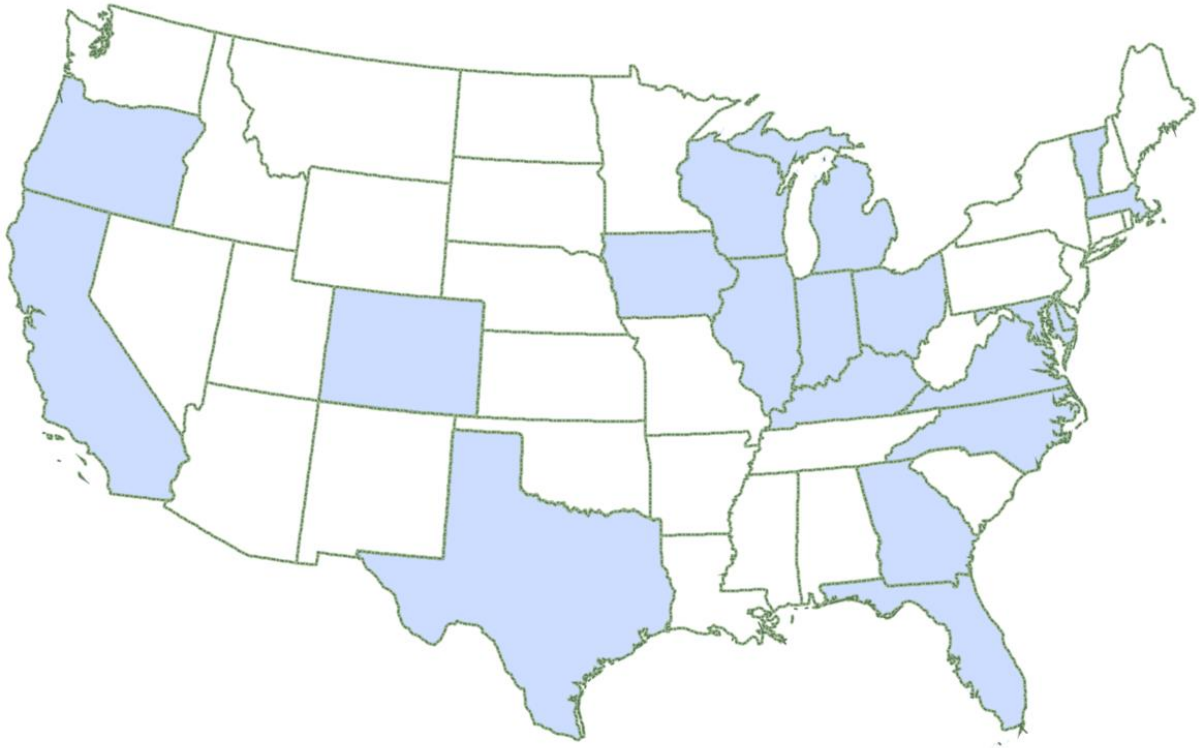
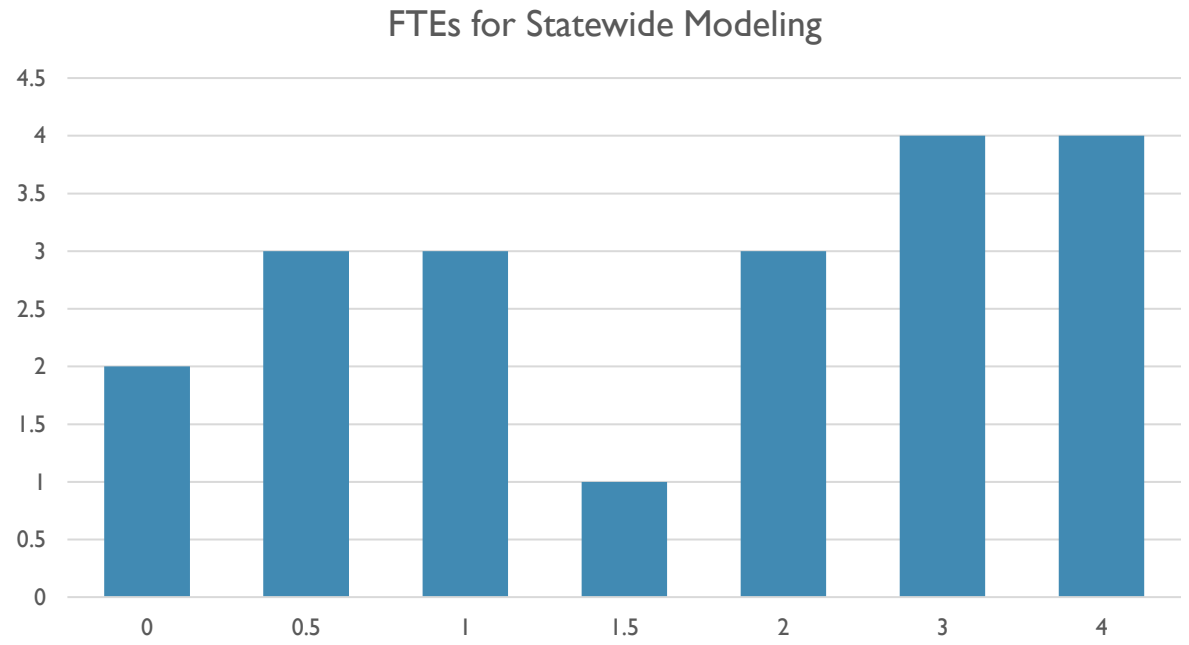
PEER EXCHANGE SURVEY RESPONSES

