Store Operations Study

Observations and Waste
Roles and Responsibilities
Engineered Labor Standards

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Time diary results were mostly consistent between our 2018 labor study and 2008 LFO

|	2008 LFO	2018 Labor Study
Other activities	6%	6%
Store administration	10%	5%
Store maintenance	5%	4%
Ordering & Inventory mgmt	4%	16%
Shipment/ Rack maintenance	20%	3%
Promotions & pricing	4%	60%
Selling activities	41%	7%
Down time	10%	
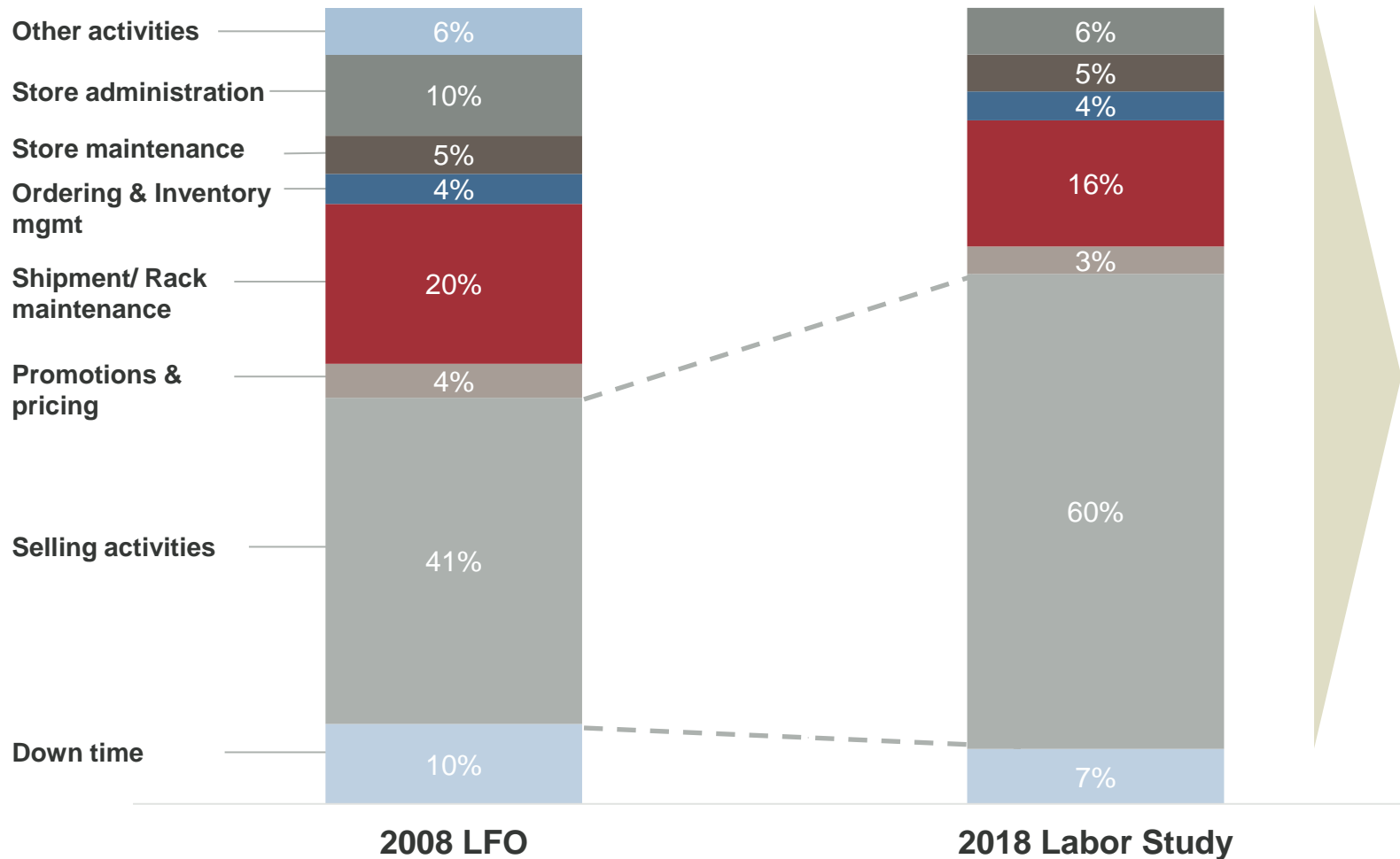
Observations

- 19% increase in selling activities/ **customer facing** activities. Partially the result of new offerings (B2B, .com support, best brands etc.) as well as method of categorization/ granularity of time diary form

- Consistent allocation of store time across ordering & inventory management, store maintenance and promotions and pricing

- 4% decrease in total store time spent on shipment/ rack maintenance could be a result of AWOR best practices following LFO

