Improving network agility to create resilient supply chains

4FLOW
Your supply chain solution

Inbound network optimization and transportation planning with 4flow vista®

The more complex and global a company's supply chain network, the more likely it is to suffer from disruptions and breakdowns. These can lead to significant production downtimes and losses.

The automotive industry is among those most affected right now. Shortages of semiconductors and key raw materials from Ukraine and Russia alone led to a decrease in European vehicle production of approx. 150,000 vehicles (March 2022) with multiple plant closures across the globe.

While the risk of disruption cannot be avoided, it can be reduced by improving supply chain agility.

Global automotive businesses trust 4flow vista® to design optimized, resilient supply chain networks. See our example projects to learn how 4flow customers benefited from our decades of experience to achieve improvements in:

> **Greenfield optimization**
> **Cost optimization and transparency**
> **Brownfield optimization**

4flow vista®

The 4flow vista® software solution is specially designed to support network planning and optimization, from strategic to tactical planning. Powered by optimization algorithms developed in-house, 4flow vista® enables users to:

Identify network structures
Generate possible scenarios and identify the optimal network structure of supply, production, and distribution networks

Plan transportation structure
Plan transportation structures and concepts based on historic and future requirements, transportation costs, and potential synergies

Generate load previews to enable early-stage communication with stakeholders
Automatically create a unique transportation plan and preview specific to each origin-destination pair or lane, including relevant routing and loading information for future shipments

Tactically optimize routes
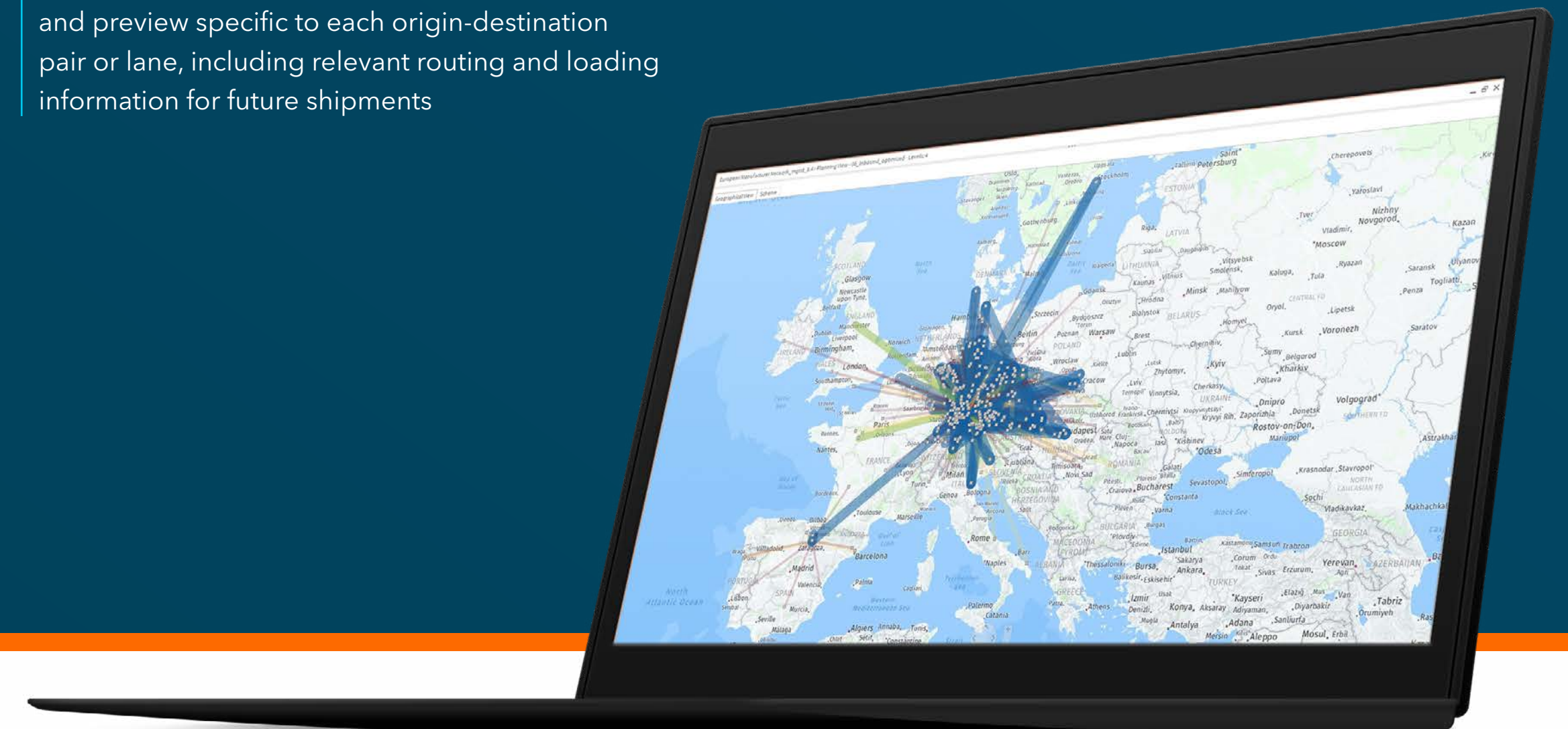Continuously replan and adapt based on changing boundary conditions

