

The benefits of digitalizing container operations

Phase 1: Book and Prepare

- Save 8 hours per week by automating 3 processes
- Get back 4 full working days per month
- Harmonize human + machine in freight forwarding

April 2023



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Foreword

The shipping container is one of the most revolutionary inventions of all time, dating back to the 1950s. Yet not much has changed about it since, including the manual and untransparent operations around it. It seems that many longstanding sea logistics companies are hesitant to digital transformation, even if it would decrease costs and improve workflow in the long run.

At Container xChange, our goal is to simplify the logistics of global trade. Naturally, we wanted to find out the value that digital tech tools bring to the industry and quantify and communicate that value to our stakeholders.

We're also built on transparency. In this report, we'll guide you through our brainstorming and research methods, exhibit our survey results, and provide first-step solutions for players who are ready to gain a competitive edge and start digitalizing their container operations.

We hope you enjoy this exploratory research report from us.

The current state of digitalization

Digital adoption within the broader realm of ocean logistics has indeed commenced and currently the industry is experiencing a surge in third party logistics (3PLs). Still, there's a huge mindset gap between digitally savvy companies and their stagnant counterparts – among many other roadblocks to allowing the industry to scale digitally and seamlessly. In fact, while much of the wider supply chain has been digitalized, container shipping is one industry segment falling noticeably behind.

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I used to joke – though I still do – that if you want to know where container shipping will be next year, look at where every other industry was 15 years ago. The problem is the vessels all run, basically, on Windows 95.

”

– Alan Murphy, CEO and founder of Denmark's Sea-Intelligence

There is much potential to ramp up efficiency in container shipping – even by transforming just one integral process at a time.

In a 2022 article by McKinsey and Company, Casanova et al. states that “a digitalized bill of lading could technically save \$6.5 billion in direct costs and enable \$40 billion in global trade.”



“

Imagine you're a cargo owner in the year 1450. You hand over your goods to the ship that will carry them across the world, and are presented with a bill of lading—a piece of paper stating what you're shipping, where it comes from, and where it's heading.

Fast forward to the year 2022: The world has changed dramatically, but the bill of lading remains relatively unchanged. Today, the bill of lading process is still reliant on the physical transfer of paper records and applies to roughly 40 percent of all containerized trade transactions.

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So why does the bill of lading remain its old-fashioned, physical paper form today? And why isn't this seemingly simple change happening on a more urgent scale?

According to the Digital Container Shipping Association (DCSA), what's holding the industry back is the lack of standardized data, intent collaboration, and end-to-end transparency:

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Digitalization of the bill of lading has been slow and difficult to date, as various stakeholders are involved in the process, all of whom have different interests, needs, and systems—and must be approached individually. In addition, many other documents are connected to the bill of lading process via a multitude of interfaces, so that individual digitalization initiatives may have been dismissed as unattractive due to the limited impact that a single stakeholder can make on its own. The bill of lading also requires acceptance of regulators globally and may seem too big to address by a single private entity. Furthermore, the bill of lading is a document of title and therefore requires the highest possible security standards, over and above e-mail or electronic data interchange (EDI) standards, and this creates additional concerns for all parties involved.

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This is just one of many examples that highlights the revolution gap and incompatibility of individual goals of each player within the industry.

But we can't simply sit back and wait for everyone to get on board. We believe each player should keep digitalization, transparency and collaboration at the foreground of their own aims and goals.

For freight forwarders, there's a chance to take action themselves and start small. We believe there are various opportunities for digitalization along the container operations journey – especially when managing SOCs.



Container operations overview for a freight forwarder

Moving a shipping container from one point to another involves a complex network of players and touchpoints. Throughout the shipping container journey, there are numerous processes and negotiations between the different stakeholders involved.

When operating SOC containers, you need to orchestrate and coordinate more touchpoints than you would if you were simply using the standard COC bundles. The upsides to this are that you get access to more visibility along the container journey, as well as dismantle your dependence on big shipping lines.

Here's a simplified overview of the general container operations journey, from the perspective of a freight forwarder managing SOCs.



And you'd be surprised as to learn how many of these processes remain manual, inefficient, or disconnected in 2023 – for both SOC and COC.



Overview of the Container Operations Journey



Book and prepare

- Step 1: Purchase order:** created between buyer and supplier/shipper of the goods
- Step 2: Hire Freight Forwarder:** Supplier/Shipper hires a freight forwarder to handle the international transport of goods
- Step 3: Incoterms Confirmation:** Freight forwarder confirms incoterms with buyer and supplier
- Step 4: Document Exchange:** Goods supplier provides all the documents necessary for export which will be handled on the shipper's behalf by the freight forwarder
- Step 5: Container Sourcing:** Freight forwarder contacts or sources container partner
- Step 6: Research + Negotiations:** Freight forwarder researches market trends and negotiates terms and conditions with container supplier (including quality, exact location, insurance)
- Step 7: Export Shipment Booking:** Freight forwarder sources or contacts carrier to get a slot on the vessel
- Step 8: Empty Container Release:** Freight forwarder gets release reference, organizes an on-hire survey and trucker to pick up empty container from depot



Execute Departure

- Step 9: Empty Container Move to Warehouse + Document Check:** Container is moved to warehouse / place of goods. (Enter Bill of Lading, Customs Clearance, Export Declaration etc)
- Step 10: Container Stuffing:** Container is loaded with the goods
- Step 11: Container Move to Origin Port:** Freight forwarder organizes full container move to port of origin (Enter THC origin payment + storage charge destination payment)



Ocean Leg

- Step 12: Ocean Voyage:** Vessel travels across the ocean



Execute Arrival

- Step 13: Full Container Offloading at Destination Port:** Container is offloaded at port of destination (Enter POD customs clearance and THC destination payment)
- Step 14:** Full Container Move to Buyer Freight forwarder works with local truckers/ companies to move full container to warehouse/buyer and container is unstuffed



Close / Return

- Step 15: Empty Container Move to Depot or back to Container Supplier:** Freight forwarder organizes empty container move to a depot for storage or return back to container supplier (Enter return references, payment handling including insurance + damage claims)



Interview with digital strategist, Nikolaus Sievers



Nikolaus Sievers began his career as an operator in air and ocean forwarding, and soon realized that the technology offered to support his day-to-day processes were often not very helpful. He became bent on reshaping systems in freight forwarding to allow operational processes to be handled more smoothly and make the life of an operator easier, so that they would in turn be able to better service their customers. With over 12 years of experience in digital strategy, Nikolaus now works as director of Logistics Optimisation Solutions at Solvo.ai.

Q: How/why did you get into the digital strategy space in Logistics?

Supply chains consist of tangible and intangible flows: on one hand you have physical cargo flows and humans handling documents, and on the other you have digital flows of data. The business of international freight forwarding is all about the intersection of people, processes and technology.

Throughout my career, I noticed the disparity of the intersection, and unhelpful technology; too many different systems and screens to look at, and no system guiding or providing any intelligence to support my day-to-day processes and decision making.

Some examples would be the way people keep track of one's shipments, which is often still done based on file paper covers moving across from one tray (eg. waiting for pick up) to another (eg. customs clearance). Another example is the communication and exchange of information between departments and offices involved in handling a shipment. This has in the past and still today happens extremely manual, ie. a vast majority is exchanged via email and using excel sheets. Any of this not going through a system is later not traceable for anybody, ie. processes happening 'in the dark', which also does not allow to improve or automate certain work steps.

