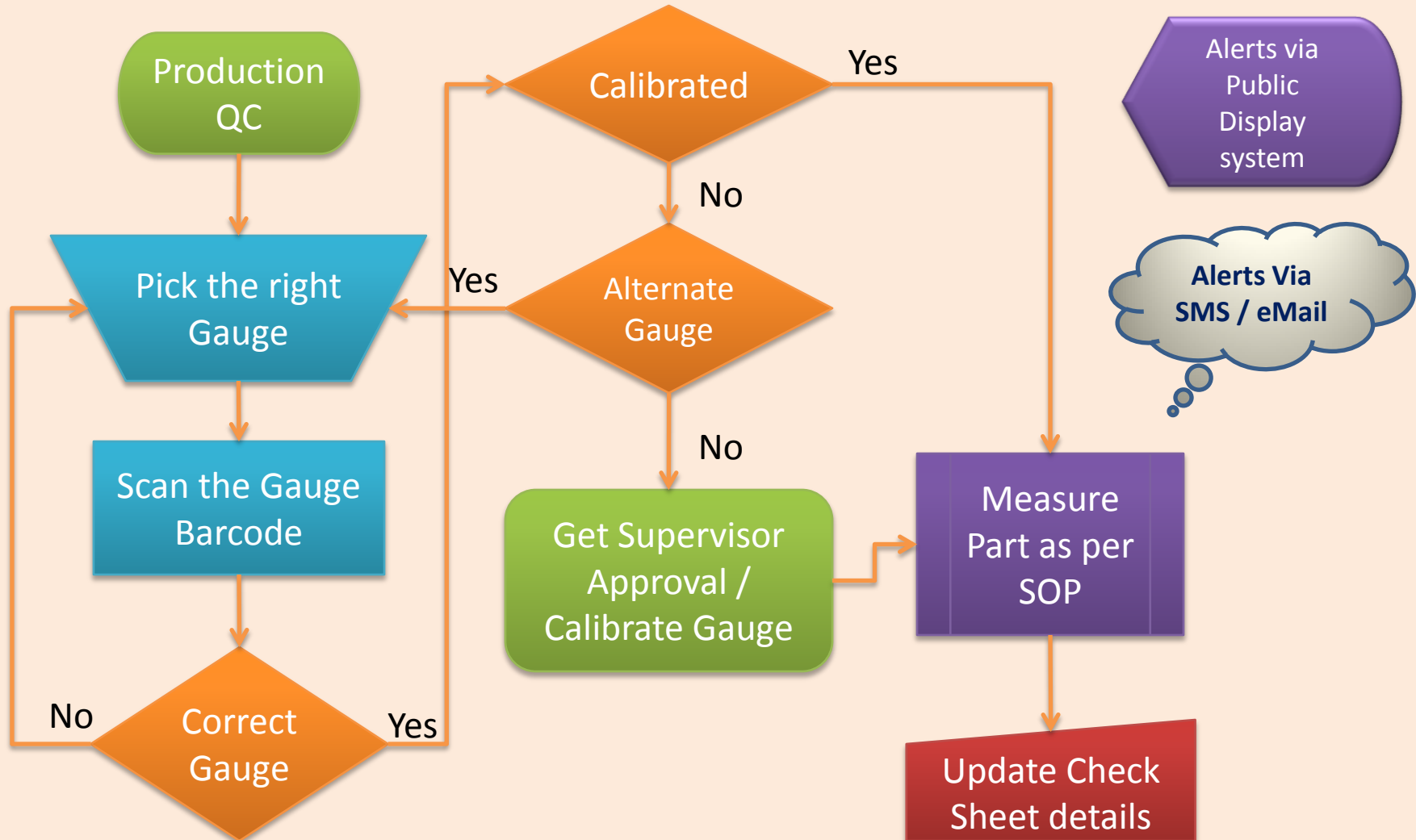Alert Maintenance team, Supervisor and other concerned on Major events such as Downtime

