



VAP Packaging Management



A photograph of a man and a woman standing in front of a building. The man is on the right, wearing a black and red jacket with the VAP logo on the chest. The woman is on the left, also wearing a black and red jacket. They are both smiling. The building behind them has large, red, 3D 'VAP' letters on the wall, and below them, the words 'Packaging Management' are written in black. The image is overlaid with a semi-transparent dark grey box containing text.

OUR VISION, MISSION & THE VAP WAY

We're redesigning the way packaging materials are manufactured, managed & delivered to improve the lives of our VAP Team, customers, & community.



Typical Industry Way:

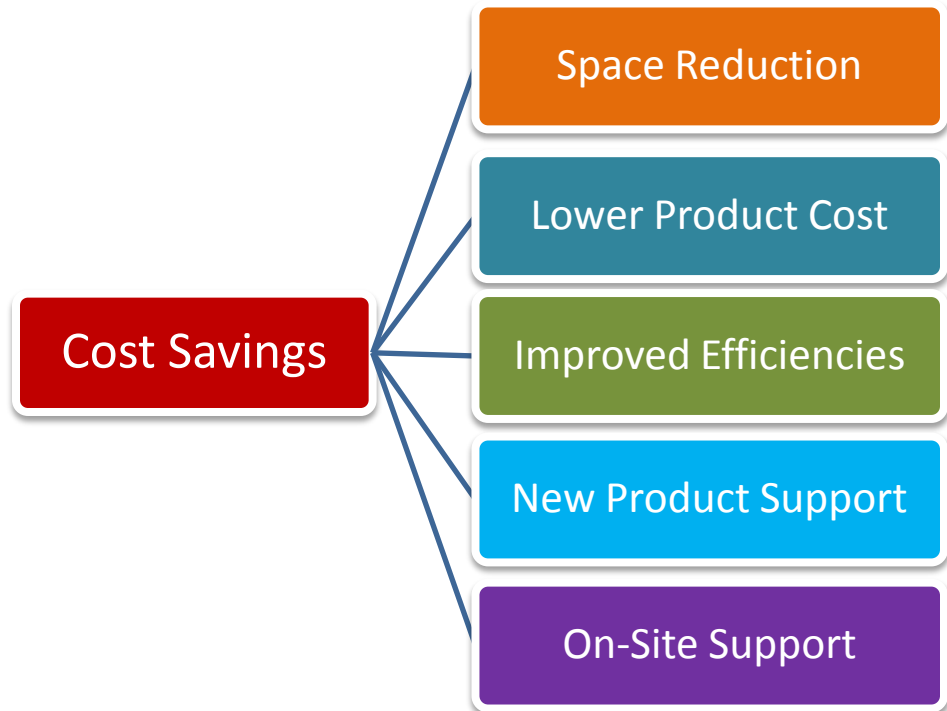
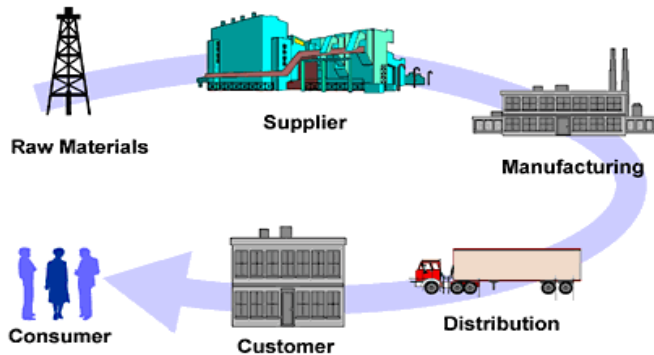
- Only thing matters is price per unit
- Don't look at the bigger picture



VAP Way:



- Total Cost Savings
- Look at the full supply chain (bigger picture)



Typical Industry Way:



