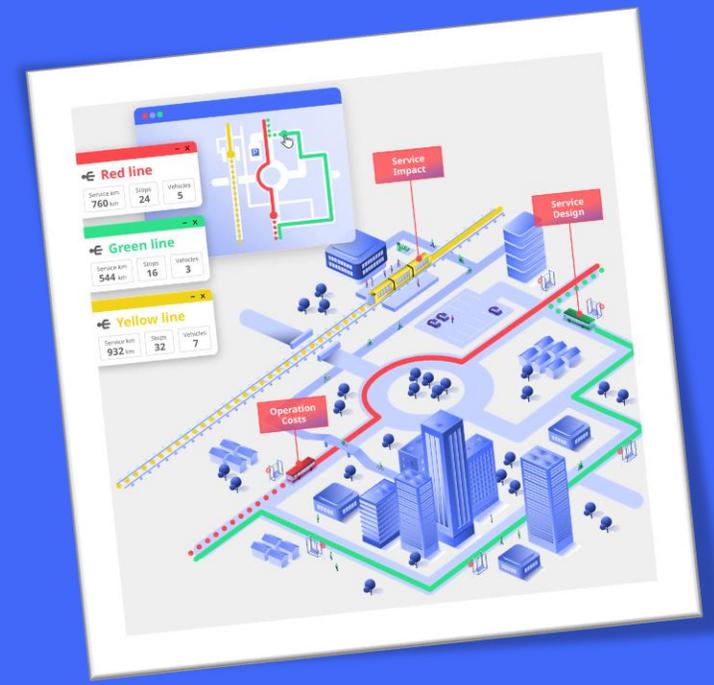


PTV GROUP

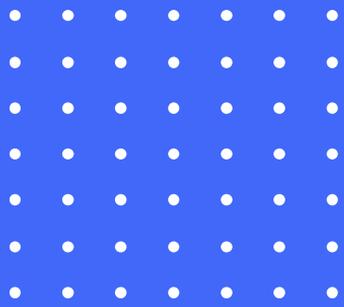
PTV LINES



The easy-to-use web-based cloud tool for planning public transport service



AGENDA



- 01 About PTV Group
- 02 Challenges of public transport
- 03 Your current pains
- 04 What you are aiming for
- 05 Our solution: PTV Lines
- 06 Your benefit
- 07 Key features
- 08 Licenses and roadmap
- 09 Our unfair advantage but your win

ABOUT PTV GROUP

- Founded in 1979 as a university spin-off with headquarters in Germany
- Global presence with 28 locations
- ~ 900 employees
- 50,000 users of PTV software
- € 117M annual revenue



Empowering mobility and logistics for a cleaner, smarter & safer future:



Plan



**Visualize &
analyze**



Optimize



Execute

PUBLIC TRANSPORT CHALLENGES

Sustainability

Climate change and rising energy prices are increasing the public's awareness of public transports critical role. At the same time, operators and planners face an uphill battle to adjust themselves to new realities, such as emissions regulations.

Access & Equity

Anyone, regardless of age, race, gender, health, physical challenges, or socio-economic vulnerability, should have the same access to mobility.

Service quality

The quality of service, as well as punctuality, coverage, and accessibility are seen as the adjustable screws to lead to improvement in performance.

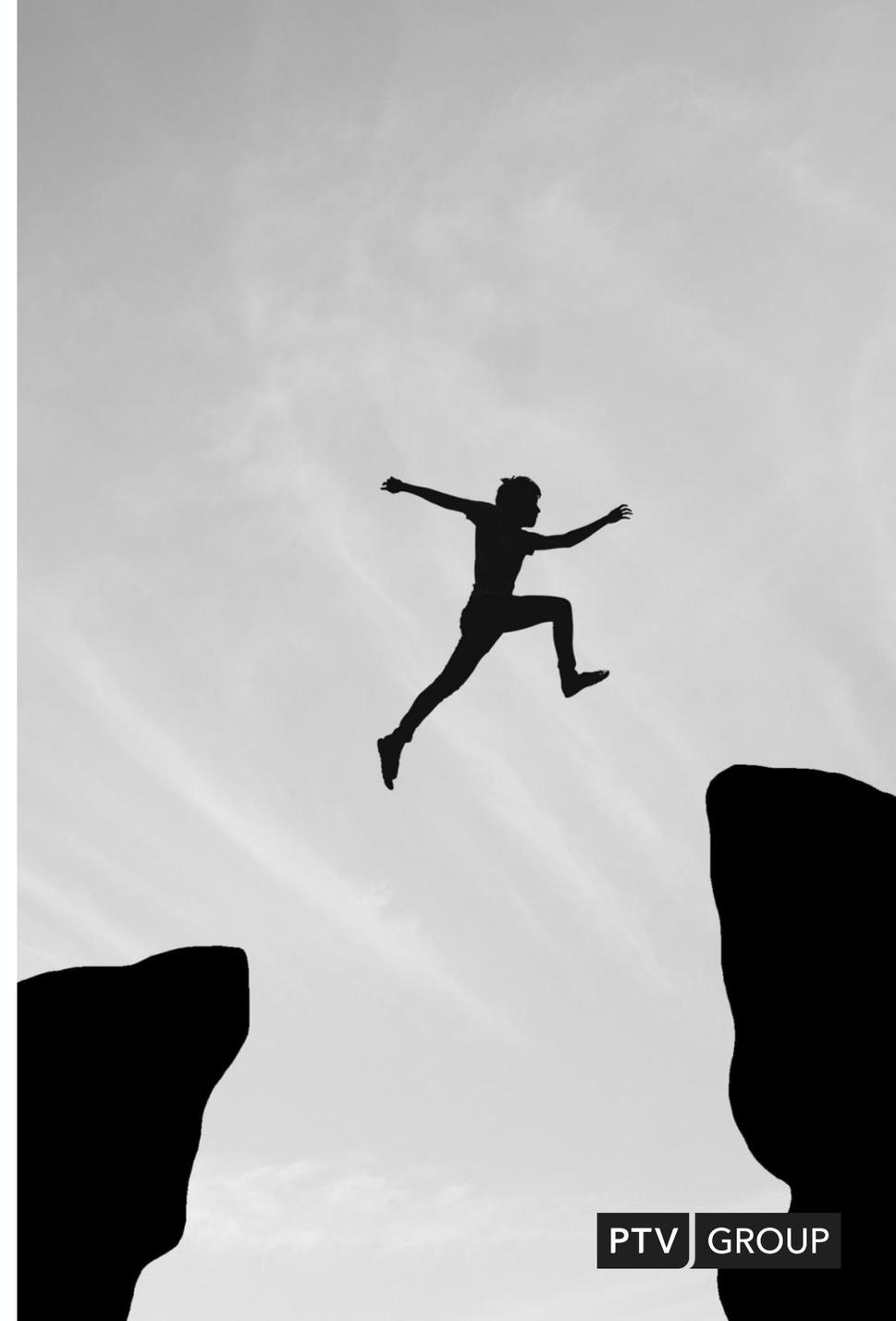
Competition

Apps and digital platforms-based mobility services are at the base of sharing-mobility models. Which are widely used by the younger generation and by user groups in metropolitan areas.

