Transportation Industry
Job Demand and Skills Data
and Implications for Workforce Development
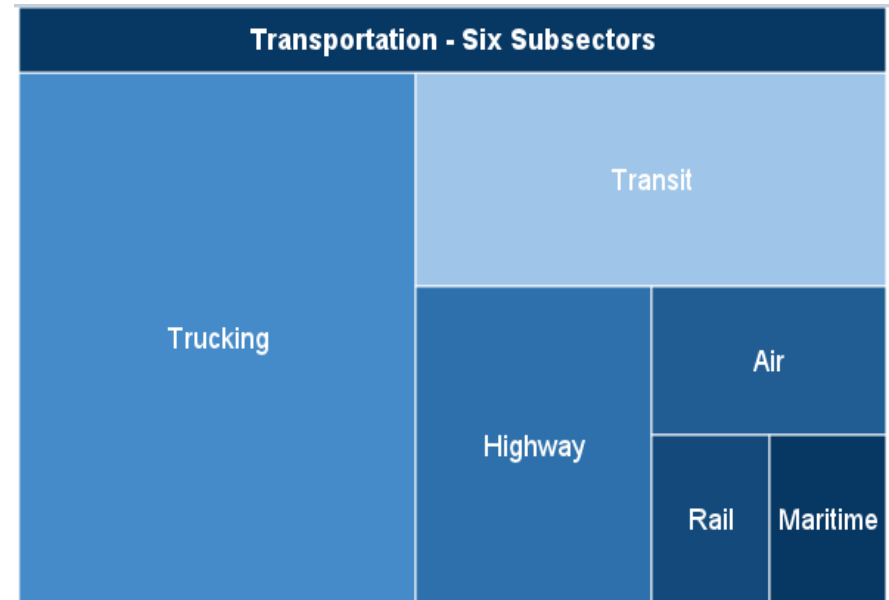
Xinge Wang
Transportation Learning Center
April 8, 2015

- **Trucking Transportation**
- **Transit and Ground Passenger Transportation**
- **Air Transportation**
- **Highway Construction and Maintenance**
- **Rail Transportation**
- **Maritime Transportation**

Transportation - Six Subsectors

Trucking

Transit

Highway

Air

Rail

Maritime

- **Current industry employment and demographics**
- **Projected industry and occupational job openings**
  - **Net job growth**
  - **Separations (retirement, turnover, and other exits)**
- **Job openings by career area**
- **Top occupations by long-term projections and recent online job postings**
- **Wage and entry requirements of high-demand jobs**
- **Geographic "hot spots"**
- **Labor supply from educational programs**

ADVANCING CAREER AND TECHNICAL EDUCATION IN CAREER PATHWAYS SYSTEMS

Trucking and Transit take up the largest share of transportation's 4 million workers.

Maritime 164k 4%

Rail 273k 7%

Highway 500k 12%

Air 625k 15%

Trucking 1.7M 42%

Transit 817k 20%

4 million + Employed in Transportation
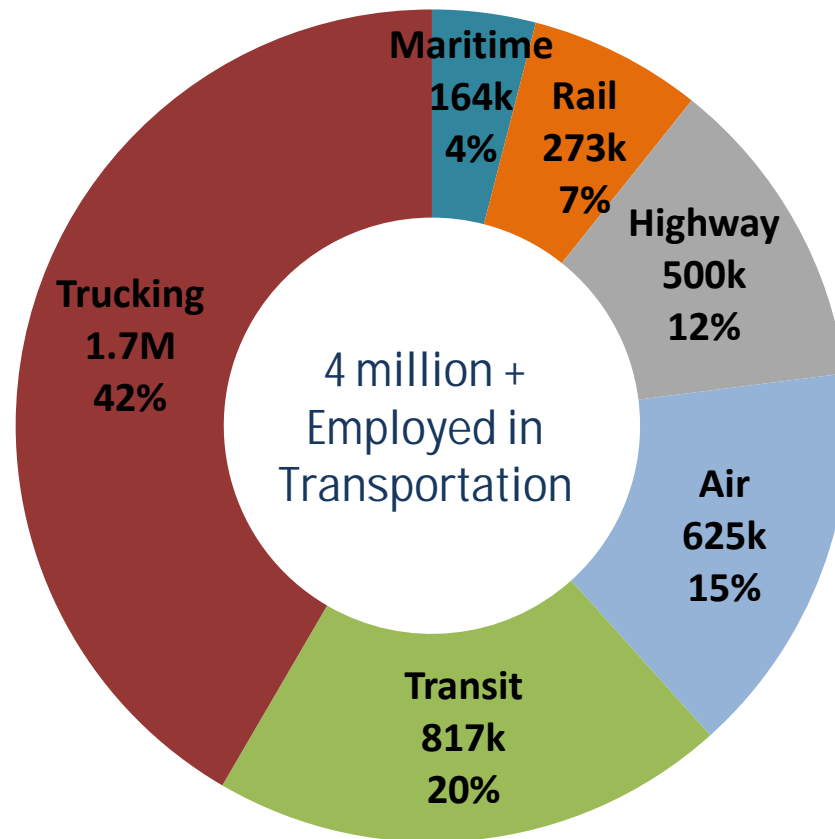
55% of transportation workforce is 45+, 9% more than national average. Transit and Rail have the highest % of older workers.

