



Time Slot Management

from the Perspective of Ramp Operators

An empirical study on the effectiveness and benefits of time slot management systems

The traffic jam on the ramp, long waiting times when loading and unloading, frustrated drivers and overwhelmed ramp operators: such scenarios are still not uncommon in Germany and Europe. The accompanying lack of efficiency is much more than a general annoyance, but is associated with high costs for both the client and the logistics service provider. It has been known in the logistics sector for many years that time slot management systems are an essential aid in structuring the processes on the ramps and making them more economical. But how effective are these systems really, how clearly can waiting times be reduced and processes generally equalized and improved? To find out, Cargoclix, provider of the web-based time slot management system SLOT, specifically targeted the operators and supervisors of ramps in autumn 2019 for their expectations of the software solution and the achievement of their goals in reality.

The survey focused on the operators of storage ramps in Germany and other European countries who were active as Cargoclix SLOT customers during the survey period. 148 companies with bookings at a total of 509 locations took part in the survey during the survey period, with 80 percent of them handling between 11 and 50 trucks a day on their ramps.

As early as 2016, Cargoclix had ascertained the benefits of time slot management systems from the perspective of logistics service providers as part of a study. The study that is currently being carried out thus brings the perspective of another user group of the cloud-based system SLOT from the Freiburg company into focus - and reveals a multitude of results.

Requirements for Time Slot

In ramp operator management systems one thing is certain: the expectations of the ramp operators when using time slot management systems are high and multifaceted. The users who took part in the survey find the following aspects important or very important:

- Equalization of peak load times in the daily routine and an even distribution of the trucks on the ramp (95 percent).
- General improvement of the processes on the ramp (93 percent).
- Ramp capacities (staff, forklift trucks, etc.) are evenly used (92 percent).
- Improved communication (88 percent).
- Reduction of throughput times for loading and unloading (83 percent).
- Better conditions for truck drivers (71 percent).

These points are crucial for the ramp operators to consider the introduction of a time slot management system. The study also shows to what extent the requirements have been met in practice. And indeed: the results confirm that the systems can make a significant contribution to noticeably improving the situation on the ramp.

How Time Slot Management Systems Work

The decisive factor when considering whether the introduction of a time slot management system on the ramp is worthwhile is the question of the effect of using such a system in practice. The following results show that the influences can vary:

- The goal, which 93 percent of the respondents considered very important or important, to improve the processes on the ramp in general with a time slot management system, was achieved by almost all companies. 60 percent of the ramp operators who took part in the survey stated that they had largely optimized their processes, and 14 percent even completely. 22 percent have partially achieved the goal. At four percent, no general optimization of the processes on the ramp could be achieved.
- The goal of equalizing peak loads during the day - for example in the morning - and achieving an even distribution of trucks became a reality for 96 percent of ramp operators. The majority stated that they had largely achieved this goal, 14 percent even completely.
- 96 percent of those surveyed found that the use of time slot management found that staff and forklifts on the ramp were used more evenly - at least, partly.

- 94 percent of ramp operators stated that they had achieved a significant change in throughput times. These had been shortened partly or even massively.

Particularly, it is noteworthy that the use of a time slot management system had also positive effects that the ramp operators who had not expected this, and which had therefore not been classified as primarily important in advance or played no role in the decision. For example, 57 percent of the ramp operators who took part in the survey considered the reduction of costs important or very important when using the system. In fact, the study shows that costs have dropped for 73 percent for all respondents. 41 percent mentioned savings on a larger scale, and in seven percent of the respondents the cost reduction was even significant. This suggests that the cost-cutting effects of time slot management systems are still neglected or underestimated in many companies.

Truck drivers are a professional group that has to suffer particularly from chaotic processes on the ramp. According to the study, a time slot management system makes a contribution in 90 percent of cases to noticeably improving the working conditions on the ramp for the drivers. 42 percent of the study participants indicated that the conditions for the drivers had improved in part, and 24 percent for the most part. Seven percent reported that the working conditions for the drivers had almost completely changed for the better. In this connection, the study makers point out that in addition to the use of a time slot management system, measures such as covered gates, clean sanitary facilities and flexible ramp times, also have a significant impact on driver satisfaction.

The study has also found out another interesting result: only 58 percent of the study participants had hoped for the abolition of the Excel lists for ramp management by introducing a time slot management system. In fact, 75 percent had achieved this goal completely, in large part, or at least in part, after the launch. The introduction of SLOT therefore had a pleasant side effect for most users, which was initially not considered to be of great importance.

The study also came up with another interesting result: only 58 percent of the study participants had hoped that the introduction of a time slot management system would lead to the abolishment of cellists in ramp management. In fact, 75 percent had achieved this goal completely, largely or at least partially after the introduction. Thus, the introduction of SLOT had a pleasant side effect for most users, to which no great importance had initially been attached.

