



Unlocking Hidden Cost in the Distribution Centre

A Research Report by
Intermec Technologies Corporation

RESEARCH PAPER



EXECUTIVE SUMMARY

The “Unlocking Hidden Cost in the Distribution Centre” research examines current views on distribution centre trends and challenges from senior supply chain and distribution centre managers within the UK, France, Germany and Northern America.

With many businesses still feeling the effects of the recession, facing increased competition and being forced to operate on smaller and smaller profit margins, distribution managers are increasingly tasked with the seemingly impossible job of finding cost savings from existing operations. To do this, managers are learning that they have to leave no stone unturned in order to effectively evaluate current processes and technology to help identify areas for efficiency improvements.

Key Findings From The Intermec Research Are:

- Managers are seeking to improve operational efficiency by gaining back mere seconds from each workflow to improve the overall time and cost savings. Having workers take fewer steps over the course of a day, eliminating battery changes mid-shift or using one device for multiple purposes are all areas managers identified as key components to increase efficiency. It is also clear that technology investment will impact productivity when deployed effectively.
- Picking accuracy is of growing importance to managers as visibility increases over the cost to the business through measures such as The Perfect Order Index. Managers believe mis-picks to be an ongoing issue within the workplace and one that could be avoided through new technology and processes.
- Trends such as ‘reverse logistics’ are growing in popularity as businesses look to manage returned goods within the supply chain as quickly as possible to reduce the impact on the bottom line. And along with this, managers are adopting ‘Hardware as a Service’ models to ease the burden of peak periods without significant capital expenditure. Adoption of RFID and Voice technology is steadily growing, with the US and Germany quicker on adoption in both instances.

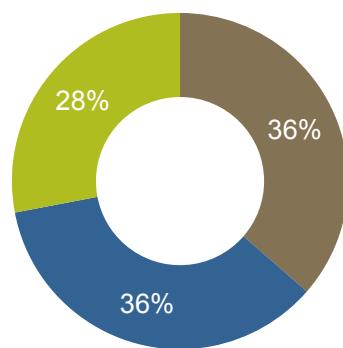
RESEARCH METHODOLOGY

The research, commissioned by Intermec and carried out by research company Vanson Bourne, surveyed 250 senior supply chain and distribution centre managers at organisations with over 500 employees in the UK, France, Germany and North America.

The interviews were conducted by telephone with respondents spanning industries including retail, manufacturing, distribution, transport, chemicals, logistics, pharmaceuticals, wholesale and FMCG.

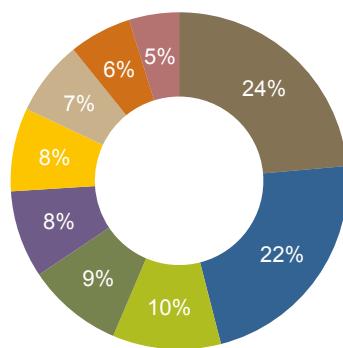
50 interviews were conducted in each European country with 100 interviews taking place in North America during October 2012.

SIZE



- 501-1000 employees
- 1001-3000 employees
- More than 3000 employees

SECTOR



- Retail
- Manufacturing
- Distribution
- Transport
- Chemicals
- Logistics
- Pharmaceuticals
- Wholesale
- FMCG

SUMMARY OF RESEARCH STATISTICS

Every Second Counts

- 79% of managers have been tasked with finding areas where time and cost saving could be made
- Of the managers tasked with finding cost savings, nearly 85% have been asked to find between 10% and 30%.
- Nearly two thirds (60%) of organisations agree that “Large time and cost savings opportunities can be found in gaining back mere seconds in operations workflows”
- On average, organisations could find nearly 3,000 hours’ worth of direct labour hour reductions if processes were made more efficient
- UK inventory control and French packing are the most inefficient workflow processes of those surveyed
- 89% of managers believe that investing in new technology would enable them to achieve time savings and improve worker productivity



Technology And Process Trends

Within The Distribution Centre

- More than three in five managers in each country, excluding France, see ‘reverse logistics’ as a key focus area. Just over a third of managers in France agree with this
- To address short term requirements in the distribution centre, nearly two-thirds (62%) of managers view the leasing of hardware as a cost-effective solution
- More than 70% of organisations in the UK, France, Germany and USA use mobile handheld computers in the distribution centre while more than half (52%) use RFID
- Surprisingly nearly a quarter (23%) of distribution centres still use paper. This is highest in the US at 27%
- Almost four in five organisations see boosting worker productivity as the most important factor in their business except in France where improving worker safety was ranked 2% higher

Greater Visibility On The Cost Of Mis-Picks

- Almost three in five (59%) of managers use “The Perfect Order” metric
- 90% of managers in the UK measure the cost of mis-picks, compared with 74% in France, 77% in the US and 82% in Germany
- France has the lowest average picking accuracy at just 4% reporting a 99% or greater pick rate and has the greatest room for improvement on perfect orders
- Organisations that measure the cost of mis-picks are on average losing £242,000 / \$389,000 / €291,000 a year due to mis-picks in the picking workflow

EVERY SECOND COUNTS

The distribution centre is under increasing pressure to reduce cost and increase margins.

