



Port KC

Kansas City Container Market Analysis and Intermodal Trade Forecast


May 2022 Update

Prepared for:



Prepared by: KPMG LLP and its sub-consultants





This report has been prepared by KPMG and its sub-consultants and is for the confidential, exclusive, and private use of Port KC (the Client) for the purposes only in connection with the project reported upon herein. This report may not be suitable for any other purpose. Any party who obtains access to, makes any changes to, and/or chooses to rely on this report (or any part of it) will do so at its own risk. KPMG and its sub-consultants (or any other firm of KPMG International) do not accept any responsibility or liability for any use of this report by third parties. For the avoidance of doubt, the report recipient receives and uses the report entirely at its own risk and no responsibility is taken or accepted by KPMG or its sub-consultants and all liability is expressly excluded by KPMG and its sub-consultants for any losses which may result therefrom. Anyone other than the Client reviewing this report is cautioned not to reproduce its contents without prior written consent of KPMG and its sub-consultants.

KPMG's and its sub-consultants' analysis of future market expectations and trade projections contained in this report are contingent upon factors over which they have no control, and the forecasts are by their nature uncertain. While KPMG and its sub-consultants have prepared this report in good faith, no warranty express or implied is made in respect of the accuracy, completeness or appropriateness of its data, assumptions, calculations or that actual events will not vary from their projections. All users of this report are accordingly advised to undertake their own review of its assumptions, calculations, and results before making any decision or entering any commitment based on the information herein. The recipient of the report should make (and will be deemed to have made) its own review of the report to ensure it satisfies its objectives and is accurate. The reproduction or manipulation of the report without the expressed consent of KPMG and its sub-consultants is prohibited. The report recipient acknowledges that all intellectual property rights whatsoever and howsoever arising in this report as between the Client, KPMG and its sub-consultants are, and shall remain, the exclusive property of KPMG and its sub-consultants. No reliance may be placed upon this report by any party.

Contents

I.	Executive Summary	1
II.	Report Background.....	3
III.	Analysis Focus	4
IV.	Current Market Perspective.....	5
V.	Trade Forecast Assumptions.....	23
VI.	Trade Projections 2022-2070 for the Kansas City MSA.....	28
VII.	Opportunities for Export Containerization of Agricultural Products	30
VIII.	Market Findings and Opportunity for Missouri River Terminal	35
	Appendices	36
	Appendix I: References for Container-on-Barge Studies	37
	Appendix II: Colliers International Listing of Large Industrial Property Leases in the Kansas City MSA, 2018-2021	40
	Appendix III: Container Trade Forecast for Kansas City, 2022-2070	41
	Appendix IV: Selected Crop Production by County and DDG plants by location (2020)	43
	Appendix V: Leading Kansas City Importers, 2019	45
	Appendix VI: Leading Kansas City Exporters, 2019	48

List of Figures and Charts

Figure 1 Selected Kansas City Container Importers.....	1
Figure 2 Kansas City Total Container Import Volume Forecast (all sizes in TEUs)	2
Figure 3 Port KC Proposed Missouri River Terminal.....	3
Figure 4 Container ships waiting in Pacific for LA/LB berths	6
Figure 5 Kansas City Area Intermodal Rail Ramps	7
Figure 6 Leading Midwest Rail Ramps for Intact Containerized Imports, 2021.....	8
Figure 7 Comparative Performance of U.S. Intact Container Imports by Destination, % change yearly	9
Figure 8 Kansas City Intact Container Imports by Origin Region, in TEU	10
Figure 9 Kansas City's Intact Container Imports by Top Countries, 2021.....	11
Figure 10 Kansas City's Top-15 Intact Container Import Commodities, 2021 in TEUs	12
Figure 11 Selected Kansas City Leading Importers	13
Figure 12 U.S. Port of Arrival for Intact Container Imports Headed to Kansas City, in TEUs.....	14
Figure 13 Kansas City's Intact International Container Trade Balance, 2015-2021.....	16
Figure 14 Midwest Intact International Container Exports by Rail Gateway, 2021.....	16
Figure 15 Kansas City's Intact International Container Exports by Destination Region, in TEUs.....	17
Figure 16 Kansas City's Leading Intact International Container Export Commodities to China, 2015 versus 2020-2021	18
Figure 17 Kansas City's Top-15 Intact International Container Export Commodities, 2021 in TEUs	19
Figure 18 U.S. Port of Departure for Intact International Container Exports Leaving Kansas City, in TEUs	19
Figure 19 Leading Intact International Container Exporters Using Kansas City Rail Ramps	20
Figure 20 Example of Various Container Sizes Used in Intermodal Rail	20
Figure 21 Total Container Lifts for Kansas City, 2021 in TEUs	22
Figure 22 Total Container Lifts for Kansas City, 2016-2021 in TEUs	22
Figure 23 Colliers International Top Industrial Leases in Kansas City, 2020-2022.....	26
Figure 24 Forecast of Kansas City Regional GDP and Industrial Space Expansion, as annual % changes	27
Figure 25 2022-2070 Forecast for Kansas City's Import Intermodal Containers	29
Figure 26 Corn for Grain Production by County, 2019	30
Figure 27 Increase in Containerization of Agricultural Products between 2016 and 2021	32
Figure 28 Regional and Product Composition of Possible Added Container Exports from Bulk Conversion, 2020.....	33
Figure 29 The 4-State Potential Container Export Volumes Converted from Bulk Shipment, 2020.....	34
Figure 30 Forecast New Trade in Containers Lifts, Averaged by Decade	35
Figure 31 Kansas City Metro Industrial Space Leases, 2018-2021.....	40
Figure 32 Kansas City Container Forecast	41
Figure 33 Sorghum for Grain 2019 Production by County for Selected States.....	43
Figure 34 Soybeans 2019 Production by County for Selected States	43
Figure 35 Ethanol Plants with Capacity to Produce Distillers Dried Grains (DDG) as a Byproduct	44
Figure 36 Top 100 Importers in Kansas City in 2019	45
Figure 37 Top 100 Exporters in Kansas City in 2019.....	48

I. Executive Summary

The global events of 2019-2022 have impacted American and foreign consumer and business behavior including the demand for, and supply of, international merchandise goods. Kansas City's container market prospects exceed the restrained performances for imports and exports witnessed recently. Some macroeconomic challenges remain but the region's underlying economic, demographic, and geographic attributes are core to expanding international trade.

Kansas City is primed for trade growth

The metropolitan area is an attractive commercial and residential location in America's Heartland with a rising population, high ranking in affordability and household income, and thriving industrial and manufacturing developments.

The region's economic strength is enhanced by an expansive transportation network supporting further opportunities for growth.

Kansas City has five Class I railroads

operating at four different inland intermodal terminals offering service with all major U.S. container ports including the important San Pedro Bay gateways in southern California. In the Midwest, only Chicago has a broader selection of intermodal options with seven Class I railroads.

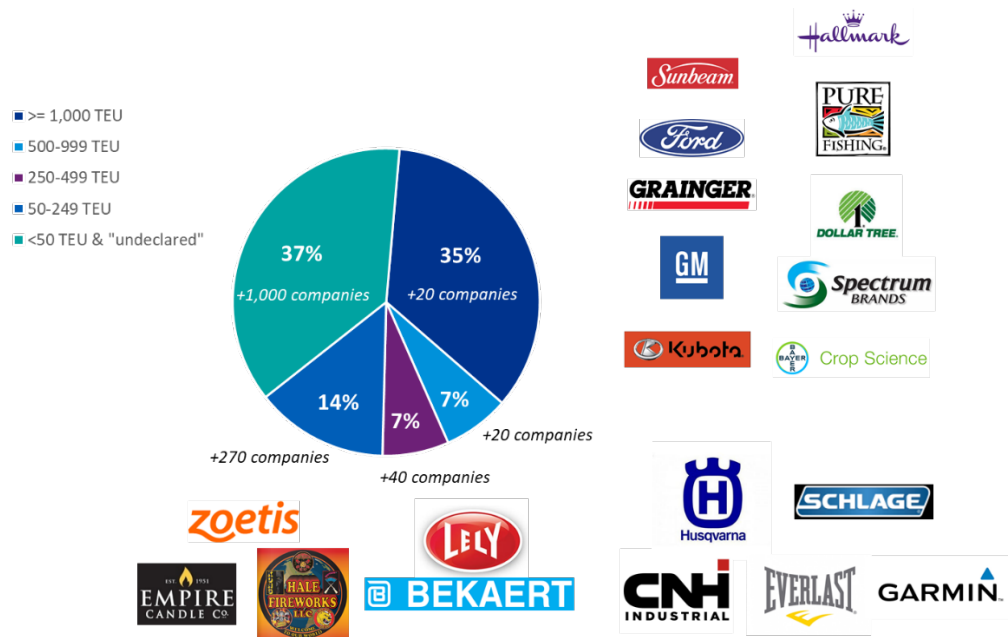
Kansas City is ranked 2nd in the Midwest and 4th in the nation for containerized imports having achieved an estimated inbound volume of 238,000 TEUs in 2021.

Kansas City's market desirability is widespread

as evidenced by statistics showing more than 355 area firms imported at least 50 TEU in 2019. It is worth noting that six of the area's businesses that imported 500 or more TEU are included in the Journal of Commerce's list of "U.S. Top 100 Container Importers for 2019".

This successful portfolio is drawing in international containerized imports of consumer merchandise, commercial machinery and equipment, and farming materials for local users as well as customers throughout neighboring areas of Missouri, Kansas, Iowa, and Nebraska.

Figure 1 Selected Kansas City Container Importers



Source: Datamyne, KPMG and its sub-consultants

¹ A TEU, or twenty-foot equivalent unit, is the industry standard for measuring container carrying capacity given the different sizes including international 20-footers (container length), 40-footers, 45-footers, and domestic 53-footers.

International trade depends on the two-way transit of containers. Kansas City has much to offer in loaded exports of regional products such as animal feeds, grains, and meats. The 2021 outbound rail volume is estimated at 190,000 loaded TEU. Consistent with America’s history to import more than it exports, and the need to balance rail car movements, Kansas City’s outbound intermodal trains handle a considerable number of empty containers in addition to export cargoes.

Looking ahead, Kansas City’s demographics and the expectation for continued economic gains is attracting industrial development of buildings and logistics parks for retail distribution, e-commerce, agricultural product transloading, and general manufacturing. These commercial expansions, and the consumer spending that fuels them, portends sustained growth in container imports. The forecast includes a compound annual average volume growth rate (CAGR) of 5.8% through 2030. This nearly matches the 6.0% CAGR achieved between 2016-2021 despite the depressing economic impact caused by the pandemic. The 2030-2040 outlook anticipates import gains averaging 3.9%.

Longer term, conservative planning is likely to be more useful than reasoned projections acknowledging how recent unprecedented external shocks to the global economy and its trade activity lowers forecasting confidence. For 30 years forward, an estimated CAGR of 1% to 2% for Kansas City’s economic performance and its parallel trade volume expectation is considered reasonable.

Figure 2 Kansas City Total Container Import Volume Forecast (all sizes in TEUs)



Source: KPMG and its sub-consultants

II. Report Background

Port KC is in the advanced planning stages for Missouri River Terminal (MRT) after purchasing the 415-acre site in 2018 from AK Steel Corporation. The facility is planned as an intermodal container rail terminal and river port terminal with freight transload capabilities and the potential to serve possible transport logistics functions including on-site including retail distribution, warehousing, storage, e-commerce, and other industrial activities.

Port KC plans to pursue the development of MRT as an advanced state-of-the-art intermodal development which will enhance the region's rail, water, and highway trade platform. The Project contemplates the development of an inland intermodal (water, highway, and rail) port and transportation hub with potential transport logistics functions on-site or proximate including retail distribution, warehousing, freight transloading, e-commerce, and light manufacturing.

Figure 3 Port KC Proposed Missouri River Terminal



Source: Port KC

To enable development of MRT, Port KC is looking to engage partner(s) through long-term master development agreement(s) to finance, construct and develop the capital investment, future operational management, and maintenance of the Project. To gain an understanding of the size, composition, and growth potential of the Kansas City market for international containerized trade, Port KC engaged KPMG to conduct a market analysis and to forecast annual trade volume for 2022-2070.

III. Analysis Focus

In 2021, U.S. ports handled 28 million import containers, measured as TEUs or twenty-foot equivalent unit boxes from over 200 countries². While ocean-going vessels called at more than 35 coastal ports to unload these containers, the consumers of the imported merchandise, known as beneficial cargo owners (BCOs), were spread across the country. The Kansas City Metropolitan Statistical Area (MSA) has 2.2 million consumers with an estimated \$58,000 per capita income³ which presents a favorable market opportunity. Additionally, a growing number of retailers find Kansas City's location beneficial as Midwest distribution and e-commerce hubs as do manufacturers as production or assembly sites.

This analysis examines important aspects of the Kansas City MSA's container import trade including volumes for the leading commodities, top buyers, overseas origins, and major ports of arrival. While less voluminous, container exports are profiled in the same manner in this study to reflect the importance of two-way trade flows to the inland transportation supply chain.

KPMG and its sub-consultants' trade forecast is included in this analysis building upon published projections for the regional economy from reputable sources such as the Federal Reserve Bank, commercial bank economists, and private forecasting firms.

MRT's access to the Missouri River offers the opportunity to construct a berth capable of handling container-on-barge (COB) or other container vessel traffic. Several studies (see Appendix I) have evaluated the competitiveness of a COB transport option connecting inland terminals on the Missouri, Mississippi, and Arkansas Rivers with Gulf Coast container ports. Not specific to COB, but potentially presenting additional export cargo prospects, research is included in this report on further conversion of the international transport of bulk commodities into containers.

² Data Source: www.datamyne.com

³ U.S. Census Bureau statistics

IV. Current Market Perspective

Recent Trade Flow Impacts from COVID-19 and Transport Supply Chain Congestion

Important drivers of import demand include population, economic activity, and consumer and business income; all of which contribute to spending. Transportation congestion and delays in 2021 showed that the buyer's location cannot be overlooked as impactful on cargo flows. About 40 percent of the U.S. population lives in coastal counties; close enough perhaps for normally routine transport of imported merchandise from ports. That means nearly 200 million inland consumers must rely on longer-haul trucking and intermodal rail in addition to efficient ocean transportation for timely delivery of their imported goods.

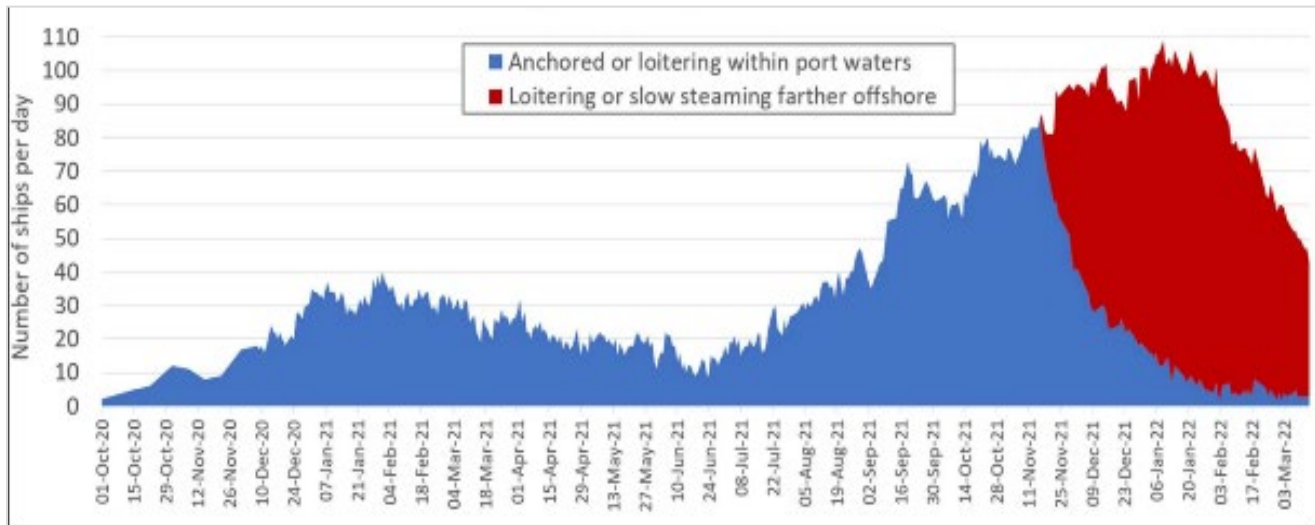
Near or far, all touchpoints in global container shipping were altered by the pandemic and the ripple effect on supply chains continues in 2022. At times, COVID-19 lockdowns reduced overseas workforces which caused erratic manufacturing and instability in the reliability of exports. Meanwhile, many home-bound Americans cautiously increased savings at the onset of the pandemic; eligible taxpayers received government stimulus checks; and those that lost jobs collected enhanced unemployment benefits. Gradually, consumers with pent up demand increased shopping behaviors, substituting e-commerce purchases for lost opportunities in retail shopping, dining out, and vacationing, among other public amenities.

As China and other "factories of the world" caught up with America's demand, the normally steady cross-ocean transport of imports could not keep pace. The ports of Los Angeles and Long Beach account for about 36% of American inbound containers and even more critical to trade destined for Kansas City. As shown below, the increase of cargo at Southern California ports exceeded their capacity to handle it forcing ships to queue up for a berth to unload. The peak of backlog of vessels reached over 100 in late 2021. In September, the Port of Los Angeles' Executive Director quantified the cascading effects of the inbound container backlog: box dwell times on terminals reached six days, the on-dock wait time for intermodal rail loading neared 12 days, and the chassis pools serving the port reported an average of over eight days delivery lag time until space opened at Southern California warehouses⁴.

While less severe, most U.S. container gateways experienced ship waiting periods and overwhelmed terminals as ocean carriers sought port alternatives to Los Angeles and Long Beach with deployment of larger vessels and more weekly services.