Later in my career, I moved to handling and overseeing commercial activities and operations for large key accounts, and realised that also at that scale, a lot was missing or not setup properly, especially with respect to reporting. The data entered into an operating system was not easily accessible in reports, such as from a BI system, either because of missing knowledge or access locally or because of insufficient ways systems were designed and would not allow to extract or extend data at scale.

**Solvo.ai is an early-stage logistics technology SaaS company that helps logistics businesses drive higher yields using AI. As a first SaaS product, Solvo.ai has built a Price Optimisation Engine in collaboration with one of the world's largest 3PL businesses. The solution enables Revenue and Pricing Managers to set optimal pricing strategies that are in tune with the company's business objectives (Revenue, Profit, Volumes etc.), changing market conditions and changing customer buying behaviours.*



Q: Which processes along the container journey would you consider low-hanging fruit to digitalize?

The better you are at recording what your customer wants, the smoother your operations process and the better your customer service. You will be able to setup automated actions only if you record when certain tasks are expected. An automated arrival notice can only be sent to a customer if the contact is recorded in a system. And a vessel schedule only needs to be tracked once if it is maintained as a single entity across all containers and shipments moving on it rather than individually for each shipment.

This is the most simple and basic point to start with, and companies often start failing right here. Disparate systems have their own set of master data, ie. not a single set aligned across order management system (OMS), transportation management systems (TMS) and booking systems – and even within the same system, master data may often not be controlled properly. This is a major source of evil for any process to be controlled or automated and data and service quality to be assured.

Another key process I would consider a low hanging fruit is that of pricing and quotations, for instance the spot rate business. This is an area where recently an increasing volume of quote requests has been impacting freight forwarding operations' productivity due to increased market volatility and customers' uncertainty, hence a need to constantly ask for latest rates again and again. These requests are mostly handled through manual processes and following an inside-out approach, meaning cost plus. People will spend an enormous amount of time chasing latest charges and trying to obtain buying rates, but buying rates often update quickly and differ by the time of shipping from what when it was quoted.

A further area to improve is the booking process, where shipper bookings are received by a logistics service provider (LSP) and carrier bookings are placed according to the details of the respective shipper booking. Most LSPs follow a process in which shipper and carrier booking are fixed to one another and changes to either would require to pass the changes to the other accordingly. If a cargo ready date of a shipment booking changes for instance, the linked carrier booking may need to be cancelled and postponed. There is a big opportunity in decoupling shipment booking from the carrier booking and flexibly linking them up based on a set of parameters and re-linking them whenever changes happen.

Q: Any manual processes you experienced first-hand that you were shocked to see are still in use? Can you give us an example?

One example would be how ocean carriers operationally interact with freight forwarders. You would expect that large ocean carriers are integrated with large freight forwarders, or would exchange information via a platform for carrier bookings. In reality, most components are exchanged manually, this goes for the procurement process where rate sheets are mostly on excel or word based, as much as for the invoicing processes where invoices are received in hard copy via mail or pdf via email, or even for schedule events where a majority is provided electronically, but often service info or vessel schedules are only accessible on websites or on excel sheets updated and exchanged locally.

A critical part for me is the ocean carrier booking process, where carriers and forwarders exchange booking request and acknowledgement via EDI (or now also API), and the booking confirmation would then be provided as a pdf via email or to be downloaded from the carrier's portal. These pdfs are often not even in a machine-readable format, and structure of them



varies locally based on branch or even department and changes over time. This applies mainly for Asian origins, a key portion of global traffic, and causes for major blockers for automation and improved transparency of booking shortfall and space performance in the booking process. Other processes that I am bit shocked to find still predominantly manual in nature would for instance be the tracking of vessel ETAs or transmission of handover milestones at warehouses or terminals. You would expect that an ocean carrier transmits a latest ETA for a vessel a single time to an LSP, either directly or via a visibility platform, and that this would automatically update shipment files in that LSPs operating system. However, many operational staff in LSPs will still rely on individually checking carriers' websites for vessel dates, updating the system manually. Another example would for instance be the receiving process of single shipments at a CFS warehouse where they get consolidated into a container. You would expect the shipments to get scanned upon receipt and that status to become available in a system, in reality, warehouses are often operated by 3rd parties of which a warehouse staff will record the receiving on a sheet and only later in the day copy that into an excel sheet that will then be sent to the LSP for them to copy past this information into the core operating system. This causes a massive time lag and leaves room for error. Same goes for the transmission of POD status, ie the proof of delivery at the final destination of eg. a full container. This is often handled by a subcontracted trucking company that is not well connected with the LSP that organises the transport and has to report this critical status back to a customer.

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Q: What digital roadblocks have you encountered in the industry?

A key issue for me is a lack of focus on processes and decision. Solutions are built with the system and not the process in mind, ie. a system is built and the process needs to somehow function around the system and adjusting to its constraints. It should be the other way around, where a process is analysed and designed and then a system is developed to support that process (as we supported in several use cases in my previous company Ssync.io). Same goes for solutions that are designed based on data instead of focusing on the decision. People tend to focus on what data is available or easily accessible and then build models that the data allows, which then supports some decisions, but potentially not the ones that it would need to support. It should be the other way around, where a decision that needs to be supported or automated is at the heart of the solution (as we do at my current company Solvo.ai), and then models are developed to support that decision and then you go look for the data to support that model. And if the data is not there, you need to find ways of bringing it about, either by procuring it or by setting up processes/systems that enable to obtain it.

From a user point of view, another major roadblock is the lack of compatibility of systems with manual processes such as those using excel and emails. Latter are an essential part of the operations process and a key means to exchanging information with internal and external parties. There will always be parts of a system that do not allow users the full extent of a function they require and they will fall back to using an excel spreadsheet. Instead of prohibiting this, systems must rather be designed in a way to embrace this use of additional



means to maintain and exchange information. Systems should be built to act in a compatible way, ie. create and intake data to/from excel, emails and pdfs.

Q: We could never take the human out of freight forwarding. How do we synthesize human and machine, and still provide a satisfactory customer service?

There are different ways of achieving this. One key element for me is to make manual processes eg. from excel and emails compatible with systems and automated processes. Customers for instance do not want to be forced to use a portal and prefer to send an email or provide or receive the data in an excel spreadsheet, so why not let them by designing systems that automatically read emails or extract data from spreadsheets.

Another important component for me is the use of RPA (Robotic Process Information), which needs to be better integrated into an end-to-end process and requires to let some freedoms to local parties. In large organisations, you will always have locally deviating tasks that may not be covered by global processes and systems or automations. Ideally, these should be allowed to be automated locally, but kept in a low coding platform to be able to make local bots and automations compatible with the overarching global systems. Otherwise, people again fall back to using excel macros and such tools that are completely outside of anybody's control and to not work with structured databases.

A key term for me in this context is 'Decision intelligence' which is a new category recognised by Gartner. This refers to the use of advanced technologies such as AI that are being used to support humans in their decision-making process. It is important here to focus on supporting the human with recommendations, not on replacing them. It is therefore key to follow a white-box approach which allows 'explainability' to the user of why certain recommendations are made, and providing a confidence score and details of how this suggestion was derived. A predictive ETA event for instance or price recommendation will only be used by a human if they understand and trust the input, ie. a human must gain confidence in what the system provides.

Q: Do you have a vision or structure for companies to follow as they begin going digital?