- Responses from 19 states + Ontario
- Since 40 states have models ~ 48% response rate



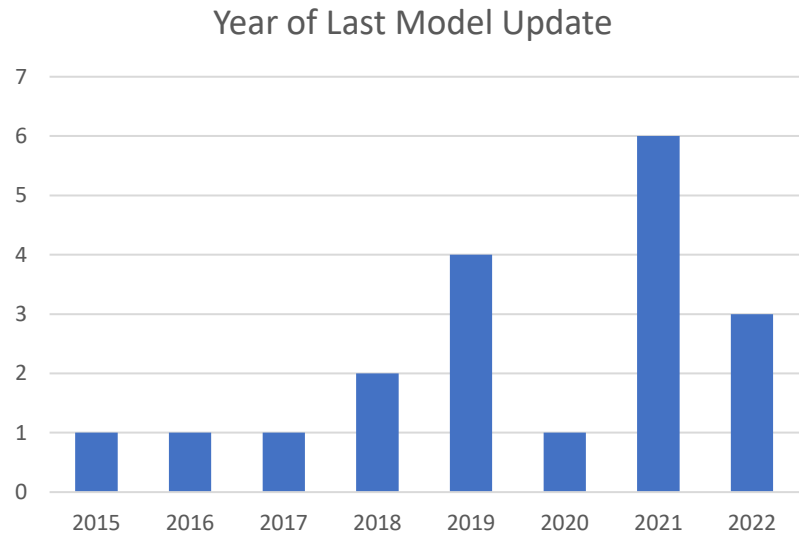
STAFFING

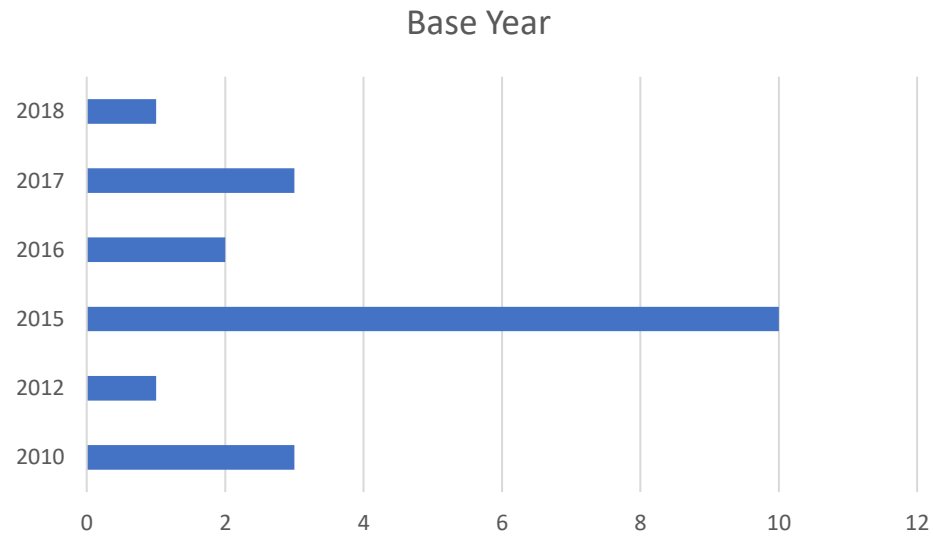
- On average DOTs have 2 FTEs for statewide modeling
- Variation is not primarily explained by size of state



