

10TH ANNUAL

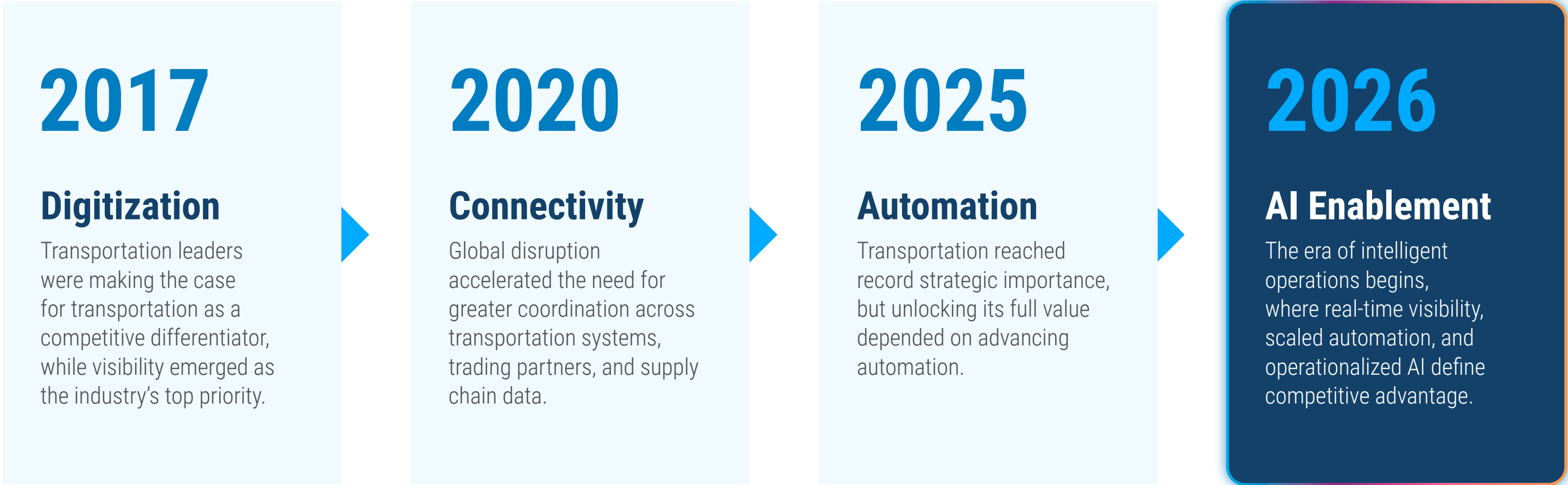
Global Transportation Management Benchmark Survey

Explore how the industry has evolved over the past decade, and how top performers are adapting to increasing market complexity and AI adoption to build more connected, resilient transportation networks.

CHAPTERS

A Decade of Transformation

Over the past decade, transportation management has undergone a fundamental transformation, reshaping how organizations create value through transportation.



Three Defining Shifts

Ten years of benchmark research reveal three enduring shifts that continue to shape transportation management today.

1

Transportation became strategic

Transportation management evolved from an operational function into a strategic driver of business growth, customer experience, and competitive differentiation.

2

Technology investment became mainstream

The conversation shifted from proving the value of transportation technology to maximizing its impact through automation, AI, and operational execution.

3

Visibility became the foundation for automation and AI

The role of real-time visibility evolved from tracking freight to helping organizations know what to do next.



Key Takeaways

The 2026 Transportation Management Benchmark Survey reveals an industry balancing growth, operational transformation, and AI adoption. Here are key benchmark findings, by the numbers.

INDUSTRY-WIDE	FOR SHIPPERS	FOR LSPs*
Fewer than 1 in 5 organizations are using AI at scale.	82% expect to increase transportation management IT investment.	67% are using AI for real-time visibility and tracking.
Data quality is the biggest barrier to scaling AI.	Truckload leads all transportation modes in demand for real-time visibility.	Real-time visibility ranks as the #1 future TMS value driver.
Business growth remains the leading driver for TMS adoption.	79% expect 5%-15%+ annual growth over the next two years.	Automation is reported as the largest operational opportunity.

*Logistics Service Providers



Key Takeaways



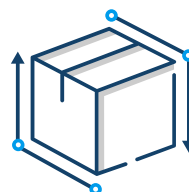
Economic Outlook

- Growth expectations remain resilient, with both shippers and LSPs projecting continued expansion despite a more complex operating environment.
- Transportation technology investment remains a strategic priority, with most organizations planning to increase TM IT spending over the next two years.



Strategy & Execution

- Transportation is increasingly recognized as a strategic business function, with the ability to improve customer experience and competitive performance as leading factors.
- Despite steady progress, the automation gap persists with most organizations having yet to achieve fully optimized transportation operations.



Challenges & Preparing for the Future

- Freight and operating cost management are currently the industry's most pressing transportation challenges, with rising costs expected to shape transportation strategy over the next five years.
- AI adoption and automation have become strategic priorities for the next generation of transportation operations.



Visibility & Operations

- The need for more connected and intelligent transportation operations is apparent, with the biggest operational gaps reported as real-time visibility, automation, and carrier connectivity.
- Truckload and LTL are the transportation modes where organizations see the greatest opportunity to improve real-time visibility.



AI Adoption

- Shippers and LSPs are applying AI across transportation operations, with the strongest realized benefits in administrative cost reduction, service improvement, productivity, and risk reduction.
- Fewer than one in five organizations have deployed AI at scale, with data quality emerging as the primary obstacle to broader adoption.

Who We Surveyed

Seniority

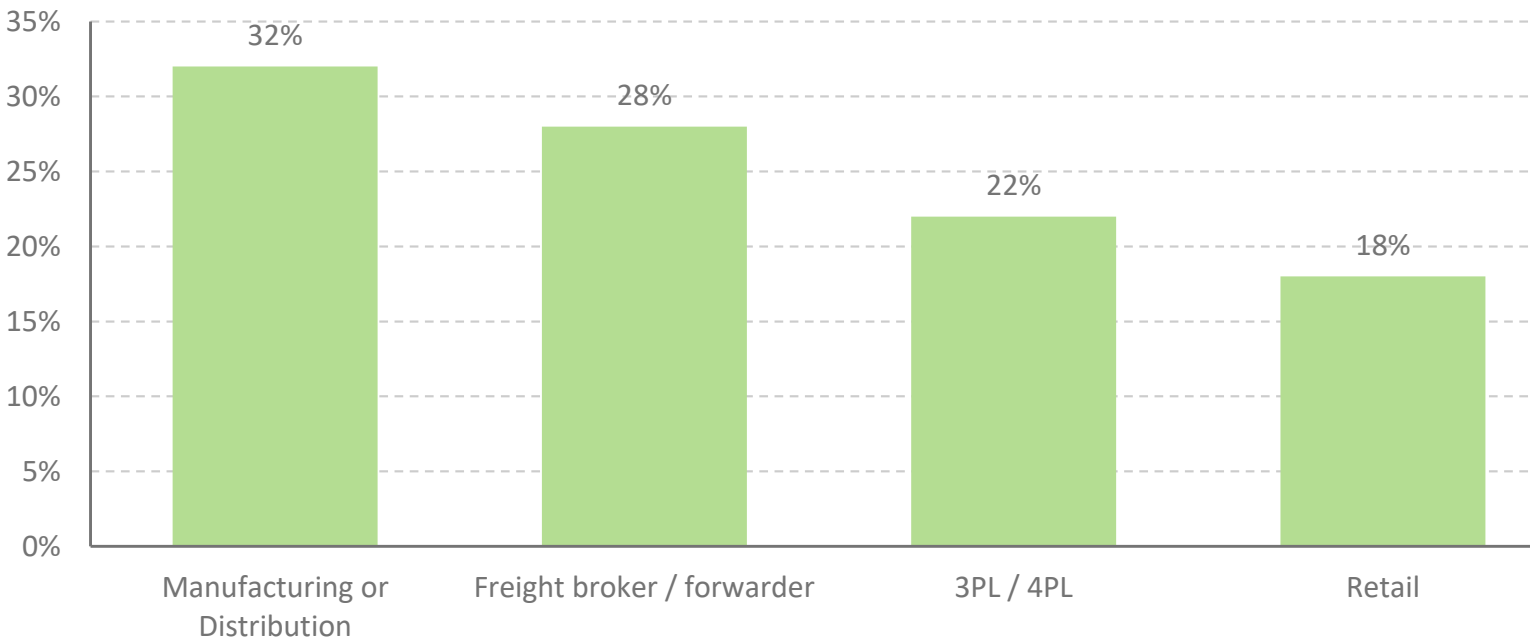
ROLE	% OF RESPONDENTS
C-level Executive	36%
Director / Vice President	36%
Manager	27%

