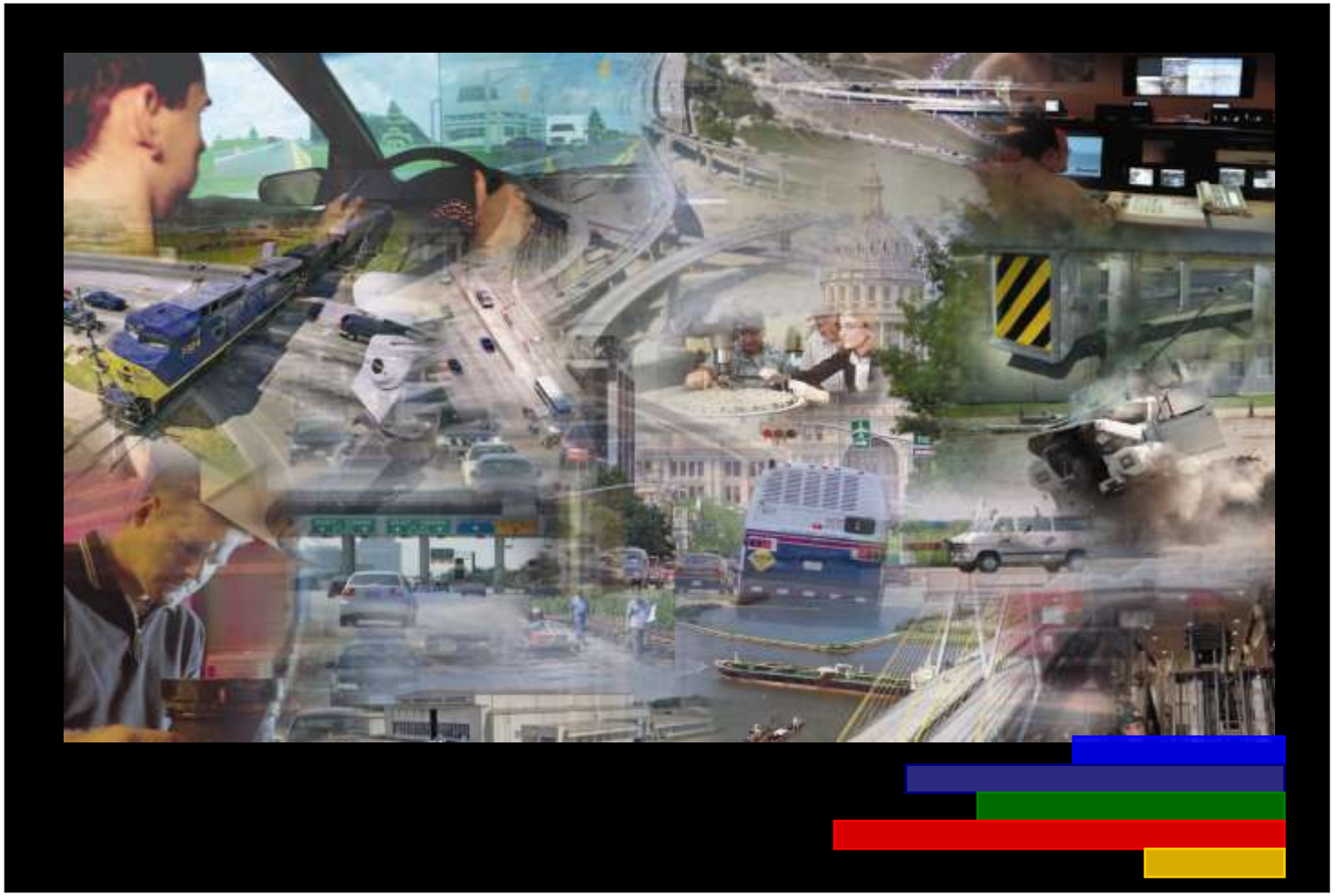
THIS IS AN “IN PROGRESS” REVIEW

Mobility Needs Assessment
(Draft August 2008)



Why Mobility Matters

Increased Congestion Costs:

- Money (Delay)

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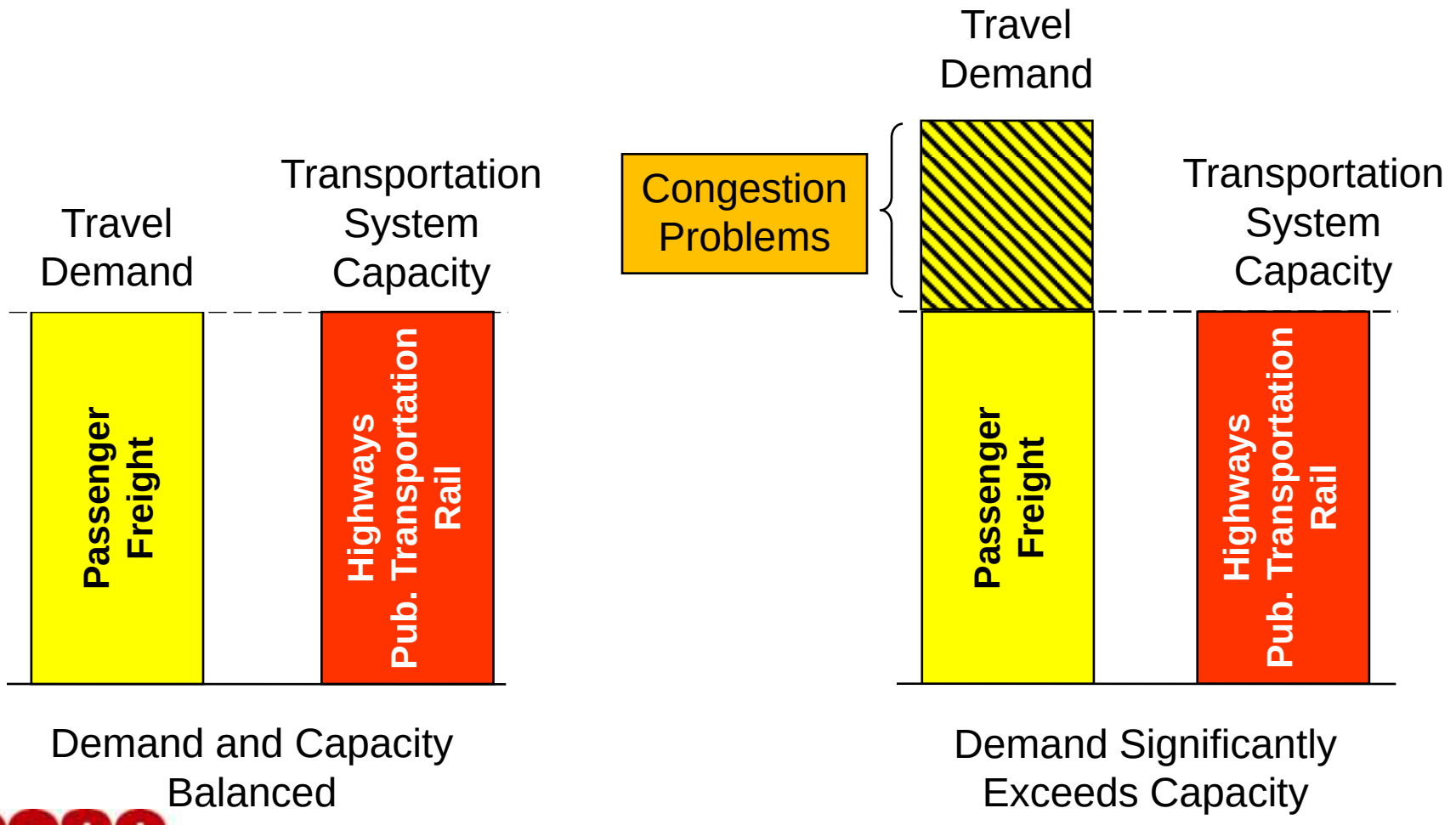
Increased Congestion Costs:

- Money (Delay)
- Jobs (Lost Economic Opportunity)
- Lives (Safety)

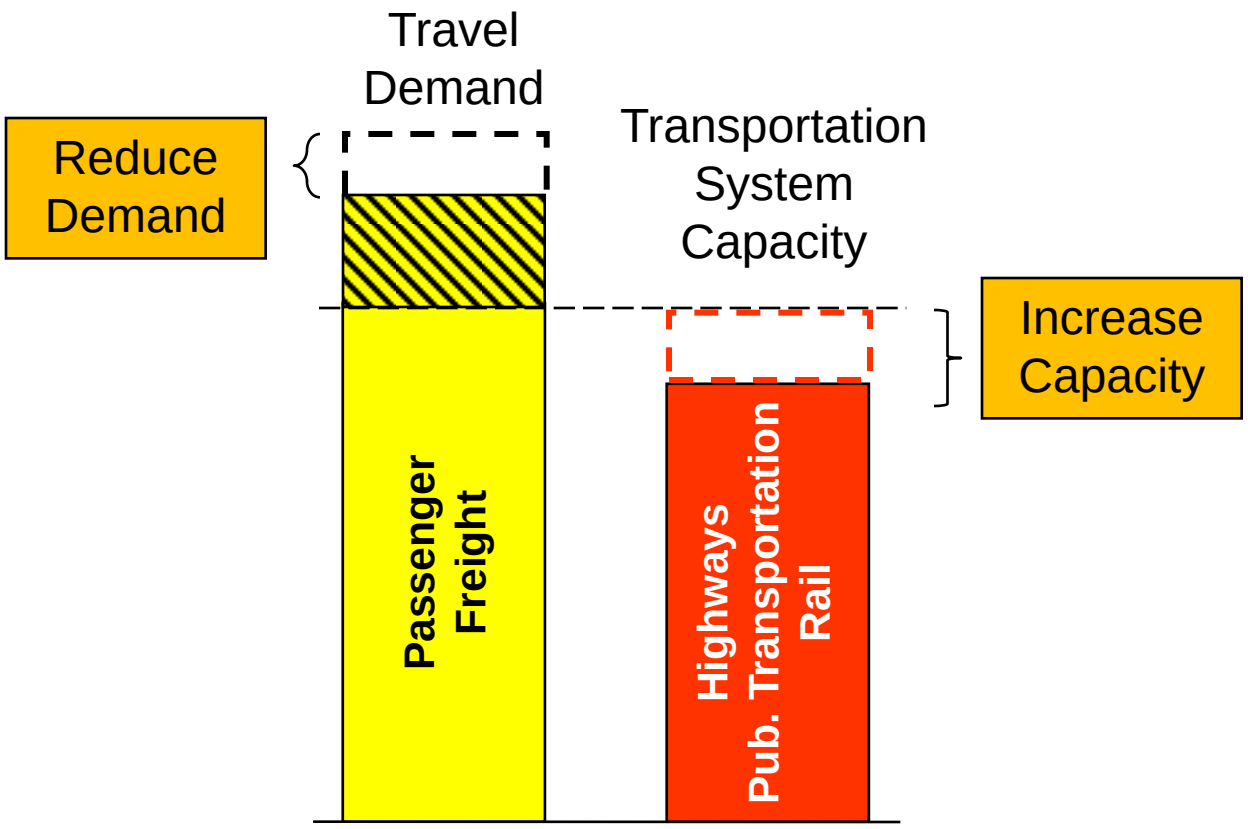
Our Challenge

Determine a feasible and justifiable estimate of statewide transportation need for the next 22 years.

How Do We Define Mobility?



Strategies for Reducing the Problem



Strategies for Reducing the Problem

How Do We Define Mobility?

- For Metro and Urban areas: congestion relief (improved travel speeds)
- For Rural Areas: congestion relief and improved connectivity

What Mobility Scenarios Were Considered?

Because mobility in Metro/Urban and Rural areas are different, the scenarios are different.

