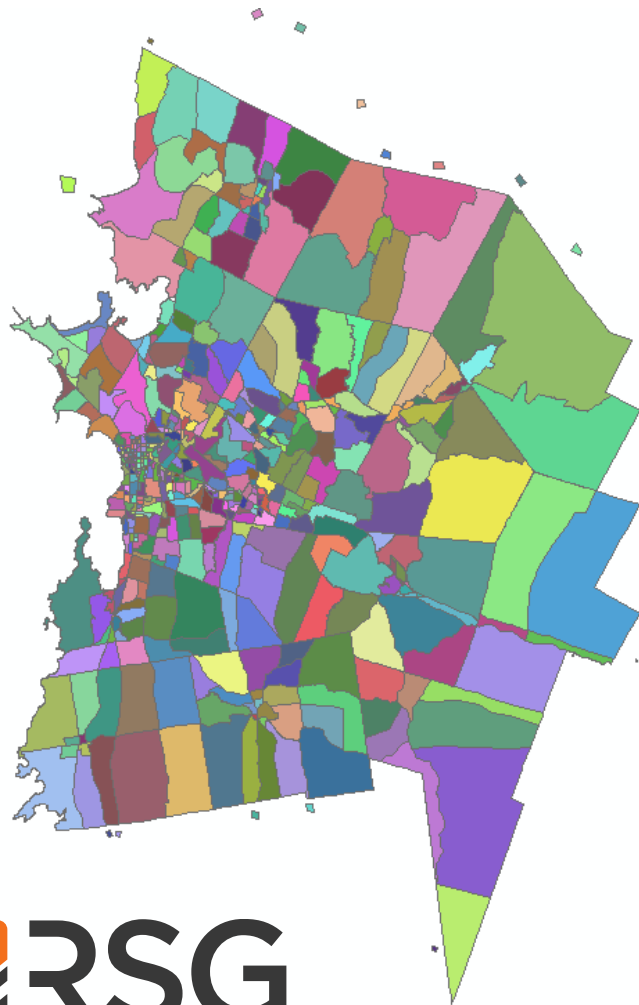




CHITTENDEN COUNTY RPC

Communities Planning Together



RSG

the science of *insight*

Modeling Connected and Automated Vehicles in Chittenden County, Vermont

TRB APPCON 2019

June 2-5

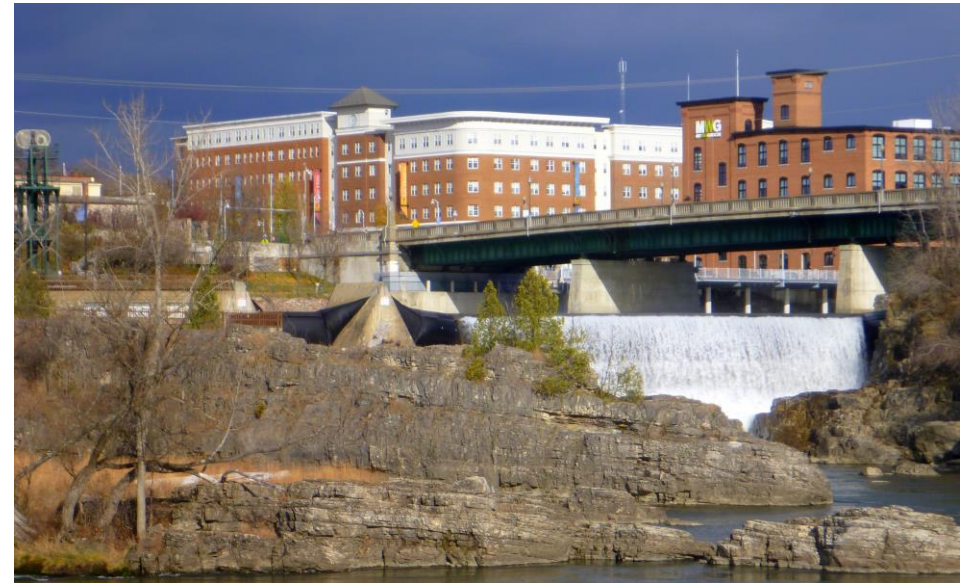
- Jon Slason, PE; RSG (Corresponding Author)
- Ben Swanson; RSG (Corresponding Author)
- Jason Charest, PE, PTP; CCRPC (Presenting)



