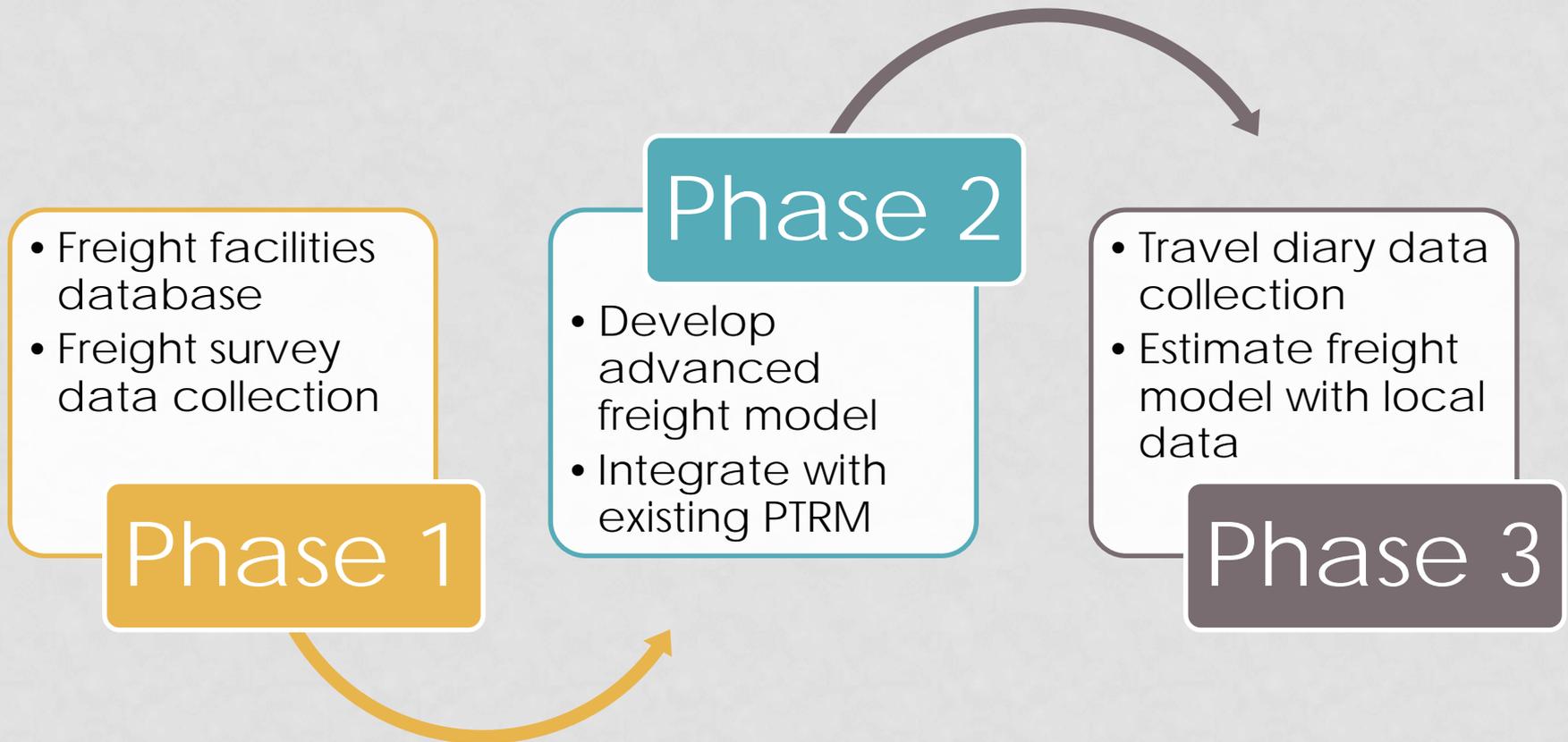


PIEDMONT TRIAD FREIGHT STUDY



PIEDMONT TRIAD FREIGHT STUDY



SHRP2 C20

- Competitive grant process
- Freight Demand Modeling and Data Improvement
- Road map for improved freight data sets and freight modeling practices
- Triad will receive national recognition this effort and will lay the groundwork for helping others

TAKE HOME MESSAGE

What we have

**Freight
focused
information
system**

Big picture benefit

Used to inform land use planning, transportation planning, and project prioritization

Specific applications

Investigate freight clusters
Estimate truck trips
Project prioritization
Inform land use and rezoning decisions
Identify characteristics supporting freight clusters

What comes next

Policy scenario analysis
Mode choice
Understanding of dynamics between congestion and freight
Impacts of land use decisions

BACKGROUND

FREIGHT AND THE TRIAD

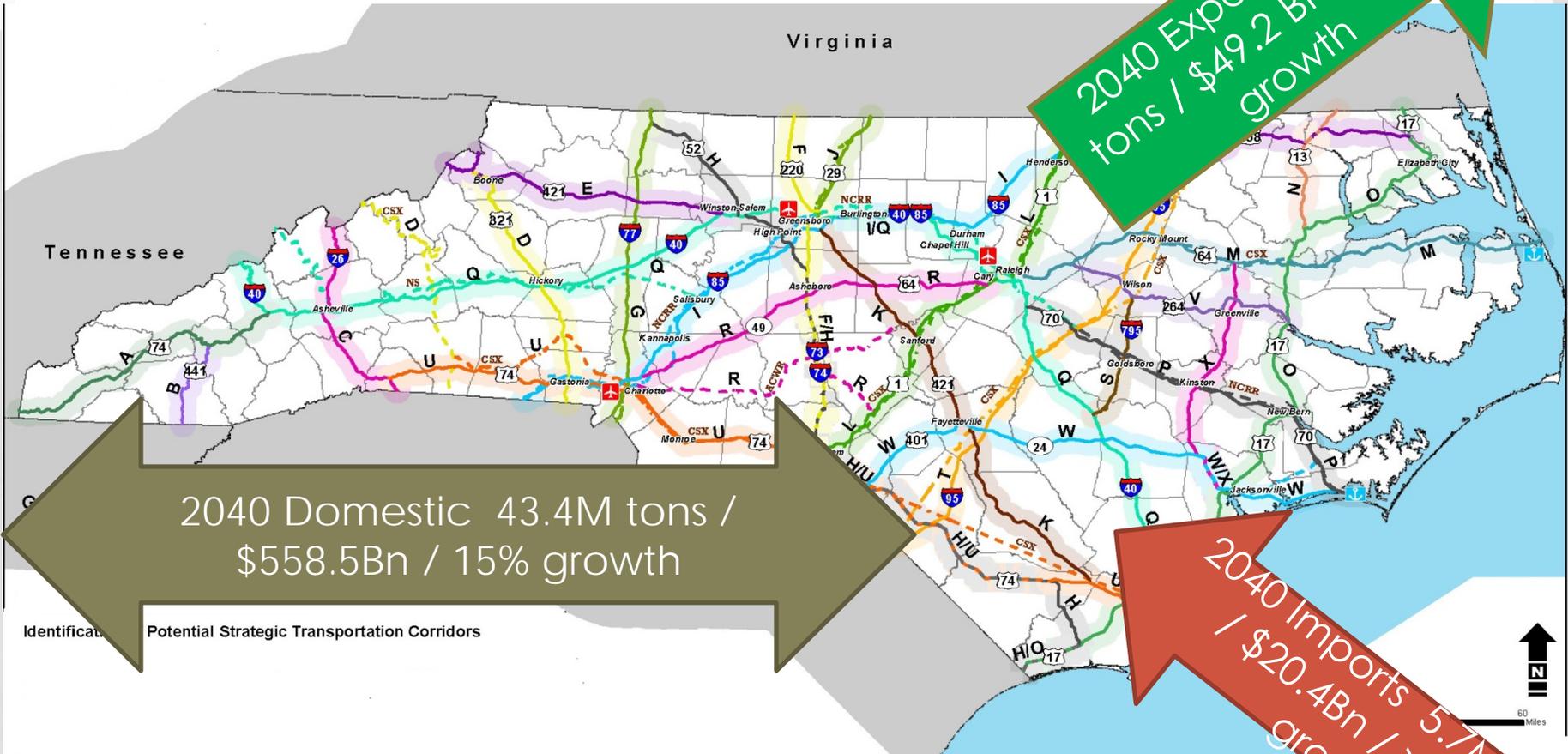
- Goods movement and the economy
- Considering Freight in Transportation Planning
- Role of Freight in the Triad
 - One of the worlds largest transportation and logistics clusters
 - Region is growing through diversification
 - I-85/I-40 gateway to major hubs in the north and south
 - Some of the highest truck flows in North Carolina
- Region is taking bold steps to understand freight and logistics

NC FREIGHT FLOWS

2040 Exports 14.5M tons / \$49.2 Bn / 150% growth

2040 Domestic 43.4M tons / \$558.5Bn / 15% growth

2040 Imports 5.7M tons / \$20.4Bn / >200% growth



Identified Potential Strategic Transportation Corridors

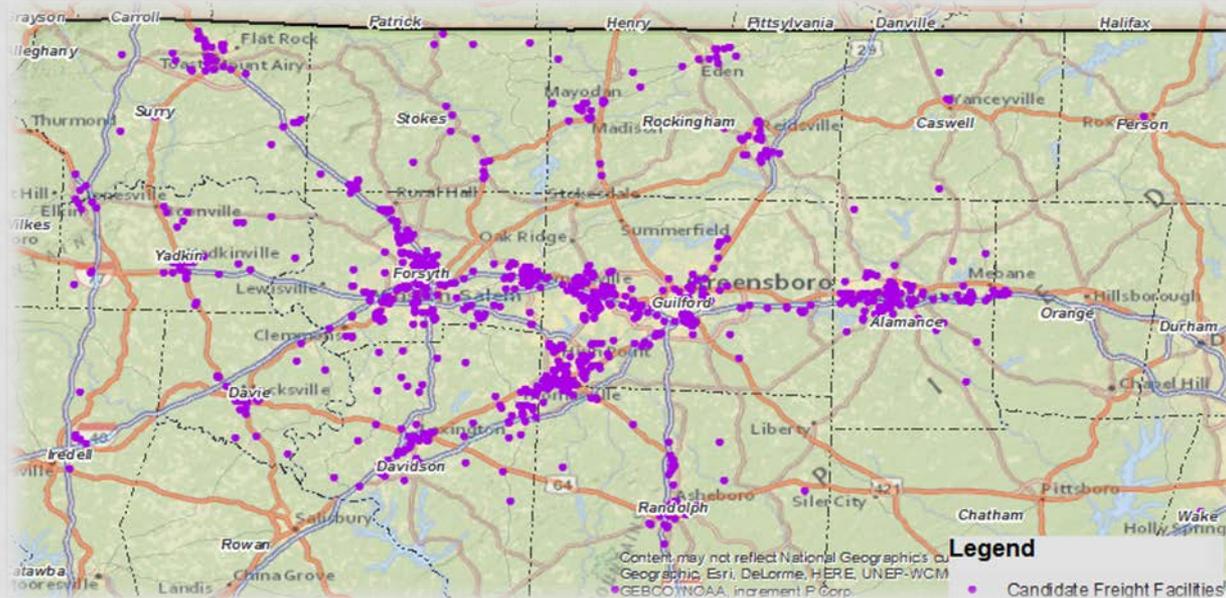
PIEDMONT TOGETHER

- **Goal 1: More transportation choices through the development of safe, reliable and economical transportation infrastructure and services**
 - Objective 1 Establish an enhance a robust network of multimodal transportation choices at the statewide, regional, county and municipal
 - Objective 2 Conduct local research and education on the benefits of a multimodal regional network.
- **Goal 2: Maintain and enhance the region's competitive edge as a freight transportation and logistics hub on the Eastern Seaboard**
 - Objective 1 Develop a comprehensive vision for freight infrastructure in the region.
 - Objective 2 Develop a multimodal freight network strategy in the region designed to create, protect and maintain transport links, connecting intermodal facilities and appropriate modes, both public and private.
 - Objective 3 Maintain a low level of traffic congestion in the region along Unlimited Truck Routes.
 - Objective 4 Expand logistics education and career opportunities for the Piedmont Triad workforce.

