

## SOFTWARE REQUIREMENT SPECIFICATION DOCUMENT

# Project: VCT- Batch Traceability

Customer: **DENSO Haryana Pvt. Ltd.**

Submitted By:



## Notice

*This document contains information, which is the proprietary property of **Sato Argox**. This document is received in confidence and its contents cannot be disclosed or copied without the prior written consent of **Sato Argox**.*

*Nothing in this document constitutes a guaranty, warranty, or license, express or implied. **Sato Argox** disclaims all liability for all such guaranties, warranties, and licenses, including but not limited to: Fitness for a particular purpose; merchantability; not infringement of intellectual property or other rights of any third party or of **Sato Argox**; indemnity; and all others. The reader is advised that third parties can have intellectual property rights that can be relevant to this document and the technologies discussed herein, and is advised to seek the advice of competent legal counsel, without obligation of **Sato Argox***

***Sato Argox** retains the right to make changes to this document at any time, without notice. **Sato Argox** makes no warranty for the use of this document and assumes no responsibility for any errors that can appear in the document, nor does it make a commitment to update the information contained herein.*

## **COPYRIGHT**

*Copyright © Sato Argox 2023. All rights reserved.*

## **TRADEMARKS**

*\*Other product and corporate names may be trademarks of other companies and are used only for explanation and to the owners' benefit, without intent to infringe.*

## Document Revision History

REVISION NUMBER	DATE	PREPARED BY	COMMENT
1.00	Jun. 29, 2023	Mayank Nasa/Akhilesh Kumar	Original Document

### Acronym

**Customer:** DENSO Haryana Pvt. Ltd hence forth will be referred as DENSO.

**Vendor:** Sato Argox India Pvt. Ltd., hence forth will be referred as SATO.

## Contents

<b>PROJECT SCOPE .....</b>	<b>5</b>
<b>SYSTEM REQUIREMENTS .....</b>	<b>5</b>
<u>SERVER.....</u>	<u>5</u>
<u>DESKTOP COMPUTERS .....</u>	<u>5</u>
<b>INTRODUCTION .....</b>	<b>6</b>
<u>PROCESS FLOW .....</u>	<u>7-8</u>
<u>LOGIN SCREEN .....</u>	<u>9</u>
<u>MAIN SCREEN.....</u>	<u>10</u>
<u>CHANGE PASSWORD .....</u>	<u>11</u>
<u>MASTER MANAGEMENT .....</u>	<u>12</u>
<u>Group Master.....</u>	<u>12</u>
<u>Group Rights Master.....</u>	<u>13</u>
<u>User Master .....</u>	<u>14</u>
<u>Child Part Master .....</u>	<u>15-16</u>
<u>PROJECT RESPONSIBILITIES .....</u>	<u>17</u>

## PROJECT SCOPE

The scope of the solution is to equip users with Batch Traceability Solution through which users can manage their Batch operations. This would require the development of the desktop application & SQL database. The document lays down the specifications of the middleware application, its architecture and infrastructure requirements.

## System Requirements

This section provides the necessary details about the hardware components required by the solution.

### Server

The application would require a server with following specifications:

- Windows Server 2016 Datacenter.
- Hard Disk: 100GB
- Installed memory (Ram): 12GB.
- Processor: Intel(R)Xeon(R) CPU E5-2620 v4 @ 2.10GHZ 2.10 Ghz
- MS SQL Server 2017 or higher

### Desktop Computers

The desktop application would require the computer with following specifications: -

- Intel Core 8<sup>th</sup> Gen Intel i5 or better CPU
- Operating system - Microsoft Windows 10
- 8 GB RAM
- Dot net Framework 4.5 Preinstalled

## Introduction

The scope of this document is to provide the understanding of this solution to all members of Denso Team & Sato Argox Team associated with the solution development & implementation. This document major emphasizes on solution processes & user operations, where the data will be captured and afterwards will be used.

