

Sustainability, Climate Action & Transportation

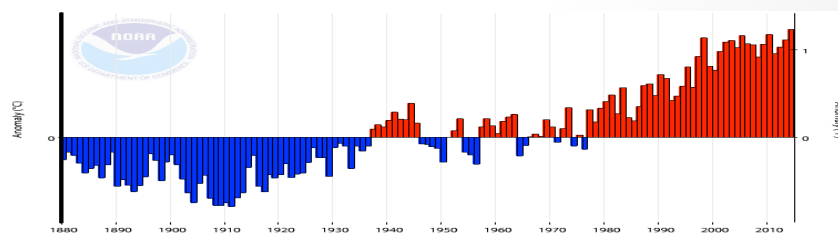
Gil Philip Friend
Chief Sustainability Officer
CAC meeting Sept 8, 2015



1

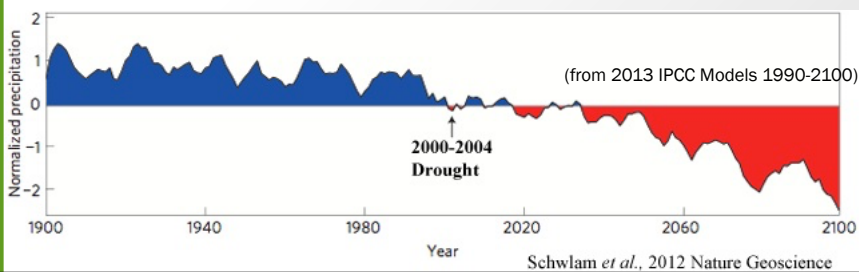
Hotter

Land & Ocean Temperature Global Anomalies (1880-2010)



Drier

Precipitation (1990-2100) Western North America



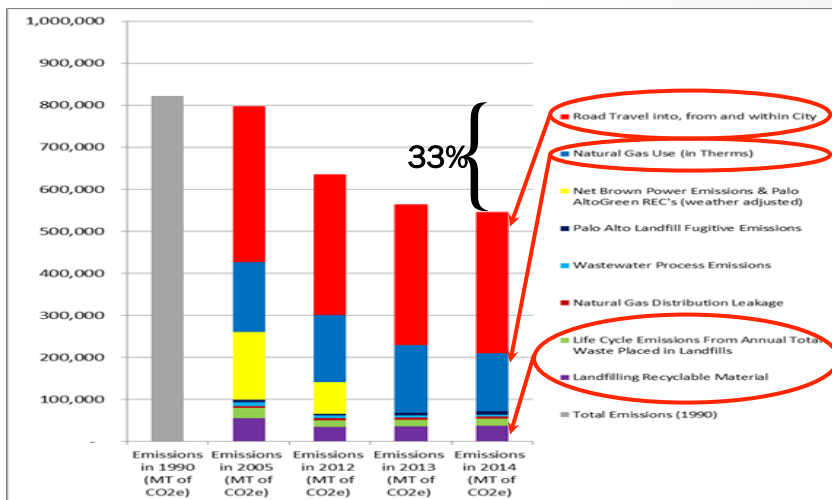
We've done a lot...

- 2007 Climate Protection Plan
- 154+ sustainability initiatives
- Carbon neutral electricity
- Green building ordinance
- Energy reach code
- EV readiness
- Fleet electrification
- S/CAP & Comp Plan
- Local Solar Plan
- PaloAltoGreen gas
- Urban Forest Master Plan
- Energy/compost facility
- PV permit streamlining
- Bicycle Boulevards
- EPP: "default to green"