In the last six months alone, nearly **eight out of ten** (79%) of managers have been tasked with finding cost savings from existing operations.

This is as high as 88% in Germany and 84% in the UK. In the US and France this figure is slightly lower at 76% and 72% respectively.

Perhaps unsurprisingly, given the economic climate, the amount of cost savings managers have been tasked with finding is not minimal. Managers have been tasked with finding an average of 19% from existing operations.

In the past 6 months ...



8 out of 10

managers have been tasked with finding cost savings in existing operations



On average ...

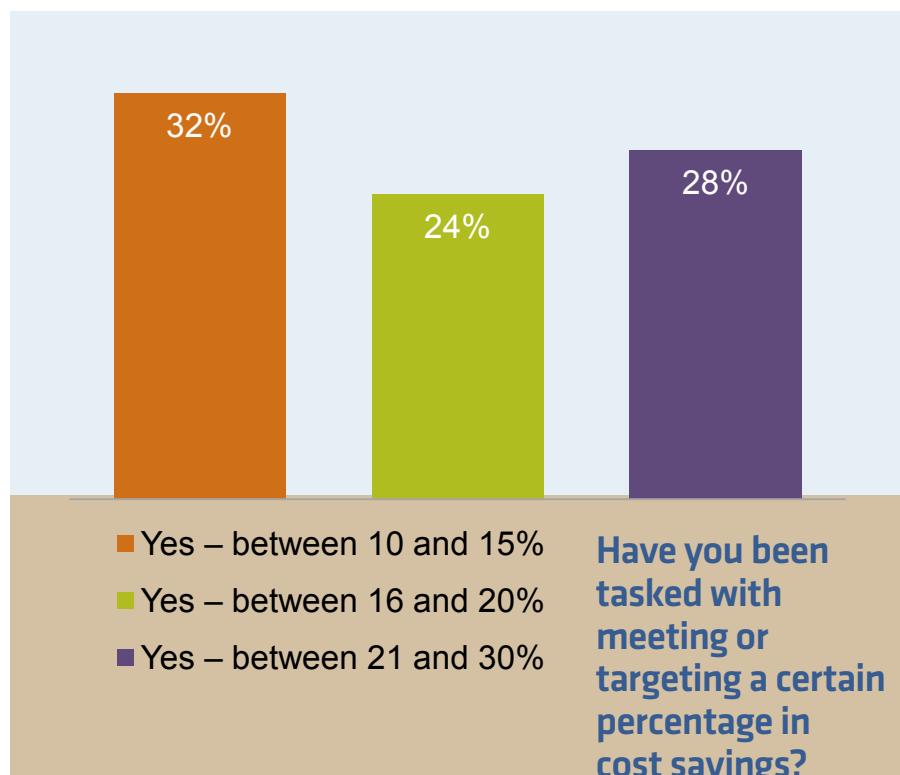
managers have been tasked with finding nearly **20%** cost savings across their organizations

89% OF MANAGERS BELIEVE THAT **INVESTING IN NEW TECHNOLOGY** WOULD ENABLE THEM TO **ACHIEVE TIME SAVINGS** AND **IMPROVE** WORKER PRODUCTIVITY