Legend: ■ <25 ■ 25-44 ■ 45-54 ■ 55-64 ■ >65

Industry	<25	25-44	45-54	55-64	>65
Transportation	5%	40%	29%	19%	5%
Trucking	5%	41%	30%	19%	5%
→ Transit	4%	33%	28%	23%	12%
Air	6%	41%	32%	18%	3%
Highway	8%	44%	28%	16%	4%
→ Rail	5%	38%	27%	26%	3%
Maritime	7%	44%	27%	18%	4%
All US Industries	10%	44%	23%	17%	6%

5
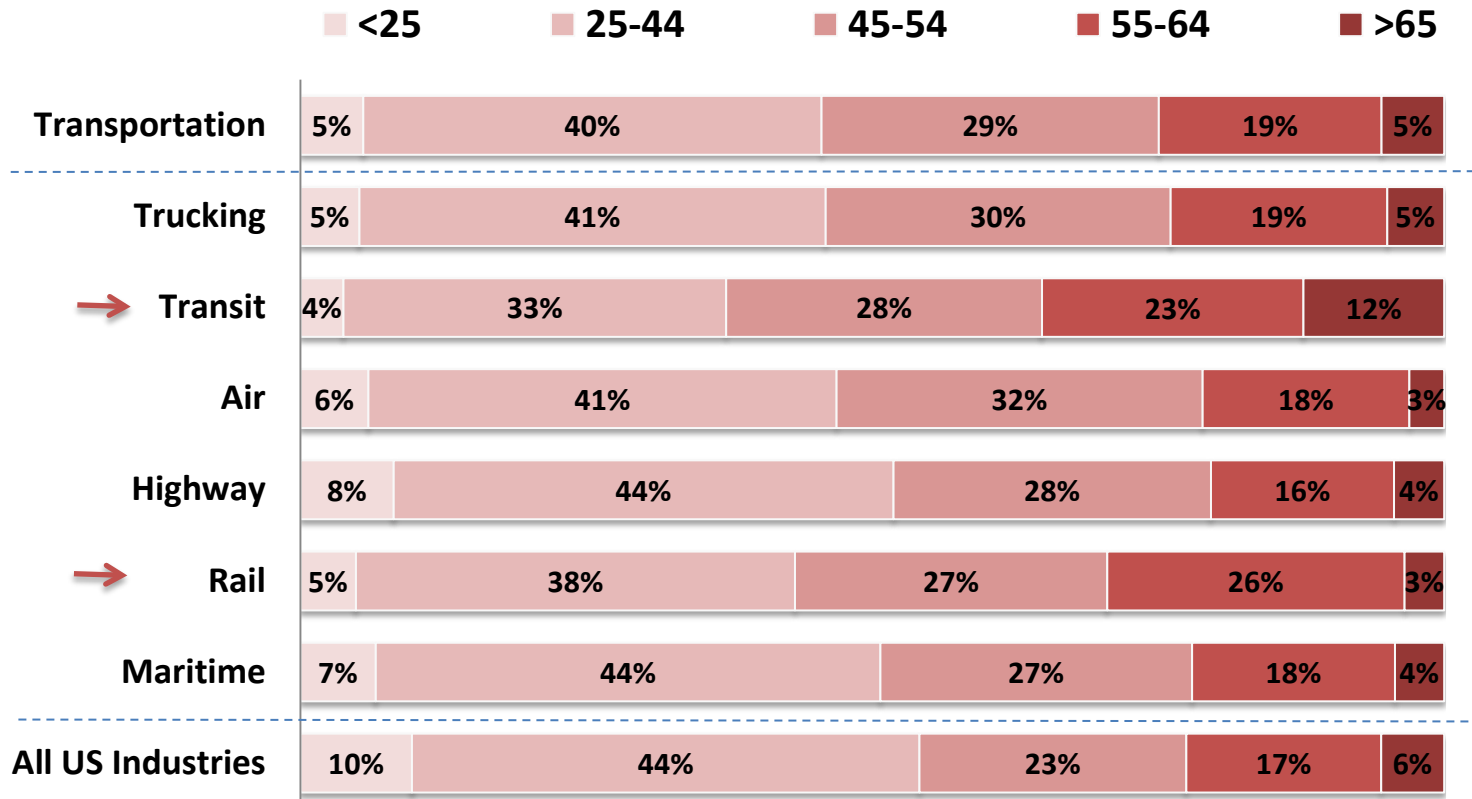
Women are highly under-represented in transportation, particularly Highway, Rail, Trucking and Maritime
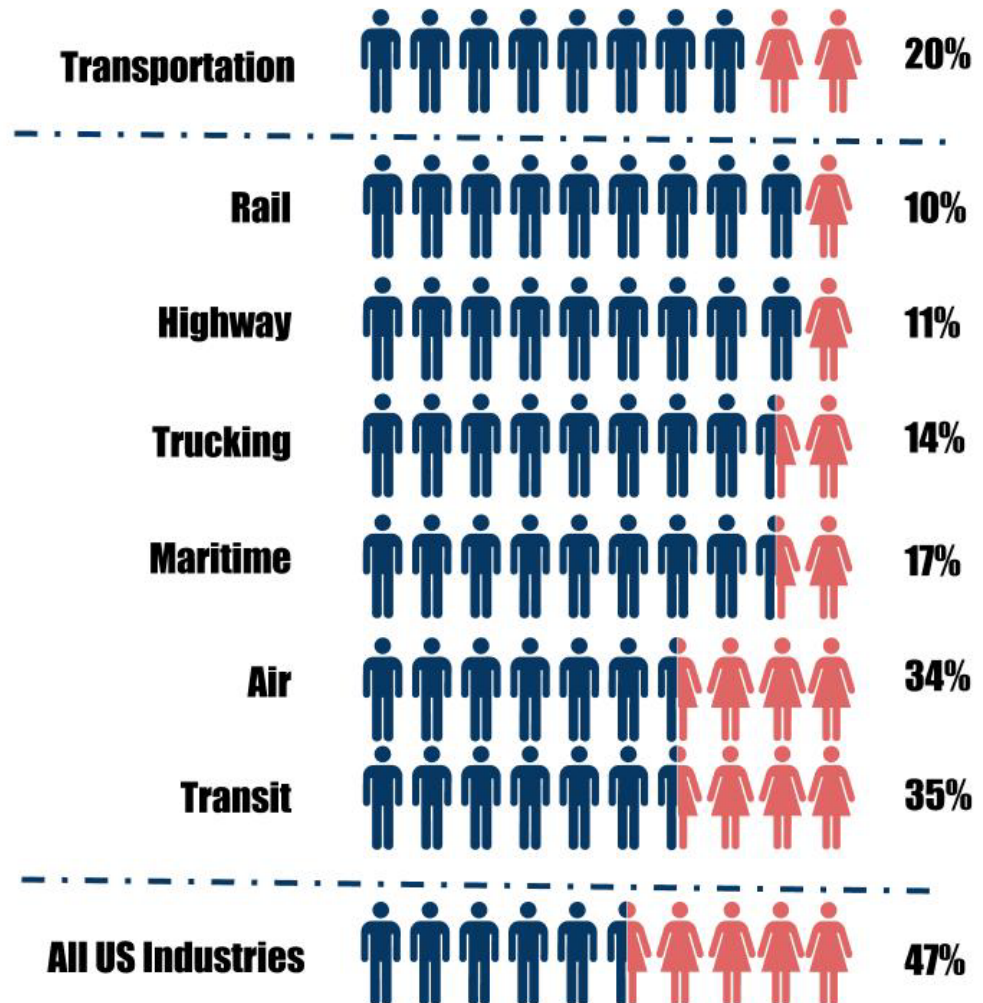
African-Americans and Hispanics underrepresented in higher paid and skilled transportation jobs

