

Appendix A Scenario Workshop Materials

Kansas City Regional
Freight Study

CONNECTED FREIGHT KC 2050

A Plan in Action



Prepared for:

Mid-America Regional Council

In coordination with

**Lawrence-Douglas County
Metropolitan Planning
Organization**

And

**Pioneer Trails Regional Planning
Commission**

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Evaluation Criteria for Initiatives, Policies & Funding

Positively impacts quality of life

- Workforce
- Site selection
- Environmental enhancement
- Truck parking accommodations

Resilient and efficient freight operations

- Proximity to major highways
- Preservation/improvement of the transportation system
- Project coordination (near-term, long-term, aspirational)
- Technological innovations (AI, connected, autonomous, and electrified)

Availability of resources

- Dedicated freight-focused staff
- Scope alignment for funding pursuits (grants programming)
- Focused collaboration across agencies (departments of transportation, municipal and regional planning organizations, private sector)
- Partnerships for federal funding pursuits

Other

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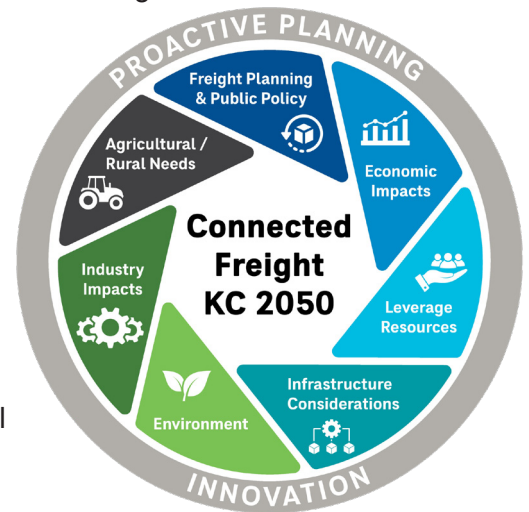
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A Plan in Action

Proactive Planning Toolkit

The initial draft of the toolkit currently consists of the tools listed below. What's missing?

- **Legislative** advocacy
- Planning Sustainable Places (PSP) Freight Destination **Layer Tool** with mapping, project selection criteria, and performance metrics
- 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 for expected freight operations** tied to artificial intelligence, connected and autonomous vehicles, electrification, crash hot spots, freight bottlenecks, etc.
- **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.
- **Other** (TBD)



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Baseline Scenario:

Using a proactive planning framework, current business continues but what's missing?

Freight Planning and Public Policy

- New housing is a part of mixed-use development that includes employment opportunities
- Preservation and new project prioritized
- Peak operations in congested areas are promoted and incentivized
- Crash modification projects are in the KS Rail Crossing Safety Action Plan
- Truck traffic impact analysis guidelines that include truck parking/queuing impacts and inspection locations in urban and rural areas are developed
- Funding designated towards multimodal freight network
- Robust outreach happens for planning/zoning and transportation efforts

Economic Impact

- A Free Trade Zone is present and the benefits to imports, exports, and value-added manufacturing are identified
- Workforce development diversified to attract freight and other industries
- Economic resiliency and policies related to freight industry success, including the importance of ports and water ways and the maritime industry to the regional and national economies, are conveyed
- Transportation cost reduced by creating local supply chains

Leverage Resources

- Stakeholders promote education for new truck drivers
- Alternatives for generating revenue
- Local business rail spurs funding programs supported in KS
- MPOs focus on multimodal freight network partnerships to align, prioritize, and promote projects
- Up to date plans and research through increase of regional and state planning capacity
- Inland waterway maintenance improved through MoDOT, ports, and USACE partnership

Infrastructure Considerations

- New transload facilities promoted in KC region
- Track Capacity increased for at or near capacity rail corridors
- Evaluating and re-engaging underused rail assets for rural freight transportation
- Capacity and development promoted at regional air-cargo handling airports
- Evaluating and re-engaging underused rail assets for rural freight transportation
- Freight employment is located in existing developed communities near highways and railroads that have urban infrastructure
- Small Truck deliveries focus as a part of complete street corridors
- Multimodal transportation incorporated in freight projects located in under served communities
- KS Truck Parking Information System is maintained and improved along with investment for KC regional

