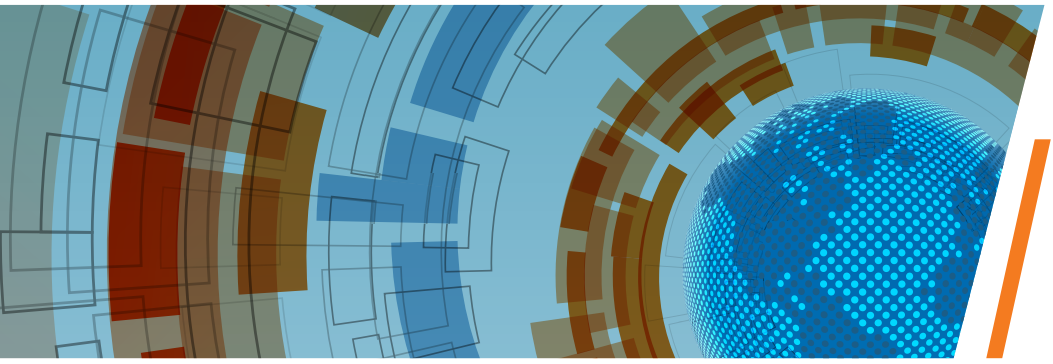
Going Global

Building a Sustainable Logistics Model in the Age of Globalization

WHITE PAPER



C.H. ROBINSON
WORLDWIDE, INC.

In brief

Globalization offers tremendous opportunities to companies of any size that can successfully provide or source products and services in dynamic markets. This white paper reviews what companies that want to go global must master in transportation and logistics to capitalize on these opportunities. It also offers insights to large companies that have global operations.



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Globalization has created staggering opportunities for companies around the world in growing markets like Brazil, Russia, India, and China. It has also ushered in a more competitive business environment. Today, whether or not a company produces or sources outside its home country, it is often competing against global organizations.

To survive and thrive under these conditions, organizations must develop efficient and effective global supply chains that can ensure a smooth supply of goods anywhere in the world. Many enterprises expect transportation and logistics executives to determine how to move products freely and efficiently across oceans and borders. While it is valuable to develop a knowledge resource regarding the population, infrastructure, languages, politics, economy, customs, currencies, tax laws, and tariffs for each country that shipping routes touch, it is not enough. The variables of global transportation change faster than the knowledge can be compiled.

Opportunities in global trade

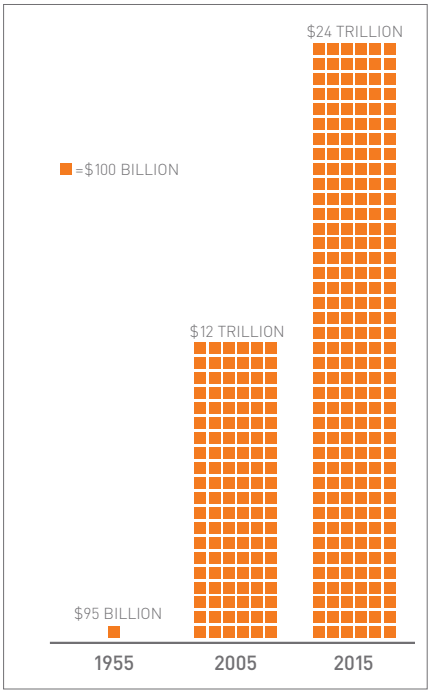
Many indicators show the promise of global trade:

- In 1955, international trade of manufactured goods totaled $95 billion (USD). In 2005, the number grew more than one hundred times, to reach nearly $12 trillion.[1] In effect, global trade was doubling every five or six years. If the trend continues, global trade will total approximately $24 trillion in 2015.
- China's population of 1.5 billion and India's population of 1.3 billion—and each country's growing middle class—represent promising markets for many industries.
- In 1950, only New York and Tokyo had populations totaling more than 10 million. Today, there are 22 of these "megacities," and by 2025, there will likely be 30 of them, primarily in Latin America, Asia, and India[2]. Each will support highly urbanized middle classes. Consumer populations in these burgeoning megacities will create incredible new opportunities for both consumer marketers and business-to-business brands that are able to market and sell globally.

