

New York Metropolitan Transportation Council

Regional Freight Land Use Study

FocusGroupIt Reporting

June 10, 2022

To ensure the New York Metropolitan Transportation Council's (NYMTC's) Regional Freight Land Use Study accurately reflects today's freight land use in the Metropolitan Area Planning (MAP) Forum Region, NYMTC hosted a virtual focus group to collect stakeholder input.

Using FocusGroupIt, a virtual platform for focus groups, ASC, Cambridge Systematics and NYMTC developed a virtual focus group with 6 discussion prompts. The first 5 prompts asked participants to answer questions related to scenarios related to trends that are likely to affect future freight land use demand and/or intensity: Growth in E-Commerce; Distributed Manufacturing; Climate Change; Population Growth; and Evolution of Clean Freight. The final prompt asked participants to react to a draft of the study's freight land use typology. The activity guide for the FocusGroupIt is attached as **Appendix A** to this report. The report with the full set of responses is attached as **Appendix B**.

The virtual focus group was initially advertised as being open from Thursday, April 21 through Thursday, May 12. To allow for additional participation past May 12, the virtual focus group was extended to close on Friday, May 27.

Outreach:

Using a combination of e-blasts and phone calls, ASC began promoting the virtual focus group to stakeholders on Tuesday, April 19, and continued outreach through the week of May 23. Please note that the numbers for open and click rates have been provided through Mailchimp's reporting tools, which may not accurately reflect all opens and clicks.

- **First E-Blast: Sent April 19, 2022, at 10 AM Eastern Time**

- Successfully delivered to 68 stakeholders
 - Open rate: 19.7%
 - Recipients who clicked: 6%
- **Second E-Blast: Sent April 21, 2022, at 10 AM Eastern Time**
 - Successfully delivered to 71 stakeholders
 - Open rate: 16.9%
 - Recipients who clicked: 1%
- **Round of Phone Calls: May 3, 2022**
 - Stakeholders contacted: 40
- **Third E-Blast: Sent May 4, 2022, at 3 PM Eastern Time**
 - Successfully delivered to 72 stakeholders
 - Open rate: 38.0%
 - Recipients who Clicked: 7%
- **Fourth E-Blast: Sent May 10, 2022, at 2 PM Eastern Time**
 - Successfully delivered to 71 stakeholders
 - Open rate: 32.9%
 - Recipients who clicked: 7%
- **Round of Phone Calls: May 11, 2022**
 - Stakeholders contacted: 44
- **Fifth E-Blast: Sent May 20, 2022, at 5:15 PM Eastern Time**
 - Successfully delivered to 70 stakeholders
 - Open rate: 25.7%
 - Recipients who clicked: 3%
- **Round of Phone Calls: May 24, 2022**
 - Stakeholders contacted: 35
- **Sixth E-Blast: Sent May 25, 2022, at 2 PM Eastern Time**

- Successfully delivered to 69 stakeholders
- Open rate: 21.7%
- Recipients who clicked: 4.3%

Participation Overview:

- Total number of participants who registered for the FocusGroupIt: **19**
- Total number of participants who responded to at least one question in the FocusGroupIt: **13**
- Total number of participants who provided a complete set of responses in the FocusGroupIt: **10**

Stakeholders Represented in Virtual Focus Group

To allow for the most genuine responses to the questions posed in the virtual focus group's activities, the project team enabled the "Anonymous Responses" feature on FocusGroupIt to mask participant identities. However, enabling this feature also hides the participant identities from the project team moderators.

Through Mailchimp (the email marketing platform used to distribute e-blasts), ASC was able to generally identify some of the organizations as well as the location of respondents that clicked through the e-blast to access the FocusGroupIt landing page. Some trends from this data include:

- **Geographic:** The majority of the clicks came from New York and New Jersey, with some clicks from Pennsylvania. While the stakeholder database developed for this focus group included Connecticut organizations and agencies, ASC did not see any clicks from Connecticut email addresses.
- **Organization Type:** Most of the clicks came from logistics associations and planning associations/agencies, with some clicks from economic development agencies. While the stakeholder database developed for this focus group included real estate associations, ASC did not see any clicks from these organizations.

APPENDIX A: Full Activity Guide

About This Focus Group

Focus Group Name:

Virtual Focus Group on Regional Freight-Related Land Use

About this focus group:

Welcome to the New York Metropolitan Transportation Council's (NYMTC) and the Metropolitan Area Planning (MAP) Forum's virtual focus group on regional freight-related land use. Your participation is essential to this regional assessment of freight-related land uses—we are grateful for your time and input.

This focus group is part of a Regional Freight Land Use Study to collect data on freight-related land uses in the four state New York City metropolitan region, assess freight-related land use trends and potential future freight-related land use scenarios. This assessment has become even more critical due to challenges and changes related to the COVID-19 pandemic, including supply chain issues and evolving business models.

The online focus group, which is being administered to a group of planning officials, public sector freight specialists and representatives of shipping industries from around the metropolitan region has been designed for online participation and collaboration.

The focus group has been designed for online participation and collaboration:

- You can join in when it is convenient and return any time between April 18 and May 10 to add to or complete your input.
- You may also return to comment on the input of other participants.
- None of the responses will be connected to identifying information.
- If you return to the survey, it will take you to where you last left off.

If you have any questions or concerns accessing the FocusGroupIt, please reach out to us at: freightlandusestudy@gmail.com

Getting Started:

Thank you for participating in the New York Metropolitan Transportation Council's (NYMTC) and the Metropolitan Area Planning (MAP) Forum's virtual focus group on regional freight-related land use.

This focus group includes two types of activities:

1. You will be asked to comment on five scenarios related to trends that are likely to affect future freight land use demand and/or intensity.

2. You will also be asked to complete an exercise to contribute to the classification (typology) of freight land use types and subtypes that was developed using land use data collected to date.