■ White ■ Black or African American ■ Hispanic or Latin American ■ Asian

Generally Higher Wages, Skills & Career Potential

Job	White	Black	Hispanic	Asian
Aircraft pilots	88%	3%	5%	4%
Highway maintenance	81%	9%	10%	1%
Bus and truck mechanics	77%	6%	16%	1%
Aircraft mechanics	74%	8%	9%	9%
Truck drivers	64%	15%	19%	2%
Bus drivers	57%	27%	14%	2%
Laborers	56%	18%	23%	3%
Vehicles cleaners	43%	21%	33%	3%
All US Workforce	68%	11%	16%	6%

Generally Lower Wages, Skills & Career Potential

7
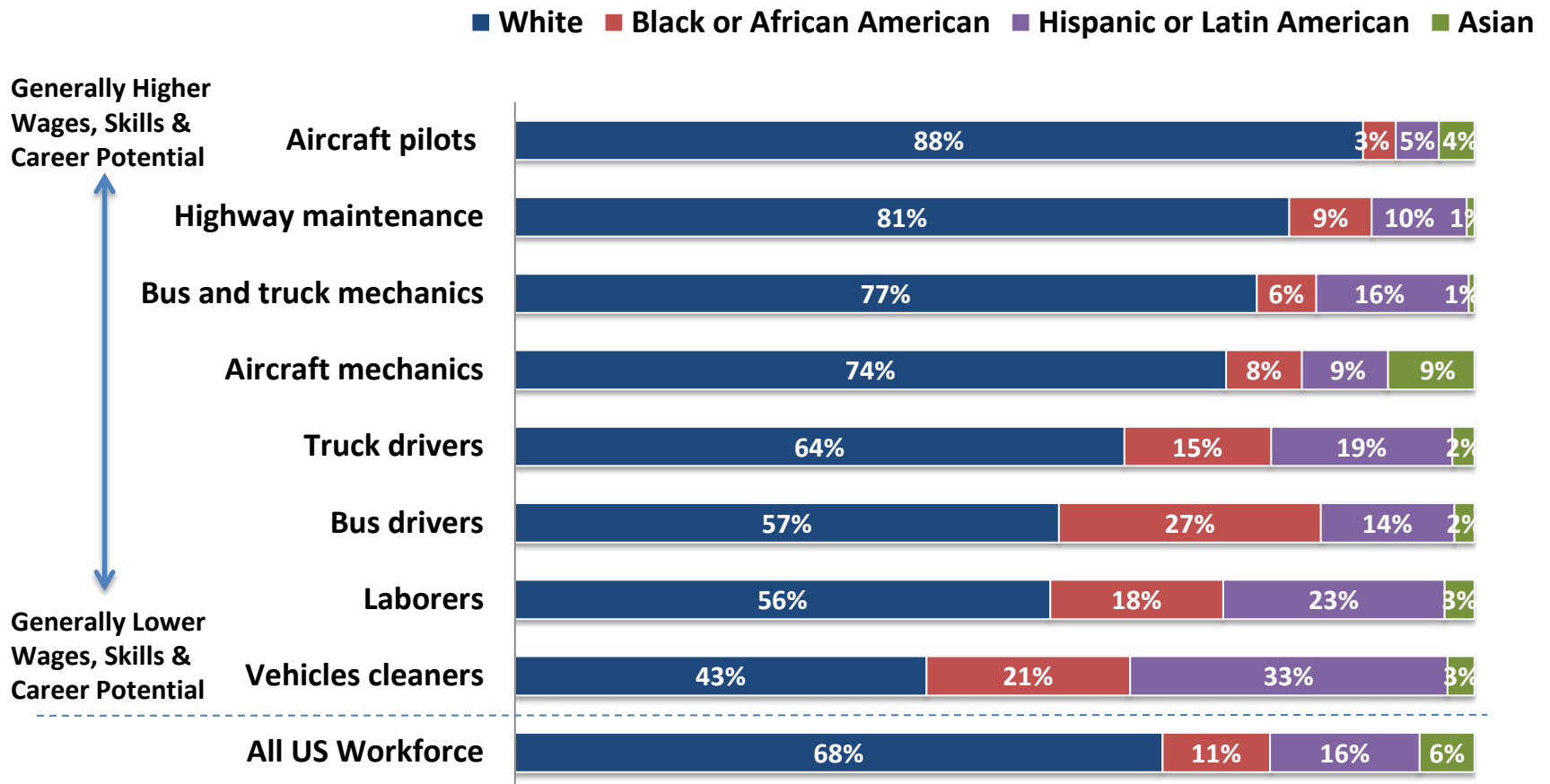
Growth and separations will generate 4.6 million total job openings in ten years, 1.2 times the current workforce

