



Metrics for Air Quality Projects



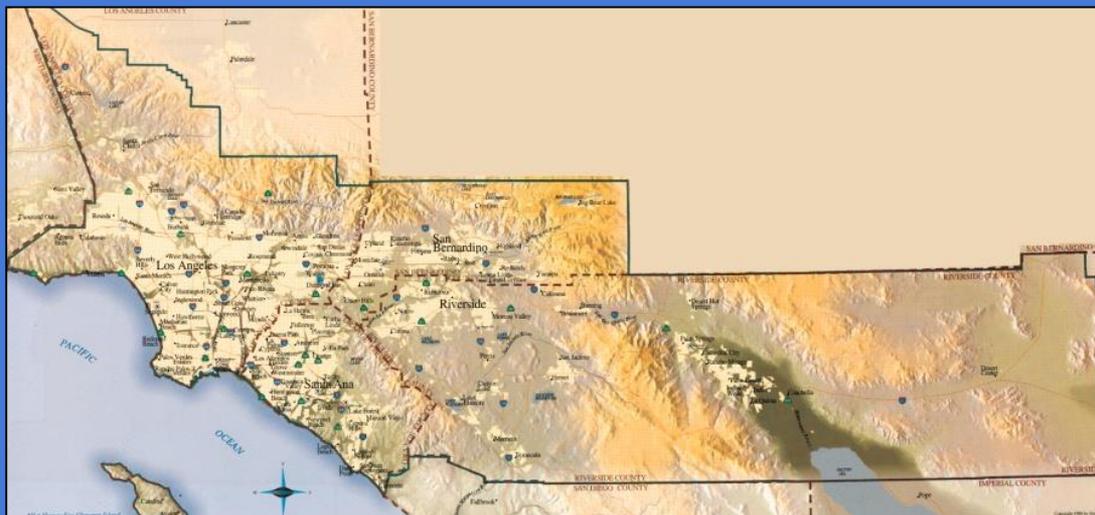
Matt Miyasato, Ph.D.
Deputy Executive Officer
Science & Technology Advancement

South Coast Air Quality Management District

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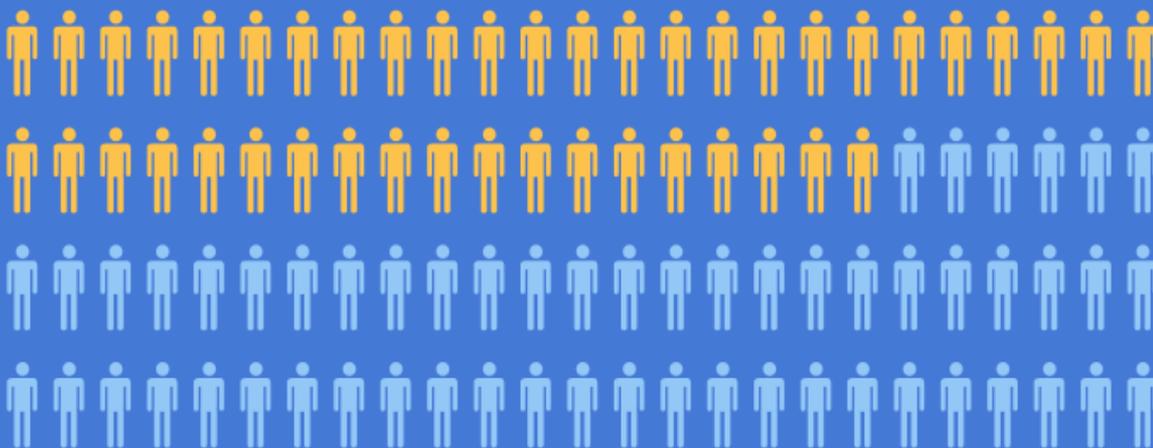
Counties of

- Los Angeles
- Orange
- San Bernardino
- Riverside



44%

State's population in
South Coast



■ AQMD (44%) ■ CA (56%)