Throughout the focus group site, we'll reference three groups of freight land use:

- 1) Freight-handling: facilities that support the movement of freight through the supply chain (ex. marine terminals, rail yards and terminals, highways and rail lines, air cargo airports, and other facilities)
- 2) Freight-generating: land uses that generate shipments of goods to be transported to other locations (ex. warehouses, distribution and fulfillment centers, manufacturing facilities, and agricultural lands)
- 3) Freight-receiving: facilities that receive deliveries of goods (ex. retail stores, office parks, residential areas, and institutional facilities like schools, hospitals, etc.). Note, some freight-generating facilities also receive deliveries.

Remember that:

- You can participate when it is convenient, and return any time between April 18 and May 12 to modify or complete your input.
- You can also return to the focus group to comment on the input of other participants.
- Your participation in this survey is completely voluntary and all your responses are anonymous.
- If you have any issues while working through the activities, you can reach out to our project team at freightlanduse@gmail.com, or use the reply option at the bottom of this page.

When you are ready, click "Continue to the next topic" at the bottom of this page, which will take you to the first scenario: Growth in E-Commerce.

Scenario A: Growth in E-Commerce

In this first exercise, please consider the topic of growth in e-commerce and its relationship to freight land use.

We'll review two potential growth scenarios and the associated demand for warehousing. Then, we will ask for your input on which scenario is most likely and what the impacts might be on freight land use.

Background

E-commerce has increased its share of retail sales in the past decade, from 5% of retail sales in 2012 to 14% in 2021, impacting supply chains by increasing demand for warehousing and fulfillment center development.

This increased demand could further current industrial real estate trends:

- New industrial buildings could be constructed on industrial and agricultural lands,
- Older industrial buildings could be modernized or redeveloped,
- And/or commercial spaces could be repurposed to facilitate e-commerce logistics.

The map below illustrates the current distribution of industrial, agricultural, and commercial land uses across the Metropolitan Area Planning (MAP) Forum region, a consortium of 10 Metropolitan Planning Organizations (MPOs) from New York, New Jersey, Connecticut, and Pennsylvania that have entered into an agreement to better coordinate planning activities in the multi-state region.

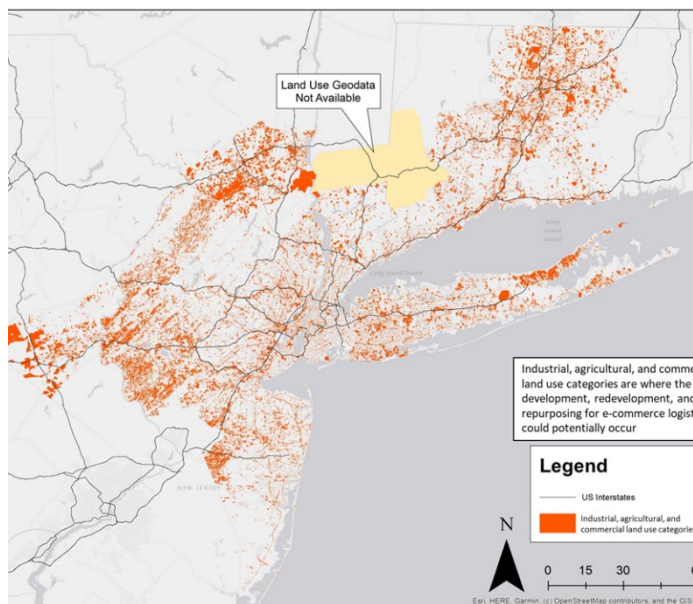
Growth Scenarios:

- **LOW-GROWTH SCENARIO:** E-commerce sales increase by 350% and represent 30% of total retail sales by 2050, and the corresponding requirement for warehousing space to stage, fulfill, and ship orders increases by 250%.
- **HIGH-GROWTH SCENARIO:** E-commerce sales increase by 900% and represent over 50% of total retail sales by 2050, and the corresponding requirement for warehousing space to stage, fulfill, and ship orders increases by 650%.

(To enlarge the map, click on the photo)

Questions:

1. Which of these two scenarios, Low-Growth or High-Growth, is most likely to occur, and why?
2. Are there other scenarios that are more likely than the scenarios identified?
3. Are there other potential impacts on freight land use, in addition to those discussed? Please explain.



Scenario B: Distributed Manufacturing

In this exercise, please consider three possible scenarios related to the future of distributed manufacturing in the region. You will be asked to identify which scenario is most likely to occur, if others should be considered, and what other freight land use impacts might arise.

Background

Distributed manufacturing (DM) refers to the potential for three-dimensional (3D) printing to permit efficient goods production near the points of demand, which would lead to the establishment of many small factories located in and serving many local markets. This would contrast with the historical need for factories to achieve economies of scale through mass production, and the location of fewer, larger plants located near raw materials and affordable skilled labor.

As a result, shipments to the multi-state New York City metropolitan region of large volumes from some external sites in the U.S. or abroad, might be replaced by local shipments from points of production inside the region.

Change Scenarios for Distributed Manufacturing (DM)

- A. ONSHORE INCREASE: DM could facilitate onshoring of production (i.e., relocating some manufacturing from overseas to the U.S.) of some goods, particularly replacement parts, healthcare products, and construction materials in industrial zones throughout the region.
- B. "MAKE-AT-HOME" GROWTH: DM could facilitate a cottage industry of "make-at-home" parts and goods (including consumers making their own, or entrepreneurs producing at a small scale) in industrial, commercial, residential, or other locations throughout the region.
- C. LIMITED IMPACT: DM could remain a "niche" activity with no measurable impact on production, logistics, and/or land use.

Questions

1. Which scenario of these three is most likely to occur and why?
2. Are other scenarios more likely than the scenarios identified?
3. Are these scenarios likely to have other impacts on freight land use in addition to those discussed? Please explain.

Scenario C: Climate Change

In this exercise, please consider a few potential mitigations in response to climate change related weather events and flooding. You will be asked to identify which of two scenarios is most likely to occur, and what the impacts might be on freight land use.

