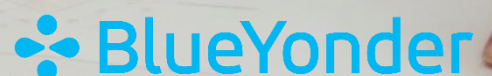


Transportation  
transformation  
visualized through  
digital simulation



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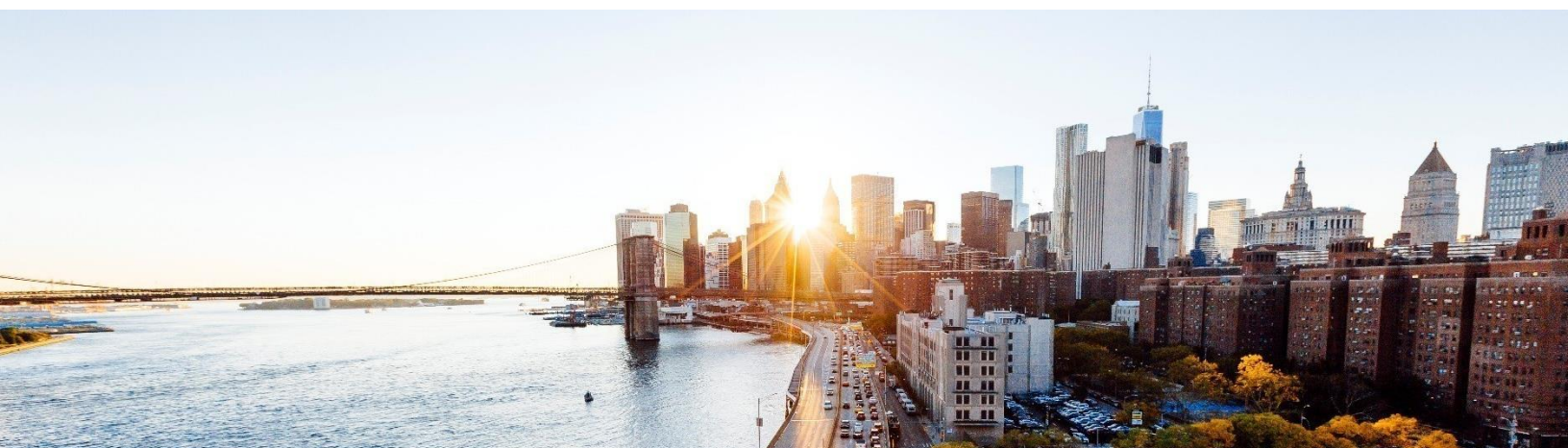
## Introduction

Many clients in their journey towards transforming their existing transportation operations face challenges in substantiating their business case when it comes to crucial pillars such as **“Re-defining Procurement Process,” “Asset Optimization to save cost,” “Better capacity re-allocation,” “Outsource a business function,” and “Move towards industry standard Transportation System.”**

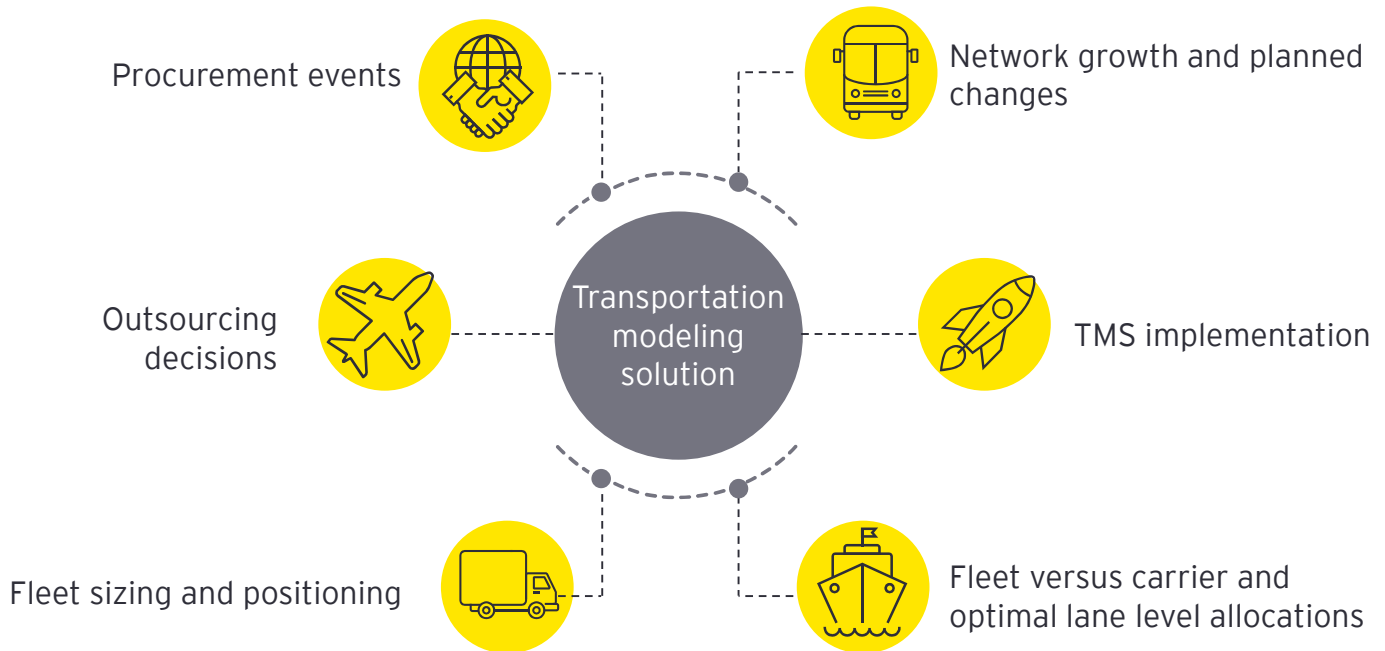
They are aware that their current transportation functions have challenges around the process, system or business. They could improve their planning by building more efficient loads, continuous moves and overall routing. The question arises: **How do we develop a concrete plan towards building a business case supported by data on file?**