Company Size

# OF EMPLOYEES	% OF RESPONDENTS
Less than 50	1%
50-99	11%
100-499	21%
500-999	28%
1000+	39%

Industries

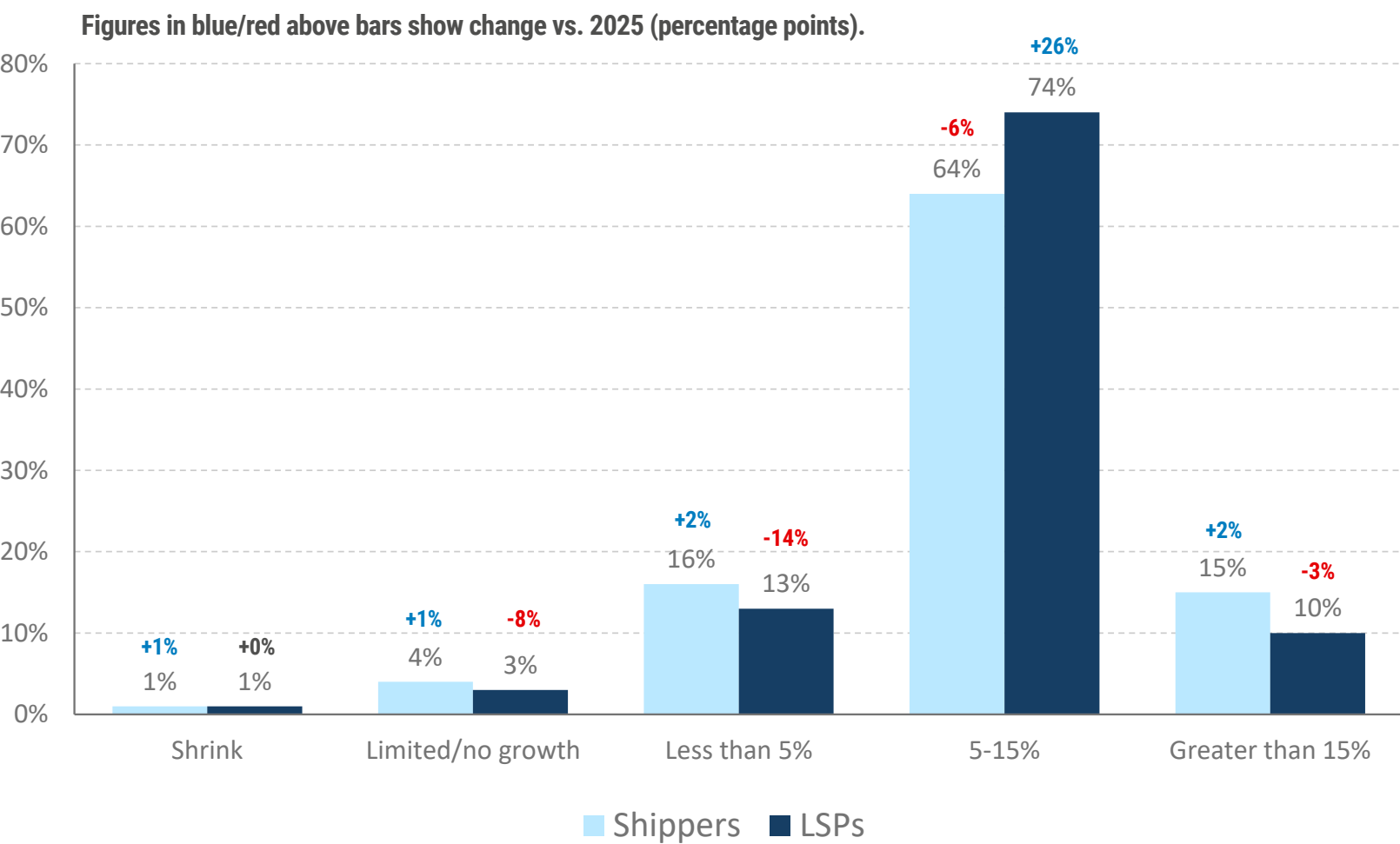
- Responses were gathered from 300 senior decision-makers working within diverse shipper and logistics service provider organizations, providing a comprehensive view of today's logistics landscape.
- Their perspectives reflect the priorities, challenges, and strategic decisions shaping the future of transportation operations across North America.



Economic Outlook

Predicted annual growth over the next 2 years

Survey responses point to continued market resilience despite ongoing trade uncertainty and broader market volatility. Nearly three-quarters of LSPs expect annual growth of 5–15% over the next two years, up 26 points year over year. Shippers also remain optimistic, with 79% forecasting at least 5% annual growth.



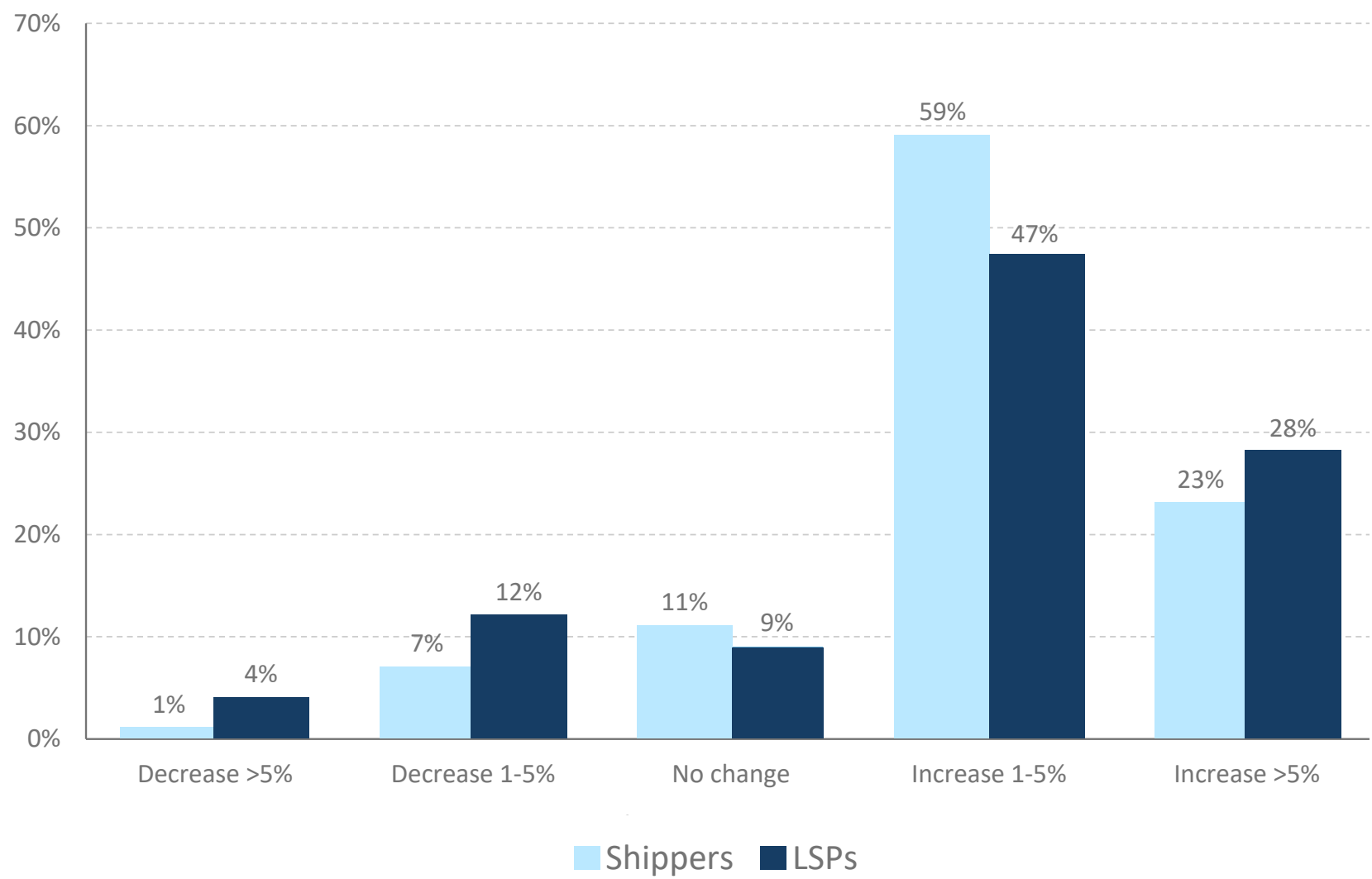
Economic Outlook

💡 10 Year Perspective

Over the past decade, planned investment in transportation technology has increased, rising from 53% in 2017 to 75–82% in 2026.

Change in TM IT spend in the next 2 years

Transportation management technology investment remains a strategic priority. More than three-quarters of organizations expect to increase TM IT spending over the next two years, with roughly one-quarter planning increases greater than 5%.