South Coast Air Quality Management District

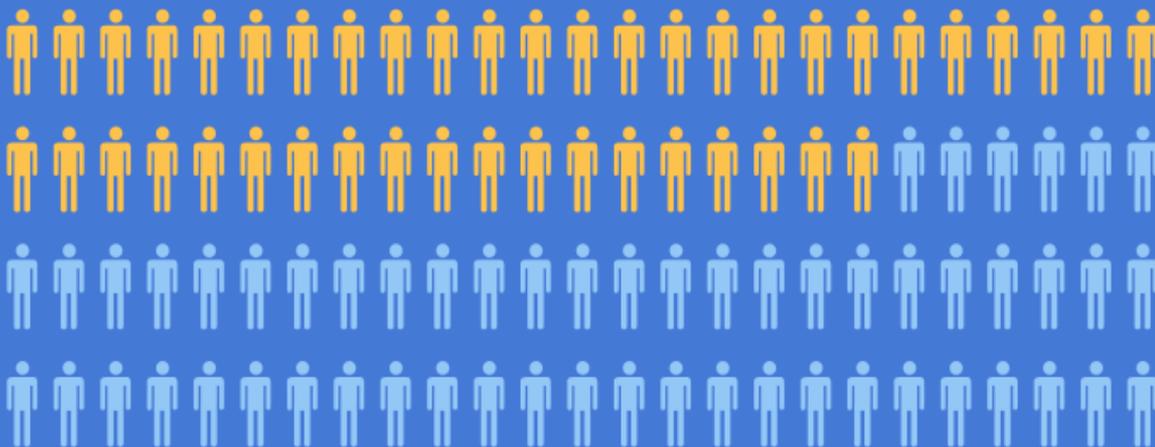
40%

Containerized goods
to nation



44%

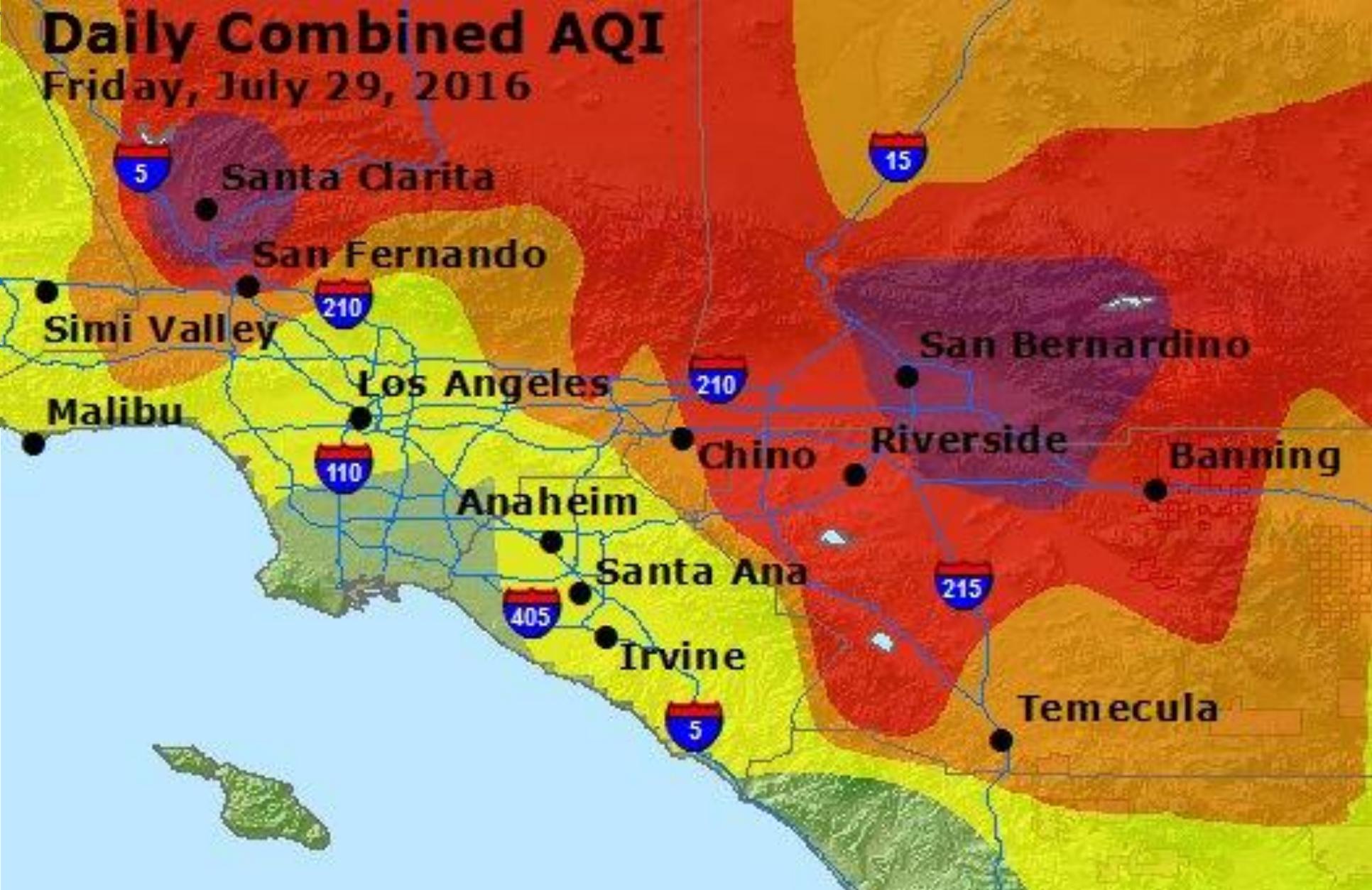
State's population in
South Coast



■ AQMD (44%) ■ CA (56%)

Daily Combined AQI

Friday, July 29, 2016



Good

Moderate

USG

Unhealthy

