

A man with glasses and a denim shirt is sitting at a table, gesturing with his hands while talking to a woman in a yellow top. They are surrounded by papers, a coffee cup, and a smartphone on the table. The background shows an office environment with desks and chairs.

# Manufacturing & IoT

Kuldeep Satav

Solutions Consultant

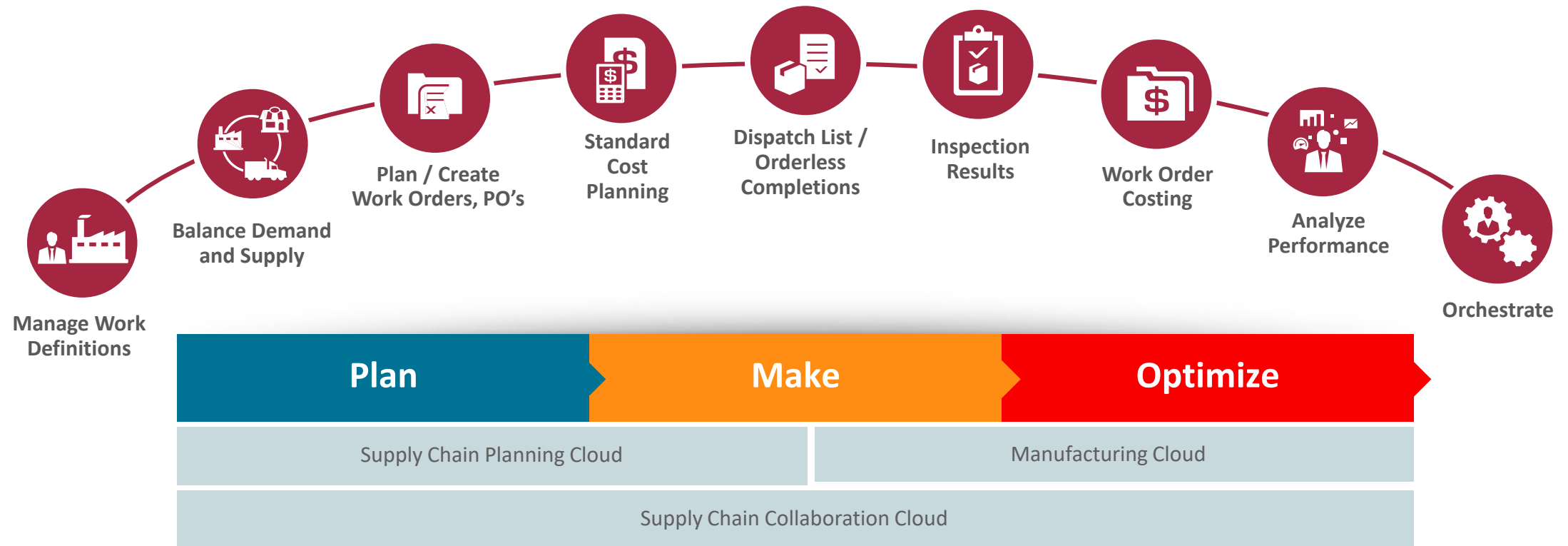
Oracle

# Safe Harbor Statement

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle.

# SCM Cloud: Plan-to-Produce

- Enabling efficient planning and productive manufacturing operations



Balance Supply & Demand | Efficiently Manage Master Data | Create and Transact Work Orders | Flexible Work Order Costing & Analysis

# Comprehensive Discrete Manufacturing

## DISCRETE WORK ORDERS

- Work definition
- Dispatch list
- Material & resource transactions
- Orderless completions
- Integrated Quality
- Outside processing
- Rework & transform work orders
- Material availability workbench
- Operation start / stop
- Lot / serial genealogy
- Electronic Records and Signatures (ERES)

## CONFIGURED PRODUCTS

- ATO model work definition
- Mandatory or option dependent operations
- Multi-level component to operation assignments
- Applicability rules
- Dynamically configure item work definition



## SERIALIZED MANUFACTURING

- Pre-assign serial numbers
- Generate and associate serial numbers on release from planning
- Issue lot or serialized components to the serialized parent
- Shows status of each serial number

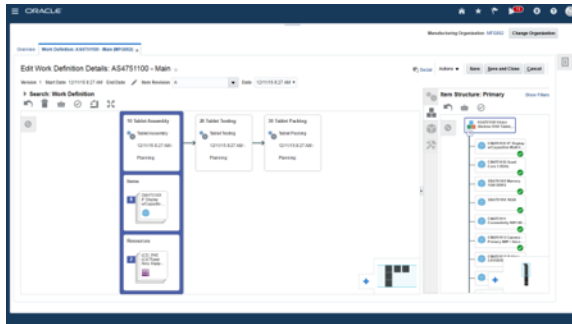
## STRATEGIC CONTRACT MANUFACTURING

- CM location represented as mfg plant
- Structure includes CM service item and OEM owned components
- Report production progress and component consumption at milestones
- Automatic receipt generation at last milestone operation
- Collaboration with trading partners

# Make with Oracle Manufacturing Cloud

- Enabling efficient and productive manufacturing operations

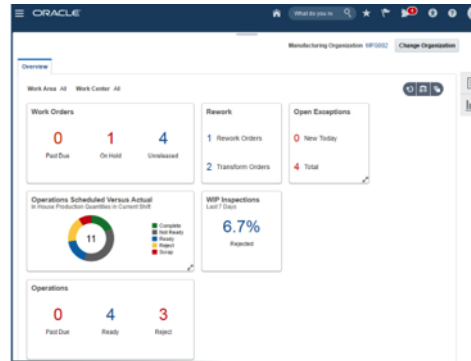
DEFINE



Visually design your production process

Quickly establish process standards & execution requirements

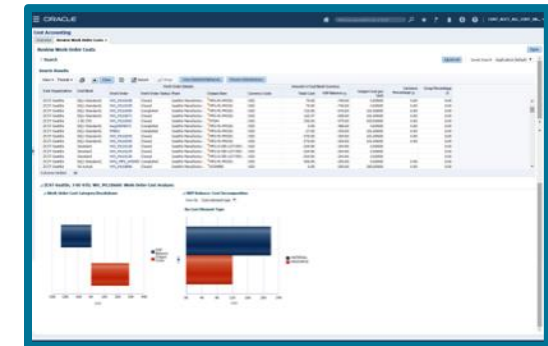
EXECUTE



Quickly see status and take action on the go

Simplify shop floor experience & enforce execution compliance

COST



Efficiently analyze work order charges and product costs

Ensure compliance to established standards

# Validate with Oracle Quality Management Cloud

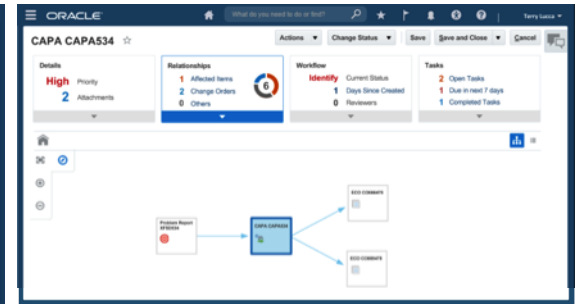
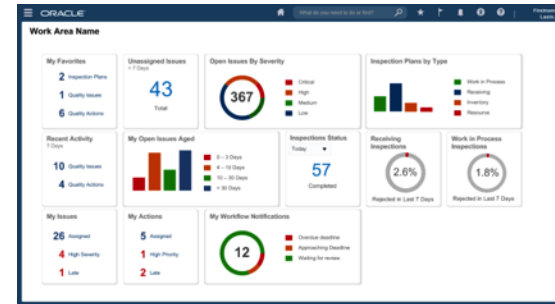
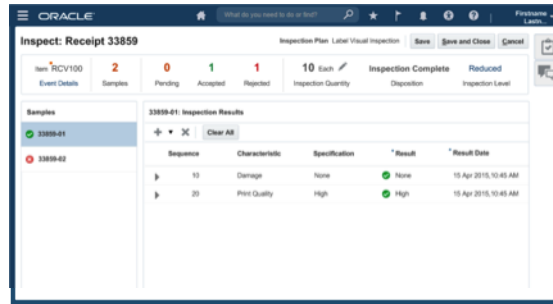
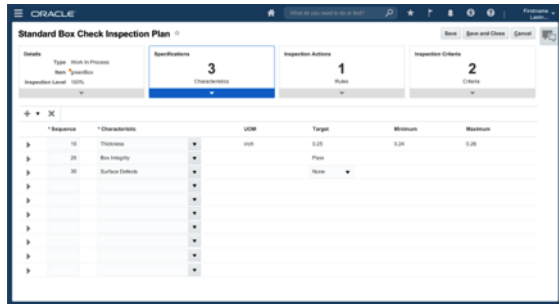
## Drive quality best practices from issue to resolution

DEFINE

IDENTIFY

ANALYZE

CORRECT



Connect items to inspections to define quality attributes

Perform receiving, WIP, and ad hoc inspections

Identify and manage quality issues

Implement corrective and preventative actions

Align with design for quality with reduced data maintenance

Quickly identify defective components or finished goods

Solve problems in a controlled and auditable manner

Use the latest in cloud technology to create solutions



# Connect with Oracle IoT Applications

Making IoT signals actionable

## DETECT

Track movement  
Read temperature  
Gauge humidity  
Sense vibration



**IoT Devices**

<b>Building Sensors</b> 	<b>Equipment</b> 
<b>Logistics</b> 	<b>Mobile Devices</b> 

## ANALYZE

Determine lateness  
Detect overheating  
Predict failures  
Update parameters



**IoT Cloud Applications**

<b>Asset Monitoring</b> 	<b>Production Monitoring</b> 
<b>Fleet Monitoring</b> 	<b>Connected Worker</b> 

## ACT

Reroute shipments  
Replan supply  
Dispatch service  
Substitute materials

**SCM Cloud**

<b>Inventory &amp; Cost Mgmt</b> 	<b>Manufacturing</b> 
<b>Transportation Mgmt</b> 	<b>Warehouse Mgmt</b> 





### SCM MANAGER (Ava Clark)

Share thoughts with your colleagues...

3

Conversations

1

Following

3

Followers

1 Employee News

2 My Flags

1 Quality Actions

3 Quality Issues

1 Change Order a...

1 All Ideas



Order Management



Supply Orchestration



Supply Chain Collaboration



Electronic Records



Manufacturing



Supply Chain Planning



Product Management



Quality Management



Maintenance Management



Costing



Financial Orchestration



Supplier Portal



Inventory Management



Procurement



Scheduled Processes





### SCM MANAGER (Ava Clark)

Share thoughts with your colleagues...

