Analyzing the Financial Impact of Consignment vs. Vendor-Managed Inventory

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Author Note

This senior thesis is submitted as partial fulfillment of the graduation requirements of Kettering University. The conclusions and opinions expressed in this thesis are from me and do not necessarily represent the position of the University, EWIE Group of Companies (EGC), or anyone affiliated with this undergraduate experience. Although this thesis describes the compilation of my efforts, I would like to acknowledge and extend my sincere gratitude to the following individuals for their valuable time and assistance, without whom the completion of this thesis would not have been possible: *Dr. William Edwards*, my Faculty Thesis Advisor, *Dr. Scott Grasman*, my academic advisor, as well as *Bradley Grubba*, my Co-op Thesis Advisor.

Abstract

EWIE Group of Companies (EGC), or EWIE, is a global leader in inventory management services that specializes in managing the procurement, sourcing, and total supply chain efficiency of specific commodity groups on behalf of various customers. One site in specific had fallen victim to inventory negligence by previous staffing, which resulted in over-ordering and lack of inventory transparency. This thesis work and data analysis presents the remediate steps to address the excess inventory of vendor-managed and consignment stock. It delves into the financial impact of taking advantage of vendor price breaks for the customer to save money and potentially produce more significant profit for the company. By dissecting and enhancing current reportings available, new minimum/maximum order quantities could be accurately calculated to reflect individual items' monthly usage and instantly produce cost-savings to the inventory on hand. Additionally, by looking into vendor pricing, the team could tell there was an overstock of items with minimum order quantities set with the merchant that could be negotiated better on either end. Only once these considerations were made could the financial impact of holding VMI vs. VOI and/or the opportunity to reach potential price breaks be examined.

Keywords: inventory management services, procurement, supply chain efficiency, commodity groups, excess inventory, vendor-managed inventory, consignment inventory, vendor price breaks, cost-savings, minimum/maximum order quantities, monthly usage

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Background

EWIE Group of Companies (**EGC**), or EWIE, is a global leader in inventory management services spanning cutting tools, abrasives, special tools, and industrial supplies with over 30 years of experience as a third-party commodity manager. The business specializes in managing the procurement, sourcing, and total supply chain efficiency of specific commodity groups for customers such as Ford, ZF, SKF, Caterpillar, Cummins, Woodword, and more. EWIE works as an intermediary between customers and suppliers to negotiate prices, manage inventory, and ensure the timely delivery of goods. With updated demand-flow technologies, teams of analysts and engineers are able to monitor and replenish components preemptively to keep up with production and their facilities' infrastructure.

EWIE manages over 70,000 parts comprising millions of dollars of inventory at over 94 contracts globally. To remain competitive, they work to combine various resources, reporting, and more to offer better commodity management solutions and achieve reduced total costs. Their breadth of knowledge and depth of product lines from multiple suppliers and value-added services will streamline vendors, resulting in dramatic cost savings. They work to address costs associated with supply chain management including inventory, paperwork, invoicing, and quotes. By handing over the full responsibility of inventory management to EWIE, Vendor-Managed inventory allows customers and MROs to increase margins by cutting overall costs.

The tooling commodity contract with Cummins Fuel Systems was extended for one additional year, and the personnel on site were tasked with providing substantial, sustained cost savings to gain better trust with the customer, increase profit, and create higher margins, as well as enhance the inventory's overall transparency for both parties.

Introduction

Cummins Fuel Systems is located in Columbus, IN, where this data analysis occurred. With various projects in their facilities, their commodity management has been broken into two production lines: FSC and XPC, each line having its own engineering team associated. With high turnover and little historical knowledge of the customer's ordering system, in-depth research and analysis into the current tooling inventory began in November of 2022 to provide accurate reporting/data for Cummins's engineers and the EWIE site team. This project aims to examine tool life and usage to compare with price breaks available from vendors to achieve the highest profit margin obtainable while avoiding a surplus or shortage of material. Before this analysis could be completed, the new site team needed to recover the effects of formerly ordering incorrectly to mend the relationship with the customer and increase overall transparency.

Scope

At a different customer site, EWIE StoreRoom information for all parts in the crib was compiled to create the "Inventory and Usage" report; featuring fields such as monthly and annual usage, average lead time, balance on hand, inventory value, and current open orders, this report intends to become an essential resource for total inventory management and reorder health. However, when this report was transitioned to the Cummins site, the data initially presented was not accurate enough to perform the needed calculations to optimize the inventory by addressing items' minimum and maximum order quantities. The team needed to work together to determine what was active inventory and why additional items were showing. Then, by correcting min/max quantities, the inventory can be reduced to what's needed, and the overage can be burned down

or used up in order to take advantage of price breaks and see additional profit from the Vendor-Managed and owned inventory.

Figure 1

Project/Thesis Goals

Note. A breakdown of the three main goals for the co-op term in order to address the data discrepancies, optimize the inventory, and in turn take advantage of potential price breaks to increase the company's profit margin.

Context

When the Inventory and Usage Report was launched, the site analyst noticed a disconnect between the individual warehouses for the customer and how those warehouses were summed into the division-level view. However, they could not initially identify the cause of this issue. The Cummins process was found to be different from the previous site where the report was created in that the Cummins team has an entire warehouse dedicated to expenses. Other warehouses represent the tool crib and sites' vending machines; however, when summed together with the "catch-all " expense warehouse, the usage and details for specific items were not reflected correctly. After communicating with the analyst and IT, the issues were found, and the report filters were set permanently for the team and customers to view live data of their inventory's health. Once the SQL code was solidified, the new min/max could be set.

Importance

A minimum order quantity is the bare number of items you should always keep in stock for a specific part. A maximum order quantity is the most you should ever keep on hand to avoid excessive inventory. Depending on if the inventory is VMI or VOI, the impact of maintaining overage is different.

Vendor-managed inventory (VMI) is when EWIE is responsible for ensuring that the customer always has enough stock; these items are Billed on Receipt (BOR). They are owned by the customer and issued from the tool crib at their discretion. Whereas vendor-owned inventory (VOI), or consignment material, is where EWIE owns the item, and when it is needed, it is taken and paid for, usually in a vending machine. Deciding if items should be VMI or VOI is crucial to optimize inventory management and the stock's reorder health.

One of the tell-tale ways to determine if an item should be VMI or VOI is to look at the months of usage in the previous 12 months. Suppose something has a high inventory turnover rate each month. In that case, it is more beneficial for EWIE to assume the inventory, purchase bulk stock from suppliers, and sell back to the customer when needed. With the new 2023 year, all of Cummins's inventory was considered for items burndown to VOI and vice-versa: items to transition back to VMI that are no longer beneficial for EWIE to own.

Once the inventory excess and ownership are corrected, the study can delve deeper into the financial impact of the vendors' price breaks available and research the potential for more optimum ones to order more consistently for monthly consumption - now that the monthly consumption calculations have been corrected. Additionally, looking into the profitability of purchasing/holding six-eight weeks of inventory on hand for VOI items at the next highest break.

