



Global Shop Floor Tools – Snacks

Train the Trainer Session

What is MES?

gSFT Overview and Program Details

What is Global Shop Floor Tools?

Global Shop Floor Tools is a Manufacturing Execution System (MES) that provides real time detailed performance information that supports Continuous Improvement thru real time data insights.



[Global Shop Floor Tools - Veurne Snacks Plant](#)
 User Name/Password: admin/admin

Real Time Line Status and Productivity Measures

- ✓ TE, NE, Loss Trees
- ✓ Downtime
- ✓ Slow Running
- ✓ Waste
- ✓ Automated Downtime Events
- ✓ Automated Slow running Events
- ✓ Automated Waste Tracking
- ✓ Make vs plan visibility
- ✓ Real time and historical reports

- Two Versions Available:**
1. **Basic** – Lower Cost, less functionality or machines connected
 2. **Enhanced** – Full functionality

Foundational to DVC



[Global Shop Floor Tools - Phoenix Beverage Plant](#)
 User Name/Password: demo/pepsi

*When are they happening??? Where are they happening ???
Why are they happening ???*

Global Shop Floor Tools Dashboard helps:



Collect data directly from PLC or through interfaces



Measure efficiency, components APQ or DTW and trends



Operators and Managers know how they are performing



Measuring and tracking performance helps improve line efficiency!

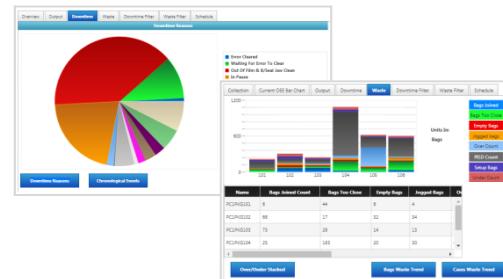
Real Time Data

- Real time Line Status
- Real time Line Performance Data
- Real time Productivity Measures and Analysis:
 - ✓ TE, NE, Loss Trees
 - ✓ Availability/Downtime
 - ✓ Slow Running/Rate Performance
 - ✓ Quality/Waste
- Accurate and Consistent Data and KPIs for tracking and reporting
- Make vs. Plan Visibility
- Real time and historical reports



Automated Data Collection

- Automated Packaging Detailed Downtime Events
- Semi-Automated Processing Downtime Events
- Automated Processing and Packaging Slow running/Rate Loss Performance
- Automated Packaging Waste data
- Semi-Automated Processing Waste
- Reduces or eliminates manual data collection and tracking of gSFT KPIs



Support Continuous Improvement

- With Global Shop Floor Tools, Continuous Improvement Processes share the same information and effective action planning and sustainable improvements are supported



gSFT Vision: We will use gSFT to drive performance by sharing fact based real time insights to achieve world class Manufacturing Excellence.
gSFT is foundational to Digital Value Chain (DVC).

| Managers |
|--|
| <ul style="list-style-type: none">• FLMs• Department Managers• Engineering/Maintenance Managers• Process Improvement Managers• Site Leadership <ul style="list-style-type: none">✓ Review Line and Machine level Performance Hourly, Daily, Weekly✓ Identify causes impacting performance and develop action plans✓ Review Performance trends and address root causes✓ Leverage data for focused improvement events✓ Understand Site Performance |



Frontline

- Processing and Packaging Operators
- Specialists
- Supervisors

- ✓ Review Line KPIs to identify opportunities and create action plans to win the hour and shift



| Sector |
|---|
| <ul style="list-style-type: none">• Productivity• MOS• LSS• Engineering/Controls• SMEs <ul style="list-style-type: none">✓ Review and Analyze Line and Machine Level Performance trends✓ Deep Dive Line Performance data and implement best practices✓ Benchmark Line Performance✓ Commission new equipment✓ Leverage data for focused improvement events |

Global Shop Floor Tools (Snacks MES)

Aligns with Continuous Improvement Methodologies



LSS – Lean Six Sigma is a methodology that focuses on performance improvement by removing waste and reducing variation in processes through data based analysis.

A LSS approach focuses on reducing process variation which improves:

- Removing non-value added work
- Defect reduction
- Quality of products and services
- Employee Morale
- Profit

Global Shop Floor Tools supports 4 out of 5 Lean Six Sigma phases:

- ✓ **DEFINE PHASE** – Defining Problem, Pain, Charter
- ✓ **MEASURE PHASE** – Establishing baseline/accuracy of data
- ✓ **ANALYZE PHASE** – Identifying root causes
- **IMPROVE PHASE** – Take action to implement solutions to root causes impacting performance
- ✓ **CONTROL PHASE** – Sustaining results/post audit – Use LPS

Insert Sector Continuous Improvement Methodologies

ESSA – QCDM

LATAM – MOTOR

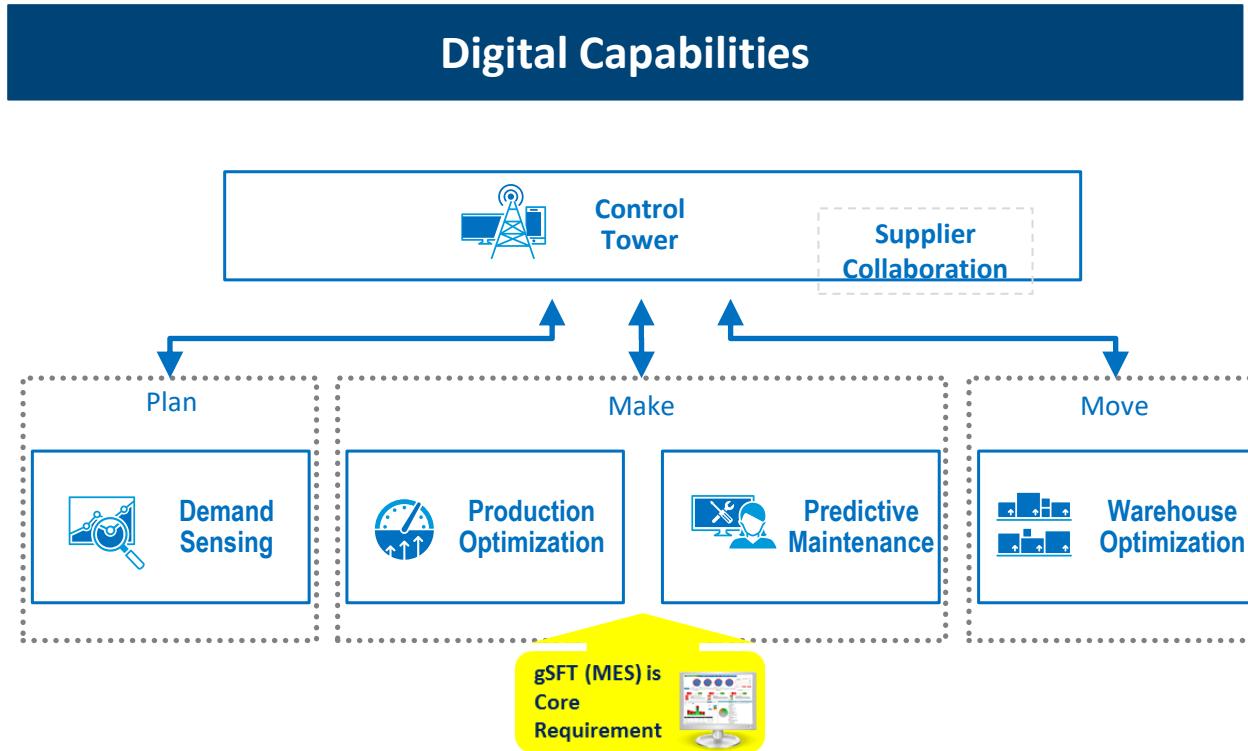
AMENA -

gSFT Connection to DVC

Global Shop Floor Tools

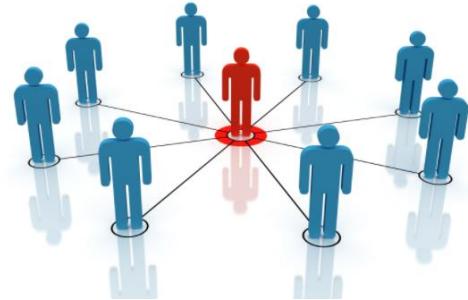
Connection to Global Shop Floor Tools

PepsiCo has prioritized 5 digital capabilities that will transform our operations, deliver productivity, and increase our agility to serve customers



What is your role as gSFT Site Owner?

- ✓ Responsible for being local MES Subject Matter Expert
- ✓ Responsible for identifying future SMEs and building MES capability
- ✓ Responsible for development and execution of Change Management Strategy
 - Developing and executing Business Integration Strategy (how will MES be used)
 - Developing and executing Training Strategy (including customizing Training Materials)
 - Developing and tracking MES Success Criteria
- ✓ Engagement/Support through UAT
 - Support Test Cases provided by TCS
 - There can be no High severity issues remaining; High Severity means System unusable, no work around exists
- ✓ Advocate for gSFT
- ✓ Responsible for identifying and supporting Adoption Risks/Mitigation Actions





What is your role as an gSFT Subject Matter Expert?



- ✓ Responsible for being local MES Subject Matter Expert and building MES capability
- ✓ Responsible for supporting Training Strategy
- ✓ Engagement/Support through UAT
 - Support Test Cases provided by TCS
 - There can be no High severity issues remaining; High Severity means System unusable, no work around exists
- ✓ Advocate for gSFT and identify/support Adoption Risks/Mitigation Actions



Global Shop Floor Tools – Snacks

Navigation Training



Dashboard Navigation

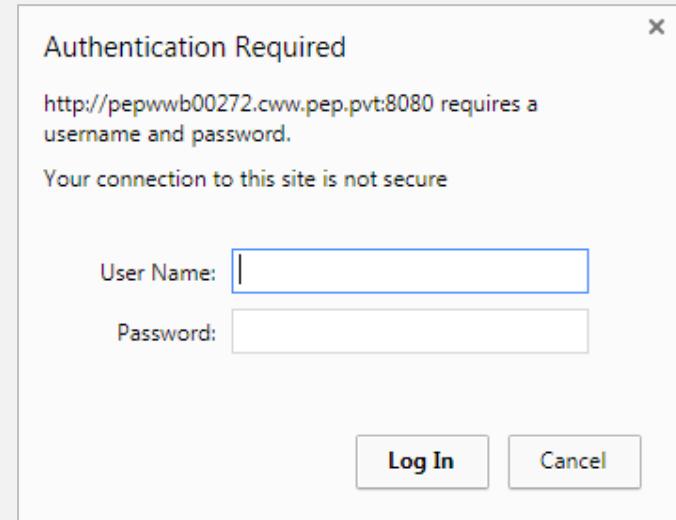
Login to Dashboard

- Web-based URL (Unique to each Site)
- Chrome – Preferred Browser
- OITs, Desktops, Laptops, Mobile devices



http://11.84.46.214:8080/Thingworx/Runtime/index.html#master=MES_Home&mashup=MES_Dashboard

- User Name
 - GPID
 - Generic User Name/Password (admin/admin)
- Device must be connected to PepsiCo Network



The dialog box displays the following text:
Authentication Required
<http://pepwwb00272.cww.pep.pvt:8080> requires a username and password.
Your connection to this site is not secure

User Name:

Password:

Log In **Cancel**

- **Cerrillos:**

http://meswebcerrillos.cww.pep.pvt:8080/Thingworx/Runtime/index.html#master=MES_Home&mashup=MES_Dashboard

- **Itu:**

http://11.128.113.9:8080/Thingworx/Runtime/index.html#master=PepsiCo_Master&mashup=MES_Dashboard

- **Curitiba:**

http://pepwap09680.cww.pep.pvt:8080/Thingworx/Runtime/index.html#master=PepsiCo_Master&mashup=MES_Dashboard

- **Guadalajara:**

http://meswebguadalajara.cww.pep.pvt:8080/Thingworx/Runtime/index.html#master=PepsiCo_Master&mashup=MES_Dashboard

- **Saltillo:**

http://meswebsaltillo.cww.pep.pvt:8080/Thingworx/Runtime/index.html#master=MES_Home&mashup=MES_Dashboard

- **Vallejo:**

http://pepwap09264.cww.pep.pvt:8080/Thingworx/Runtime/index.html#master=MES_Home&mashup=MES_Dashboard

USER: demo

PASSWORD: demo

gSFT Access Levels

| gSFT Functions (ThingWorx) | Access | | |
|--|-----------|--------|-------|
| | Read Only | Update | Admin |
| Setpoint Events | | | |
| Update | | Y | Y |
| Downtime Events | | | |
| Create/Delete | | | Y |
| Update | | Y | Y |
| Split | | Y | Y |
| Waste Events | | | |
| Create/Delete | | | Y |
| Update | | Y | Y |
| Collaboration | | | |
| Add | Y | Y | Y |
| Edit | Y | Y | Y |
| Delete | | | Y |
| Make vs. Plan | | | |
| Edit Cases Required, Scheduled Start/End | | Y | Y |
| OEE by Operator | | | |
| Assign Operator | | Y | Y |
| Production Case Entry | | | |
| Update | | Y | Y |
| Waste | | | |
| Create/Delete | | Y | Y |
| Update | | Y | Y |
| Administration Menu items | | | |
| Monetize Year Parameters | | | Y |
| Update | | | Y |
| Product Maintenance | | | |
| Create/Copy | | | Y |
| Modify | | | Y |
| Activate/Inactivate | | | Y |
| Specification Maintenance | | | |
| Update | | | Y |
| Reports | | | |
| | Y | Y | Y |

- **Levels of access can be assigned for a Group or Individual**
- **3 Levels of Access**
 - **Read Only**
 - **Update**
 - **Admin**
- **How to Request New User ID**
 - User ID (Groups or Individuals)
 - Send email to SPAITGSFTSupport@pepsico.com with group name and access level required
 - GPID Access (future):
 - An iDM request process will be developed and communicated at a later date.

gSFT Definitions

Project Terminology

| | |
|------|---|
| AU | Asset Utilization |
| DT | Downtime |
| FTT | Fault Translation Table |
| HMI | Human-Machine Interface |
| KPI | Key Performance Indicator |
| MES | Manufacturing Execution System |
| MTBF | Mean Time Between Failure |
| MTTR | Mean Time To Recover |
| NE | Net Efficiency |
| OEE | Overall Equipment Effectiveness |
| OPC | OLE for Process Control (Device Communication protocol) |
| PA | PA (GEIP Proficy suite MES application) |
| PC | Potato Chips |
| PE | Production Event |
| PLC | Programmable Logic Controller |
| SSRS | SQL Server Reporting Services |
| TCS | Tata Consultancy Services |
| TWX | ThingWorx |
| WE | Waste Event |
| WIP | Work In Progress |

Global – Equipment Terminology

| Packaging Terms | Description |
|-----------------|--------------------|
| ACP | Auto Case Packer |
| BMK | Bag Maker |
| CHW | Check Weigher |
| MHW | Multi Head Weigher |
| PKG | Packaging |

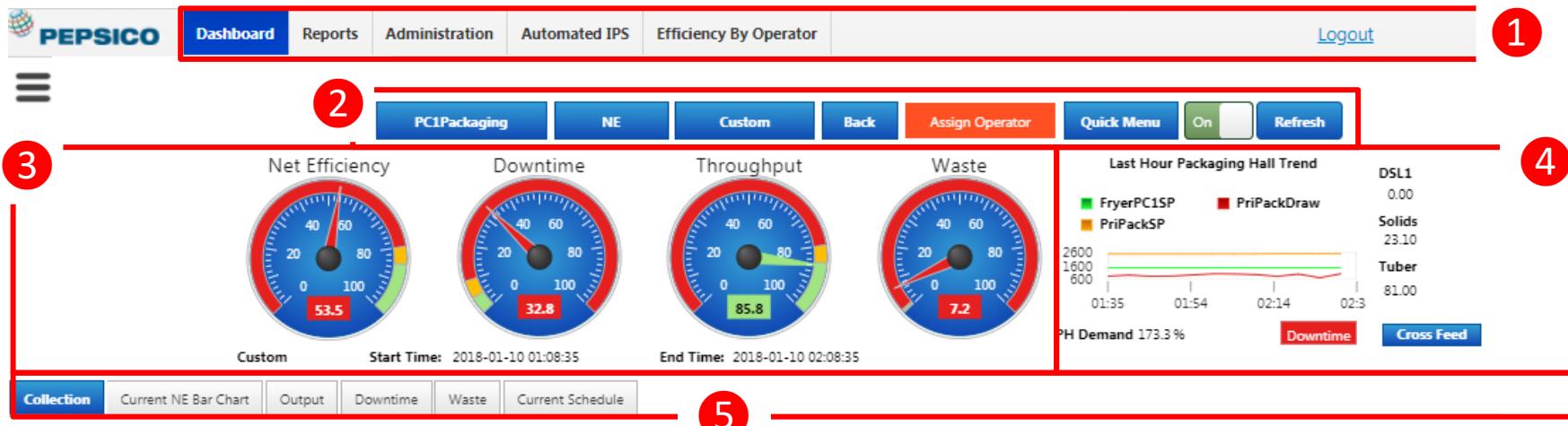
ThingWorx Dashboard: Link to log on to SiteThingWorx dashboard home page below. Currently, ThingWorx dashboard is available in *English*

(Copy link using Chrome Browser – URL is site specific)

At Cerrillos Plan, MES is available in:

_____ Departments (PC), _____ Fryers and _____ Auto Packaging Tubes and _____ Manual Packaging tubes.

Dashboard Screen Layout



Dashboard consists of:

1. Dashboard Selection – Primary Dashboard, Reports, Administrative, Automated IPS, Packaging Tubes, Efficiency by Operator
2. Reporting Range Section – Select Entity, KPIs, Date Range, Refresh, Back, Shortcuts, Assign Operator
3. Real time performance Gauges for selected entities and date range
4. Processing Mini Trend – Last Hour Throughput
5. Production Trends and Analysis Tabs

This training deck will explain how to navigate through the gSFT Dashboard

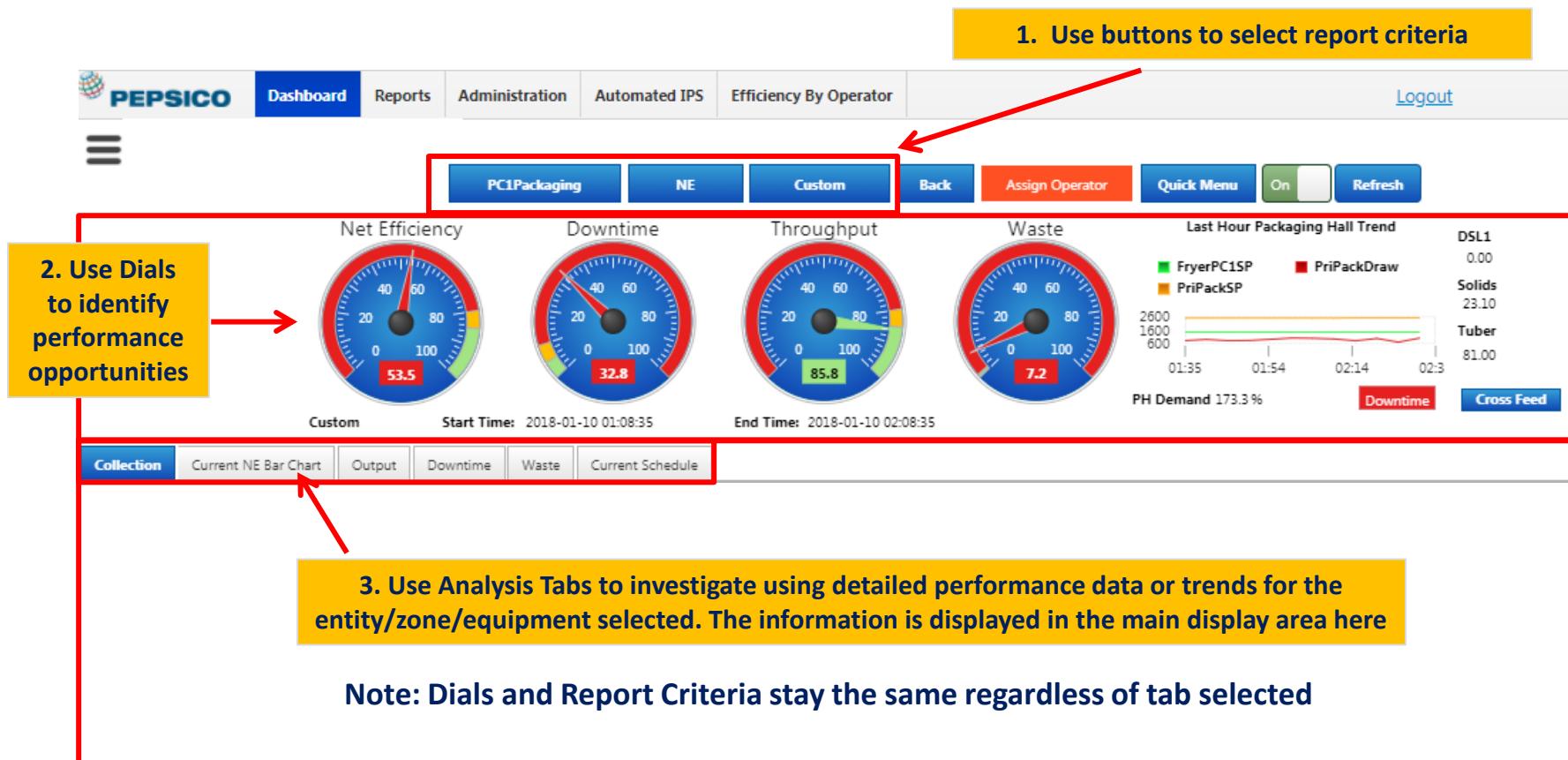
Dashboard Screen Layout

1. Use buttons to select report criteria

2. Use Dials to identify performance opportunities

3. Use Analysis Tabs to investigate using detailed performance data or trends for the entity/zone/equipment selected. The information is displayed in the main display area here

Note: Dials and Report Criteria stay the same regardless of tab selected



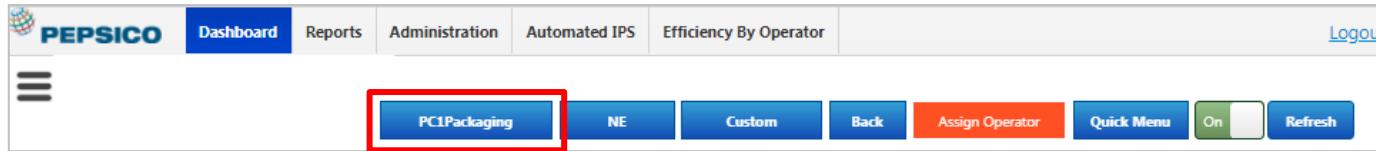
1. Use buttons to select report criteria

2. Use Dials to identify performance opportunities

3. Use Analysis Tabs to investigate using detailed performance data or trends for the entity/zone/equipment selected. The information is displayed in the main display area here

Note: Dials and Report Criteria stay the same regardless of tab selected

Choosing your data – Select Entity (Area)

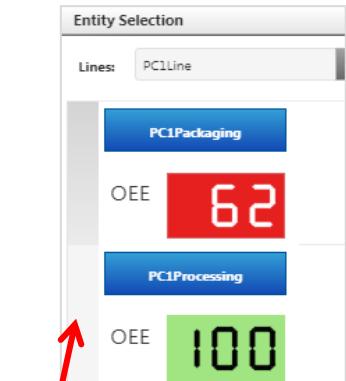


Global Shop Floor Tools Dashboard KPI's can be viewed by:

1. Line Entity – Entire Line and/or Processing Entity – Fryer/Oven
2. Packaging Department – Combined Packaging Units
3. Packaging Unit - One Single Packaging Unit consisting of: **MHW, BMK, INS/CW, ACP**

Select Line from Drop Down menu

Use Blue Buttons for Area selection



Blue buttons can be used to make Entity selection

①
Line Entity and/or Processing Line

PC1Processing

| Entity Selection | PC1PKG101 | PC1PKG102 | PC1PKG103 | PC1PKG104 | PC1PKG105 | PC1PKG106 | PC1PKG107 | PC1PKG108 | PC1PKG109 | PC1PKG110 | PC1PKG111 | PC1PKG112 |
|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| OEE | 28 | 54 | 52 | 50 | 55 | 53 | 51 | 56 | 57 | 58 | 59 | 50 |
| PC1Processing | PC1Processing | PC1Processing | PC1Processing | PC1Processing | PC1Processing | PC1Processing | PC1Processing | PC1Processing | PC1Processing | PC1Processing | PC1Processing | PC1Processing |
| OEE | 54 | 52 | 50 | 55 | 53 | 51 | 56 | 57 | 58 | 59 | 50 | 50 |

Line Names will differ from Site to Site. Above line names are Veurne Plant example