CCRPC – Region Overview



CCRPC – Region Overview

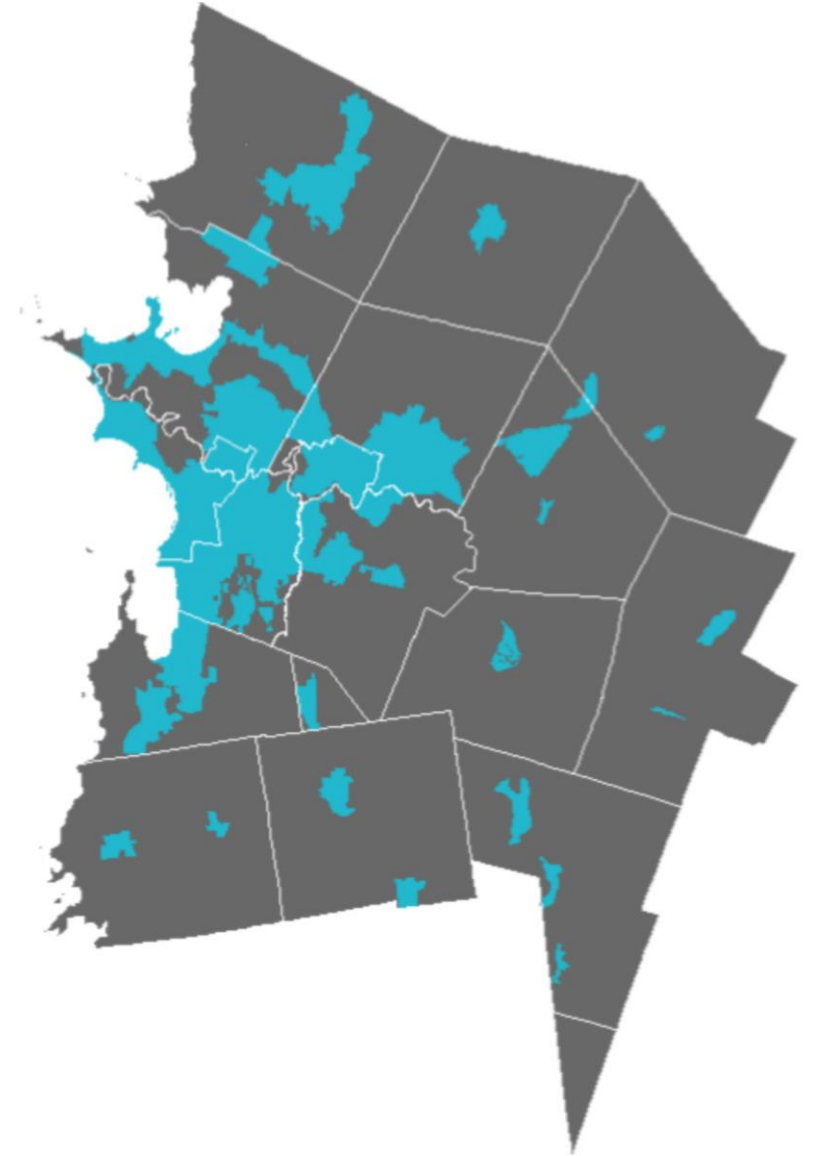


CCRPC – Demographic & Employment Forecasts

