Fab Op Report
For week ending Thursday, 2019-05-23

Created 2019-05-24

Purpose

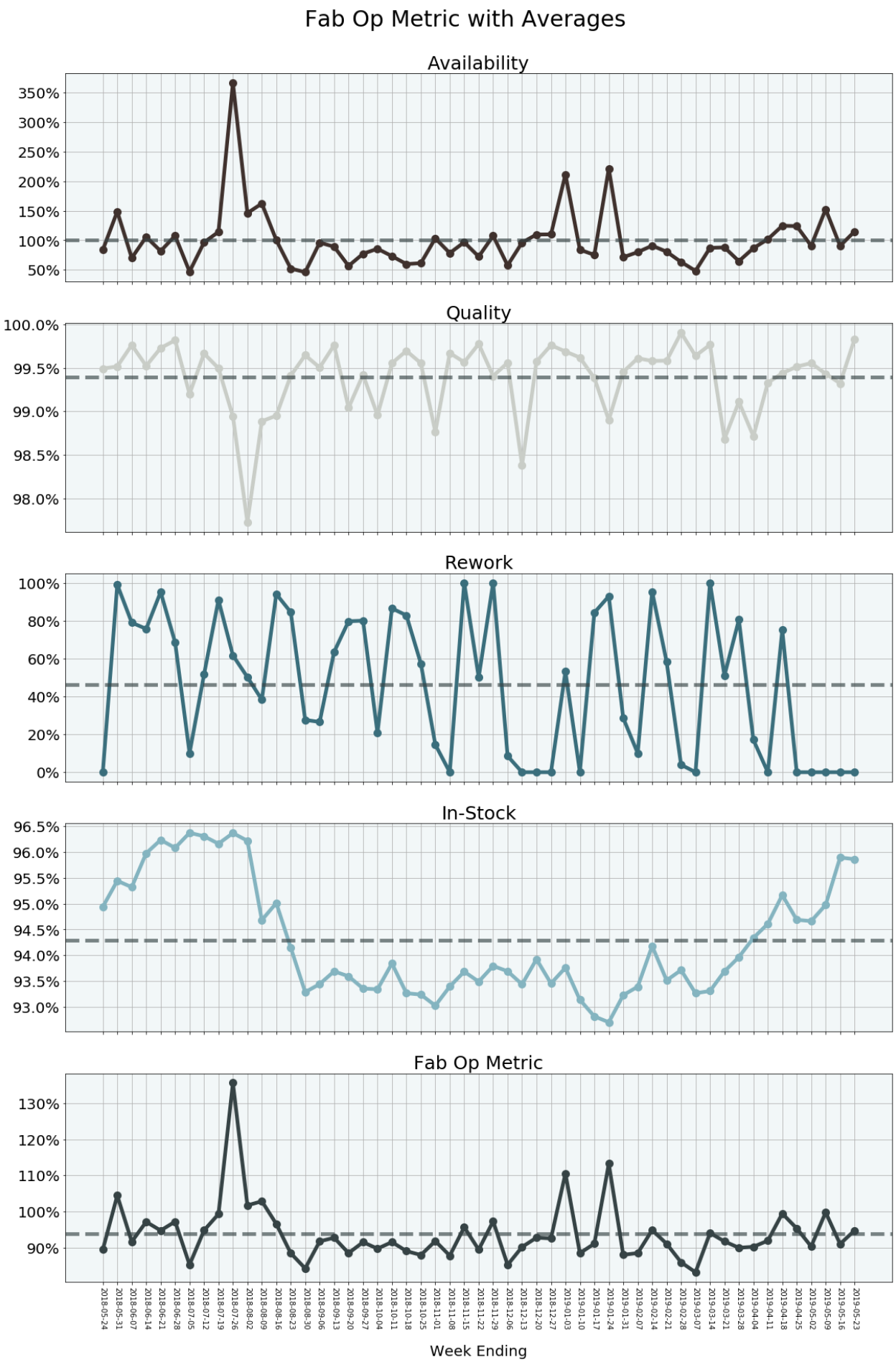
The purpose of this weekly write-up is to report the Fab Op Metric, a single number that encapsulates the most important areas of Adafruit's manufacturing division; that is, work order scheduling, quality, rework success rate, and in-stock percentage. The Fab Op Metric is inspired by the well-known Overall Equipment Effectiveness Metric.