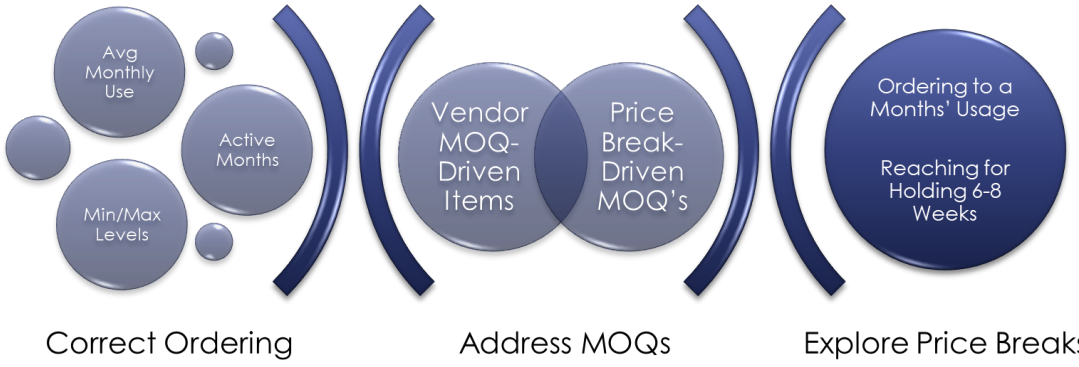
Impact/Need

This initiative can help EGC save money and increase profitability by reducing excess inventory and taking advantage of vendor price breaks. These steps can be replicable at other sites. By implementing the corrected calculations for minimum/maximum order quantities and negotiating better pricing with vendors, they can reduce excess inventory and improve their cash flow. It can also help the company improve its inventory management processes and increase efficiency. By analyzing the current inventory management processes and identifying areas for improvement, EGC can streamline its operations and reduce waste. This can help to improve customer satisfaction by ensuring that they have full transparency in their order management.

Methods

Figure 2

Steps to Achieve Project Goals



Note. A breakdown of the three main goals for the co-op term in order to address the data discrepancies, optimize the inventory, and in turn take advantage of potential price breaks to increase the company's profit margin.

The assumption of VMI or VOI is easily determined by the inventory turns, which is how it is clarified in the customer's contract. A sure way to identify items that will meet their inventory requirements is by looking at their months of activity out of a rolling twelve. If an item is used more than six months in a year, it would be a good item to transition to VOI.

Alternatively, VOI items moving less than six months in the year should be considered for transition back to VMI. Items with zero-three (0-3) months of activity should be VMI, and items with four or five (4/5) months of activity's ownership are determined by a risk assessment based on usage and a Quantity to Maintain (QTM). Once the Inventory and Usage Report was functional for the site, all items' monthly use and months of activity were accurate for the past 12 months.

$$Average\ Monthly\ Usage\ =\ Active\ Month(s)'s\ Use\ /\ Active\ Month(s)$$

(Active meaning at least 1pc used in the month.)

Figure 3

Overview of VMI Inventory

MONTH OF USE	# OF PARTS	INV. VALUE
FSC		
0 MONTHS	712	$ 1,969,926.31
1-3 MONTHS	286	$ 1,331,424.63
4-5 MONTHS	36	$ 225,926.14
6+ MONTHS	54	$ 343,613.67
STOCK (EITHER OR BOTH)		
0 MONTHS	13	$ 12,449.88
1-3 MONTHS	22	$ 47,911.09
4-5 MONTHS	9	$ 37,218.13
6+ MONTHS	18	$ 57,255.07
XPC		
0 MONTHS	74	$ 418,569.64
1-3 MONTHS	35	$ 287,898.51
4-5 MONTHS	13	$ 73,880.68
6+ MONTHS	48	$ 411,812.51
Grand Total	**1320**	**$ 5,217,886.26**

Note. Breakdown of Cummins's initial VMI inventory, broken down by production line: FSC and XPC.

To keep an adequate amount of stock on hand, regardless of ownership, the min/max order quantities must be accurately calculated to the most recent usage of the parts. To identify mix/max guides that were ill-reflective of the product's movement, the inventory value at the currently assigned values was compared to the current inventory value at the balance on hand.

$$(Current\ Balance\ on\ Hand\ +\ Total\ on\ Order) \times\ Item\ Price\ =\ Current\ Inventory\ Value$$

Evaluating the Current Minimum

$$Current\ Minimum \times\ Item\ Price\ =\ Inventory\ Value\ at\ MIN$$

$$Inventory\ Value\ at\ MIN\ -\ Current\ Inventory\ Value\ =\ \Delta MIN\ vs.\ Actual$$

***Goal:** $\Delta MIN\ vs.\ Actual\ =\ \$0.00$

Evaluating the Current Maximum

$$Current\ Maximum \times\ Item\ Price\ =\ Inventory\ Value\ at\ MAX$$

$$Inventory\ Value\ at\ MAX\ -\ Current\ Inventory\ Value\ =\ \Delta MAX\ vs.\ Actual$$

***Goal:** $\Delta MAX\ vs.\ Actual\ \geq\ \$0.00$

Current Inventory Target

$$Inventory\ Target\ =\ Mean\ of\ the\ Min/Max$$

Previous Inventory Target: $3,794,528.42

EWIE operates with a minimum set to keep a 15-day safety stock on all items, considering lead time and average monthly consumption. The customer asked for an additional calculation with a 30-day safety stock to be kept on hand for a price comparison of the difference between keeping that much on hand. The 15-day and 30-day minimums were collated against the

current inventory value of the balance on hand to differentiate between the existing and proposed minimum order quantities.

Adding a 15-Day Safety Stock for (Ideal) Minimum

$$Average\ Lead\ Time\ +\ 15\ Days\ =\ Days\ in\ Advance$$

$$Days\ Supply\ =\ \frac{Average\ Monthly\ Usage}{30\ Days}$$

$$Days\ in\ Advance\ \times\ Days\ Supply\ =\ Ideal\ Minimum$$

$$Ideal\ Minimum\ \times\ Current\ Price\ =\ Ideal\ Min\ Inventory\ Value$$

$$Ideal\ Min\ Inventory\ Value\ -\ Current\ Inventory\ Value\ =\ \Delta Ideal\ vs.\ Actual$$

***Goal:** $\Delta Ideal\ vs.\ Actual\ \geq\ \$0.00$

$$15\ Day\ Value\ for\ Customer\ =\ \Sigma\ Ideal\ Min\ Inventory\ Value$$

$$15\ Day\ Value\ for\ Customer\ =\ \$126,157.62$$

Considering a 30-Day Safety Stock for Minimum

$$Average\ Lead\ Time\ +\ 30\ Days\ =\ Days\ in\ Advance$$

$$Days\ in\ Advance\ \times\ Days\ Supply\ =\ New\ Minimum$$

$$New\ Minimum\ \times\ Current\ Price\ =\ New\ Min\ Inventory\ Value$$

$$New\ Min\ Inventory\ Value\ -\ Current\ Inventory\ Value\ =\ \Delta New\ vs.\ Actual$$

To avoid excess inventory, EWIE usually keeps a maximum order quantity to 60 days out, or approximately two months considering the items' lead time. For comparison, a 45-day maximum was also calculated to determine the most cost-effective value without hindering production. The values for these new proposed maximum order quantities were then compared to

the current inventory on hand to see if the inventory currently held exceeds such a large buffer zone. Items that exceed the buffer are considered for burndown to VOI or consolidation.