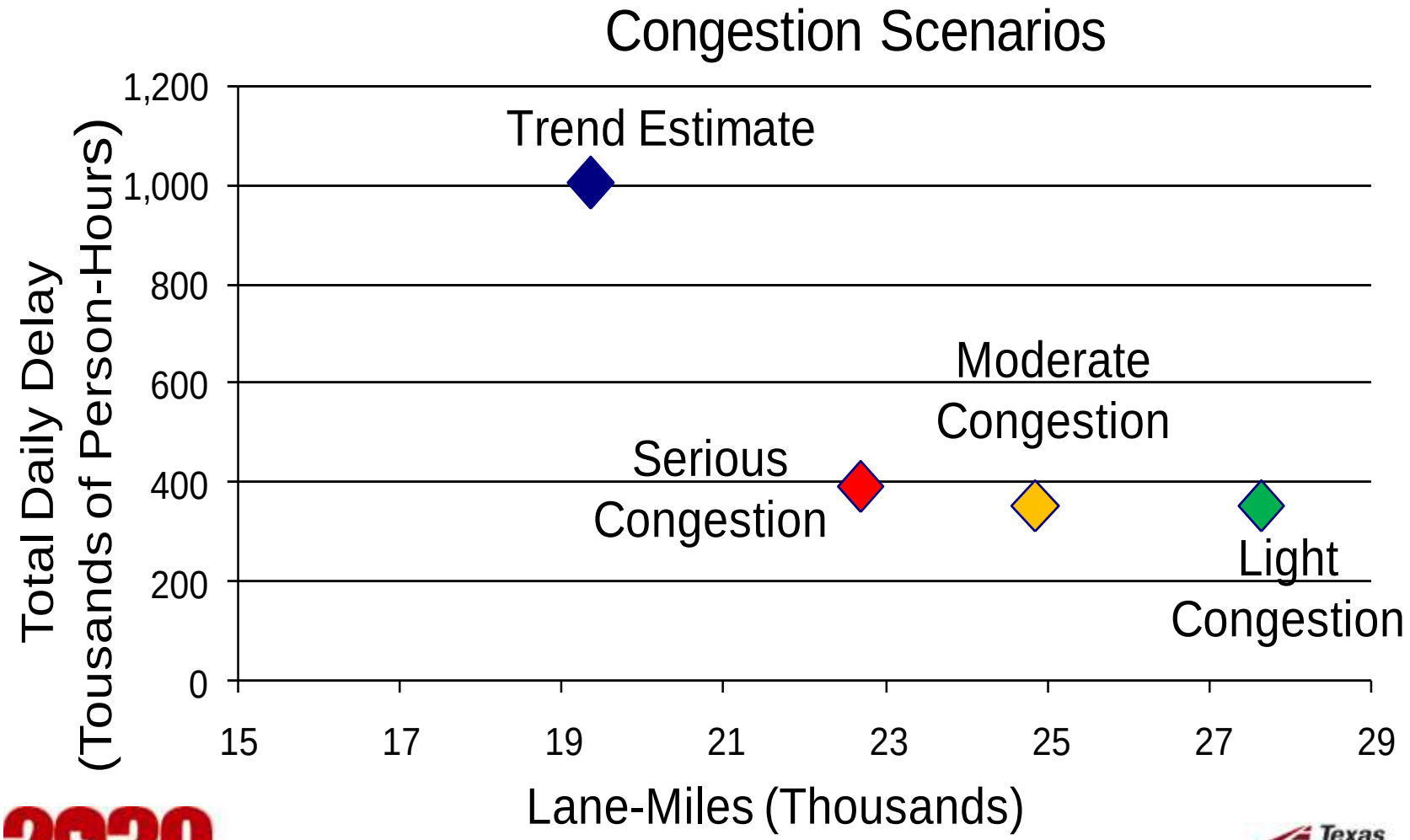
Mobility Scenarios for Metro and Urban Areas

- Scenario M1 – eliminate serious congestion by 2030
- Scenario M2 – prevent congestion from worsening
- Scenario M3 – continue investing at trend levels

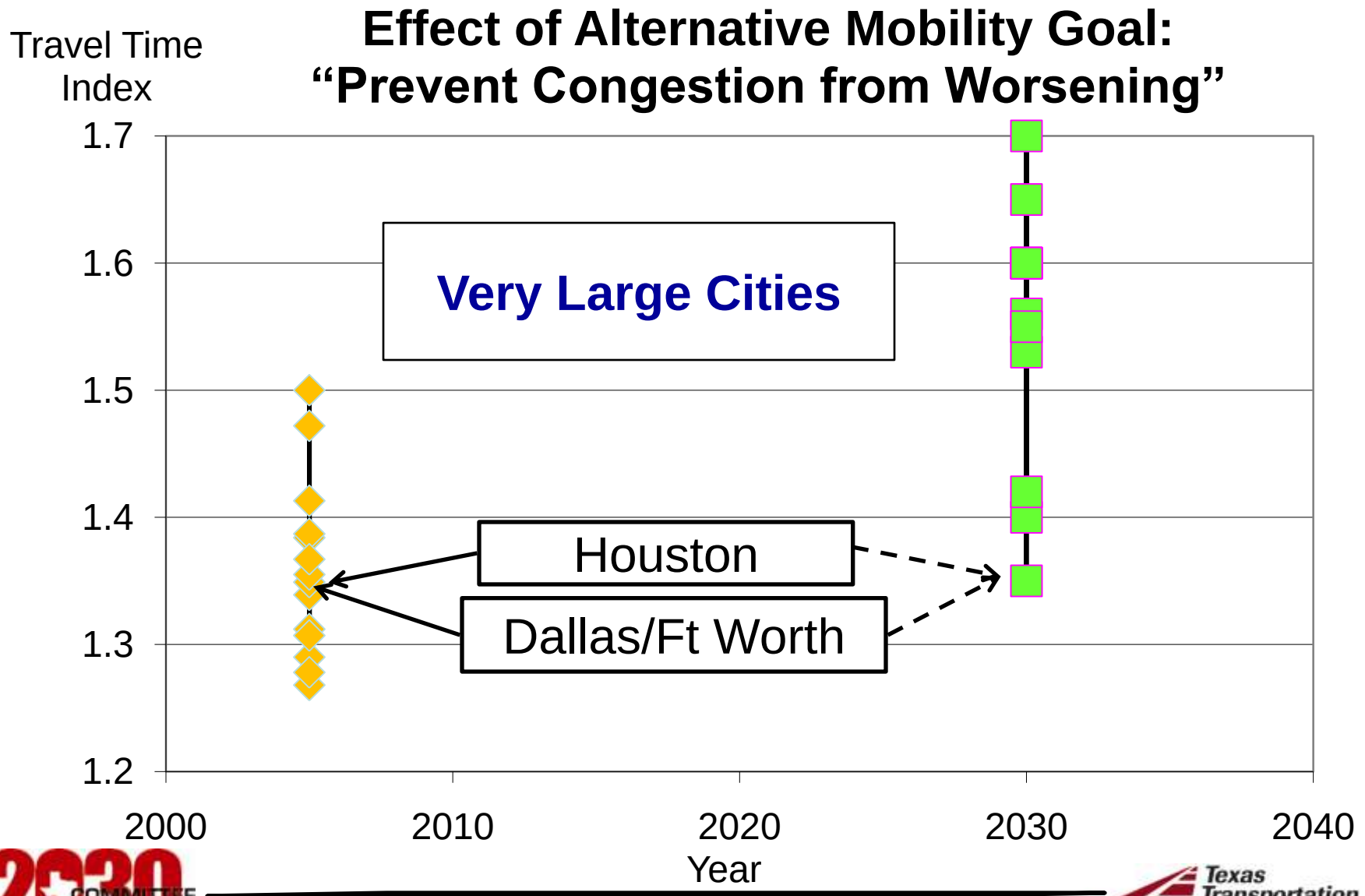
What Does This Mean?