2012-22
Projections

2014

Growth 0.4 M

Actual
Employment

4 Million

Separations

4.2 Million

2012-22 Total
Projected Job
Openings:

4.6 Million
or
1.2 x 2014
Employment
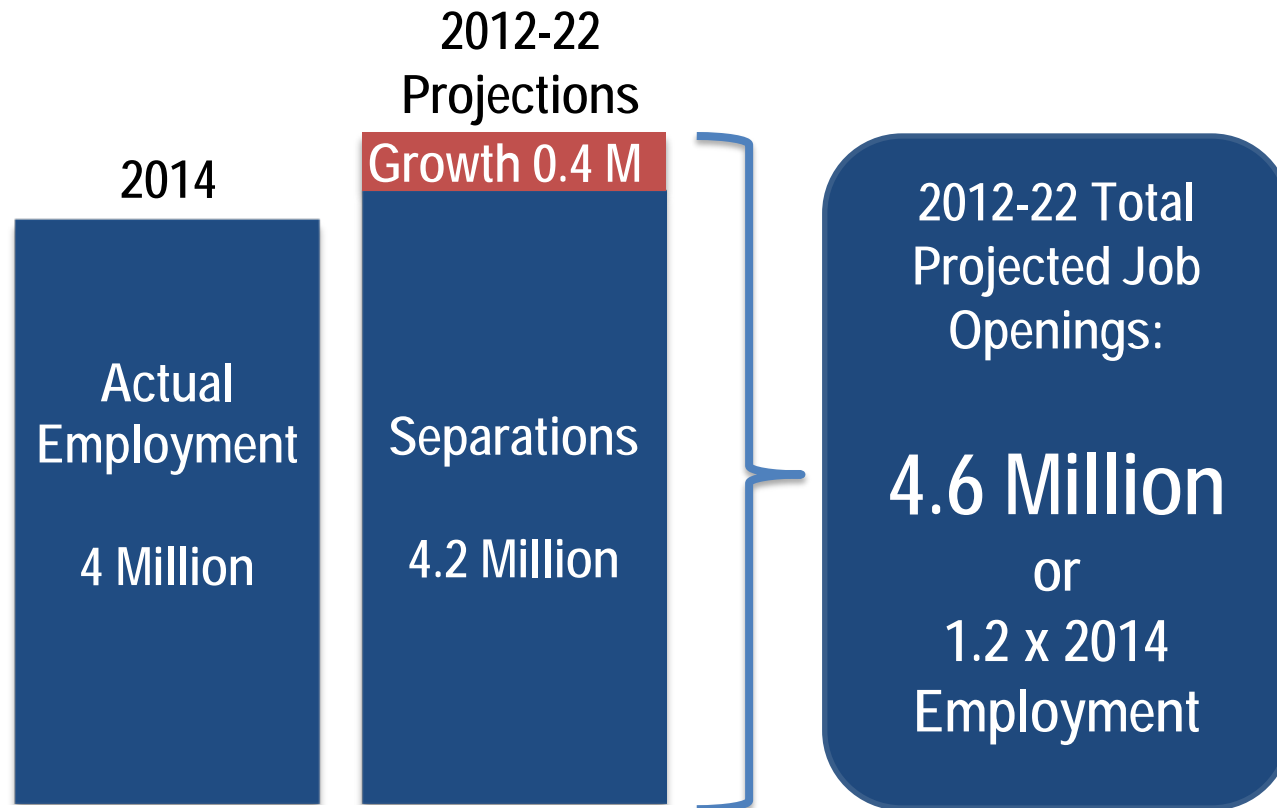
Trucking and Transit will generate the most projected job openings