Sustainable benefits

Sustainable cost reduction

Improved network agility

High-efficiency network design

Planning and maintaining a lean, cost-optimal inbound network for a new automotive OEM

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The project

A new automotive manufacturer was in the process of creating supply chain management and network engineering teams. To support production ramp-up and sustainable growth for the client's main production sites in Europe, 4flow was contracted to set up an initial network structure and a network design tool. The team leveraged the greenfield situation in the transportation network to design an optimized, flexible network structure from scratch.

Project approach

> Perform initial network study
>> Configure mapping for easy upload of data into 4flow vista®
>> Find optimal transportation concept for each lane with the 4flow vista® optimized network creation
>> Export cost forecast on part level for corporate cost planning
> Conduct training and handover to customer network engineering team for further projects

Outcome and benefits

1. Design was optimized on supplier location level, including transportation mode (FTL, LTL, hub, milk run) and frequency

2. Transportation cost evaluation was achieved per part to support in supplier selection

3. Customer was optimally prepared for project maintenance, which includes yearly network updates to adapt to market changes with minimal planning effort
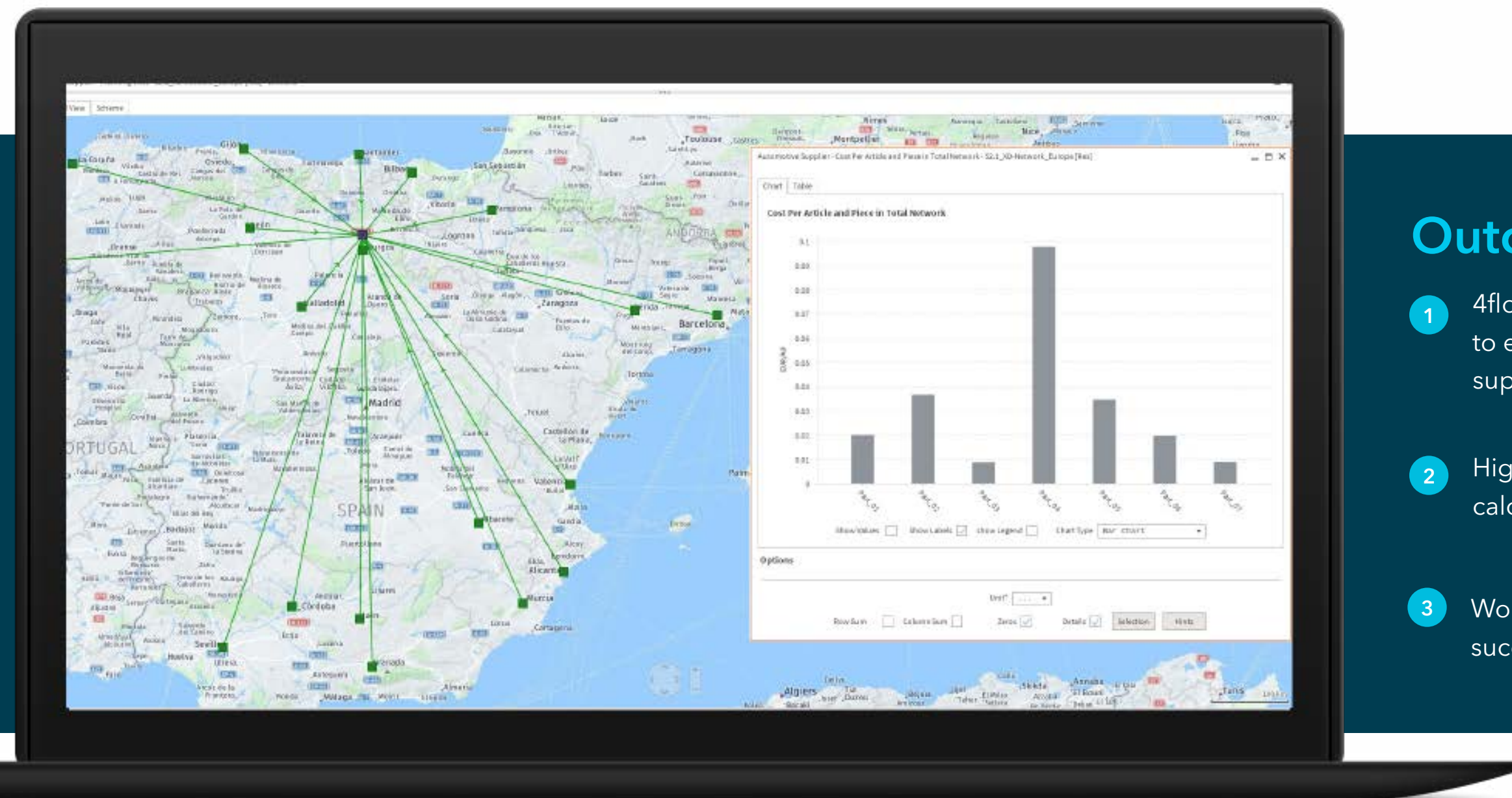
Calculating unit-level supply chain costs for an automotive supplier

