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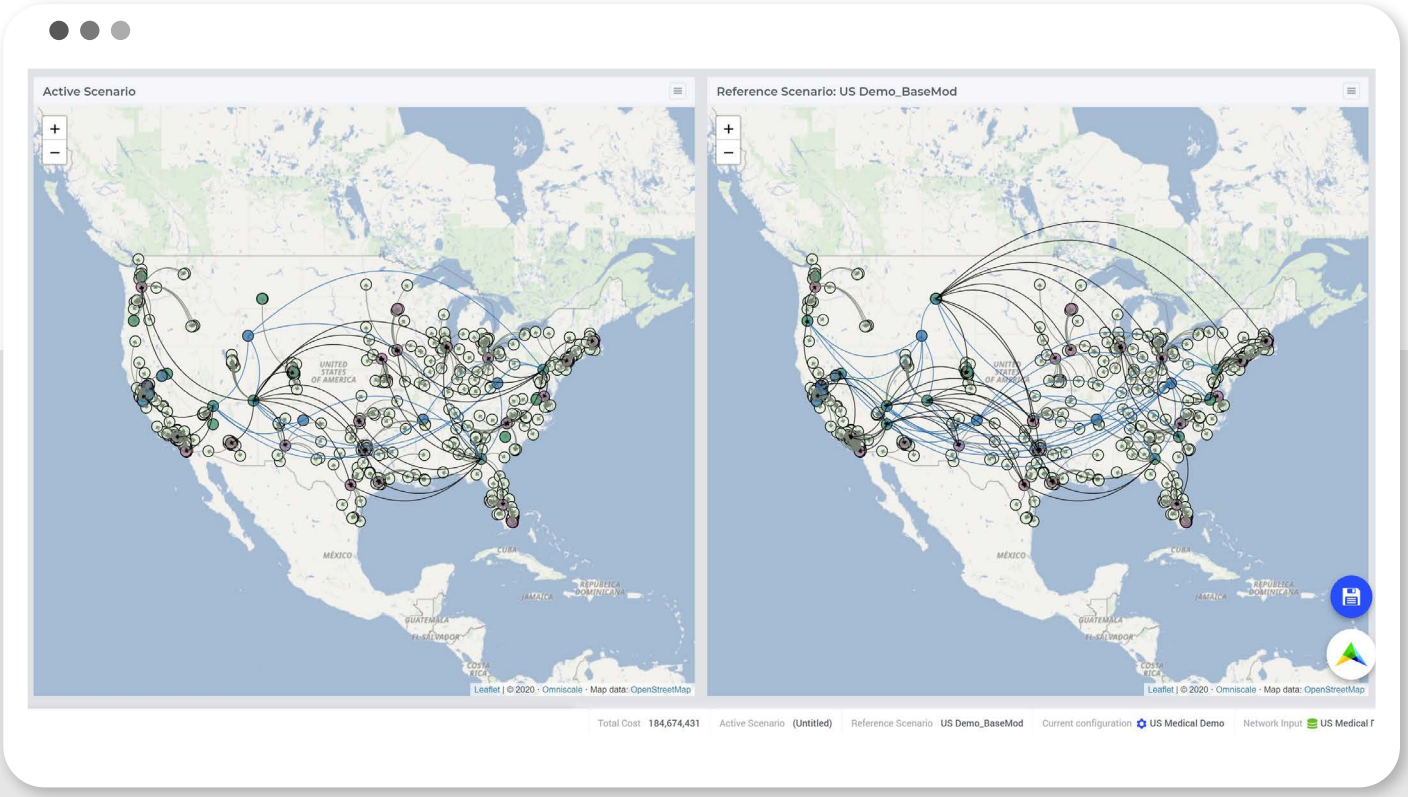
Network Design

Product Data Sheet



Created by supply chain professionals for supply chain professionals, AIMMS Network Design is a software solution that helps you optimize your supply chain's design.

In the back-end, AIMMS Network Design is powered by advanced prescriptive analytics technology using the CPLEX solver. In the front, it provides an intuitive and easy to use browser interface for analysts to rapidly and easily run and compare different scenarios. The resulting analysis can then be used to support supply chain leaders in making informed and data-driven decisions about their supply chain network design.