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Time Study Recap

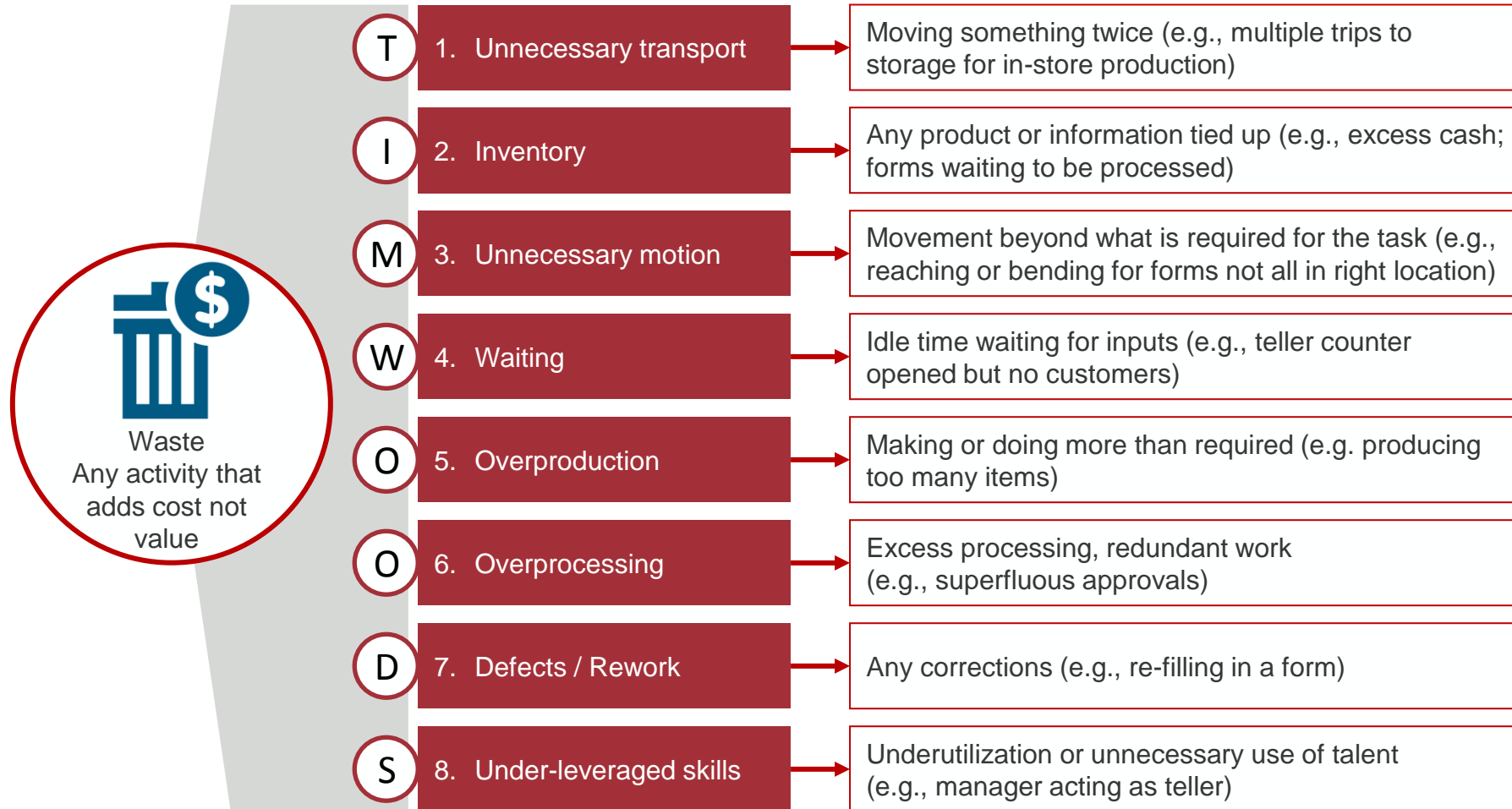## Time spent by process:
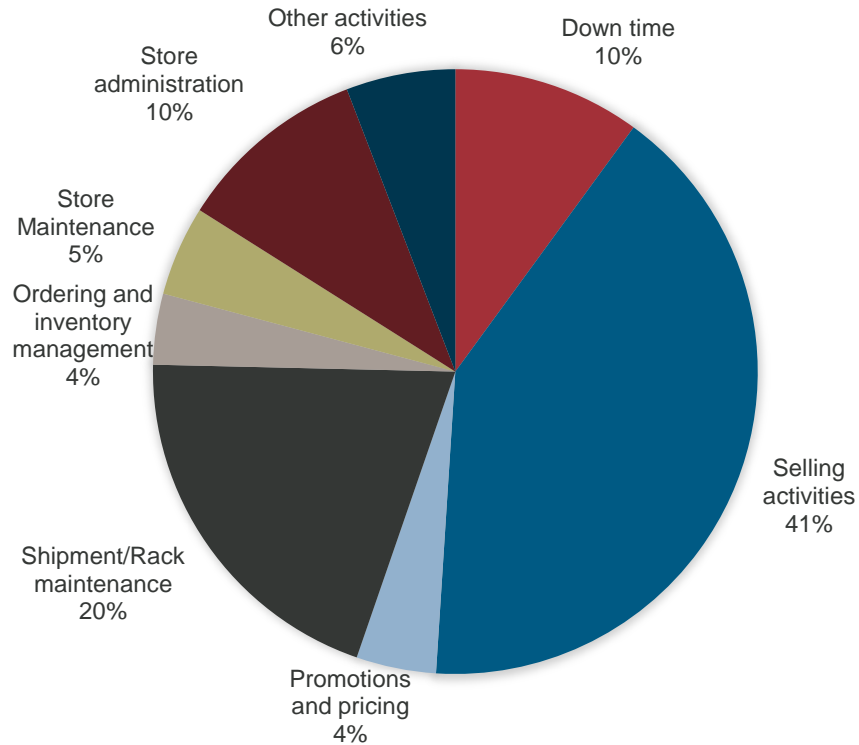
41% of store labor hours are spent directly with consumers
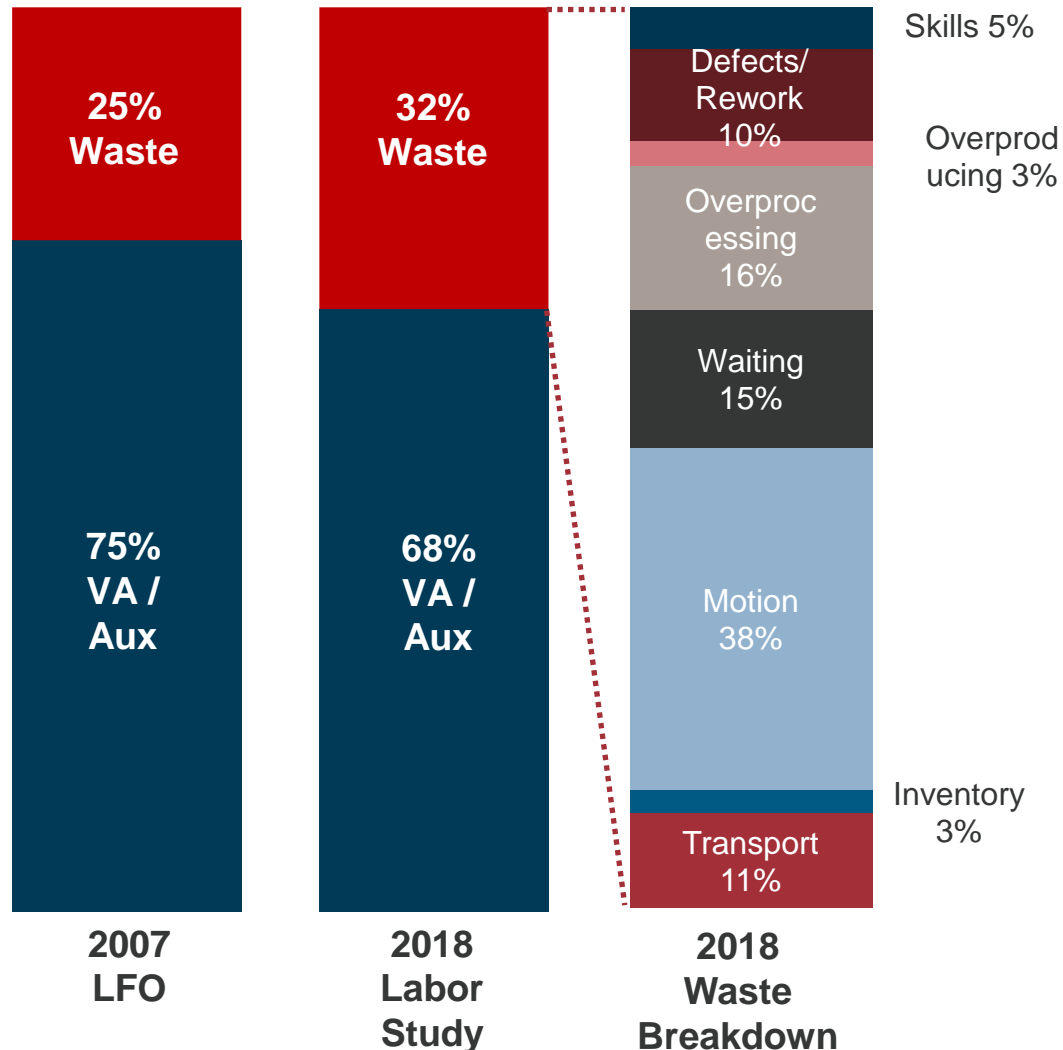
Key Processes captured:

1. Down time
   1. Wait time
   1. Breaks
   1. Meal breaks
2. Selling activities
   2. Interacting with customers
   2. Checking backroom/ top stock
   2. Specialty task- key making
   2. Specialty task- Paint mixing
   2. Product service (cutting glass, assembling products)
   2. Creating special orders
   2. Checking out customers
   2. Handling returns/disputes/ customer complaints
   2. Delivery to car/home
3. Promotions and pricing
   3. Promo and price change tagging
   3. Detagging
   3. Shifting or resetting items due to promotion
   3. Setting up other in-store promotions
   3. Promotional Administration/ back office
4. Shipment/Rack maintenance
   4. Receiving shipments/shipment breakdown
   4. Restocking products to shelf
   4. Moving merchandise from top stock to racks
   4. Shelf conditioning
   4. Re-plan-ogramming shelves

5. Ordering and inventory management
   5. Maintaining inventory counts
   5. Filling out and placing order
   5. Checking outs and exceptions
   5. Order verification
6. Store Maintenance
   6. Cleaning store/trash maintenance
   6. Repairs and others
   6. Technology support/repair (computer issues, etc.)
7. Store administration
   7. Telephone calls
   7. Handling money
   7. Store opening/closing procedures
   7. Team meetings
   7. Paperwork, reporting, and mgmt documentation
   7. HR management
   7. Training/coaching/performance management
   7. Scheduling employees
   7. Written/email communications with/from corporate/management
   7. Strategic planning
8. Other activities

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Through process observations, we identified and categorized waste

Waste
Any activity that adds cost not value

Letter	Category	Description
T	1. Unnecessary transport	Moving something twice (e.g., multiple trips to storage for in-store production)
I	2. Inventory	Any product or information tied up (e.g., excess cash; forms waiting to be processed)
M	3. Unnecessary motion	Movement beyond what is required for the task (e.g., reaching or bending for forms not all in right location)
W	4. Waiting	Idle time waiting for inputs (e.g., teller counter opened but no customers)
O	5. Overproduction	Making or doing more than required (e.g. producing too many items)
O	6. Overprocessing	Excess processing, redundant work (e.g., superfluous approvals)
D	7. Defects / Rework	Any corrections (e.g., re-filling in a form)
S	8. Under-leveraged skills	Underutilization or unnecessary use of talent (e.g., manager acting as teller)

Where is the waste?

2007 LFO
- 25% Waste
- 75% VA / Aux

2018 Labor Study
- 32% Waste
- 68% VA / Aux

2018 Waste Breakdown
- Skills 5%
- Defects/Rework 10%
- Overprod ucing 3%
- Overprocessing 16%
- Waiting 15%
- Motion 38%
- Inventory 3%
- Transport 11%

Sources of waste

Checkout
- Significant idle time / time filled with NVA tasks (e.g. facing nearby shelves excessively, cleaning counters repeatedly, etc.)
- Lack of cross-training everyone on cash leading to need for overstaffing

Customer Service
- Overstaffing – staff focused on "busy work" vs. value added activities (e.g. slow restocking, slow putaway, excessive walking, etc.)

Inventory Management
- Excessive searching/processing low value items (e.g. clearance, out of stocks, negatives), and added workload from excessive amount of obsolete inventory in backstock
- Performing processes manually which could be performed more efficiently with a RF scanner
- Poor coordination with other activities, leading to errors (e.g. shelf conditioning not done, putaway in process, etc.)

