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The state of logistics technology - 2017

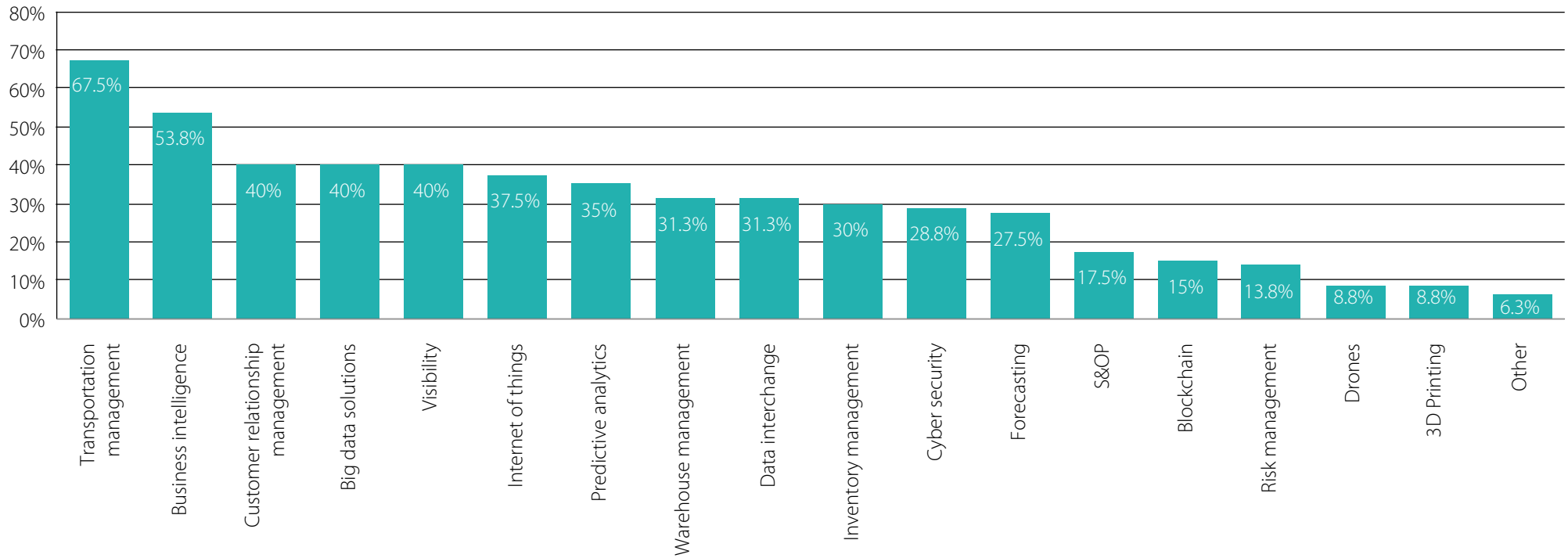By Haley Garner, Head of Research and Content, eft

Introduction

One of the only constants in logistics technology today has been its pace of change. After years of disruption at the hands of new technologies, logistics are only getting started. IT budgets continue to increase, focus shifts towards innovation and the logistics tech startup gains industry acceptance.

Technology is not the only force transforming logistics IT. Increasingly demanded and connected customers are shaping how IT departments work: building solutions hand in hand with customers, and engaging with them regularly. IT decision-makers are also increasingly involved in business development processes as they are required to ease connectivity of potential partnerships.

The report includes added commentary by DHL's Ian Fisher, CIO for the UK and Ireland.

What are you looking to invest in over the next 12 months?

Category	Percentage
Transportation management	67.5%
Business intelligence	53.8%
Customer relationship management	40%
Big data solutions	40%
Visibility	40%
Internet of things	37.5%
Predictive analytics	35%
Warehouse management	31.3%
Data interchange	31.3%
Inventory management	30%
Cyber security	28.8%
Forecasting	27.5%
S&OP	17.5%
Blockchain	15%
Risk management	13.8%
Drones	8.8%
3D Printing	8.8%
Other	6.3%

There have been a number of critical innovations to logistics over the last 30 years. Some have created a huge impact on the industry such as GPS and what it has done for smart routing. Others have had a more moderate impact including the use of natural gas in vehicles to reduce emissions, or even of electric vehicles. One of the profound changes though has been shift of logistics from something you fell into to an actual profession.

