

Dropped Sessions: **The Hidden Productivity Killer**

Session Persistence Report 2024

This report details warehouse worker's perception of the unseen issue that directly impacts the productivity and bottom line of your warehouse.

This report examines the underexplored issue of dropped sessions within warehouse environments and analyses the impact they may have on your operational productivity, employee morale, and bottom line.

DROPPED SESSIONS

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Dropped sessions occur when a connection is lost between the device a warehouse worker is using and the backend warehouse management system (WMS), causing the worker to lose access to the workflow task they were engaged in.

The findings from the survey provide warehouse managers and technology providers with valuable insights into how they can address this challenge, ensuring that their investment in technology accurately translates into improved productivity, accuracy and a more motivated workforce.

THE COST OF DROPPED SESSIONS

Dropped sessions should no longer be considered “part of the job” when working in warehouses and should be called out for what they are – productivity killers and financially damaging for the warehouse.

Every time a disruption occurs – every time there is a dropped session – workers find themselves logging back into systems, re-entering data, or even losing work entirely.

Hours per shift can be wasted, costing money, delaying work and potentially even leading to missed deadlines – which can result in large financial consequences.

FINANCIAL IMPACT

Dropped sessions cost a business an average of £13.02 per worker per day. A warehouse with 50 workers would lose £650.91 per day and as much as £160,000 per year because of dropped sessions.



~£160K
PER YEAR



£13
PER DAY

As well as the immediate productivity and financial implications of dropped sessions, there are long-term issues of the effect on morale and overall job satisfaction of the warehouse workers. In a time of acute labor shortages – the US Chamber of Commerce the ‘America Works’ report¹, states that there are unprecedented challenges trying to find workers to fill jobs – keeping hold of good staff is vital. No warehouse can afford to lose experienced workers and face an endless cycle of training new staff.

¹ US Chamber of Commerce: The America Works Report

The Financial Impact of Dropped Sessions

We asked warehouse workers how often they experience dropped sessions and how much working time they lose to fixing them. We also asked how often they need to get additional support to resolve the issue, such as IT or managerial personnel. Based on the answers we are able to calculate the financial cost of dropped sessions to a warehouse.

Time spent resolving a dropped session obviously means lost productivity, but this is what that means for your bottom line.

The Cost of Workers' Time

Our survey told us that warehouse workers spend an average of just over four hours per day using a handheld rugged device in the warehouse. During that time, they experience an average of just over two and a quarter dropped sessions. 65% of workers said that it takes them between ten and 30 minutes to resolve a dropped session and get back to work. All of which equates to an average of 50 minutes per worker, per shift resolving unnecessary dropped sessions.

If we work on an hourly rate for UK warehouse workers of £12, then the average cost, per day, to your business of resolving dropped sessions is **£10.02 per warehouse worker**.

Management Time Costs

However, as we know, there are lots of times when workers cannot resolve a dropped session themselves and need to involve the IT department or a supervisor. In fact, 52% of workers said that they need to ask for support.

Based on pay rates of £15 per hour for IT support and also £15 per hour for supervisors and an average time of 10 minutes per issue, this adds an additional £3 cost per worker to the business every day to deal with dropped sessions.

What This Means for Your Business

Our survey shows that dropped sessions cost a business an average of **£13.02 per worker per day**. That is a cost that you don't see because people still look busy resolving the issue.

For some, a hidden cost of £13 may not seem that much in isolation. However, if you have a warehouse with 50 workers, you are losing **£650.91 per day**, or over **£160,000 per year** because of dropped sessions. That is only the time cost, this doesn't include the cost of missed deadlines due to the lost productivity.

Dropped sessions clearly have a huge financial impact on supply chain businesses.

DROPPED SESSIONS AFFECT PRODUCTIVITY

The key reason that dropped sessions are so costly for warehouses is due to the significant impact they have on productivity. Dropped sessions are more than just a minor inconvenience – they're a significant roadblock for warehouse management. The survey data paints a vivid picture of the impact these interruptions have.

Meeting Deadlines

Over half of the workforce (52%), reported that their productivity takes a major hit due to these disruptions. A staggering 84% of warehouse workers face at least one dropped session per shift. UK workers have it even tougher, with 87% experiencing this frustration. In fact, almost every warehouse worker using a device on their shift is guaranteed an unwanted break in their workflow, every single day. And for nearly a third of these workers (31%), this isn't just a daily nuisance, it's an hourly one.

