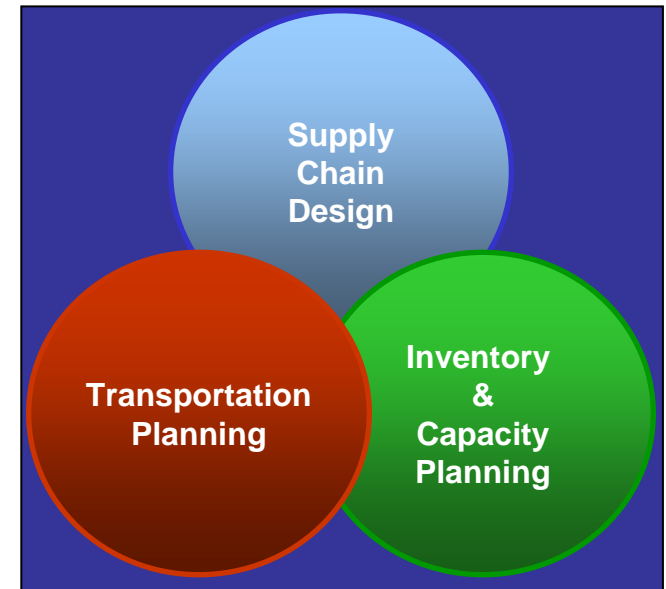




# Collaborative, Master-Planned Transportation Procurement

Gary Girotti  
VP, Transportation Practice  
Chainalytics, LLC

- Chainalytics formed in 2001 (HQ in Atlanta, GA)
- Supply Chain Analysis in 3 Focus Areas:
  - Supply Chain Design
  - Transportation Planning
  - Inventory & Capacity Planning
- Recent Accolades
  - “Top 100 Innovations”
    - Supply and Demand Chain Executive
    - 2006 Award for Model-Based Benchmarking
  - “Great Supply Chain Partner”
    - Global Logistics and Supply Chain Strategies
    - Named for three years running: 2004,2005, 2006



# Agenda

- Why are carrier rates rising?
- What tools can shippers use to address this?
- Questions and discussion

There are three key realities that are driving carrier costs (and rates) up

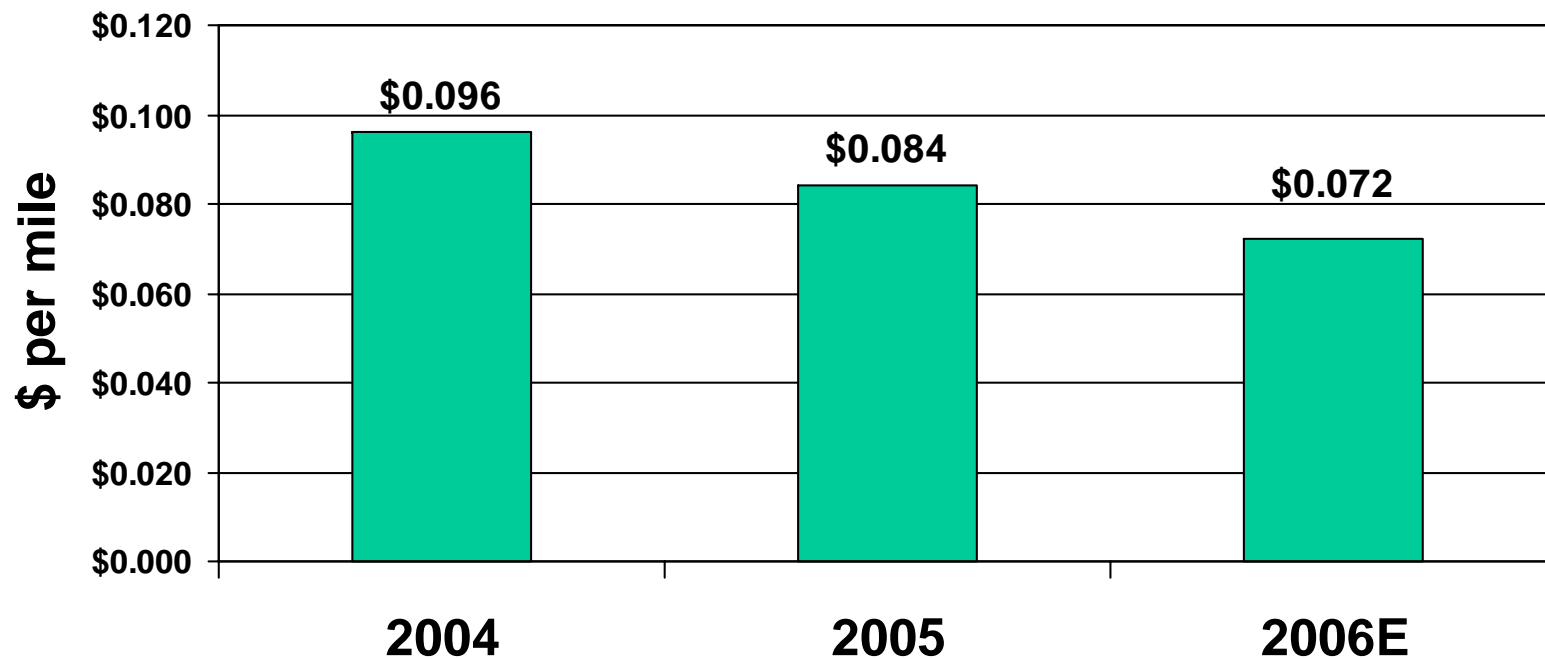
- *Fuel price increases*
- *Shortage of truck drivers, especially for long-haul activity*
- *Decreased productivity--effect of new government regulations*