Background

Superstorm Sandy in 2012 and the heavy rains associated with the remnants of Hurricane Ida in 2021 demonstrated the severe economic and social burdens that extreme weather can inflict upon the region's freight infrastructure and economy. Rising sea levels may exacerbate storm surge and climate change could increase the severity and frequency of extreme precipitation and temperature events.

Approximately 9% of the freight-generating and freight-handling land and approximately 7% of freight-receiving land in the multi-state New York City metropolitan region is within a Special Flood Hazard Area, as defined by FEMA. Sea levels in those areas could rise by 1 foot by 2050, and by up to 5 feet by 2100.

Change Scenarios Related to Climate Change Events

A. PREVENTATIVE MEASURES: Industrial real estate developers, landowners, and others, invest in constructing flood walls or other preventative measures to protect land and facilities that generate, receive, and/or handle freight, increasing development and real estate costs.

B. RELOCATION: Freight-generating and freight-handling land uses are relocated to areas less prone to flooding or sea level rise, spurring new development in parts of the region that may not currently have clusters of freight-generating or freight-handling facilities.

Questions:

1. Which of these two scenarios is most likely to occur and why?
2. Are there other scenarios that are more likely than the scenarios identified?
3. Are these scenarios likely to have other impacts on freight land use in addition to those discussed above? Please explain.

(To enlarge the table, click on the photo)

Percent of Land Area by Freight Land Use Category Affected by 1-Foot and 5-Foot Sea Level Rise

Land Use Category	Sea Level Rise: 1 foot	Sea Level Rise: 5 feet
Freight-Generating Lands (industrial, agricultural)	0.2%	1.2%
Freight-Receiving Lands (commercial, residential, institutional)	1.0%	2.9%
Freight-Handling Lands (marine terminals, rail yards, transportation infrastructure)	0.6%	2.9%

Source: NOAA, analysis by Cambridge Systematics

Scenario D: Population Growth and Distribution

In this exercise, you will be asked to consider three population growth scenarios related to freight demand, distribution and therefore, freight land use. You will be asked which scenario is most likely and what might be the impacts on freight land use.

Background

Population growth drives freight demand. From 2000 until 2020, population growth in the multi-state New York City metropolitan region was greatest in the urban core areas such as New York City and Hudson County, NJ, reversing the trend of suburban sprawl that had occurred through the second half of the 20th century. However, since 2020, during the COVID-19 pandemic, Census estimates show a shift in population growth toward suburban and rural areas, and to locations outside the region altogether.

Population Growth Scenarios

A. CENTRALIZED POPULATION GROWTH: The pre-pandemic population growth trend returns, with the urban core seeing the most population growth. In this scenario, distribution centers may continue being developed in exurban and peripheral areas, many of which may serve regional or national distribution, and/or international trade gateways (ports, airports, etc.). The higher costs of acquiring, developing, or redeveloping land and brownfields may be justified by having access to the large consumer market and being able to offer same-day or next-day delivery service.

B. SUBURBAN POPULATION GROWTH: The pandemic-induced suburban and rural population growth trend continues with a corresponding increase in widely spread distribution and fulfillment centers to serve a more widely distributed consumer market. There may be less urban development, redevelopment, and brownfield redevelopment as a result.

C. NO CHANGE IN POPULATION GROWTH: Population growth in the entire region stalls relative to other regions of the country, with less demand for and development of e-commerce fulfillment and last-mile distribution centers. Demand for facilities that serve mega-regional or national distribution and/or facilitate imports/exports from the region's international gateways to and from consumers in other regions of the country may increase.

Questions:

1. Which scenario of these three is most likely to occur and why?
2. Are there other scenarios that are more likely than the scenarios identified?
3. Are there other potential impacts on freight land use, in addition to those discussed? Please explain.

Scenario E: Evolution of Clean Freight

In this exercise, you will be asked to consider two potential scenarios related to the impact of the adoption of clean freight fueling and electric trucks on freight land use. You will be asked which scenario is most likely to occur and what might be the impacts on freight land use.

Background

Diesel emissions impact the natural environment through greenhouse gases and the human environment through ground-level ozone and particulate matter. The timing and extent of the transition from medium-duty and heavy-duty trucks to electric or other alternative fuel sources will be influenced by the relative costs of acquiring, fueling, and maintaining alternative fuel source vehicles.

The map below illustrates highway corridors throughout the multi-state New York City metropolitan region prioritized for needed expansion of alternative fueling and/or electric charging capacity.

Clean Freight Fueling Scenarios

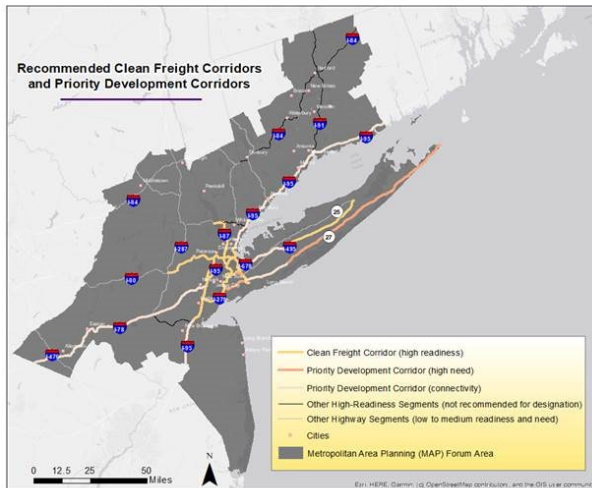
A. LIMITED IMPACT: Very little transition to electric or other alternative fuels occurs with a corresponding low impact on freight land use.

B. HIGH IMPACT: There is robust growth in electric or other alternative fuel adoption among truck fleets, requiring the addition of alternative fuel and charging capacity at existing truck stops, service plazas, and fueling stations. New facilities may be developed at or adjacent to major terminals (ports, air cargo hubs, industrial clusters) and/or on commercial properties located along major highway corridors.