■ Estimated Job Openings due to Industry Growth

■ Estimated Job Openings due to Separations

Growth & Separations 2 Million

1 M

0.7 M

0.5 M

0.3 M

0.2 M

Trucking   Transit   Air   Highway   Rail   Maritime
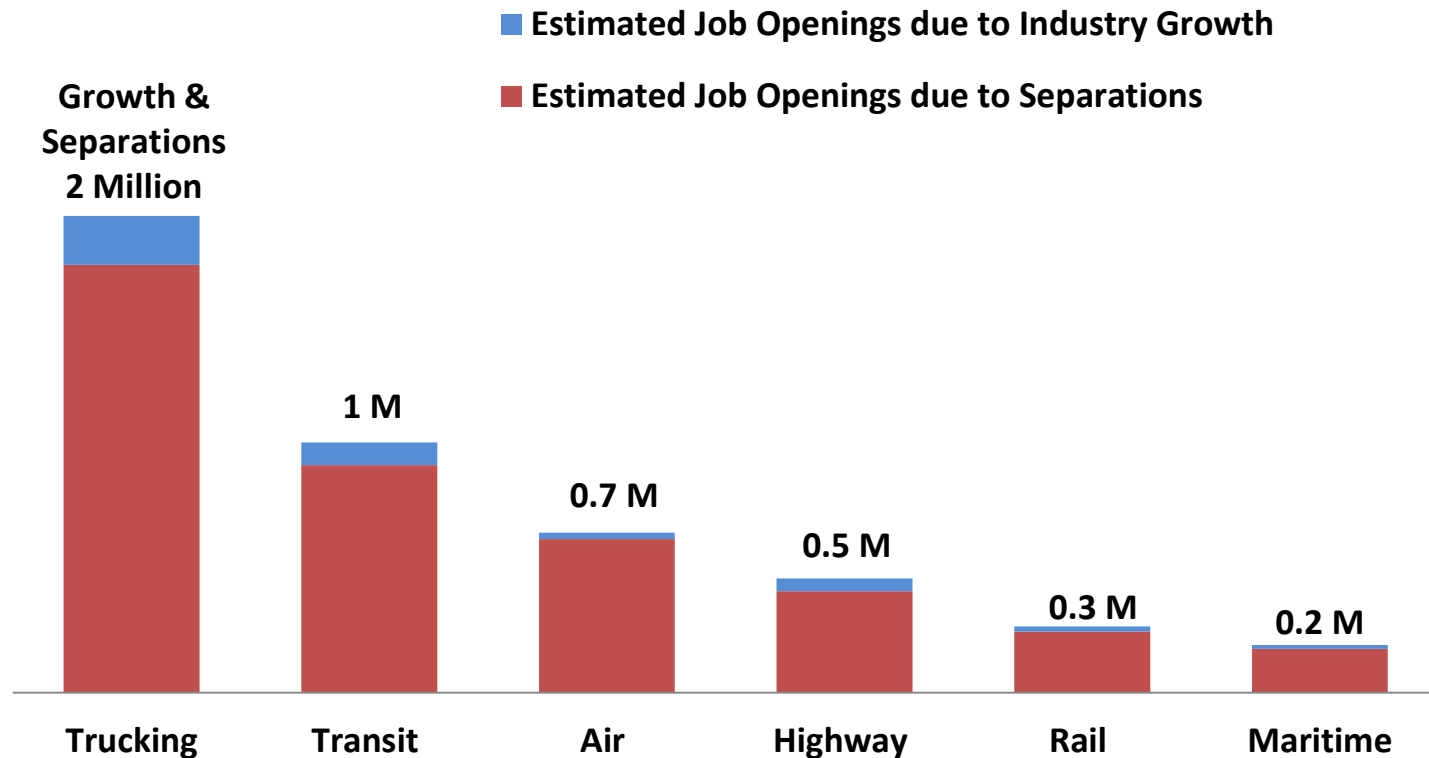
Across the six modes, growth and separations together will create hiring needs 1 to 1.3 times the current workforce size

- ■ Estimated Job Openings due to Industry Growth
- ■ Estimated Job Openings due to Separations

6 Subsector Total	
Growth	11%
Separations	108%
Total Openings	119%

Growth & Separations

	Transit	Maritime	Trucking	Air	Highway	Rail
Total	132%	125%	120%	106%	106%	105%
Growth	12%	11%	12%	4%	12%	8%
Separations	121%	114%	108%	102%	94%	97%

10
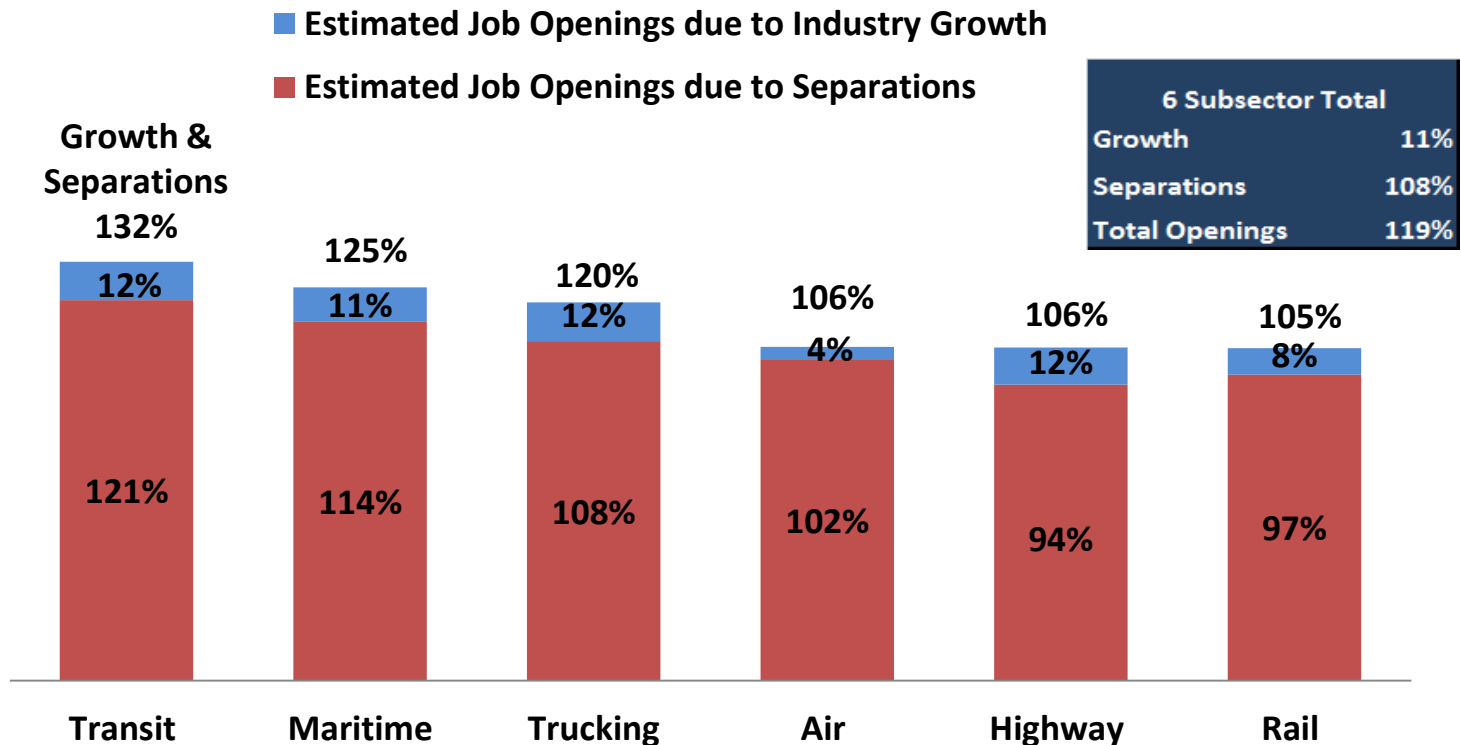
Heavy Truck Drivers, Bus Drivers, Laborers, Taxi Drivers and Highway Maintenance Workers will have the largest projected 2012-22 job openings

