

# ns-sms

## Shift Management System

a powerful tool that collects and analyses events from your manufacturing shopfloor

# NS-SMS Design

- ▶ *NS-SMS* was built using modern development technologies HTML5, PHP, Java and MySQL to name a few
- ▶ *NS-SMS* is delivered as a browser based application and it doesn't require any software installation for the end user
- ▶ *NS-SMS* has been developed using responsive design, meaning it fits perfectly on any screen size of any device – mobile, tablet or desktop

# ns-SMS Features

- ▶ **MO (Manufacturing Order) Data Register**
  - MO Number, Quantity, Customer, Product PN, Product Name
  - Output for each shift on each workstation
  - Quality Issues recorded for each serial number
  - Operators assigned to the MO on each workstation
- ▶ **Downtime Records**
  - For each production line, organized by category:
    - Breakdown
    - Change Over
    - Debug
    - Engineering
    - IT Systems
    - Materials Packaging
    - Materials Shortages
    - No Headcount
    - No planned production
    - Preventive Maintenance
    - Quality Issues
    - Start Up
    - Training
  - Machine Tag, Start Time, Duration, Issue Description, MO, Reported by, Pictures

# ns-SMS Features

## ▶ Reporting

- Powerful reports, charts and dashboards create an 360 degree view, in order to take quick and best informed decisions

## ▶ Administration and Set Up

- Powerful and customisable browser based admin features
- Anything you need is easily accessible and easily done

## ▶ Security

- Multiple user levels – easy to update and reconfigure based on your needs
- Configure user rights for each table/form/feature
- Use Active Directory and Windows credentials to login

# Shift Management made easy

Add your production line

Production Shift Data, Add new record

Line  \*

Shift  \*

Date

Team Leader  \*

Under the production line add MO that you are working on

Mo Data, Add new record

**MO Info** **Comments**

MO  [Add new](#) \*

MO Qty

Customer  \*

Product PN  \*

Product Name  \*

Add your operators

Operators, Add new record

Op Name Position  \*

Now you are ready to add quality issues and downtimes.

# Quality Issues records

- ▶ Record quality defects in great details
- ▶ Use standard defect list
- ▶ Upload pictures by drag and drop to add further evidences for defects found
- ▶ All recorded data are searchable and will be available in Top Defects and Yield – Reports, Charts and Dashboards

Quality, Add new record

Serial Number

Reference Designators

Defects

Comments

Picture

Add files

Drag files here

DT

23-01-2016 12:33:55 AM

Save

Back to list

Coating / Adhesive Not Cured

Coating / Potting Defects

Cold Joint

Component Under IC

Contamination / Foreign Material

Damaged / Bent Lead

Damaged Label

Damaged PCB

Defective Component

Delamination / Measling

Disturbed Joint

Documentation error

Dry Joint

Excess Flux Residue

Excess Solder

Exposed Copper

Extra Component

Fractured Joint

Glue on Pad

Illegible-Silkscreen/Label/Stamp

Incorrect Packaging

Incorrect Polarity/Orientation

Insufficient Solder

Lifted Component

Misaligned Component

Missing Component

Missing/Incorrect Etch Cut

No Flow up

No Glue

No Meniscus in Solder

No Solder on Pad

# Quality Issues Reports, Charts and Dashboards

- ▶ Comprehensive search available
- ▶ 3D pie charts tell you the whole story
- ▶ Detailed report highlights specific of each quality issue data entry

Top Defects - Advanced search

Criteria: ☒ All conditions ☐ Any condition

NOT

Defect ☐ Equals

How Many ☐ Equals

Reference Designators ☐ Contains

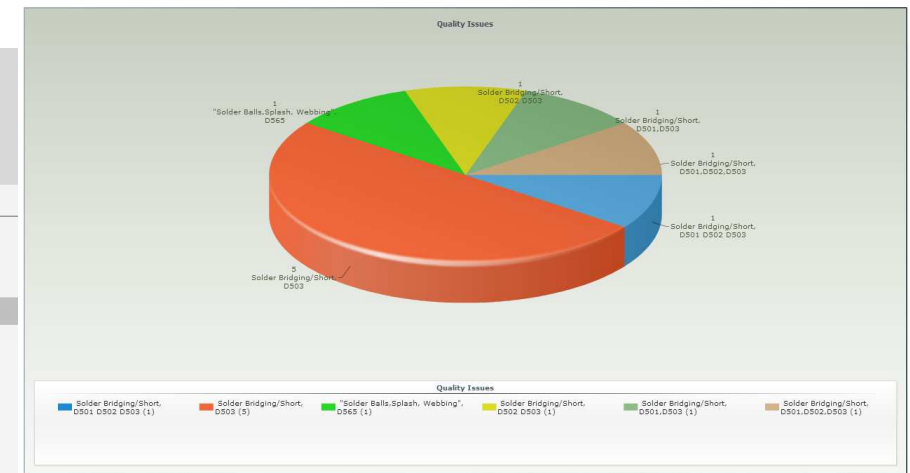
DT ☐ Between  1  January  2016  23  January  2016