3 Conversations | 1 Following | 3 Followers

- 1 Employee News
- 2 My Flags
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- 1 Change Order a...
- 1 All Ideas



Order Management



Supply Orchestration



Supply Chain Collaboration



Electronic Records



Manufacturing



Supply Chain Planning



Work Definition



Work Execution



Product Management



Quality Management



Maintenance Management



Costing



Financial Orchestration



Supplier Portal

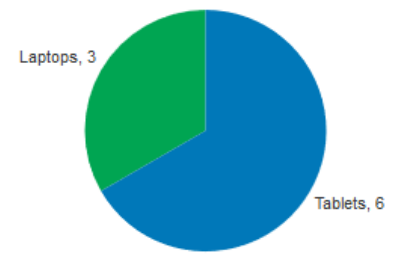


Overview

Recently Updated Work Definitions

Item	Name	Version
AS4751300	Transform	1
AS4880109	Main	1
AS4880000	Main	1
AS4751300	Main	1
AS4751200	Transform	1

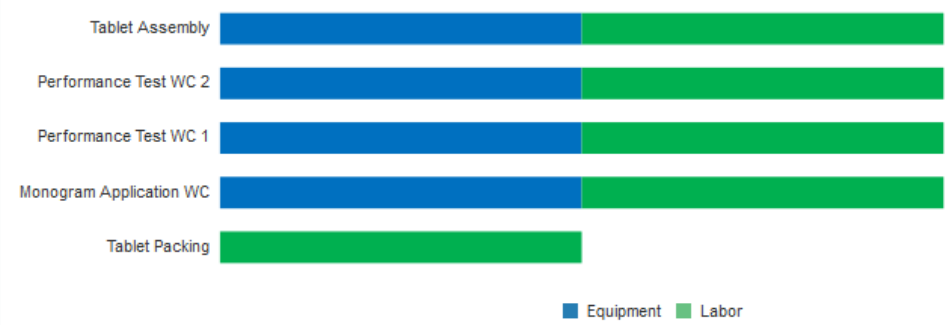
Work Centers by Work Area



Plant Resources

4 Total Equipment  
5 Total Labor

Work Center Resources

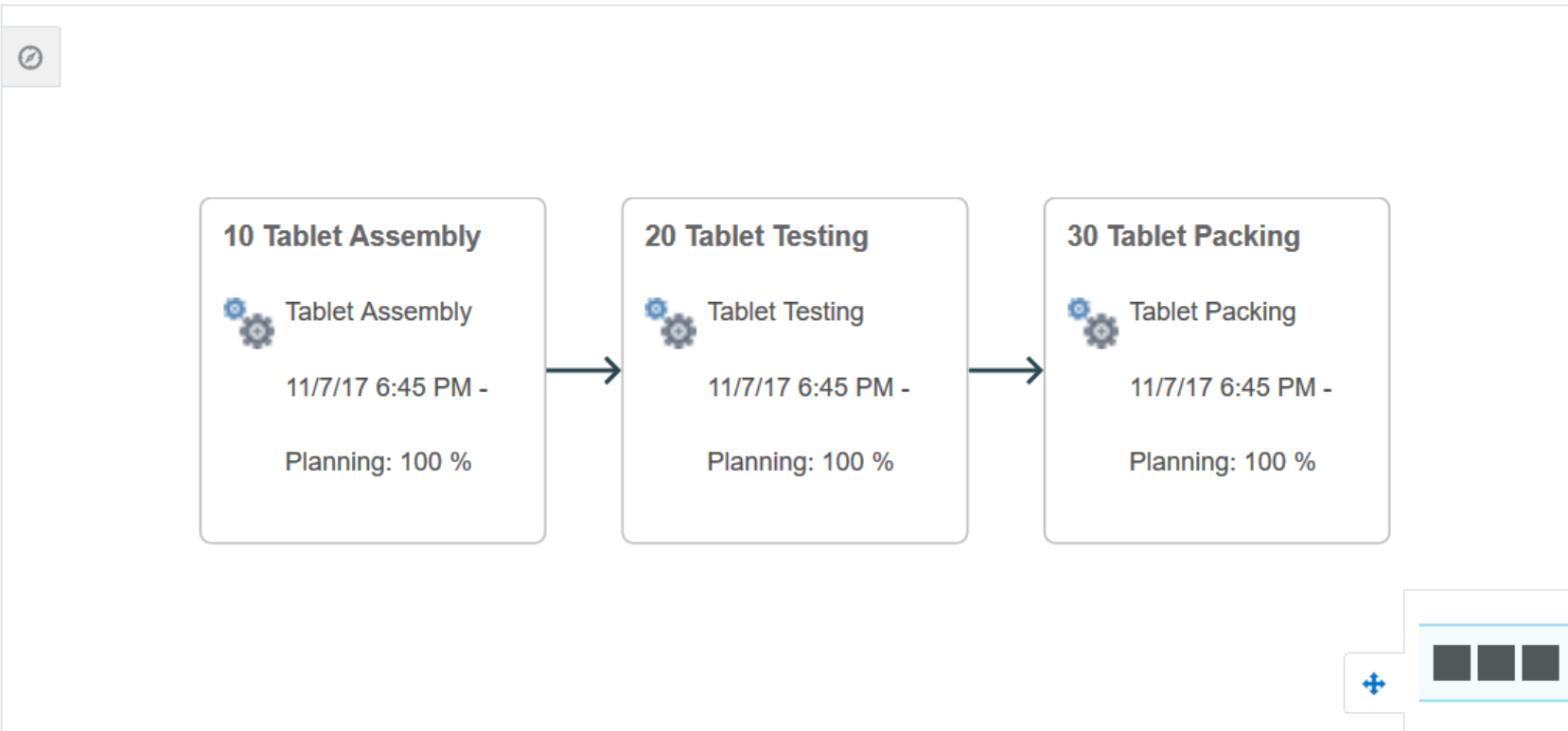


### Edit Work Definition Details: AS4880109 - Main ★

[Social](#) Actions [Save](#) [Save and Close](#) [Cancel](#)

Version 1 Start Date 11/7/17 6:45 PM End Date  Item Revision  Date

#### Search: Work Definition



#### Item Structure: Primary [Show Filters](#)

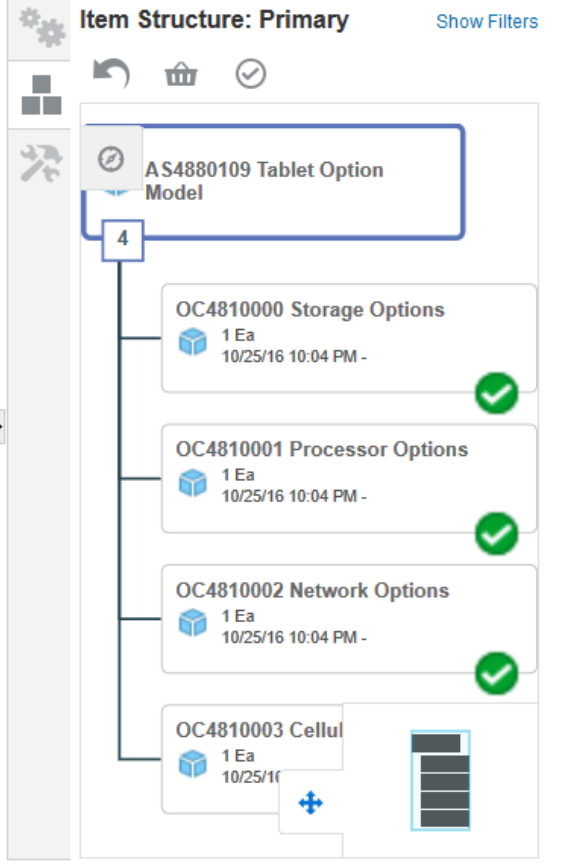
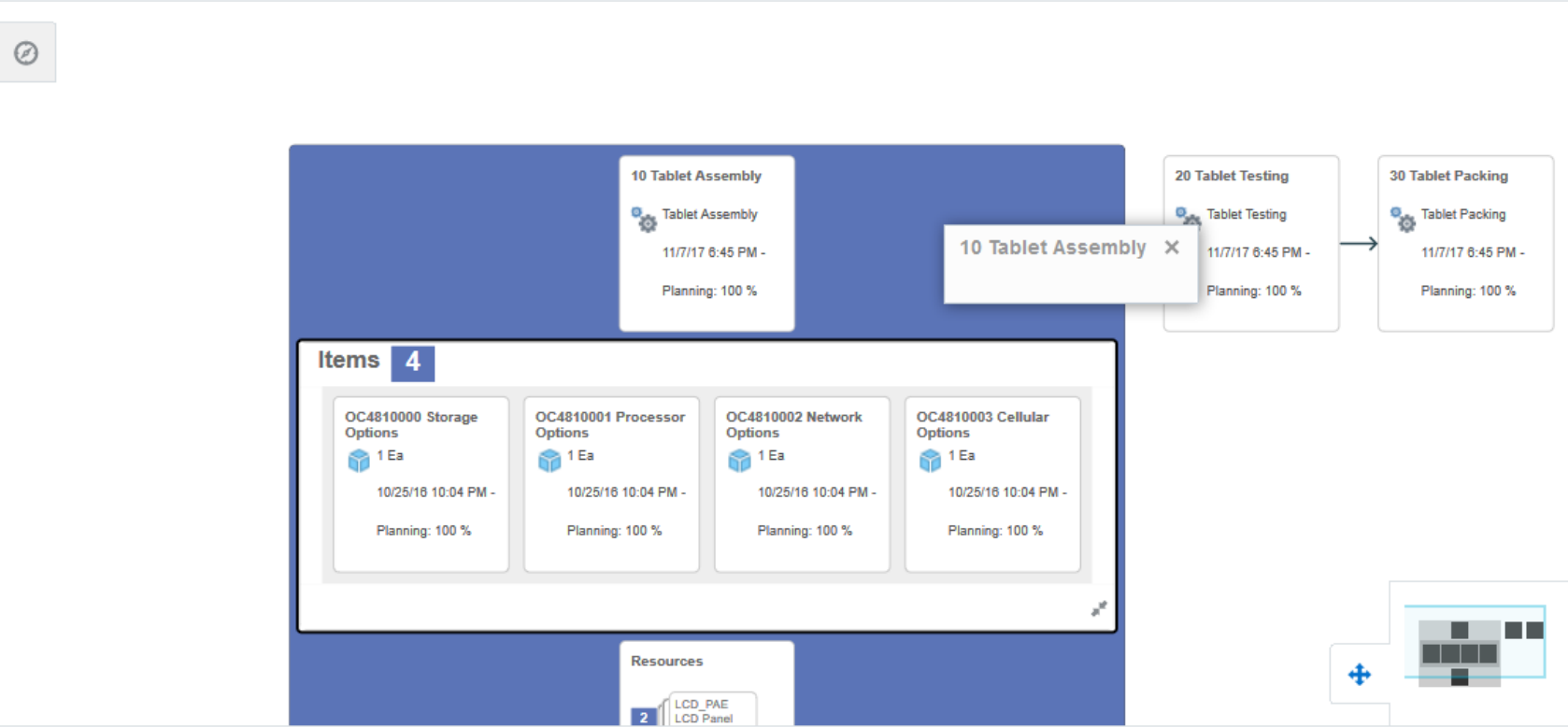
- AS4880109 Tablet Option Model
  - 4
    - OC4810000 Storage Options  
1 Ea  
10/25/16 10:04 PM -
    - OC4810001 Processor Options  
1 Ea  
10/25/16 10:04 PM -
    - OC4810002 Network Options  
1 Ea  
10/25/16 10:04 PM -
    - OC4810003 Cellul  
1 Ea  
10/25/16