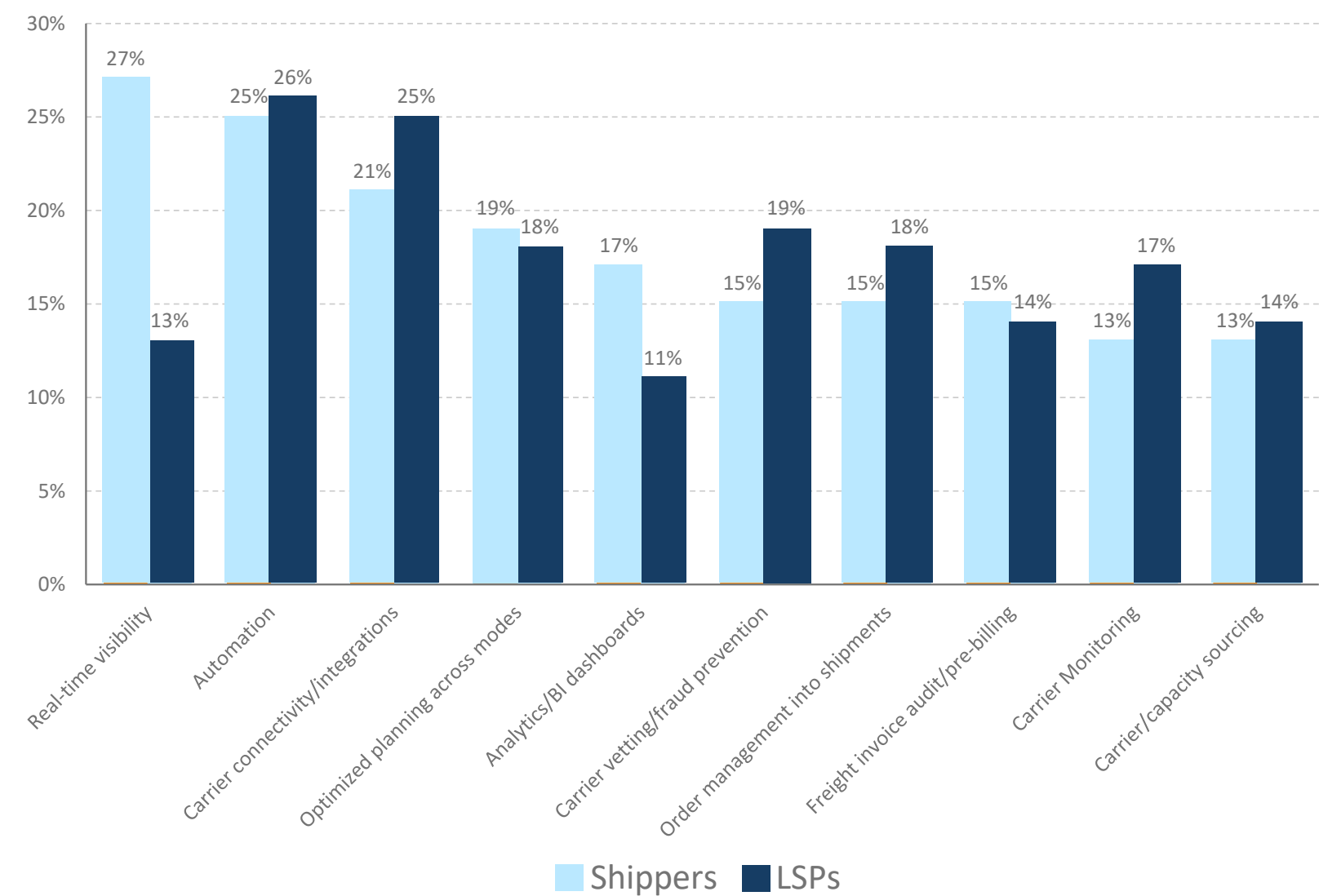


Visibility & Operations

Top 10 gaps in current transportation system/service

Real-time visibility remains the most significant operational gap for shippers, with 27% identifying it as their top challenge, reflecting the continued difficulty of maintaining end-to-end visibility across increasingly complex transportation networks.

For LSPs, automation (26%) and carrier connectivity (25%) emerge as the top operational priorities, highlighting the continued focus on streamlining transportation execution.



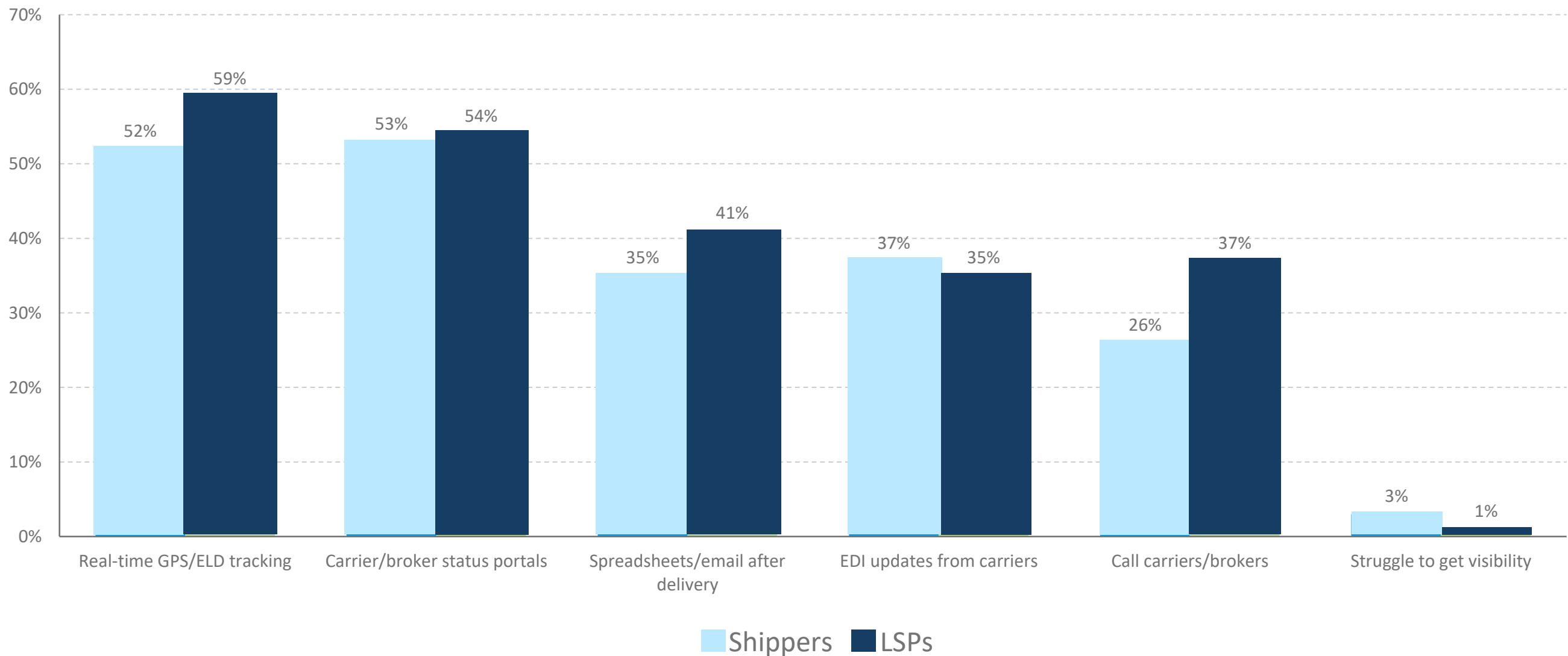
Visibility & Operations

How organizations gain shipment visibility

Digital visibility is well established across transportation operations, with GPS/ELD tracking used by 52% of shippers and 59% of LSPs, and carrier portals used by 53% and 54%, respectively. Yet 35% of shippers and 41% of LSPs still rely on spreadsheets or post-delivery emails, highlighting continued opportunities to modernize shipment visibility.

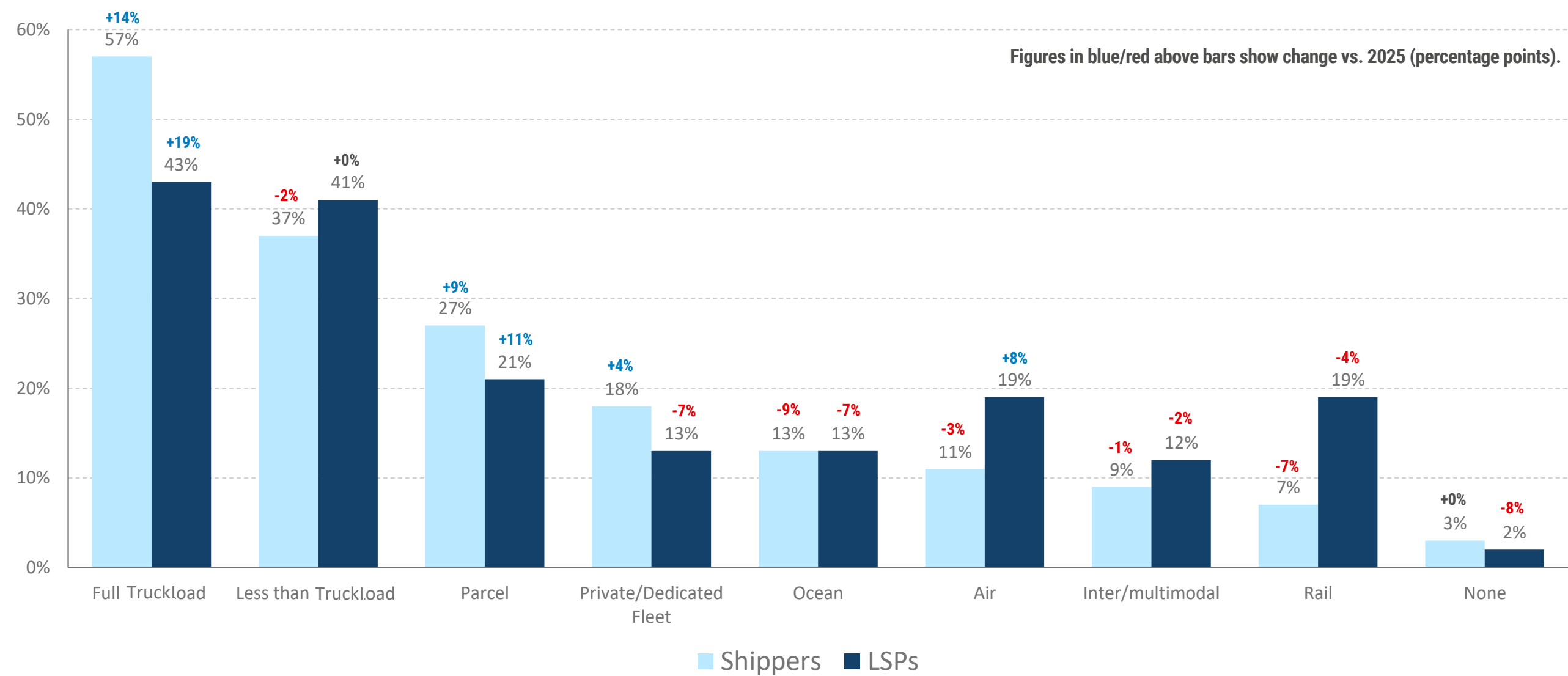
**10 Year Perspective**

No transportation management capability has remained a greater focus over the past decade than visibility, ranking as the #1 priority every year since 2017.



