Visibility, Speed and Agility

How M2M is Redefining the Supply Chain and Transportation

eyefortransport reports









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Executive Summary

Transportation and supply chain management are critical pillars of global commerce and are facing unprecedented challenges and change. Not the least of which are:

- Higher operating costs and the commoditization of prices
- An increasingly complicated regulatory environment
- Capacity crunches in the face of swings in customer demand
- Demands for business growth and delivering higher customer satisfaction results

The new and original information in this study sheds light on how executives at transportation and supply chain management companies use or plan to use technology to address these issues and more.

Key findings in the survey data reveal that "operational visibility" – knowing where a shipment is and monitoring the environmental conditions in near real-time of cargo in-transit – is becoming a critical tool for the supply chain and the transportation industries. In fact:

- Around 90% of respondents report that improving operational visibility and real time information is either 'critical and necessary' or 'very important'.
- Organizations are becoming more sophisticated in their visibility requirements, looking beyond location checks for near real-time information on temperature, security, vibration and environmental conditions that are critical to maintaining the quality of goods from departure to destination.
- M2M as a means for gathering information is growing in popularity and will over time surpass RFID and bar codes, ranking second to GPS as a visibility tool.

One of the key conclusions we draw from the survey results is that Supply Chain, Transportation and Logistics leaders view the collection, analysis and sharing of critical visibility data intelligence as a necessity and a key tool to overcoming the increasing complexity and challenges their industry is facing.

The attached report provides a graphical view of the data collected from the survey and gives a clear analysis of the results in an easy to read bullet point format. Additional industry observations are also used to provide deeper insights into the findings.



Data and Technology are Transforming Global Commerce – Are You Ready?

"The transformation of trade has been underway for some time. It is manifested most clearly in wider geographical participation in trade and the rise of international supply chain production. The first of these developments reflects the dynamism of emerging economies. The second is a vivid part of the recent story of globalization.

Technology has been the great enabler of globalization, but globalization is a human construct and is therefore neither inevitable nor irreversible..... **Technology has not just provided the wherewithal to make globalization possible in a physical and virtual sense, but it is also the key source of increased productivity associated with innovation and growth.**"

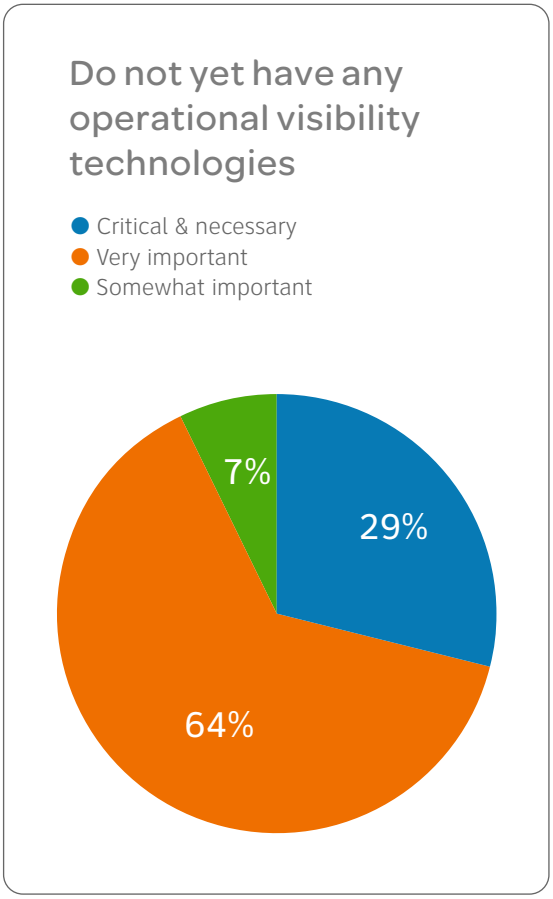
Pascal Lamy
the World Trade Organization Director-General