Automatically capture the machine down times

SOP, Check Sheet, Version Control, Approvals, Efficiency Analysis, TS Audit, MIS

CNC Interface, Control Panel, Check Sheet, Drawings, SOP, Alerts, Display Units

Control Plan

Production

SMART FLOOR

Gauge Manager

Tool Manager

Gauge Inventory, Calibration, History Card

Spares, Tool Life, Maintenance Schedules, History Card, Downtime Analysis

Control Plan

Start

Setup Part
Get FOA readings

OK — Yes / No

Hand over production to Operator

Get Part Count

Frequency Reached — No / Yes

Stop CNC
Get Check Sheet Readings

OK — No / Yes

Take corrective action

End of Shift / Qty Reached — No / Yes

Alerts via Public Display system

Alerts Via SMS / eMail

Check Sheet & Efficiency Reports

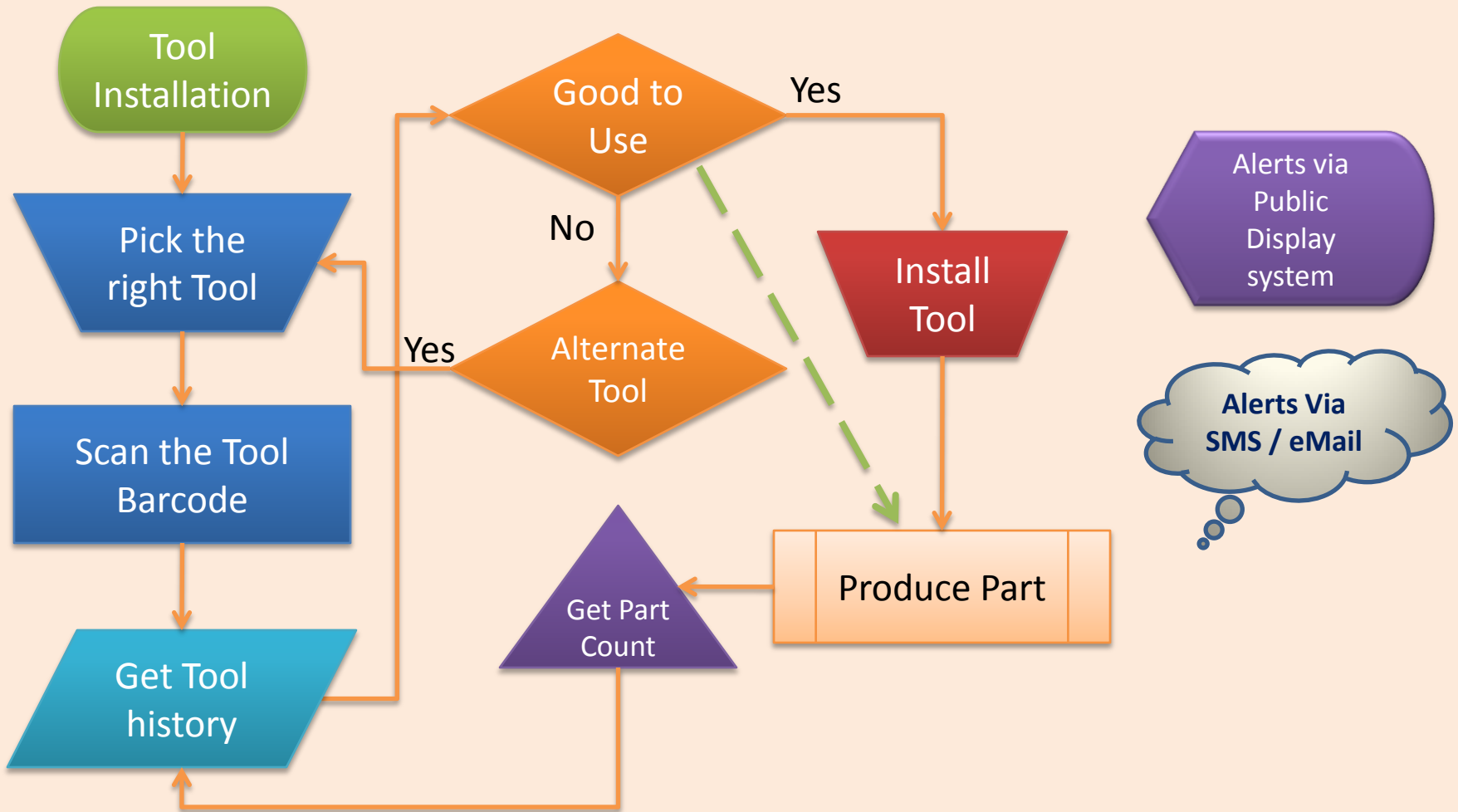Stop

Gauge Management

Control Plan

1. Part Master with Process number and description

2. SOP creation for every Process

3. Check Sheet creation with Min Max Values for each Parameter

4. Identification of Gauge for each Parameter

5. Version control for Check Sheet / SOP

6. Approval for new release or modifications of SOP / Check sheet

7. Gauge Master

8. Machine Master

9. Operator and Supervisor Master

10. Customer Complaints

11. MIS Reports

Production Module

1. Interface CNC Machine

2. Decipher CNC log and populate formatted data

3. Configuration for different data formats

4. Check frequency as per SOP/Control Plan

5. Collect QC details as per Check Sheet

6. Alert Supervisor via SMS if intervention is required

7. Capture corrective actions taken by the Supervisor

8. Display Control Plan / SOP document for quick reference

