



QUALITY
DEPLOYMENT
Business Value Engineering

“Show me the money”

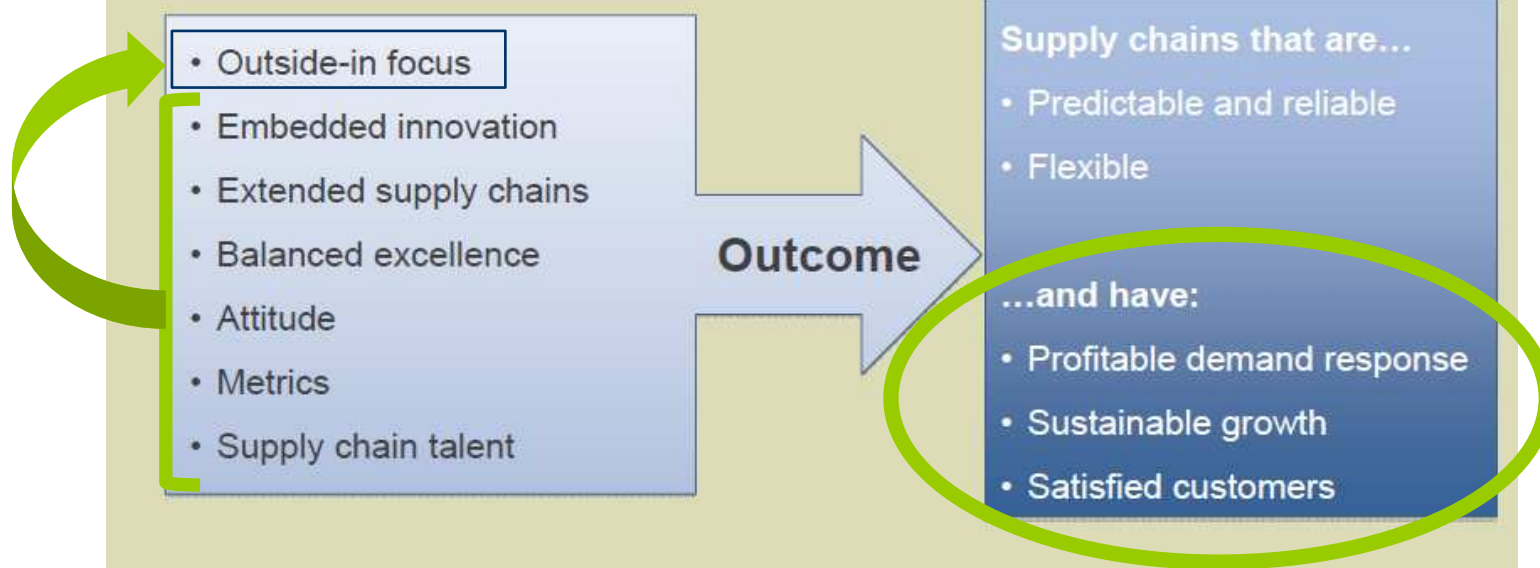
Making progress in the new economy

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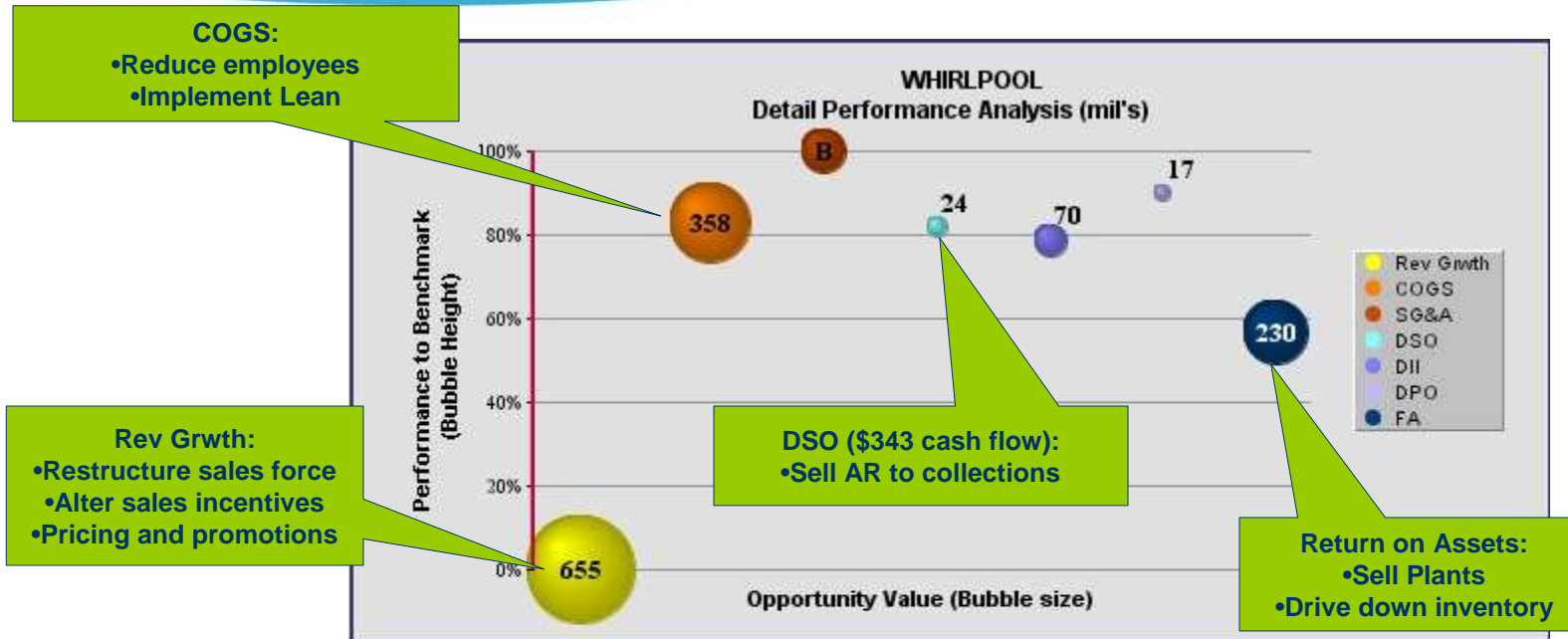
September, 2009