YOUR CURRENT PAINS

Let's just name a few:

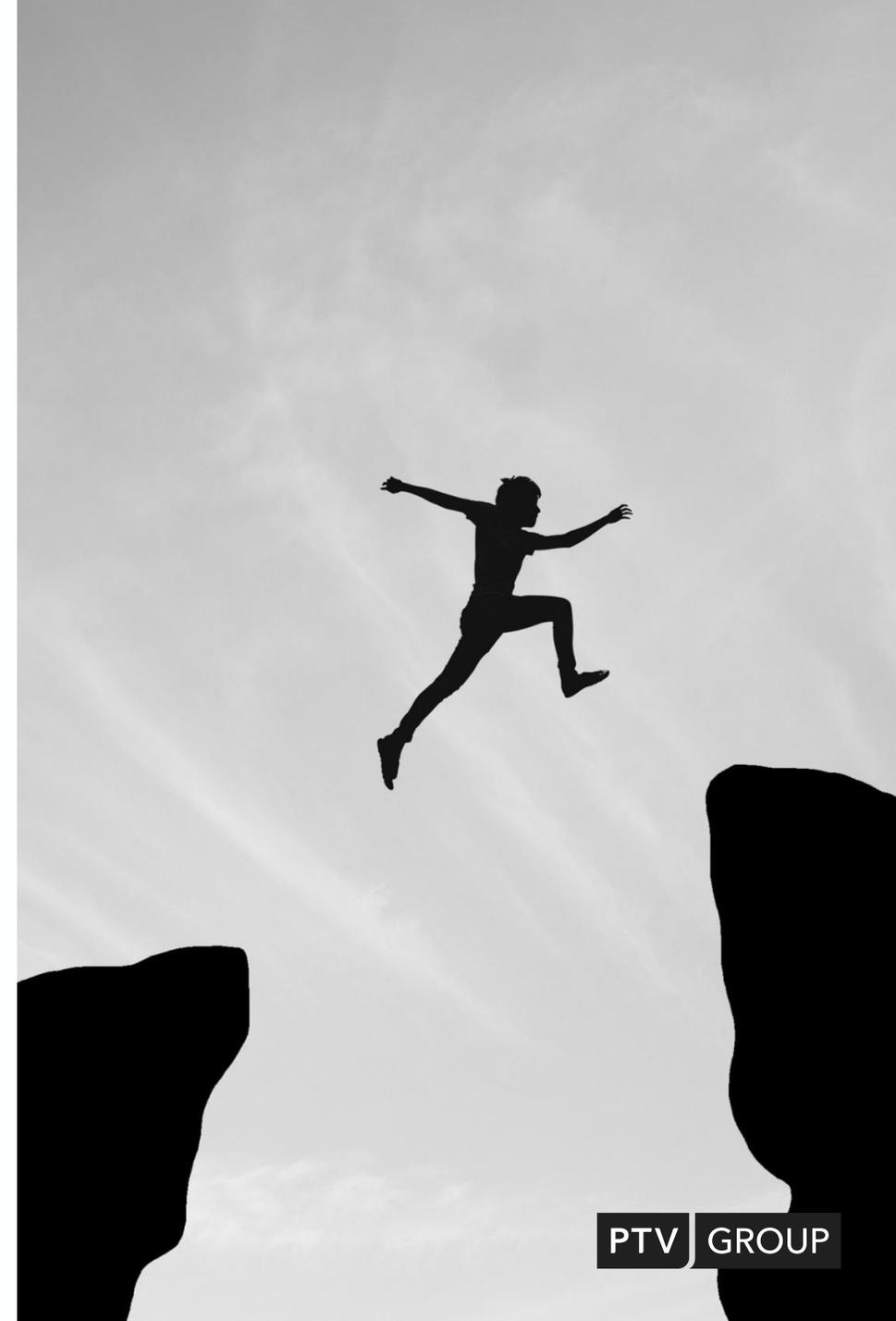
- Your work is complex and lacks transparency, thus making it a challenge to convince decision makers of suitable plans
- Pen & paper planning and customized excel applications do not reflect state-of-the-art technology
- You want quickly assess the impact of changes to your public transport supply
- The current planning process is fragmented due to different expert software tools
- Collaborative working is becoming increasingly important, accelerated by cloud tech
- Available software in the market is too complex and unhandy for your need



WHAT YOU ARE AIMING FOR

Let's just name a few:

- Increase transparency of planning with stakeholders and public
- Increase efficiency and use of resources
- Digitize the planning process
- Speed up planning process
- Communication of new services & detours
- Create a cost-effective public transport service
- Use public funding well
- Make data driven and reliable decisions
- Understand easily the current situation and options for the future → Short term and long-range planning of services



OUR SOLUTION

PTV Lines

PTV Lines is an online browser-based public transportation service planning platform that allows

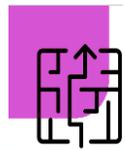
- service planning for new and existing services
- users to evaluate different scenarios by comparing operational cost and KPIs
- users to communicate their ideas visually, quickly and simply to different stakeholders

PTV Lines is designed for public transport service planners and operators who are involved in early stages of public transport supply.



YOUR BENEFITS

PTV Lines specific:



Fact-based decision making

Understand the concrete effects of infrastructure changes before making decisions



Accelerate productivity and reduce errors

Sketch ideas quickly with a powerful and intuitive tool, streamline your workflow and boost productivity



Increase transparency through collaboration

Design public transport services together as a team and share results with stakeholders.



Digitized processes

Pen & paper planning and customized Excel applications are obsolete

+ your usual cloud benefits:



No Installation or Updates

Always work with the latest release including up-to-date features directly from your web browser.



Data Security and Privacy

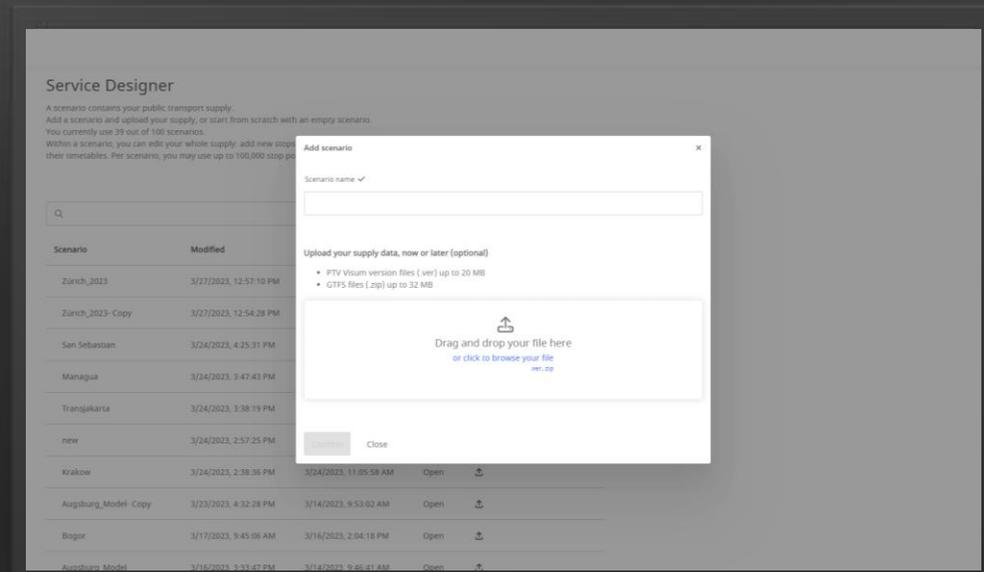
Your data and privacy are protected using our secure infrastructure and European data centers.