DATA COLLECTION

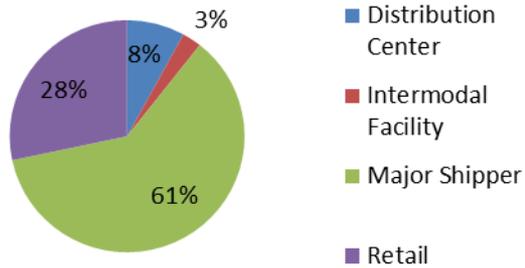
FREIGHT FACILITIES DATABASE

- 968 Facilities classified by type
 - Distribution center, intermodal facility, major shipper, retail
- Basic information available for most facilities
 - NAICS classification code, number of truck bays, primary commodity

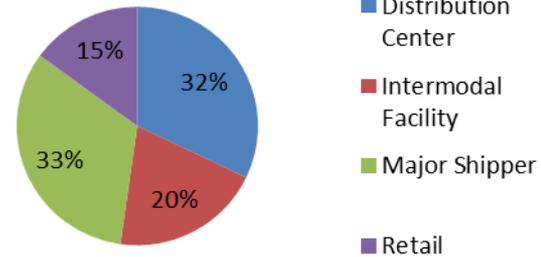


FREIGHT FACILITIES BY MPO

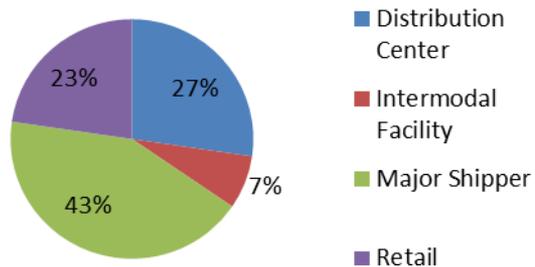
BGMPO



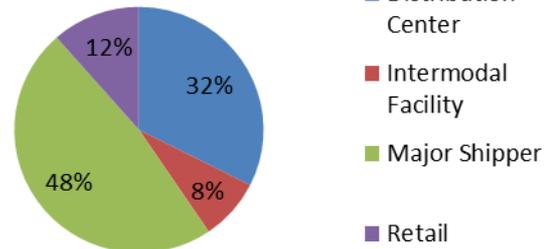
GMPO

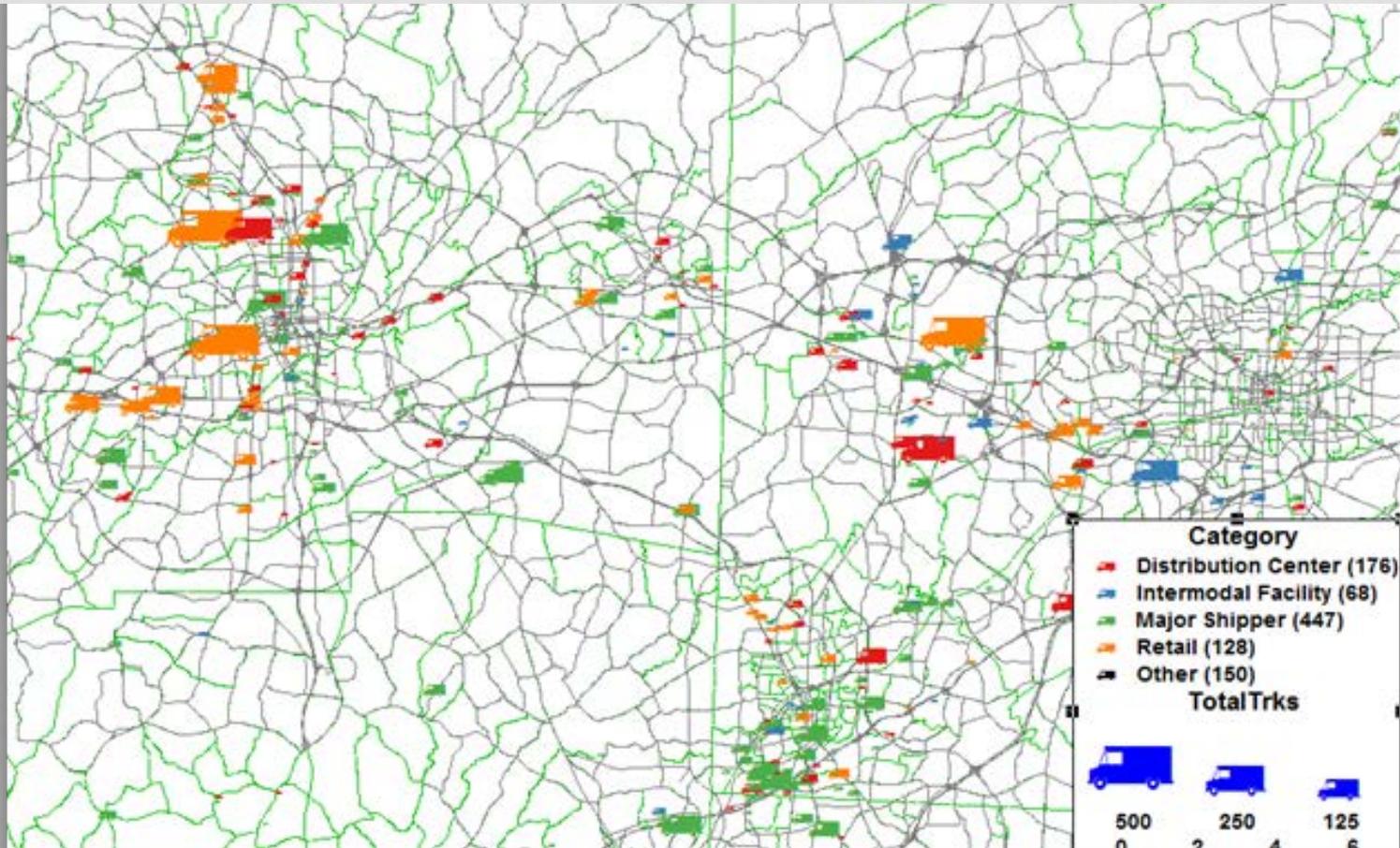


WSMPO



HPMPO

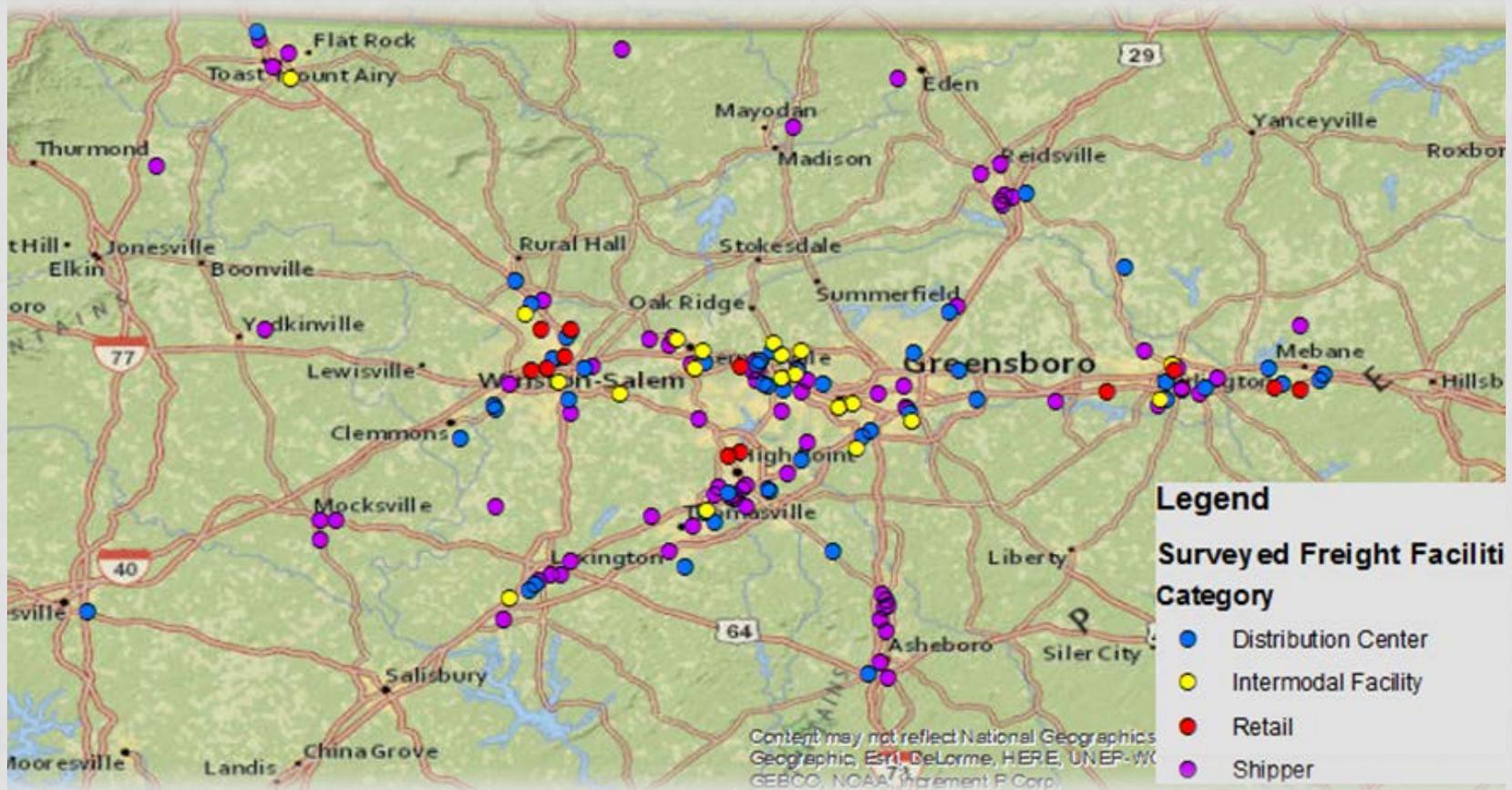




DATABASE BENEFITS

FREIGHT FACILITIES BY CATEGORY SCALED BY ESTIMATED TRUCK TRIPS

FREIGHT SURVEY DATA COLLECTION

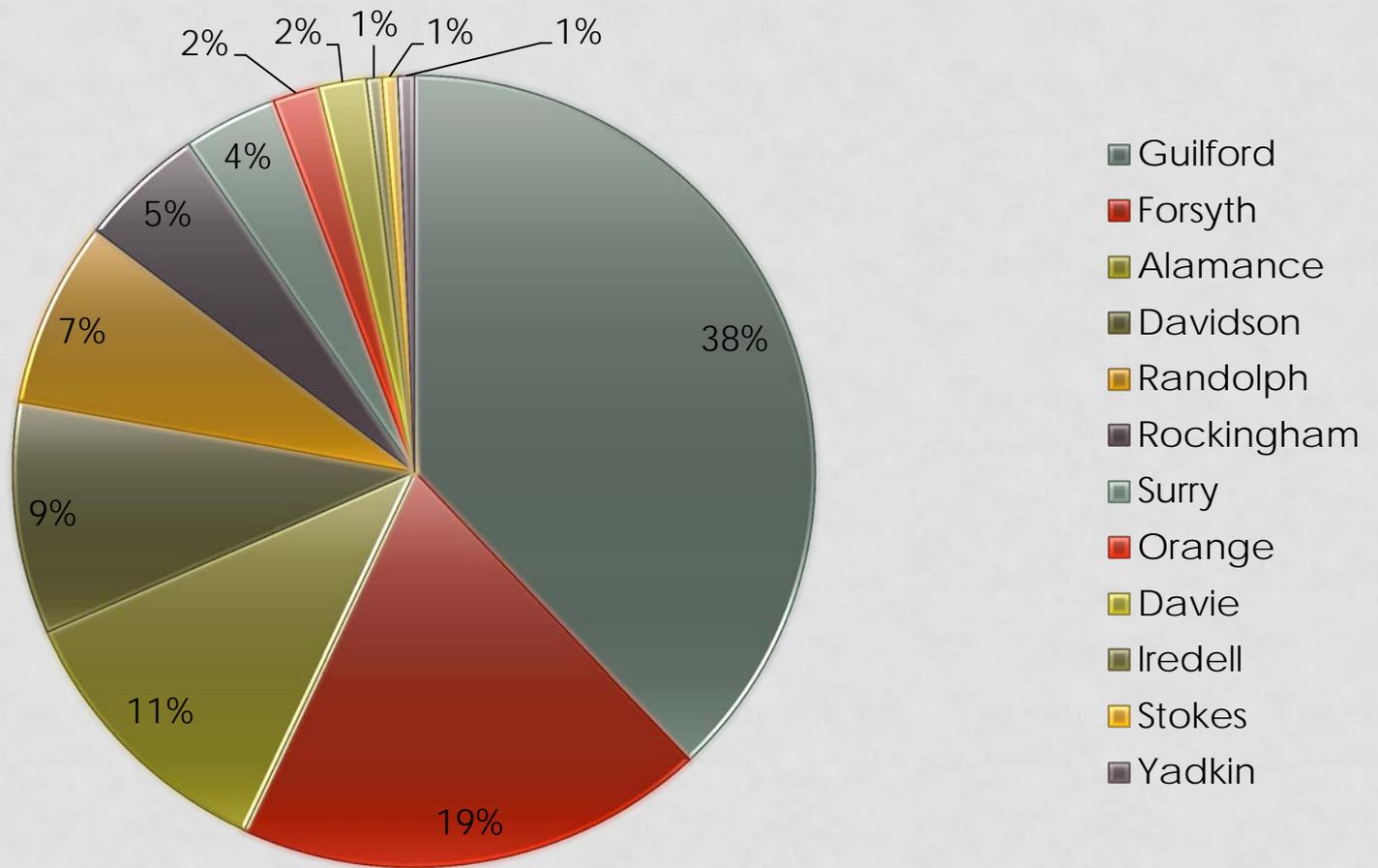


SURVEY RESULTS

OVER 800 FACILITIES VISITED, SURVEY DATA FOR 158

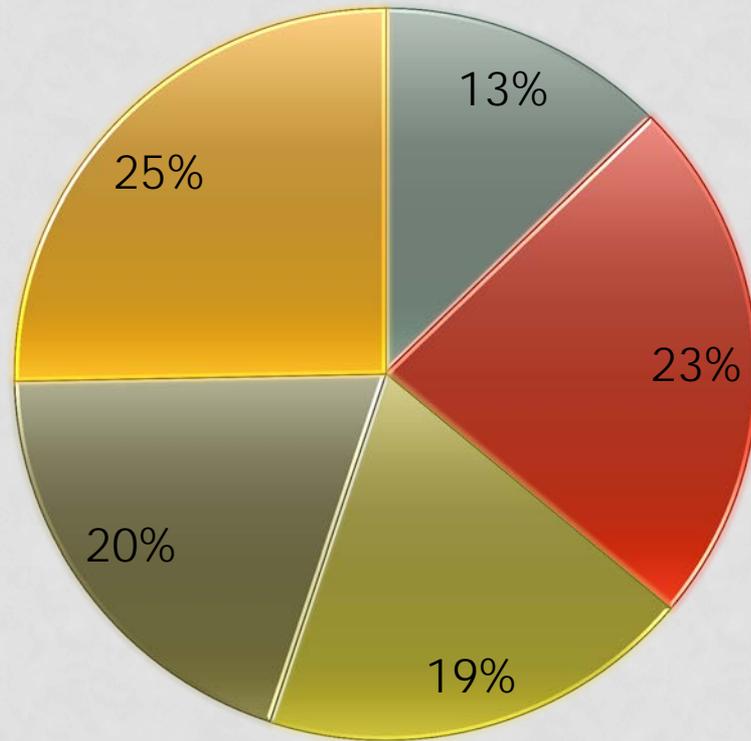
EXAMPLE DATA RECORD

RecordID	2775
County	Iredell
Type	Warehouse
Category	Distribution Cen
PTRM_NAICS_Group	Retail
FT_Empl	75
Bldg_SF	24000
TrkBays	0
IB_Comm1	Scrap metal
IB_Comm2	
IB_Comm3	
OB_Comm	Prcessed scrap metal
DailyTrk	80
Cntainer	20.00%
Conv5axl	50.00%
SingUnit	5.00%
Del_Vans	20.00%
OtherTrk	5.00%