Industries where AIMMS Network Design is used include:

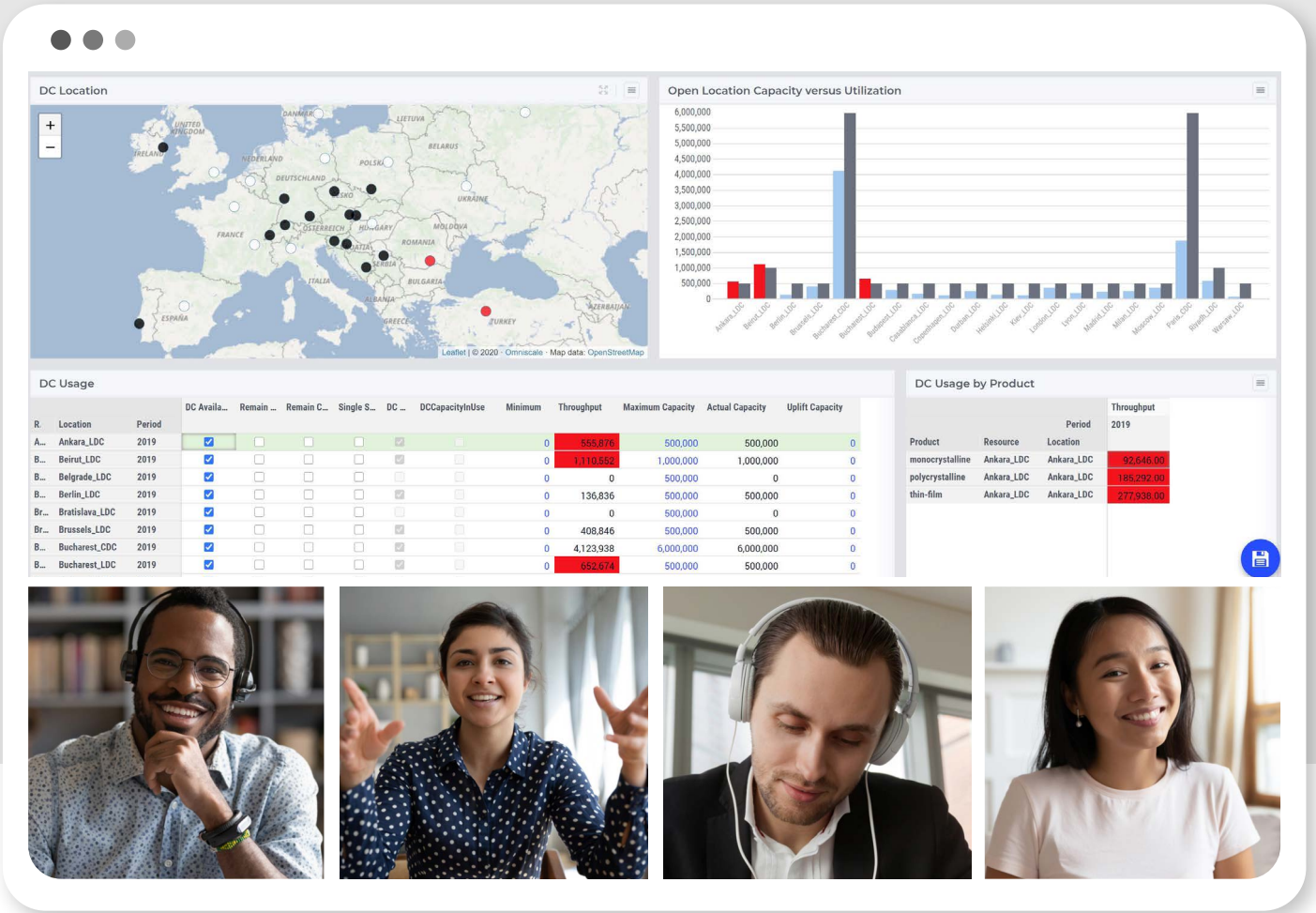
- Manufacturing
- Consumer goods
- Distribution & Logistics
- Spares

Who is it for?

AIMMS Network Design is used by:

- Analysts in corporate supply chain departments or Centers of Excellence (typically, they are the users of the software)
- Supply Chain leaders who need strategic / tactical decision support (typically, they use the output of the software)
- Network Design consultants who perform studies for companies

AIMMS Network Design can be used in any supply chain that makes and/or moves physical products. The application is suited primarily for strategic (next few years) and tactical (next few months) decision support.