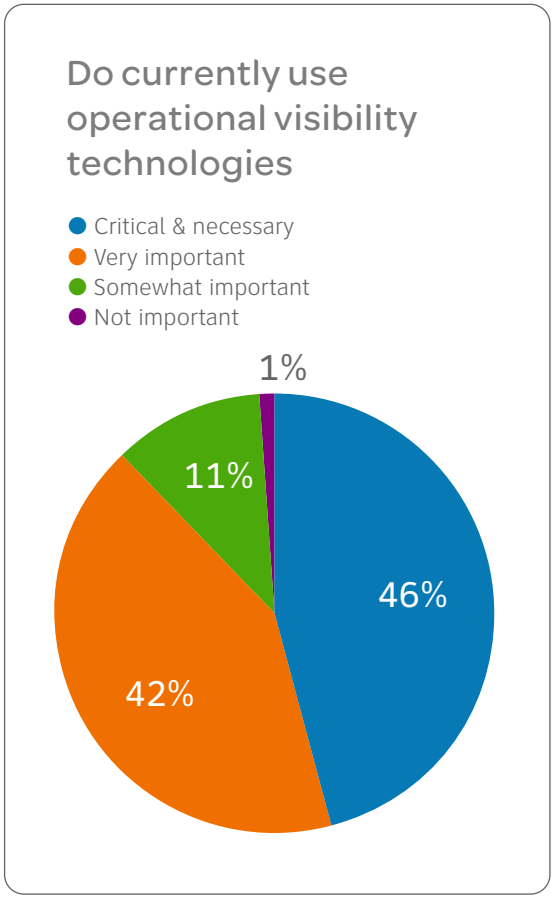
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Survey and Report Methodology

eft in conjunction with AT&T conducted a global survey of shippers and logistics providers to find out how the supply chain is being monitored now and in the future. A global internet based survey was created and received over 750 responses during May 2014. Every response was individually checked and respondents who did not complete the full survey or who were not either a shipper or logistics provider were removed. A total of 344 responses were then used for evaluation. Of the responses used in the analysis, 57.2% do currently have real time monitoring, data collection and/or operational visibility technology in place today and 42.8% do not. We asked both groups of respondents some similar questions and some unique questions. Where appropriate, comparisons have been made.

1. How important is improving operational visibility and real time information to your business?



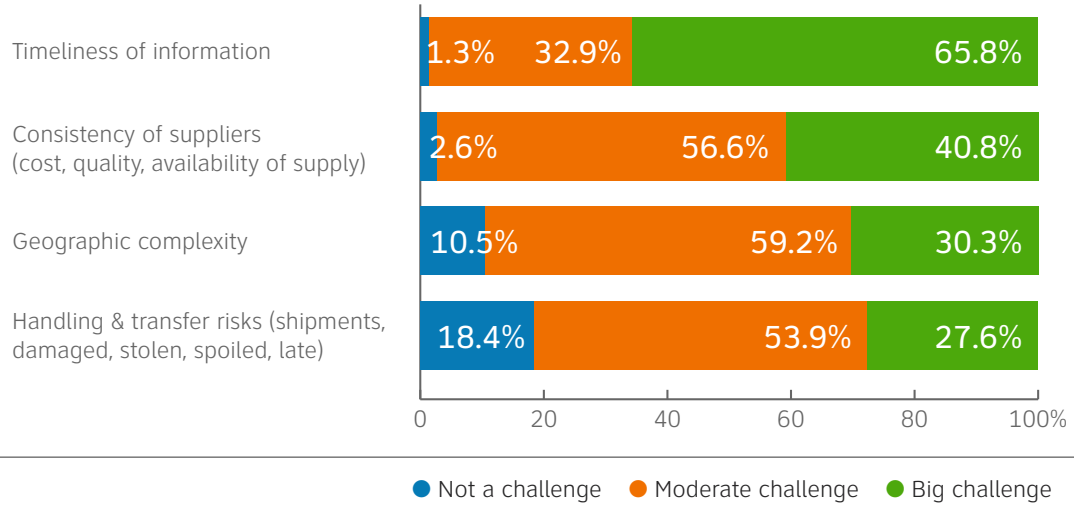


- Around 90% of respondents report that improving operational visibility and real time information is either 'critical and necessary' or 'very important'.
- Less than 1% of all respondents said improving operational visibility was 'not important'
- A much higher percentage of respondents who already gather and use operational visibility information, rate its importance as 'critical and necessary' compared to those who are merely planning to deploy – 46.25% vs 28.95%