SURVEY RESULTS

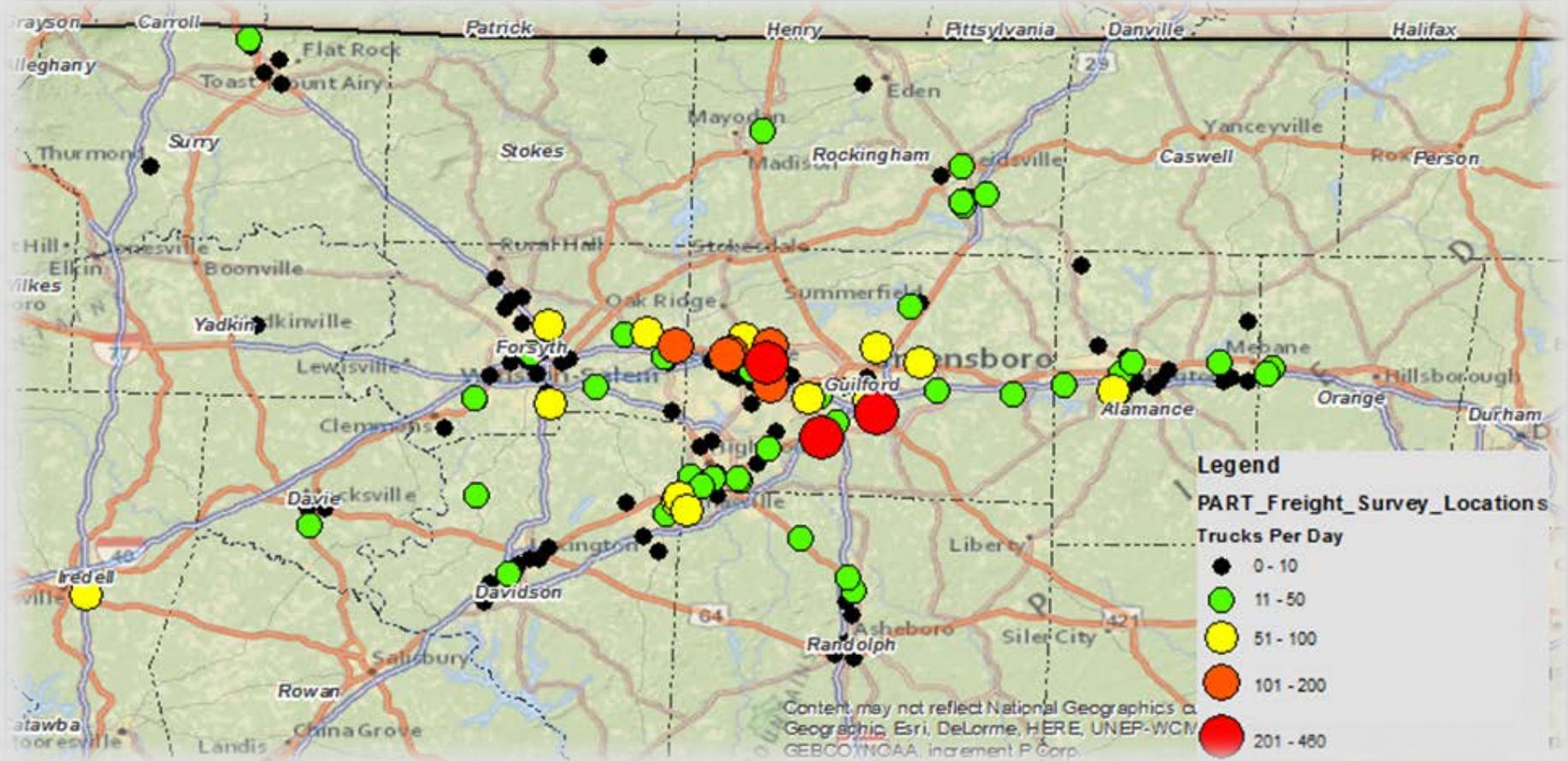
DISTRIBUTION OF SURVEYS BY COUNTY



- BGMPPO
- GMPO
- HPMPO
- WSMPO
- Other

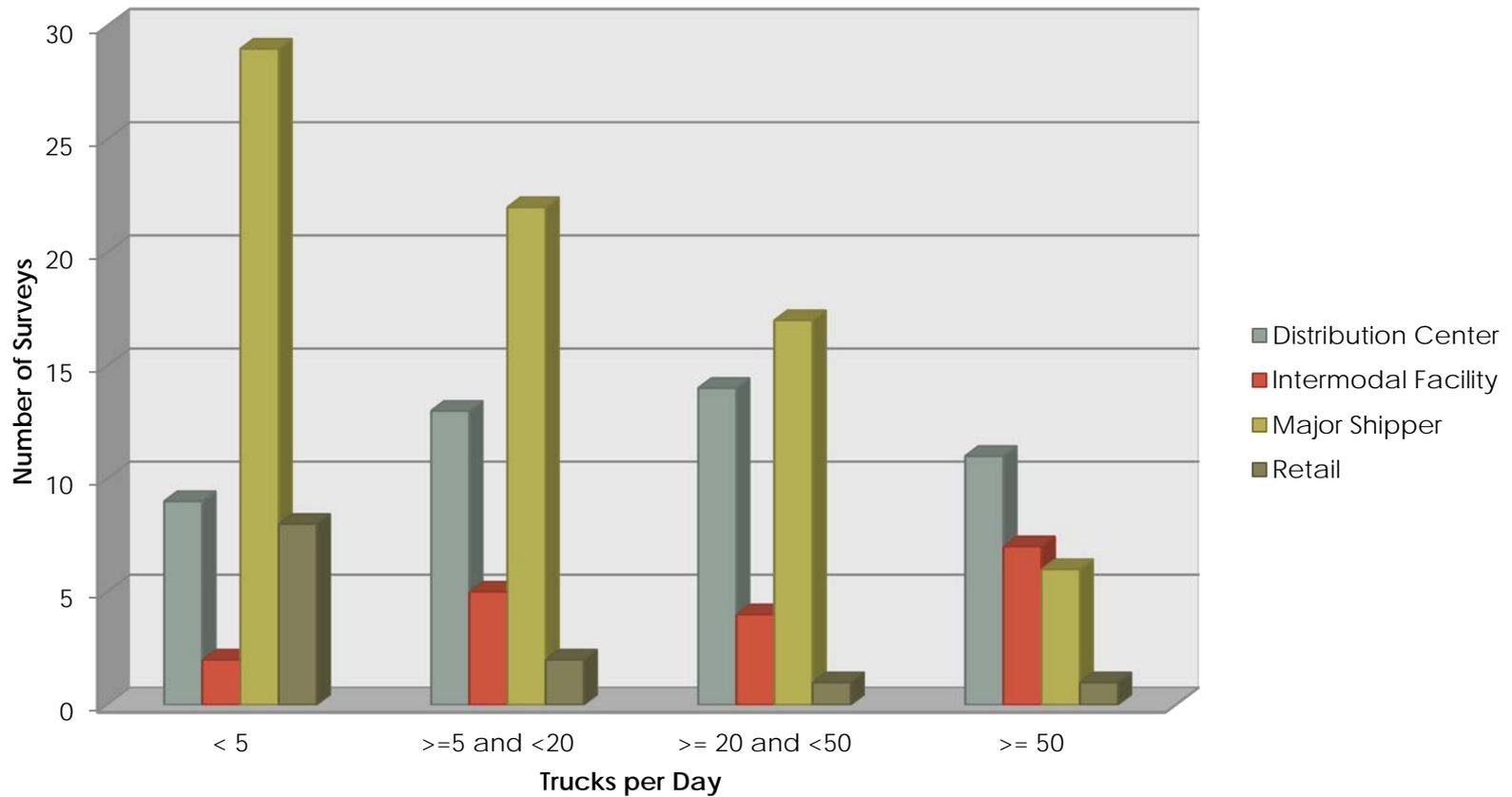
SURVEY RESULTS

DISTRIBUTION OF SURVEYS BY MPO



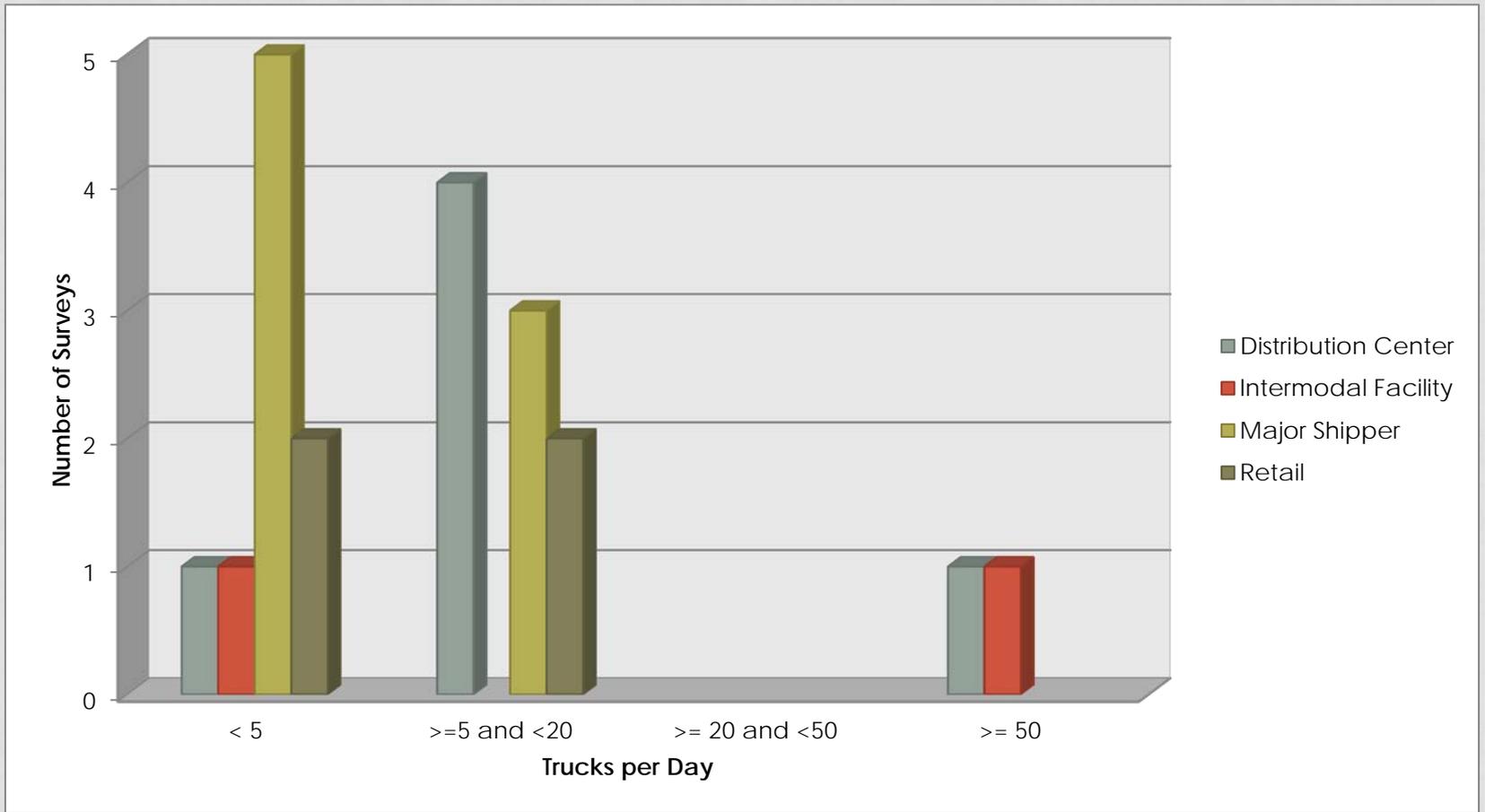
SURVEY RESULTS

SURVEY LOCATION BY NUMBER OF TRUCKS PER DAY



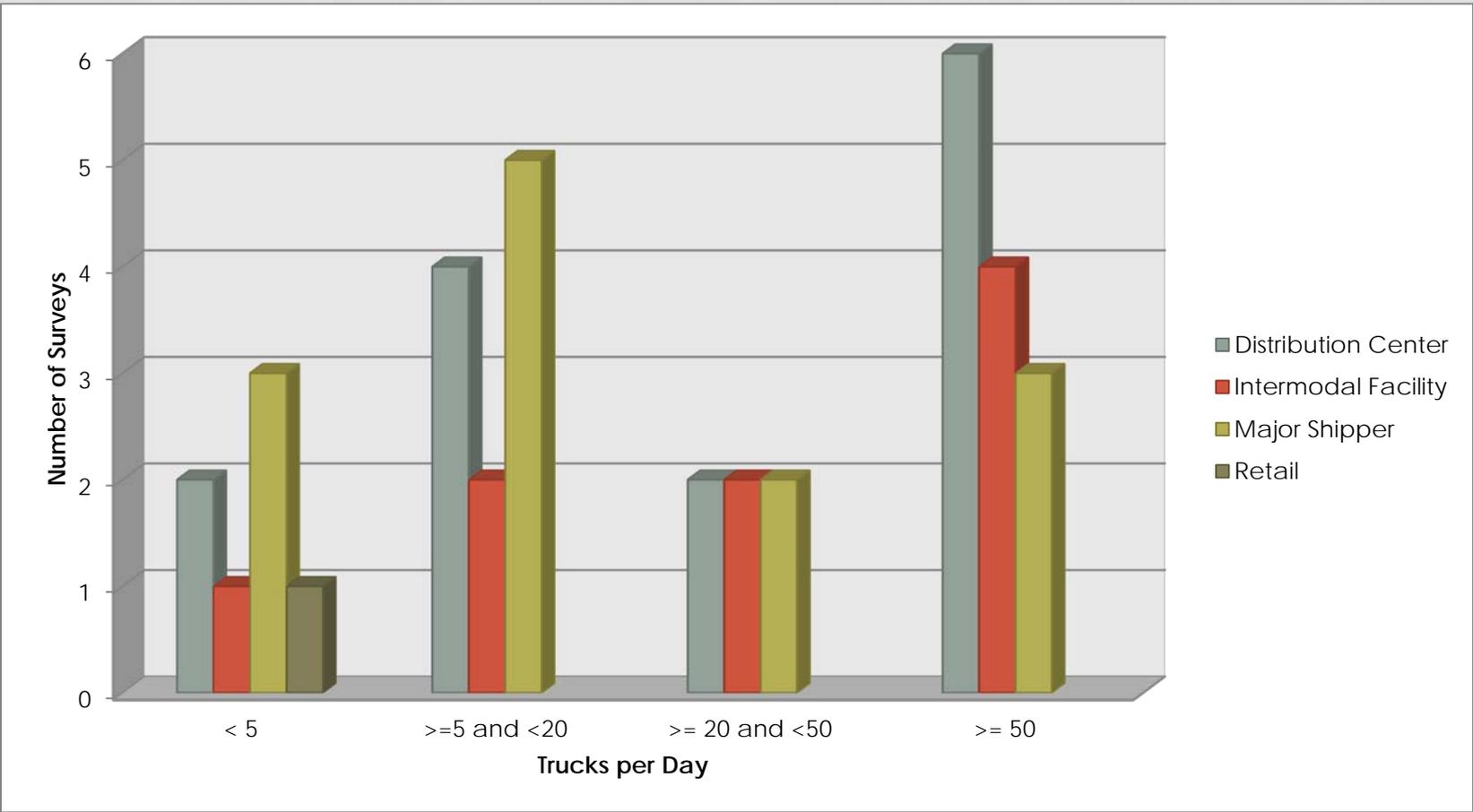
SURVEY RESULTS - TRIAD REGION

DISTRIBUTION BY TYPE AND TRUCKS PER DAY



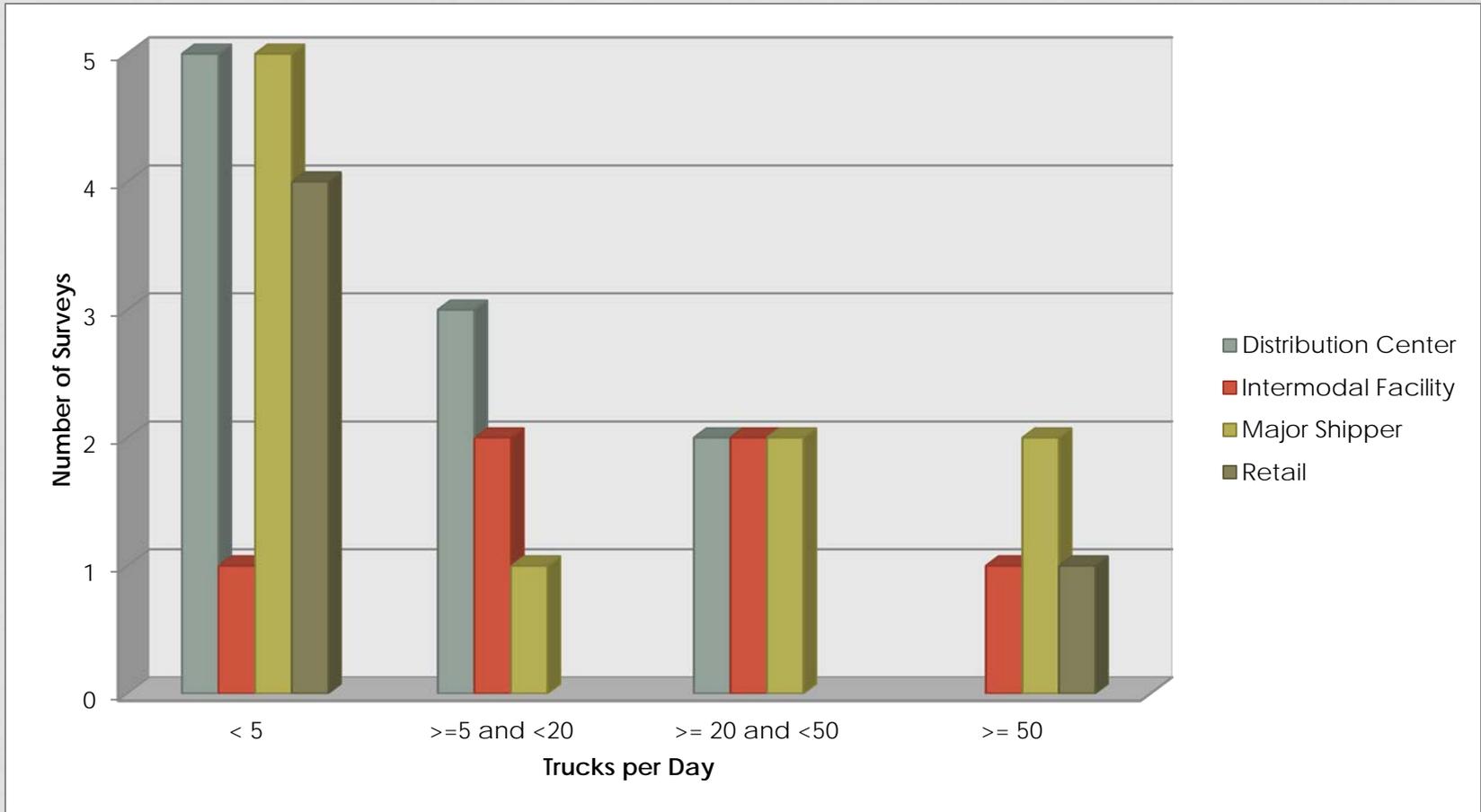
SURVEY RESULTS – BGMPO

DISTRIBUTION BY TYPE AND TRUCKS PER DAY



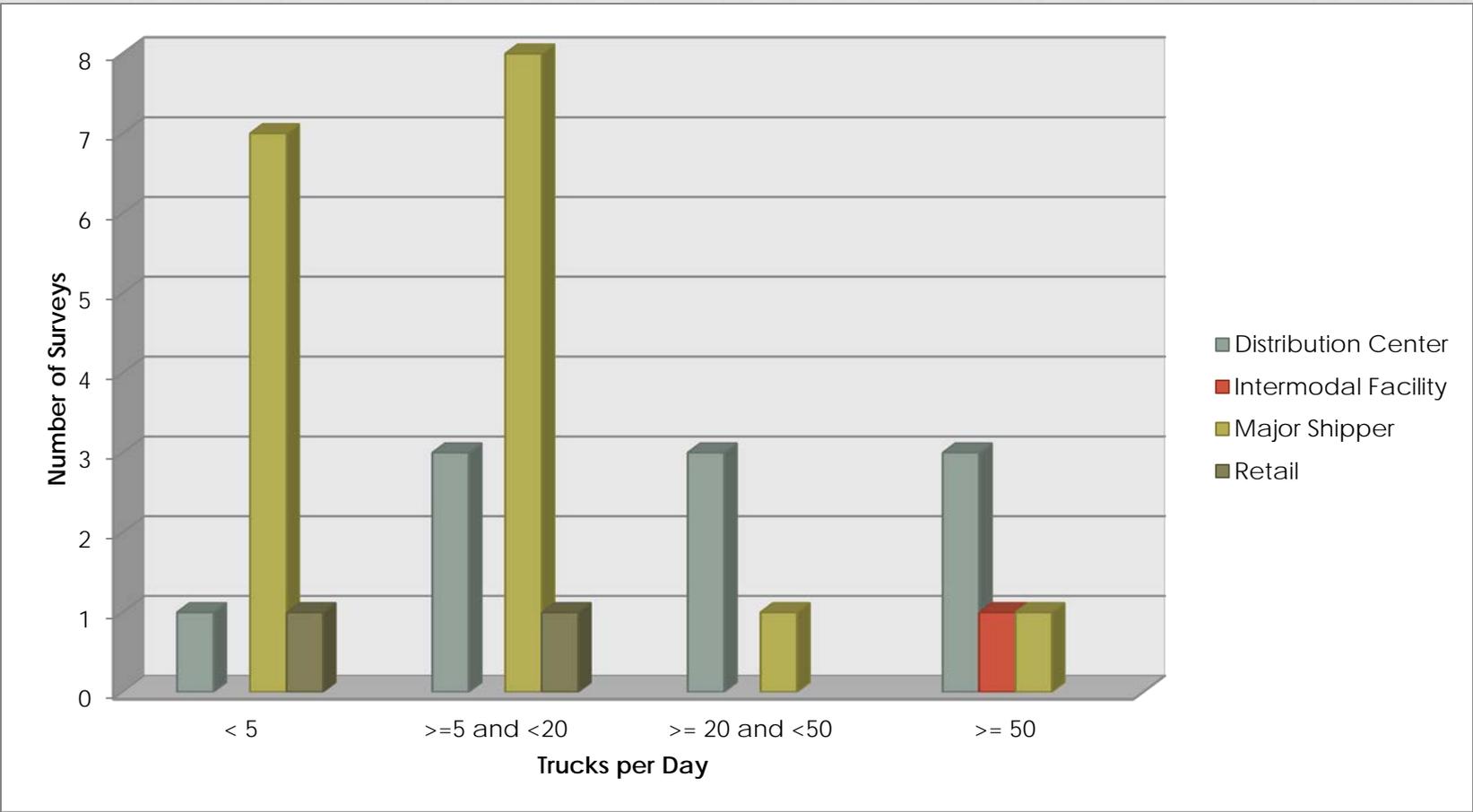