The top differentiator of AMR's top 25 supply chains:

What distinguishes leaders: themes



The cost take-out (inside-out) philosophy has low potential, painful results, and limits growth



Company Metrics for Benchmarking								Target
Company	Rev Growth	COGS	SGA	DSO	DII	DPO	Fixed Assets	
WHIRLPOOL	-9.0%	83.4%	10.2%	40	63	-50	0.163	<== Target
ELECTROLUX	0.1%	80.0%	16.2%	72	55	-55	0.163	
JARDEN	4.9%	70.0%	19.9%	60	110	-26	0.094	
LG ELECTRONI	15.3%	77.4%	17.3%	37	50	-32	0.270	
Industry Avg Co.	42.2%	82.0%	16.1%	33	69	-53	0.176	
Value Creation & Cash Impact								
Value Creation	655	358	0	24	70	17	230	1,354
Cash Impact	(926)	358	0	343	582	240	1,378	1,954

Outside-In builds relationships that drive growth

COGS:

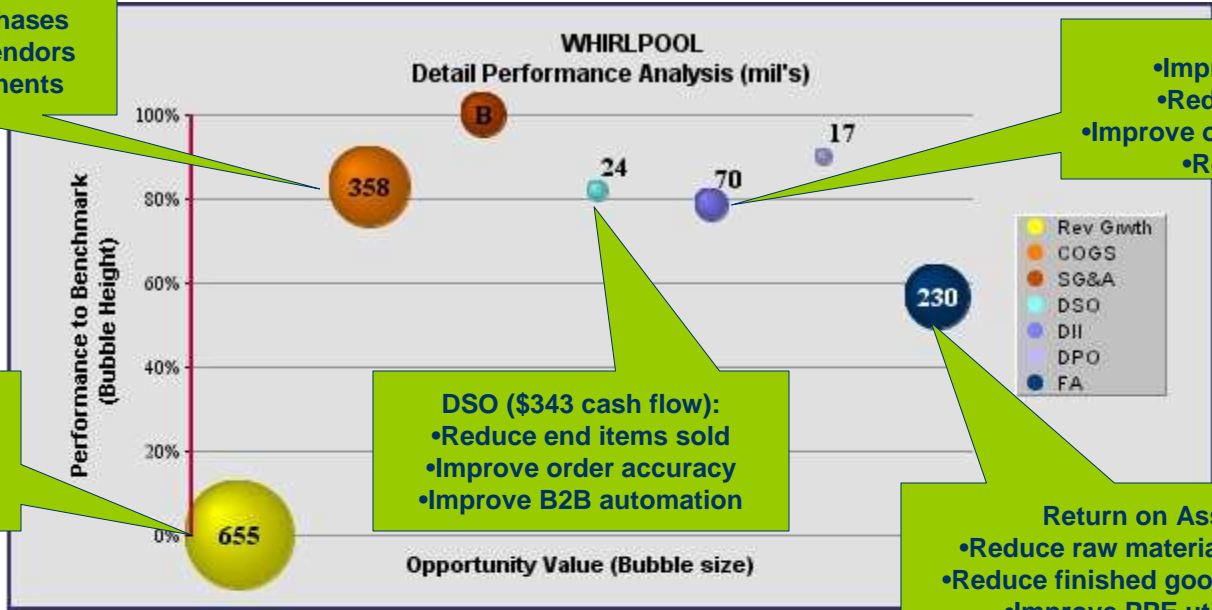
- Improve volume purchases
- Negotiate harder w/ vendors
- Use common components

DII:

- Improve forecasting
- Reduce duplication
- Improve order fulfillment speed
- Reduce returns

Rev Grwth:

- Speed time to market
- Supplier of choice
- Expand private label



DSO (\$343 cash flow):

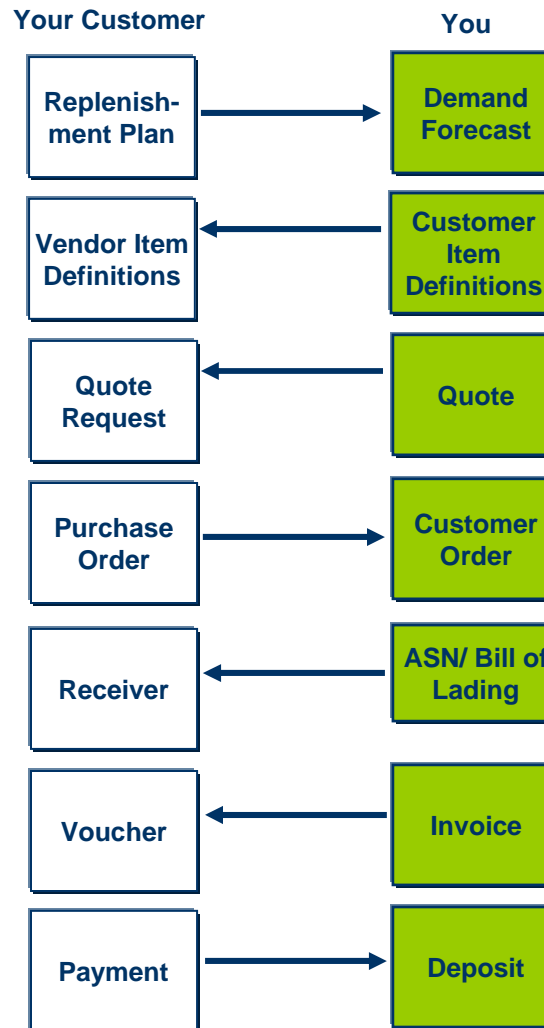
- Reduce end items sold
- Improve order accuracy
- Improve B2B automation

