



Return-It: Simplified Sort Time Study Rapid Lean Assessment

Propel Solutions

August/September 2021



Analysis Objectives

Return-It



Simplified Sort Key Results

Propel observed three depots both before and three weeks post the implementation of the simplified sort processes had been installed in order to observe the impacts:

- ✧ Overall Depot staff were positive about the change and said it did not take long to learn the new sorting process.
- ✧ POS and Terminal Screens had been simplified leading to improved data entry and reduced transaction times. This had improved the customer experience through reduced wait times.
- ✧ There was visibly more space in the depot sorting areas created by a reduction in the number of container receptacles.
- ✧ Depots had improved layout of the receptacle bags to reduce personnel's travel time to sorting.
- ✧ Operators told us that they found the express sort easier as they only had to count 4 material types in their head which means they can complete the full counts before entering the POS.
- ✧ There was no visible changes for end customers of the depots. There was no visible communication of any differences to the depot customers.

Depot Testimonials

The Depots expressed positive sentiments about the simplified sorting process. Each of the depots estimated that the time savings through the implementation ranged from 10 – 30% depending on the step in the process. Below are direct quotes shared by the depot staff:

- ✧ *“The new sorting process saves me at least 15% - 30% of effort when keying the transaction into the terminal.”*
- ✧ *“There is more space for me to move in the back of the depot now that we only have 4/5 bags to sort in.”*
- ✧ *“My job is so much easier now that all we have to do is count the containers rather than sort them by size.”*
- ✧ *“The new sorting process is easier and more convenient.”*