1 World Trade Organization. "Trade to expand by 9.5% in 2010 after a dismal 2009, WTO reports." Press Release, March 26, 2010.
2 The Mega Cities Project. "Welcome to the Mega Cities Project." Accessed March 30, 2011 at http://www.megacitiesproject.org.

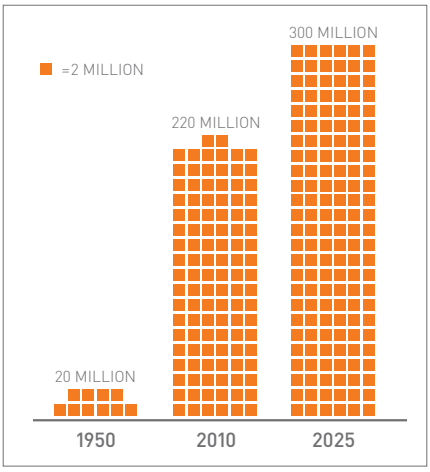
Taking advantage of global opportunities requires a strategy that transcends continually changing markets. This white paper offers key considerations to enterprises of any size that are looking to initiate or expand their international logistics capabilities while developing global businesses.

FIGURE 1 GLOBAL TRADE



Source: World Trade Organization, 2011.

FIGURE 2 MEGACITY POPULATION TREND



Source: Mega-Cities Project, 2010.

Understanding globalization and the changing world

To succeed in global markets, enterprises and logistics professionals must be mindful of the factors that drive change in the international movement of goods:

- **Infrastructure development.** While some market and transportation infrastructures are currently insufficient to handle fast growth, it's anticipated that government agencies will shift greater resources toward that development. From a logistics perspective, this includes the creation and/or expansion of intermodal terminals, roads, airports, railways, and ports. Monitoring government investment in these initiatives is critical to the development of an effective global transportation plan.
- **The global grid.** A highly connected digital and physical network is emerging that is expected to transcend physical, social, cultural, and technological borders. While such a network should help streamline international logistics, it could be hindered by periodic instability and volatility. Global logistics plans should prepare alternate strategies to cope with these conditions.
- **Government attitudes toward economic growth and social stability.** Views regarding the balance of strong economic growth, environmental policy, community and social responsibility, product safety, and social services vary by country and culture. These considerations often dictate the development of tariffs, duties, taxes, customs declaration processes, and general import/export compliance.
- **Regulatory materials and energy pricing.** Fuel costs will be a determining factor in the decision to approach global markets, source raw materials from abroad, or outsource manufacturing to low-cost jurisdictions. Companies also need to consider the costs associated with sourcing scarce materials.

Logistics must be part of any global business strategy to source products and grow market share. Whether a company handles global logistics internally or outsources some or all of its transportation management, they must understand the crucial role logistics will play in their ultimate success.

Global transportation essentials

By definition, global opportunities bring logistics and transportation to the forefront of the discussion. To capitalize on sourcing and sales in global markets—and to successfully price goods and services—an enterprise needs information and analysis unique to logistics, as well as several essential areas of expertise.

1. Supply Chain Finance. Organizations can maintain a free and timely flow of goods across borders by understanding international trade agreements and requirements—letters of credit, tariffs, terms of sale, and other financial considerations. All financial documentation must be in order to avoid profit-killing delays in buying, selling, and sourcing.

2. Integrated Workflow. Reaching global profitability goals will likely require an integrated workflow approach. While some transportation management systems (TMS) offer software platforms to integrate global inbound and outbound transportation, strategic silos still remain in many enterprises. The information and technology are available to bridge the gaps, but the strategic intent is missing. Logistics and transportation groups should lead this unification process to create a truly global infrastructure.

3. Real-Time, Dynamic Routing. Global instability and rapidly changing infrastructures in countries around the world call for dynamic routing approaches. The most efficient route in December may not be in January, since bad weather, political instability, fuel prices, capacity, or any number of other factors can influence that determination. To account for all the variables, effective global transportation strategies will likely employ TMS technology, processes, and expertise, which allow for real-time agility and risk mitigation.



DYNAMIC ROUTING EXAMPLE:

CHALLENGES:

1. A component supplier in India is delayed because of severe weather (three-day delay).
2. The second supplier in Taiwan can deliver in 48 hours, but wants a premium for the components.
3. A third supplier in Eastern Europe can deliver in 48 hours at a lower price, but will charge more for shipping.