Return on Assets:

- Reduce raw material inventory
- Reduce finished goods inventory
- Improve PPE utilization

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The customer relationship is a key component to improving financials



Every mismatch has financial ramifications

- Mismatched capacity
- Higher than necessary inventory
- Inconsistent labor needs
- Out of stock on wrong part numbers
- Lost sales or margin wrong pricing
- SLA violation penalties
- Unexpected transportation costs
- Cost overruns missed requirements
- Little or no reuse on engineered parts
- Missed delivery and high WIP
- Penalties
- Product returns
- Credit memos
- Payment delays and investigation cost
- Product returns
- Inaccurate inventory & wasted space
- Payment delays and investigation cost
- Penalties
- Credit memos and write-offs
- Payment delays and investigation cost
- Payment delays and investigation cost

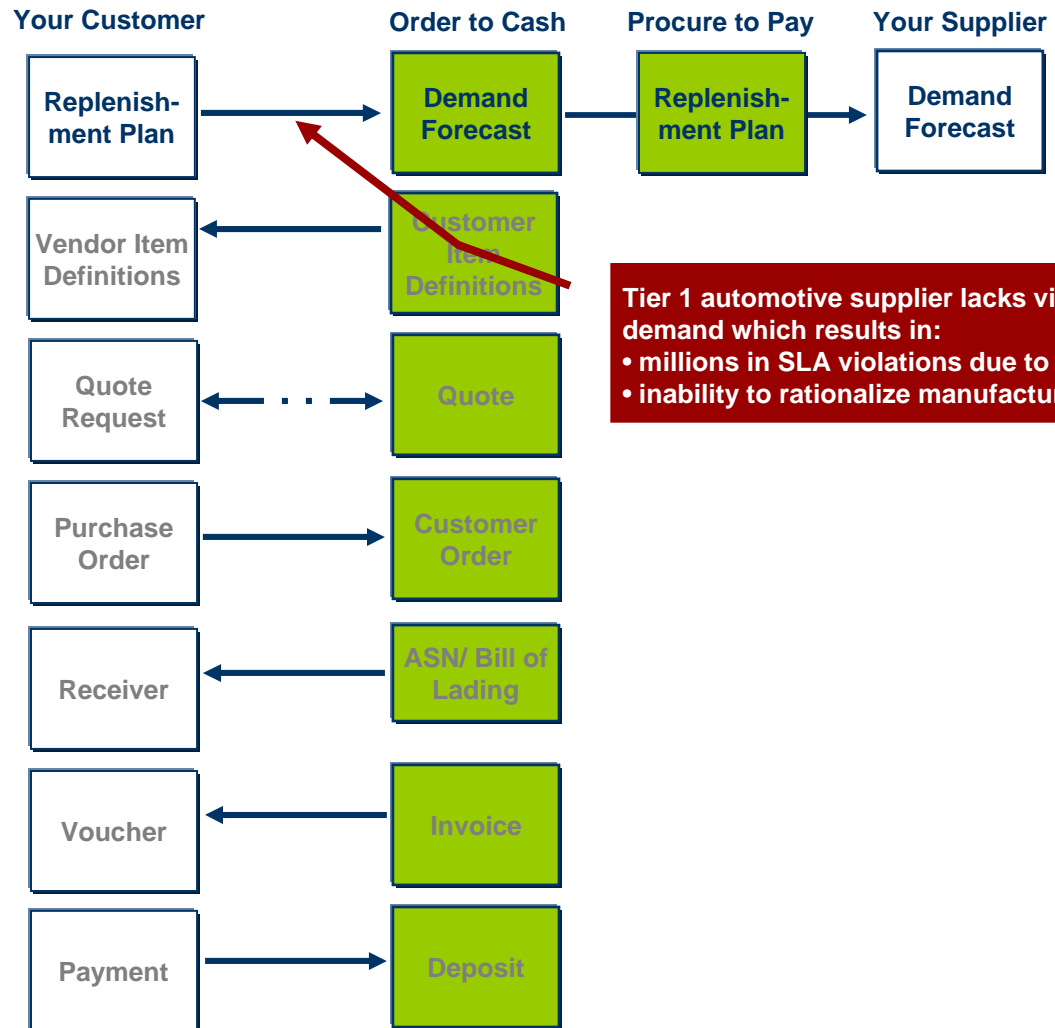
If it were only that simple...

- **Stock Order** – Orders filled by stock inventory or made to order internally
- **Stock Sourced to Order** – Orders filled by vendors or outsourced manufacturers
 - Jarden (Sunbeam) transfers ownership to Wal-Mart in China from third-party manufacturers
 - Office Depot sells a whole catalog of items fulfilled by S.P. Richards
- **Quoted Orders** – Orders requiring real-time pricing and product description
 - Commodity and natural resource orders
 - Printers ask Unisource for quotes on specialty paper
 - Bluelinx has a call center to provide quotes to buyers on lumber
- **Engineered to Order** – Products engineered to buyer specification
 - Electrolux engineers product sold under Sears brand
 - BE Aerospace engineers galleys and passenger seats to order

Financial performance is governed by the quality of our conversion of inputs

Outside-In Opportunities

- Better plant/asset utilization
- Lower labor costs
- Lower carrying cost and shrinkage
- Lower inbound logistics costs



Tier 1 automotive supplier lacks visibility of demand which results in:

- millions in SLA violations due to stock-outs
- inability to rationalize manufacturing