Adding a 45-Days-Out (Ideal) Maximum

$$Average\ Lead\ Time\ +\ 45\ Days\ =\ Days\ in\ Advance$$

$$Days\ in\ Advance\ \times\ Days\ Supply\ =\ New\ Maximum$$

$$New\ Maximum\ \times\ Current\ Price\ =\ New\ Max\ Inventory\ Value$$

$$New\ Max\ Inventory\ Value\ -\ Current\ Inventory\ Value\ =\ \Delta New\ vs.\ Actual$$

Considering a 60-Days-Out Maximum

$$Average\ Lead\ Time\ +\ 60\ Days\ =\ Days\ in\ Advance$$

$$Days\ in\ Advance\ \times\ Days\ Supply\ =\ Ideal\ Maximum$$

$$Ideal\ Maximum\ \times\ Current\ Price\ =\ Ideal\ Max\ Inventory\ Value$$

$$Ideal\ Max\ Inventory\ Value\ -\ Current\ Inventory\ Value\ =\ \Delta Ideal\ vs.\ Actual$$

***Goal:** $\Delta Ideal\ vs.\ Actual\ \geq\ \$0.00$

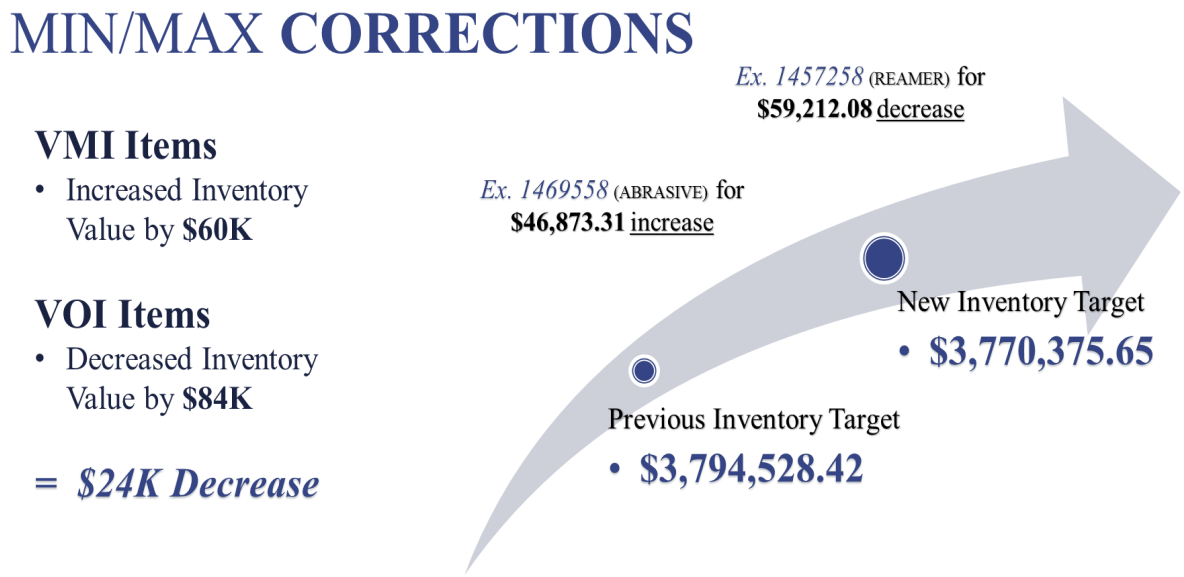
Results

Inventory Reduction

From performing these calculations, the 15-day holding difference of $126.5K could be taken to the customer so they could decide how many days of inventory they wanted to keep on hand - ultimately deciding on 15 days minimum, and 45 days maximum. Correcting the inventory's min/max decreases the overall Inventory Target by $24K, which overall may not seem like a steep change for a $5M inventory; however, some specific items saw drastic changes from a $46K increase to a $59K decrease in target holding costs.

Figure 4

Summary of Inventory Reduction



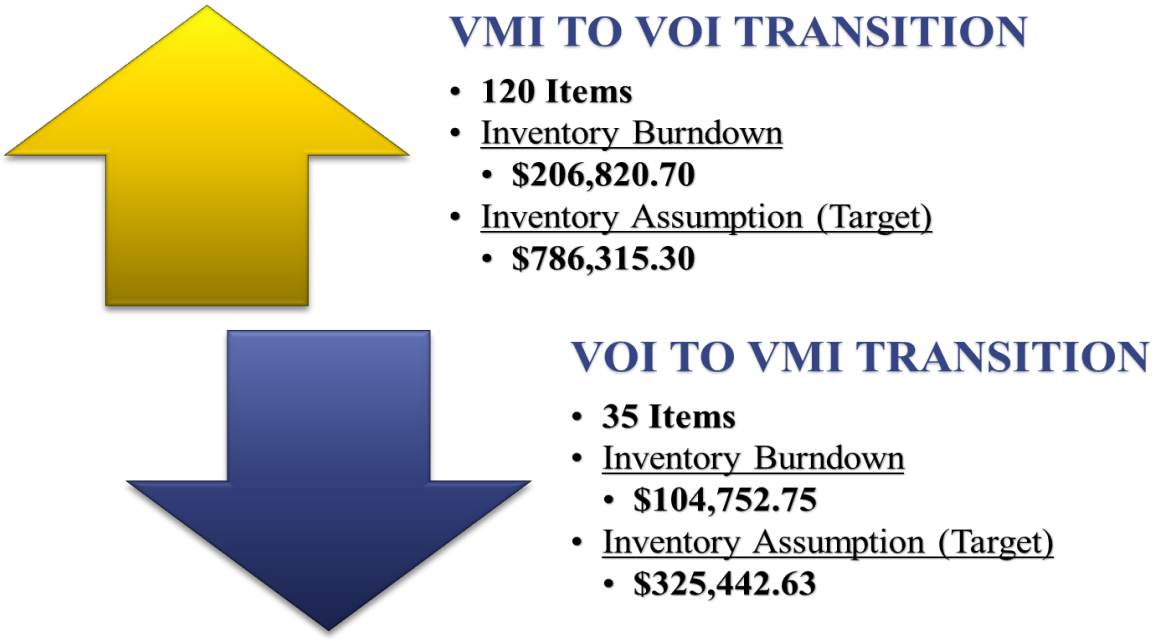
Note. A high-level overview of the inventory reduction from adjusting the min/max's to reflect accurate usage.

Inventory Transition

It was found that 120 items were used for more than six months in the year that could be transitioned to VOI inventory and 35 VOI items were used for less than four months in the year that could be transitioned back to VMI. The 120 items switching to VOI currently sit at about $206.8K over the items' new maximums, but once that is burned down to a month's supply, the inventory assumption, or target, would be $786.3K. The 35 items transitioning back to VMI are $104.7K over their new maximums, and the assumption of the inventory would be around $325.4K, so the customer would be taking back approximately half the inventory value of what EWIE assumed as VOI.

Figure 5

Summary of Inventory Transition



Note. Summary of the transition from VMI to VOI and vice-versa based on months of activity.

MOQ-Driven Overages

Another limiting factor to consider was if vendors have minimum order quantities on items with lower usage than the required amount. There are 137 VMI items with MOQs, and 20 VOI items with MOQs as well. The minimum order quantities for these 157 items result in $165.8K of inventory overage - spent above monthly usage. It was found that some MOQs may need to be updated, and the team should reach out for updated ordering requirements to avoid items with significant discrepancies to actual consumption.

Figure 6

Impact of Vendor-Imposed Minimum Order Quantity

INV. TYPE	ITEMS W/ MOQ	INV. ABOVE MONTHLY CONSUMPTION
VMI	137	$105.933.23
VOI	20	$59,886.18
TOTAL	157	$165,819.41

Note. Summary of VMI and VOI items with minimum order quantities (MOQs).