What are you looking to invest in over the next 12 months?

There are two key investment areas that we are focused on over the next year; robotic processes automation (RPA) and machine learning.
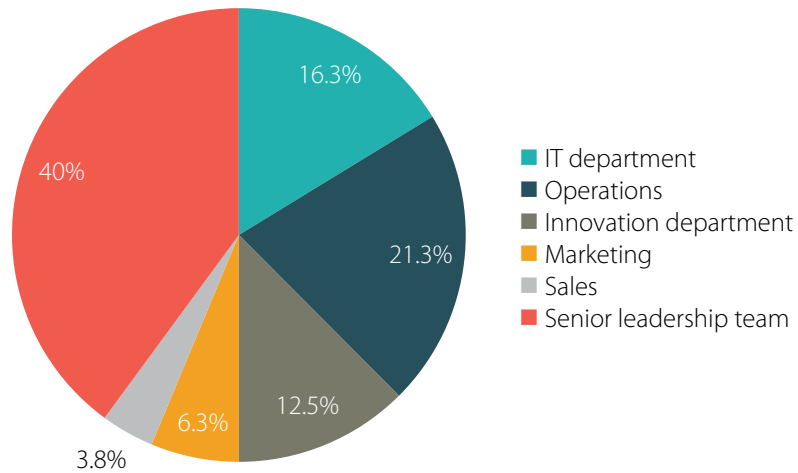
RPA enables us to replace and improve transactional keying activity through automation. While this technology has been widely used by internet search engines and comparison sites, we are only now seeing it within the workplace. It allows us to reduce the need to key-in information manually and brings new efficiencies. To take one example, we can use RPA to manage procurement processes across different teams and quickly create invoices.

Through investment in machine learning technology, we are also able to adapt and enhance our machines using human knowledge. Our new transport management system enables transport optimisation and real-time visibility of tracking. By using machine learning technology, it can learn from the end user and adapt solutions accordingly. Planners can, for example, input their tacit knowledge about roads and how busy they usually are, which can in turn be utilised by machines to adapt routes.

Ian Fisher
Chief Information Officer
DHL Supply Chain, UK&I

Which department is primarily responsible for driving innovation in your organization?

- IT department — 16.3%
- Operations — 21.3%
- Innovation department — 12.5%
- Marketing — 6.3%
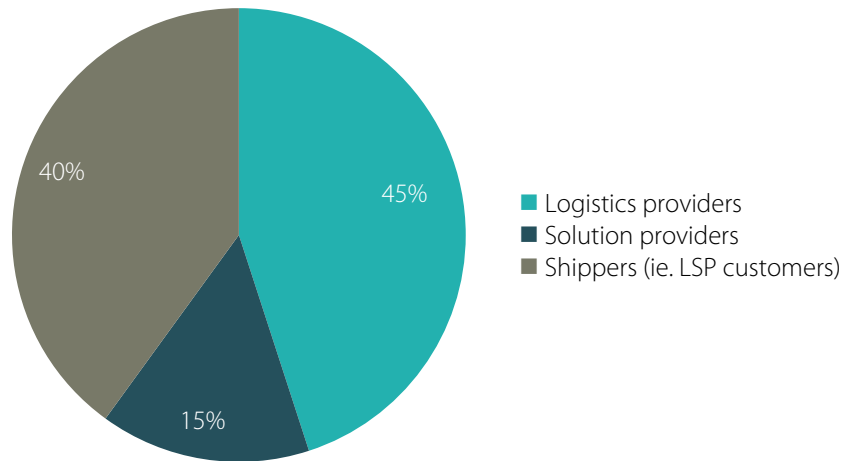- Sales — 3.8%
- Senior leadership team — 40%

At DP DHL, we have a global innovation team which is crucial in driving innovation at a company-wide level. We have two innovation centres, in Bonn, Germany, and Singapore, and announced this month a new incubator project called the 'Start-up Lab, focused on creating an innovation ecosystem across the whole company.

However, most of our innovation happens at ground level. We encourage our teams to think about how technology can be used in different ways and to put forward their ideas which we can develop and test before making big investment decisions. For example, our proof of delivery app was an idea that came from one of our team members, which is now being rolled out.