Occupation	Projected Total Job Openings
Heavy and Tractor-Trailer Truck Drivers	1,225,280
School or Special Client Bus Drivers	330,700
Laborers and Freight, Stock, and Material Movers	264,210
Transit and Intercity Bus Drivers	200,530
Taxi Drivers and Chauffeurs	194,110
Highway Maintenance Workers	141,010
Flight Attendants	96,210
Construction Laborers	89,990
Bus and Truck Mechanics and Diesel Engine Specialists	86,850

■ Projected Total Job Openings (Growth and Separations)

11

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CAREER AND
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EDUCATION
IN CAREER
PATHWAYS
SYSTEMS

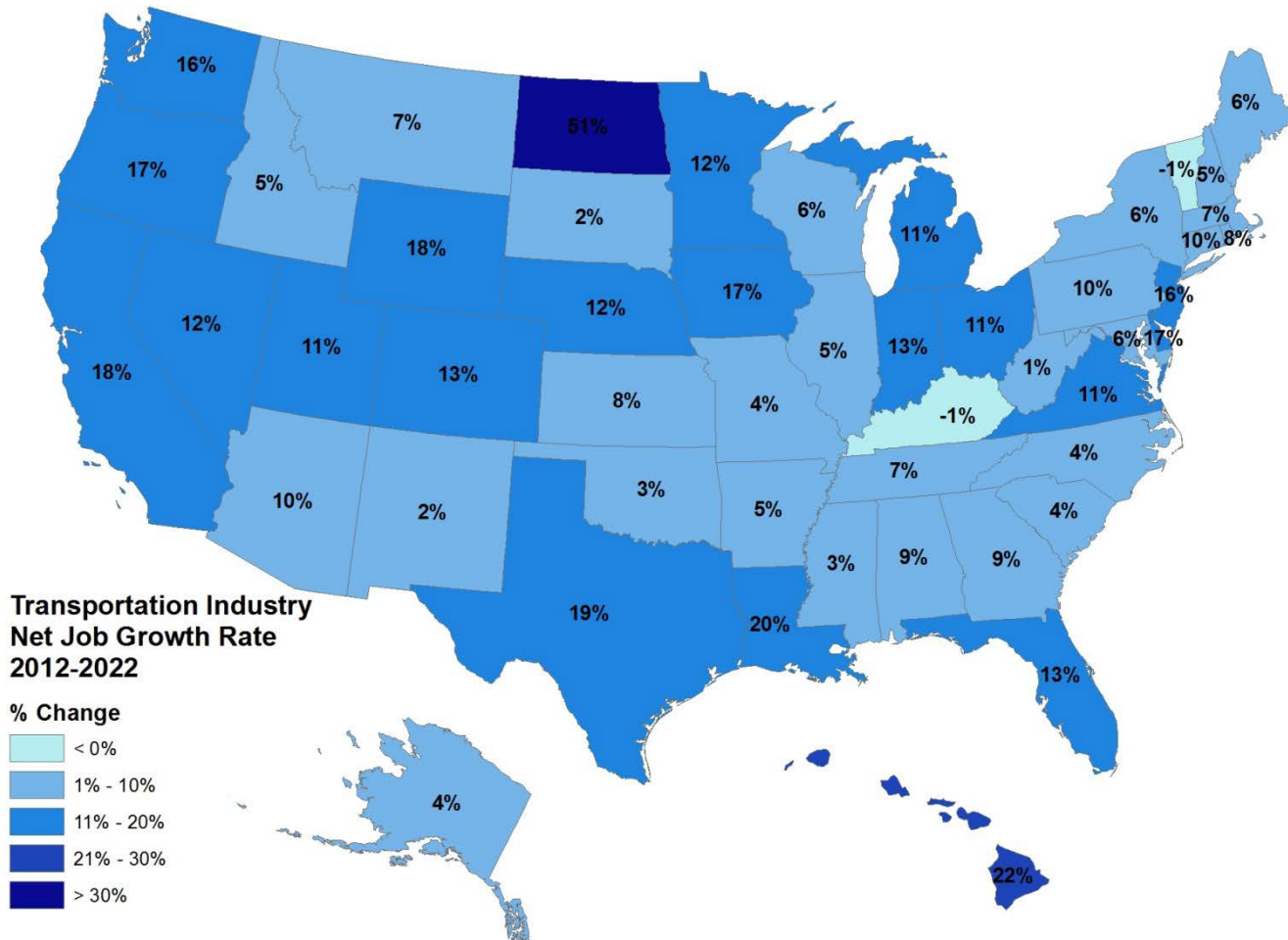# Future transportation job openings will be concentrated in frontline operations and maintenance (92% total)
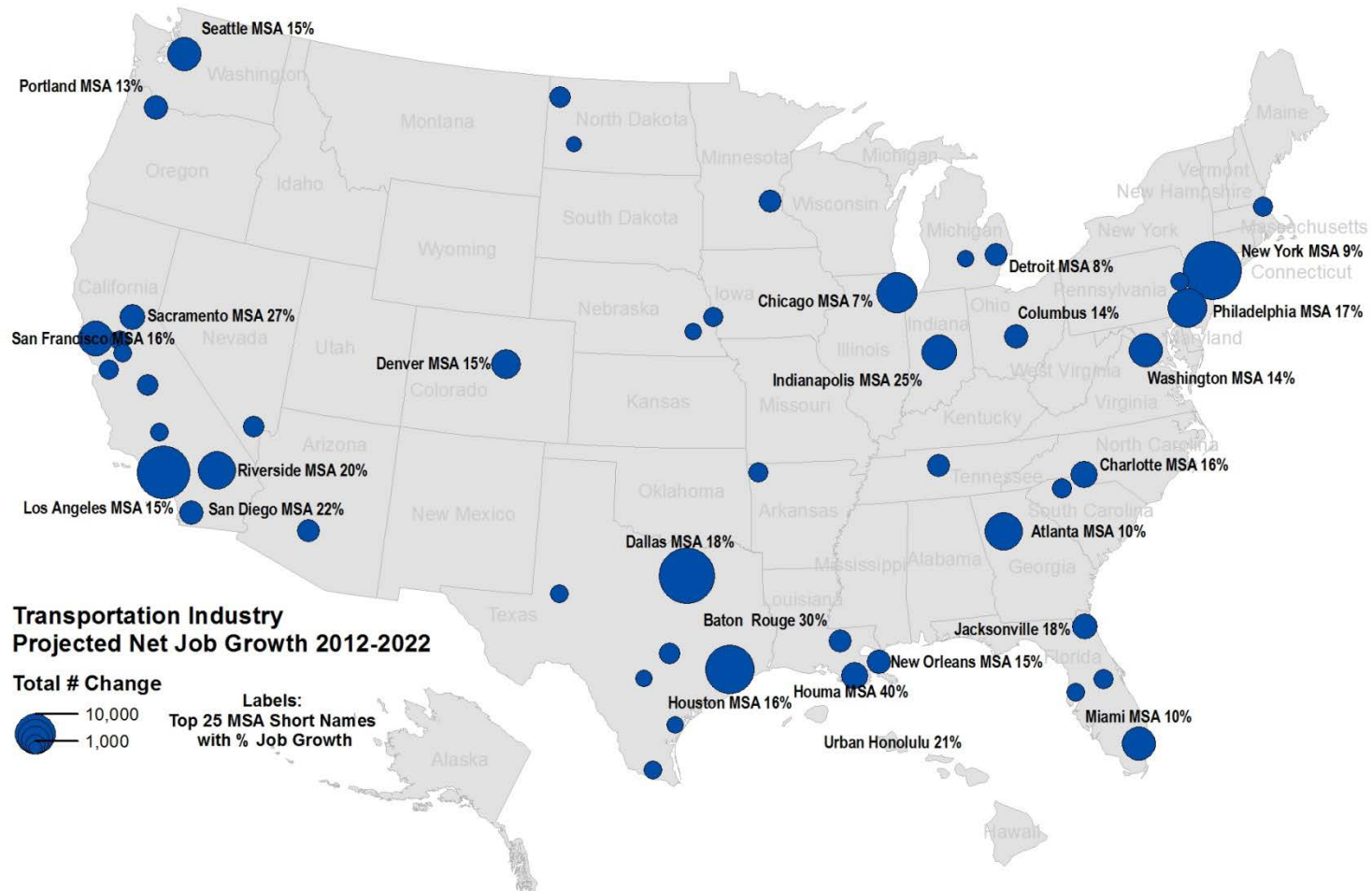

**2012-2022
Transportation Job Openings**

Operations	21
Maintenance	2
Construction	1
Central Services	1

Net transportation job growth in all but two states; North Dakota - highest % growth

Highest number of projected transportation job openings in NYC, Dallas, LA, and Houston