Optimal Price Breaks

Using the Pricing Review Report, which includes all items' current sell price and available vendor breaks, the monthly usage could be considered for purchase. It was found that there were 221 items, 185 VMI and 6 VOI, without price breaks available from the vendor. An additional 819 items, 802 VMI and 17 VOI have had zero usage within the past year, so those were not considered for pricing review since they are not being used actively. Additional considerations were made, as shown above, for items with minimum order quantities and items that use less than 1pc per active month; these items would not be used enough to take advantage of a price break for more pieces. Most importantly, from this analysis, 121 items were found to have optimum price breaks available that should be ordered to in the future.

There are 91 VMI items with optimum price breaks available. Ordering to these price breaks would result in holding an average of 35.7 days of inventory on hand. Compared to these items' previous orders, $88,106.88 could have been saved from the customer's inventory. This means that previously the internal team was over-ordering by almost $90K, either to meet price breaks or due to incorrect min/max levels. This value can be proposed to the customer as potential cost savings. In turn, when ordering to this identified optimum price break, keeping in mind monthly consumption for each item, there is a potential for EGC to generate $41,624.19 in pure profit.

Additionally, there are 30 VOI items with optimum price breaks available. Ordering to those items' price breaks would result in holding an average of 33.7 days of inventory. Compared to these items' previous orders, $151,852.05 could have been saved from the company's inventory. This means that previously the internal team was over-ordering by over $150K, either to meet price breaks or due to incorrect min/max levels. This value is a direct

saving to EWIE; when ordering these newly identified optimum price breaks, there is a potential for EGC to generate $32,834.17 in profit on vending items.

Figure 7

Remediation Actions for Inventory Items

PRICE BREAK NOTES	VMI	VOI	TOTAL
NO PRICE BREAKS, PPP	185	36	**221**
1 PC / MONTH, NO MOQ	92	1	**93**
ZERO USAGE	802	17	**819**
BREAK TOO HIGH, PPP	11	1	**12**
MOQ DRIVEN	86	17	**103**
MOQ DRIVEN, PPP	51	3	**54**
OPT. BREAK AVAILABLE	91	30	**121**
POOR PRICE BREAKS	2	2	**4**

Note. Summary of VMI and VOI items' Pricing Review notes, broken down to identify next actions based on category.

To examine further the potential for profit on VOI items, the idea of holding 6-8 weeks (as opposed to monthly consumption) was considered. Not all 30 VOI items had extended price breaks or a next tier to order, so those were considered by 2x monthly consumption. Ordering to the next price break available or extended holding would result in 68.2 days of inventory. Even by reaching for this order, there is a potential to save $38,613.94 from previous orders, and being VOI, there is the possibility of making $85,901.61 on pure profit. While the yield of holding more is almost 3x greater than that of ordering to monthly consumption, the current inventory is far too high above its current inventory target value to justify buying to the next price break.

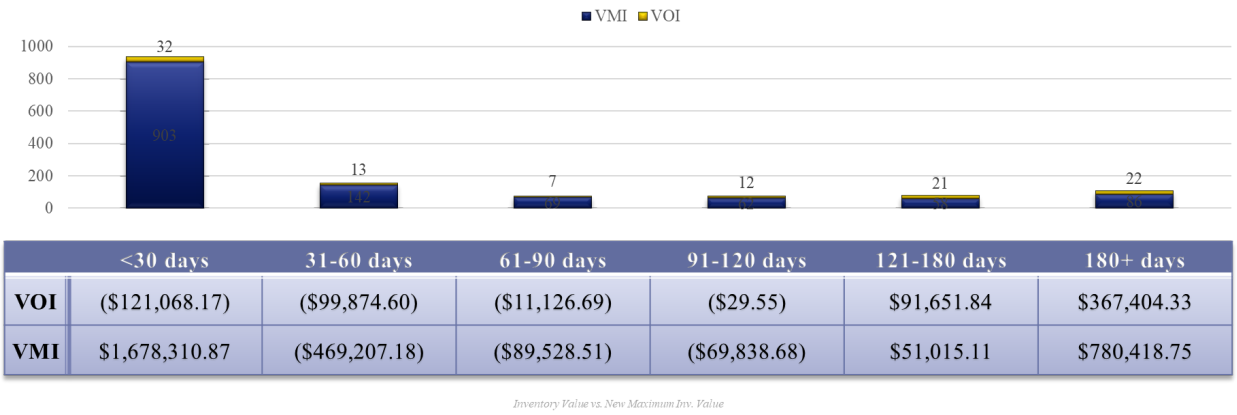
Inventory Burndown

To take advantage of the optimum price breaks identified, the current inventory on hand needs to be "burned down" or used up. This is calculated using the Days Supply calculation

shown in the methods section. With an estimation of when the current inventory will be used up, the analyst can prepare to place the next order and confirm corrected pricing. This tool was also beneficial in transitioning items to and from VMI to VOI to ensure sufficient overlap and coverage of orders.

Figure 8

Duration to Burndown Current Inventory



	<30 days	31-60 days	61-90 days	91-120 days	121-180 days	180+ days
VOI	($121,068.17)	($99,874.60)	($11,126.69)	($29.55)	$91,651.84	$367,404.33
VMI	$1,678,310.87	($469,207.18)	($89,528.51)	($69,838.68)	$51,015.11	$780,418.75

Inventory Value vs. New Maximum Inv. Value

Note. Duration to burndown current VMI & VOI inventory as well as inventory value associated based on Days' Supply and the current balance on hand.

This research and reporting can now be replicated at other sites to conclude similar findings, and the remediate actions of the team can result in over $100K in cost-savings for both the customer and EGC. Using months of activity to identify items that will meet their inventory turns helps EGC assume more consolidated inventory, or VOI, embedding them further into their customers and ensuring longevity.

References

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EWIE Group of Companies. (2023). *Inventory Review Report: 3511 - Cummins Fuel Systems TLP.* (EGC Corporate Reports - Inventory Control).*intranet.theegc.com*

