WHITEPAPER

The status quo of the container import process and its impact on time, costs and security

Flowfox

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The container import process requires a high amount of manual work for the ocean carriers, consignees, forwarders and transporters. The communication usually takes place via unencrypted emails, resulting in not only security issues but also time consuming manual processes delaying the pick-up of import containers. Waiting times can often result in higher costs for all parties.

This paper addresses the issues related to the current handling of container imports, and outlines a new approach to improve the processes.

The import process

The container import process includes all operational steps necessary from pre-announcement of the arrival of a full container at the port of discharge to the drop-off of the empty container at a depot. The import process begins already before the container is being discharged from the ocean vessel and is completed with the return of the empty container to the ocean carrier after customs clearance, release to the transporter and delivery to the consignee. The transport is typically arranged by the forwarder in case of a merchant's haulage or by the ocean carrier in case of a carrier's haulage. If the ocean carrier is instructed to arrange a carrier's haulage, they are required to collect the necessary data, such as delivery time and place from the consignee. Afterwards, the container is transported to the inland unloading place, emptied and transported back to the terminal or dropped off at an inland depot.
In case free times are exceeded, the ocean carrier will calculate and charge extra in form of storage, demurrage and detention.

Challenges in the status quo

Authentication of the parties

At the very beginning of the import process, authentication and authorization of relevant parties is necessary, especially with respect to the ocean carrier exchanging information with customers and 3rd parties involved in the process. Company identification is key to secure the release process, mostly when high-value goods are transferred from one party to another and is usually depending on individual people in the organization approving relevant parties. For example, by knowing the email address, the name of the company or by knowing the contact person. However, manual authentications are prone to mistakes, confusions and insecurities. In the worst case, a container could be released to the wrong party, which is not authorized. These mistakes are not only time consuming but worse it can lead to unnecessary claims and costs in order to resolve the issue, recover the goods, re-release the container etc.

Cybercrime is being increasingly sophisticated and is no longer isolated to just faking an email address to illegally obtain a container release and information. Just how technologically advanced these methods have become

is illustrated by the example of fraudsters using AI technology to clone company director's voice in a $35 million bank heist in early 2020 (Forbes reported).

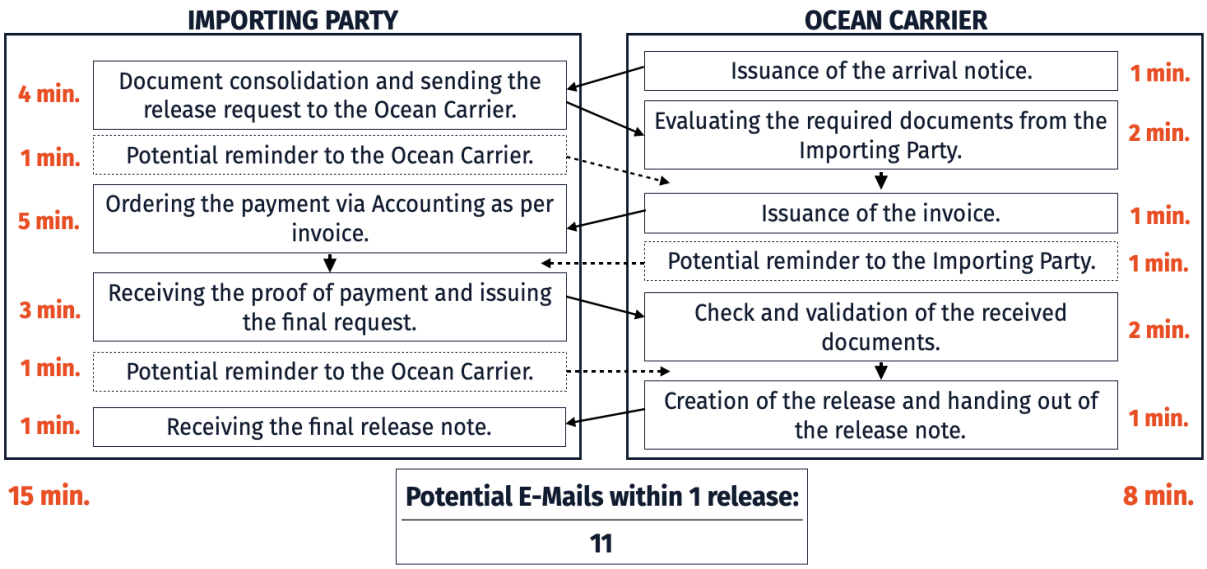
Container release

The container release process is typically a manual process by the ocean carrier's import departments. In order to release a container, the import department collects several documents from the consignee, such as the bill of lading and the power of attorney in case of assignments. The collection of the required information is often done manually by emails and physical documents, such as marking received documents or checking endorsements. Furthermore, the import department often spend time reminding the counterpart to provide the necessary documents in time to avoid unnecessary penalties and costs, such as storage and demurrage.

