Proactive Planning Framework

Regional Freight Study

CONNECTED FREIGHT KC 2050

A Plan in Action

Prepared for:

Mid-America Regional Council

In coordination with

Lawrence-Douglas County Planning Commission

And

Pioneer Trails Regional Planning Commission

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Acronyms and Abbreviations

GMC	Goods Movement Committee
LDCMPO	Lawrence-Douglas County Metropolitan Planning Organization
MARC	Mid-America Regional Council
PSP	Planning Sustainable Places
PTRPC	Pioneer Trails Regional Planning Commission

1. Connected Freight KC 2050 Proactive Planning Framework

1.1 Overview

The central idea of the Connected Freight KC 2050 Plan was to establish a proactive planning process, intended to serve as an effective tool for Mid-America Regional Commission (MARC), Lawrence-Douglas County Metropolitan Planning Organization (LDCMPO), and Pioneer Trails Regional Planning Commission (PTRPC) planning agencies. This process provides guidance on developing actionable steps to integrate freight planning into daily operations. By implementing this framework, these agencies will have the necessary tools to create systematic approaches to address the impact of freight on their communities. This will be achieved by:

- **Defining** roles and responsibilities for planning agencies in regional, state, and national freight planning.
- **Integrating** proactive freight planning into the regional transportation planning process.
- **Supporting** regional, state, and federal freight goals and objectives.

Proactive planning is an ongoing and iterative process that involves predicting future scenarios and developing strategies to support those anticipated outcomes. This planning aims to position the region advantageously in response to changes related to freight movement. The process will integrate local, regional, statewide, and national freight planning efforts into a comprehensive regional freight planning framework. This integration will enable agencies to identify, select, and prioritize multimodal freight projects at various levels. The approach will be designed to align seamlessly with each agency's planning and project selection protocols. The outcomes of this proactive planning process will provide planners and public agencies with tools to identify, define, and communicate the freight transportation system's effect on these key themes.

1.2 Proactive Planning Objectives

Establishing proactive planning objectives that is unique to this area was crucial for creating an adaptive freight transportation system that meets the evolving demands of regional and national economies. The objectives of the Proactive Planning process will be to:

- Establish a proactive freight planning process
- Leverage the MARC-LCDMPO-PTRPC partnership
- Preserve and improve the multimodal freight network
- Convey the economic resilience to freight industry success

By leveraging partnerships among planning agencies like MARC, LCDMPO, and PTRPC, the framework ensures collaboration and resource optimization, fostering a unified approach to

address regional freight-related challenges. The preservation and improvement of the multimodal freight network safeguard accessibility and efficiency, enabling seamless movement of goods and services across various modes of transport. Furthermore, emphasizing economic resilience underlines the significance of freight industry success as a cornerstone of economic stability and growth. These objectives collectively ensure a comprehensive strategy that balances infrastructure sustainability, ecological considerations, and the dynamic nature of freight planning to support thriving communities and industries.

1.3 Proactive Planning Key Themes

Each theme contributes a vital perspective in shaping a resilient freight transportation system that aligns with regional development goals and ensures long-term sustainability. The interaction between these themes (**Figure 1**) and the freight industry is intricate, with each component playing a pivotal role in shaping policies and strategies that support resilient and adaptive freight planning. These themes collectively can guide the development of a proactive planning framework that can effectively respond to current and future freight movement challenges.

1. **Regional Economic Impacts** involve identifying the ways in which freight activities bolster local economies, create jobs, and maintain competitiveness in national and international markets.
2. **Freight Planning and Public Policy** ensure consistency and adaptability in regulations and guidelines, enabling the seamless integration of freight needs into broader urban and regional plans.
3. **Leveraging Resources and Partnerships** highlights the importance of collaboration across agencies, stakeholders, and industries to maximize efficiency and innovation within the freight network.
4. **Environmental Impacts** emphasize the need to adapt to extreme weather and reduce carbon footprints through sustainable practices, such as promoting cleaner fuel alternatives and optimizing logistics to minimize waste.
5. **Infrastructure Considerations** focus on maintaining and upgrading transport facilities to meet growing demands without compromising efficiency or safety.
6. **Industry Impacts** delve into understanding economic trends, technological advancements, and workforce needs that shape the freight industry's evolution.
7. **Agricultural and Rural Needs** shed light on the unique challenges faced by rural economies, ensuring that freight strategies account for their critical role in supplying goods and supporting agricultural productivity.