MODEL UPDATES

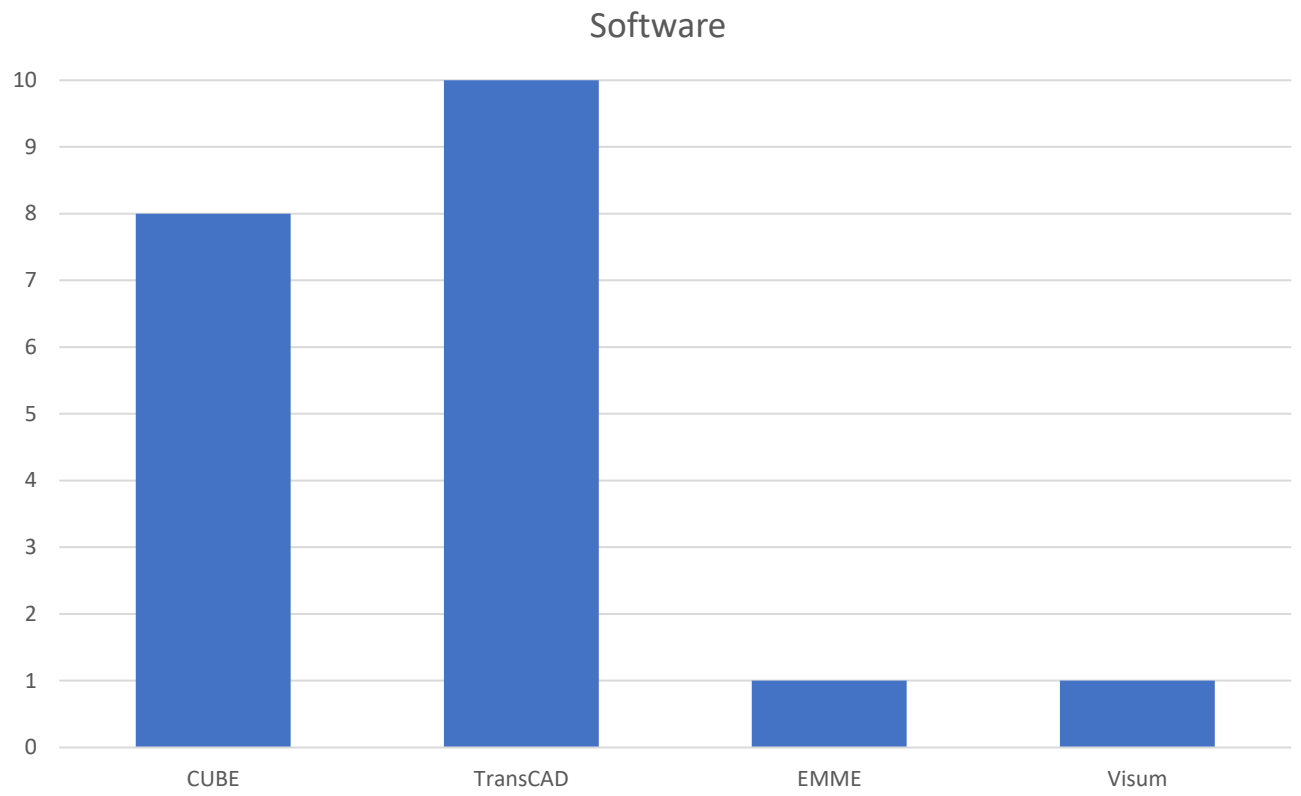
- 89% of states had updated their model within the past 5 years
- 47% of states had updated their model within the past 18 mos
- No one had yet updated to a 2020 or more recent base year