Select Packaging Unit Name for individual Unit performance

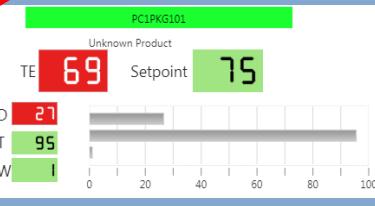
②
Packaging Department

PC1Packaging



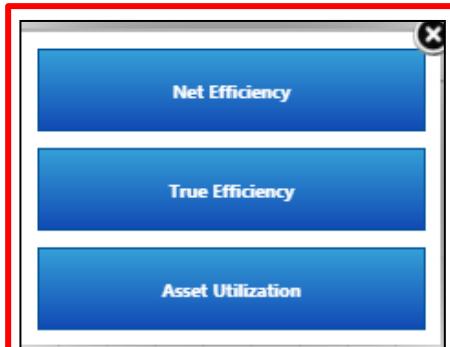
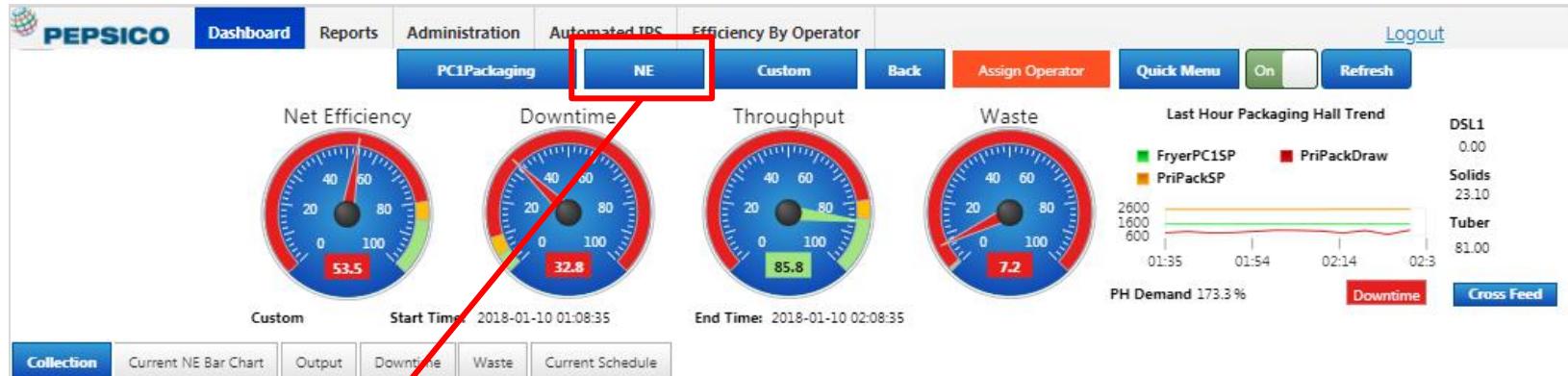
③
Single Packaging Unit

PC1PKG101



Gray or White Areas can be used to refresh screen

Choosing your data: Reporting Metric



NE – Net Efficiency - Overall Efficiency of the Line

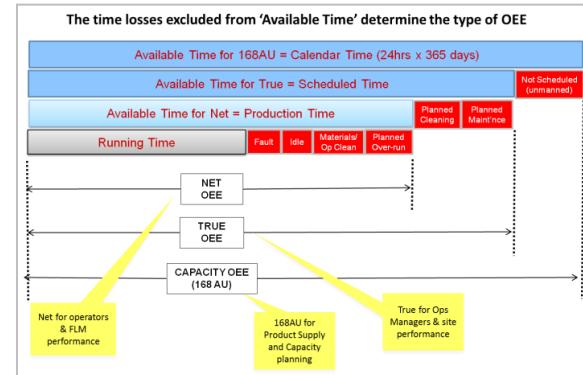
- Excludes Planned Downtime or Dark Hours

TE – True Efficiency - Overall Efficiency of the Line

- Excludes Dark Hours

AU – Overall Capacity Utilization of the Line

- All Hours in one week



TE is the CI Compass



TE is the CI “compass”.....



Production kg or litres

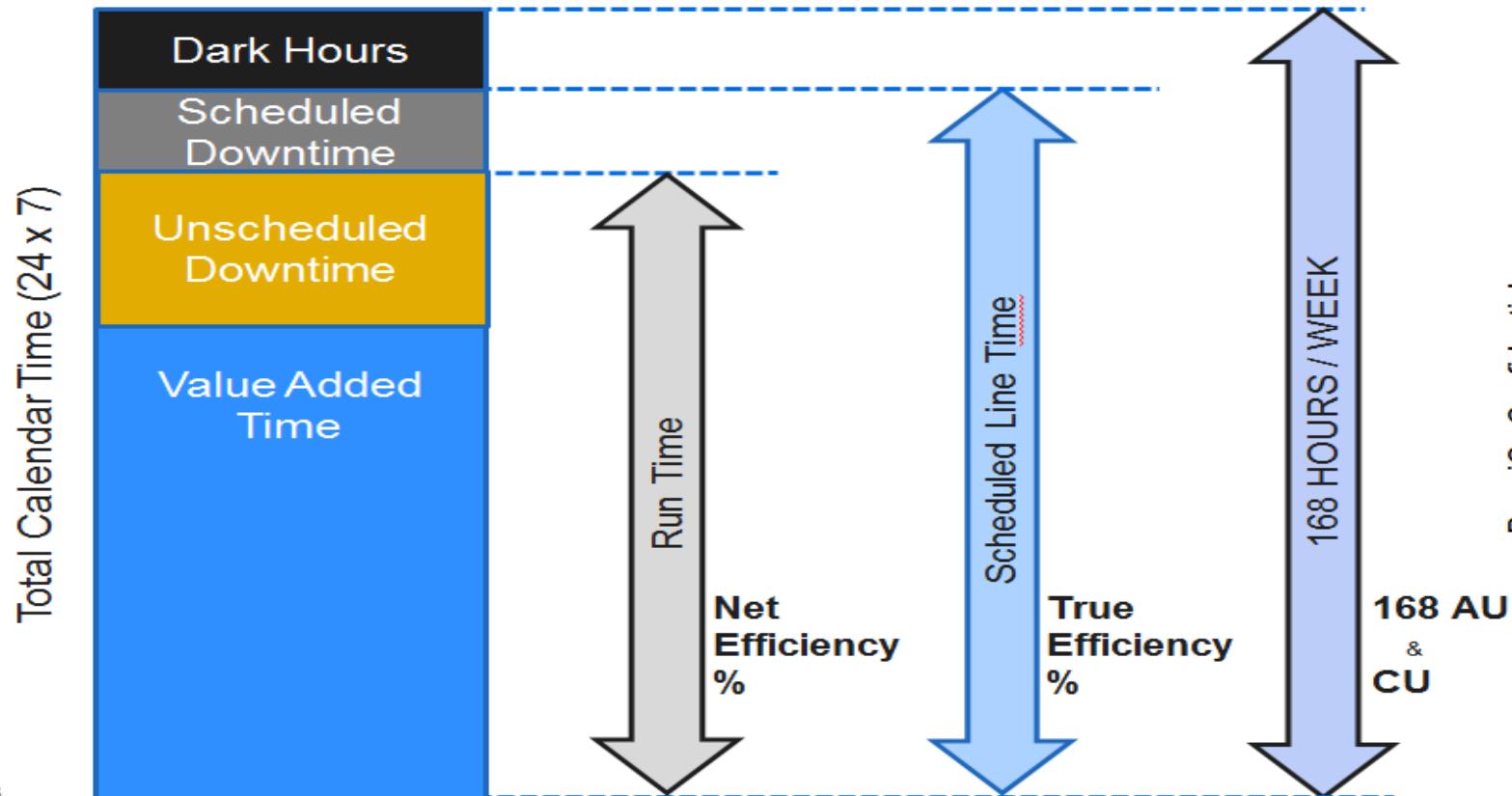
TE

| Scheduled DT | Unscheduled DT | Slow running | Waste |
|--------------------|---|------------------------------------|--|
| Planned activities | Overrun planned activities and unplanned downtime | Reduced throughput vs. rated speed | Product & packaging waste and product giveaway |

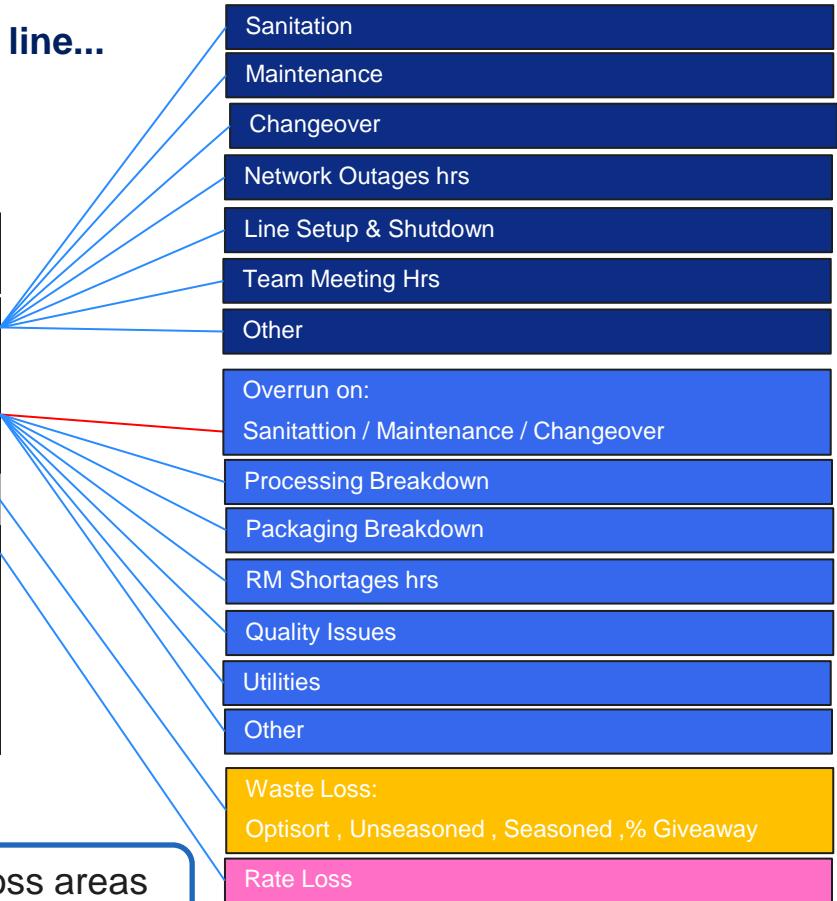
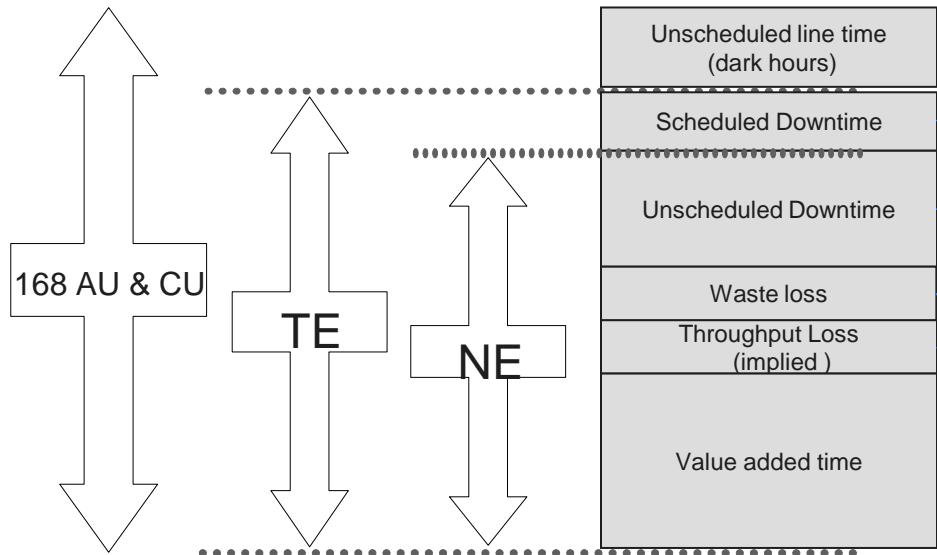
The only exclusion is unscheduled calendar time or “dark hours”.... this is defined as NO activity whatsoever.



The 168 hours in a week is broken down into categories that feed the different metrics



Numerous factors can reduce value-add run-time of a line...
TE highlights true value-added performance



Need to first understand root causes of loss areas
when focusing on TE improvement



How much Good Product was actually made (base)

How much Product could have been made if the Line ran “perfectly”

$$\text{Efficiency} = \frac{(\dots\dots\dots\dots\dots)}{(\dots\dots\dots\dots\dots) \times (\dots\dots\dots\dots\dots)}$$

$$\text{Efficiency} = \frac{(\text{Good Product})}{(\text{Available Time}) \times (\text{Nameplate})}$$

Efficiency components



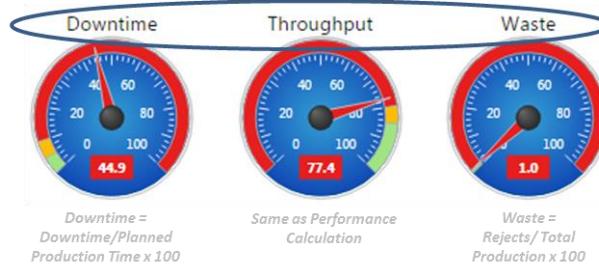
Losses = Downtime & Slow Running & Waste

Losses = Downtime & Throughput & Waste

$$\frac{\text{(Running Time)}}{\text{(Available Time)}} \quad \& \quad \frac{\text{(Total Product)}}{\text{(Theoretical Product)}} \quad \& \quad \frac{\text{(Good Product)}}{\text{(Total Product)}}$$

$$\frac{\text{(Running Time)}}{\text{(Available Time)}} \quad \& \quad \frac{\text{(Total Product)}}{\text{(Running Time)} \times \text{(Nameplate)}} \quad \& \quad \frac{\text{(Good Product)}}{\text{(Total Product)}}$$

$$\text{Efficiency} = \frac{\text{(Good Product)}}{\text{(Available Time)} \times \text{(Nameplate)}}$$



Process (Whole Line performance)



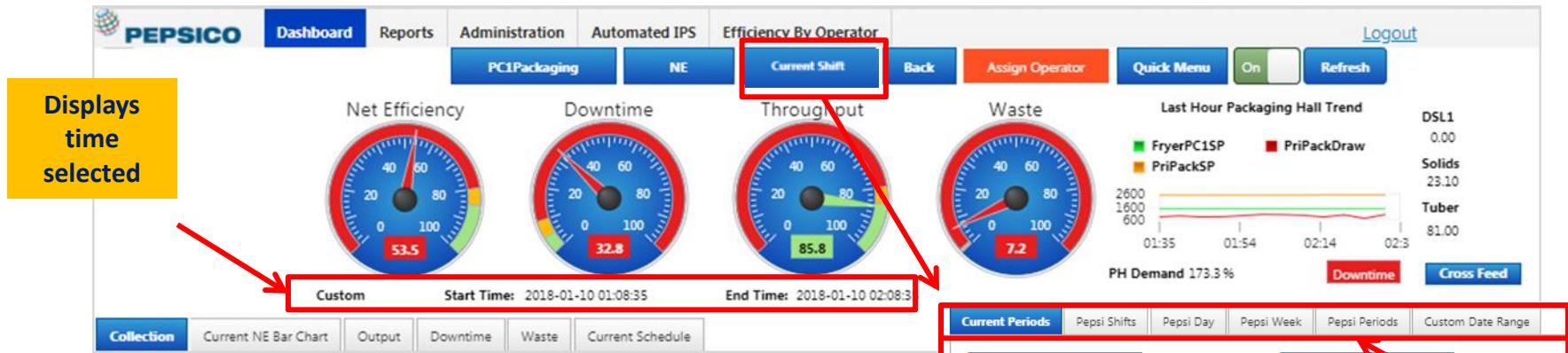
The generic formula for the global Efficiency metrics is

$$\text{Efficiency} = \frac{\text{(Net production of base chip)}}{\text{(Theoretical possible production)}} = \frac{\text{(Net Production)}}{\text{(Available Time)} \times \text{(Nameplate)}}$$

The 3 efficiency metrics differ by the “Available Time” and “Nameplate” used to calculate the theoretical possible production -

| Metric | Available Time | Nameplate |
|-----------------------|--|---|
| 168 Asset Utilisation | Calendar time | Technology maximum |
| True Efficiency | Calendar time – unmanned time | Product maximum <i>(for PC this is also flexed according to the average potato solids during the available time)</i> |
| Net Efficiency | Calendar time – (unmanned time + planned downtime) | |

Choosing your data: Time Frame Selection



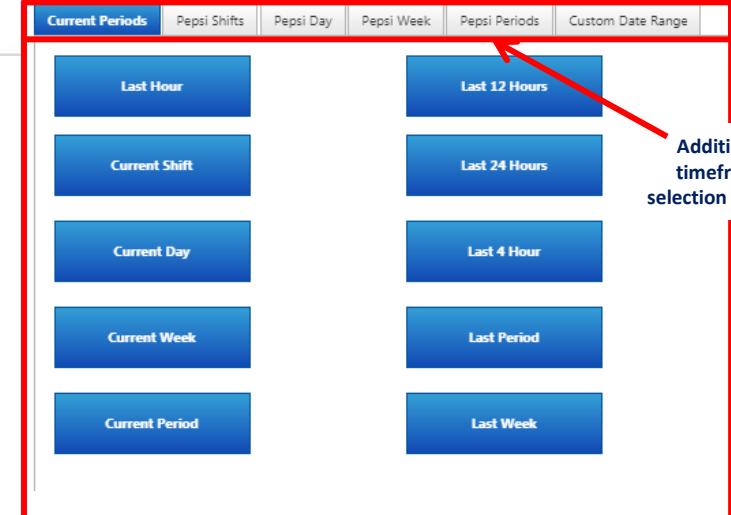
Use timeframe button to select which timeframe you want to view.

Note: Some areas will always reflect 'Current' status regardless of timeframe selected. These areas are indicated with a 'Current' as part of description. Examples below:

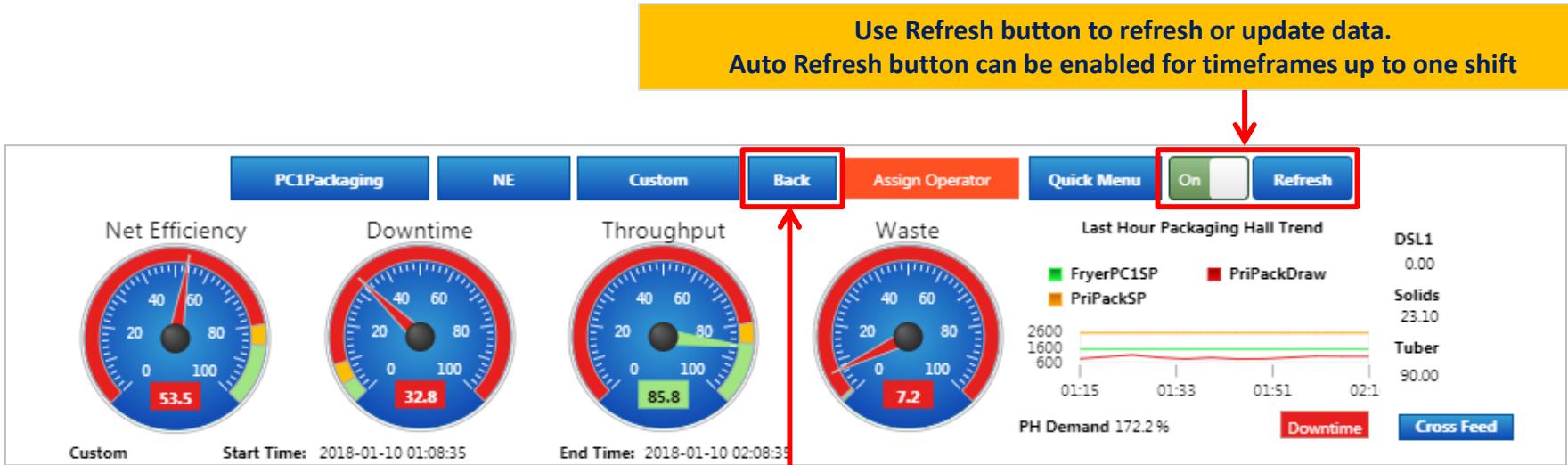
Unit (Current Status)

Current Product

Current Setpoint



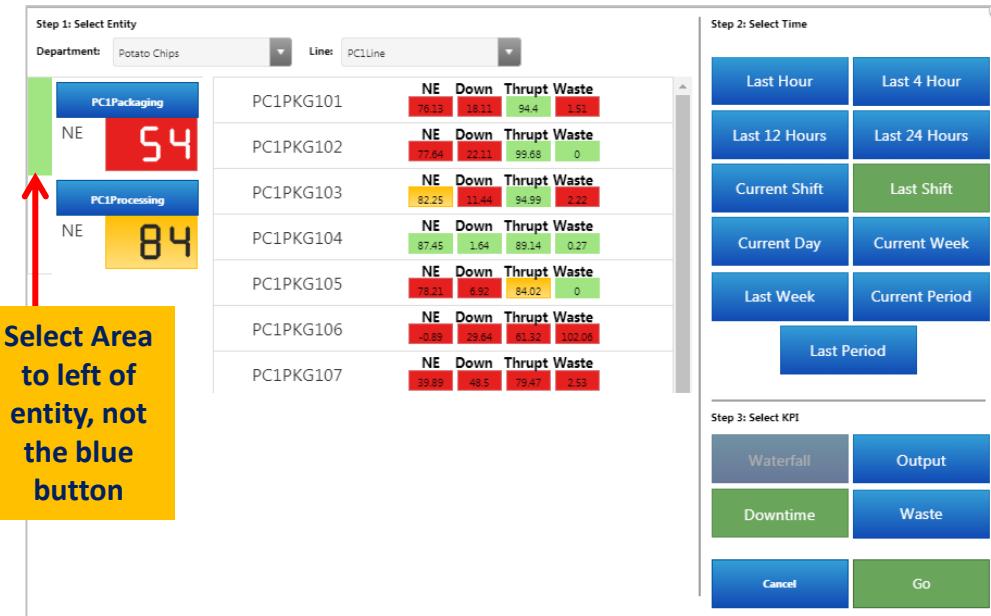
Refreshing your data



Use Back button to return to previous screen. Recommendation is to use Back button vs. browser back button

Quick Menu for Entity, Timeframe, and KPI selection in one screen

Use Quick Menu buttons to make Frequently used data selections



Step 1: Select Entity

Department: Potato Chips Line: PC1Line

| PC1Packaging | NE | Custom | Back | Assign Operator | Quick Menu | On | Refresh |
|---------------|----|--------|------|-----------------|------------|----|---------|
| PC1Packaging | 54 | | | | | | |
| NE | 54 | | | | | | |
| PC1Processing | 84 | | | | | | |
| NE | 84 | | | | | | |

Step 2: Select Time

| | |
|---------------|----------------|
| Last Hour | Last 4 Hour |
| Last 12 Hours | Last 24 Hours |
| Current Shift | Last Shift |
| Current Day | Current Week |
| Last Week | Current Period |
| Last Period | |

Step 3: Select KPI

| | |
|-----------|--------|
| Waterfall | Output |
| Downtime | Waste |
| Cancel | Go |

Select Area to left of entity, not the blue button

Step 1: Select Entity

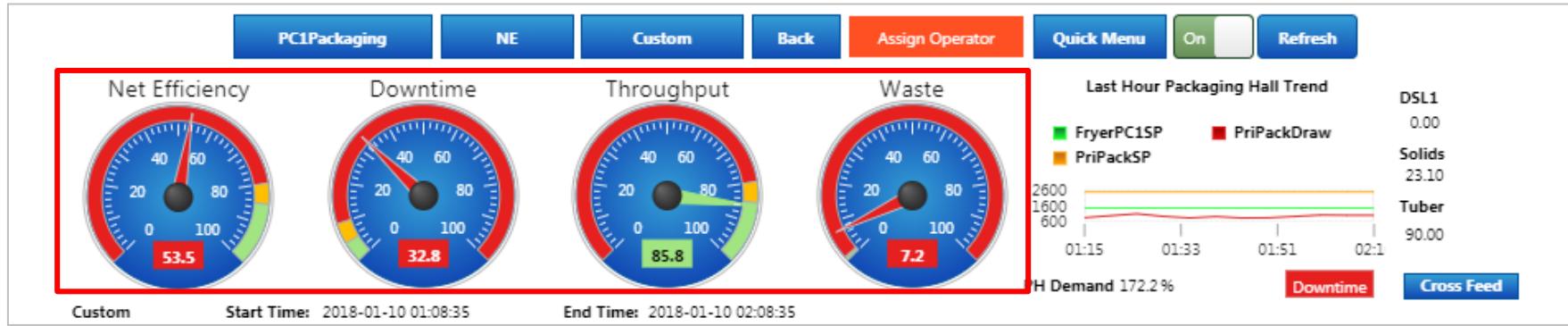
Step 2: Select Time

Step 3: Select KPI

Step 4: Click GO

Button/area will turn green when selected

Real time performance Gauges for selected entities and date range



- **Downtime** – The percent of timeline or Unit is down and not available to run. Downtime can be categorized as Planned or Unplanned Downtime
- **Throughput** – The percent throughput vs. Manufacturer's Rated Speed. When a machine runs below its rated speed, the lost production is quantified as rate loss or slow running.
- **Waste** – The percent of throughput lost to quality defects

Exporting Data

- ‘Export’ Button allows data to be exported to CSV
- ‘Export’ Button available in selected screens in Dashboard

| Setpoint | | | | | | | | |
|---------------------|-------------|--------------|---------------|--------|----------|--------|--------------------|---------|
| Edit Event | | Export | | | | | | |
| TimeStamp | SetPoint Kg | NamePlate Kg | Adjustment Kg | % Loss | Category | Reason | Product | Comment |
| 2017-07-05 20:39:05 | 2060.00 | 2743.00 | -40.00 | 24.90 | | | CR-Flats Chips ips | |
| 2017-07-05 20:39:02 | 2100.00 | 2743.00 | +50.00 | 23.44 | | | CR-Flats Chips ips | |
| 2017-07-05 20:38:58 | 2050.00 | 2743.00 | +10.00 | 25.26 | | | CR-Flats Chips ips | |
| 2017-07-05 20:38:55 | 2040.00 | 2743.00 | +10.00 | 25.63 | | | CR-Flats Chips ips | |
| 2017-07-05 20:38:52 | 2030.00 | 2743.00 | +130.00 | 25.99 | | | CR-Flats Chips ips | |
| 2017-07-05 20:38:49 | 1900.00 | 2743.00 | -200.00 | 30.73 | | | CR-Flats Chips ips | |
| 2017-07-05 20:22:04 | 2100.00 | 2743.00 | -100.00 | 23.44 | | | CR-Flats Chips ips | |
| Setpoint Trend | | | Setpoint List | | | | | |

Packaging

Global Shop Floor Tools (Snacks MES)

Viewing Packaging Department Performance

1. Select 'Packaging' as Entity 

2. Select Collection Tab 

Dials reflect performance for Entity Selected

| Unit (Current Status) | Current Product | Current Setpoint | Nameplate | NE | D | T | W |
|-----------------------|--|------------------|-----------|-------|-------|-------|--------|
| PC1PKG101 | LAYS CHIPS BBQ 12X2X100GR FR/340025708 | 70 | 70 | 76.13 | 18.11 | 94.4 | 151 |
| PC1PKG102 | LAYS CHIPS PAPRIKA 20X40GR BE/340017610 | 100 | 100 | 77.64 | 22.11 | 99.68 | 0 |
| PC1PKG103 | LAYS ANC.SEL WIP 120X27.5GR FR/340027521 | 95 | 100 | 82.25 | 11.44 | 94.99 | 2.22 |
| PC1PKG104 | LAYS ANCIENNE SEL RECL 12X350GR FR/340030447 | 40 | 45 | 87.45 | 1.64 | 89.14 | 0.27 |
| PC1PKG105 | LAYS CHIPS BBQ 24X27.5GR FEX/340017926 | 100 | 100 | 78.21 | 6.92 | 84.02 | 0 |
| PC1PKG106 | LAYS ANCIENNE SEL 20X150GR FR/340024132 | 80 | 90 | -0.89 | 29.64 | 61.32 | 102.06 |
| PC1PKG107 | LAYS ANC.SEL WIP 120X27.5GR FR/340027521 | 100 | 100 | 39.89 | 48.5 | 79.47 | 2.53 |

3. Collection Tab shows the performance of entity selected. In this example, the Packaging Department PC1 has been selected which includes Packaging Units displayed. Click anywhere on the individual packaging station to drill down to individual station.