Mobility Scenario	Description	Resulting Approx. Peak-Hour Speeds
M1	Eliminate serious congestion	Freeways: 55+ mph Arterials: 35+ mph
M2	Prevent worsening of existing congestion	Freeways 40-50 mph Arterials 20-30 mph
M3	Continue trend investment levels	Freeways 30-40 mph Arterials 15-20 mph

Another Way to Look at It: Marginal Benefit versus Marginal Cost



Getting Better by Not Getting Worse:



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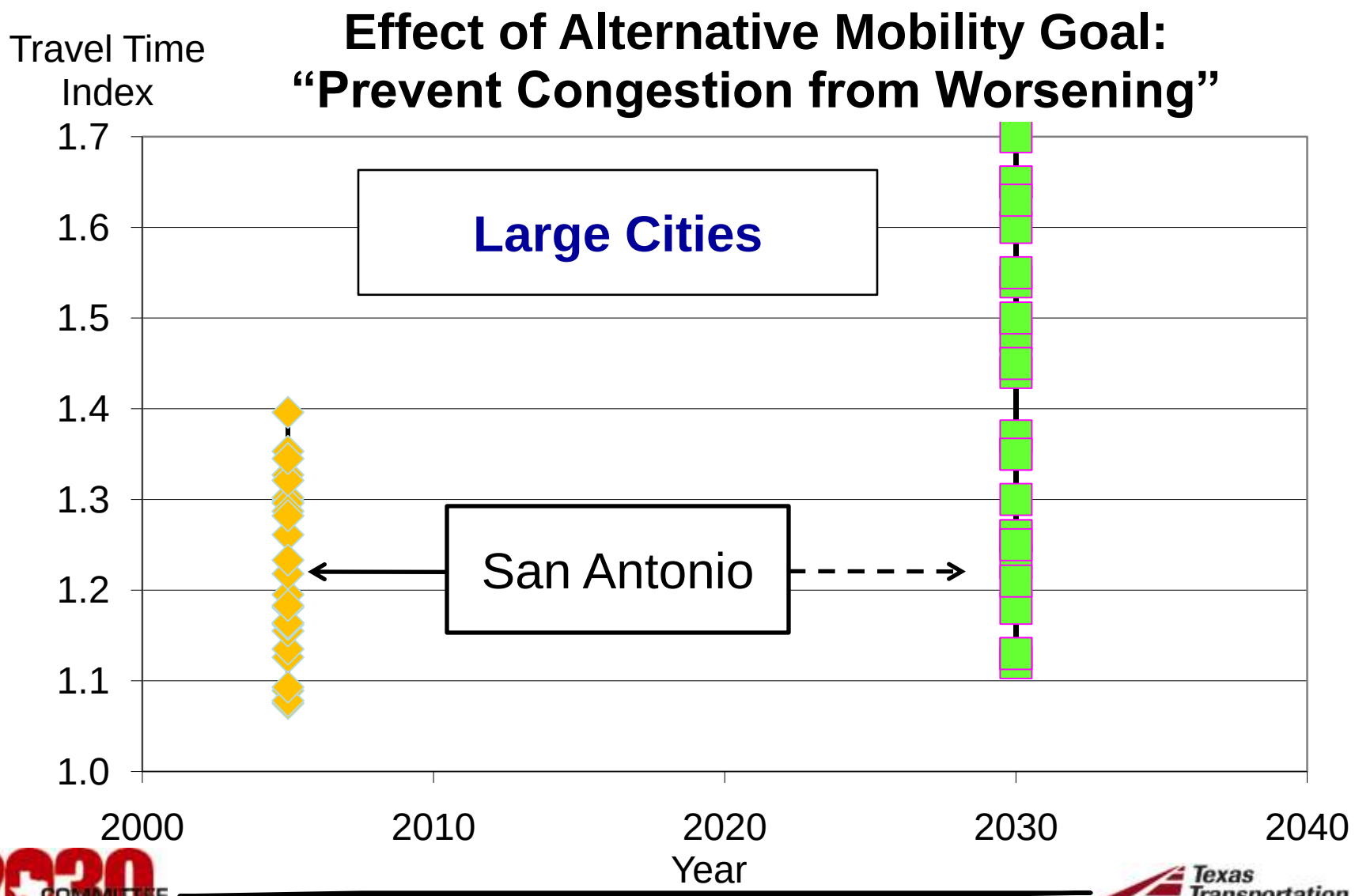