Ian Fisher
Chief Information Officer
DHL Supply Chain, UK&I

Who's driving the need for innovation in logistics technology?

- **45%** Logistics providers
- **15%** Solution providers
- **40%** Shippers (ie. LSP customers)

At DHL, innovation is mostly driven by the needs of our customers who are always looking for ways to be more efficient and effective. It is also driven by our desire to constantly improve the way we do business and the solutions we offer.

Our open culture encourages ideas to come from all levels of the business, and from every team. We have recently implemented forward-facing video cameras in all our vehicles, which was suggested by our road safety team.

Ian Fisher
Chief Information Officer
DHL Supply Chain, UK&I

From 2016 to 2017, there has been a significant shift in terms of which supply chain partner is driving innovation in logistics technology. Traditionally, this has been an area led by shippers, forgotten by logistics. This year, logistics providers have stood their ground, suggesting that they're the ones now driving innovation in logistics tech.

And they might not be far off...

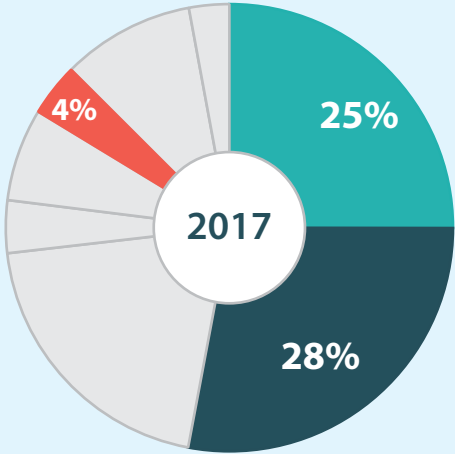**How many developers (computer engineers, programmers etc.) does your company employ?**
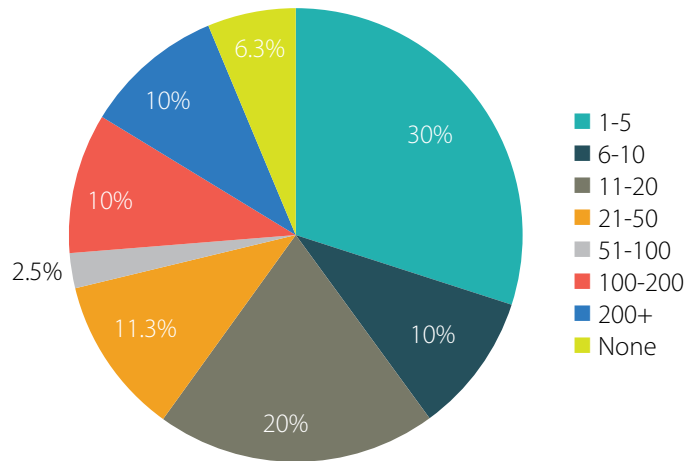
There's a noticeable uptick in the number of logistics companies employing developers or computer engineers in their organizations. Over 30% have from 11-50 with only 6% stating 'none'. The fact of the matter is that logistics is increasingly a digital business. The most important decision then is one of insource or outsource. The transcendence of digital across the industry though has meant that logistics companies choosing to outsource still have to have at least some developer presence in their workforce whether to maintain systems, respond to emergencies or even to tailor solutions to their organization's needs.
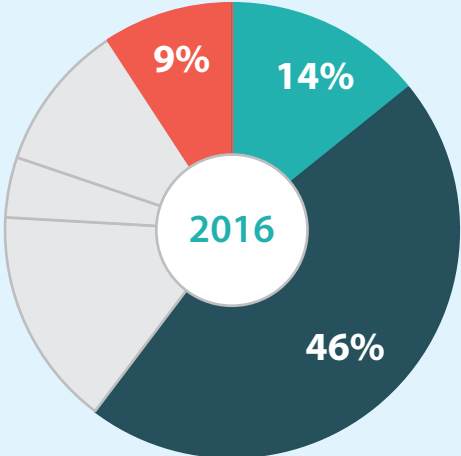
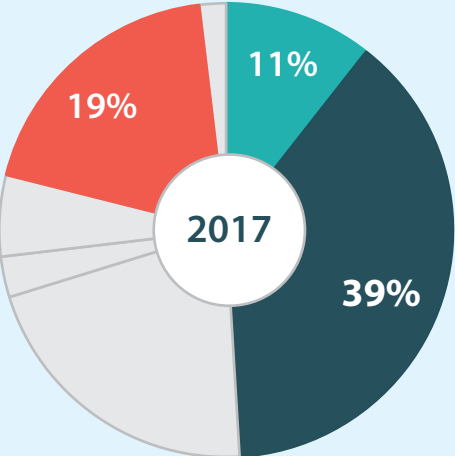## How did you gain most of your new business in the last 12 months?
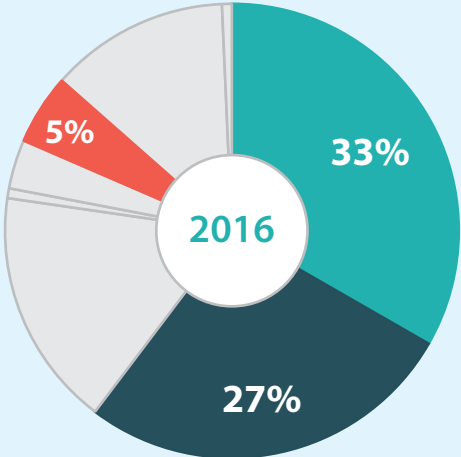
2016
- 33%
- 27%
- 5%

