

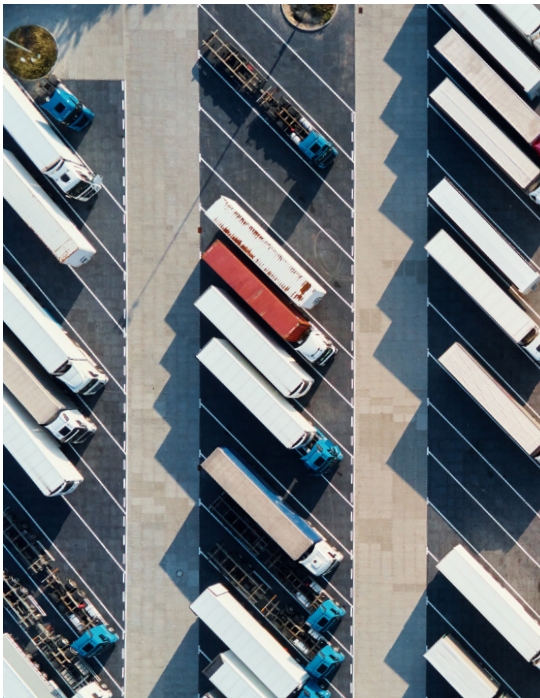
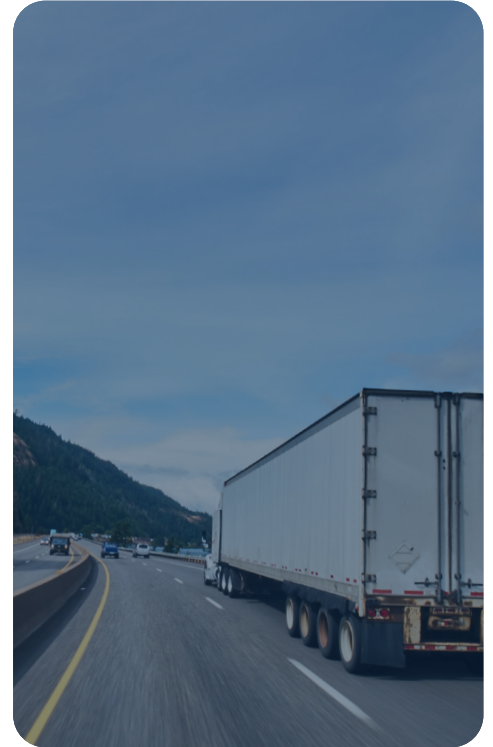
An aerial, top-down view of a shipping yard or port. The yard is filled with numerous intermodal containers of various colors, including red, blue, green, orange, and white. The containers are arranged in rows and columns, with some showing signs of wear and rust. A concrete road or path with yellow markings runs through the yard. In the upper right quadrant, there is a white structure that looks like a crane or a piece of heavy machinery. The overall scene is busy and industrial.