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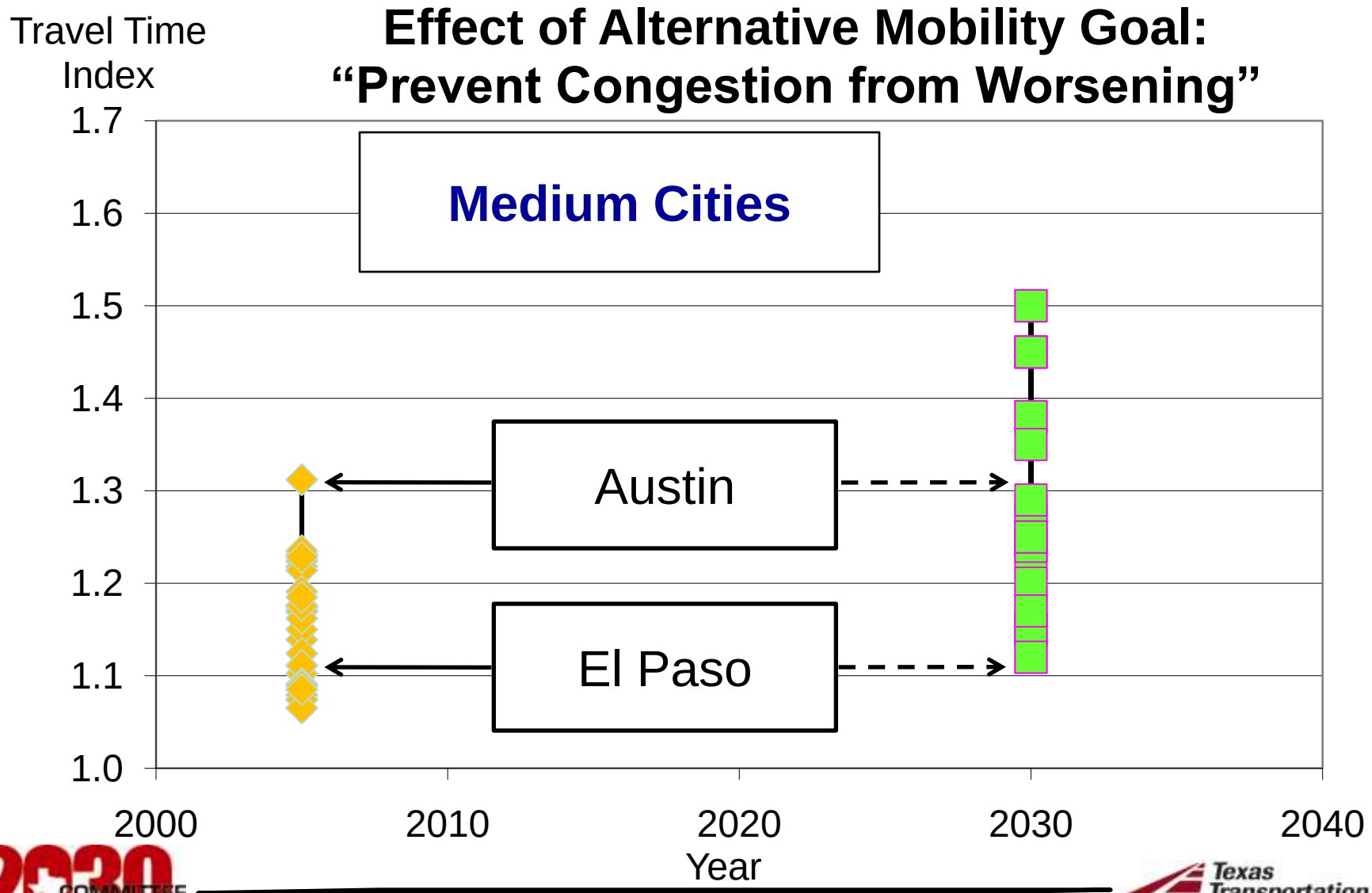

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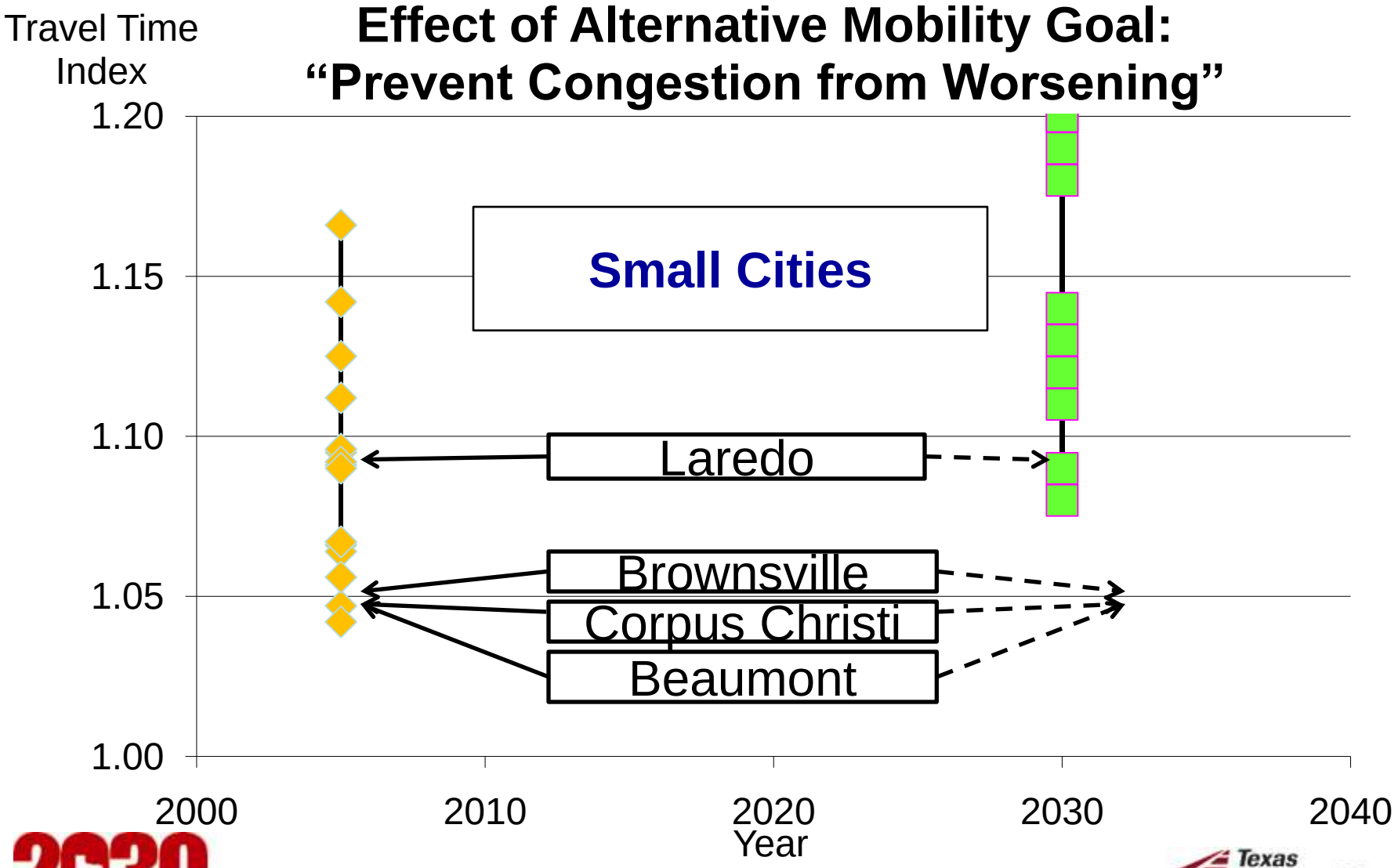