This comprehensive framework not only identifies and mitigates local challenges but also positions the region as a forward-thinking leader in freight planning, ensuring alignment with broader state and national freight planning efforts. By interweaving these themes into actionable recommendations, the framework strives to create a more adaptive, balanced, and inclusive freight transportation system that supports economic vitality and environmental stewardship.

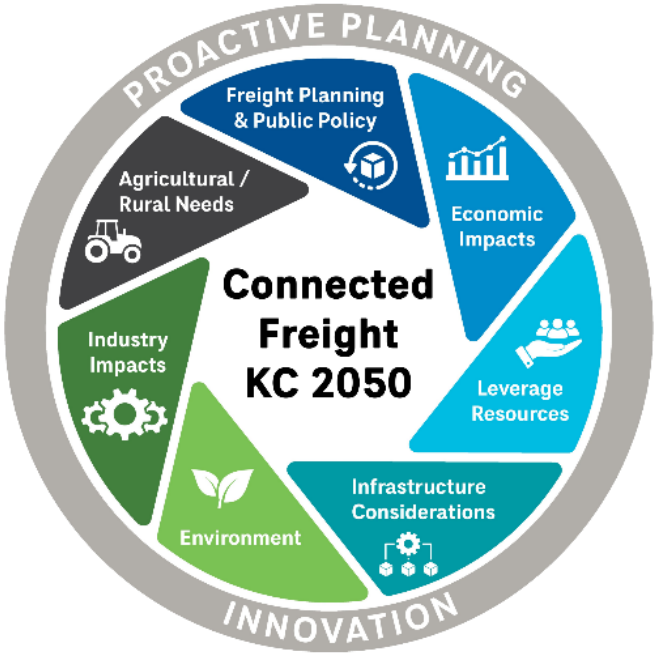

Figure 1. Proactive Planning Key Themes

1.4 Proactive Freight Action Plan

The proactive planning action plan focuses tying together the region's critical issues and proactive planning objectives within the freight industry through the integration of seven key themes. The process began with a deep dive into the findings from the technical memoranda, uncovering critical insights that shaped each recommendation. Discussions among agencies provided blended perspectives to ensure the plan remained inclusive and adaptive. From aligning regional economic impacts with workforce strategies to addressing environmental sustainability and rural needs, each theme was interwoven into a coherent strategy. The result was a forward-thinking framework that leveraged resources, optimized infrastructure, and embraced innovative freight policies to position the region as a leader in multimodal connectivity and economic resilience.

Table 1 lists the planning recommendations for regional and local planning agencies to be "proactive" in the freight planning process based on the key themes. The **critical issues** are listed below and are referenced by number in the table.

1. Balancing rural and urban representation of freight needs, policies, and project prioritization
2. Harmonizing regional freight policies to elevate freight within the project selection process
3. Providing resources to educate local governments on the expected impacts of freight development and goods movement
4. Developing public policies that integrate land use and transportation planning reflective of the Kansas City region's geographic advantages

Table 1. Proactive Freight Action Plan

Critical Issues	Proactive Planning Objective	Planning Recommendations
Key Theme: Regional Economic Impacts		
#2 #4	▪ Leverage MARC-LDCMPO-PTRPC partnership ▪ Convey the economic resilience to freight industry success	▪ Identify specific metrics that indicate the impacts of shifts in freight industry to the regional economy. ▪ Develop campaign focused on planning strategies to leverage the Kansas City region's geographic position as a multimodal freight hub to enhance competitiveness. ▪ Prioritize infrastructure investments that enhance the competitiveness of FACs by improving multimodal connectivity and workforce accessibility. ▪ Develop workforce recruitment strategies targeting veterans, high school graduates, and underrepresented groups in the logistics sector. ▪ Encourage local sourcing and the adoption of advanced manufacturing technologies to strengthen supply chains and reduce external dependencies. ▪ Meet with economic development groups at least twice per year to report and exchange freight related information. ▪ Develop a workforce strategy plan ▪ Develop methodology that identifies freight value on the Farm to Market routes ▪ Utilize RFI's the explore economic development that leverage infrastructure improvements (i.e. business looking for rail access or intermodal convergence)