Freight
- Excessive walking searching for/looking up products, lack of urgency during putaway

Waste by process

Legend: Waste (red), Value-add/Auxiliary (blue)

Inventory
- Out of stocks: 30%
- Ordering: 26%
- Negatives: 21%
- ICM: 71%
- Counts: 41%
- Transfers: 58%

Merchandising
- Bin tags: 48%
- Restock: 45%
- Shelf conditioning: 21%
- Shelf resets: 19%

Service & Selling
- Checkout: 32%
- Customer Service: 46%
- Assembly: 10%
- Delivery: 7%
- Special Orders: 30%
- B2B: 17%
- Paint: 2%
- Key: 14%
- Screens: 11%

Freight
- Preparation: 58%
- Receive: 34%
- Sort - Totes: 20%
- Sort - Optis: 38%
- Putaway - Totes: 22%
- Putaway - Optis: 21%
- Total Freight: 28%

Office Mgmt.
- Open: 43%
- Close: 33%
- Cash handling: 25%
- Scheduling: 40%

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ACE

Roles and Responsibilities

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Roles & Responsibilities

Direction	▪ Improve scheduling accuracy and staffing flexibility in stores ▪ Ensure store responsibilities are aligned to the 'home of best fit'

Recommended Initiatives	Rationale
A. Define roles and responsibilities needed in order to support store organization based on store volume	A. There is an inconsistent approach to defining roles and responsibilities across Ace stores. This often results in activities falling outside the 'home of best fit' and also drives scheduling challenges when unnecessary 'specialization' occurs (i.e. dedicated department associates) Providing guidance to stores with respect to roles and related responsibilities based on volume will help improve store operations and scheduling flexibility
B. Provide guiding principles for store scheduling	B. During our study we frequently observed situations of overstaffing and subsequently, idle time. This time can be minimized or re-allocated to customer focused activities by leveraging guiding principles for store management to consider when preparing and executing weekly schedules
C. Leverage ELS as an input for workforce management solution	C. In addition to point B above, leveraging engineered labor standards obtained from this study can be used to help stores budget time for transaction driven tasks. This data should be incorporated into a workforce management solution (such as Kronos) along with historic transaction data to further assist stores with optimal scheduling

Guiding principles for store scheduling

The following section provides an overview of a basic approach to scheduling driven by store volume during off-peak season.

The principles provided over the following slides can be leveraged when discussing workforce management needs and scheduling approaches with stores, and can help bridge the gap towards more sophisticated workforce management solutions in the long term.

To fully realize the benefits of this approach, store staff will need to be fully cross-trained and following AWOR best practices.

High-level approach:

1. Determine store size (based on volume)
2. Determine staff roles/ responsibilities within store
3. Determine off-peak/ on-peak periods based on past results
4. Determine inter-day traffic and transaction volume to build floor coverage plan
5. Determine staffing zones in store (core and minimum coverage)
6. Determine next steps to realize scheduling benefits (i.e. cross training, implementing AWOR procedures)

Recommended store tiers for staffing needs based on store volume

	S Small	M Medium	L Large	XL Plus
Retail Sales	<$2M	$2M - $5M	$5M - $10M	$10M +
Store Count	2391	880	300	82
Store Count Cumulative %	51%	89%	98%	100%
Average Retail Sales Per Store (2017)	$1.2M	$2.8M	$6.8M	$13.1M
Median Retail Sales Per Store (2017)	$1.2M	$2.7M	$6.5M	$17.6M
Observed Stores	Manteno – 11313 Washington, MO – 10672 Seattle – 15649 Puyallup – 16186 Mukilteo – 14681	Libertyville – 800 San Carlos – 10342 Crestwood – 14594 Chesterfield – 33 St. Louis – 491	Bonita Springs – 2311 Wauchula – 14436 Dunedin – 10130 Tumwater – 7085	N/A

Notes:
*Tiering calculations exclude outliers with <$10,000 (13 in total) in reported retail sales
*Data only includes stores that reported 2017 retail sales to Ace Corporate (3657 of ~4436)

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Recommended store roles for staffing

Roles	Small <$2M	Medium $2M - $5M	Large $5M - $10M	Plus $10M +
Store Manager	☐	☐	☐	
Assistant Manager		☐	☐	
Floor Manager/ Key holder	☐	☐	☐	Not represented in labor study
Sales Associate	☐	☐	☐	
Cashier	☐	☐	☐	
Inventory Coordinator		☐	☐	
Office Administrator			☐	
Specialist	As needed	As needed	As needed	

Guiding Principles

- Store volume primary driver of activity and number of FTE's (FT/PT) per role

- All Sales Associates to be cross-trained on all departments (including cash) to maximize staff flexibility in-store

- Maintain simple organizational hierarchy and provide clear career path from floor staff (Sales Associate/Cashier) to Store Manager; Floor Manager/ Key Holder, Assistant Manager positions may serve as bench for up and coming talent

- Inventory Coordinator to be added based on store volume to shift administrative responsibility from store management and promote manager time spent on sales floor vs. in office/ back room

- Specialist roles (i.e. Stihl repair) added as needed based on demand/ volume in store with goal to cross-train additional sales associates in specialty area

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Recommended store roles and responsibilities

	Store Manager				Assistant Manager			Floor Manager			Sales Associate			Cashier			Inventory Coordinator			Office Admin		
	FT	FT	FT		FT	FT	FT	FT	FT	FT/PT	FT/PT	FT/PT	FT/PT	FT/PT	FT/PT		PT	FT			OS/PT
Task	S	M	L	S	M	L	S	M	L	S	M	L	S	M	L	S	M	L	S	M	L
Merchandising Bin Tags										☐	☐	☐									
Restock										☐	☐	☐									
Shelf Conditioning										☐	☐	☐									
Shelf Resets										☐	☐										☐
Service & Selling Checkout													☐	☐	☐						
Back Up Checkout	☐	☐	☐		☐	☐	☐	☐	☐	☐	☐	☐									
Customer Coordinator[1]	☐	☐	☐		☐	☐	☐	☐	☐				☐	☐	☐						
Assembly										☐	☐	☐									
Delivery										☐	☐	☐									
Special Orders										☐	☐	☐	☐	☐	☐						
B2B[2]										☐	☐	☐									
Services										☐	☐	☐	☐	☐	☐						