Global Shop Floor Tools (Snacks MES)



Viewing Packaging Unit Performance in Collection Tab

| Unit (Current Status) | Current Product | Current Product Setpoint | NE | D | T | W |
|-----------------------|---|--------------------------|-------|-------|-------|-------|
| PC2PKG201 | LAYS ANCIENNE SEL 15X300GR FR/340024174 | 40.0 | 47.20 | 38.81 | 77.95 | 1.048 |

Unit Status

REAL-TIME CURRENT

Green – Bagmaker Currently Running

PC2PKG201

Red – Bagmaker Currently Not Running (any reason)

PCLPKG103

Current Product by Bagmaker

LAYS ANCIENNE SEL 15X300GR FR/340024174

Current Setpoint – Current setpoint by Machine Operator

- **Green** – Equipment Setpoint at or above nameplate for running product
 - **Red** – Setpoint below nameplate rate defined for running product

One Single Packaging Unit consists of:

1. Multihead Weigher
 2. Bagmaker
 3. CheckWeigher or Inspector
 4. ACP

Unit Status

based on TIMEFRAME SELECTED

- NE or TE
 - D – Downtime at Unit Level
 - T - Throughput at Unit Level
 - W - Waste at Unit Level
 - Green – At Goal or above
 - Yellow – Between lower warning and Goal
 - Red – Below Goal

Viewing Packaging Unit Performance

1. Select 'Individual Station' as Entity



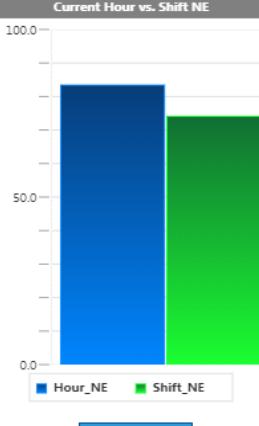
Dials reflect performance for Entity Selected, the Packaging Unit in this example

2. Select any Analysis Tab



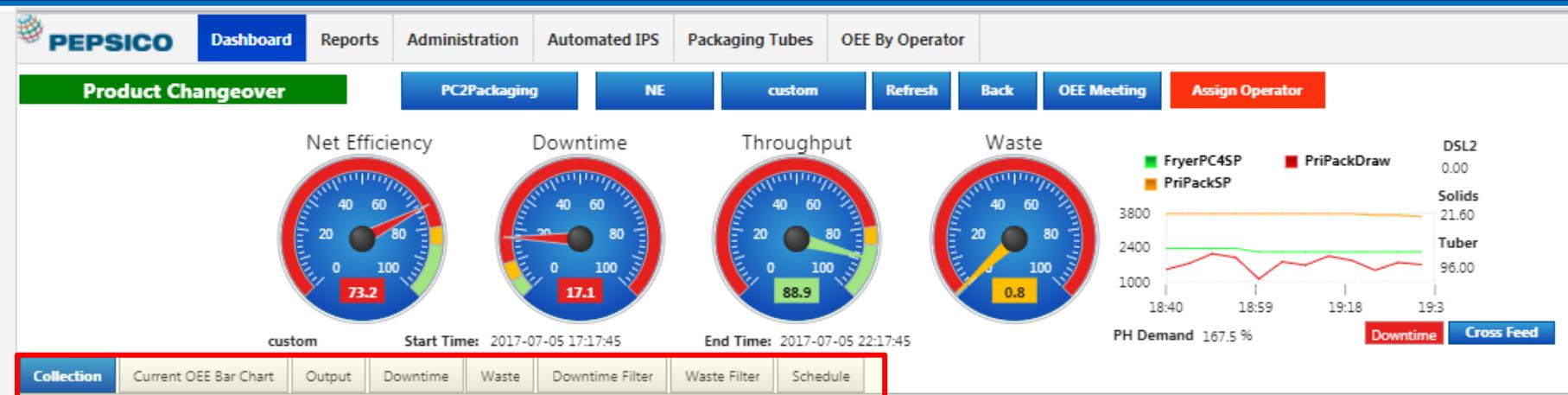
3. Analysis area displays detailed performance information based on selected tab

| UnitName | StartTime | End Time | Duration | Reason 1 | Reason 2 | Reason 3 | Reason 4 | |
|-----------|---------------------|---------------------|----------|-----------|-------------|----------|--------------------------------|--|
| PC1PKG101 | 2018-01-09 19:05:22 | 2018-01-09 19:05:33 | 0.18 | Unplanned | Operational | BMK | Max Rego Correct | |
| PC1PKG101 | 2018-01-09 19:03:42 | 2018-01-09 19:05:14 | 1.53 | Unplanned | Operational | BMK | Out Of Film & B/Seal Jaw Clean | |
| PC1PKG101 | 2018-01-09 18:52:54 | 2018-01-09 18:54:36 | 1.70 | Unplanned | Operational | BMK | ESTOP | |
| PC1PKG101 | 2018-01-09 18:37:38 | 2018-01-09 18:38:29 | 0.85 | Unplanned | Operational | BMK | Metal Detect | |



Configure

Packaging - Real time performance Gauges and Analysis Tabs



Packaging Performance Gauges

- NE, TE, AU
- Downtime
- Throughput
- Waste

Packaging Performance Tabs

- Collection – Packaging Units Performance
- Current OEE Bar Chart – NE Hour & Shift
- Output - Production Trends
- Downtime – Downtime Events
- Waste – Waste Trends
- Downtime Filter – Downtime Events
- Waste Filter – Waste Trends
- Schedule – Make vs. Plan

Processing Mini-Trend

- Fryer Setpoint
- Packaging Setpoint
- Packaging Draw
- % Packaging Hall Demand
- Downtime ALERT Downtime
- Slowrunning ALERT Slowtime

Processing

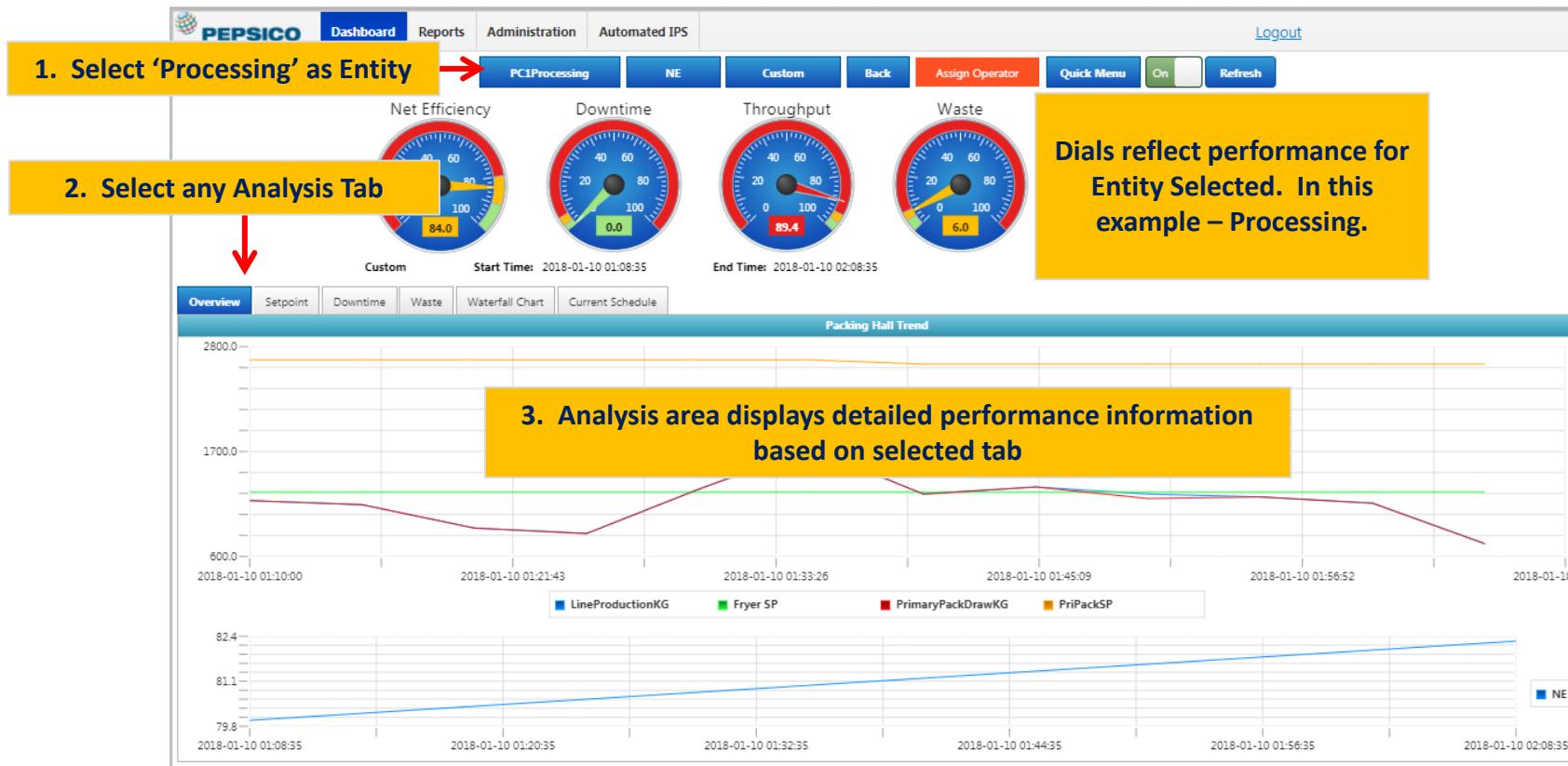
Viewing Processing Performance

1. Select 'Processing' as Entity →

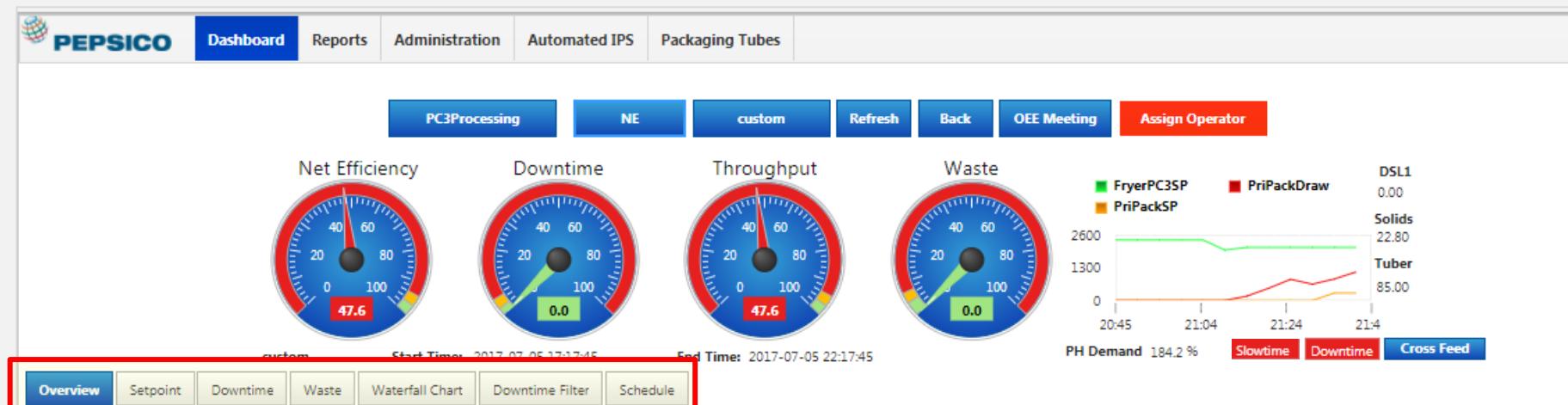
2. Select any Analysis Tab

Dials reflect performance for Entity Selected. In this example – Processing.

3. Analysis area displays detailed performance information based on selected tab



Processing - Real time performance Gauges and Analysis Tabs



Processing Performance Gauges

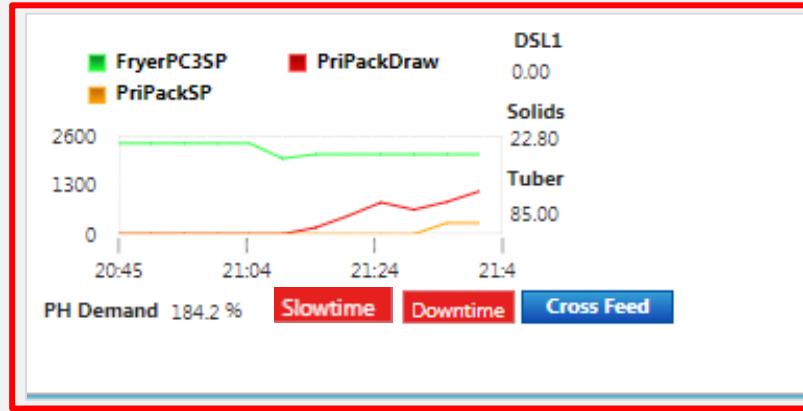
- NE, TE, AU
- Downtime
- Throughput
- Waste

Processing Performance Tabs

- Overview - Production Trends
- Setpoint – Setpoint Changes
- Downtime – Downtime Events
- Waste – Waste Detail
- Waterfall Chart – TE Losses
- Downtime Filter – Downtime Events
- Schedule – Make vs. Plan

Processing Mini-Trend

- Fryer Setpoint
- Packaging Setpoint
- Packaging Draw
- % Packaging Hall Demand
- Downtime ALERT Downtime
- Slowrunning ALERT Slowtime



Processing Mini-Trend provides information for last 60 Minutes regardless of timeframe selected and can be viewed from Main Dashboard for both Processing and Packaging

- Fryer Setpoint ■ FryerPC3SP
- Packaging Setpoint ■ PriPackSP
- Packaging Draw ■ PriPackDraw
- PH Demand: % Packaging Hall Demand
- Downtime ALERT
- Slowrunning ALERT

| | |
|---|-------|
| FRYER SP | 2700 |
| PRIPACK SP | 2310 |
| PACKING HALL DEMAND | 85.6% |
| Calculation PH Demand = PRIPACK SP/ FRYER SP * 100 | |

PH Demand: This is Packing Hall Demand. It represents Packing Hall Set point capacity to keep up with Fryer Set Point.

It is a measure how well the Packaging department is keeping up with Fryer Set Point capacity. If the Fryer Output outstrips the current Set Point Capacity for PrimaryPack, the result will be waste with unpackaged chips falling to the floor. Packing Hall Demand would be monitored to ensure it does not drop below 120% of the Fryer output. This is also known as 'Over pull of the Fryer'.

Visibility is there on the Dashboard for both Processing and Packaging, because the information can be used to take proactive action in either or both areas, such as, slow down the fryer, bring up another packaging line, chase whether packaging can lift the set points, or otherwise improve packaging availability.

Global Shop Floor Tools (Snacks MES)

KPIs - Data Source and Collection Method



| KPI Gauge | Line Level | Processing Line | Packaging Department | Packaging Unit |
|------------|---|---|---|---|
| NE/TE | Line Efficiency Automated | Fryer Efficiency Automated | Based on Sum of Dept. Bagmaker Efficiencies Automated | Based on Individual Bagmaker Efficiency Automated |
| Downtime | Based on Fryer Downtime Semi Automated | Based on Fryer Downtime Semi Automated | Based on Sum of Dept. Bagmaker Downtimes Automated | Based on Individual Bagmaker Downtime Automated |
| Throughput | Based on Packaging Dept. Output (Total Cases Produced converted to base weight) Semi Automated | Based on Fryer Output Semi Automated | Based on Sum of Dept. Bagmaker Outputs Automated | Based on Individual Bagmaker Output Automated |
| Waste | Based on Multiple Waste Locations Manual | Based on Multiple Waste Locations Manual | Based on Sum of Dept. Inspector or Checkweigher Rejects Automated | Based on Inspector or Checkweigher Rejects Automated |

Automated – No Manual intervention (Full Data from PLC)

Semi Automated - Requires manual updates

Manual – Requires manual entry

Note: Packaging Dept includes all Packaging Machines in selected Packaging Bank regardless of fryer assignment

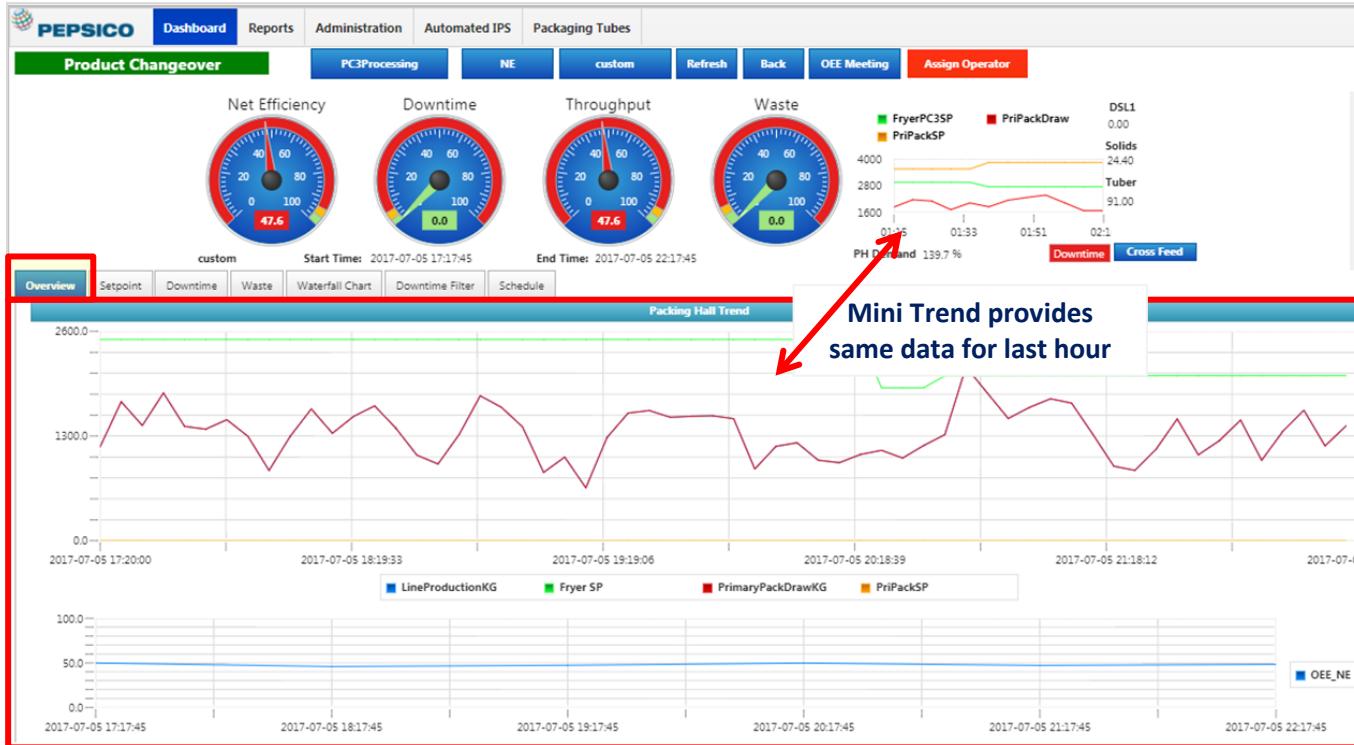


Performance Trends

Performance Trends Processing

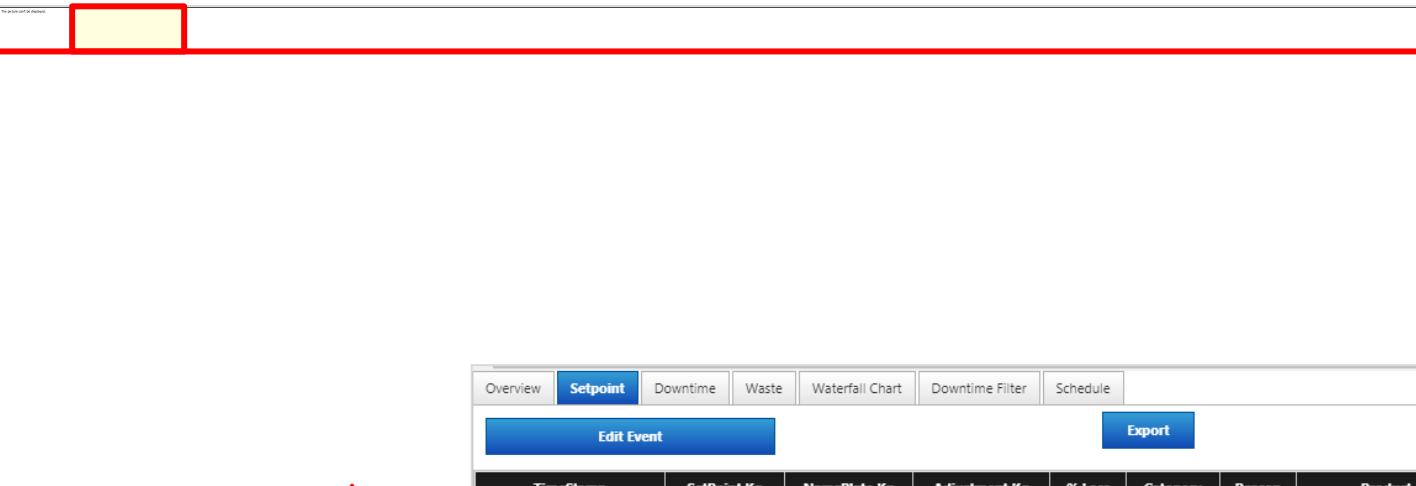
Global Shop Floor Tools (Snacks MES)