⁴ The port's Executive Director comments to FreightWaves publication as reported on September 30, 2021

Figure 4 Container ships waiting in Pacific for LA/LB berths



Source: www.freightwaves.com "American Shipper" publication based on data from Marine Exchange of Southern California

A retrospective analysis of the foregoing situation led to significant challenges in U.S. container transportation. The supply chain constraints did not stop at the global factories, the shipping industry, or the ports. Landside issues included a lack of truck chassis and drayage truck drivers, capacity constrained warehouses, curtailed throughput at rail yards due to extended container dwell times, a dislocation of empty containers for export reloading, and of course, weather. The Surface Transportation Board and Federal Maritime Commission continue to hold hearings and publish their findings and recommendations related to the transport logistics crisis.

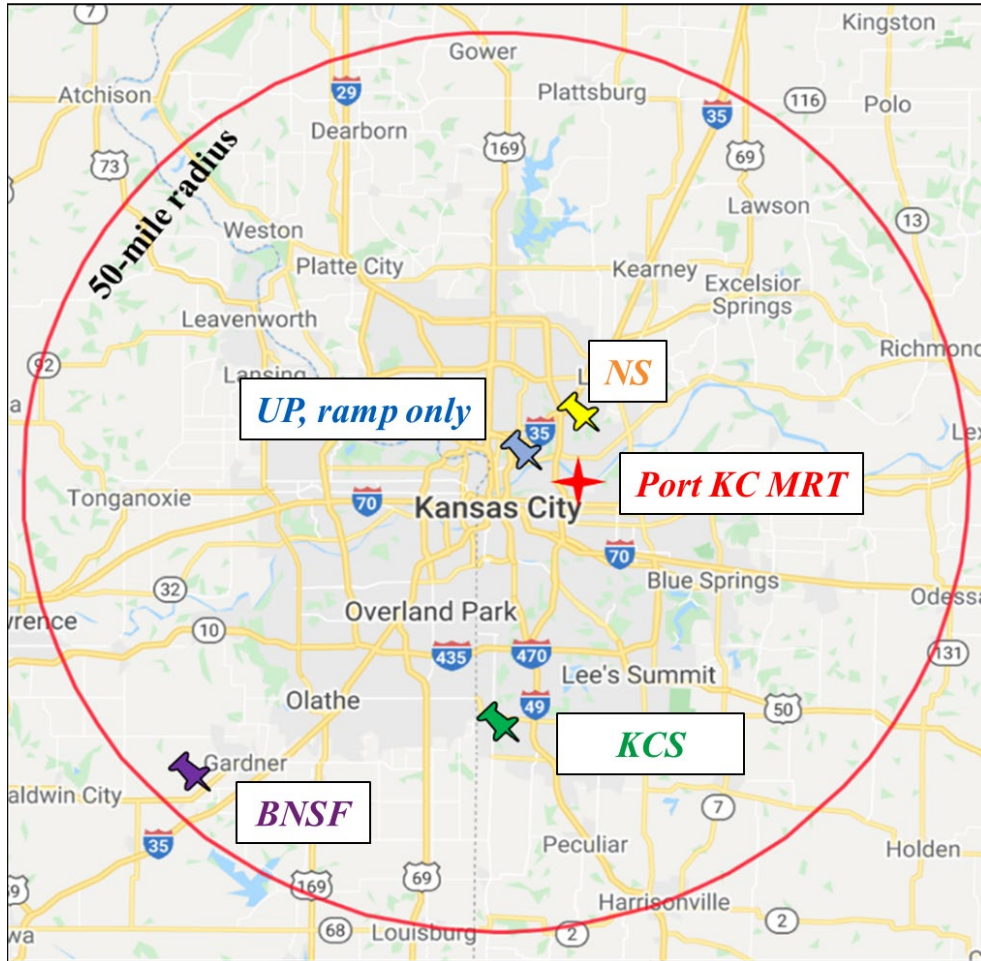
Imports

As noted above, the Kansas City MSA economic profile comprises a large consumer base with respectable earnings. In 2020, the Kansas City MSA Gross Domestic Product (real GDP, in \$2012) totaled \$124 billion, ranking the region 29th in the nation and 7th in the Midwest⁵. Kansas City's western location within the Midwest geography is also a positive for trade. As will be discussed further, China has earned the label "the world's factory" as it is the dominant source for most U.S. container imports. Pacific Rim trade predominantly enters the U.S. at West Coast ports positioning Kansas City as the first inbound rail hub in the Midwest with direct intermodal service from Southern California ports.

Kansas City currently is served by four intermodal rail hubs operated by Burlington Northern Santa Fe Railroad (BNSF), Kansas City Southern Railroad (KCS), Union Pacific Railroad (UP) and Norfolk Southern Railroad (NS). The fifth Class I railroad, Canadian Pacific also serves the broader Kansas City region.

⁵ U.S. Bureau of Economic Analysis, with the Midwest inclusive of Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Missouri, Nebraska, Ohio. Official 2021 statistics will not be released until December 2022.

Figure 5 Kansas City Area Intermodal Rail Ramps



Source: KPMG and its sub-consultants

Kansas City’s inbound intermodal rail volume of intact international containers totaled 238,000 TEU in 2021 based on Datamyne statistics⁶. The Kansas City market is the 4th largest inbound inland gateway in the U.S. and 2nd largest in the Midwest. Chicago, the country’s third largest city by population, recorded over one million import TEU. Chicago has intermodal service by all seven Class I railroads.

⁶ Datamyne statistics are sourced from U.S. Customs vessel manifests and are referenced throughout this report. Springfield MO delivered imports are included with Kansas City as most ocean carriers contract for container yard delivery at a Kansas City rail ramp. Only BNSF has rail service in Springfield, and it is predominantly for domestic freight. As explained later in the report, details on shipments moving to inland rail ramps are only available for intact ocean-going containers that are predominantly sized in 20-foot, and 40-foot lengths. Once a container arrives at a U.S. port it is possible to transload its contents into a domestic-sized container that is predominantly 53-feet in length.

Figure 6 Leading Midwest Rail Ramps for Intact Containerized Imports, 2021



Source: KPMG and its sub-consultants; Google Maps

In recent years, Kansas City’s import performance has seen a total volume increase topping 60,000 TEU from 2015’s volume of 175,000 TEU. This is a compounded annual average growth of 5% (CAGR). Import gains exceeded the inbound volume growth rates achieved by the nation and within the Midwest in 2017, 2018 and 2020. This sustained success is due in large part to the significant expansion of industrial distribution and warehousing within the Kansas City MSA. The importance to trade of industrial space buildout for new or expanding tenants is discussed in more detail in the Trade Forecast Assumptions section of this report.

The 2021 import volume growth slowed compared to 2020 despite post-COVID-19 gains in the regional economy, employment, and continued expansion of occupied industrial warehousing. Container transport congestion curbed faster trade growth. A September 2021 [Bloomberg.com](https://www.bloomberg.com/news/articles/2021-09-23/containers-piling-up-at-u-s-rail-yards-add-to-port-strains) story entitled, “*Containers Piling Up at U.S. Rail Yards Add to Port Strains*”⁷ cited surging dwell times at most inland rail terminals. According to one ocean carrier, Kansas City rail terminal dwell time surpassed ten days in May and had only lessened to under nine days on average by September. The delays are not subsiding with an early April 2022 ocean carrier report stating Kansas City dwell time stood at over 12 days; twice the wait of Dallas and 14% higher than Chicago⁸. Typically, containers are picked up at the rail depot within 24-48 hours for truck drayage to the importer.

Another restraint on the flow of containers reaching Chicago and Kansas City was the correlated impact once their rail terminals were at capacity. Train dispatch was metered at origin ports to avoid further inland congestion. In a September 21, 2021 article, the [Journal of Commerce \(JOC\)](https://www.joc.com) included comments from the CEO of Norfolk Southern Railroad (NS) regarding intermodal congestion⁹:

⁷ www.bloomberg.com/news/articles/2021-09-23/containers-piling-up-at-u-s-rail-yards-add-to-port-strains

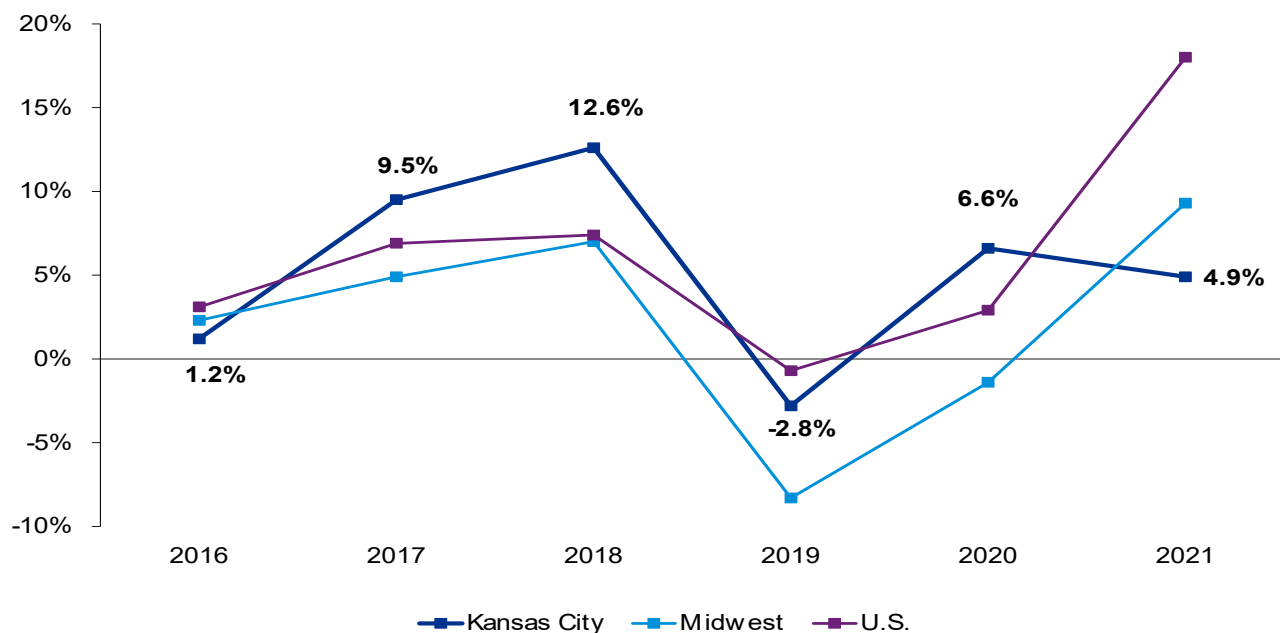
⁸ www.hapagloyd.com These statistics are specific to this carrier and may not be representative of all carriers.

⁹ www.joc.com

“Our terminals are not designed or intended for extended storage or warehousing. Delays in pulling containers from our terminals results in congestion, which impacts the fluidity of our operations and the level of service we are able to provide to our intermodal customers. To ease congestion at our international intermodal terminals, NS has taken measures such as metering traffic at origin to keep the flow of containers to inland destination terminals consistent with the ability of the drayage and warehouse communities to pull from those terminals, increasing the flow of inbound containers as “outgate” capacity improves.” – *Journal of Commerce, September 2021*

The JOC also noted that Union Pacific (UP) and Burlington Northern Santa Fe (BNSF) were also metering trains out of West Coast ports. With rail terminal congestion limiting local delivery earnings some truckers opted for better paying long-haul opportunities thereby cutting into the fleet available for container drayage. BCOs had little choice but to let boxes sit on chassis. Rapid turnover is key for all container transfers and fixing supply chain disruptions will require coordinated efforts. Logistical enhancements at ports and rail terminals are occurring although Kansas City’s trade volume is not forecast to resume a more normal growth pace until 2023.

Figure 7 Comparative Performance of U.S. Intact Container Imports by Destination, % change yearly



Source: Datamyne

China is the source for over half of Kansas City’s waterborne container imports. This share exceeds the country’s overall 37% dependence on China for inbound container merchandise and contributed to the region’s modest volume gain. China’s zero-tolerance of COVID-19 forced many factories to close or reduce operations for weeks at a time. Correspondingly, the country’s merchandise exports were limited, only to surge soon after. Despite China’s contribution to regional trade, Kansas City imports at least 100 TEU annually from 54 countries.

Figure 8 Kansas City Intact Container Imports by Origin Region, in TEU

Origin Region	2015	2016	2017	2018	2019	2020	2021	2021 % of total
NE ASIA	131,709	132,551	146,586	164,411	152,607	161,020	157,284	66%
<i>of which: China</i>	107,932	108,362	118,915	133,889	122,137	128,053	125,813	53%
EUROPE	24,171	23,987	26,932	30,805	31,271	32,914	35,806	15%
SE ASIA	8,211	8,139	8,477	9,516	12,809	15,647	21,946	9%
INDIA & SUBCONTINENT	6,736	7,609	7,942	8,895	10,106	10,585	14,219	6%
SOUTH AMERICA	2,422	2,874	2,363	2,637	3,016	3,390	4,513	2%
AUSTRALIA & NEW ZEALAND	690	926	586	819	1,033	1,112	1,077	0.5%
AFRICA	244	240	425	356	340	287	681	0.3%
CENTRAL AM & CARIBBEAN	297	359	311	327	323	365	515	0.2%
Others	338	424	524	790	917	1,151	1,509	1%
Total	174,817	177,109	194,145	218,557	212,422	226,472	237,551	100%
Annual % change		1.3%	9.6%	12.6%	-2.8%	6.6%	4.9%	

Source: Datamyne

U.S. regional reliance on any specific country can be explained by several factors including the type of commodities being supplied, retailers’ geographic preference for import distribution center sites, manufacturers’ plant locations, and government trade policy. As examples, two of the region’s largest importers – Grainger and Spectrum Brands – source 70% and 74% of their imports from China, respectively. Ford and GM purchase parts for their Kansas City assembly plants worldwide including Europe and South America. Over 94% of Kubota Tractor’s imports unloading at its Edgerton, KS distribution center originate in Japan¹⁰.

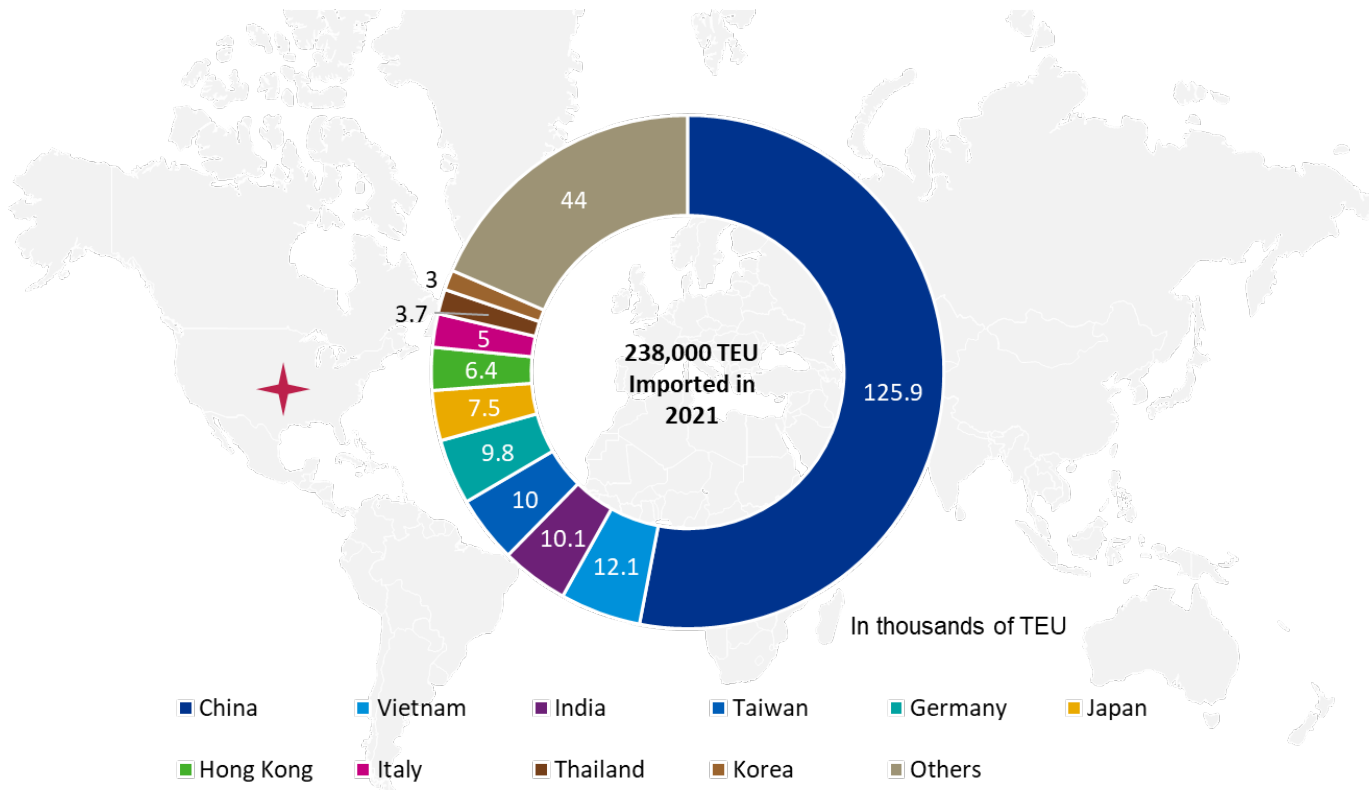
Europe accounts for about 15% of Kansas City’s inbound trade led by German industrial products including engines, auto parts, chemicals, and packaging materials. Southeast Asian nations are a growing source of import products. Businesses have migrated factories to this region seeking lower labor costs and its natural resources. Many of the imports are the same products as sourced in Northeast Asia with the exception being manufactures of natural rubber including medical gloves, tires, and industrial belts.

Vietnam is the 2nd largest supplier of container goods nationwide as well as to Kansas City. It is the region’s fastest growing supplier with volume jumping 64% in 2021. Vietnam is a significant manufacturer of furniture and footwear for companies such as Flexsteel, Nebraska Furniture Mart, and Adidas.