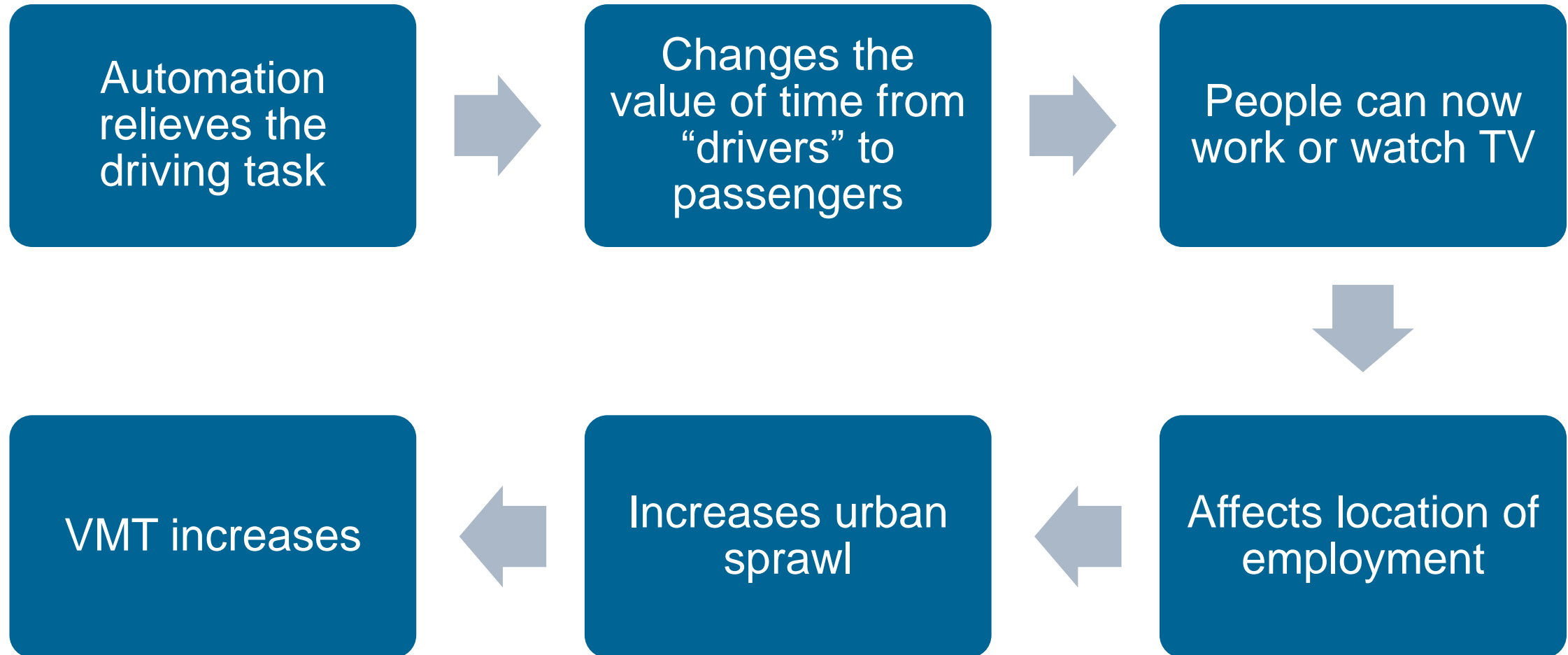
	2015	2050	2015 to 2050 % increase
Population	161,382	183,172	14%
Employment	135,511	182,688	35%
Households	63,498	79,151	25%