### Edit Work Definition Details: AS4880109 - Main

Social Actions Save Save and Close Cancel

Version 1 Start Date 11/7/17 6:45 PM End Date  Item Revision A  Date 11/7/17 6:45 PM

#### Search: Work Definition





Manufacturing Organization 002

[Change Organization](#)

Overview **Manage Resources** x

## Manage Resources

[Done](#)

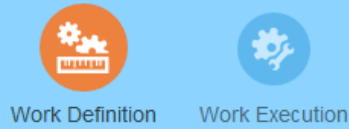
Filter

View ▾ Format ▾  Define Rates  Include inactive resources  Costing enabled

Name	Code	Inactive On	Costing enabled
LCD Panel Assy Equipment	LCD_PAE		<input checked="" type="checkbox"/>
Monogram Machine	MMACH		<input checked="" type="checkbox"/>
Performance Test Machine 1	PTM1		<input checked="" type="checkbox"/>
Performance Test Machine 2	PTM2		<input checked="" type="checkbox"/>

Columns Hidden 4



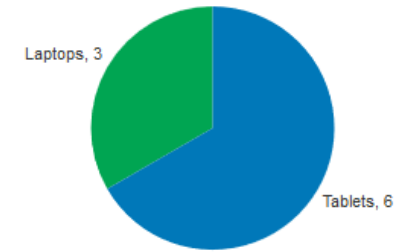


Overview

Recently Updated Work Definitions

Item	Name	Version
AS4751300	Transform	1
AS4880109	Main	1
AS4880000	Main	1
AS4751300	Main	1
AS4751200	Transform	1

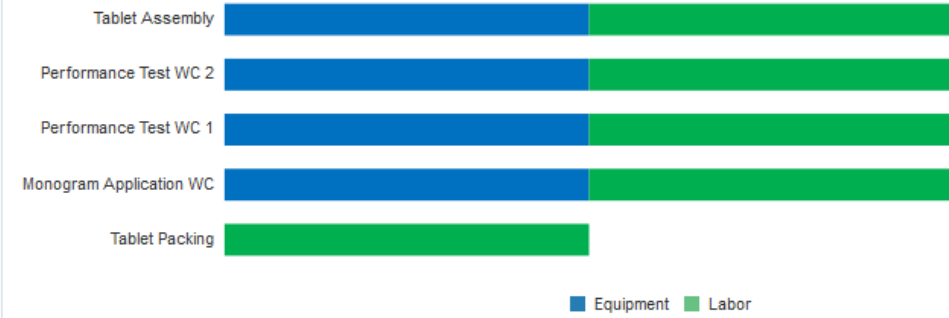
Work Centers by Work Area



Plant Resources

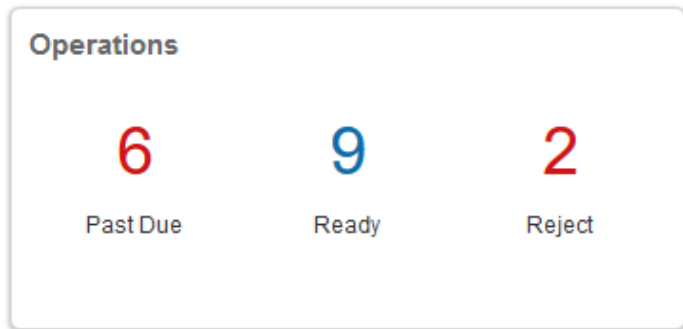
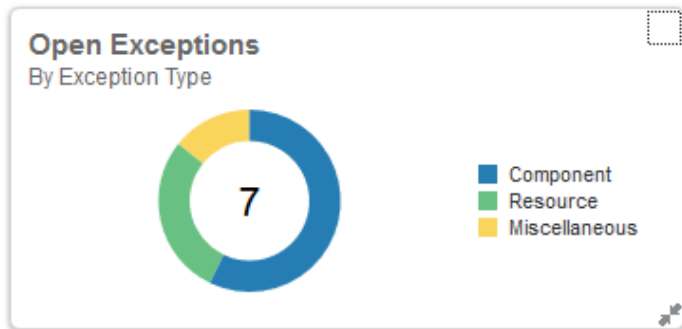
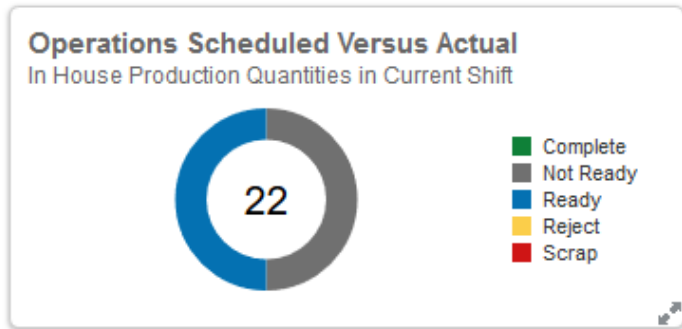
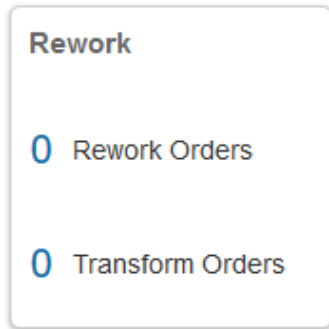
4 Total Equipment  
5 Total Labor

Work Center Resources



Overview

Work Area All Work Center All



Overview

Work Area All Work Center All

### Work Orders

<b>6</b> Past Due	<b>1</b> On Hold	<b>2</b> Unreleased
----------------------	---------------------	------------------------

### Rework

<b>0</b> Rework Orders
<b>0</b> Transform Orders


### Operations Scheduled Versus A

In House Production Quantities in Current

**No data available**

### Open Exceptions

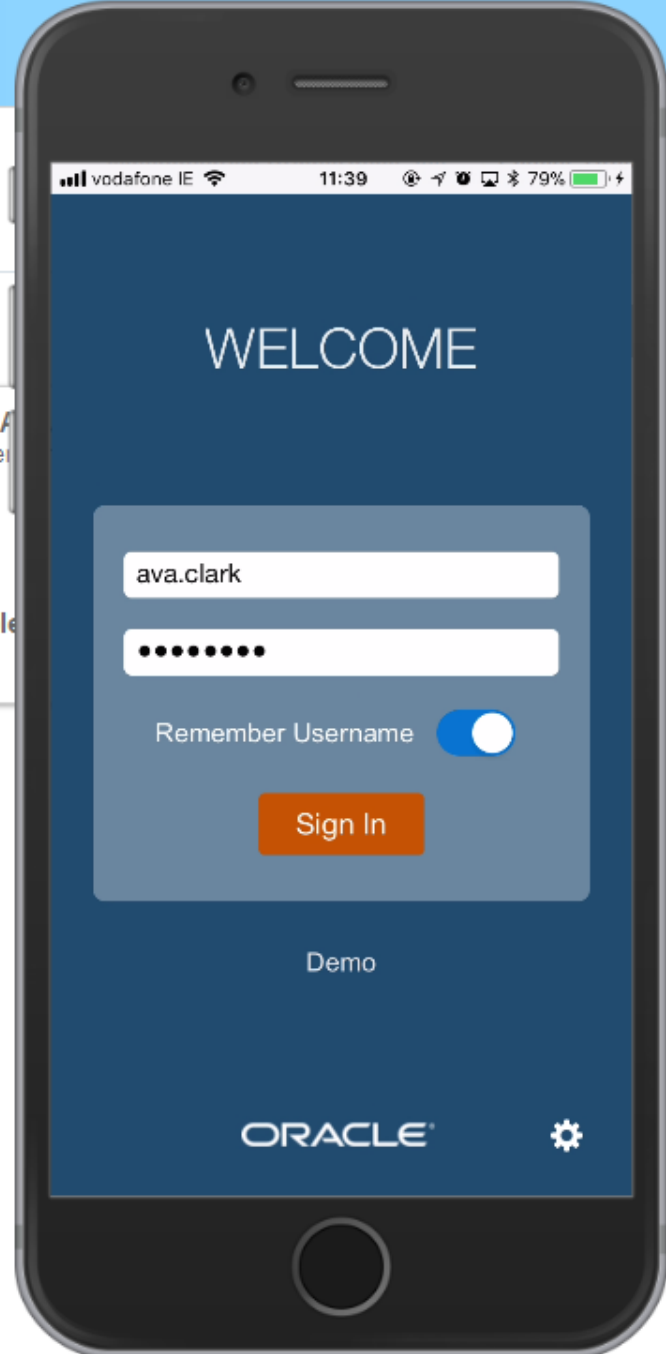
By Exception Type



■ Component
■ Resource
■ Miscellaneous

### Operations

<b>6</b> Past Due	<b>8</b> Ready	<b>2</b> Reject
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Overview

Work Area All Work Center All

### Work Orders

<b>6</b> Past Due	<b>1</b> On Hold	<b>2</b> Unreleased
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### Rework