# The Impact of Fuel



- **Fuel has accounted for over 1/2 of the increase in rates since 2004**
  - Chainalytics benchmarking research has shown that the average price of a 750 mile load dry TL in North America has increase 33% from January 2004 through July 2006, fully 55% for this increase is due to fuel surcharges. The rest is due to increases in other carrier costs
  
- **What to do about fuel?**
  - Expose it
    - keep the fuel surcharge base low
  - Buffer it
    - Consider a hedging program if price spikes are a series problem
  - Off-load it
    - Try to make it the finance or treasury departments problem
  - Avoid it
    - Reevaluate sourcing decisions

## Average Dry Van Rate Increase Excluding Fuel (Yr/Yr)



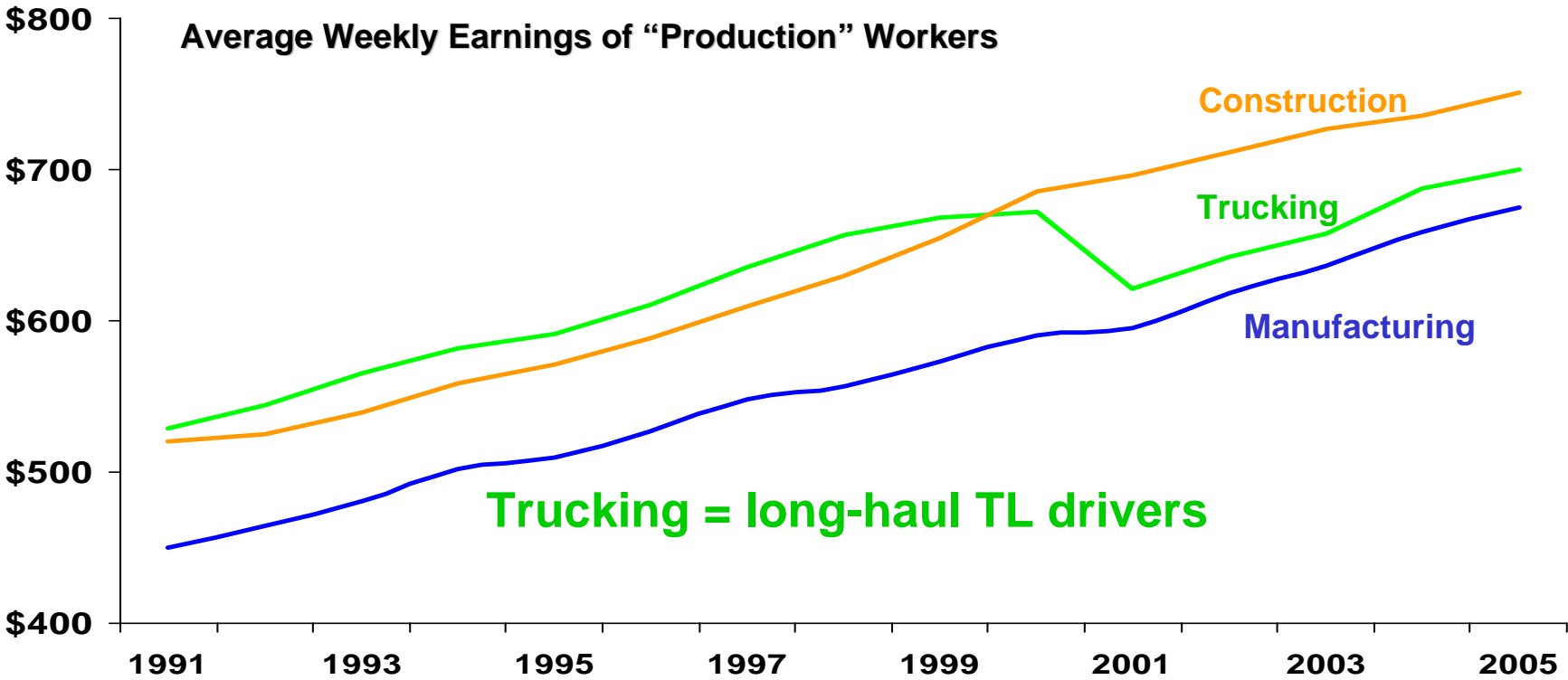
**Excluding fuel, rates have increased on average \$0.25 per mile since the beginning of 2004. The good news is they are increasing at a decreasing rate**

There is a severe lack of capacity in the trucking market, and the driver is Drivers

- Truck driver shortage currently at 20,000, and projected to be 111,000 by 2014\*
- Why the shortage:
  - Driver pay in the past has not kept pace with other alternatives
    - Construction industry is coming off an all time high in activity and wages
  - Safety / security regulations limit the pool of qualified drivers
  - More drives per activity are needed due to efficiency decreases
    - Turn-over rates averaging over 120%
    - Schneider is looking for 700 drivers, “one of the hardest recruiting points in history” (Tom Nightingale, Schneider spokesperson)\*

All this is driving up driver pay and increases overall costs (training, ramp-up time)