Very Unhealthy

Hazardous

Los Angeles Times

L.A. Now

California: This just in

Thousands of lives could be saved in California by stricter air pollution limits, study finds

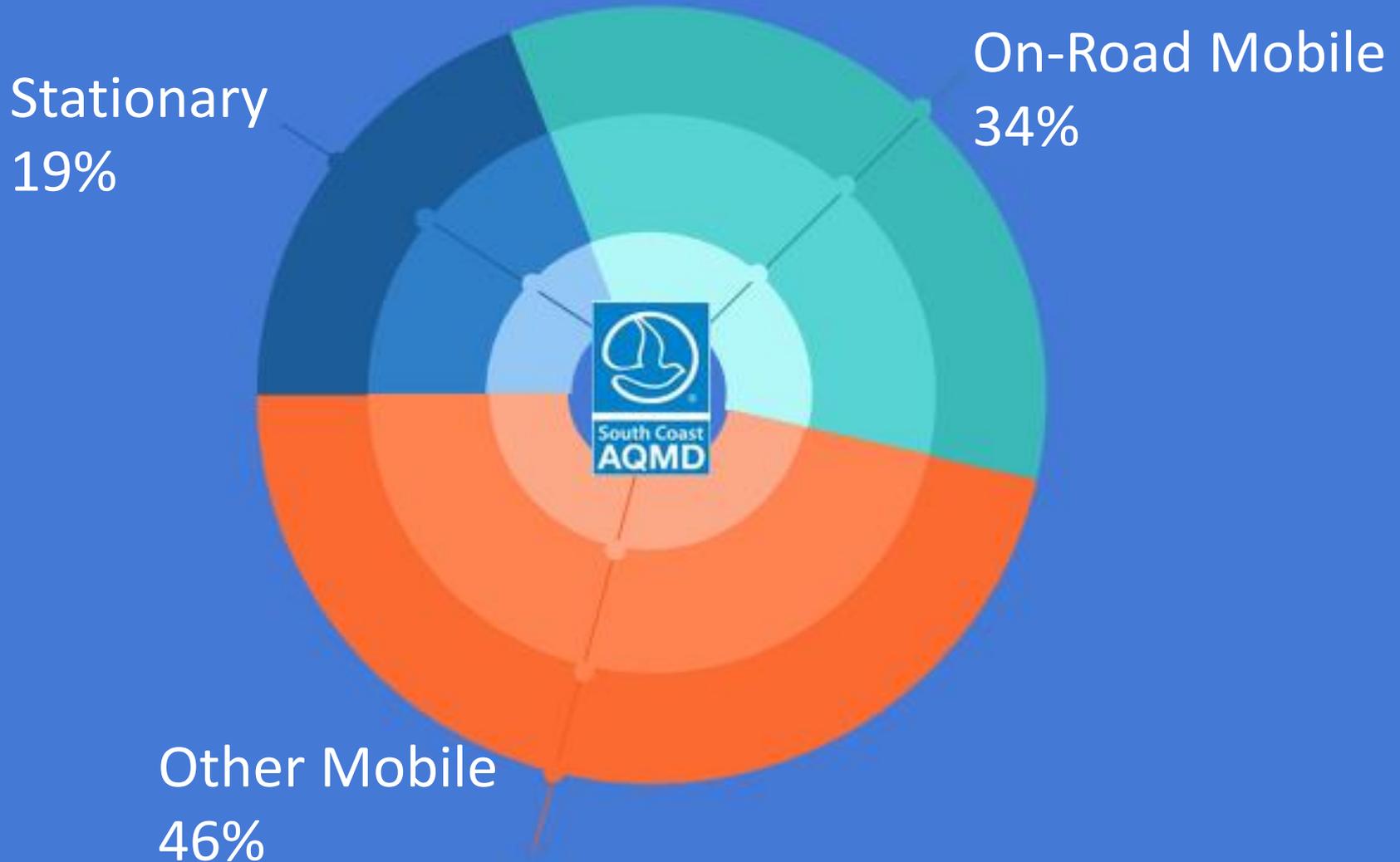


Smog descends on downtown Los Angeles during a November afternoon in 2015. (Los Angeles Times)