Weekly Fab Op Metric

*A week begins on Friday and ends on Thursday. All of the averages in this report are taken over the last 53 weeks (so about one year).

Metric	Week Ending 2019-05-23	Avg	Weight	Above Or Below The Avg
Availability	115.0%	100.3%	15.0%	ABOVE
Quality	99.8%	99.4%	20.0%	ABOVE
Rework	0.0%	46.2%	5.0%	below
In-Stock	95.9%	94.3%	60.0%	ABOVE
Fab Op Metric	94.7%	93.8%		ABOVE

Keep scrolling for a bird's-eye-view of these metrics over time.


Fab Op Metric with Averages
Availability
350%
300%
250%
200%
150%
100%
50%
Quality
100.0%
99.5%
99.0%
98.5%
98.0%
Rework
100%
80%
60%
40%
20%
0%
In-Stock
96.5%
96.0%
95.5%
95.0%
94.5%
94.0%
93.5%
93.0%
Fab Op Metric
130%
120%
110%
100%
90%
2018-05-24
2018-05-31
2018-06-07
2018-06-14
2018-06-21
2018-06-28
2018-07-05
2018-07-12
2018-07-19
2018-07-26
2018-08-02
2018-08-09
2018-08-16
2018-08-23
2018-08-30
2018-09-06
2018-09-13
2018-09-20
2018-09-27
2018-10-04
2018-10-11
2018-10-18
2018-10-25
2018-11-01
2018-11-08
2018-11-15
2018-11-22
2018-11-29
2018-12-06
2018-12-13
2018-12-20
2018-12-27
2019-01-03
2019-01-10
2019-01-17
2019-01-24
2019-01-31
2019-02-07
2019-02-14
2019-02-21
2019-02-28
2019-03-07
2019-03-14
2019-03-21
2019-03-28
2019-04-04
2019-04-11
2019-04-18
2019-04-25
2019-05-02
2019-05-09
2019-05-16
2019-05-23
Week Ending

Work Order Overview

At the time of this writing, the data shows the following work order counts:

Wo Status	Work Order Counts
Completed	6,072
Pending	330
Active	173
Total	6,575

CSV Data

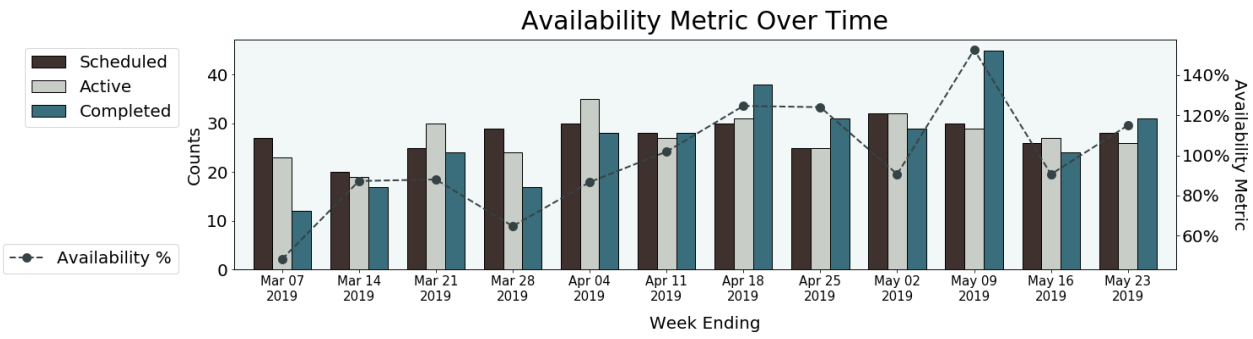
Here's where you can view a CSV which contains the data used in this report, and below are some notes on each worksheet.