Outbidding or winning contracts from competitors

Innovating to create new business areas

Expanding to new industry verticals

2017
- 25%
- 28%
- 4%

How do you expect to gain the most of your new business in the next 18 months?

2016
- 14%
- 46%
- 9%

Outbidding or winning contracts from competitors

Innovating to create new business areas

Expanding to new industry verticals

2017
- 11%
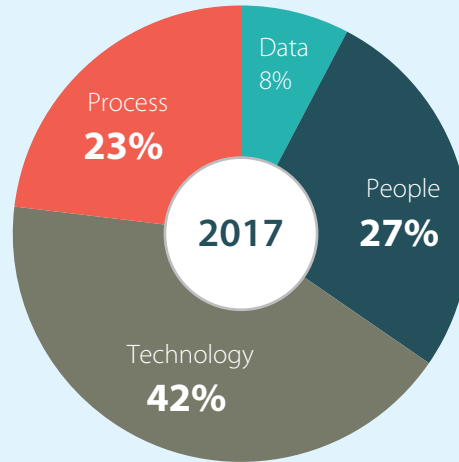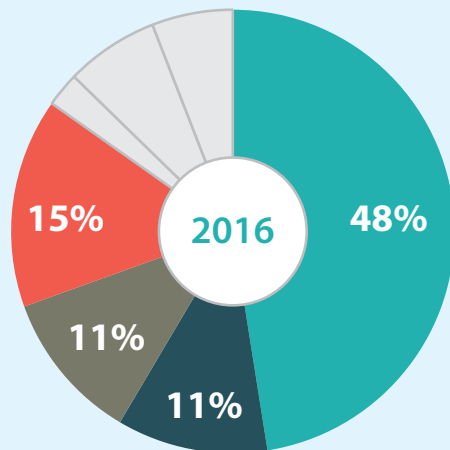- 39%
- 19%

How do you expect to gain the most of your new business in the next 18 months?

Data
8%

Process
23%

People
27%

2017

Technology
42%

Where do LSPs most often come up short?