By **Tony Barboza**

AUGUST 11, 2016, 9:00 AM

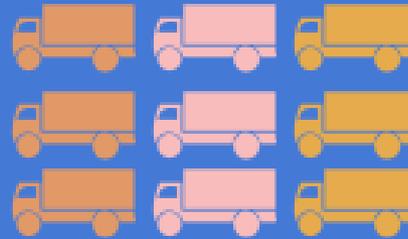
80% NOx Emissions – Mobile Sources



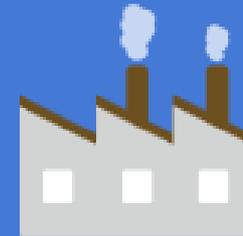
Priorities



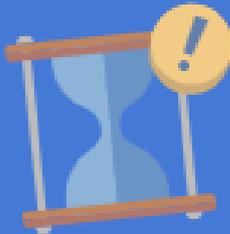
NO_x



INVENTORY



SCALABILITY



TIMING



EJ IMPACTS



GO-FUNDING



GHGs

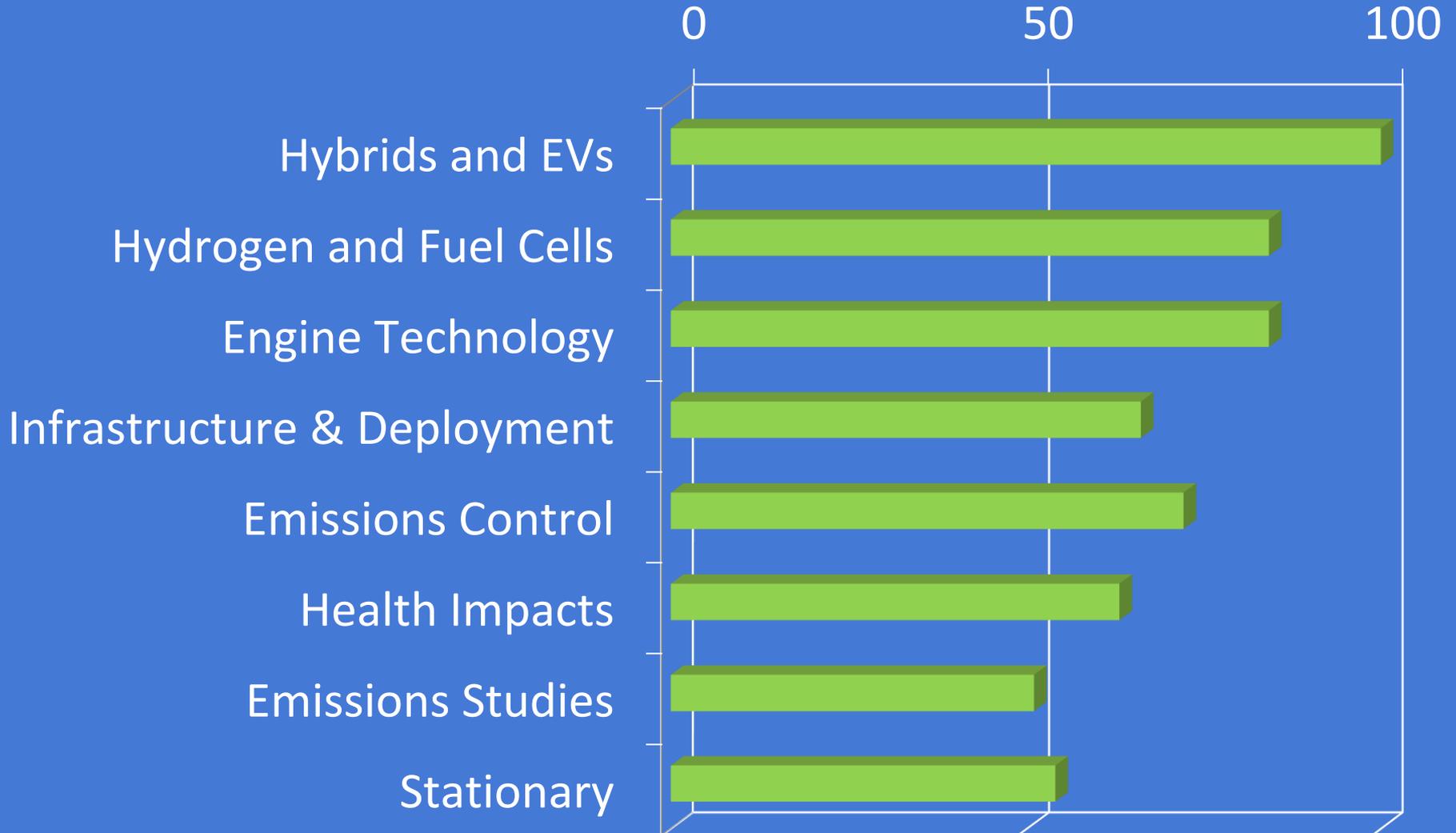
Weighting of Priorities (QFD)