Notes:
[1]Customer Coordinator responsibility to be assumed by Management during hot floors and Cashier's during cold floors
[2]Dedicated B2B Sales Associate should be considered once B2B sales comprise ~20-25% of total store sales

S >$2M   M $2M - $5M   L $5M - $10M

Recommended store roles and responsibilities

Task	Store Manager			Assistant Manager			Floor Manager			Sales Associate			Cashier			Inventory Coordinator			Office Admin		
	FT	FT	FT		FT	FT	FT	FT	FT	FT/PT	FT/PT	FT/PT	FT/PT	FT/PT	FT/PT		PT	FT			OS/PT
	S	M	L	S	M	L	S	M	L	S	M	L	S	M	L	S	M	L	S	M	L
Out of Stocks - Scan							☐	☐	☐	☐	☐	☐									
Out of Stocks - Verify	☐				☐	☐										☐	☐				
Ordering	☐				☐	☐										☐	☐				
Negatives	☐				☐	☐										☐	☐				
Item Change Mgmt.	☐				☐	☐										☐	☐				
Counts							☐	☐	☐	☐	☐	☐									
Transfers - Action							☐	☐	☐	☐	☐	☐									
Transfer - Verify	☐						☐									☐	☐				

Inventory[1]

Notes:
[1]Inventory activities to be handled by management positions unless a dedicated Inventory Coordinator is justified by store volume (and need)
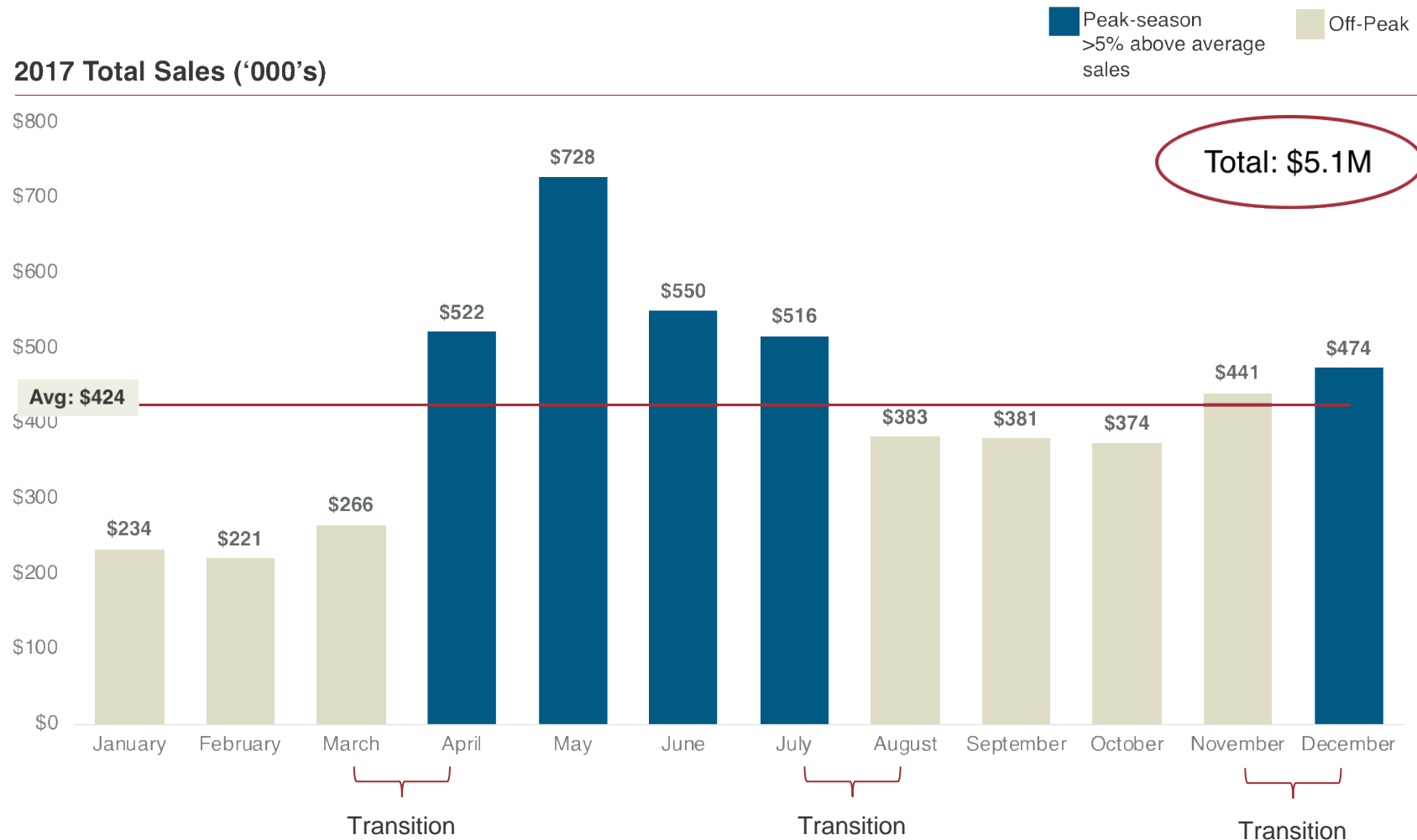
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S >$2M   M $2M - $5M   L $5M - $10M

Recommended store roles and responsibilities

	Store Manager				Assistant Manager			Floor Manager			Sales Associate			Cashier			Inventory Coordinator			Office Admin		
	FT	FT	FT		FT	FT	FT	FT	FT	FT/PT	FT/PT	FT/PT	FT/PT	FT/PT	FT/PT		PT	FT			OS/PT
Task	S	M	L	S	M	L	S	M	L	S	M	L	S	M	L	S	M	L	S	M	L
Freight — Preparation							☐										☐	☐			
Receive	☐				☐	☐	☐	☐	☐												
Check In	☐						☐										☐	☐			
Sort[1]							☐	☐	☐				☐	☐	☐						
Put away										☐	☐	☐	☐	☐	☐						
Office Mgmt. — Open/Close	☐	☐	☐	☐	☐		☐	☐	☐												
Cash Handling	☐	☐	☐	☐	☐		☐	☐	☐												☐
Scheduling	☐			☐																	☐
Performance Mgmt.	☐	☐	☐	☐	☐																
Training Coordination							☐	☐													☐