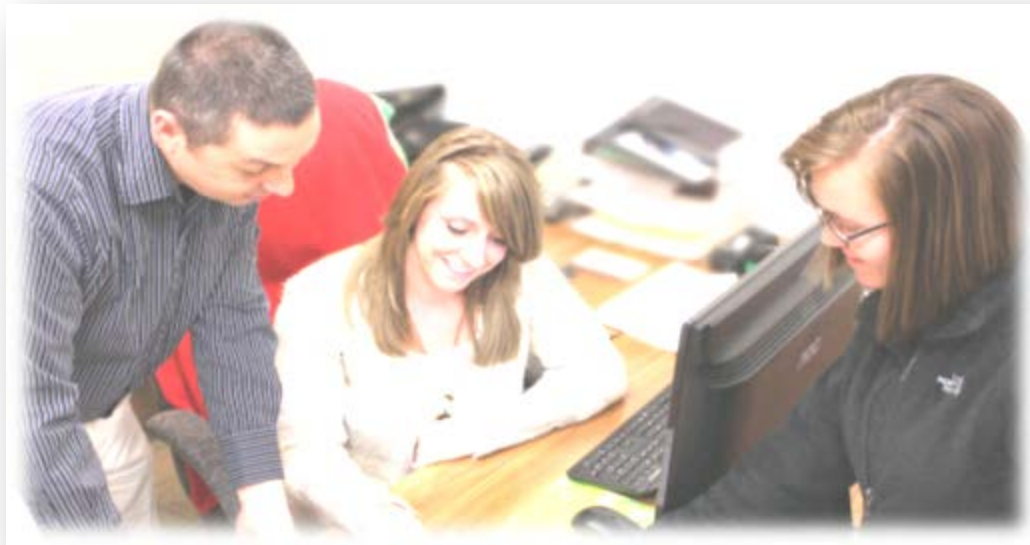
- Push vendors every time for cost savings
- Deal with many vendors; that is the best way to bring cost down



VAP Way:



- Work with your suppliers
- “End the practice of awarding business on the basis of a price tag. Instead, minimize total cost. Move toward a single supplier for any one item, on a long-term relationship of loyalty and trust.” - W. Edwards Deming



Result of working with our Supplier



- We represent only 2.5 % of total business of our supplier.
- Working together as a team
- Support suppliers to achieve their vision
 - Professional, Helping community
- We order 90% of our corrugated board from them.
- We receive the same level of care and preference as the rest of their major customers get.



Typical Industry Way:



- Offer Just In Time (JIT) (With a warehouse full of several months worth inventory)
- We support Lean Manufacturing (but don't practice)



On Time Delivery and Inventory Turn



- On Time Delivery ratio = 98.4 %
- Average Inventory Turn = 1.04 (our goal = 2.0)
- Average Inventory Days = 30 (our goal = 15)
- Industry Average Inventory Turn = 0.33
- Industry Average Inventory Days = 90

** From 5/5/13 to 5/5/14*



Lead Time and Order Qty:



- Average Lead Time Manufacturing VAP = 2 days
- Average Lead Time Manufacturing Industry= 2 weeks

Box-King:

- Lowest Order Qty: 1
- Average Order Qty: 250
- Highest Order Qty: 1000





| | A | B | C | D | E |
|----|----------|--|-----------|-------|------------|
| 1 | Material | Description | Available | Stock | Order rese |
| 11 | 85013 | CARTON,RSC-SS-30.25(L) x 8.75(W)x30.38"H | 60 | 82 | 22 |
| 12 | 85017 | CARTON RSC 24(L) x 8.75(W) x 24.38(H) | 34 | 59 | 25 |
| 13 | 85092 | FOLDER, OPF- 39.125(L)x 32.94(W) x0.69" | 20 | 28 | 8 |
| 14 | 85098 | CARTON RSC 10.88(L) x 8.38(w) x 9(H) | 27 | 27 | 0 |
| 15 | 85099 | PAD, FLAT, CORR, 9 X 35" | 90 | 228 | 138 |
| 16 | 85100 | PAD, FLAT, CORR 7 X 25" | 145 | 335 | 190 |
| 17 | 85101 | PAD, FLAT,CORR -7 X 22" | 365 | 465 | 100 |
| 18 | 85102 | PAD, FLAT,CORR 15 X 52" | 39 | 139 | 100 |
| 19 | 85104 | PAD, CORR FLAT, 13 X 48" | 74 | 218 | 144 |
| 20 | 85105 | PAD, FLAT, CORR - 11 X 45" | 17 | 262 | 245 |
| 21 | 86260 | CARTON RSC 23.63(L) x 14.5(W) x 24.38(H) | -13 | 39 | 52 |
| 22 | 89577 | CARTON AND DIVIDER SET- (SMA) | -4 | 12 | 16 |
| 23 | 89584 | CARTON AND DIVIDER SET- (SMA FAN COVER) | 0 | 0 | 0 |
| 24 | 89588 | CARTON AND DIVIDER SET- (SMA) | -4 | 1 | 5 |
| 25 | 89593 | FOLDER AND PAD SET- SMA KIT | 10 | 80 | 70 |
| 26 | 89668 | CARTON-RSC_23.625 x8.75 x 35.56IN | 17 | 52 | 35 |
| 27 | 89672 | CARTON RSC 12.13(L) x 6.5(W) x 12(H) | 2 | 164 | 162 |
| 28 | 89673 | CARTON RSC 12.25(L) x 6.75(W) x 15.88(H) | 5 | 157 | 152 |
| 29 | 89674 | CARTON RSC 16.13(L) x 6.75(W) x 15.88(H) | 56 | 76 | 20 |
| 30 | 89675 | CARTON RSC 16.13(L) x 9.06(W) x 15.88(H) | 0 | 104 | 104 |
| 31 | 89676 | CARTON RSC 16.13(L) x 9.06(W) x 19.88(H) | -1 | 175 | 176 |
| 32 | 89677 | CARTON RSC 20(L) x 9.06(W) x 19.88(H) | 22 | 202 | 180 |
| 33 | 89678 | CARTON RSC 24(L) x 9.063(W) x 23.75(H) | 108 | 133 | 25 |
| 34 | 89679 | CARTON RSC 16.13(L)x 6.69(W) x 19.88(H) | 35 | 67 | 32 |
| 35 | 89690 | CARTON RSC 20(L) x 6.69(W) x 19.88(H) | 119 | 144 | 25 |
| 36 | 89691 | CARTON RSC 24(L) x 12.63(W) x 30.13(H) | -20 | 31 | 51 |
| 37 | 89692 | CARTON RSC 24(L) x 12.63(W) x 23.81(H) | 18 | 21 | 3 |
| 38 | 89693 | CARTON RSC 20(L) x 9.06(W) x 23.88(H) | 166 | 214 | 48 |
| 39 | 89695 | CARTON RSC 24(L) x 9.063(W) x 30.5(H) | 6 | 26 | 20 |
| 40 | 89702 | CARTON RSC 24(L) x 10.63(W) x 24(H) | 56 | 76 | 20 |
| 41 | 89709 | CARTON RSC 20(L) x 12.5(W) x 24(H) | -18 | 36 | 54 |
| 42 | 89710 | CARTON RSC 16.13(L) x 9.06(W) x 24(H) | -40 | 181 | 221 |
| 43 | 89731 | CARTON RSC 20.5(L) x 10.63(W) x 24.13(H) | -15 | 5 | 20 |
| 44 | 204718 | CARTON,RSC 30.25(L)x12.25(W)x 30.38"(H) | 20 | 50 | 30 |

VAP Lean Forecasting



VAP Culture:



- Collaborative Engaged Team Culture
 - Change without fear
 - Accountability
 - Continuously empowering all VAP Team Members
 - Commitment to education & training

- Embrace Lean!
 - DMAIC
 - PDSA
 - Huddle Board Meetings



VAP Culture:



- Continuous Improvement of Processes
 - Investment in new technology
 - Setup times improved from 30 min to less than 5 min
 - 5S + Safety



VAP Solutions:



Floor Space



Safety



Time to Assemble Packs



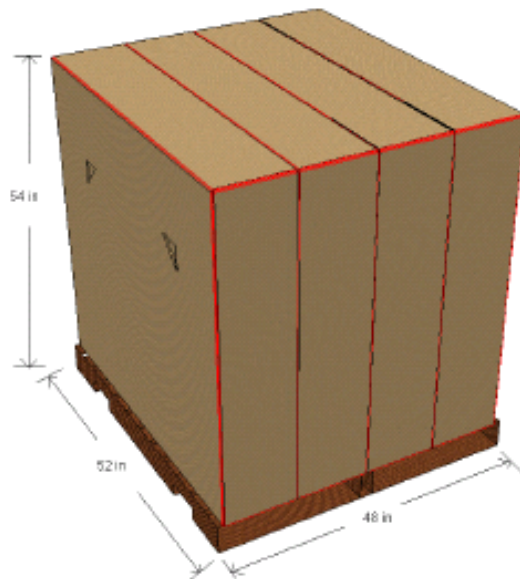
Ergonomics



VAP Solutions:

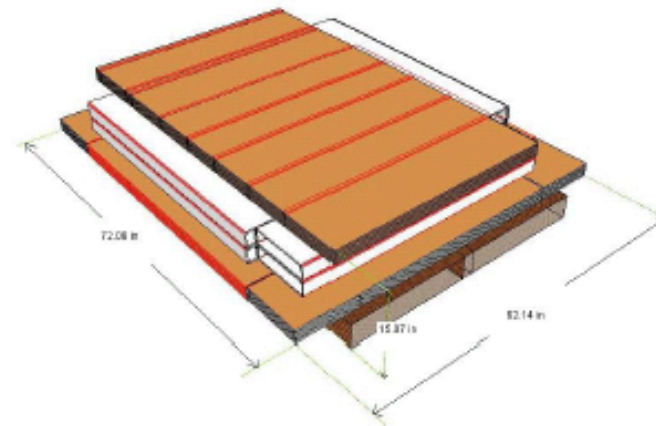


- Current Version



Space= 78.47 cubic ft

- Knock Down Flat (KDF) Version



Space= 40.73 cubic ft



VAP Solutions:



Space Savings

- If you store 10 kits on an average; that would save 377.4 cubic ft space at any given day which is approximately **50%** reduction in space.

Lower Direct Cost of Packaging

Shipping Cost Savings

Safe Stacking, Easy and Quick to assemble

- Within the 1 Min 11 sec Takt Time

Onsite Continuous Improvement

Total Cost Savings



Case Study:



- Customer located in Urbana
- Specialized in electrical enclosures, power distribution and software for planning and monitoring solutions
- 512,00 square foot facility
- We provide 70% of their total packaging



Support Level:



- Daily
 - On Site Customer Support
 - Logistics
- Project Based
 - New Designs
 - Cost Savings projects