Critical Issues	Proactive Planning Objective	Planning Recommendations
Key Theme: Freight Planning and Public Policy		
#1 #2 #3	▪ Leverage MARC-LDCMPO-PTRPC partnership ▪ Convey the economic resilience to freight industry success	▪ Provide technical resources to local governments that support integrating freight considerations planning and zoning plans. ▪ Utilize technical committees to develop public policies that analyze land use and freight planning (i.e. requiring truck parking near warehousing or distribution centers) ▪ Use scenario planning workshops to evaluate critical issues and test the impacts of various freight planning strategies on key regional themes like economic growth and environmental sustainability. ▪ Leverage advanced data models, GIS mapping, and freight flow analysis to monitor trends and support decision-making for future freight investments. ▪ Regularly review and revise the Connected Freight KC 2050 Proactive Action Plan to align with emerging trends, technologies, and stakeholder priorities. ▪ Prioritize projects with maximum economic and operational impact that provides sustainable growth and efficiency in regional freight systems. ▪ Develop integrated freight policies across jurisdictions to streamline project selection, align goals, and improve efficiency in goods movement. ▪ Educate local governments and stakeholders on the socioeconomic impacts of freight to foster informed decision-making and community support.
Key Theme: Leverage Resources and Partnerships		
#2 #3	▪ Establish a Proactive Freight Planning Process ▪ Leverage MARC-LCDMPO-PTRPC Partnership ▪ Convey the Economic Resilience to Freight Industry Success	▪ Expand GMC membership to include more planning agencies to develop a “One-Voice” Freight Strategy ▪ Leverage advanced data models, GIS mapping, and freight flow analysis to monitor trends and support decision-making for future freight investments. ▪ Harmonize freight policies across jurisdictions to enhance consistency and adaptability.

Critical Issues	Proactive Planning Objective	Planning Recommendations
		▪ Develop tailored emergency preparedness plans for communities, addressing freight continuity during disruptions caused by extreme weather or other hazards. ▪ Collaborate with educational institutions to align curriculum with the needs of the freight and logistics industries. ▪ Invest in training programs for truck drivers, logisticians, and warehouse managers to meet workforce demands. ▪ Engage diverse stakeholder groups to address workforce challenges and leverage regional educational resources effectively.
Key Theme: Environmental Impacts		
#1 #3	▪ Establish a Proactive Freight Planning Process ▪ Leverage MARC-LCDMPO-PTRPC Partnership ▪ Preservation and improvement of the Multimodal Freight Network	▪ Incorporate freight resiliency into MARC's Natural Hazard Transportation Risk Assessment, emphasizing climate adaptation and robust infrastructure. ▪ Establish a comprehensive freight natural hazards responsibility matrix to clarify roles and responsibilities among public and private entities. ▪ Promote the adoption of clean fuel technologies, idle reduction strategies, and alternative energy sources for freight operations. ▪ Prioritize infrastructure projects that avoid or mitigate impacts on natural resources, wildlife, and flood-prone areas. ▪ Support infrastructure and technologies aimed at minimizing the environmental footprint of freight operations.
Key Theme: Infrastructure Considerations		
#1 #2 #3	▪ Preservation and improvement of the Multimodal Freight Network ▪ Convey the Economic Resilience to Freight Industry Success	▪ Identify and prioritize critical freight corridors to bolster economic activity and improve supply chain efficiency. ▪ Enhance multimodal connectivity to optimize the interplay between rail, highway, air, and maritime transportation systems. ▪ Allocate funds to modernize multimodal assets to meet the freight demands of the region ▪ Develop a regional waterways plan that identifies opportunities for smaller ports in key rural areas

Critical Issues	Proactive Planning Objective	Planning Recommendations
		▪ Prioritize capacity improvements on freight corridors that support existing FACs. ▪ Improve connectivity between intermodal sites, major highways, and local freight facilities to support multimodal freight movement. ▪ Identify funding resources to support last mile intermodal connectivity between air, rail, and ports. ▪ Focus on bridge and pavement maintenance in FAC zones experiencing high freight activity or poor conditions. ▪ Identify a process to develop local truck parking infrastructure sites accessible to truck drivers during breaks at home. ▪ Develop design standards for regional, local, and farm to market routes that carry freight goods
Key Theme: Industry Impacts		
#2 #3 #4	▪ Leverage MARC-LCDMPO-PTRPC Partnership ▪ Convey the Economic Resilience to Freight Industry Success	▪ Leverage technology and data analytics to enhance decision-making processes ▪ Support innovation in freight technology, such as autonomous vehicles and ITS. ▪ Support workforce development programs to address the growing employment needs of the supply chain and logistics sectors. ▪ Encourage the adoption of advanced manufacturing techniques to enhance productivity and economic competitiveness. ▪ Support initiatives that manage the rising demand for e-commerce and home deliveries. ▪ Design and implement plans to widen critical rural corridors to accommodate larger freight vehicles safely. ▪ Encourage policies that support local sourcing and the adoption of advanced manufacturing technologies to strengthen supply chains and reduce external dependencies.