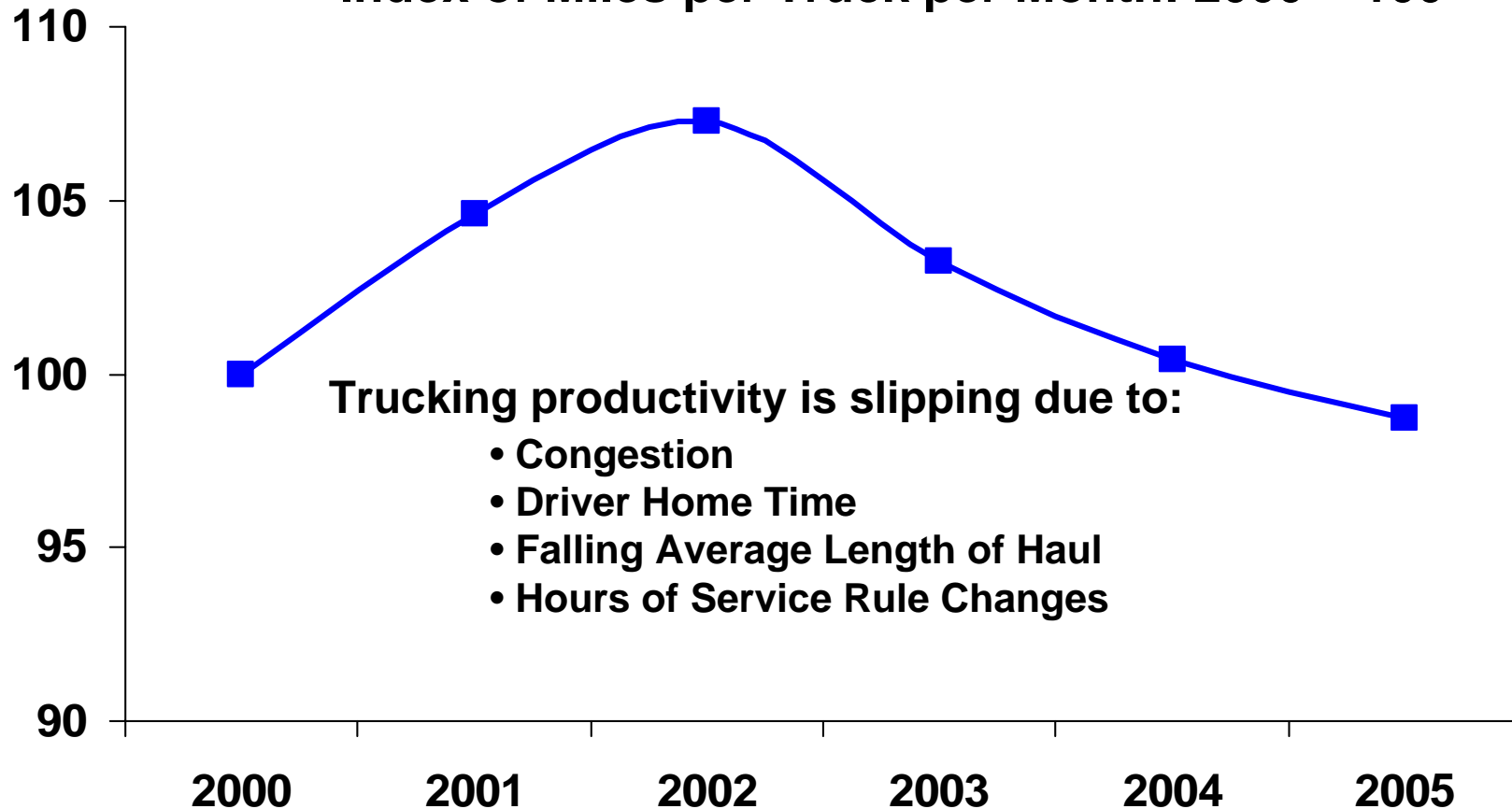
# Weekly Earnings



Sources: U.S. Department of Labor & ATA

Weekly Earnings = Pay Rate \* Amount Worked (mileage or hours)

**Index of Miles per Truck per Month: 2000 = 100**



**Trucking productivity is slipping due to:**

- Congestion
- Driver Home Time
- Falling Average Length of Haul
- Hours of Service Rule Changes

Source: ATA

Carriers are capitalizing on this constrained environment, with a focus on increasing margins, not revenues