Processing – Overview Tab



- Hover over line to see the details of that point
- Line Production KG = Packaging Draw KG + Waste Events; unless there a waste event, the blue line will be behind red line

- Gauges display performance for Entire Processing Line
- Blue Line – Line Production KG
■ LineProductionKG
- Green Line – Fryer Setpoint KG
■ Fryer SP
- Red Line – Packaging Draw KG
■ PrimaryPackDrawKG
- Yellow Line – Packaging Setpoint KG
■ PriPackSP
- Blue Line - NE
■ OEE_NE



| The action will be recorded | |
|-----------------------------|--|
| | |

- Trend of Nameplate calculation (solids based), and the operator entered Setpoint



| Setpoint | | | | | | | | |
|---------------------|-------------|--------------|---------------|--------|----------|--------|--------------------|---------|
| Edit Event | | Export | | | | | | |
| TimeStamp | SetPoint Kg | NamePlate Kg | Adjustment Kg | % Loss | Category | Reason | Product | Comment |
| 2017-07-05 20:39:05 | 2060.00 | 2743.00 | -40.00 | 24.90 | | | CR-Flats Chips ips | |
| 2017-07-05 20:39:02 | 2100.00 | 2743.00 | +50.00 | 23.44 | | | CR-Flats Chips ips | |
| 2017-07-05 20:38:58 | 2050.00 | 2743.00 | +10.00 | 25.26 | | | CR-Flats Chips ips | |
| 2017-07-05 20:38:55 | 2040.00 | 2743.00 | +10.00 | 25.63 | | | CR-Flats Chips ips | |
| 2017-07-05 20:38:52 | 2030.00 | 2743.00 | +130.00 | 25.99 | | | CR-Flats Chips ips | |
| 2017-07-05 20:38:49 | 1900.00 | 2743.00 | -200.00 | 30.73 | | | CR-Flats Chips ips | |
| 2017-07-05 20:22:04 | 2100.00 | 2743.00 | -100.00 | 23.44 | | | CR-Flats Chips ips | |

- Event record of every operator setpoint change.
- Use the Setpoint List button to input reasons

Setpoint Trend

Setpoint List

Processing – Entering Setpoint Change Reasons

| Overview | Setpoint | Downtime | Waste | Waterfall Chart | Downtime Filter | Schedule | | |
|---------------------|-------------|--------------|---------------|-----------------|-----------------|---------------|--------------------|---------|
| | Edit Event | | | | | Export | | |
| TimeStamp | SetPoint Kg | NamePlate Kg | Adjustment Kg | % Loss | Category | Reason | Product | Comment |
| 2017-07-05 20:39:05 | 2060.00 | 2743.00 | -40.00 | 24.90 | | | CR-Flats Chips ips | |
| 2017-07-05 20:39:02 | 2100.00 | 2743.00 | +50.00 | 23.44 | | | CR-Flats Chips ips | |
| 2017-07-05 20:38:58 | 2050.00 | 2743.00 | +10.00 | 25.26 | | | CR-Flats Chips ips | |



Edit Setpoint Event

| | | | |
|---------------------|-----------------------------|---------------|---------------------|
| Description | SP_2017-07-05_20:38:56 | Timestamp | 2017-07-05 13:38:58 |
| Category | Operational | | |
| Reason | Auto Palletising efficiency | | |
| Previous Comments | | | |
| Add Comment | | | |
| Comment | | | |
| Update Event | | Cancel | |

1. Select the Event to edit – Selecting will highlight event in blue
2. Select Edit Event button 
3. Enter
 - a. Category
 - b. Reason
 - c. Comments as needed
4. Select Update Event

Processing – Downtime Tab

Overview
Setpoint
Downtime
Waste
Waterfall Chart
Downtime Filter
Schedule

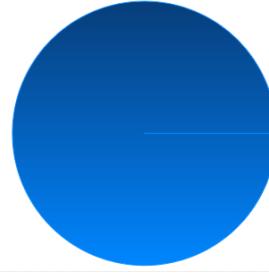
Micro Stops:

Show All Data
▼
CSV Export

| UnitName | StartTime | EndTime | Duration | Reason1 | Reason2 | Reason3 | Reason4 | Comment | Shift |
|---------------|---------------------|---------------------|----------|-----------|-------------|---------|-------------|---------|---------|
| PC1Processing | 25/08/2017 14:08:23 | 27/08/2017 18:06:39 | 2031.62 | Unplanned | Operational | Line | Unspecified | | Unknown |
| PC1Processing | 24/08/2017 20:01:36 | 24/08/2017 20:11:02 | 9.43 | Unplanned | Operational | Line | Unspecified | | Unknown |
| PC1Processing | 24/08/2017 04:11:13 | 24/08/2017 04:23:05 | 11.87 | Unplanned | Operational | Line | Unspecified | | Unknown |
| PC1Processing | 22/08/2017 02:58:41 | 22/08/2017 03:29:03 | 30.37 | Un | | | | | |

Downtime Reasons
Chronological Events

Downtime Reasons



Downtime Reasons
Chronological Events
CSV Export

| Category | Reason | Count | % Downtime | Total Duration | MTBF | MTTR |
|----------|-------------|-------|------------|----------------|--------------|--------------|
| Line | Unspecified | 16 | 100.00 | 3618.27 | 07:10:46 hrs | 03:46.08 hrs |

Chronological Events

Chronological Events

- List of downtime events. Processing Downtime Events require Operator Interaction to update events with reasons and comments
- Select an individual row to Edit or Split an event
- Data can be filtered to exclude events based on duration

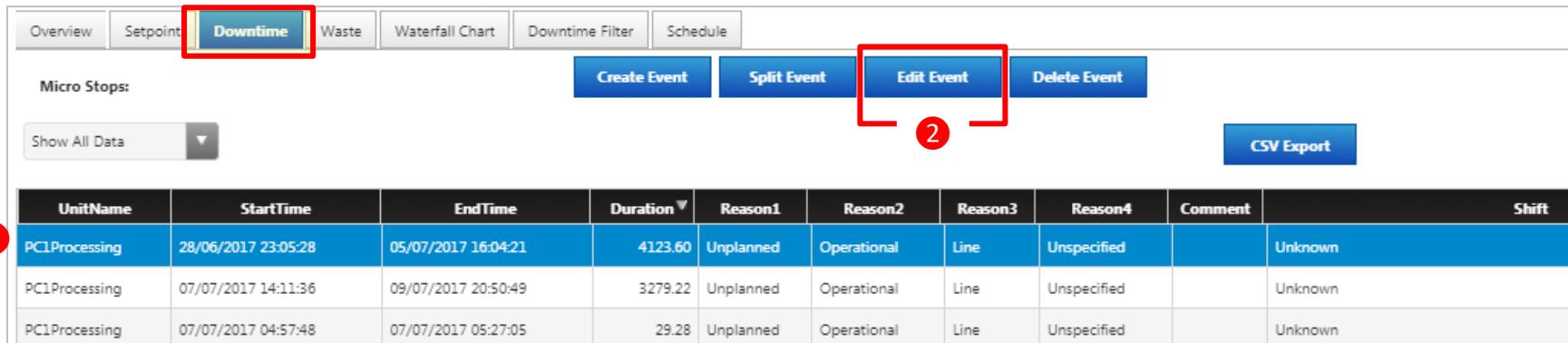
Downtime Reasons

Downtime Reasons

- Downtime Reasons button switches display for graphical analysis
- Table displays Reason, Count, Duration, MTTF and MTTR

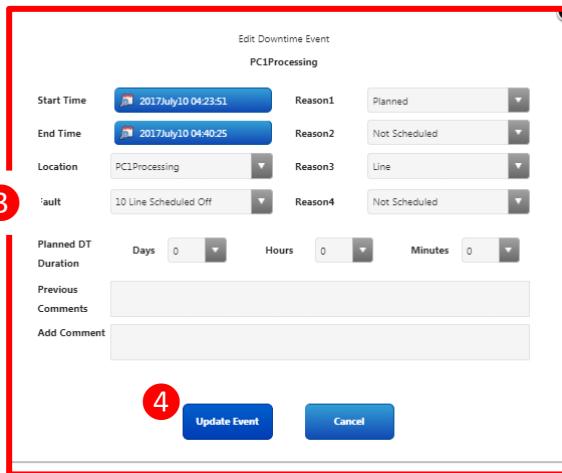
Processing or Packaging

Editing a Downtime Event from Downtime Tab



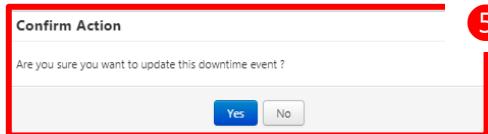
The screenshot shows the Downtime tab selected (highlighted by a red box). Below it is a table of downtime events. A red box highlights the 'Edit Event' button in the top right of the table header. A red circle labeled '2' is placed over the 'Edit Event' button.

| UnitName | StartTime | EndTime | Duration | Reason1 | Reason2 | Reason3 | Reason4 | Comment | Shift |
|---------------|---------------------|---------------------|----------|-----------|-------------|---------|-------------|---------|---------|
| PC1Processing | 28/06/2017 23:05:28 | 05/07/2017 16:04:21 | 4123.60 | Unplanned | Operational | Line | Unspecified | | Unknown |
| PC1Processing | 07/07/2017 14:11:36 | 09/07/2017 20:50:49 | 3279.22 | Unplanned | Operational | Line | Unspecified | | Unknown |
| PC1Processing | 07/07/2017 04:57:48 | 07/07/2017 05:27:05 | 29.28 | Unplanned | Operational | Line | Unspecified | | Unknown |



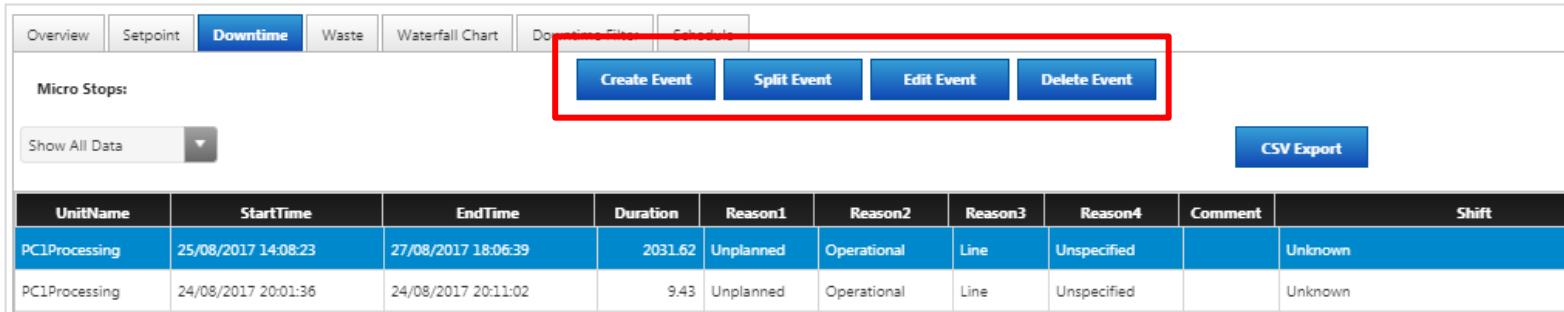
The dialog box is titled 'Edit Downtime Event' and shows details for a PC1Processing event. It includes fields for Start Time (2017/07/10 04:23:51), End Time (2017/07/10 04:40:25), Location (PC1Processing), Reason1 (Planned), Reason2 (Not Scheduled), Reason3 (Line), Reason4 (Not Scheduled), and a 'Fault' dropdown (10 Line Scheduled Off). It also has sections for Planned DT Duration (Days 0, Hours 0, Minutes 0) and Previous Comments. At the bottom are 'Update Event' and 'Cancel' buttons. A red box surrounds the entire dialog, and a red circle labeled '3' is placed near the 'Fault' dropdown.

- User Privileges may be required to Edit a Downtime Events
1. Select the event to edit. Selecting will highlight event in BLUE
 2. Select Edit Event button
 3. Update Fault and Reasons if necessary
 - a) Dark Hours, Planned Downtime, Unplanned + additional Reasons
 - b) Confirm Start/End Time
 4. Select Update Event to make Save
 5. Confirm Action



Processing or Packaging

Creating, Splitting or Deleting a Downtime Event

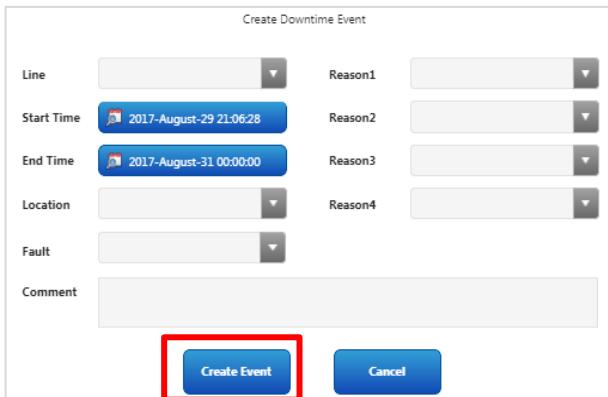


Overview Setpoint Downtime Waste Waterfall Chart Downtime Filter Schedule

Micro Stops:

Show All Data CSV Export

| UnitName | StartTime | EndTime | Duration | Reason1 | Reason2 | Reason3 | Reason4 | Comment | Shift |
|---------------|---------------------|---------------------|----------|-----------|-------------|---------|-------------|---------|---------|
| PC1Processing | 25/08/2017 14:08:23 | 27/08/2017 18:06:39 | 2031.62 | Unplanned | Operational | Line | Unspecified | | Unknown |
| PC1Processing | 24/08/2017 20:01:36 | 24/08/2017 20:11:02 | 9.43 | Unplanned | Operational | Line | Unspecified | | Unknown |



Create Downtime Event

Line:

Start Time: 2017-August-29 21:06:28

End Time: 2017-August-31 00:00:00

Location:

Fault:

Comment:

Reason1:

Reason2:

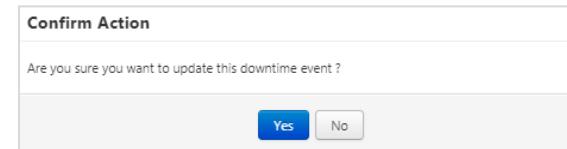
Reason3:

Reason4:

Buttons: Update Event, Split Event, Delete Event, Create Event, Cancel

User Privileges required to Create/Edit/Split or Delete Events

1. Select the event to edit. Selecting will highlight event in blue
2. Select appropriate Create, Split or Delete Event button
3. Update fields as needed
 - a) Confirm Start/End Time
4. Select Create, Edit, Split, or Delete Event to make save
5. Confirm Action



Confirm Action

Are you sure you want to update this downtime event?

Buttons: Yes, No

Processing or Packaging

Creating, Splitting or Deleting a Downtime Event

Overview Setpoint **Downtime** Waste Waterfall Chart Downtime Fixes Schedule

Micro Stops:

Show All Data ▾

| UnitName | StartTime | EndTime | Duration | Reason1 | Reason2 | Reason3 | Reason4 |
|---------------|---------------------|---------------------|----------|-----------|-------------|---------|-------------|
| PC1Processing | 25/08/2017 14:08:23 | 27/08/2017 18:06:39 | 2031.62 | Unplanned | Operational | Line | Unspecified |
| PC1Processing | 24/08/2017 20:01:36 | 24/08/2017 20:11:02 | 9.43 | Unplanned | Operational | Line | Unspecified |

Create Event **Split Event** **Edit Event** **Delete Event**

Downtime Duration functionality.

Once a downtime event has started, they can set the Planned Downtime Duration for the existing event. The system will monitor when the event closes and set the event accordingly.

If the event actually closes after the Planned Downtime Duration, it will split the event for Planned Downtime for the Planned Duration and Overrun for the time after the Planned Duration.

Create Downtime Event

| | | | |
|------------|-------------------------|--------------|--------------|
| Line | Reason1 | Update Event | |
| Start Time | 2017-August-29 21:06:28 | Reason2 | Split Event |
| End Time | 2017-August-31 00:00:00 | Reason3 | Delete Event |
| Location | Reason4 | | |
| Fault | | | |
| Comment | | | |

Create Event **Cancel**

User Privileges required to Create/Edit/Split or Delete Events

1. Select the event to edit. Selecting will highlight event in blue
2. Select appropriate Create, Split or Delete Event button
3. Update fields as needed
 - a) Confirm Start/End Time
4. Select Create, Edit, Split, or Delete Event to make save
5. Confirm Action

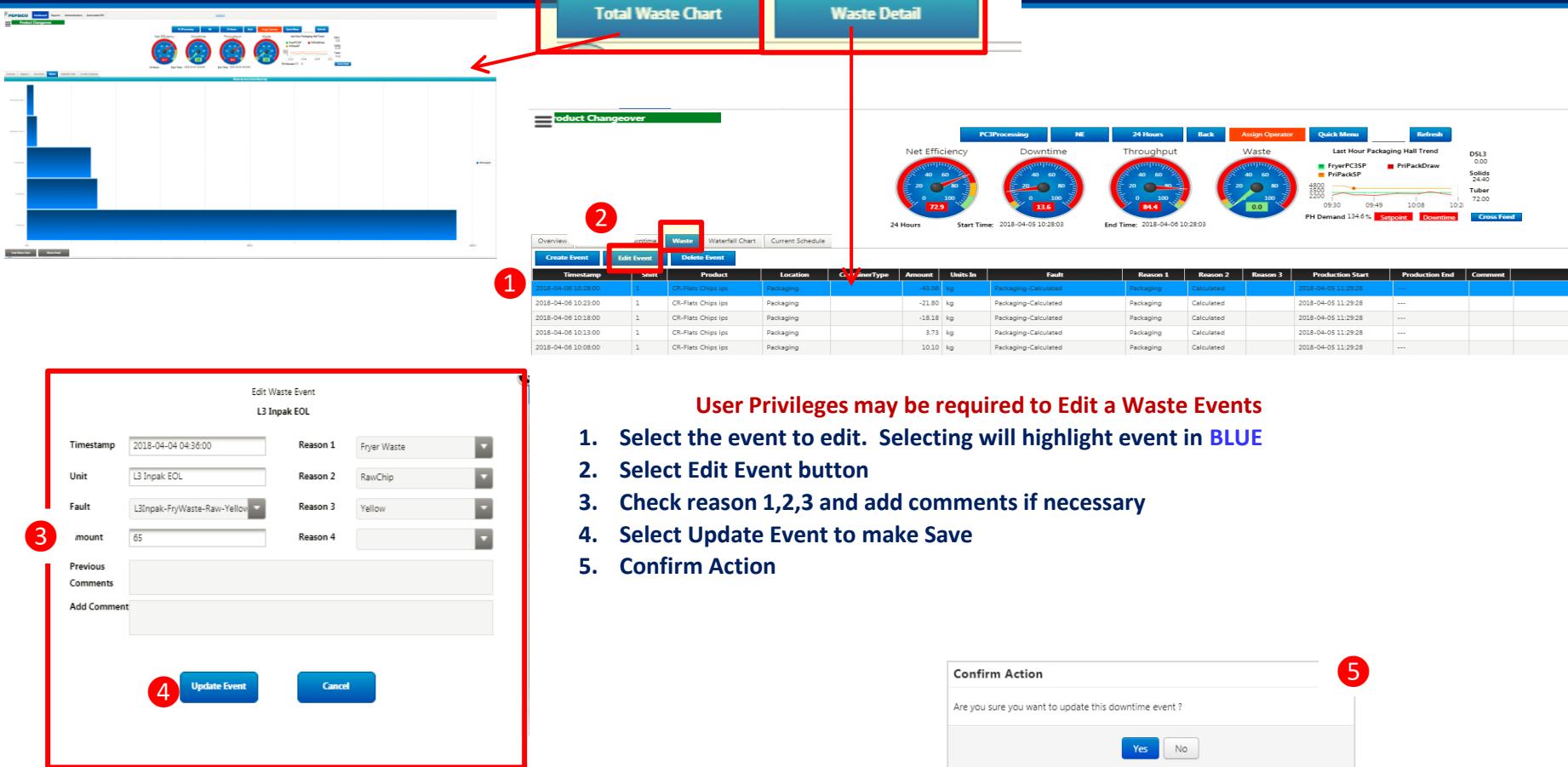
Confirm Action

Are you sure you want to update this downtime event ?

Yes **No**

Global Shop Floor Tools (Snacks MES)

Processing – Waste Tab



User Privileges may be required to Edit a Waste Events

1. Select the event to edit. Selecting will highlight event in **BLUE**
2. Select **Edit Event** button
3. Check reason 1,2,3 and add comments if necessary
4. Select **Update Event** to make Save
5. Confirm Action

| Timestamp | Shift | Product | Location | ContainerType | Amount | Units In | Fault | Reason 1 | Reason 2 | Reason 3 | Production Start | Production End | Comment |
|---------------------|-------|--------------------|-----------|---------------|--------|----------------------|-----------|------------|----------|----------|---------------------|---------------------|---------|
| 2018-04-06 10:28:00 | 1 | CR-Flats Chips ips | Packaging | -41.00 | kg | Packaging-Calculated | Packaging | Calculated | | | 2018-04-05 11:29:28 | 2018-04-05 11:29:28 | --- |
| 2018-04-06 10:23:00 | 1 | CR-Flats Chips ips | Packaging | -21.80 | kg | Packaging-Calculated | Packaging | Calculated | | | 2018-04-05 11:29:28 | 2018-04-05 11:29:28 | --- |
| 2018-04-06 10:18:00 | 1 | CR-Flats Chips ips | Packaging | -18.18 | kg | Packaging-Calculated | Packaging | Calculated | | | 2018-04-05 11:29:28 | 2018-04-05 11:29:28 | --- |
| 2018-04-06 10:13:00 | 1 | CR-Flats Chips ips | Packaging | 3.73 | kg | Packaging-Calculated | Packaging | Calculated | | | 2018-04-05 11:29:28 | 2018-04-05 11:29:28 | --- |
| 2018-04-06 10:08:00 | 1 | CR-Flats Chips ips | Packaging | 10.10 | kg | Packaging-Calculated | Packaging | Calculated | | | 2018-04-05 11:29:28 | 2018-04-05 11:29:28 | --- |

1. Select the event to edit. Selecting will highlight event in **BLUE**

2. Select **Edit Event** button

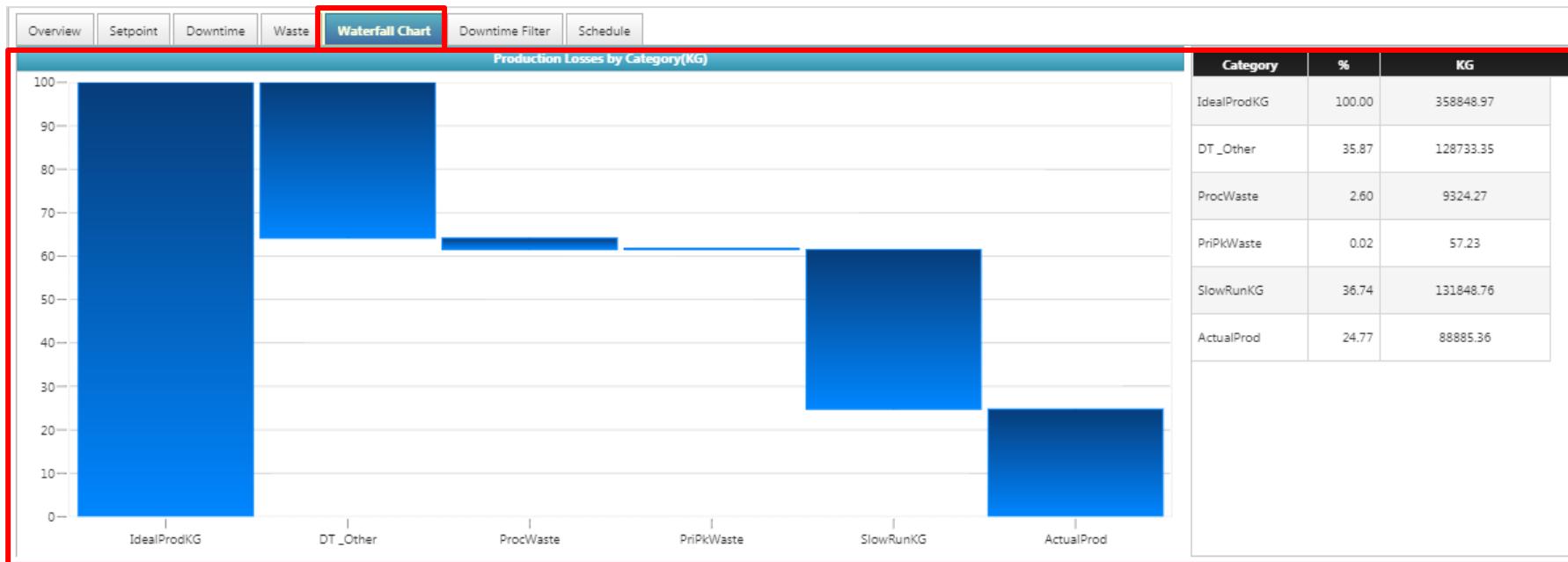
3. Check reason 1,2,3 and add comments if necessary

