

Low water is turning European waterways into a network constraint

When water levels fall, transportation capacity falls with them.



AI-generated image

Low water is already affecting European supply chains in 2026

20%

of normal vessel capacity reported on parts of the Rhine¹

€115-120/t

tanker barge rates from Rotterdam to Karlsruhe have increased¹

≈500k

unfilled truck driver positions across Europe²

Critical raw materials, fuels and industrial goods are especially exposed.

The result is a network-wide impact on capacity



Reduced barge capacity

Lower water level limits payloads and forces additional sailings



Limited road capacity

More demand for tankers, bulk trailers and specialized equipment



Higher transportation costs

Shippers compete for scarce backup and spot capacity to replace lost volume



Greater service risk

Critical materials become harder to move reliably

The strategic question

Companies cannot simply replace lost waterway capacity with trucks.

How do you keep critical flows moving when one transportation mode suddenly loses capacity?



What leading supply chain teams are focusing on



See exposure early

Identify flows, lanes and materials most dependent on waterways



Keep alternatives ready

Compare barge, road, rail and multimodal routing options



Use capacity efficiently

Optimize routes, consolidation and shipment frequency



Quantify the trade-offs

Balance cost, service and emissions before shifting volume

When barge capacity drops, the volume still has to move

Replacing waterway capacity creates a cross-industry bottleneck

Low water means lower vessel payloads. Shifting the displaced volume to road or rail requires significantly more transportation capacity – and competing with other shippers looking for the same alternatives.

One barge. How many trucks?



1 push barge
2,450 t cargo capacity

≈ 102 trucks*
at 24 t per truck

*Illustrative comparison based on reference cargo capacity. Actual capacity depends on vessel, equipment, cargo and operating conditions.

But not every truck can move every load



Liquids
Tank trailers



Bulk materials
Specialized bulk trailers



Industrial materials
Walking-floor or other suitable equipment

The advantage goes to companies that already know their alternatives



When everyone needs alternative capacity at the same time, preparation becomes a competitive advantage.

Modeling barge, road and rail alternatives in advance gives transportation teams a factual basis for deciding where volumes can move, what capacity is required and what the change will cost.

4flow network optimization software

Design and continuously optimize your network with agentic AI



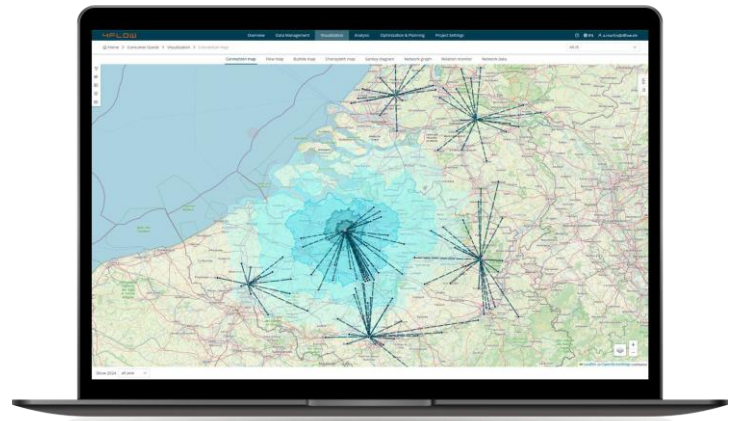
Instant network transparency and analytics



Scenario planning and trade-off analysis



Strategic network redesign and location optimization



Our supply chain expertise
Real results with 4flow

Over 20%
Savings in transportation costs

Up to 10%
Average increase in service level

Over 20%
Increase in process efficiency

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.



About 4flow

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