MO ☐ Equals

Customer ☐ Equals

Product PN ☐ Equals

Product Name ☐ Equals



Product PN:

Product Name:

Customer:

MO:

MO Qty:

Note:

Shift	Line	Team Leader	Serial Number	Defect	Reference Designators	Comments
Shift 1	SMT Line 1	<input type="text"/>		Solder Bridging/Short	D501 D502 D503	
Shift 1	SMT Line 1	<input type="text"/>		Solder Bridging/Short	D503	
Shift 1	SMT Line 1	<input type="text"/>		"Solder Balls, Splash, Webbing"	D565	
Shift 1	SMT Line 1	<input type="text"/>		Incorrect Polarity/Orientation	X1	
Shift 1	SMT Line 1	<input type="text"/>		Incorrect Polarity/Orientation	X1	
Shift 1	SMT Line 1	<input type="text"/>		Solder Bridging/Short	D502 D503	
Shift 1	SMT Line 1	<input type="text"/>		Solder Bridging/Short	D503	
Shift 1	SMT Line 1	<input type="text"/>		Incorrect Polarity/Orientation	X2	
Shift 2	SMT Line 1	<input type="text"/>		Solder Bridging/Short	D501, D503	
Shift 2	SMT Line 1	<input type="text"/>		Solder Bridging/Short	C503	
Shift 2	SMT Line 1	<input type="text"/>		Solder Bridging/Short	C503	
Shift 2	SMT Line 1	<input type="text"/>		Solder Bridging/Short	D501, D502, D503	