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Use cases

AIMMS Network Design can be applied in the following use cases:

- **Optimize your supply chain design based on cost and service levels:**
  - o Find the optimal number, size and location of DCs, xDocs, warehouses, etc
  - o Optimize the allocation of customers to service locations
  - o Find the optimal supply/production locations and mix
  - o Determine the optimal flows per mode of transport
- **Identify, quantify and manage capacity constraints (production, DC, transport, etc)**
- **Design for risk and resilience:**
  - o Respond to supply, production, warehouse or transport disruptions (health, weather, political, trade, etc)
  - o Flex demand to see how your supply chain handles fluctuations due to expected factors, such as seasonality, or unexpected factors, such as COVID-19.
- **Understand and address sustainability trade-offs**
- **Rationalize the supply chain after mergers and acquisitions**

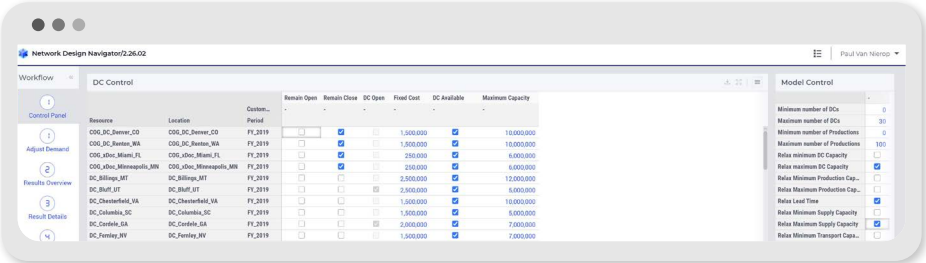
AIMMS Network Design is NOT:

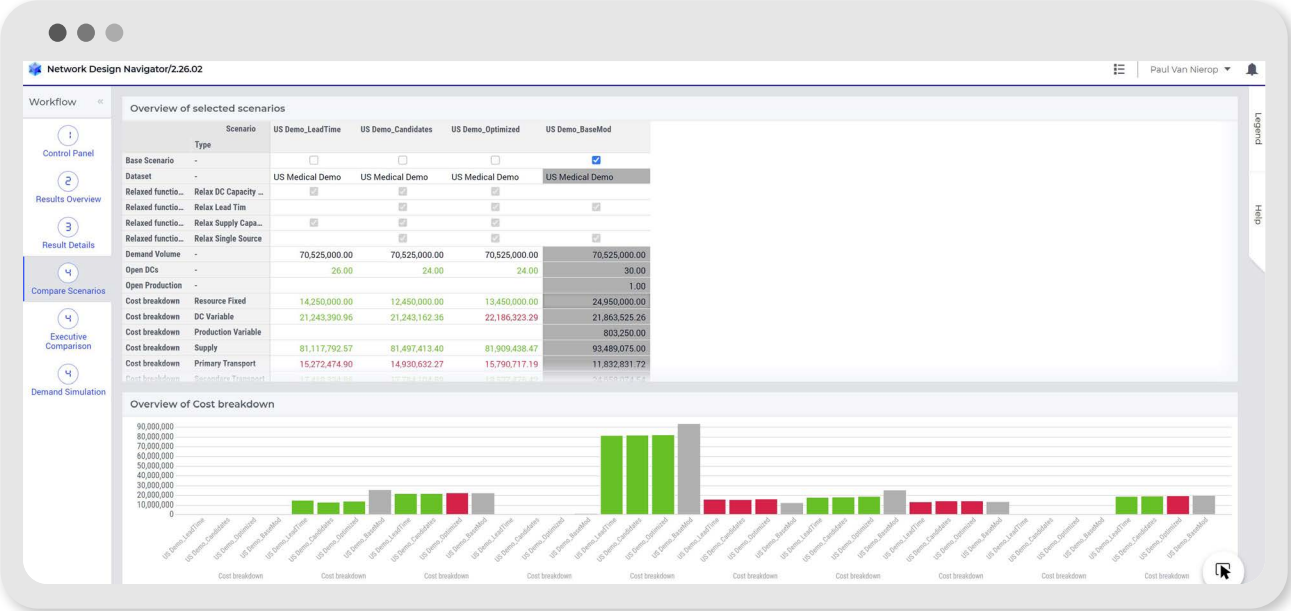
- A routing and scheduling tool
- A tool for short-term / execution planning at the SKU level (such as daily load plans, picking and packing, production scheduling, etc)
- A transaction-based TMS system used for the daily execution of transport activity: vehicle loading, order tracking, vehicle tracking, ERP integration, etc
- A tool used to absorb highly detailed and transactional data
- A source of external data like benchmark freight rates and warehousing costs
- An ETL tool used to import and transform data from the ERP