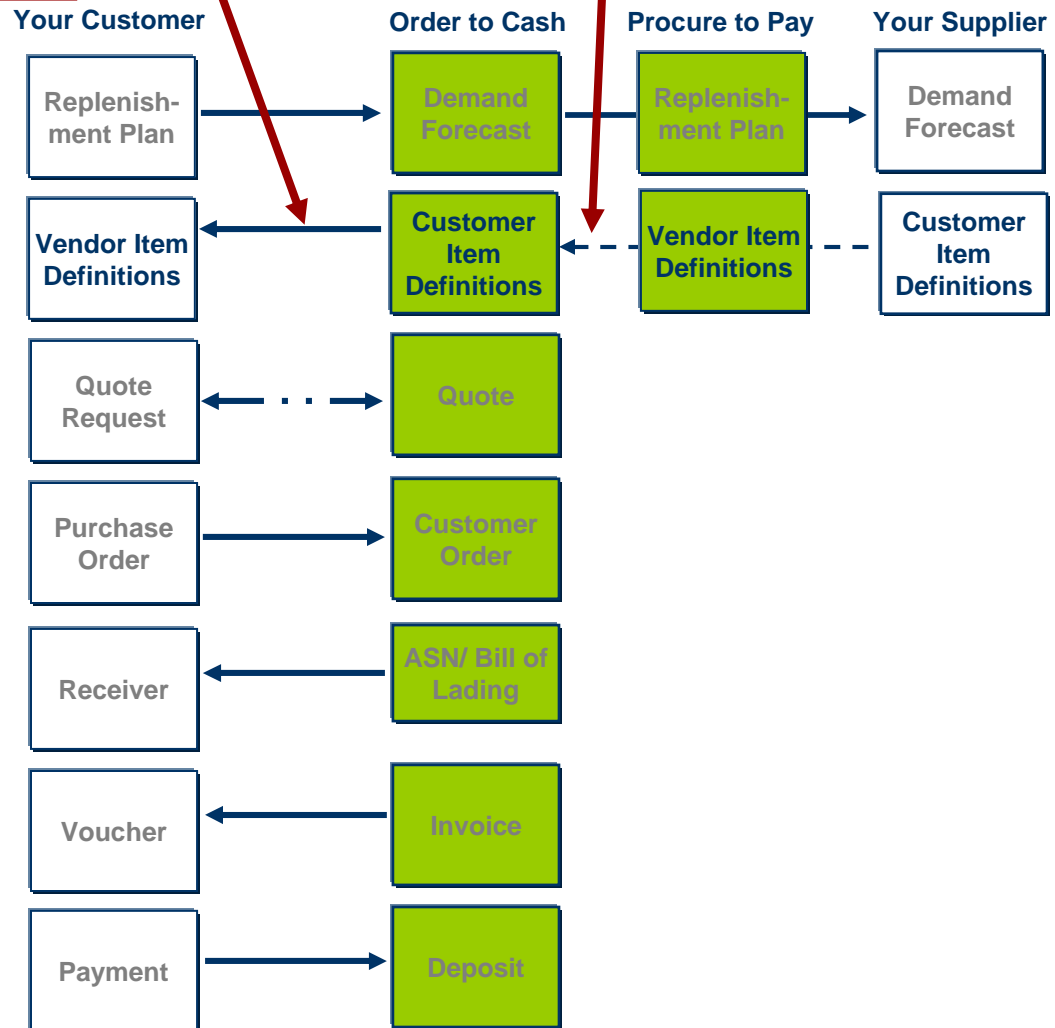
Financial performance is governed by the quality of our conversion of inputs

Appliance mfr item level pricing, promotion, and discount disputes cost them \$2m in EBIT earnings

\$6bn distributor has millions in credit memos due to cost/price mismanagement

Outside-In Opportunities

- Reduction in deductions
- Higher gross margins
- Lower new product cycle time
- Less penalties, higher customer sat



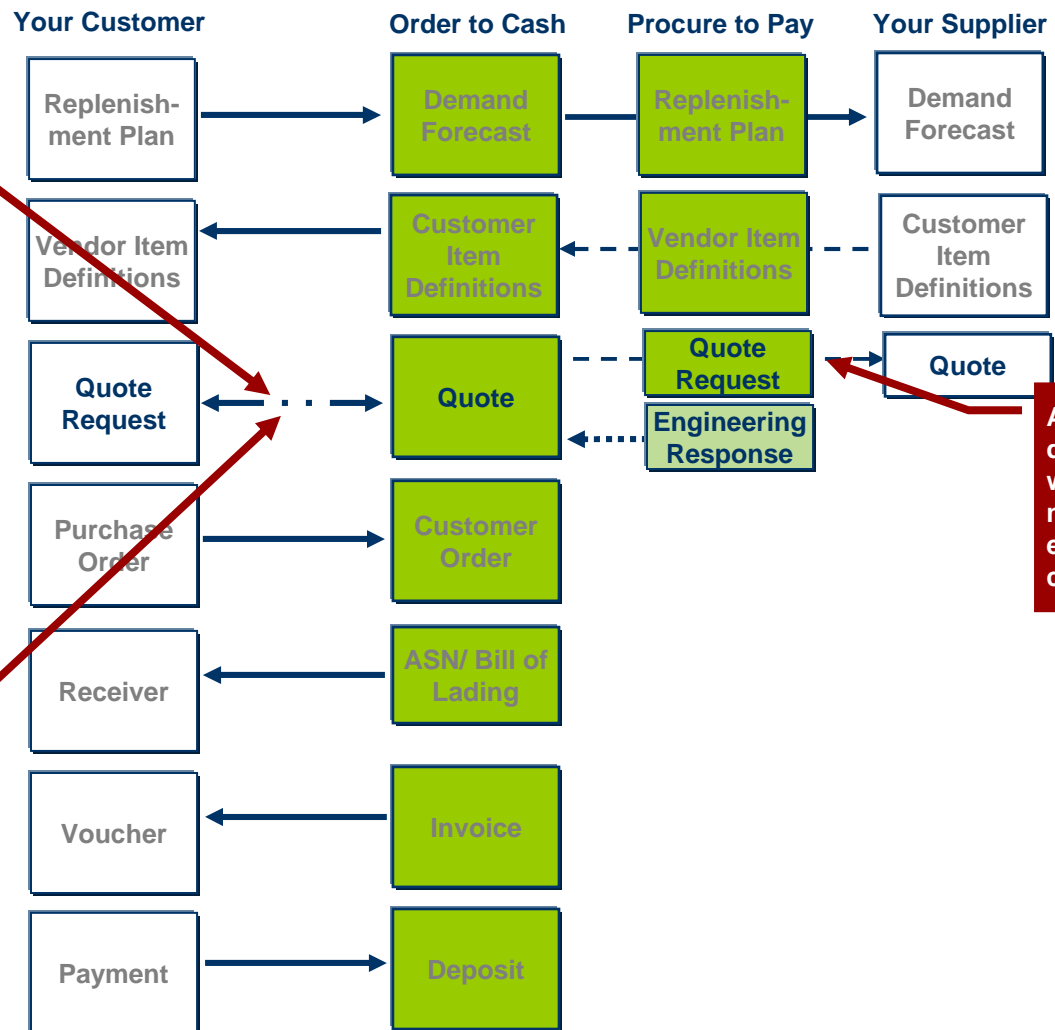
Financial performance is governed by the quality of our conversion of inputs