07



Key Features

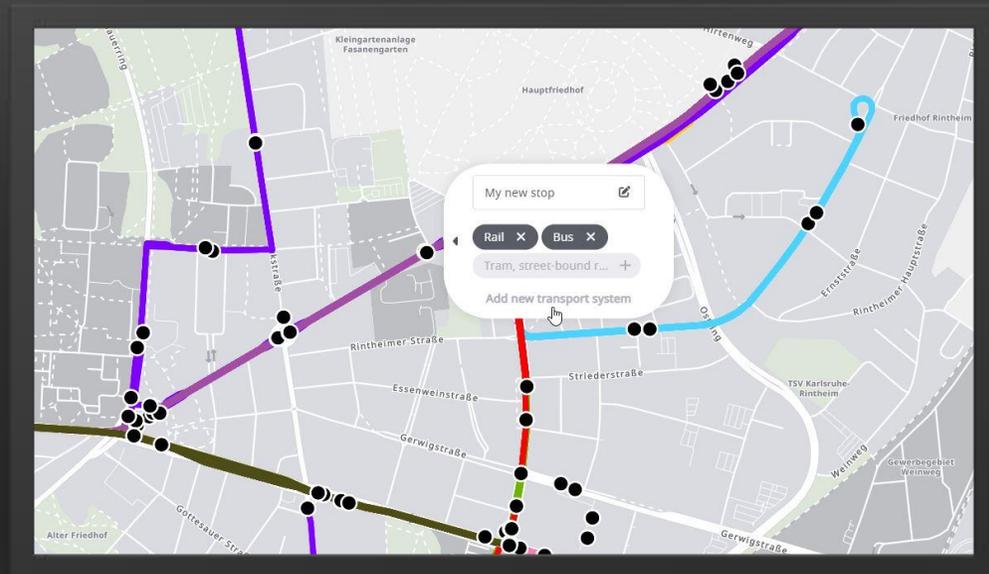
PT SERVICE PLANNING



Create scenarios

- Upload your PT supply data as GTFS or PTV version file
- Create and compare numerous supply scenarios

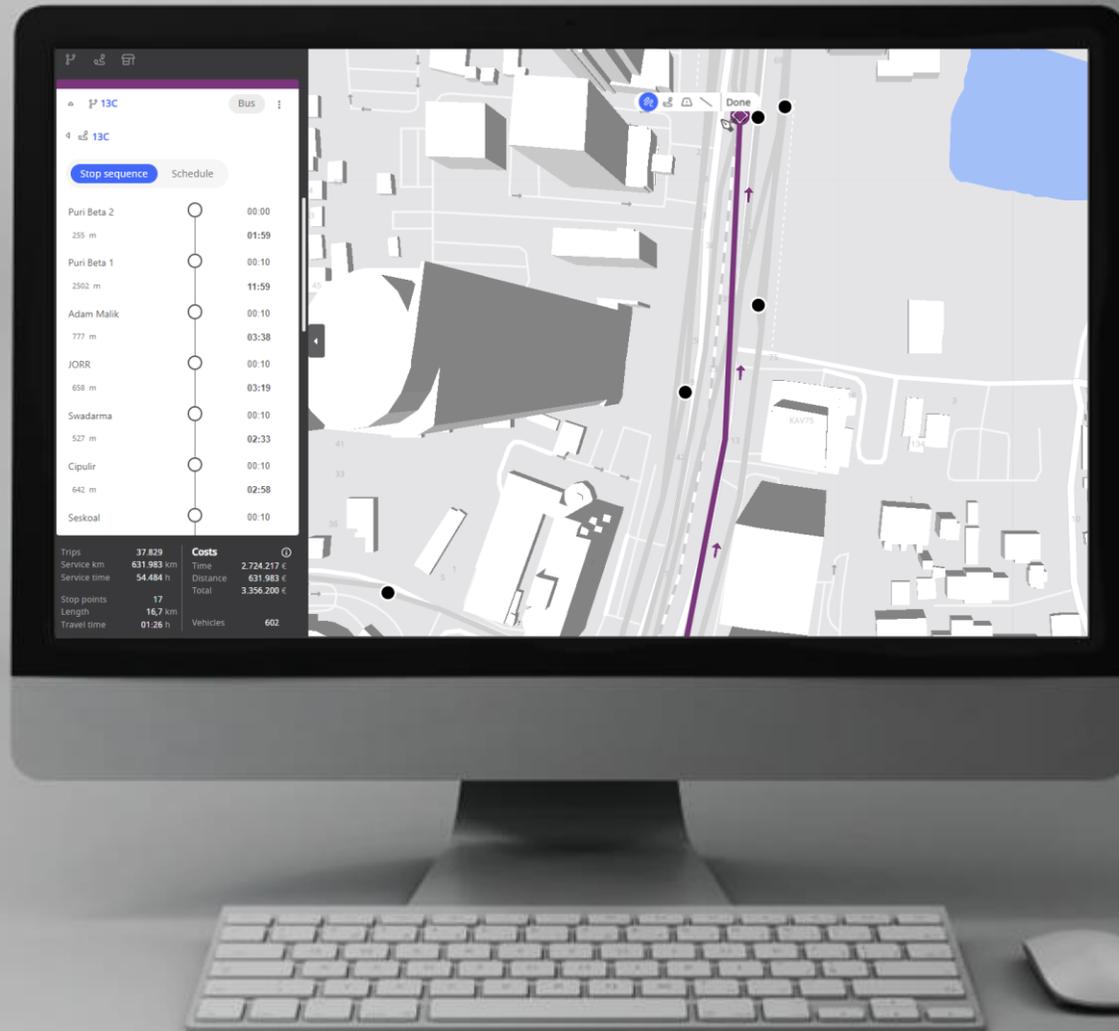
NETWORK EDITING



Simple and powerful

- Create lines and stop points
- Model different transport systems
- Add or modify your line routes on the map along the street, PT network or as straight lines