Questions:

1. Which scenario of these two scenarios is most likely to occur and why?
2. Are there other scenarios that are more likely than the scenarios identified?
3. Are there other potential impacts on freight land use, in addition to those discussed? Please explain.

(To enlarge the map, click on the photo)



Freight Land Use Typology

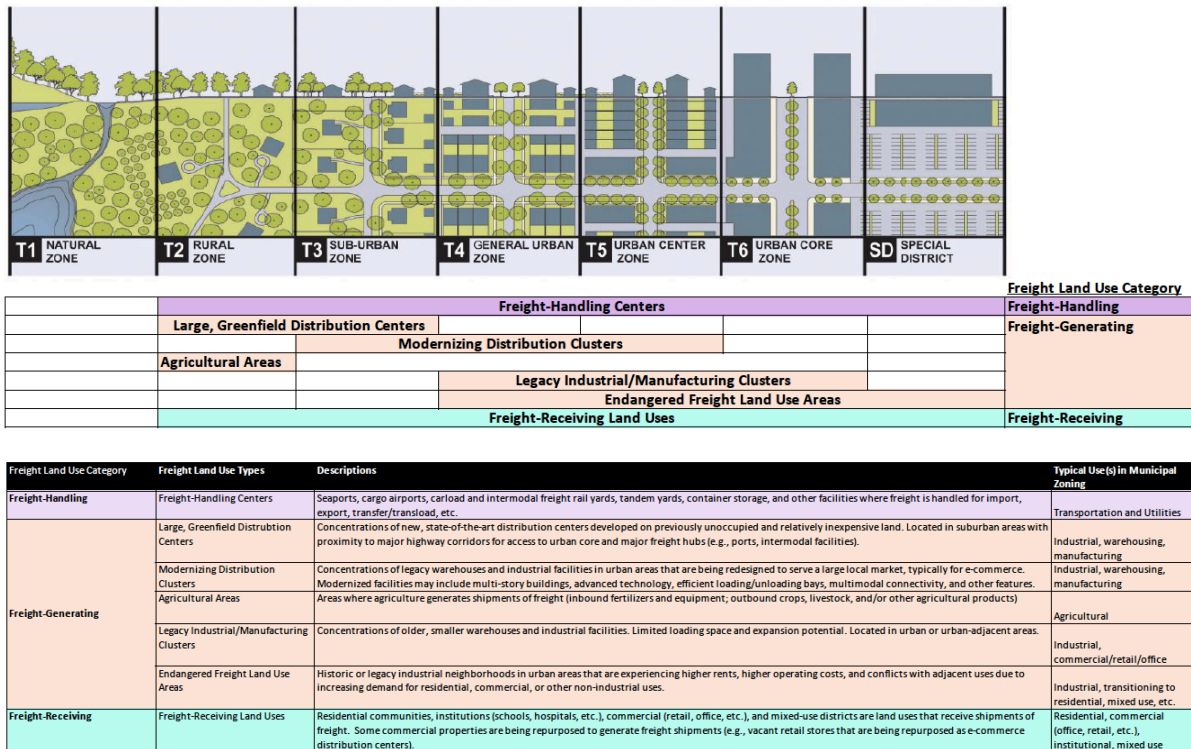
Land use classification is important as a standard for land use description and management. Having a consistent typology will be helpful in facilitating discussions and decision-making related to freight land use. In this exercise, you will be asked to provide your input on a typology of three distinct ways land is used related to freight.

Background

The Regional Freight Land Use Study has uncovered a typology of three distinct types that describe the ways that land is used for the movement of freight, and/or for the production or receipt of freight shipments: freight-handling, freight-generating and freight-receiving land uses. Within the freight-generating land use type, there are multiple sub-types.

The figure below describes the types/sub-types, their typical municipal zoning uses and where they appear in the region's rural-urban transect.

(To enlarge the tables, click on the photo)



Questions

1. Do the land use types and subtypes described below accurately reflect the region's freight patterns and land use trends? If not, what is missing?
2. How have these types and subtypes changed since the beginning of the COVID-19 pandemic?

Thank You

Your participation in this session has been extremely valuable, and the responses you have provided will make an important contribution to regional freight land use planning. I hope you also enjoyed participating in this virtual focus group.

As the final step, please log on any time between now and the close of this focus group on May 12 to add to your opinion and interact with other participants' input.

To visit this focus group again in the future, use the website address below:
<https://focusgroupit.com/groups/6f4a59ff/participate>.

Freight-Related Land Use Focus Group

Transcript of the focus group discussion as of 2022-06-08

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Helpful Reminders:

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Participant 27

Participant 26

Participant 26

Participant 24

Participant 23

Participant 23

Participant 21

Participant 20

Participant 19

Participant 18

Participant 16

Participant 17

Participant 14

Participant 7

Participant 12

Participant 11

Participant 10

Participant 10

Participant 10

Participant 9

Participant 8

Participant 6

Participant 6

Participant 4

Participant 1

Scenario: Growth in E-Commerce

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Background:

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This increased demand could further current industrial real estate trends:

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Growth Scenarios:

A. LOW-GROWTH SCENARIO: E-commerce sales increase by 350% and represent 30% of total retail sales by 2050, and the corresponding requirement for warehousing space to stage, fulfill, and ship orders increases by 250%.

B. HIGH-GROWTH SCENARIO: E-commerce sales increase by 900% and represent over 50% of total retail sales by 2050, and the corresponding requirement for warehousing space to stage, fulfill, and ship orders increases by 650%.

Questions:

1. Which of these two scenarios, Low-Growth or High-Growth, is most likely to occur, and why?
2. Are there other scenarios that are more likely than the

scenarios identified?

3. Are there other potential impacts on freight land use, in addition to those discussed? Please explain.

(To enlarge the map, click on the photo)

Participant 27

1. Low-Growth - I think the pandemic fueled increase in E-Commerce will level off post pandemic. 2. I agree there will be an increase in E-Commerce 3. Housing Affordability - Fulfilment center are unable to fill jobs due the lack of affordable housing. The employers should help solve the housing shortage.