DESCARTES™

# Transportation Management Software Buyer's Guide 2026

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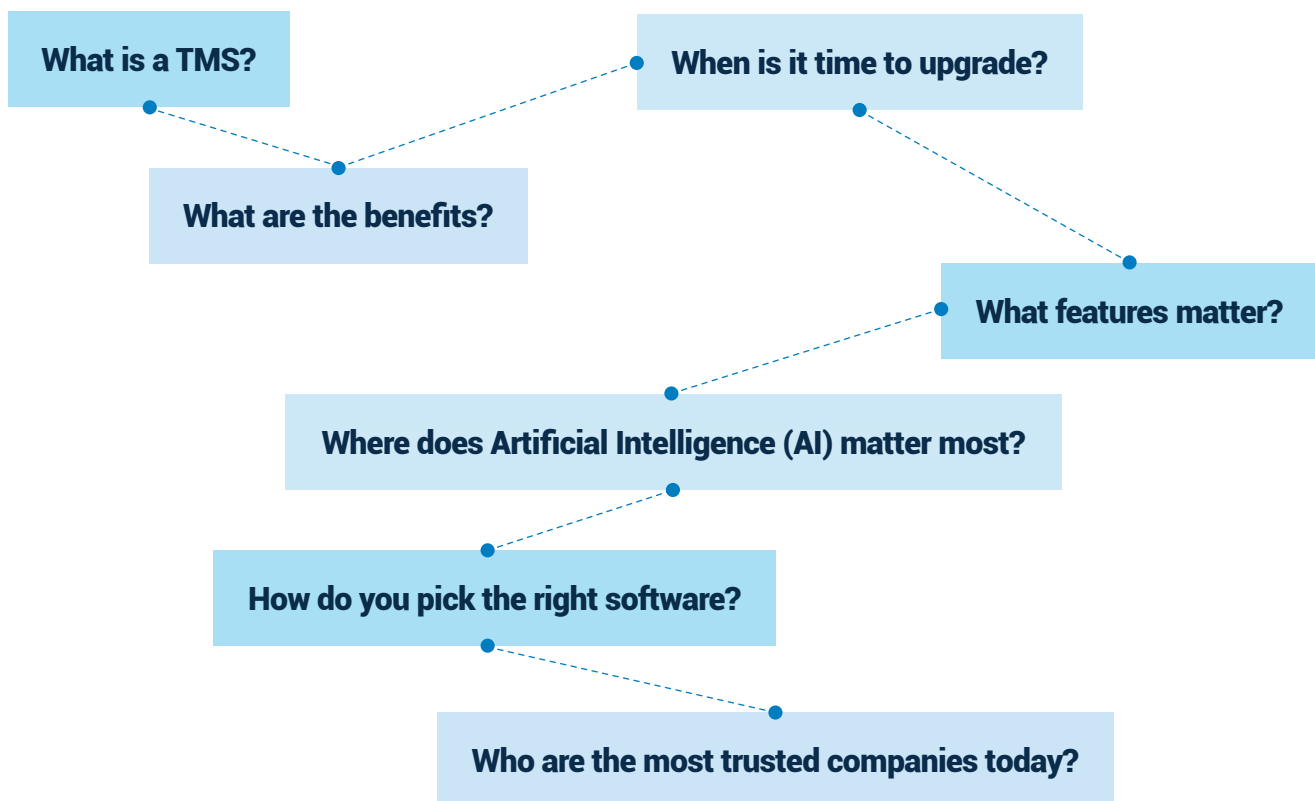
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# What's Changed? (And Why It Matters)

Transportation networks are more complex, customer expectations are higher, and disruptions are constant. Legacy tools and spreadsheets struggle to keep pace. When visibility is limited, risk increases, workflows can fail, and systems can't adapt. The result? Costs rise and service slips.

**How can we optimize operations without adding even more complexity?** Modern transportation management systems (TMS) provide a practical solution.

## This Guide Answers:



## Takeaway

Recognize where legacy systems are holding you back. Commit to exploring a modern TMS to reduce complexity while improving visibility, control, and scalability.

# What Is a **Transportation Management System?**

A Transportation Management System (TMS) is software that **helps organizations plan, execute, and optimize the movement of goods across carriers and modes.**

Core functions include planning, execution, optimization, visibility, cost control, and compliance.

## Who Uses a TMS & What Do They Achieve?

- 1 Operations** teams improve routing and carrier selection.
- 2 Executives** gain a live view of cost and service performance.
- 3 Finance** streamlines invoicing, audits, and compliance.

In practice, a TMS becomes the **transportation hub that improves day-to-day execution and supports long-term growth.**



## Takeaway

Define what a TMS is in the context of your business. Identify which teams would use it most and document the outcomes they need so you can be prepared to find the solution best fit for your business.

# What Are the **Benefits of a TMS?**

A modern TMS converts transportation from a cost center into a strategic differentiator for security, agility, and connectivity. Companies adopting cloud-first platforms **consistently turn fragmented operations into streamlined, data-driven networks that keep supply chains strong and adaptable.**

## Common benefits include:

### Lower transportation costs and stronger return on investment (ROI)

Automated rate shopping, optimized mode selection, and tighter capacity management directly reduces spend while proving measurable return on investment.

### End-to-end visibility across carriers, modes, and regions

Real-time insight into shipments eliminates blind spots, shortens response times, and improves customer satisfaction.