Critical Issues	Proactive Planning Objective	Planning Recommendations
Key Theme: Agricultural and Rural Needs		
#1 #2 #3	▪ Establish a Proactive Freight Planning Process ▪ Leverage MARC-LCDMPO-PTRPC Partnership ▪ Preservation and improvement of the Multimodal Freight Network ▪ Convey the Economic Resilience to Freight Industry Success	▪ Identify and prioritize investments in primary and secondary farm-to-market routes to improve rural freight connectivity. ▪ Ensure rural roads meet the needs of agricultural freight, including adequate lane widths, pavement strength, and clear signage. ▪ Educate planners and communities in rural areas on freight operations to address unique challenges in agricultural logistics effectively. ▪ Conduct detailed evaluations of existing farm-to-market routes, identifying bottlenecks, safety hazards, and areas for improvement. ▪ Engage local farm owners, agricultural organizations, and freight operators in planning discussions to ensure investments align with practical needs. ▪ Install clear and durable signage indicating farm-to-market routes, freight detours, and weight limits. ▪ Collaborate with universities and agricultural colleges to create specialized modules on rural freight planning and logistics. ▪ Understand OS/OW loads of rural freight routes

1.5 Scenario Planning Guide

The Freight Scenario Planning Workshop was convened to evaluate the effectiveness of tools within the control of planning agencies to help guide future freight planning actions. The workshop was organized around identifying industry challenges presented under four distinct scenarios. The aim was to create a shared agenda across key public and private sector stakeholders that directly impact goods movement policy and economics. Identifying these shared outcomes for regional and state economies provide a foundation for prioritizing regional freight infrastructure, policy, technologies, and economic development strategies.

The scenario planning guide complements the proactive planning framework by encouraging stakeholders to anticipate diverse challenges and opportunities within freight logistics. By integrating tools like legislative advocacy and collaborative workshops, it fosters adaptive strategies tailored to each scenario, ensuring resilience and sustainability in freight operations. This structured approach aids decision-makers in navigating uncertainties and implementing effective policies.

1.5.1 Summary of Scenarios (3 Scenarios + Baseline)

Scenario workshops were conducted in each of the freight impact area's regions: Kansas City, Sedalia, and Lawrence-Douglas County, during the spring of 2025. The workshop scenarios are described below.

- **Baseline:** Like "business as usual". (Other scenarios could be compared to it).
- **Wild Wild West:** What happens when economic development, technology and logistics growth are unchecked by regulations, land use, economics, minimal decarbonization policies—everything is possible.
- **Shifting Patterns:** Consumer expectations are high, decarbonization policies, logistic patterns change, redefining modal collaborations and partnerships, scale matters (size and area coverage), last mile partnerships, "just in time" delivery- is it a thing of the past or part of the future.
- **Show Me:** Focus on regional freight growth by implementing initiatives that promote the unique geographic, infrastructure, workforce, and socioeconomic conditions in the Kansas City region in the face of another pandemic, returning recissions, shortages in manpower, cost increases, markets decrease, stringent decarbonization policies, and supply chain bottlenecks.

1.5.2 Proactive Planning Toolkit

At each meeting, participants were asked to review the four scenarios and apply tools from the sample proactive planning toolbox for each scenario, rating their effectiveness for addressing each scenario.

The tools **(listed in bold)** utilized for the scenario workshop are:

- **Legislative** advocacy.
- A **freight destination layer tool** with mapping, project selection criteria, and performance metrics via MARC Planning Sustainable Places (PSP).
- Methodology for and **mapping of future** port locations, intermodal and transload facilities, warehousing and distribution centers, farm-to-market routes, at-grade rail crossing and future spur locations, and anticipated freight areas.
- **Resource guide** with data sets, range of employment possibilities, etc., that express freight's meaning to the region and what impacts it.
- **Checklist for context sensitive freight development, infill, and street design** that addresses first and last mile considerations, truck parking, activity centers, land use, and mobility.
- **Harvest season** traffic counts.