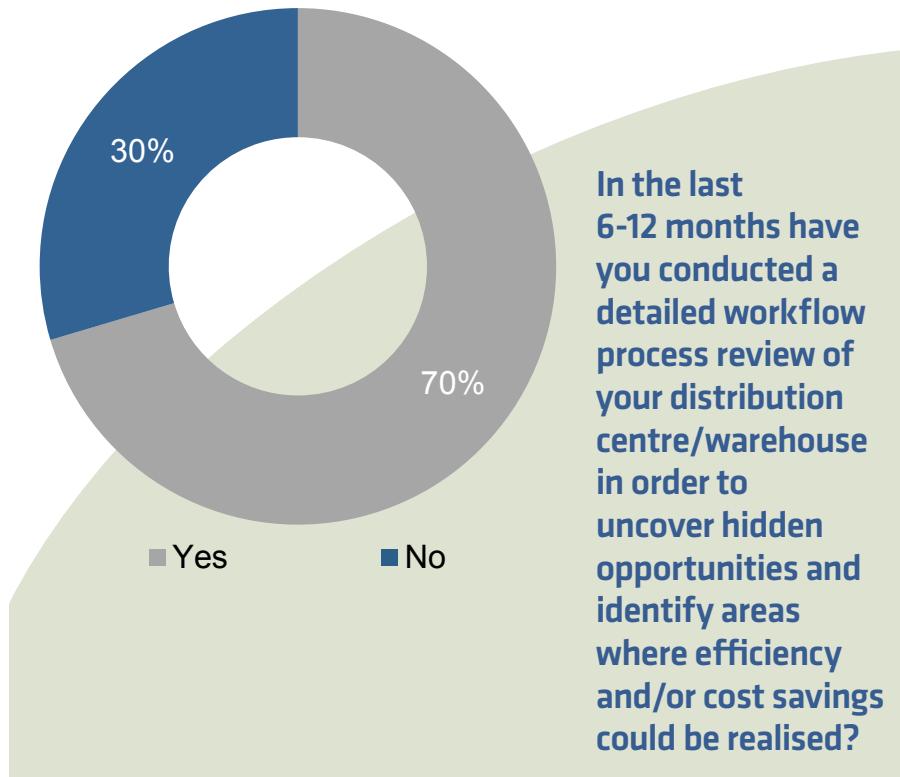
EVERY SECOND COUNTS

Of those involved in finding cost and time saving areas, almost 85% have been asked to find cost savings of between 10% and 30%. Almost three in ten (28%) are being asked to find the higher end of this bracket: 21% to 30%.

Despite the majority of managers tasked with finding cost savings, nearly one in three (30%) have not conducted a review of workflow process in their distribution centre within the past year. Given this is considered to be the first step in identifying areas for improvement this figure could be concerning for many business leaders. The research also reveals that in the companies that are yet to take action to improve workflow productivity, there is a degree of resistance to the idea of carrying out a full review.



Have you been tasked with meeting or targeting a certain percentage in cost savings?



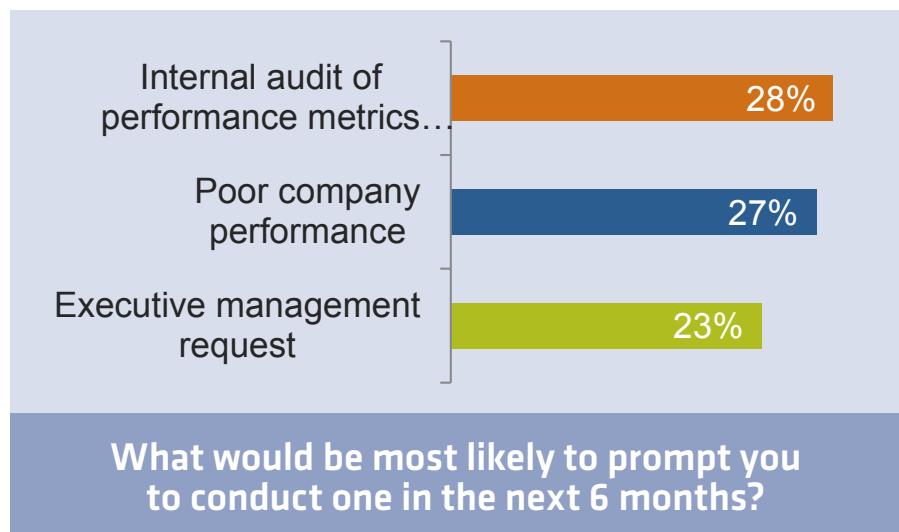
In the last 6-12 months have you conducted a detailed workflow process review of your distribution centre/warehouse in order to uncover hidden opportunities and identify areas where efficiency and/or cost savings could be realised?

EVERY SECOND COUNTS

Managers who have not held a review in the past year, say that compliance (28%) or poor performance (27%) are most likely to prompt them to do so. This is in contrast to the businesses that have held reviews with only 9% of companies citing poor performance as the driver. Interestingly, in a world in which every customer's business is hard won, and even harder kept, nearly one in five companies (16%) say they will not review their workflow processes until after a customer complaint has been received.

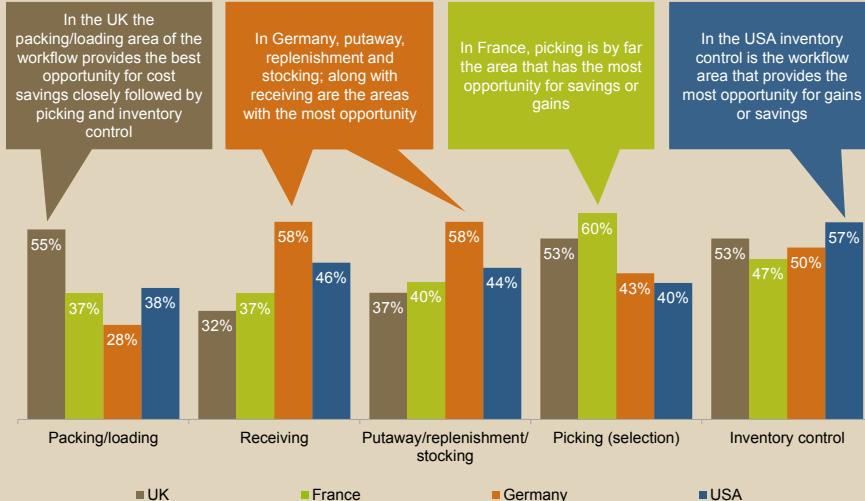
Businesses that have conducted recent reviews revealed that their top drivers for this were compliance (26%), internal improvement programme (22%) and an executive management request (23%).