4. Select **Update Event** to make Save

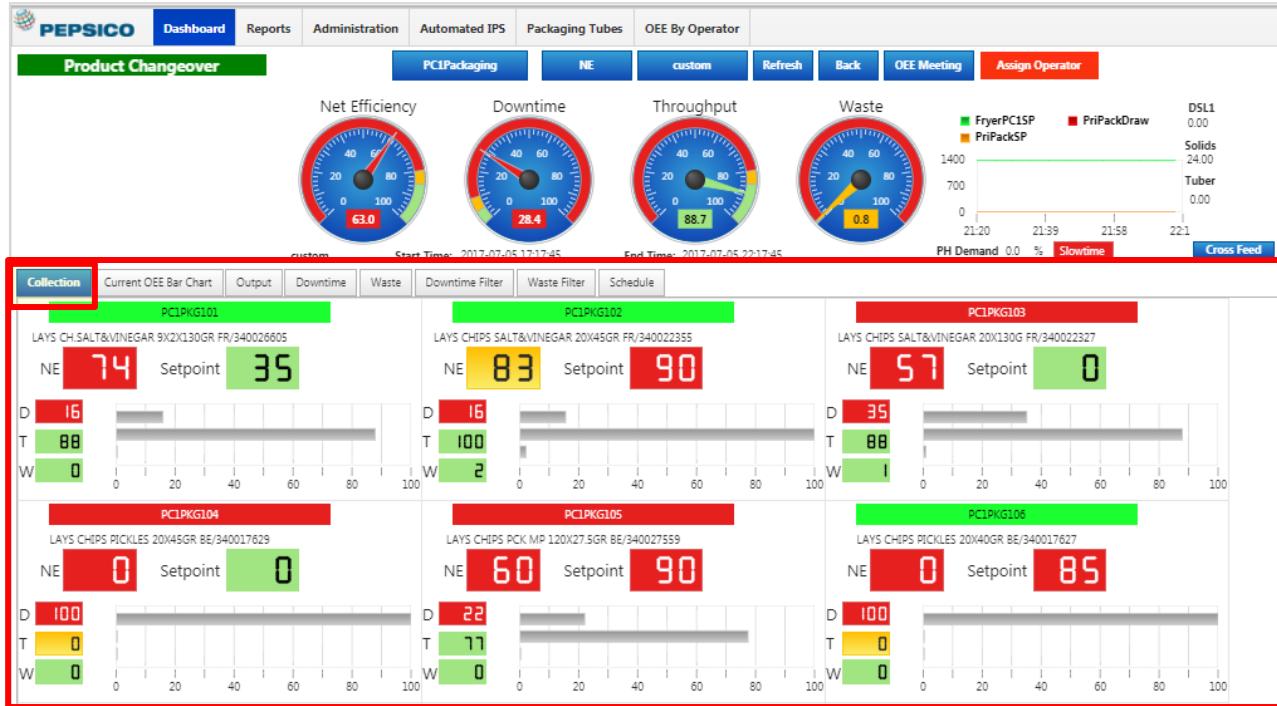
5. Confirm Action

Processing – Waterfall Chart Tab

- Ideal Production – Left bar
- Good Cases Produced – Right bar
- Percent Loss by Category
- Table to the right of the chart
- Percent values for each Loss Category
- Case impact for each Loss Category



Performance Trends Packaging DEPARTMENT



- Gauges display performance for Entire Department
- Collection Tab displays performance of each Packaging Unit in that department
- Individual Units displayed in:
 - Green – Running
 - Red – Stopped
- KPI Background color:
 - Red – KPI value falls below lower reject spec value
 - Amber – KPI value falls between lower reject and lower warning spec value
 - Green – KPI value falls above to target spec value
- Setpoint:
 - Red – Equipment setpoint below product name plate
 - Green - Equipment setpoint equal or above product name plate

Drill down to an individual Packaging Unit by clicking on Unit

Bagmaker Status REAL-TIME CURRENT

Green – Bagmaker Currently Running

PC1PKG101

Red – Bagmaker Currently Not Running (any reason)

PC1PKG103

Active Product by Bagmaker

LAYS CH.SALT&VINEGAR 9X2X130GR FR/340026605

Setpoint – Current setpoint by Machine Operator

- Green – Equipment Setpoint at or above nameplate for running product
- Red – Setpoint below nameplate rate defined for running product



Bagmaker Status based on TIMEFRAME SELECTED

- NE or TE
- Downtime – Unit Level
- Throughput – Unit Level
- Waste – Unit Level
- Green – At Goal or above
- Yellow – Between lower warning and Goal
- Red – Below Goal

One Single Packaging Unit consists of:

1. Multihead Weigher
2. Bagmaker,
3. CheckWeigher or Inspector
4. ACP

Packaging UNIT – Collection Tab

| Unit (Current Status) | Current Product | Current Product Setpoint | NE | D | T | W |
|-----------------------|---|--------------------------|-------|-------|-------|-------|
| PC2PKG201 | LAYS ANCIENNE SEL 15X300GR FR/340024174 | 40.0 | 47.20 | 38.81 | 77.95 | 1.048 |

Unit Status

REAL-TIME CURRENT

Green – Bagmaker Currently Running

PC1PKG101

Red – Bagmaker Currently Not Running (any reason)

PC1PKG103

Current Product by Bagmaker

LAYS CH.SALT&VINEGAR 9X2X130GR FR/340026605

Current Setpoint – Current setpoint by Machine Operator

- **Green** – Equipment Setpoint at or above nameplate for running product
- **Red** – Setpoint below nameplate rate defined for running product

| Product | Current Product | Current Product Setpoint | W | T | D | NE |
|-----------|---|--------------------------|------|-------|-------|------|
| PC1PKG101 | LAYS ANCIENNE SEL 15X300GR FR/340024174 | 40.0 | 4.00 | 4.70 | 36.87 | LOW |
| PC1PKG103 | LAYS ANCIENNE SEL 15X300GR FR/340024172 | 40.0 | 4.00 | 20.00 | 36.87 | OKAY |
| PC1PKG101 | LAYS ANCIENNE SEL 15X300GR FR/340024174 | 40.0 | 4.00 | 4.70 | 36.87 | LOW |
| PC1PKG103 | LAYS ANCIENNE SEL 15X300GR FR/340024172 | 40.0 | 4.00 | 2.00 | 36.87 | OKAY |
| PC1PKG101 | LAYS ANCIENNE SEL 15X300GR FR/340024174 | 40.0 | 4.00 | 4.70 | 36.87 | LOW |
| PC1PKG103 | LAYS ANCIENNE SEL 15X300GR FR/340024172 | 40.0 | 4.00 | 2.00 | 36.87 | OKAY |
| PC1PKG101 | LAYS ANCIENNE SEL 15X300GR FR/340024174 | 40.0 | 4.00 | 4.70 | 36.87 | LOW |
| PC1PKG103 | LAYS ANCIENNE SEL 15X300GR FR/340024172 | 40.0 | 4.00 | 2.00 | 36.87 | OKAY |

One Single Packaging Unit consists of:

1. Multihead Weigher
2. Bagmaker
3. CheckWeigher or Inspector
4. ACP

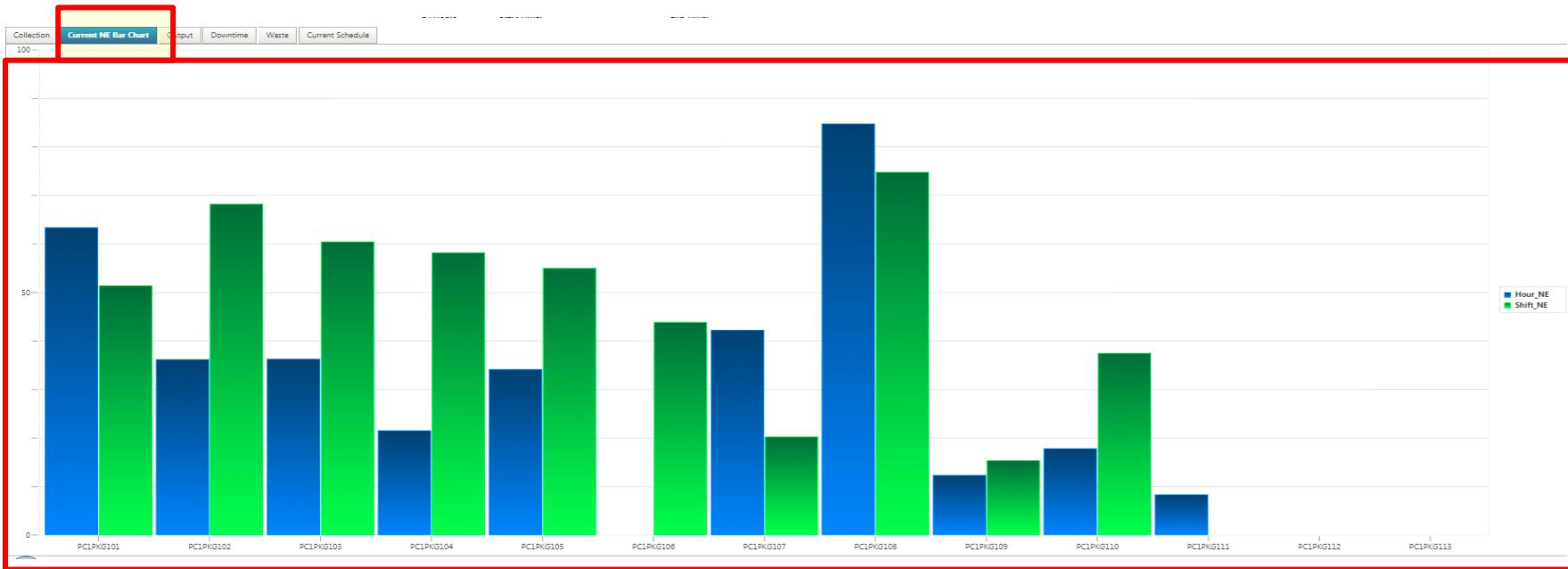
Unit Status

based on TIMEFRAME SELECTED

- NE or TE
- D – Downtime at Unit Level
- T - Throughput at Unit Level
- W - Waste at Unit Level
- **Green** – At Goal or above
- **Yellow** – Between lower warning and Goal
- **Red** – Below Goal

NE OEE% for each unit (zone or station) – Metric displayed is always NE

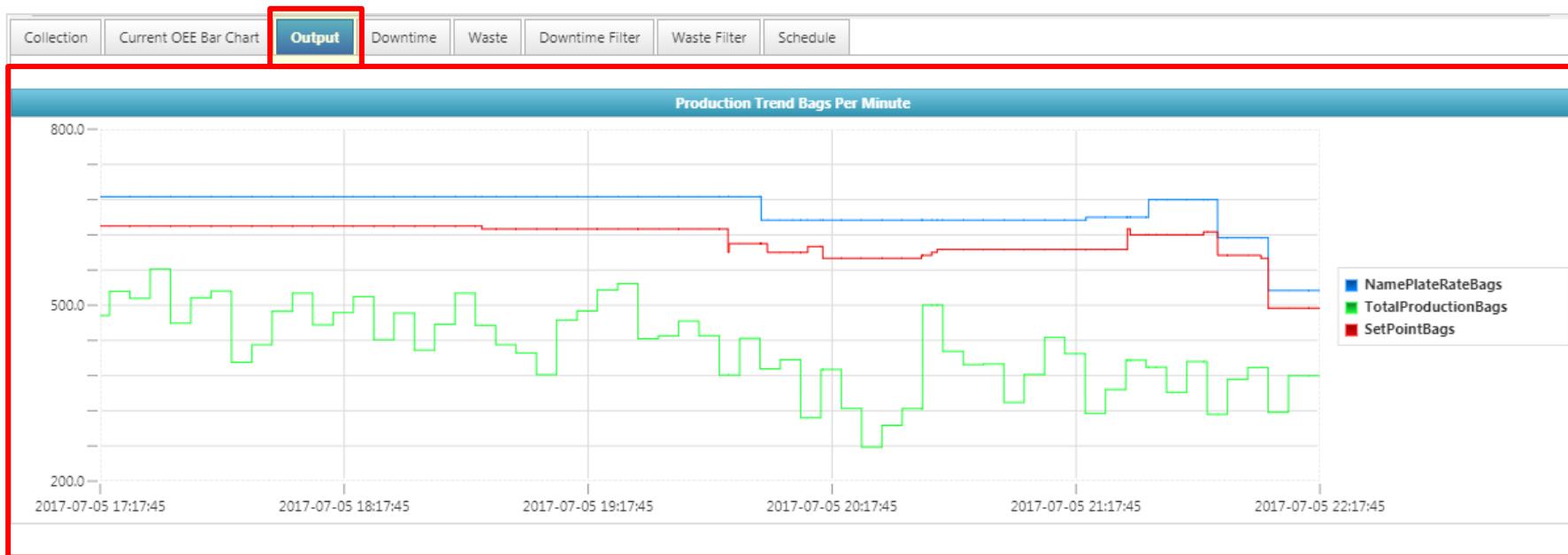
- Blue = performance over the last hour
- Green = performance for shift so far



Production Trend Bags per Minute

- Blue – Nameplate Rate Bags
- Green – Total Production Bags
- Red – Machine Operator Setpoint Bags

If looking at Entire Packaging Department, this number would be SUM of all Bagmakers for selected reporting timeframe



Global Shop Floor Tools (Snacks MES)

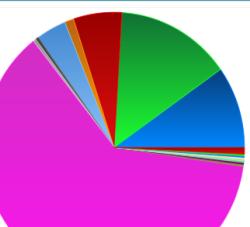
Packaging Department – Downtime Tab

| Collection | Current OEE Bar Chart | Output | Downtime | Waste | Downtime Filter | Waste Filter | Schedule | | |
|---|-----------------------|---------------------|-----------------|----------------|-----------------|----------------|-------------------|----------------|--------------|
| <div style="display: flex; justify-content: space-between;"> Micro Stops: <div style="border: 1px solid #ccc; padding: 2px; margin-right: 10px;"> Show All Data Exclude less than 1 minute </div> <div style="border: 1px solid #ccc; padding: 2px; margin-right: 10px;"> Show All Data Exclude less than 10 sec Exclude less than 30 sec </div> <div style="border: 1px solid #ccc; padding: 2px; margin-right: 10px;"> Split Event </div> <div style="border: 1px solid #ccc; padding: 2px; margin-right: 10px;"> Edit Event </div> <div style="border: 1px solid #ccc; padding: 2px; margin-right: 10px;"> CSV Export </div> </div> | | | | | | | | | |
| UnitName | StartTime | EndTime | Duration | Reason1 | Reason2 | Reason3 | Reason4 | Comment | Shift |
| PC1PKG109 | 2017-07-05 22:15:15 | 2017-07-05 22:31:26 | 2.72 | Unplanned | Starved | MHW | Starved for Chips | C1 | |
| PC1PKG105 | 2017-07-05 22:14:45 | 2017-07-05 22:15:04 | 0.32 | Unplanned | Starved | MHW | Starved for Chips | C1 | |
| PC1PKG107 | 2017-07-05 22:14:10 | 2017-07-05 22:14:22 | 0.20 | Unplanned | Opx | | | | |
| PC1PKG112 | 2017-07-05 22:13:31 | 2017-07-05 22:13:53 | 0.37 | Unplanned | Opx | | | | |
| PC1PKG109 | 2017-07-05 22:13:20 | 2017-07-05 22:13:22 | 0.03 | Unplanned | Starved | | | | |
| PC1PKG109 | 2017-07-05 22:12:52 | 2017-07-05 22:13:16 | 0.40 | Unplanned | Opx | | | | |
| PC1PKG101 | 2017-07-05 22:11:47 | 2017-07-05 22:11:49 | 0.03 | Unplanned | Starved | | | | |
| PC1PKG101 | 2017-07-05 22:11:25 | 2017-07-05 22:11:39 | 0.23 | Unplanned | Opx | | | | |

[Downtime Reasons](#)
[Chronological Events](#)

[Collection](#)
[Current OEE Bar Chart](#)
[Output](#)
[Downtime](#)
[Waste](#)
[Downtime Filter](#)
[Waste Filter](#)
[Schedule](#)

Downtime Reasons



| Category | Reason | Count | % Downtime | Total Duration | MTBF | MTTR |
|----------|--------------------------------|-------|------------|----------------|--------------|--------------|
| MHW | Starved for Chips | 197 | 9.81 | 195.58 | 00:01:32 hrs | 00:00:59 hrs |
| ACP | ACP Fault (BM Interlock) | 124 | 14.23 | 283.72 | 00:06:04 hrs | 00:02:17 hrs |
| BMK | Fall Through | 55 | 6.00 | 119.73 | 00:07:34 hrs | 00:02:10 hrs |
| BMK | In Pause | 26 | 1.13 | 22.55 | 00:03:58 hrs | 00:00:52 hrs |
| BMK | Out Of Film & B/Seal Jaw Clean | 20 | 3.70 | 73.85 | 00:10:03 hrs | 00:03:41 hrs |
| BMK | Metal Detect | 11 | 0.39 | 7.82 | 00:05:27 hrs | 00:00:42 hrs |
| BMK | In Run | 8 | 0.35 | 6.95 | 00:07:44 hrs | 00:00:52 hrs |
| BMK | Max Rego Correct | 6 | 0.05 | 1.05 | 00:00:06 hrs | 00:00:10 hrs |
| PKG | Extended Downtime | 6 | 62.07 | 1237.90 | | 03:26:19 hrs |
| PKG | Unknown Fault | 5 | 0.28 | 5.65 | 00:02:23 hrs | 00:01:07 hrs |

Chronological Events

Chronological Events

- List of downtime events with automatic reasons populated (where available).
- Select an individual row to Edit or Split an event
- Data can be filtered to exclude events based on duration

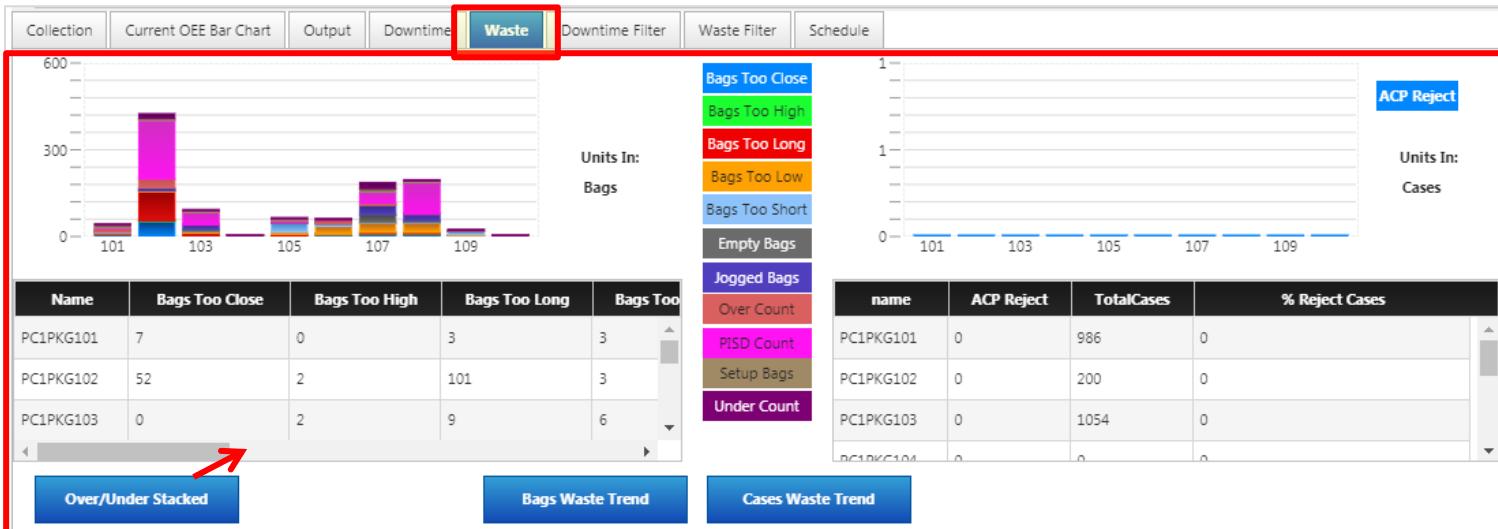
Downtime Reasons

Downtime Reasons

- Downtime Reasons button switches display for graphical analysis
- Table displays Reason, Count, Duration, MTTF and MTTR

Global Shop Floor Tools (Snacks MES)

Packaging Department – Waste Tab

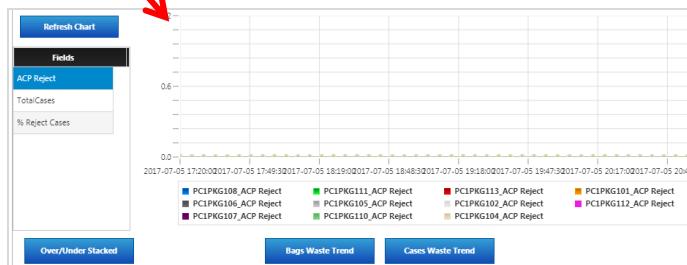
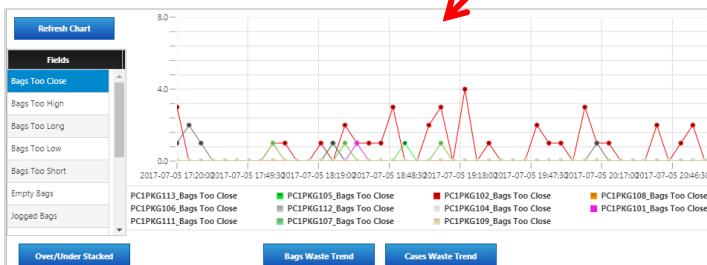


Over/Under Stacked

Stacked bar chart
for each unit
showing waste by
category

Bags Waste Trend

Cases Waste Trend



Waste Trend
button switches
display for trend
analysis view

Packaging Department – Downtime Event Details

Table to the right provides details on Downtime Event Header

| Downtime | |
|--------------------------------|---|
| KPI |  |
| Line Level | Based on Fryer Downtime |
| Processing Entity | Based on Fryer Downtime |
| Packaging Entity (Single Unit) | Based on Individual Bagmaker Downtime |
| Packaging Entity (Department) | Based on Sum of Dept. Bagmaker Downtimes |

Downtime Event Examples

PC1Packaging

| Definition | Packaging | Processing |
|------------|--|---|
| Unit Name | Packaging Machine | Fryer or Oven |
| Start Time | Event Start Time | |
| End Time | Event End Time – will show no end if event is still in progress | |
| Duration | Duration of Downtime Event - Decimal format | |
| Reason 1 | Auto – May be Planned or Unplanned No fault events become Planned after 60 Minutes No Manual updates required | Automatically captured as: Reason 1: Unplanned Reason 2: Operational Reason 3: Line Reason 4: Unspecified |
| Reason 2 | Level 2 Fault Reason (Blocked, Starved, Operational, etc.) | |
| Reason 3 | Fault Location (MHW, Bagmaker, CW or INS, ACP) | |
| Reason 4 | Available Detailed Fault | |
| Shift | Configured Shifts for Site | Manual updates required to update Reasons 1 - 4 |

PC1Packaging

| UnitName | StartTime | EndTime | Duration | Reason1 | Reason2 | Reason3 | Reason4 | Comment | Shift |
|-----------|---------------------|---------------------|----------|-----------|---------|---------|-------------------|---------|-------|
| PC1PKG109 | 2017-05-15 21:03:08 | 2017-05-15 21:03:10 | 0.03 | Unplanned | Starved | MHW | Starved for Chips | | C,3 |

PC1Processing

| UnitName | StartTime | EndTime | Duration | Reason1 | Reason2 | Reason3 | Reason4 | Comment | Shift |
|---------------|---------------------|---------|----------|-----------|-------------|---------|-------------|---------|-------|
| PC1Processing | 2017-08-12 00:35:59 | --- | 4373.07 | Unplanned | Operational | Line | Unspecified | | C,1 |

Performance Trends Packaging UNIT

Global Shop Floor Tools (Snacks MES)

Packaging Individual UNIT – Overview Tab

PEPSICO Dashboard Reports Administration Automated IPS Packaging Tubes

PC2PKG201 TE custom Refresh Back OEE Meeting Assign Operator

True Efficiency: 76.9 Downtime: 15.8 Throughput: 92.5 Waste: 1.3

FryerPC4SP PriPackDraw DSL2 0.00 Solids 22.20 Tuber 101.00

PH Demand 0.0 % Downtime Cross Feed

Output Downtime Waste Downtime Filter Waste Filter Schedule

Overview

1. OEE Trend or 2. Downtime Listing

OEE_NE

1. OEE Trend View: NE Trend for selected timeframe

2. Downtime Listing: Displays Downtime Events for selected timeframe

3. Hour vs. Shift OEE Bar Chart: Last Hour vs. Shift NE

4. Downtime Occurrences or 5. Downtime Top 5

Starved for Chips

ACP Fault (BM Interlock) bag Stucked Under Bag Stop... Customer Stop ESTOP Extended Downtime In Pause In Run Max Rego Correct Metal Detect Missed Three Eye Out Of Film & B/Seal Jay Clean Queue At Outfeed, Infeed At Hold. Ready Signal From Check Weigher Is Missing Servo X