Meeting deadlines is crucial in the warehouse environment. Here, time is not just money, it's the pulse of the entire operation. Yet, 44% of respondents admit that dropped sessions impact their ability to meet these all-important deadlines. It's a domino effect: missed deadlines lead to delayed shipments, which lead to negatively-impacted customers. In the world of logistics, customer satisfaction is vital to success. These survey results do not bode well for warehouse management.

Time Wasted

Eight out of ten workers reported that resolving a dropped session takes at least ten minutes. For an unfortunate 16%, it's a minimum of half an hour spent wrestling with tech issues instead of accomplishing tasks in a workflow. While over 30% of workers say that they experience session drops at least once an hour.

Dropped sessions are more than a tech glitch; they're a productivity plague, eating away at valuable working time and employee morale. The message from the warehouse floor to management is clear - these aren't just dropped sessions, they're dropped opportunities and dropped efficiency. For workers on incentive based pay, they mean dropped income and for warehouses they ultimately mean dropped profits. It's time we listen to warehouse workers and act.

The Supply Chain Industry is Under Pressure

Dropped sessions, and the damage they cause to productivity, efficiency and morale, are so important because the sector is under so much stress at present. The demand for space and services has skyrocketed,

largely due to our collective shift to online shopping during the pandemic. In 2020, when the pandemic began, 87% of UK households made purchases online. By 2022, statistics indicate that the vast majority of consumers preferred online shopping. E-commerce is booming, and it is a trend that is here to stay, with online retail spending in the UK expected to reach £75 billion by 2024².

In the US, e-commerce sales in the fourth quarter of 2023 accounted for 17 percent of total sales. Total e-commerce sales for 2023 were estimated at \$1,118.7 billion, an increase of 7.6 percent from 2022³. These figures indicate a massive change in consumer behaviour in a relatively short time. The pressure is clearly on the warehouse sector.

84%

of warehouse workers surveyed reported at least one dropped session per shift.



The Drive for Accuracy

Under this kind of pressure, warehouses are scrambling not just for speed and efficiency, but also for accuracy. The unpredictable market conditions have put a spotlight on the importance of getting things right first time. Justin Griffith, Chief Technology Officer at StayLinked, addressed the issue in February 2024 when StayLinked issued its report “[Making Supply Chain Resilience Work](#)”⁴.

Justin emphasised the critical need for accuracy to foster resilience and agility in warehouse operations. “As market conditions continue to be volatile and unpredictable, [this] shows the importance of building accuracy into warehouse operations in order to drive resilience, flexibility and agility through accurate visibility of warehouse operations.”

² The future of warehousing: automation, robotics, and energy efficiency. March 2022

³ US Government Census Bureau, February 2024

⁴ StayLinked Report: Making Supply Chain Resilience Work

Productivity Enhancer or Roadblock

The increased pressure and the drive for accuracy had led to a clear push towards innovation and ramping up the use of technology in the warehouse. Research from Deloitte showed that 96% of executives believe innovation is crucial for growth. The survey conducted for this report echoes this trend, showing a heavy reliance on technology in day-to-day warehouse operations, with nearly three-quarters of responders (73%) using devices for over three hours every shift, which rises to 77% for workers in the US and Canada. Across the whole survey, 29% of workers use a device for more than five hours every shift.

While technology is meant to be a silver bullet, it also presents its own set of challenges. Dropped sessions and technology interruptions are more than just annoyances – they are roadblocks on the path to efficiency, productivity, and growth. As warehouses navigate this high-pressure landscape, it's clear that their technology solutions need to be as robust and reliable as their workforce plans. In a world that's moving faster than ever, there's no room for error – or downtime.



DROPPED SESSIONS BY THE NUMBERS

How much time warehouse workers lose to each dropped session, including all the activities to resolve the issue such as rebooting the mobile computer or handheld terminal, contacting support, or obtaining a replacement.*

5-10 minutes



20%

10-20 minutes



35%

20-30 minutes



30%

30-60 minutes



14%

* 1% of warehouse workers reported issues lasting more than 60 minutes.

