Trade fair logistics of the future

Logistics as a service:

How exhibition companies create new added value
with existing capacities

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Greeting

The first day of the build-up phase of the trade fair, 8 a.m.: All gates are blocked and two thirds of the vehicles are stuck in heavy traffic.

Anyone who has ever been involved in trade fair planning and logistics knows such situations. When it comes to logistics, trade fairs often turn into a stressful time and processing suffers from a lack of coordination.

During the build-up and break-down phases, it becomes apparent again and again that planning and reality differ from one another. In the past few years, the pressure on exhibition companies to optimise their processes has therefore increased. More efficient planning of all logistical processes relating to the trade fair not only creates order at the event itself; it also helps to protect the environment and reduce CO2 emissions.

That is exactly what we are concerned with. GTS Systems and Consulting GmbH has expanded its portfolio to include software development and individual process consulting for the coordination of trade fair logistics. We view logistics comprehensively, covering all trade fair services offered, being an essential part of the value chain of a trade fair company.

By defining logistics as a service, we are offering you something that did not exist before: In order to avoid situations like the chaos described above through we devise intelligent planning and control that assists logistics planners and dispatchers. The software helps them to plan trade fair processes in advance and control vehicles in real time. And not only that: The very special benefit is the intelligent

planning of the existing exhibition space. This may be used togenerate additional revenue for logistics - for example using modern extra pay models that you are already familiar with from other industries.

In this white paper, we provide you with concrete solutions for the challenges of transport to the trade fair, the build-up and break-down phase and the forklift and empties management on the site. The objective: to bring time management and vehicle coordination to a common denominator and to show all potential values to trade fairs.

Have fun reading!

Dr. Tore Grünert

**Owner and Director of
gts systems & consulting GmbH**

Introduction: Using exhibition space

Build-up and break-down phases rarely run optimally during trade fair operations. Chaos often arises not only on the exhibition grounds, but also in external traffic. The organisers of centrally located exhibition locations in particular have to face this challenge: In the dense traffic in front of the exhibition gates, numerous transport service providers are waiting to be admitted and causing huge traffic jams. Neighbouring residents suffer from the high volume of traffic. There is not enough space on the site itself. If all exhibitors want to build up their stands under these conditions in tight time windows, the potential for conflict is significant and everyone involved is bound to be frustrated - especially when parallel events are competing for the same space.

Overcome logistical challendes

Many exhibition companies have now recognized the problem of weak logistics management and are asking themselves whether they can manage process optimisation digitally with appropriate software. The software should coordinate time slots that regulate admission and thus avoid overlapping arrivals and lack of parking space. There has been a lack of appropriate software to manage this task. But what about a classic dock & yard management system that food companies or parcel services use for their warehouses? Typical dock & yard management systems focus on the logistics processes at gates and ramps. However, a solution for trade fair logistics must take into account overlapping areas that can be used by different vehicles and other resources like e.g. containers. This means that the spatial distribution of capacities on the site and their re-scheduling is not implemented in a classic Dock & Yard Management system.
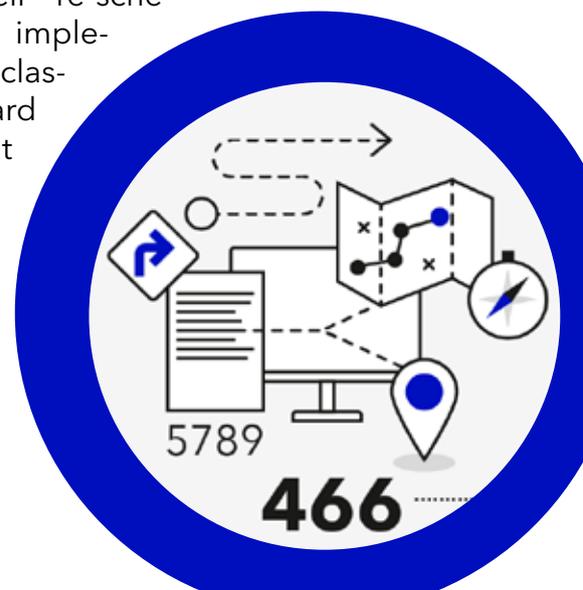
Optimise processes from A to Z.

Which aspects have to be taken into account in order to make the logistics processes at the trade fair as smooth as possible? Both trade fair organisers and builders and the transporter's drivers should benefit from optimisation. The aim is to have sufficient space available at the gates and on the exhibition grounds at all times for vehicles arriving, loading and leaving. To this end, the bottleneck spots in all phases of trade fair planning and implementation should be taken into account in the planning.

The decisive phase: planning in advance

The real work begins long before a trade fair takes place. It starts with a series of questions: How many exhibition halls are available? How many vehicles of which type do we expect (trucks, lorries, cars etc.)? How many vehicles fit in the loading yard, taking into account alternative use of space (e.g. container parking space, construction site, etc.)? And how many set-up and break-down days will there be? Knowing these parameters is important in order to be able to plan the logistics areas adequately. If different events take place in different halls on the exhibition grounds at the same time, this planning becomes all the more complex.