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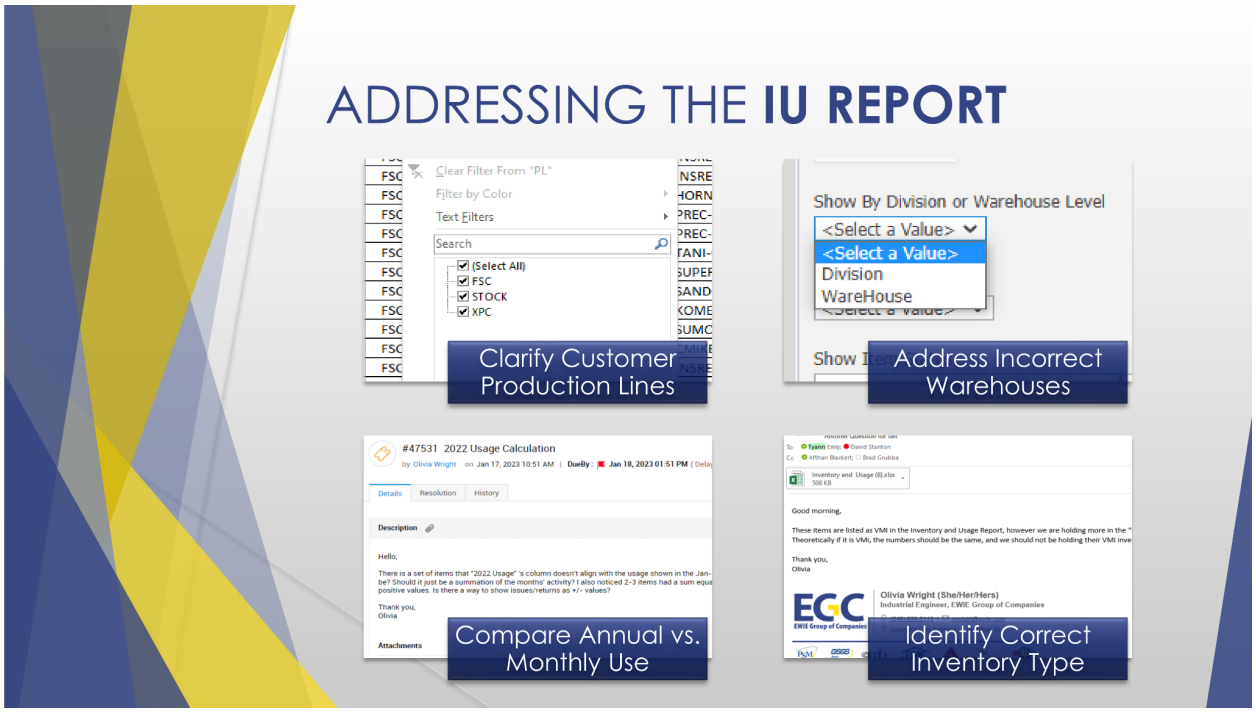
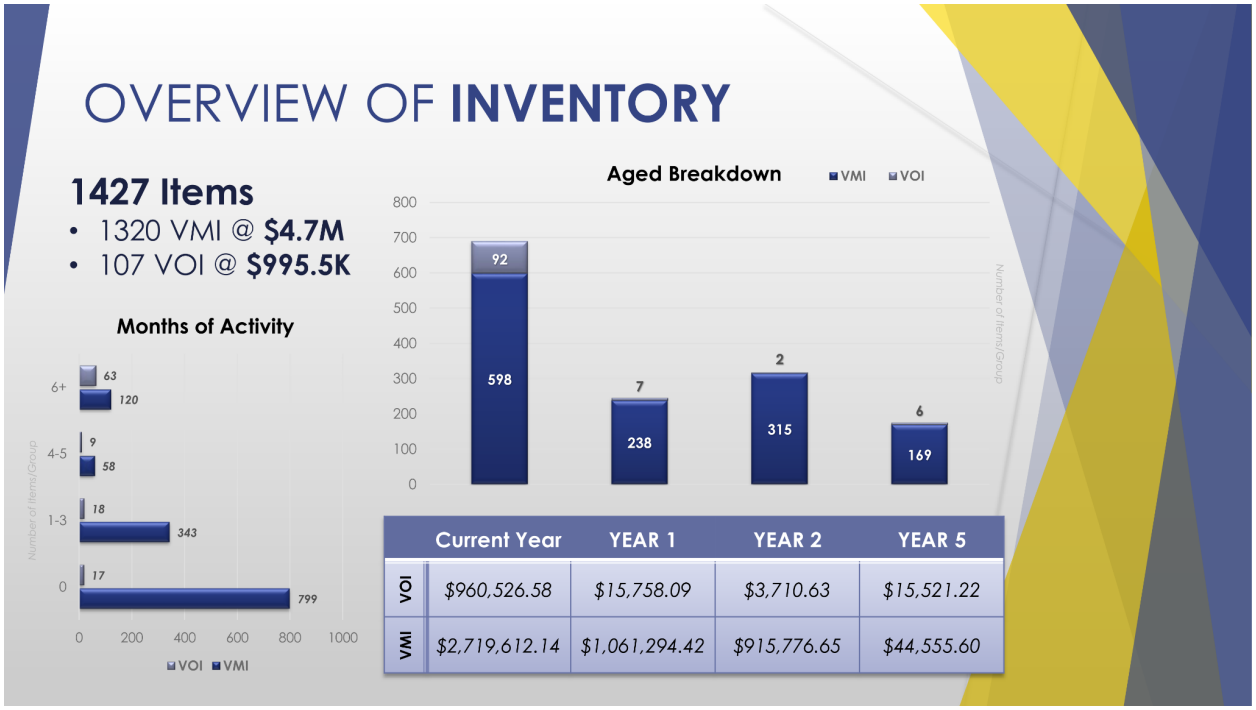
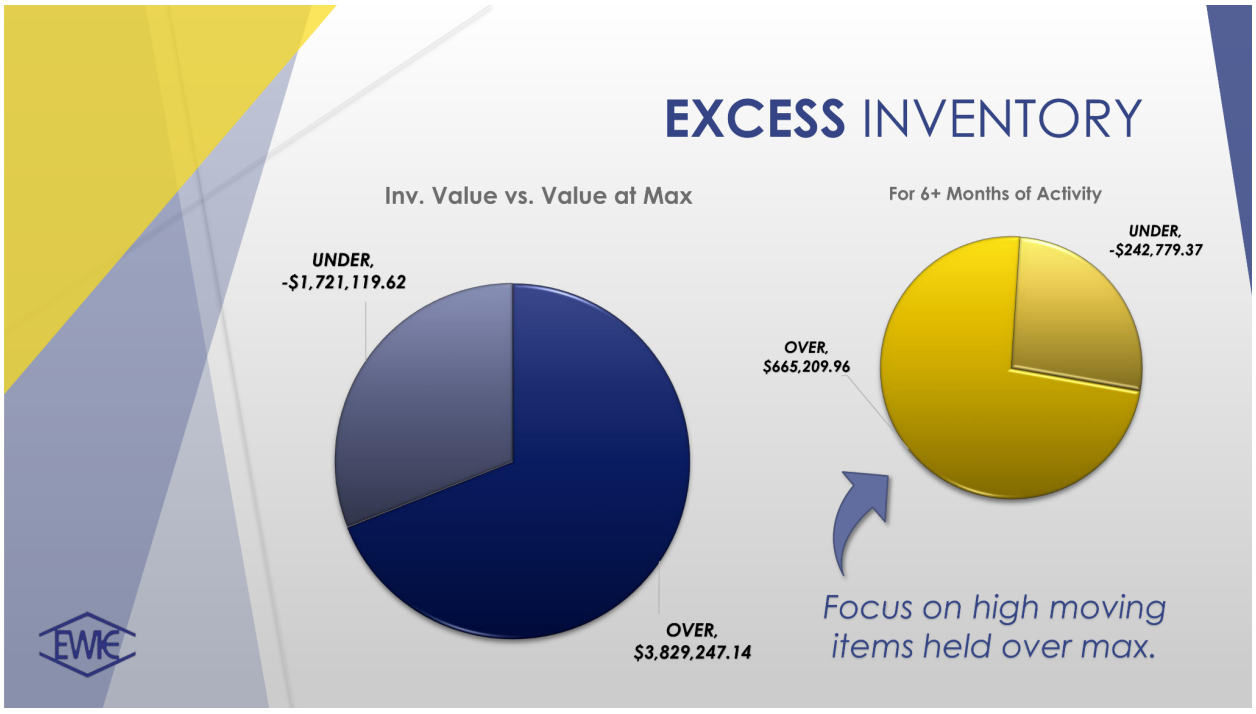
Appendix A: Final Co-op Presentation on Findings