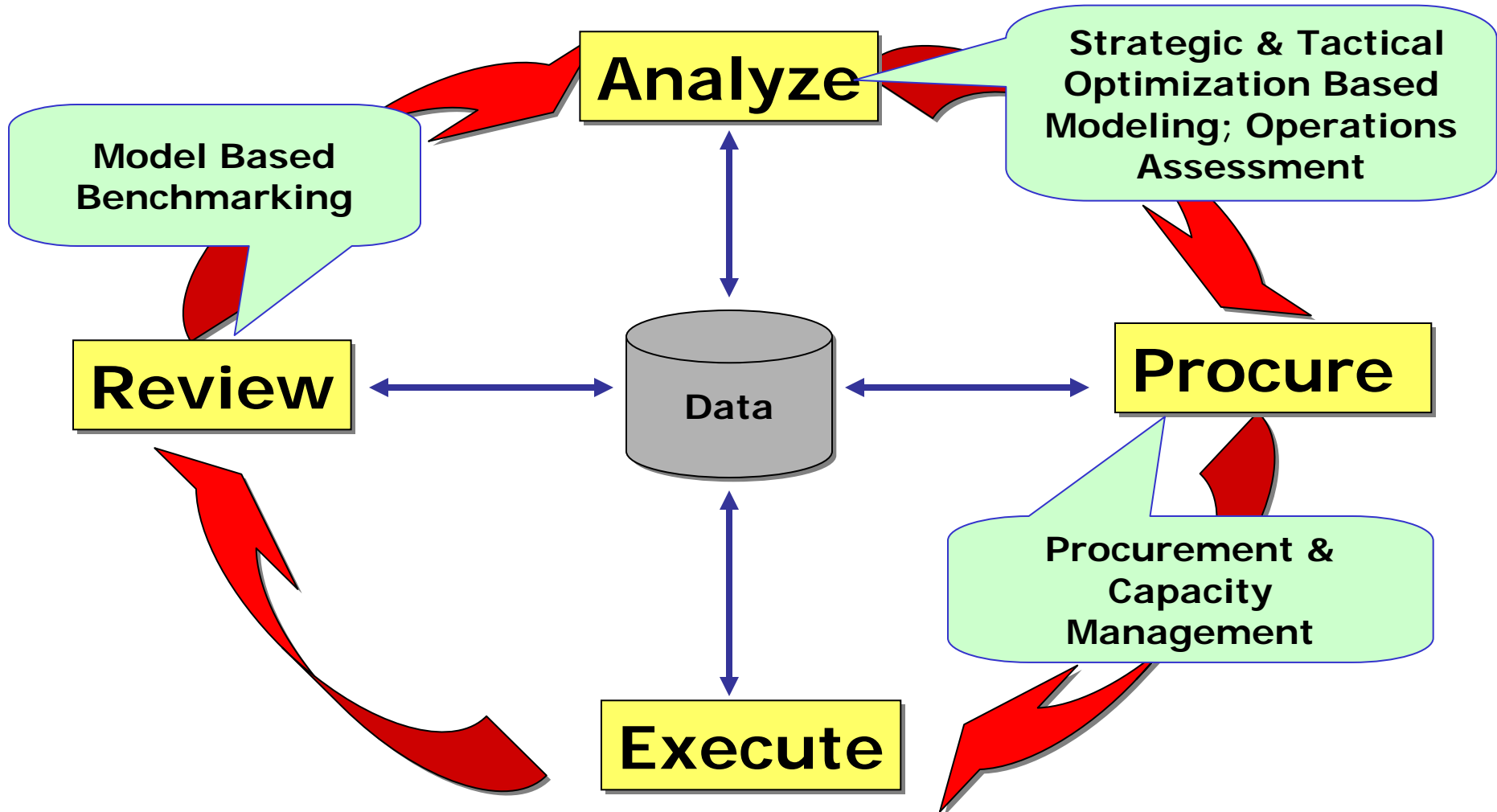
- Consolidation in the carrier market is leading to larger, more sophisticated carriers who are taking more intelligent approaches and applying more sophisticated technology to pricing and other financial/operational decisions.
  - Carriers have instituted customer allocation models to give capacity to the highest margin lanes
  - Shippers need to keep pace with this increasing sophistication
- Carriers are not chasing volume
  - Carriers are allocating capacity to shippers with carrier-friendly practices and relationships
  - Adding capacity very slowly

# Agenda

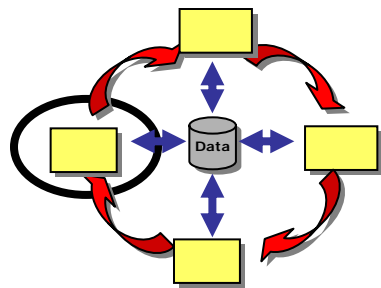


- Why are carrier costs *and* profits rising?
- What tools can shippers use to address this?
- Questions and discussion

# Transportation Master Planning Cycle



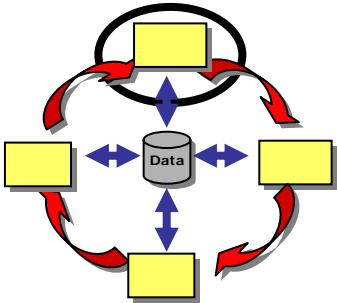
## Shippers need to know where they stand and why before they can take actions



- Needs to be more than just blind rate to rate comparison
- Identify and quantify transportation cost drivers
  - Origin, destination, distance, loading conditions, service requirements, fuel costs, regional imbalances, equipment size/type constraints, detention...
- Which lanes hold the biggest opportunities & why
  - How are carriers cost behaving on a lane?
  - What is driving their costs?

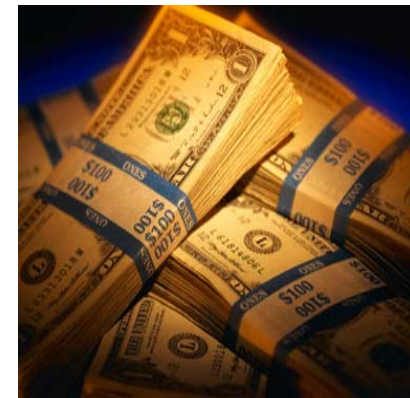
- Contract renewals
  - Not everything has to be put out to bid. Members have used the MBBC results as a yard stick in negotiation with incumbent carriers before going to bid
- Highlights area for improvement studies
  - Dedicated capacity opportunities/requirements
  - Value of carrier friendly programs
    - Drop and hook programs, payment programs
- Support fleet lane analysis
  - Are fleet assets being used on the most efficient lanes?
- Internal cost containment metric
  - Used by transportation groups to highlight cost containment efforts and budget discussion
    - The last analysis (Q2 2005) showed around 5% increase over the past 6 months

## Transportation modeling can quantitatively answer the following questions



- Should I operate a private or dedicated fleet?
  - What regional density do I need to support a fleet?
  - How do I deploy fleet assets for maximum benefit and utilization?
  - Could a pop-up fleet be leveraged to address seasonality?
  - Should I own or contract for fleet assets? Drivers?
- Which modes of transport should I use to provide the required levels service at the best cost?
- What are the cost and service impacts of various routing strategies?
- What is the value of deploying a Hub or X-Doc strategy
- What are the key transportation cost drivers?
  - Order visibility, customer timing requirements, loading and unloading requirements, etc.