The Drivers Prompting Workflow Process Reviews



EVERY SECOND COUNTS

Yielding Greatest Cost Saving – Country Differences



During the review, which workflow area provided the most opportunity for cost savings and/or efficiency gains?

In Germany, reviews are far more likely to be prompted by an executive management request than by anything else with 40% choosing this option.

This compares to just 16% in the US, and 25% in both France and the UK.

Following a review, managers identified Inventory Control (53%), Picking (47%) and Putaway/Replenishment/Stocking (45%) as the top workflows where the most opportunity for cost and/or efficiency savings could be gained. This varies slightly per country.



60% of managers agreed large time and cost savings can be found by gaining back mere seconds in operations workflows

Through the process of workflow reviews and when faced with finding up to 30% cost savings, managers are looking to shave seconds wherever possible. Nearly two-thirds (60%) agree that 'large time and cost savings opportunities can be found in gaining back mere seconds in operations workflows'. Examples of how to achieve this include having workers take fewer steps, investing in faster label printing and quicker barcode label scanning and eliminating battery changes mid-shift.

EVERY SECOND COUNTS

In the UK almost four in five (78%) organisations agree with the statement, compared to 65% and 56% in the US and Germany respectively.

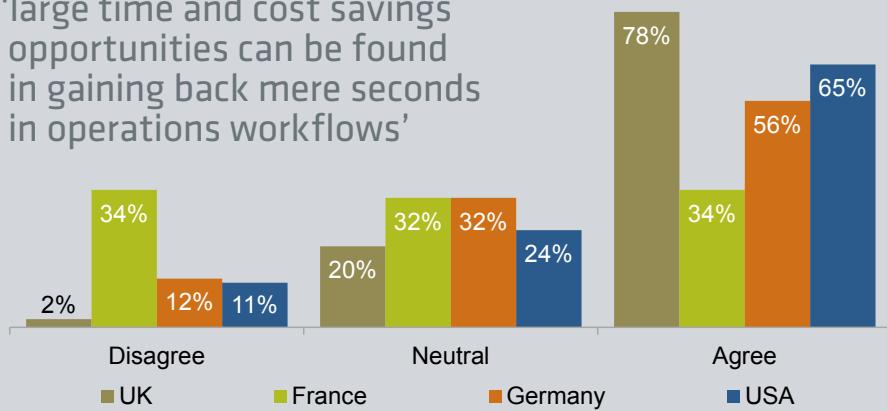
In France, the same percentage (34%) both agree and disagree with this statement.

When it comes to quantifying the value that gaining back mere seconds on unproductive workflows presents to overall efficiency, the research revealed that a distribution centre with a minimum of 50 workers is losing close to 3,000 hours a year.¹

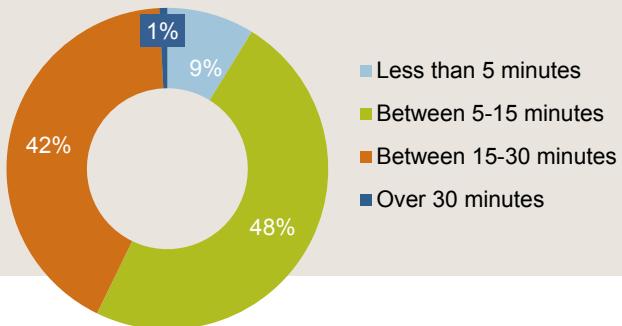
Almost half (48%) believe that within an eight hour work shift, there is up to 15 minutes of unproductive worker time available, with a further two in five (42%) believing up to half an hour of unproductive work time per worker. Interestingly, an overwhelming 89% of managers believe that investment in new technology would enable time savings and improve worker productivity, which would significantly reduce these lost hours.

How Strongly Do You Agree With This Statement?

'large time and cost savings opportunities can be found in gaining back mere seconds in operations workflows'



Assuming an 8 hour work shift, how many minutes of unproductive work time per worker would you estimate are currently available to improve in that workflow per shift?