Modes needing most improvement in real-time visibility

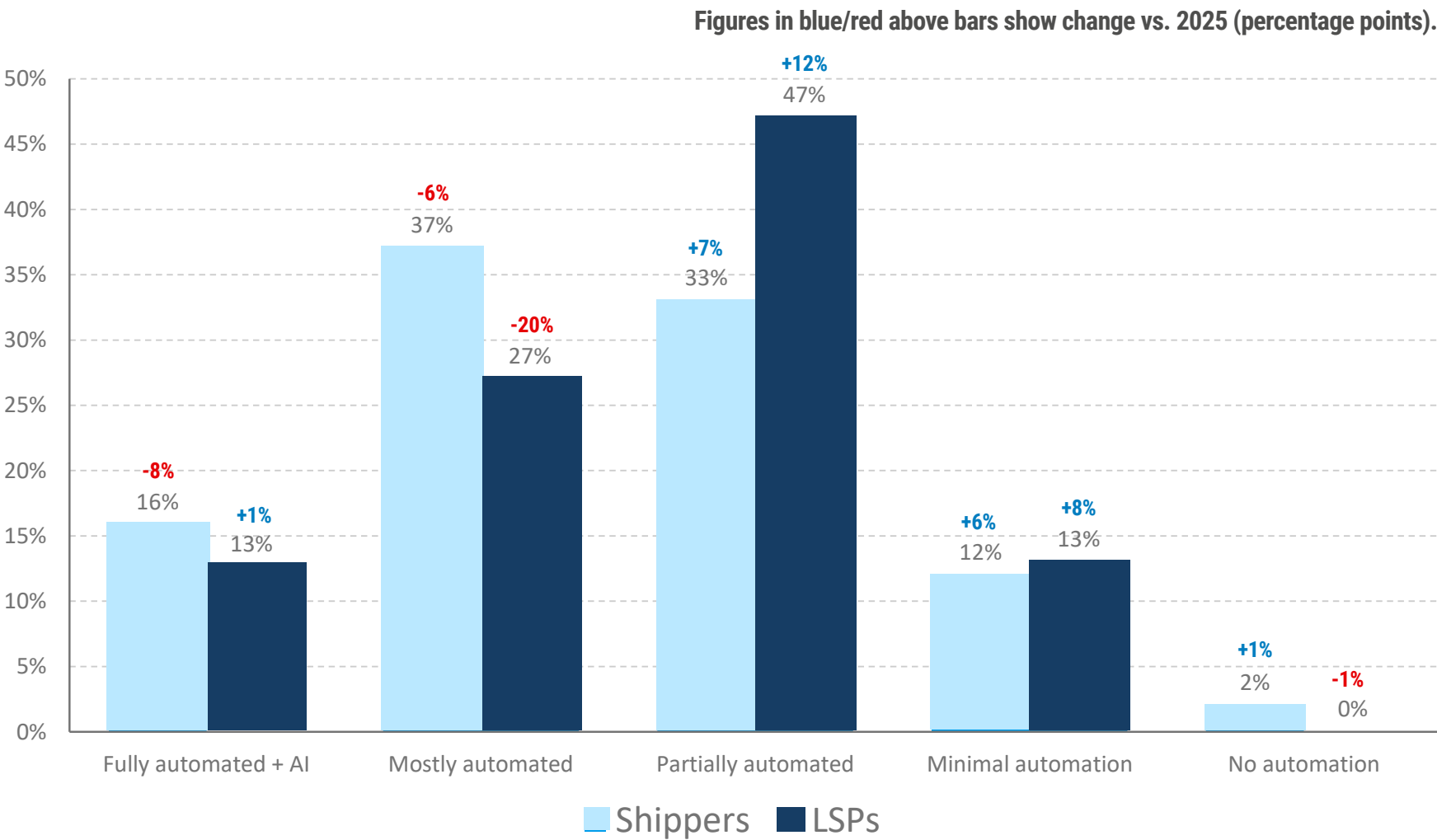
Full truckload has become the most urgent priority for real-time visibility, rising 14 points year over year among shippers and 19 points among LSPs. LTL ranks second for both groups, reinforcing that the greatest visibility opportunities remain concentrated in over-the-road transportation, where execution is often the most dynamic and complex.



Maturity of transportation technology adoption

Only 16% of shippers and 13% of LSPs describe their transportation operations as fully automated with AI. Most remain in the middle of the maturity curve.

Coupled with a slight decline in maturity level year over year, the results suggest many organizations are still working to extend automation beyond individual processes into network-wide operations.



Strategy & Execution

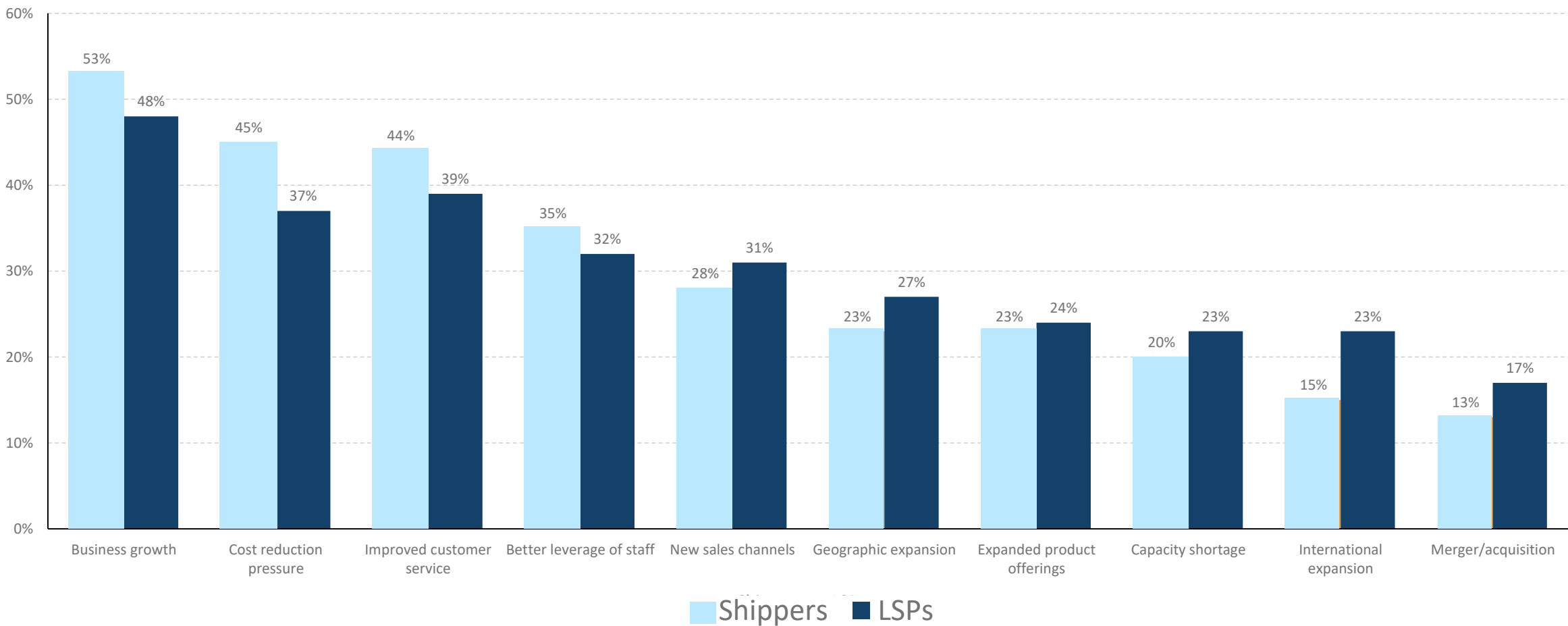
💡 10 Year Perspective

Transportation has evolved into a recognized competitive differentiator, with 81–87% of organizations now viewing it as either a competitive weapon or customer service differentiator, up from 65% in 2017.

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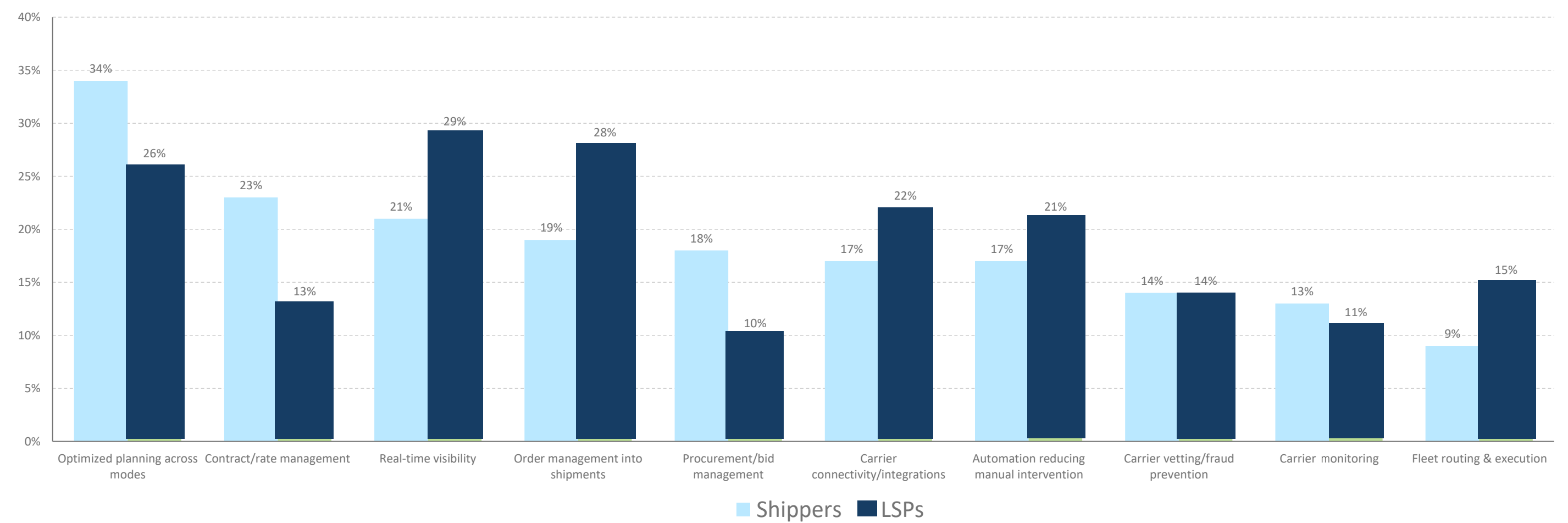
Business drivers for transportation management system (TMS)

Business growth remains the leading driver of TMS adoption for both shippers (53%) and LSPs (48%). Beyond growth, shippers are more likely to invest in a TMS to optimize existing operations, while LSPs are more often driven by initiatives that support business expansion.