Outside-In Opportunities

\$2bn truck mfr had huge WIP and delays from orders that do not contain entire specifications

- Higher gross margins
- Reduction in quality and due date penalties
- Lower WIP inventory and waste
- Credit memo & write-off reduction

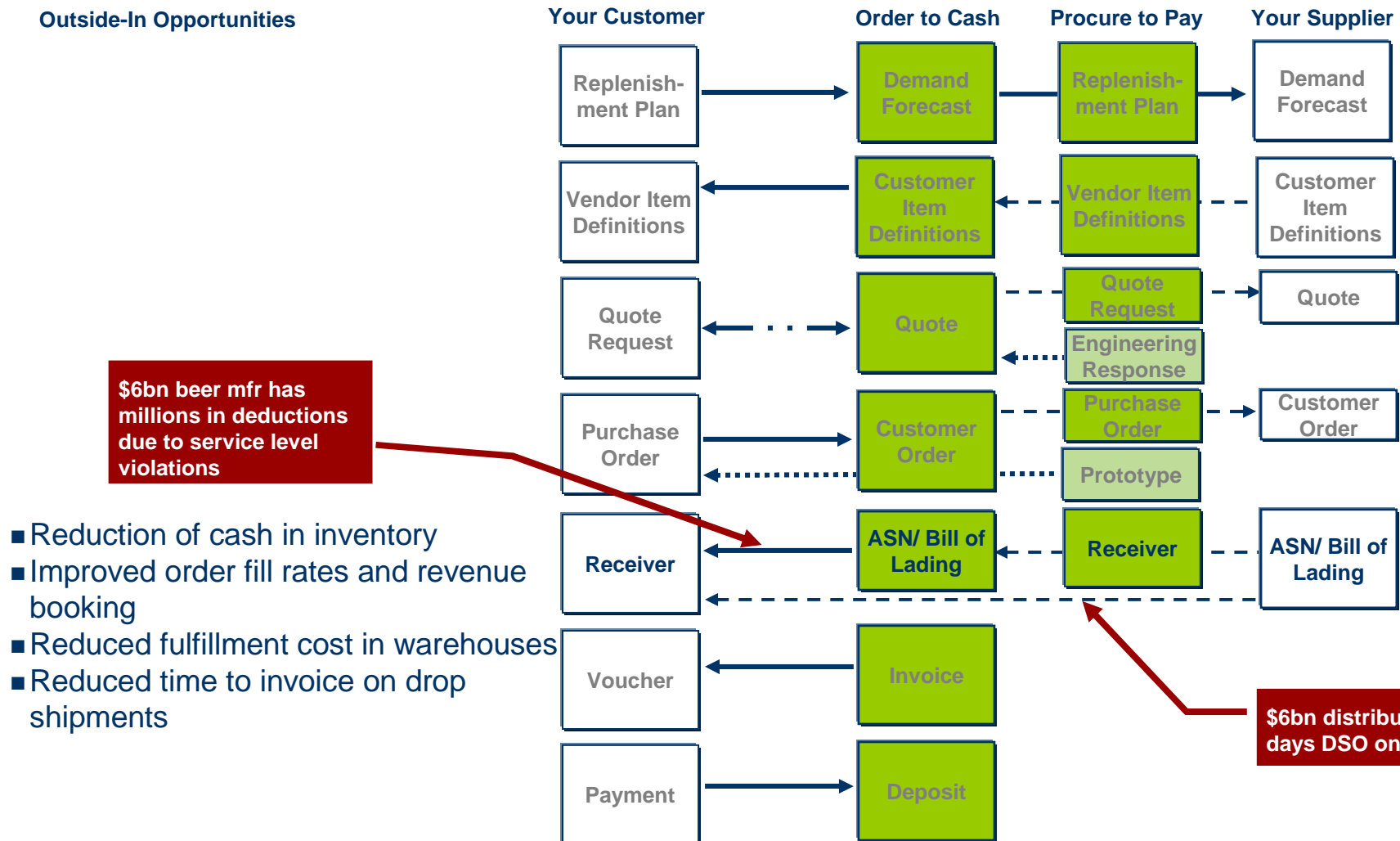
\$1.5bn aerospace mfr sees millions in penalties from missed requirements