Environment

- Design standards to harden against extreme weather, flooding, and other events
- Adoption of alternative fuels is encouraged
- Transportation projects designed to consider extreme weather, decreased asset life cycles, and system redundancy
- Freight Programs and projects protect wildlife habitats, manage flooding, and mitigate environmental impacts, all while addressing climate change

Industry Impacts

- Guidelines mitigate freight and industry conflicts with residential and commercial land uses
- Sites are prepared for industrial development and infill industrial uses
- Land use and zoning ordinances designate future parks and preserves while ensuring commercial and freight land uses are compatible with recreational lands
- Regional intermodal facilities are identified and developed along with prepared large-scale development sites along highway and rail corridors
- New facilities have traffic impact studies done
- Land near highways and rail corridors have denser zoning
- Utility expansion for new developments are funded by impact fees

Agricultural / Rural Needs

- Outlying areas in the region have non-residential zoning
- Zoning and development standards protect farmland from development
- Land use guidelines protect wildlife migration corridors and direct freight development to developed areas



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Baseline Scenario:

Using a proactive planning framework, current business continues but what's missing?

Freight Planning and Public Policy

- More truck parking is provided where needed
- Multimodal plans are up to date and projects are "shovel-ready"
- Freight rail growth identified to aid demand and bottlenecks
- Guidelines for regional access management in freight corridors
- Policy and standards don't allow freight facilities near residential or office developments and are consolidated at freight activity centers
- Programs and projects that promote Evs and FCEVs in the KC region
- Robust outreach happens for planning/zoning and transportation efforts

Economic Impact

- Projects that enhance workforce mobility to and from freight-related job centers are considered
- Regional freight and logistics workforce is developed
- Increased demand for consumer goods and higher housing costs could be triggered by populations moving to the area from higher cost regions
- High-value on-time deliveries and everyday necessities will be in greater demand
- Programs prepare workers for diverse jobs in freight

Leverage Resources

Infrastructure Considerations

- Specific facilities/corridors cater to heavy trucks and trip integration
- Maintenance costs are considered when infrastructure is expanded
- Blocked crossings implemented from KS Grade Crossing Safety State Action Plan
- Capacity increase through ITS and technology improving transportation efficiency
- Transportation projects designed to consider extreme weather, decreased asset life cycles, and system redundancy
- Freight safety impacts that create barriers to transportation options and first and last mile accessibility are mitigated

Environment

Industry Impacts

Agricultural / Rural Needs



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Wild Wild West Scenario:

What happens when economic development, technology and logistics growth is unchecked by regulations, land use, economic, minimal decarbonization policies – everything is possible

Freight Planning and Public Policy

- MPOs and state DOTs are required to develop freight performance metrics
- KC Region encourages electric vehicle policies
- Regulatory exceptions support OS/OW for specific facilities

Economic Impact

- FTZs may become obsolete or harder to implement
- Tariffs affect capacity and demand for air, rail, highway, and logistics coordination (due to onshoring/nearshoring)

Leverage Resources

- Policies support electric charging infrastructure for trucks and hydrogen facilities
- National or local revenues are raised through user fees, gas tax, VMT fees, etc.

Infrastructure Considerations

Environment

- Carbon reduction policies support electric vehicle charging infrastructure for trucks

Industry Impacts

- Freight safety issues affect driving, walking, biking, and first/last mile transit access
- Enhanced air quality regulations impact non-attainment areas
- Stricter driver regulations (e.g., "Jason's Law") may be introduced
- National tariffs impact supply chain and Kansas City's role in freight
- No guidelines for mitigating incompatible freight land uses near sensitive areas (residential, schools, parks)
- Energy prices may fluctuate dramatically
- Local land use guidelines fail to promote infill and address sprawl

Agricultural / Rural Needs



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Shifting Patterns Scenario:

Consumer expectations, decarbonization policies, “Amazon Effect,” logistic patterns, modal collaborations and partnerships, scalable solutions, last mile partnerships. Is “just in time” a thing of the past or part of the future?