Start with basics. Choose a system that has the end-user in mind. Start fixing internal processes before focusing on external customer facing solutions, support your internal staff as they will in turn service the customer. Analyse and define your processes before choosing or designing a system. Go for a modular approach instead of building a static monolith. Buy rather than make, your core business is that of logistics, not a technology provider. Focus on data (master data and data lake, data integration and BI), this is the backbone of everything you do, invest in storing and cleansing your data. Invest in the right people (bridge between IT and business), they are the key to your success.

“*Start with basics. Choose a system that has the end-user in mind. Buy rather than make, your core business is that of logistics, not a technology provider. Focus on your data, this is the backbone of everything you do. Invest in the right people to bridge between IT and business – they are the key to your success.*”



Aim and Methodology

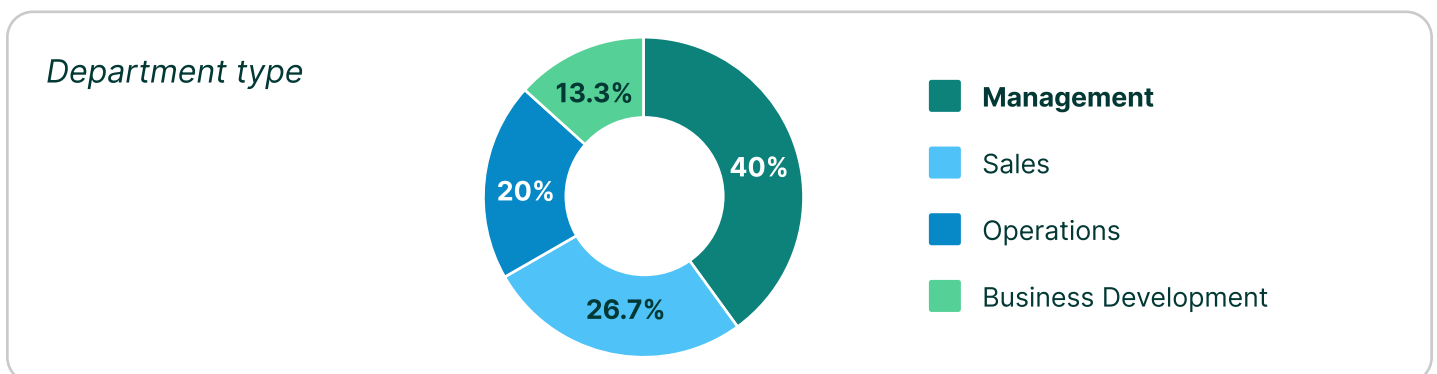
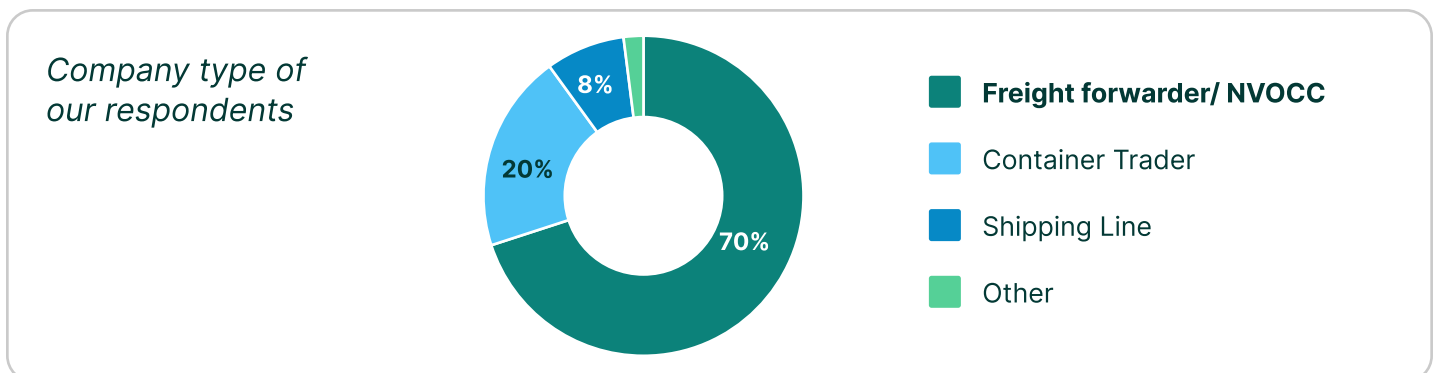
We set out to identify processes along the container operations journey that would be a.) be simple and sensical to digitalize and b). bring value or exhibit return on investment either in time, money or effort.

But being told that something will save you time and money is old news. How much time exactly? How much money, and within what processes? That's what we set out to find.

- First, we limited our focus to container logistics – our specialty – from the viewpoint of a freight forwarder.
- Then, we looked at the many touchpoints along the container journey and grouped them into phases.
- We decided to only spotlight one of these phases, depending on which phase could exhibit best a quantified value (however, starting at the beginning made most chronological sense.)
- Keeping the above points in mind, we wanted to find a simple-to-understand and universal way to quantify the value of said digitalized processes.

To conduct our research, we targeted and surveyed 1000+ logistics professionals (including our own clients and website traffic) via LinkedIn polls, a Typeform survey and personal interviews over email or Zoom.

Here's a quick snapshot of our total respondent pool:



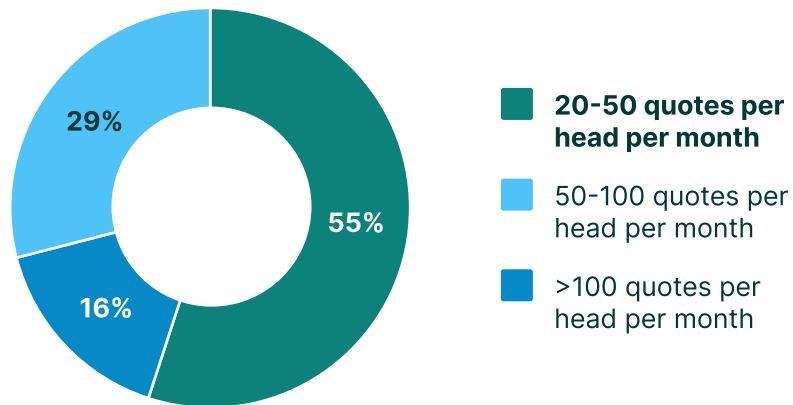
Quantifying return on investment

ROI can be calculated in many ways, usually through associated cost-savings, efficiency gains, improved customer service, or actual revenue growth through increased sales.

In a recent article by JOC.com, Raghav Viswanathan (CEO, Freightify) suggested a better way to measure the ROI of digital Logtech tools by looking at growth in two separate strands, namely operational and customer-facing. A suggestion was to look at the difference of profit per employee (operational) and quotations per employee (customer-facing) before and after adopting a specific digital tool.

We tested a preliminary question to international logistics players to see if there was noticeable value following the general digital growth made possible by the pandemic:

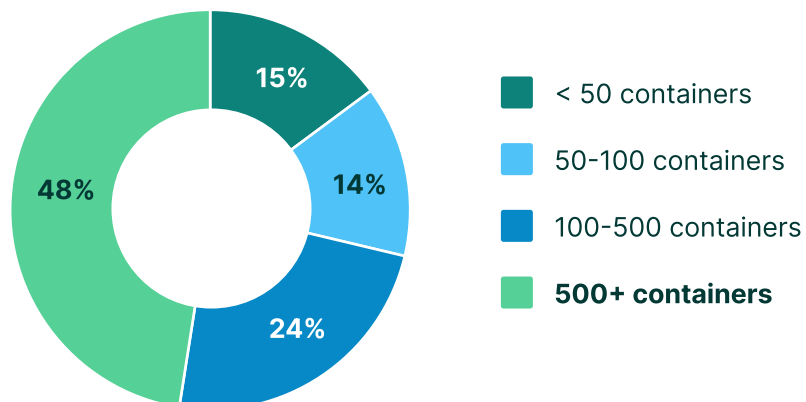
Since 2021, how many more quotes does your team receive online?