On-site Customer Service Role



Removal
of
Empty
WIP
Units



Repleni-
shing all
required
packaging
material



Proper
Inventory
Count



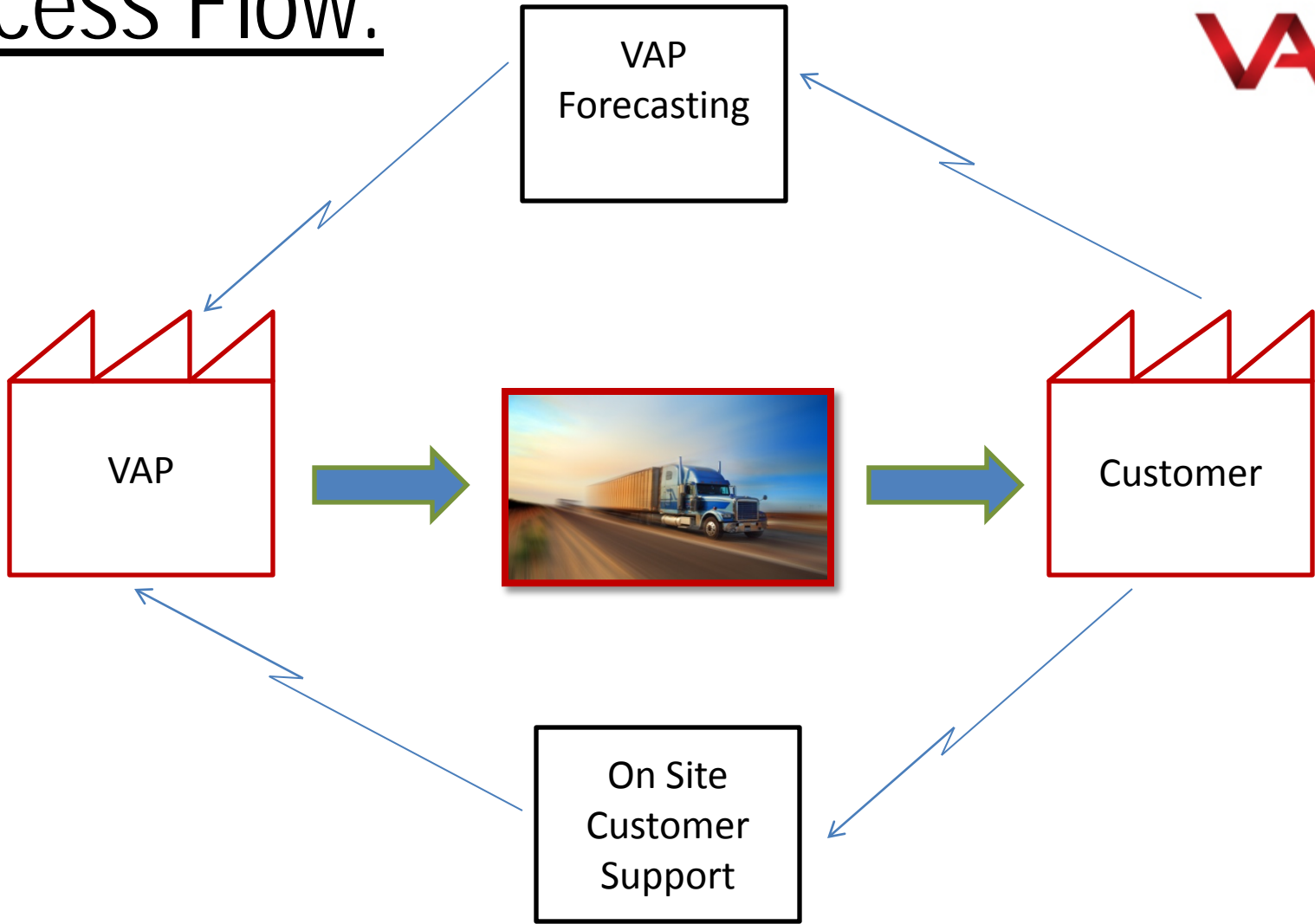
Ordering
of
Required
Material



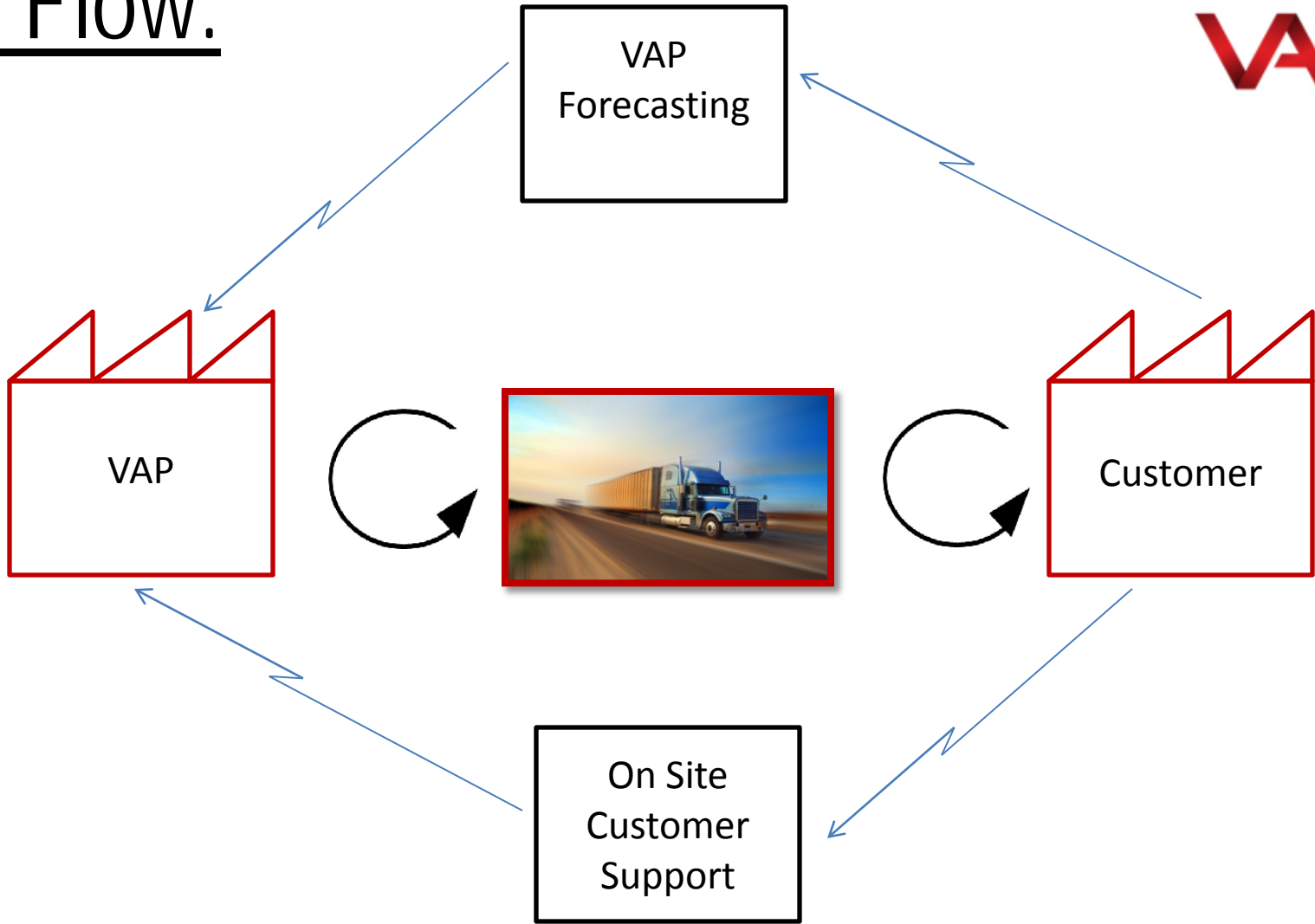
Helping
to
develop
a
Forecast



Process Flow:



Pull Flow:



Facts:



- After the order is placed in the system by on-site customer support order reaches to customer within 3 hours
- Supply only for that day's production
- Driver: Loads all shipping carts on line and brings empty carts back, personally loads boxes to one production line directly
- Provide non stocked items mostly within 24 hours
- On-Time Delivery ratio = 98.33



Projects:



- Annual cost savings of \$180,000 on a project
 - New solution to the biggest user
- Re-designed Wall-mount area
 - Space reduction by 20%
 - Time to find the items reduced by 50%



CARRYING COST ASSESSMENT FORM



CUSTOMER: _____ DATE: _____

| ANNUAL INVENTORY COSTS: | | CURRENT STATE | | | | VAP PACKAGING MANAGEMENT | | | | TOTAL SAVINGS |