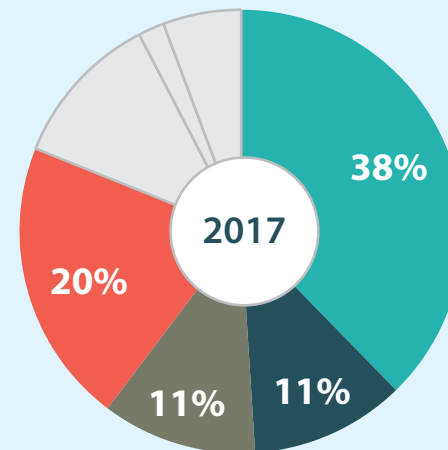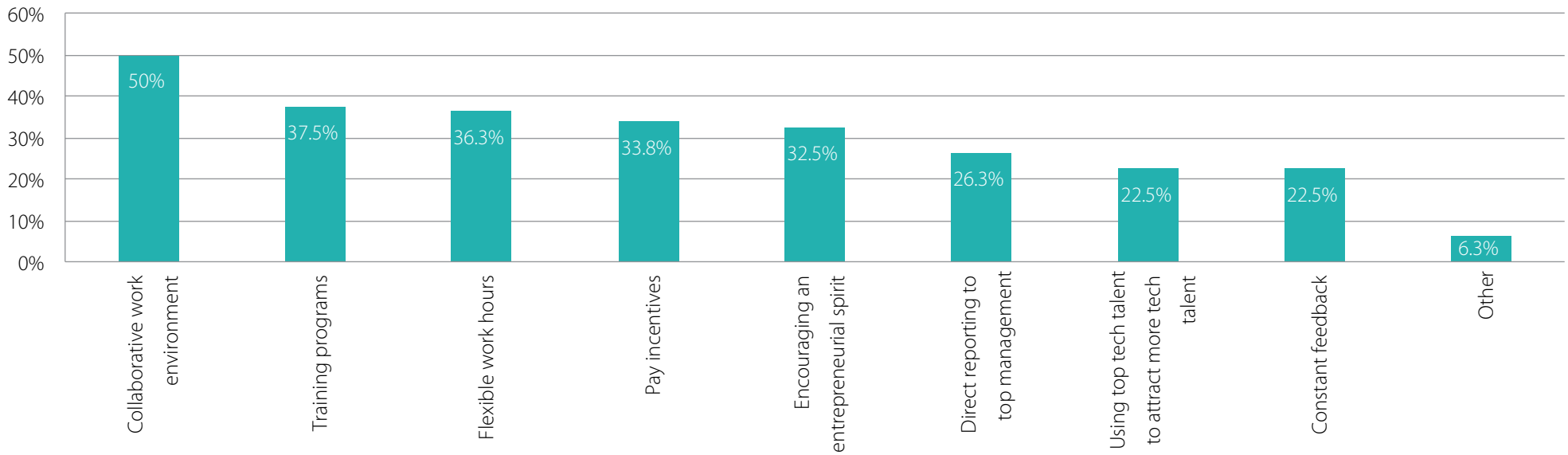**48%**

15%

11%

11%

2016

Innovation / New
ideas and solutions

Leadership/
Management &
Relationship
Development

Reliability

Customer Service &
Speed of response to
queries and problems

38%

20%

11%

11%

2017

Who's driving the need for innovation in logistics technology?

| Category	Value
Collaborative work environment	50%
Training programs	37.5%
Flexible work hours	36.3%
Pay incentives	33.8%
Encouraging an entrepreneurial spirit	32.5%
Direct reporting to top management	26.3%
Using top tech talent to attract more tech talent	22.5%
Constant feedback	22.5%
Other	6.3%

There's been a major shift between 2016 and 2017. While a collaborative work environment is still the top driver, training programs and flexible work hours have now also risen to the top. What's important about these additional categories, is that they round-out what are considered across the board millennial-centric employment priorities. As such, this data suggests that logistics companies are actively working to target younger, tech-savy employees.

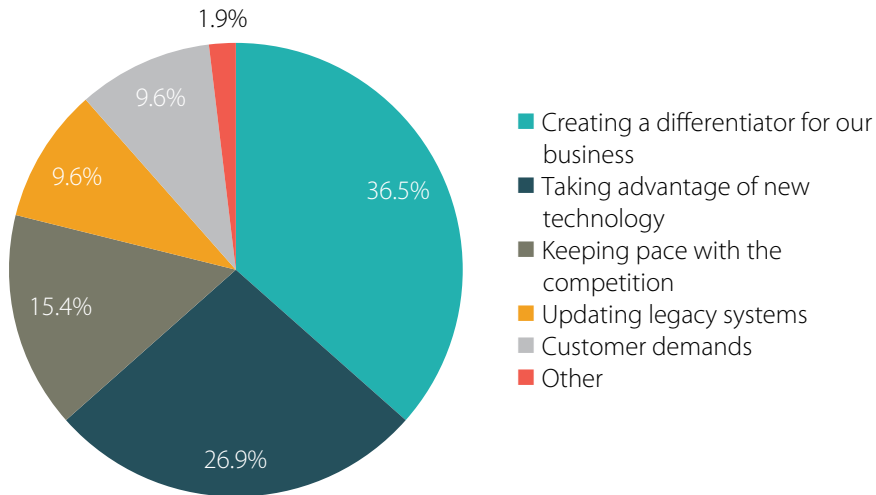**Do you actively use AI in your current operations?**