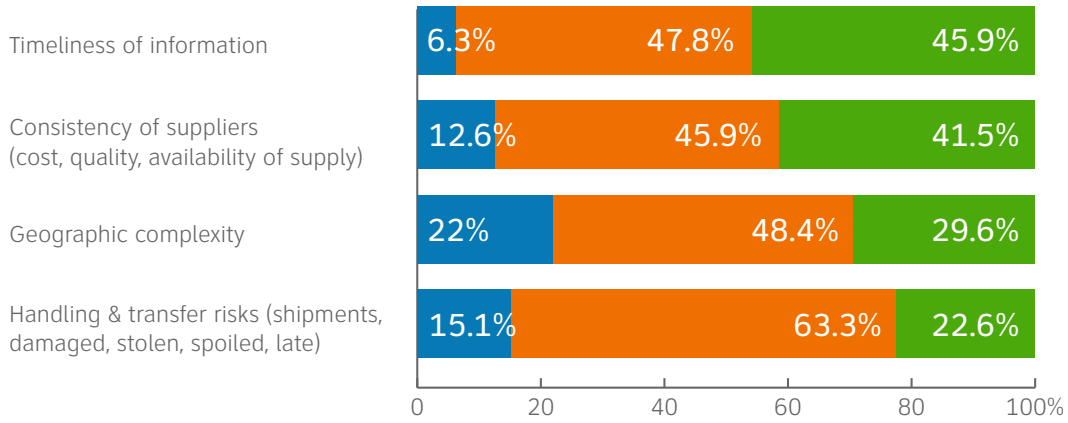
Increasing visibility is a top priority for those people who are responsible for the movement of goods.

2. What are the biggest challenges you have in the supply chain today?

Do not yet have any operational visibility technologies



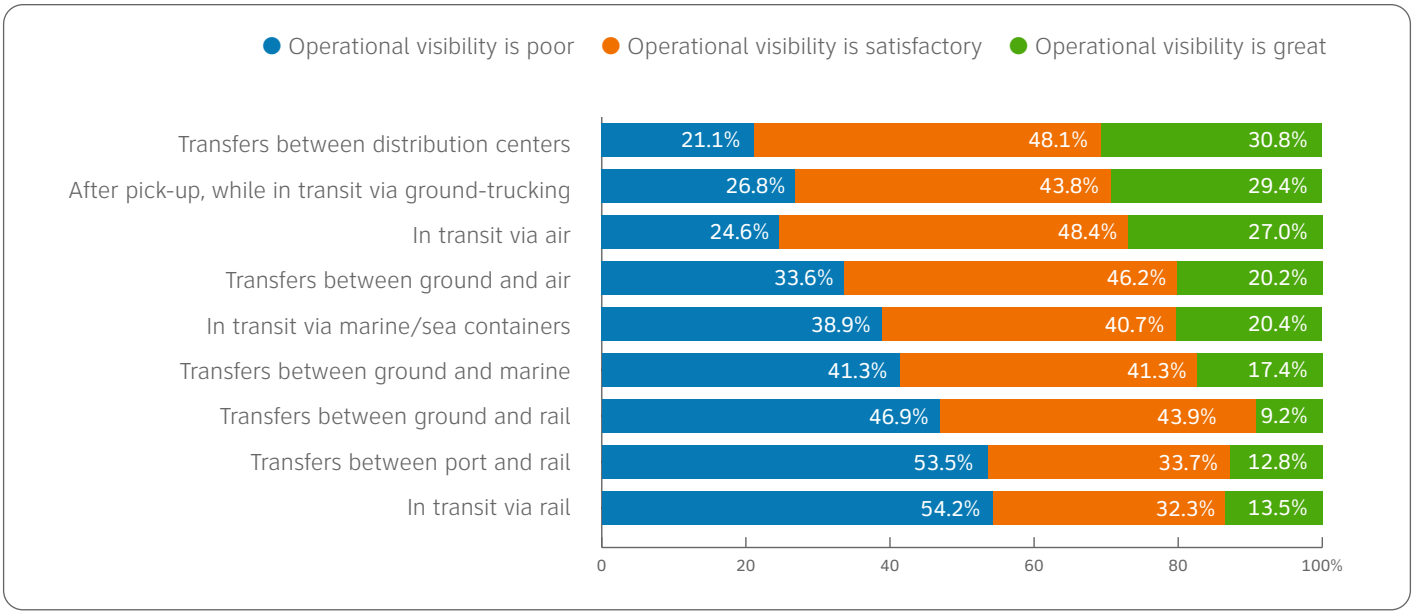
Do currently use operational visibility technologies