SOFTWARE

- Market shares similar to modeling in general



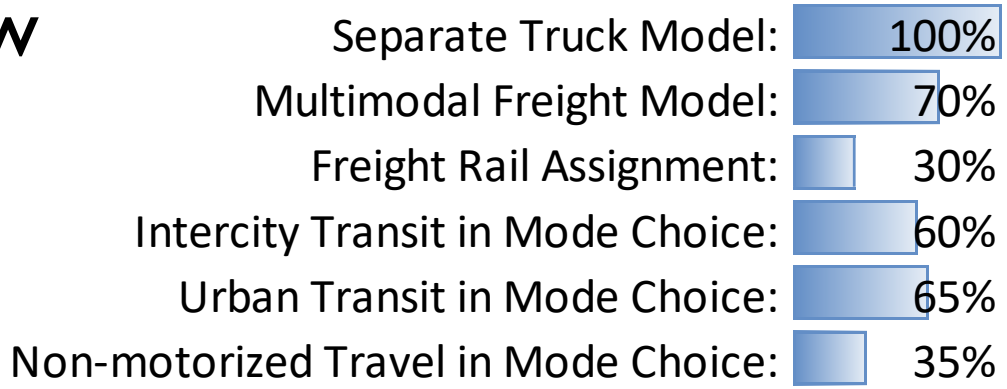
ZONAL & NETWORK DETAIL

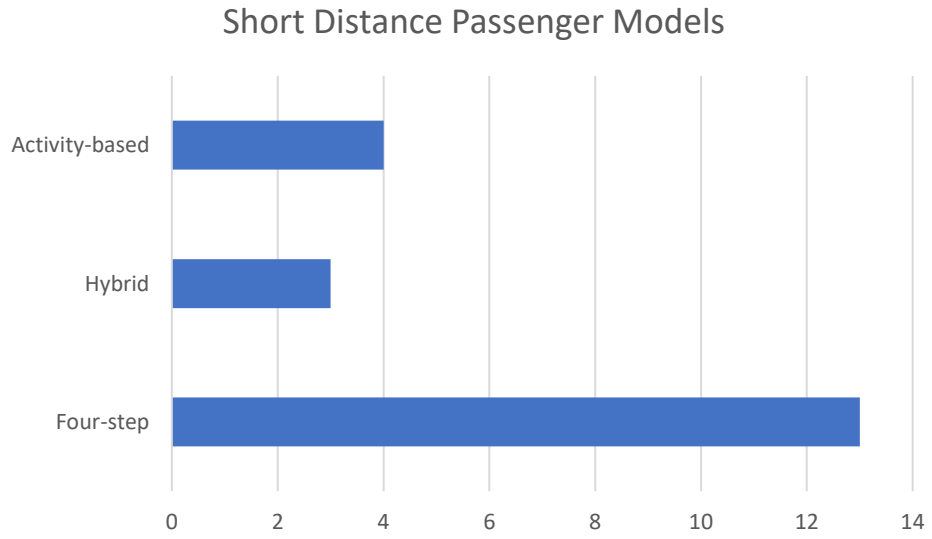
- More populous states tend to have more zones (in state) and more populous zones than less populous states
- Number of zones out of state varied considerably and was not related to state's size

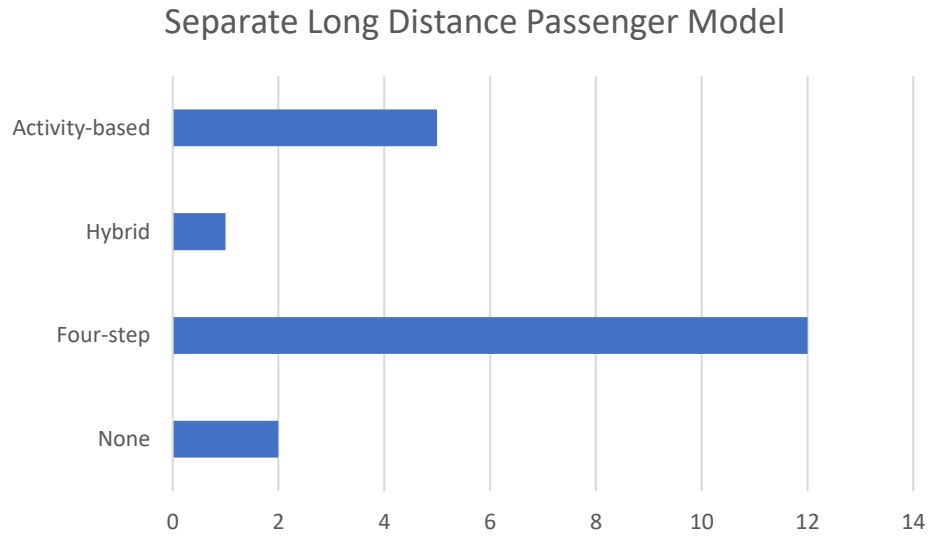
Metric	Median	Mean
Number of Zones In-state:	4,464	4,728
Number of Zones Out-of-state:	365	551
Population per Zone (in-state):	2,025	2,297
Roadmiles per Zone (in-state):	8.9	10.5

STATEWIDE MODEL DESIGN

- Roughly 1/3 of models are now hybrid or activity-based
- All have truck models







DATA SOURCES

- All states used Census data and their own DOT traffic counts
- Employment: 65% use DataAxle / 60% use LEHD/QCEW
- Commodity Flows: 50% FAF / 45% Transearch / 15% none
- SE Forecasts: 70% state / 35% Woods & Poole / 25% MPO / 15% LUMs / 15% REMI/Tredis
- Big Data
  - 60% use Speed/travel time data (25% NPMRDS, 30% INRIX, 15% HERE)
  - 65% use Truck ODs (35% ATRI / 20% Streetlight / 10% INRIX)
  - 40% use Passenger ODs (20% Streetlight / 10% Airsage / 10% RSG / 5% CS)

STATEWIDE MODEL VALIDATION

- Overall, highway assignment validation statistic have improved since 2010 (NCHRP 836, Task 91) when the overall mean RMSE was 55%

	%RMSE			
	Mean	**Median**	**Min**	**Max**
1 - 5,000 ADT	88%	83%	52%	184%
5,000 - 10,000 ADT	52%	49%	35%	108%
10,000 - 20,000 ADT	40%	39%	25%	67%
20,000 - 30,000 ADT	31%	32%	18%	56%
30,000 - 40,000 ADT	29%	25%	12%	69%
40,000 + ADT	19%	17%	8%	30%
OVERALL	**45%**	**45%**	**22%**	**75%**

STATEWIDE MODEL USES