SURVEY RESULTS - GMPO

DISTRIBUTION BY TYPE AND TRUCKS PER DAY



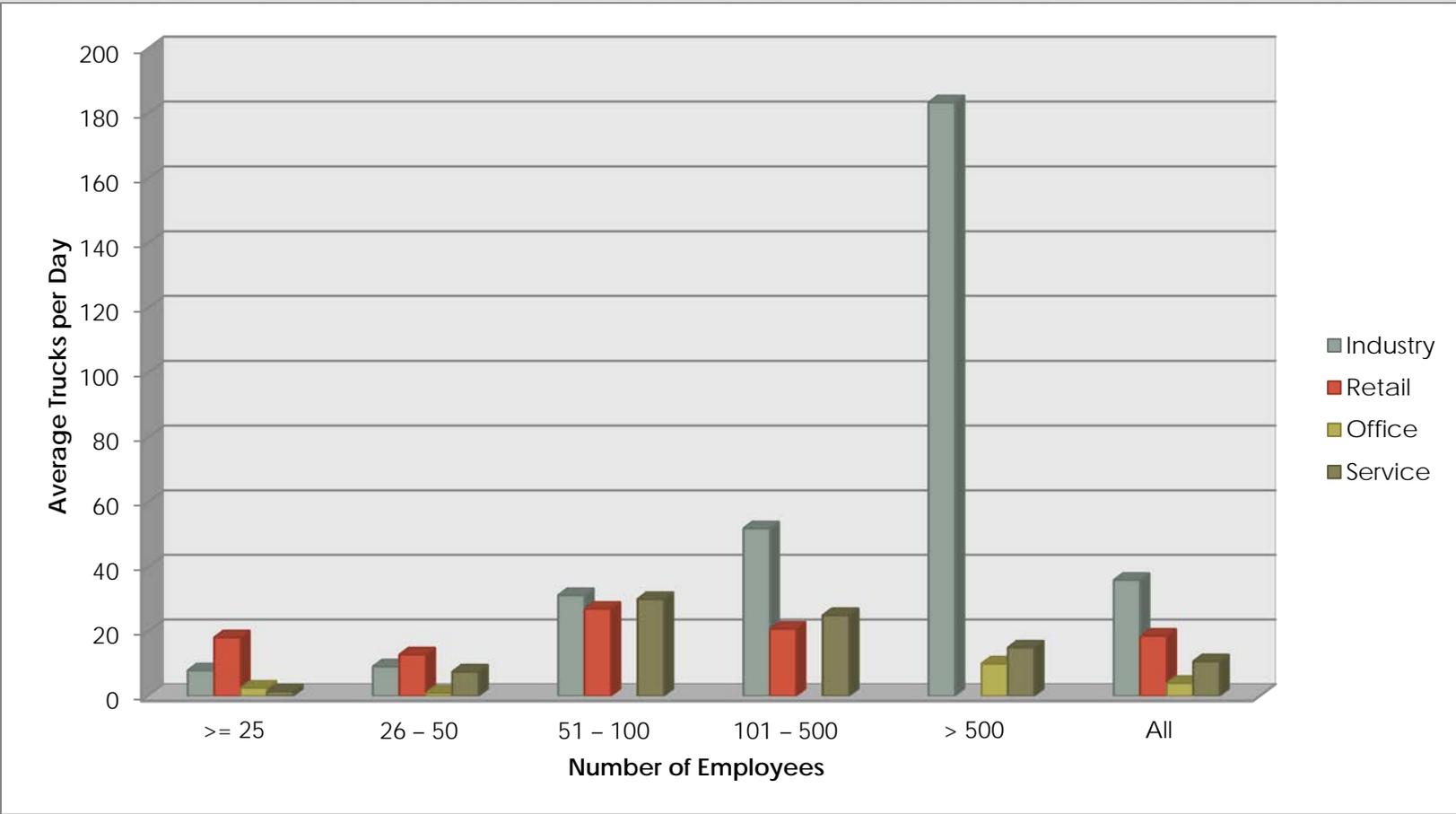
SURVEY RESULTS - WSMPO

DISTRIBUTION BY TYPE AND TRUCKS PER DAY



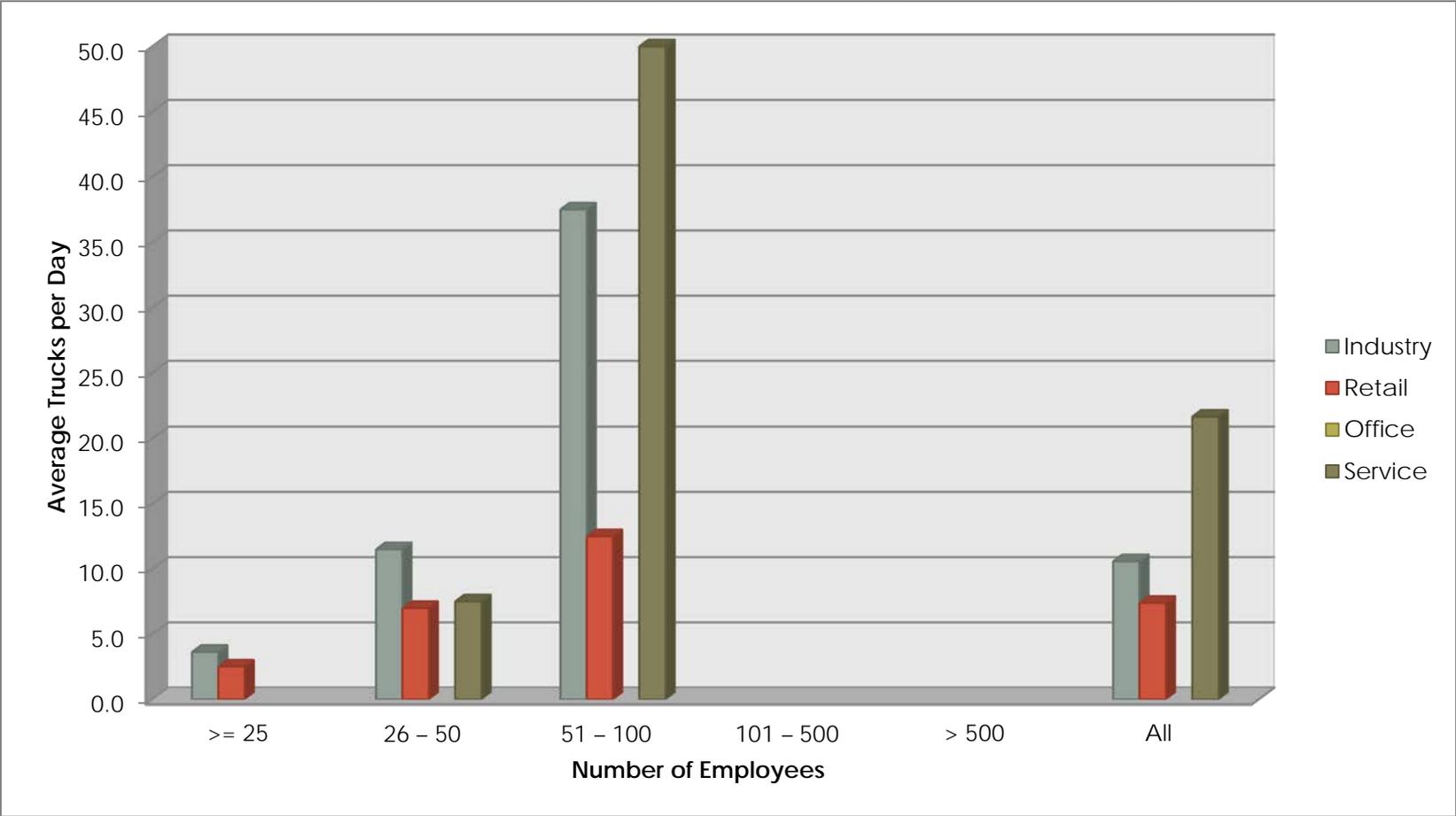
SURVEY RESULTS - HPMPO

DISTRIBUTION BY TYPE AND TRUCKS PER DAY



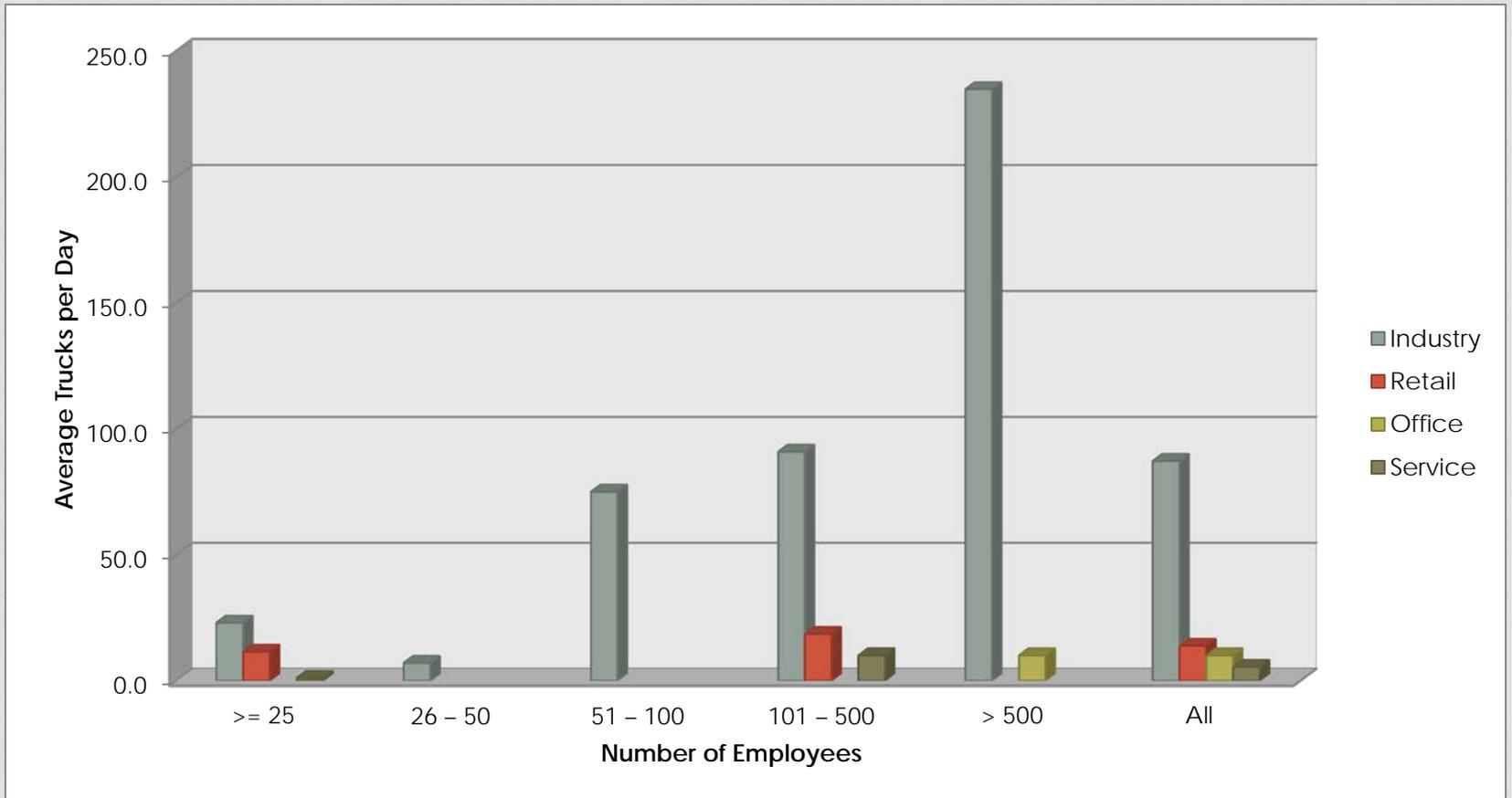
SURVEY ANALYSIS - TRIAD REGION

AVERAGE TRUCKS/DAY BY TYPE AND # OF EMPLOYEES



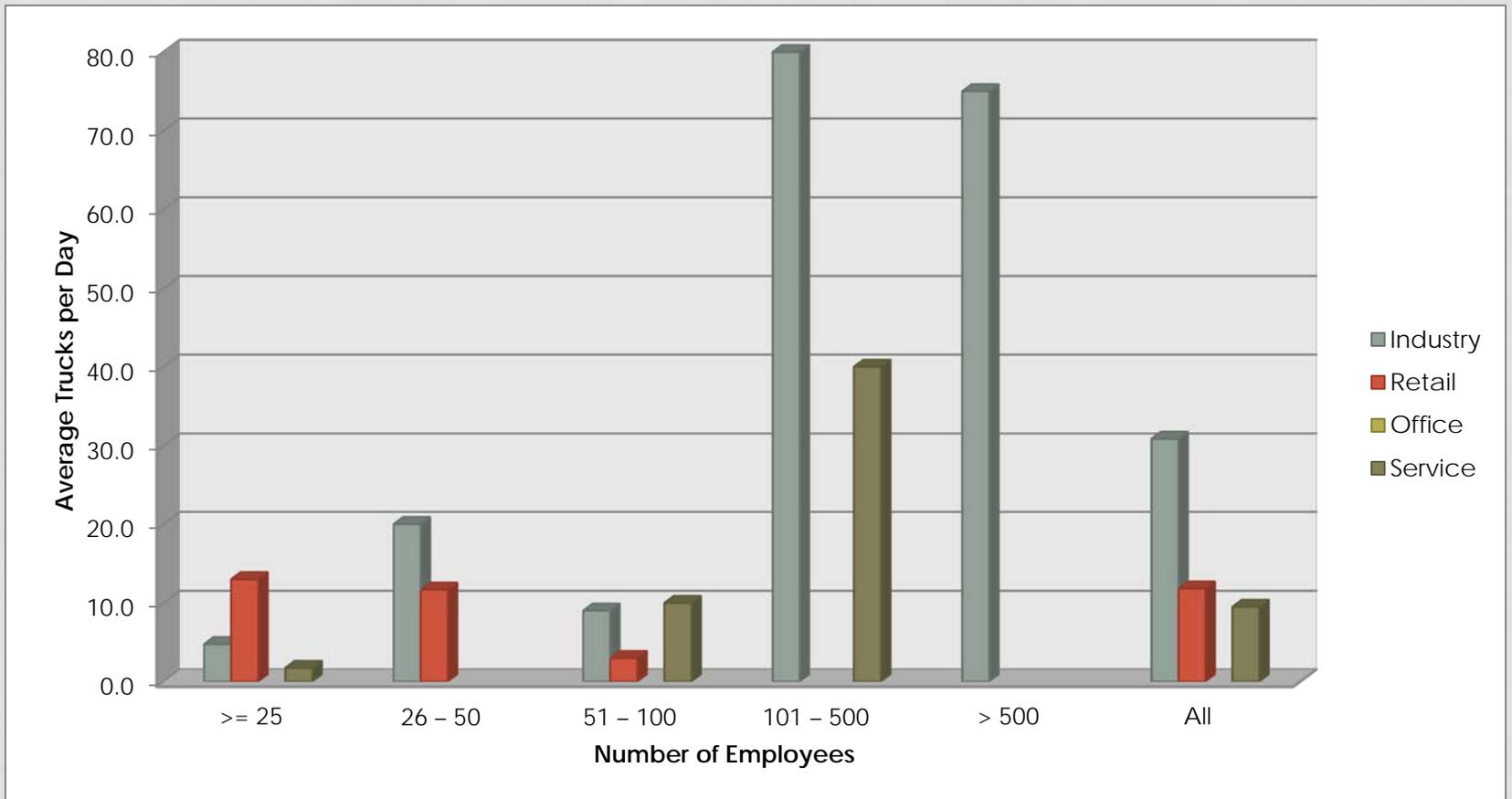
SURVEY ANALYSIS - BGMPO

AVERAGE TRUCKS/DAY BY TYPE AND # OF EMPLOYEES



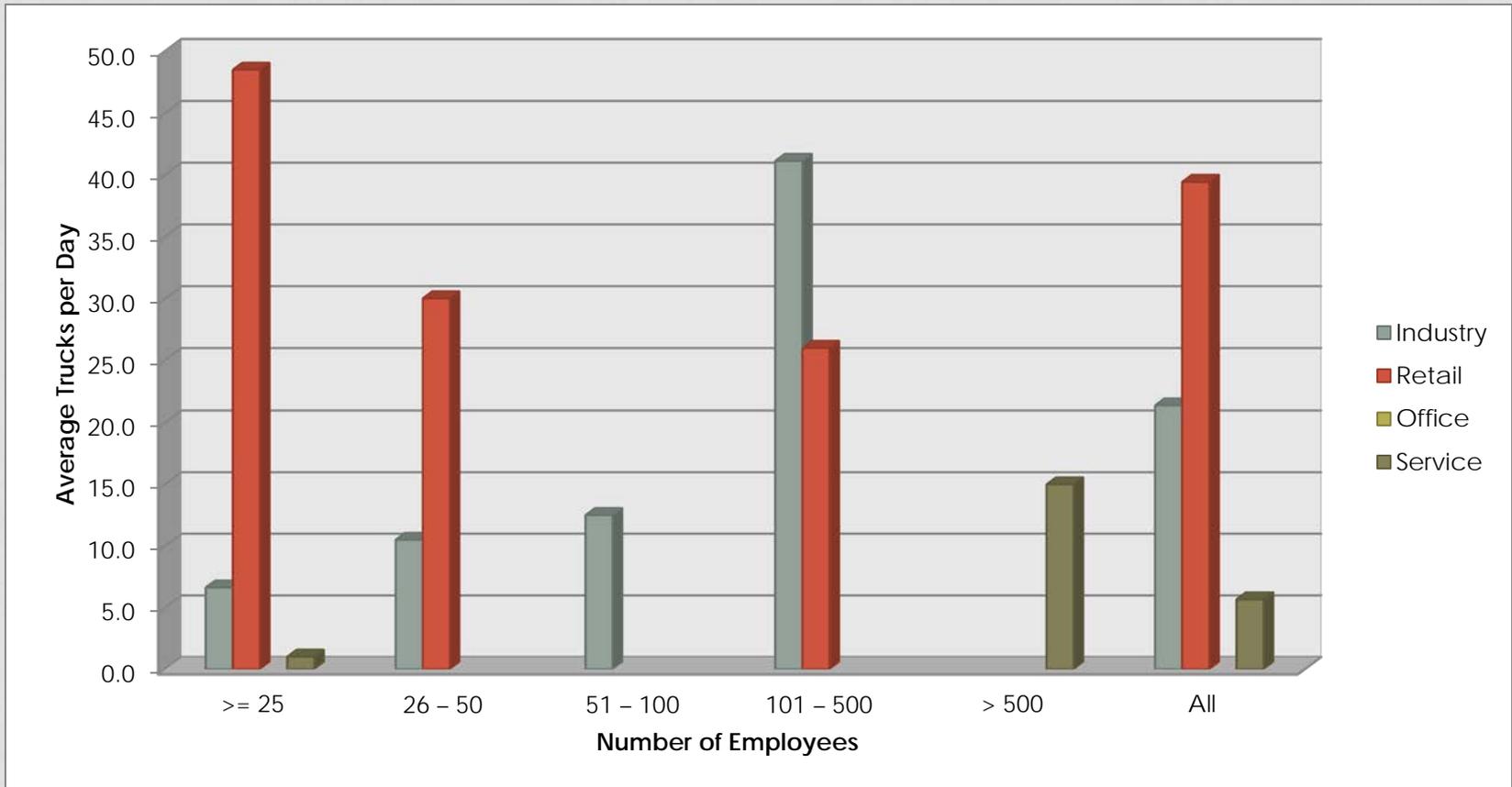