5. Downtime Top 5: Displays Top 5 Downtime Faults

- Gauges display performance for **INDIVIDUAL PACKAGING UNIT**

- 'Configure' Button enables different views of NE Performance

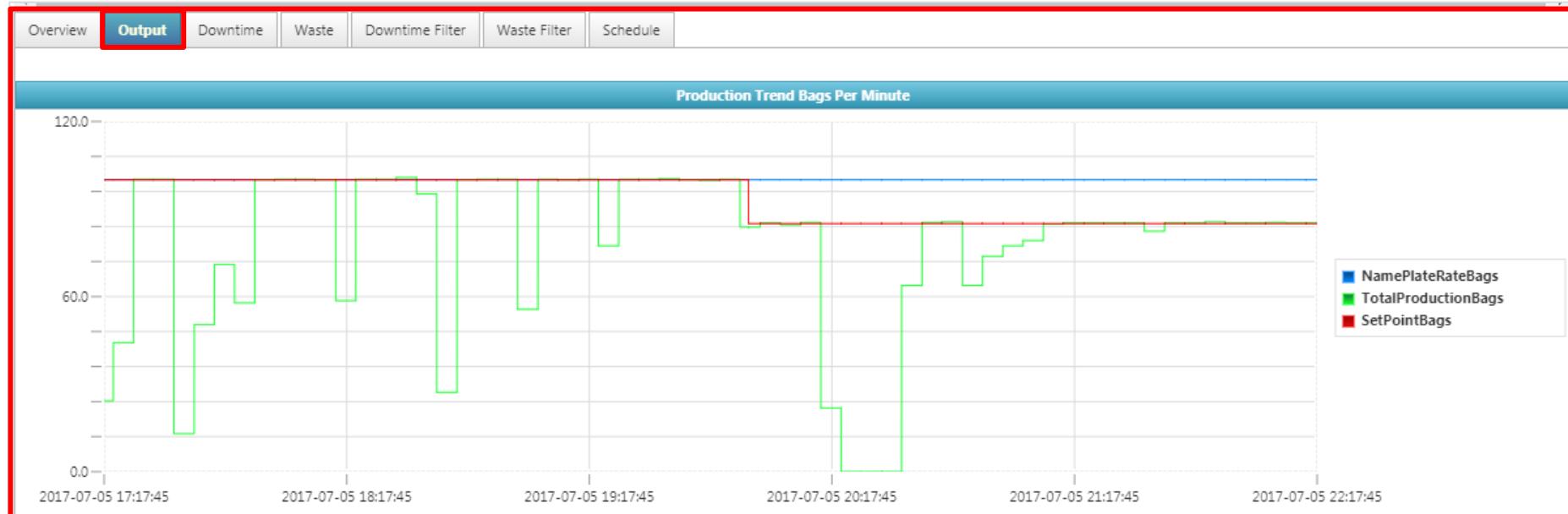


1. OEE Trend View: NE Trend for selected timeframe
2. Downtime Listing: Displays Downtime Events for selected timeframe
3. Hour vs. Shift OEE Bar Chart: Last Hour vs. Shift NE
4. Downtime Occurrences: Downtime Faults Word Cloud. Top Faults will appear in largest font
5. Downtime Top 5: Displays Top 5 Downtime Faults

Production Trend for selected timeframe in bags per minute

- Blue – Bagmaker Nameplate Rate in Bags per minute
- Green – Bagmaker Total Production in Bags per minute
- Red – Bagmaker Setpoint Bags in Bags per minute

Hover line to view any single point



Packaging Individual UNIT – Downtime Take

List of downtimes captured for selected timeframe



Overview Output **Downtime** Waste Downtime Filter Waste Filter Schedule

Micro Stops:

Show All Data ▾

Show All Data

Exclude less than 1 minute

Exclude less than 10 sec

Exclude less than 30 sec

Split Event Edit Event CSV Export

| UnitName | StartTime | EndTime | Duration | Reason1 | Reason2 | Reason3 | Reason4 | Comment | Shift |
|-----------|---------------------|---------------------|----------|-----------|-------------|---------|--------------|---------|-------|
| PC2PKG201 | 2017-07-05 21:37:39 | 2017-07-05 21:37:45 | 0.10 | Unplanned | Operational | RMK | Metal Detect | C1 | |
| PC2PKG201 | 2017-07-05 21:05:20 | 2017-07-05 21:05:41 | 0.35 | | | | | | |
| PC2PKG201 | 2017-07-05 21:01:40 | 2017-07-05 21:02:05 | 0.42 | | | | | | |
| PC2PKG201 | 2017-07-05 20:57:31 | 2017-07-05 20:57:41 | 0.17 | | | | | | |
| PC2PKG201 | 2017-07-05 20:53:45 | 2017-07-05 20:55:28 | 1.72 | | | | | | |
| PC2PKG201 | 2017-07-05 20:16:17 | 2017-07-05 20:36:12 | 19.92 | | | | | | |

Chronological Events

Chronological Events

Downtime Reasons

Collection Current OEE Bar Chart Output Downtime Waste Downtime Filter Waste Filter Schedule

Downtime Reasons

Chronological Events

| Category | Reason | Count | % Downtime | Total Duration | MTBF | MTTR |
|----------|--------------------------------|-------|------------|----------------|-------------|-------------|
| MHW | Starved for Chips | 197 | 9.81 | 195.58 | 00:0122 hrs | 00:0059 hrs |
| ACP | ACP Fault (BM Interlock) | 124 | 14.23 | 283.72 | 00:0604 hrs | 00:0217 hrs |
| BMK | Fall Through | 55 | 6.00 | 119.73 | 00:0734 hrs | 00:0210 hrs |
| BMK | In Pause | 26 | 1.13 | 22.55 | 00:0358 hrs | 00:0052 hrs |
| BMK | Out Of Film & B/Seal Jaw Clean | 20 | 3.70 | 73.85 | 00:1003 hrs | 00:0341 hrs |
| BMK | Metal Detect | 11 | 0.39 | 7.82 | 00:0527 hrs | 00:0042 hrs |
| BMK | In Run | 8 | 0.35 | 6.95 | 00:0744 hrs | 00:0052 hrs |
| BMK | Max Rego Correct | 6 | 0.05 | 1.05 | 00:0006 hrs | 00:0010 hrs |
| PKG | Extended Downtime | 6 | 62.07 | 1237.90 | | 03:2619 hrs |
| PKG | Unknown Fault | 5 | 0.28 | 5.65 | 00:0223 hrs | 00:0107 hrs |

- List of downtime events with automatic reasons populated (where available).
 - Highlight an individual row to Edit or Split an event
 - Data can be filtered to exclude events based on duration

- ## Downtime Reasons

Downtime Reasons

- Downtime Reasons button switches display for graphical analysis
 - Table displays Reason, Count, Duration, MTTF and MTTR

Processing or Packaging

Creating, Editing, Splitting or Deleting a Downtime Event

Overview Setpoint **Downtime** Waste Waterfall Chart Downtime Filter Schedule

Micro Stops:

Show All Data

CSV Export

| UnitName | StartTime | EndTime | Duration | Reason1 | Reason2 | Reason3 | Reason4 | Comment | Shift |
|---------------|---------------------|---------------------|----------|-----------|-------------|---------|-------------|---------|---------|
| PC1Processing | 25/08/2017 14:08:23 | 27/08/2017 18:06:39 | 2031.62 | Unplanned | Operational | Line | Unspecified | | Unknown |
| PC1Processing | 24/08/2017 20:01:36 | 24/08/2017 20:11:02 | 9.43 | Unplanned | Operational | Line | Unspecified | | Unknown |

Create Downtime Event

| | | | |
|---------------------|--|---------------|----------------------|
| Line | <input type="text"/> | Reason1 | <input type="text"/> |
| Start Time | <input type="text" value="2017-August-29 21:06:28"/> | Reason2 | <input type="text"/> |
| End Time | <input type="text" value="2017-August-31 00:00:00"/> | Reason3 | <input type="text"/> |
| Location | <input type="text"/> | Reason4 | <input type="text"/> |
| Fault | <input type="text"/> | | |
| Comment | <input type="text"/> | | |
| Create Event | | Cancel | |

User Privileges required to Create/Edit/Split or Delete Events

1. Select the event to edit. Selecting will highlight event in blue
2. Select appropriate Create, Edit, Split or Delete Event button
3. Update fields as needed
 - a) Confirm Start/End Time
4. Select Create, Edit, Split, or Delete Event to make save
5. Confirm Action

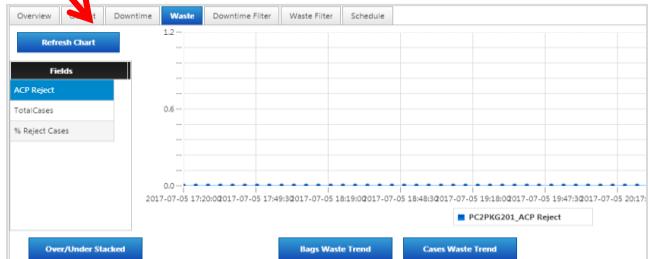
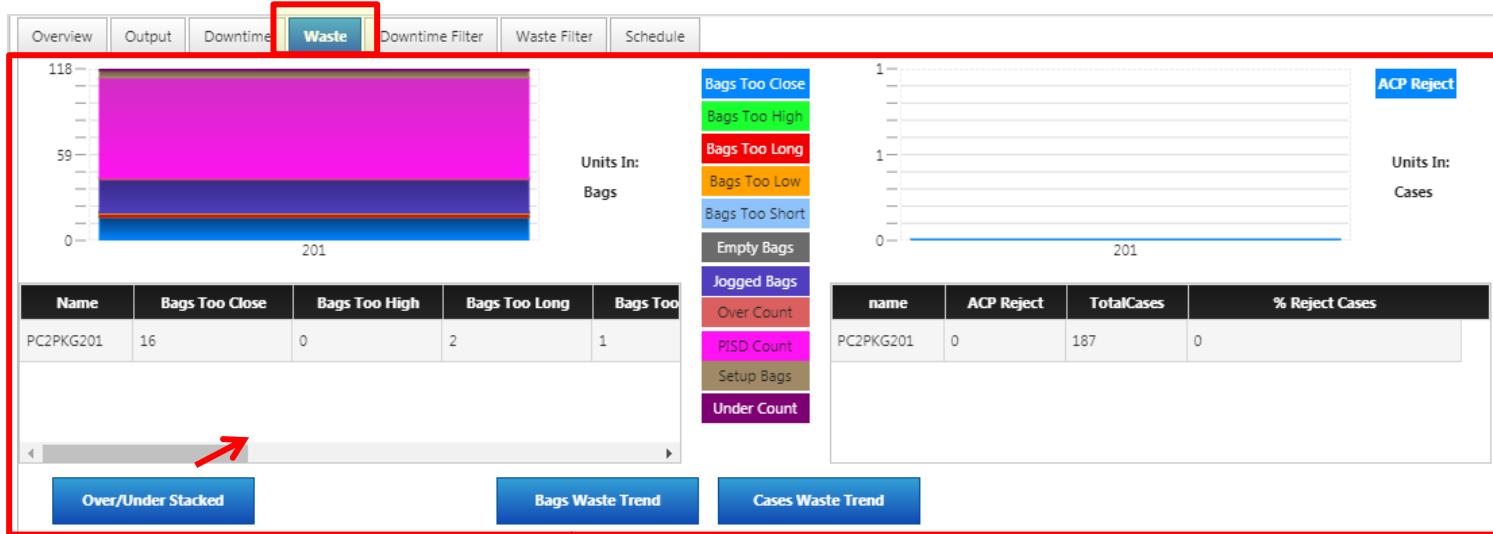
Confirm Action

Are you sure you want to update this downtime event ?

Yes **No**

Packaging Individual UNIT – Waste Tab

Comment



Over/Under Stacked

Stacked bar chart for Individual unit showing waste by category

Bags Waste Trend

Cases Waste Trend

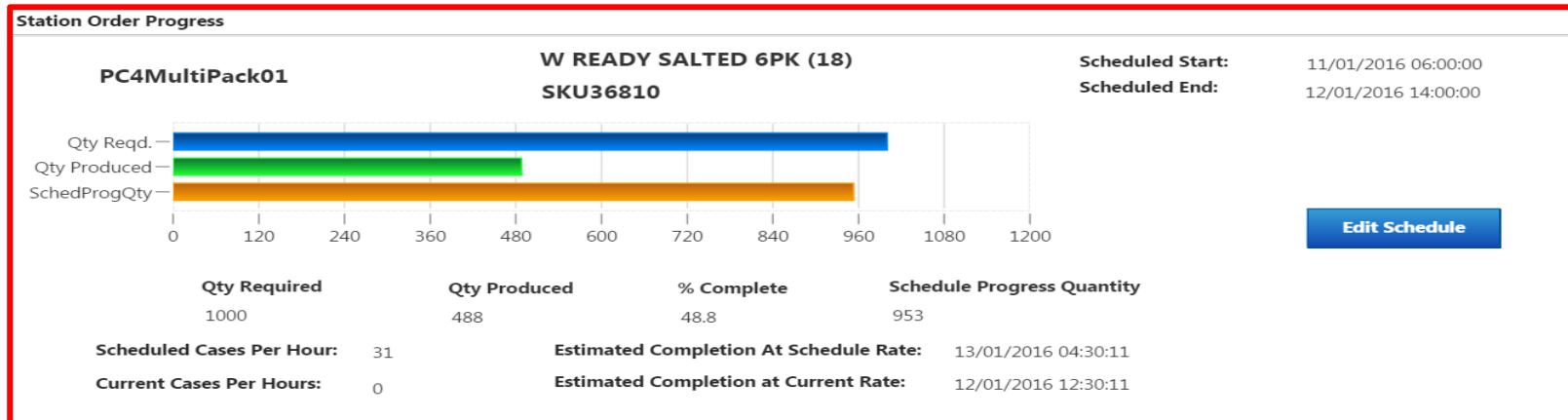
Waste Trend button switches display for trend analysis view



Schedule Tab

Schedule Tab

- Schedule Tab provides visibility to Production Make vs. Plan
- Operator enters the planned amount after each product changeover and system tracks production counts
- Operator manual entry is required for items below:
 - Total number of cases required (Scheduled Amount).
 - Production run scheduled start date & time (Scheduled Start Time).
 - Production run scheduled completion date & time (Scheduled End Time).



Make Vs. Plan Screen

This Banner is displayed when Production Plan details are required. Click on it to enter details

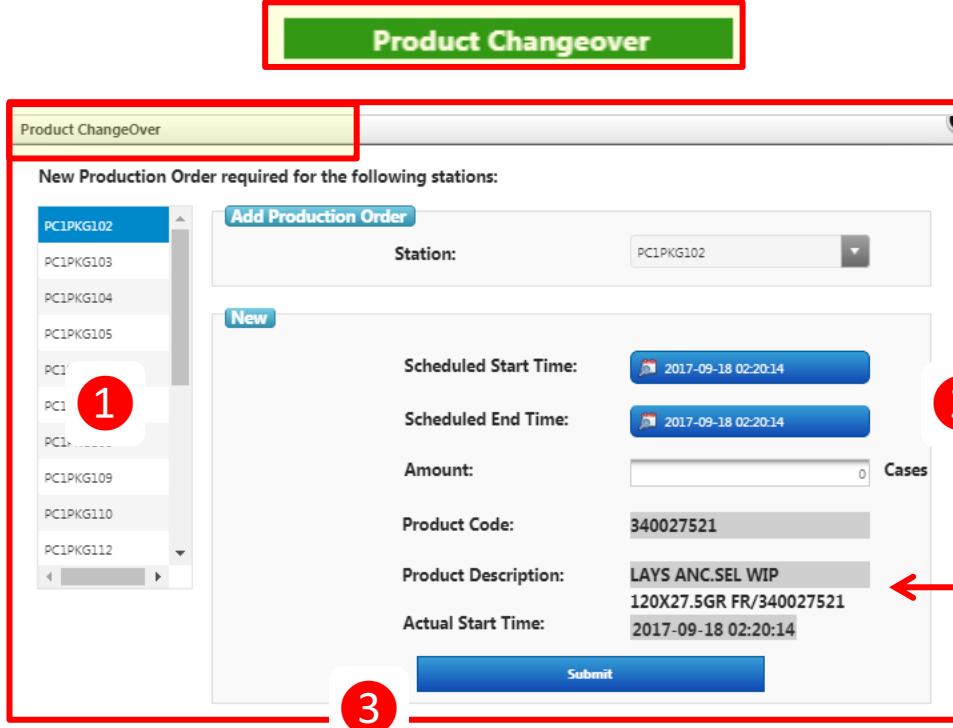
Alternatively, click on the Schedule Tab and enter the Production Plan details there



Click on the 'Product Changeover' green slider running will display the Make Vs Plan Popup Screen.

Product Changeover

Click on the 'Product Changeover' green slider running will display the Make Vs Plan Popup Screen.



Product Changeover

New Production Order required for the following stations:

Add Production Order

Station: PC1PKG102

New

Scheduled Start Time: 2017-09-18 02:20:14

Scheduled End Time: 2017-09-18 02:20:14

Amount: 0 Cases

Product Code: 340027521

Product Description: LAYS ANC.SEL WIP
120X27.5GR FR/340027521

Actual Start Time: 2017-09-18 02:20:14

Submit

List of all Packaging Units that require Production Order Plan

Step 1: Select the Packaging Unit that requires Production Order Plan →

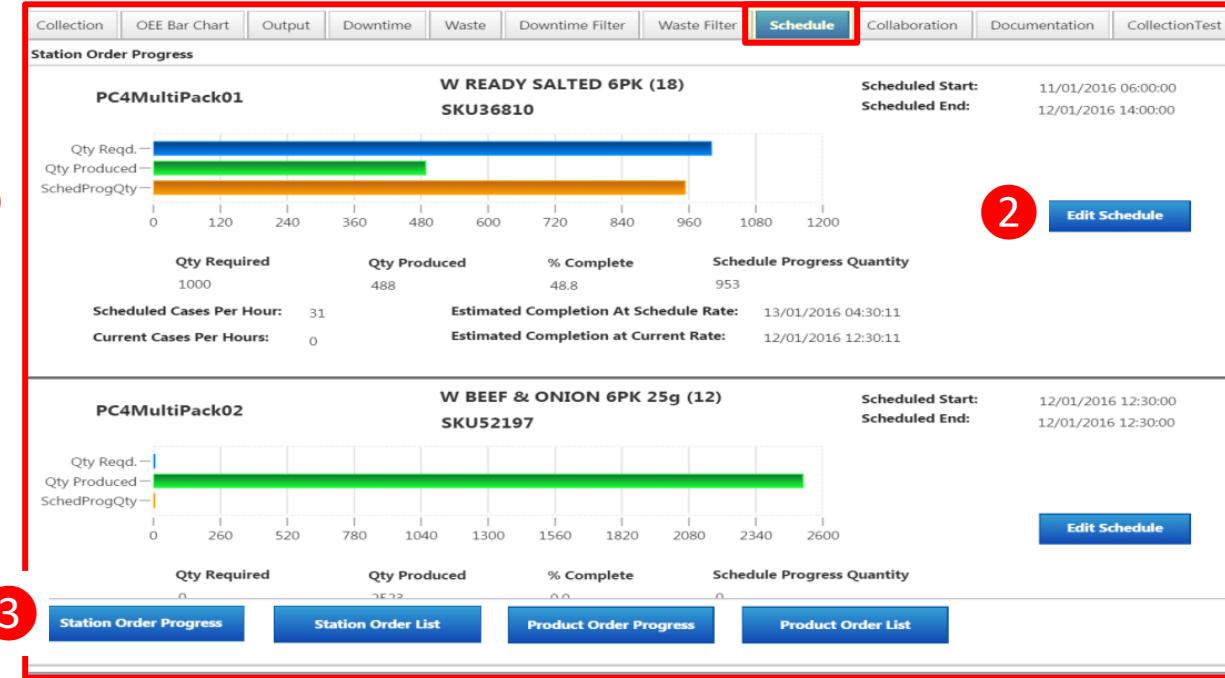
Step 2: Enter the following Production Order Information:

- Scheduled (Planned) Start Date and Time
- Scheduled (Planned) End Completion Date and Time
- Amount - Number of Cases Required

This area is system populated and shows the SKU currently running on the station

Step 3: Submit to save the changes

Select Schedule Tab to view Production Order Progress.



1. Production Plan Details

- 'Edit Schedule' Button to update Production Order Plan by Packaging Unit

3. Select Views

By Order

- Station Order Progress
- Station Order List

By Product

- Product Order Progress
- Product Order List

gSFT will determine UOM based on SKU

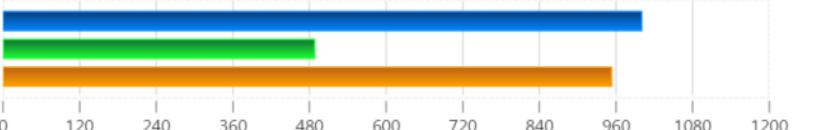
Schedule Tab Details

Collection OEE Bar Chart Output Downtime Waste Downtime Filter Waste Filter **Schedule** Collaboration Documentation CollectionTest

Station Order Progress

① PC4MultiPack01 ② W READY SALTED 6PK (18) SKU36810 ③ Scheduled Start: 11/01/2016 06:00:00
Scheduled End: 12/01/2016 14:00:00

Qty Reqd. — Qty Produced — SchedProgQty —



0 120 240 360 480 600 720 840 960 1080 1200

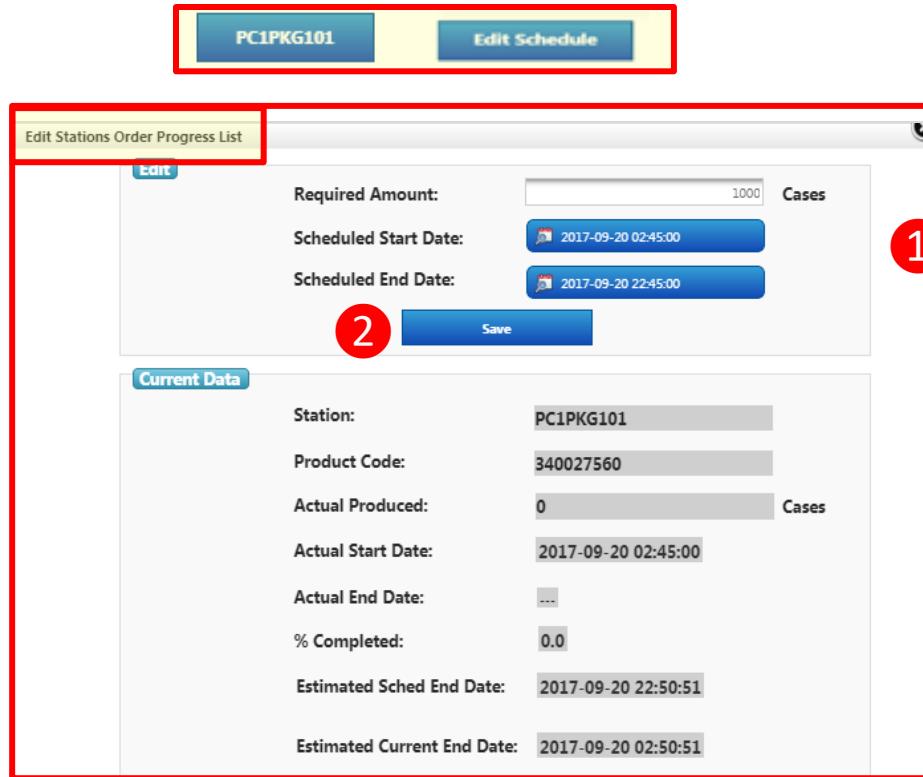
④ Edit Schedule

| Qty Required | Qty Produced | % Complete | Schedule Progress Quantity |
|--------------|--------------|------------|----------------------------|
| 1000 | 488 | 48.8 | 953 |

⑤ Scheduled Cases Per Hour: 31 ⑥ Estimated Completion At Schedule Rate: 13/01/2016 04:30:11
Current Cases Per Hours: 0 Estimated Completion at Current Rate: 12/01/2016 12:30:11

Station Order Progress **Station Order List** **Product Order Progress** **Product Order List**

1. **Packaging Unit**
2. **SKU Details**
3. **The Scheduled (Planned) Start and End Dates**
4. **Production Amount Information**
 - **Quantity Required:** Manually entered by Operator
 - **Quantity Produced:** Automatically tracked
 - **% Complete:** Produced Qty/Qty Required
 - **Scheduled Progress Quantity:** How many Units should have been made?
5. **Scheduled and Current Cases per Hour:** How many cases should we be making each hour & how many are we making?
6. **Estimated Completion at Scheduled and Current:** When will the Production Plan be completed?