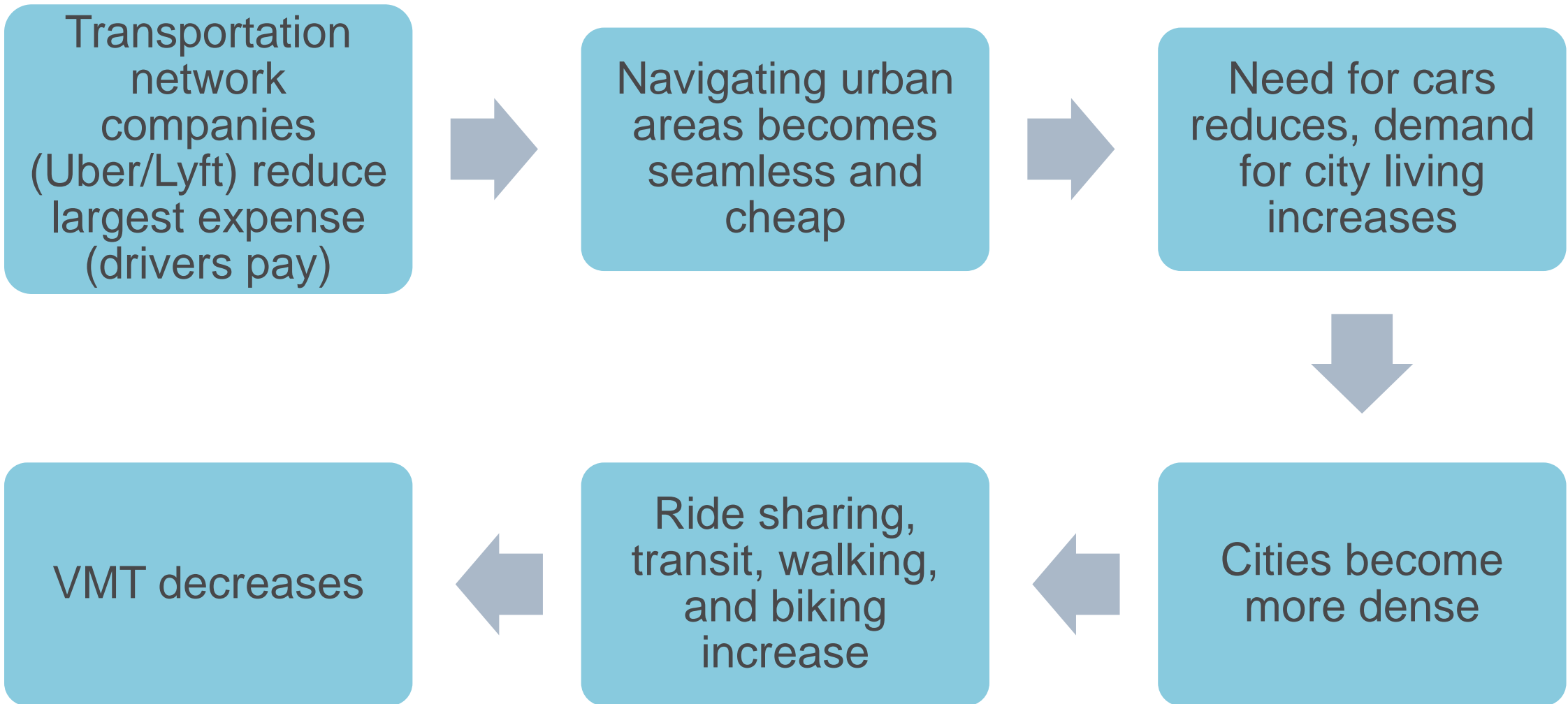
- Scenario Planning
 - ~10 total scenarios
- 4-step travel demand model
- Opportunity to model CAVs



Does VMT Go Up?



Does VMT Go Down?