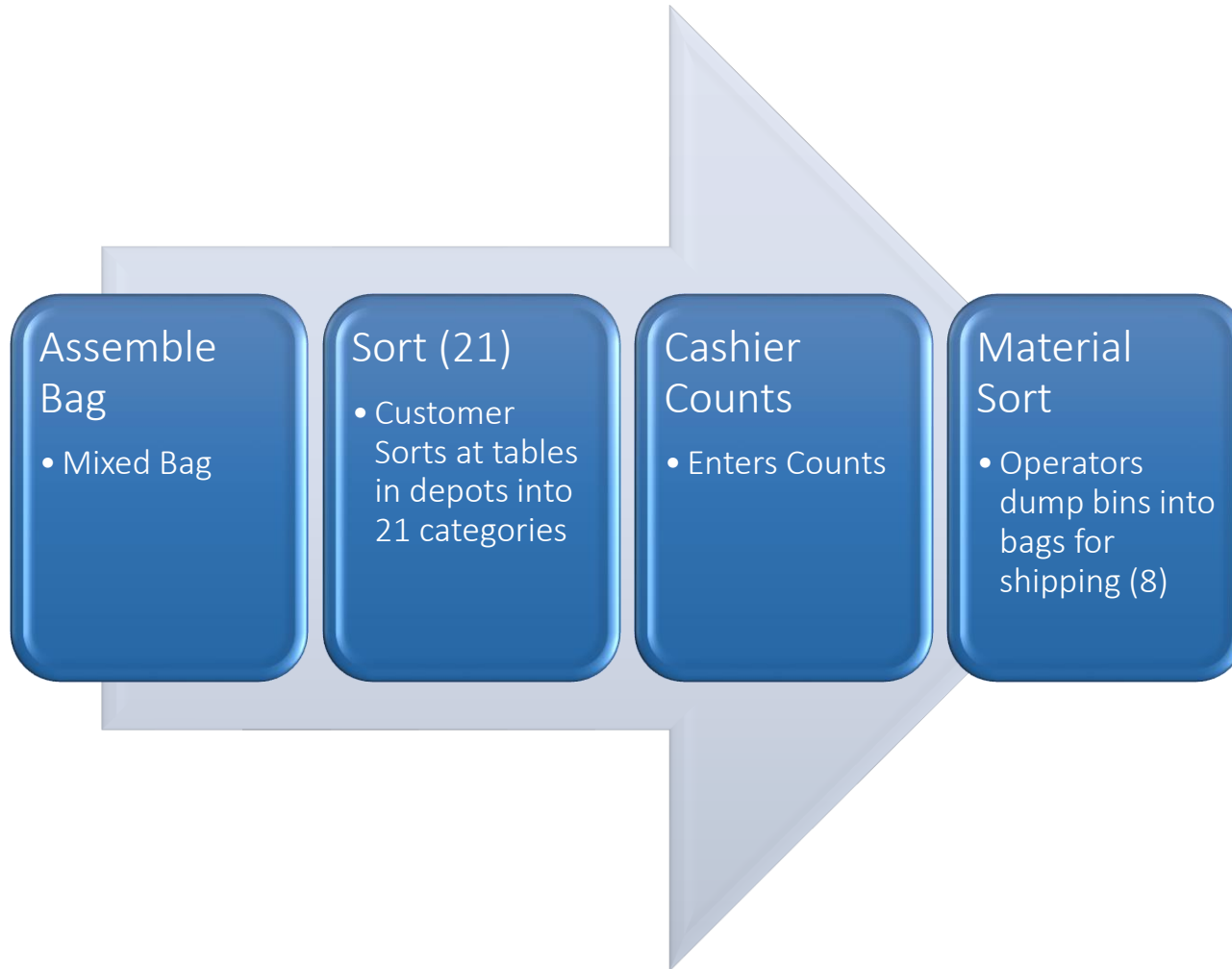


Time & Motion Studies

Observing the Current State



As Is - Customer Sort

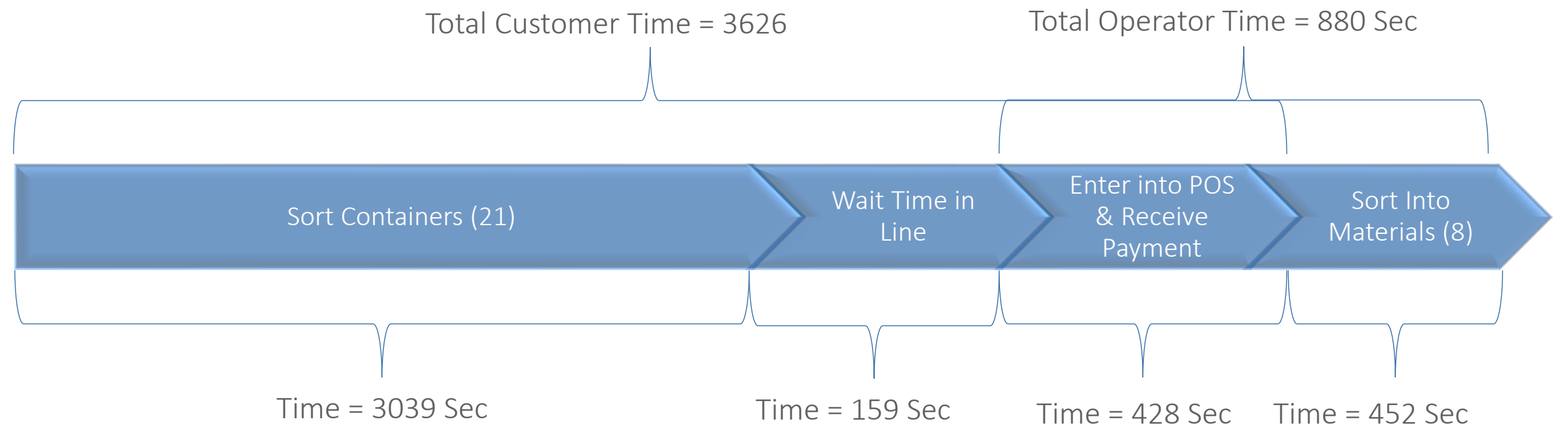


The Current State Customer Sort Process was observed to have 4 steps. The following observations were made:

- Takes up more space at the depot having sorting tables
- Must wipe down the sorting tables between customer visit
- Multiple touches of containers into different numbers of sorting criteria
- System entry done at time of transaction resulting in longer processing time for both customer and operator
- 2 Sorts In Process
 - Customer (21)
 - Operator (8-9)