The screenshot shows a software interface for managing production orders. At the top, there are two buttons: 'PC1PKG101' and 'Edit Schedule'. Below these, a red box highlights the 'Edit' button in the 'Edit Stations Order Progress List' header. A red circle labeled '1' points to the 'Save' button in the main input area. Another red circle labeled '2' points to the 'Current Data' section below. This section displays various production details:

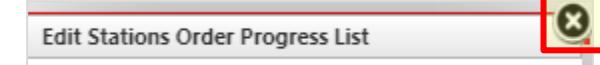
| Station: | PC1PKG101 |
|-----------------------------|---------------------|
| Product Code: | 340027560 |
| Actual Produced: | 0 Cases |
| Actual Start Date: | 2017-09-20 02:45:00 |
| Actual End Date: | ... |
| % Completed: | 0.0 |
| Estimated Sched End Date: | 2017-09-20 22:50:51 |
| Estimated Current End Date: | 2017-09-20 02:50:51 |

Step 1: Enter the following Production Order Information:

- Required Amount
- Scheduled Start Date
- Scheduled End Date

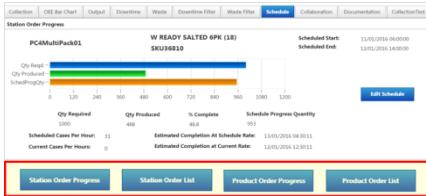
Step 2: Save changes

Press X to cancel anytime

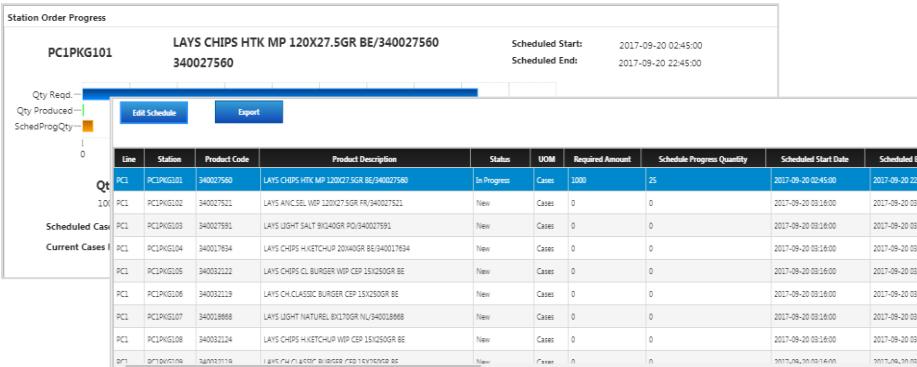


Global Shop Floor Tools (Snacks MES)

Production Order Progress - Views



1: Progress by Order – Graphical or List



Station Order Progress

PC1PKG101 LAYS CHIPS HTK MP 120X27.5GR BE/340027560 Scheduled Start: 2017-09-20 02:45:00
Scheduled End: 2017-09-20 22:45:00

Qty Ready: 0 Qty Produced: 0 SchedProgQty: 0

Line Station Product Code Product Description Status UOM Required Amount Schedule Progress Quantity Scheduled Start Date Scheduled End

| | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PC1 | PC1PKG100 | 340027560 | LAYS CHIPS HTK MP 120X27.5GR BE/340027560 | In Progress | Cases | 1000 | 25 | 2017-09-20 02:45:00 | 2017-09-20 22:45:00 |
| PC1 | PC1PKG101 | 340027521 | LAYS ANCSEL WIP 120X27.5GR FR/340027521 | New | Cases | 0 | 0 | 2017-09-20 03:16:00 | 2017-09-20 09:31 |
| PC1 | PC1PKG102 | 340027591 | LAYS LIGHT SALT SYA40GR PO/340027591 | New | Cases | 0 | 0 | 2017-09-20 03:16:00 | 2017-09-20 09:31 |
| PC1 | PC1PKG103 | 340017634 | LAYS CHIPS H-KETCHUP 20X40GR BE/340017634 | New | Cases | 0 | 0 | 2017-09-20 03:16:00 | 2017-09-20 09:31 |
| PC1 | PC1PKG104 | 340032122 | LAYS CHIPS CL. BURGER WIP CEP 15X250GR BE | New | Cases | 0 | 0 | 2017-09-20 03:16:00 | 2017-09-20 09:31 |
| PC1 | PC1PKG105 | 340032119 | LAYS CH CLASSIC BURGER CEP 15X250GR BE | New | Cases | 0 | 0 | 2017-09-20 03:16:00 | 2017-09-20 09:31 |
| PC1 | PC1PKG106 | 340031868 | LAYS LIGHT NATUREL BX170GR NL/340031868 | New | Cases | 0 | 0 | 2017-09-20 03:16:00 | 2017-09-20 09:31 |
| PC1 | PC1PKG107 | 340032124 | LAYS CHIPS H-KETCHUP WIP CEP 15X250GR BE | New | Cases | 0 | 0 | 2017-09-20 03:16:00 | 2017-09-20 09:31 |
| PC1 | PC1PKG108 | 340032118 | LAYS CHIPS H-KETCHUP WIP CEP 15X250GR BE | New | Cases | 0 | 0 | 2017-09-20 03:16:00 | 2017-09-20 09:31 |
| PC1 | PC1PKG109 | 340032115 | LAYS CHIPS H-KETCHUP WIP CEP 15X250GR BE | New | Cases | 0 | 0 | 2017-09-20 03:16:00 | 2017-09-20 09:31 |

Buttons: Edit Schedule, Export

Export Data using Export Button on either View

2: Progress by Product – Graphical or List



Station Order Progress

PC1PKG109 LAYS CH.CLASSIC BURGER CEP 340032119 Scheduled Start: 2017-09-20 03:19:00 Scheduled End: 2017-09-20 03:19:00

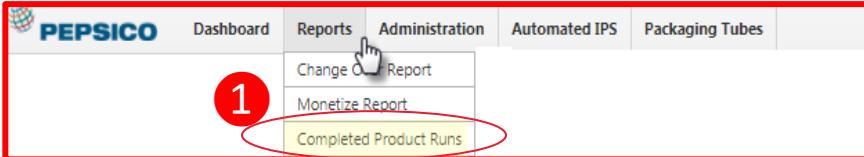
Qty Ready: 0 Qty Produced: 0 SchedProgQty: 0

Station Product Code Product Description UOM Total Required Scheduled Start Date Scheduled End Date Planned Prod Hours Actual Shd

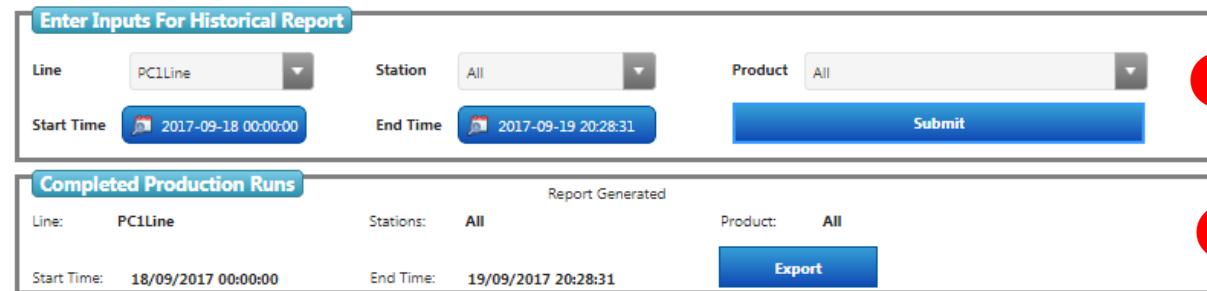
| | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PC1PKG100 | 340027560 | LAYS CHIPS HTK MP 120X27.5GR BE/340027560 | Cases | 1000 | 2017-09-20 02:45:00 | 2017-09-20 22:45:00 | 20.00 | 2017-09-20 |
| PC1PKG101 | 340027521 | LAYS ANCSEL WIP 120X27.5GR FR/340027521 | Cases | 0 | 2017-09-20 03:20:00 | 2017-09-20 09:20:00 | 0.00 | 2017-09-18 |
| PC1PKG102 | 340027591 | LAYS LIGHT SALT SYA40GR PO/340027591 | Cases | 0 | 2017-09-20 03:20:00 | 2017-09-20 09:20:00 | 0.00 | 2017-09-19 |
| PC1PKG103 | 340017634 | LAYS CHIPS H-KETCHUP 20X40GR BE/340017634 | Cases | 0 | 2017-09-20 03:20:00 | 2017-09-20 09:20:00 | 0.00 | 2017-09-19 |
| PC1PKG104 | 340032122 | LAYS CHIPS CL. BURGER WIP CEP 15X250GR BE | Cases | 0 | 2017-09-20 03:20:00 | 2017-09-20 09:20:00 | 0.00 | 2017-09-19 |
| PC1PKG105 | 340032119 | LAYS CH CLASSIC BURGER CEP 15X250GR BE | Cases | 0 | 2017-09-20 03:20:00 | 2017-09-20 09:20:00 | 0.00 | 2017-09-19 |
| PC1PKG106 | 340032119 | LAYS CH CLASSIC BURGER CEP 15X250GR BE | Cases | 0 | 2017-09-20 03:20:00 | 2017-09-20 09:20:00 | 0.00 | 2017-09-19 |
| PC1PKG107 | 340032112 | LAYS LIGHT NATUREL BX170GR NL/340031868 | Cases | 0 | 2017-09-20 03:20:00 | 2017-09-20 09:20:00 | 0.00 | 2017-09-19 |
| PC1PKG108 | 340032114 | LAYS CHIPS H-KETCHUP WIP CEP 15X250GR BE | Cases | 0 | 2017-09-20 03:20:00 | 2017-09-20 09:20:00 | 0.00 | 2017-09-19 |
| PC1PKG109 | 340032100 | LAYS LIGHT NATUREL BX170GR NL/340032100 | Cases | 0 | 2017-09-20 03:20:00 | 2017-09-20 09:20:00 | 0.00 | 2017-09-20 |

Stations running the same SKU are grouped together

Production Order Progress - View through Completed Product Run



1. From Main Dashboard Header, select Reports >> Completed Production Runs



| Completed Production Runs | | Report Generated | |
|---------------------------|---------------------|------------------|---------------------|
| Line: | PC1Line | Stations: | All |
| Product: | All | Start Time: | 18/09/2017 00:00:00 |
| End Time: | 19/09/2017 20:28:31 | Export | |

2. Make Filtering Selections and Submit
3. Export to Save in Excel

| Line | Station | Product Code | Product Description | Calculated On | Status | Total Cases Rqd | Scheduled Start Date | Scheduled End Date | Planned |
|------|-----------|--------------|---|---------------------|--------|-----------------|----------------------|---------------------|---------|
| PC1 | PC1PKG101 | 340030447 | LAYS ANCIENTE SEL RECL 12X350GR FR/340030447 | 18-09-2017 09:19:46 | Closed | 0 | 20-09-2017 03:32:00 | 20-09-2017 03:32:00 | 0.00 |
| PC1 | PC1PKG101 | 340017979 | LAYS ANCIENTE SEL 20X45GR FR/340017979 | 18-09-2017 18:56:41 | Closed | 0 | 20-09-2017 03:32:00 | 20-09-2017 03:32:00 | 0.00 |
| PC1 | PC1PKG101 | 340027521 | LAYS ANC.SEL WIP 120X27.5GR FR/340027521 | 19-09-2017 01:57:45 | Closed | 0 | 20-09-2017 03:32:00 | 20-09-2017 03:32:00 | 0.00 |
| PC1 | PC1PKG101 | 340026516 | LAYS CHIPS CLASSIC BURGER 12X120GR NL/340026516 | 19-09-2017 12:01:33 | Closed | 0 | 20-09-2017 03:32:00 | 20-09-2017 03:32:00 | 0.00 |
| PC1 | PC1PKG101 | 340017804 | LAYS CHIPS CLASSIC BURGER 20X40GR BE/340017804 | 19-09-2017 18:45:53 | Closed | 1000 | 18-09-2017 23:48:00 | 19-09-2017 23:48:00 | 24.00 |

The Completed Production Report data is displayed



Efficiency by Operator

Efficiency by Operator

Select 'Efficiency by Operator' to view Efficiency by Operator

Select 'Assign Operator' to assign Packaging Units to Operator



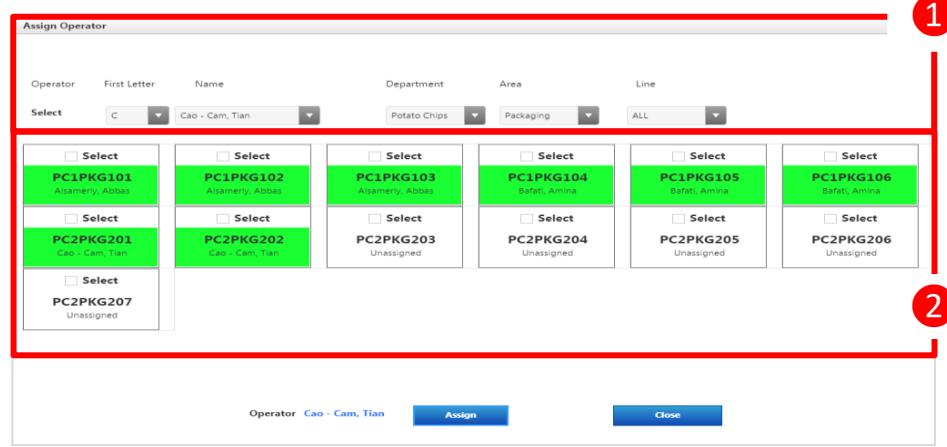
Note: Efficiency by operator navigation button will not be visible when viewing dashboard for Processing or single Packaging Tube

Global Shop Floor Tools (Snacks MES)

Efficiency by Operator

1. Select Filters

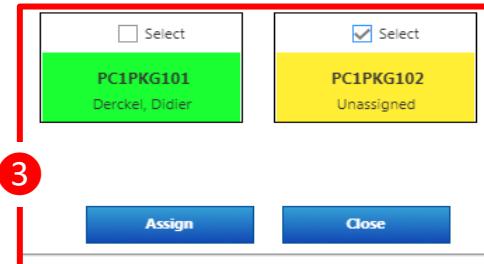
- Select drop down first letter to filter Operator names by letter
- Select Operator from dropdown menu
- Select Department, Area, or Line to filter packaging units by selection



The screenshot shows the 'Assign Operator' interface. At the top, there are filters for 'Operator' (dropdown menu), 'First Letter' (input field with 'C'), 'Name' (input field with 'Cao - Cam, Tian'), 'Department' (dropdown menu with 'Potato Chips'), 'Area' (dropdown menu with 'Packaging'), and 'Line' (dropdown menu with 'ALL'). Below the filters is a grid of 12 packaging units. The first six units (PC1PKG101 to PC1PKG106) have a green background and a checked 'Select' checkbox. The next three units (PC2PKG201 to PC2PKG203) have a white background and an unchecked 'Select' checkbox. The last three units (PC2PKG204 to PC2PKG206) also have a white background and an unchecked 'Select' checkbox. At the bottom, there are buttons for 'Operator' (Cao - Cam, Tian), 'Assign', and 'Close'.

2. Select Packaging Units to assign.

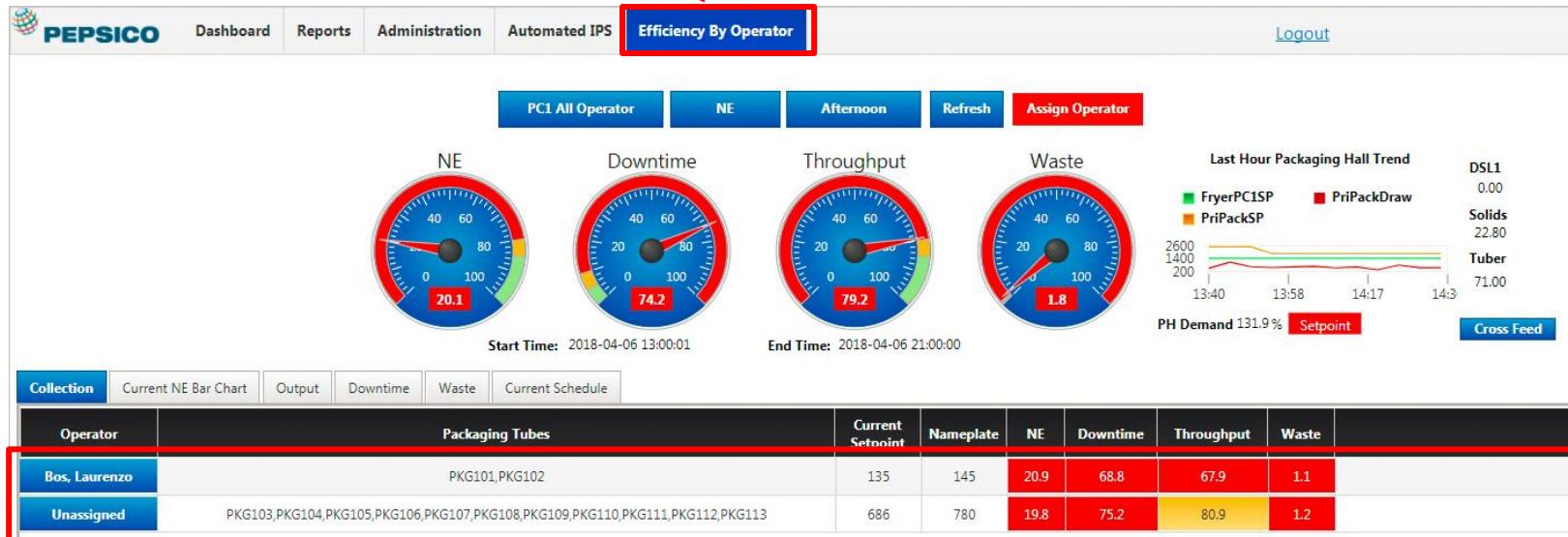
- Unit background color turns yellow when selected



This screenshot shows a zoomed-in view of the 'Assign Operator' interface. It displays two packaging units: PC1PKG101 and PC1PKG102. Both units have a checked 'Select' checkbox. PC1PKG101 has a green background, and PC1PKG102 has a yellow background. At the bottom, there are buttons for 'Assign' and 'Close'.

3. Select 'Assign' to Assign. Unit Background color turns green and displays Operator name assigned to unit. Select 'Close' to exit

View Efficiency by Operator by selecting from Menu



Collection Tab will display performance by Operator



Automated IPS

Automated IPS by Station Department

Potato Chips

Viewing Current Information for : PC1PKG101

| Line | Station 1 Product : | Station 1 Status : |
|--------------|---------------------|--------------------|
| PC1Packaging | 340030203 | Running |

| Description | Item | Description | Limits | Current Value | Limits |
|-------------|------|---|-----------|---------------|-----------|
| PC1PKG101 | 1 | Weigher Efficiency >= Target | >= 99.50 | 73.01 | |
| PC1PKG102 | 2 | Bed depth on cross feeder is correct | | | |
| PC1PKG103 | 3 | Product falls onto product on dispersion feeder | | | |
| PC1PKG104 | 4 | Feeder interrupt (low/low feed on TNA) is set to zero | = 0.00 | 74.00 | |
| PC1PKG105 | 5 | Radial feeders do not transfer vibration between radial to radial | | | |
| PC1PKG106 | 6 | MHW Standard Deviation | = 0.30 | 21.93 | |
| PC1PKG107 | 7 | MHW Lower limit is set to standard 3 * SD | = 0.90 | 10.80 | |
| PC1PKG108 | 8 | MHW Upper limit is set to standard 4 * SD | = 1.20 | 11.30 | |
| PC1PKG109 | 9 | Compensation value is set to 0.2g | = 0.20 | 0.30 | |
| PC1PKG110 | 10 | Radial/Linear feeders deliver 20% to 25% of pack weight to each pool hopper | | | |
| PC1PKG111 | 11 | Jaw 1 Heaters Temperature is set correctly | >= 135.00 | 155.00 | <= 155.00 |
| PC1PKG112 | 12 | Jaw 2 Heaters Temperature is set correctly | >= 135.00 | 155.00 | <= 155.00 |
| PC1PKG113 | 13 | Vertical Seal Heaters Temperature is set correctly | >= 135.00 | 158.00 | <= 155.00 |
| | 14 | Jaw Sealing Pressure is correct | >= 650.00 | 0.00 | <= 850.00 |
| | 15 | Vertical Seal Pressure is correct | | | |
| | 16 | Jaw Sealing Time is correct | >= 100.00 | 125.00 | <= 300.00 |
| | 17 | Film Reel is positioned correctly | | | |

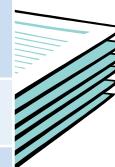


Exercises

EXERCISE

Using PC1 - Packing “Cost”

| Ref | Question | Answer |
|-----|--|--------|
| 1 | In the last shift, which ACP has the highest reject count waste? | |
| 2 | For this machine, which is the biggest waste problem/reason? | |
| 3 | Has the problem been consistent through the shift, or was there a period when it was particularly bad? | |
| 4 | What was the total reject waste % in the last hour blow off by the bagmaker? | |
| 5 | What was the Waste % in the last hour measured by total bags made versus good bags made ? | |
| 6 | Can the difference between question 4 and 5 be explained? | |

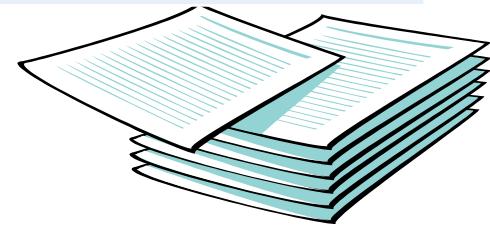


EXERCISE

Using PC1 - Packing “Delivery” (without Make v Plan)

Pick any station

| Ref | Question | Answer |
|-----|--|--------|
| 1 | How many Good bags did it make in the last hour? | |
| 2 | What was the gap v the nameplate? | |
| 3 | How many bags were lost due to the Speed setpoint? | |
| 4 | How many minutes “downtime” occurred? | |
| 5 | What were the top 3 downtime reasons by time? | |
| | | |

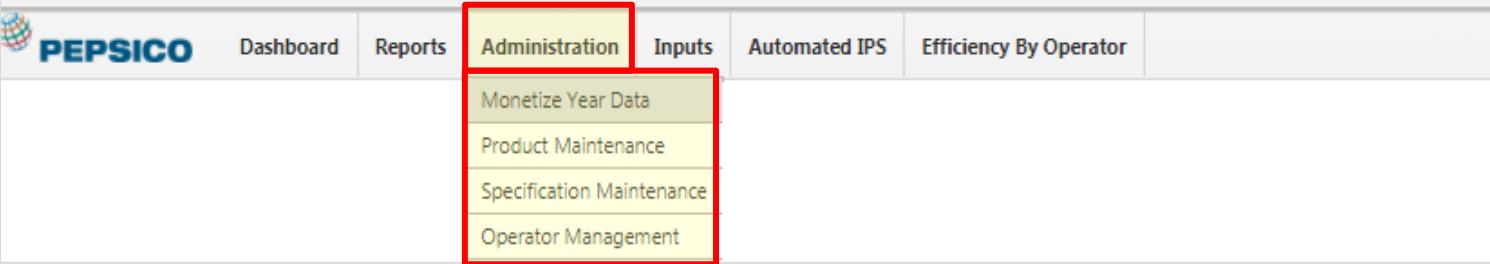




Advanced Users Appendix



New Administrator Menu

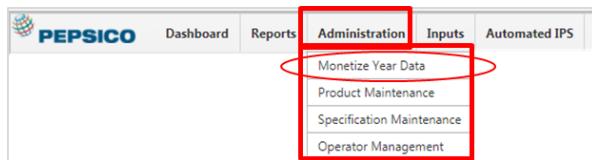


The screenshot shows a navigation bar with tabs: Dashboard, Reports, Administration, Inputs, Automated IPS, and Efficiency By Operator. The 'Administration' tab is active and highlighted with a red border. A vertical dropdown menu is open under the 'Administration' tab, listing four items: 'Monetize Year Data', 'Product Maintenance', 'Specification Maintenance', and 'Operator Management', each also highlighted with a red border.