TERM GOALS
Thesis: Analyzing the Financial Impact of Consignment vs. Vendor Managed Inventory
Finalize IU Report to Reflect Accurate Inventory & Usage
• Clarify Customer Production Lines
• Address Incorrect Warehouses
• Compare Annual vs. Monthly Use
• Identify Inventory Type
Calculate New MIN/MAX Order Levels for Items Based on Use
• Decide 15/30 Day Safety-Stock
• Compare 45/60 Days (+LT) Days on Hand
• Propose Items for Conversion VMI ⇔ VOI
• Get Customer Approval
Compare Order Levels to MOQs and Price Breaks Available
• Calculate Current Inventory Burndown
• Balance Monthly Usage & Available Price Breaks
• Optimize Breaks on High-Use Items to Lessen Costs and Heighten Profit


ADDRESSING THE IU REPORT
Clear Filter From "PL"
Filter by Color
Text Filters
Search
(Select All)
FSC
STOCK
XPC
Clarify Customer Production Lines
Show By Division or Warehouse Level
<Select a Value>
<Select a Value>
Division
WareHouse
Address Incorrect Warehouses
#47531 2022 Usage Calculation
Details
Resolution
History
Description
Compare Annual vs. Monthly Use
Good morning,
Thank you,
Olivia
Olivia Wright (She/Her/Hers)
Industrial Engineer, EWIE Group of Companies
Identify Correct Inventory Type


OVERVIEW OF INVENTORY
1427 Items
• 1320 VMI @ $4.7M
• 107 VOI @ $995.5K
Months of Activity
6+
63
120
4-5
9
58
1-3
18
343
0
17
799
0
200
400
600
800
1000
VOI VMI
Number of Items/Group
Aged Breakdown
VMI VOI
800
700
600
500
400
300
200
100
0
92
598
7
238
2
315
6
169
Number of Items/Group
Current Year YEAR 1 YEAR 2 YEAR 5
VOI $960,526.58 $15,758.09 $3,710.63 $15,521.22
VMI $2,719,612.14 $1,061,294.42 $915,776.65 $44,555.60


EXCESS INVENTORY
Inv. Value vs. Value at Max
UNDER,
-$1,721,119.62
OVER,
$3,829,247.14
For 6+ Months of Activity
UNDER,
-$242,779.37
OVER,
$665,209.96
Focus on high moving items held over max.
EWE

MIN/MAX **CORRECTIONS**

VMI Items
- Increased Inventory Value by **$60K**

VOI Items
- Decreased Inventory Value by **$84K**

= $24K Decrease

Ex. 1457258 (REAMER) for **$59,212.08** decrease

Ex. 1469558 (ABRASIVE) for **$46,873.31** increase

New Inventory Target
- **$3,770,375.65**

Previous Inventory Target
- **$3,794,528.42**

BURNDOWN OF **CURRENT INVENTORY**

	<30 days	31-60 days	61-90 days	91-120 days	121-180 days	180+ days
VOI	($121,068.17)	($99,874.60)	($11,126.69)	($29.55)	$91,651.84	$367,404.33
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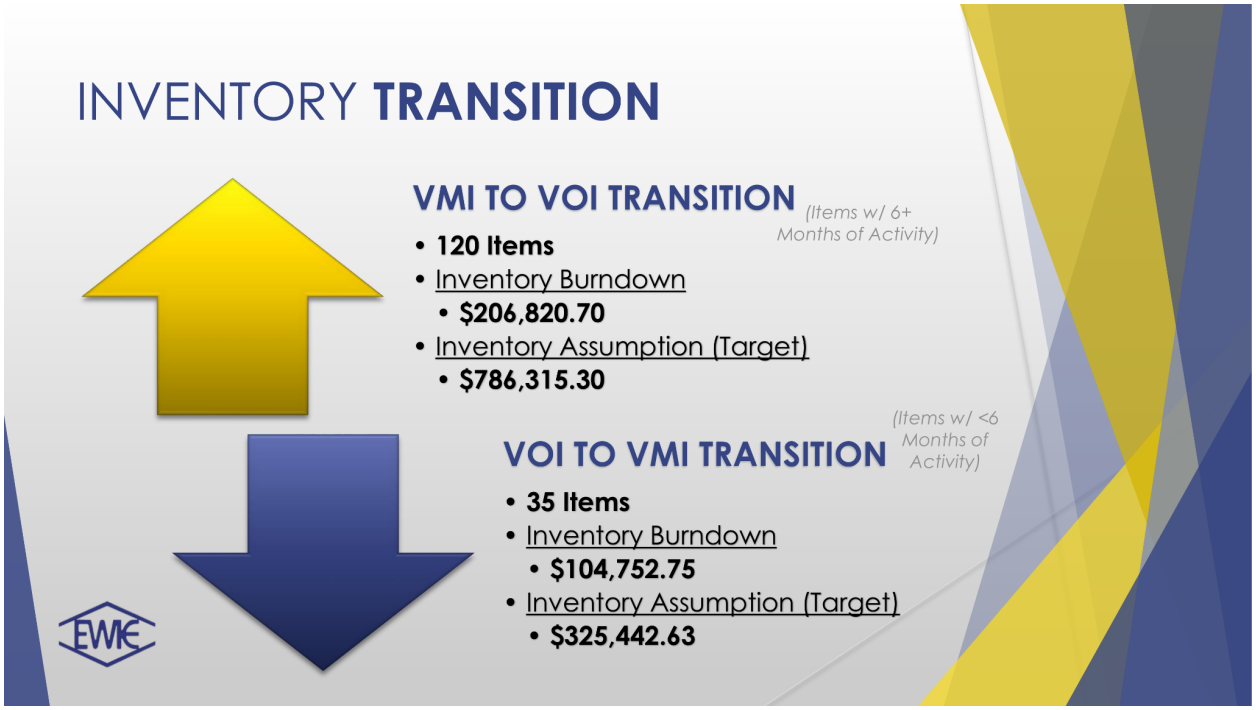
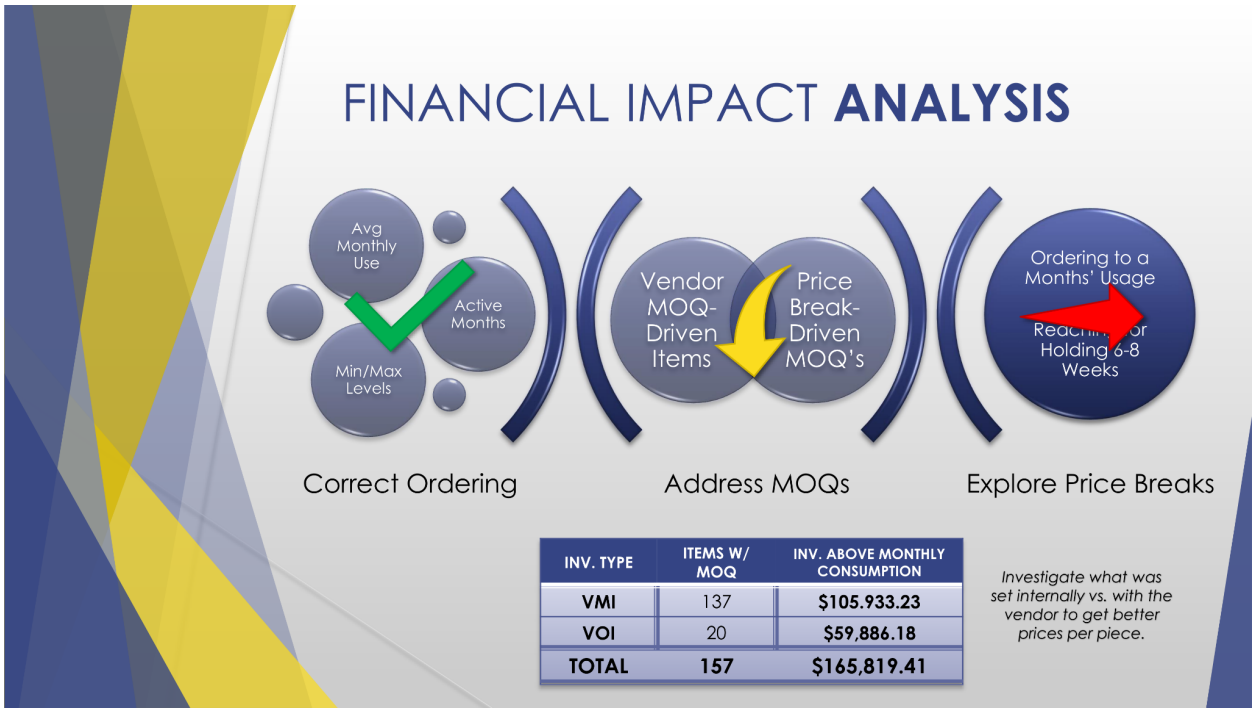
Inventory Value vs. New Maximum Inv. Value