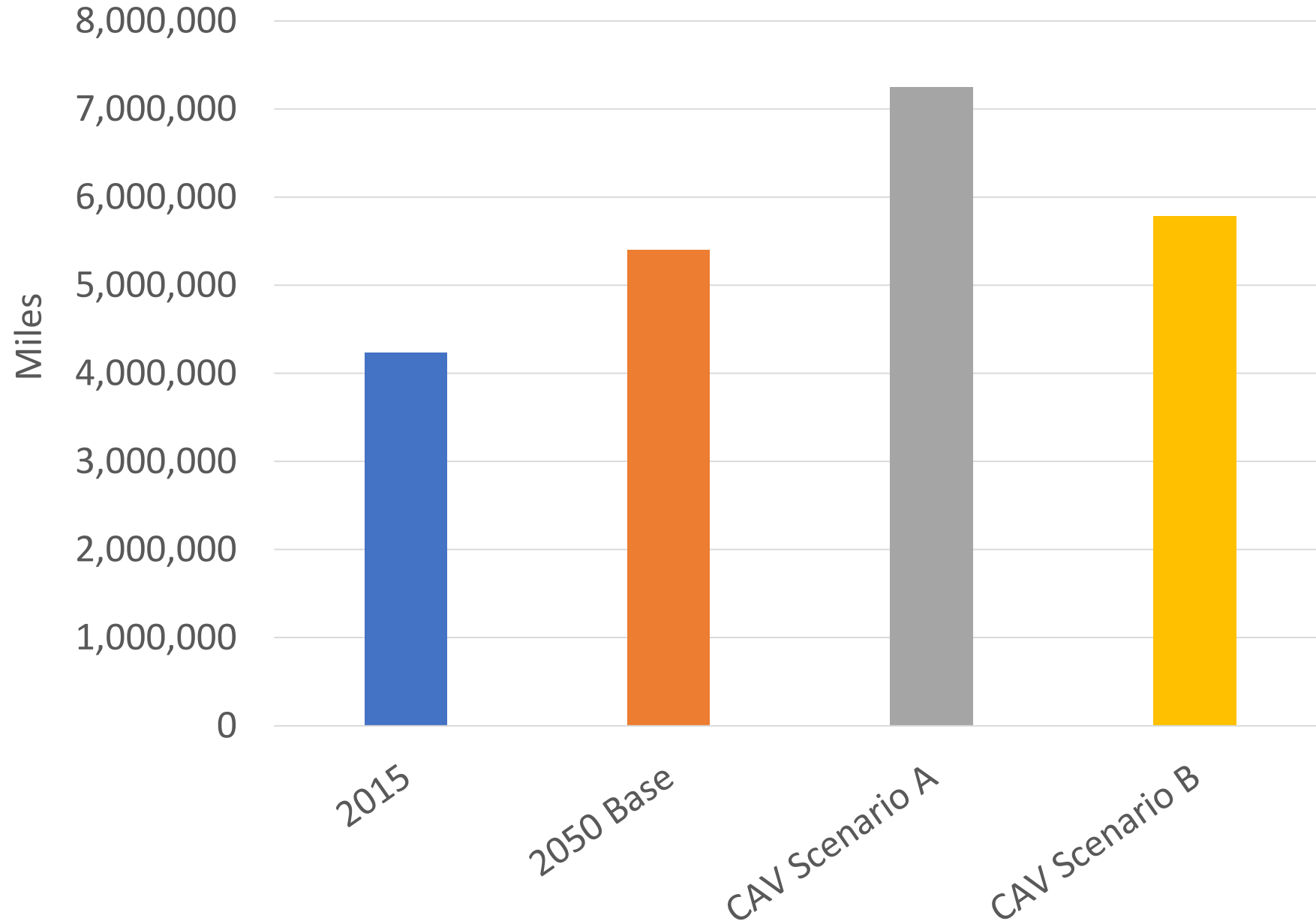
Assumptions

	Scenario A	Scenario B
CAV Penetration	80%	100%
Roadway capacity increases	Freeways	Freeways, collectors, and arterials
Intersection capacity increases	Signalized intersections	All intersections
Factor of safety	Increased headway in mixed-flow	None