Timeliness of Information is the number one challenge in the supply chain today

- 65% of respondents who have not deployed visibility solutions say 'timeliness of information is a 'big challenge'. This compares to 46% saying the same for those who have deployed solutions. This clearly proves that operational visibility solutions are dramatically reducing the challenge of timely information
- Only 6% of respondents who have deployed solutions state that timeliness of information is not a challenge – there is still a lot to be achieved in this area

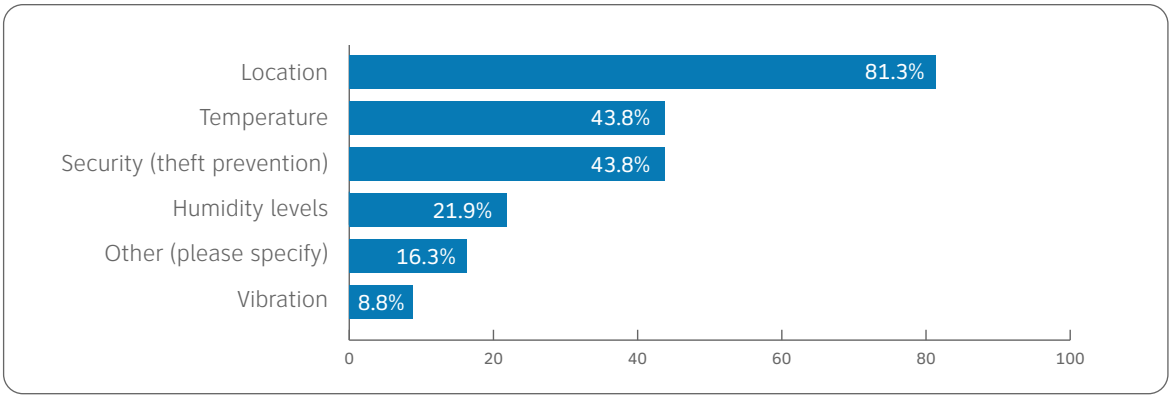
3. At what points in the supply chain is operational visibility best/worst?



- Rail is seen as providing the least information in terms of visibility with around 50% of all respondents reporting the operational visibility involving rail as poor

A visibility gap exists in all modes of transportation.

4. What types of real-time, operational visibility information do you have in your Supply Chain today?



- Location information is very prevalent today with over 80% using it within the supply chain
- However the industry has definitely moved beyond reporting just the location information, with over 40% of respondents reporting using temperature data and over 40% using visibility data for security reasons to combat theft
- Other operation visibility information in use includes engine telemetry, tilt sensors, tire pressures, driver performance, Proof of Delivery…
- Fully automated solutions are now available to collect timely information