IDEAS IN ACTION®:

4. An established dynamic routing process brings speed and clarity to making the best decision for both the organization and its customer.

4. Control Tower Visibility. Global logistics will greatly magnify the inefficiencies of spending too much time on tactical or low-value tasks. Granted, international transportation can be far more complex than domestic shipping. It's not uncommon for global shipments to touch many intermediaries, each of whom has a distinct set of regulations, cultural beliefs, and IT capabilities. Nor is technology alone the answer; too many shippers have deployed TMS software, only to have it fail and drive users back to their old, laborious duties. The most successful global companies use strategies that allow for "acceptable tolerances" in their transportation networks. They rely on event management features of technology to alert operators when attention is needed for out-of-the-ordinary situations. In addition, effective TMS solutions and services should allow users to generate a real time, global "control tower" view of their networks, and to drill down into the specifics of each shipment, such as P.O.'s, freight bills, SKUs, etc.

5. International Portals. While IT savvy and bandwidth vary from country to country, the global IT infrastructure is generally sound enough to allow for visibility into offshore supplier organizations. The ability to communicate with offshore customers or providers is a critical part of the global control tower. Global supply chains demand access to current information, from advance ship notices and inventory planning to purchase orders and production status updates. While there are often significant hurdles to overcome in terms of language, customs processes, time zones, and currencies, an effective TMS platform—supported by a strong strategic plan—can greatly reduce delays and other costly problems posed by international borders.

6. Security Compliance. Border controls and customs procedures in many countries pose significant and costly barriers for shipments of all kinds. Automation can overcome manual data entry errors that are often the cause of significant delays and fines. Organizations must also develop processes around security, safety, and compliance in various jurisdictions to prevent unnecessary difficulties and delays, and ensure that suppliers understand and follow those procedures.

7. Total Landed Costs Analysis. Analyzing the total landed cost seems straight-forward, but some shippers have found it can be much higher than expected. Accurately calculating total landed cost—especially as it fluctuates due to a variety of global forces—moves transportation to the center of the pricing and profitability discussion, since it is crucial to helping senior leaders avoid surprises.

Calculating Total Landed Costs:

- **Transportation.** Getting to the real costs in this category is a challenge. Be sure to include land, air, and sea costs, along with fuel surcharges, accessorials, and peak season surcharges.
- **Product Classification.** Customs classifications, size, weight, and volumes all contribute to total landed costs.
- **Tariffs and Taxes.** Not every shipment incurs taxes and tariffs, but many do. Variables include port of entry or debarkation, product or commodity type, and the prevailing security legislation.
- **Returns and Reverse Logistics.** Durable goods often require return shipping for repairs or replacement. Also, many products require value-added services, once landed.
- **Quality Assurance.** Perishable items, products subject to counterfeiting, and goods that require some kind of special handling can significantly increase costs.
- **IT Infrastructure.** Maintaining a control tower view of transportation networks requires two to three times the IT expense of a domestic operation.[3]

8. Managing Risk. Even the most perfectly planned global shipment can be ruined by theft, counterfeiting, hurricanes, floods, political unrest, labor disputes, documentation errors, and mechanical problems. The best practice course of action requires a strategic view of supply chain risks.

A white paper from the MIT Center for Transportation & Logistics shows that only 16% of small- to mid-sized companies have a dedicated risk management function in their supply chain organization; only 47% of large enterprises have a dedicated person or staff.[4]

Although preventing and managing risk associated with disruptions is clearly more difficult on a global level than it would be regionally or locally, the risk management role is essential for global supply chains. Even in organizations with dedicated risk management staff, questions can arise about who is responsible—headquarters, regional offices, or third party transportation providers—for predicting, tracking, and resolving disruptions, and for understanding Incoterms® (International Commercial Terms)[5] and associated risks around contracts, liability, and insurance.