We found most people receive 20-50 more quotes per month today than 2 years ago. But how do you compare this number to when quotes were mostly handled offline?

Then, what about effort? Could we look at operational effort in terms of containers?

How many containers does each person in your operations team handle?



But again, the question was: Could we accurately investigate the growth of containers per head after specific digital tool investment, or is this tied more to subjective operational efficiency and affected too much by size of company, company culture, market demand, and so on?

In the end we chose to move away from using money and effort as a primary quantifying lens, given the current climate and pending recession that would skew the usual profit and business growth estimations.

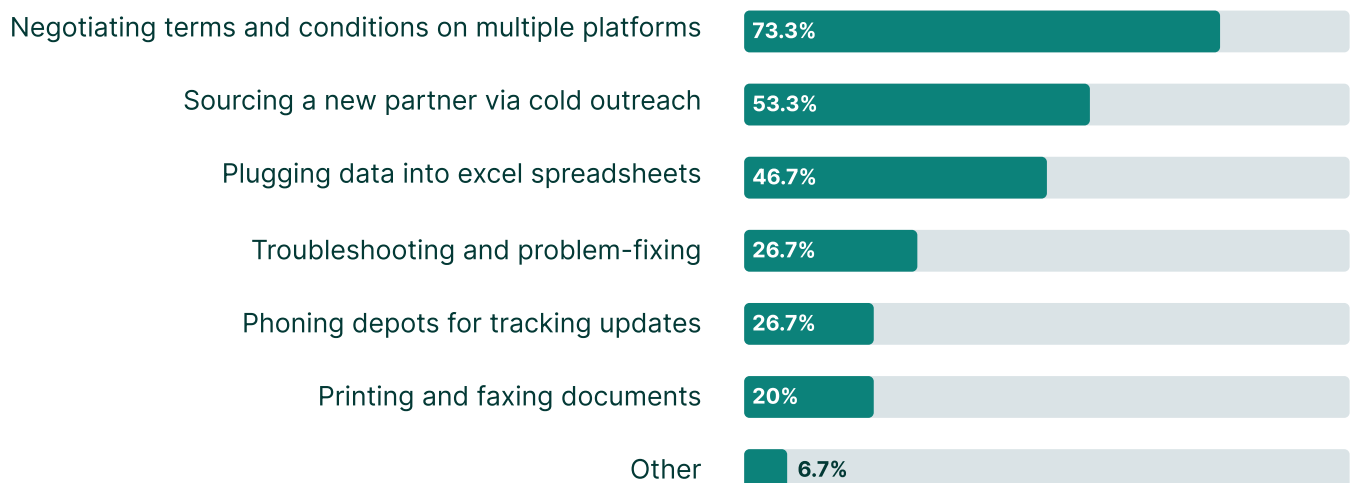
Chosen value measure: time saved

Time was the one factor that seemed easy enough to quantify across any container operation and organization, as well as somewhat liberated from market fluctuations.

And as cliched as it sounds, time can still translate to money. And effort. In fact, it's often the first step to understanding and extrapolating value. And since we're all about simplifying and keeping things transparent, we chose to go with time as our primary value gauge.

One of the preliminary questions we asked container shipping players, was:

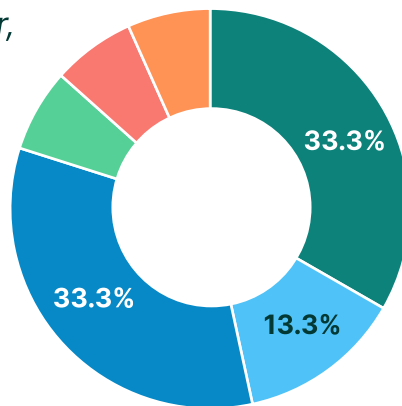
Which of these manual processes takes (or used to take) up most of your time?



Spotlight on Phase 1: Book and Prepare

To get a feel for industry demands and tech tool potential before we began quantifying value along the container operations journey, we asked our digital-adopting respondents on which processes are noticeably saving them time.

Which of these digital functions has noticeably saved you time over older, manual processes?



- Online marketplace for equipment and partner sourcing
- Online chat for negotiating terms and conditions
- Container tracking, release references or live ETAs
- Live data dashboards
- Payment handling and automatic invoices
- Problem fixing (like insurance claims) handled by third-party services

Looking at the top 3 results, we can see where they fit along the container operations processes in phase 1 of the container journey.



Low-hanging fruit to digitalize which can noticeably save time

Phase 1: Book and prepare

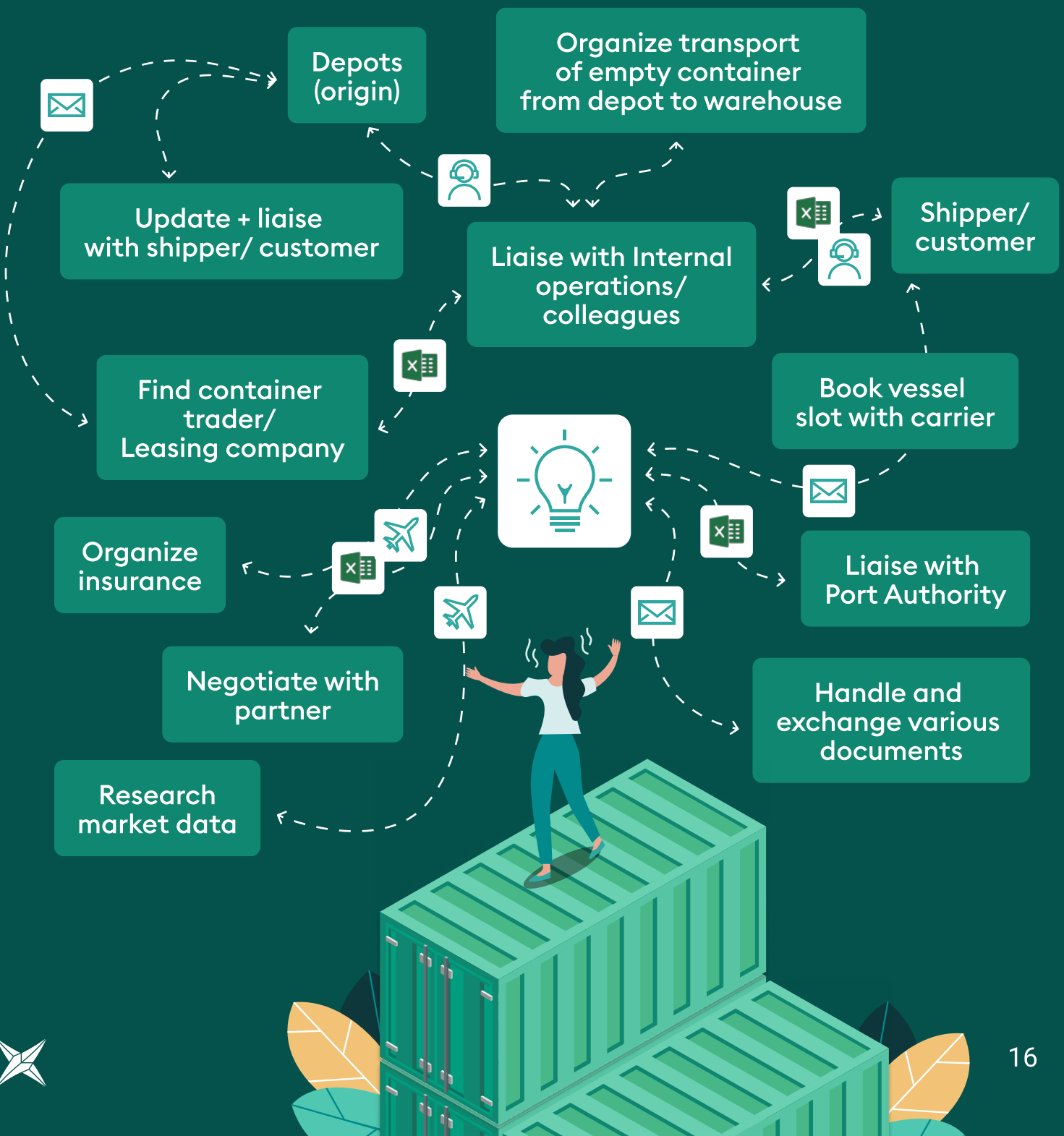
- ◆ Step 1 Purchase order between buyer + supplier
- ◆ Step 2 Supplier/shipper hires Freight Forwarder
- ◆ Step 3 Incoterms Confirmation
- ◆ Step 4 Document Exchange
- ◆ Step 5 Container Sourcing
= *Online marketplace for equipment and partner sourcing*
- ◆ Step 6 Research + Negotiations
= *Online chat for negotiating terms and conditions*
- ◆ Step 7 Export Shipment Booking
- ◆ Step 8 Empty Container Release
= *Container tracking, release references or live ETAs*