Functionality Checklist

Leverage scenario modeling to test hypotheses, understand trade-offs & proactively optimize your network

Scenario management: run, save and compare multiple scenarios





MILP (Mixed Integer Linear Program) solved using CPLEX

End-to-end modeling: suppliers, production, warehouses, customers, transport

Carbon/Sustainability modeling using custom objectives

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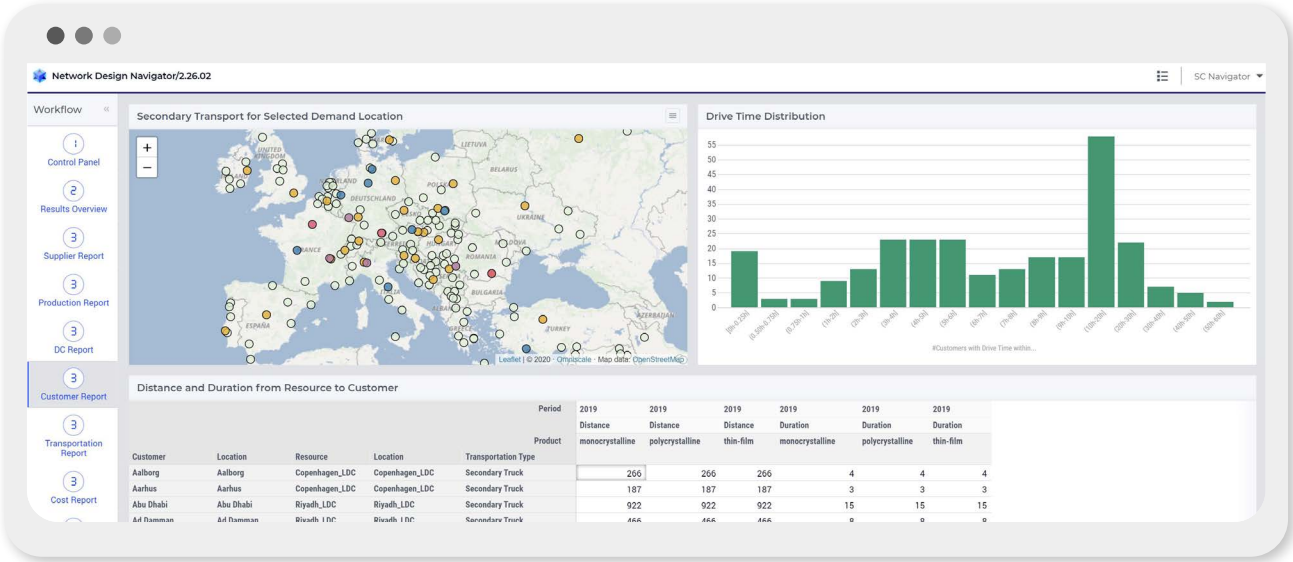
Optimize cost and service levels