BLAME THE DEVICE

Productivity disruption on the warehouse floor is a huge frustration and someone or something needs to be blamed. Let's examine where the finger gets pointed when productivity encounters a digital hurdle because of dropped sessions.

The wide variety of terms warehouse workers use to describe a dropped session gives us a glimpse into their daily frustrations and where they put the blame.



47%

of workers surveyed believe their devices are to blame for dropped sessions.

From “power failure” and “glitch” to “mobile device outage” and “system crash”, these phrases paint a picture of the myriad ways productivity can come to a screeching halt. The terms “abrupt malfunction”, “sudden blank screen”, “mobile device crash”, and “handheld terminal failure” are not just expressions, they are the descriptive frustrations of workers battling with technology that is creating barriers to productivity. The warehouse floor should be a place of seamless efficiency and not one of digital entropy.

Workers Blame Hardware

Nearly half of warehouse workers surveyed (47%) are looking squarely at their devices as the culprits of their lost productivity. In the US and Canada that sentiment is even stronger, with over half (54%) blaming their handheld devices for the interruptions.

In many ways this is an understandable worker reaction, however, it is a completely inaccurate conclusion. This misattribution should make concerning reading for device vendors. Vendors who pride themselves on designing handheld computers that are built to withstand harsh environments and to maintain connectivity in the most extreme conditions, are being blamed by their users for disruption to their workflow, according to the survey data.

Following the device, the next suspect to be blamed for a dropped session is the network, with 31% of workers thinking network issues are the root of their session persistence problems. In a distant third place, far behind the leader, software gets blamed by 21% of respondents for the disruptions.

Management Blames Hardware

Interestingly, it's not just the warehouse workers who are eyeing their handheld computers and scanners with suspicion. Management is also quick to point at the hardware with nearly a quarter of warehouse workers (24%) believing that their managers would carry out a tech refresh as the go-to solution for these dropped session dilemmas.

It's Not Hardware

As experts in this sector for more than two decades, we've seen that more often than not the culprit for a dropped session is not the hardware, but the software. Terminal Emulation (TE) software connects the handheld device to the WMS. Dropped sessions are simply a result of connectivity failures in the TE workflows between the handheld devices and the WMS.

Many warehouse management teams have been conditioned to accept dropped sessions as an inevitability, that all TE software works in this way. However, dropped sessions are entirely preventable if they are running TE software that is designed to deliver seamless sessions. Instead, according to the warehouse workers, warehouse management often incorrectly assumes that if there are issues of connectivity in supply chain environments, then one way it will be solved is with new hardware.

For the warehouse, this is simply kicking the can down the road. Although possibly not planned for another three to five years, it is believed that a hardware update will resolve the dropped session issue, so why look for another solution in the meantime. It also leaves the blame for dropped session firmly on the hardware.

For device manufacturers this means that they are likely to be held accountable for something for which they are not responsible. In reality, the hardware should not take the blame for a software issue, but frequently does. Hardware manufacturers might consider implementing software that minimises the likelihood of their devices being associated with issues such as dropped sessions.