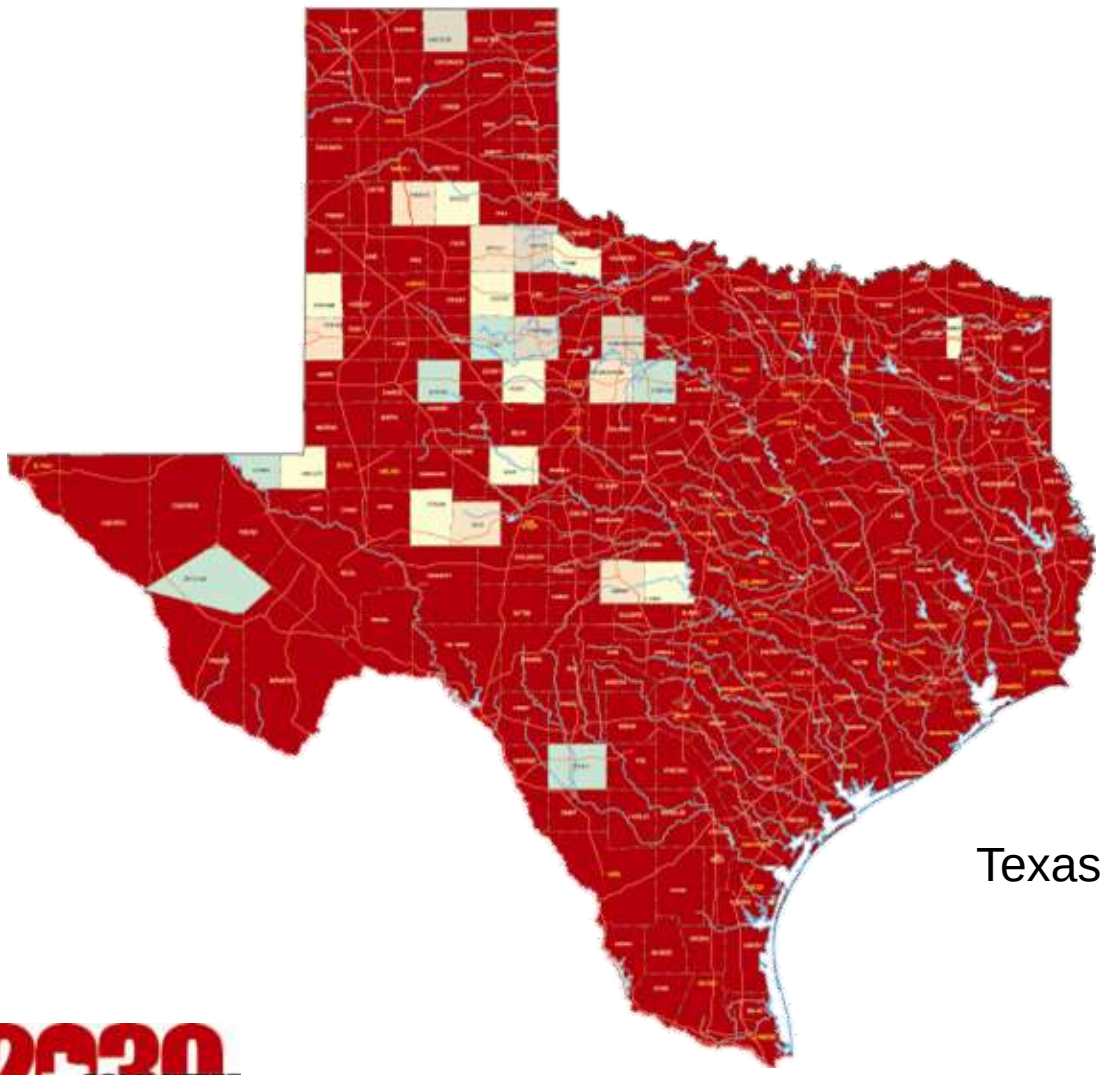
Mobility Scenarios for Rural Areas

- Scenario R1 – Aggressive connectivity and congestion relief
- Scenario R2 – Basic congestion relief and connectivity
- Scenario R3 – Basic congestion relief

What Does This Mean?

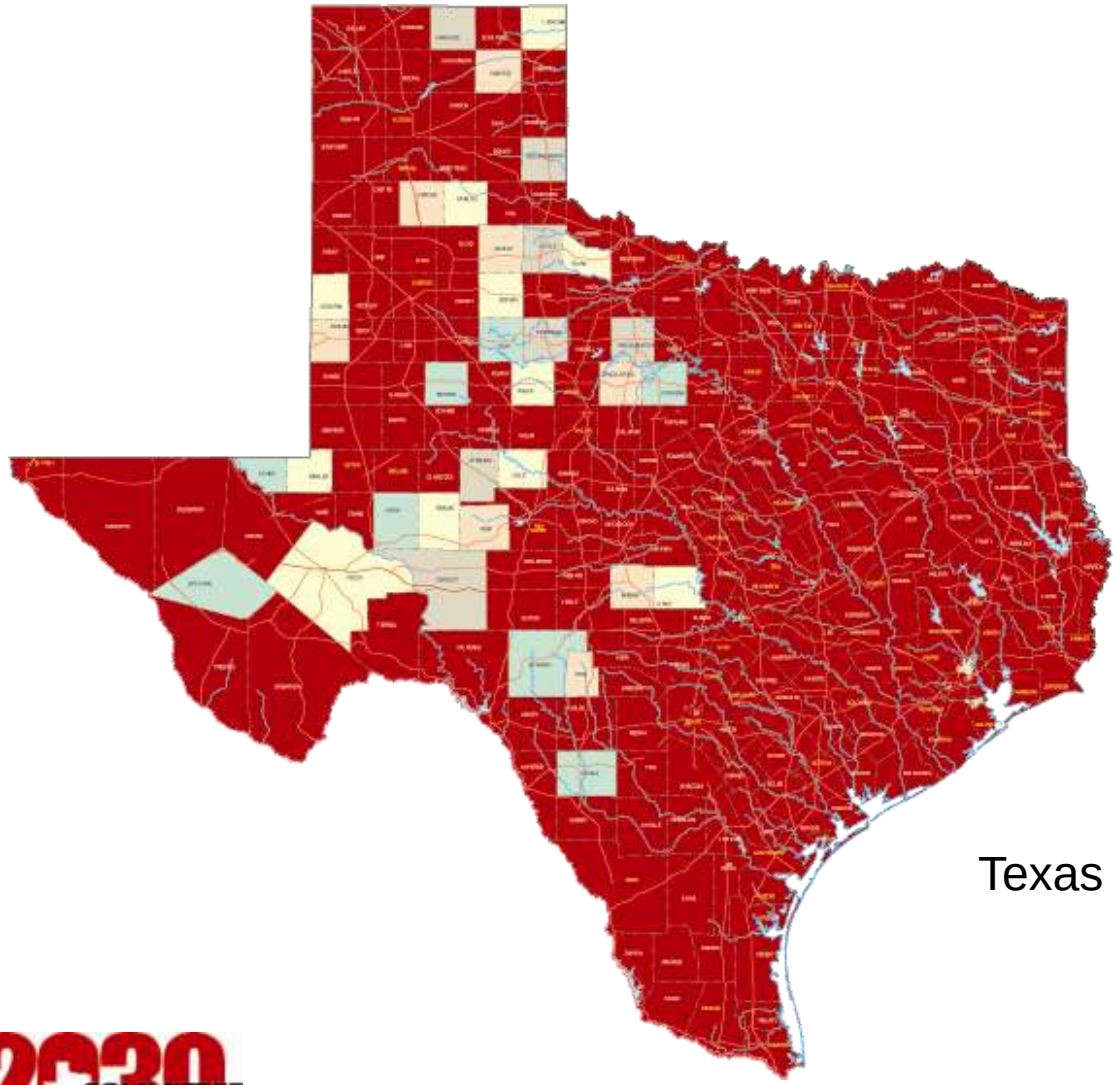
Area Type and Roadway Class	Additional Lane-Miles Required to Meet Scenario Targets		
	R1 - Aggressive Connectivity and Congestion Relief	R2 - Congestion Relief and Basic Connectivity	R3 - Congestion Relief
Small Urban			
Freeway or Tollway	141		70
Major Streets	1,571		1,333
Rural			
Freeway or Tollway	2,073		850
Major Streets	13,379		6,199