SURVEY ANALYSIS - GMPO

AVERAGE TRUCKS/DAY BY TYPE AND # OF EMPLOYEES



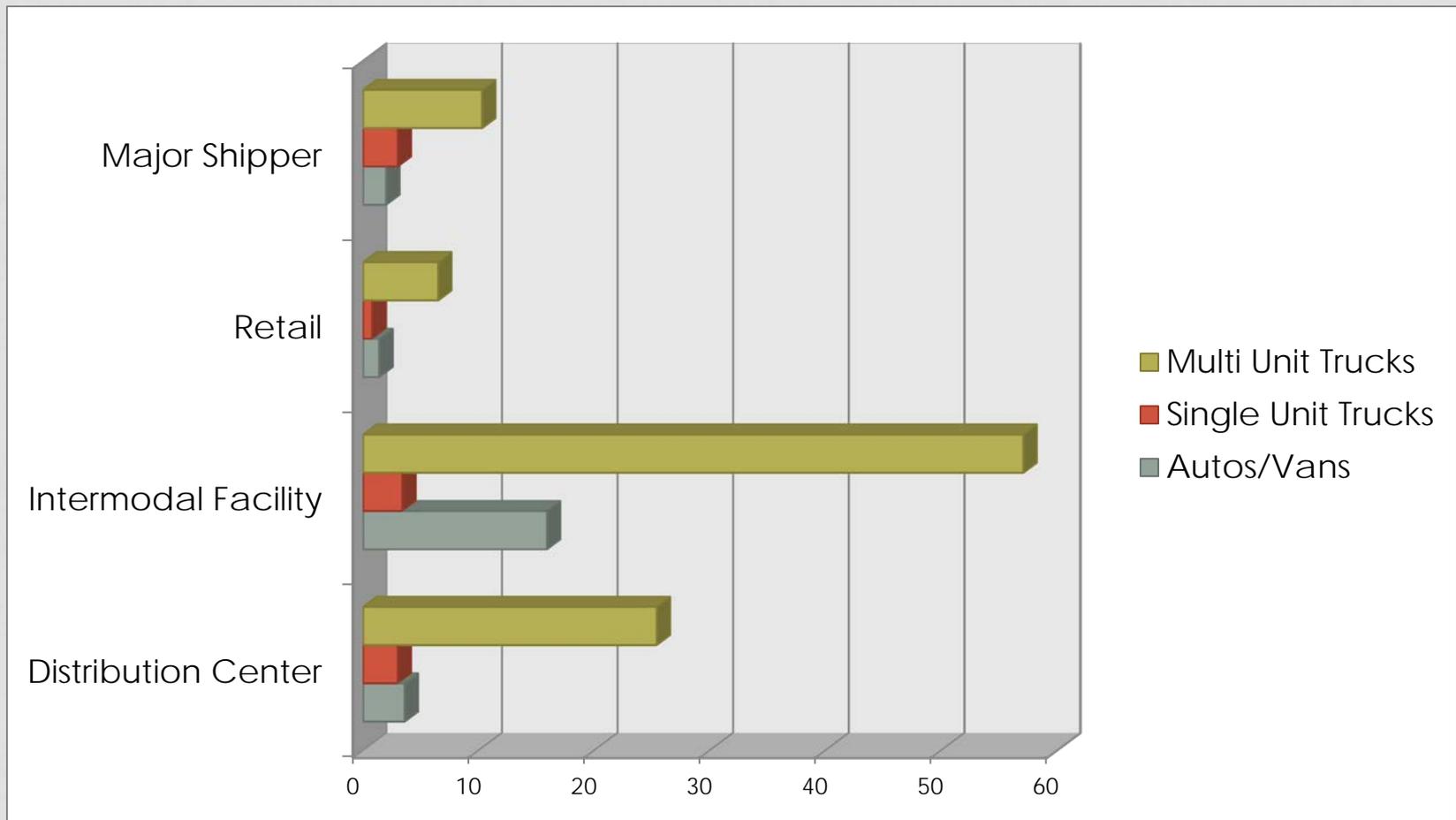
SURVEY ANALYSIS - WSMPO

AVERAGE TRUCKS/DAY BY TYPE AND # OF EMPLOYEES



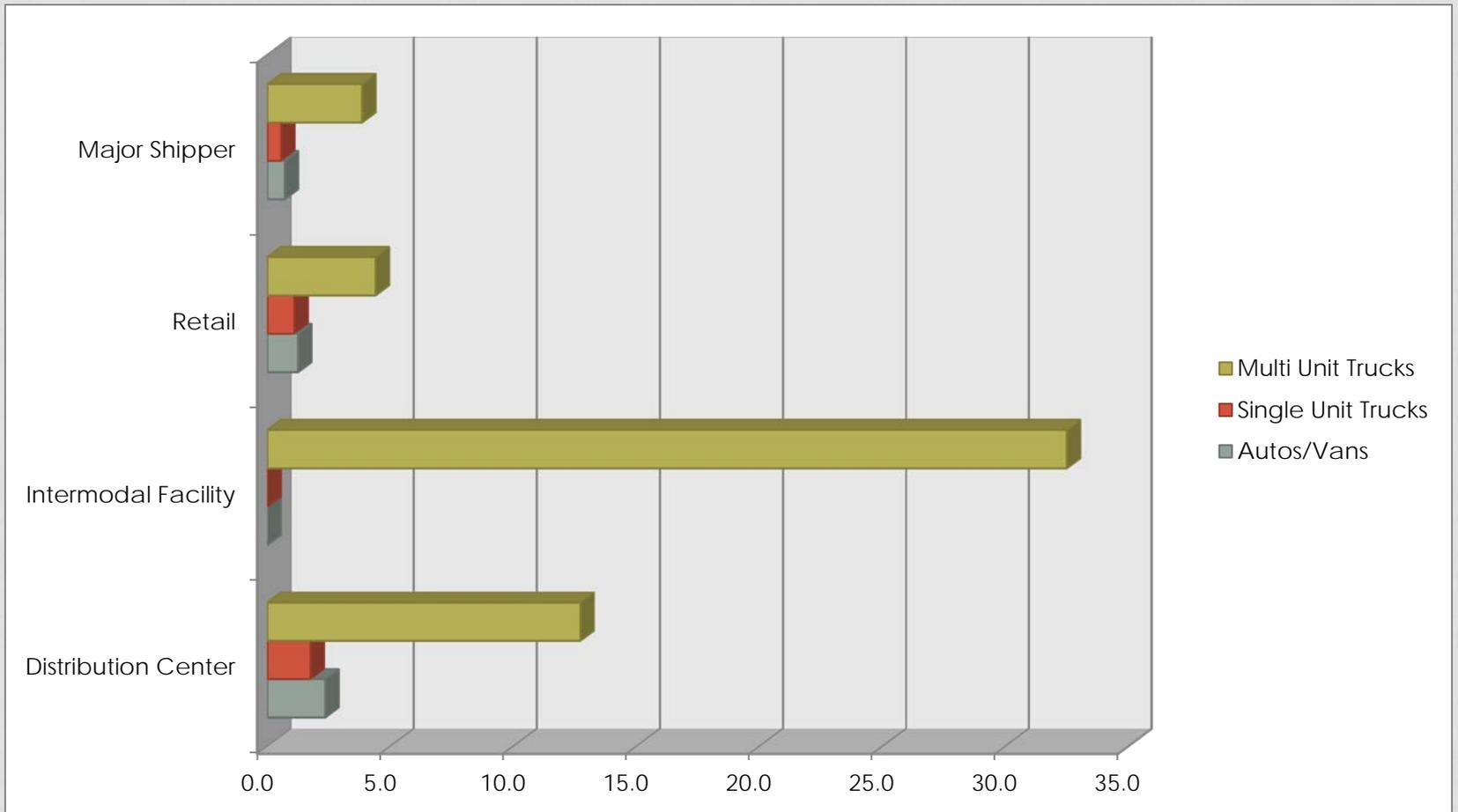
SURVEY ANALYSIS - HPMPO

AVERAGE TRUCKS/DAY BY TYPE AND # OF EMPLOYEES



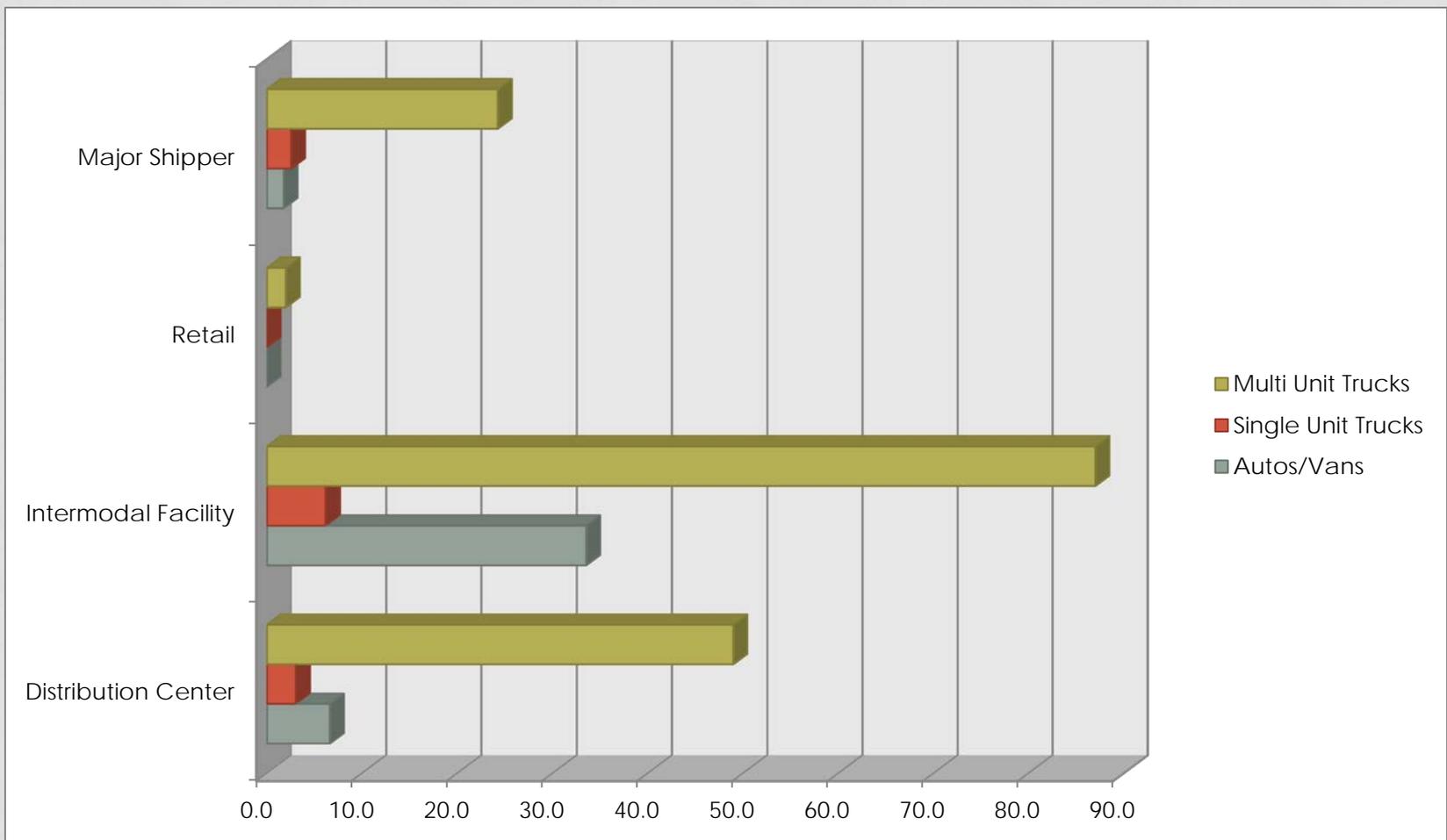
SURVEY ANALYSIS - TRIAD REGION

AVERAGE TRUCKS/DAY BY CLASSIFICATION AND TRUCK TYPE



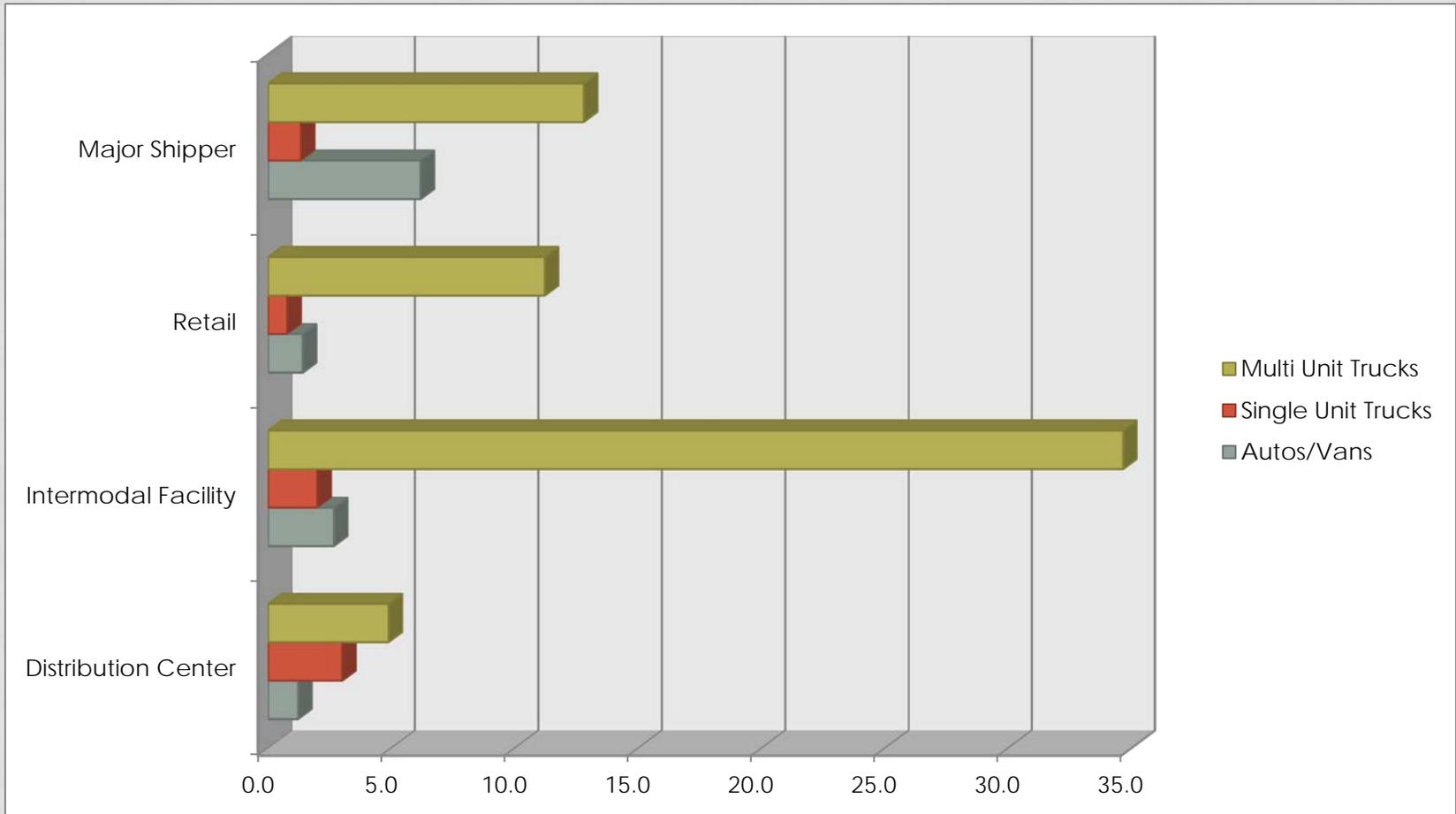
SURVEY ANALYSIS - BGMPO

AVERAGE TRUCKS/DAY BY CLASSIFICATION AND TRUCK TYPE



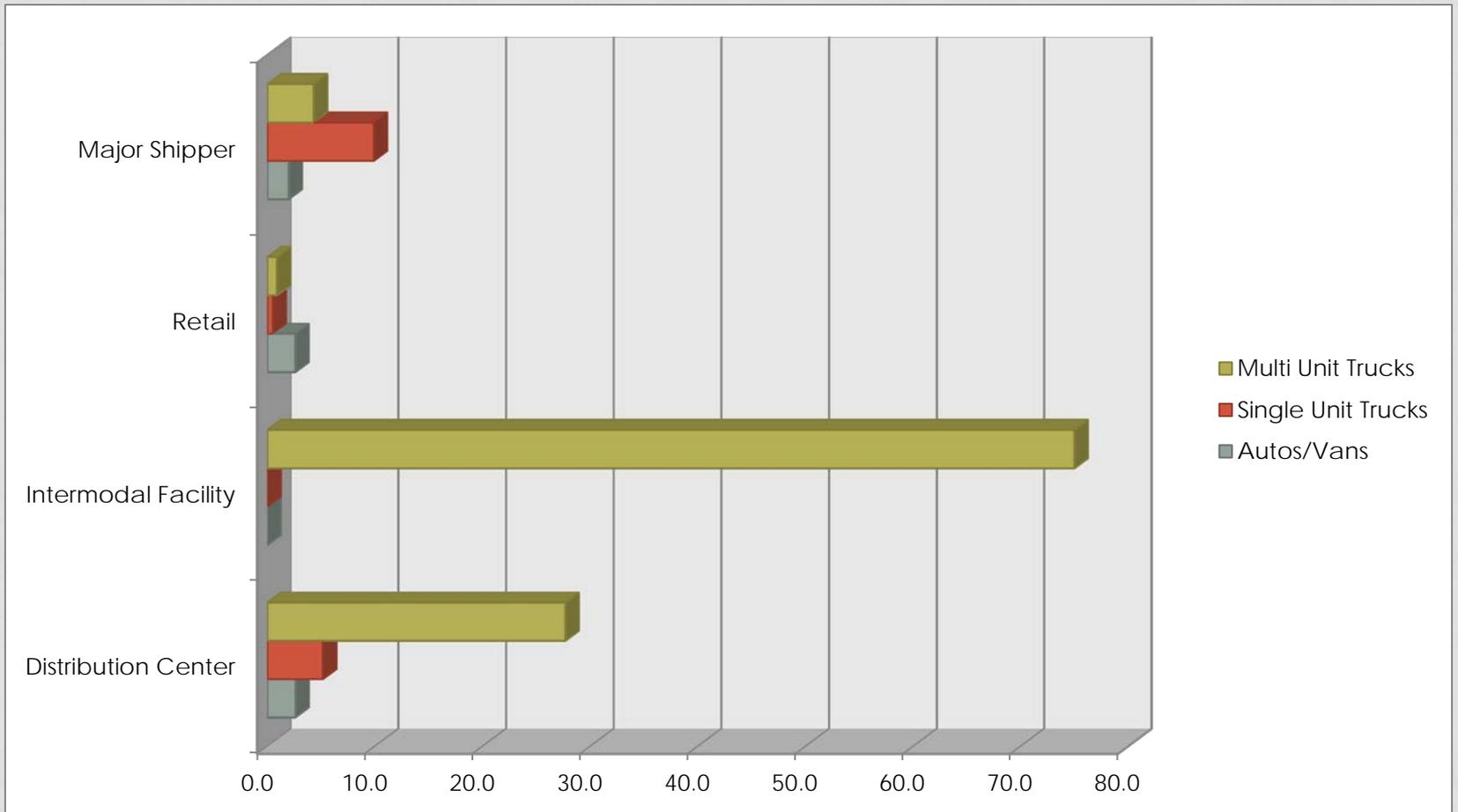