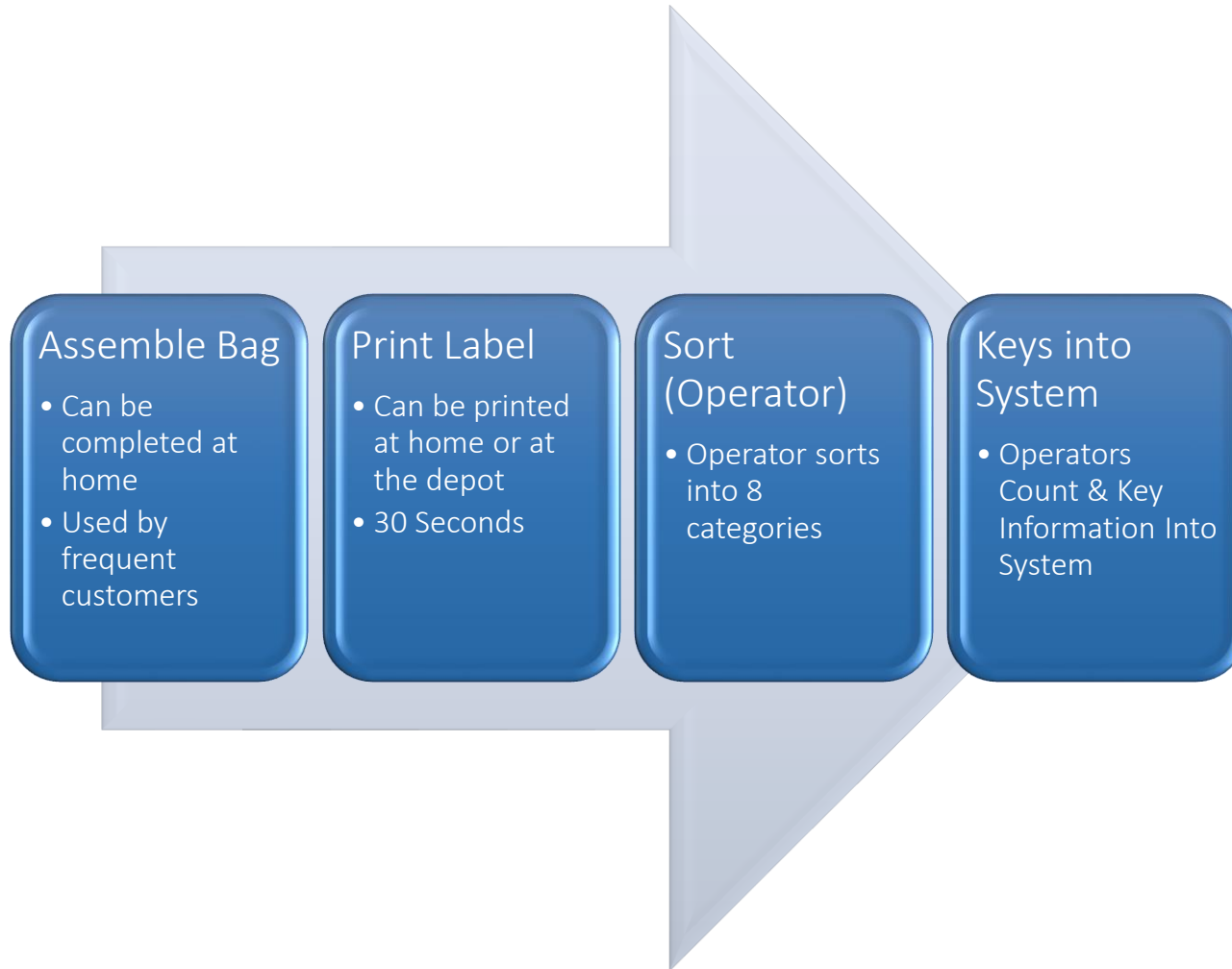
As Is Customer Sort

(Average Time By Container Count – Per 1000)