<b>0</b> Rework Orders
<b>0</b> Transform Orders

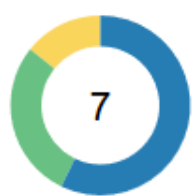
### Operations Scheduled Versus A

In House Production Quantities in Current

**No data available**

### Open Exceptions

By Exception Type

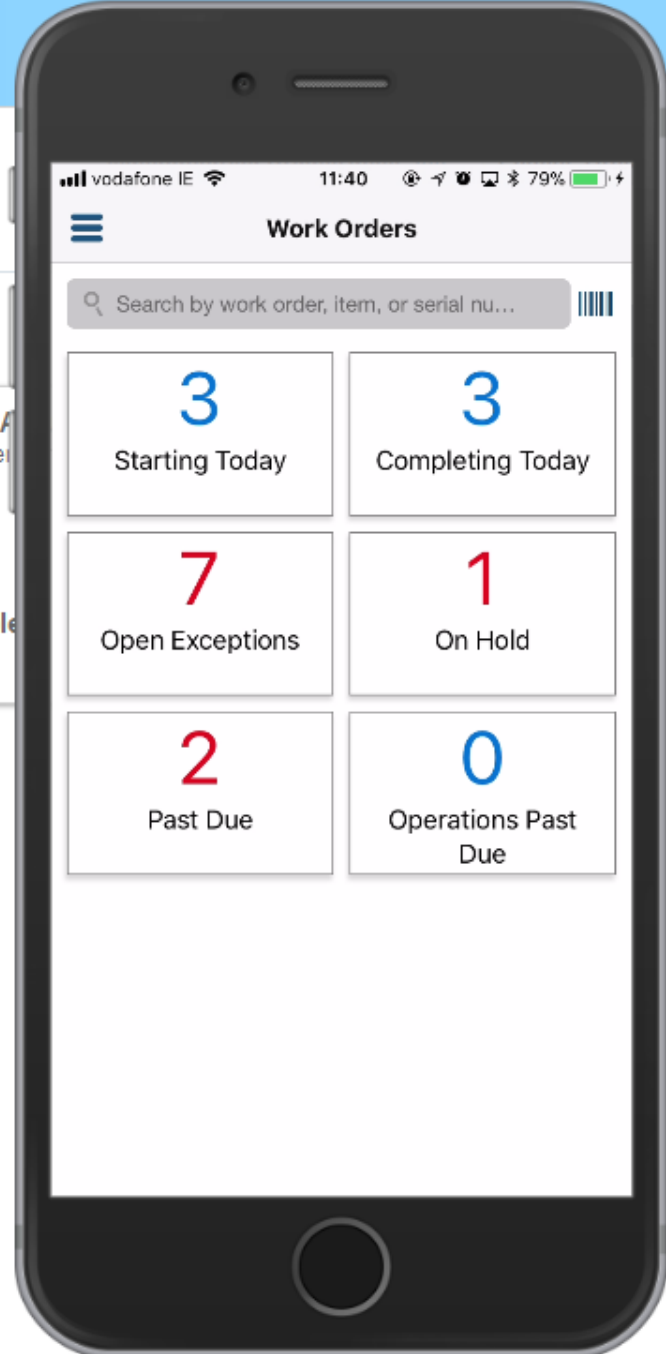


■ Component
■ Resource
■ Miscellaneous

**7**

### Operations

<b>6</b> Past Due	<b>8</b> Ready	<b>2</b> Reject
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Overview

Work Area All Work Center All

### Work Orders

<b>6</b> Past Due	<b>1</b> On Hold	<b>2</b> Unreleased
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### Rework

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<b>0</b> Transform Orders

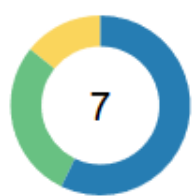
### Operations Scheduled Versus A

In House Production Quantities in Current

**No data available**

### Open Exceptions

By Exception Type

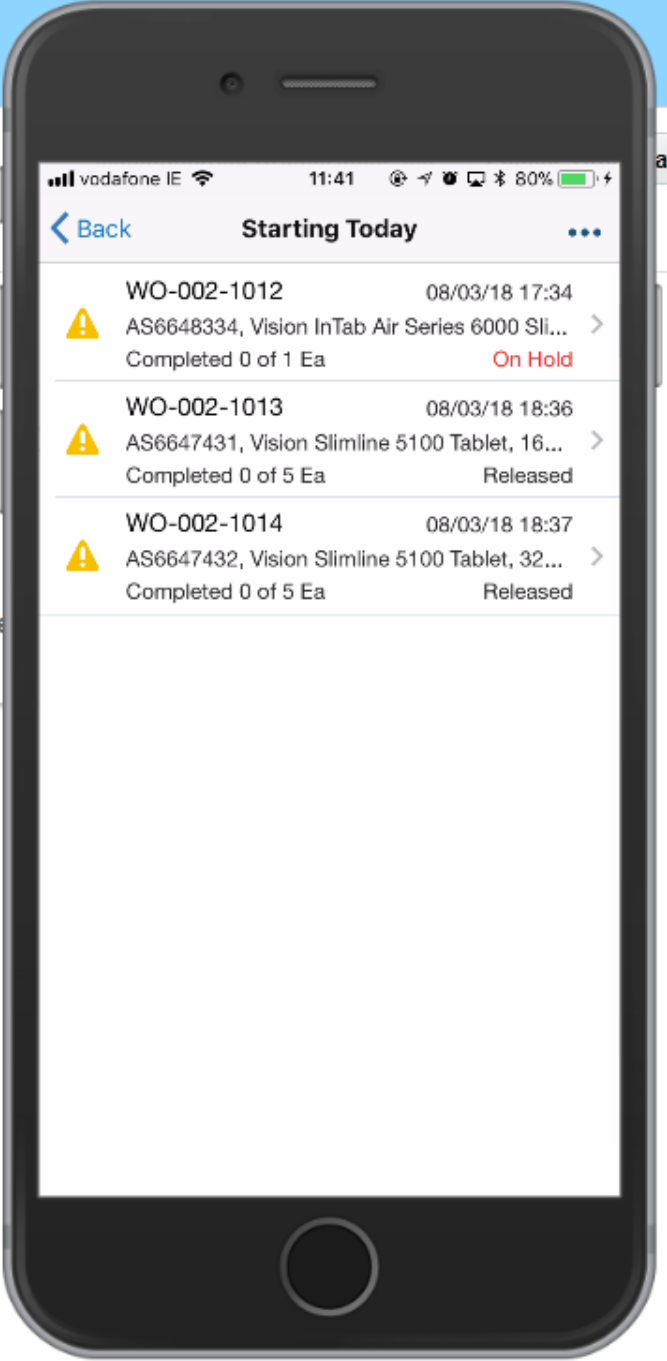


■ Component
■ Resource
■ Miscellaneous

7

### Operations

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Overview

Work Area All Work Center All

### Work Orders

<b>6</b> Past Due	<b>1</b> On Hold	<b>2</b> Unreleased
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### Rework

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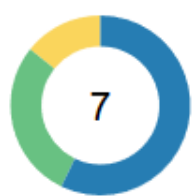
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**No data available**

### Open Exceptions

By Exception Type

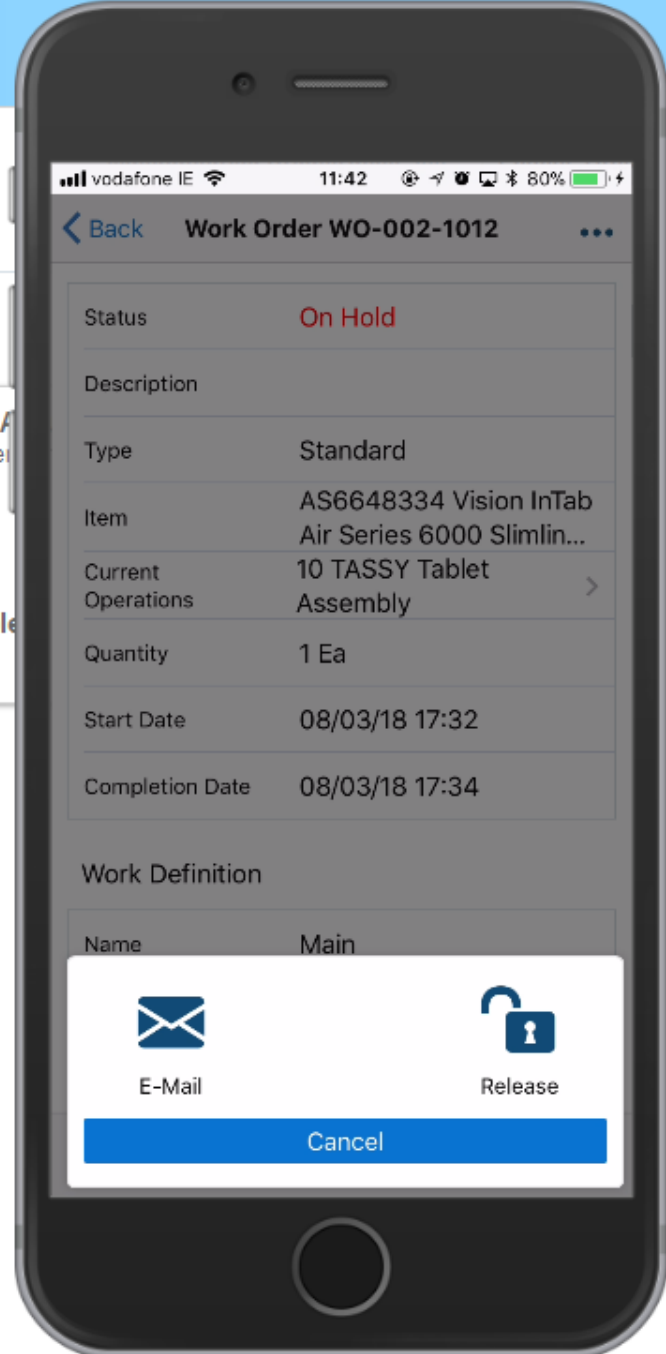


■ Component
■ Resource
■ Miscellaneous

**7**

### Operations

<b>6</b> Past Due	<b>8</b> Ready	<b>2</b> Reject
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Overview

Work Area All Work Center All

### Work Orders

<b>6</b> Past Due	<b>1</b> On Hold	<b>2</b> Unreleased
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### Rework

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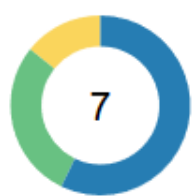
### Operations Scheduled Versus A