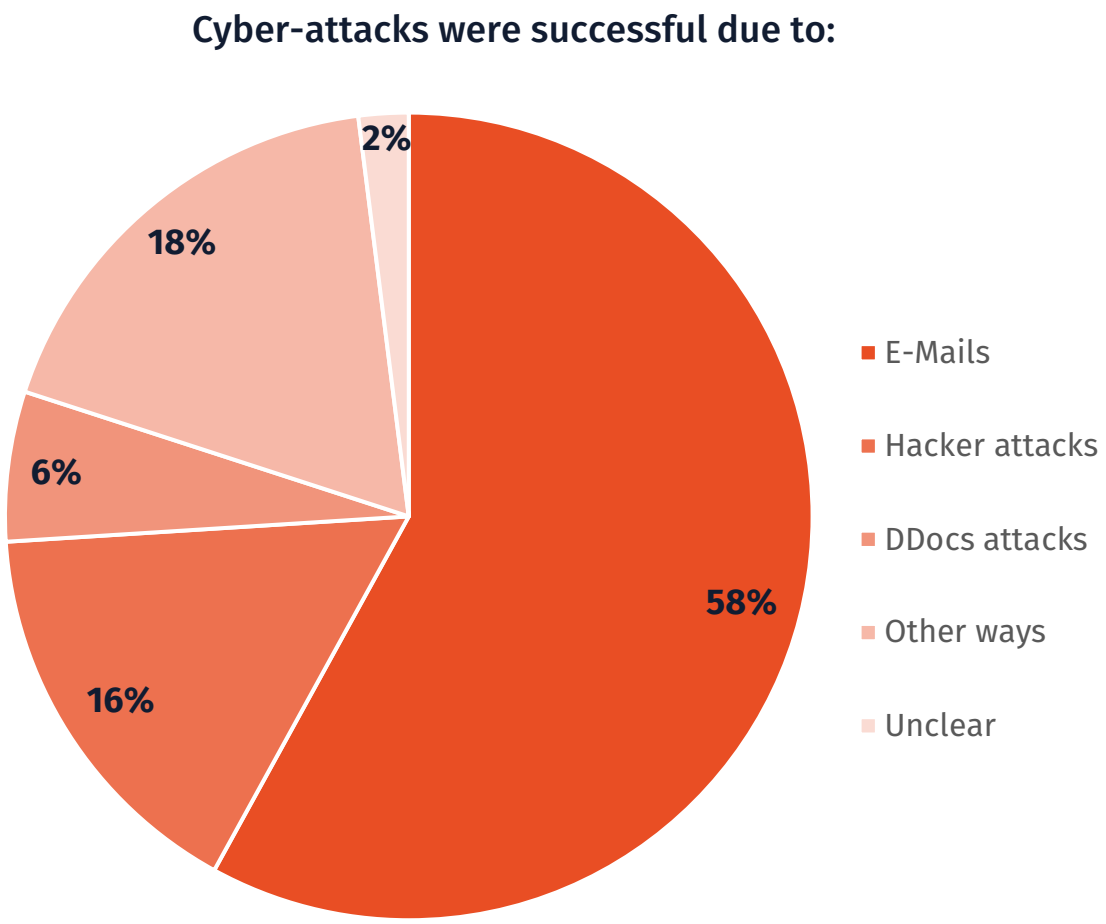
Necessary documents typically include:

- Original bill of lading
- Power of attorney
- Framework agreement
- Confirmation of cost coverage
- Release order
- Proof of payment

This common practice leads to a vicious cycle of email ping pong, which is highly time and resource consuming for all parties as illustrated:



Once the ocean carrier has received all necessary documents from the consignee, a release note will be issued. The ocean carrier's import department typically creates terminal gate PIN-code for the pickup and provide it via email to the importing party. Considering the importance of the PIN, and that anyone with the key has the authority to collect the container and its value, the use of email has several issues like fraud, data theft and, in the worst case, theft of the container itself. Our data shows that 58% of all cyber-attacks are performed on emails, which makes the unencrypted email exchange of PIN-codes highly vulnerable:



Source:
Report: Cyberrisiken im Mittelstand 2020
Gesamtverband der Deutschen Versicherungswirtschaft e.V.

In addition, ocean carrier's employees are exposed to the danger of blackmailing, as the PIN is available in the ocean carrier's system. Anyone who has the PIN also has the possibility to easily pick up the container at the terminal. This results in a not uncommon way for criminals to illegally gain access to high-value goods, illegally imports, drugs, etc.