South America is a relatively small source of imported merchandise. Brazil accounts for 73% of volume and is comprised of agricultural chemicals, granite, and animal feed ingredients.

¹⁰ As reported by Datamyne for 2020; sourcing can vary year to year

Figure 9 Kansas City’s Intact Container Imports by Top Countries, 2021



Source: Datamyne

In late 2018, President Trump imposed a 10% tariff on numerous Chinese products, including furniture. That rate jumped to 25% a year later. Many home furnishing companies acknowledged that the higher Chinese tariffs forced more production to Vietnam. For example, Flexsteel’s Edgerton, KS distribution center saw Vietnamese-sourced furniture increase six-fold between 2018-2020. In March 2022, the Biden Administration reinstated Chinese tariff exclusions which included some furniture categories.

The overall import commodity mix for Kansas City is diverse and includes finished consumer goods as well as parts and equipment for local manufacturers and farmers. The top four import commodities for Kansas City mirror the nation’s profile in terms of the commodity groups and their combined 37% of total inbound trade. Of course, there are multiple products in these broad 2-digit harmonized codes. For example, machinery for Kansas City is farm tractors and agricultural equipment, while nationally it is white goods such as refrigerators, washers, dryers, and air conditioners.

Figure 10 Kansas City's Top-15 Intact Container Import Commodities, 2021 in TEUs

HS-2	TEU	% of trade	HS General Category Description	Examples
84	30,631	13%	Machinery & equipment, including parts	Farm tractors, sprayers, milking equipment
94	20,815	9%	Household furnishings	Cabinets & parts, sofas, chairs, lamps
85	19,317	8%	Electrical equipment & electronics	Solar panels, slow cookers, coffee makers, home goods
95	16,434	7%	Toys, games & sports equipment	Playground sets & components, fishing equipment
87	15,392	6%	Vehicles, parts & accessories	Tractor & auto parts, wheel assemblies, doors
39	14,673	6%	Plastics & articles thereof	POF shrink film, plastic bottles, sprayers, gloves, decorations
73	10,907	5%	Articles of iron or steel	Metal furniture, toolboxes, fittings, springs
29	6,701	3%	Organic chemicals	Herbicides, insecticides
40	6,695	3%	Rubber and articles thereof	Tires, hoses, gloves
63	5,998	3%	Textile articles	Tents, towels, gazebos, canopies
83	5,919	2%	Misc. base metal products	Door components, locksets, casters, hardware, faucets
44	5,217	2%	Wood & articles thereof	Lumber, plywood, cedar, boards
48	5,069	2%	Paper & paperboard	Egg trays, cartons, cups, boxes
36	5,058	2%	Explosives & pyrotechnics	Fireworks
70	4,580	2%	Glass & glassware	Glass bottles
Others	64,145	27%		
Total	237,551	100%		

Source: Datamyne; HS-2 is the international Harmonized Commodity Description and Coding System at the two-digit level

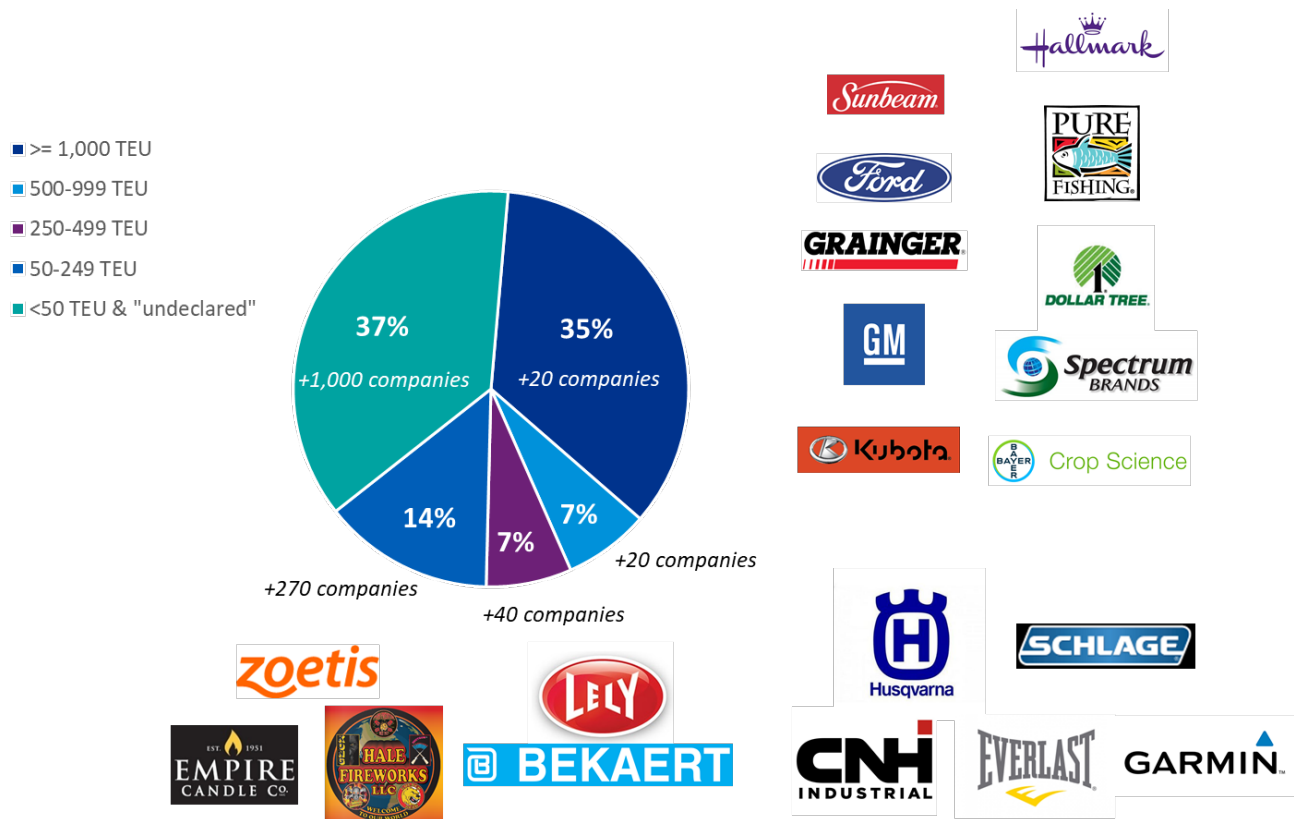
As noted earlier, a region’s success in attracting select retail distribution centers impacts its commodity mix. Kansas City-based companies such as Pure Fishing and Leisure Time Products (Backyard Discovery) are specialists in their product offerings. Both companies have distribution activities within the Kansas City MSA and were regional top-10 importers in 2019.

Using available statistics that include company names, there were 270 firms in the Kansas City market that imported at least 50 TEU in 2019 (14% of total)¹¹. It is worth noting that 6 of the region’s BCOs that imported 500 or more TEU are included in the Journal of Commerce’s “Top 100 Importers” national listing¹². Over 20 companies with individual volume of at least 1,000 TEU accounted for 35% of Kansas City’s total imports. The next tier of over 20 companies with 500-999 TEU is responsible for 7% of trade. The full list of Top 100 Importers in Kansas City in 2019 is shown in Appendix V.

¹¹ U.S. Customs permits companies to have their names restricted from publicly available vessel manifest data. Additionally, more freight forwarders are considered the client for the ocean carrier, and hence the actual BCO will not be listed on shipping documents as the consignee of record. This has been more prevalent in 2020-2021. Therefore, to be as accurate as possible, the authors used 2019 data for this BCO analysis. Many well-known businesses including Wal-Mart, Home Depot, Target, and Amazon are not detailed by name in Datamyne’s database. However, all other shipment details for these companies are available including commodity descriptions, and port and country locations.

¹² Journal of Commerce, Top 100 US Importer and Exporter Rankings

Figure 11 Selected Kansas City Leading Importers



Source: Datamyne

The San Pedro Bay California ports of Los Angeles and Long Beach handle three-fourths of all container imports destined by intermodal rail for Kansas City. BNSF and UP railroads provide direct service from these ocean gateways with an average rail transit time of 4-5 days¹³. This is not surprising given the importance of Asian trade to the Kansas City MSA and the propensity of container carriers to make San Pedro Bay ports their first inbound vessel call.

BlueWater Reporting Service statistics show there are now 34 weekly container strings calling at San Pedro Bay from Asia: an increase from 25 services at the close of 2020. Correspondingly, these service additions spawned a 40% increase in ship deployments and a 60% surge in weekly TEU capacity¹⁴.

Many inland market BCOs including Kansas City importers worked with their ocean carriers to find alternatives to cargo discharge at Los Angeles and Long Beach. Volume to Kansas City from southern California ports dropped 7% in 2021. The ports of Oakland and the Pacific Northwest experienced an uptake in volume as carriers diverted services and added strings to these gateways. As examples, CMA CGM, Matson, MSC, and Wan Hai all launched first-in port call services from Asia to Oakland in 2021.

¹³ Based on samples of carrier bills of lading pre-pandemic and related transport delays in 2021. It only includes the rail transit time not the port or rail ramp unload/load time.

¹⁴ www.bluewaterreporting.com

Figure 12 U.S. Port of Arrival for Intact Container Imports Headed to Kansas City, in TEUs

U.S. Port of Arrival	2015	2016	2017	2018	2019	2020	2021	2021 % of total
SAN PEDRO BAY, CA	135,391	136,534	149,096	166,764	160,479	171,832	160,213	76%
<i>Los Angeles</i>	66,533	69,981	74,825	84,066	85,276	92,606	86,816	41%
<i>Long Beach</i>	68,858	66,552	74,271	82,697	75,203	79,226	73,397	35%
NEW YORK/ NEW JERSEY	24,146	22,417	26,546	32,239	30,468	34,829	35,222	15%
NORFOLK, VA	9,422	12,279	11,007	10,904	14,313	12,726	22,609	6%
SEATTLE/TACOMA, WA	5,077	5,412	6,801	7,901	6,768	5,568	9,972	2%
OAKLAND, CA	72	25	34	12	22	4	8,286	0%
Others	708	441	660	737	372	1,513	1,250	0.7%
Total	174,817	177,109	194,145	218,557	212,422	226,472	237,551	100%
% change		1.3%	9.6%	12.6%	-2.8%	6.6%	4.9%	

Source: Datamyne

New York/New Jersey and Norfolk, VA, with rail service by NS, are the predominant ports for European, Indian subcontinent, and South American trade. The continued growth in manufacturing in Southeast Asia and the Indian subcontinent has fostered more cargo shipments via the Suez Canal. As examples, New York/New Jersey has ten weekly services that can carry Indian cargo either direct or transshipped via the Suez Canal route. Norfolk, VA has five first-in services: two each with Europe and Asia, one with the Indian subcontinent. Slightly more than 90% of Kansas City imports from India were discharged at New York/New Jersey or Norfolk, VA. Container carriers rarely use Gulf Coast ports for serving Kansas City as the volume from the short-haul Central America and Caribbean routes is minimal.

Exports and Outbound Empty Containers

The U.S. is a wealthy nation of consumers which results in more buying than selling with most of our trade partners. This is especially true for oceangoing goods transported in containers. Datamyne reported that total U.S. export loaded container counts in 2020 were only 45% of the import totals. This imbalance worsened during the 2021 transport supply chain challenges sliding further to a 36% ratio of exports to imports. Due to the two-way nature of trade, this forces ocean carriers to load out a significant number of empty containers for eventual reuse overseas.

Historically, Kansas City's container balance is slightly more balanced than the national average reflecting a strong agricultural export cargo base. This outbound performance had been maintained since 2015. The imbalance which occurred in 2021 was particularly worse for inland markets. Importers kept loaded inbound containers longer due to warehouse space limitations. This delayed carriers' ability to reload boxes for export. As a result, carriers rushed empties overseas for quicker turns on imports¹⁵. According to exporters, including those members of the Agricultural Transport Coalition (AgTC), U.S. government policies should consider ocean shipping reforms to better ensure the ability of American companies to export their products.

¹⁵ KPMG and its subcontractors' research shows that the Kansas City export loaded volume may be undercounted by as much as 15%. Regardless, this underreporting does not significantly change the region's imbalance exhibiting a greater volume of imports compared to exports.

On March 31, 2022, the U.S. Senate passed the ‘Ocean Shipping Reform Act of 2022’ to address similar issues. The legislation (S.3580) was passed to the House of Representative on April 4th, 2022. This bill revises requirements governing ocean shipping to increase the authority of the Federal Maritime Commission (FMC) to promote the growth and development of U.S. exports through an ocean transportation system that is competitive, efficient, and economical¹⁶.

“Right now we are finding through our AgTC survey that of the actual foreign sales — not projected targets, but actual sales under contract — that we are unable to perform 20% of those because we could not get our cargo on ships, could not get it delivered timely and because of price assessments by ocean carriers rendering the product unaffordable for delivery overseas. That is a phenomenal loss of export cargo and export revenue.” – *Agricultural Transport Coalition, 2022*

Exports in the Kansas City MSA and nearby states may move either by truck or rail as bulk or breakbulk cargo that is transloaded into containers at the gateway port. U.S. Customs records these container exports as originating at the U.S. port of load. This is especially true for agricultural products. KPMG and its sub-consultants’ research estimates potentially 20% - 25% of Kansas City’s total container exports are under-reported.

For example, export shipping documents (the bill of lading contract between the shipping line and the BCO) may not name the inland rail ramp where the cargo is originally containerized. In 2021, Datamyne’s statistics from shipping documents for the Delong Company, the largest identified exporter for Kansas City, do not identify 40% of the company’s total national TEUs as to “place of receipt”. Other exporters’ unidentified shipment origins are also likely contributing to an undercount of outbound containers originating at Kansas City area rail ramps. Transport may be listed under the account of the exporter’s logistics provider, cooperative, trading company, or distributor without reference to cargo origin; or U.S. Customs may not publish the cargo owner’s name due to privacy.

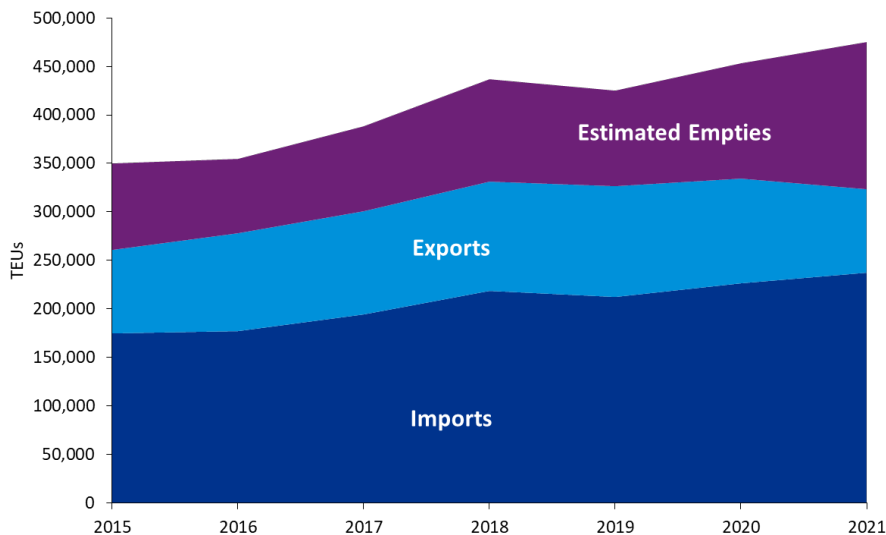
These shortfalls are insufficient to impact the trade imbalance favoring imports, and not likely to affect the region’s commodity mix or shares of outbound trade by port or overseas buying pattern. Additionally, the overall Kansas City container trade forecast is unaffected as to the combined volume of imports, export loads, and empty exports.

The following export analysis and profiles are restricted to the information available in Datamyne for the shipment of intact international containers originating at Kansas City rail ramps.

In 2021, the Kansas City market exported approximately 86,000 TEU of intact international containers via U.S. ports compared to import volume of 238,000 TEU. This implies that about 152,000 TEU of empty containers were repositioned overseas. Assuming outbound loads and empties match back to the number of loaded imports, Kansas City rail ramps handled over 475,000 TEU in 2021 of intact international containers.

¹⁶ <https://www.congress.gov/>

Figure 13 Kansas City's Intact International Container Trade Balance, 2015-2021



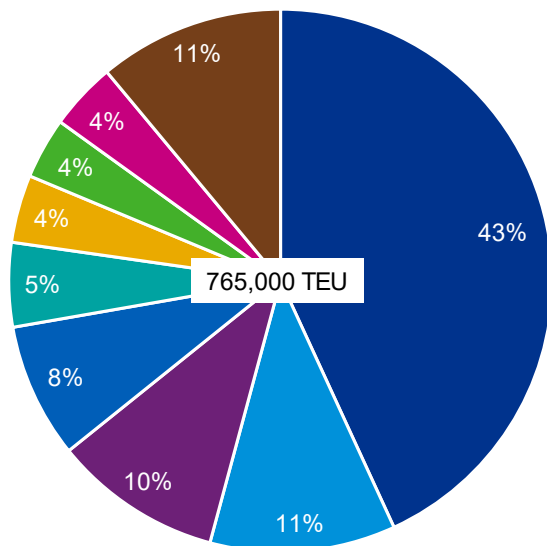
Within the Midwest, Kansas City is the 2nd largest container export load center with an 11% share. As is the case with imports, Chicago dominates the Midwest container export market with about 330,000 loaded TEU annually.

Source: Datamyne; KPMG and its sub-consultants

Figure 14 Midwest Intact International Container Exports by Rail Gateway, 2021

Export performance since 2015 has been inconsistent with key factors impacting performance including the trade war with China; container transport share of select commodities; and the COVID-19

- CHICAGO
- KANSAS CITY
- COLUMBUS
- DETROIT
- CLEVELAND
- LOUISVILLE
- CINCINNATI
- ST. LOUIS
- Others



pandemic's effect on global economies. The 2021-2022 transport supply chain situation has become another inhibitor of consistent performance. In the aggregate, Kansas City's export volume increased steadily until 2020. This masks the fact that container exports to China, the largest buyer, declined every year except 2020. In 2015, China accounted for 40% of Kansas City container exports. These volumes dropped to a low of 8% in 2019 and finished in 2021 with a 20% market share of outbound trade.