Stakeholders involved in phase 1

Like most seeding and procurement phases, the preparation within container transactions is highly important and often involves many back-and-forth conversations, research, administration and documentation.

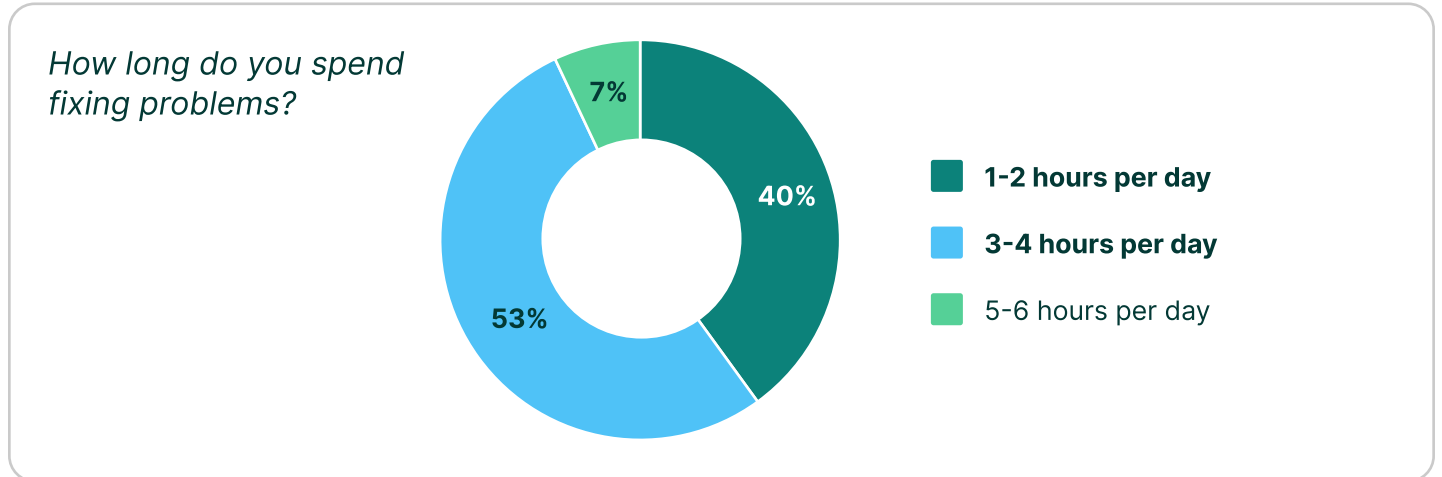
And from the vantage of a freight forwarder who must coordinate, manage and regularly comply with multiple parties, this is even more complex.



Things that often go wrong

Speak to any freight forwarder, and you'll find they spend ages liaising with stakeholders working to solve issues; issues we believe could be avoided or streamlined with the adoption of simple technology.

In fact, 93% of industry players spend almost half of their working day fixing problems.



When procuring a container deal, here's an idea of what some of these problems can be:



Incorrect or incomplete documentation: It's easy for documents sent over fax, mail or email to be misplaced. If the authorities are missing just one of the documents they need (like release references) they can withhold the container or even reject the request.



Miscommunication + misunderstandings: This is especially common in international business or when liaising with a partner who doesn't speak your language. Depending on the depth of these misunderstandings, it can lead to delays in the deal going through or ruined professional relationships.



Vessel schedule changes: Shipping lines might overbook container space, or schedule blank sailings last minute, resulting in a delay in the availability of containers or the need to rebook shipments or store your containers for longer.





Lack of payment or payment delays: If there's a delay or mistake in payment, containers can be withheld or not released.



Different container quality or quantity than what was promised: The container may have suffered damage that wasn't noticed or recorded at the time of its return to the depot, leading to disputes over liability and repair costs.



Unexpected events: Unforeseen events such as weather-related disruptions, port strikes, or equipment breakdowns can also cause sudden delays or container shortages. Anything can happen in our industry!



Digitalization (and timesaving) potential

Step 5

Container Sourcing

= Online marketplace for equipment and partner sourcing

Digitalization potential = Online marketplace for equipment and partner sourcing

Some freight forwarders conduct business using established relationships within a smaller set of partners, but many actively seek out new partners on a regular basis to expand their network and capabilities.

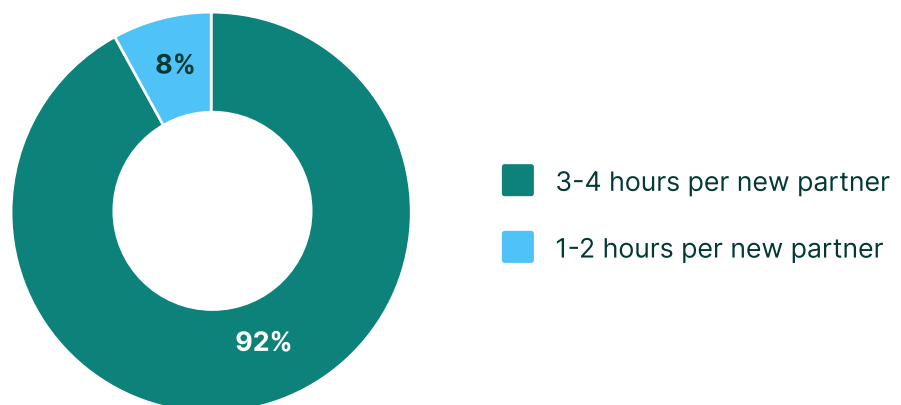
Whenever there's a change in the logistics landscape (COVID-19, worker strikes, container scarcity) it's best practice to source new partners and secure new deals to work around unexpected limitations. And due to their unique position as middleman between carrier and shipper, freight forwarders often have to act and solve problems fast, including making last minute bookings and transactions.

