

Are You Trusting the Future of Your Company To A Coin-Flip?

A butterfly flaps its wings. Molecules of air set in motion by the downbeat of the tiny creature's wings tumble and swirl, soon forming into feeble cascades of air. Fed by forces of heat and moisture the cascades grow into breezy currents, and the currents into puffy white clouds. In time the clouds turn dark and stormy, unleashing forces of wind and rain that delay airplanes, divert ships, and jackknife trucks.

The feeble flap of a butterfly's gossamer-thin wings has just snapped a link in your supply chain. And you never saw it coming.

Supply Chain Links Are Fragile Things

Whether a single flap of a butterfly's wings can disrupt your supply chain may be open to debate. But the underlying principle of the concept known as the "butterfly effect" is indisputable. Multitudes of small, random events, both natural and man-made, occur every single day, each potentially generating widespread, unforeseen consequences.

Modern supply chains are quite vulnerable to disruption. Just like a chain of forged metal, a supply chain is only as strong as its weakest link. And rare is the supply chain that isn't *loaded* with weak links - many, perhaps, only a butterfly-wing-flap away from snapping.

According to a survey conducted a few years ago by the Business Continuity Institute, 85% of companies reported experiencing a *minimum* of one supply chain disruption in the previous 12-month period. Three-fourths of the companies noted that lean practices such as just-in-time inventory management made them even more vulnerable to supply chain disruptions. And half of the companies were significantly damaged by the disruptions experienced during the survey period.

Distribution Gets the Blame

When a supply chain snaps, distribution pays the price. Though distribution personnel have little control over the events that cause supply disruptions, they bear the burden and responsibility of attempting to manage the situation. They're caught in a never-ending tug-of-war, constantly working to balance the mercurial forces of supply and demand in an effort to minimize business disruptions and customer dissatisfaction levels.

And always, *always*, distribution suffers from a lack of information. They're constantly reacting to supply chain disruptions, lacking the foreknowledge that would support proactive rather than reactive management.

Flip A Coin; Hope for The Best

Knowledge is the key to minimizing the impact of disruptions; knowledge of what *is* happening, and knowledge of what *might* happen. If you were running an inbound facility that distributes product, for example, you'd want to know where your product is in the supply pipeline at all times, and when it will arrive.

But most companies don't have that knowledge. Most companies, in fact, are relying upon guesswork instead. They're relying upon experience-influenced gut feelings. They're relying upon intuition.

Not surprisingly, the success rate of the manage-by-guesswork technique is unimpressive - about 60%; essentially the equivalent of managing a business by the flip of a coin: "Hey, is our product going to be here on time?" asks the store manager. The distribution manager answers: "I'm not sure...hang on a second" - reaches into pocket, pulls out coin, and flips it - "OK, heads - yeah, I think it'll be here on time."

Not a great way to run a business.

ETAs Are a Joke...But Nobody's Laughing

Everybody has ETAs, of course. So everybody knows when their product is *estimated* to emerge from the pipeline.

But on an international scale, ETAs are abysmally inaccurate. The global metric for ocean-shipping ETAs is a standard deviation of 4.78 days. So the ETAs for your product currently en route across the ocean will be inaccurate by an average of nearly a third of the total shipping time.

Why are ETAs *so* inaccurate?

It's partly because of the archaic notification system that drives the process of calculating ETAs. Industry wide, notifications usually average 24 to 48 hours post event. When the butterfly flaps its wings, or a fire consumes a factory, or a terrorist event prompts transit shutdowns - when *any* of countless daily events occur that could impact an ETA - notification of the disruption can take up to 2 days to be disseminated.

So if something happens on a Monday, you find out about it on Wednesday. It's very difficult to react appropriately to 2-day-old information.

The Magical Transparency of Live Data

Supply pipelines are veiled in mystery. That's the way it is for most companies. It's as if product goes into one end of an opaque cast-iron pipeline and disappears from view until emerging from the other end upon delivery. Similarly, notifications that *could* be effective in fine-tuning ETAs go into a virtual black box, like dropping a letter into a mailbox. When the notification emerges from the box a day or two later, it's often too late to be helpful in formulating a more accurate ETA.

But what if both the analogical cast-iron supply pipeline *and* the black box could be reconstructed of a transparent material such as a clear acrylic? Product would be visible at every point of the flow through the pipeline. ETAs could constantly be reformulated

based upon the known positioning of product in the pipeline. And similarly, notification messages would be available instantly, enabling real-time adjustment of ETAs.

That level of transparency, in effect, is what TransVoyant has enabled with its Continuous Decision Intelligence™ (CDI™) technology. CDI™ monitors hundreds of live data streams, delivering up-to-the-second situational awareness to distribution operations. Just as importantly, CDI™ combines live data streams with historical data in performing predictive analysis.

Put simply, CDI™ provides distribution management with the ability to know where product is located in the supply line at all times, *and* more accurately predict where product will *be* at any given time.

ETAs Don't *Have* to Be a Joke

Transparency enabled by CDI™ technology produces ETAs based upon predictive analytics rather than clumsy guesswork. As a result, global ETAs that currently average 60% accuracy rates can soar to accuracy levels of over 90%.

A Fortune 500 retailer recently incorporated CDI™ into its existing supply chain system interface. The result was a 50% increase in global visibility, with up to a 70% improvement in ETA accuracy. And a Fortune 100 company utilized CDI™ to obtain end-to-end visibility in its airfreight operations, resulting in 95% on-target time-of-arrival calculations - a 60% approval in ETA accuracy.

These companies no longer rely upon coin-flip guesswork in managing their distribution operations. Guesswork has been replaced by transparency-enabled certainty.

The Benefits of Transparency...

The transparency in supply chain operations made possible by technologies like CDI™ provides an impressive array of benefits. Transparency enables better, more accurate planning. It facilitates carrying lower inventory levels, resulting in faster inventory turnover. And lowered DIO equates to less money borrowed as inventory funding is reduced.

But the impact upon customer service level satisfaction may be the most important benefit offered by live data and analytic technology. That's because customer satisfaction levels maintained above a 95% average equates to a 6% increase in future sales revenue. Levels that drop below 95% equate to a 6% drop - a potential 12% swing.

And one more big benefit of transparency? It makes life *much* easier for distribution operations personnel. That's a benefit that's difficult to quantify. But it's a *priceless* benefit.