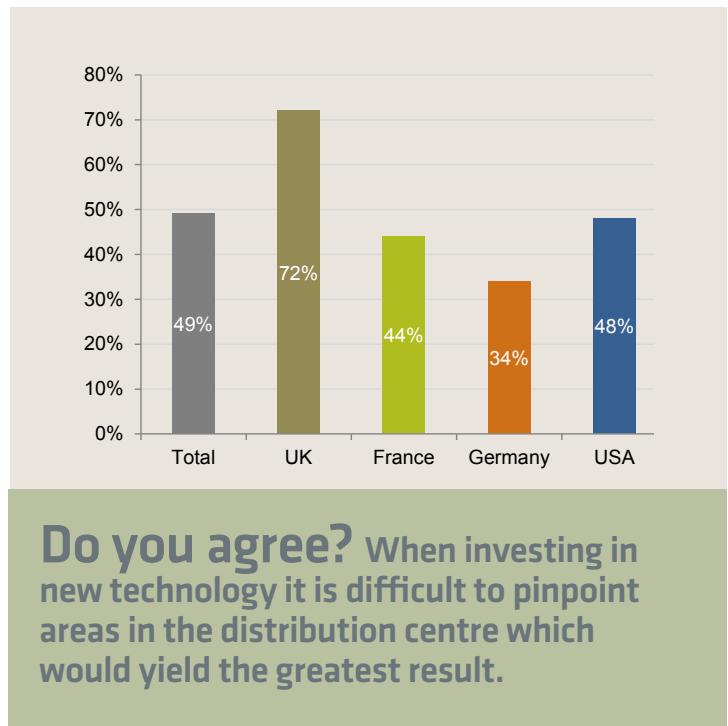


¹ Intermec research conducted by Vanson Bourne reveals that the average worker loses an average of more than 15 minutes a day / 58 hours a year / 8 working days year. Assuming a distribution centre with a minimum of 50 workers, this equates to 2,899 hours a year.

EVERY SECOND COUNTS

However, it appears that one of the key challenges in investing in new technology lies in the difficulty of pinpointing areas in the distribution centre which would gain the most efficiency improvement from investment. In fact, nearly three out of four (72%) UK managers believe this to be true. On average, across the US and Europe, nearly half (49%) support this view.

With this in mind, a relatively simple workflow review process is likely to help managers identify these areas and ensure technology investments are made within the right processes to help managers achieve their targeted cost savings and improve business operations.



“Distribution Centre managers are faced with significant cost saving challenges, which means they can’t afford to let such levels of time wastage continue. Businesses should be looking at every workflow in detail, on a regular basis, to claim back the minutes and seconds they need to achieve these savings. As this research shows, reviewing their technology infrastructure may be the perfect place to start.”

Bruce Stubbs, Industry Marketing Director at Intermec

GREATER VISIBILITY ON THE COST OF MIS-PICKS

Achieving a strong pick rate is fundamental to improving profit margins, which is why, on average, more than half (59%) of managers are now turning to 'The Perfect Order' metric to identify areas for improvement. This metric measures an order picked in its entirety, error free, damage free and delivered on time.

However, use of the metric varies widely by country – with adoption in Germany (68%) far exceeding that of the UK, France and the USA.

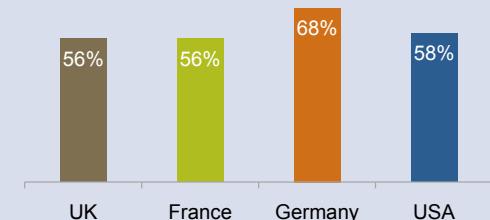
With the average mis-pick costing £14 / \$22.52 / €16.85, managers have revealed the staggering impact of inaccuracies. The yearly cost of mis-picks equates to an average of £242,000 (\$390,000 / €291,000). This is significantly higher in the UK at £322,000 and lowest in France.

When it comes to managing picking accuracy, the vast majority (90%) of managers in the UK claim to measure the cost of mis-picks (in some form) compared with 74% in France, 77% in the US and 82% in Germany. Overall, 19% of companies do not manage the cost of mis-picks. Across all regions, the reported losses remain alarmingly high.

We don't measure mis-picks...

The "Perfect Order" metric

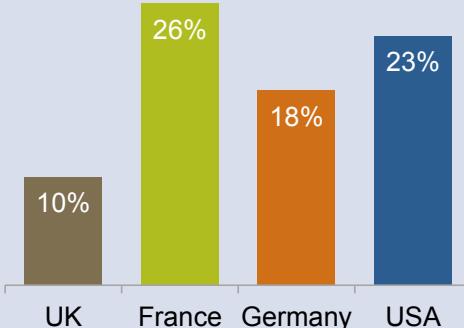
Do you currently use the compound metric known as 'The Perfect Order'?



If you measure the cost of mis-picks, how much cost do you associate with the average mis-pick in your operation?

Global Avg.	UK	France	Germany	USA
£242K	£322K	€176K	€294K	\$392K
Global Avg.	UK	France	Germany	USA
£14	£15	€13	€16	\$14

(Cost of mis-picks in local currency)



GREATER VISIBILITY ON THE COST OF MIS-PICKS

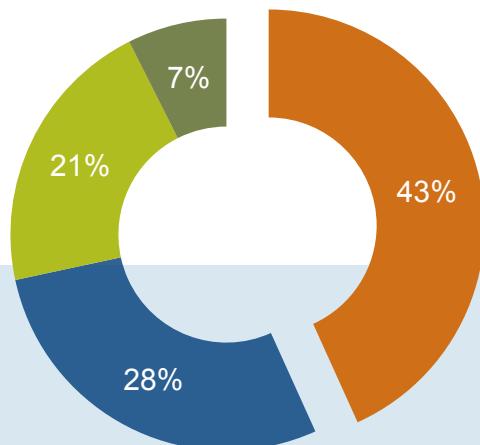
Over half (52%) of companies report a pick rate of less than 97%, with the lowest average picking accuracy coming from France, where only 4% of managers report a pick-rate of over 99% or higher. The US, meanwhile, can report a near-perfect pick rate in 19% of companies.

