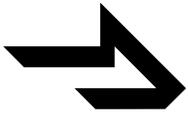




# Transforming Data Into Action in Third Party Logistics

October 30<sup>th</sup>, 2012 | Chicago, IL

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## Agenda

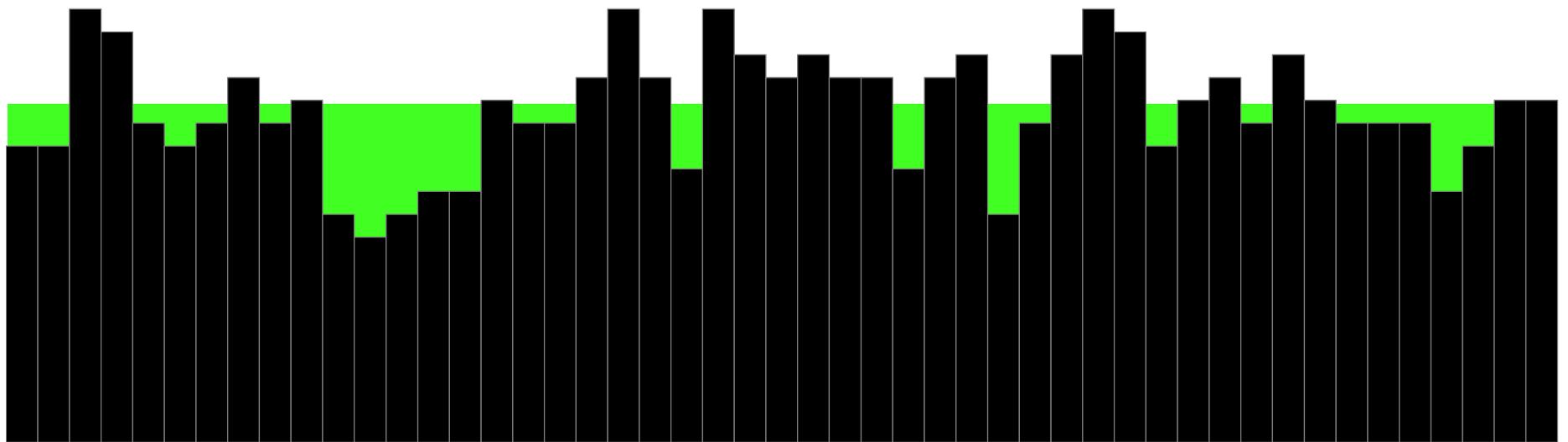
What data do we care about?

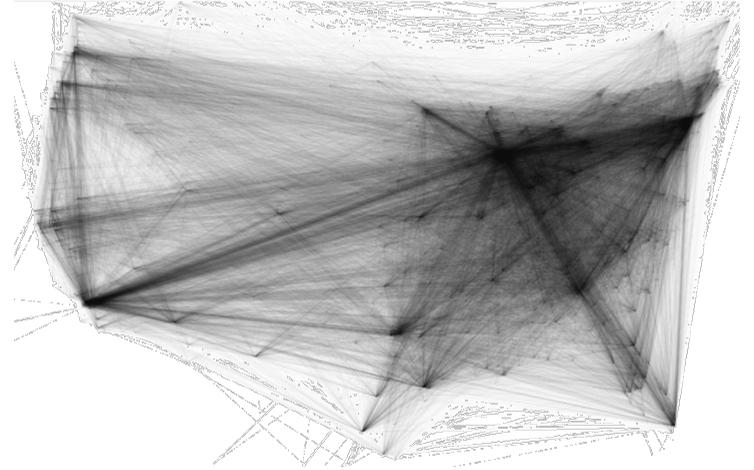
Is more data better?

What types of problems are we trying to solve?

Do we have Big Data problems?

How do we create actionable intelligence?





## The Data

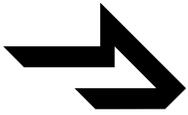
**Coyote is a non-asset owning third party transportation company. Every day, we have 900+ employees making tens of thousands of phone calls and systems scouring customer and carrier websites gathering information on the current state of the market.**

Where do carriers have capacity?

Where do customers have loads today?

What markets are tight?

What economic or weather factors should we be aware of?



**Is more data better?** It depends.

For us, more **Capacity Data** is better  
More **Tracking** information is not always better

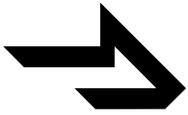
### **Cost vs. Value**

What is the value of the data versus the cost to capture the data?

Why did Wal-Mart's RFID initiative ultimately fail? The incremental value of more granular data, more precise tracking, wasn't worth the cost.

### **Risk**

Data carries risk. Data implies responsibility and potential liability. What did you know? What **could** you have known? What **should** you have known?



## **Executional**

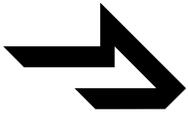
Should we take a truck that is available to us, given the negotiated cost, and what we know about the market?

## **Tactical**

Where should we focus our carrier reps? Which regions are at risk for a capacity crunch?

## **Strategic**

How can we help our carriers stay moving and stay profitable? How can we help our customers understand the market, and how to go to market with their bids?



**There is a fine line between interesting data and actionable data.**

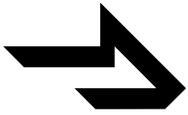
**Do we have BIG DATA problems? No.**

1. Do we have too much data to manage with a traditional RDMS? **No, we have about 30GB, 95% of which can be partitioned as historical.**
2. Do we have geographically distributed users and databases, with the need to read and write near real-time? **Users, YES. Databases, NO**

**Can we benefit from BIG DATA approaches? Yes.**

There are a host of new technologies that have broad applications for us. We do a massive amount of distance and price calculating that is an **embarrassingly parallel problem** (yes, that's an actual technical term), allowing for the use of tools like Hadoop and Amazon EC2 hosting.

Understanding the capabilities of the technologies often changes how we think about structuring the problem.



**There is a fine line between interesting data and actionable data, and it is often a matter of timing.**

The data useful after the fact is rarely the same data that is useful beforehand.

Beforehand, the data needs to be provided real-time to the users who can act upon it. We benefit from having an in-house development staff who can build real-time solutions, and we follow three tenets of system design around data and information:

- Focused** Screens should be focused around a user and a task. Avoid unnecessary information, provide rich focused data.
- Intelligent** Real-time predictive analytics and intelligently tailored screens will improve the effectiveness of our employees.
- Automated** Users shouldn't have to dig for information relevant to them, it should be served up, and prioritized by relevance.