- Fab Op Table: The same table shown at the top of this report, for reference
- Completed: All WOs currently marked as “Completed”
- Active: All WOs currently marked as “Active”
- Pending: All WOs currently marked as “Pending”
- Completed WOs with null dates: WOs currently marked as “Completed”, but whose “Date Active” or “Date Completed” is null or equal to zero
- Skus Used For In-Stock Metric: The skus this report uses in the calculation of the In-Stock Metric
- Rejection data: All parts which incurred rejections for the current week ending
- Current Reworks: All attempted reworks for the current week ending

Availability

*Availability = 50% * (WOs completed / scheduled) + 50% * (WOs completed / active)
†Excludes outsourced WOs

This metric equalled 115.0%, surpassing the average of 100.3%. x28 work orders were scheduled, x26 went active, and x31 were completed. The chart below shows these counts over time along with the Availability Metric.



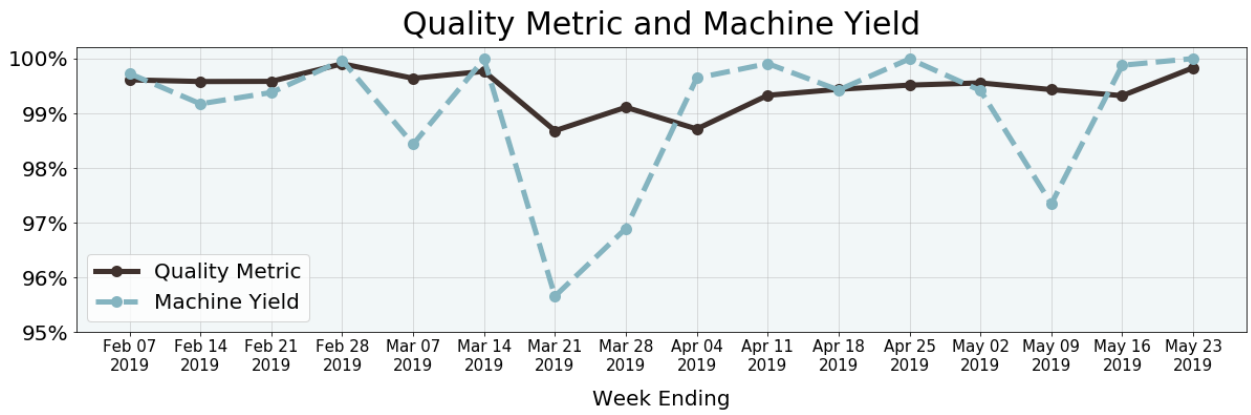
Quality

*Quality = Good Units / Total Units
†Measured over all steps, not just the Fabrication step

This metric arrived at 99.8%, about equal to the average of 99.4%. On a step-by-step basis, all rejections counts were below or at their averages.

To see all rejections for the current week ending, check out the workbook link at the top of this report, and navigate to the "Rejection Data" worksheet.

Zooming in now to the Fabrication step, we have Machine Yield, which totaled 100.0%, larger than the average of 98.6%. Below is a chart showing the Quality Metric alongside Machine Yield.