	Customer Time	Operator Time	Total Time
As Is	3236 Sec	880 Sec	4506 Sec

As Is - Express Sort

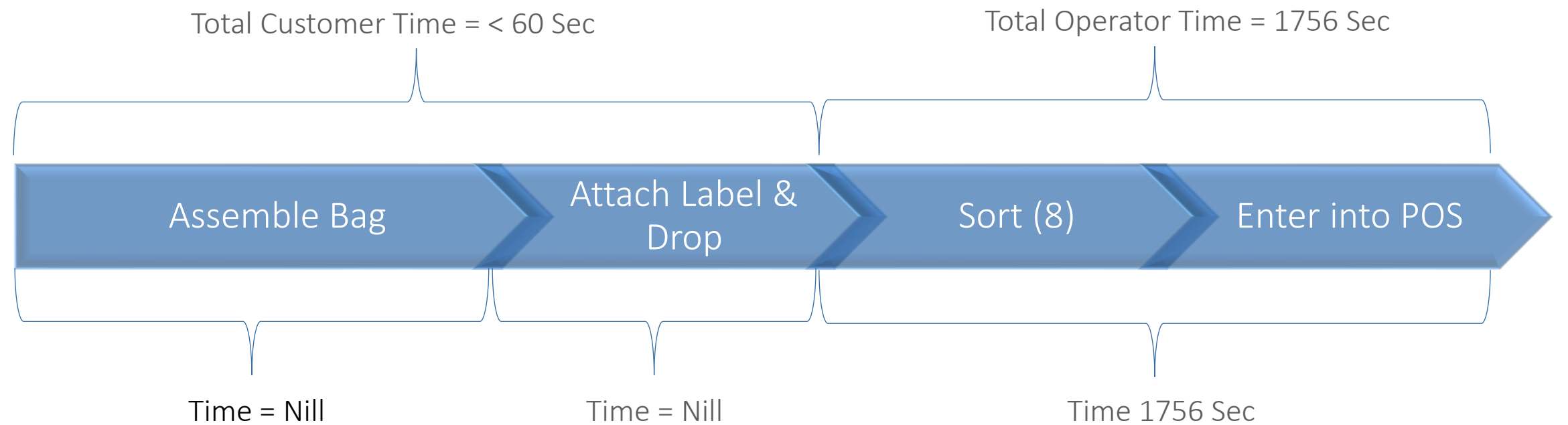


The Current State Customer Sort Process was observed to have 4 steps. The following observations were made of the key benefits:

- Fast processing for customer reducing space requirements for the operator. (Does not require table washing)
- Eliminates duplicate handling of materials and multiple sorts.
- System entry completed after customer departs resulting in faster processing time
- One sort in process:
 - Operator Sort (8)

As Is Express Sort

(By Container Count – Average Time Per 1000)



