# V2X. Way to the Future?

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### Intelligent Transportation System = Road + Vehicle



## Key pain points of transportation: Safety, Efficiency & Environment

**ADAS:** Advanced Drivers Assistant System



Long Range Radar Short/Medium Range Radar LIDAR Camera Ultrasound Radar



#### LTE-V2X Advantages

Scenarios	C-V2X	ADAS
Bad Weather	$\odot$	8
Traffic Signal	٢	8
NLOS	$\odot$	8
Internet	$\odot$	8
Larger Coverage	٢	8



Analysis on 6 million accidents source from US DoT



## Key pain points of transportation: Safety, Efficiency & Environment



### V2X tech: two choices, one future



	Likelihood of successful message delivery between two vehicles								
	At a junction			Not at a junction					
	Urban	Rural	Motorway	Urban	Rural	Motorway			
LTE-V2X	96%	83%	N/A	96%	99%	94%			
802.11p	78%	66%	N/A	81%	98%	86%			



### Why 5G? Latency and reliability matter

Deliebility	End to end latency						
Reliability	100ms	25ms	10ms	5ms	3ms	2ms	1ms
90%	Warning						
99%			Sensor sharing				
99.9%							<b>5G</b>
99.99%							
99.999%			Short distance platooning	Remote driving		Rea	lly