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VMI	137	$105.933.23
VOI	20	$59,886.18
TOTAL	157	$165,819.41

Investigate what was set internally vs. with the vendor to get better prices per piece.

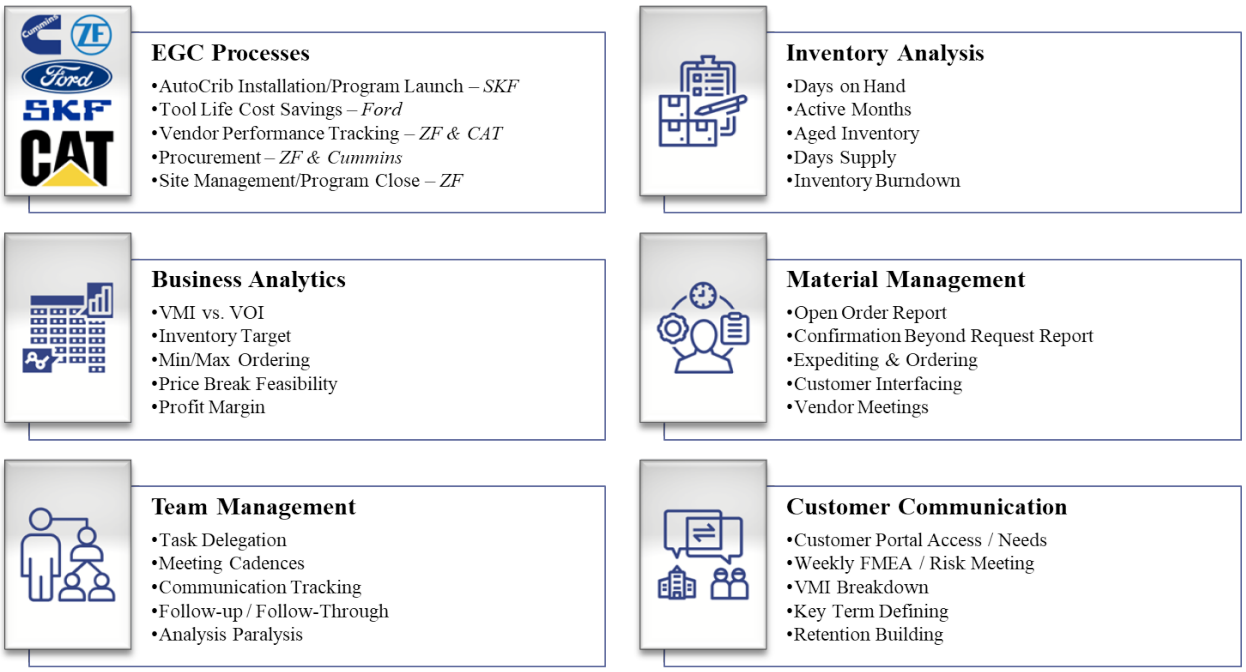

INITIAL PRICE BREAK COMPARISON
VMI Price Breaks
35.7
Average Days Holding
$88,106.88
Total Savings From Previous Orders
$41,624.19
Profit From Price Breaks
VOI Price Breaks
33.7
Average Days Holding
$151,852.05
Total Savings From Previous Orders
$32,834.17
Profit From Price Breaks


NEXT PRICE BREAK COMPARISON
VMI Price Breaks
59.6
Average Days Holding
-$10,372.77
Total 'Savings' From Previous Orders
$141,615.73
Profit From Price Breaks
VOI Price Breaks
68.2
Average Days Holding
$38,613.94
Total Savings From Previous Orders
$85,901.61
Profit From Price Breaks