Express Sort	Operator Time
As Is	1756 Sec



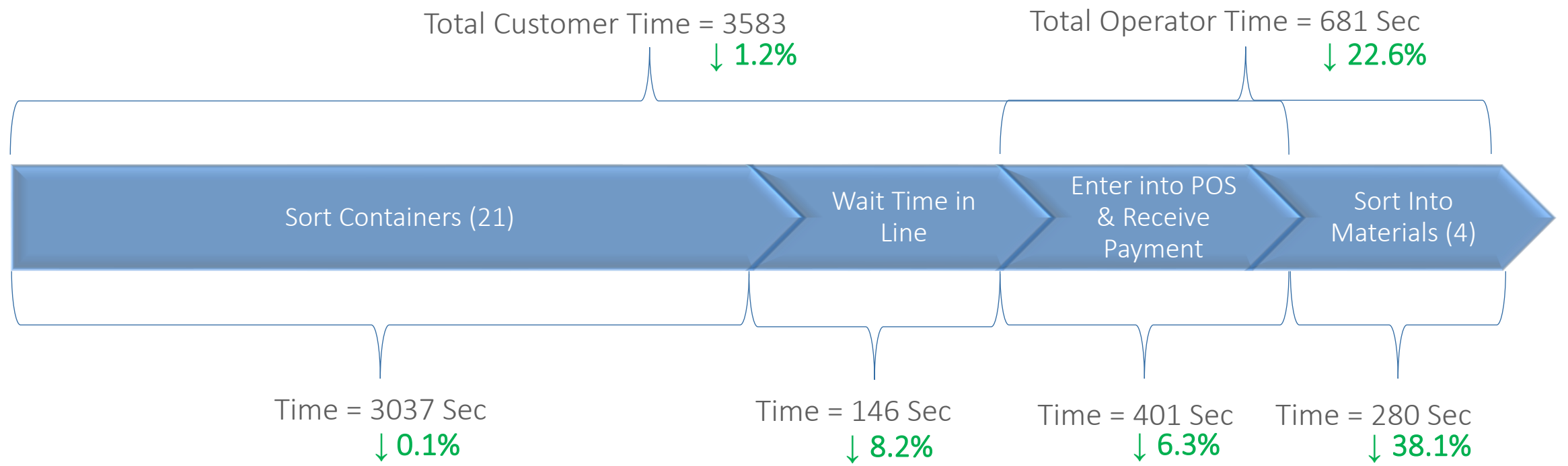
Results

Simplified Sort Improvements



Customer Sort Improvement

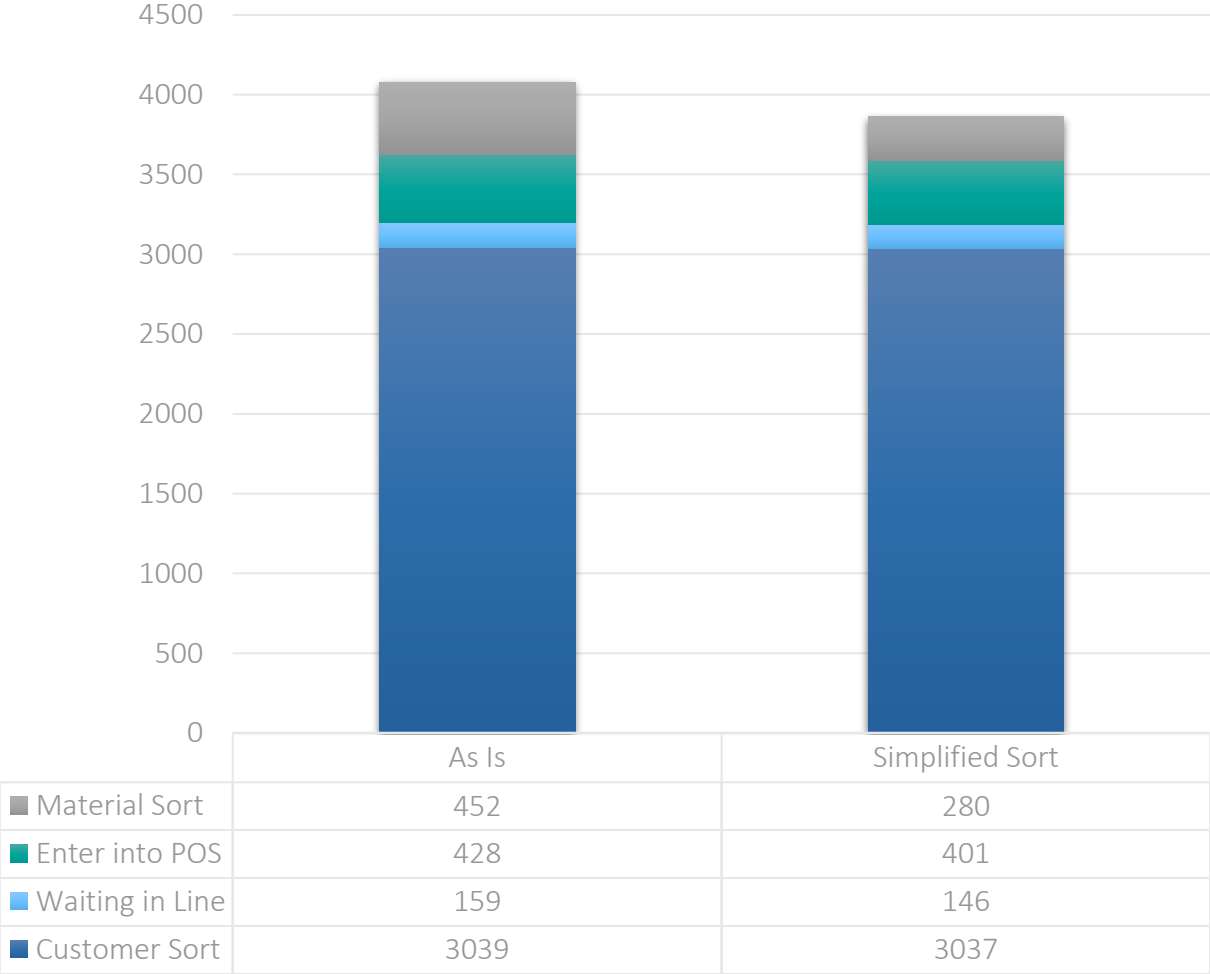
(Average Time By Container Count – Per 1000)