The project

This automotive supplier was lacking transparency on total supply chain costs per finished product. The use of an external service provider to calculate costs, as well as poor data and calculation quality, made extensive checks and multiple time-consuming updates necessary. 4flow was asked to support the streamlining and optimization of this process.

Project approach

> Plan for insourcing of supply chain cost calculations
> Implement 4flow vista® for strategic transportation planning to calculate supply chain costs
> Train staff on specific responsibilities for working with 4flow vista®
> Carry out pilot project to identify cost drivers and integrate them in network models

Outcome and benefits

1. 4flow vista® was successfully implemented to enable the supplier to calculate their own supply chain costs independently

2. High-quality results were achieved in cost calculations on the unit level using 4flow vista®

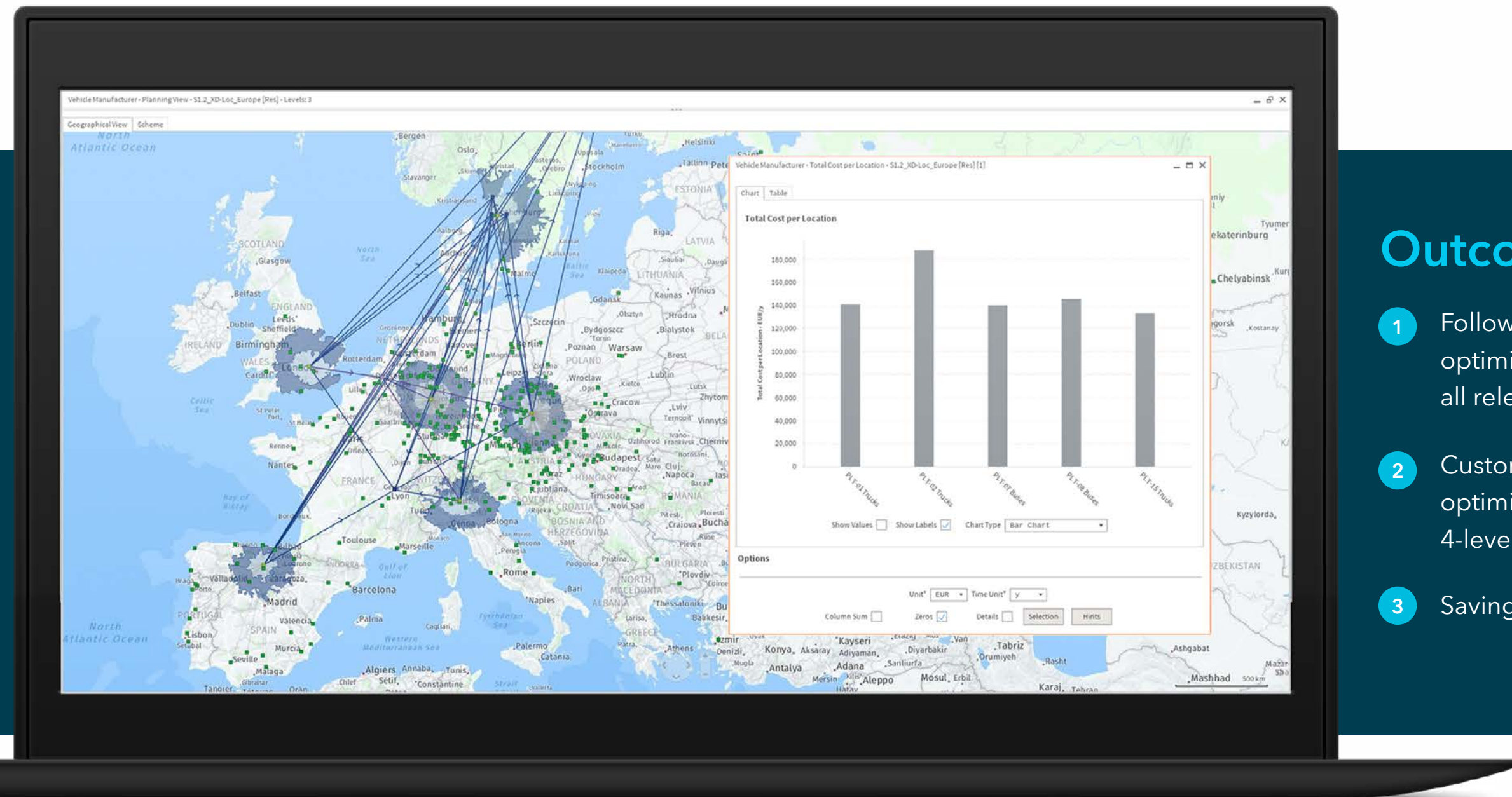3. Working time was significantly reduced thanks to a successful integration and improved transparency