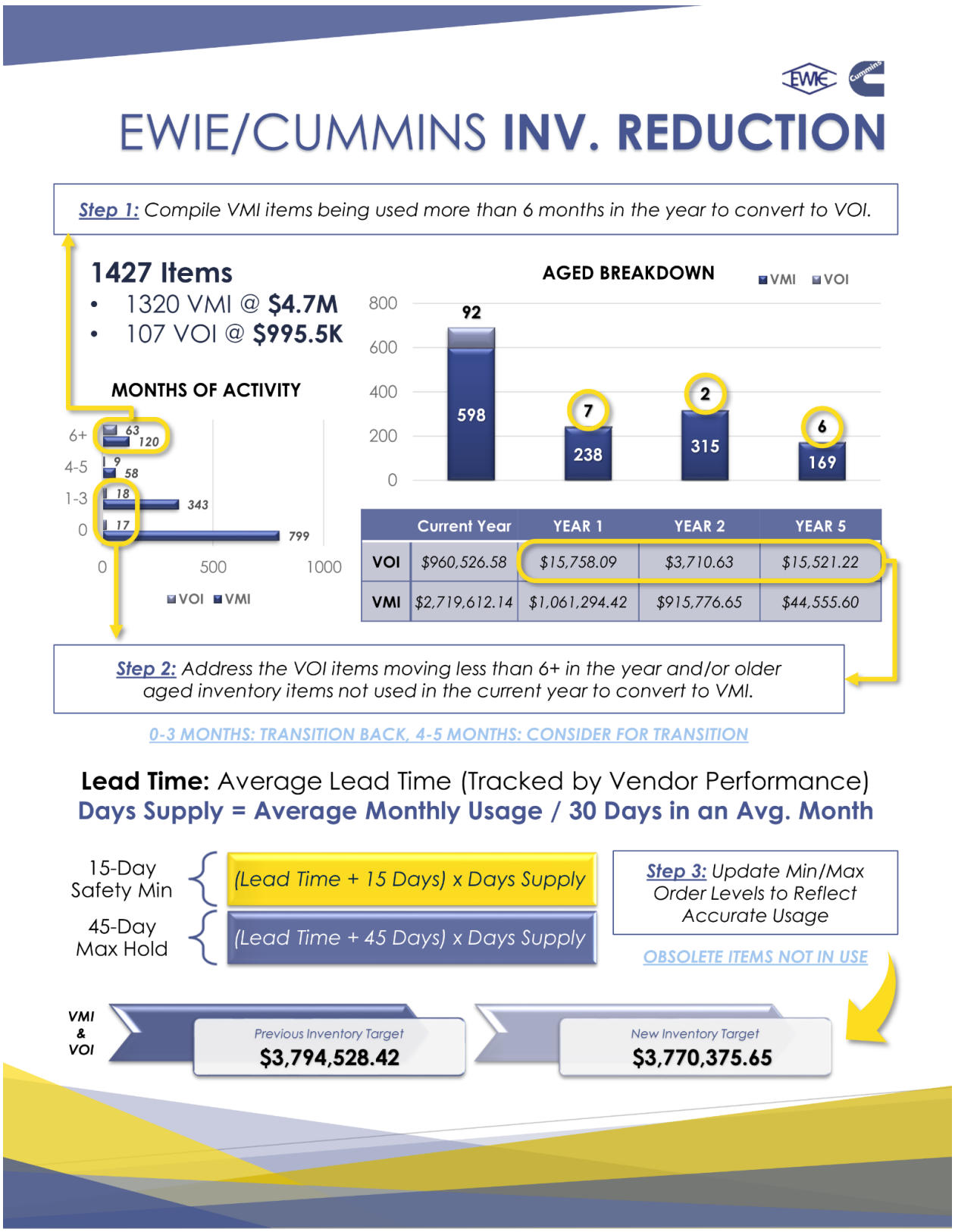

KEY TAKEAWAYS
EGC Processes
•AutoCrib Installation/Program Launch – SKF
•Tool Life Cost Savings – Ford
•Vendor Performance Tracking – ZF & CAT
•Procurement – ZF & Cummins
•Site Management/Program Close – ZF
Inventory Analysis
•Days on Hand
•Active Months
•Aged Inventory
•Days Supply
•Inventory Burndown
Business Analytics
•VMI vs. VOI
•Inventory Target
•Min/Max Ordering
•Price Break Feasibility
•Profit Margin
Material Management
•Open Order Report
•Confirmation Beyond Request Report
•Expediting & Ordering
•Customer Interfacing
•Vendor Meetings
Team Management
•Task Delegation
•Meeting Cadences
•Communication Tracking
•Follow-up / Follow-Through
•Analysis Paralysis
Customer Communication
•Customer Portal Access / Needs
•Weekly FMEA / Risk Meeting
•VMI Breakdown
•Key Term Defining
•Retention Building


Thank you!
Any questions?

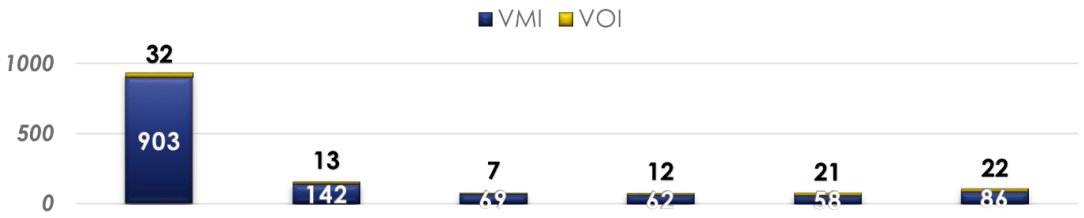
Appendix B: LDP Learning Outcomes



Appendix C: Thesis Overview Infographic



EWIE/CUMMINS **INV. REDUCTION** (CONT.)

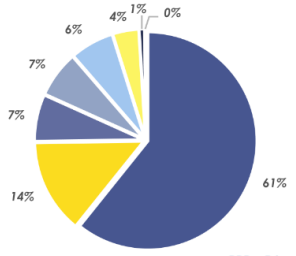


	<30 days	31-60 days	61-90 days	91-120 days	121-180 days	180+ days
VOI	($121,068.17)	($99,874.60)	($11,126.69)	($29.55)	$91,651.84	$367,404.33
VMI	$1,678,310.87	($469,207.18)	($89,528.51)	($69,838.68)	$51,015.11	$780,418.75

Inventory Value vs. New Maximum Inv. Value

Step 4: *Analyze & address current MOQs and price breaks available for VMI items.*

VMI PRICE BREAK NOTES	# OF ITEMS
ZERO USAGE	802
NO PRICE BREAKS, PPP	185
1 PC / MONTH, NO MOQ	92
OPT. BREAK AVAILABLE	91
MOQ DRIVEN	86
MOQ DRIVEN, PPP	51
BREAK TOO HIGH, PPP	11
POOR PRICE BREAKS	2



PPP = Price Per Piece

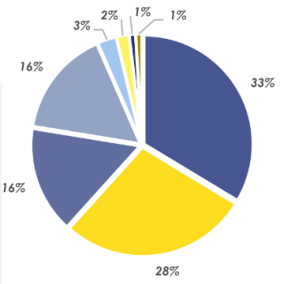
VMI Price Breaks

- *Average Days Holding:* **35.7**
- *Total Savings From Previous Orders:* **$88,106.88**
- *Profit From Price Breaks:* **$41,624.19**

$105.9K
over monthly consumption from Minimum Order Quantities (MOQs)

Step 5: *Analyze & address current MOQs and price breaks available for VOI items.*

VOI PRICE BREAK NOTES	# OF ITEMS
NO PRICE BREAKS, PPP	36
OPT. BREAK AVAILABLE	30
ZERO USAGE	17
MOQ DRIVEN	17
MOQ DRIVEN, PPP	3
POOR PRICE BREAKS	2
1 PC / MONTH, NO MOQ	1
BREAK TOO HIGH, PPP	1



VOI Price Breaks

- *Average Days Holding:* **33.7**
- *Total Savings From Previous Orders:* **$151,852.05**
- *Profit From Price Breaks:* **$32,834.17**

$59.9K
over monthly consumption from Minimum Order Quantities (MOQs)

EWIE/CUMMINS **INV. REDUCTION** (CONT.)

ZERO USAGE

Item not used within the past ***6 months.** *No further action needed.*
**Activity set by the Pricing Review Report.*

NO PRICE BREAKS, PPP

No price breaks on file, we are paying the **"Price Per Piece".** We should reach out for price breaks if the monthly consumption and vendor warrant it.

1 PC / MONTH, PPP

We are only using 1 piece per active month so therefore any price break would set us above the items' monthly consumption. We are paying the **"Price Per Piece".** *No further action required.*

OPT. BREAK AVAILABLE

There is an optimum price break on file for these items' monthly consumption. We need to input the new pricing for VMI & VOI, and claim the VMI differences as cost-savings.

MOQ DRIVEN

These items' Minimum Order Quantities (MOQs) are higher than their monthly consumption, however they have price breaks available for other prices. *Verify MOQs on file with vendors since they could have been set at the site level to achieve a previous price break.*

MOQ DRIVEN, PPP

These items' Minimum Order Quantities (MOQs) are higher than their monthly consumption therefore the orders we place have large burndowns inherently. They do not have price breaks, we are paying the **"Price Per Piece".** *Verify MOQs on file with vendors and/or negotiate lower.*

BREAK TOO HIGH, PPP

The price breaks available are too far above monthly consumption to ethically place an order. We are paying the **"Price Per Piece".** *Consider reaching out for different price breaks.*

POOR PRICE BREAKS

Price breaks exist for these items but are at inconvenient increments. Due to usage being so high, I would consider reaching out for more convenient price breaks to match monthly consumption.