In House Production Quantities in Current

**No data available**

### Open Exceptions

By Exception Type

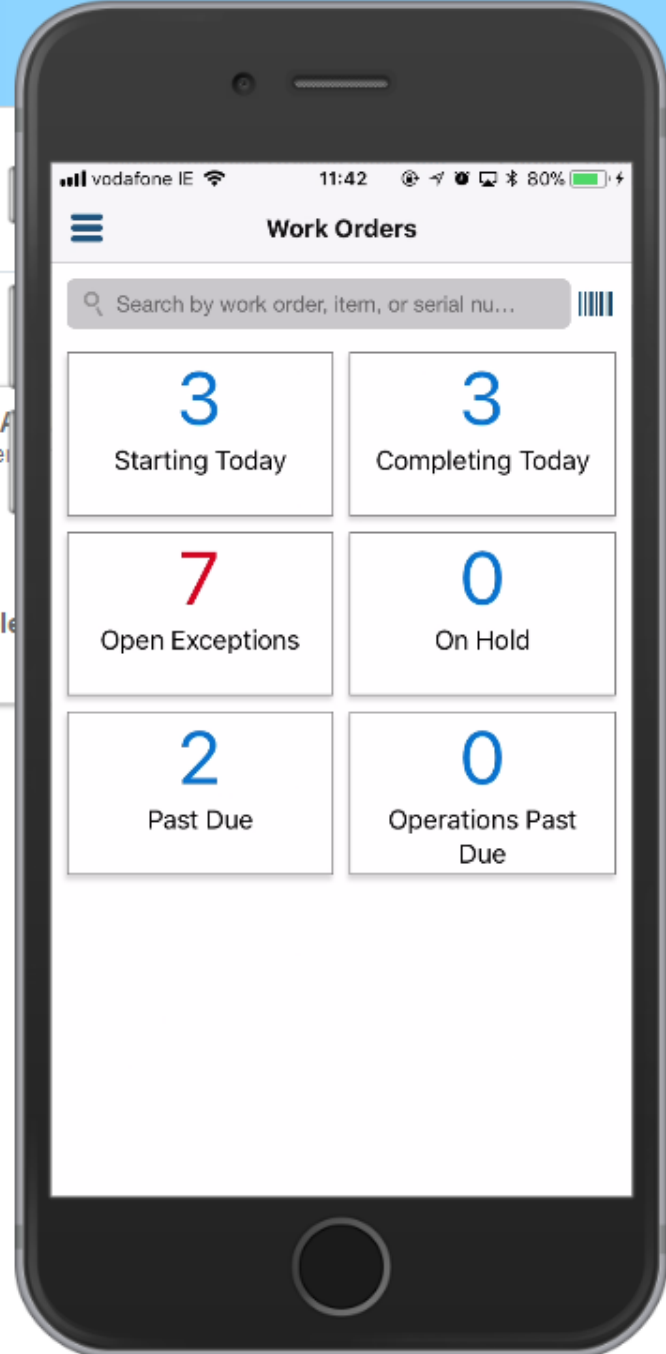


■ Component
■ Resource
■ Miscellaneous

**7**

### Operations

<b>6</b> Past Due	<b>8</b> Ready	<b>2</b> Reject
----------------------	-------------------	--------------------



Overview

Work Area All Work Center All

**Work Orders**

**6** Past Due      **1** On Hold      **2** Unreleased

**Rework**

0 Rework Orders

0 Transform Orders

**Operations Scheduled Versus A**  
In House Production Quantities in Current

**No data available**

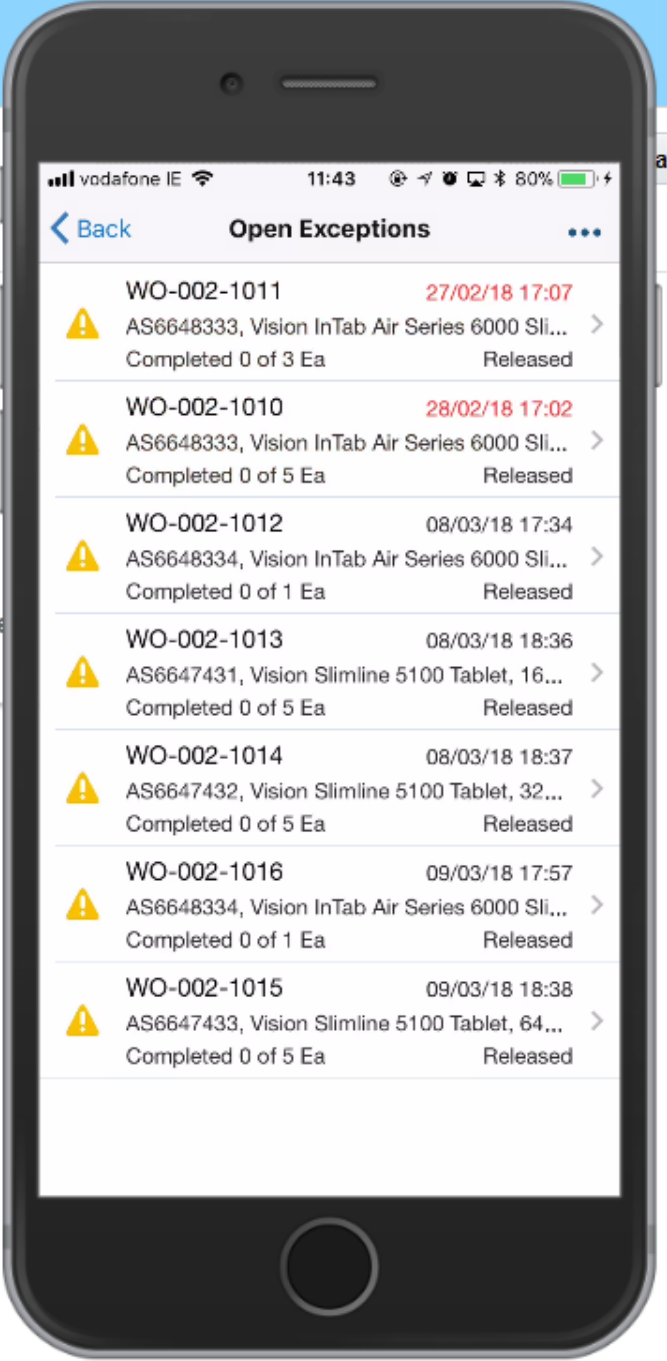
**Open Exceptions**  
By Exception Type

**7**

- Component
- Resource
- Miscellaneous

**Operations**

**6** Past Due      **8** Ready      **2** Reject



Overview

Work Area All Work Center All

### Work Orders

<b>6</b> Past Due	<b>1</b> On Hold	<b>2</b> Unreleased
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### Rework

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### Operations Scheduled Versus A

In House Production Quantities in Current

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### Open Exceptions

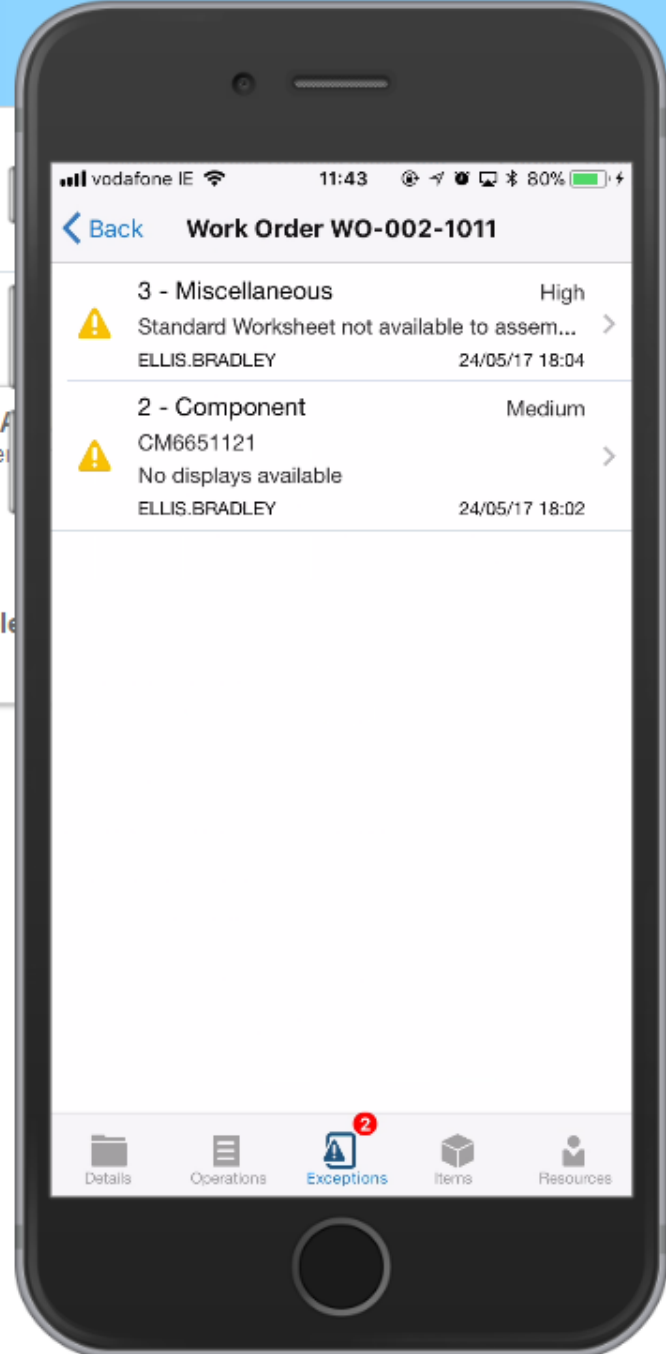
By Exception Type

**7**

- Component
- Resource
- Miscellaneous

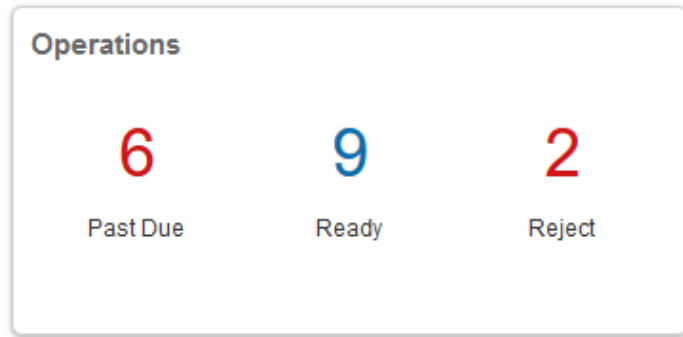
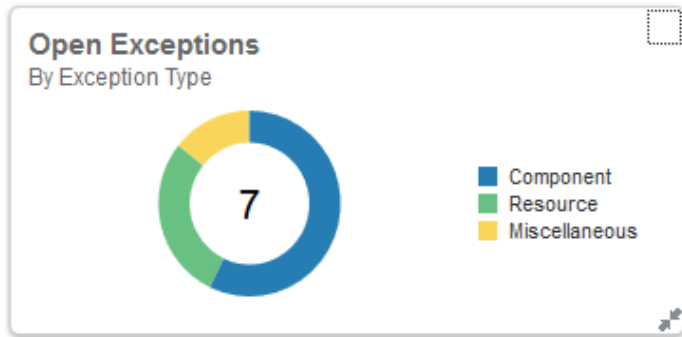
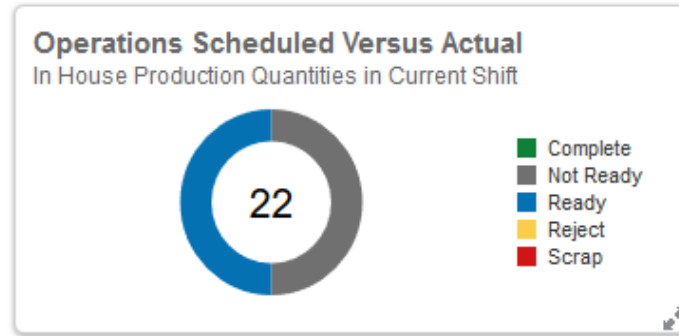
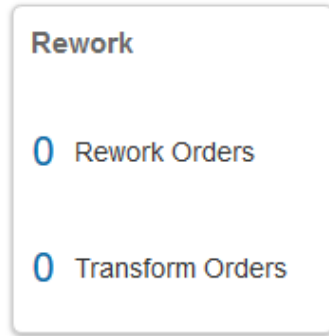
### Operations