RESOLVING THE ISSUES

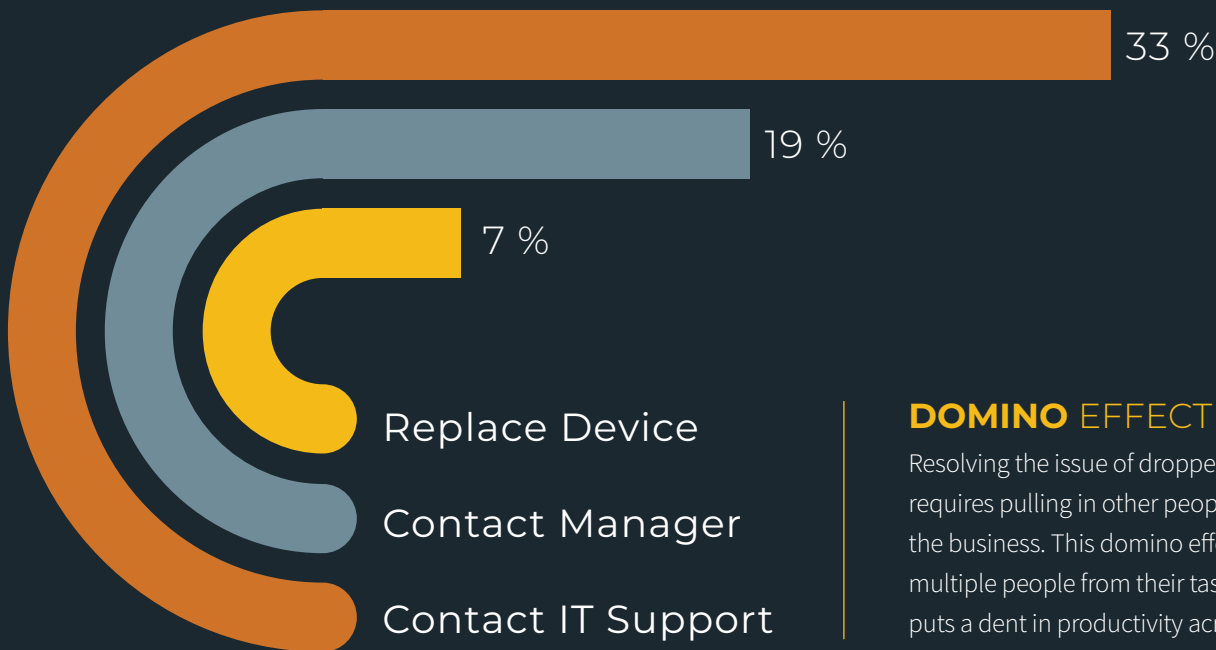
When it comes to getting back on track after a dropped session, some warehouse workers employ a quick fix method to get their devices working again. A small segment of the workforce (15%) is able to simply log back in after a dropped session, while 26% use the classic technique of turning the device off and back on again.

While simply logging back in can save time and allow the worker to get back to work, what isn't known is whether data has been lost in the process. The user may not even be aware of lost data, but it could result in a change to their workflow, prevent an order from being completed properly, or a number of other issues for the warehouse.

Disconnections will happen in any warehouse, what is important is how much disruption they cause. The right kind of software, allows the worker to just pick up again from where they left off. The wrong kind of software, doesn't allow this, meaning the worker loses their transaction and needs additional support to continue.

SUPPORT NEEDED

Nearly 60% of all warehouse workers surveyed report seeking help from other sources to resolve dropped sessions.



DOMINO EFFECT

Resolving the issue of dropped sessions requires pulling in other people from around the business. This domino effect diverts multiple people from their tasks, which in turn puts a dent in productivity across the board.

Support Needed

The findings from our survey reveal that the majority of workers—nearly 60%, in fact—have to seek help elsewhere to resolve these IT issues with:

- **33% contacting IT support for help**
- **19% having to involve their manager in solving the issue**
- **7% needing to leave their work area to grab another device**

All of these approaches are time consuming activities. However, this issue isn't solely about the time required to resolve it; it's also about the subsequent chain reaction it triggers. For many warehouse workers, resolving the issue of dropped sessions requires pulling in other people from around the business. This domino effect diverts multiple people from their tasks, which in turn puts a dent in productivity across the board.

As well as getting the worker back to productivity, a dropped session will often result in needing to update the WMS. If a session drops then a partial transaction is recorded in the WMS. The worker can't pick up and carry on, so the incomplete transaction is abandoned in the WMS. A data administrator is needed to reconcile the WMS – yet more additional time and cost wasted due to dropped sessions.

Are Dropped Session a Serious Problem?

But here's where it gets interesting - when it comes to addressing the problem on a broader scale, there's a bit of a disconnect between warehouse workers and warehouse managers. Almost half of the workers feel that warehouse management aren't taking the issue as seriously as they should. Staggeringly, over 45% believe management either dismisses the issue as a minor interruption (29%) or, worse, assigns the blame to the workers themselves (17%). In the US and Canada this sentiment jumps to over half (54%) of workers. In the current climate of acute labor shortages, management cannot afford for their warehouse workers to be unproductive and feel disheartened about their role.

The Verdict: Dropped Sessions Need to Be Addressed

So, what is the takeaway for management? It is clear that while individual fixes might patch the problem temporarily, there's a larger conversation to be had about recognising the true impact of dropped sessions. It's not just about the time lost in the moment, it's about the cumulative effect on productivity, morale and ultimately, as we have shown, the company's financial performance. If the goal is to optimise efficiency and productivity, the survey data suggests that warehouse management and warehouse workers need to collaborate on a solution that addresses the root of the problem.