|-------------------------|--|---------------|------------|---------|----------|--------------------------|------------|---------|----------|---------------|
| | | # /people | Hrs/Sqft/% | Rate/\$ | Result | # /people | Hrs/Sqft/% | Rate/\$ | Result | |
| Storage: | *Avg \$/Sqft (Includes Triple Net) | x | x | | = \$0.00 | x | x | | = \$0.00 | \$0.00 |
| Obsolescence: | Total \$ -or- % of Avg Inventory Value | x | x | | = \$0.00 | x | x | | = \$0.00 | \$0.00 |
| Damage: | Total \$ -or- % of Avg Inventory Value | x | x | | = \$0.00 | x | x | | = \$0.00 | \$0.00 |
| Logistics: | **Avg \$/ManHr | x | x | | = \$0.00 | x | x | | = \$0.00 | \$0.00 |
| Quality: | **Avg \$/ManHr | x | x | | = \$0.00 | x | x | | = \$0.00 | \$0.00 |
| Engineering: | **Avg \$/ManHr | x | x | | = \$0.00 | x | x | | = \$0.00 | \$0.00 |
| Administrative: | **Avg \$/ManHr | x | x | | = \$0.00 | x | x | | = \$0.00 | \$0.00 |
| Loss: | Total \$ -or- % of Avg Inventory Value | x | x | | = \$0.00 | x | x | | = \$0.00 | \$0.00 |
| | | | | | \$0.00 | | | | \$0.00 | \$0.00 |

