

# PepsiCo Salts Assembly

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### IE-4350



### ABSTRACT

By using DMAIC our team was able to come up with suggestions on how to minimize search time for bins. For immediate results we would establish a new SOP for placing bins in a new runoff area to account for a lack of storage space. We also recommended updating SAP to add some fail-safes for drivers. We also believe that if they were to equalize their production rate, they could easily utilize their available rack space and remove the need for a runoff space entirely in the future by utilizing a pull system. We also believe they should invest in new forklifts to utilize their rack space in a safer, more efficient way

### INTRODUCTION

PepsiCo manufactures, markets, and distributes grain based snack foods, beverages, and other products. The concentrate facility located in Arlington Texas is PepsiCo's only salts assembly center in North America. Currently the assembly area is having an issue with bin storage. The drivers aren't utilizing the upper tiers of their racking system due to time and safety concerns. This forces them to store bins in undesigned areas which causes confusion when the bins need to be retrieved by other drivers. Implementing time studies, worker questionnaires, and decision analysis techniques have lead us to a few suggestions to help improve the throughput of the facility.

### REFERENCES

Dr. K.J. Rogers, P.E.  
Etang Pugh (Plant Manager PepsiCo)  
Jose Matinez (Manager Salts Assembly)

### RESULTS

We determined that the quickest way to reduce search time was to establish a designated runoff area for the bins once the rack system is full. The drivers would then use a sheet attached to their clipboard and write down where they placed the bins. This would allow the next shift of drivers to know the bin's location. This would be necessary until SAP could be updated to include the new area in their system. We also believe that the company should invest in new forklifts which would be safer and allow the drivers to access the upper rack space. The facility should also equalize the production rate of the filling room. This would allow the available rack space to accommodate the bins.

Item	Cost
New Forklifts	\$ 38,000.00
SAP (est)	\$ 2,000.00
SOP	\$ 180.00

### CONCLUSION

To increase the productivity of the salts assembly line we discovered that some basic organization techniques could yield some great results. Most of these would be easy to implement and relatively inexpensive. The facility could also consider some more advanced, and costly, techniques to ensure the continued improvement of the plant into the future. This project required implementing multiple techniques from our Industrial Engineering curriculum as well as a great group dynamic to ensure its success.

### FUTURE WORK

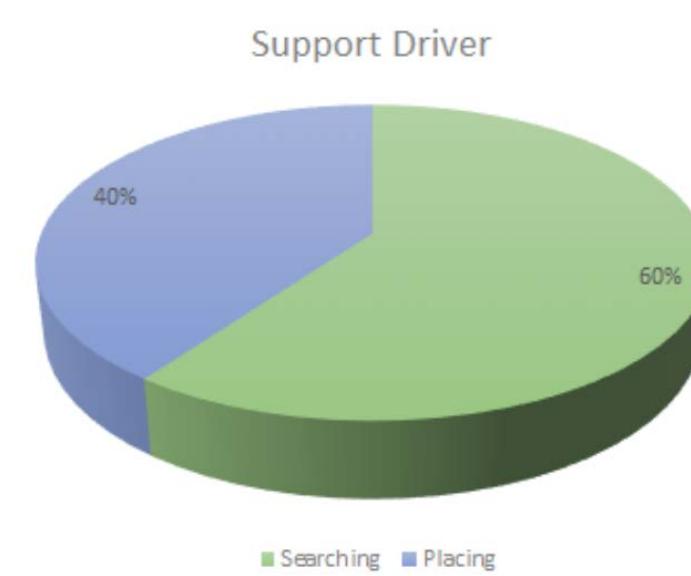
It is now up to PepsiCo to choose whether or not they would like to implement our ideas.

### METHODOLOGY

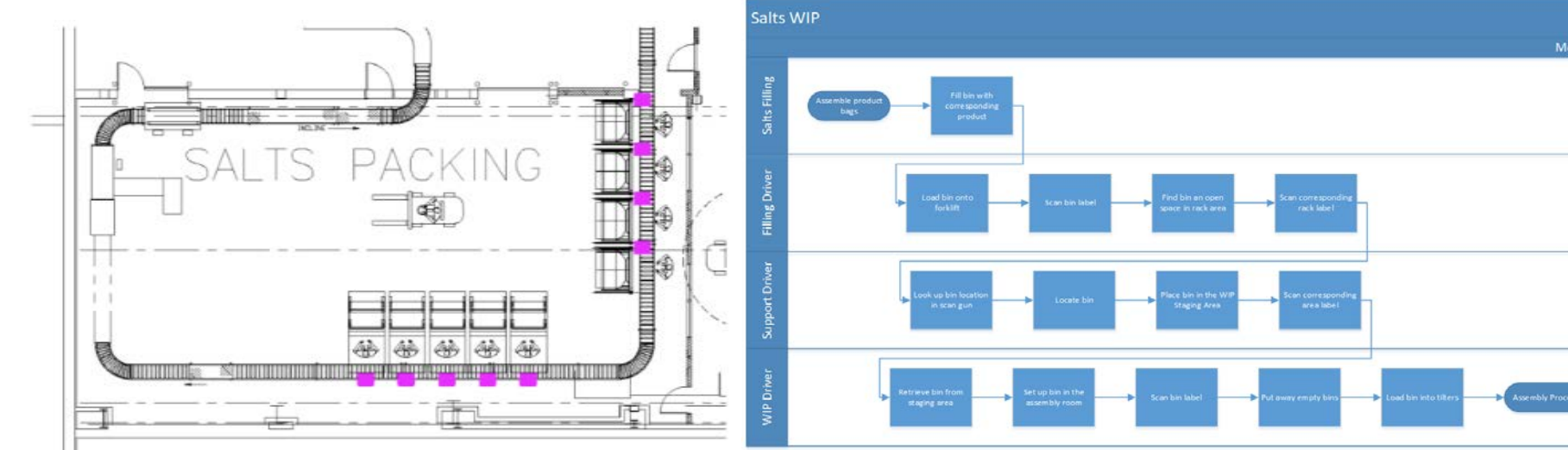
#### Define:

PepsiCo wants to decrease search time for bins at salts assembly

#### Measure:



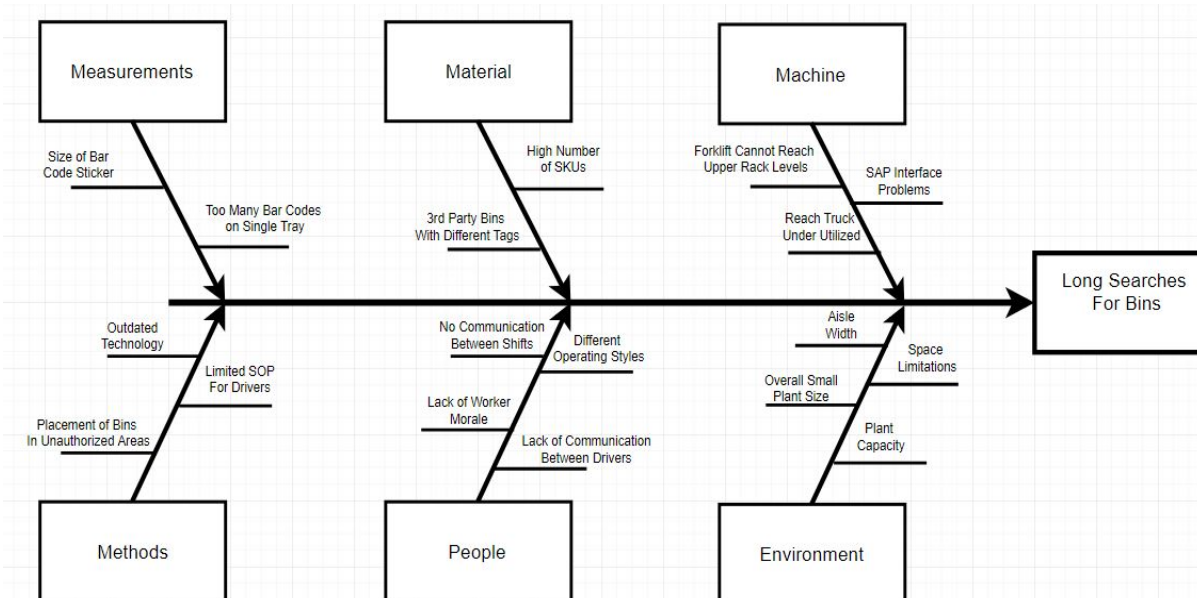
Time Study



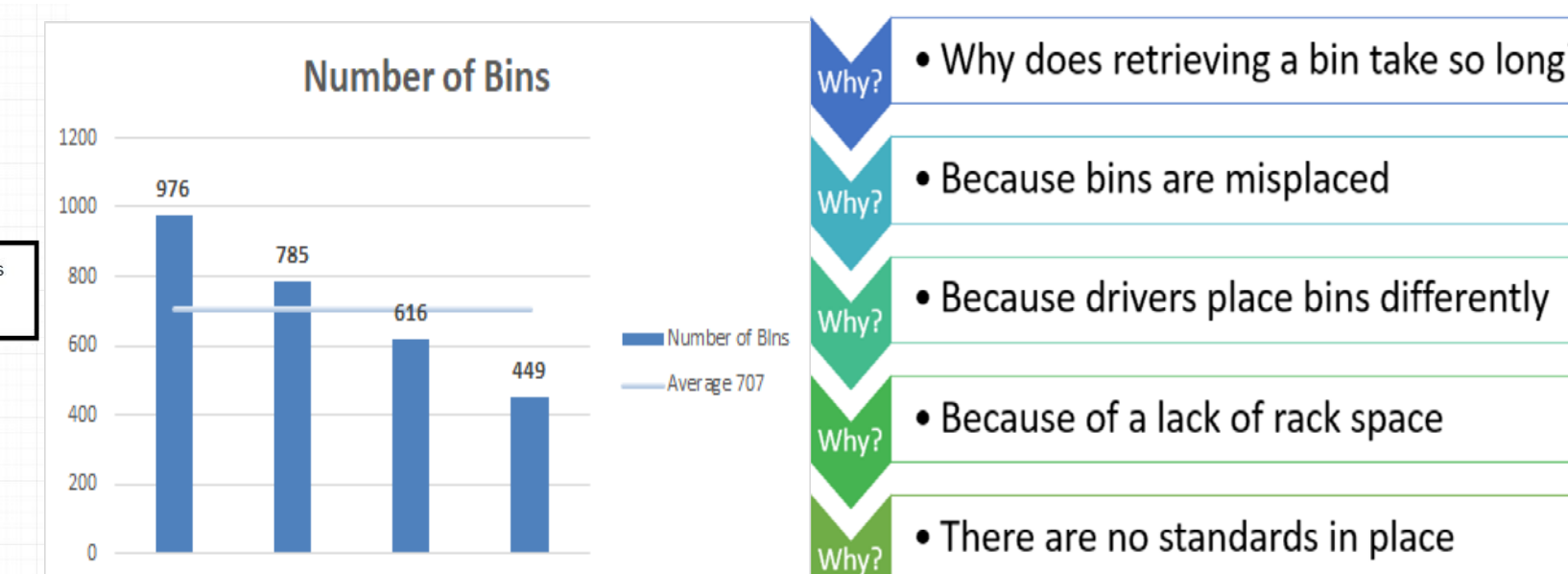
Current Layout

Process Map

#### Analysis:



Cause and Effect Diagram



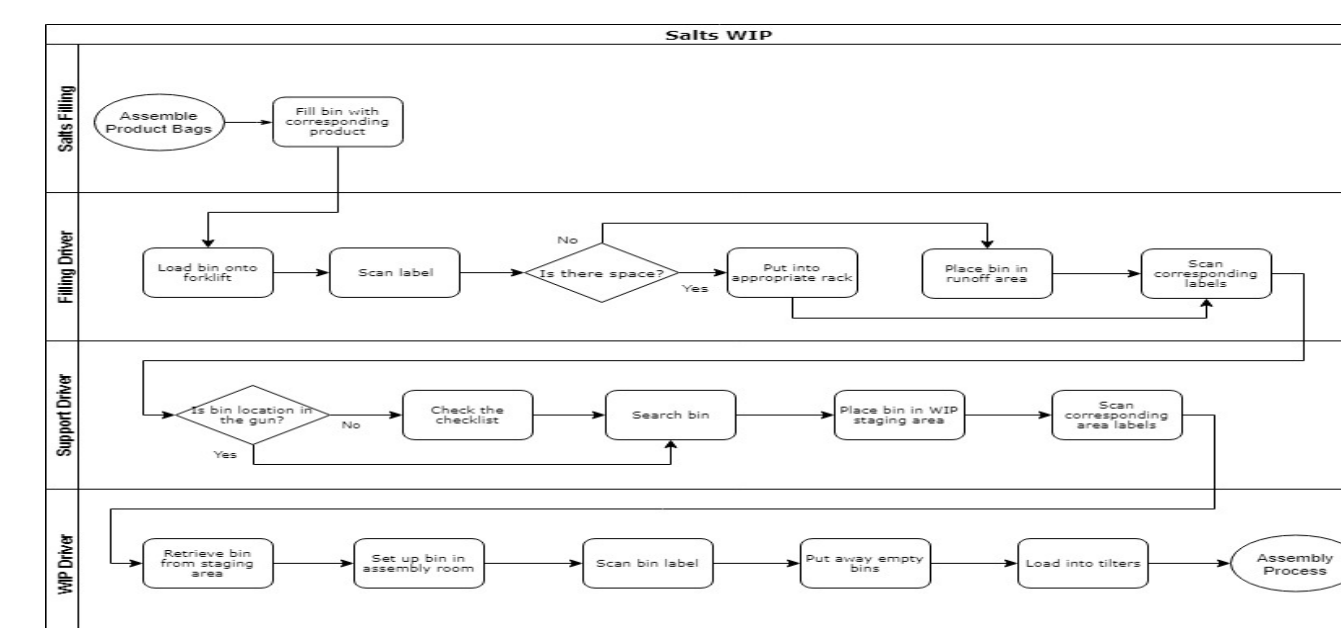
Production Analysis

5 Whys Analysis

- Why? Why does retrieving a bin take so long?
- Why? Because bins are misplaced
- Why? Because drivers place bins differently
- Why? Because of a lack of rack space
- Why? There are no standards in place

#### Improve:

- Redistribute production
- Update SAP system
- Create Standard Operating Procedures for drivers
- Optimizing layout



Updated Process Map

#### Control:

- New time studies
- Flowplanner to simulate new process
- Incentive program for drivers