Clean Fuels Plan Update

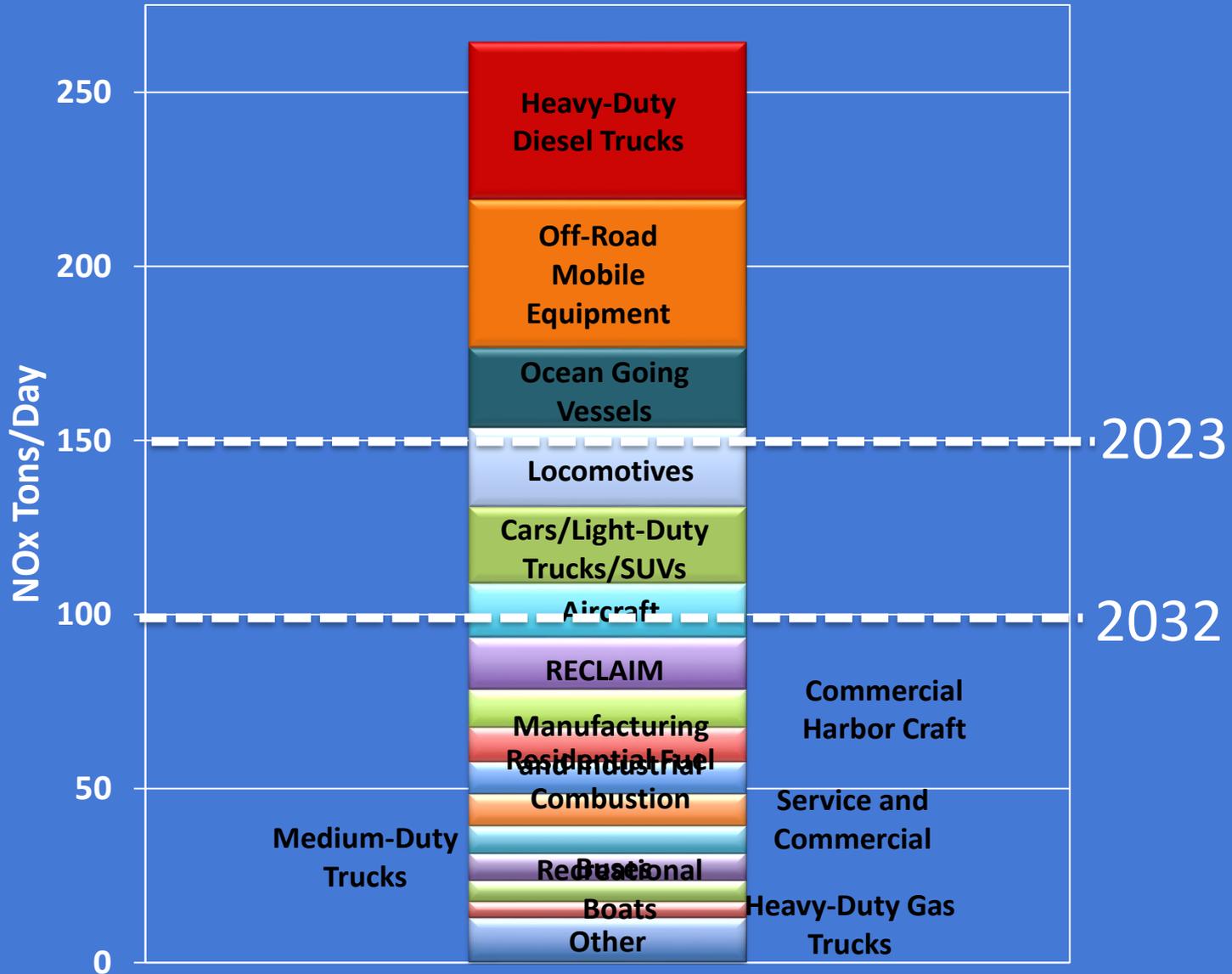
Technology Sector

Technology Expectation	Importance	Hybrids and EVs	Hydrogen and Fuel Cells	Engine Technology	Infrastructure & Deployment	Emissions Control	Health Impacts	Emissions Studies	Stationary	
Low NOx	3	h	h	h	m	m			h	
Inventory	3	h	h	h	m	h	h		l	
Low GHGs	1	m	h	m	m	m			m	
OEM	3	m	m	l	m	m		h	m	
EJ Impact	2	h	m	h	h	h	h	h	m	
Leveraging Opportunity	2	h	m	m	h	m	h	m	m	
Total		102	84	84	66	72	63	51	54	