- 21.3% Yes
- 78.8% No
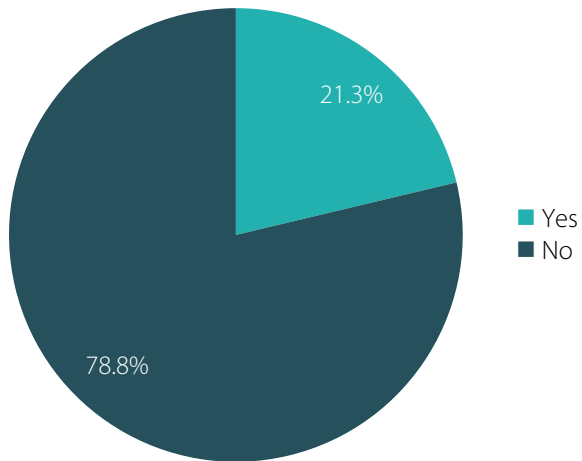
Are you increasing or decreasing your IT spend?

- 66.3% Increasing
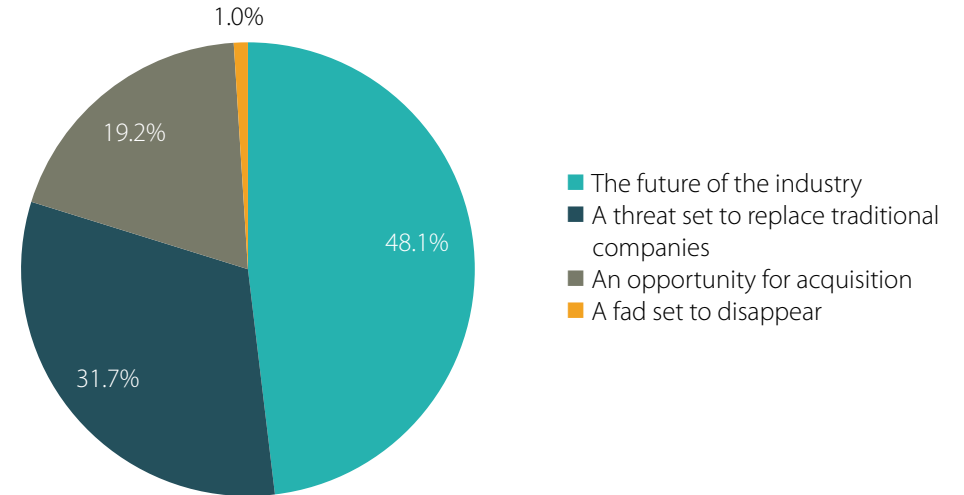- 8.8% Decreasing
- 25% Staying the same
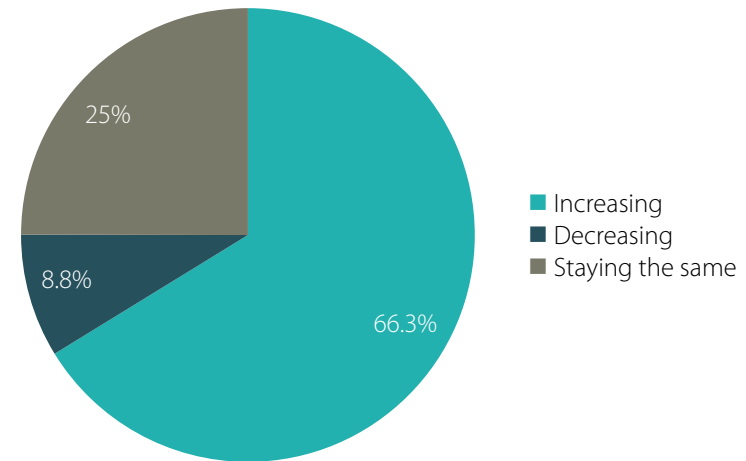
71% of logistics companies have increased their IT budgets year on year. The pace of growth though seems to be slowing slightly. This can be attributed to many possible things: companies needing time to digest recent IT spending, time for new processes and technologies to settle into organizations or the need to reshape strategy.