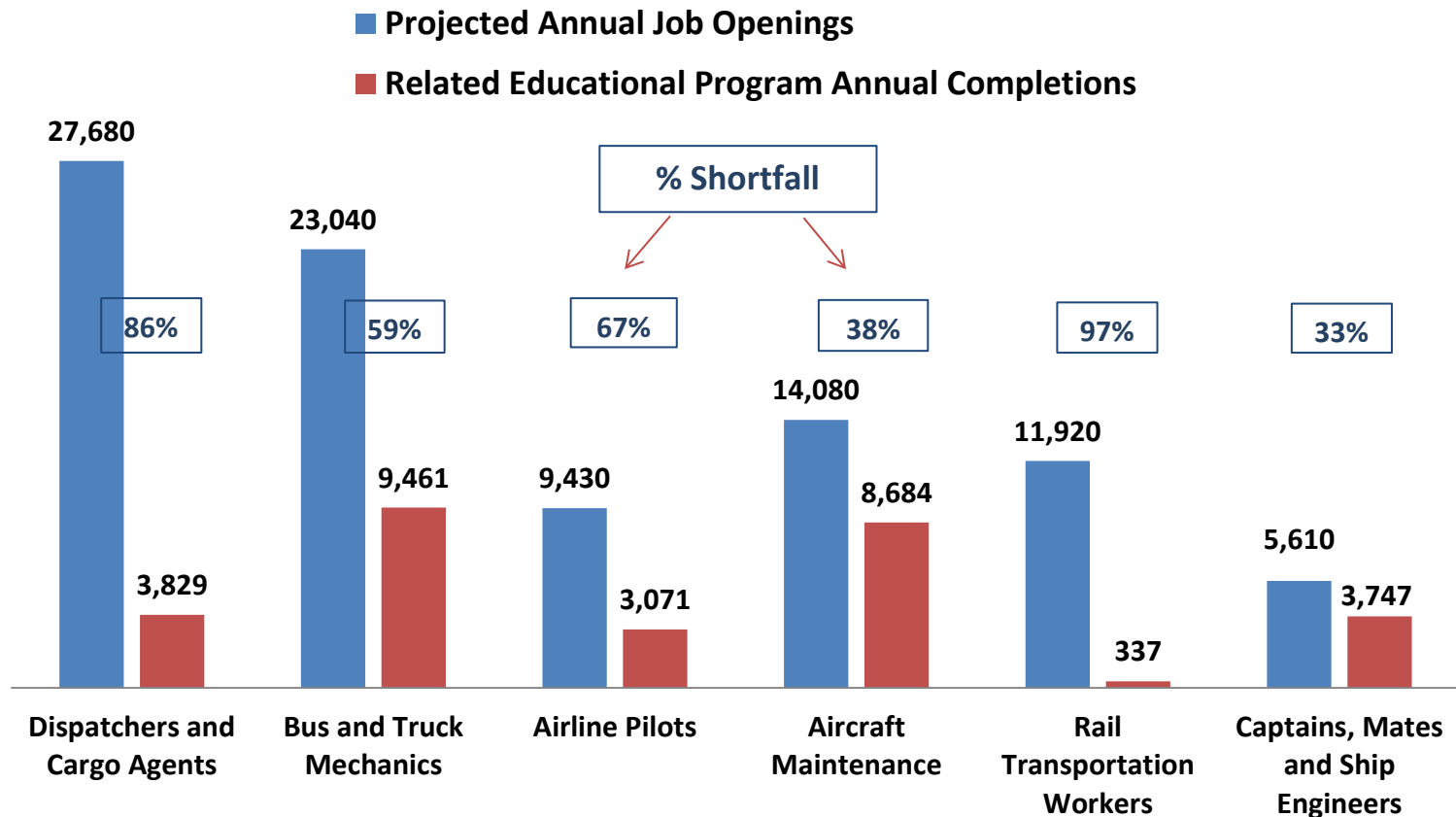**Transportation Industry Projected Net Job Growth 2012-2022**

Total # Change
— 10,000
— 1,000

Labels:
Top 25 MSA Short Names
with % Job Growth

Seattle MSA 15%
Portland MSA 13%
Sacramento MSA 27%
San Francisco MSA 16%
Denver MSA 15%
Los Angeles MSA 15%
Riverside MSA 20%
San Diego MSA 22%
Dallas MSA 18%
Houston MSA 16%
Baton Rouge 30%
Houma MSA 40%
New Orleans MSA 15%
Urban Honolulu 21%
Chicago MSA 7%
Indianapolis MSA 25%
Detroit MSA 8%
Columbus 14%
New York MSA 9%
Philadelphia MSA 17%
Washington MSA 14%
Charlotte MSA 16%
Atlanta MSA 10%
Jacksonville 18%
Miami MSA 10%

14

Many high-demand transportation jobs offer above national median wages and career pathways/ladders potentials

Top 20 Jobs in Transportation Subsectors by Projected Total Job : Median Wages vs. Edu/Work Exp./Training Requirements for Entry

Size of the bubbles represents total job openings 2012-2022

National Median Wage
$34,750

Annual Median Wages

- $140,000
- $120,000
- $100,000
- $80,000
- $60,000
- $40,000
- $20,000
- $0

Little/No · Some · Medium · Considerable · Extensive

Edu/Training Requirements for Entry

15

ADVANCING CAREER AND TECHNICAL EDUCATION IN CAREER PATHWAYS SYSTEMS

Projected annual job openings are 68% larger than annual completions of related educational programs across selected transportation job groups

- Projected Annual Job Openings
- Related Educational Program Annual Completions

% Shortfall

Job Group	Projected Annual Job Openings	Related Educational Program Annual Completions	% Shortfall
Dispatchers and Cargo Agents	27,680	3,829	86%
Bus and Truck Mechanics	23,040	9,461	59%
Airline Pilots	9,430	3,071	67%
Aircraft Maintenance	14,080	8,684	38%
Rail Transportation Workers	11,920	337	97%
Captains, Mates and Ship Engineers	5,610	3,747	33%

See the full detail in the
Transportation, Distribution and Logistics Competency Model
www.CareerOneStop.org/CompetencyModel