What Does This Mean?



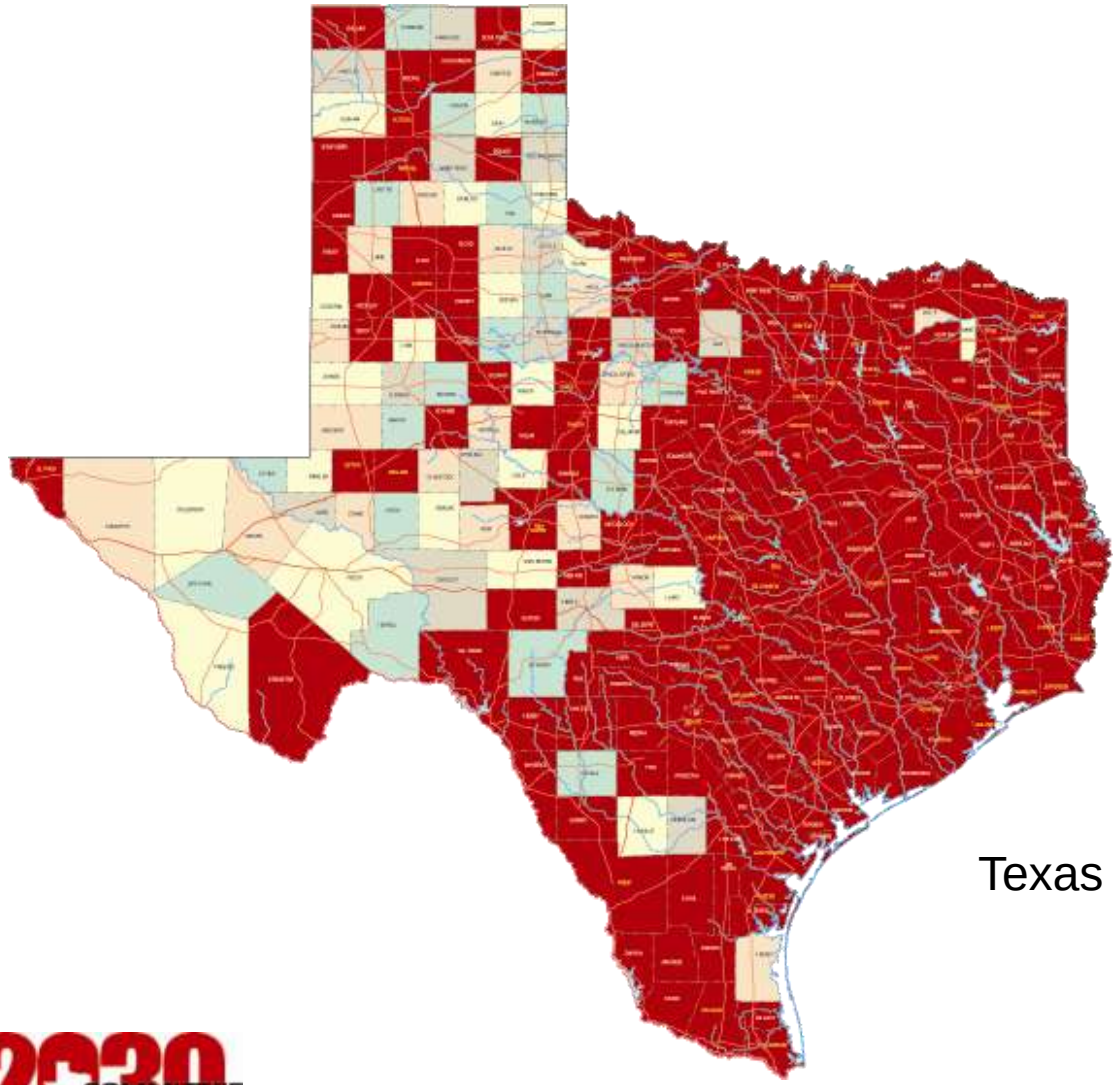
Texas Connectivity & Congestion
Scenario A

What Does This Mean?



Texas Connectivity & Congestion
Scenario B

What Does This Mean?



Texas Connectivity & Congestion
Scenario C

What Types of Mobility Improvements Did the Committee Consider?

A reality:

Modal decisions (autos, bus rapid transit, light rail and commuter rail, etc.) are mostly local and regional decisions.