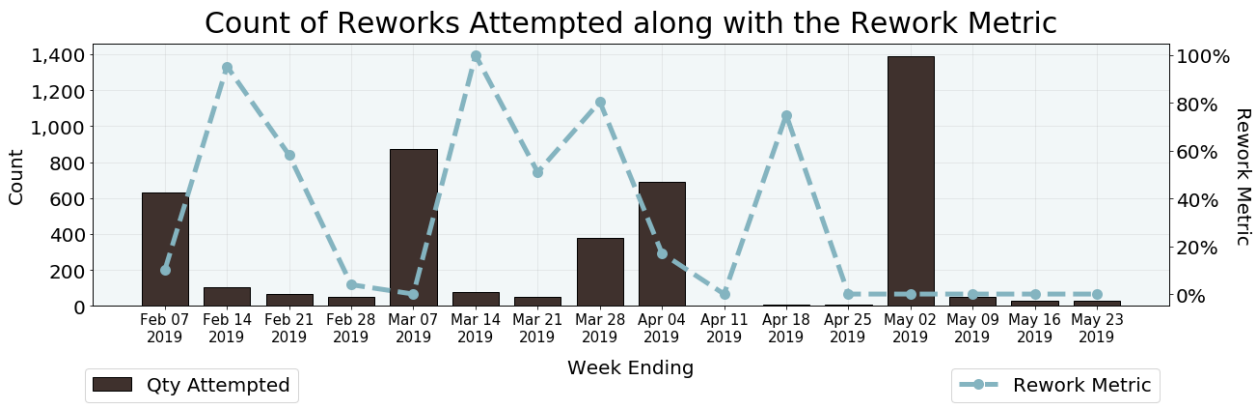


Reworks

*Reworks = Successful Reworks / Total Reworks Attempted

This metric equalled 0.0%, underneath the average of 46.2%. x30 units were attempted and x0 were successful.

To see all reworks for the current week ending, check out the workbook link at the top of this report, and navigate to the "Current Reworks" worksheet. Below we have a chart showing the count of reworks over time along with the Rework Metric.

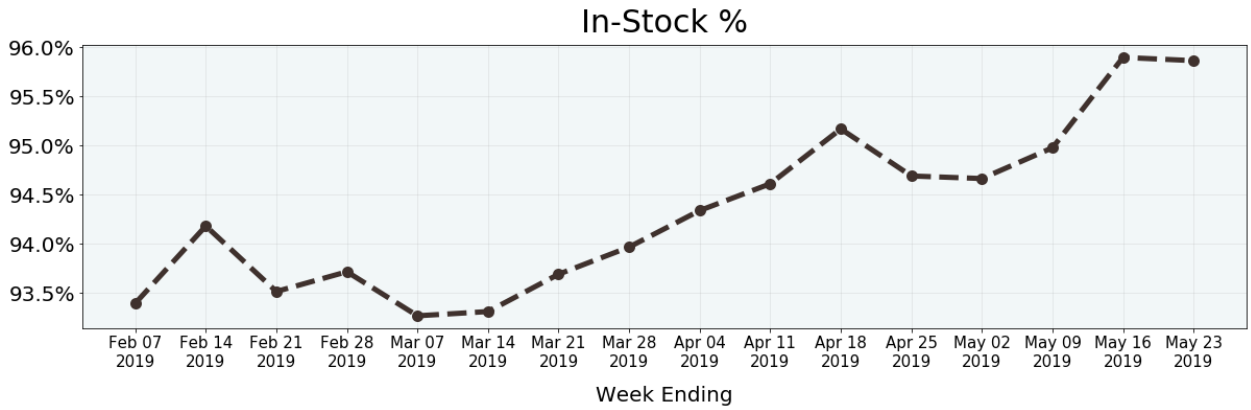


In-Stock

*Visible in-stock percentage of all currently working skus that have a bom type equal to “pnp”.

The unique sku count is currently x435. To see the skus which are used in this metric, check out the workbook link at the top of this report, and navigate to the worksheet titled "Skus Used For In-Stock Metric".

This metric arrived at 95.9%, passing the average of 94.3%, and below is a chart showing this metric over time.



Note that if you compare this metric to the one found in the Zero Stock Report, the two may not match. This is because the Zero Stock Report shows a snapshot while the report shows over time.

Elapsed Times For Work Orders

This section contains a standalone set of metrics which are not included in the calculation of the Fab Op Metric. The table below shows the average time in days that it takes for a single work order to go from period to period.

	Week Ending May 23, 2019	6 Month Avg	Shorter Or Longer Than Avg?
Created To Scheduled	61	54	Longer
Scheduled To Active	0	1	About Equal
Active To Completed	41	39	Longer

State of the Fruit Blurb

Copy/paste the blurb below into your SOTF notes :)

fab ops!
-availability: 115.0% (last week: 90.6%)
-quality: 99.8% (last week: 99.3%)
-rework: 0.0% (last week: 0.0%)
-in-stock: 95.9% (last week: 95.9%)
-overall: 94.7% (last week: 91.0%, goal = 93.8%)

End of report