9. Display Part Drawing on request

Machine Spares and Tools Module

1. Machine wise Spares master

2. Tools Master with Bar Code for individual unit

3. Scheduled Maintenance Plan

4. Machine Maintenance
   a. Maintenance details
   b. Spares Changed
   c. Corrective actions taken

5. Tool out put and remaining life

6. Spares / Tools Inventory

7. Machine Down time Analysis

8. AMC / Warranty register and alerts

9. Machine History Card

10. Preventive maintenance alerts

11. Integration with Production module for validating Tool validity

Gauge Inventory Module

1. Gauge Master

2. Bar Code for individual unit

3. Calibration Due details

4. Calibration Entry

   a. Calibration done

   b. Spares Changed if any

   c. Corrective actions taken

5. Gauge Inventory

6. Gauge History Card

7. Calibration alerts

8. Integration with Production module for validating Gauge validity

Alerts and Display Module

1. Integrate SMS Gateway with smartFLOOR

2. Send SMS Alerts on Tool life, Calibration and Production Status

3. Notifications and Scheduled reports via eMail

4. Display Production status on large display screens in shop floor and

   office area

   a. OE Status Graphs

   b. Red Alerts on Machine Idle time

   c. Customer Complaints

   d. Safety Videos

   e. Production Status
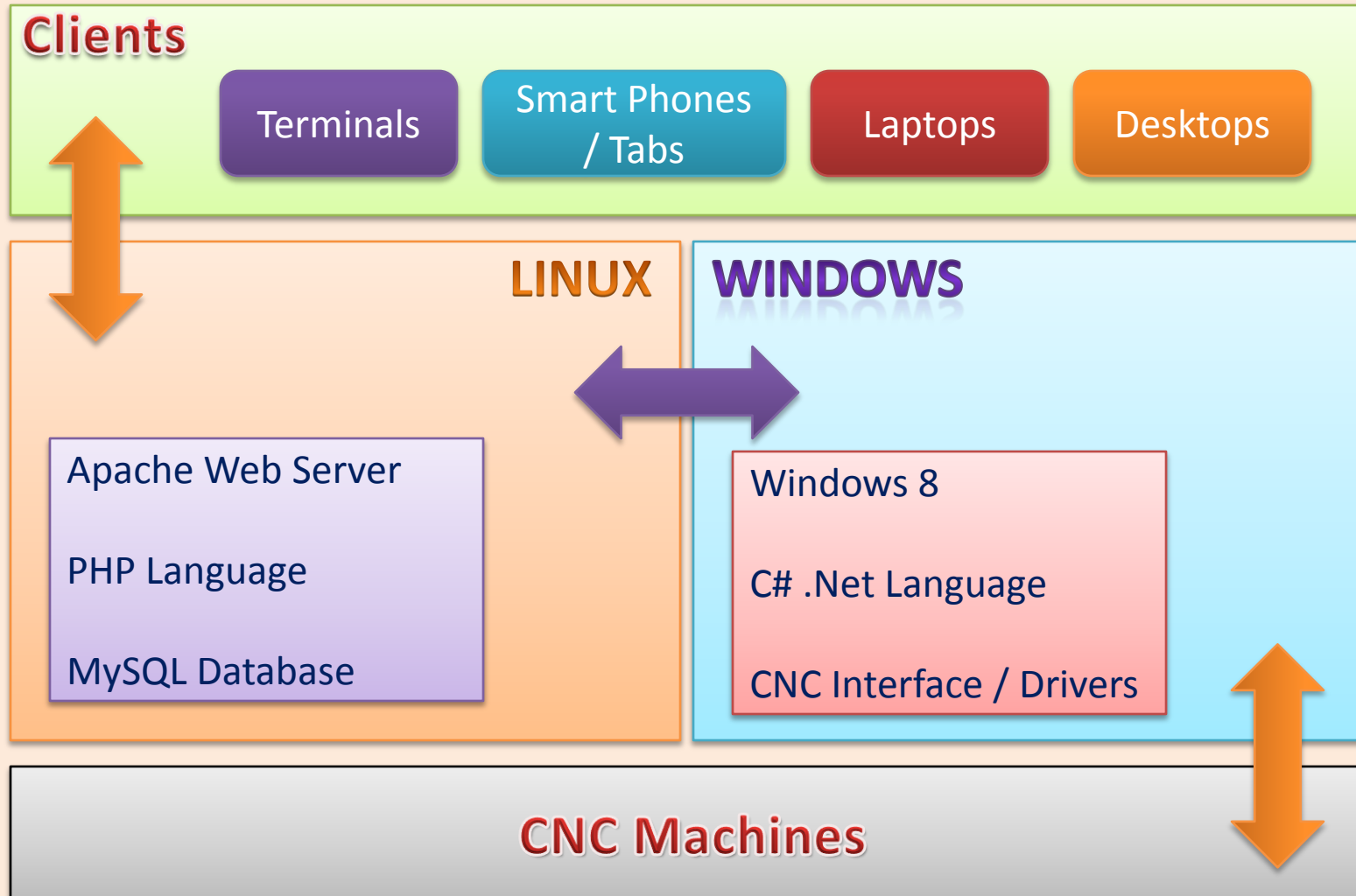
Training Audio / Video Module

1. Display training Videos on demand in the console

2. Provision to listen to Audio files with selected language

3. Other training material as provided by the company

Note: Training material / Audio / Video files and resources to be provided by