	Customer Time	Operator Time	Total Time
As Is	3626 Sec	880 Sec	4506 Sec
Simplified Sort	3584 Sec	681 Sec	4264 Sec
Improvement	43 Sec	199 Sec	241 Sec
% Improvement	1.1%	22.6 %	5.4 %

Customer Sort Time Savings

Per 1000 Containers

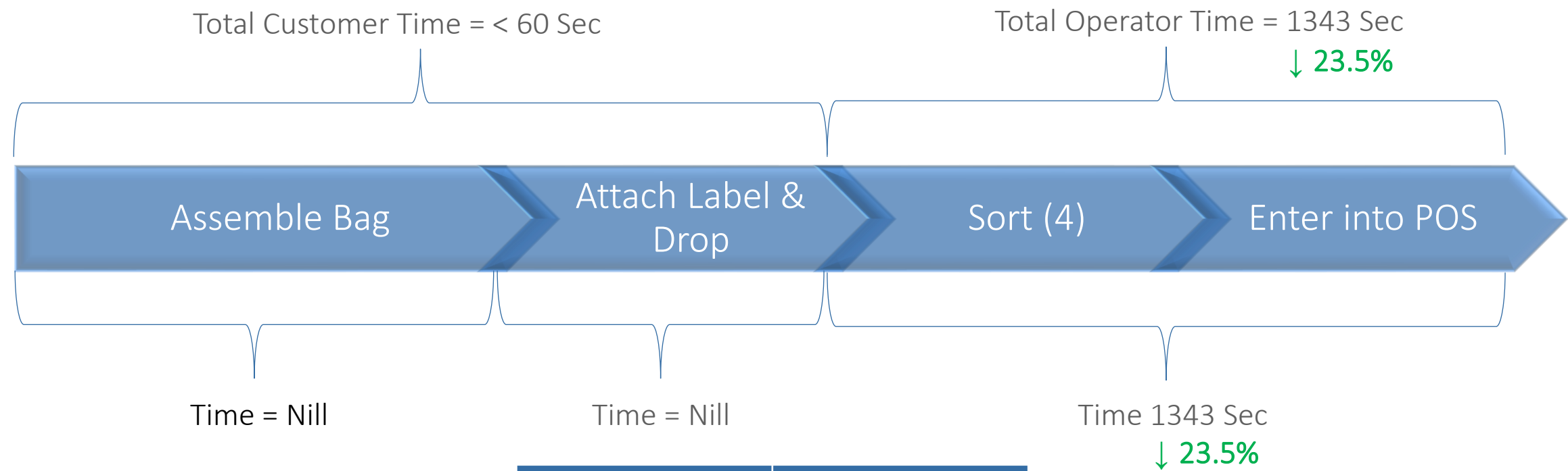


The simplified sort resulted in a 199 second improvement in the operator effort which represents a 22.6% reduction in time spent handling customer sort transactions.

- The largest impact for the depot staff was identified through the sorting process (38.1% improvement). The reduced material sorts allowed the collections bags to be placed closer to the conveyer/cashier which reduced the depot staff’s travel time to place materials in the receptacle.
- There was reduced time spent entering the containers into the POS. The operators did not have to toggle between the screens for 21 containers. This represented a 6.3% improvement.
- There was a negligible difference for the customer sorting process in the simplified sort. There was reduced time spent waiting in line as the transaction time per customer was less. (8% reduced time in line)

