While supply chain stakeholders have been inundated with the idea of real-time visibility for several years now, the practicality of this capability is still questionable to many of them. The problem possibly starts with the definition and what constitutes real-time visibility — is it about receiving notifications at regular intervals? Is it flexible, with companies having the power to check on freight location at any time of their choosing? Or is it a metric of importance solely when there is disruption?

Many visibility platforms have mushroomed in the space, promising to provide real-time insights into the state of freight, only to crumble away at greater scrutiny, as visibility — although theoretically simple — is practically cumbersome to monitor in real-time. There are several reasons why this can happen, but one of the primary causes is that tracking freight is not a consistent endeavor. The challenges with measuring data vary wildly depending on the transit environment.

For instance, while monitoring last-mile freight movement in a city can be largely straightforward with GPS tracking or even geofencing, tracking temperature and moisture metrics on sensitive cargo hauled on an interstate highway in a region prone to weak communication networks can be quite a challenge.
60% of the respondents mentioned tracking their freight via the carrier website and emails.

40% of the respondents stated they get updates by calling their transport service provider.

What are your primary means of tracking the status of your cargo?

(Can Select Multiple)

- Phone Call: 37%
- Website Tracking: 63%
- Email Tracking: 58%
- IoT Devices: 13%
- Real-Time Visibility: 27%
- None: 4%
Latency is another issue. Latency is the time it takes for freight data to move from the point of origin to its destination (quite often the back office). Reducing latency is critical as higher latencies mean freight tracking is more 'near-time' than 'real-time.' While improved communication networks like 4G LTE and the more recent 5G can help whittle down latency figures, a large number of service providers still bank on 3G networks. Not only do they have substantially higher latency numbers, but 3G networks are also being phased out by communication providers, increasing the risk of visibility blind spots for its users.

Tive undertook a survey to understand users’ stand on the visibility debate. We received over 250 respondents from the supply chain space, with 30% being senior management respondents and another 30% recorded from middle management and the operations segment. A common theme across the survey was user frustration at the lack of real-time visibility and the difficulty in working with clunky, visibility hardware — expected, considering the rampant challenges we explained above.

Real-Time Visibility Is A Service Differentiator And No Longer A ‘Good-To-Have’

Although freight tracking is widespread in the industry, the means of monitoring vary considerably. While roughly 60% of the respondents mentioned tracking their freight via the carrier website and emails, close to 40% stated they get updates by calling their transport service provider. Alternatively, only about one in four respondents had a real-time visibility software installed.

While these results are not surprising, it paints a picture of how the idea of visibility is fundamentally broken in the market. Visibility, or the lack thereof, is a problem of such immense gravity that companies struggling to make it a competitive differentiator miss out on customers or find it harder to retain them.
of the respondents clearly stated their desire to have a real-time visibility solution.

A WHOPPING 80% of respondents pointed to a lack of real-time visibility in the mid-mile.
The elusiveness of tracking aside, it is heartening to see shippers are clearer than ever on how essential real-time track and trace is for their businesses, and what they want to see in a visibility solution. A whopping 80% of the respondents clearly stated their desire to have a real-time visibility solution.

Within end-to-end logistics operations, it is interesting to observe how different segments in the linehaul have different levels of visibility embedded in them. Over 60% of respondents pointed to a lack of real-time visibility in the mid-mile — significantly higher than the first- and last-mile, where only 40% of people had tracking issues.

This again goes back to our initial explanation on tracking instability, with the mid-mile largely being freight movement on container vessels across ocean trade lanes or OTR trucking (if linehaul is strictly overroad). As mid-mile linehaul segments meander across terrain usually removed from human inhabitation, the telecommunication network in such regions would be sketchy — leading to information lag or blind spots.

Close to 60% claimed that visibility is something they’d need on-demand, with another 30% demanding push notifications at regular intervals on their freight.

Is Real-Time Track and Trace Important To You?

- Yes: 83%
- No: 8%
- I Don’t Know: 8%
Shippers Gain Insights Into Damaged Cargo While It’s En Route

Cargo Damages Are Seldom Communicated To The Back Office

While freight tracking, as the name suggests, is usually a capability shippers desire as means to stay updated on their freight’s location, track-and-trace is more critical in edge case situations like suspected cargo damage.