Source: Datamyne

Figure 15 Kansas City's Intact International Container Exports by Destination Region, in TEUs

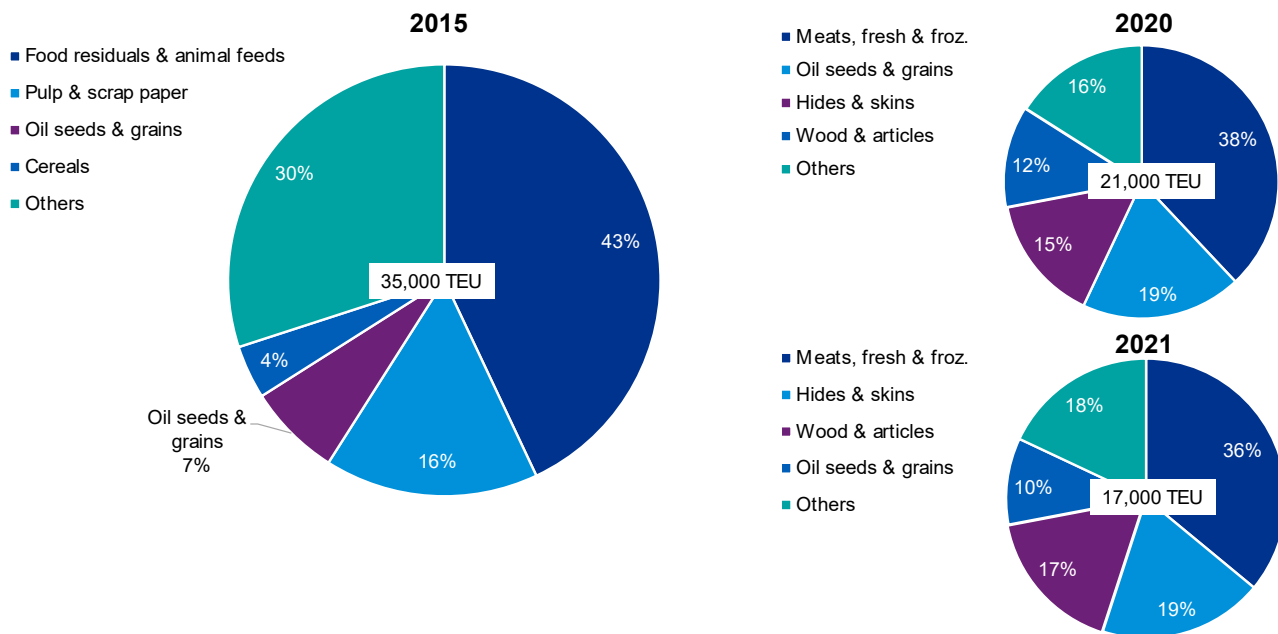
Destination Region	2015	2016	2017	2018	2019	2020	2021	2021 % of total
NORTHEAST ASIA	46,054	41,772	46,416	37,353	30,349	38,327	27,774	32%
<i>of which: China</i>	<i>34,876</i>	<i>26,347</i>	<i>26,297</i>	<i>15,570</i>	<i>9,594</i>	<i>20,987</i>	<i>17,330</i>	20%
SOUTHEAST ASIA	12,379	23,297	24,208	33,170	34,799	32,810	24,855	29%
EUROPE	11,925	13,293	14,661	16,425	16,548	14,314	16,078	19%
SOUTH AMERICA	5,931	5,564	7,179	9,503	10,435	8,333	4,497	5%
INDIAN & SUBCONTINENT	2,967	8,578	6,697	6,381	7,607	5,124	3,148	4%
MIDDLE EAST	1,676	1,599	1,897	2,183	2,715	2,011	2,939	3%
AUSTRALIA & NEW ZEALAND	1,150	1,268	1,320	2,459	1,794	2,185	2,798	3%
AFRICA	1,041	873	1,327	1,334	1,566	1,950	2,133	2%
CENTRAL AM & CARIBBEAN	1,034	1,327	1,191	1,905	1,316	1,035	1,027	1%
UNIDENTIFIED & MISC.	1,914	3,097	1,490	1,905	7,101	1,557	419	0%
Total	86,071	100,668	106,386	112,617	114,229	107,645	85,667	100%
% change		17.0%	5.7%	5.9%	1.4%	-5.8%	-25.0%	

Source: Datamyne

In 2016, China imposed anti-dumping and anti-subsidy tariffs totaling almost 65% on U.S. exports of distillers dried grains (DDGs) citing potential damage to domestic producers. At that time DDGs and other animal feeds accounted for 40% of Kansas City's exports to China. By 2019, any of this region's DDG exports to China only moved via bulk vessels. In 2020, a small percentage increase in DDG trade reemerged including transport in containers. This did not move the needle on total TEU exports to China. The 2020 uptick resulted from the "Phase One" trade deal between the U.S. and China by which they agreed to purchase an additional \$200 billion of American goods and services between 2020-2021 (over their 2017 level). For Kansas City, the gains benefited sales of soybeans, beef, and hides.

The COVID-19 pandemic forced China to restrict access to entire cities, regions, and ports at various times in 2021. As a result, Kansas City's exports fell by 18%. Unfortunately, as of this report publication date, a COVID-19 resurgence has forced China to reimpose lockdowns. People in the manufacturing-heavy provinces of Jilin and Guangdong and the Shanghai Municipality are currently homebound affecting personal consumption of goods as well as reduced factory production.

Figure 16 Kansas City’s Leading Intact International Container Export Commodities to China, 2015 versus 2020-2021



Source: Datamyne

Outside of China, Kansas City containerized exports had performed well; excepting the 2020-2021 downturns that can generally be accounted for by economies weakened by the global pandemic, followed by the impact from transportation congestion. The leading buyers include most countries in Southeast Asia. According to U.S. Census data, one in every three metric tons of U.S. export DDGs goes to Vietnam, Indonesia, Thailand, and the Philippines. This is the same profile shares for Kansas City. Containerization has gained favor in transport due to smaller-scale ports in these countries and the ability to direct deliver containers to more moderate sized farms.

Two of Kansas City’s trade partner regions are stronger in export volume than imports. Besides Southeast Asia, South America’s significant farm base consumes American made chemicals, fertilizers, DDGs, and agricultural equipment. Livestock products, grains, and related byproducts account for over half of container exports at Kansas City rail ramps. The adjacent four states that primarily export container goods via Kansas City rail ramps rank highly based on U.S. Department of Agriculture (USDA) 2020 statistics on total cash receipts for all farm commodities: Iowa is 2nd; Nebraska is 3rd; Kansas 5th; and Missouri is 12th ¹⁷.

¹⁷ www.data.ers.usda.gov/reports.aspx?ID=17844

Figure 17 Kansas City's Top-15 Intact International Container Export Commodities, 2021 in TEUs

HS-2	TEU	% of trade	HS General Category Description	Examples
23	17,297	20%	Food residuals & animal feeds	DDGs, animal feeds
2	9,443	11%	Meats, fresh & frozen	Frozen pork & beef
41	9,168	11%	Hides & skins	Cow hides
12	8,546	10%	Oil seeds & grains	Soybeans
84	6,916	8%	Machinery & equipment	Irrigation, agriculture & construction equip.
44	5,020	6%	Wood & articles	Hardwood lumber
39	2,567	3%	Plastics & articles	Bio-based plastics
4	2,030	2%	Dairy products	Milk powder
76	1,959	2%	Aluminum & articles	Aluminum waste & scrap
21	1,750	2%	Edible preparations	Foodstuffs, glutens, spices
87	1,604	2%	Vehicles & parts	Storage tanks, tractor parts
72	1,336	2%	Iron & steel	Mixed metal scrap, waste motors
74	1,027	1%	Copper & articles	Recycled cooper scrap
38	988	1%	Chemicals, miscellaneous	Herbicides
5	930	1%	Animal products	Bone meal & chips
Others	15,087	18%		
Total	85,667	100%		

Source: Datamyne; HS-2 is the international Harmonized Commodity Description and Coding System at the two-digit level

The port profile for Kansas City’s container exports is comparable with its inbound trade with slightly higher participation for New York and Norfolk versus San Pedro ports. The Suez Canal route and Southeast Asia’s larger export market explain the shift. There are six weekly services at New York that transit roundtrip with South Asia countries via the Suez Canal. There are an additional four services that route eastbound imports from Asia to the U.S. East Coast via the Panama Canal and return to the Far East via the Suez Canal carrying exports. This provides additional export ocean transport capacity at the U.S. East Coast. Additionally, there are four Suez services that turn in India and do not extend into Southeast Asian ports.

As a result, 20% of Kansas City’s Southeast Asia exports exit through New York-New Jersey/Norfolk, VA versus 3% for imports. Since exports headed to Southeast Asia are primarily lower-valued, less time-sensitive agricultural goods, they can tolerate the longer transit time via the Suez Canal.

Figure 18 U.S. Port of Departure for Intact International Container Exports Leaving Kansas City, in TEUs

U.S. Port of Departure	2015	2016	2017	2018	2019	2020	2021	2021 % of total
SAN PEDRO BAY, CA	57,475	67,901	74,477	66,352	63,827	65,330	44,033	35%
<i>Long Beach</i>	22,726	34,290	34,777	30,565	36,940	39,425	30,237	35%
<i>Los Angeles</i>	34,749	33,611	39,700	35,787	26,887	25,905	13,796	16%
NORFOLK, VA	10,760	14,336	11,767	16,126	18,179	15,984	20,710	24%
NEW YORK/ NEW JERSEY	14,517	10,813	19,208	23,739	28,131	24,386	19,571	23%
SEATTLE/TACOMA, WA	20	301	52	735	2,101	960	899	1%



Others	3,299	7,318	882	5,666	1,993	985	454	1%
Total	86,071	100,668	106,386	112,617	114,229	107,645	85,667	100%
% change		17.0%	5.7%	5.9%	1.4%	-5.8%	-25.0%	

Source: Datamyne

The following schematic depicts some of the region’s significant export rail users. The full list of Top 100 Exporters in Kansas City in 2020 is shown in Appendix VI. This list does not reflect complete source document information due to US Customs data collection processes and aggregation of international companies. It is recommended that further information be obtained on key participants in the export supply chain through commodity associations such as the U.S. Grains Council and the National Cattlemen’s Beef Association.

Figure 19 Leading Intact International Container Exporters Using Kansas City Rail Ramps



Source: Datamyne

Domestic Transloads of International Cargo

This market analysis and trade forecast is directed at Kansas City’s involvement in international container trade and overseas partners with sources for market intelligence as Datamyne compiled from U.S. Customs ship documents showing imports and exports of intact ocean containers. Throughout the U.S. port network and especially at the San Pedro, CA ocean gateways, transloading of cargoes from 20-foot and 40-foot international containers into domestic 53-foot containers for inland routing is a process commonly utilized by shippers and carriers. Carriers benefit by having import containers remain local thereby hastening their return overseas. BCOs potentially benefit by reducing inland rail and truck costs. In general, imported goods in three international 40-foot containers can be transloaded into two domestic 53-footers, based on typical weight and cubic measurement.

Figure 20 Example of Various Container Sizes Used in Intermodal Rail

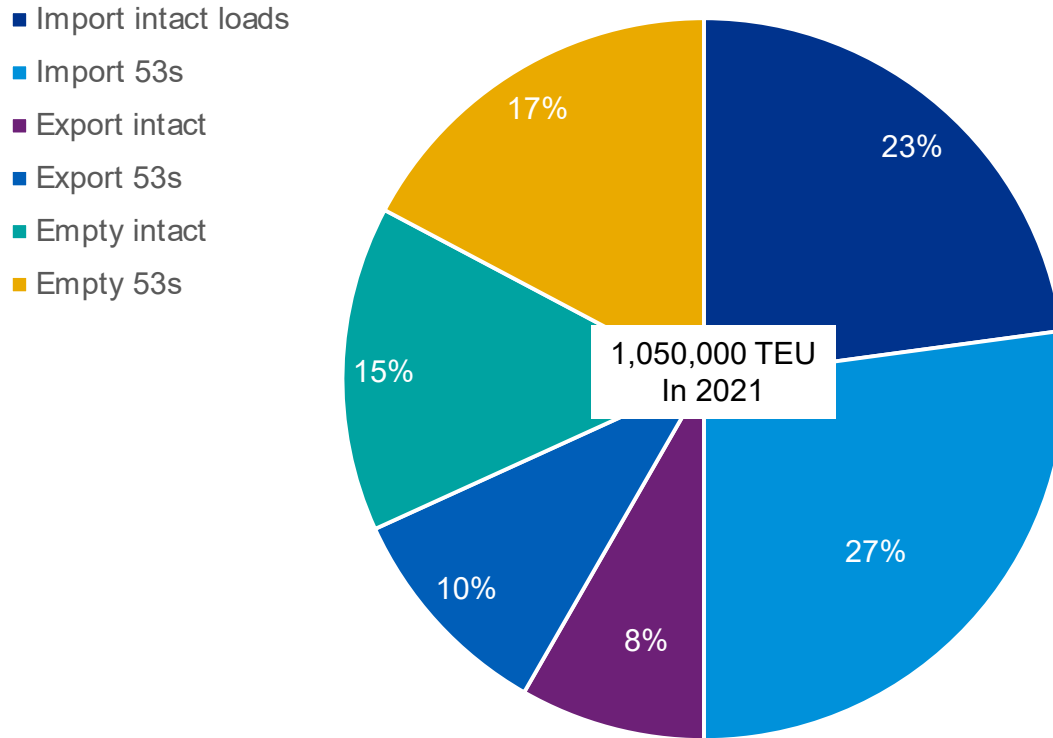


Source: Google Images

Kansas City rail ramps also handle international imports that have been transloaded at the U.S. port of arrival into 53-foot domestic containers. These boxes are not included in Datamyne but are relevant to quantifying market size. Research by the University of California at Berkeley estimated that at the ports of Los Angeles and Long Beach, 21% of all imports remain local to fulfill home-grown demand; 37% are railed or trucked inland as intact ocean containers; and 42% of international boxes are transloaded to 53-foot domestic containers¹⁸. There are numerous BCOs and ocean carrier transport providers; as a result transloading does not impact the participation mix profile for importers or commodities. To account for U.S. port transloading and for Canadian port traffic with Kansas City, KPMG and its subcontractors has assessed these components at a combined 20% higher level than intact containers. The Kansas City volume of internationally traded containers is estimated to have totaled just over one million TEU in 2021. The following figures depict total container lifts for Kansas City in 2021, as well as historic container lifts from 2016-2021.

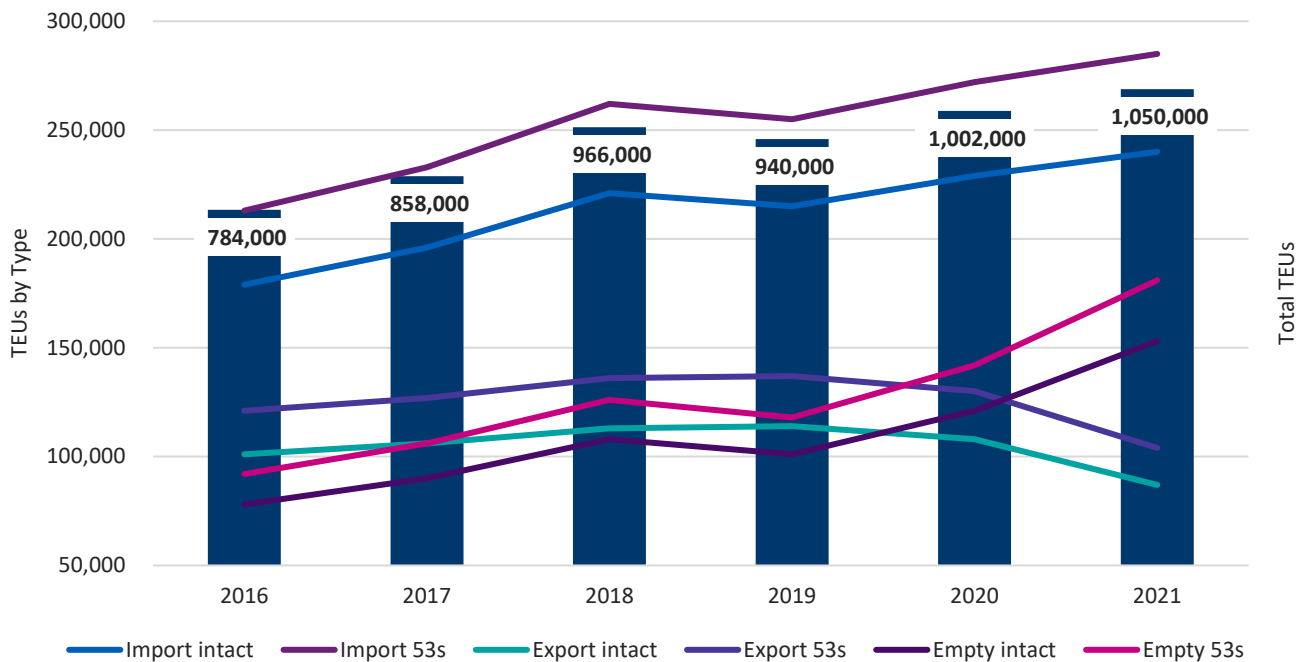
¹⁸ https://ieor.berkeley.edu/wp-content/uploads/2019/10/RCL-LA-Basin-Initiatives-Jan_13_2017.pdf

Figure 21 Total Container Lifts for Kansas City, 2021 in TEUs



Source: Datamyne; IANA

Figure 22 Total Container Lifts for Kansas City, 2016-2021 in TEUs



Source: Datamyne; IANA

V. Trade Forecast Assumptions

As this market analysis demonstrates, the demand for inbound international and domestic containerized goods arriving in Kansas City by intermodal rail is driven by the growth in the region's consumption of a cross section of retail merchandise, manufacturing materials and agricultural supplies. Examples include imports of Sunbeam appliances; Ford and Kubota auto and tractor parts; and Grainer industrial equipment.