- Must be based on real dollar costs to the company
- Calculated from either
  - Invoices from a dedicated carrier
- Or
  - Activity based costing model for shipper owned fleet
- But not
  - Inter-company / internal invoices from a private fleet.
    - Transfer prices are typically unrelated to fleet cost



**Key - find the cash not the paper**

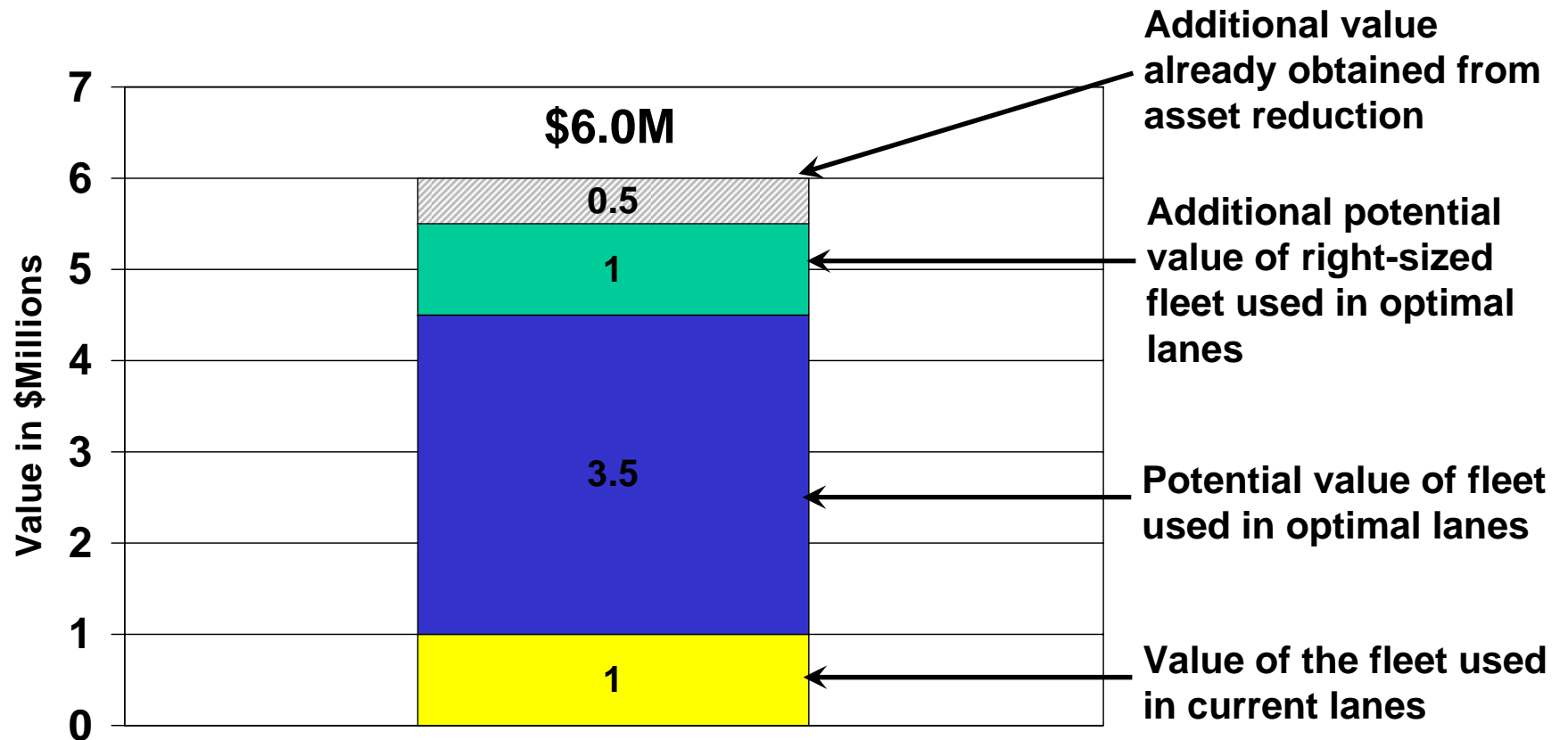
# Methodology for determining value added by the fleet

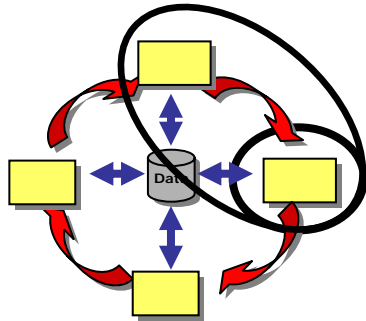
- A = sum of the freight cost for all shipments delivered
- B = sum of freight cost for those same shipments if no dedicated assets were available
- C = fixed cost for the assets at the domicile for the number of assets in the scenario
- Value of fleet at the domicile =  $B - (A + C)$