The survey clearly shows that companies use more than just location information

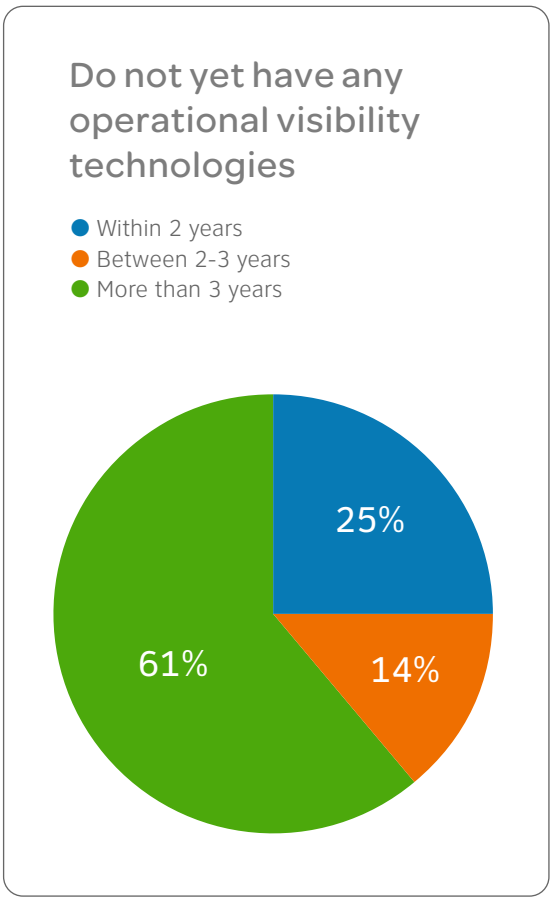
5. If you do not yet use real time operational visibility technology, what are the top reasons why you are looking to deploy this technology?

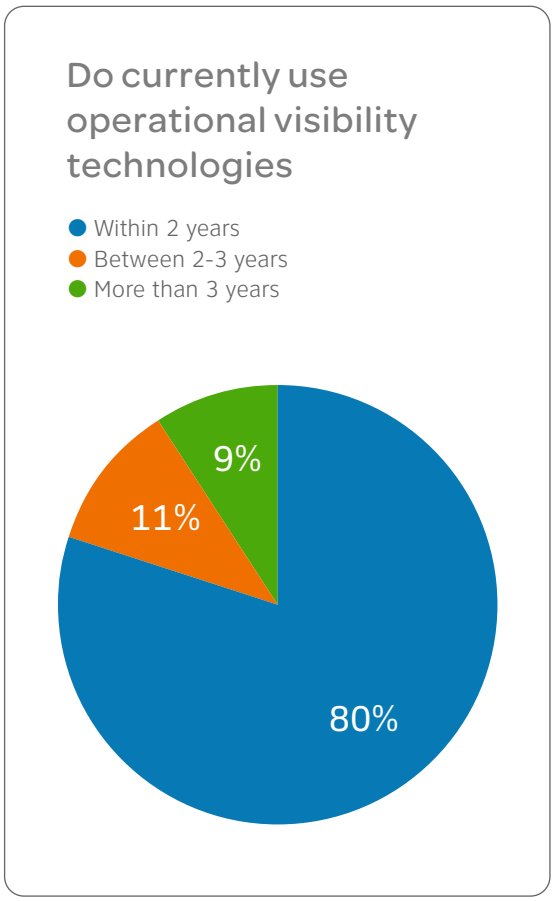
	Not A Reason	Of Slight Importance	Quite Important	Very Important Reason	Most Important Reason
To improve customer service with better information	0.0%	1.3%	21.1%	39.5%	38.2%
To improve speed, delivery timeframes through data analytics collected	1.3%	6.6%	22.4%	46.1%	23.7%
To provide customers with more frequent updates on shipment pick-up or delivery	6.6%	5.3%	19.7%	38.2%	30.3%
To improve cost control/ management through data analytics	0.0%	2.6%	36.8%	46.1%	14.5%
To strengthen competitive differentiation through new service capabilities – i.e. ensure quality of cargo in-transit	7.9%	11.8%	19.7%	42.1%	18.4%
To ensure product integrity or quality of cargo in-transit	13.2%	7.9%	21.1%	40.8%	17.1%
To provide information to comply with security and safety regulations	17.1%	19.7%	25.0%	26.3%	11.8%
To have real-time insights and information on shipment environmental conditions, i.e. temperature of cargo during shipment, monitor gas and humidity levels	31.6%	19.7%	21.1%	17.1%	10.5%