Notes:
[1]Cashier can assist with Tote sorting from register during slow periods

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Legend: S >$2M | M $2M - $5M | L $5M - $10M

ACE

Determining off-peak vs. peak season for Ace stores

2017 Total Sales ('000's)

Legend: Peak-season >5% above average sales (blue) | Off-Peak (grey)

Total: $5.1M

Month	Value
January	$234
February	$221
March	$266
April	$522
May	$728
June	$550
July	$516
August	$383
September	$381
October	$374
November	$441
December	$474

Avg: $424

Transition (March–April), Transition (July–August), Transition (November–December)

Past performance data can be used to help determine peak vs. non-peak seasons.

In this example we have identified peak months as those with sales exceeding 5% of the annual monthly average for 2017

Transition months (March to April, July to August, November to December) likely split between peak and off-peak and should be scheduled accordingly to prevent over or under-staffing

See appendix for equivalent charts for remaining labor study stores

Engineered labor standards – Service & Selling

	Current Average	ELS	Waste %	% Time spent	Types of waste
Checkout	1:19 / customer	1:19 / customer	32%	15.8%	Idle time / Overstaffing Duplicate effort (e.g. facing)
Customer Service	3:20 / customer	3:20 / customer	46%	29.4%	Idle time / Overstaffing
Assembly	26:16 / unit	23:34 / unit	10%	1.0%	Lack of proper equipment Scheduling of task
Delivery	45:29 / delivery	42:12 / delivery	7%	1.5%	Lack of /excessive equipment Scheduling of task
Special Orders	13:15 / SKU	9:21 / SKU	30%	1.2%	Duplicate effort
B2B	23:51 / customer	19:55 / customer	17%	1.7%	Lack of training
Paint	5:55 / gallon	5:55 / gallon	2%	1.6%	Overstaffing
Key	4:11 / key	1:41 / key	14%	2.0%	Rework Lack of training (new machine)
Screens	16:08 / screen	6:29 / screen	11%	1.4%	Manual work

An Example and Observations

Example:

25 transaction in an hour X 1:19 minutes = 32:54 minutes of cashier demand.

60 minutes per shift – 32:54 minutes of cashier demand = 27:06 minutes of idle time or waste ($6.75 in payroll)

Hurst Store Observations:

- FT/PT ratio should be targeted at 40/60
- Set schedules are one of the major causes of schedule/payroll waste
  - Ask yourself if there is enough customer and task demand to support that person being there
- Standard shifts are another cause of schedule/payroll waste
  - 7-4 to open. 3-close. And no overlap. Staggered shifts to meet demand as well as staggered lunch breaks helps to reduce wasted labor and meet demand.
- Specialists (Paint, apparel, sporting goods, services) – Also known as the Paint Counter Sentry who stands guard at the ready to protect the paint counter – yet never mixes a can of paint. Labor should match demand.
- Thousands of dollars can be saved or re-invested into the business – also labor will be more productive and deliver better service to your customers.

Recommendations:

- Follow the guiding principles for store scheduling (Slide 9)
- Complete a skills matrix for the staff. Identify the specialists and look for places to cross train.

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Base store coverage: Medium store, core workday, off-peak
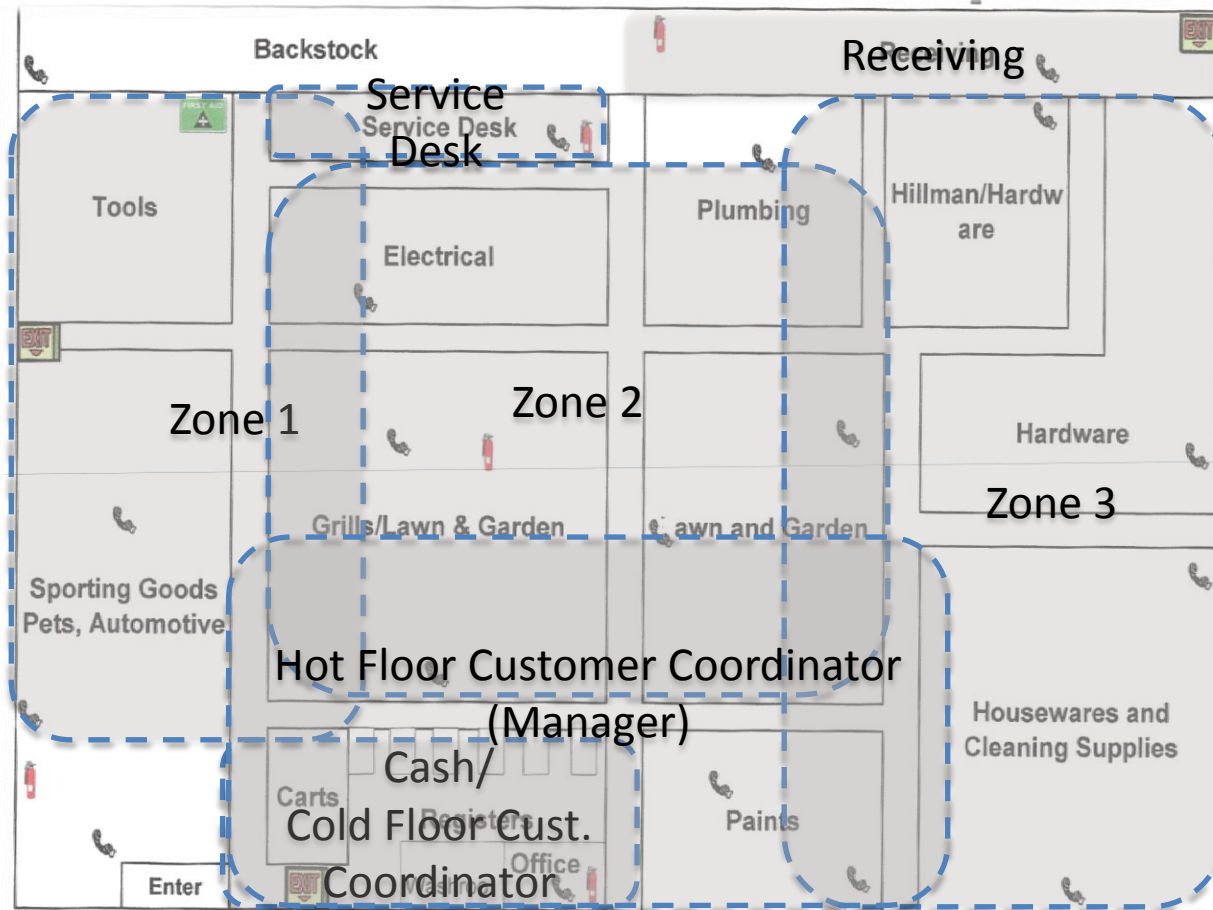
Principles