Freight Planning and Public Policy

- Considerations for chip manufacturing, time-sensitive deliveries, and growth in electronics/auto/electric vehicle sectors
- Address workforce needs in the KC region
- Shift away from highways as primary freight mode
- Support workforce mobility, new driver education, and development across all freight modes
- Housing near freight facilities, staffing plans for KDOT Freight and Rail Unit

Economic Impact

Leverage Resources

Infrastructure Considerations

- Opportunities to reduce highway reliance
- Rapid technology adoption/advancements
- Promote regional air cargo capacity
- Drone deliveries, autonomous vehicles, electrification, and alternative fuels (hydrogen)
- Expand rail capacity, re-engage underused rail assets, promote ports, and strengthen partnerships for inland waterways

Environment

- Transportation projects protect wildlife and manage flooding/stormwater, considering climate change
- Transportation projects consider extreme weather, decreased asset life cycles, and system redundancy
- Resiliency planning needed for extreme weather, emergency detours, and wildlife/environmental impacts
- Roadways require design for extreme weather, flooding, and resiliency

Industry Impacts

- Major supply chain disruptions due to inflation, emergencies
- National and local driver and equipment shortages
- Amazon and e-commerce delivery companies electrify fleets, reducing emissions and Highway Trust Fund revenues
- Federal Highway Trust Fund faces insolvency
- E-commerce leads to increased warehousing and last-mile delivery demands (e.g., drones, private shippers)
- Population growth variations due to migration
- Energy prices fluctuations
- Local governments experience funding shortages

Agricultural / Rural Needs



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Show Me Scenario:

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 rescissions, shortages in manpower, cost increases, markets decrease, stringent decarbonization policies, and supply chain bottlenecks.

Freight Planning and Public Policy

- Fund top tier projects from Missouri/KDOT statewide plans, addressing bottlenecks and multimodal needs
- Focus on preserving and improving KC's multimodal network, expanding beyond trucks/highways
- Identify and improve infrastructure to support oversize/overweight movements
- Prioritize freight corridors, safety, and efficiency for infrastructure investment in KC
- Promote capacity building for regional freight planning staff and modern technologies
- Consider key factors like farm-to-market network, truck-related fatalities, and infrastructure condition in project selection
- Establish a proactive regional freight planning process
- Develop policies for electric truck charging infrastructure, including hydrogen-powered vehicles

Economic Impact

- Communicate policies related to the freight industry's economic resiliency
- Explore additional FTZs to encourage imports, exports, and value-added manufacturing
- Address freight-related workforce needs, promote education, and enhance mobility to freight job centers

Leverage Resources

- BIL Grant Applications: Align regional agencies for successful freight project funding, identifying lead agencies and roles
- Leverage Partnerships: Maximize collaboration between MARC, LDCMPO, and PTRPC; capitalize on KC's location, infrastructure, affordability, and quality of life

Infrastructure Considerations

- Leverage technology (AI, automation, off-peak operations) to improve freight movement efficiency
- Support funding for rail spurs to serve local businesses and enhance connectivity
- Expand Missouri's rail freight market, addressing bottlenecks and increasing capacity
- Advocate for complete streets in non-high-volume areas to accommodate all modes, including trucks
- Use modern technologies to improve safety, expand truck parking, and address grade crossing safety

Environment

Industry Impacts

- Continuously assess the impacts of trade policies (tariffs) on regional freight development
- Integrate extreme weather planning (flooding, etc.) into asset management and freight infrastructure

Agricultural / Rural Needs

- Inland Waterways: Promote and strengthen partnerships for improving the Mississippi and Missouri rivers' freight capacity