What is primarily driving your increased spending?

1.9%
9.6%
9.6%
15.4%
36.5%
26.9%

- Creating a differentiator for our business
- Taking advantage of new technology
- Keeping pace with the competition
- Updating legacy systems
- Customer demands
- Other

How do you perceive tech-driven logistics companies (logistics tech start-ups that use software to replace traditional logistics processes and services)?

1.0%
19.2%
48.1%
31.7%

- The future of the industry
- A threat set to replace traditional companies
- An opportunity for acquisition
- A fad set to disappear

A significant change year on year is the number of logistics companies increasing their spending as a means of keeping pace with the competition. One of the drivers for this could be the fact that increasingly, logistics companies are acknowledging that tech-driven providers are the future of the industry.
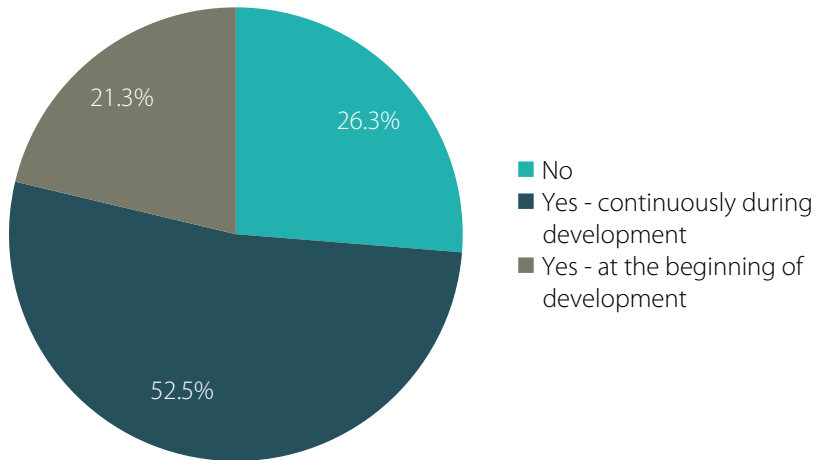
Is your company actively assessing logistics start-ups and judging the possibility of a partnership/acquisition?

40.3%

59.7%

- ■ Yes
- ■ No
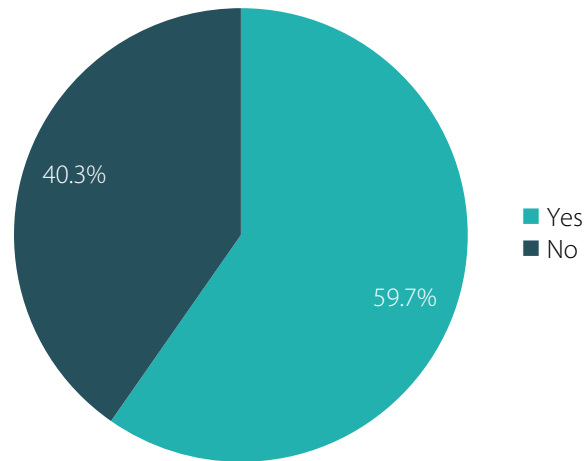
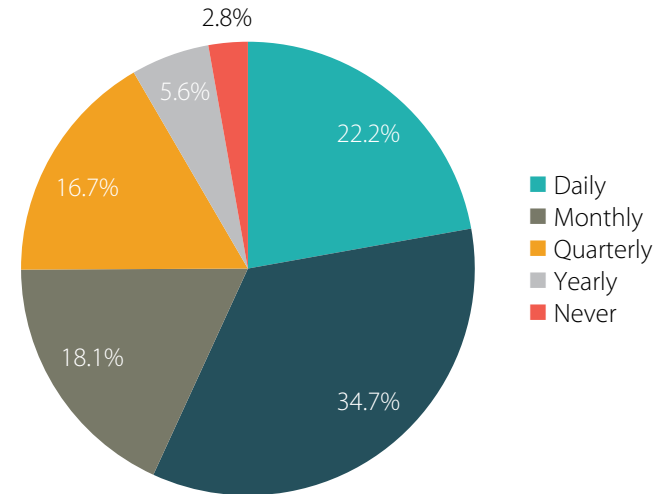In fact 59.72% of logistics companies polled were actively assessing logistics start-ups for the possibility of a partnership/acquisition. This suggests that tech-driven logistics start-ups are offering some innovative solutions that incumbent companies are not able to provide. However, given the amount of money pouring into logtech at the moment, acquisition might already be out of reach in many cases for logistics companies.