Freight forwarding is also a competitive landscape, with over 100 000 companies in existence today. To ensure they stay competitive and find partners easily, they usually spend copious amounts of time and money attending networking events, chasing referrals, conducting cold outreach via email, phone or LinkedIn, investing in social and marketing strategies, and so on.

Manually: It takes on average 3-4 hours to source 1x new partner

We asked our respondents how long it would take them to source a new partner using manual strategies outlined above, and found that 92% spend an average of 3-4 hours sourcing new a partner without an online marketplace.

How long does it take you to source a partner without an online marketplace?



While we would never vouch to replace in-person networking entirely – as logistics is necessarily human-centred – cold calling and back-and-forth messaging could indeed be replaced by an online marketplace; one you could use to connect, filter and find the best partner for you in just a matter of minutes based on your search criteria.

The ideal digital solution?

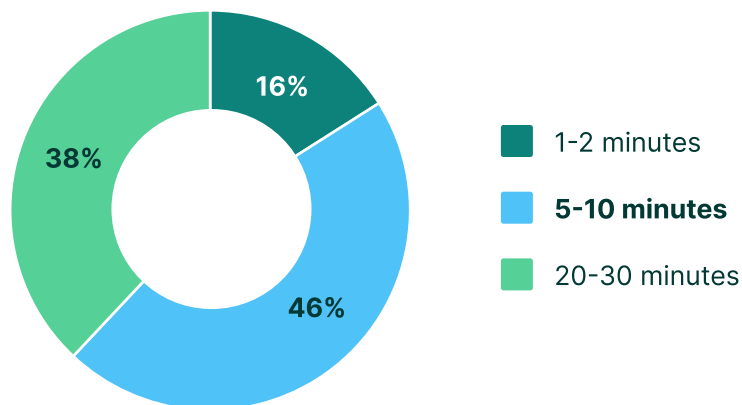
An online marketplace, where:

- *all suppliers and users are connected*
- *you can plug in your own criteria*
- *you can browse deals, peruse companies and conditions (similar to Skyscanner or Airbnb)*
- *partners are vetted and rated by others, so you already know you can trust them*

Digitally: It takes on average 5-10 minutes

We surveyed respondents who make use of tool similar to the one outlined above, and found that 56% of them spend only 5-10 minutes to find a suitable new partner this way.

How long does it take you to source a partner using an online marketplace?



If you could effectively reduce the time you spent researching and outsourcing partners yourself from 3 hours to 10 minutes, you could save yourself 170 minutes per partner.

And if you were needing to find new container deals on a regular basis – let's say around three or four times a month, you could save yourself 11 hours of manual outreach in one month.

Total time saved per partner = 170 minutes

Total time saved in one month = 11 hours*

**Assuming you sourced 4 new partners/ deals in one month*



Step 6

Research + Negotiations

= *Online chat for negotiating terms and conditions*

Digitalization potential = Online chat for negotiating terms and conditions

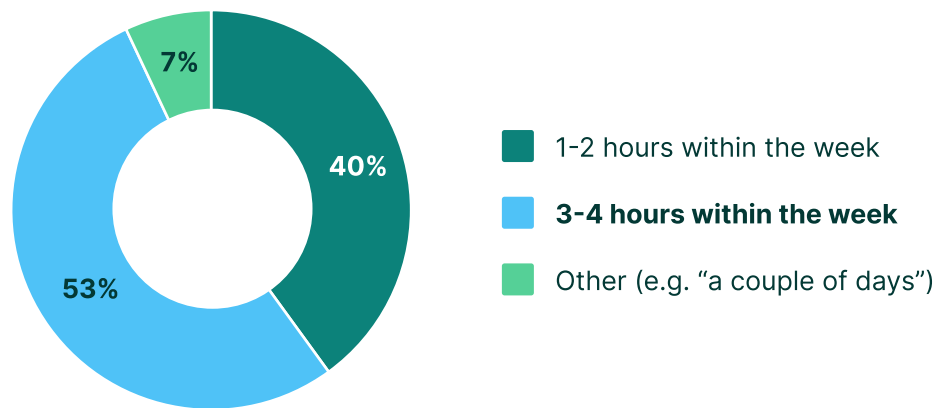
In a pie chart from chapter 1, we saw that 73% of industry players selected negotiating T&Cs on multiple platforms as a task that takes up (or used to take) most of their day. Negotiating mutually beneficial agreements that consider the interests of all parties involved can be a time-consuming process, as it requires careful analysis of market conditions, shipping routes, cargo volumes, and other factors that can impact the profitability of the business. Other factors that can contribute to lengthy negotiations include regulatory issues, legal concerns, and language barriers, particularly in international negotiations.

We asked our respondents how long they spend negotiating with partners using manual or undigitized methods and found that:

Manually: 53% spend 3-4 hours within the week discussing T&Cs with new partner

We asked our respondents how long it would take them to source a new partner using manual strategies outlined above, and found that 92% spend an average of 3-4 hours sourcing new a partner without an online marketplace.

When negotiating T&Cs with a new partner (phone, email, meetings, travel) how long does it take on average?



Of course, some people even spend a couple of days negotiating, especially if they need to travel to meet the new business partner in person.



The ideal digital solution?

An online chat that:

- you can upload your digital documents or necessary data to
- automatically translates what you're typing = a huge time saver when connecting with people overseas
- keeps a record of all the conversations you've had in one place
- is integrated with email as well so that you both don't have to be constantly logged in

Digitally: Using an online chat, it should take only 30 minutes to negotiate T&Cs

Based on interviews with clients, we found they spend a considerably lower amount of time negotiating the deal with their new partners – around 30 minutes on average – when using the chat function and having all communication and details in one place. The automated translation also helps reduce miscommunication and future mistakes, of course helping them save time in the future as well.

Outcome: Reduce 3-4 hours of T&C negotiation to 30 minutes

We asked our respondents how long it would take them to source a new partner using manual strategies outlined above, and found that 92% spend an average of 3-4 hours sourcing new a partner without an online marketplace.

Total time saved throughout the week = 150 minutes*

Total time saved in one month = 10 hours

**Assuming one new partner is communicated with within one week*



Step 8

Empty Container Release

= *Container tracking, release references or live ETAs*

Digitalization potential: Container tracking, release references & live ETAs

Even something as simple as checking if your container is released or picked up from the depot can be a time-consuming process. With so many containers coming in and out, it's a challenge for depot operators to keep track of them all and to ensure that they're properly processed and released in a timely manner.