Aircraft OEM delivery slowed weeks by manual vendor export compliance

Financial performance is governed by the quality of our conversion of inputs

Outside-In Opportunities



Every business has hard financial documentation of these conversion failures

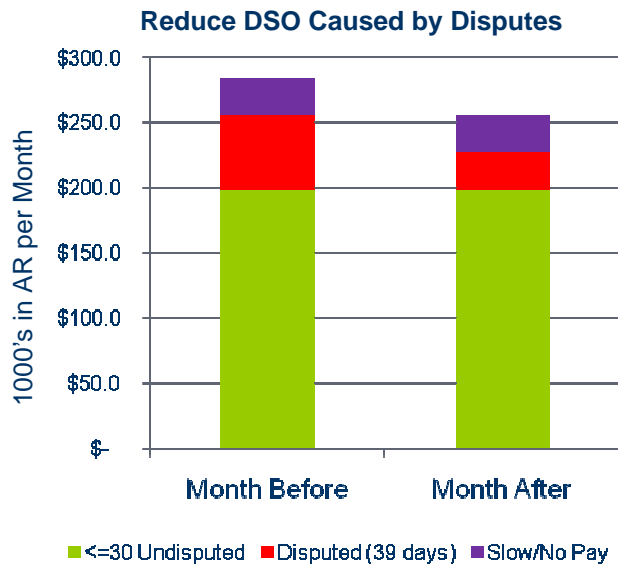
Credit Memo Processing Cost

Credit Memo Reason Type	Avg Count of CM per Month	Percent of Total	A/R Customer Support	Collectors	Annual Cost to Process CM
E-SLS-Price Correction	6,078	39.80%	\$35,820	\$61,689	\$97,509
N-SLS-Billing Error	1,419	9.29%	\$8,362	\$14,401	\$22,763
H-CST-Stock change/cancellation	1,066	6.98%	\$6,281	\$10,817	\$17,098
C-CST-Item ordered incorrectly	1,008	6.60%	\$5,940	\$10,230	\$16,169
P-SLS-Policy Credit	875	5.73%	\$5,157	\$8,881	\$14,038
K-IT-Qty/Price calculation error	512	3.35%	\$3,015	\$5,192	\$8,207
NULL-U-Unknown	476	3.12%	\$2,804	\$4,828	\$7,632
B-SC_CS-Item keyed incorrectly	359	2.35%	\$2,117	\$3,647	\$5,764
I-SC_WH-Item Short Shipped	304	1.99%	\$1,791	\$3,084	\$4,875
F-SC_CS-Customer number error	301	1.97%	\$1,772	\$3,052	\$4,824
Z-U-Unknown	269	1.76%	\$1,586	\$2,732	\$4,318
V-CST-Freight charge error	216	1.42%	\$1,276	\$2,197	\$3,472
A-SC_WH-Item misfilled	208	1.36%	\$1,228	\$2,116	\$3,344
T-F-Credit keyed incorrectly	204	1.34%	\$1,204	\$2,073	\$3,277
R-SC_WH-Stock damage	136	0.89%	\$802	\$1,382	\$2,184
L-SC_CS-Incorrect item substitution	116	0.76%	\$686	\$1,182	\$1,868
U-SLS-Duplicate Shipment	108	0.71%	\$639	\$1,101	\$1,740
G-SC_CS-Ship to incorrect	79	0.52%	\$466	\$802	\$1,267
M-SC_CS-Sales tax error	55	0.36%	\$324	\$558	\$882
D-SLS-Item written incorrectly	45	0.29%	\$265	\$457	\$722
Q-SC_WH-Item cut wrong	41	0.27%	\$240	\$413	\$653
J-SC_WH-Item Over Shipped	38	0.25%	\$223	\$384	\$607
O-F-Cost Error	13	0.08%	\$74	\$128	\$202

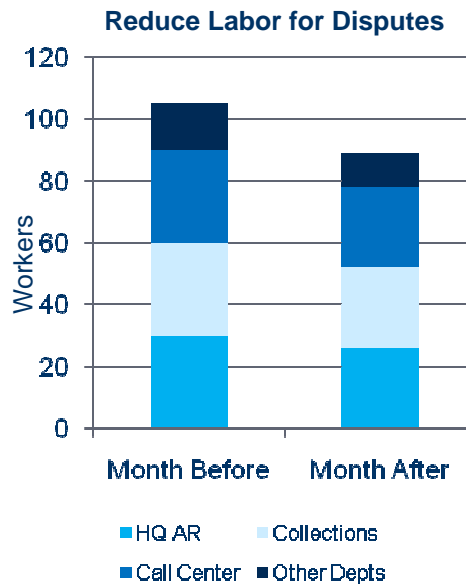
Documentation of Errors Leading to:

- Millions in stranded cash
- \$100k's of labor cost
- Millions in credit memos
- Damaged customer relationships

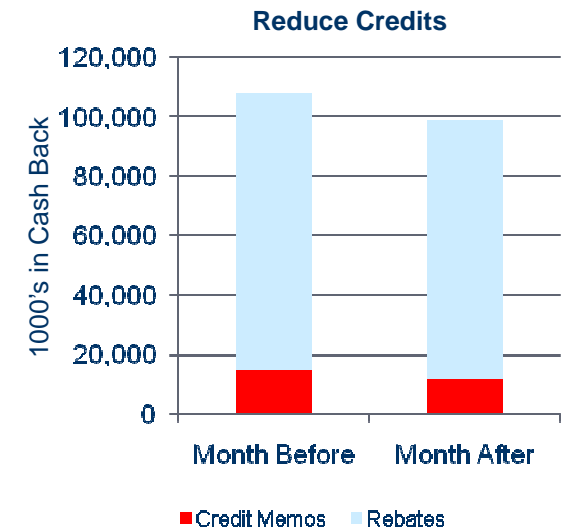
Outside-in initiatives improve cash, cost and customer satisfaction