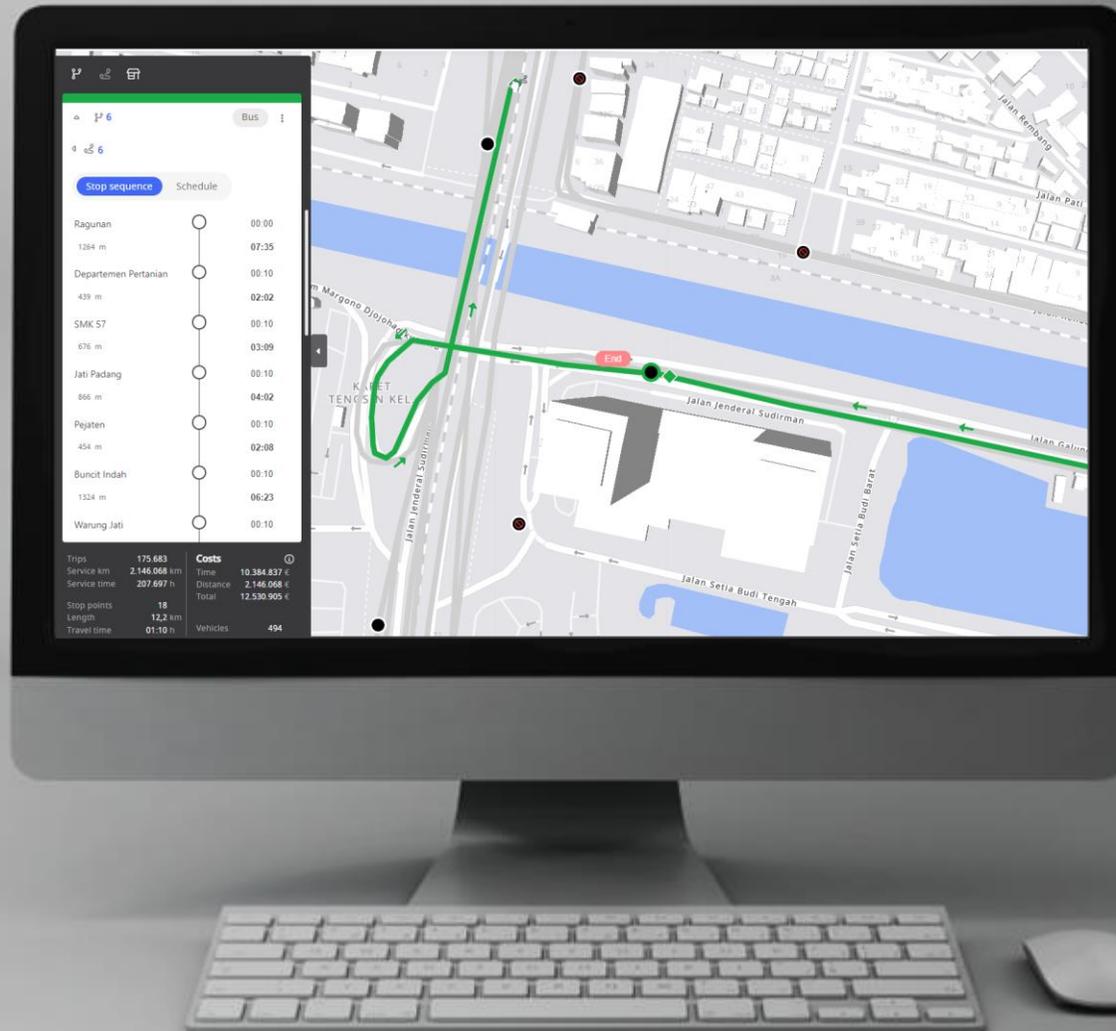
NETWORK EDITING



Automization

- When drawing your lines, benefit from the automatic stop detection based on nearest distance and transport system.
- Modify your stop sequence manually after automatic stop detection