Participant 26

High Growth is a possibility based on the population and needs of the region. There could also be a push for 3-D printing and Drone deliveries. Impacts could be more trucks on the roadways to deliver the freight. Another impact could be cars going to the distribution centers as they would become employment hubs.

Participant 24

I'm actually surprised that the 2021 share is only 14%. I think a high-growth scenario is most likely, as people's habits from COVID continue and online shopping remains a safe, easy way to buy and return goods. Additional freight land use implications will be the need for increased truck parking.

Participant 23

Under today's operating environment believe e-commerce will be limited to warehouse, labor and infrastructure space to expand beyond 30% in our Region. The supply chain is already nearing maximum capacity. The most significant change which needs to take place is to move the operating hours of the industrial supply chain to nighttime hours so that the supply

chain is not competing for infrastructure with other transportation needs.

Participant 21

1. High-growth scenario is more likely to occur. Consumers have grown accustomed to the click and ship ease of online shopping. It also provides accessibility to goods and services to consumers who are not able to travel to brick-and-mortar stores. 2. Whether low, medium or high, growth in e-commerce will continue. Unless 3-D printing of goods becomes a viable reality, it will continue to be the main way for consumers to receive their goods. 3. Land-use and the transportation must be tied together in this discussion. As industrial land-uses increase the stress on the transportation network increases. With less land located near higher classification roadways, rural infrastructure must be upgraded.

Participant 20

I believe the high growth of e-commerce will be the path taken. Consumers are looking for the easy way. They want things now. Through e-commerce they can shop anytime from anywhere, and have the items delivered anywhere. This will only continue to grow unless there are time delays in getting their immediate needs accommodated or costs escalate. Another area less commonly talked about are returns in e-commerce. If the current process is adjusted to impact returns and make it harder or associate a cost to repeat returners you will see e-commerce demands go down as often over 35% of e-commerce purchases are returned. The impact of e-commerce is that it will obsolete many of the large big box warehouses in the region. There will be a need for smaller more nimble facilities. I am already seeing this trend regionally. Ecommerce puts more trucks on the road. Ecommerce cause a higher volumetric shipment while reducing the tonnage. The density goes down.

Participant 19

both need to consider that fulfillment may occur from brick and mortar stores rather than from industrial buildings. further, different layers and

types of industrial bldgs in locations both within and outside of the study region could be involved in the fulfillment process. both scenarios need to be adjusted.

Participant 6

x

Participant 18

A: Consumers will continue to purchase many items in-person, acting on human need for social interaction and activity. Scarcity/availability of land and increased cost for rent, land, construction, labor, regulation, local opposition, and inefficiencies with the transportation network and bottlenecks at the port, will impact growth of freight. Increased investments in rails and electrifying freight, community benefit agreements and greater community outreach and support, including offsite improvements to reduce and mitigate impacts, could help offset these impacts.

Participant 17

E-Commerce is likely to fall somewhere between the low and high growth scenarios.

Participant 14

Scenario A. I believe the high-growth scenario overstates the growth of e-commerce. While it will continue to grow, the following factors will reduce the rate of growth compared to the recent past: Saturation of e-commerce markets in products conducive to online shopping (not all products lend themselves to online shopping); tight labor market/unionization of workforce/pressure to regulate workplace environment will lower price competitiveness of e-commerce; limited properties near population centers necessary for final distribution.

Participant 11

don't know

Participant 9

N high growth is more likely. However IMHO there will be no change in the total freight handling. This is a business shift fro retail e.g Macy's to Amazon. Just as the public sector did not take sides in the retail cs retail debate. It should not take sides in the bricks and mortar vs e-commerce debate. Will retail warehouse be empty and have to be reused. What else is new?

Scenario: Distributed Manufacturing

In this exercise, please consider three possible scenarios related to the future of distributed manufacturing in the region. You will be asked to identify which scenario is most likely to occur, if others should be considered, and what other freight land use impacts might arise.

Background:

Distributed manufacturing (DM) refers to the potential for three-dimensional (3D) printing to permit efficient goods production near the points of demand, which would lead to the establishment of many small factories located in and serving many local markets. This would contrast with the historical need for factories to achieve economies of scale through mass production, and the location of fewer, larger plants located near raw materials and affordable skilled labor.

As a result, shipments to the multi-state New York City metropolitan region of large volumes from some external sites

in the U.S. or abroad, might be replaced by local shipments from points of production inside the region.

Change Scenarios for Distributed Manufacturing (DM):

A. ONSHORE INCREASE: DM could facilitate onshoring of production (i.e., relocating some manufacturing from overseas to the U.S.) of some goods, particularly replacement parts, healthcare products, and construction materials in industrial zones throughout the region.

B. "MAKE-AT-HOME" GROWTH: DM could facilitate a cottage industry of "make-at-home" parts and goods (including consumers making their own, or entrepreneurs producing at a small scale) in industrial, commercial, residential, or other locations throughout the region.

C. LIMITED IMPACT: DM could remain a "niche" activity with no measurable impact on production, logistics, and/or land use.

Questions:

1. Which scenario of these three is most likely to occur and why?
2. Are other scenarios more likely than the scenarios identified?
3. Are these scenarios likely to have other impacts on freight land use in addition to those discussed? Please explain.

Participant 27

1. C 2. No sure. 3. No

Participant 26

I think that you could end up getting a combination of #1 and #2. Distributed Manufacturing allows for mass production locally; bringing jobs to the American economy via multiples sectors. It also seems that having 3D printing available at home would allow for people to print on quickly on demand, minimizing the cost of allocating various materials for the project. One negative of this would be the potential loss of valuable manufacturing jobs for Americans as most of the automation would be done by machines. 3D printing would decentralize production; thus making it possible for customers to allocate goods faster. This would increase the need for more freight land uses across the region.

Participant 23

limited impact and will be a niche. This is a high cost Region. Labor cost, land cost, land availability and startup costs will always be the barrier to entry.