An aggregate measure of this consumer and business demand is the region's total economic performance in terms of real (inflation-adjusted) gross domestic product (GDP). This statistic is calculated by the U.S. Bureau of Economic Analysis (BEA). The region's economy advances through population growth, expanded business activity, job creation and the ensuing increase in wages, business investment and consumer spending. Cumulatively, such improvements will be reflected in the rise in regional GDP.

The COVID-19 pandemic's impact on the economy in 2020 and 2021 was unprecedented and resulted in significant government intervention to prevent potential downturns. For 2020, the U.S. Bureau of Economic Analysis reported the national GDP declined -3.5%. To help stimulate the economy, President Biden signed the American Rescue Plan (ARP) in April 2021 which targeted spending of \$1 trillion. Financial packages were designed to assist various pillars of the economy: the Homeowners Assistance Program; Economic Impact Payments for taxpayers; businesses' Paycheck Protection Program; and the State and Local Fiscal Recovery Funds, among other assistance plans¹⁹.

The Kansas City regional GDP fell -2.3% in 2020, outperforming the national average as well as the state of Missouri (-3.6%). For 2021, Moody's Analytics estimates Kansas City's GDP advanced 3.25% which is below the country's gain of 5.7% but nevertheless resilient following 2020's more moderate downturn²⁰. Moody's also noted that the region's cost of doing business remained 3.0% lower than the national average which kept and attracted business. In turn, it boosted the job market recovery. Fannie Mae noted the importance of job growth in the Kansas City metropolitan area²¹:

"The Kansas City metro area has been able to mitigate the severe impacts of COVID-19. The pandemic may have also created a new economic crutch for the Kansas City local economy: the logistics sector. According to Moody's Analytics, there is an above-average concentration of Logistics/Transportation payrolls (5%) in the metro. Furthermore, as the virus shifted consumer behavior and made e-commerce more essential, Kansas City's central location bodes well for the future of e-commerce." – **Fannie Mae, 2021**

¹⁹ <https://home.treasury.gov/system/files/136/American-Rescue-Plan-Six-Month-Report.pdf>

²⁰ The BEA will release the 2021 official GDP for the Kansas City MSA in December 2022

²¹ <https://multifamily.fanniemae.com/media/8556/display#:~:text=The%20Kansas%20City%20metro%20is,continue%20to%20be%20through%202025>

The Federal Reserve, in its March 2022 “Beige Book”²², cited several current conditions for the Kansas City District both positive and negative that arise in their most recent survey. The service and manufacturing sectors are rebounding as the pandemic wanes. Retail sales are still strong although some consumer spending is showing signs of saturation. Rising commodity prices are benefiting agriculture and energy activities, although wage pressure is mounting in tandem. Business procurement costs are on the rise which is forcing companies to seek new suppliers. Capital spending is mixed with some trepidation related to higher costs and rising interest rates. Shipping delays and cost increases are crimping goods (inventory and retail) and service (restaurant) sectors. Overall, the economy is described as expanding at a modest pace being held in check by the spread of inflation.

The nation’s and Kansas City’s immediate 2022-2023 economic outlook remains uncertain due to ongoing impacts of the COVID-19 pandemic, the outbreak of war in Ukraine in February 2022, and the Federal Reserve’s decision to increase interest rates in March 2022 which may continue through 2022. Many banks and private forecasters forewarn that more interest rate hikes are anticipated in 2022-2023; additionally, commodity shortages and higher than normal inflationary trends have required analysts to revisit prior economic projections. As an example, Reuters reported the following on April 8, 2022²³:

“The macro-economic picture is deteriorating fast and could push the U.S. economy into recession as the Federal Reserve tightens its monetary policy to tame surging inflation, Bank of America strategists warned in a weekly research note. ‘Inflation shock’ worsening, ‘rates shock’ just beginning, ‘recession shock’ coming.” – *Reuters, 2022*

Deutsche Bank speculated that a short, mild recession could materialize in late 2023-early 2024. The economic drivers for the 2022-2023 trade forecast are based on a Moody’s Analytics late March 2022 modeling which estimates U.S. GDP growth between 2% and 2.6%.

Longer term this trade forecast is built upon a conservative expectation that GDP growth in the Kansas City MSA will average between 1.2% and 2.4% annually in 2030-2070. This appears reasonable as real GDP growth averaged 1.4%, compounded annually for 20 years through 2019. Additionally, put into perspective, the Congressional Budget Office’s Long-Term Outlook for the nation (published March 2021) bases its projections on real GDP growth averaging between 2.2% (in the 2020s) to a low of 1.5% (2040s)²⁴.

To ascertain the relationship between the Kansas City regional economic performance and demand for inbound container goods an intermediate step is required to determine the physical locations where merchandise is warehoused before distribution to consumers through retail channels; or the locations where manufacturers directly use purchased materials.

²² https://www.federalreserve.gov/monetarypolicy/files/BeigeBook_20210303.pdf

²³ <https://www.reuters.com>

²⁴ <https://www.cbo.gov/publication/56977>; the 2022 Long Term Outlook publication has been delayed until May

A reliable gauge of the storage supply and expansion requirements is the region's industrial building inventory. This includes manufacturing sites, as well. Real estate service companies and regional government economic development organizations report on such properties including location, ownership, leasing, current inventory (in square footage) and new additions, vacancy rates and rents. Colliers International statistics on total industrial square footage and building counts by sizes form the basis for this analysis²⁵.

The forecast quantifies how the increase in the volume of inbound intermodal containers can be attributed to the growth in regional economic activity as explained by the expansion in square footage of occupied industrial buildings. For example, in 2016 Spectrum Brands a consumer products company announced the future occupancy of a nine hundred thousand square-foot distribution center at the Logistics Park next to BNSF's rail ramp in Edgerton, KS just outside of Kansas City. This site was to replace multiple warehouses the company operated in other states. Spectrum's Kansas City import volume jumped from zero in 2016 to nearly 7,000 TEU in 2020 (as reported by Datamyne).

Colliers International summarized the impact of industrial property growth on the trade outlook for Kansas City in their "2021 Commercial Real Estate Forecast Report":

"The Kansas City market continues to be a thriving industrial market based on its ideal centralized location. A growing reliance on e-commerce retailers for basic goods throughout the pandemic, continues to fuel demand for industrial big box product as supply chains continue to become right-sized, shifting away from "lean" inventory strategies that proved sound in the past. As growing needs continue to materialize for warehouse and distribution space, markets such as Kansas City, with established infrastructure, allows occupiers the ability to streamline their supply chain operations, which lowers costs, and more importantly, delivers goods to the end user in a faster and more efficient way throughout the country." – *Colliers, 2021*

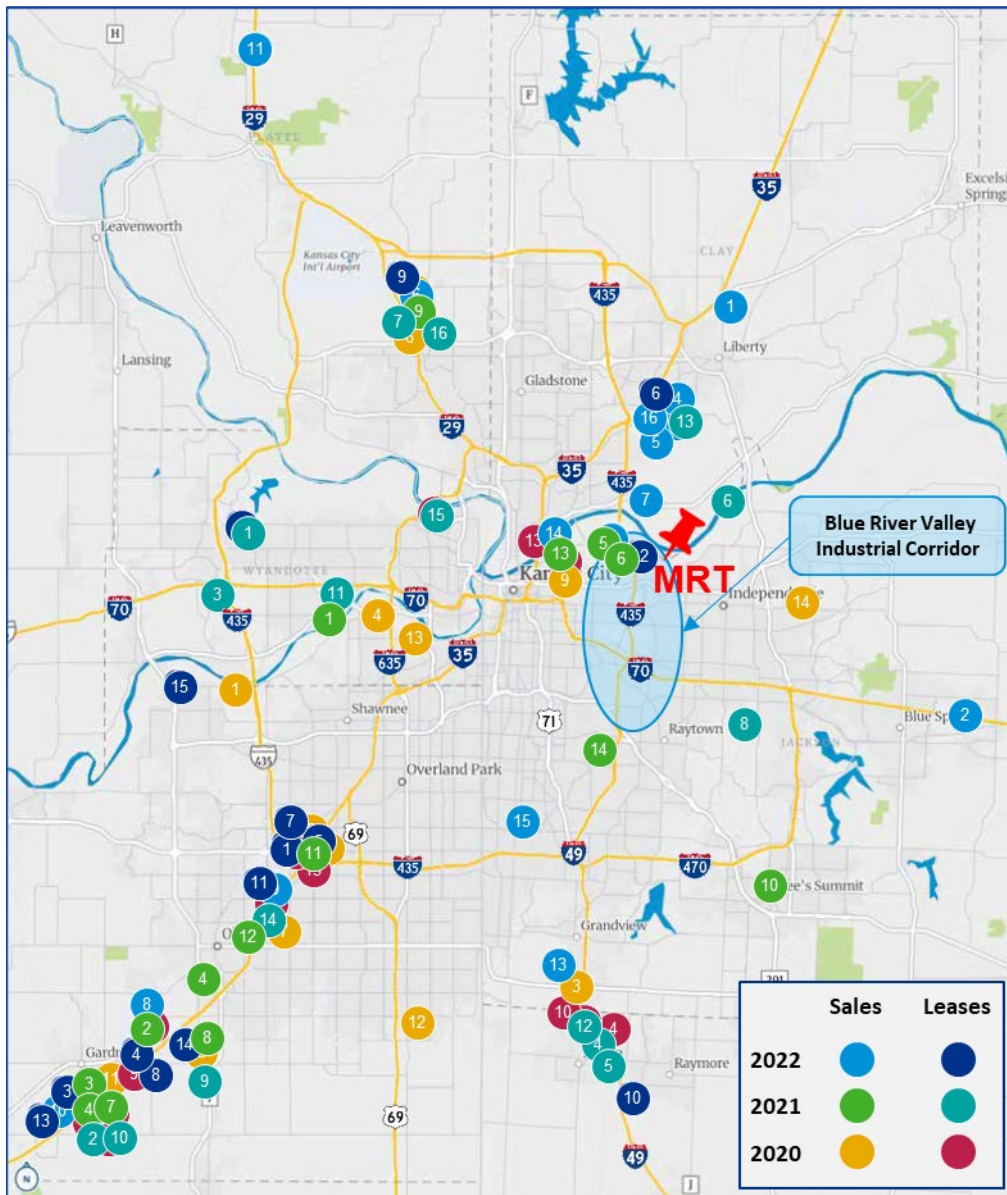
Following up in their 2022 Outlook, Colliers noted further opportunity for Kansas City:

"Driven by rapid e-commerce growth, the industrial market is poised for another active year. Big-box omnichannel retailers, third-party logistics providers and food and beverage manufacturers that support e-commerce and fulfillment activity continue massive expansion efforts both locally and nationally to keep pace with growing e-commerce demands. Looking ahead to 2022, solid market fundamentals will drive a strong industrial market for the foreseeable future." – *Colliers, 2022*

²⁵ <https://www.colliers.com/en/research/kansas-city/>

According to Colliers, over the past four years, there were 55 leases (new, renewed, or expanded) of industrial sites of at least 200,000 square feet spread across five counties throughout the Kansas City MSA. The full list of the industrial buildout of space in Kansas City since 2018 is shown in Appendix II. The following map shows Collier’s summary of lease and sale activity from 2020-2022.

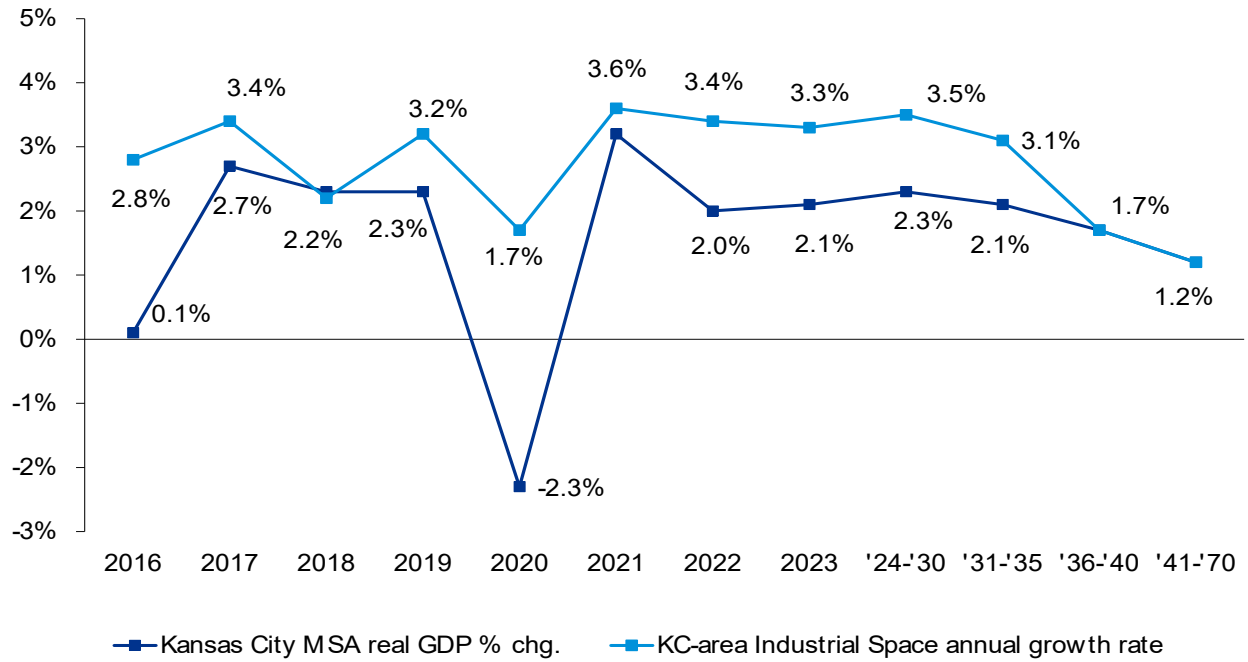
Figure 23 Colliers International Top Industrial Leases in Kansas City, 2020-2022



Source: Colliers

Throughout this decade, Kansas City MSA industrial space square footage is projected to continue its upturn with a total gain of 35% through 2030 owing to the accelerated expansion in e-commerce. Thereafter, as e-commerce distribution center needs begin to level out, overall industrial space buildout is forecasted to moderate in line with real GDP gains averaging 1.2% to 3%. The expectation is that occupied industrial space will double by the early 2040s reaching over 500 million square feet: a good indicator of future gains in container trade.

Figure 24 Forecast of Kansas City Regional GDP and Industrial Space Expansion, as annual % changes



Source: KPMG and its sub-consultants; Historical data from U.S. Bureau of Economic Analysis (BEA) and Colliers

VI. Trade Projections 2022-2070 for the Kansas City MSA

In 2017 and 2019 Kansas City's imports were able to quickly bounce back from off years. The current economic climate is impacted as the COVID-19 pandemic wanes only to be replaced by increased inflation, higher interest rates, and the likelihood that international and domestic transportation bottlenecks may persist throughout 2022. Despite these challenges on a global and national scale, as noted, Kansas City's economy has exceeded the national growth rates and the continued resilience in regional industrial warehousing is generating multiplier benefits to construction, jobs, and wages throughout the Kansas City MSA. It is expected that the 2022 import gain for the Kansas City MSA is moderately projected at a 4.4% growth rate.

It is anticipated that inbound trade momentum will pick up in 2023 to address unmet consumer demand which could exhibit a volume gain over 8%. Such an elevated long-term growth rate is not justifiable once the economy rebalances and adjusts to higher inflation. The expectation is a return to a more normal equilibrium in spending between goods and services, as well as an economic growth rate at a more moderate, albeit sustainable levels.

By the 2nd half of this decade, the annual import growth rate is forecast to average 5% to 5.5%. Import volume in 2030 is projected at 873,000 TEU (inclusive of all inbound box sizes including intact ocean containers and 53-foot domestic transloads); a 66% volume advance compared to 2021's 525,000 TEU. Adding in the continued match back of exports and empties to import volumes positions Kansas City rail ramps to handle 1.75 million annual TEU entering the next decade.

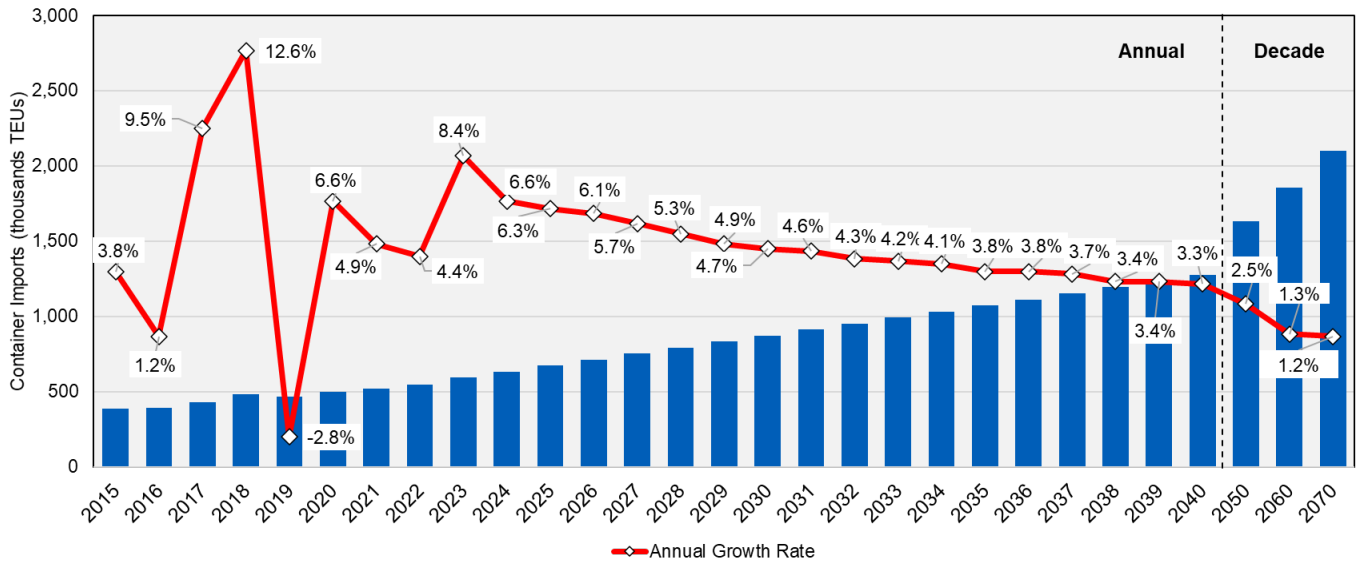
Several external factors can influence global economics and trade performance rather quickly; therefore, it is challenging to develop long-term forecasts (20 or more years) beyond more than a reasoned forecast. This trade forecast "flattens out" long-term growth rates, averaging the likelihood of future cyclical performance without attempting to pinpoint when it will happen. The long-term trade forecast calls for import growth to average about 4.0% in the 2030s; 2.5% in 2040s-2050s; and 1.0% thereafter.