20-Jan-16

20-Jan-16

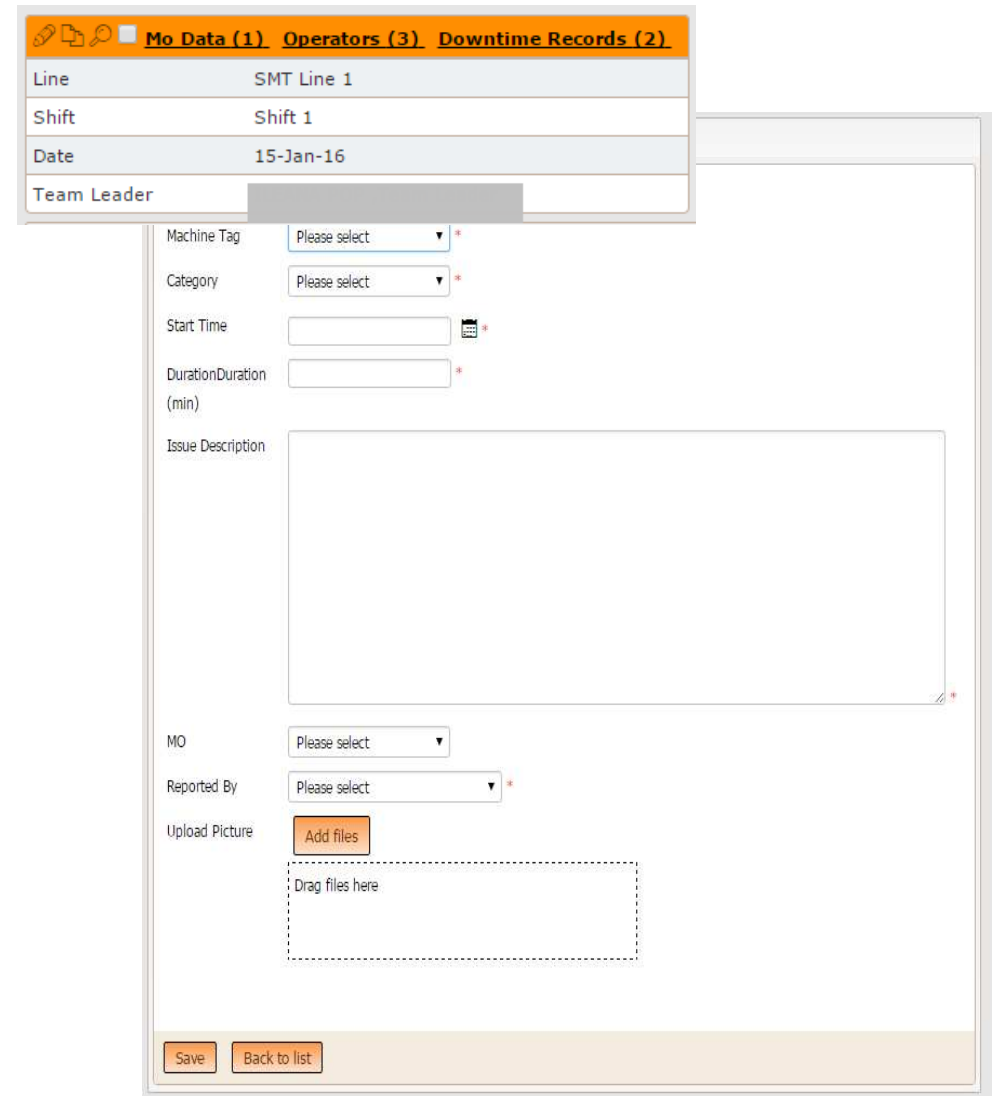
20-Jan-16

20-Jan-16

20-Jan-16

# Production Downtime

- ▶ All that you need to know to prevent future downtime is recorded here
- ▶ Downtimes are linked to a manufacturing line and to the MO if are occurring during manufacturing of a particular MO
- ▶ Can be linked with CMMS, if you use one
- ▶ Highly configurable and customisable entry page
- ▶ Main pre-defined downtime categories are:
  - Breakdown
  - Change Over
  - Debug
  - Engineering
  - IT Systems
  - Materials Packaging
  - Materials Shortages
  - No Headcount
  - No planned production
  - Preventive Maintenance
  - Quality Issues
  - Start Up
  - Training



The screenshot shows a web-based form for recording production downtime. At the top, there is a navigation bar with three tabs: 'Mo Data (1)', 'Operators (3)', and 'Downtime Records (2)'. Below this is a summary table with the following data:

Line	SMT Line 1
Shift	Shift 1
Date	15-Jan-16
Team Leader	[Redacted]

Below the table is the main entry form. It includes the following fields:

- Machine Tag:** A dropdown menu with 'Please select' and a red asterisk.
- Category:** A dropdown menu with 'Please select' and a red asterisk.
- Start Time:** A text input field with a calendar icon and a red asterisk.
- Duration:** A text input field with a red asterisk.
- Issue Description:** A large text area for describing the problem.
- MO:** A dropdown menu with 'Please select' and a red asterisk.
- Reported By:** A dropdown menu with 'Please select' and a red asterisk.
- Upload Picture:** A button labeled 'Add files' and a dashed box with the text 'Drag files here'.

At the bottom of the form are two buttons: 'Save' and 'Back to list'.



# Production Downtime Analysis

Powerful reports and charts quickly generate a 360 degrees view of your manufacturing lines. Colourful Pareto, Pie and Bubble charts and dashboards pinpoint the most important issues to tackle. Suddenly you see the whole *'hidden factory'*.