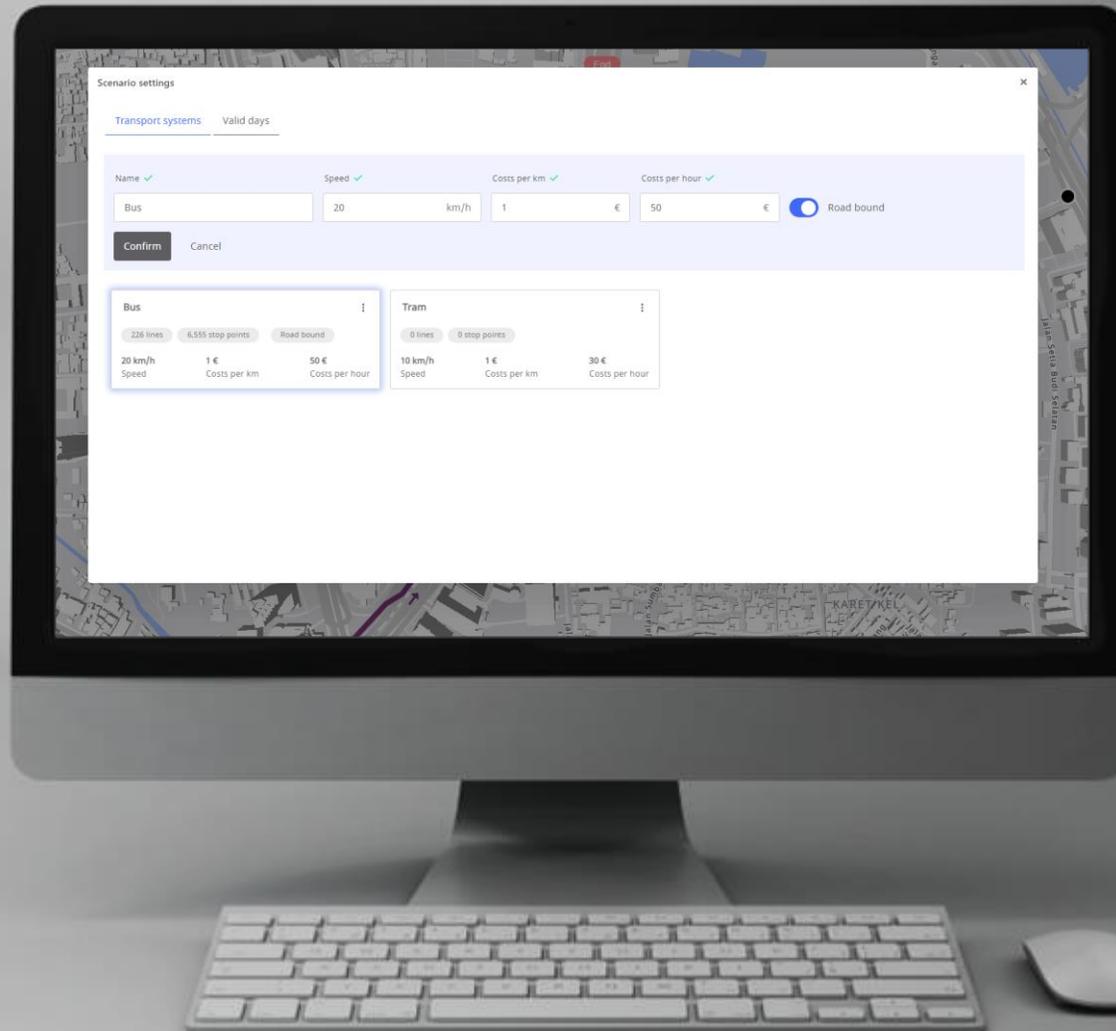
SERVICE PLANNING



Planning and evaluation

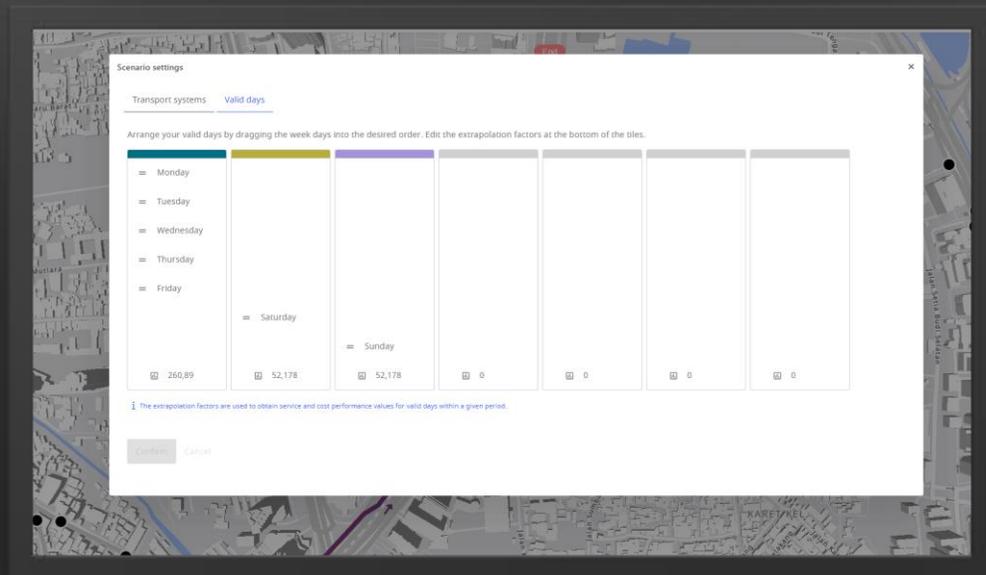
- When drawing your line on the map or changing the schedule, get directly the calculated operational costs and other KPIs such as number of vehicles

OPERATION COSTS



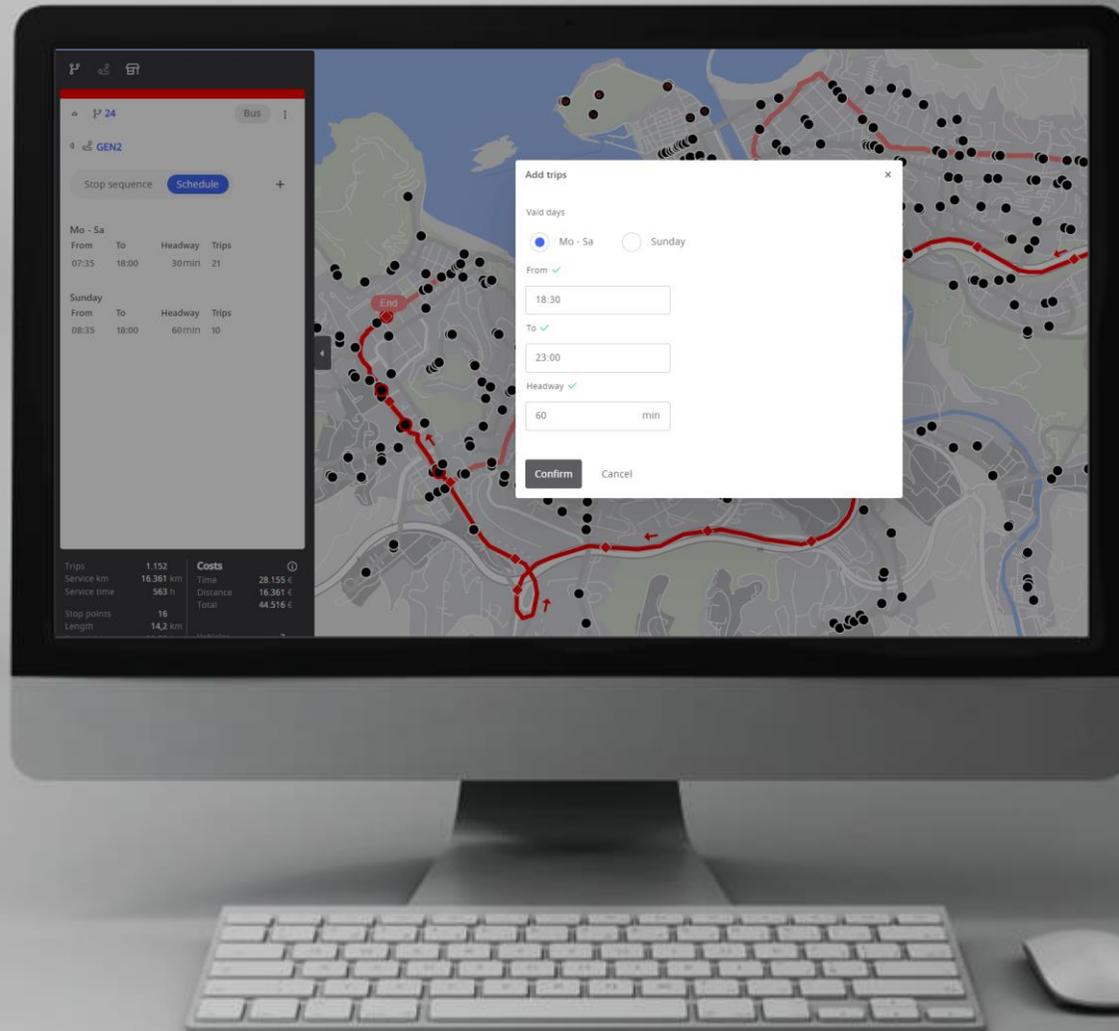
- Define costs per distance and cost per hour for each transport system
- See immediate changes by changing the costs on you service plan

VALID DAYS



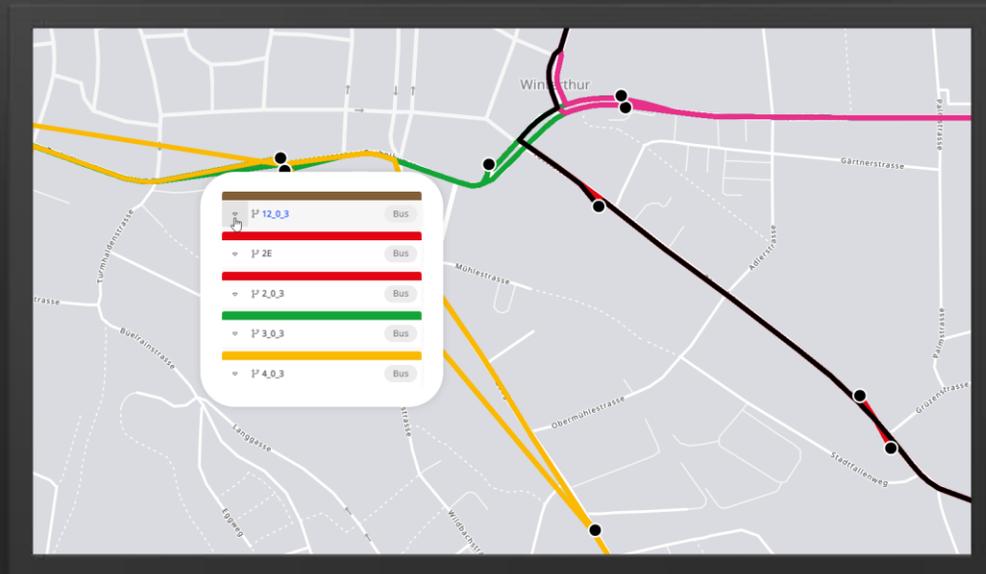
- Arrange the service days into arbitrary groups
- Calculate the service KPIs for different time period such as summer breaks, holidays or annual plans