the company

MIS Reports Module

1. Operator Efficiency Reports

2. Machine Downtime / Idle time analysis

3. Part wise Quality Analysis (Characteristic wise rejections)

4. Over all Efficiency analysis

5. Combined analysis of Efficiency (Part, Operator, Machine)

6. Hourly Output Analysis

7. Customer Complaint Analysis reports

8. Planned Maintenance alert report

9. PPM and Quality Analysis reports

10. Standard reports required as per ISO/TS standards

Technology Overview

Clients

| Terminals | Smart Phones / Tabs | Laptops | Desktops |

LINUX   WINDOWS

Apache Web Server

PHP Language

MySQL Database

Windows 8

C# .Net Language

CNC Interface / Drivers

CNC Machines

Hardware Requirement

1. Linux Server

2. Windows Machine

3. Network Switches

4. Terminals (Touch Panel PC)

5. Network and Power Cabling

6. Barcode Printer

7. Barcode Scanner

8. UPS

9. Public Display Units

10. Backup Device

11. Audio Units (Speakers)

Project Overview

1. Connect All CNC Machines to the Network using LAN Cables, Switches
2. Interface CNC Machines with smartFloor application using drivers provided by the CNC manufacturer
3. Install Terminals at each CNC connected to Network switches
4. Setup centralized data collection server written in C# .net
5. Setup web server for interfacing users with smartFloor application
6. Link Gauge issues to CNC machine
7. Link Tool installation to CNC machine
8. Interface with SAP for production data entry
9. Setup mass display units in Shop floor and office area to display online status of the shop floor

Thank You

Tarka Infotech Private Limited