Downtime per Category - Advanced search

Criteria: ☒ All conditions ☐ Any condition

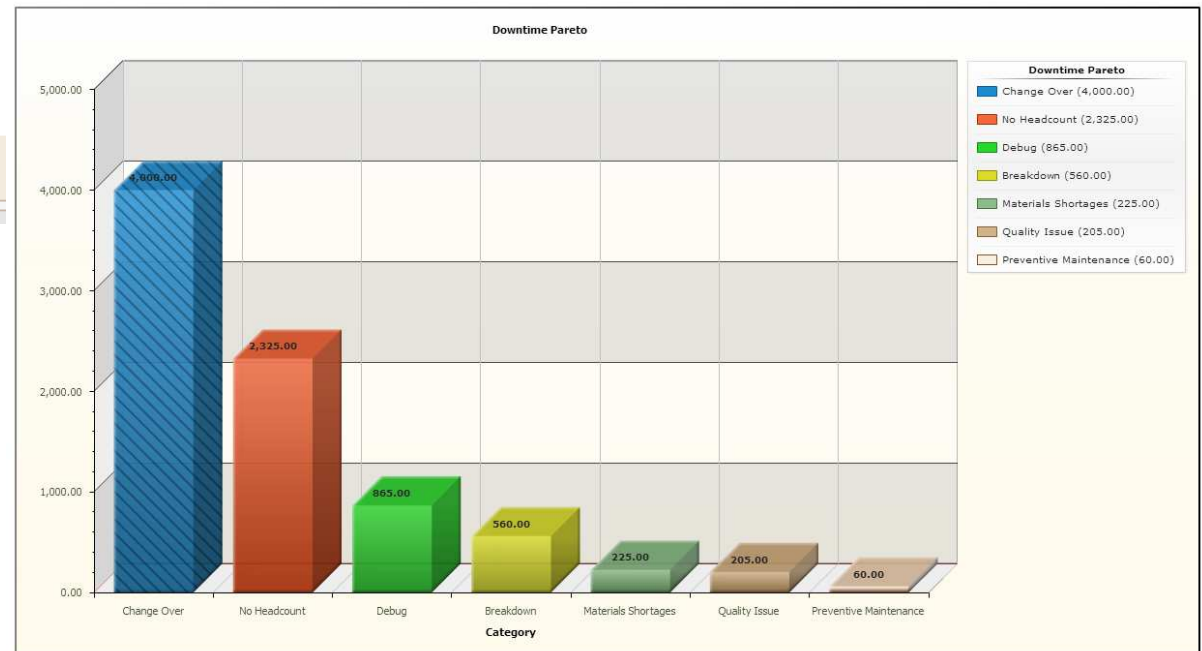
NOT

Date ☐ Between

Shift ☐ Equals

Line ☐ Equals

Category ☐ Equals



# Production Downtime Analysis

- Divulge most problematic machines and processes
- Tighten your preventive maintenance activities based on these findings

Downtime per machine - Advanced search

Criteria: ☒ All conditions ☐ Any condition

NOT

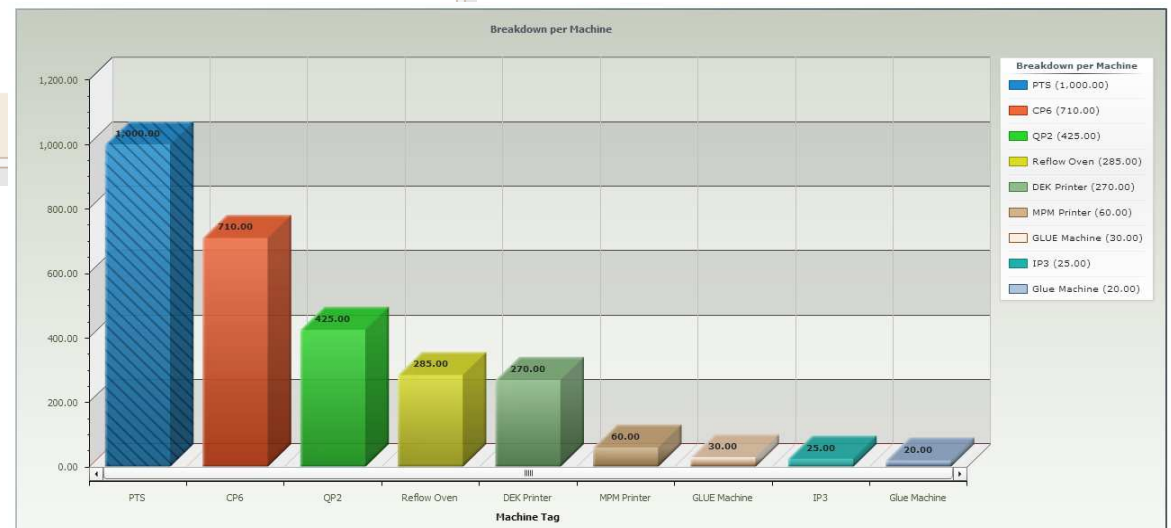
Machine Tag ☐ Equals

Total ☐ Equals

Date ☐ Between  1  January  2015  23  January  2016

Shift ☐ Equals

Line ☐ Equals  SMT Line 1



# Production Downtime Analysis

- ▶ See in a split second products that have very long change over times
- ▶ Target your efforts to correct the big offenders
- ▶ Correlate change over time with available manpower resources