This solution major comprises of followings:

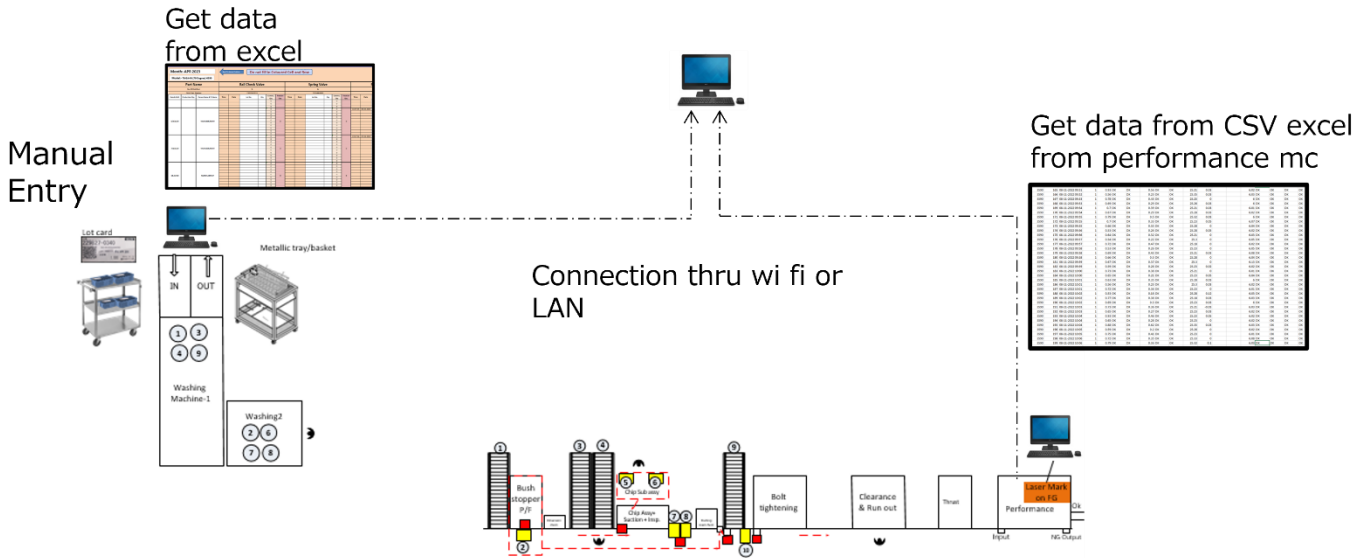
- Master Managements
- Different Types of Processes.
- Reports

This Document will help the end client to understand the application and its implementation in various places with the help of screen shots and brief description supporting the images. Also, these images carries the idea how the application GUI will look like, the end product can have slight visual differences.

## Process Flow

### Phase 1

Digitalization of existing manual entry process



Major modules are mentioned in Phase 1 are.

- Schedule Module (For washing excel data), Excel format attached below.
- Scheduler Module (For performance parameters data)

Note: -

- Consider washing machine software and database, Phase 2 will cover (Scanning of lot at washing, washing data map)
- Performance data will be recorded for 2 stations on the same line.