SCHEDULE



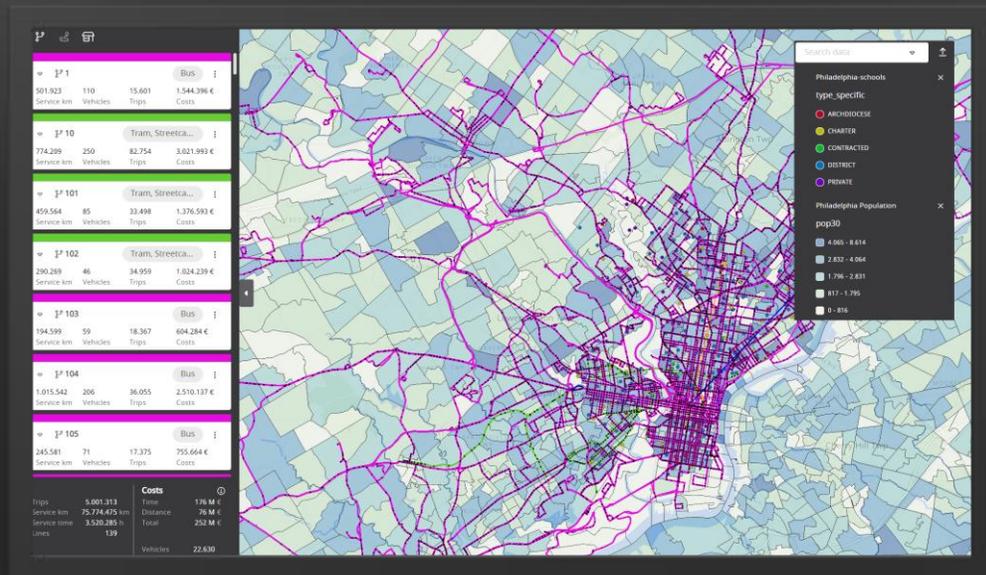
- Create groups of service trips within different service days
- Edit start, end, and headway of the trips
- Automatically calculate number of required trips

LINE MAP CLICK



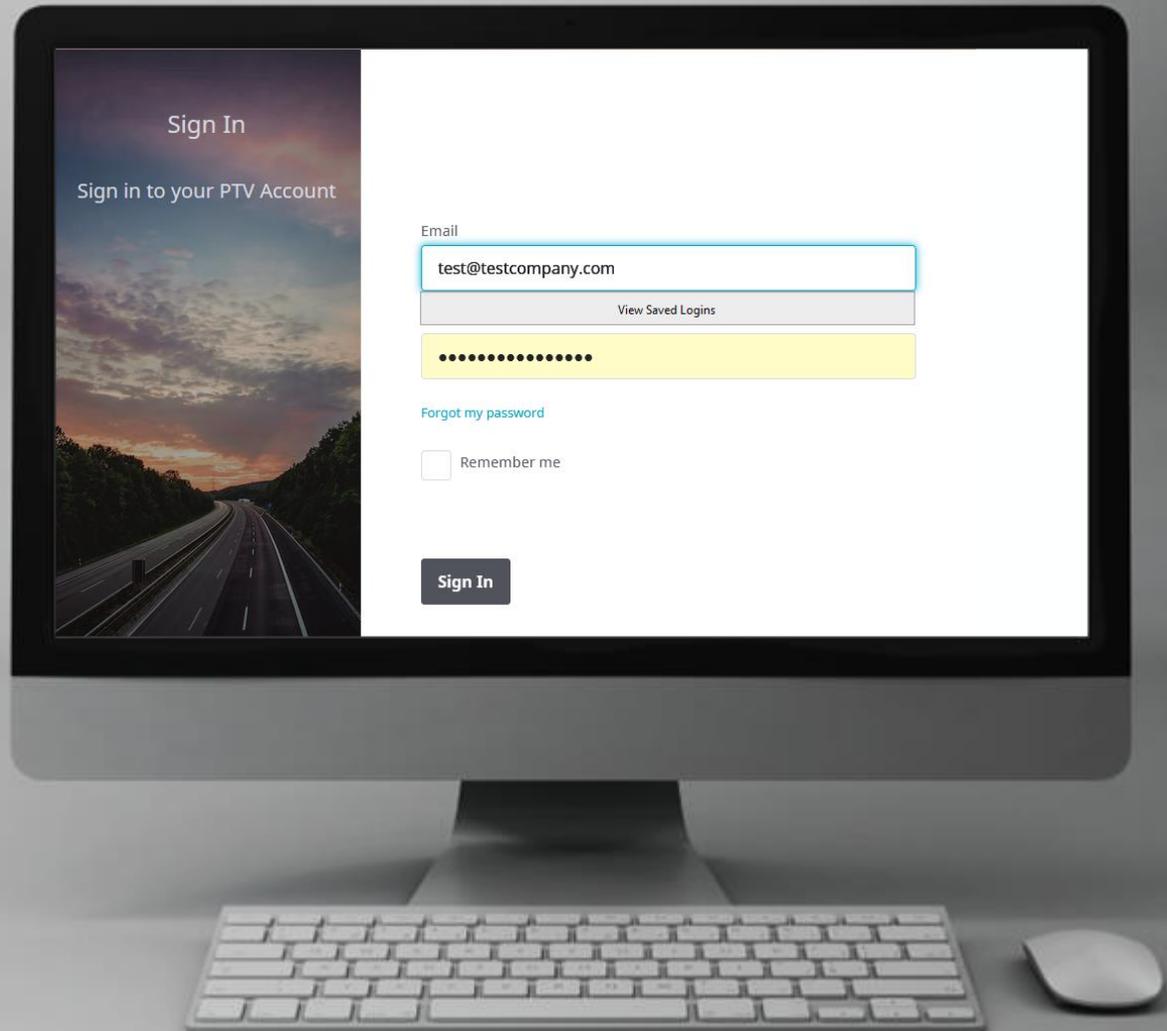
- Simple and uncomplicated map interactive analyzing
- Click on the lines and stops to find out more detail of your service