SURVEY ANALYSIS - GMPO

AVERAGE TRUCKS/DAY BY CLASSIFICATION AND TRUCK TYPE



SURVEY ANALYSIS - WSMPO

AVERAGE TRUCKS/DAY BY CLASSIFICATION AND TRUCK TYPE



SURVEY ANALYSIS - HPMPO

AVERAGE TRUCKS/DAY BY CLASSIFICATION AND TRUCK TYPE

PROJECT FINDINGS

EXISTING PATTERNS

- Highest concentration of freight facilities in Guildford County followed by Forsyth and Alamance
- By Classification:
 - Major Shipper (~55%)
 - Distribution Centers (~21%)
 - Retail (~16%)
 - Intermodal (~8%) – highest average number of truck trips
- Strong relationships:
 - Building square footage and average truck trips
 - Number of truck bays and average truck trips
- Freight facilities tend to cluster

LONG TERM FREIGHT PLANNING

- Increased freight flows as population increases:
 - NC population to increase by 3 million in next 25 years
 - NC freight traffic in 2040 will be 120 million tons higher
- Economic competitiveness:
 - Freight supporting policies
 - Investments in infrastructure
- Triad Freight Study helps address critical freight related questions:
 - Where are the highest concentrations of freight generators
 - What types of vehicles do they use
 - How many trucks visit the site on an average day

TAKE HOME MESSAGE

What we have

**Freight
focused
information
system**

Big picture benefit

Used to inform
land use planning,
transportation
planning, and
project
prioritization

Specific applications

Investigate freight
clusters
Estimate truck trips
Project prioritization
Inform land use and
rezoning decisions
Identify
characteristics
supporting freight
clusters

What comes next

Policy scenario
analysis
Mode choice
Understanding of
dynamics between
congestion and
freight
Impacts of land use
decisions

QUESTIONS