## SRS: Batch Traceability

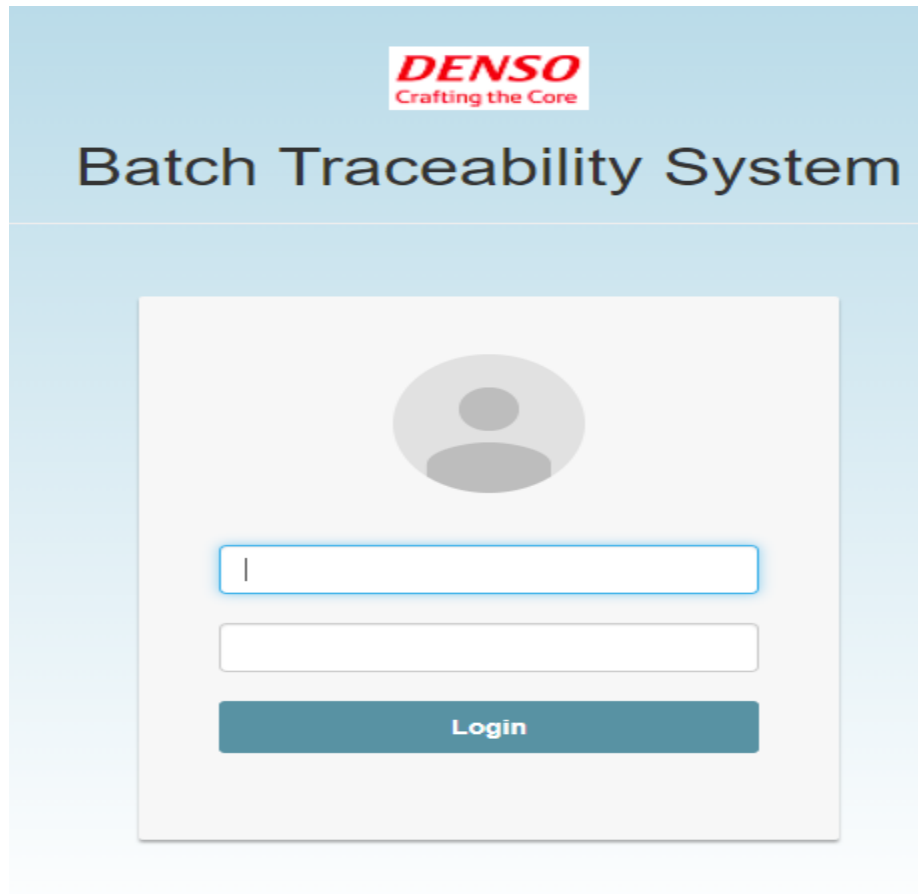
## Washing Station Excel sheet Format

Month:-March			<div><div>Back To Home Position</div><div>Do not fill in Coloured Cell</div></div>														
Model:- KC-IN 3240																	
Part Name			Rotor (Inhouse)									Rotor (CKD)					
No. Of Child Part			2									2.1					
Child Part Number			HA 229861-2850									229861-2850					
Date & Shift	Production Qty.	Person Name & TL Name	Time	Date	Machining Date	Shift	Line	Qty	Comm. Qty	Fraction Qty.	Time	Date	Lot No.	Qty	Comm. Qty	Fraction Qty.	
1/3/23/A		YADUVEER/AKSHAY	12:39:53	01-03-2023	21-02-2023	A	1	96	96	432					0	0	
			12:41:32	01-03-2023	27-02-2023	C	2	96	192						0		
			12:41:46	01-03-2023	22-02-2023	B	2	48	240						0		
			12:43:21	01-03-2023	27-02-2023	C	2	48	288						0		
			12:44:06	01-03-2023	21-02-2023	A	1	48	336						0		
			13:01:55	01-03-2023	21-02-2023	A	1	48	384						0		
			13:31:06	01-03-2023	22-02-2023	B	1	48	432						0		
											432						0
											432						0
											432						0
											432						0
											432						0
											432						0
											432						0
											432						0
											432						0
											432						0
											432						0
											432						0
											432						0
											432						0
											432						0
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432					0					
							432				</						