An IT-based simulation can check whether the expected number of vehicles is practically feasible. The size of the vehicles is also decisive: a 40-tonne truck blocks roughly the space of five transverse 12-tonne lorries in the loading yard.

- **Analyse the availability of halls and parking space**
- **Model parking space patterns to allow overlapping use of the same space**
- **Define standard charging times**
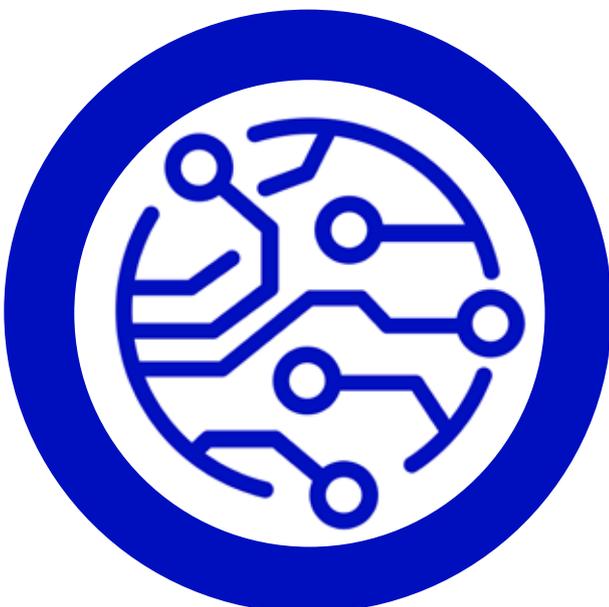
Depending on the vehicle type and number, complex parking patterns are created, which must be modelled and mapped as realistically as possible (e.g. representation in AutoCAD) in order to determine capacities and to meet safety-relevant regulations. If standard charging times and travel times between different locations are also considered, it is ensured that the vehicles also fit into the area in practice.

Calculate times and areas dynamically when booking

Customer X would like to book a time slot at 9 a.m. on Monday morning with a 90-minute charging process. If this slot is already occupied, an alternative slot must be suggested. In addition, the software should check which alternative logistics area is suitable for the customer's vehicle and whether there is enough space available at the desired time. If there are several options, for example a parking yard on both sides of the exhibition hall, alternatives are needed if a yard is occupied.

In addition, planners must be able to see in real time whether an event still has enough capacity. If too few parking areas have been reserved, they should be able to release more space on demand. If individual trade fair events take place outside the halls at the loading yards, this further reduces the space required. In addition, the time slot booking for loading and unloading must be planned not only on a single logistics area, but also for a sequence of stops.

The system should therefore be able to assess the travel times within the exhibition centre and take into account the space occupancy in accordance with the sequence.

- **Define time periods for booking**
- **Track capacities in real time**
- **Consider all trade fair events simultaneously**

# Release vehicles during build-up and break-down
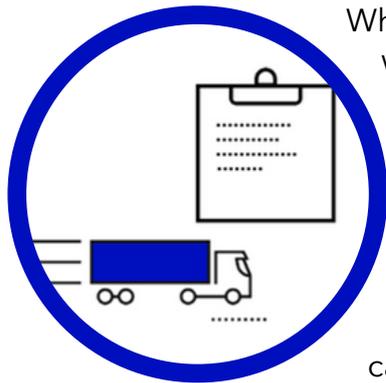
When using planning software, there is the option of not leading the vehicles directly to the exhibition centre, but first to a remote parking area where the drivers register. When the slot is scheduled, it can be determined, for example, that you have to arrive at this area 90 minutes before your scheduled gate entrance. Thus, the arrival of the vehicle can be planned as part of the transport planning. Once the vehicles have arrived and checked in and their time slot becomes valid, they will receive approval to drive to the entrance gate. Any disruptions must be taken into account - for example, if a vehicle blocks part of the parking area for much longer than planned. Other risk factors are traffic jams or gate blocks. In these cases, the software will have to re-schedule in order to give each customer a slot that is as close as possible to the original one

- **Use remote parking areas where vehicles first meet**
- **Issue clearances for driving to the exhibition grounds (via parking areas or alternative direct access regulations)**
- **Software-based rescheduling to take disruptions into account**

Perfect timing during build-up and break-down
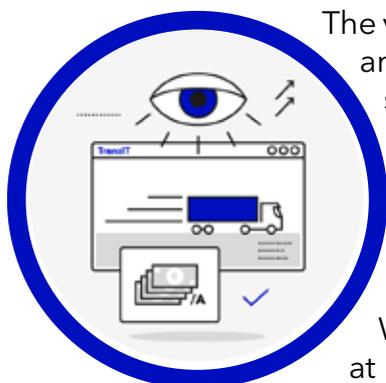
The vehicle arrives at the gate and the driver must present an entry code. The dispatcher who coordinates the arrivals checks with a scan whether the vehicle has booked a slot at this point in time. When the vehicle arrives at its designated parking space, the planning software can also take into account shunting areas that forklifts need for loading and unloading in the parking patterns. The loading yard manager records all events and compares them with the planning. This methodology fulfils the **customer's visit and loading demand** at trade fairs in the best possible way. The process and any incidents including causes are documented electronically.

- **Check arrivals with a scan**
- **Plan shunting areas for loading and unloading**
- **Compare previous planning with actual events**

After the fair is before the fair

When the fair is over, **reporting** is due: How many vehicles arrived? When did they come? Which loading yards were particularly heavily frequented? How many delays were recorded?

The data stored in the system provide the basis for evaluating these aspects. In this way, the trade fair organiser can analyse whether the planning worked in practice and use this knowledge in the following year.

Logistically coordinated planning and processing not only offers trade fair customers considerable added value, but can also provide organisers with **new ideas for extra pay models** in the following year - for example, if popular slots are priced higher.

The organiser can, for example, stipulate that large exhibitors may arrive three days before the other exhibitors due to their longer build-up time (e.g. early build-up) or reserve additional space for them.

The management of VIP parking areas and events in the yards are also mapped in the system and will be taken into account in the planning.

- **Analyse processes using actuals**
- **Include practical experience in planning the upcoming trade fair**
- **Consider dynamic pricing of logistics services**

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Benefits of trade fair planning

Intelligent trade fair planning and optimisation offers trade fair companies added value potentials in terms of organisation, controlling, service partnerships or the planning of trade fair events.

Quantitative added value:

> Previously, transport service providers were often unable to meet the times assigned to them due to traffic jams or other delays. Sequence planning via booked slots offers you guaranteed processing times - and the companies additional income.

> A Dock & Yard system only optimises the processes on ramps. Trade fair yards are flexible areas where arrivals, departures and charging are controlled dynamically and according to priorities.

> Time management, vehicle coordination, space planning, ... - Optimising these factors improves the service for customers and those responsible can act as a trade fair logistics control tower.

Qualitative added value:

> Since trucks and other vehicles no longer block traffic and are specifically coordinated by an intelligent system, freight forwarders benefit from manageable processing times. The planning of forklifts and empties quantities becomes much more transparent for the trade fair forwarding agent.

> The impact of improved coordination is an important factor in terms of environmental friendliness, as the CO_2 and noise emissions of the arriving and departing vehicles are reduced significantly.

> Trade fair companies can define logistics as a service that is an essential part of a trade fair's value chain.

Conclusion: A lot of optimisation potential for trade fair organisers

Heavy traffic around the site, incidents during build-up and break-down and overcrowded logistics areas have a significant impact on the processes at the trade fair. This is at the expense of the exhibitors and their transport service providers. But even the organiser himself leaves a lot of potential for optimisation unused without the right planning in advance - especially in terms of **process optimisation and increased sales**. gts offers trade fair companies a completely new perspective: As part of a trade fair logistics service, flexible use of the yards and VIP packages for exhibitors are just a few of the options for generating additional revenue through **clever pricing of new services**. There are already **software solutions that go beyond the scope of a Dock & Yard Management System**. If they are specially tailored for trade fairs, they can bring time management and vehicle coordination to a common denominator with the availability of space - and set new standards in the value chain.

Overview: Trade fairs benefit from this thanks to IT support

> New sources of revenue through extra pay services

> Satisfied VIP customers who like to come back

> Manage the limited resources of simultaneous events

> Avoid traffic bottlenecks in the planning phase

> Better estimate loading and unloading times

> Less traffic jams and waiting times

> Minimise disruptions in the flow of traffic

> Intelligent control of activities in the yards at any time

About gts systems and consulting

gts systems and consulting was founded in 1999 and has specialised in software development and individual consulting for intelligent route planning, route optimisation and network optimisation. Under the claim "solutions. miles ahead", solutions for logistics, transport, distribution and supply chain management can be found in the portfolio. The origin of the gts planning system goes back to an initiative by RWTH Aachen University (ELITE Foundation) and Deutsche Post. The Aachen consultants not only look after CEP (courier, express and parcel) services, they also implement projects in other areas. These include waste disposal, the food industry, wholesaling, passenger transport and medical laboratories. There are also individual projects, for example in the area of seat allocation for large airlines.

At a glance

Company name	gts systems and consulting GmbH
Managing directors	Michael Thaerigen Dr. Tore Gruenert
founding year	1999
Industry focus	Trade fairs, waste management, airlines, bakeries, health, wholesale, food, passenger transport, postal and parcel services, service staff, laundries
Range of services	Solutions for logistics, transport, distribution and supply chain management
Products and services	Software for route planning and optimisation as well as trade fair planning: - TransIT - TransITfair - TransITmeet
Contact person	Sascha Egener Head of Partner Account Management