4 Days DSO = \$28m in cash



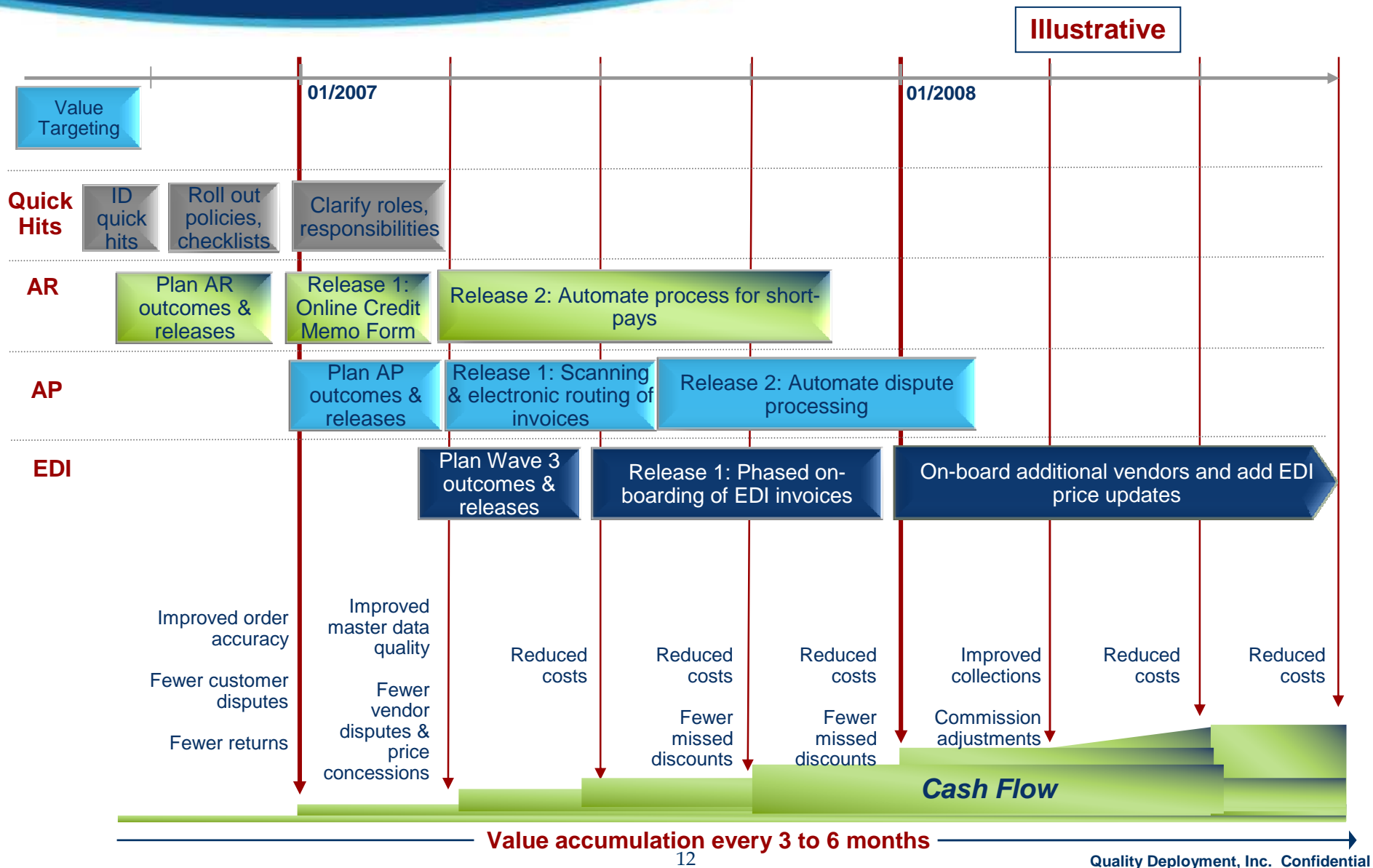
Plus \$300k-\$600k saved



Plus \$3-\$8m in reduced credits

Plus Happier Customers!