1. The Effects of Cost and Time are Most Important

A look at the detailed results of the study shows how far a time slot management system can optimize the processes on the ramp:

- The use of a time slot management system noticeably reduces waiting times for the drivers on the ramp. This showed that six percent of all ramp operators surveyed had almost no waiting times for the drivers at the ramp after the system was introduced. Another 23 percent were able to reduce their waiting times by 50 to 75 percent. Around half of all respondents, namely 48 percent, stated that they had reduced waiting times by at least a quarter to even by half. 23 percent achieved a reduction in waiting times by up to a quarter. This result suggests two conclusions: time slot management systems are an important component in accelerating the handling of vehicles on the ramp. Nevertheless, time slot management systems are no substitute for good, flexible personnel planning, especially at peak times. It is only the interaction of several factors, the predictable arrival of the trucks and the quick handling of the vehicles after they arrive that can ensure that on-site processing can be carried out particularly quickly and efficiently. Furthermore, the results confirm that not only the ramp operators benefit from time slot management systems, but also the carriers / freight forwarders themselves. Ramp operators can also improve handling by further optimization, for example by introducing express ramps.
- Ramp operators who use time slot management systems had also significant effects in another area: the punctuality of the logistics service providers - even if this still leaves something to be desired among the carriers in many places - improved significantly. Specifically, the use of the time slot management system helped 29 percent of the surveyed ramp operators to improve the punctuality of logistics service providers by values between 50 and 100 percent. 26 percent of those surveyed saw an improvement in punctuality of, at least, half to 75 percent, three percent even up to 100 percent. At 39 percent, the majority of those in charge of the ramp surveyed improved punctuality from 26 to 50 percent. After all, 32 percent achieved a punctuality improvement of up to a quarter. However, these results also show that there is still potential for punctuality.

Even if it seems easy to blame the forwarding agents primarily for the lack of punctuality, the results of the study also suggest another thought: ramp operators are just as responsible for this topic as the logistics service providers. The effectiveness of a time slot management can be further increased, for example, by additional systems for determining the ETA (Estimated Time of Arrival). Cargoclix also offers a corresponding solution as a modular component. No system, no matter how sophisticated, is able to avoid traffic jams that occur during the transportation of goods. However, if a ramp operator knows in advance that a truck will arrive late with the help of appropriate tools, he can initiate appropriate measures and have the opportunity to plan with possible delays and to adjust procedures ad hoc.

- One of the biggest annoyances and problems of logistics is too much bureaucratic effort, like a lack of punctuality. As the study shows, time slot management systems have a positive effect in this area as well. 18 percent of the ramp operators surveyed said that this had reduced by at least 51 to 75 percent, four percent even mentioned a reduction in effort of 76 to 100 percent. 34 percent noticed a 26 to 50 percent reduction in bureaucratic effort, while 44 percent saw bureaucratic effort cut by up to a quarter. Although this aspect does not represent a decisive argument for the introduction of a time slot management system, in contrast to the reduction of waiting times and an improvement in punctuality, it does provide a noticeable positive side-effect and thus helps to avoid processing errors.
- A time slot management system has a significant impact on personnel costs. Personnel costs fell by up to 25 percent in 81 percent of the ramp operators surveyed, and another 15 percent almost halved their personnel costs. According to the data collected, an average savings potential of 20 to 30 percent appears realistic on average in personnel costs. However, the savings in personnel should not mean that trucks can no longer be handled quickly at the ramp and that the cost advantages in other areas are overcompensated. Here, ramp operators are well advised to deploy their staff in such a way that maximum flexibility and minimal waiting times are possible, especially at peak times.
- Positive results can also be seen in the development of demurrage charges. For 60 percent of the respondents, these fell by up to 25 percent, for another 21 percent even by half. In the course of the survey, 13 percent reported a decrease in demurrage of up to 75 percent, while six percent pay extremely low demurrage or even no demurrage at all. The amount of such demurrage depends, among other things, on the location and unloading time. The rates that German courts accepted as appropriate in various judgments range between 30 and 60 euros per hour on average. Ramp operators can therefore save costs by using a time slot management system.

All the detailed results show in summary that the introduction of a time slot management system not only optimizes everyday ramp work in many places, but also reduces costs. In addition, the study confirms that the requirements that ramp operators have for a time slot management system can be demonstrated in practice.

The Importance of a Low Cost Booking Price

How much money can a time window cost? What changes does a time slot management system bring along? Anyone who deals with the question of a possible introduction always has

the booking price for the individual slots in mind. Depending on the time slot management system, the prices per loading and unloading slot are currently between 50 cents and 2.50 euros, sometimes even more. The amount includes all booking processes, data transfers and support for the user. The booking price of Cargoclix SLOT has been at 50 cents per time slot for years. This makes Cargoclix SLOT one of the most inexpensive time slot management systems on the market. The price can be borne equally by the client and the logistics service provider, which is optional for every ramp operator.