The challenge becomes more significant when clients' operations are spread across multiple modes, regions or geographies, product lines and different business functions. Clients in these situations typically ask themselves questions such as:

- ▶ “Are there any transportation functions that can be insourced vs. outsourced?”
- ▶ “Can I support my procurement team with actionable inputs?”
- ▶ “Can I do a health check on my current routing and trip building to identify improvements?”
- ▶ “Are my assets being utilized optimally, and is there scope for improvements?”
- ▶ “Am I optimally allocating loads between carrier(s) and fleet and saving cost?”
- ▶ “Can my operations team and planners review these new models for operational feasibility?”
- ▶ “How do I quantify the savings associated with better transportation planning?”
- ▶ “How do I support my potential savings projections using solid data when I present my business case to management?”
- ▶ “How many months will it take to achieve my transportation implementation ROI
- ▶ “How long will it take to develop models of my transportation network to build the business case?”



## Introduction



One solution to these important challenges may be to look towards a transportation modeling exercise. Modeling your transportation network or a subset of your network provides a clinical approach towards envisioning your future operational state. Business, strategy, planning and operations teams can discuss and agree on the approach, data and assumptions, thereby allowing for alignment and easier quantification of the outcome – potential savings.

Utilizing a transportation modeling solution to complete network analysis brings extensive benefits to the table:

- ▶ Drives purposeful collaboration between all transportation stakeholders
- ▶ Gives a glimpse of the future by ensuring critical business and system constraints are considered when modeling the future state network
- ▶ Procurement teams can understand which existing carriers can be renegotiated and with whom new relationships can be forged
- ▶ New improvements and ideas not yet operational can be tested to determine and validate potential savings
- ▶ Any existing function(s) that can be insourced or outsourced for better efficiencies
- ▶ Future saving potentials can be quantified with KPIs and data points to back up the models; savings potentials can be identified to the dollar rather than just estimated percentages
- ▶ Return on investments can be determined for TMS investments



## Approach

The client's strategic needs should drive the modeling objectives. For example, there may be consideration of expanding the business' geographic footprint or an initiative to improve private asset utilization, thus reducing overall spend.