1. **Receiving/ Inventory Coordinator:** Management (Assistant Manager or Inventory Manager) focused on receiving trucks and inventory management (Verifying Outs, Negatives, Item Change Management)

2. **Store within a store (e.g. Commercial Paint/Lumber Yard/Lawn & Garden):** Managed as separate store with appropriate resources aligned to volume

3. **Zone coverage:** One Sales Associate per zone with skills present respective area (e.g., paint, sporting goods, Best Brands, service desk)

4. **Customer Coordinator:** Customer Coordinator responsibility to be assumed by Management during hot floors and Cashier's during cold floors, role should be positioned where the most business is being done in the store

5. **Cash:** Number of cashiers based on cashier transaction standard

TOTAL: ~9 Staff

Illustrative

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Base store coverage: Medium store, minimum coverage, off-peak

Store layout diagram labeled with: Backstock, Receiving, Service Desk, Tools, Electrical, Plumbing, Hillman/Hardware, Hardware, Zone 1, Zone 2, Grills/Lawn & Garden, Lawn and Garden, Sporting Goods Pets, Automotive, Housewares and Cleaning Supplies, Carts, Keyholder / Cash, Paints, Enter, Washroom, Office
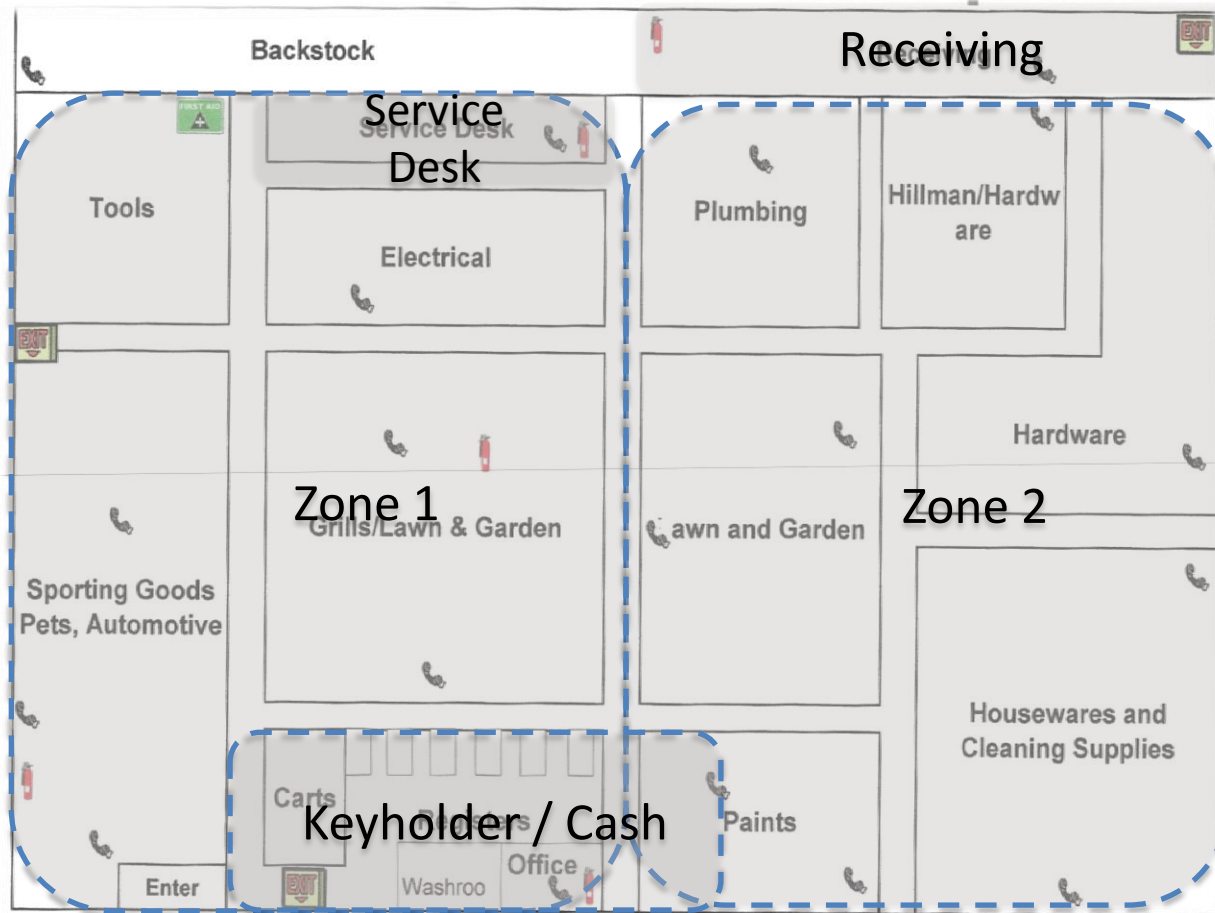
TOTAL: ~3 Staff