Logistics IT and the Customer

Does your IT department engage directly with customers when developing or implementing customer-facing IT?

Legend:
- ■ No
- ■ Yes - continuously during development
- ■ Yes - at the beginning of development

Values: 26.3%, 21.3%, 52.5%

> *We work in partnership with our customers to implement innovation. It is essential that we involve customers in pilots of new technology, to ensure they truly add value. We recently piloted our new Sawyer collaborative robots with a number of customers to ensure the solution was effective for their contract packing activity.*
>
> *Our IT function meets with customers on a weekly basis to make sure our solutions are the best they can be for them.*
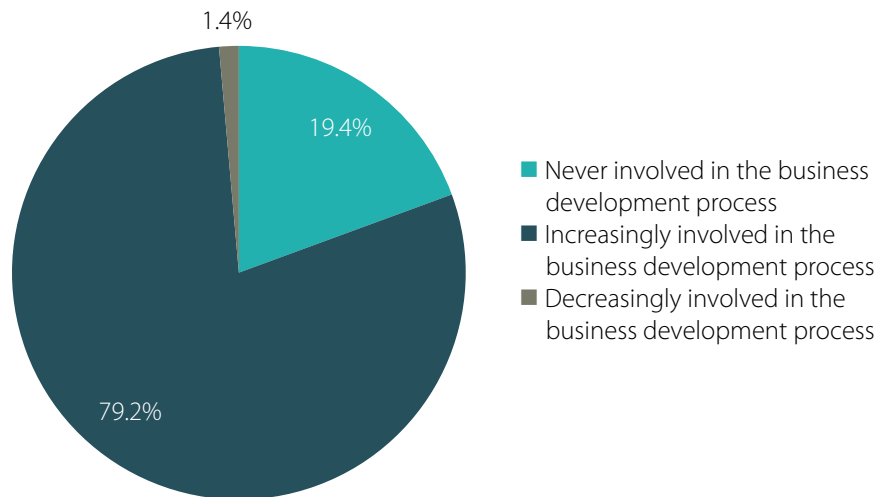
Ian Fisher
Chief Information Officer
DHL Supply Chain, UK&I

Does your IT department engage directly with customers when developing or implementing customer-facing IT?

Values: 2.8%, 5.6%, 22.2%, 16.7%, 34.7%, 18.1%

Legend:
- ■ Daily
- ■ Monthly
- ■ Quarterly
- ■ Yearly
- ■ Never

Customer engagement is still flat in terms of how logistics providers build new products and solutions. However, the IT team works regularly with their customer counterparts. Over 50% of respondents were working directly with customers on a weekly basis. This speaks directly to the customer-centric nature of the industry. As more and more customers use technology to stay in contact with their supply chain partners, the back-office becomes the front-office.

Conclusion

How involved are IT executives involved in your company's sales process?

1.4%

19.4%

- Never involved in the business development process
- Increasingly involved in the business development process
- Decreasingly involved in the business development process

79.2%

In fact, 79% of logistics providers are increasingly involved in their organization's business development process. That is compared with 19% that are never involved in that process. Clearly technology still serves as a differentiator for logistics companies, and involving internal technology expertise helps align a proposal with reality. It also means that IT executives are going to have to be increasingly in tune with customer trends and the nuances of customer contracts. Equally, sales teams are going to have to have a thorough understanding of IT solutions in order to properly advise customers during the business development process.

IT's role in logistics continues to evolve. Technology is increasingly central to how a logistics business runs, rather than a support network for its services. As customers become more connected, IT decision-makers are becoming increasingly customer-facing. IT represents sales opportunity and differentiation. IT also plays a critical role in enabling partnerships and easing the services logistics organizations seek to provide.

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- **Secure Your Network**
  Understand solutions you could implement to remain vigilant against constant threats to your cyber security
- **Always Be Innovating**
  Embrace change. Hear how LSPs are innovating with the right technology, right now to deliver a competitive edge
- **Deliver Data-Driven Success**
  Engage the best possible technology, integrate data seamlessly, and increase efficiency company-wide

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