Perhaps unsurprisingly, companies that have recently conducted a workflow process review found picking (47%) a key area where cost savings could most easily be achieved. For those using 'The Perfect Order' metric, opportunities for increased savings were clear, with complete shipments (43%) seen as the most profitable to the bottom line. Invoice errors meanwhile were identified as the area with the least potential for improvements (7%).

What is your picking accuracy?



**Which measure in
“the Perfect Order”
metric provides the
most upside potential
for improvement**



- Complete shipments
- On-time shipments
- Zero damage
- No invoice errors

"This research reaffirms just how crippling mis-picks are to businesses. If left unmanaged, businesses will continue to cause significant damage to overall revenues and performance. Faced with these losses, and in light of the cost savings that must be achieved across the distribution centre, failure to utilise the processes and tools that can make a difference is no longer an option."

Bruce Stubbs, Industry Marketing Director at Intermec

THE DISTRIBUTION CENTRE: TECHNOLOGY AND TRENDS

In the quest to meet growing pressure to modernise distribution centres and increase profits, managers are turning to new processes and technologies. This is seen particularly evident within the returns process, a key pain-point for many businesses around peak times of the year.

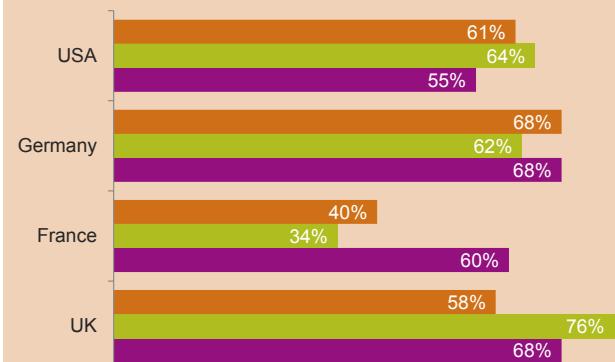
Although nearly two-thirds of businesses (61%) recognise that the post-holiday period represents 'the most challenging time of the year due to the high numbers of returns,' more than half (52%) of managers admit they don't have the appropriate processes and tools in place to determine if returned goods should be discarded, returned to vendor or moved quickly back into inventory.

Managing returned items, at any time of the year, represents a challenge to many businesses. 44% of managers admit this to be true. To combat this increasing strain of returned goods and minimise the impact on peak times, 60% of managers are now turning to 'reverse logistics' - the reverse management of stock - to get items back into the supply chain as soon as possible. More than three in five managers in each country, excluding France, see 'reverse logistics' as a key focus area.

To address short term requirements in the distribution centre, another technology trend has emerged with nearly two-thirds (62%) of managers viewing the leasing of hardware (Hardware as a Service) as another cost-effective solution to manage service peaks. Utilising HaaS has been proven to boost efficiency levels during peak

Reverse logistics is a key focus area for the market

Here follows a series of statements relating to "Reverse Logistics". Please indicate how strongly you agree or disagree: Ratings 4 and 5 – strongly agree



- We have an accurate view of goods in the return and/or repair process at all times
- Reverse Logistics is a key focus area as we try and reduce the impact of returned goods to the bottom line
- The post-holiday period represents the most challenging time of the year due to the number of returns

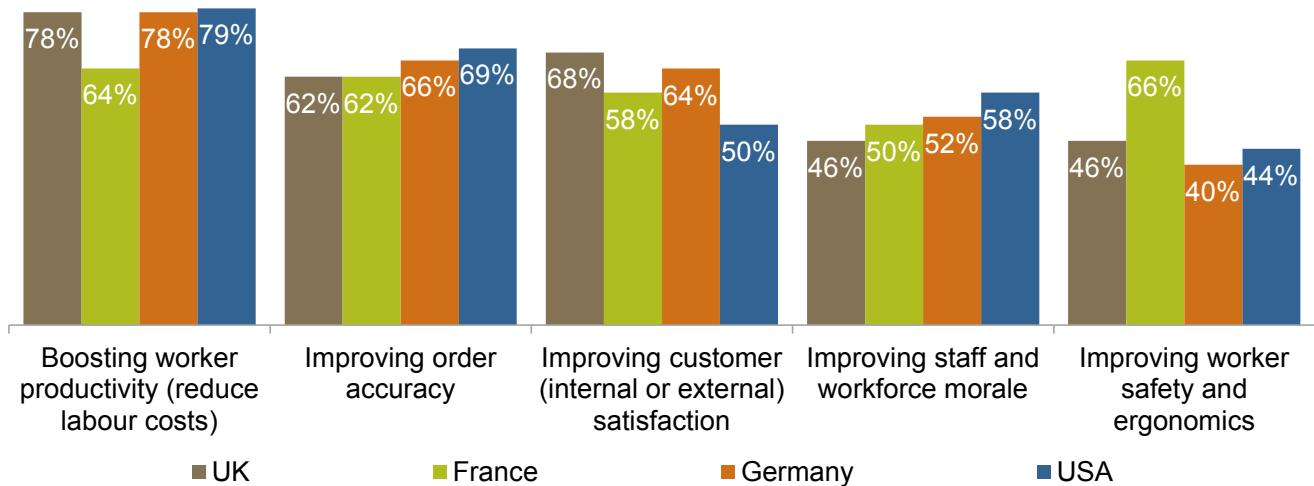
times by supplying mobility solutions for a limited period without having to make the commitment of a long-term purchase. This also allows companies to transition their costs from capital expenditure to operating expenditure, an attractive option to many.