For a shipper, cargo damage can be a cause for concern due to several reasons. One, it strains their relationships downstream, as owners would demand answers. Two, depending on the type and sensitivity of the cargo damaged, replacements can be costly with both financial and time-bound constraints. Lastly, in a tight logistics environment where retailers stress on-time, in-full (OTIF) models, shippers would be stuck with freight that cannot be moved.

All these reasons make it critical for shippers to gain insights into cargo that is damaged en route — necessitating real-time visibility in operations. That said, the industry has a long way to go with regard to shippers gaining perspective on damages before they confront them at the destination.

Aside from damages, cargo theft is another issue that is growing in both volume and value. Electronics and household goods are often the favorites of cargo hijackers, with cargo value per theft averaging around $170,000 in the US last year. Deterring cargo thieves would require carriers to fix cameras and sensors on their trucks, which is beyond shippers’ control. Nonetheless, detecting and transmitting cargo loss information is crucial as shippers will need to arrange for backup to ensure freight schedules are not sabotaged.

Over [35%] of respondents mentioned that they rarely receive information from the carriers when their cargo is damaged.

Over [40%] of respondents said they get it once in a week or a month — quite rather as a passing courtesy.
A Variety Of Systems Exist For Integration

Inter-Tier Collaboration Is The Future Of End-To-End Supply Chain Visibility

Companies realize the importance of data streams that flow across the entirety of the supply chain, with over half the respondents mentioning that data sharing and collaboration are critical to the health of their supply chain operations.

A lot of this has to do with the Amazon Effect, which puts the end consumer at the de facto center of the supply chain and provides them with flexible delivery options that were unheard of before. While this was true of a business-to-consumer (B2C) model, the ideas on flexibility have now seeped into business-to-business (B2B) transactions as well, with clients expecting similar experiences with vendors, irrespective of their position in the supply chain.

For integration, a variety of systems exist. Electronic Data Interchange (EDI) is by far the most popular amongst the respondents, with roughly 30% calling it their preferred method of integration with their service provider’s systems. Close to 20% each opt for Application Programming Interface (API) and Enterprise Resource Planning (ERP), while another 20% mentioned they use proprietary systems that their service provider provides them.

With demand and supply equations becoming increasingly volatile since the pandemic, it is evident that businesses have to weaponize collaboration across the supply chain to ensure they can stay vigilant to change and adapt operations accordingly. Collaboration is vital in exception management, which is the part of operations that deals with best practices on how and when to respond to adverse events — like misplaced cargo, damages, or theft.
This being said, businesses still have a long way to go with understanding and prioritizing exception management. Around one in four survey respondents claimed that they do not have the means to handle exception management. A further 25% stated that exception management processes are currently in the works of being set up. Close to 20% said they use it as a value-added service after receiving it as part of their tracking solution.

Only around one-third of the respondents really comprehended its importance — 23% of the total respondents mentioned they used exception management to improve customer service levels, while a further 11% called it a process to improve profitability.

Real-time visibility is a term that has become regular parlance in the supply chain world but, surprisingly enough, has a long way to go in practical terms. However, technology adoption in a complicated and highly fragmented logistics industry takes time, and it is encouraging to see companies waking up to the need for real-time or, at least near-time visibility — most often the first step to initiating change.

**Conclusion**

Companies need to do a lot more than just desire change, as visibility services are only as good as the sensors that provide tracking data. The survey showed that businesses are still skeptical of Internet of Things (IoT) sensors, with two in three respondents unaware of such technology or not in a position to incorporate them in their freight operations. It takes two to tango, and it is time for companies seeking freight tracking to adopt IoT solutions and push their haulers to do so.

Real-time tracking service providers and IoT device manufacturers are equally responsible for disseminating information on their vitality in track-and-trace. Providing flexible options like IoT-as-a-service and working closely with partners in integrating hardware into their operations can help. Ultimately, the sooner there is a productive dialogue between parties and implementation on ground zero, the sooner we get to a stage where real-time visibility is a reality, and not just a marketing gimmick.