Principles

1. **Receiving/ Inventory Coordinator:** Management (Assistant Manager or Inventory Manager) focused on receiving trucks and inventory management (Verifying Outs, Negatives, Item Change Management)

2. **Store-within-a-store (e.g. Commercial Paint/Lumber Yard/Lawn & Garden):** Managed as separate store with appropriate resources

3. **Service Desk:** Not staffed (sales floor team members address any service desk requests)

4. **Zone coverage:** One team member per zone with skills present respective area (e.g., paint, sporting goods, Best Brands)

5. **Customer Coordinator:** Not staffed,

6. **Cash**: Covered by keyholder who also performs store opening activities

7. **Start Time**: All personnel to start at open, and to leave at close

Illustrative

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Scheduling guidelines (off-peak)

Time	Position	Scheduling Guideline		
		Small <$2M	Medium $2M - $5M	Large $5M - $10M
Open/Close	Management/ Key holder	1[1]	1	1
	Sales Associate	1	1-2[2]	1-2[2]
	Cashier		1	1
Core Hours	Management/ Key holder	1	1	1
	Sales Associate	2	3	4
	Cashier	1	1	2
	Inventory Coordinator		0.5	1
	Office Administrator			0.5
TOTAL BASIC		**6**	**9.5**	**12.5**
Freight (add'l to core)	Management/ Key Holder		1	1
	Sales Associate	1	1	2
Services	Stihl Repair	ELS	ELS	ELS
	Screens	ELS	ELS	ELS
	Assembly	ELS	ELS	ELS
Store-within-a-store	Lawn & Garden[3]		1	1
	Lumber[4]	2+	2+	2+
	Commercial Paint	1+	1+	1+

Notes:

[1] Manager/ key holder performs opening activities at cash, and manages checkout

[2] Additional sales associate may be added at close if needed for coverage

[3] Mixed role: Cashier + floor coverage

[4] Minimum two lumber associates to satisfy health and safety requirements

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Engineered Labor Standards

Engineered labor standards – Inventory Mgmt.

	Current Average	ELS	Waste %	% time spent	Types of waste
Out of stocks	2:20 / 4ft section	1:39 / 4ft section	30%	0.9%	Searching Manual work Lack of product knowledge
Ordering	23:20 / order	17:20 / order	26%	0.6%	Manual work Additional steps
Negatives	4:58 / SKU	1:06 / SKU	21%	0.5%	Searching for low value items
ICM	6:34 / SKU	1:54 / SKU	71%	0.8%	Excessive effort on low value item Lack of consistent application of process
Counts	7:03 / SKU	4:10 / SKU	41%	0.9%	Searching Manual work Lack of product knowledge
Transfers	8:54 / SKU	3:45 / SKU	58%	0.4%	Searching Inventory errors Duplication of work

Engineered labor standards - Merchandising

	Current Average	ELS	Waste %	% Time spent	Types of waste
Bin tags	3:24 / SKU	1:45 / SKU	48%	1.7%	Searching Wasting tags Lack of training (to print)
Restock	2:18 / 4ft section	1:16 / 4ft section	45%	2.4%	Searching backstock Manual work Additional steps
Shelf conditioning	2:43 / 4ft section	2:09 / 4ft section	21%	4.9%	Rework / Incomplete work Duplicate effort (esp. near cash)
Shelf resets	29:26 / reset	23:50 / reset	19%	0.6%	Lack of training Additional steps

Engineered labor standards – Service & Selling

	Current Average	ELS	Waste %	% Time spent	Types of waste
Checkout	1:19 / customer	1:19 / customer	32%	15.8%	Idle time / Overstaffing Duplicate effort (e.g. facing)
Customer Service	3:20 / customer	3:20 / customer	46%	29.4%	Idle time / Overstaffing
Assembly	26:16 / unit	23:34 / unit	10%	1.0%	Lack of proper equipment Scheduling of task
Delivery	45:29 / delivery	42:12 / delivery	7%	1.5%	Lack of /excessive equipment Scheduling of task
Special Orders	13:15 / SKU	9:21 / SKU	30%	1.2%	Duplicate effort
B2B	23:51 / customer	19:55 / customer	17%	1.7%	Lack of training
Paint	5:55 / gallon	5:55 / gallon	2%	1.6%	Overstaffing
Key	4:11 / key	1:41 / key	14%	2.0%	Rework Lack of training (new machine)
Screens	16:08 / screen	6:29 / screen	11%	1.4%	Manual work

Engineered labor standards - Freight

	Current Average	ELS	Waste %	% Time spent	Types of waste
Preparation	35:48 / truck	15:00 / truck	58%	0.5%	Unnecessary work Lack of planning
Receive	6:09 / pallet	4:02 / pallet	34%	2.1%	Idle time
Sort	2:02 / tote 10:26 / opti 0:17 / case	3:20 / tote 6:31 / opti 0:11 / case	20% 38% 38%	1.0% 1.1% 1.1%	Lack of preparation Lack of training
Putaway	19:57 / tote 81:36 / opti 2:08 / case	15:33 / tote 64:27 / opti 1:41 / case	22% 21% 21%	3.6% 2.8% 2.8%	Additional steps Lack of urgency Rework (e.g. ICM)
Total Freight	1:11 / case	0:51 / case	28%	10.2%	Lack of training Additional steps

Engineered labor standards – Office Mgmt.

	Current Average	ELS	Waste %	% Time spent	Types of waste
Open	48:31 / store	15:00 / store	43%	1.5%	Overstaffing Scheduling of tasks
Close	30:57 / store	20:44 / store	33%	2.4%	Overstaffing Scheduling of task
Cash handling	58:07 / day	10:56 / day	25%	1.5%	Duplicate effort
Scheduling	30m - 4h / wk	30 m - 1h / wk	40%	0.5%	Overstaffing Excessive time for poor outcome