## Performance Data Excel sheet Format

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	
3590	130	#####	1	0.54	OK	OK	0.26	OK	OK	25.16	0			6	OK	OK	OK	OK	OK
3590	131	#####	1	0.55	OK	OK	0.35	OK	OK	25.52	0.03			6.02	OK	OK	OK	OK	OK
3590	132	#####	1	0.54	OK	OK	0.24	OK	OK	25.13	0			6.02	OK	OK	OK	OK	OK
3590	133	#####	1	0.54	OK	OK	0.26	OK	OK	25.45	0			6.02	OK	OK	OK	OK	OK
3590	134	#####	1	0.61	OK	OK	0.25	OK	OK	25.29	0.03			6.02	OK	OK	OK	OK	OK
3590	135	#####	1	0.49	OK	OK	0.26	OK	OK	25.4	0			6.04	OK	OK	OK	OK	OK
3590	136	#####	1	0.55	OK	OK	0.26	OK	OK	25.16	0			6.02	OK	OK	OK	OK	OK
3590	137	#####	1	0.6	OK	OK	0.31	OK	OK	25.4	0.03			6.02	OK	OK	OK	OK	OK
3590	138	#####	1	0.52	OK	OK	0.25	OK	OK	25.16	0			6.04	OK	OK	OK	OK	OK
3590	139	#####	1	0.61	OK	OK	0.34	OK	OK	25.4	-0.03			6.02	OK	OK	OK	OK	OK
3590	140	#####	1	0.65	OK	OK	0.23	OK	OK	25.13	0.05			6.09	OK	OK	OK	OK	OK
3590	141	#####	1	0.58	OK	OK	0.33	OK	OK	25.38	0			6.02	OK	OK	OK	OK	OK
3590	142	#####	1	0.64	OK	OK	0.25	OK	OK	25.11	0			6.02	OK	OK	OK	OK	OK
3590	143	#####	1	0.72	OK	OK	0.27	OK	OK	25.34	0			6.01	OK	OK	OK	OK	OK
3590	144	#####	1	0.6	OK	OK	0.24	OK	OK	25.13	-0.03			6.02	OK	OK	OK	OK	OK
3590	145	#####	1	0.59	OK	OK	0.25	OK	OK	25.38	0.03			6.06	OK	OK	OK	OK	OK
3590	146	#####	1	0.63	OK	OK	0.24	OK	OK	25.13	0			6.01	OK	OK	OK	OK	OK
3590	147	#####	1	0.54	OK	OK	0.27	OK	OK	25.36	0			6.02	OK	OK	OK	OK	OK
3590	148	#####	1	0.59	OK	OK	0.26	OK	OK	25.16	0			6.01	OK	OK	OK	OK	OK
3590	149	#####	1	0.67	OK	OK	0.24	OK	OK	25.36	0			6.01	OK	OK	OK	OK	OK
3590	150	#####	1	0.52	OK	OK	0.22	OK	OK	25.11	0			6.02	OK	OK	OK	OK	OK
3590	151	#####	1	0.69	OK	OK	0.27	OK	OK	25.4	0.03			6.03	OK	OK	OK	OK	OK
3590	152	#####	1	0.48	OK	OK	0.22	OK	OK	25.16	0.08			6	OK	OK	OK	OK	OK
3590	153	#####	1	0.64	OK	OK	0.31	OK	OK	25.43	0			6.05	OK	OK	OK	OK	OK
3590	154	#####	1	0.51	OK	OK	0.22	OK	OK	25.16	0			6	OK	OK	OK	OK	OK
3590	155	#####	1	0.62	OK	OK	0.24	OK	OK	25.56	0			6.02	OK	OK	OK	OK	OK
3590	156	#####	1	0.56	OK	OK	0.25	OK	OK	25.16	0			6.08	OK	OK	OK	OK	OK
3590	157	#####	1	0.7	OK	OK	0.27	OK	OK	25.49	0			6.1	OK	OK	OK	OK	OK
3590	158	#####	1	0.7	OK	OK	0.28	OK	OK	25.24	0.03			6.11	OK	OK	OK	OK	OK



**PC - Application****Login Screen**

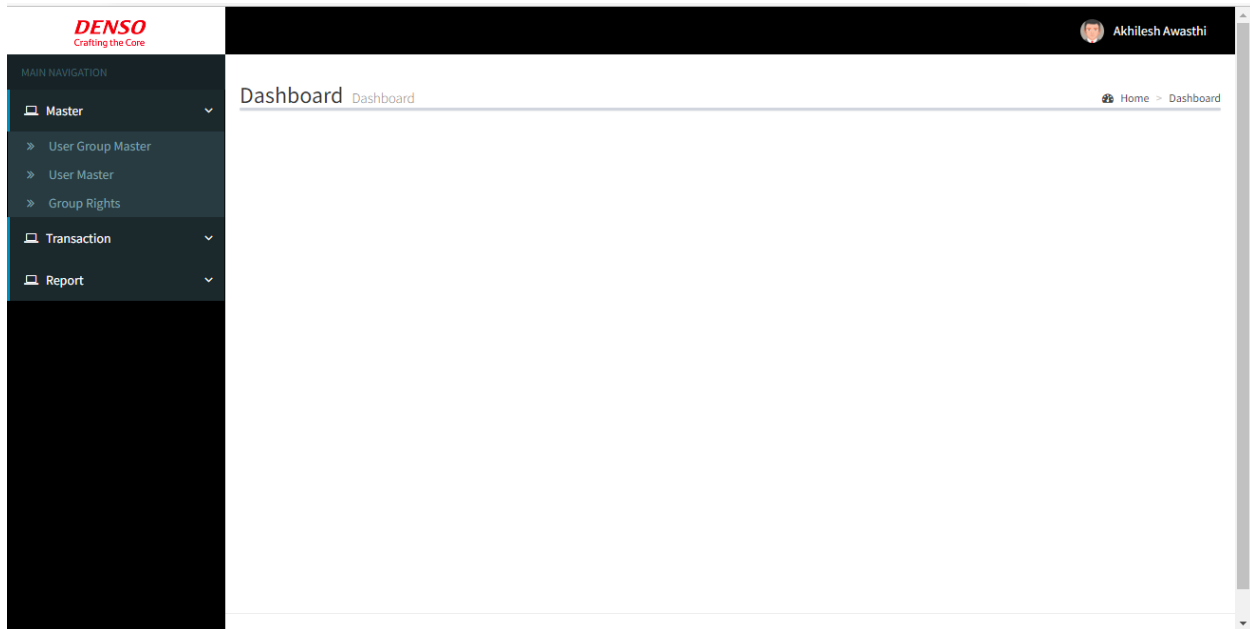
**Brief Description:** This screen is used for login purposes. User will enter User ID & Password; system will validate entered user ID & password. Then according to user rights assigned to user, menus of Main Menu screen will be enabled.