| INVENTORY CARRYING COSTS: | | CURRENT STATE | |
|---------------------------|----------------|------------------------------|---------|
| INVENTORY COSTS: | \$0.00 / Month | Percent Inventory Cost: | #DIV/0! |
| AVG INVENTORY VALUE: | / Month | Opportunity Cost of Capital: | 9% |
| | | Insurance: | 4% |
| INV. CARRYING RATE: | #DIV/0! | Taxes: | 6% |
| x | | | |
| AVG INVENTORY VALUE: | \$0.00 / Month | INVENTORY CARRYING RATE: | #DIV/0! |
| INVENTORY CARRYING COST: | #DIV/0! / Year | | |

ANNUAL INVENTORY CARRYING COST SAVINGS: #DIV/0!

TOTAL SAVINGS UTILIZING VAP: #DIV/0!

* Per current market findings through avg lease properties available.
 ** Wage & Benefit Survey 2012, published Oct. 31, 2012. Data collected & prepared by Manpower for the Dayton Region Manufacturers Association. All information was based on Average wage for employees within the 25th percentile (meaning: only 25% is below the pay rate listed)

| INVENTORY CARRYING COSTS: | | VAP PACKAGING MANAGEMENT | |
|---------------------------|----------------|------------------------------|---------|
| INVENTORY COSTS: | \$0.00 / Month | Percent Inventory Cost: | #DIV/0! |
| AVG INVENTORY VALUE: | / Month | Opportunity Cost of Capital: | |
| | | Insurance: | |
| INV. CARRYING RATE: | #DIV/0! | Taxes: | |
| x | | | |
| AVG INVENTORY VALUE: | \$0.00 / Month | INVENTORY CARRYING RATE: | #DIV/0! |
| INVENTORY CARRYING COST: | #DIV/0! / Year | | |

Carrying costs are typically between 24% to 48% per year and they include:

- 1) The cost of money (your corporate cost of capital).
- 2) The cost of the space tied up to hold the inventory.
- 3) The administrative costs to manage the inventory: Cycle counting, inventory transactions, etc.
- 4) The cost of obsolescence and deterioration (the design changed, the customer reneged, etc.)
- 5) The quality impact. The more inventory, the more scrap, sorting, and rework required, and inventory delays discovery.
- 6) The correlation between inventory and response time: the more items the longer it takes to move an item through.
- 7) Insurance and Taxes.
- 8) Material Handling: Lots of inventory means more material movement.
- 9) More material movement means more handling damage.
- 10) Inventory delays innovation: We must wait until the old parts are used before implementing the new design.
- 11) Lost parts or material.

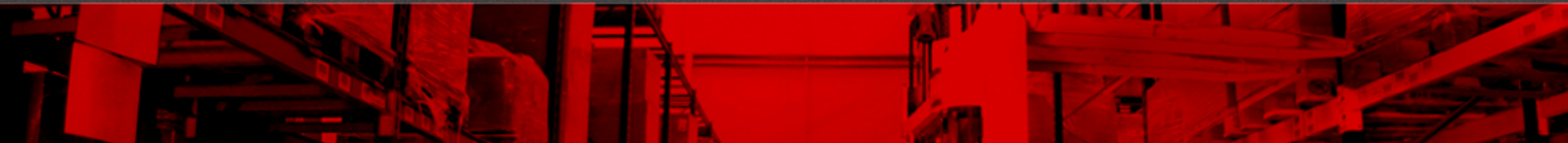
TOTAL SAVINGS BY DOING BUSINESS WITH VAP:

#DIV/0!

Q & A



Contact a VAP Team Member Today (937) 832-9595



Thank You



Team VAP