Carrier's haulage instructions

In case of carrier's haulage, the ocean carrier requires specific information, such as delivery date, time and place, in order to organize the transport of the container from the terminal to the inland warehouse/unloading place. This information is usually supplied via email and manually typed into the ocean carrier's system. Often the importing party does not provide the information proactively, and the ocean carrier has to request the data manually via email, in order to plan in time and avoid extra costs.

As availability of transport mode (truck, train, barge) is often intransparent, additional coordination is required, which leads to even more email ping-pong. This whole manual process is not only error prone, for typos and similar, but also time consuming. Overall, this manual work leads to a process with an unnecessary workload for both parties, especially when both are interested in a smooth and fast handling of the carriage.

Amending drop-off / re-use

The import process is completed, once the empty container is dropped off or re-used for a full export shipment. Usually, the return depot is determined by the transporter before the pick-up of the container at the terminal. However, it is not unusual that the return depot is later changed or amended to a container reuse. Amendments from the forwarder side as well as the ocean carrier checking, accepting and notifying the transporter are typically handled manually. In a merchant's haulage each delay adds extra costs, like detention, therefore, especially the consignee has a high interest in a fast and smooth process. Furthermore, waiting times cause logistics re-planning for the importing party as well as for the ocean carrier. The importing party cannot plan the next steps with or without the container. The ocean carrier cannot plan the next usage of the container for future export shipments. To sum up, the manual process for amendments is slow, inefficient and error prone causing waiting times, extra costs and periods of uncertainty for all parties.

Demurrage and detention

If free times are exceeded, further costs, like demurrage, detention and storage will apply and are invoiced using typically a manual process. In addition, these invoices are often done by hand and, considering the sheer number of invoices that are handled, they usually contain not much information regarding the costs, such as dates, costs per day or the used agreement.
The result is that invoices are often delayed, inaccurate and are contested by payers as details regarding the cost basis, events and applied agreements are missing.

Due to the lack of transparency regarding the cost calculation, invoices are regularly rejected by customers leading to further delays, increase in workload, uncertainty, and dissatisfaction of the customer.

Payments

Wherever money is transferred, the issuing party always wants to receive the payment as soon as possible. Based on the receiving of payments, releases are handled and issued, and docs and information are provided. Usually, payments are processed by hand, such as issuing the cash transfer and sending the proof of payment. This common practice slows down the entire payment process as it relies on manual verifications for payment receipt and issuance.

Fundamental issues of the manual handling

Overall, manual handling processes are not only slowing down and unscalable but also error prone. Mistakes, like typos or confusions by staff, are communicated to the transporter. The transporter relies on this, unknowingly, faulty information for planning the transport. Once the transporter realizes that the information is wrong, a correction process is started. Furthermore, relying on human staff to handle processes, such as supplying PINs or requesting carrier's haulage, is no longer adaptive in today's international market, where 24-7 availability is essential for success. Stagnating exchange of information, including waiting times for all concerned parties, no availability outside of working hours, holidays and weekends and no real time flow are constantly occurring problems, delaying the process. Additionally, waiting times are caused by emails, not to forget the lacking security aspect, as our data shows that reading and answering an email can

take up to 24 hours on working days. This entire process is highly resource and time consuming and thus cost intensive for all involved parties.

A new approach

As the above stated challenges show, there are significant benefits by implementing an automated system to simplify the import process by implementing an efficient and secure transfer of all relevant data.
We believe that a platform-based solution is required to resolve the current challenges.

A data exchange platform based on standards

The platform can be safely accessed through an easy authentication process, ensuring that participants can rely on who they are communicating with.

Standardized formats reduce mistakes and make it easy to use and transparent allowing for a more efficient information exchange. Regarding the container release process, we understand the importance of shortening the process in order to reduce costs connected to manual handling. Flowfox' system combines the necessary tasks for a container release, such as having only authenticated parties requesting the release and supplying the PIN, in a single workflow. PINs can be created automatically and fully encrypted in the Flowfox platform, making them accessible only to the approved party responsible for the terminal pick-up, thereby eliminating the risk of blackmailing, especially for ocean carrier's employees.

Our system facilitates a smooth and secure communication between the ocean carrier, forwarder and the consignee. Furthermore, we offer the possibility to take direct actions within the release process, such as requesting carrier's haulage, drop-off depot changes, reuse requests to use containers for export shipments or free time extensions. Flowfox' system includes the option of an API connection to offer the automation of processes to all involved parties.
In conclusion, Flowfox offers an all in one, scalable, collaborative and secure process flow, which is accessible for all participants at any time and day, making manual handlings obsolete.