A few aggregate trade milestones (comprised of imports, exports, and empties) to note for Kansas City:

- 2 million TEU is expected by 2034;
- 3 million TEU reached in 2046; and
- 4 million TEU possibly handled by area intermodal rail ramps by 2067.

The complete trade forecast volumes are included in the Appendix III.

Figure 25 2022-2070 Forecast for Kansas City's Import Intermodal Containers



Source: KPMG and its sub-consultants; historical data from Datamyne

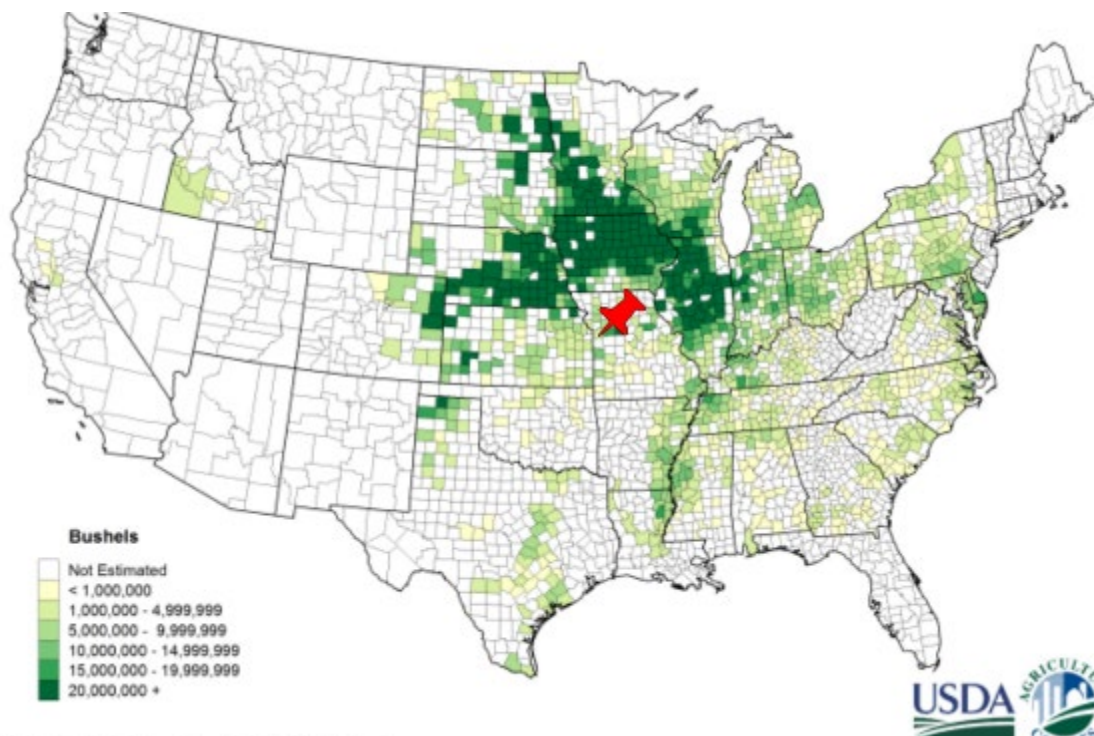
VII. Opportunities for Export Containerization of Agricultural Products

U.S. Census statistics show that American port exports of corn, soybeans, sorghum and DDGs topped 116 million metric tons in 2020, a robust 30% gain that totally erased the loss in 2019²⁶. A moderate increase of 3.6% in 2021 pushed exports above 120 million metric tons which surpasses the previous peak achieved in 2016. Early 2022 statistics (only through February) reveal volume dropping -17% led by major setbacks in soybeans (-25%) and corn (-12%). Significant changes are likely as the Ukrainian crisis was not yet a factor in global commodity trade volumes or prices.

In 2021, for these four key commodities, only 8% of outbound volume was shipped in containers which could present an opportunity for further containerization at Kansas City given the importance of these commodities in the export mix.

As an example, Kansas City's transport location is conducive for handling corn produced in western Iowa, eastern Nebraska, and northeastern Kansas. Corn could be transloaded into international containers and either railed or barged to coastal ports for export. Similar maps showing Kansas City's beneficial location near production of soybeans, sorghum and DDGs are included in Appendix IV.

Figure 26 Corn for Grain Production by County, 2019



Source: U.S. Department of Agriculture

There has been little shift in transport mode over the last ten years for the four commodities combined,

²⁶ <https://usatrade.census.gov/>, exports to Canada and Mexico are only includes ocean transportation

with container exports holding an 8% to 12% share. However, to reach new overseas markets, grain merchandisers and trade associations are increasing their marketing outreach emphasizing the use of containers. CHS Inc., a grain merchandiser, explained the value to its Asian importers of containers²⁷:

“CHS is a top container exporter and handler of sorghum. We are part of the entire supply chain from Kansas to China, which is appealing to buyers. Grain loaded via container better preserves crop identity during transit overseas. And containers can be easily transported inland by smaller vessels, rail, or trucks, reaching more customers and markets. Buyers are willing to pay a premium for identity-preserved grain and shipping flexibility. From Lincoln, Neb., we truck sorghum 200 miles to western Iowa, where it is loaded into containers and transported to Los Angeles by rail for export.” – **CHS, 2021**

The U.S. Soy Organization has identified similar containerization benefits for its products depending on the overseas buyer’s requirements.²⁸

For many countries, containers are preferred to bulk vessels. On a per metric ton basis, it is cheaper to ship a vessel of soybeans than an equivalent number of containers. If a country has a smaller animal population, the supply chain has an easier time handling a stream of 25 metric ton loads than a Panamax vessel shipping 60,000 metric tons or a fully loaded capesize vessel shipping 120,000 metric tons. By receiving containers versus bulk, the buyers can avoid infrastructure requirements that are necessary to unload, receive, and store the extra volume of soybeans. As the animal population increases, due to economies of scale cost savings, some container customers will shift shipments to bulk vessels. – **U.S. Soy Organization**

Nationally outbound cereals’ transport remains primarily a bulk business. DDG export in containers has advanced transport share from 41% to 46% since 2016. This share was marginally higher at 48% in 2020 prior to the container shipping delays. As an example, Vietnam is largest overseas market for containerized DDGs. In 2021, container transport accounted for 80% of outbound shipments compared to 92% in 2020. Container export tonnage dropped by 3%.

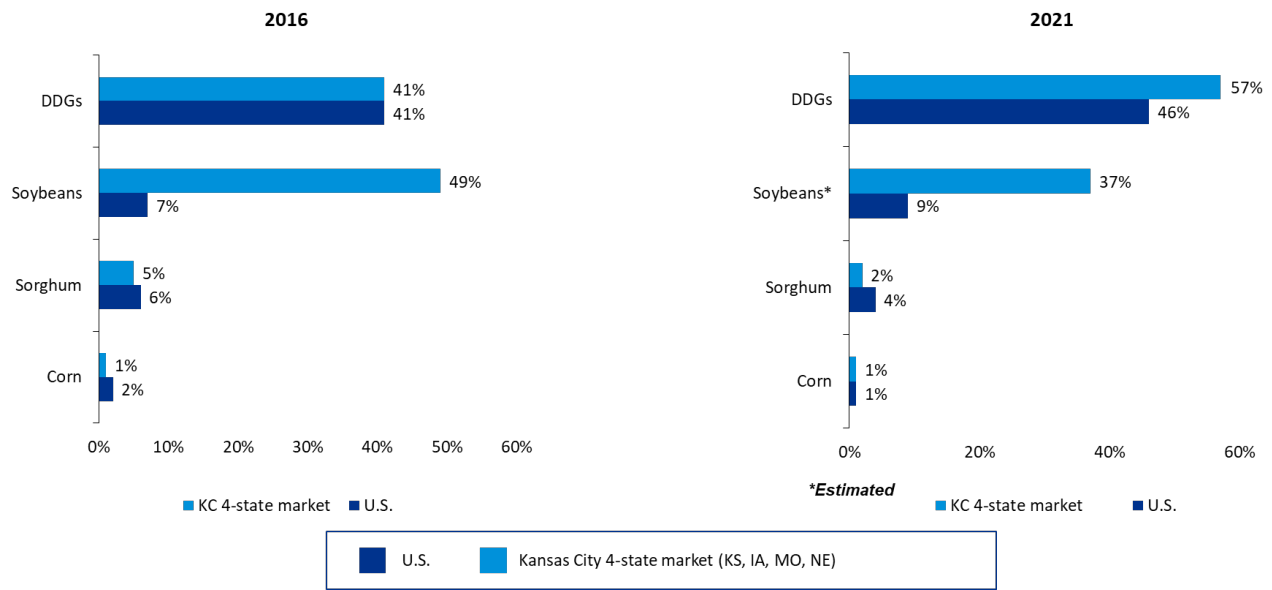
For the four-state market nearest to Kansas City (Kansas, Iowa, Missouri, Nebraska), containerization has gained transport share at a faster pace for soybeans and DDGs²⁹.

²⁷ <https://www.chsinc.com/about-chs/news/news/2021/03/09/containers-deliver-on-global-specialty-grain-demand>

²⁸ <https://ussoy.org/u-s-soybean-container-exports-increasing/>

²⁹ The 4-state export volume reported by U.S. Customs as being transported in containers does not specify the loading location. Grains produced in the region can be containerized locally or be trucked and railed in bulk to an ocean port for transloading into containers.

Figure 27 Increase in Containerization of Agricultural Products between 2016 and 2021



Source: U.S. Census data

As noted by the U.S. Soy Organization, a key to estimating the potential for further containerization is to evaluate exports from Kansas City’s four state agricultural market to identify countries where total annual shipment size is small to moderate, and containerized export share is low. To define this market potential by commodity, this analysis focused on annual tonnage per country less than or equal to 150,000 tons; and a current containerization rate no higher than 75%. Conversion to containers was set at 22 metric tons per 40-footer³⁰.

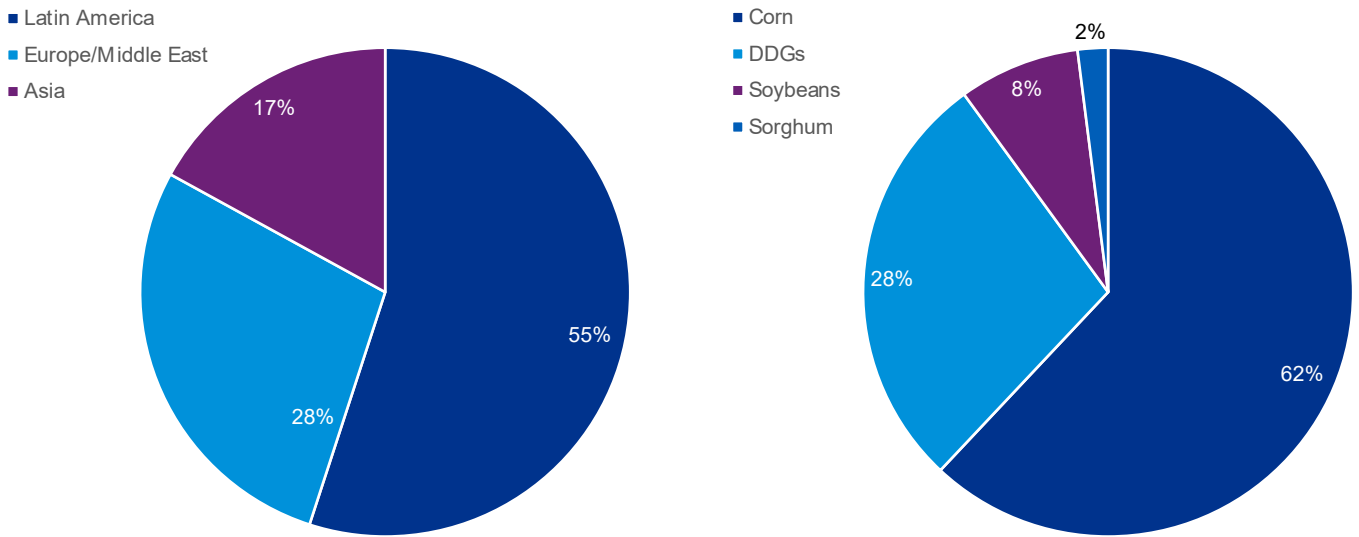
Please note that this container analysis is based on 2020 U.S. Census data. KPMG and its sub-consultants discern that the 2021 profile for container exports is likely skewed against containerization due to the transportation supply chain challenges experienced during the COVID-19 pandemic. As already noted, carriers opted to forego loaded container exports to return a higher-than-normal number of empty boxes overseas for faster reuse.

The 2020 calculation yields a potential, at full conversion, of nearly 50,000 40-footers annually. The volume for conversion of Chinese soybeans and sorghum and Japanese corn are shown in the tables because of their low container shares, however they are excluded from this 50,000-box count. The volume for these commodities appears sufficient to continue shipping by bulk vessel. If included as potential for transition to container shipments, the market possibilities increase to 120,000 40-footers. Both estimates are calculated at full conversion, which is not being implied in this research example as a matter of course.

Of the 50,000 containers, corn and DDGs offer the largest potential for containerization. Regarding global reach, Latin America (Caribbean, Central and South America) account for 55% of possible conversion. Interestingly, these southbound trades currently comprise only 9% of Kansas City’s container exports. Additional trade to Latin America might generate attention to COB transport via the Missouri/Mississippi River system to Gulf Coast ports.

³⁰ Datamyne data show that 90% of the 4 commodities researched were exported in 40-foot containers

Figure 28 Regional and Product Composition of Possible Added Container Exports from Bulk Conversion, 2020



Source: U.S. Census Bureau; KPMG and its sub-consultants

Figure 29 The 4-State Potential Container Export Volumes Converted from Bulk Shipment, 2020

Soybeans			
Country	2020 Total tons	% Containerized	Potential Conversion to 40-foot containers
Morocco	27,010	0%	1,228
Costa Rica	15,978	0%	726
Venezuela	5,206	0%	237
Japan	66,204	29%	2,124
China	585,458	41%	15,800
Total Potential, in containers			20,114
Without China			4,314

Sorghum			
Country	2020 Total tons	% Containerized	Potential Conversion to 40-foot containers
Japan	25,149	0%	1,141
China	886,998	2%	39,602
Total Potential, in containers			40,743
Without China			1,141

DDGs			
Country	2020 Total tons	% Containerized	Potential Conversion to 40-foot containers
Turkey	55,000	0%	2,500
Ireland	37,915	0%	1,723
Israel	26,654	0%	1,212
New Zealand	25,000	0%	1,136
Morocco	21,000	0%	955
Costa Rica	2,704	4%	119
Chile	77,076	4%	3,364
Japan	55,436	15%	2,136
Vietnam	77,132	71%	1,000
Total potential, in containers			14,145

Corn			
Country	2020 Total tons	% Containerized	Potential Conversion to 40-foot containers
Dominican Rep.	123,865	0%	5,630
Israel	123,849	0%	5,630
Jamaica	105,738	0%	4,806
Venezuela	68,539	0%	3,115
New Zealand	31,000	0%	1,409
Honduras	21,000	0%	955
Algeria	19,687	0%	895
St Vincent/Gren.	6,390	0%	290
Costa Rica	29,995	0%	1,363
Trinidad & Tob.	39,078	0%	1,772
Colombia	126,244	0%	5,721
Japan	353,485	1%	15,919
Total Potential, in containers			47,505
Without Japan			31,586

Source: U.S. Census Bureau; KPMG and its sub-consultants

A complete switch from bulk to container transport may not be likely for most trades excepting perhaps where volumes make containerization effective for a country's small-scale farmers. This conversion analysis and estimated container potential provides a simplified snapshot of market aspects only. Many factors influence the choice of transportation including pricing, aggregation and blending of multiple product sources before ocean shipment, equipment and storage availability, and the merchandisers' role, to name a few.

VIII. Market Findings and Opportunity for Missouri River Terminal

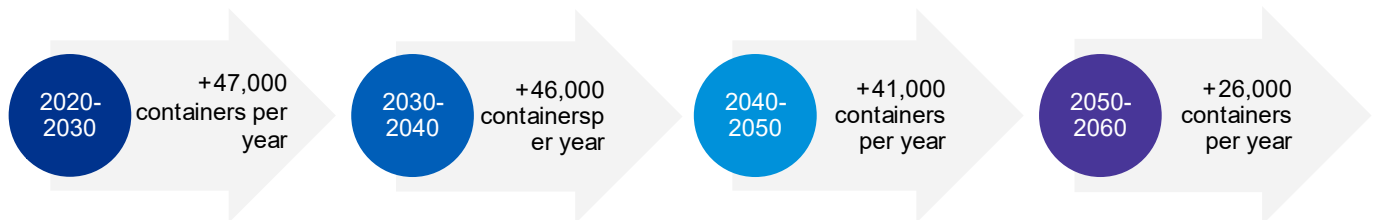
Kansas City is projected to continue as a preferred metropolitan area for container trade. A strong regional economy tops its list of attributes. Another feature is its mid-America location with five Class I intermodal railroads. The foundation for trade growth is solidly built on the region’s demographics fueling spending and commercial interests establishing an expanded base for merchandise distribution, warehousing, and related logistics.