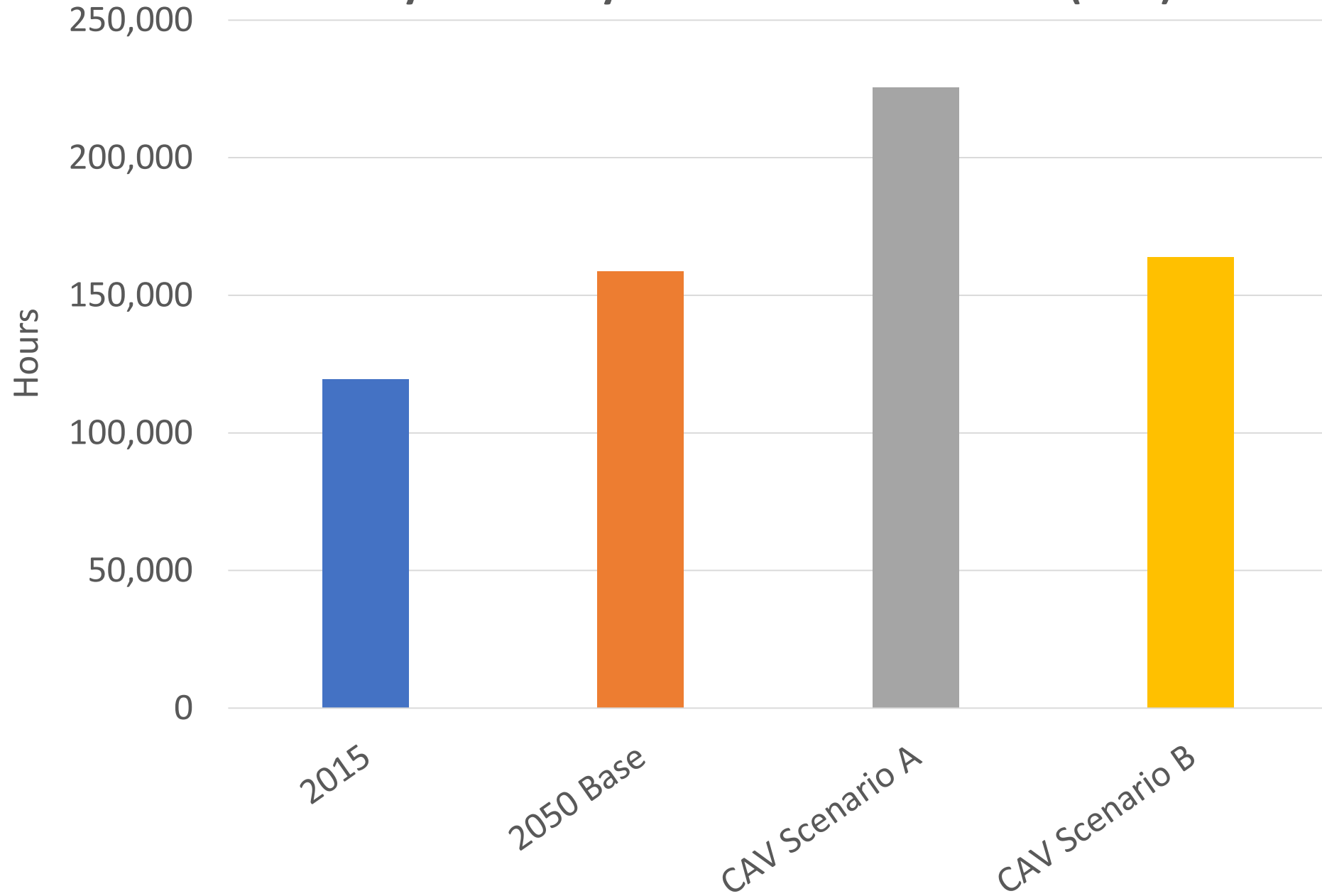
More Assumptions

	Scenario A	Scenario B
Ownership	50/50 shared (MaaS)/ private ownership	65/35 shared (MaaS)/ private ownership
Occupancy increases	None	MaaS = 2.5 people per car vs ~1.3
Induced demand	<ul style="list-style-type: none">- Increases in Home Based Other trips for young and old- Private CAVs circling the block downtown or parking themselves- MaaS drop off/pick up trips & depot stations	