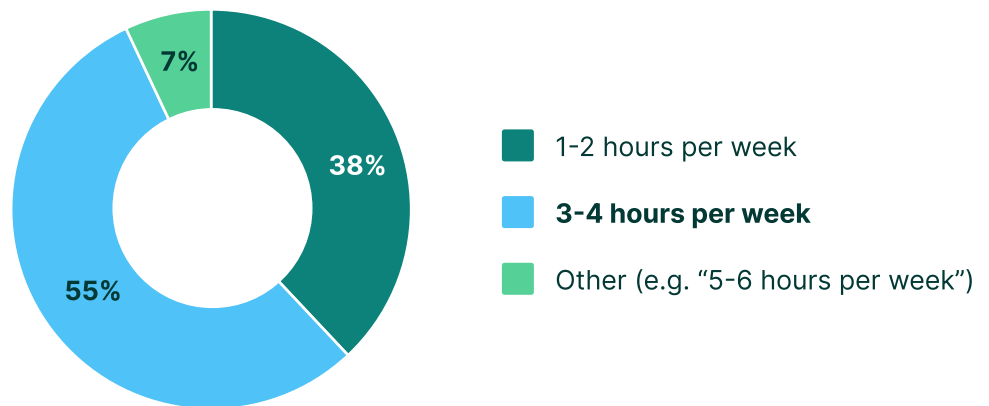
In most cases, container depots will require you to contact them directly to get updates on the release of your container, but some companies are already investing in advanced tracking and monitoring systems that enable them to better manage their operations and communicate with their customers.

Still, many freight forwarders waste time manually liaising with depots that could otherwise be saved through automated updates.

We surveyed our respondents and found that most people are spending around 2-4 hours within the week just phoning depots for an update on their container whereabouts.

Manually: 93% spend 2-4 hours per week contacting depots for release + drop off references

How long would it take you to contact depots for release + drop off references without digital tools?



We also found that many of our customers struggled to keep track of release references when they were sending this information over email. A lost or incorrect reference can lead to your container being withheld and many run-on delays as a result, and this is a use-case that occurs quite frequently.



The ideal digital solution?

A container operational tool that:

- *keeps all your container release references in one place*
- *automatically notifies you on container release ETA*
- *integrates on hire survey and damage settlement*

Digitally: Spend 20 minutes checking up on your container statuses online

There are many container tracking and depot integration tools out there using technology like Internet of Things (IoT) and event-based updates. Most of these take a few minutes to log in, request an update or receive an automated status email.

Based on our research, people seem to spend only a couple of minutes logging in to check their email for live ETAs and upload release references.

The outcome: Reduce 3 hours of container monitoring to just 20 minutes per week

Total time saved throughout the week: 160 minutes*

Total time saved in a month: 10 hours

**Assuming you checked up on 1x container order release per week*



Save 8 hours per week by digitalizing just 3 container operations

Hypothetically, if you could digitalize each of these 3 processes outlined, you could save yourself 8 hours within one week.

This could also be communicated as 90 minutes per day.

And if you repeated this process each week, this could translate to 4 full working days per month.

Imagine you had 1 full day back each week?

How would you spend it?

Most freight forwarders we surveyed said they use unexpected free time at work on reflection and strategy. This free time also allows them to be more responsive, efficient, and competitive in the market which is notorious for last-minute and panicked requests.

Freeing up time is highly valuable for strategic level decision-making as it allows executives and managers to focus on higher-level tasks that can drive the company's growth and success, like setting long-term goals, developing new products or services, and identifying new markets and opportunities for growth.

This can also help to foster a more collaborative and innovative culture within the organization. When employees have more time to engage with their teams and share ideas, they can foster a more creative and innovative environment that can lead to new products, services, and business models.

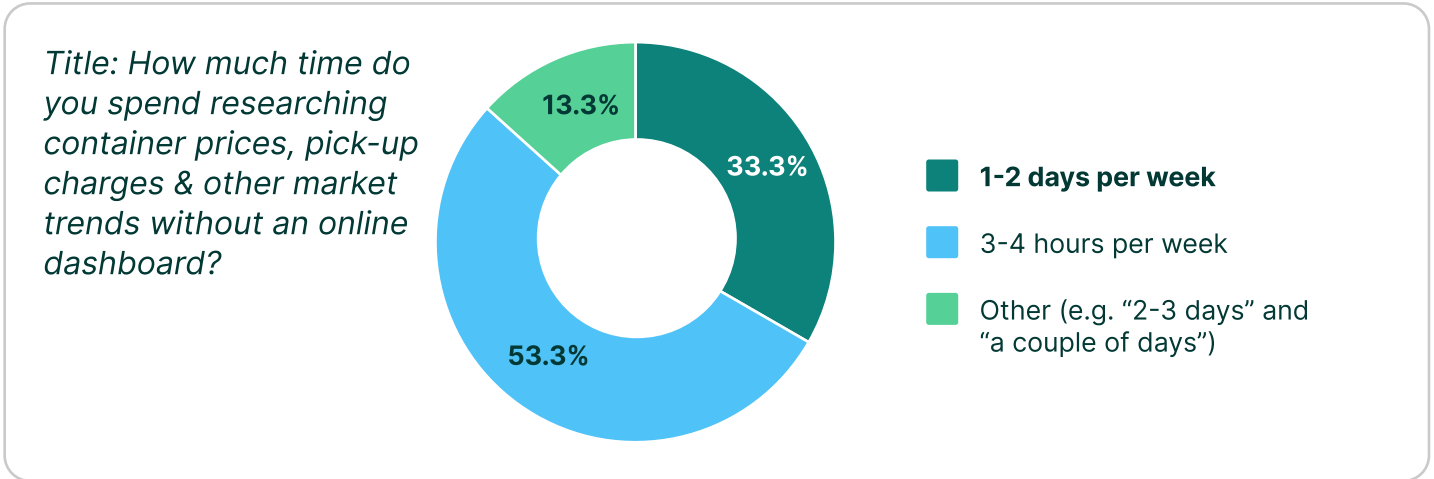
In conclusion, freeing up time is one of the most valuable ROI measures and can lead to a multitude of growth for your team in terms of profit, strategy, efficiency, and company culture.



Other processes that just make sense to digitalize:

Here are some other low hanging fruit along the full container operations journey.

✗ **Research on multiple sites** → ✓ **Live-data dashboards**



What if this was replaced with a live data dashboard that only took you a couple of minutes?

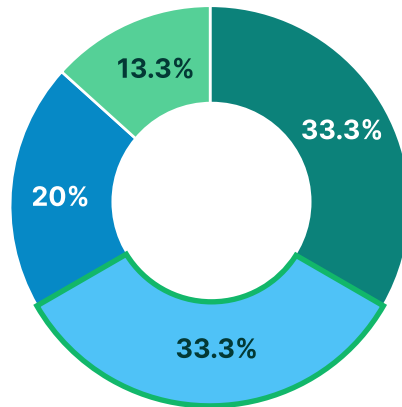
In addition to saving hours in your work week, here are some other pros:

- **Improved visibility:** Live container data dashboards provide a centralized platform for tracking containers and shipments in real-time, providing greater visibility into the movement of goods across the supply chain. This can help companies to identify any issues or delays and take corrective action quickly to minimize any impact on delivery times.
- **Reduced costs:** By monitoring container data in real-time, companies can identify inefficiencies and areas for improvement, allowing them to reduce costs associated with transportation, inventory holding, and other logistics-related expenses.
- **Better decision-making:** Live container data dashboards provide real-time insights into container logistics operations, enabling executives and managers to make more informed decisions about inventory management, transportation routes, and other key aspects of the supply chain.



✗ **Manual payments** —→ ✓ **Automated payment handling**

What's the biggest downside of manual payments?