This report and research did not address the current capacity and expansion required at the existing intermodal rail ramps to meet future import demand. MRT would be the 5th regional rail ramp, and operating at full planned buildout, would be within the same size profile as others. Therefore, MRT would have the design potential to handle 20% (one-fifth) of the region’s intermodal rail business.

One barometer to consider when evaluating a match of rail supply to demand is the container volume increase created on the margin each year. Normally rail terminals price their service and plan required equipment and facility space based on a container “lift” regardless of the container size (20s, 40s, or 53s), or its contents (loaded or empty). To reflect container lifts, the TEU trade forecast was converted to the number of container moves. For example, the 2021 volume of 1,050,000 TEU was equivalent to 600,000 container lifts.

The following chart shows the incremental container lifts that are forecast annually. The average yearly increase in container lifts for 2016-2021 was 30,000, including the market setback in 2019. A logical approach to determining future market share is to assume a 5th rail terminal participates in the market growth attracting some percentage of the new volume.

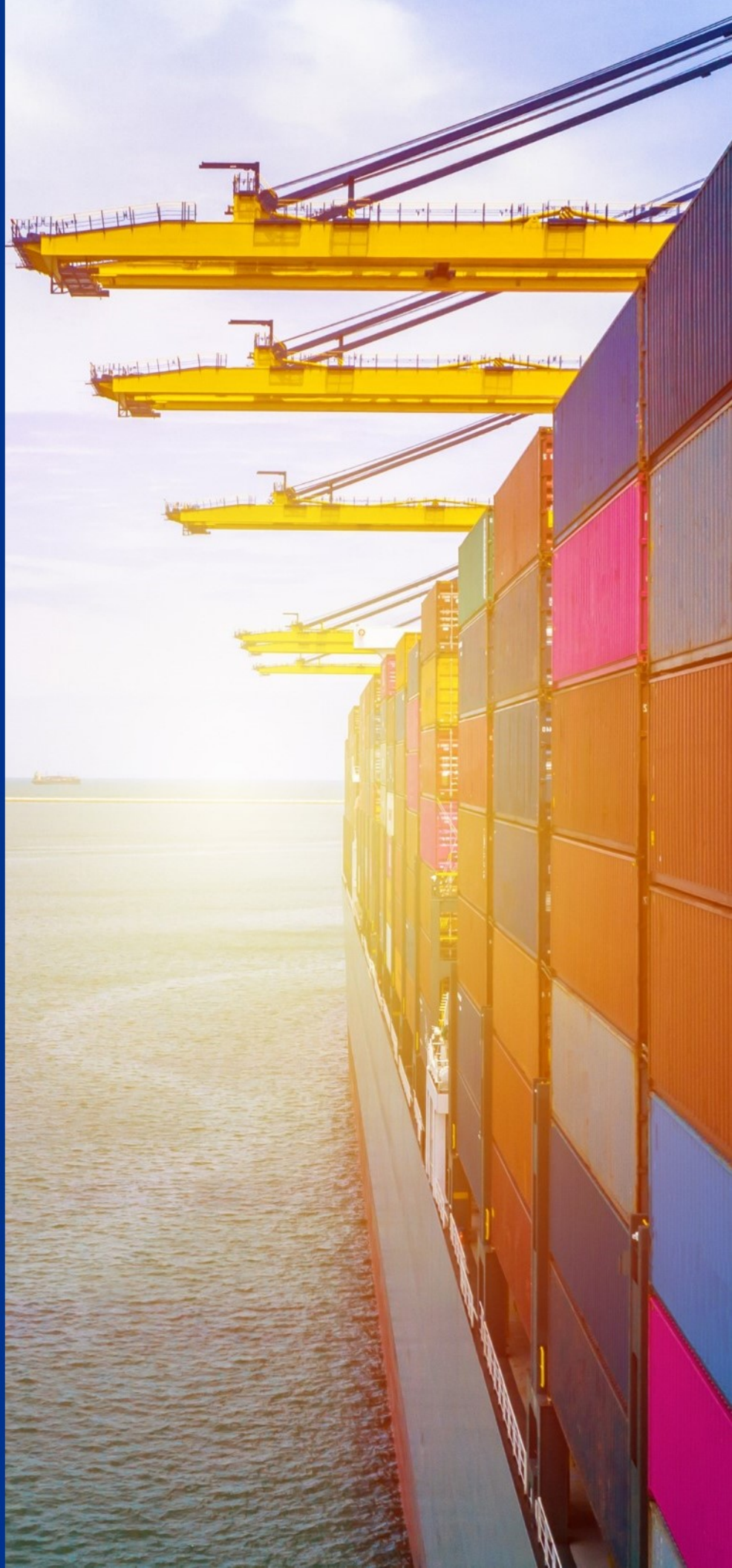
Figure 30 Forecast New Trade in Containers Lifts, Averaged by Decade



Source: KPMG and its sub-consultants; Datamyne historical statistics

To quantify a new terminal’s potential, it would be prudent to assume a gradual buildup to a 20% market share. Depending on the proposed start year, Figure 29 can be utilized as a gauge of future volume available to a new rail facility in the Kansas City MSA.

Appendices



Appendix I: References for Container-on-Barge Studies

1) Western Arkansas Intermodal Authority (WAIA) Intermodal Facility Concept Study Plan

Pickering Firm Inc., as presented to the WAIA Board in January 2022 (meeting packet)

[Western Arkansas Intermodal Authority | Western Arkansas Planning & Development District \(wapdd.org\)](http://wapdd.org)

From the introduction:

Pickering was tasked by Western Arkansas Intermodal Authority (WAIA) to prepare a Concept Plan Study Report addressing harbor development, upland development, and rail/highway access for the proposed development of the Western Arkansas Intermodal Facility. [on the Arkansas River]

2) Innovation: Global Trade and Inland Waterways A New Paradigm in International & Domestic Freight Movement

American Patriot Holdings, 2019

https://www.luc.edu/media/lucedu/quinlan-businesshub/sal_and_sandy_room1001.pdf

From the introduction: as presented by the authors at a Loyola University Chicago Business Leadership session

American Patriot Holdings will be presenting a new vertically integrated transportation alternative that will add value to the supply chain. The expansion of the Panama Canal opened the door to an all-water route into the Midwest. The widened canal can accommodate larger vessels, from 5,000 twenty foot equivalent units (TEU) to (18,000 TEU), whereas previously 60 percent of ocean going vessels could not fit through the canal. With the additional travel time to the Gulf Coast offset by congestion-related delays and longer dwell times at the West Coast ports, shippers now have a viable and efficient alternate route. That provides economies of scale which permits deeper market penetration into the United States from the Gulf Coast, eroding cost advantages previously associated with the East and West Coast.

Central Missouri Multimodal Port Feasibility Study

3) Cambridge Systematics, 2018

https://www.icchamber.org/clientuploads/Economic_Development/Port%20Authority/Central_Missouri_Multimodal_Port_Feasibility_Study.pdf

From the report introduction:

The Jefferson City Area Chamber of Commerce, Callaway County, and Cole County funded this study to assess the feasibility of a multimodal port facility in central Missouri. The port would potentially have one or more barge terminals on the Missouri River to help spur economic development in central Missouri region. The purpose of the current study is to assess potential market demand for a river port in the region.

4) Containerized Exports via the Inland Waterway System: An Opportunity for Agriculture?

Agribusiness Consulting (Informa), originally published in 2018 and updated in 2019

https://www.soytransportation.org/newsroom/ContainerizedShippingOnInlandWaterways_FullReport.pdf

From the report introduction:

This study produced for the Soy Transportation Coalition and the Illinois Soybean Association provides clarity on the potential for soybeans, soybean meal and other agricultural products to benefit from a new and innovative approach moving containers for the hauling of global trade via the nation's inland waterway system.

5) M-55 Illinois-Gulf Marine Highway Initiative

The RNO Group, 2013

<https://idot.illinois.gov/Assets/uploads/files/Transportation-System/Pamphlets-&-Brochures/Freight-Council/M-55%20Marine%20Highway%20Initiative%20Study%20-%20Final%20Report%202013.pdf>

From the report introduction:

The Heart of Illinois Regional Port District and Missouri Department of Transportation jointly sponsored the M-55 Marine Highway Corridor Initiative in order to develop marine intermodal transportation services on the United States' Mississippi and Illinois Rivers. As a part of that Initiative, a study was commissioned to identify regionally significant industries in the Peoria, Illinois area that would consider shifting their freight transportation providers from trucks to container or roll-on roll-off (Ro/Ro) marine vessels.

Appendix II: Colliers International Listing of Large Industrial Property Leases in the Kansas City MSA, 2018-2021

Figure 31 Kansas City Metro Industrial Space Leases, 2018-2021

(includes new, renewed & expanded leases of at least 200,000 ft.²)

Company	County	Square footage	Company	County	Square footage
Coleman Company	Johnson	1,100,000	Bayer/DHL	Johnson	300,000
Amazon	Wyandotte	1,080,000	Invenergy	Johnson	300,000
PepsiCo/Gatorade	Johnson	953,000	Harte Hanks	Wyandotte	298,000
Urban Outfitters	Wyandotte	880,000	Home Depot	Jackson	297,000
Hallmark Cards	Exec Park/NE	847,475	Kenco Logistics	Exec Park/NE	295,000
Chewy.com	Cass	796,000	Honeywell	Jackson	275,000
Hostess Brands	Johnson	765,000	Faurecia	Jackson	262,000
Pepsi	Jackson	584,820	Woodstream	St. Joseph, MO	256,000
BoxyCharm	Cass	575,000	Schlage Lock Company	Johnson	253,000
FedEx Ground	Exec Park/NE	548,560	XPO	Exec Park/NE	252,000
Pure Fishing	Platte	542,000	Winco Fireworks	Jackson	249,500
Bennett Packaging	Jackson	524,000	Murphy Logistics	Platte	249,465
Amazon	Exec Park/NE	517,000	Professional Packaging Syst.	Johnson	248,000
Ford Motors	Exec Park/NE	513,432	Vanguard Packaging	Exec Park/NE	248,000
Overstock.com	Wyandotte	513,000	doorLink Manufacturing	Platte	240,000
PAE	Johnson	507,000	ALPLA Group	Jackson	240,000
Ford Motors	Exec Park/NE	462,472	Scarborough Intl	Exec Park/NE	226,000
Matheson Companies	Johnson	460,000	Doorlink	Platte	220,000
American News Group	Johnson	455,000	PBI Gordon Corporation	Platte	211,588
Progress Rail	Cass	454,489	Metrie Industries Inc	Platte	211,000
Niagara Bottling	Jackson	425,000	Ply Gem	Exec Park/NE	207,000
URBN US Retail	Platte	400,828	XPO Logistics	Exec Park/NE	203,000
Hantover Inc	Exec Park/NE	391,900	Rogers Sporting Goods	Platte	202,800
Turn5, Inc.	Johnson	363,000	DHL	Platte	200,000
A1 Auto	Johnson	347,000			
Invenergy	Johnson	330,000			
ITRenew	Johnson	315,000			
Hanes	Johnson	311,000			
Adv. Logistics & Fulfillment	Exec Park/NE	310,000			
Ford	Exec Park/NE	303,000			
Lenexa Logistics	Johnson	303,000			

Source: www.colliers.com/en/research/kansas-city

Appendix III: Container Trade Forecast for Kansas City, 2022-2070

Figure 32 Kansas City Container Forecast

	Actual:							Estimate	Forecast										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	
Volume in thousand TEUs*:																			
Imports	386.9	391.7	429.1	483.0	469.5	500.5	525.0	548.1	594.1	633.1	672.9	713.9	754.8	794.4	833.2	872.7	913.1	952.3	
Export loads	190.2	222.5	235.1	248.9	252.4	237.9	189.3	<i>Total exports are forecast as a match back to imports</i>											
Export empties	196.7	169.2	193.9	234.1	217.0	262.6	335.7												
Total exports	386.9	391.7	429.1	483.0	469.5	500.5	525.0	548.1	594.1	633.1	672.9	713.9	754.8	794.4	833.2	872.7	913.1	952.3	
Total 2-way trade (000 TEU)	773.7	783.4	858.1	966.0	938.9	1,001.0	1,050.0	1,096.1	1,188.2	1,266.1	1,345.8	1,427.8	1,509.5	1,588.9	1,666.3	1,745.4	1,826.2	1,904.7	
% change		1.2%	9.5%	12.6%	-2.8%	6.6%	4.9%	4.4%	8.4%	6.6%	6.3%	6.1%	5.7%	5.3%	4.9%	4.7%	4.6%	4.3%	
Volume in thousand lifts**:																			
Total 2-way trade (000 lifts)	442	448	490	552	537	572	600	626	679	724	769	816	863	908	952	997	1,044	1,088	
% change		1.2%	9.5%	12.6%	-2.8%	6.6%	4.9%	4.4%	8.4%	6.6%	6.3%	6.1%	5.7%	5.3%	4.9%	4.7%	4.6%	4.3%	
Annual increase/decrease in lifts		5	43	62	(15)	35	28	26	53	45	46	47	47	45	44	45	46	45	
Cumulative increase in lifts from 2021							28	54	107	152	197	244	291	336	380	425	472	516	

* Conversion to TEUs for all container sizes

** each container counts as one lift regardless of box size

	Forecast																		
	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Volume in thousand TEUs*:																			
Imports	992.4	1,033.2	1,072.8	1,113.1	1,154.2	1,193.9	1,234.3	1,275.4	1,314.9	1,355.1	1,396.0	1,432.7	1,469.9	1,507.7	1,540.9	1,574.6	1,608.7	1,631.5	
Export loads	<i>Total exports are forecast as a match back to imports</i>																		
Export empties																			
Total exports	992.4	1,033.2	1,072.8	1,113.1	1,154.2	1,193.9	1,234.3	1,275.4	1,314.9	1,355.1	1,396.0	1,432.7	1,469.9	1,507.7	1,540.9	1,574.6	1,608.7	1,631.5	
Total 2-way trade (000 TEU)	1,984.7	2,066.4	2,145.6	2,226.2	2,308.4	2,387.7	2,468.5	2,550.7	2,629.8	2,710.2	2,791.9	2,865.3	2,939.8	3,015.4	3,081.8	3,149.2	3,217.4	3,263.1	
% change	4.2%	4.1%	3.8%	3.8%	3.7%	3.4%	3.4%	3.3%	3.1%	3.1%	3.0%	2.6%	2.6%	2.6%	2.2%	2.2%	2.2%	1.4%	
Volume in thousand lifts**:																			
Total 2-way trade (000 lifts)	1,134	1,181	1,226	1,272	1,319	1,364	1,411	1,458	1,503	1,549	1,595	1,637	1,680	1,723	1,761	1,800	1,839	1,865	
% change	4.2%	4.1%	3.8%	3.8%	3.7%	3.4%	3.4%	3.3%	3.1%	3.1%	3.0%	2.6%	2.6%	2.6%	2.2%	2.2%	2.2%	1.4%	
Annual increase/decrease in lifts	46	47	45	46	47	45	46	47	45	46	47	42	43	43	38	38	39	26	
Cumulative increase in lifts from 2021	562	609	654	700	747	792	839	886	931	977	1,023	1,065	1,108	1,151	1,189	1,228	1,267	1,293	

* Conversion to TEUs for all container sizes

** each container counts as one lift regardless of box size

Appendix IV: Selected Crop Production by County and DDG plants by location (2020)