TMS capabilities delivering the greatest value in the next 2 years

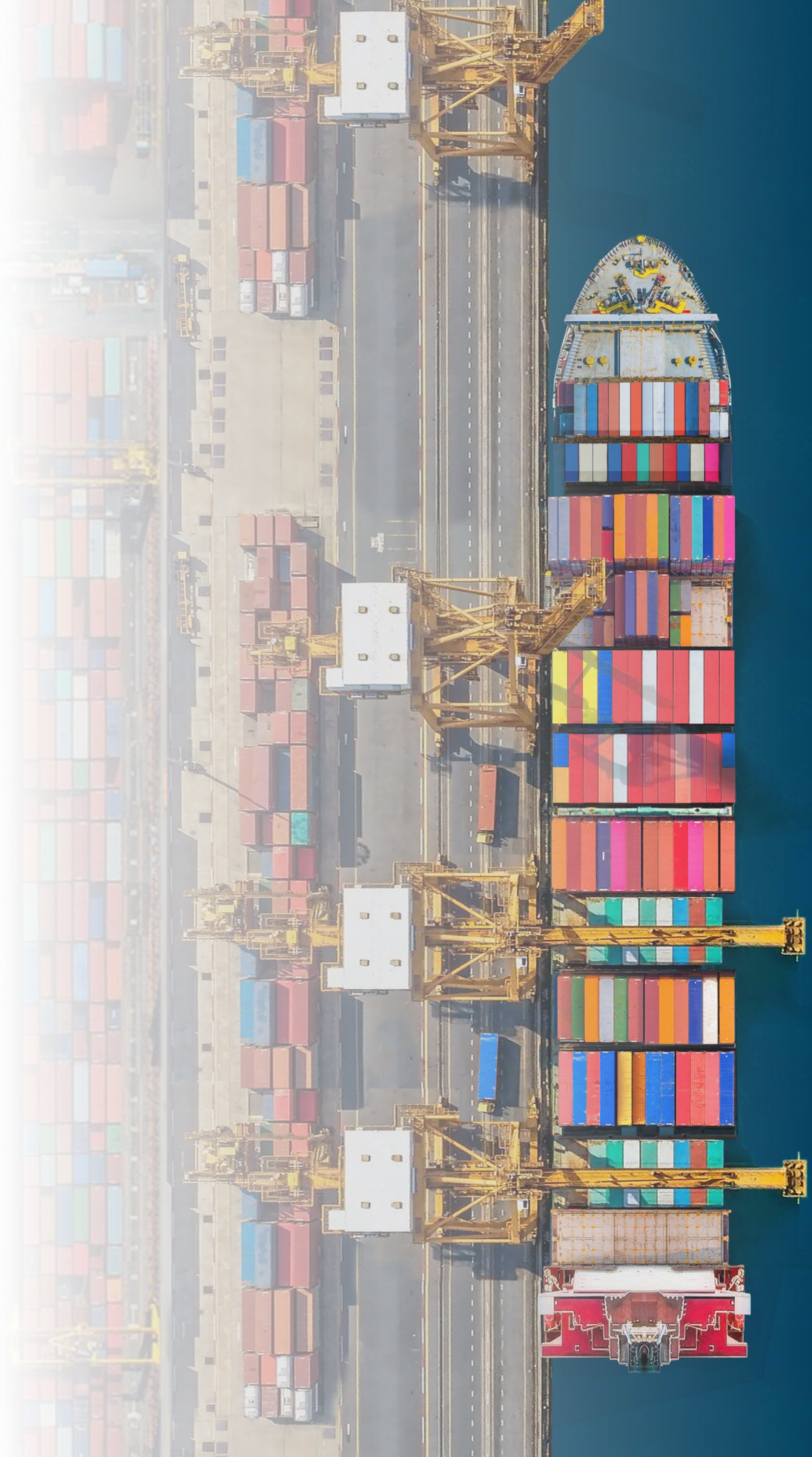
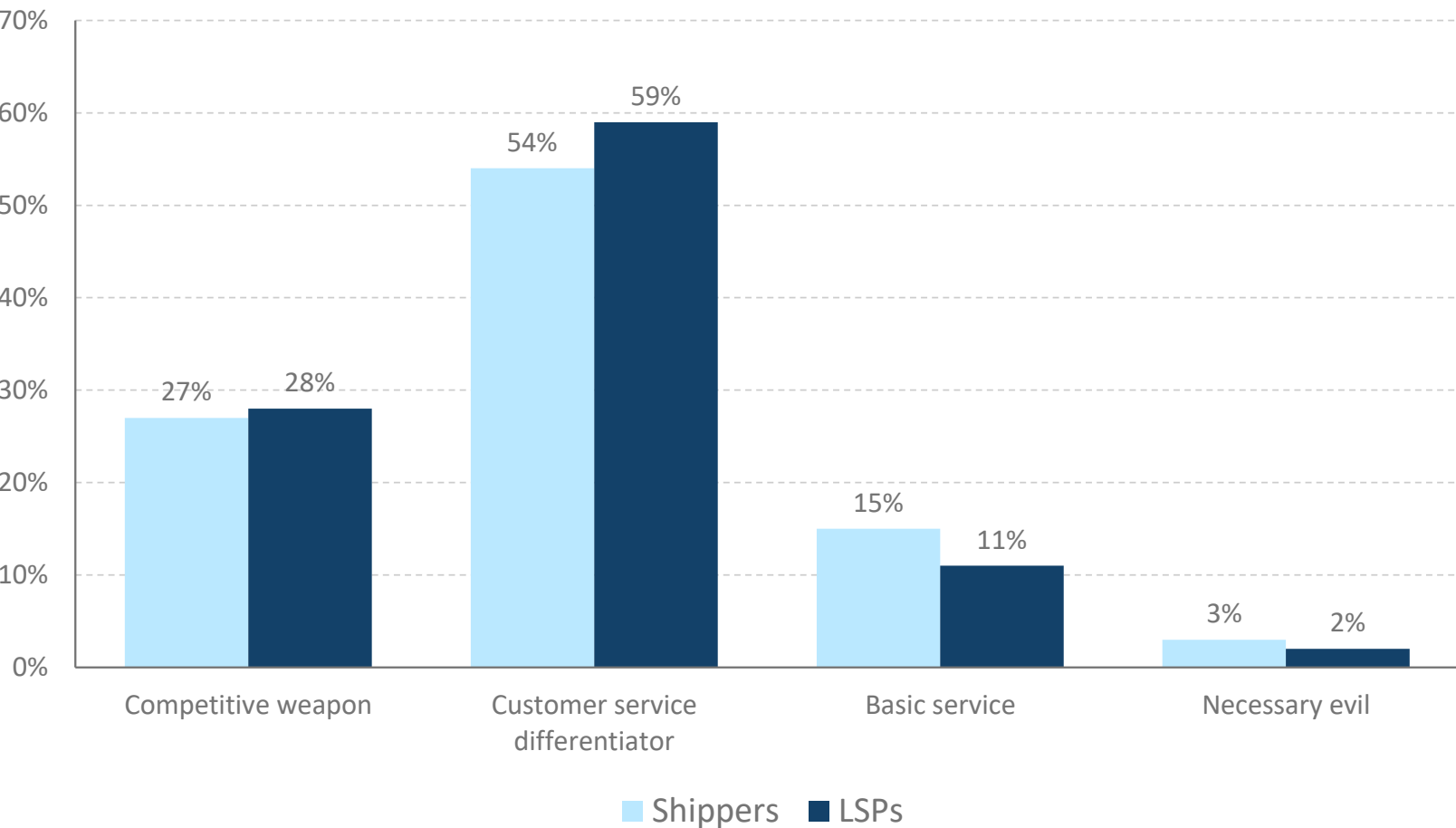
Organizations continue to prioritize TMS capabilities that strengthen planning, visibility, and execution. Shippers place the greatest value on optimized planning across modes (34%), while LSPs prioritize real-time visibility (29%) and order-to-shipment management (28%).