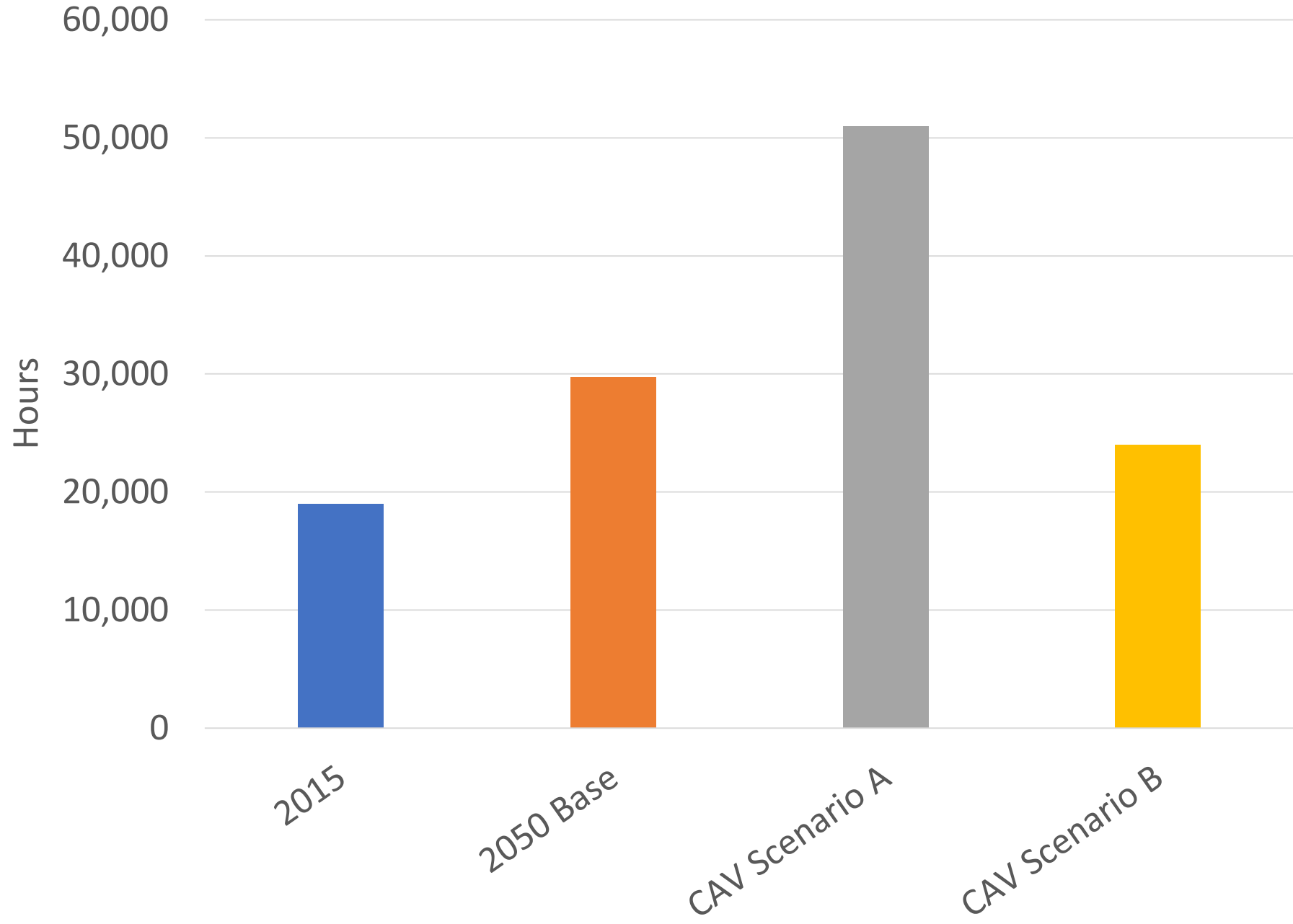
Countywide Daily Vehicle Miles Traveled (VMT)