Figure 33 Sorghum for Grain 2019 Production by County for Selected States

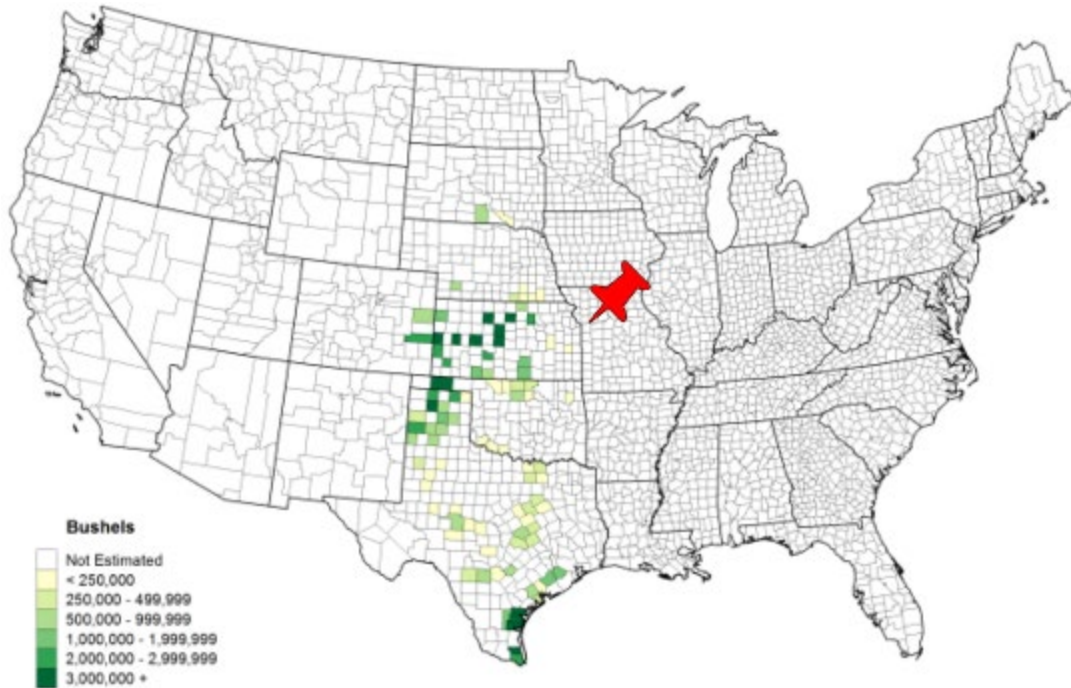
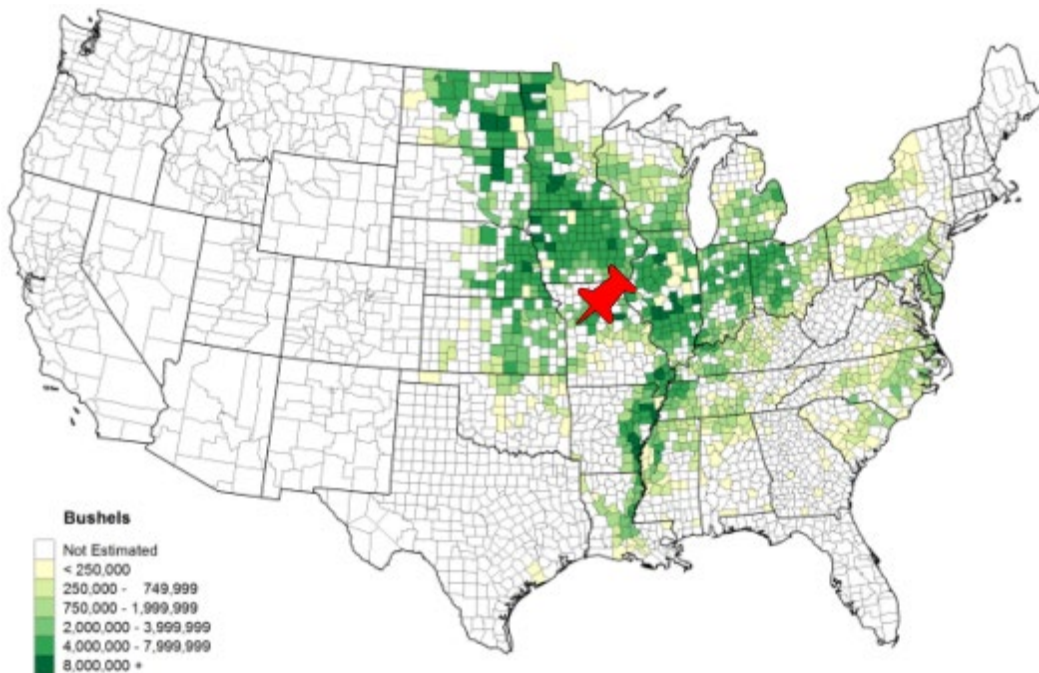
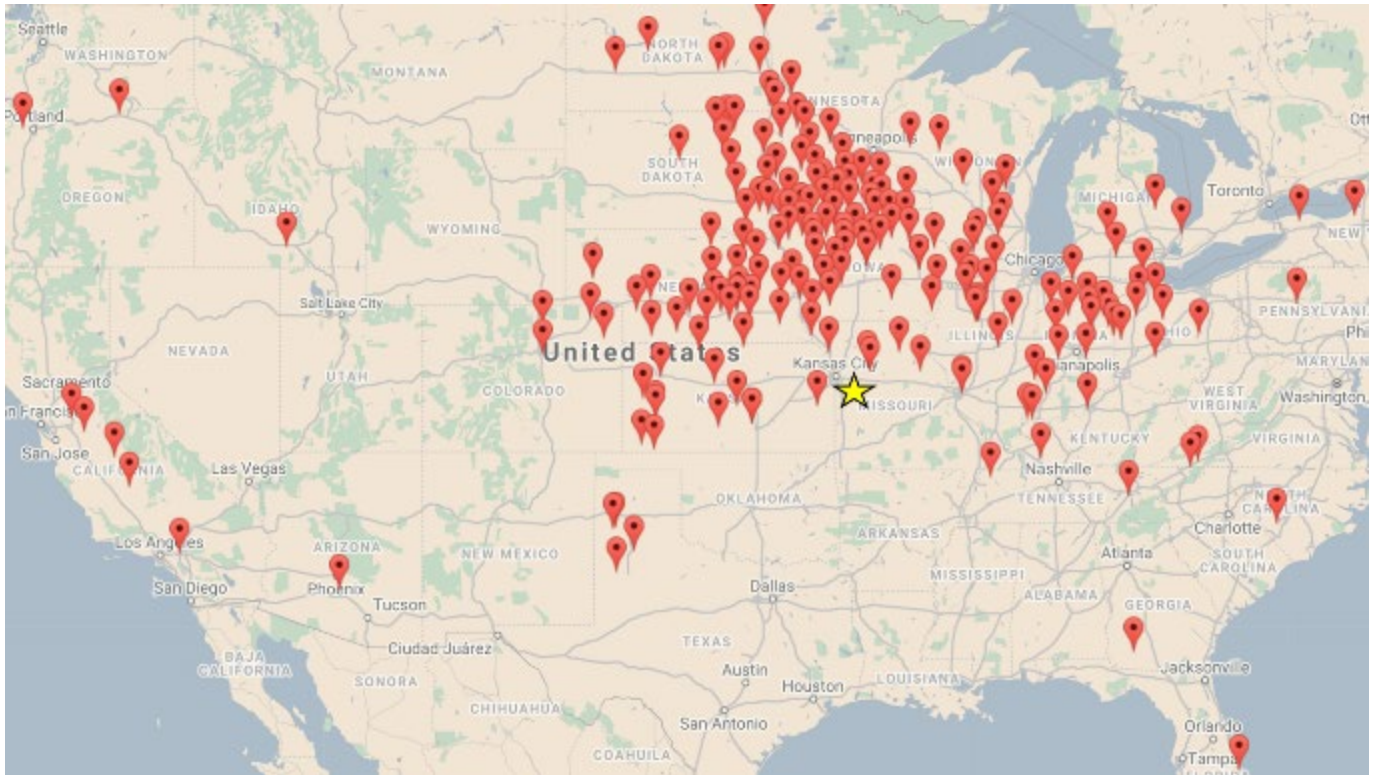


Figure 34 Soybeans 2019 Production by County for Selected States



Source (above images): USDA, U.S. Department of Agriculture, National Agricultural Statistics Service

Figure 35 Ethanol Plants with Capacity to Produce Distillers Dried Grains (DDG) as a Byproduct



Source: USDA

Appendix V: Leading Kansas City Importers, 2019

Figure 36 Top 100 Importers in Kansas City in 2019

Rank	Company	TEUs
1	SUNBEAM PRODUCTS INC	10,525
2	GRAINGER INTERNATIONAL	7,384
3	KUBOTA TRACTOR CORPORATION	6,218
4	SPECTRUM BRANDS INC	4,889
5	THE COLOMAN COMPANY INC	4,467
6	LEISURE TIME	3,909
7	BAYER CROP SCIENCE	2,650
8	SIEMENS GAMESA RENEWABLE ENERGY IN	2,194
9	VORNADO AIR LLC	1,907
10	HORIZON GLOBAL AMERICAS INC	1,845
11	LONGI SOLAR TECHNOLOGY US INC	1,721
12	PURE FISHING INC	1,601
13	OFM INC	1,562
14	IGNITE USA LLC	1,483
15	NILFISK ADVANCE INC	1,245
16	WOODSTREAM CORPORATION	1,242
17	J SONIC SERVICES INC	1,138
18	COLEMAN TILE LLC	1,092
19	ROQUETTE AMERICA INC	1,077
20	HALLMARK MARKETING COMPANY LLC	991
21	HUSQVARNA CONSTRUCTION PRODUCTS	970
22	SNORKEL INTERNATIONAL INC	942
23	ORSCHELN FARM AND HOME	914
24	FASTENAL CO	852
25	SILGAN DISPENSING SYSTEMS CORPORATI	847
26	CNH AMERICA LLC CO	806
27	SCHLAGE LOCK COMPANY	804
28	MID STATES DISTRIBUTING CO	790
29	DEMACO CORPORATION	746
30	WINCO FIREWORKS INC	722
31	EVERLAST SPORTS MANUFACTURING CORPORATION	706
32	GARMIN INTERNATIONAL INC	696
33	CATERPILLAR WORK TOOLS INC	693
34	EXCELLIGENCE LEARNING CORPORATION	648
35	LIFETIME PRODUCTS KANSAS CITY	624
36	MARSHALLTOWN COMPANY	610
37	NEBRASKA FURNITURE MART INC	576
38	CAMSO MANUFACTURING USA LTD	533
39	AMERICANA TIRE WHEEL	528
40	BEKAERT CORPORATION	520
41	ZOETIS GEOSPACE	515

Rank	Company	TEUs
42	HALDEX BRAKE PRODUCTS CORP	511
43	LELY NORTH AMERICA INC	503
44	COMPOSITE TECHNOLOGY INC	494
45	MCCORMICK INTERNATIONAL INC US	491
46	FUTURA LOGISTICS CORP	455
47	SOUTHERN CARLSON INC	449
48	GARDNER DENVER INC	445
49	WAGNER LOGISTICS	437
50	ALPHABRODER USA	437
51	JARDEN CONSUMER SOLUTIONS	429
52	EXIDE TECHNOLOGIES	421
53	PANASONIC AUTOMOTIVE SYSTEMS	411
54	SELECT BRANDS INC	409
55	HALE FIREWORKS	407
56	DANIELI CORPORATION	395
57	BOEING COMMERCIAL AIRPLANE GROUP	390
58	DAISY OUTDOOR PRODUCTS	390
59	WARRISON CORPORATION	384
60	ROYAL INGREDIENTS GROUP USA INC	383
61	CLORE AUTOMOTIVE DISTRIBUTION KC	380
62	LANSING TRADE GROUP LLC	380
63	CHANGXING INTERNATIONAL TRADE US C	370
64	FIREWORKS OVER AMERICA	370
65	STAMINA PRODUCTS INC	365
66	ARDENT MILLS	364
67	DON SMITH & ASSOCIATES INC	364
68	A & M PRODUCTS C O CLOROX	356
69	GUNZE PLASTICS & ENGINEERING CORPORATION OF AMERICA	348
70	EMPIRE CANDLE CO	329
71	BOEHRINGER INGELHEIM ANIMAL HEALTH	328
72	SOULE BLACK & WECHSLER INC	326
73	SPIRIT OF 76 LLC	310
74	K AND M TIRE	308
75	BRIDGEKEN INC	306
76	DELAVAL INTERNATIONAL AB SITE	304
77	WEG ELECTRIC CORPORATION WEC	304
78	REDNECK OUTDOOR PRODUCTS	291
79	W C BRADLEY ZEBCO HOLDING INC	289
80	LONG MOTOR CORPORATION	284
81	FOODCOM INTERNATIONAL	281
82	SCHUETZ CONTAINER SYSTEMS INC	280
83	GREAT PLAINS MANUFACTURING INCORPOR	276
84	FIOCCHI OF AMERICA INC	274
85	GHARDA CHEMICALS LIMITE	273
86	INNOVATIVE PROCUREMENT	271
87	1A AUTO INC	265

Rank	Company	TEUs
88	CHR OLESEN INC	265
89	ECCO DOMANI USA INC	252
90	MANNA PRO PRODUCTS LLC	252
91	JOHN DEERE	251
92	INFINITY HEADWEAR AND APPAREL	250
93	MGB INGREDIENTS WOODBINE	244
94	AGANDM ARCHITECTURAL GRANITE AND MA	242
95	ALTEC PRODUCTS INC	240
96	SPRINGS GLOBAL US INC	238
97	REYCO GRANNING LLC	236
98	CONCENTRIC INTERNATIONAL INC	234
99	GATES CORPORATION	234
100	KC STORE FIXTURES	232

Source: Datamyne

Appendix VI: Leading Kansas City Exporters, 2019

Figure 37 Top 100 Exporters in Kansas City in 2019

Rank	Company	TEUs
1	THE DELONG CO INC, WI	14,277
2	CONFIDENTIAL, WO	7,651
3	SCOULAR COMPANY, MN	5,123
4	SWIFT PORK COMPANY, CO	4,222
5	INTERNATIONAL, EX	3,278
6	NATIONAL BEEF PACKING CO LLC, MO	3,108
7	LTH LOGISTICS INC, CA	2,862
8	DG GLOBAL USA INC, KS	2,550
9	MAC CONTAINER LINE, CA	2,364
10	SEABOARD OVERSEAS GROUP, KS	2,143
11	JBS SWIFT COMPANY, CO	2,109
12	FORNAZOR INTERNATIONAL INC, NJ	1,568
13	LAFUER GROUP LTD, MO	1,440
14	INTERNATIONAL FEED COM, MN	1,380
15	NORTHPOINT FORWARDING LLC, MO	1,372
16	HILLS PET NUTRITION INC, KS	1,296
17	INTERNATIONAL LOGISTICS INC, NE	1,212
18	GAVILION INGREDIENTS LLC, NE	1,204
19	INTERGLOBO NORTH AMERICA INC, NJ	1,181
20	EXPEDITORS INTERNATIONAL OF WASHINGTON INC, MO	1,011
21	CARGILL INCORPORATED, MN	920
22	ALTER TRADING CORP, MO	913
23	KUEHNE & NAGEL INC, NJ	827
24	CH ROBINSON WORLDWIDE INC, MO	782
25	DAIRY FARMERS OF AMERICA INC, KS	762
26	POET NUTRITION LLC, SD	690
27	RICH INTERNATIONAL INC, NJ	651
28	MILLS BROS INTERNATIONAL INC, WA	648
29	DSV AIR & SEA INC DSV OCEAN, MO	643
30	DG GLOBAL INC, KS	600
31	NATUREWORKS LLC, MN	573
32	INTERRA FOOD MARKETING LLC, GA	569
33	SCHENKER INC, OH	568
34	DG GLOBAL INC USA, KS	562
35	CASTLE SHIPPING LINES, MN	521
36	DAIRY FARMERS OF AMERICA, MO	500
37	WM RECYCLE AMERICA, IL	484
38	MAC INDUSTRIES INC D B A MAC CONTA, CA	461
39	SHIPCO TRANSPORT INC EIN, NJ	447
40	STEAM LOGISTICS, TN	429
41	THE DAVID J JOSEPH COMPANY, OH	419

Rank	Company	TEUs
42	EXPEDITORS INTERNATIONAL OF WASHINGTON INC, NY	419
43	KUEHNE & NAGEL INC, MO	412
44	GLOBERUNNERS INC, MN	401
45	KUEHNE & NAGEL INC, MA	390
46	LANSING TRADE GROUP LLC, KS	378
47	ICL SPECIALTY PRODUCTS INC, MO	378
48	AMERICAN HONDA MOTOR CO INC, CA	378
49	MAC CONTAINER LINE, NJ	374
50	GAVILON LLC, NE	368
51	MAC CONTAINER LINE C O US, CA	365
52	RED RIVER COMMODITES INC, ND	355
53	INTERNATIONAL FREIGHT TRANSPORT INC, NJ	347
54	AMERICA METAL EXPORT INC, CA	329
55	POET NUTRITION INC, SD	326
56	TSC CONTAINER FREIGHT, IL	321
57	DUPONT SPECIALTY PRODUCTS USA LLC, DE	309
58	GFG INLAND ELEVATOR & GRAIN LLC, MO	308
59	DAIRY FARMERS OF AMERICA, KS	306
60	TSC CONTAINER FREIGHT CA, CA	298
61	CAROLINA OCEAN LINES INC, NC	284
62	UPS SUPPLY CHAIN SOLUTIONS, MO	282
63	MAC CONTAINER LINE, GA	280
64	COHERENT METAL INC, TX	275
65	SCHENKER INC, IL	270
66	US COMMODITIES LLC, MN	267
67	GLOBAL TRANSPORTATION SERVICES INC, TX	265
68	GLOBERUNNERS INC, CA	264
69	THE SCOLAR COMPANY, WO	262
70	CHS INC, MN	262
71	DSV OCEAN TRANSPORT, MO	259
72	SMITHFIELD FRESH MEATS CORP, VA	256
73	HARLEY DAVIDSON MOTOR COMPANY, WO	254
74	STRAIGHT FORWARDING INC, CA	251
75	VANGUARD, NJ	239
76	R V LOGISTICS INC O B FFC, CA	232
77	JORDAN TRADING INC, NY	224
78	PHILADELPHIA HIDE BROKERAGE, PA	222
79	VANGUARD LOGISTICS SERVICES, IL	210
80	WHEATON GRAIN INC, WI	210
81	NAVIGATION NETWORK, LA	207
82	ALLY GLOBAL LOGISTICS LLC, MA	194
83	SIMMONS PET FOOD, KS	184
84	SIGMA RECYCLING INC C O, GA	183
85	CH ROBINSON WORLDWIDE INC, GA	182
86	STONE ARCH COMMODITIES, MN	172
87	USA SHIPPING LLC, GA	171

Rank	Company	TEUs
88	JAS FORWARDING USA INC, TN	170
89	TRANSGLOBAL EXPRESS INC, IL	162
90	COFCO INTERNATIONAL GRAINS US LLC, IL	160
91	GEODIS WILSON USA INC, TX	159
92	SEALINK INTERNATIONAL INC, TX	155
93	CAROTRANS INTERNATIONAL INC, NJ	154
94	DSV AIR AND SEA INC, KY	154
95	ROSE CONTAINER INC, NY	152
96	INGREDION INC, IL	151
97	CEVA LOGISTICS USA INC, IL	150
98	TRADELANES INC, AL	146
99	PHISON INTERNATIONAL INC, IL	146
100	C & L GLOBAL INC, NE	146

Source: Datamyne

Note: This list does not reflect complete source document information due to US Customs data collection processes and aggregation of international companies. It is recommended that further information be obtained on key participants in the export supply chain through commodity associations such as the U.S. Grains Council and the National Cattlemen's Beef Association.

kpmg.com/socialmedia



© 2022 KPMG LLP, a Delaware limited liability partnership and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee. All rights reserved.

The KPMG name and logo are trademarks used under license by the independent member firms of the KPMG global organization.