<b>6</b> Past Due	<b>8</b> Ready	<b>2</b> Reject
----------------------	-------------------	--------------------



Overview

Work Area All Work Center All





Overview **Review Dispatch List** x

### Review Dispatch List

Done

Search

Saved Search Tablets

Actions View

	Quantity	UOM	Status	Work Order	Item	Work Center	Completion Date		
▶	5	Ea	Ready	WO-002-1010 - 10	AS6648333	Tablet Assembly	5/24/17 4:56 PM		<input type="radio"/>
▶	3	Ea	Ready	WO-002-1011 - 10 ...	AS6648333	Tablet Assembly	5/24/17 5:03 PM		<input type="radio"/>
▶	1	Ea	Ready	WO-002-1012 - 10 ...	AS6648334	Tablet Assembly	5/24/17 5:33 PM		<input type="radio"/>
▶	5	Ea	Ready	WO-002-1013 - 10 ...	AS6647431	Tablet Assembly	5/24/17 6:30 PM		<input type="radio"/>
▶	5	Ea	Ready	WO-002-1014 - 10 ...	AS6647432	Tablet Assembly	5/24/17 6:31 PM		<input type="radio"/>
▶	5	Ea	Ready	WO-002-1015 - 10 ...	AS6647433	Tablet Assembly	5/24/17 6:32 PM		<input type="radio"/>
▶	1	Ea	Ready	WO-002-1016 - 10 ...	AS6648334	Tablet Assembly	5/25/17 5:56 PM		<input type="radio"/>
▶	2	Ea	Ready	WO-002-1017 - 10 ...	AS6647431	Tablet Assembly	5/25/17 5:59 PM		<input type="radio"/>
▶	1	Ea	Ready	WO-002-1023 - 10	AS4751200	Tablet Assembly	12/15/17 8:08 PM		<input checked="" type="radio"/>

Columns Hidden 6



Manufacturing Organization 002

Change Organization

Overview **Review Dispatch List** x

## Review Dispatch List

Done

Search

Saved Search Tablets

Actions View

	Quantity	UOM	Status	Work Order	Item	Work Center	Completion Date			
▶	2	Ea	Ready	WO-002-1017 - 10 ...	AS6647431	Tablet Assembly	5/25/17 5:59 PM		<input type="radio"/>	<input type="radio"/>
▶	1	Ea	Ready	WO-002-1023 - 10	AS4751200	Tablet Assembly	12/15/17 8:08 PM		<input checked="" type="radio"/>	<input type="radio"/>
▶	3	Ea	Ready	WO-002-1011 - 10 ...	AS6648333	Tablet Assembly	2/27/18 5:03 PM		<input type="radio"/>	<input type="radio"/>
▶	5	Ea	Ready	WO-002-1010 - 10	AS6648333	Tablet Assembly	2/28/18 4:56 PM		<input type="radio"/>	<input type="radio"/>
▶	5	Ea	Ready	WO-002-1013 - 10 ...	AS6647431	Tablet Assembly	6:30 PM		<input type="radio"/>	<input type="radio"/>
▶	5	Ea	Ready	WO-002-1014 - 10 ...	AS6647432	Tablet Assembly	6:31 PM		<input type="radio"/>	<input type="radio"/>
▶	1	Ea	Ready	WO-002-1028 - 20	AS4751100	Tablet Testing	10:13 PM		<input type="radio"/>	<input type="radio"/>
▶	8	Ea	Ready	WO-002-1027 - 30	AS4751100	Tablet Packing	10:35 PM		<input type="radio"/>	<input type="radio"/>
▶	1	Ea	Ready	WO-002-1016 - 10 ...	AS6648334	Tablet Assembly	Tomorrow 5:56 PM		<input type="radio"/>	<input type="radio"/>

Inspect and Complete

1



Quick Complete

Complete with Details

Cancel

Overview [Review Dispatch List](#) x

### Quick Complete: WO-002-1028-20: Inspect

Inspection Plan Standard Tablet Testing Plan [Save and Close](#) [Cancel](#)

ItemNumber AS4751100 <a href="#">Inspection Details</a>	<b>1</b> Samples	<b>0</b> Pending	<b>0</b> Accepted	<b>1</b> Rejected	<b>1</b> Ea Inspection Quantity	<b>Completed</b> Disposition	<b>100%</b> Inspection Level
--	---------------------	---------------------	----------------------	----------------------	------------------------------------	---------------------------------	---------------------------------

#### Samples

SampleNumber
WO-002-1028-20-1

#### WO-002-1028-20-1: Inspection Results

[Clear All](#)

Sequence	Characteristic	Specifications		* Result	Result Date
▶ 10	Tablet Weight	340 - 360 zzV		340	3/8/18 10:33 PM
▶ 20	Memory Clock	160 - 175 MHz		156	3/8/18 10:33 PM





### SCM MANAGER (Ava Clark)

Share thoughts with your colleagues...

3

Conversations

1

Following

3

Followers

1 Employee News

2 My Flags

1 Quality Actions

3 Quality Issues

1 Change Order a...

1 All Ideas



Order Management



Supply Orchestration



Supply Chain Collaboration



Electronic Records



Manufacturing



Supply Chain Planning



Product Management



Quality Management



Maintenance Management



Costing



Financial Orchestration



Supplier Portal



Inventory Management



Procurement



Scheduled Processes

Search For Quality Issues



Overview

### Overview



#### My Favorites

- 3 Inspection Plans
- 2 Quality Issues
- 2 Quality Actions

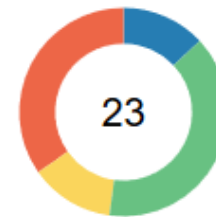
#### My Issues

- 1 Assigned
- 0 Critical Severity
- 0 Late

#### My Actions

- 1 Assigned
- 1 High Priority
- 0 Late

#### Open Issues by Severity



- Medium
- High
- Low
- Critical

#### Unassigned Issues

Last 7 Days

3

Total

#### My Open Issues by Age



- 0 to 3 Days
- 4 to 10 Days
- 11 to 30 Days
- Over 30 Days

#### Recent Activity

Created Last 24 Hours

- 3 Quality Issues
- 0 Quality Actions

#### Inspection Plans by Type



- Receiving
- Work in pro...

#### WIP Inspections

Last 7 Days

27.3%

Rejected

#### Receiving Inspecti...

Last 7 Days

0%

Rejected

#### Inspections Status

3

Last 24 Hours

Search For

Overview **Search** x

Quality Issues Show Filters

View

Number	Type	Name	Status Type	Severity	Organization	Expected Resolution Date	Assigned To	Customer	Suppli
NC8	Non-Conformance - Work in Pr...	WO-002-1026-2...		2 High	002				
NC9	Non-Conformance - Work in Pr...	WO-002-1027-2...		2 High	002				
NC10	Non-Conformance - Work in Pr...	WO-002-1027-2...		2 High	002				

Search For Quality Issues [dropdown] [input] [magnifying glass] [+]

Overview Search x Quality Issue: WO-002-1026-20-1 x

### Non-Conformance - Work in Process: WO-002-1026-20-1 ☆

🗨️ Social Actions ▾ Save Save and Close ▾ Cancel

**Details**

**High** Severity

0 Attachments

**Relationships**

3 Affected Objects

0 Quality Actions

0 Other Related Objects

**3**

**Workflow**


No data to display.

**Similar Issues**

5 Item Match

0 Other Matches

5 Both



### General Information



Number NC8

\* Name WO-002-1026-20-1

Type Non-Conformance - Work in Process

Severity 2 High ▾

Occurrence ▾

\* Source Inspection ▾

Organization 002

Customer ▾

Supplier ▾

Creation Date 3/8/18

Last Updated Date 3/8/18

Expected Resolution Date [calendar icon]