Participant 21

1. At this point and time and into the near future, the most likely scenario is that DM remains a "niche" activity. I'm not sure there is a savings in logistics from receiving raw materials, manufacturing the product and then shipping for sale as compared to central manufacturing and shipping. 2. N/A 3. N/A

Participant 20

Etsy is already fostering a make from home atmosphere. There is a growth industry of make from home however most people do not have the where with all to do it themselves. Again they are looking for the easier way so they buy it from someone else. I see it growing substantial over the next 3 to 4 generations as it is something they learn in school and becomes the norm. Like any technology it takes time to become the norm. The impact to imports will only be reduced in a limited way as you will still need the raws to make the printers work. You are just trading one thing for another.

Participant 19

it is likely that more us based manufacturing will occur particularly within certain industries. however, it is unclear (and would need to be determined by industrial sector) how much will occur within the study region and where. it is also likely that near shore distributed processing could occur which would affect the modal use in international trade.

Participant 18

A: Onshoring increase represents a desirable and foreseeable scenario. B. is also feasible, but probably of lesser significance. A: Could reduce pressure on major ports and related logistics and realize more dispersed impacts of lesser scale on the development/redevelopment of land and impacts on transportation infrastructure. Seen as positive.

Participant 17

B. "Make at Home" growth. Some entrepreneurs.

Participant 14

Scenario C. 3D printing is limited largely to plastic and not suitable for a range of products. It offers easy customization but cannot compete with economies of scale and will therefore remain a niche product. Boutique manufacturing will likely grow to meet the demand for specialized products, but will remain relatively small.

Participant 9

C. Limited impact. Near shoring is a customs issue. There may be smaller shipment in smaller vehicles but the same volume

Scenario: Climate Change

In this exercise, please consider a few potential mitigations in

response to climate change related weather events and flooding. You will be asked to identify which of two scenarios is most likely to occur, and what the impacts might be on freight land use.

Background:

Superstorm Sandy in 2012 and the heavy rains associated with the remnants of Hurricane Ida in 2021 demonstrated the severe economic and social burdens that extreme weather can inflict upon the region's freight infrastructure and economy. Rising sea levels may exacerbate storm surge and climate change could increase the severity and frequency of extreme precipitation and temperature events.

Approximately 9% of the freight-generating and freight-handling land and approximately 7% of freight-receiving land in the multi-state New York City metropolitan region is within a Special Flood Hazard Area, as defined by FEMA. Sea levels in those areas could rise by 1 foot by 2050, and up to 5 feet by 2100. The table below details how different categories of freight land use might be impacted by sea level rise.

Change Scenarios Related to Climate Change Events:

A. PREVENTATIVE MEASURES: Industrial real estate developers, landowners, and others, invest in constructing flood walls or other preventative measures to protect land and facilities that generate, receive, and/or handle freight, increasing development and real estate costs.

B. RELOCATION: Freight-generating and freight-handling land uses are relocated to areas less prone to flooding or sea level

rise, spurring new development in parts of the region that may not currently have clusters of freight-generating or freight-handling facilities.

Questions:

1. Which of these two scenarios is most likely to occur and why?
2. Are there other scenarios that are more likely than the scenarios identified?
3. Are these scenarios likely to have other impacts on freight land use in addition to those discussed above? Please explain.

(To enlarge the table, click on the photo)

Participant 27

1. Choice A is more likely given the significant investment in existing facilities and proximity to labor markets. We should encourage B for new facilities and implementing preventative measures for existing facilities. 2. Not sure. 3. It will depend on the frequency and severity of impacts. If the impacts are severe enough some facilities will have no choice but to relocate. FEMA has a flood buyout program for homeowners. There may be need severely flood prone industrial areas in the metropolitan area. If relocation is required, there may be future open space opportunities.

Participant 26

Preventative Measures - Weather related disruptions can have economic impacts of freight services for both the operator and the consumer (delayed deliveries). Investing in new areas would be tough to do - existing residential neighborhoods may not want new freight facilities directly next to them (event if the closer location is better for rapid deliveries).

Participant 23

Relocation. for everything other than ocean transport. It's happening regardless due to the high real estate cost in the Region.

Participant 21

1. Relocation is the most likely to occur, as it would more than likely be less costly in the long run. Creating new clusters of freight generating and freight handling facilities will lower initial relocation costs as economies of scale come into play.

Participant 20

The current philosophy is to develop the flood walls and barriers however this is only a short term approach as when you bolster one area you have problems in another. It is not just an industrial problem either. Run off from development across the board is a growing concern as impervious surfaces continue to over cap areas. We are seeing faster rises because of run off which floods worse then years before. Moving facilities to other locations may save those facilities but have down stream impacts which no one addresses. There was a consideration made by the corp of engineers years ago that all development should be required to have run off retention to exceed the cubic volume of the average single storm rainfall in a region plus 50% to minimize downstream flooding. So if you had an average storm dumping 1 inch of rain and you had a 100,000 sf building and another 100,000 square feet of impervious surface you would need 25,000 cubic feet of retention. But it never got traction.

Participant 19

if the available property can meet FEMA requirements, then it will be used.

Participant 18

A. Will likely necessitate an all-of-government, public and private approach underpinned by cost benefit analysis of total costs for preventative

measures, including retrofitting critical public and private logistics infrastructure facilities (e.g., marine, train, airports and bus terminals, etc.) including construction and long term viability of flood gates and other coastal defenses in comparison to costs and feasibility of relocating critical logistics infrastructure facilities out of harms way as part of a phased approach. Relocation would likely be most impactful and perhaps less feasible given increasing scarcity of strategically located space, regulations, increasing awareness of environmental justice concerns and local opposition to adverse impacts (e.g., diesel exhaust, noise, traffic, greenfield development) associated with the logistics industries.

Participant 17

Preventative Measures. Locations proximate to transportation cannot be easily relocated - particularly near port and airport facilities, and especially rail.