In a previous study from 2016, Cargoclix asked logistics service providers which price was considered acceptable for booking a time slot. At that time, 72 percent of the respondents spoke in favor of a booking price of up to EUR 0.50 per SLOT, 23 percent of the respondents stated that they also accepted a price between EUR 0.51 and 1.00 as the upper limit - higher prices were viewed extremely critically.

The current study confirms this and shows that 57 percent of the ramp operators surveyed also rate the low booking price of 50 cents as "very important", 17 percent as "important". This means that the low booking price plays a significant role for almost three quarters of those surveyed.

The specific Cargoclix booking price was rated by 95 percent of the ramp operators surveyed, almost as "very good" or "fairly good". For this reason, the psychological effects of a favourable booking price in combination with relevant improvements in ramp operations should not be neglected in this context. An optimal combination of a low price and improved performance through the introduction of a time slot management system can therefore make a long-term contribution to noticeably improving the performance of individual ramps.

Conclusion

Like the survey of logistics service providers on the use of time slot management systems carried out by Cargoclix 2016, the current study with a query of ramp operators also contains a clear conclusion: time slot management systems are more than ever adequate means to demonstrably defuse the "fight at the ramp" and to achieve significant improvements for all sides.

The main goal of equalizing congestion at peak load times during the day at the ramp is achieved by time slot management systems. Waiting times are reduced, in some cases significantly, the planning of all processes is simpler and more effective, and costs - including personnel costs and demurrage charges - are also reduced noticeably, which can have a positive impact on the financial statements at the end of a fiscal year.

Of course, handling the processes on the ramp requires a high degree of discipline even after the introduction of a time slot management system. Time slot management systems only work smoothly if everyone adheres to the booked dates and reports any delays as early as possible. However, time slot management systems do not relieve ramp operators of their duty to ensure,

through forward-looking planning and adequate ramp equipment, that the vehicles arrive quickly and effectively if they arrive on time and can be planned.

It remains important for the long-term success of the use of time slot management systems that ramp operators and logistics service providers work together in a cooperative manner. Targeted planning of the processes and the willingness to use and accept the offer of a time slot management system offers great potential to significantly defuse one of the biggest logistic hotspots and save costs - for ramp operators and logistics service providers.

CARGOCLIX SLOT

CARGOCLIX SLOT is a web-based time window management system for the optimisation of loading and unloading processes at the ramp. Ramp operators can set free capacities, forwarders and carriers book their desired delivery time and pay a booking fee per time slot. Internet access is sufficient for booking by freight forwarders and carriers.

Cost per slot booking: 50 cents.

System Description

- Interface to the ERP system or as a stand-alone solution
- Variable ramp opening times and flexible time frame lengths according to number of pallets, barrels, vehicle type, etc.
- Individual setting of break and holiday times, shift changes, booking limits, etc.
- Storage of capacity limits such as personnel, forklifts or processing capacities
- Layouts and assignment of rights for rebooking and changes
- Plausibility checks of booking data by double check, comparison of number ranges. etc.
- Event-based notifications and alerts
- Collection and evaluation of incoming goods flows with punctuality and handling times
- Real-time comparison of booked and unbooked time windows (requirement: ERP interface)
- Tracking of loading and unloading processes in real time with selectable screen display as a schedule with a ramp view, tabular booking list, traffic light system with color symbols
- Recording incoming goods flows with planned time / clock time per truck, quantity and quality of delivered per shipment and balance delivered actual and desired amounts of contracts

- KPI tool "CARGOCLIX Logistics Monitor" for controlling ramps using individual KPIs (Key Performance Indicators)
- "CARGOCLIX ETA" for dynamic arrival time calculation at the ramp
- "CARGOCLIX TERMINAL" Realization of the "Gate 4.0" without the use of personnel

About Cargoclix

Cargoclix is a neutral internet marketplace for the electronic tendering of transports and logistics services as well as a provider of modular time window management systems. The range of services offered by the logistics platform "Cargoclix TENDER" includes global tenders for contracts for road, rail, air freight, sea and inland shipping, courier express parcel services and logistics services such as warehousing. With over 28,000 registered members from industry, trade and forwarding, TENDER is one of the leading international tender platforms for transport and logistics.

The central product of the time slot management business unit is the modularly adaptable software "Cargoclix SLOT" for the optimization of processes on the ramp. With more than 65,000 members, SLOT is one of the most widely used time slot management systems. Cargoclix is a trademark of Dr. Meier & Schmidt GmbH. The company was founded in 1998 and has its headquarters in Freiburg i.Br.
www.cargoclix.com.