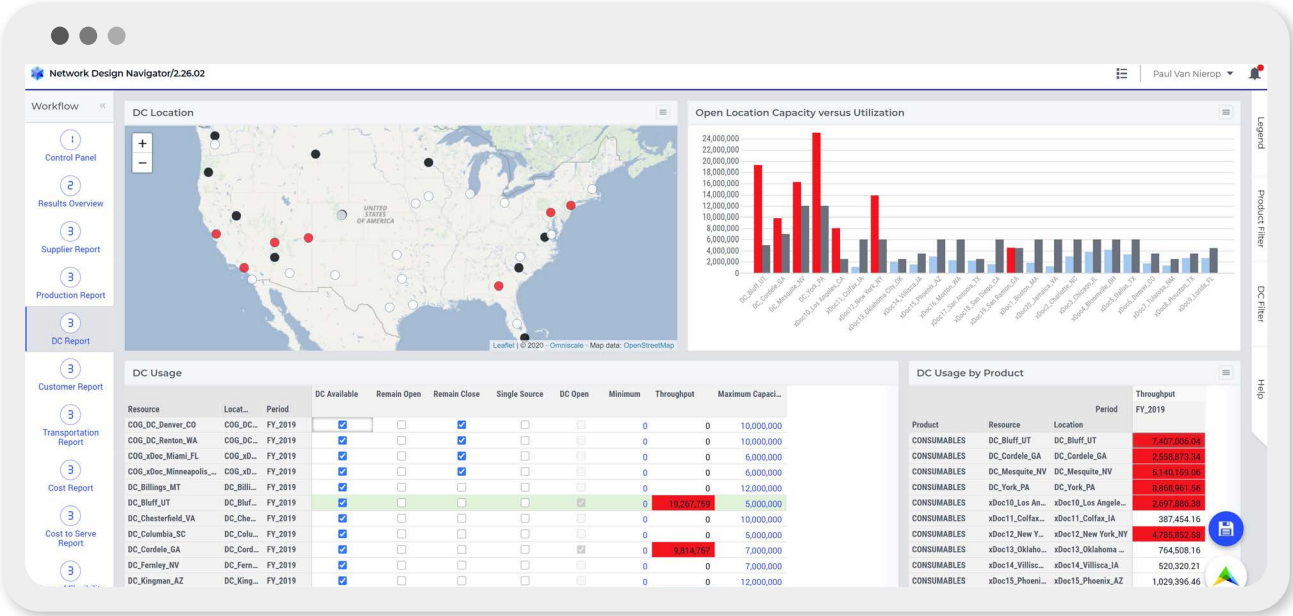


Bill of Materials (BOM) modeling for production conversion (from raw materials to intermediates to final product)

Multiple modes of transport

Multi-echelon distribution network

Constraints: supply, production, DC, capacity expansion, lead times, transport, single source, number of locations and other geographical constraints



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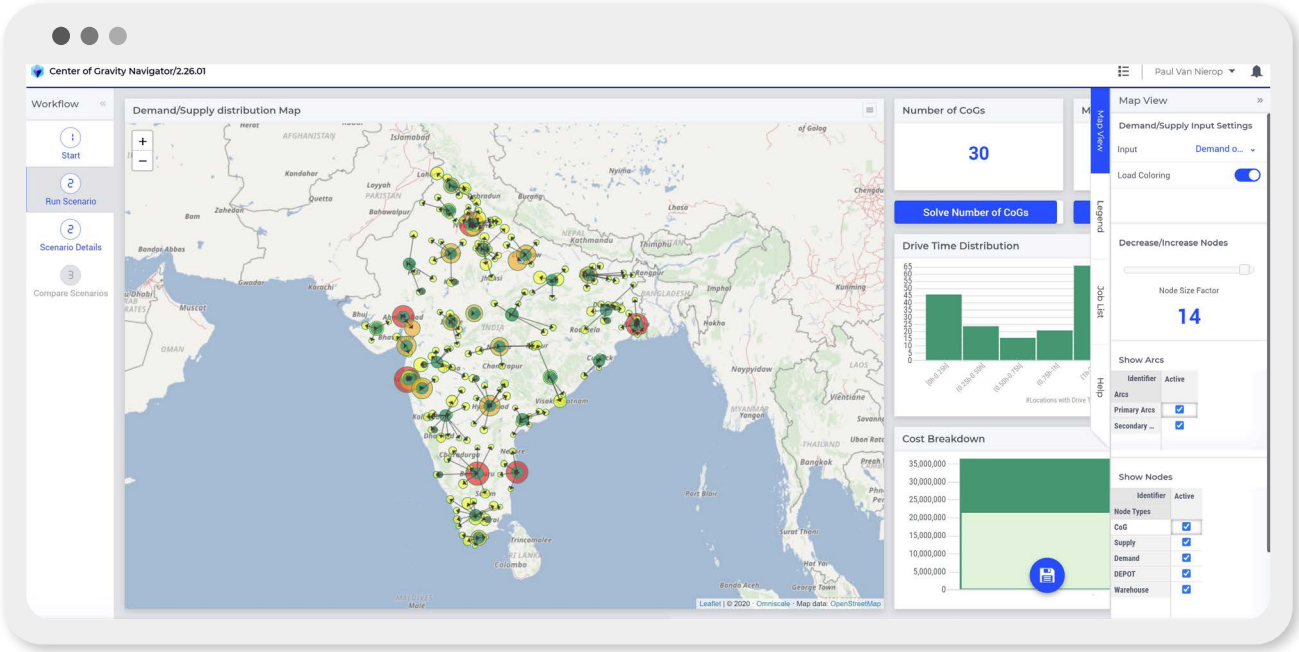
Multiple ways to capture transport costs: distance based, volume based, fixed and minimum costs, stepwise costs, take or pay, cost curves, etc