Companies must decide how much time, money, and effort should be allocated to prevention vs. response. While strategic responsibility should reside at the top of the supply chain, ensuring that suppliers understand the risk priorities, prevention strategies, and response plans is imperative. A plan should include:

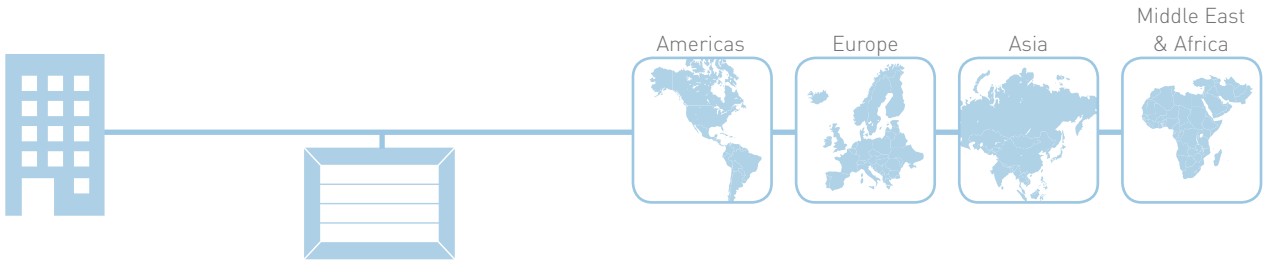
- **Awareness.** Many providers in the supply chain may have little or no risk management capabilities, so identifying the relative strength of core suppliers is important. Keep senior management aware of potential risks, since these vulnerabilities can have an impact on decisions regarding where to source, manufacture, and market products. Awareness and understanding of Incoterms®[6]

3 Jim Thompkins. "Transportation Sustainability: It Is Your Father's Oldsmobile." Industry Week, January 29, 2010.
4 Arntzen, Bruce. "Global Supply Chain Risk Management Part 3: Differences in Practices." White paper published by MIT Center for Global Logistics, December 2010.
5 VEDP International Trade. "Fast Facts: Incoterms® 2010." www.exportvirginia.org, accessed March 30, 2011.
6 Incoterms® define the responsibility of importers and exporters (buyers and sellers) regarding liability and the transfer of liability between parties during the transportation process. Although they do not cover ownership of the goods, global trade practitioners rely heavily on Incoterms® when negotiating international sales contracts to reduce the risk of trade-terms confusion and outcomes that can affect shipping costs, tariffs, and insurance.

can help minimize confusion and misunderstanding of trade contract responsibilities and avoid the associated, costly risks.

- **Accountability.** Developing a risk management plan that clearly spells out the responsibilities of regional offices and third party providers establishes accountability. Developing and promoting a plan will contribute to vendor selection criteria—and help regional offices and third party providers understand the expectations for communication and response. Rather than wonder whether they need authorization from the home office, they can take responsibility for resolving issues and communicate updates accordingly.
- **Scorecards.** A risk management plan should include detailed scorecards for evaluating both in-house and contracted supply chain providers. The scorecards will help everyone understand which capabilities and responsibilities are most critical. They can also provide the data needed to make decisions regarding sourcing, manufacturing, distribution, internal preparedness, and vendor selection. Scorecards should balance risk mitigation, contract, and response capabilities.
- **Quarterly reviews.** Suppliers and in-house operations should be reviewed quarterly for their handling of incidents to promote proactive risk monitoring. Data collected before and during these reviews will likely contribute to the strengthening of risk management planning.
- **Visual Mapping.** A visual map of all transportation routes, with identified risks called out as "hot spots," promotes a greater understanding and assessment of risk. By monitoring weather events, political unrest, and other elements of risk and visually displaying them on a global map, shippers can develop highly effective prevention and response plans. In addition, a global sales team can use a consolidated visual map of Incoterms® during contract negotiations and trade operations, giving them crucial insight as they navigate the conditions of each transportation transaction.

FIGURE 3 RISK MANAGEMENT MODEL—LEVELS OF AUTHORITY FOR DECISION-MAKING



Home Office
+ Global Transportation Strategy
+ Supply Chain Integration
+ Contracts
+ Emergency Response Plans
+ Incoterms®

Logistics Outsource Provider
+ Dynamic Routing Strategy
+ Score Cards & Assessments
+ Contingency Plans
+ Incoterms®

Regional Authority
+ Dynamic Routing Tactics
+ Customer Communications/Updates
+ Carrier Reassignment
+ Insurance Claims
+ Incoterms®

Why global business requires a global TMS

TMS solutions were developed initially to track domestic or regional truck shipments, and to automate tedious, low-value, and overly time consuming processes performed by an enterprise's transportation staff. As day to day processes were automated, organizations gained greater efficiencies in their supply chains, as well as a new level of optimization that had not previously been possible.