Strategic importance of transportation

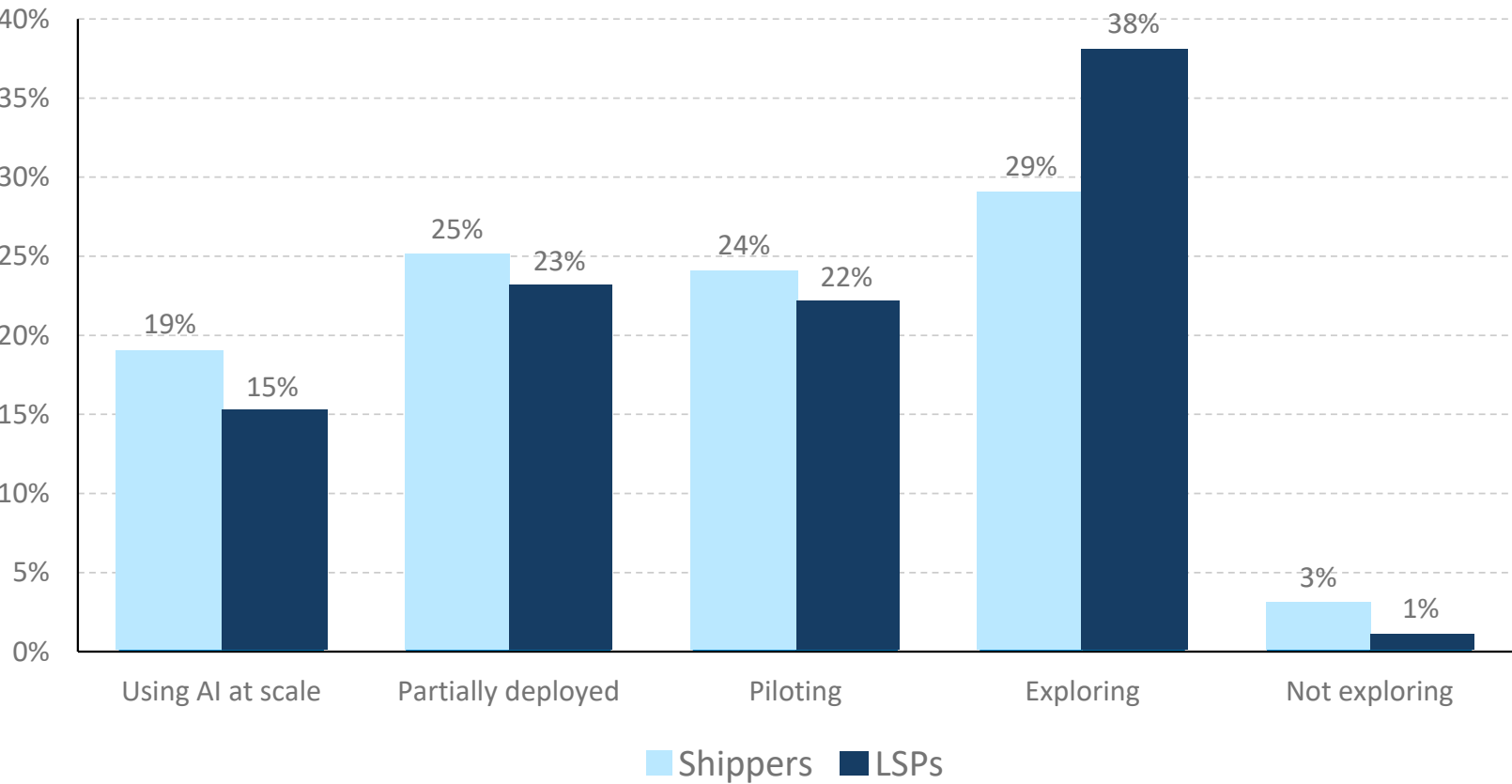
Transportation’s role continues to expand beyond execution, with organizations increasingly recognizing its impact on customer experience and business performance.

Organizations in the US are more likely to view transportation as a competitive weapon (US 32% vs. Canada 15%), while those in Canada more commonly view it as a customer service differentiator (Canada 73% vs. US 15%).



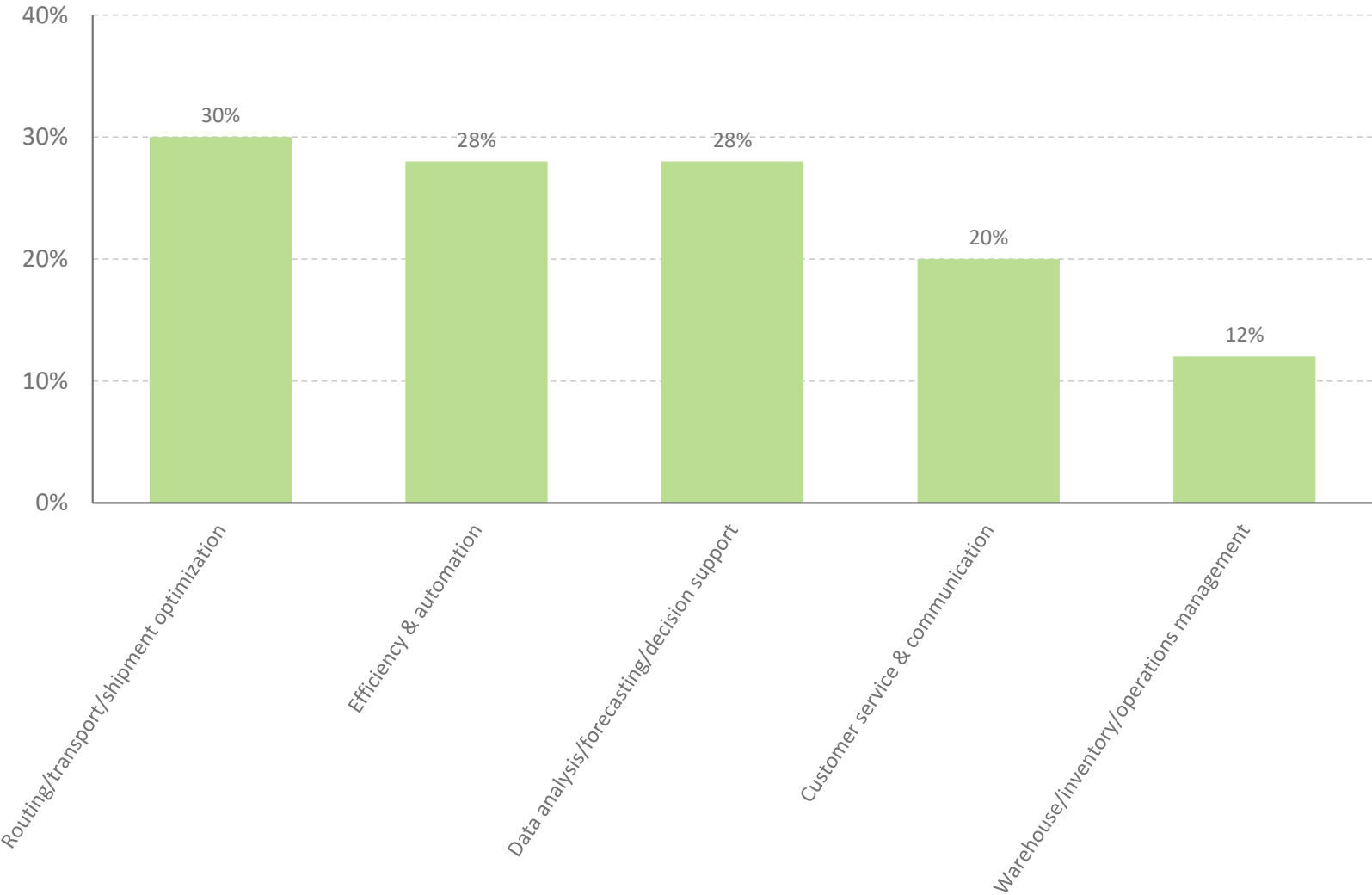
Level of AI Adoption

AI engagement is nearly universal, but scaled adoption remains limited. Only 19% of shippers and 15% of LSPs report using AI at scale, while most are still exploring, piloting, or partially deploying it.



Leading AI Use Cases

Early AI adoption is centered on improving operational efficiency, with transportation teams prioritizing transportation optimization (30%), automation (28%), and data-driven decision support (28%).



Respondent Quotes

Efficiency & automation

AI is widely described as reducing manual work, automating routine/admin tasks, and speeding up workflows.

“ *AI cuts manual work to save team time and labor costs.* ”

Routing, transport & shipment optimization

A major theme is route planning, delivery optimization, shipment tracking, ETA prediction, and lowering fuel or transport costs.

“ *We use AI to help plan routes, track shipments, reduce delays and lower transportation costs.* ”

Data analysis, forecasting & decision support

Many responses focus on analytics, forecasting demand, identifying trends, and making faster or better decisions.

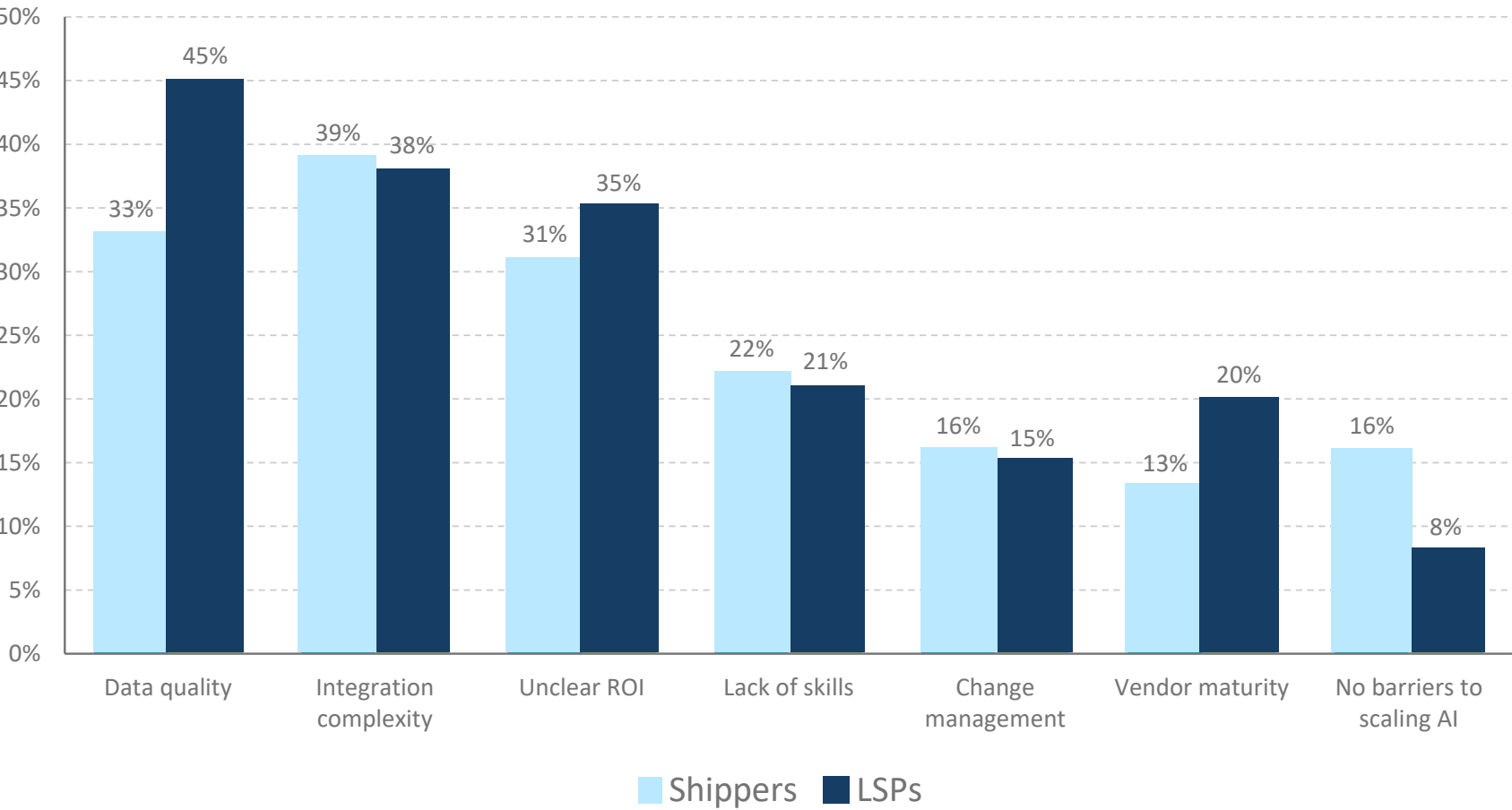
“ *AI forecasts trends to guide long-term business planning.* ”