BACKGROUND DATA



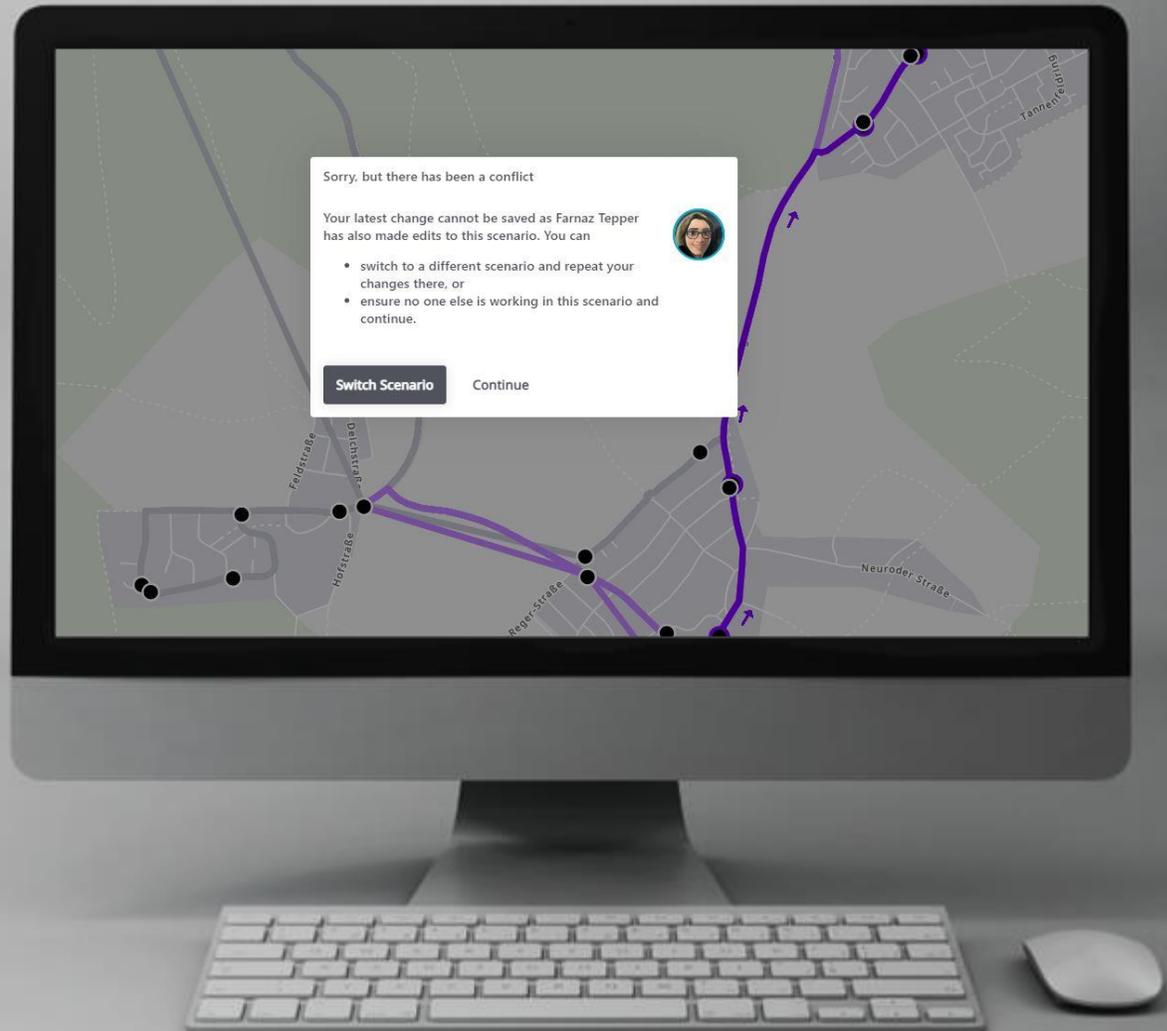
- Upload own spatial background data like population or points of interests
- Visualize your data as multiple layers in addition to your public transport supply on the map and consider any changes based on it

CLOUD-APP



- Web-based cloud-application
- No installation or updates required
- Work in your web browser on any computer or laptop without installation
- Always work with the latest release including up-to-date features

COLLABORATION



- Invite other people and assign them different roles and rights
- Design your public transport supply collaboratively with others and share results with stakeholders

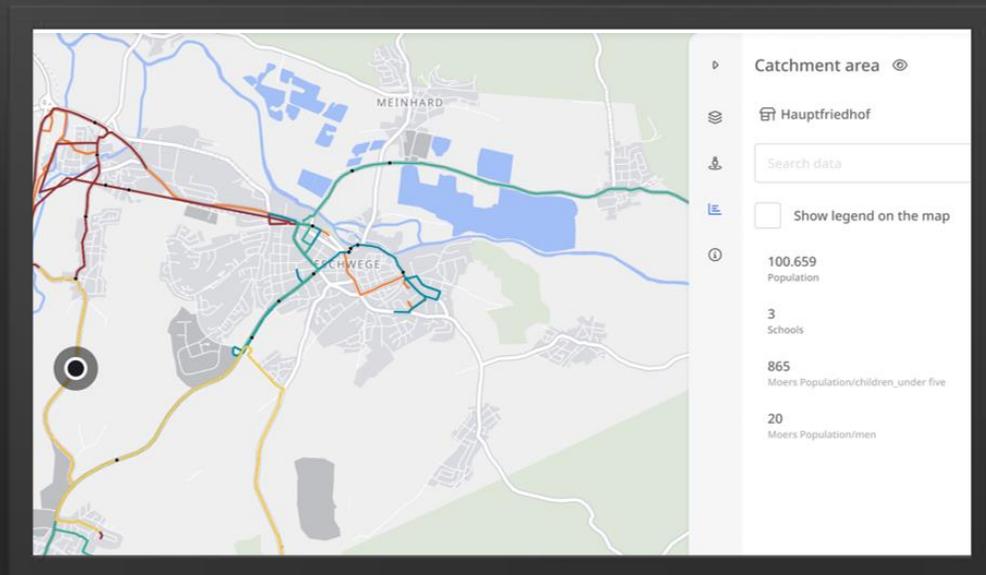
08

Licenses and
upcoming
features

LICENSES

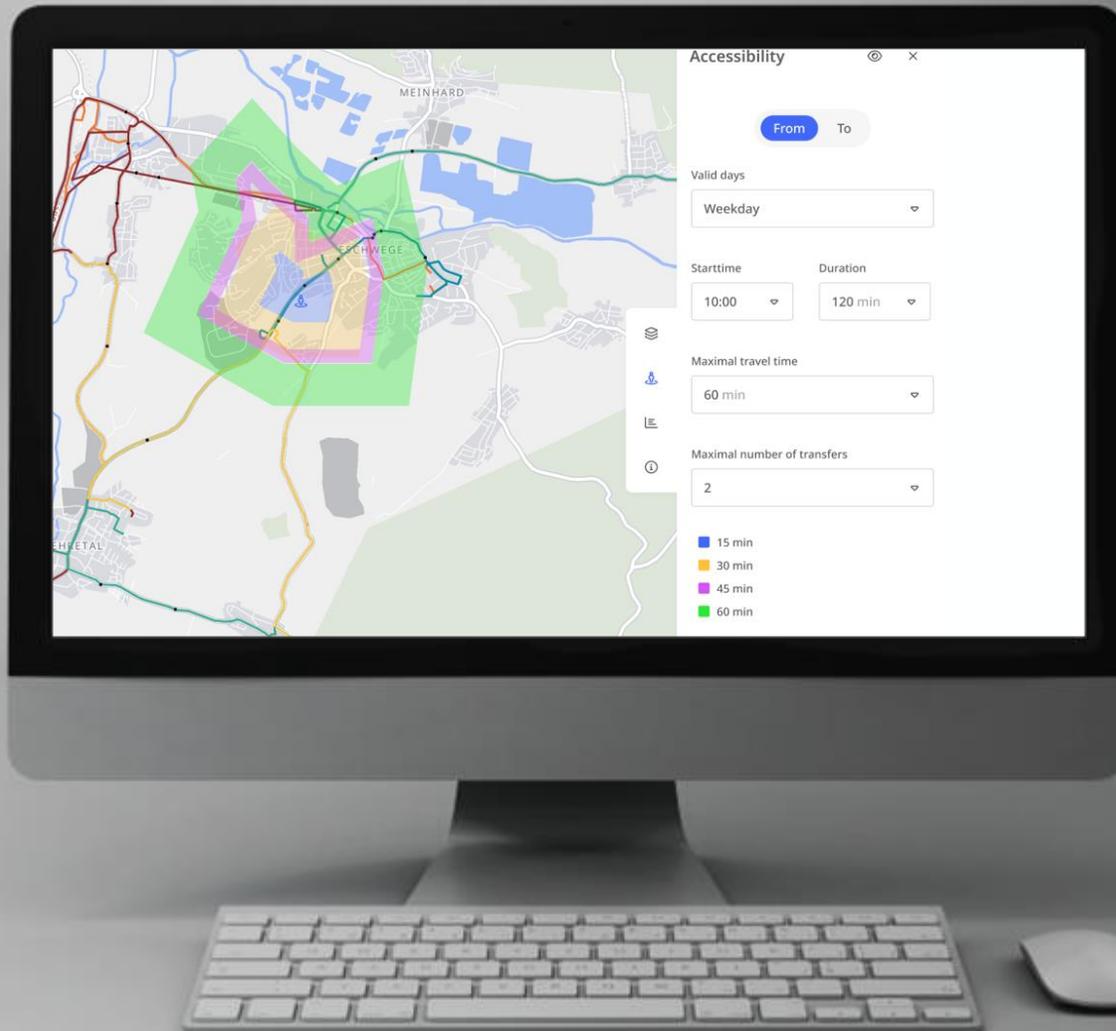
Description / Feature	Trial version (30 days)	Size Extra small	Size Small	Size Medium	Size Large
Region size (km2)	Unlimited				
Population of region	Unlimited				
Number of lines in the network per scenario	<2000	<50	<100	<500	<2000
Number of stops in the network per scenario	<100,000	<500	<1,000	<5,000	<100,000
Number of Scenarios	10	100			
Number of users	5	2	5	10	20
Customer Support	none	Full			