For companies who have not yet deployed real time visibility technology, the #1 reason to deploy is 'to improve customer service through better information'

- Improving speed/delivery timeframes through data analytics and providing customers with more frequent updates on shipment pick-up and delivery completed the top 3 reasons
- It is very apparent that the customer is at the heart of the reasoning for deploying real time operational visibility solutions

6. What is your expected payback or ROI timeframe?

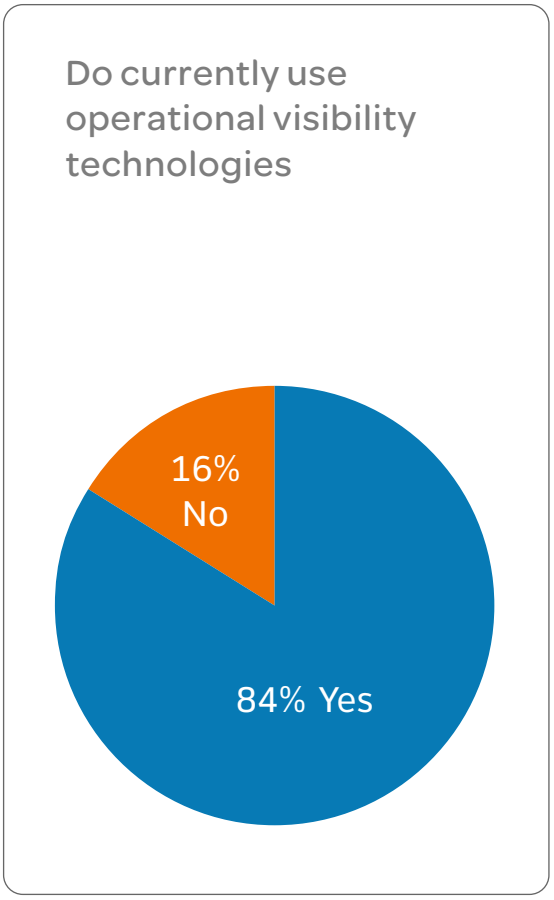




- The returns will also come faster than you may think. 80% of companies who have already deployed some solutions and are now looking to expand their use believe that they will get a return within 2 years on their new deployments. Whilst just 56% of companies who have not yet deployed any type of solution see an ROI within the same 2 year period.

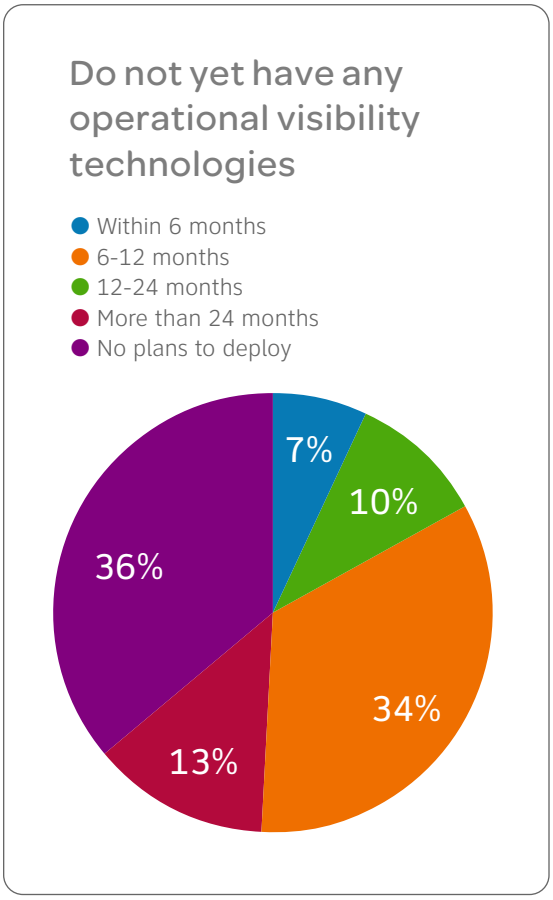
Companies expect to see a return within 2 years from the deployment of operational visibility technology.