- **Public relations tools**, e.g., freight resource guide with data sets, range of employment possibilities, etc., that express freight's meaning to the region and what impacts it.
- **Goods Movement Committee (GMC) partnership** consisting of KC Metro, Lawrence-Douglas County, and Pioneer Trails Regional Planning Commission regions, that pursues funding opportunities, builds connections with businesses, and helps expand the workforce.
- Regional freight **symposium** (annual) for brokers, drivers, logistics, warehousing, distribution, agriculture, and government representatives.
- **Freight-focused duties** at each metropolitan planning organization/regional planning commission.
- **Livability checklist** for freight in terms of workforce and housing diversification, accessibility, services, amenities, and buffers.
- **Enforcement** for **and education** on weigh stations, permitting, truck parking, lane use, etc.
- **Traffic Incident Management** resources and communication via Kansas City Scout, 511, telephone, etc.

1.5.3 Summary of Scenario Outcomes

Overall, when applying the tools to the scenarios, participants indicated many would be at least moderately affective. Across scenarios, regions selected the following tools most:

Kansas City (MARC) Region

- Context sensitive freight development and design checklist
- Enforcement and education
- Harvest signs and traffic counts
- Layer tool via MARC Planning Sustainable Places (PSP)
- Livability checklist for workforce, housing, etc.
- Mapping of future ports, transload, intermodal, farm-to-market, etc.
- Regional freight symposium
- Traffic incident management

Lawrence-Douglas County Region

- Context sensitive freight development and design checklist
- Enforcement and education
- Freight-focused duties
- GMC partnership
- Harvest season traffic counts
- Layer Tool via PSP
- Legislative advocacy
- Livability checklist for workforce, housing, etc.
- Mapping of future ports, transload, intermodal, farm-to-market, etc.
- Public relations tools
- Regional freight symposium
- Resource guide for expected freight operations
- Traffic incident management

Pioneer Trails

- Layer tool via MARC PSP
- Legislative advocacy
- Mapping of future ports, transload, intermodal, farm-to-market, etc.
- Resource guide for expected freight operations
- Traffic incident management

The project team concluded each meeting with a discussion of potential criteria for initiatives, policies, and funding. They placed each criterion into one of the following categories: positively impacting quality of life, resilient and efficient freight operations, availability of resources, and other. In response, participants included the following among their top four criteria:

- **Positively Impacts Quality of Life:** Workforce
- **Resilient and Efficient Freight Operations:** Preservation/improvement of the transportation system
- **Availability of Resources:** Focused collaboration across agencies (departments of transportation, municipal and regional planning organizations, private sector)
- **Other:** Dedicated freight funding

2. Conclusion and Next Steps

The Connected Freight KC 2050 Plan represents a landmark effort in harmonizing regional freight priorities, fostering economic growth, and addressing critical challenges in the Kansas City area. By leveraging the region's unique position as a multimodal freight hub, the plan weaves together data-driven insights, collaborative stakeholder engagement, and innovative strategies to build a resilient, efficient, and balanced freight transportation network. Through its emphasis on equity, resilience, and economic vitality, the plan transcends traditional reactive planning frameworks, offering a proactive blueprint for the future.

The plan highlights the importance of balancing rural and urban freight needs, harmonizing policies, educating local governments, and integrating land use with transportation planning—all while addressing the complexities of socioeconomic factors, workforce development, e-commerce growth, and environmental sustainability. Its robust analysis of infrastructure, freight activity centers, and multimodal connectivity further underscores the significance of strategic investment and policy alignment to address current and future demands. The continuous involvement of diverse stakeholders, including regional economic agencies, educational institutions, infrastructure groups, and private sector representatives, ensures that the plan remains grounded in practical realities while pushing the boundaries of innovation.

Looking ahead, the Connected Freight KC 2050 Plan serves as a guiding framework to navigate challenges posed by technological advancements, economic shifts, climate change, and global trade dynamics. It empowers the study area region to adapt to emerging trends while safeguarding its economic vitality and quality of life. By integrating proactive goals, proactive planning recommendations, and scenario-based strategies, the plan lays the foundation for a freight transportation system that is not only responsive but also anticipatory, capable of thriving amid uncertainty and change.

Ultimately, the success of this plan relies on continued collaboration, resource optimization, and commitment to its vision. It is not merely a roadmap but a call to action—an invitation to stakeholders across the region to collectively invest in a brighter, more sustainable future for freight transportation. As the region grows and evolves, the Connected Freight KC 2050 Plan can be referred to by planning partners as a mechanism for thoughtful freight planning, transformative innovation, and unified effort in shaping the economic future of the region.