Participant 14

Scenario B. Freight related uses are more likely to be found in flood zones because of historic connections to water transportation and because the land is cheap. Compared to other uses, freight/warehousing has a low revenue/area occupied ratio and is less concerned with quality of neighborhood, so it will gravitate toward less expensive areas. Land owners will not make costly investments to prevent flood damage. Most likely scenario is no investment/expenditures, continue operations until natural disaster forces relocation.

Participant 9

Those owning the existing facilities will push for Preventative. Society should take whichever of prevention and relocation has the lowest cost including costs because of climate events

Scenario: Population Growth and Distribution

In this exercise, you will be asked to consider three population growth scenarios related to freight demand, distribution and therefore, freight land use. You will be asked which scenario is most likely and what might be the impacts on freight land use.

Background :

Population growth drives freight demand. From 2000 until 2020, population growth in the multi-state New York City metropolitan region was greatest in the urban core areas such as New York City and Hudson County, NJ, reversing the trend of suburban sprawl that had occurred through the second half of the 20th century. However, since 2020, during the COVID-19 pandemic, Census estimates show a shift in population growth toward suburban and rural areas, and to locations outside the region altogether.

Population Growth Scenarios:

A. CENTRALIZED POPULATION GROWTH: The pre-pandemic population growth trend returns, with the urban core seeing the most population growth. In this scenario, distribution centers may continue being developed in exurban and peripheral areas, many of which may serve regional or national distribution, and/or international trade gateways (ports, airports, etc.). The higher costs of acquiring, developing, or redeveloping land and brownfields may be justified by having access to the large consumer market and being able to offer same-day or next-day delivery service.

B. SUBURBAN POPULATION GROWTH: The pandemic-

induced suburban and rural population growth trend continues with a corresponding increase in widely spread distribution and fulfillment centers to serve a more widely distributed consumer market. There may be less urban development, redevelopment, and brownfield redevelopment as a result.

C. NO CHANGE IN POPULATION GROWTH: Population growth in the entire region stalls relative to other regions of the country, with less demand for and development of e-commerce fulfillment and last-mile distribution centers. Demand for facilities that serve mega-regional or national distribution and/or facilitate imports/exports from the region's international gateways to and from consumers in other regions of the country may increase.

Questions:

1. Which scenario of these three is most likely to occur and why?
2. Are there other scenarios that are more likely than the scenarios identified?
3. Are there other potential impacts on freight land use, in addition to those discussed? Please explain.

Participant 27

1. A. We saw similar exodus post 9/11, followed by return to the urban center. I think this happen again post-pandemic. 2. One thing that is different from the 9/11 exodus is that the pandemic introduced remote working on a large scale and workers in the City were able to work remotely from their second home upstate. We could see a scenario where those with the means to do live/work part-time in the City and part-time in

their second home. 3. Yes. Centralized population growth and suburban population growth continue.

Participant 26

This is hard to say. The Northeast Region (as a whole) is not really affordable and there has been an exodus occurring to more affordable parts of the country. I would combine people leaving the region with suburban growth. Suburban areas will continue to see growth (from urban centers) and will warrant more freight oriented land uses (to accommodate the growth).

Participant 23

Suburban population growth. We're faced with an aging population. They will continue to relocate to less costly part of the country which means - not in our region. High real estate taxes and cost of living expenses are and will drive people out of the region.

Participant 21

1. The most likely scenario is a mix between centralized population growth and suburban growth. As distribution centers and other industrial growth occur, jobs will follow. However, most are low-skill and low-paying thus causing an influx in urban growth. Those in the urban setting begin to move to the suburban locales and the circle of population growth continues.

Participant 20

I do not see the urban growth reoccurring for another 5 to 10 years. People are allowed to work remotely so why head back. I see suburban sprawl negatively impacting freight land usage as it put more thing remotely which in turn generates more use in place it was never before. Also it creates congestion in areas not typical in the past causing freight usage facility analysis to move facilities to different geographic regions. Freight follows the people patterns.

Participant 19

while millennial moves outward from urban cores were delayed, the pattern of growth, both urban and suburban will continue. densification nearer to the urban core will also continue especially near transit facilities.

Participant 18

A. Unless there is state level legislation enacted that mandates towns to accept more residential growth and/or programs that make it more attractive to towns to change their zoning, it is likely that restrictive zoning throughout many rural and suburban communities across NJ will continue to foster growth in urban and historic centers that have the capacity and desire for it.

Participant 17

B. The aging of the population will continue to drive long-term growth in suburban and exurban locations.

Participant 14

Scenario C. I believe pandemic-induced suburban growth is a temporary resulting from changes in housing preferences during the pandemic. The growth of virtual workplaces may lead to workers leaving large, expensive urban cores but those workers are equally likely to leave the region altogether, leading to the growth of smaller, cheaper urban areas around the country. Pre-pandemic population growth in NY Metro Area core was largely driven by immigration. Whether this returns is unclear and depends on multiple national and international factors. the long term trend smaller population increases in this area compared to the rest of the country will continue.

Participant 9

Stall. While new US growth will occur in current smaller towns. The exiting NYC resources of housing and infrastructure should attract other growth. If

at a lower cost(rent). This is a big deal for existing property owners but IMHO this is not a government concern

Scenario: Evolution of Clean Freight

In this exercise, you will be asked to consider two potential scenarios related to the impact of the adoption of clean freight fueling and electric trucks on freight land use. You will be asked which scenario is most likely to occur and what might be the impacts on freight land use.

Background:

Diesel emissions impact the natural environment through greenhouse gases and the human environment through ground-level ozone and particulate matter. The timing and extent of the transition from medium-duty and heavy-duty trucks to electric or other alternative fuel sources will be influenced by the relative costs of acquiring, fueling, and maintaining alternative fuel source vehicles.

The map below illustrates highway corridors throughout the multi-state New York City metropolitan region prioritized for needed expansion of alternative fueling and/or electric charging capacity.

Clean Freight Fueling Scenarios:

A. LIMITED IMPACT: Very little transition to electric or other alternative fuels occurs with a corresponding low impact on freight land use.