AI Adoption

Biggest barriers to scaling AI

Data quality is the leading barrier to scaling AI, cited by 33% of shippers and 45% of LSPs. Integration complexity and unclear ROI follow closely. Skills, change management, and vendor maturity rank notably lower, suggesting organizational readiness is no longer the primary constraint.

Looking ahead, transportation teams are functionally prepared to expand AI, but realizing its full value at scale will depend on the digital infrastructure behind it.

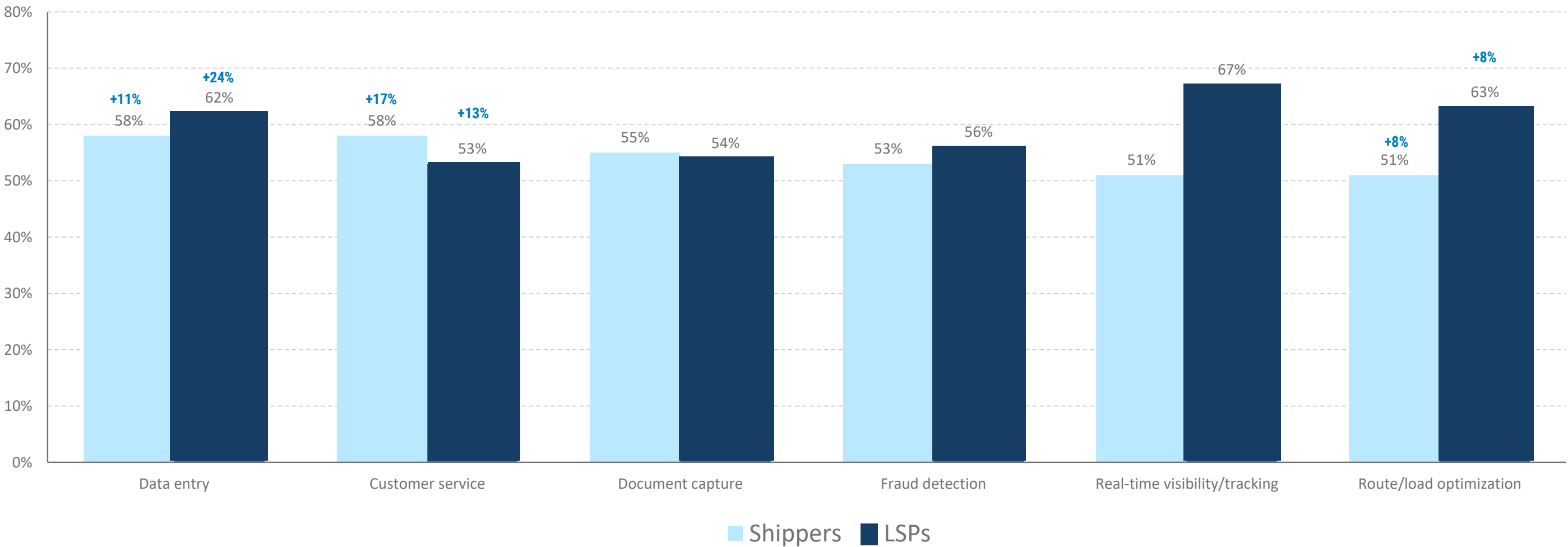


Use of AI in transportation

Real-time visibility/tracking, data entry, and customer service are among the most widely deployed AI use cases in transportation; however, shippers and LSPs are prioritizing AI differently.

Shippers are equally focused on automating data entry (58%) and strengthening customer service (58%), while LSPs are using AI for real-time visibility/tracking (67%) and route optimization (63%).

Figures in blue/red above bars show change vs. 2025 (percentage points).



Benefits realized from AI

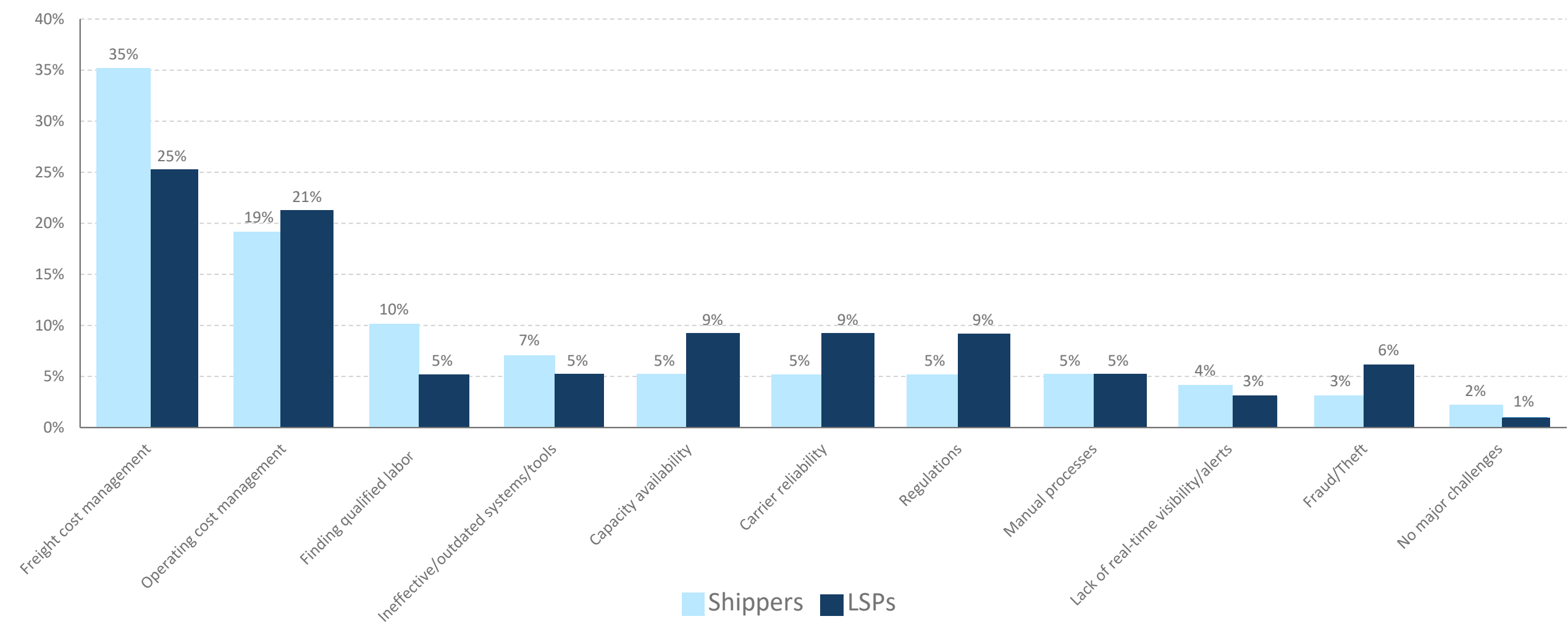
Survey responses indicate that the greatest realized value from AI comes from improving day-to-day transportation operations. Shippers report the strongest gains in reduced administrative and labor costs (55%), while LSPs see the greatest benefit in improved service (53%) and freight cost reduction (46%).



Challenges & Preparing for the Future

Biggest transportation challenge

Cost pressures continue to dominate current transportation priorities. Freight cost management ranks as the biggest challenge for both shippers (35%) and LSPs (25%), followed by operating cost management (19% and 21%, respectively), far outpacing every other transportation challenge.