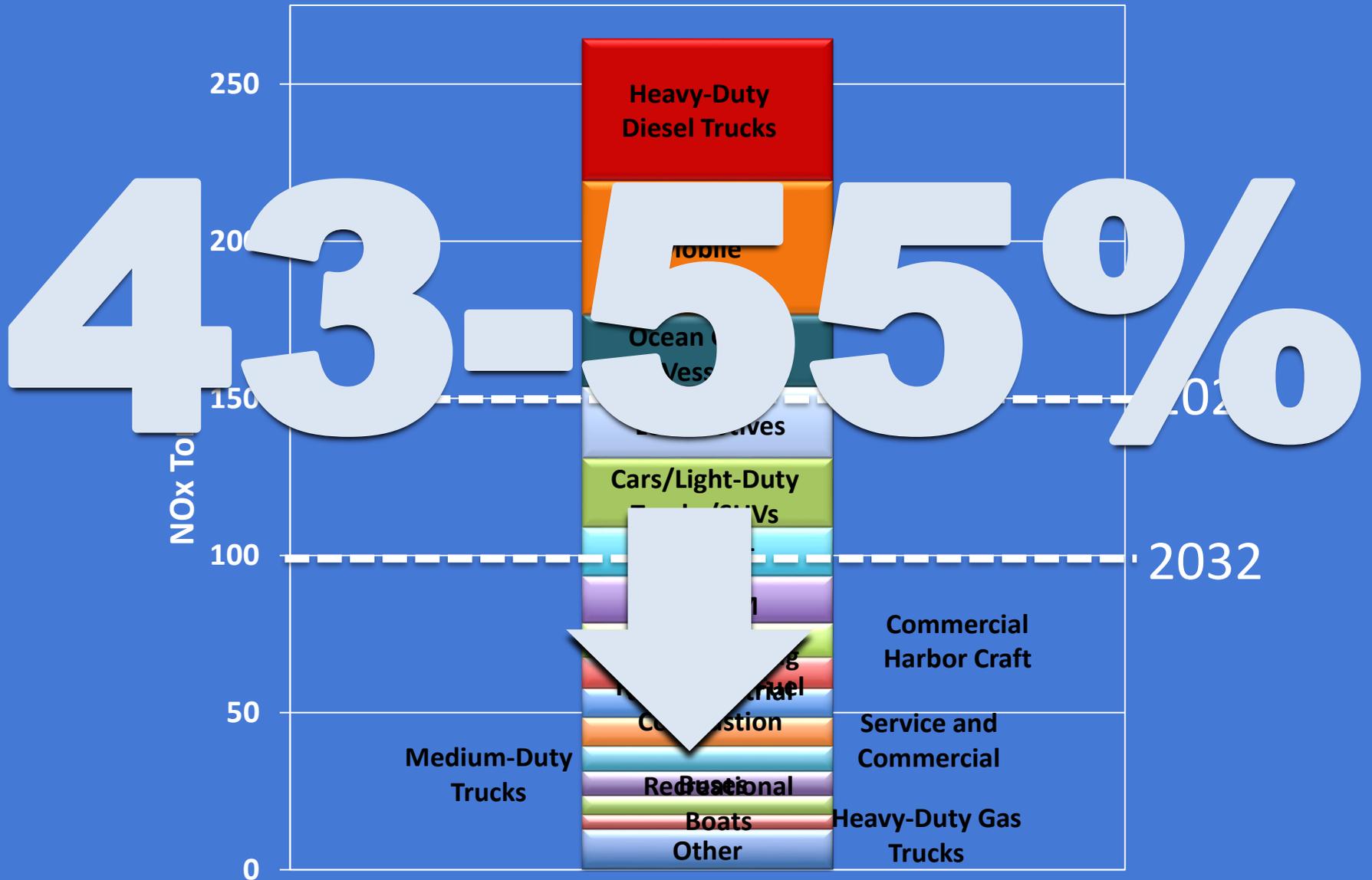
Pareto Chart



Top NOx Sources 2023



Top NOx Sources 2023

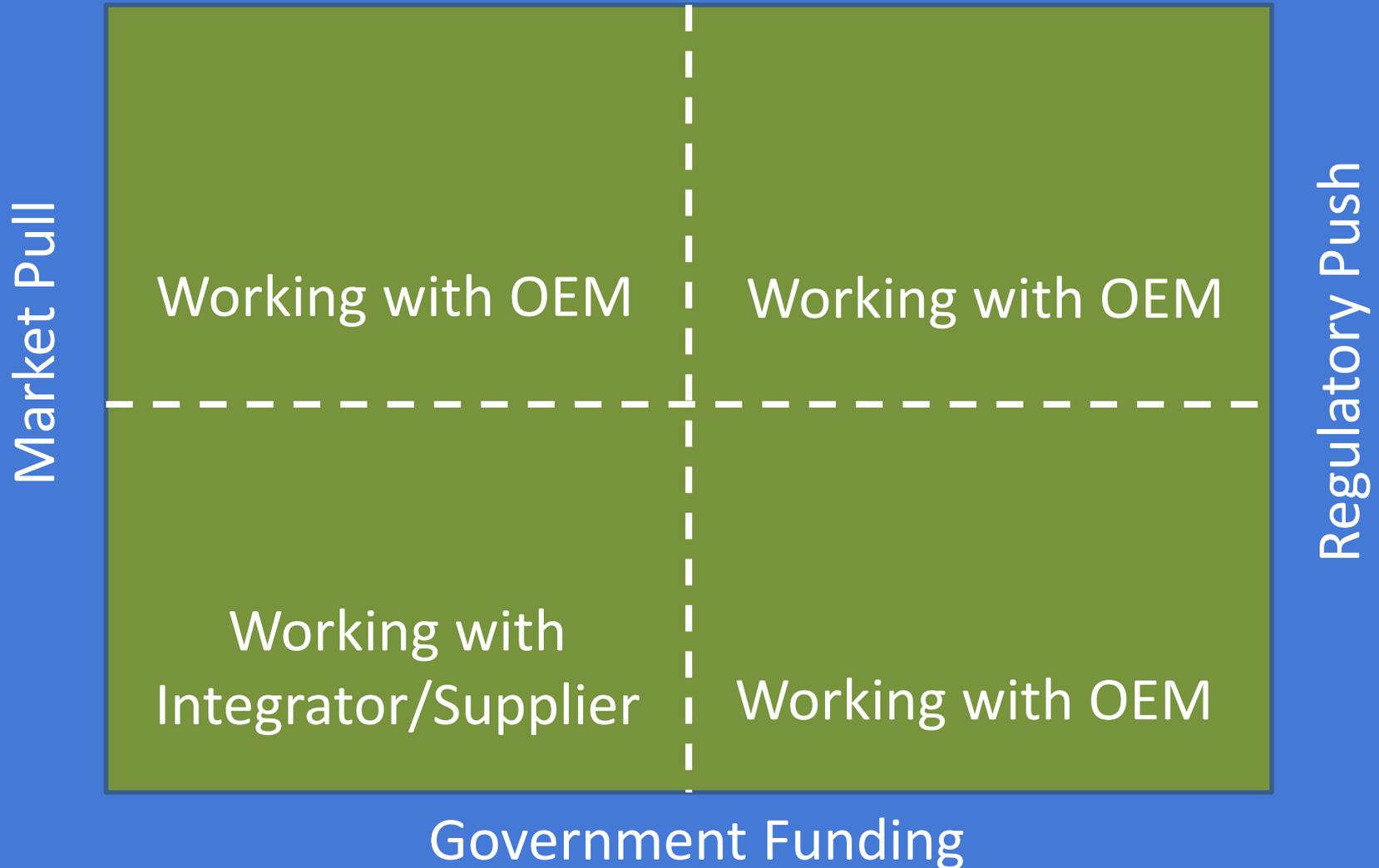


Zero & Near-Zero Fleet Needed per Year until 2023

x 15

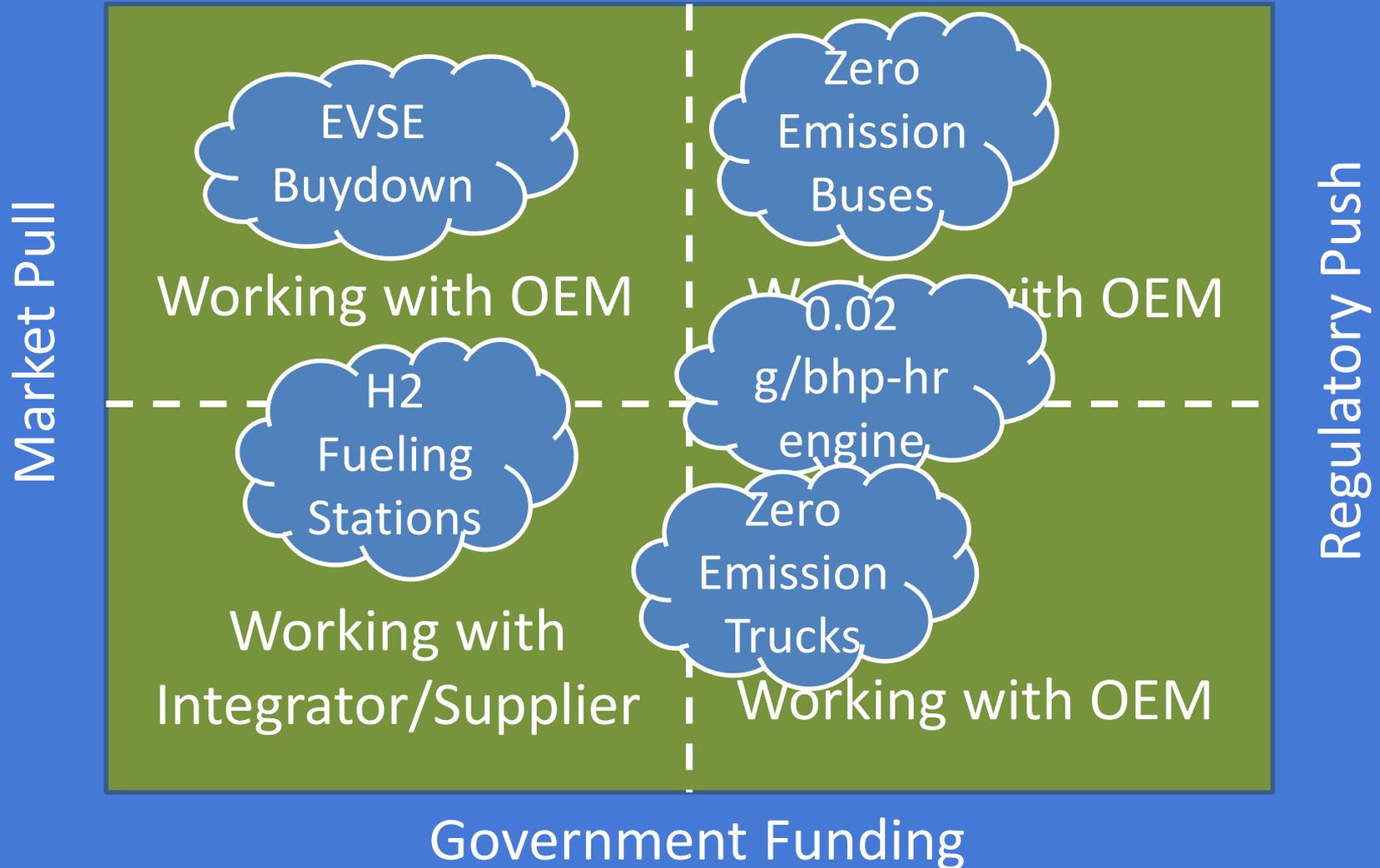


Technology Development and Demonstration



Technology Development and Demonstration

Deployment/Market Initiation



Takeaways

- Look to where your funding makes a difference
- Portfolio approach for long-term goals
- Heavy-duty for near-term reductions
- State & regional collaboration very successful
- National markets needed to accelerate turnover



Recent Collaboration

- Hydrogen stations and upgrades
- Catenary truck
- Ultra-low NOx engine
- Fuel cell trucks
- Volvo PHEV
- DC FC infrastructure
- SoCalEV (EVSE)



“Alone we can do so little, together we can do so much.” --*Helen Keller*