Actual Resolution Date

Workflow ▾

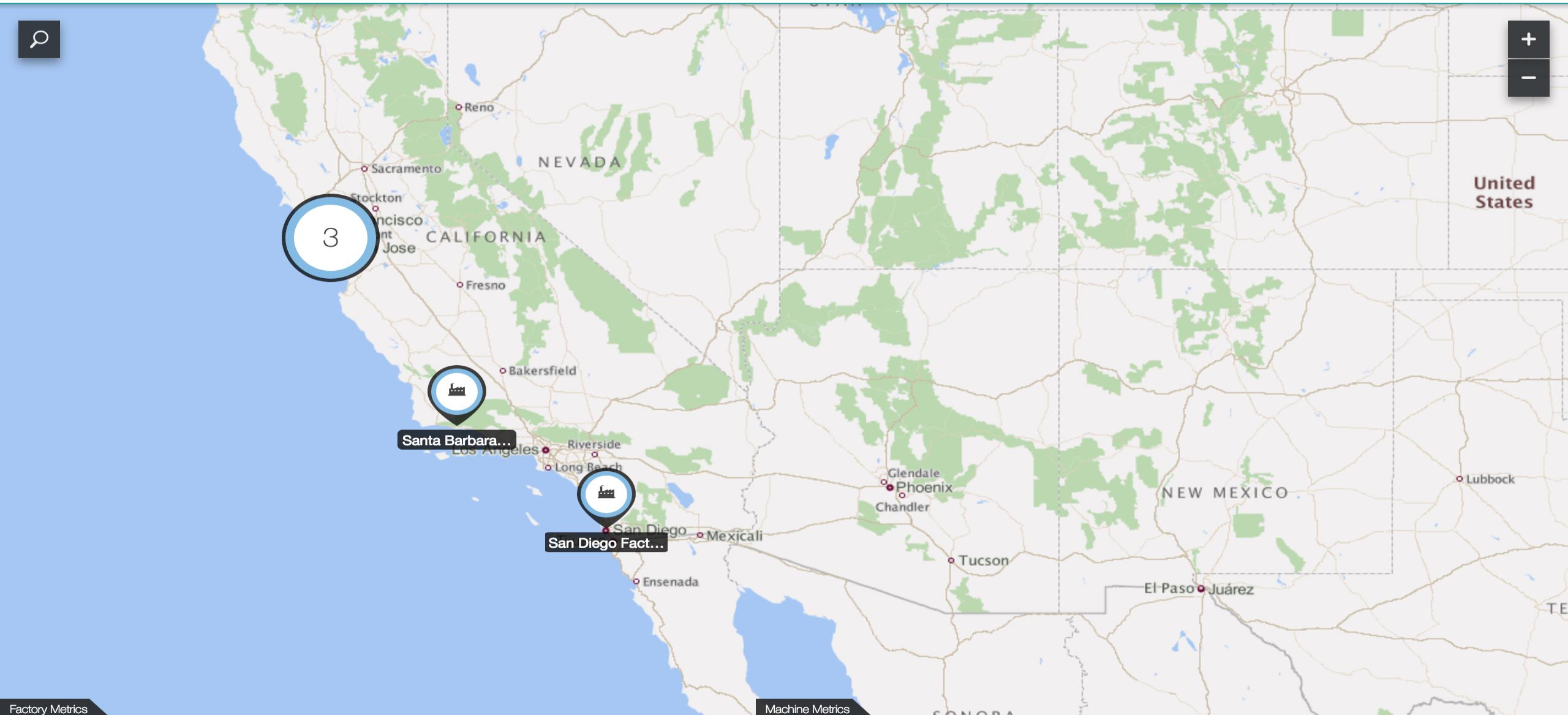
Status

Created By AVA.CLARK

Assigned To ▾

Comments None 🗨️\*





Factory Metrics

5

Factories

8

Lines

5

Products

52%

Factories Behind Plan

Machine Metrics

77

Machines

87%

In Use

9%

Idle

4%

Down

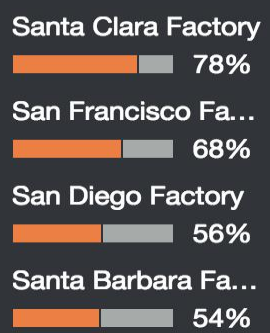




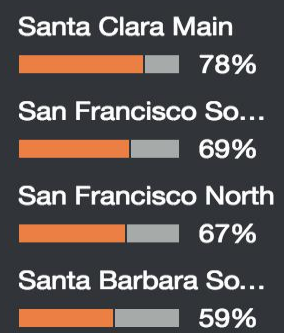


Factory Metrics

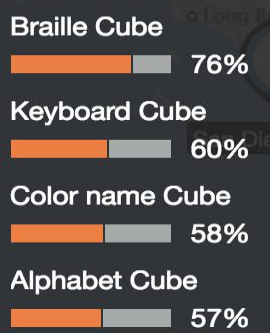
Factories Behind Plan



Lines Behind Plan

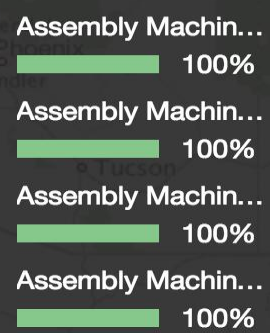


Products Behind Plan

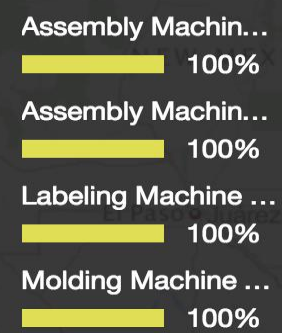


Machine Metrics

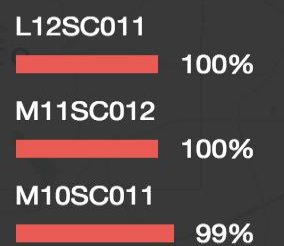
Machines Most in Use



Machines Most Idle

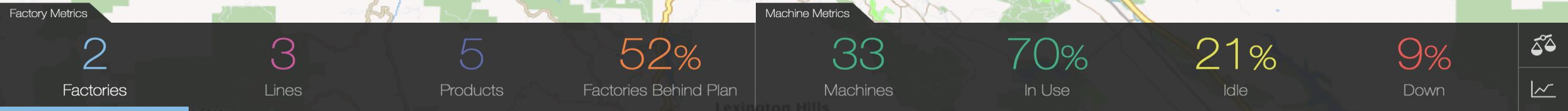
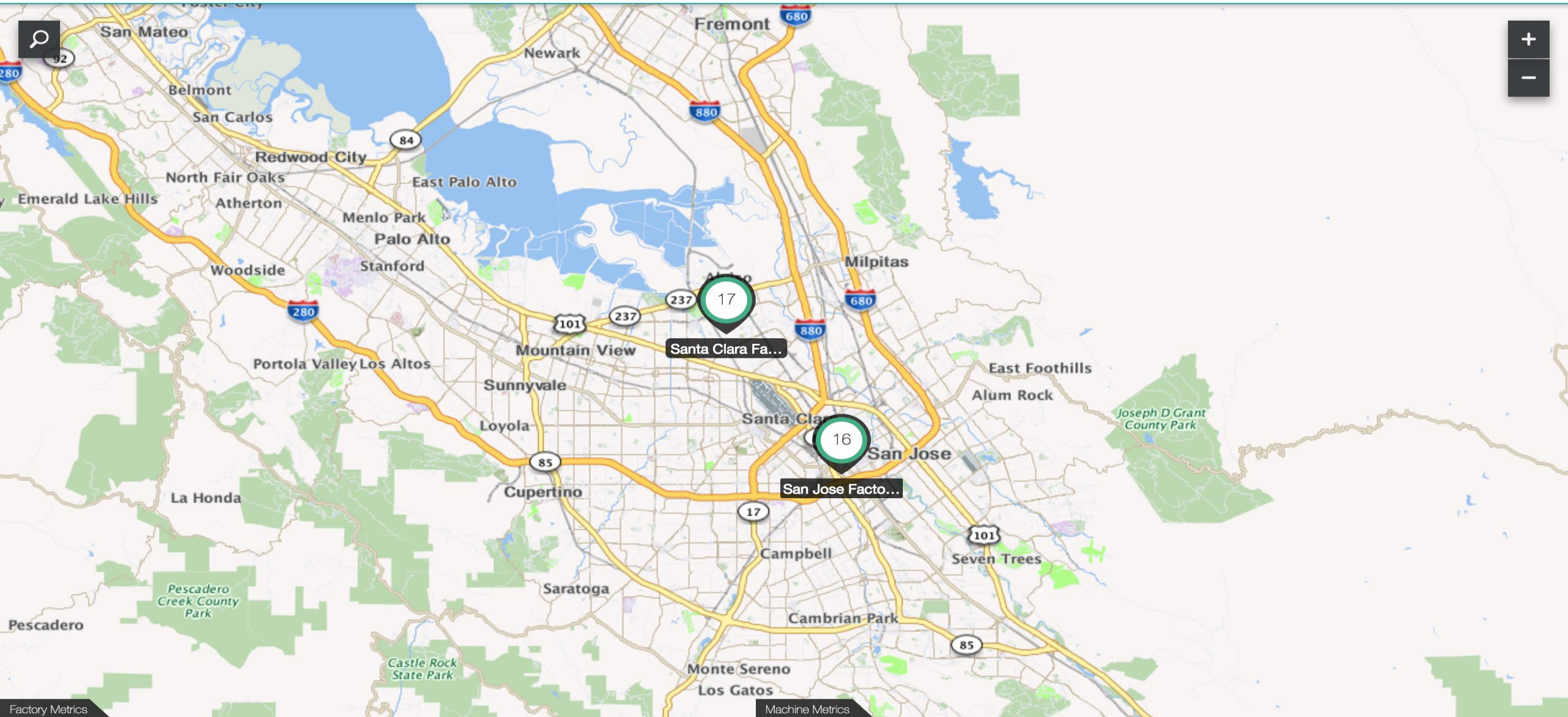


Machines Most Down

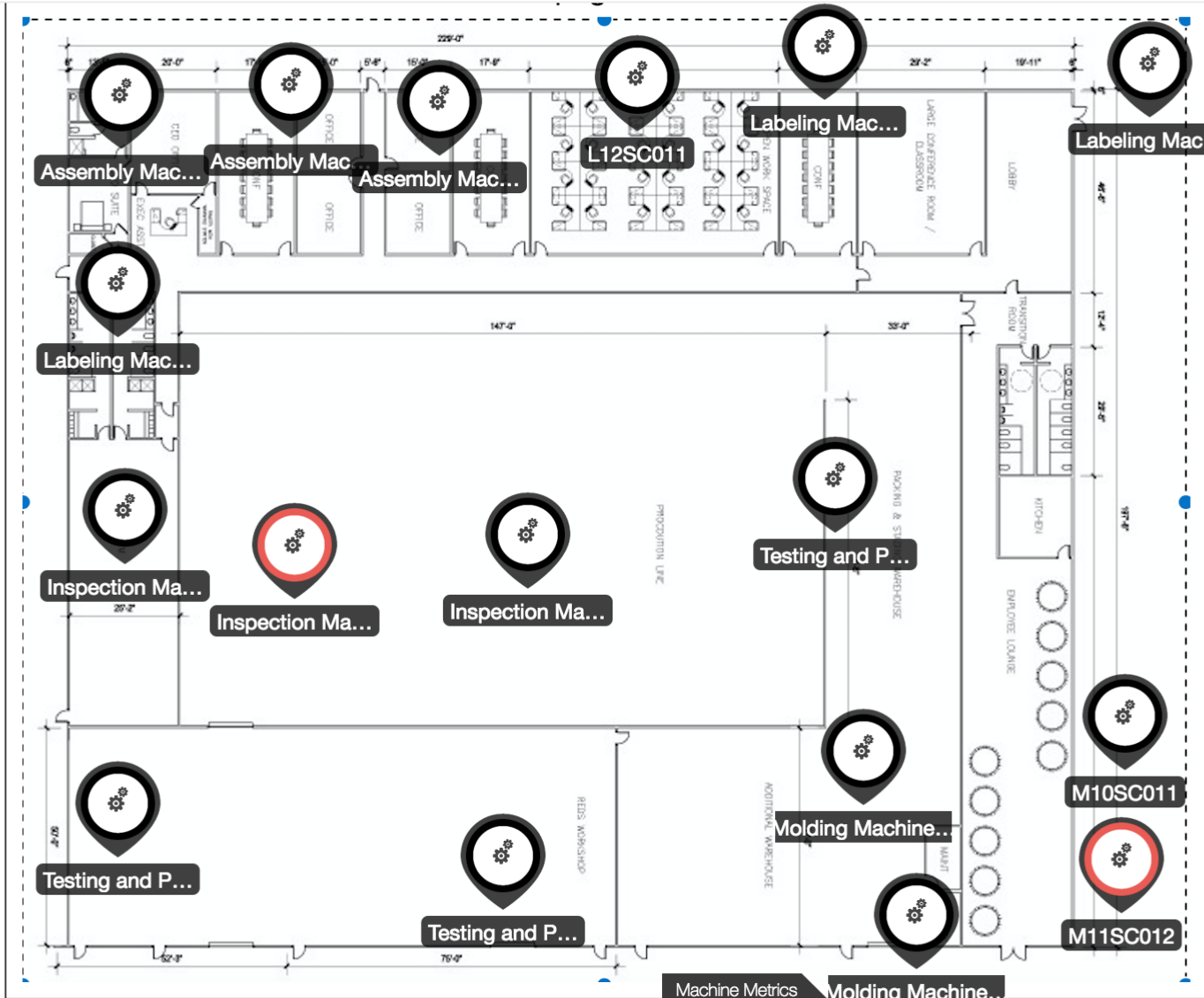
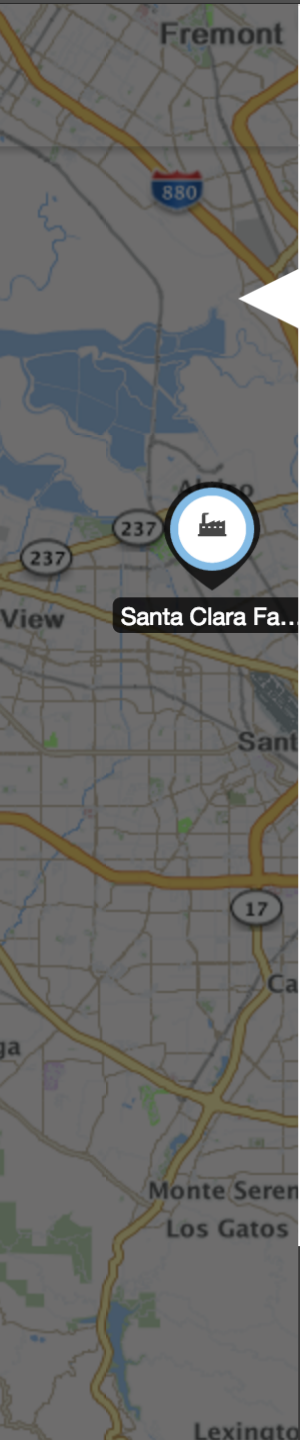