THE DISTRIBUTION CENTRE: TECHNOLOGY AND TRENDS

When it comes to measures impacting the bottom line, managers are also reviewing the use and impact of technology within the workplace. Nearly three-quarters (74%) of managers believe that increasing automation within the distribution centre would have the greatest impact in increasing profitability. The same percentage also believe this to be true for adoption of new technology.

Despite this, more than half (51%) believe that ensuring adoption of new technology by workers

Please rank the following five categories in terms of importance to improve your operation where one is the least important and five is the most important: Combination of 4 and 5 – the most important



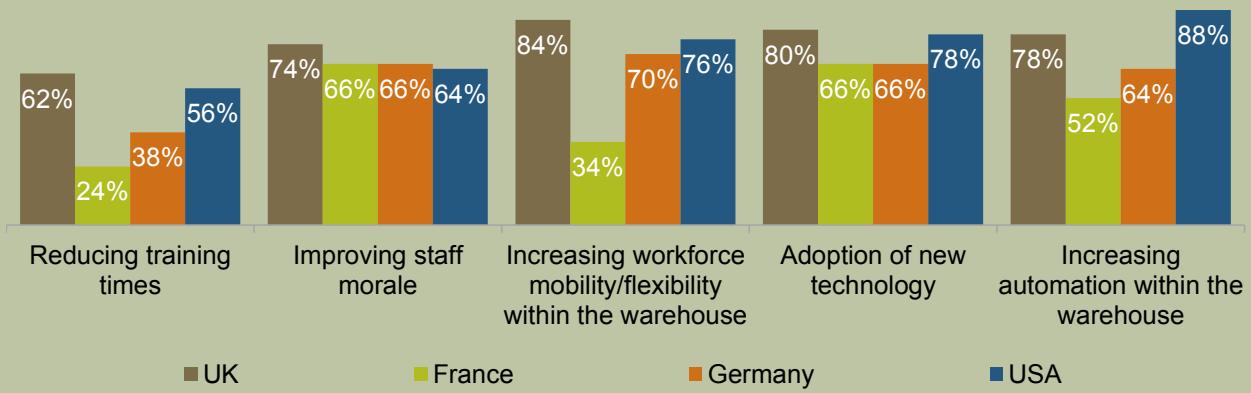
is a 'big challenge' signifying that any new technology must be intuitive and simple to use. Nearly the same amount (49%) claim that being able to pinpoint areas in the distribution centre where investment would yield the greatest result is difficult to achieve. More than two-thirds (68%) believe worker mobility and flexibility is key to improving profitability – a sentiment felt strongest in the US (76%) and UK (84%).

"The holiday season is the busiest and most challenging time of the year for distribution operations, especially those engaged in Business to Consumer (B to C) fulfillment. With challenging lead times, increased volumes, temporary staffing and the after holiday deluge of returns, improving mobility solutions for the workforce becomes more critical than ever before if businesses are to meet customer demands and improve profitability."

Bruce Stubbs, Industry Marketing Director at Intermec

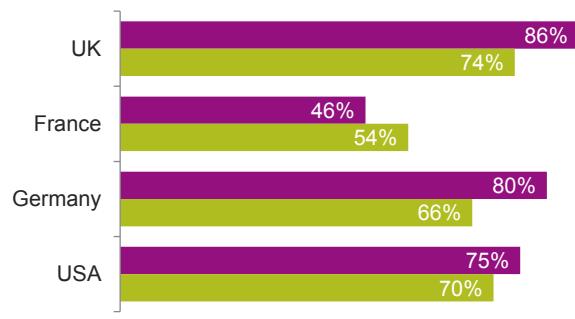
THE DISTRIBUTION CENTRE: TECHNOLOGY AND TRENDS

Please rank the following five categories in terms of importance to improve your operation where one is the least important and five is the most important: Combination of 4 and 5 – the most important



Despite recognition of the benefits new technology and automation can provide to the bottom line, it is perhaps surprising to learn that nearly one in four (23%) of all companies are still using paper to conduct distribution centre processes. In contrast to the number of companies still dependent on paper for parts of their distribution centre processes, the vast majority of companies agree that up-to-date technology is needed to improve distribution centre performance. Multi-functional devices, for example, are seen by 72% of managers as critical to ensuring workers are flexible and are equipped to do more. And with this comes the belief that intuitive and user friendly devices help drive employee satisfaction, morale and loyalty. A sentiment felt by 67% of all managers, 70% in the US and 74% in the UK.