B. HIGH IMPACT: There is robust growth in electric or other

alternative fuel adoption among truck fleets, requiring the addition of alternative fuel and charging capacity at existing truck stops, service plazas, and fueling stations. New facilities may be developed at or adjacent to major terminals (ports, air cargo hubs, industrial clusters) and/or on commercial properties located along major highway corridors.

Questions:

1. Which scenario of these two scenarios is most likely to occur and why?
2. Are there other scenarios that are more likely than the scenarios identified?
3. Are there other potential impacts on freight land use, in addition to those discussed? Please explain.

(To enlarge the map, click on the photo)

Participant 27

1. A. Due to the need to coordinate across many states, including those in the mid-west and the cost of building out the infrastructure. 2. Not sure. 3. Not sure.

Participant 26

High Impact - with gas prices the way they are and may continue to be, the timing is right for electric/other alternative fuel options.

Participant 23

by 2050 it will be High Impact. This of course is dependent on electric vehicle technology development but it's clear even today that this will be a

viable option.

Participant 21

The most likely scenario is high impact and most auto/diesel manufacturers are moving towards electric and/or alternative fuel vehicles. As infrastructure continues to grow for these alternative fuels, the impact will only continue to grow. The NEVI funding will establish the backbone of the alternative fuel corridors for the nation and then grow from there.

Participant 20

There is some growth but it is limited. Until the electrical grid is updated and prepared for the demands of electrification of vehicles it will only be limited. Many sites currently in the region have limitations on the electrical draw they can support. And you would have a trade off between operational and transportation charging alternatives.

Participant 19

the private supply chain industry has been pivoting for several years towards increased environmental considerations. this may not affect land use as much as the technologies used.

Participant 18

B. Local opposition to logistics projects will continue to increase which will turn influence public and private support for ramping up efforts to electrify freight. Locating warehousing closer to highway interchanges, rail and via the redevelopment of landfills and contaminated sites for such uses will see greater support.

Participant 17

Hopefully, there will be institutional resistance to widespread adoption of electric vehicles; there will be some adoption, but less than the

policymakers intend.

Participant 17

Correction: meant to advise that there would be efforts to overcome institutional resistance to widespread adoption of electric vehicles.

Participant 14

B. Commercial freight will move to electrification more quickly than general population. Government incentives can/likely will be targeted to commercial fleets. Commercial fleets are often serviced by in-house facilities, making transition easier once infrastructure is established. Private firms are more attuned to economics and will adopt new technology more quickly than the general public (which is more affected by psychological resistance to change) once it makes financial sense.

Participant 9

Mid way between high and low. New purchases are likely to be green. But the turnover of existing resources will be modest.

Typology

Land use classification is important as a standard for land use description and management. Having a consistent typology will be helpful in facilitating discussions and decision-making related to freight land use. In this exercise, you will be asked to provide your input on a typology of three distinct ways land is used related to freight.

Background:

The Regional Freight Land Use Study has uncovered a

typology of three distinct types that describe the ways that land is used for the movement of freight, and/or for the production or receipt of freight shipments: freight-handling, freight-generating and freight-receiving land uses. Within the freight-generating land use type, there are multiple sub-types.

The tables below describe the types/sub-types, their typical municipal zoning uses and where they appear in the region's rural-urban transect.

Questions:

1. Do the land use types and subtypes described below accurately reflect the region's freight patterns and land use trends? If not, what is missing?
2. How have these types and subtypes changed since the beginning of the COVID-19 pandemic?

(To enlarge the tables, click on the photos.)

Participant 27

1. I think so. 2. Increase in freight-generating and freight-receiving land uses.

Participant 26

More people are moving towards the suburbs; expect this trend to continue.

Participant 23

No comment

Participant 21

1. I believe the land use types and subtypes described are accurate. 2. The covid pandemic increased the need for more industrial space thus pushing further out into the rural areas. Zoning in these areas must be reviewed as the continued push for more industrial grows.

Participant 20

The types and subtypes are hypocritical in that they may be changed adjusted and or modified. It takes work and time however but they go through modifications or you would not have zoning hearings. With the change in population I see housing right next to industrial with park squeezed in the middle while manufacturing is somewhere in the mix as well. Everyone wants to be close to transportation corridors but doe not want the headaches of being there. I think the current system is antiquated and needs to be revised.

Participant 19

brownfield reuse should be included

Participant 18

IN NJ at least, large Greenfield Distribution Centers are also being proposed/constructed in the Natural (T1) Zone with increasing frequency, typically in upland forested areas. In Agricultural Areas (T2), many of the new Greenfield Distribution Centers being proposed/constructed, are not associated with agricultural freight generation, but e-commerce.

Participant 17

Seems to be inclusive. Not sure they've changed since the pandemic.

Participant 14

Probably worthwhile to evaluate exurbia as a separate subtype - formally

natural/rural areas seeing low density residential development. Distinct from rural and suburban.

Participant 9

IMHO, this list covers all. Not included is Retail IMHO THIS IS LIKELY TO DCLINE AND Amazon vans replace trips to the mall. (Increase in CV trips and decrease in HBS person trips)

Thank You

Your participation in this session has been extremely valuable, and the responses you have provided will make an important contribution to regional freight land use planning. I hope you also enjoyed participating in this virtual focus group.

As the final step, please log on any time between now and the close of this focus group on May 12 to add to your opinion and interact with other participants' input.

To visit this focus group again in the future, use the website address below:

<https://focusgroupit.com/groups/6f4a59ff/participate>

Participant 27

Thank you

Participant 26

Thank you.

Participant 23

My pleasure

Participant 21

N/A

Participant 20

I think we are evaluating current scenarios and trying to guess future scenarios based on historic criteria and view points. We need to get beyond that a relook at what is going on and understand it with future looking eyes.

Participant 19

thanks

Participant 18

Appreciate the opportunity to participate.

Participant 17

Thanks!

Participant 14

welcome

Participant 9

My pleasure