Improvements should generate benefits to cover necessary costs



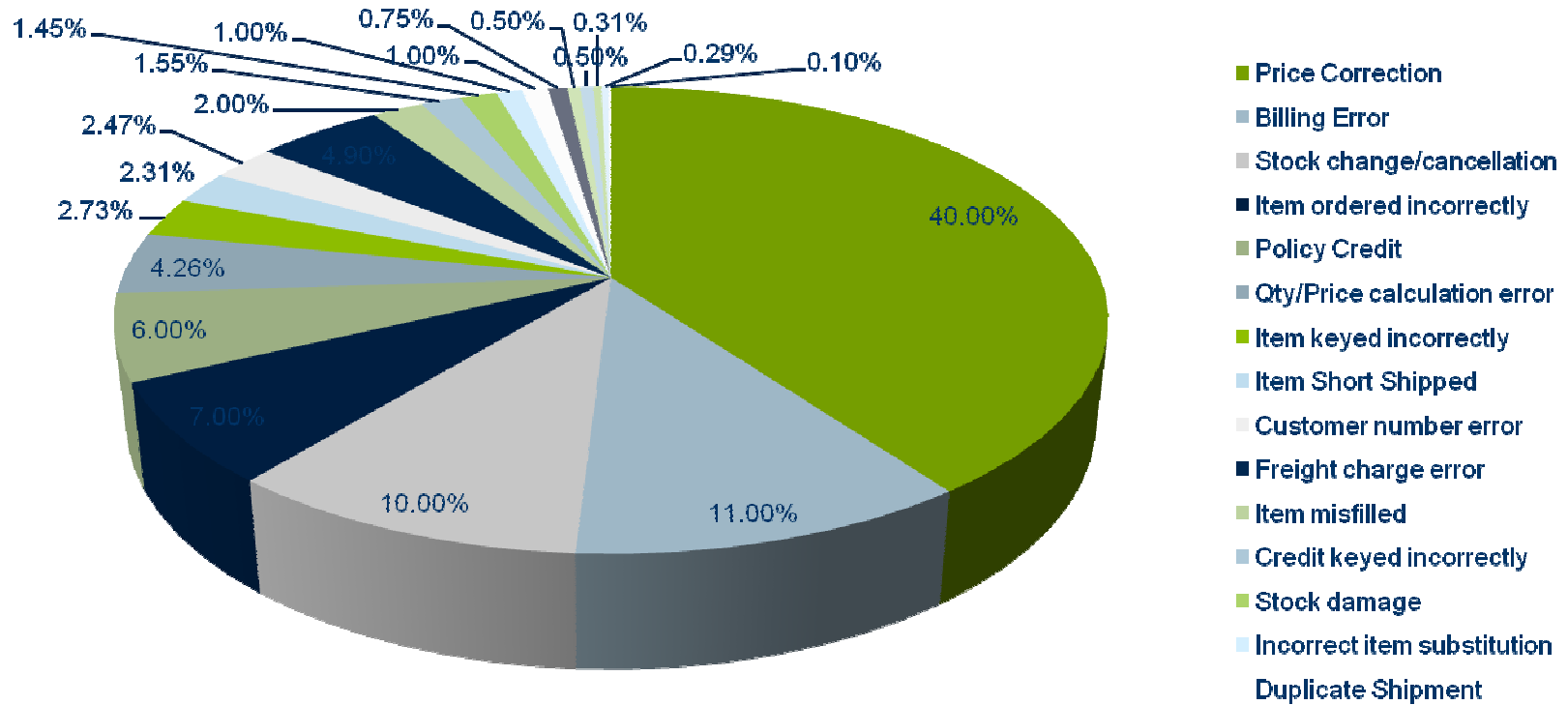
Unisource Worldwide

ERP Context

- \$6bn distributor with aging custom ERP
- Huge SAP implementation failure 4 years before
- Private equity owners required cash flow from the business
- Wanted integration as enabler for transition to best-of-breed applications

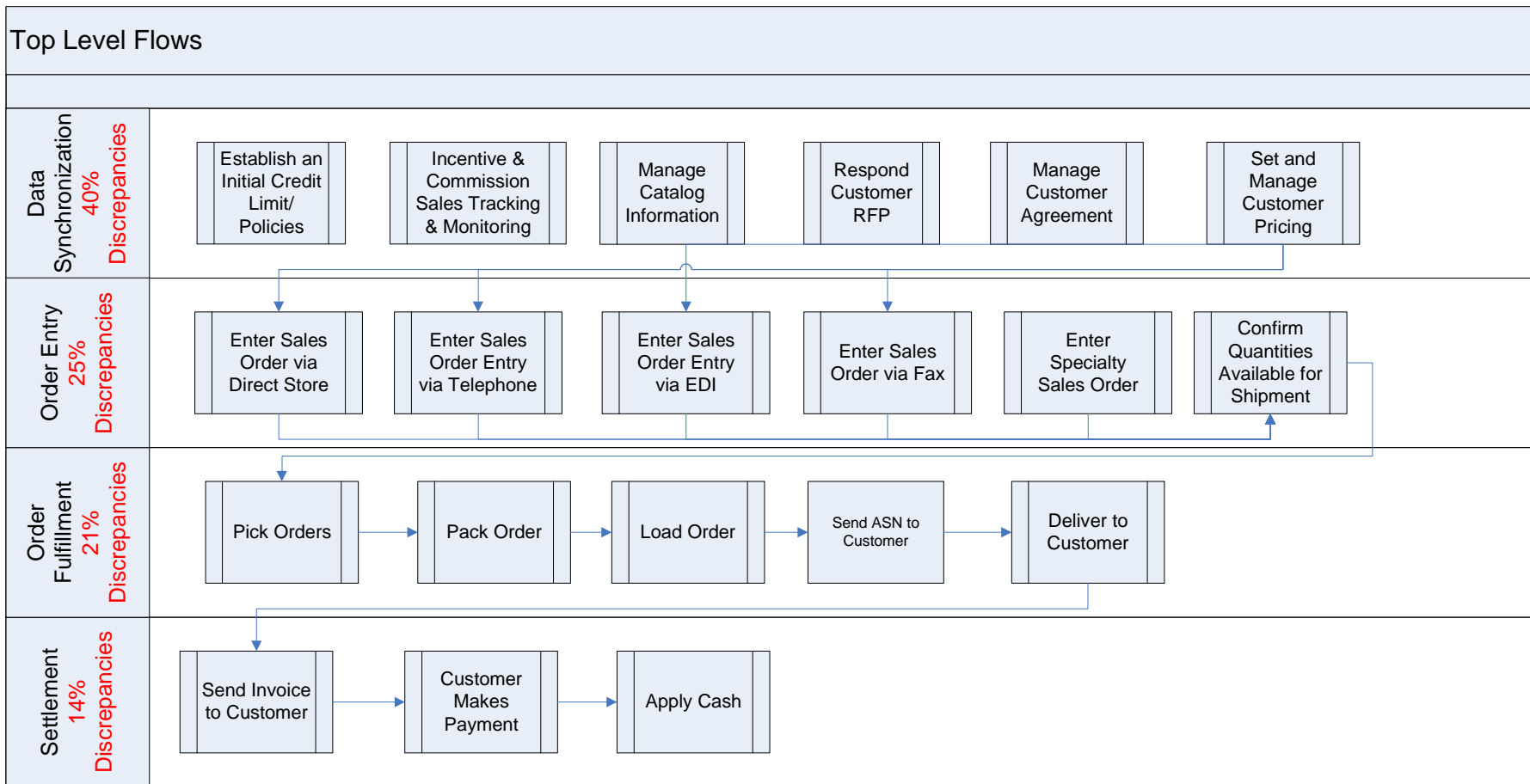
Receivable challenges are rampant in the consumer/office products industry

% of 15,271 Credit Memo Per Month by Reason Code



Recent data from a major office products wholesaler

There were several sources of errors



A big pocket of errors and DSO was found in AP

Original Process



In 4 months, the following benefits will begin to accrue:

