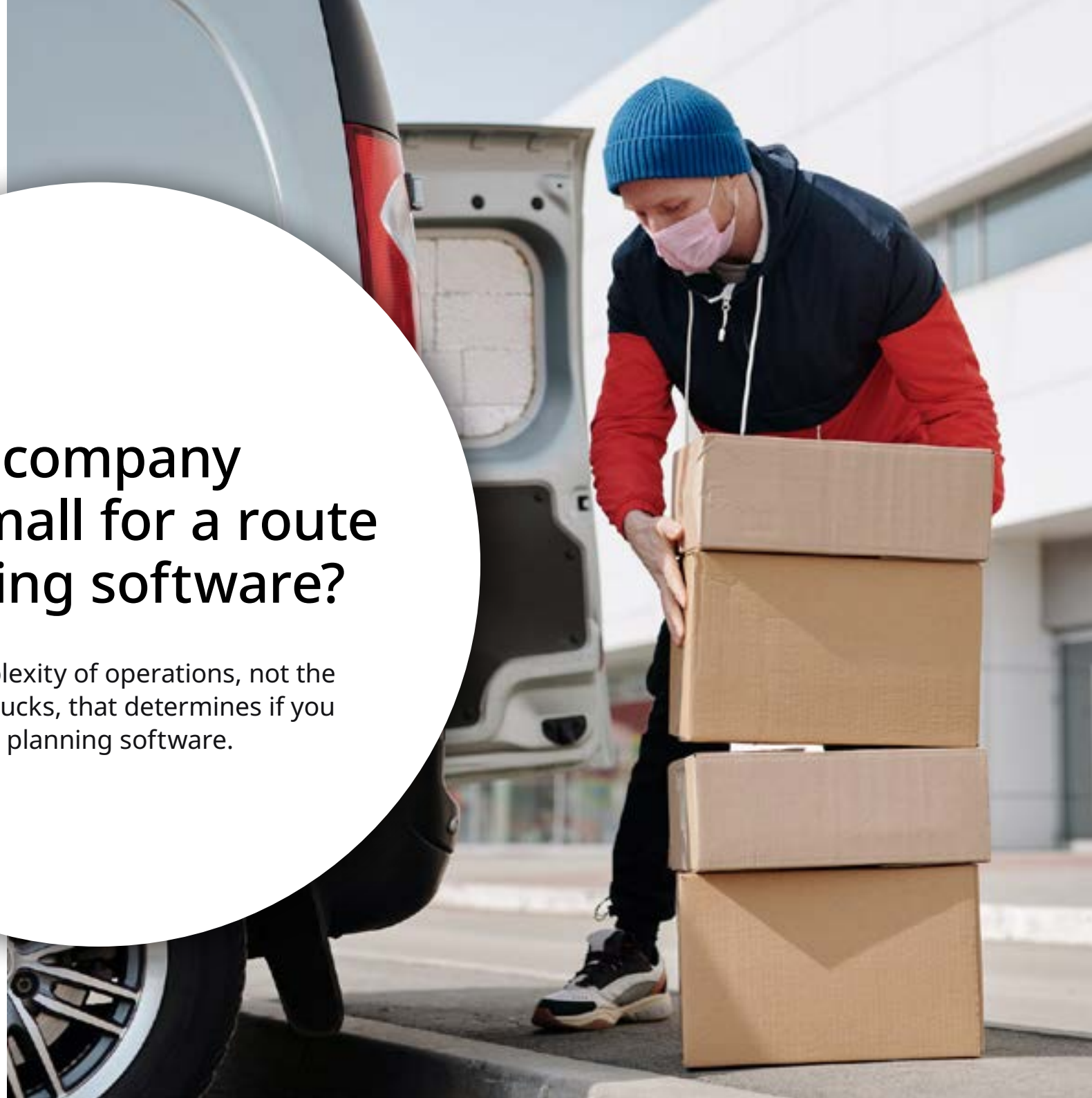


White Paper

Is my company too small for a route planning software?

It's the complexity of operations, not the number of trucks, that determines if you need a route planning software.



INTRODUCTION

Is a route planning software only beneficial for companies with a fleet of dozens of trucks? The answer is no. It is not the number of trucks, but the complexity of operations that determines if a route planning software is needed. Anyone who sends several trucks a day, with several stops per trip has a need for good overview and optimized efficiency.

In this white paper you can read more about route planning software and its benefits.

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HOW DOES A ROUTE PLANNING SOFTWARE WORK?

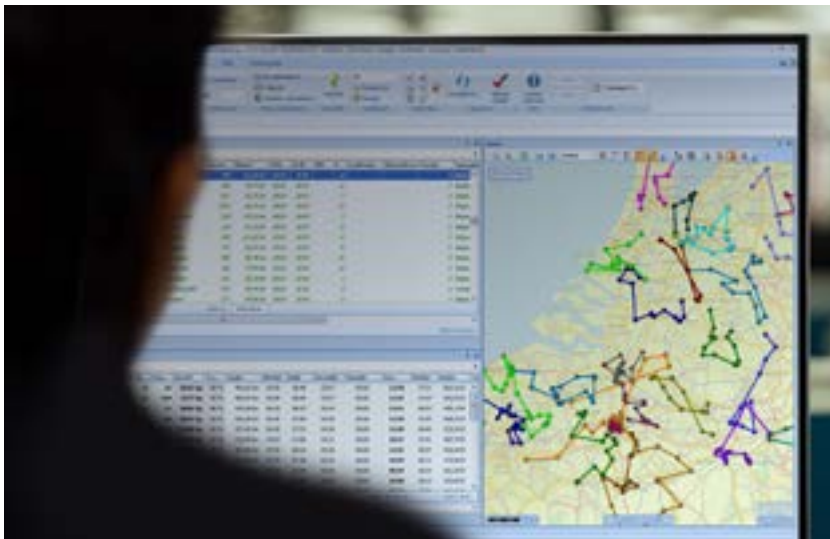
A route planning software automatically distributes your orders across the fleet. The orders indicate at which locations a truck must stop, and then the system calculates the optimal routes between those locations. This way, you are assured to get the most efficient transport planning - and save valuable miles and hours. Thanks to the system's planning accuracy, you serve your customers better.

The limitations of manual scheduling

Manual scheduling might work just fine in businesses with two or three vehicles and a handful of stops per truck. If the number of vehicles and the number of stops increases, the situation quickly becomes challenging. After all, the number of possibilities for the distribution of orders over the journeys increases exponentially. So how do you determine which journeys are the most efficient?



Based on knowledge and experience, some planners manage to make a reasonably good route planning. But a reasonably good plan is not an optimal plan. Even a few unnecessary miles or hours per day will significantly increase your annual expenses: Fuel costs, drivers' pay, maintenance and depreciation. More miles means more wear and tear.



The advantages of route planning software

At the heart of a route planning software are algorithms. In essence, they quickly and smartly calculate all possible trips and routes and compare them according to parameters such as miles and hours. This way, a route planning software easily provides the most efficient trip planning - every day.

What makes a route planning software extra useful is that it automatically considers all kinds of preconditions, restrictions, and other factors that impact the planning. The number of wishes and requirements that a schedule must meet increases every year. Not only do customers become more demanding, but also their environment. This makes a route planning software relevant even for companies with smaller fleets.

THE FOUR MAIN RESTRICTIONS

In an ideal logistics world, you can go to any location with any vehicle at any time of the day. However, this world does not exist. When planning a trip, you are bound by all kinds of restrictions, wishes and preconditions. These restrictions can be a result of your operations, but also of customers' demands and government regulations. Here is an overview of the most common restrictions:

Fleet

When planning, you are bound by the vehicles that are currently at your disposal. Of course, you want to use them as efficiently as possible. Outsourcing of freight or journeys should be kept to a minimum.

- What is the available loading space or the load capacity per truck?
- Which trucks are undergoing maintenance works?
- Is a refrigerated truck required?
- Do you need a pallet truck, a vehicle with a tailgate or a forklift?

Drivers

Your drivers are the backbone of your company, but not every driver can perform every trip. A route planning software takes this into account.

- Which drivers are not available because of holidays or sick leave?
- Which drivers want to drive internationally, and which only domestically?
- Is a driver with special certifications required?
- Does the order consist of large items that require a two-person delivery?
- Does the driver need to be qualified to install products?

Customers

Of course, you want to serve your customers as good as possible and meet their requests for the delivery. That can complicate the planning process.

- Do you have to load, unload or both?
- Can you contact the customer at any time?
- Have you agreed on a specific time or time window for delivery?
- Is there a penalty for late deliveries?
- Do you need a truck with a trailer?

Government

The government also sets requirements for transport, in the form of legislation and regulations. These demands can stem from national and regional authorities, or from international bodies such as the European Union. Are you familiar with all these restrictions? If not, you risk receiving fines.

- Does the route planning comply with laws regarding drive and rest times?
- Are there time restrictions for delivery in city centers?
- Are there low-emission zones where trucks are not allowed?

All these restrictions can create a complex puzzle, which cannot be solved manually. This leads to dissatisfied customers and perhaps even fines. With a route planning software, you only have to enter all those restrictions once. The software then automatically considers all of them every time.

WHAT WILL CHANGE FOR THE CUSTOMER?

Your customers want to receive their delivery, but also to know in advance when the truck will arrive. This requires route planning with an accurate prediction of all delivery times. A route planning software does this. As a result, delays are kept to a minimum. And if they occur, you can proactively alert your customers.



Parameters in the planning software

Not every stop lasts the same amount of time. Of course, it makes a difference whether you have to deliver one or 33 pallets, but other factors also play a role:

- Can you unload at a warehouse with a loading pit or do you need a tail lift?
- Can you start unloading immediately, or must register first?
- Can you park in front of the door in the city center, or at specific loading and unloading areas?
- Do you only have to unload goods or do you have to take back packaging and packaging material?
- Can you deliver packages straight to the door? Do you have to lift heavy goods up the stairs?

The route planning software considers all these aspects. To do this, you have to enter a number of parameters into the system once – per loading or unloading address. The system then calculates for each schedule how long a stop lasts.

IMPACT ON THE YIELD

The efficiency of a route planning software depends on how it is used. With a number of steps, you can increase the efficiency and the yield of the planning process.

Link with ERP or TMS

To get the most out of a route planning software, it's necessary to connect it with an ERP system, a transport management system (TMS) or another administrative system. In that system, all orders are recorded and all customer data needed for planning is stored. If the systems are linked, the route planning software automatically retrieves all relevant data from the administrative system.

Link with telematics

Are your vehicles equipped with an on-board computer or similar telematics tool? Then you can send the trip plan and route directly to the right

truck. You can also closely monitor the location of each truck, and easily monitor if the journey proceeds according to plan. Is there a delay? Then you can alert the customers and react accordingly.

Extensive reporting function

The advantage of a route planning software is that all relevant information is automatically recorded. This means that you can make analyzes afterwards, and gain insights about your performance. Will transport costs go up or down? What is the average load factor? Which vehicles and drivers drive the most miles?

In short: by linking the route planning software with other systems, you spend less time entering information and communicating with drivers. In addition, you will gain more insight into the transport operations, which enables you to make better decisions.

Informing customers

Once the schedule is known, you can automatically send all customers a message with the estimated time of arrival (ETA). This gives them the opportunity to adjust their own processes accordingly.

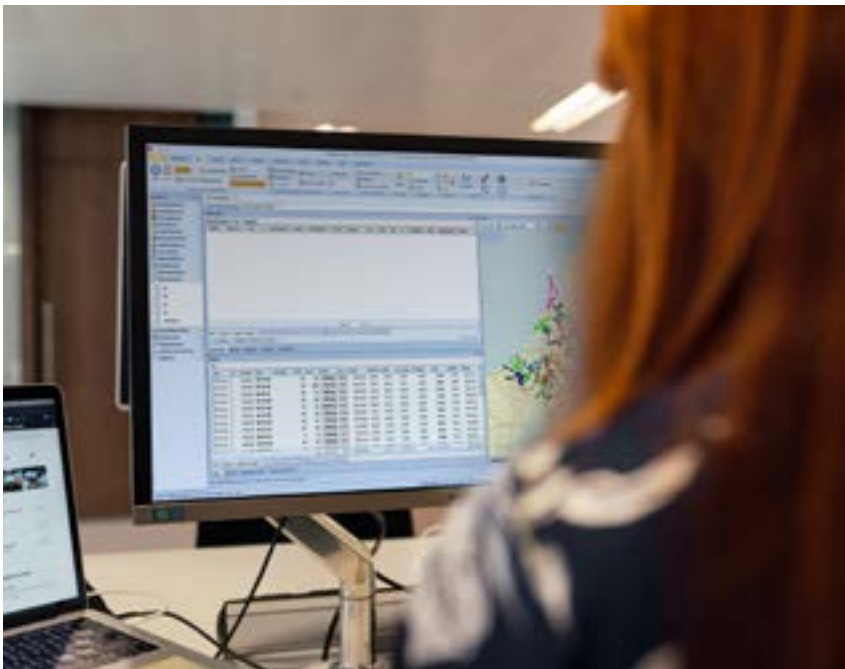
Supermarket chains, for example, can ensure that shelf fillers are ready.

In case you notice that a stop takes longer than planned, causing a delay to all subsequent stops, you can alert your customers in advance. You can also choose to fully automate this process.



THE ROLE OF THE TRANSPORT PLANNER

Does a route planning software replace the planner? No, definitely not. A route planning software is a tool that enables planners to do their job best. It saves planners a lot of time because the algorithms eliminate the need for long manual calculations. This ensures more rest and less stress. In addition, it allows planners to spend more time on optimizing the planning, managing drivers, and coordinating with customers.



A route planning software also provides more insights, which enable planners to make better tactical and strategic decisions. Which trips should be outsourced? When is it profitable to invest in an extra truck? How can you save on transport costs?

Necessary input from planners

Optimized planning is a combination between a good planner and a good route planning software. Software will always give the same result based on the same information, but sometimes it is better to deviate. For example, a planner considers specific wishes and requirements of customers or drivers. The planner knows what leeway exists to exceed

a time window, when bad weather is expected, or when a road is extra busy due to holiday traffic.

In addition, input from planners is crucial for a route planning software. Planners know which restrictions are important and what the settings of the parameters should be. As many supply chains become more complex and unpredictable, a planner is needed who constantly checks that all settings are still correct and useful.



WHEN IS A ROUTE PLANNING SOFTWARE NEEDED?

As shown in this whitepaper, the size of the fleet does not indicate whether a route planning software is needed. The complexity of operations plays a much bigger role: The number of stops, the number of restrictions, etc.

As the average size of shipments decreases, and customer and government requirements increase, many transport operations become more complex. A route planning software helps you keep a grip on operations, while saving on transport costs.

Here's an example:

Planning five trips with a total of 50 stops is usually a lot more complex than planning 50 trips with one stop each. So, take a close look at your operations. How many trips do you have each day? What is the average number of stops per trip? And what are the restrictions associated with each route or stop? Can you still figure it out?

Your next step

Do you want to know if a route planning software is useful for your company? First of all, talk to your planners. Do they still have a grip on the planning process? Do they see room for further optimization? Do they have time to deal with tactical and strategic issues?

In addition, look carefully at the performance of your transport department. How full are the trucks? Does the execution of trips often fall out of step with the planning? Is there an increase in customer complaints about late deliveries? Do transport costs grow in sync with the growth of your turnover? The answers to these questions can all be signals that your company is ready for a route planning software. Contact a specialist to discuss the possibilities.

Our software solution:

PTV ROUTE OPTIMIZER



Functions:

- Automatically assign orders to resources
- Optimize the sequence of stops
- Take restrictions into account
- Create optimized route plans
- Link with TMS, ERP, WMS & Telematics
- Multi-depot planning & planning of sub-depots
- Multi-user
- ETA calculation & communication
- Extensive reporting possibilities

Benefits:

- Visualization on the map
- Increased overview & transparency
- Reduced planning time
- Reduction of transport costs
- Better vehicle utilization
- Improved customer service

PTV Route Optimizer customers



WONDERING IF A ROUTE PLANNING SOFTWARE FITS YOUR COMPANY?

Please contact us directly for a free consultation. It's always possible for us to visit you on-site, view the current situation and discuss all possibilities. We have offices and experts all over the world.

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Contact us!