### Automated carrier compliance and fraud prevention

Built-in risk assessments, validation checks, and insurance workflows minimize errors, reduce risk exposure, and prevent revenue leakage.

### Scalability to match growth and complexity

Elastic cloud capacity and configurable workflows ensure performance and stability as volumes, geographies, or service lines expand.

### Faster integrations and fewer siloed systems

API-first connections with Enterprise Resource Planning (ERP), Warehouse Management System (WMS), and carrier/customer portals replace manual workarounds and accelerate time-to-value.

Measurable benefits companies see after adopting a modern TMS

**10%**

Reduction in annual shipping costs

**99.99%**

Accuracy in shipment processing

**75%**

Less manual labor

**SOURCE**

Customer case studies from [go3g.com/customer-stories/](https://go3g.com/customer-stories/)

## Takeaway

Translate benefits into measurable business impacts by linking them to cost drivers like excess freight spend, manual labor hours, or compliance penalties. Putting clear values on these impacts provides a foundation for internal alignment, a benchmark for validating vendor claims, and the leverage to negotiate terms tied to real operational and financial gains.

# How Do You Know It's **Time to Upgrade?**

Wondering if your current setup is holding you back?

**Look for these signals:**

## Slowdowns at the worst time

Systems lag during peaks, forcing manual workarounds.

## Blind spots in transit

Customers flag delays before your team does.



**Fraud Alert**

**Carrier Compliance Alert**

[View Details](#)

## Growing exposure to risk

Compliance slips and fraudulent invoices go unnoticed.

## Stringent workflows

Lack of flexibility and configurability leave you stuck with inefficient systems.

## Disconnected tools

Visibility is segmented and data is siloed, so opportunities to improve operations get missed.



## Unresponsive support

Fixes take too long, putting service at risk.

## Overreliance on email & spreadsheets

Shipments are managed in inboxes, not a central system.

## Takeaway

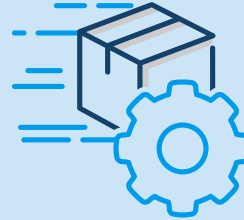
Log recurring issues in speed, visibility, and control. Document real-world examples of manual processes that could be automated. Make note of how improved logistics strategies, like dynamic planning and sophisticated route optimization, could lead to cost savings. Those records become proof for leadership and a checklist for what you need in your next TMS.

# What Features Matter Most?

When you compare providers, focus on capabilities that directly improve cost, service, and risk mitigation.

## Planning & Optimization

Plan and consolidate shipments across modes, build efficient loads, and use carrier capacity wisely to cut costs and improve delivery speed.

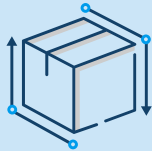


## Automation

Automate rate shopping, invoice checks, and routine workflows to reduce manual effort and free up staff for higher-value work.

## Cloud-first Capabilities

Deploy quickly, scale as business grows, and get continuous updates without the burden of manual upgrades.



## Execution

Track shipments in real time, receive alerts on delays, and manage documents digitally so teams can act fast when issues arise.

## Security & Compliance

Protect against fraud, ensure regulatory requirements are met, and keep a clear log of who changed what and when.

## Flexibility & Configurability

Adapt workflows, add extensions, and connect with partners so the system fits your operation instead of the other way around

## Business Intelligence & Reporting

Access dashboards and scorecards that explain performance and guide better decisions and contract negotiations.

## Takeaway

Build a checklist of must-have capabilities tied to your pain points, then use it as a scorecard to compare providers side by side.

# Questions to Ask About **AI in 2026**

AI is now everywhere in transportation. In the 2025 Descartes Transportation Management Benchmark Survey, 96% of companies report using it. But most of that adoption remains shallow. The common uses—data entry (41%) and load optimization (39%)—deliver important efficiency gains, but broader applications of AI can evolve how your business competes.

**When evaluating a TMS in 2026, look deeper than claims that software is “AI-native” and ask for proof in three areas:**

# 1

## **Decisions impacted**

Ask for examples of where AI recommendations changed how transportation was planned, how exceptions were handled, or how customers were kept informed.