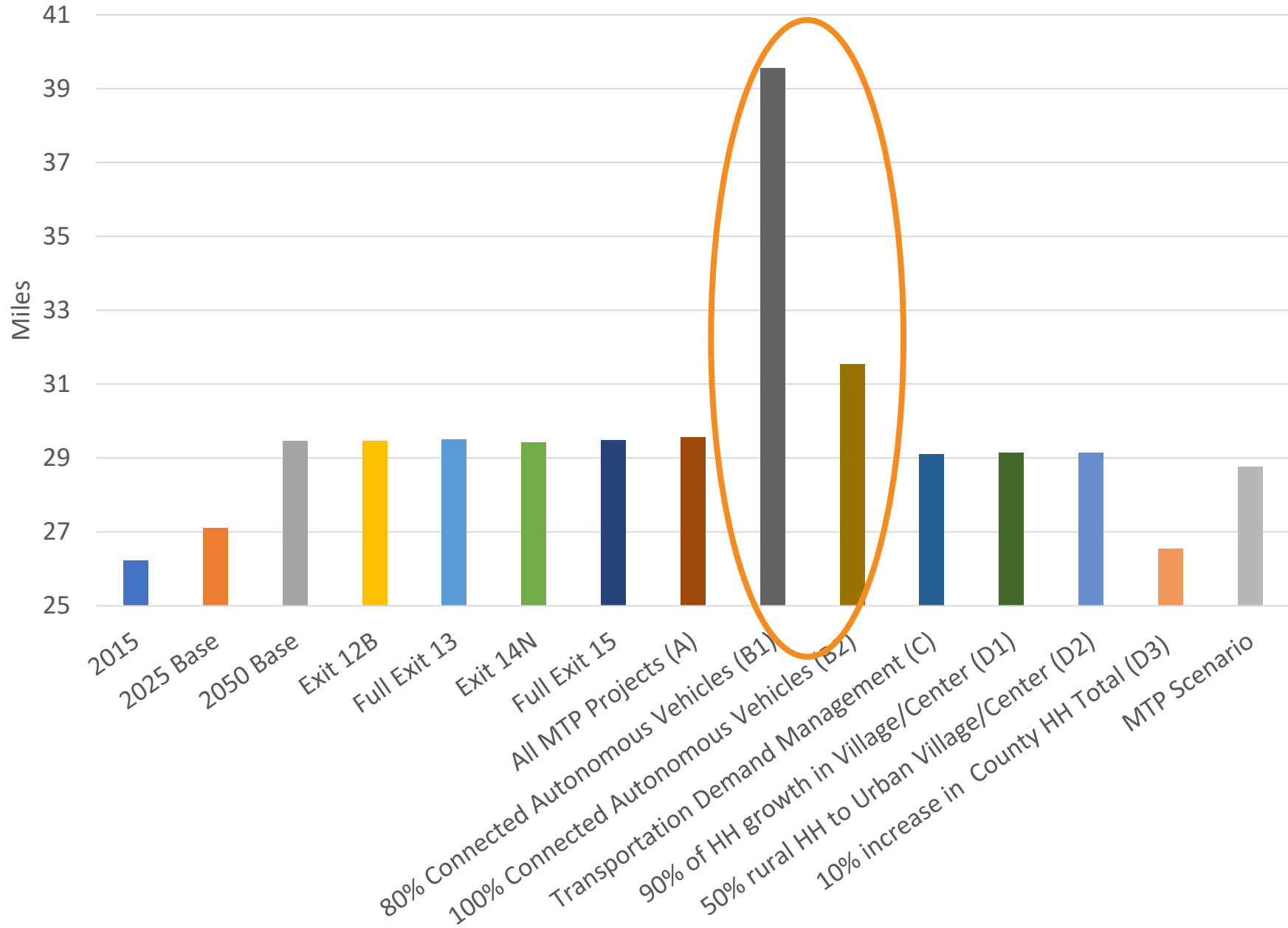
Countywide Daily Vehicle Hours Traveled (VHT)



Countywide Daily Delay



Countywide Daily Vehicle Miles Traveled (VMT) per Capita



- Started the conversation
- Continuing the conversation moving forward
 - I-89 Study
- Focus on planning to have CAVs help achieve the future you want

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Questions?



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