Typically, TMS solutions—offered through licensing agreements, cloud computing models, managed services, or some combination thereof—can integrate on some level with an ERP system and provide shippers with global visibility into the details of every shipment. But global transportation operations require truly robust, Internet-based management and reporting tools—most in-house ERP systems simply do not include the capabilities to track the potential 30 handoffs and interactions that can comprise a global move.[6]

Some global TMS solutions incorporate modules or features that expand tracking capabilities to include air and ocean shipments, and that provide a control tower view of the entire supply chain. Such solutions help to manage bids for any method of transportation, anywhere in the world, and to coordinate contracts, procurement, rates, tenders, and schedules. Globalized versions of TMS solutions can also accommodate various language, currency, tax, and tariff considerations.

For the first time, organizations are using TMS solutions to optimize their worldwide supply chain, and to compile data and create customized reports. Developing reports, from carrier and client scorecards to carbon emissions performance and calculation of total landed cost, gives enterprises and their executive leaders more strategic intelligence regarding sourcing, manufacturing, marketing, pricing, and distribution. With powerful business analytics, companies can define their differentiators in the market, positively impact and use their supply chains, and improve customer satisfaction.

Third-party providers around the world offer varying degrees of sophistication, reliability, and robustness when it comes to connecting with ERP systems and providing data and business insights. While one 3PL or 4PL probably can't meet all global needs, organizations should select providers based on their ability to connect, report, give insight, and communicate—even to the point of accepting higher rates—because the consequences of missing or delaying information can prove disastrous.

By outsourcing global transportation to a 3PL or 4PL, an enterprise can:

- Instantly acquire that provider's knowledge of taxes, tariffs, cultures, currencies, laws, regulations, and often, global considerations
- Gain access to their technology, control towers, and worldwide relationships that allow them to execute a top tier program
- Obtain information about Incoterms® and negotiating contracts
- Hand off day-to-day tasks that have less impact on the development of a global supply chain
- Allow transportation staff to focus on strategic issues

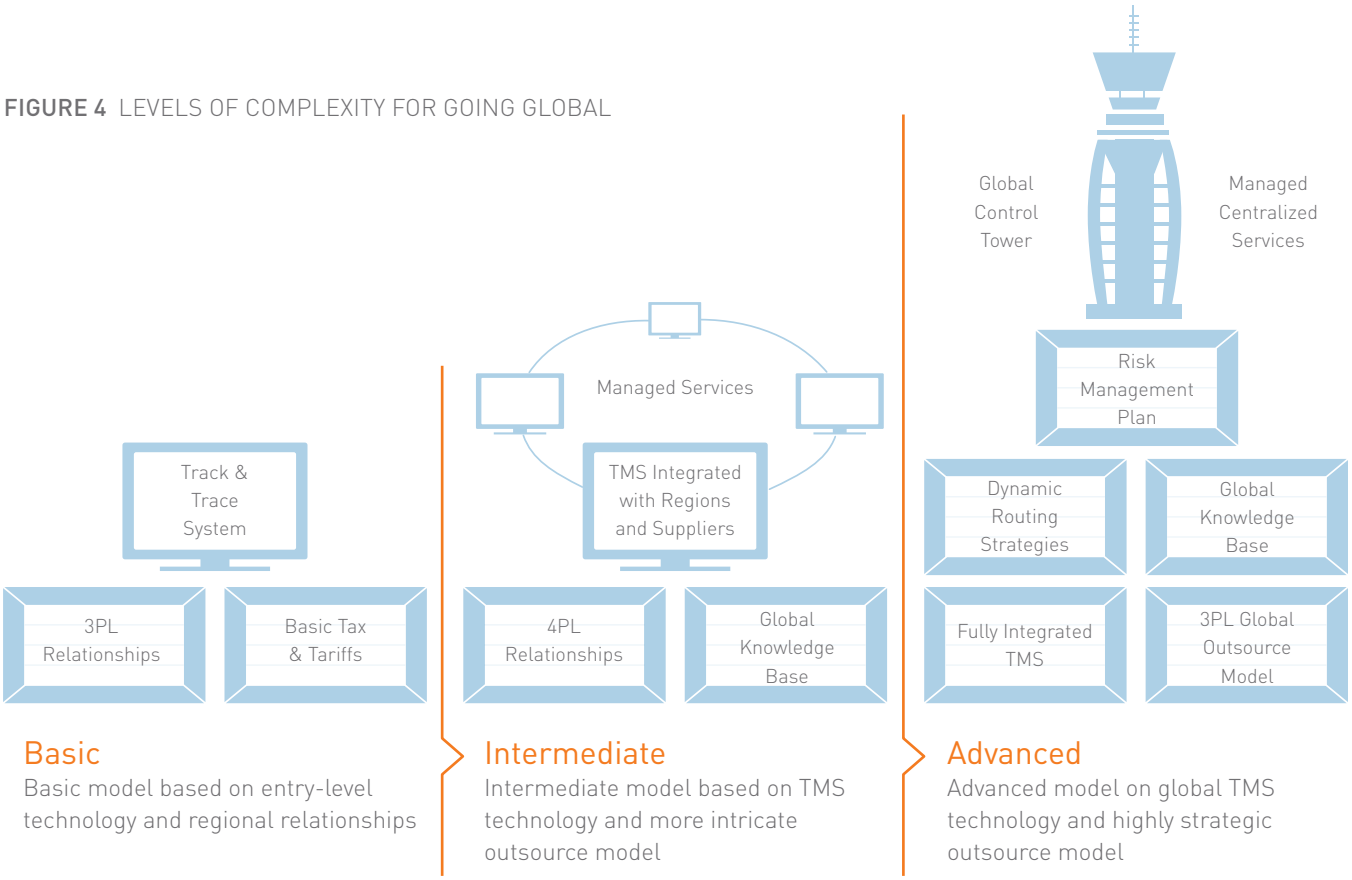
6 Logistics Online. "Global Transportation Service Challenges Discussed at Annual Freight Transportation Productivity Summit." September 26, 2005.