**Function Description in Detail:**

Sr No.	Function	Description	Remarks
1.	Sign In	<ul style="list-style-type: none"> <li>→ User will enter User ID, password</li> <li>→ User will click on Sign in Button</li> <li>→ Application will validate user id &amp; Password into database. If successfully validated, application will move to main screen.</li> <li>→ when user will login in application for first time, it will take user to change password screen.</li> <li>→ when user will click on the forgot password, current password will be mailed on the user id.</li> </ul>	

## PC - Application Menu

### Main Screen



Action available: Masters, Transactions, Report

**Brief Description:** This screen is used to show the Application Menu & Graphical Representation of the records on the dashboard.

#### Function Description in Detail:

Sr No.	Function	Description	Remarks
1.	Side bar options	→ User can click on the respective menu items to use options (Mentioned in the below pages).	

## Change Password

Change Password Change Password Home > Change Password

\* Mandatory Fields

User ID\* 11

Current Password\*

New Password\*

Confirm Password\*

**Back Save Reset**

Action available: Save, Reset

**Brief Description:** This screen is used to change user password

**Function Description in Detail:**

Sr No.	Function	Description	Remarks
1.	SAVE	→ Username will be coming by default → User will enter new password & confirm password. → On click, new password will be updated for user id.	
2.	RESET	→ Resets the current screen controls.	
3	BACK	→ Return on login screen	

## Master Management

### Group Master

**DENSO**  
Crafting the Core

Akhilesh Awasthi

Home > User Group Master

**User Group Master** Add New User Group

\* Mandatory Fields

Group Name\* :

Back Save Reset Export

No. of Records: 5

Group Name	Edit	Delete
USER		
IT		
PCD Users		
Admin		
QAD USER		

Action available: Save, Reset

**Brief Description:** This screen is used to manage User Group Master via Save & Cancel Operation.

**Function Description in Detail:**

Sr No.	Function	Description	Remarks
1.	SAVE	<p>→ User will enter new User Group information.</p> <p>→ On click of <i>SAVE</i> button, system will check for duplicate records and respected message of success or error will be displayed to user.</p> <p>→ All fields get cleared.</p>	
2.	RESET	→ Resets the current screen controls.	
3	Edit Icon (Grid)	<p>→ User can click on edit icon</p> <p>→ Group detail will be filled in group name textbox.</p> <p>→ User can edit group name and click save button to update it.</p>	
4	Delete button (Grid)	→ User can click on delete button to delete the group	

## Group Rights Master

**DENSO**  
Crafting the Core

MAIN NAVIGATION

- Master
- » User Group Master
- » User Master
- » **Group Rights**
- Transaction
- Report

**Group Rights** Assign Group Rights

Home > Group Rights

\* Mandatory Fields

Select Group \* : -- Select Group --

Back Update Reset

Action available: Update, Reset

**Brief Description:** This screen is used to manage User Group Rights Master via Save & Cancel Operation.

### Function Description in Detail:

Sr No.	Function	Description	Remarks
1.	UPDATE	<p>→ User selects group name. Respective group rights will be displayed in the grid.</p> <p>→ User can select/deselect view rights from grid (Form Access Column)</p> <p>→ On click of <i>Update</i> button, system will update respective rights to group. These rights will be applicable on the main screen menu (Masters, Transactions, reports) to enable/disable the rights after successful login.</p>	
2.	RESET	→ Resets the current screen controls.	
3	BACK	→ Return to main screen.	