Please indicate how much you agree. Responses rated 4 and 5 – strongly agree



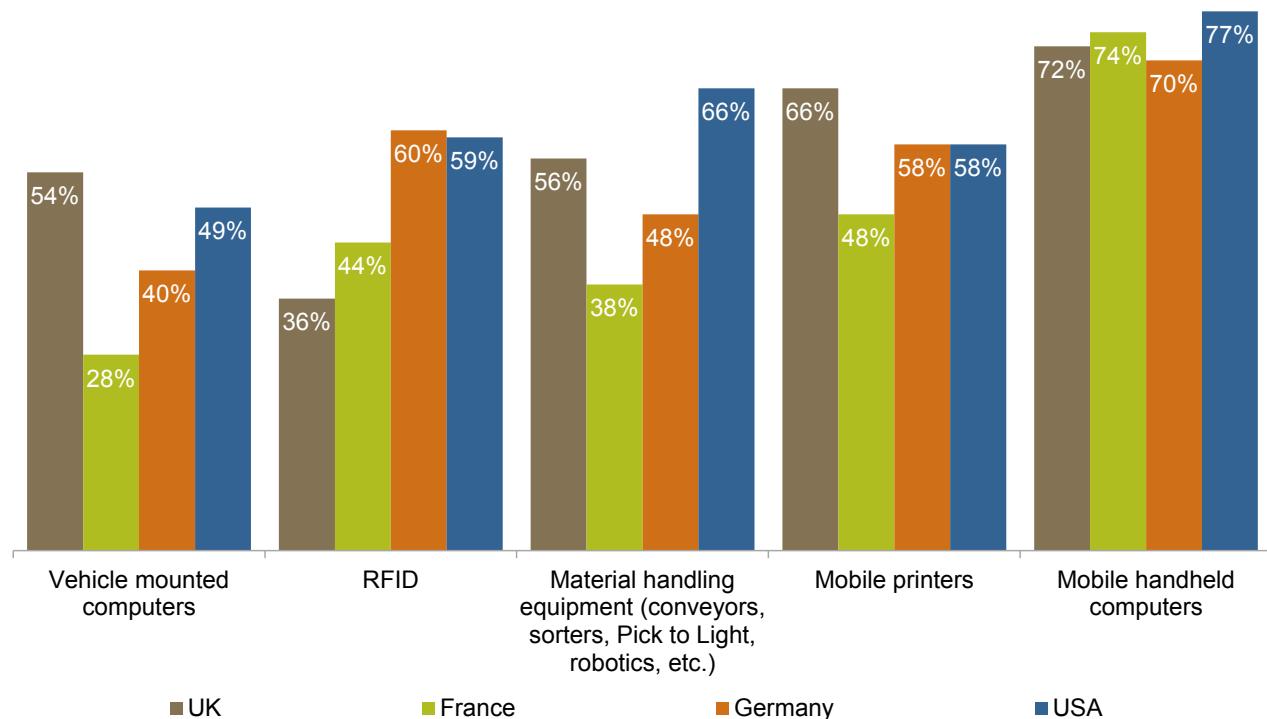
■ Multi-functional devices are critical and ensure workers can be more flexible on a given shift and do more things to improve overall DC performance

■ Intuitive and user friendly devices help to drive employee satisfaction and loyalty

THE DISTRIBUTION CENTRE: TECHNOLOGY AND TRENDS

Other growing technology trends in place to improve efficiency include the use of RFID with more than half (52%) of managers using this within the distribution centre. This is highest in Germany at 60%. Close to a quarter (24%) of all managers currently use Voice-directed working, while mobile printers also represent a popular choice, with an adoption rate of 58%.

Which of the following technologies are currently in use within your warehouse/distribution centre?



Adding to investment in technology to increase profits, managers view worker productivity as a significant issue. In most countries, managers regarded productivity and subsequent reduced labour costs, as the most important factor to improved operations.

SUMMARY

Overall, new technology is a top priority across the distribution centre as companies seek to make improvements that will impact the bottom line. Taking the next step to purchasing new technology and implementing new processes is still one that presents a number of hurdles. Knowing where within the distribution centre that technology will yield the greatest return is a key challenge for many businesses, and given the pressure managers face to reduce costs, it's no wonder that many fear making a wrong step. It is abundantly clear however that action should be taken to help stem the significant losses businesses are currently suffering. Whether measured through inefficiencies and hours that are lost (productivity), or through the cost of mis-picks (accuracy), there is significant room for improvement within the distribution centre across the US and Europe.

Encouragingly, with increased use of RFID and Voice-directed technology, as well as growing trends such as 'The Perfect Order' metric and 'HaaS', it's clear that the distribution centre is evolving as managers seek new ways to keep ahead of demand and streamline costs wherever possible. Whilst most managers face similar challenges when it comes to decisions around implementing new processes and technology, it is clear that unless action is taken these are the operations that could find themselves lagging behind.

Intermec understands this and has more than 40 years of hands-on expertise partnering with Fortune 1000 companies to improve workflow performance and unlock bottlenecks and inefficiencies to accelerate the flow of business-critical information across the supply chain. We invite you to visit us at www.intermec.com/results and learn more about how you can start seeing a greater pay-off in the future.

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