Generate cost functions for multi-drop secondary deliveries

Configure physical supply chain costs as well as custom costs (e.g. taxes, carbon, inventory holding, etc)

Multi-period support

Center of gravity analysis for greenfield candidate locations



Quantify the inventory impacts of different footprint designs, and run inventory scenarios

Run demand simulations across scenarios to test robustness

Reports combine graphical results with maps and charts, as well as detailed drill down tables

Specify rate cards with specific delivery ranges

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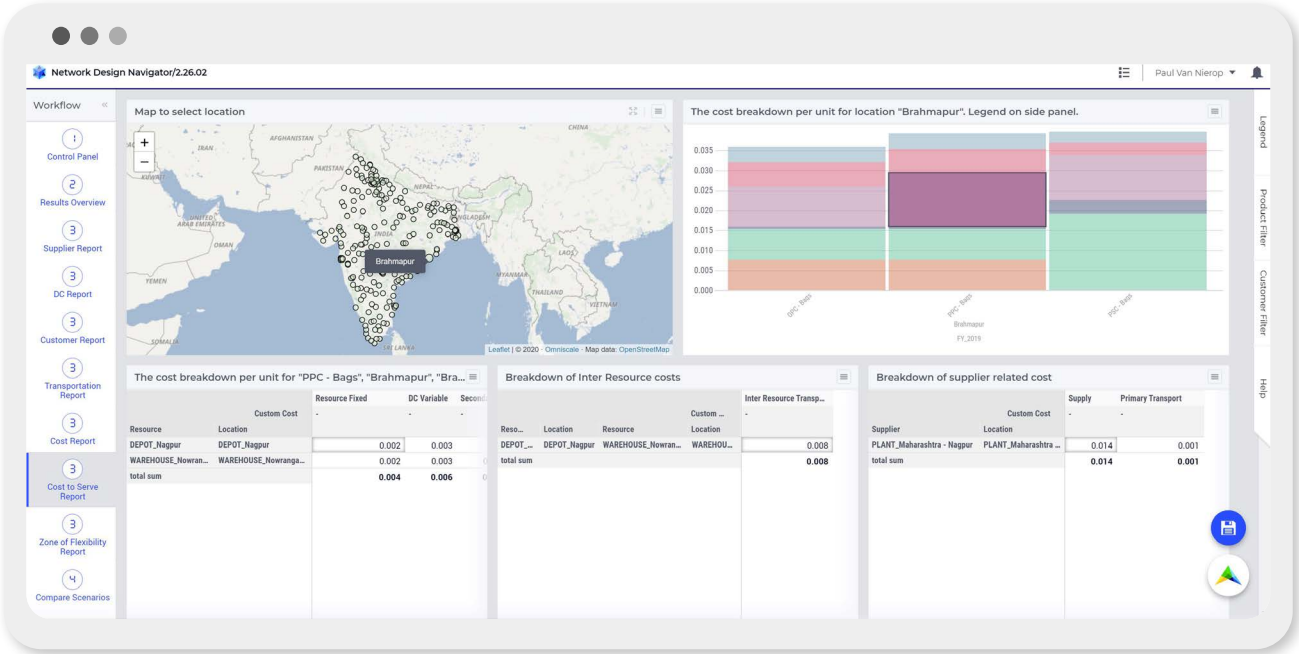
Cost-to-Serve analysis with end to end report