7 Days Ago ▼





# Factory : Santa Clara Factory



### Factory Metrics

60%

Factories Behind Plan

1

Lines

5

Products

17

Machines

### Machine Metrics

57%

Machines Behind Plan

59%

In Use

29%

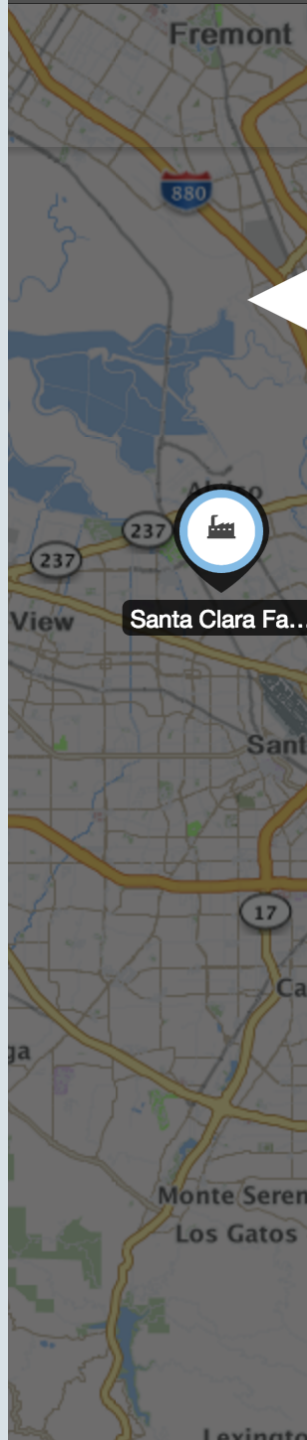
Idle

12%

Down







# Factory : Santa Clara Factory

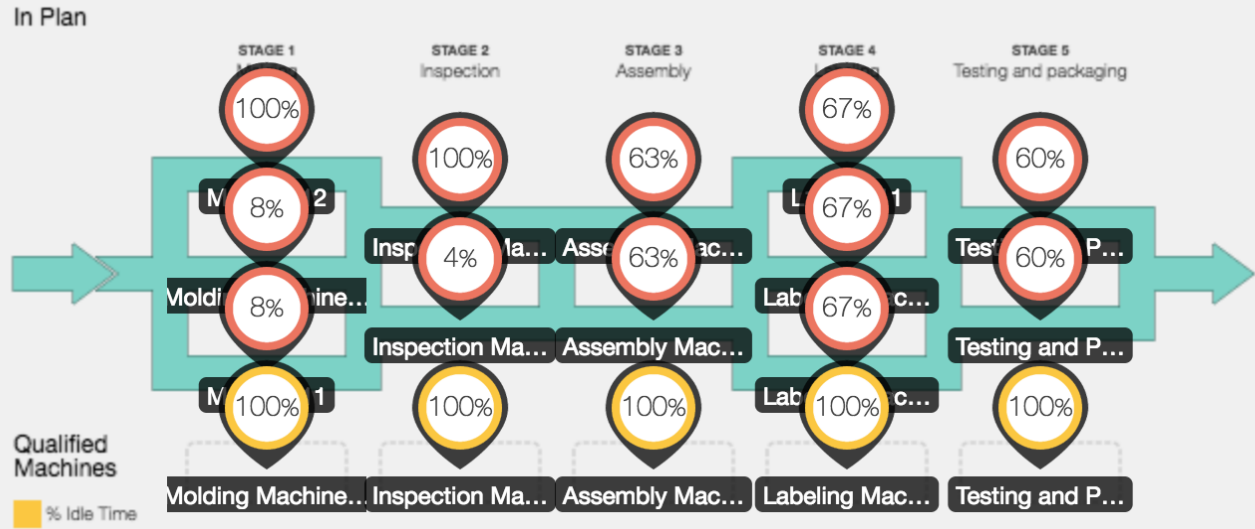


Products

Braille Cube

Lines

Santa Clara Main



Factory Metrics

60%

Factories Behind Plan

3

Lines

1

Products

17

Machines

Machine Metrics

55%

Machines Behind Plan

59%

In Use

29%

Idle

12%

Down



# Factory : Santa Clara Factory



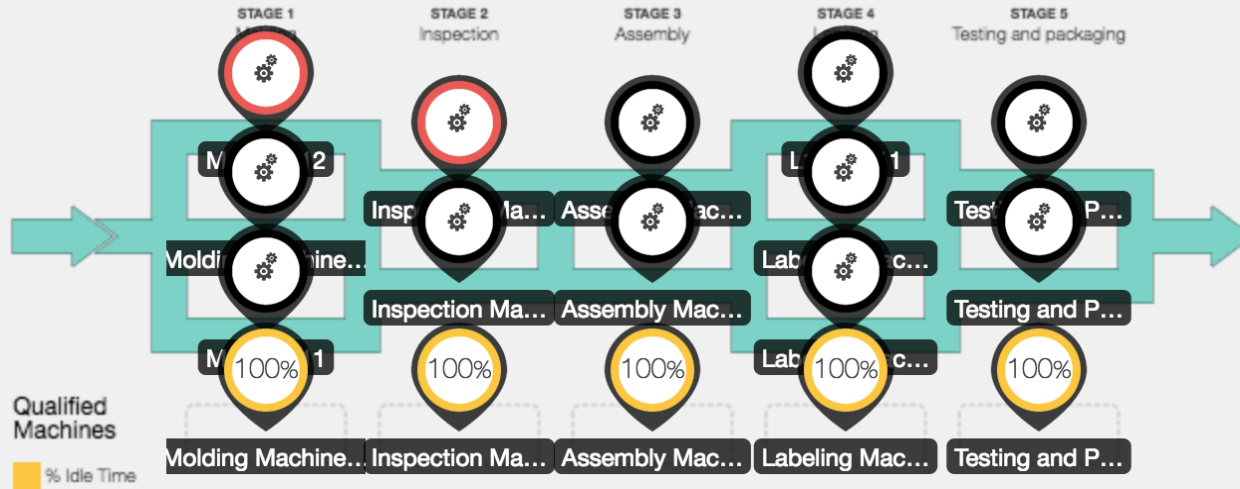
Products

Braille Cube

Lines

Santa Clara Main

In Plan



Factory Metrics

60%

Factories Behind Plan

1

Lines

1

Products

17

Machines

Machine Metrics

55%

Machines Behind Plan

59%

In Use

29%

Idle

12%

Down





Product Routing Filter

All

Production Line Filter

All

Priority Filter

All

Date Filter

All

Status Filter

All

Type Filter

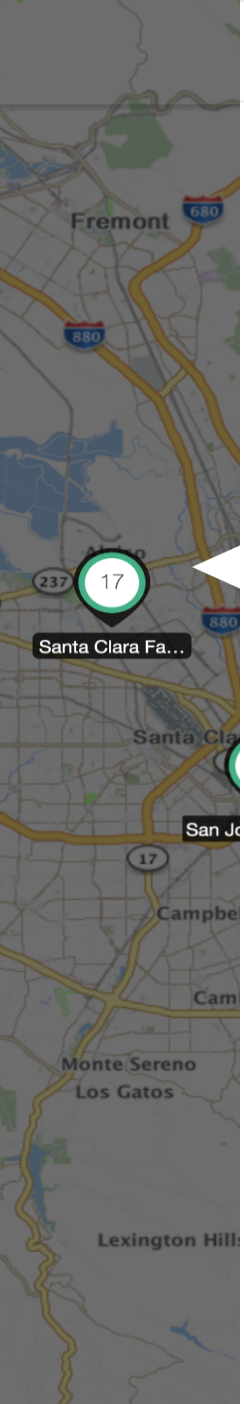
All

Text Search

Search incidents ...





Go

Priority	Machine	Reported	Status	Type	Last Edited	Summary	
	M11SC012	Jan 31 2017 10:31 PM	New	Outage	Feb 01 2017 01:55 PM	LowTemp_HighCoolingRate	
	L12SC011	Jan 31 2017 10:08 PM	Resolved	Routine	Jan 31 2017 10:08 PM	Machine L12SC011 with high temperature_c44f9f9b0...	



Priority	Reported	Status	Type	Last Edited	Summary
	Jan 31 2017 10:31 PM	New	Outage	Feb 01 2017 01:57 PM	LowTemp_HighCoolingRate 

STAGE 1 Molding

-  M11SC012
-  Molding Machine...
-  M10SC011
-  Molding Machine...

**Summary**

**Description**

**State**

**Priority**

**Product Routing**


**Production Line**

**Rule**

**Created By**

**Last Modified By**

**Comments**



# Q&A



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