# Reporting

- ▶ Dashboards, Charts, Reports –are offering you an easy way to see what is happening
- ▶ Output reports in PDF, CSV, Excel, Word, HTML, XML
- ▶ Reports can be auto generated and emailed on pre-set schedules
- ▶ Advanced Search powerful and versatile function is available for each module and let you customise the search in the way you want it
- ▶ On line report builder allows users to create their own suite of reports and charts

Shift Management
<i>Production Shift Data</i>
Reports
<i>Downtime Details</i>
<i>MO Performance</i>
<i>Quality Issues</i>
Charts
<i>Downtime per Category</i>
<i>Downtime per MO</i>
<i>Downtime per machine</i>
<i>No Planned Production</i>
<i>People Per Line</i>
<i>AVG Change Over per Product</i>
<i>Top Defects</i>
Dashboards
<i>MO Overview</i>
<i>Production Shift Data Dashboard</i>
<i>Charts</i>
Adv. Search
<i>MO Search</i>
<i>Downtime Search</i>

# Administration

- ▶ Easy to set up and customise all the dropdown boxes
  - Operators Master
  - Machines
  - Downtime Category
  - Production Lines
  - Customers
- ▶ Audit Trail records all changes done to the data, the login details and time stamp

DB Maintenance	
Operators Master	<b>Production Line ↑</b>
Machines	<input type="checkbox"/> AOI
Downtime Category	<input type="checkbox"/> Audit in process SMT area
Production Lines	<input type="checkbox"/> Conformal Coating
Customers	<input type="checkbox"/> FCT
	<input type="checkbox"/> Feeders Setup
	<input type="checkbox"/> Flying Probe Test
	<input type="checkbox"/> ICT
	<input type="checkbox"/> Kitting
	<input type="checkbox"/> Mechanical Assembly 1
	<input type="checkbox"/> Mechanical Assembly 2
	<input type="checkbox"/> PCFA LINE 1
	<input type="checkbox"/> PCFA LINE 2
	<input type="checkbox"/> Prepping area
	<input type="checkbox"/> Prototype SMT Line
	<input type="checkbox"/> PROTOTYPING
	<input type="checkbox"/> QC and Final inspection
	<input type="checkbox"/> Resmed Debug
	<input type="checkbox"/> Resmed Final assembly/PCF
	<input type="checkbox"/> SMT Line 1
	<input type="checkbox"/> SMT Line 2
	<input type="checkbox"/> SMT Line 3
	<input type="checkbox"/> SMT Line 4
	<input type="checkbox"/> Stores receiving
	<input type="checkbox"/> Wave soldering L1
	<input type="checkbox"/> Wave soldering L2
	<input type="checkbox"/> Wave soldering L3



# Users Administration

- ▶ Create multiple user levels
- ▶ Customise permissions for each level
- ▶ Add users, edit users, delete users
- ▶ Users may choose to register themselves using Registration Feature from login screen
- ▶ Users need to provide a valid email address which is used during activation process
- ▶ Forgot Password Feature helps users to recover their passwords
- ▶ Or use **Active Directory** and login with Windows credentials

Users, Add new record

User Name	<input type="text"/>	*
Password	<input type="password"/>	*
Field should be at least 4 characters long		
Email	<input type="text"/>	*
User Type	<input type="text"/>	
Active	<input type="text"/>	

Usergroup:

<Default>

<Guest>

-ENGINEERING

-QUALITY

Displaying all tables Ordering tables as in menu

search	Add	Edit	Delete	List/View	Print/Export	Import	Admin mode (access to all records)
<b>expand all</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
▶ Shift Management (1)							
▶ Reports (3)							
▶ Charts (7)							
▶ Dashboards (3)							
▶ Adv. Search (2)							
▶ DB Maintenance (6)							
▶ DB Admin (1)							
▶ Unlisted tables (16)							

# NS-SMS: Demo Available

- ▶ For a DEMO

- Please contact us at [customDB@nicks-software.com](mailto:customDB@nicks-software.com)
- We'll help with installation and configuration, if needed
- We'll get you going quickly, via remote access



# NS-SMS: Pricing

- ▶ For RFQ contact us at:
  - [customDB@nicks-software.com](mailto:customDB@nicks-software.com)
- ▶ For more details visit us at:
  - <http://www.custom-database-software-development.com.au/>
  - <http://www.nicks-software.com>





# Thank you!