7. Are you looking to expand your use of operational visibility technologies?



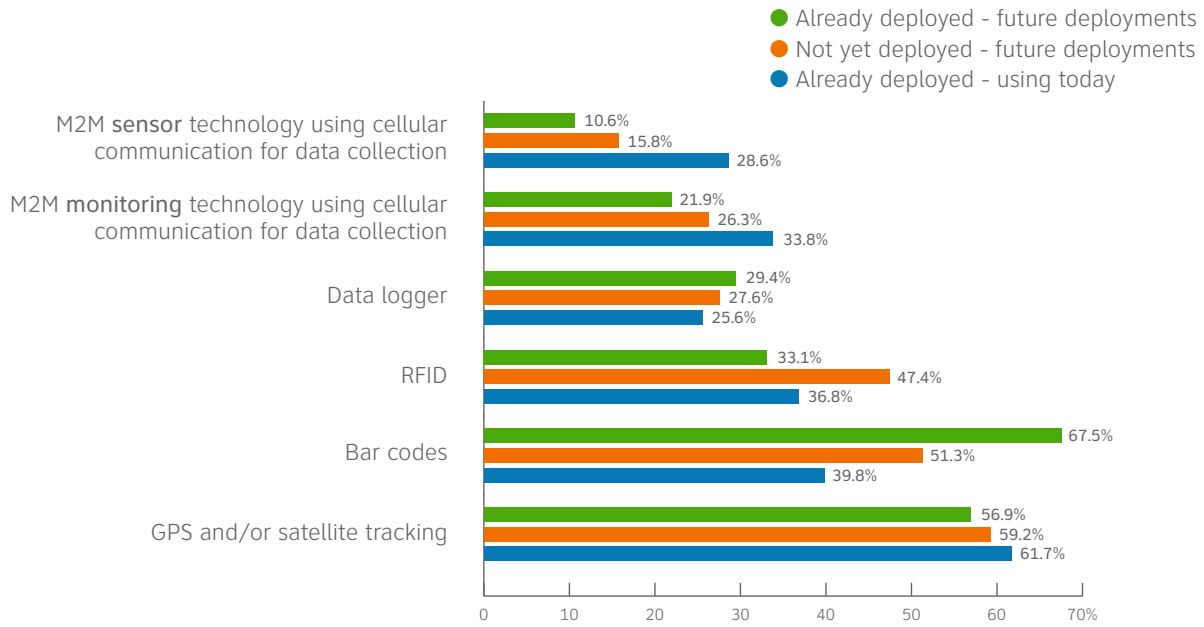
Over 80% of companies who have already deployed operation visibility solutions are looking to deploy more solutions in the future.

8. Are you planning to deploy any real time monitoring, data collection and/or operational visibility technology, and if so when?



- Over 50% of companies who have not deployed operational visibility solutions are looking to deploy for the first time within the next 2 years
- The time to deploy is now; most companies are doing so or planning to do so

9. What type(s) of technology are you already using and/or planning to deploy in the future to increase real time information and operational visibility?