Final considerations for building a sustainable, global logistics plan

Globalization moves transportation to a more prominent role in any organization. Growth-oriented enterprises and organizations that source from around the world will face a continuing challenge—the added cost, complexity, and risk that come with moving raw materials or finished products across multiple borders. With integrated systems , strategies, and processes, organizations, can coordinate the efforts of customs brokers, freight forwarders, air and ocean carriers, logistics providers, and suppliers to create an effective transportation plan.

At the same time, global transportation is not an in-house operation. It requires deep cooperation between customs brokers, freight forwarders, air and ocean carriers, logistics providers, and suppliers. Integrating all these parties—both in terms of technology platforms and strategic intent—is essential for an effective global transportation plan. By developing systems, strategies, processes, and insights that compress time and space, organizations can streamline communications and increase competitiveness in the global marketplace.

FIGURE 4 LEVELS OF COMPLEXITY FOR GOING GLOBAL



5 CHARACTERISTICS OF A TRULY GLOBAL TMS

KEY CONCEPT >

1. **Single System Architecture.** Most TMS systems are not unified. Separate systems on individual continents send data to other discrete systems on other continents to provide visibility. This does not allow a true real-time, global view of a transportation network. A truly global system spans all continents with no discrete data hand-offs and provides visibility within the same operating environment without exporting and importing data into standalone systems.
2. **Control Tower Visibility.** From a single platform, an organization should clearly see their entire supply chain, from procurement to drill-down details on every shipment worldwide. In a truly global system, leaders can capture relevant data, analyze it, and use the information to make more sustainable business decisions that achieve cost and service goals.
3. **Multiple Services and Modes.** Companies should be able to see details for air, ocean, rail, and road capabilities, and to obtain utilization reports for each. Customs compliance rigor should also be part of the system to manage import and export customs activities.
4. **World-Ready.** A global TMS should accommodate specific currency, language, tax, and tariff requirements for each country or region.
5. **Management Reports.** By providing statistical business intelligence insights, truly global TMS systems can support more profitable management decisions and greater customer satisfaction.

About us

Founded in 1905, C.H. Robinson Worldwide, Inc. is one of the largest third party logistics companies in the world, providing freight services, logistics outsource solutions, fresh produce sourcing, and information services to more than 37,000 customers globally, ranging from Fortune 500 companies to small businesses in a variety of industries.

For more information, please visit www.chrobinson.com.

14701 Charlson Road, Eden Prairie, MN 55347 | 800.323.7587 | **www.chrobinson.com**

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