Zone of flexibility analysis

Data import through Excel templates or integration with the application database

MySQL application database for data storage

Interact with data directly from the browser

Manage multiple data domains, configurations and datasets

Export data easily to .csv format for further analysis and interpretation

Debug infeasibilities through infeasibility analysis

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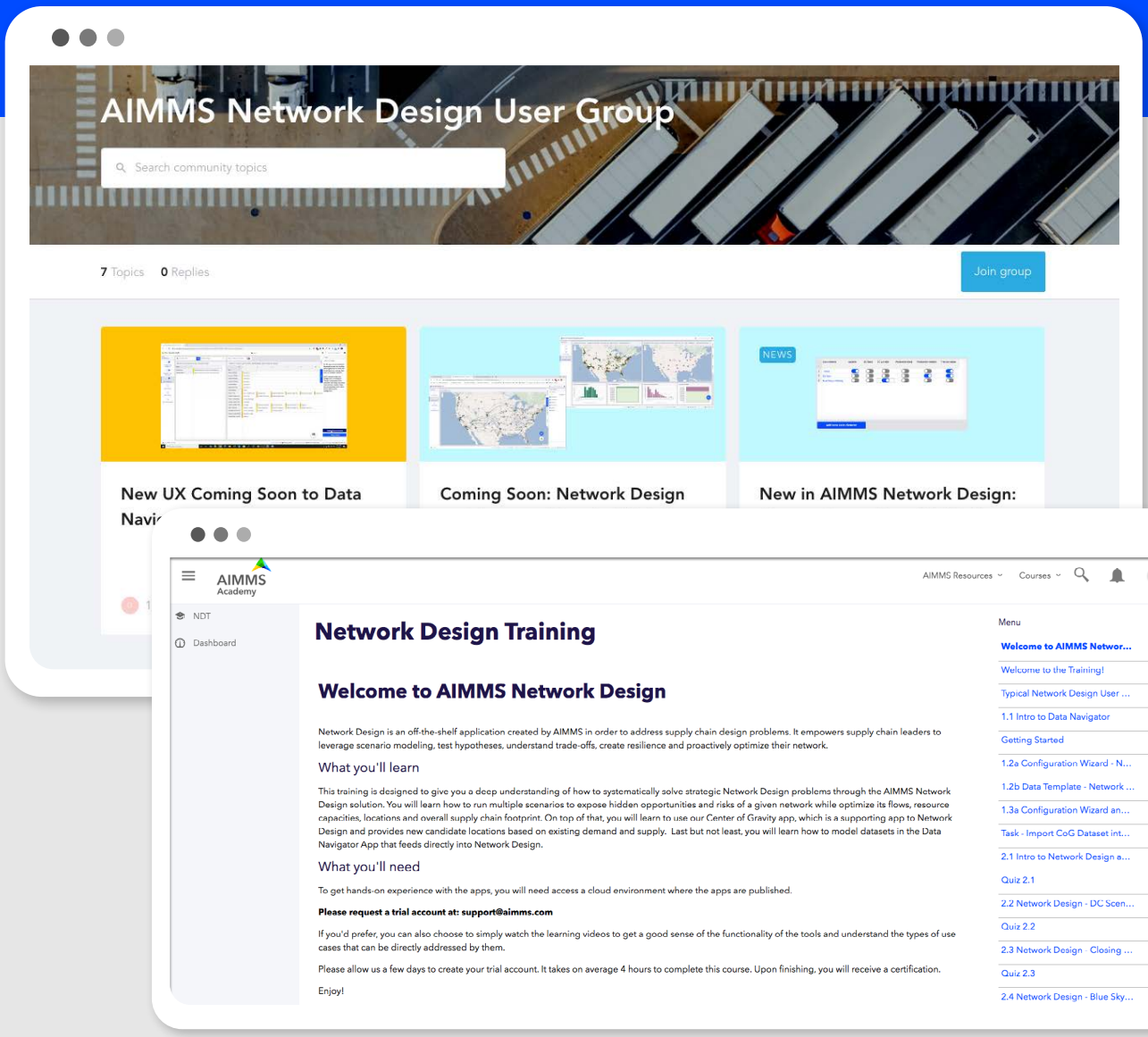
AIMMS Network Design Community and Support

AIMMS is much more than a software company. When you purchase one of our products, we also provide you with the support and connections you need to ensure your success.

- Dedicated Network Design Customer Success Manager
- Support desk for functional questions and technical issues
- Network Design User group in the AIMMS Online Community
- Network Design e-Learning modules
- Trial platform for e-Learning, academics and prospects
- Post graduate tutorials for Academics

WATCH THE DEMO



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