I1.2 – Warehouse Control of Perishable Goods

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Problem Statement

Variability in produce shelf life and the stage of life that it arrives at CTFB, coupled with inventory control, distribution, and operational procedures, leads to produce being diverted to compost. Reducing waste will allow CTFB to supply more produce to their agencies and, ultimately, the consumers of the produce.

Project Purpose

Reduce the amount of time produce is staged at the warehouse, allowing CTFB to deliver produce with a longer remaining shelf life than before. Additionally, improved procedures should help reduce the amount of expired produce (waste) at their facility.

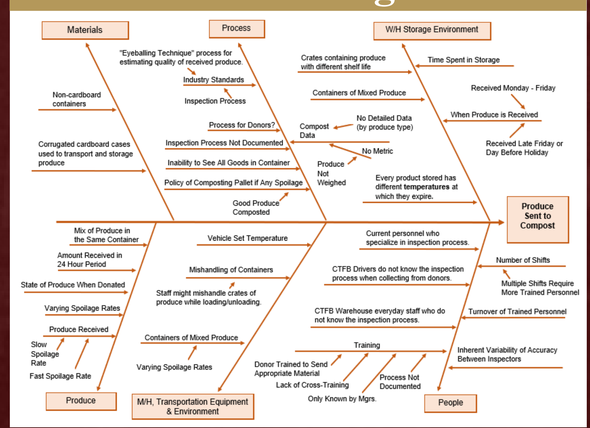
Objectives

- Reduce accumulated waste from expired produce.
- Generate SOP for undocumented processes.
- Validate recent implementations of JIT strategies.

Methodology

The project characteristics, data-driven quality, and overall objectives meet the criteria for the six-sigma process improvement model: DMAIC. This approach will also be the structure that allows the team to keep a check and balance system throughout every phase of the project.

Ishikawa Diagram

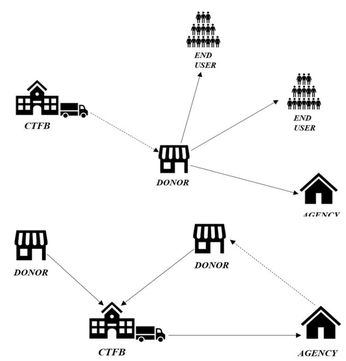


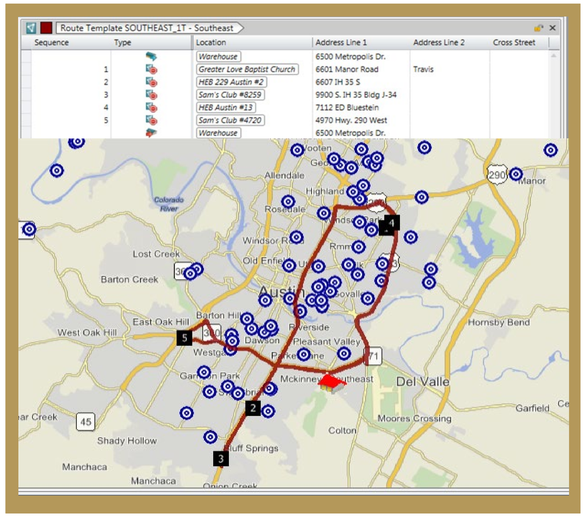
Pilot Route Validation

Just-in-Time strategies have been implemented with the objective of reducing the level of inventory in the warehouse and consequently delivering produce with a longer shelf life.

Mid-route Pick Up

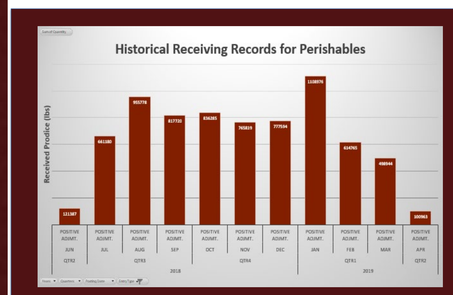
Deadheading



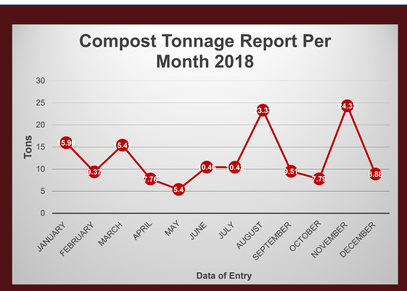


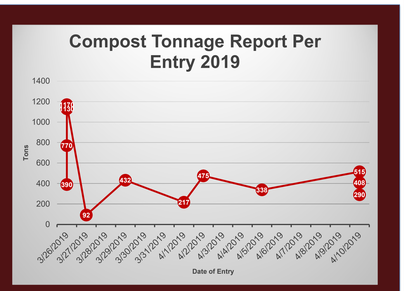
Both methodologies will be analyzed for effectiveness. Recommendations will be made based off resource consumption and the new model's efficiency.

Analysis of Peak Distribution Days for Procurement Team

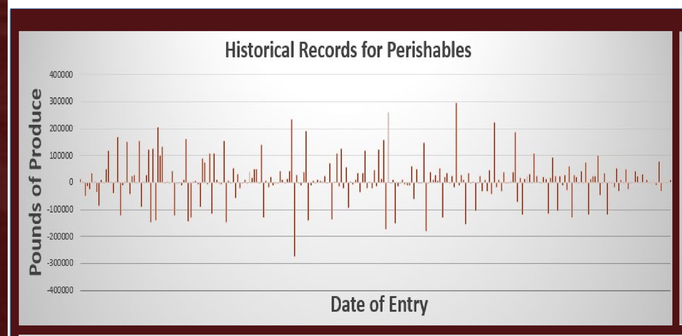


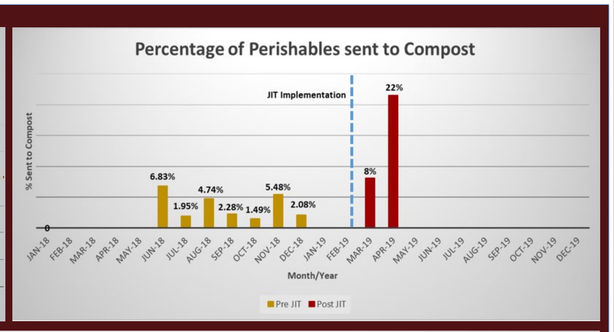
Minimal variation when viewed from month to month.





Monthly compost will continue to be measured. The data will be compared against the compost data prior to JIT implementation.





A comparison of daily receiving and distribution trendlines indicate high levels of variation. Recommendations for reducing the variability and minimizing compost will be studied further.

Performance Measures

Time Produce Remains in Warehouse

Metric: Cycle Time	Score
x ≥ 5 days	1
5> x ≥ 4 days	2
4> x ≥ 3 days	3
3> x ≥ 2 days	4
x < 2 days	5

Weightage of Produce diverted to compost

Metric: Weight in pounds of produce per week	Score
x >10,000 lbs.	1
7000 < x ≤ 10000 lbs.	2
3000 < x ≤ 7000 lbs.	3
1000 < x ≤ 3000 lbs.	4
x ≤ 1000 lbs.	5

Future Plans

- Make recommendations based on the data analyzed to support future scheduling, budgeting and operational decisions.
- Provide performance measures to evaluate the project success and for the CTFB to have parameters to estimate their process performance in the future.
- Generate strategies to improve the documentation and data collection carried out in the current process.

Team Members

Acknowledgements

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