**The ultimate metric for fleet operations should be value addition to the company**

# Example of Fleet Potential Value

## Value Addition Potential of Fleet

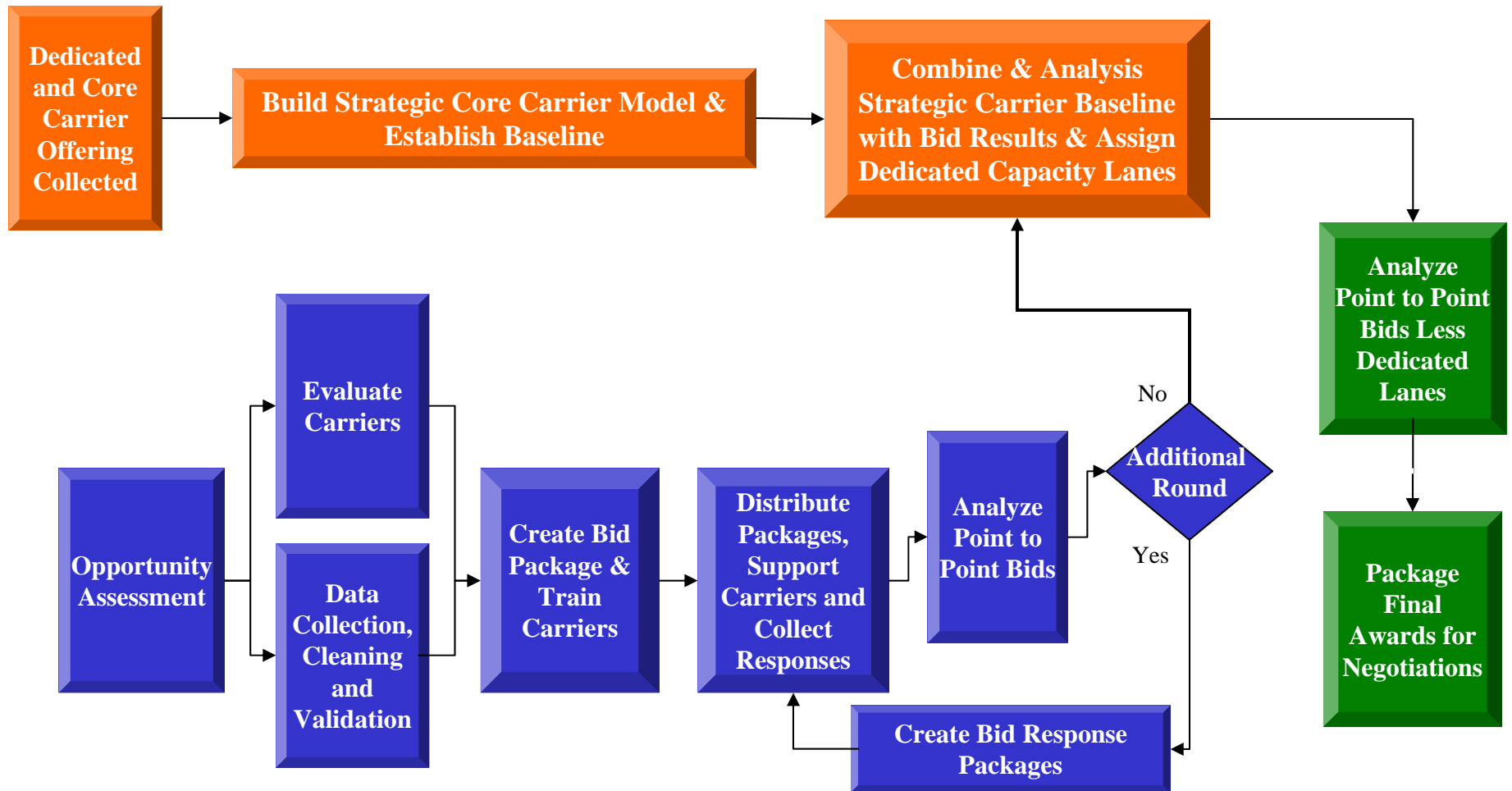




- Objective of engagement
  - Find lowest total risk-adjusted cost carrier assignment
  - Consideration of competing requirements
    - Service: levels, capacity commitments
    - Robustness: ability to handle demand & supply uncertainty
  - Enabled by advanced technologies
    - Able to quantify trade-offs and alternatives
    - Not restricted to single vendor, package, or approach
- Assuming efficient procurement history, price reductions can only be achieved by either:
  - Reducing the carrier's acceptable margin, or
  - Reducing the carrier's cost structure
    - Improve operating procedures – make freight attractive
    - Find better fit between carrier and shipper networks (luck)
    - Change the carrier-shipper payment structure to share risk
      - Dedicated fleet deployment

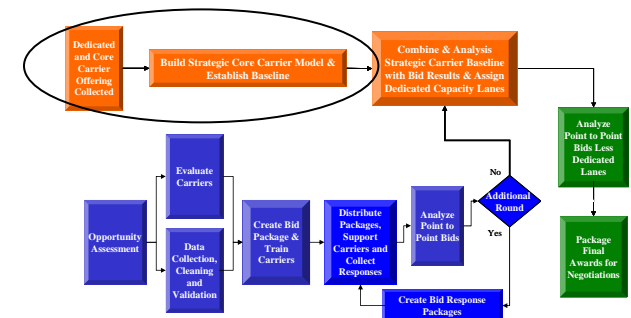
# Procurement Master Planning

- Designed to turn transportation purchasing into a collaborative exercise
  - Carriers have opportunity to leverage their existing network
  - Shippers' procurement and fleet groups should work together to allocate transportation to the most efficient carriers
    - Traditionally fleet managers maximize the utilization of their trucks without reviewing the total cost to the organization (cherry-pick lanes)
    - Fleet might be able to handle a "bad" lane more cost effectively than an outside carrier
- Look to leverage all the possible carrier rate and relationship structures
  - Not just point to point
    - Dedicated fleet opportunities – help carriers retain drivers
  - Build in the fleet analysis
- Enabled by advanced decision science technologies
  - For periodic use in support of transportation contract negotiations
  - Used by the shipper to help carriers improve their asset utilization
  - Considers service requirements, carrier capacity, and total network cost



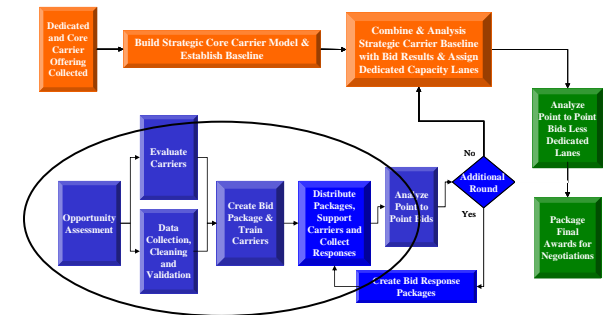
## Design phase – looking for creativity

- **Invite:** Selected 'partner-level' incumbents
  - Looking to get involved with carriers' engineering group, not pricing group
- **Info Out:**
  - Transaction level data for 6+ months
  - Required service standards (surge capacity, accept %, etc.)
- **Info In:**
  - Non standard bids that cover multiple lanes & facilities
  - Complex cost structures – per load, fixed & variable, etc.
- **Assign:**
  - Assign traffic to carriers if cost is within X% of target
  - Non-assigned lanes pass to the next stage of procurement event
  - Pass information on to following stages
- **Next:** Move to market round



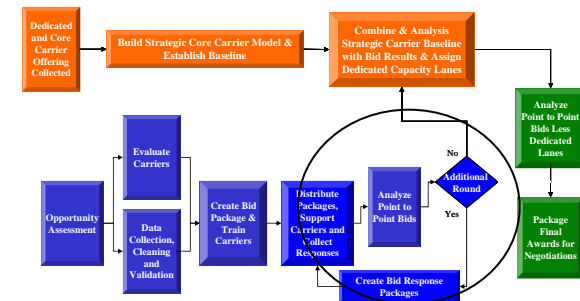
## Market Round – “Find The Best Partners”

- **Invite:** Entire eligible carrier base
- **Info Out:**
  - Aggregated lane data for network minus lanes awarded in phase 1
  - Seasonality information can be provided
  - Required service standards (Surge Capacity, Accept %, etc.)
- **Info In:**
  - Standard bids – point to point rates, simple bids, package bids, etc.
  - Capacity limits at system, facility, and lane levels
- **Assign:**
  - Minimize total cost of point to point rates
  - Early award of traffic to carriers if cost is within X% of target
  - Non-aggressive carriers out from PRICE ROUND
  - Non-assigned lanes pass to the PRICE ROUND
- **Next:** Move to pricing round



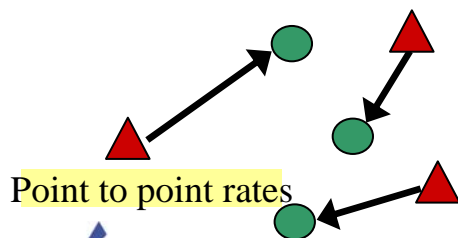
## Pricing Round – “Find The Best Carrier Per Lane”

- **Invite:** Carriers deemed aggressive enough in market round
- **Info Out:**
  - Aggregated lane data for network minus lanes given in MKT RND
  - Status of bids per lane: Current winning bid, # bids rec'd, etc.
- **Info In: (same as market round)**
  - Standard bids – point to point rates, simple bids, package bids, etc.
  - Capacity limits at system, facility, and lane levels
- **Assign:**
  - Minimize total cost of point to point rates
  - Cover all lanes and capacity requirements
- **Next: Move to analysis phase**

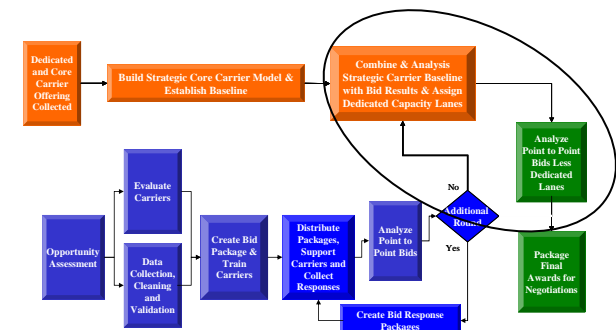
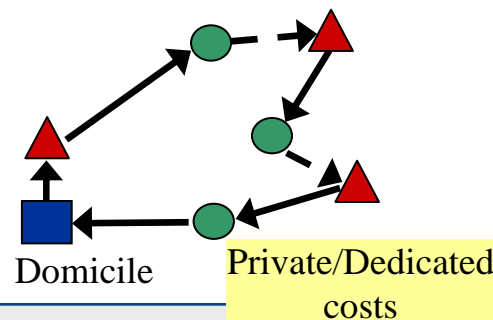


## Analysis phase – “Find The Best Fit”

- **Info in:**
  - Core carrier dedicated capacity rates and point to point for hire rates
- **Modeling:**
  - Combine both rate structure in a shipment level model to analysis & determine which lanes best fit dedicated capacity
- **Assign:**
  - Lanes to dedicated service
  - Re-run point to point optimization without dedicated lanes
- **Next:**
  - Contract negotiation



Vs.