What Types of Mobility Improvements Did the Committee Consider?

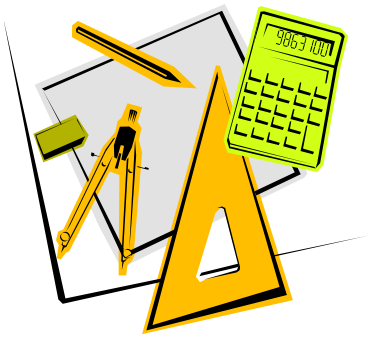
A problem:

If the Committee doesn't know what modal mix will be chosen, how can it assemble an estimate of the total investment required?

What Types of Mobility Improvements Did the Committee Consider?

An approach:

- Highway planning tools are more advanced
- Roadways will continue to be the most dominant mode for the planning horizon
- Recommend using highway planning methodology as a proxy for investment need.



What Types of Mobility Improvements Did the Committee Consider?

A caveat:

- Does NOT suggest that roadways are the only tool for improving mobility.
- A reliable, consistent measurement
- Mix of modes will be required

How was Investment Need Estimated in Urban Areas?

- Examine current capacity
- Project increased demand
- Increase capacity
  - To eliminate severe congestion (M1)
  - To preserve current mobility levels (M2)
  - To maintain current trends (M3)
- Calculate costs for each alternative

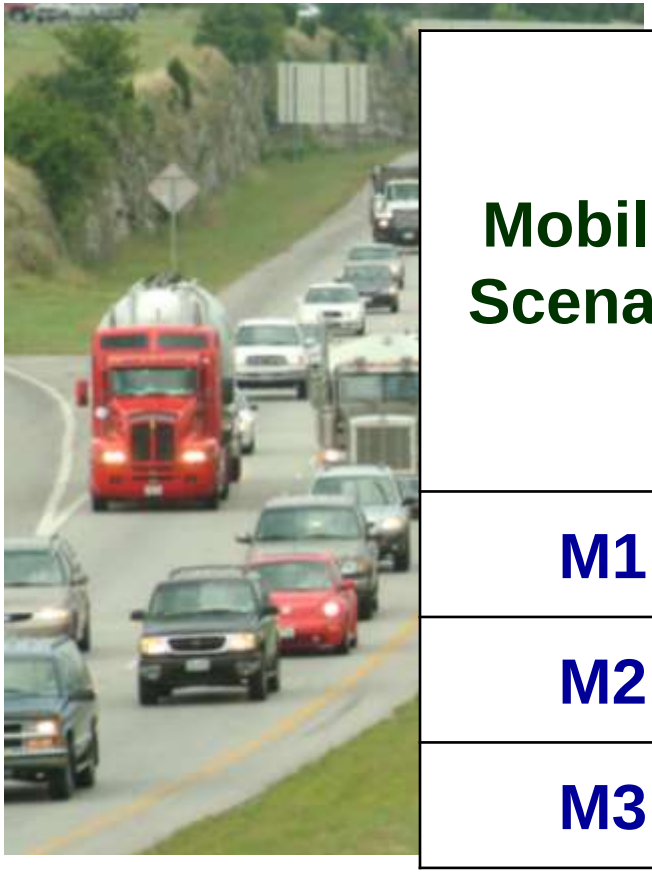
How was Investment Need Estimated in Rural Areas?

- Examine current capacity
- Project increased demand
- Increase capacity
  - To eliminate congestion above the threshold and widen remainder of Trunk System to at least four lanes (R1)
  - To eliminate congestion above the threshold and add lanes to the Trunk System where volumes are greater than 50 percent above threshold (R2)
  - To eliminate congestion above threshold levels (R3)
- Calculate costs for each alternative

What are the Rural Congestion Thresholds to Eliminate Serious Congestion?

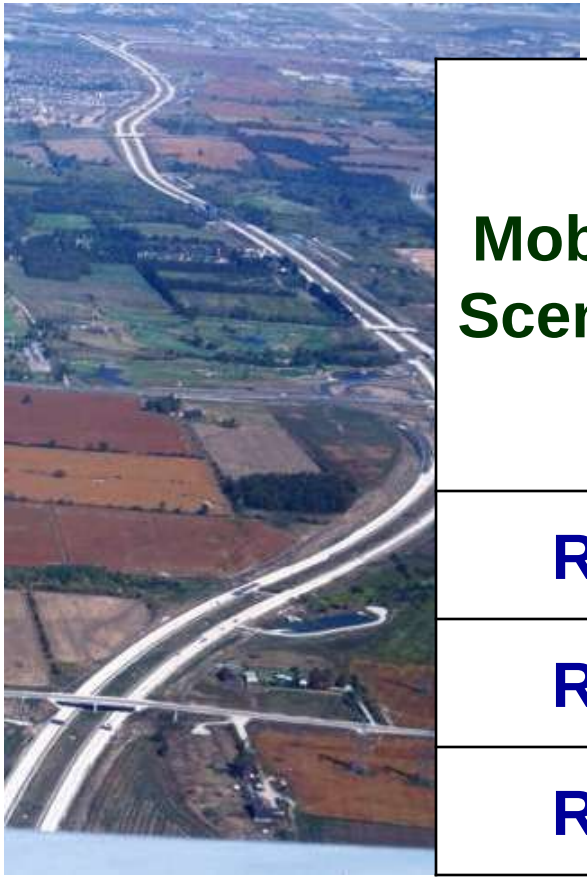
Area Type and Roadway Class	Daily Traffic Per Lane Threshold for Serious Congestion
Small Urban	
Freeway or Tollway	16,000
Major Streets	5,500
Rural	
Freeway or Tollway	10,000
Major Roads	4,500

What Does it Cost in Our Metro/Urban Areas?



Mobility Scenario	Additional Travel Capacity Equivalent Needed Statewide (lane-miles)*	Investment Required to Achieve Mobility Goal by 2030
M1	45,210	$236 billion
M2	In progress	In progress
M3	30,094	$146 billion

What Does it Cost in Rural Areas?



Mobility Scenario	Additional Travel Capacity Equivalent Needed Statewide (lane-miles)*	Investment Required to Achieve Mobility Goal by 2030
R1	17,164	$21 billion
R2		
R3	8,452	$4 billion

Next Steps

- Complete mobility scenarios **M2** and **R2**
- Finalize all scenarios
- Complete infrastructure needs assessment (pavements and bridges
- Estimate economic impact
- Develop communication tools