Express Sort Improvement

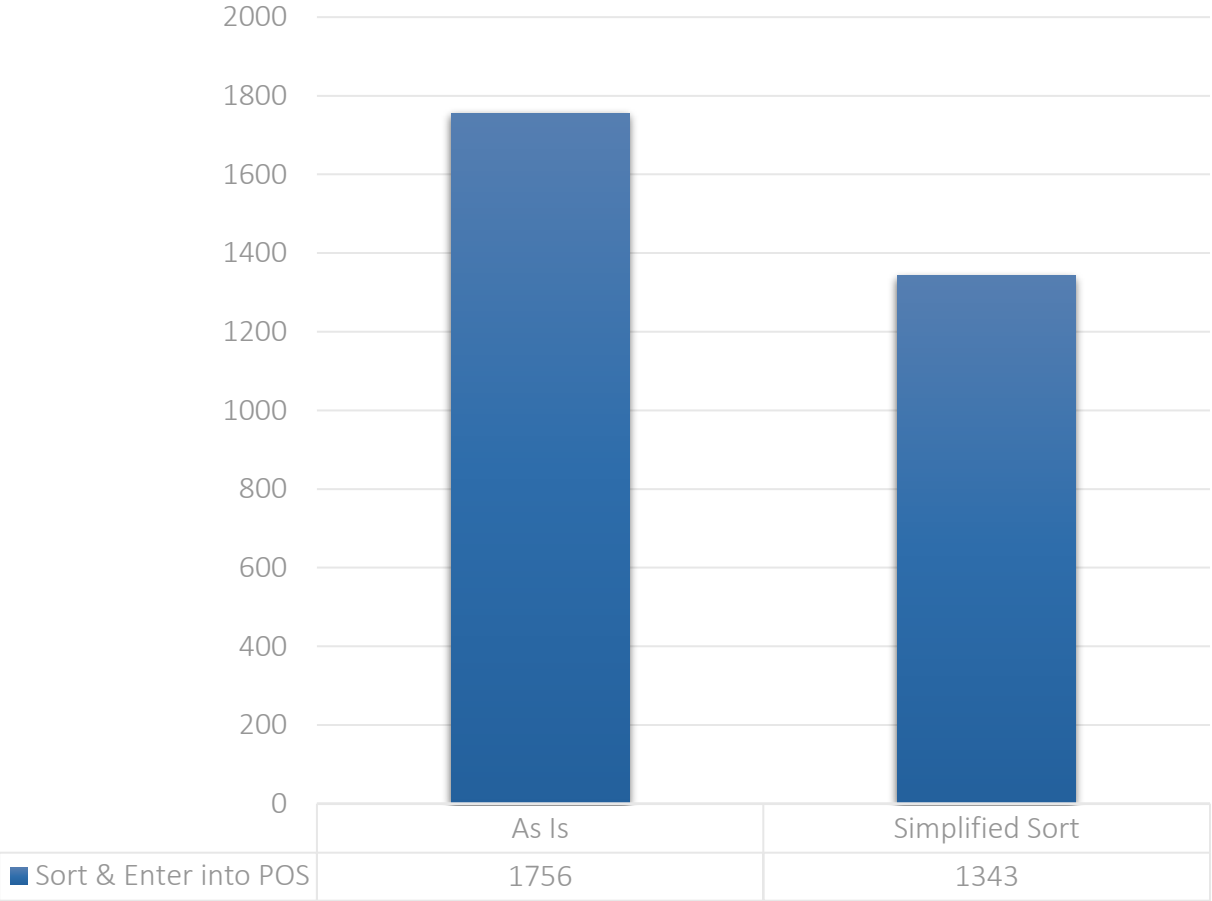
(By Container Count – Average Time Per 1000)



	Operator Time
As Is	1756 Sec
Simplified Sort	1343 Sec
Improvement	412 Sec
% Improvement	23.5%

Express Sort Time Savings

Per 1000 Containers



There was a 412 second improvement in the sorting time per 1000 containers. This represents a 23.5% reduction in the operator time spent sorting express bags and entering data into POS.

- With the simplified sort, operators can complete the full count of the contents of the express bag prior to entry into the terminal as they could keep track of the material count in their head.
- Additionally, the new sorting process has also reduced the operator movement between collection receptacles by having fewer bags to travel between.
- This in turn reduces the clean up time at the depot as there are fewer types of collections bags to manage, even though the overall bags shipped will remain constant.



Continuous Improvement

Raising the Bar - 10 Causes of Lost Time



10 Causes of Lost Time

Layout

Are bins placed in a way to minimize walking time?

Rework

Are there any points of double-handling or repeat work?

Overproduction

Are we entering repetitive information on multiple work documents or forms?

Ineffective Current Systems

Are there opportunities to improve manual or IT processes to gain time?

Process Steps Not Needed

Are we touching materials multiple times in the process?

10 Causes of Lost Time Continued

Poor Planning

Do we have a clear and logical plan for our work processes?

Waiting for Work

Is there idle time while individuals wait for work to arrive? Or customers waiting for service?

Lack of Expectations

Do we have quantifiable expectations for employees for required work volumes?

Lack of Assignment

Do we have a method for identifying when we have extra capacity?

Skills

Can staff assist other areas when work is slow in their primary area?

Thank You

Discussion



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