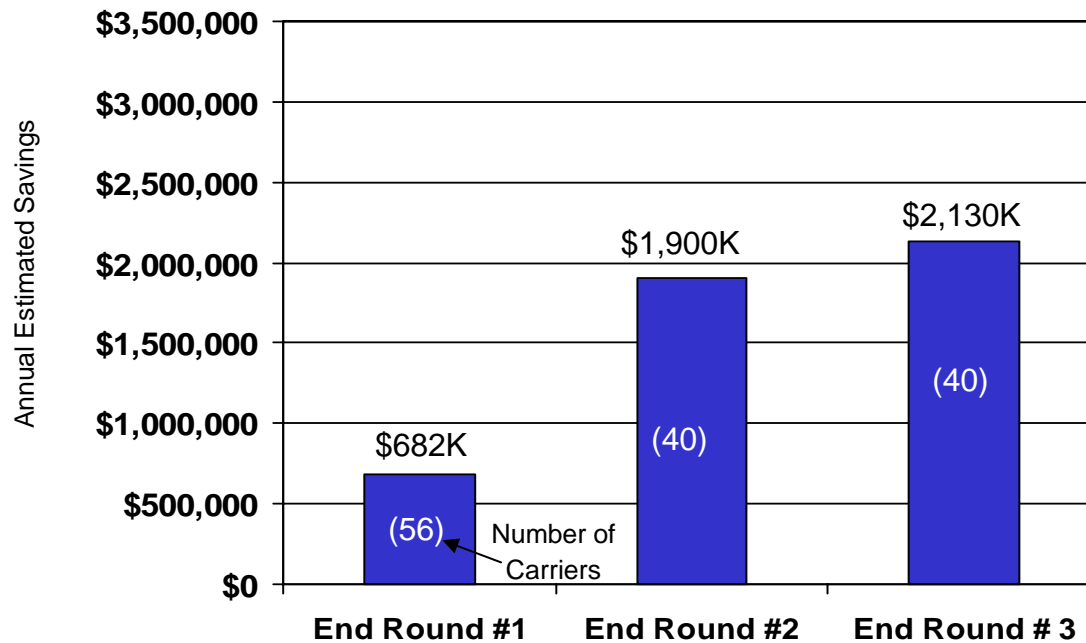
## Reactive Approach

- Allow carriers to build conditional bids out of one-way pricing
- Conditional bids are requested and submitted as a part of the same process and on the same timeline as one-way pricing

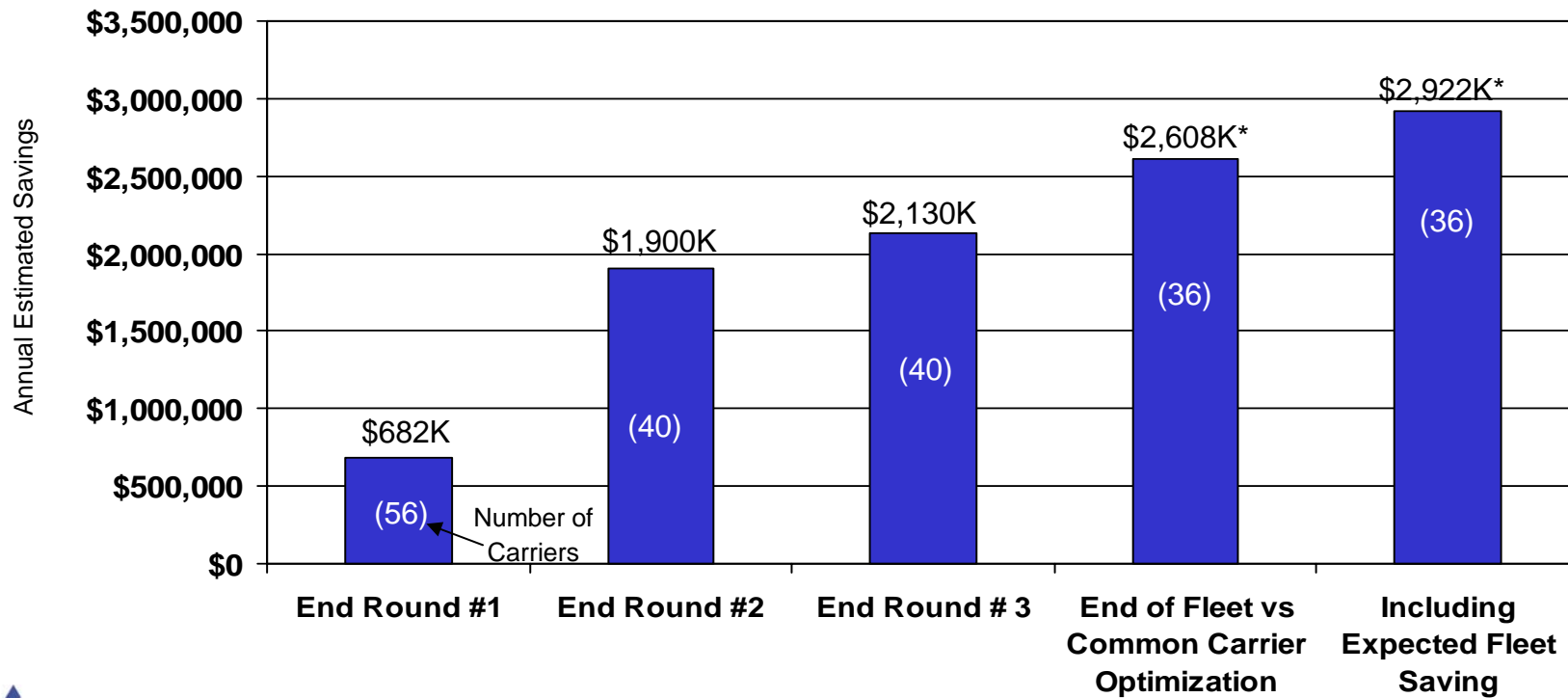
## Reactive Approach

- Challenges
  - Pricing department, not engineering department, enters data
  - Typical bid data is insufficient to conduct a proper dedicated price analysis
  - Scenario constraints dictated by the shipper prevent many conditional bids from being feasible
- Conclusion
  - Conditional bids do add some value but it is most often from carriers balancing their overall asset flow
    - Small % reduction for a bundle of lanes out of a general area to a general area
  - Conditional bids offer minimal value in achieving the potential of deploying dedicated assets within a shippers network
  - Software has the ability to support conditional bid so they should be provided as an option to the carrier - *but do not expect to much from them*

## Estimated Annual Savings



## Estimated Annual Savings



# Agenda

- Why are carrier costs *and* profits rising?
- What tools can shippers use to address this?
- Questions?