TIME TO CHALLENGE THE NORMS

It's clear from the survey findings that dropped sessions and their impact on warehouses mean they are a huge hidden cost. They are a significant roadblock to productivity, a source of frustration for workers who feel the direct hit on their efficiency and productivity and result in a significant direct cost to the business. Despite this, there's a gap in perception at the management level where the issue is not treated with the gravitas it deserves.

This disconnect suggests a deeper problem than technology glitches. It's an issue of management's unawareness, unwillingness, or inability to act and a reluctance to challenge the accepted norms.

Dropped Sessions Are Not Inevitable

Dropped sessions, too often seen as a mere technological inevitability, have been wrongly accepted as part of daily work. When productivity has taken a noticeable tumble, the response is often to shrug and accept it as "just the way it is". If more action is needed, the next step is often to replace devices, based on the misconception that the hardware is to blame.

However, this approach misses the mark. Replacing the hardware is a temporary, not to mention costly, papering over the cracks. The real issue is to understand that dropped sessions are, in fact, not the norm and must be challenged each and every time they occur.

Dropped Sessions Diminish Productivity

The survey data shows that warehouse workers feel they are less productive because of dropped sessions. It also indicates that one in twenty workers spend more than half their device time trying to resolve issues of dropped sessions. Each one of these workers can therefore only spend less than half of their time actually working on tasks that are productive. This is a massive productivity killer and should not be considered the norm.

Dropped Sessions Reduce Worker Morale

At a time when labour shortages are still an issue in the supply chain industry, anything that reduces worker morale needs to be challenged. According to the research, 60% of workers have to leave what they are doing and engage a third party to resolve the issue, or find another device. For 16% of warehouse workers, the process of resolving a dropped session takes over 30 minutes to resolve every time the issue occurs.

Dropped Sessions Are Not Caused by Hardware

The research has also shown that workers think hardware is to blame when their session drops. They use phrases such as “mobile device outage” or “handheld terminal failure” to describe what has happened. The data also shows that nearly a quarter of warehouse workers (24%) think management will attempt to resolve the issue by replacing the hardware.

As evidenced by the research, the problem is not with the hardware. This misconception is another ‘norm’ that needs to be challenged.

Dropped Sessions Affect Your Profits

The time that is required, by both the warehouse workers and their supervisors and IT support, to resolve dropped sessions is time that is spent on non-productive tasks. Dropped sessions take your workers away from their workflows. Dropped sessions cost you money.

We have calculated that cost as **£13.02 per worker**, per day. With a 50-worker warehouse, the direct impact to profits is **£650.91 per day** and could be as much as **£160,00 per year**.

Those calculations do not take into account multiple other factors that may be specific to your warehouse: penalties for missed deadlines, or the cost of overtime to make sure you hit the deadlines, for example.

There is a Better Way

When accepted norms are challenged, companies can often find a new and better way to move forward. For warehouse management, it’s about fostering a culture that refuses to settle for less, recognising the value of the workforce, and committing to making the changes necessary to support them. By addressing the root causes of dropped sessions, organisations can build a level of efficiency and morale that matches the highest ambitions of the most modern warehouse.

The journey towards a more productive, less frustrating work environment begins with recognising the accepted norms that need to be challenged when it comes to technological issues, and recognising that there’s a different way of doing things, a better way. The time to embrace that change is now.

See how StayLinked can improve the speed, reliability, and productivity of your enterprise with the most advanced terminal emulation solution available.

APPENDIX

This survey was undertaken by The Essential Agency, on behalf of StayLinked, in March 2024.

The report sought to understand the impact of dropped sessions on warehouse workers in the UK, US and Canada. Did these workers know what a dropped session was? Did they feel that dropped sessions were a problem? How did they feel that management reacted to dropped sessions?

To undertake the survey we hosted an online questionnaire and invited warehouse workers to complete it. The workers were incentivised with a £10 / \$10 gift card sent to the first 50 respondents in the UK and the first 50 respondents in the US / Canada.

A total of 205 surveys were completed, 83 from the US / Canada and 122 for the UK.

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