CATCHMENT AREA



- Catchment area radius for each transport system type
- Intersection with user imported spatial data
- Sum of numerical attributes (e.g. population) as aggregated value
- Catchment area per stop and per line

ISOCHRONES



- Departure or arrival point
- Isochrone calculation based on timetable
- Various time slots
- Maximum of travel time
- Number of transfers
- Sum of numerical attributes (e.g. population) as aggregated value within isochrones

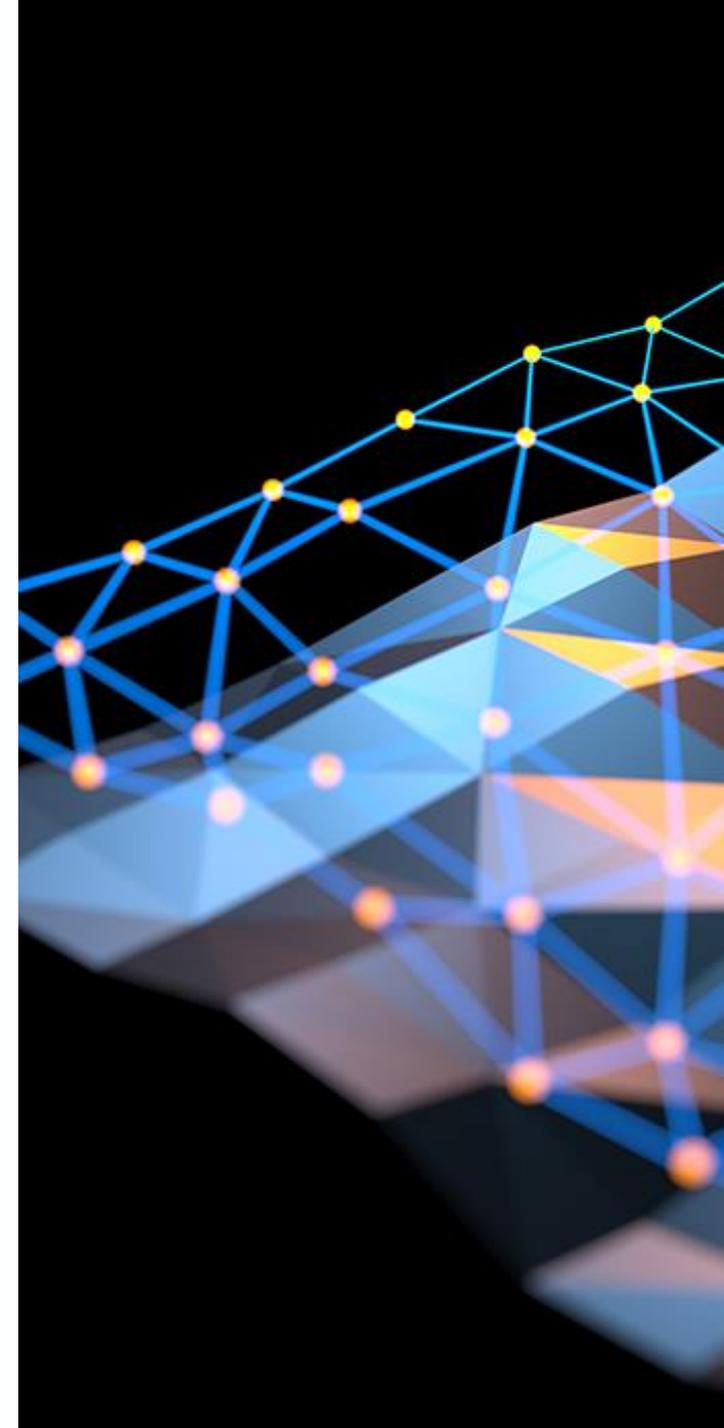
ROADMAP

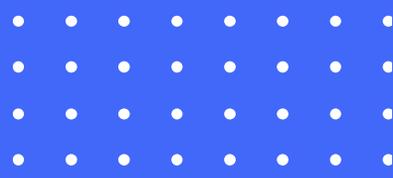
Functionality	Current release	Coming soon	Later releases
Upload of public transport supply as GTFS and PTV Visum format	✓		
Edit of public transport network (lines and stops)	✓		
Edit of schedules within different service days (headway-based)	✓		
Calculation of operation costs and PT service KPIs	✓		
Modelling of different transport systems	✓		
Export of public transport supply as PTV Visum format	✓		
Export from map (PNG)	✓		
Timetable	✓		
Collaboration and conflict management within scenarios	✓		
Visualization of GIS data	✓		
Export of public transport supply as GTFS	✓		
Export KPIs and operation costs	✓		
Scenario comparison	✓		
Analysis of catchment area with census and GIS data for stops and lines	✓		
		✓	

OUR ADVANTAGE

Experts in modeling, simulation and traffic management:

- Most robust transport data hub trusted by 2,500 cities worldwide.
- We deliver the best planning results on the market because we understand our customers' needs and know how to best meet them.
- For the past 40 years we have set standards that still prevail.
- We are continuously developing our solutions and expanding our offering. You have an extensive choice of sound and efficient algorithms.
- Our professional and developed structure shows in support and training services





PTV GROUP

QUESTIONS