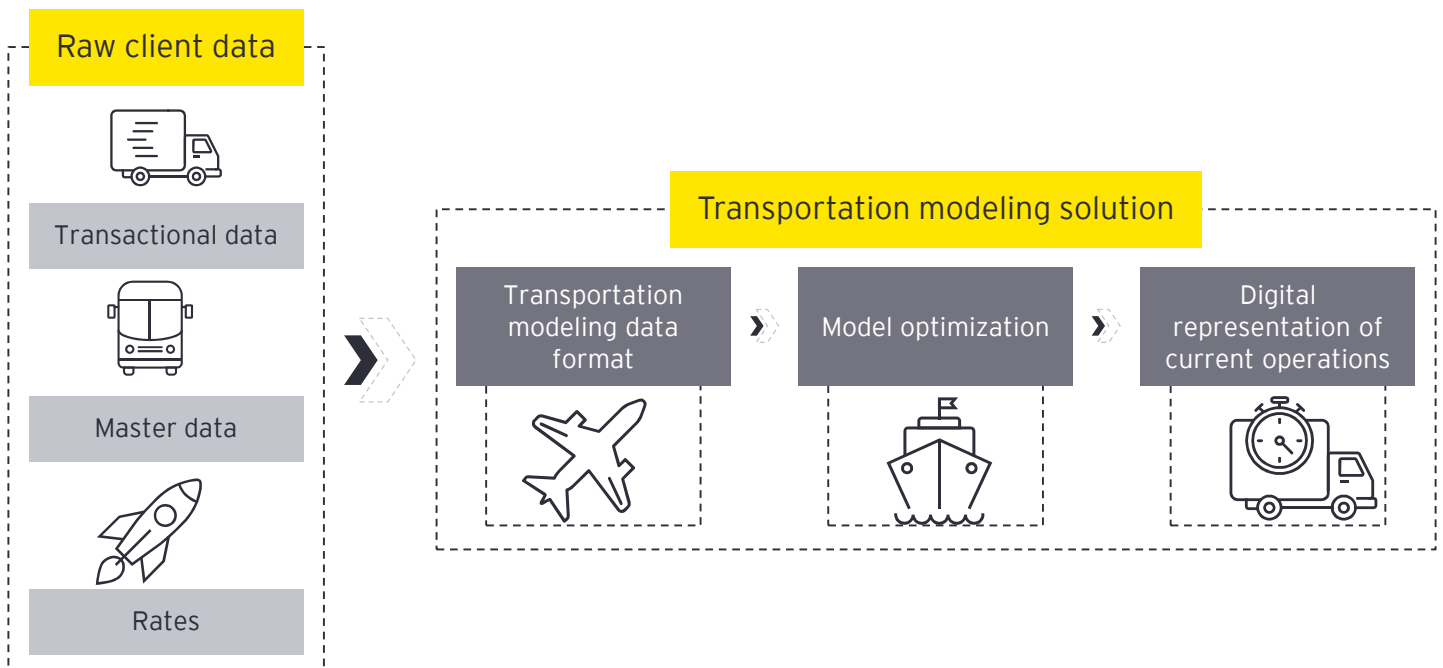
In defining the scope and objectives, clients may consider the following key elements:

- ▶ What is the objective of the overall exercise? Better asset utilization, better capacity allocation, carrier (re)negotiations, etc.
- ▶ Definition of geographic scope and data sample for realistic outcomes – start small
- ▶ Definition of KPIs and timelines – align on outcomes and metrics

After the scope and objectives are aligned, define your approach. Start small. Focus on data collection and cleansing. Ensure that your baseline model has been validated by cross business stakeholders before designing your “desired” state model to ensure it represents current cost and operations. Baselineing your current state serves two objectives:

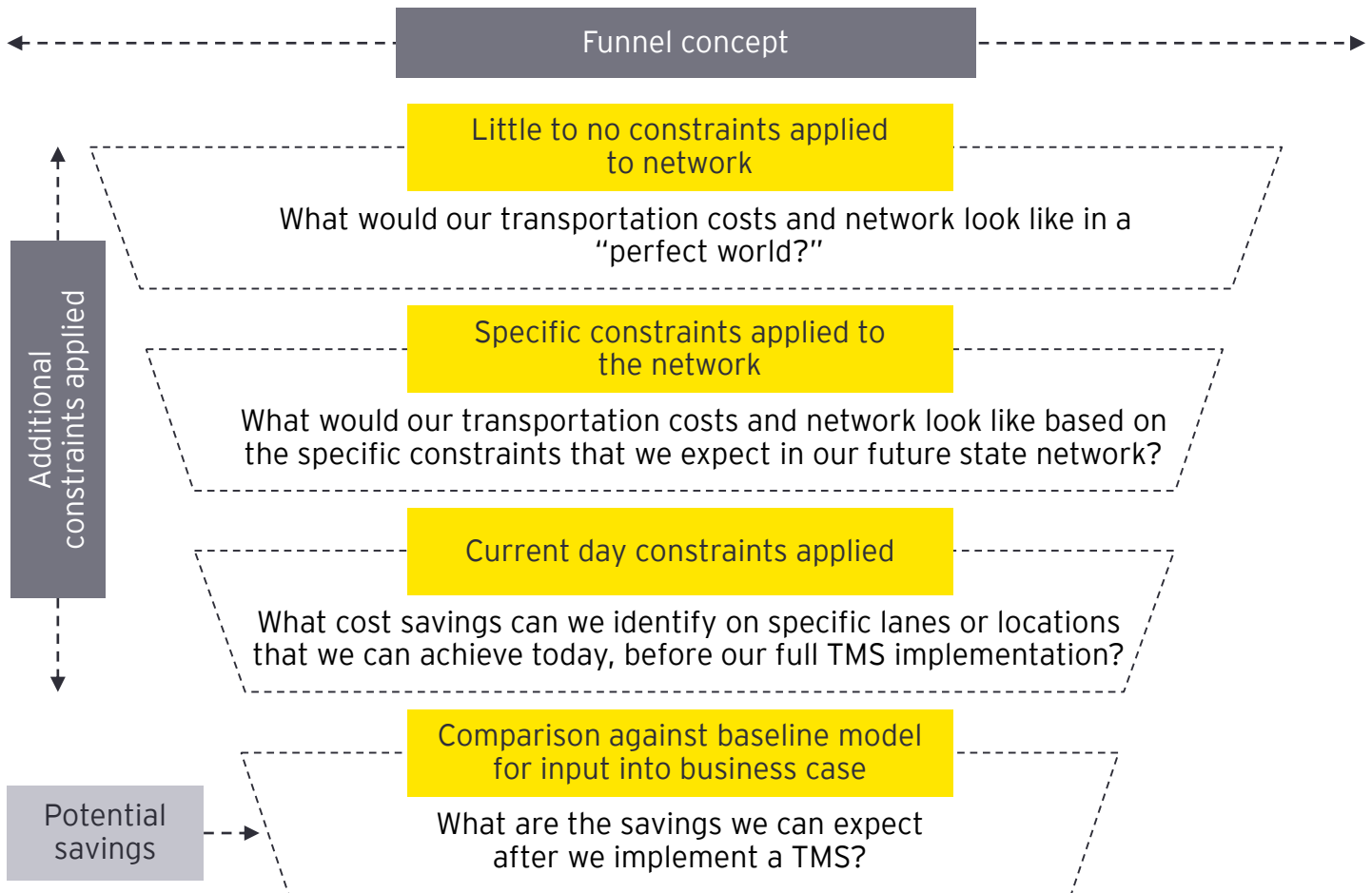
- ▶ Ensures your data is accurate
- ▶ Provides reliable data and metrics to compare against “desired” state model and realize potential gains and savings

The diagram illustrates the approach to consider for building the baseline model.



Once current state metrics around cost, utilization are defined, clients can begin to run different scenarios to replicate future operations, known as future state modeling. The approach to future state modeling can be thought of in a top-down funnel concept.

## Approach



Clients should consider the art of the possible when developing future state models. Questions they may seek to answer are:

- ▶ In a perfect world, what would our transportation network look like?
- ▶ If we removed constraint(s), what would our transportation network look like?
- ▶ How would changing our geographic footprint affect our transportation operations?
- ▶ If we could remove manual processes or systematic inefficiencies that we have today with a TMS, what would our transportation network look like?

Utilizing a modeling solution allows for answering all these questions, while quantifying the cost savings associated with each answer. Clients can derive potential savings at a specific dollar amount, based on actual data, as opposed to an estimated percentage savings on total freight spend. Each scenario provides value inputs into building a strong business case for network improvements.



## Conclusion

When completing the network study and future state modeling, clients should also look for quick-win opportunities that may be achieved in the short term. These opportunities may be consistent shifts in network operations that drive savings. Some opportunities can be executed today before the full outsourcing decision, procurement bid or TMS implementation is completed.

Transportation modeling as an input for building a business case drives quantification of savings opportunities across procurement, planning, strategy, operations and enables leadership buy-in for the presented business case. Business team(s) can arrive at expected pay back periods on investments and confidently present a business case to their management team that is backed by solid data and metrics.

Modeling engagements can see results in weeks and, in some cases, based on complexity, can stretch a few months. We at Ernst & Young LLP (EY US) have seen tremendous success with customers in their journey to drive transformation towards their transportation journey using the above approach. Such approaches are methodical and provide metrics that are both quantifiable and reliable.

Please contact us for more information.

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