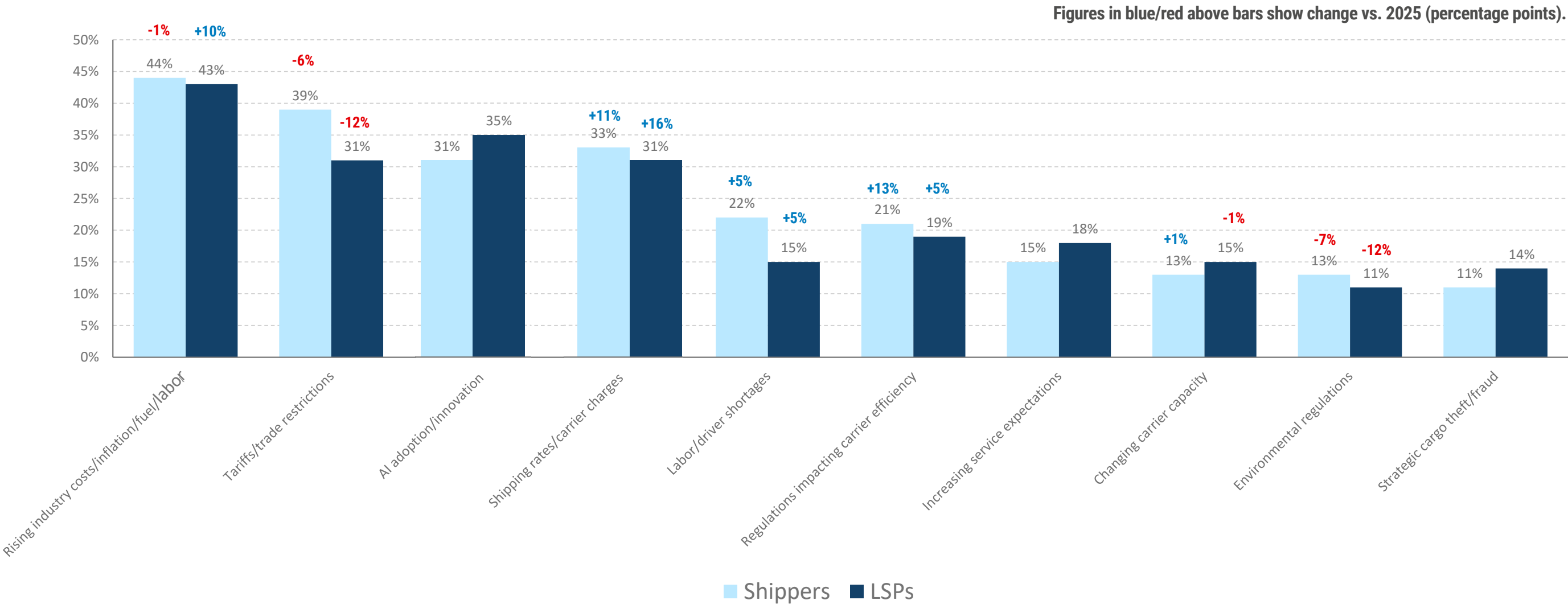


Challenges & Preparing for the Future

Impacts of external factors on transportation management in 5 years

Cost-related pressures dominate the five-year outlook as well, with rising industry costs ranked highest by both shippers (44%) and LSPs (43%).

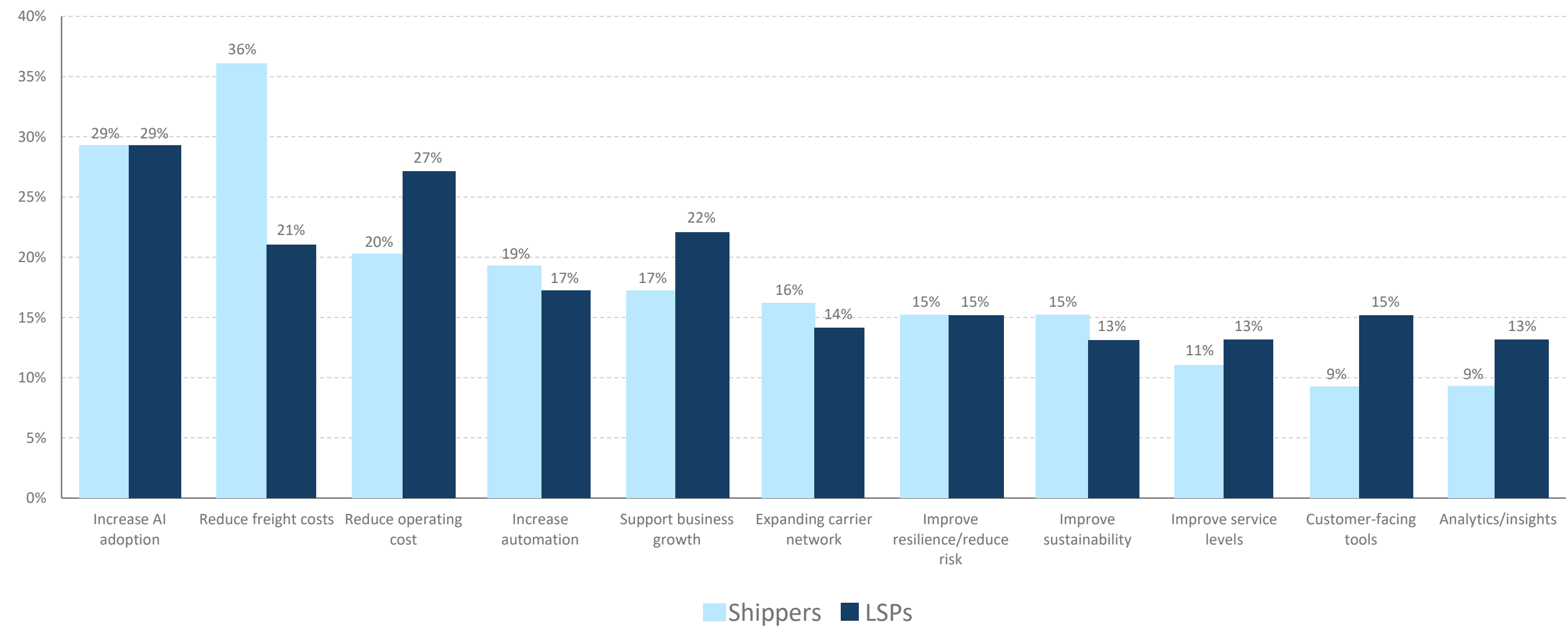
Introduced as a survey response option for the first time this year, AI adoption and innovation already ranks as the third-highest external factor overall and second among LSPs (35%), underscoring how quickly it has become one of the industry’s defining long-term priorities.



Challenges & Preparing for the Future

Transportation priorities in the next two years

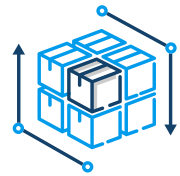
Transportation priorities reflect a dual mandate: scale AI while controlling costs. AI adoption is the top shared priority, cited by 29% of both shippers and LSPs, but cost pressures differ by segment. Shippers emphasize freight cost reduction (36%), while LSPs balance operating cost reduction (27%) with business growth (22%).



Descartes Transportation Management Solutions

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Descartes Transportation Management solutions unify end-to-end transportation operations to help businesses reduce operational costs, strengthen freight security, and protect supply chains from disruption.



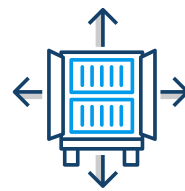
Shipper Transportation Management System

- Optimize and execute transportation across modes
- Easily maintain multimodal contracts
- Automatically rate shipments, optimize loads, select carriers
- Streamline carrier interaction (tendering, booking, tracking, delivery)
- Audit freight bills to identify discrepancies



Supply Chain Visibility Platform

- Enhance performance with real-time shipment statuses and predictive ETAs
- Know load location, condition and status (temperature, customs, etc.)
- Find available capacity using real-time data with AI
- Communicate load status with customers and suppliers



Freight Broker/3PL TMS

- Robust transportation management for freight brokers and managed transportation providers
- Shorten cycle times and reduce costs through streamlined user interface, systems integrations, and optimization
- Track loads in real-time and vet carriers using Descartes MacroPoint™ and Descartes MyCarrierPortal™



Agentic AI

- Deploy AI agents to manage exception-based transportation workflows
- Automate driver engagement, event confirmation, and document collection
- Strengthen visibility and data quality with 24/7 AI monitoring and issue resolution
- Power AI with inter-enterprise global logistics intelligence

Descartes Transportation Management Solutions

CHAPTERS



Reporting & Analytics

- Transform data into actionable insights
- Better understand operations, customers, and suppliers
- Visualize data with intuitive charts and graphics
- Create accurate scorecards to support contract negotiations



Fleet Management

- Route planning, optimization & dispatch
- Reduce delivery costs
- Improve customer experience
- Improve driver performance and safety



Dynamic Dock Appointment Scheduling

- Automate and improve visibility for dock door scheduling
- Reduce load/unload times, DC congestion, labor costs, and inventory
- Gain control over supplier-managed freight



Parcel Shipping

- Automate and optimize small package shipments
- Optimize multi-carrier shipments
- Ensure rate and label compliance
- Manifest support for parcel and LTL
- Streamline the pick, pack and ship process
- Track deliveries and evaluate service performance



Carrier Connectivity

- Single connection to Descartes provides connections to tens of thousands of carriers and providers
- Supports all connection protocols and message types
- Global, multimodal coverage
- Reduce manual labor, eliminate errors, streamline booking through billing process

About Descartes

Descartes powers more responsive, efficient, secure and sustainable international and domestic supply chains by uniting logistics-intensive businesses on its Global Logistics Network (GLN). Shippers, carriers, and logistics service providers connect and collaborate on the GLN leveraging technology, data and AI to manage last mile deliveries, domestic and international shipments, transportation rating and payment, global trade research, customs compliance and a variety of regulatory processes.

Customers use our modular solutions to:

- route, track and help improve the safety, performance and compliance of delivery resources
- plan, allocate and execute shipments
- rate, audit and pay transportation invoices
- access global trade data
- file customs and security documents for imports and exports
- complete numerous other logistics processes by participating in the world's largest, collaborative multimodal logistics community

Our headquarters are in Waterloo, Ontario, Canada and we have offices and partners around the world.

Learn more at www.descartes.com, and connect with us on [LinkedIn](#) and [X](#).



The Descartes Systems Group Inc.
120 Randall Drive, Waterloo, Ontario, N2V 1C6, Canada
Toll Free 800.419.8495 | Int'l 519.746.8110
www.descartes.com | info@descartes.com

Uniting the People & Technology
That Move the World

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