Establishing 4flow vista® as an OEM's preferred software for strategic supply chain design

The project

Our customer – an automotive OEM – needed to replan the existing network structures for its various brands. They decided to onboard a software tool capable of visualizing and optimizing supply chain network structures on a strategic level. To run cost calculations and network scenarios on short notice, one of the main demands was the ability to combine master data and transportation tariffs in one tool. Standards for calculations needed to be defined to increase efficiency. The customer chose 4flow vista® to conduct these optimizations and tasks.

Project approach

> Create proof of concept based on dedicated customer planning cases and data in 4flow vista®
> Conduct user training and intensive on-the-job training for key users
> Carry out on-the-job training based on relevant customer network and transportation planning tasks
> Set up relevant planning database for subsequent planning cases with the customer

Outcome and benefits

1 Following training and coordinated efforts to model and optimize network tasks, key users were able to evaluate all relevant strategic planning cases using 4flow vista®

2 Customer was able to carry out tasks such as hub optimization or routing decision calculations in a 4-level hub network

3 Savings of over 15% was identified
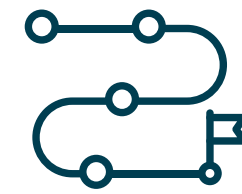
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Additional use cases with 4flow vista®

4FLOW

Network optimization and strategic transportation planning

> Visualization of supply networks
> Definition of transportation network and number of network levels
> Position of sites and allocation of assortment
> Total cost optimization

Tactical transportation planning

> Definition of transportation structure
> Optimization of transportation rates and modes
> Efficient route planning
> Preview of transportation

About 4flow

4flow is a leading provider of supply chain consulting, software and fourth-party logistics (4PL) services. With this cross-functional competency, we are able to meet and exceed the highest standards of quality and innovation.

20+
offices in Europe, North America, South America and Asia

1000+
team members globally

400+
customers globally

300+
projects annually around the world

2000
year of foundation

100%
management-owned

Our expertise – supply chain software

Software for network optimization and fully integrated transportation and container management

Digitization and software

Network and transportation optimization

Supply chain strategy

End-to-end transportation management

Sustainable supply chain

4flow customers

AGCO   **Adient**

Continental Automotive

Ineos Automotive

Knorr-Bremse   **Lear**

Magna   **MARS**   **Scania**

Yanfeng   **Volvo**

Interested or have questions?

Contact us!

Get in touch to have your questions answered or to schedule a live demo of our software solutions.

We look forward to hearing from you.

4flow software
Michael Kagel
Senior Expert,
Software Sales
+49 152 08679902
m.kagel@4flow.com

4flow on LinkedIn

www.4flow.com