## User Master

**Denso**  
Crafting the Core

Akhilesh Awasthi

Home > User Master

**\* Mandatory Fields**

User Name\* :  User ID\* :

Password\* :  User Group\* :

Enter Email\* :  Pin No. :

**Save Reset Export**

No. of Records: 4

User ID	User Name	Email	User Group	Edit	Delete
11	aaa	dipak@gmail.com	IT		
111	Ak	dipak@gmail.com	IT		
Admin	Akhilesh Awasthi	admin@gmail.com	Admin		
Dipak	Dipak	dipak@gmail.com	USER		

Action available: Save, Reset, Export

**Brief Description:** This screen is used to manage User Master via Save & Cancel Operation.

**Function Description in Detail:**

**Note:** User Id will accept both Numeric or Character.

Sr No.	Function	Description	Remarks
1.	SAVE	→ User will enter Username, user id, Password, User Type (Group) , select the plant and select department → On click of SAVE button, system will validate for duplicate records. If successfully validated, new user id will be created, respective message will be displayed, and all details will be empty for next entry.	
2.	RESET	→ Resets the current screen controls.	
3	Export	→ To Export the result in Excel Report.	
3	Edit Icon (Grid)	→ User can click on edit icon → User details will be filled in respective fields → User can edit Username, Password or User Type. → Click on Save button user details against user id will be saved into database.	
4	Delete button (Grid)	→ User can click on delete button to delete the user id.	

**Washing Station Entry Screen**

Batch Traceability

Model 1	Model 2	Model 3
Model 4	Model 5	Model 6
Model 7	Model 8	Model 9

Batch Traceability

Select Child Part \*:

Enter Lot No. :

Enter Quantity :

Child Part	Lot No.	Quantity	ScanneOn
100775-17023A	Lot 001	10	29-Jun-2023 10:02:00
100775-17029A	Lot 003	50	29-Jun-2023 10:00:00
100775-17909A	Lot 002	30	29-Jun-2023 10:01:00

Action available: Save, Export, Back

**Brief Description:** This screen is used to create lot details (Fields Mentioned in above screen)


**Function Description in Detail:**

Sr No.	Function	Description	Remarks
1.	Model Button Click	→ Users will click on the running model button model. Then the child part entry screen will open.	
2	Child Part Screen	<p>→ Users will select the child part from the selection box. Then the system automatically moves the cursor on Lot No. text box.</p> <p>→ Users will enter Lot No., then the system will automatically move cursor on the Qty text box.</p> <p>→ Users will enter Qty in qty text box press enter data will be saved into database or User will click on the save button then data will save in database.</p>	
3	RESET	→ Resets the current screen controls.	RESET



**Performance Data Scheduler Screen**

Data Schedule

DENSO DATA SCHEDULER	
	<div>Download Master</div> <div> <a href="#">Download Master Data</a> </div> <div>Sql connection</div>
Version: 1.0.0.0	

Action available: Save, Export, Back**Brief Description:** This screen is used to automatically get the performance data details.**Function Description in Detail:**

Sr No.	Function	Description	Remarks
1.	Model Button Click	→ The screen will be in AutoStart mode. As soon as system will start application will be able to get the last updated data from the performance data file (CSV Format, Screenshot pasted on top).	

## Project Responsibilities

### System Design

Deliverables	Responsibility
Software Requirement Specification Document	SATO
Interface Requirement	SATO / DENSO
Test Plan	SATO / DENSO
Document Sign-off	DENSO

### Development Phase

Deliverables	Responsibility
System Code	SATO
Test Data	DENSO
Interface Development in ERP	DENSO
Code testing and Unit Testing	SATO

### User Acceptance Testing

Deliverables	Responsibility
Test cases	DENSO
UAT	DENSO / SATO
Business Scenario Testing	DENSO / SATO
UAT Sign-off	DENSO
Release For Go Live	DENSO / SATO
Go Live Plan	SATO / DENSO

### Go Live

Deliverables	Responsibility
Software Installation	SATO
Data Migration/ Creation	SATO / DENSO
Train The Trainer	SATO
End User Trainings	SATO / DENSO
Change Management	DENSO
Project Sign-Off	DENSO