- It's expensive for foreign bank accounts
- It's time-consuming, taking around 10 minutes per transaction**
- It's frustrating to always follow up with people
- It's risky across borders

But automated payment handling in contrast can provide several benefits to companies, including:

- **Increased accuracy:** Automated payment handling eliminates the risk of human error, ensuring that payments are processed accurately and on time. This can help to avoid late fees, penalties, and other charges associated with delayed payments.
- **Faster processing times:** Automated payment handling can process payments much faster than manual methods, allowing companies to pay vendors and suppliers more quickly and efficiently. This can help to build stronger relationships with suppliers and avoid disruptions to the supply chain.
- **Improved cash flow management:** Automated payment handling provides real-time visibility into cash flow, allowing companies to manage their finances more effectively. By having access to up-to-date information on cash inflows and outflows, companies can make more informed decisions about investments, debt management, and other financial matters.



Digital solutions and LogTech tools for freight forwarders

If you are interested in digitalizing these processes and more along your container journey, here's a quick guideline of which companies and tools you could employ to digitalize specific phases and operations.

Disclaimer: Of course, there are hundreds more out there and it's a competitive landscape. These are just a few companies we know and can recommend.

Recommended digital solutions along the container journey



Book and prepare

Step 1: Purchase order



Marketplace connecting shipper + freight forwarder

Step 2: Shipper hires Freight Forwarder



Instant and competitive freight quotes

Step 3: Incoterms Confirmation



Offers a best in service customs management and geocompliance feature

Step 4: Document Exchange

Step 5: Container Sourcing



Offers a neutral marketplace to search partners and secure deals



Step 6: Research + Negotiations



Offers an Insights product for live market data and an integrated chat function for negotiations

Step 7: Export Shipment Booking



Promotes scalable, transparent shipping management and supports to unify your tech stack

Step 8: Empty Container Release



Provides automatic depot updates, like release references and ETAs



Execute Departure

Step 9: Empty Container Move to Warehouse + Document Check



Offers transport consolidation that results in cost saving, increased efficiency and help with emission reduction



Optimize your FTZ or CFS operations with built-in reporting, form automation etc

Step 10: Container Stuffing



Freight forwarders can calculate free and occupied cargo space



Minimize loading and unloading time of containers by 45 min – 60 min per loading

Step 11: Full Container Move to Origin Port



GPS vehicle tracking, ePOD templates, QR scanner for load control



Fleet monitoring solutions



Ocean Leg

Step 12: Ocean Voyage



Helps you make smarter routing decisions, identifies containers at risk of D&D charges



Their GoShipment product uses cloud documentation and created customised workflows & you can use the free port congestion tool to check port status too





Execute Arrival

Step 13:

Full Container Offloading at Destination Port

KLEARNOW.AI

Integrated with customs & helps eliminate manual data entry

awake.ai

An AI-enhanced digital platform connecting ship operators, ports and cargo owners

Step 14:

Full Container Move to Buyer

 **RailState**

Delivering unbiased, third-party data on freight railway network conditions, performance, priority, and volume



Close / Return

Step 15:

Empty Container Move to Depot or back to Container Supplier

 **Change**

Drop off references, insurance, automated payment handling



About Container xChange

The online platform for container logistics and operations



TRUSTED BY 1500+ LEADING
INDUSTRY PARTNERS



Buy, sell and lease containers in just a few clicks
with Container xChange Marketplace

Container Leasing

Lease one-way containers and grow your business. Choose among 2500+ global locations, connect with only certified companies, and negotiate the best terms.

Use containers | Supply containers | Pickup Location | Drop off Location




wants to use Regular route

Pickup locations: Qingdao | Dropoff locations: Rotterdam | Containers: 10 x 40HC (Cargo worthy) | Company: [blurred]

wants to supply Regular route

Pickup locations: Qingdao | Dropoff locations: Rotterdam | Containers: 10 x 40HC (Cargo worthy) | Company: [blurred]


Find sales offers | Find buying demands | Pickup Location | Container types

	Price: \$2,740	Location: Rotterdam	Container: 20 x 40HC Brand new	Company: [blurred]
	Price: \$2,800	Location: Rotterdam	Container: 20 x 40HC Brand new	Company: [blurred]
	Price: \$3,050	Location: Rotterdam	Container: 20 x 40HC Brand new	Company: [blurred]

Container Trading

Buy containers at the best prices with 50,000+ containers up for sale globally. Or quickly sell your stock to 1000+ certified companies.

 100% payment protection

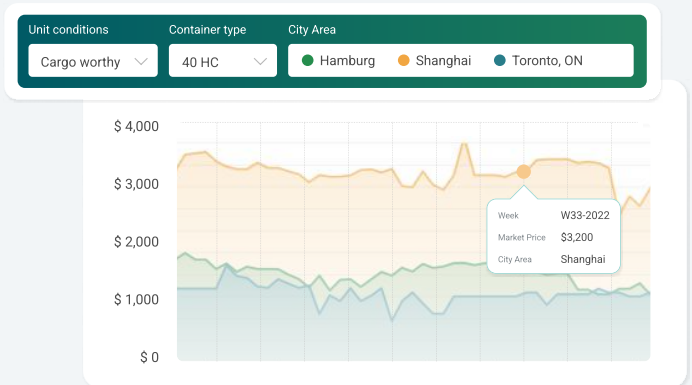
 Customer support on all deals

 Certified companies only

Find the best locations to buy, sell or lease containers

Insights

With Insights, learn and compare the live container prices and one-way leasing terms in 130+ global locations.



Daily data updates

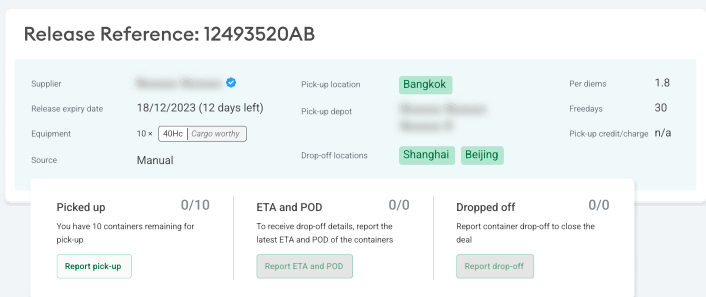


Global coverage



Various data sources

Simplify your container operations



Release Reference: 12493520AB

Supplier		Pick-up location	Bangkok	Per diems	1.8
Release expiry date	18/12/2023 (12 days left)	Pick-up depot		Freedays	30
Equipment	10 x 40HC Cargo worthy			Pick-up credit/charge	n/a
Source	Manual	Drop-off locations	Shanghai Beijing		

Picked up 0/10
You have 10 containers remaining for pick-up
[Report pick-up](#)

ETA and POD 0/0
To receive drop-off details, report the latest ETA and POD of the containers
[Report ETA and POD](#)

Dropped off 0/0
Report container drop-off to close the deal
[Report drop-off](#)



Container Control

Have all your container movement information connected in one place – release references, container gate moves, and container bookings.



Pick-up and drop-off monitoring



Quick status check



Error-free

Boost your container operations with xChange

[Book a demo](#)

www.container-xchange.com

Contact Us

Established in 2017, Container xChange is a technology company headquartered in Hamburg, Germany. It is the world's first online marketplace for buying, selling and leasing shipper owned containers (SOCs). At present, we have more than 1,500 international companies on our platform.

We offer our members efficient digital processes and market transparency to enhance their operational flexibility. We cover the entire transaction process, from finding new partners to do business with, to tracking containers and managing payments.

We are working towards a mission to simplify the logistics of global trade. And we are creating an ecosystem of products and services for container logistics companies to empower them with digitalization and help them reduce their manual workload.

For questions about this report, our products and to request a demo, please write to:



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