1. **Monetize Year Data** – Use to set targets for Monetize Report
2. **Product Maintenance** – Use to add New Products
3. **Specification Maintenance** – Use to add Product Specifications and set KPI Gauge targets
4. **Operator Management** – Use to add Operator Names to be used in Efficiency by Operator

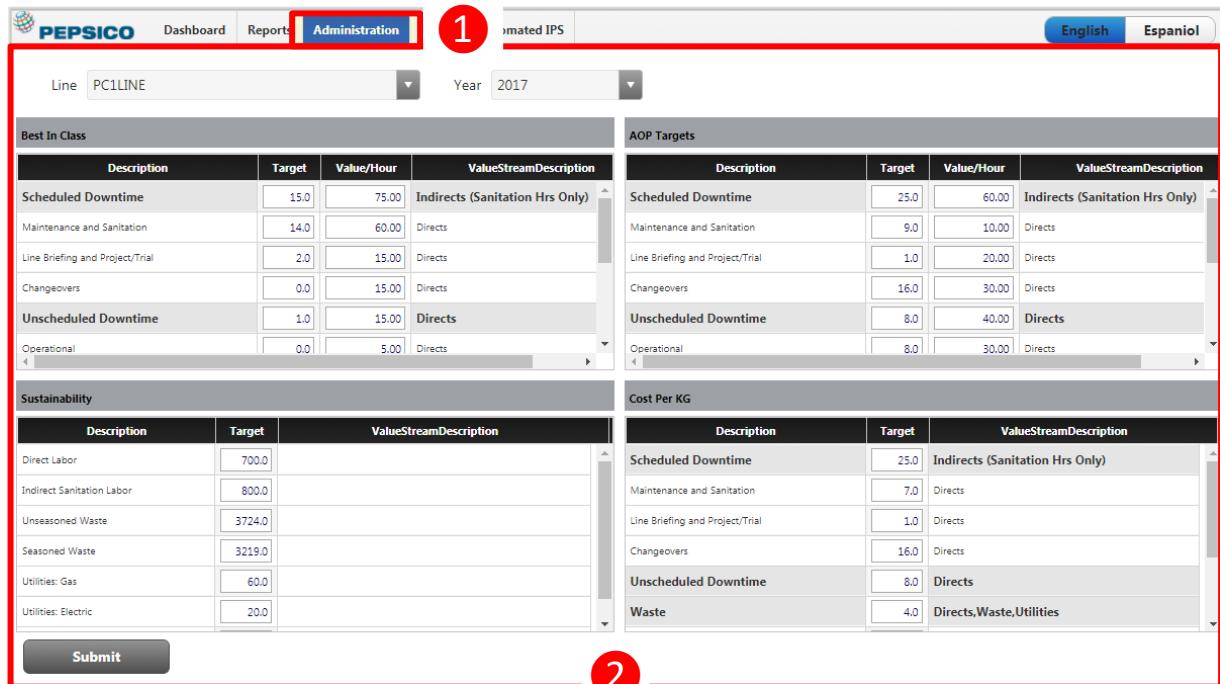
Monetize Year Data – Use to set targets for Monetize Report

1. Select Administration > Monetize Year Data



2. Enter Targets and Values

- Best in Class and AOP Targets - Target # of Hours and Value (\$)/Hr
- Sustainability Targets (Hrs) - Target # of Hour
- Cost Per KG Targets (\$) - Target USD M



| Best in Class | | | |
|---------------------------------|--------|------------|---------------------------------|
| Description | Target | Value/Hour | ValueStreamDescription |
| Scheduled Downtime | 15.0 | 75.00 | Indirects (Sanitation Hrs Only) |
| Maintenance and Sanitation | 14.0 | 60.00 | Directs |
| Line Briefing and Project/Trial | 2.0 | 15.00 | Directs |
| Changeovers | 0.0 | 15.00 | Directs |
| Unscheduled Downtime | 1.0 | 15.00 | Directs |
| Operational | 0.0 | 5.00 | Directs |

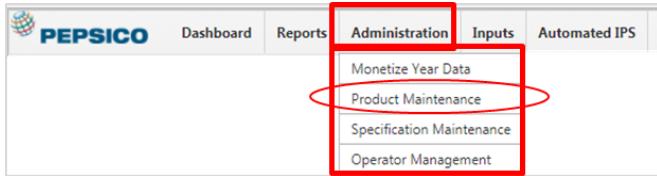
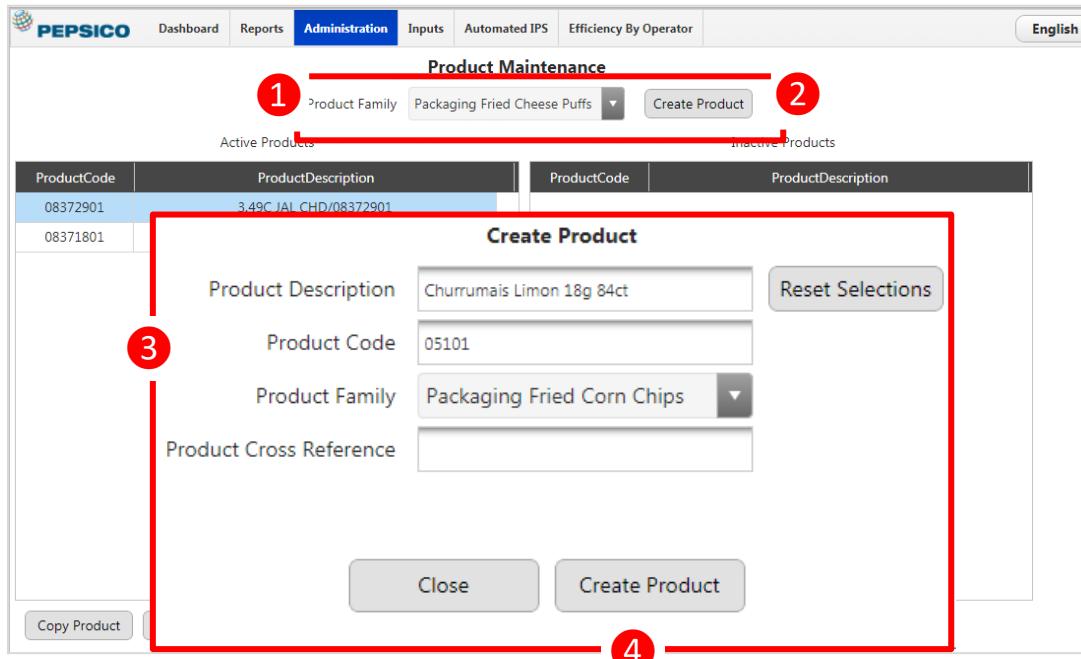
| AOP Targets | | | |
|---------------------------------|--------|------------|---------------------------------|
| Description | Target | Value/Hour | ValueStreamDescription |
| Scheduled Downtime | 25.0 | 60.00 | Indirects (Sanitation Hrs Only) |
| Maintenance and Sanitation | 9.0 | 10.00 | Directs |
| Line Briefing and Project/Trial | 1.0 | 20.00 | Directs |
| Changeovers | 16.0 | 30.00 | Directs |
| Unscheduled Downtime | 8.0 | 40.00 | Directs |
| Operational | 8.0 | 30.00 | Directs |

| Sustainability | | | |
|---------------------------|--------|------------------------|--|
| Description | Target | ValueStreamDescription | |
| Direct Labor | 700.0 | | |
| Indirect Sanitation Labor | 800.0 | | |
| Unseasoned Waste | 3724.0 | | |
| Seasoned Waste | 3219.0 | | |
| Utilities: Gas | 6.0 | | |
| Utilities: Electric | 20.0 | | |

| Cost Per KG | | | |
|---------------------------------|--------|---------------------------------|--|
| Description | Target | ValueStreamDescription | |
| Scheduled Downtime | 25.0 | Indirects (Sanitation Hrs Only) | |
| Maintenance and Sanitation | 7.0 | Directs | |
| Line Briefing and Project/Trial | 1.0 | Directs | |
| Changeovers | 16.0 | Directs | |
| Unscheduled Downtime | 8.0 | Directs | |
| Waste | 4.0 | Directs,Waste,Utilities | |

Submit

New Administration Menu - Product Maintenance (Creating a Product)

1 Product Family: Packaging Fried Cheese Puffs

2 Create Product

3 Create Product Dialog:

- Product Description: Churrumais Limon 18g 84ct
- Product Code: 05101
- Product Family: Packaging Fried Corn Chips
- Product Cross Reference: (empty)

4 Create Product

1. Select Product Family - Packaging or Processing

2. Select Create Product

3. Create Product

- Enter Product Description** - This description will appear in Collection Tab

| Unit (Current Status) | Current Product |
|-----------------------|---------------------|
| PC1PKG01 | LSS Lays Sour Cream |

- Enter Product Code (or Recipe)**
- Select Product Family from drop down**
- Enter Product Cross Reference (Not applicable for sites using Recipes)**

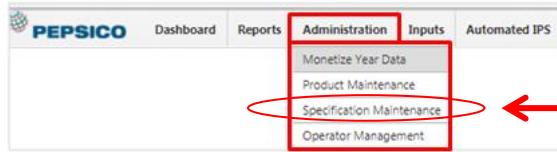
4. Select Create Product

Please note: Products may not be deleted. If product is discontinued, move to Inactive

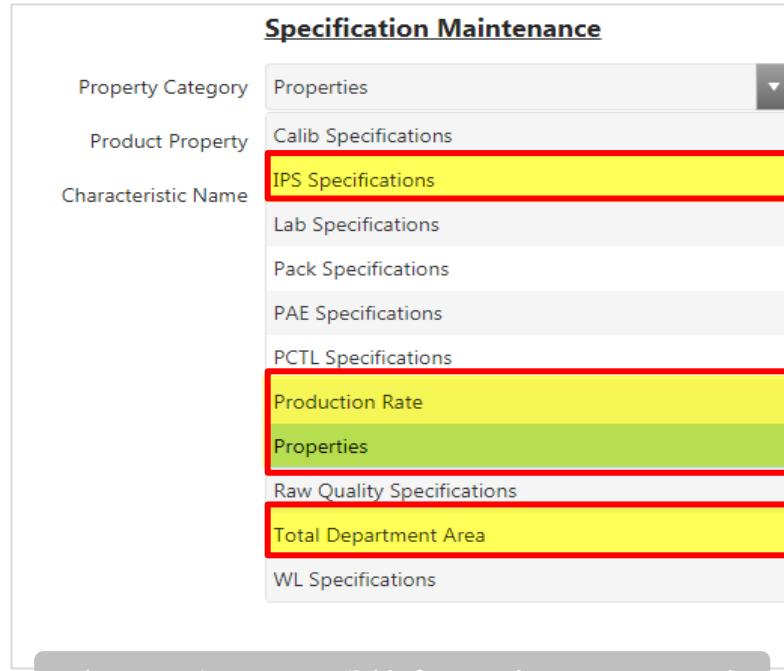
To Inactive ->

<- To Active

New Administration Menu - Specification Maintenance



Select Specification Maintenance from Administration Menu



Specification Maintenance

| Property Category | Properties |
|---------------------|----------------------------|
| Product Property | Calib Specifications |
| Characteristic Name | IPS Specifications |
| | Lab Specifications |
| | Pack Specifications |
| | PAE Specifications |
| | PCTL Specifications |
| | Production Rate |
| | Properties |
| | Raw Quality Specifications |
| | Total Department Area |
| | WL Specifications |

- 1. IPS Specifications – Use to set parameters for Auto IPS**
- 2. Production Rate – Use to set Nameplate by Product in Processing and Packaging**
- 3. Properties – Use to set Product Properties**
- 4. Total Department Area – Use to set KPI Gauge Limits**

Packaging

Specification Maintenance

| | |
|---------------------|---|
| Property Category | Production Rate |
| Product Property | Production Rate - Packaging Potato Chips |
| Characteristic Name | 0340017618 (LAYS CHIPS BBQ HAM 18X200GR BE) |

| Specification Variable | Lower Entry | Lower Reject | Lower Warning | Lower Limit | Target | Upper Limit | Upper Warning | Upper Reject | Upper Entry | Lower Control | Control Target | Upper Control |
|---------------------------------------|------------------------------------|--------------|---------------|-------------|---------|-------------|---------------|--------------|-------------|---------------|----------------|---------------|
| | Production (Performance) Rate Spec | | | | 2200.00 | | | | | | | |
| Production (Performance) Rate Spec-AU | | | | | 2300.00 | | | | | | | |

1. Select Property Category: Production Rate
2. Select Product Property: Production Rate – Dept. Packaging
3. Select Characteristic Name: Product
4. Enter TARGET - Nameplate Rate Spec
 - a. Production (Performance) Rate Spec: Bags/Minutes used in NE/TE
 - b. Production (Performance) Rate Spec: Bags/Minute used in AU

Do not fill out remaining fields

Processing

Specification Maintenance

| | |
|-------------------|--|
| Property Category | Production Rate |
| Product Property | Production Rate - Processing PC1 |
| | Production Rate - Packaging Potato Chips |
| | Production Rate - Processing PC1 |
| | Production Rate - Processing PC2 |

| Specification Variable | Lower Entry | Lower Reject | Lower Warning | Lower Limit | Target | Upper Limit | Upper Warning | Upper Reject | Upper Entry | Lower Control | Control Target | Upper Control | Data Type |
|--|-------------|--------------|---------------|-------------|---------|-------------|---------------|--------------|-------------|---------------|----------------|---------------|-----------|
| Production (Performance) Max Rate Spec | | | | | 2700.00 | | | | | | | | Float |
| Production (Performance) Rate Spec | | | | | 2205 | | | | | | | | Float |
| Production (Performance) Rate Spec-AU | | | | | 2400 | | | | | | | | Float |

1. Select Property Category: Production Rate
2. Select Product Property: Production Rate – Dept. Processing
3. Select Characteristic Name: Product
4. Enter Nameplate Rate Spec
 - a. Production (Performance) Max Rate Spec – Maximum allowed value of Rate Spec (b)
 - b. Production (Performance) Rate Spec - System calculated Production Rate Spec based on the Potato Solid and Fryer Type matrix – If value is entered, it will override current value until next product change
 - c. Production (Performance) Rate Spec – AU - Fixed value maintained by Fryer

Do not fill out remaining fields

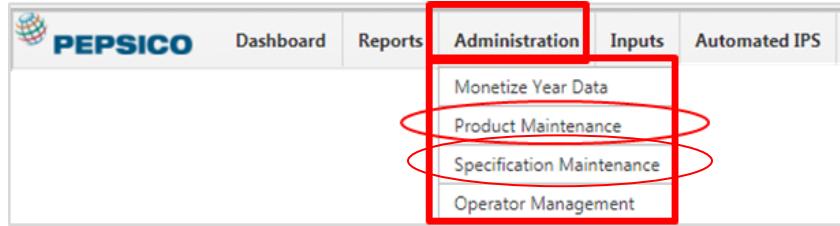
| Specification Maintenance | | | | | | | | | | | | |
|---------------------------|--|--------------|---------------|------------------|--------|------------------|---------------|--------------|-------------|---------------|----------------|---------------|
| Property Category | Properties | | | | | | | | | | | |
| Product Property | Properties - Baked Cheese Puff Packaging | | | | | | | | | | | |
| Characteristic Name | 06538501 (LSS Jumbo Puffs/06538501) | | | | | | | | | | | |
| Specification Variables | | | | | | | | | | | | |
| Specification Variable | Lower Entry | Lower Reject | Lower Warning | Lower User Limit | Target | Upper User Limit | Upper Warning | Upper Reject | Upper Entry | Lower Control | Control Target | Upper Control |
| Bag Nominal Weight | | | | | 30.00 | | | | | | | |
| Bags in Case | | | | | 80.00 | | | | | | | |
| Seasoning Level | | | | | 6.00 | | | | | | | |

1. Select Property Category: Properties
2. Select Product Property: Properties – DEPARTMENT
3. Select Characteristic Name: Product
4. Enter Specification Variables
 - Bag Nominal Weight
 - Bags in Case
 - Seasoning Level

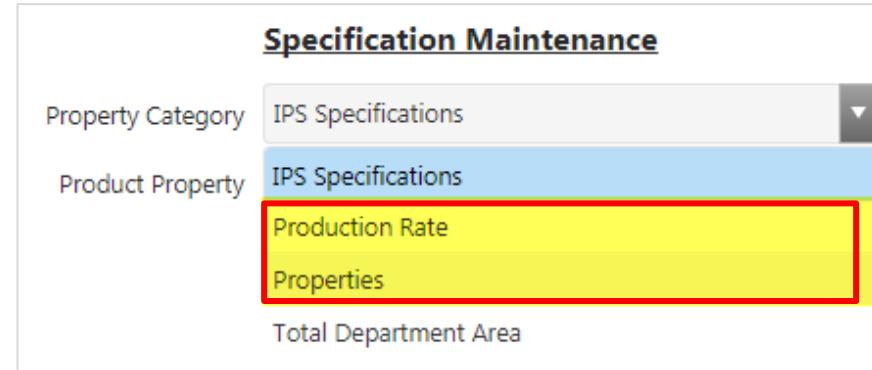
Do not fill out remaining fields

1. Create Product in 'Product Maintenance Screen'

1. Product Description
2. Product Code or Recipe
3. Product Family
4. Product Cross Reference



2. Add Product Nameplate Rates in 'Specification Maintenance > Production Rate' for Packaging and Processing (if necessary)



The screenshot shows the 'Specification Maintenance' screen. It has two main sections: 'Property Category' and 'Product Property'. Under 'Property Category', there's a dropdown menu with 'IPS Specifications' selected. Under 'Product Property', there are three options: 'IPS Specifications', 'Production Rate' (which is highlighted with a red box and circled), and 'Properties'. At the bottom of the screen, there's a footer section labeled 'Total Department Area'.

3. Add Product Properties in 'Specification Maintenance > Properties'

Global Shop Floor Tools (Snacks MES)

Specification Maintenance – IPS Specifications

EPSICO Dashboard Reports Administration Inputs Automated IPS Efficiency By Operator English Espaniol

Specification Maintenance

Property Category: IPS Specifications
Product Property: IPS Specifications - Potato Chip Packaging
Characteristic Name: 07714301 (W Lays BBQ/07714301)

Specification Variables

| Specification Variable | Lower Entry | Lower Reject | Lower Warning | Lower User Limit | Target | Upper User Limit | Upper Warning | Upper Reject | Upper Entry | Lower Control | Control Target | Upper Control | Date |
|---------------------------|-------------|--------------|---------------|------------------|--------|------------------|---------------|--------------|-------------|---------------|----------------|---------------|-------|
| Interrupt Target | | | | | 1.00 | | | | | | | | Float |
| Temperature Limits | | 135 | | | | | | 155 | | | | | Float |
| Temperature Limits | | 135 | | | | | | 155 | | | | | Float |
| Scaling Pressure Limits | | 650 | | | | | | 850 | | | | | Float |
| Scaling Time Limits | | 123.12 | 150.00 | 200.00 | 250.00 | 300.00 | 350.00 | 400.00 | 450.00 | | | | Float |
| Compensation Target | | | | | 0.20 | | | | | | | | Float |
| Lower Limit Target | | | | | 0.90 | | | | | | | | Float |
| Standard Deviation Target | | | | | 0.30 | | | | | | | | Float |
| Upper Limit Target | | | | | 1.20 | | | | | | | | Float |
| Card Speed Target | | | | | 45 | | | | | | | | Float |

Reset Selections Update Specifications

1. Make Product Selections

- Property Category
- Product Property
- Characteristic Name (Product Code)

2. Enter Specification Variable specifications – Please check with Mike Hayes for input on which variables should be completed.

3. Update Specifications

1. Select Property Category: Total Department Area
2. Select Product Property: Total Department Area – OEE Ranges
3. Select Characteristic Name: Department
4. Enter Specification Variables
 - AU Availability
 - AU OEE
 - AU Performance
 - NE Availability
 - NE OEE
 - NE Performance
 - NE Quality
 - TE Availability
 - TE OEE
 - TE Performance

Specification Maintenance

| | |
|---------------------|------------------------------------|
| Property Category | Total Department Area |
| Product Property | Total Department Area - OEE Ranges |
| Characteristic Name | Packaging POTATO CHIPS |

Specification Variables

| Specification Variable | Lower Entry | Lower Reject | Lower Warning | Lower User Limit | Target | Upper User Limit | Upper Warning | Upper Reject | Upper Entry | Lower Control | Control Target | Upper Control | Data Type |
|------------------------|-------------|--------------|---------------|------------------|--------|------------------|---------------|--------------|-------------|---------------|----------------|---------------|-----------|
| AU Availability | | 85.00 | 90.00 | 85.00 | 100.00 | | | | | | | | Float |
| AU OEE | | 85.00 | 90.00 | 85.00 | 100.00 | | | | | | | | Float |
| AU Performance | | 85.00 | 90.00 | 85.00 | 100.00 | | | | | | | | Float |
| NE Availability | | 85.00 | 90.00 | 85.00 | 100.00 | | | | | | | | Float |
| NE OEE | | 85.00 | 90.00 | 85.00 | 100.00 | | | | | | | | Float |
| NE Performance | | 85.00 | 90.00 | 85.00 | 100.00 | | | | | | | | Float |
| NE Quality | | 95.00 | 98.00 | 95.00 | 100.00 | | | | | | | | Float |
| TE Availability | | 85.00 | 90.00 | 85.00 | 100.00 | | | | | | | | Float |
| TE OEE | | 85.00 | 90.00 | 85.00 | 100.00 | | | | | | | | Float |
| TE Performance | | 85.00 | 90.00 | 85.00 | 100.00 | | | | | | | | Float |

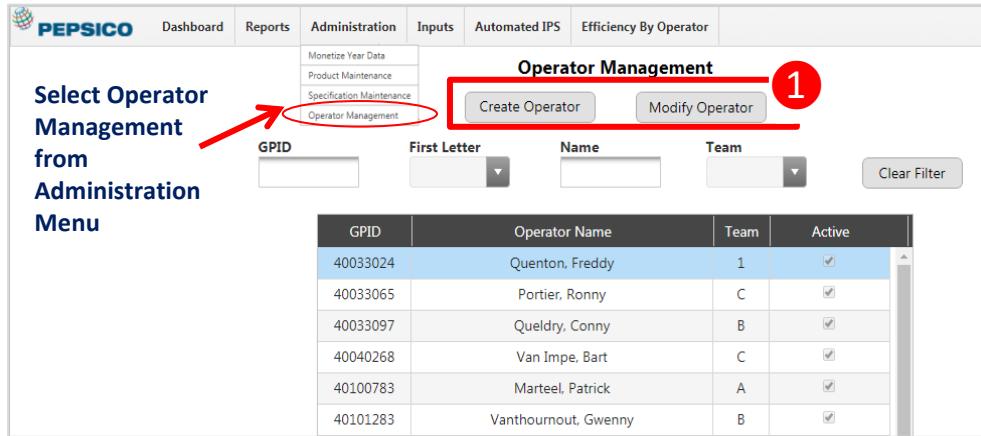
Reset Selections **Update Specifications**

In this example: <85 will be Red; 85 to 90 will be Yellow; >90 will be Green

Do not fill out remaining fields

Select Operator Management from Administration Menu

1



| GPIID | Operator Name | Team | Active |
|----------|----------------------|------|-------------------------------------|
| 40033024 | Quenton, Freddy | 1 | <input checked="" type="checkbox"/> |
| 40033065 | Portier, Ronny | C | <input checked="" type="checkbox"/> |
| 40033097 | Queldry, Conny | B | <input checked="" type="checkbox"/> |
| 40040268 | Van Impe, Bart | C | <input checked="" type="checkbox"/> |
| 40100783 | Marteel, Patrick | A | <input checked="" type="checkbox"/> |
| 40101283 | Vanthournout, Gwenny | B | <input checked="" type="checkbox"/> |

2

Create Operator

GPID: (Red box)

Name: (Red box)

Team: A (Red box)

Active (Red box)

Note: GPIID Should contain only numbers 0-9 without space

Submit **Cancel**

2

Modify Operator

GPIID: 40033024 (Red box)

Name: Quenton, Freddy (Red box)

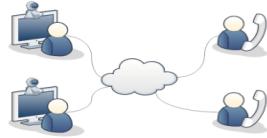
Team: 1 (Red box)

Active (Red box)

Click 'Active' check box to enable the operator and uncheck to disable the operator.

Submit **Cancel**

1. Select 'Create Operator' to add a new Operator or 'Modify Operator' to edit an existing Operator
2. Update fields
 - a. Enter GPIID – Should contain only numbers without spaces
 - b. Enter Name
 - c. Enter Team – This is the crew that the Operator is assigned to (may be the same)
 - d. Check 'Active' check box to enable the Operator and uncheck to disable Operator
3. Select Submit



Hypercare Meetings

ATTENTION!



() Phone Number Voice Mail: 24/7 x 365
USE ONLY for High Priority Incidents

- System is Down
- No Data visible in Application



Email: SPA - IT GSFT Support <SPAITGSFTSupport@pepsico.com>
ALL Support Requests
Sun – Fri: 1:30 AM – 6:00 PM (Eastern Time)

ATTENTION!

For All Support Requests first consult with local site support (Names of local gSFT Owners) confirming the issue



For all System Issues

Submit email to: SPA – IT GSFT Support

SPA - IT GSFT Support <SPAITGSFTSupport@pepsico.com>

Support Window: 24x7x365



For “How to” Questions, contact local Site Support first.

If local Site Support unable to resolve, contact (Name of Sector gSFT Owner) or
email: **SPA - IT GSFT Support <SPAITGSFTSupport@pepsico.com>**

Let's go and have a look on the floor!