# 2

## **Integration into workflows**

Look for AI that is built into daily processes and can eliminate tedious manual tasks. Prioritize AI capabilities delivered through trusted platforms you know you can rely on.

# 3

## **Logic transparency**

Ask providers to show how their system arrives at a recommendation. A black-box AI can erode trust; a transparent algorithm lets your team understand, validate, and adjust decisions.

These checks will help you separate platforms that stop at efficiency from those that apply AI where growth, service, and operational confidence are at stake.

## **Takeaway**

Prioritize TMS providers that can show where AI is embedded in decision making and backed by customer results.

# How Should You Prioritize **Your AI Investment**

There's a clear dividing line in how companies use AI. Nearly everyone starts with efficiency in areas like clerical automation, data entry, and scheduling, and that's valuable. But the companies seeing the strongest business results don't stop there. They extend AI into areas that touch customers directly, shape how disruptions are managed, and even opens doors to new markets. **The difference isn't who uses AI, but how far they let it reach into decisions that matter.**

## How AI Shows Up in a TMS

### AI That Automates

- ✓ Data Entry
- ✓ Invoice Matching
- ✓ Rate Lookups

### AI That Elevates

- ✓ Scenario Planning
- ✓ Exception Management
- ✓ Customer Communication During Disruption

### Takeaway

Efficiency is a smart starting point, but the right platform also applies AI to service, resilience, and growth.

# How Do You Choose **Software That Fits Your Workflow?**

1

## Start with research

Scan analyst reports, talk to peers, and build a shortlist of providers.

2

## Align inside your team

Identify stakeholders, agree on goals, and name the metrics that matter most.

4

## Test with real data

Script demos around your workflows to see results firsthand.

3

## Engage providers

Share your requirements, ask for references, and see how quickly they respond.

5

## Decide on the partner

Evaluate fit on both performance and support to find a long-term partner.

While most TMS platforms are cloud-first, the difference is in how well they turn the cloud into a measurable advantage for your operation. **Keep these factors in mind when evaluating a cloud-based TMS:**

### Security

Safeguards and compliance keep data protected.

### Integration

API-first links connect systems and partners reliably.

### Connectivity

Direct access to carriers and global networks speeds up collaboration.

### Scalability

Elastic capacity handles peaks and global growth.

### Flexibility

Workflows adapt as your processes and priorities change.

## Takeaway

Follow a simple roadmap: research, align, engage, test, and decide. Throughout, choose the provider who proves they'll be your long-term partner, not just your software vendor.

# Who **Should You Trust** With Your TMS Needs?

Selecting a TMS provider is one of the most visible decisions a logistics leader makes. The choice determines who you trust to guide the backbone of your transportation network. In today's market, the companies viewed as most trusted combine stability, proven performance, and a record of helping customers adapt as conditions change. Independent analyst research, including [ARC's annual spotlight](#), highlights which providers have earned that trust at scale.

When evaluating potential partners, **look for these signs that show they can deliver.**

## **Market strength**

Financial stability and scale ensure the provider will be around for the long haul.

## **Ecosystem reach**

Leaders connect you quickly to carriers, partners, and compliance networks.

## **Customer success**

References and case studies in your industry prove they deliver measurable results.

## **Service commitment**

Post-go-live support and responsiveness are crucial for ongoing success.

## **Innovation track record**

Frequent updates and a transparent roadmap show commitment to longevity.

## **Takeaway**

Build your shortlist around providers who show strength across these areas, then use analyst research to validate which companies consistently perform at the top.



# Conclusion

Transportation is unpredictable, and every delay or mistake carries a cost. **A strong TMS gives you control over shipments, visibility into what is happening in real time, and the flexibility to respond before small issues become bigger problems.**

This guide is a starting point. Use it to navigate your options with confidence and move toward a platform that supports your business at every turn.



# About Descartes

Analyst research confirms Descartes as the top provider of cloud-first TMS, recognized for scale, innovation, and customer success. If this guide helped frame your buying journey, **the next step is simple: explore how the Descartes 3G TMS™ solution can put these capabilities to work in your operation.**

Contact us at [info@descartes.com](mailto:info@descartes.com)