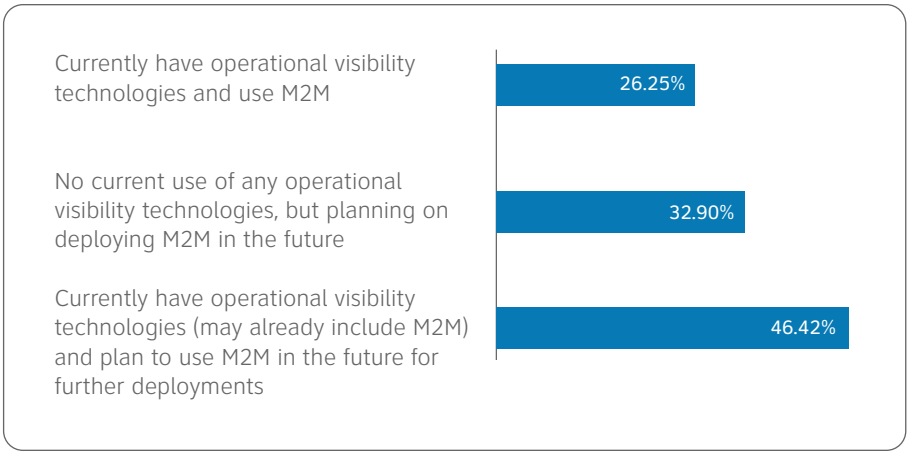


Respondents could initially answer whether they already deploy and use operational visibility technologies (Already deployed—using today) or that they do not currently use operational visibility technologies but are planning to do so (Not yet deployed—future deployments)
The data shown for 'Already deployed—future deployments' was collected only from those respondents who already use operational visibility technologies and were planning to deploy more of these technologies in the future

- Companies who have already deployed operational visibility technology, are now looking to deploy more advanced technologies in the future such as M2M compared to those who are still to deploy operational visibility technology for the first time
- By combining both sensor and monitoring M2M technologies, it is clear that some form of M2M technology will be the 2nd most used technology after GPS tracking in future deployments used to gather operational visibility information

M2M technologies will likely overtake RFID and bar codes as an operational visibility information gathering tool.

10. M2M is clearly growing as the operational visibility technology of choice



- Currently just over a quarter of companies who use operational visibility technology use M2M technologies
- A third of companies who are looking to deploy operational visibility technologies for the first time are going to include M2M technologies in their solution
- Close to half of all companies who already have operational visibility technologies and are planning further deployments, are going to use M2M technologies
- The use of M2M technologies for operational visibility technologies will be nearly doubling in the next couple of years

"Transportation is a fundamental element of global commerce,"

said Mike Troiano, Vice President, Advanced Mobility Solutions, AT&T Business Solutions. **"Companies that ship cargo all over the world need the ability to track and monitor the conditions of their assets in near-real time to minimize the risk of damaged, lost or stolen goods. We work with supply chain managers in the transportation and logistics space to deploy mobility solutions that help streamline operations but also help to transform how they interact and communicate with customers."**

Conclusion

M2M technology or the 'Internet of Things' is clearly one of the biggest disruptive technologies today and in the future.

According to a recent Gartner press release; December 12, 2013 - http://www.gartner.com/newsroom/id/2636073

> "The Internet of Things (IoT), which excludes PCs, tablets and smartphones, will grow to 26 billion units installed in 2020 representing an almost 30-fold increase from 0.9 billion in 2009"

According to Peter Middleton, Gartner's Research Director;

> "By 2020, component costs will have come down to the point that connectivity will become a standard feature, even for processors costing less than $1. This opens up the possibility of connecting just about anything, from the very simple to the very complex, to offer remote control, monitoring and sensing."

This technology trend has now reached a point where deploying a compelling, automated solution to monitor goods in transit is easy. The challenge of receiving timely information in a number of areas; not just location, but humidity, temperature, security can now be solved through the adoption of a fully automated M2M solution. The technology outlook for the continued adoption of near real-time technologies by the transportation and logistics industry is strong. This survey shows that companies who have already deployed are looking to expand capabilities, while companies who have not yet deployed, are looking do so soon. Questions still remain about how a completely automated solution such as M2M technology will affect the development and take-up of older technologies which need manual intervention such as RFID. It will be interesting to see in future years the percentage of companies that have combined near real-time monitoring technologies with passive data collection technologies in order better achieve operational excellence.

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