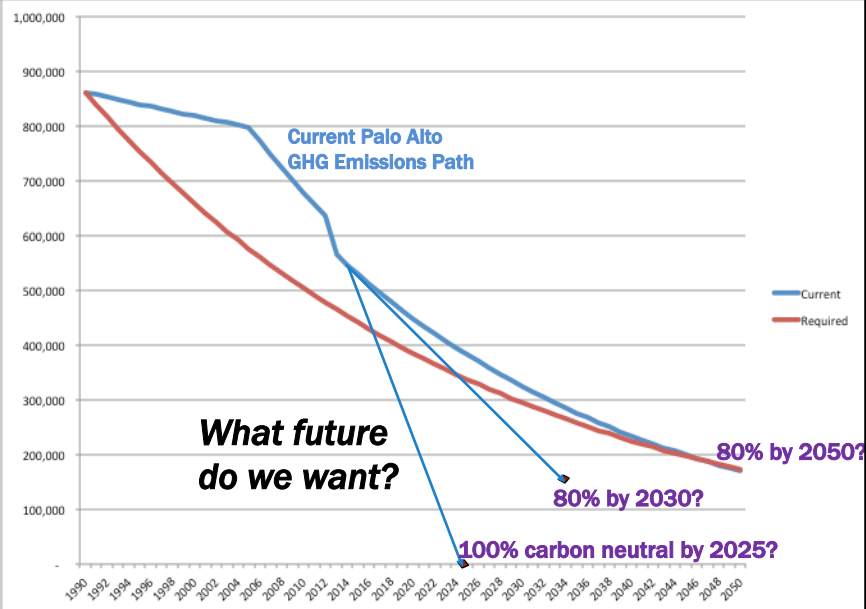
...with lots more in the pipeline



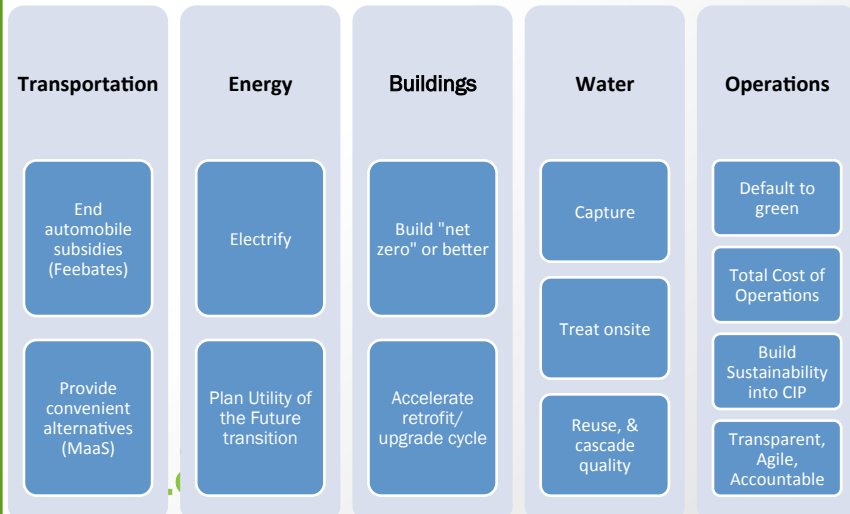
Palo Alto Emissions Reductions



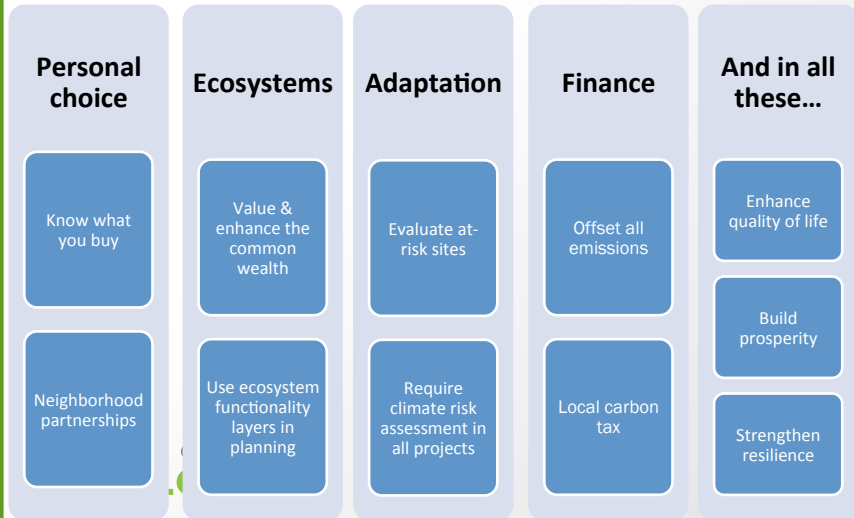
But more required to meet State 2050 goals



S/CAP: Key Levers

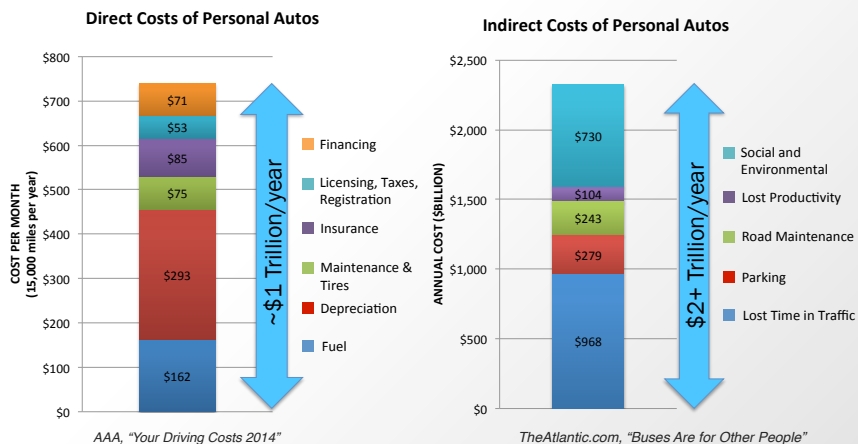


S/CAP: Key Levers



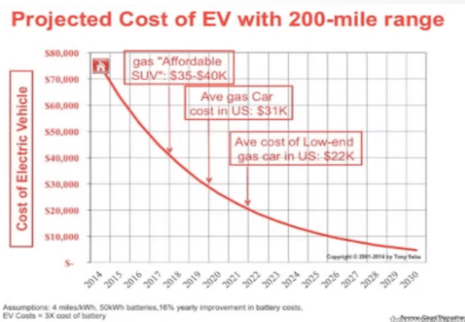
Transportation Is Expensive

\$3 Trillion per year in the U.S. ALONE



Technology & Costs Changing Quickly

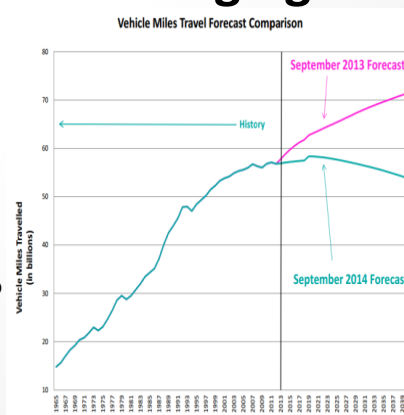
- EVs
- PVs
- Battery storage
- Self-driving cars
- Sensors
- Etc.



- *The convergence of these trends will likely drive a sea change in transportation in 10-20 years.*

Transportation is Changing

- Technology
- Demographics
- Business offerings
- More roads & parking?
- Or...
 1. Stop incenting what we don't want
 2. Make more convenient what we do want



The Driving Design Question:

How can we make it
more convenient for anyone,
any where, at any time
to not drive alone.
Or drive at all.

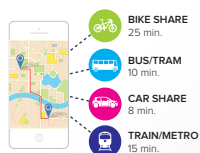


Mobility of the Future



01. MOBILITY AS A SERVICE

on-demand, multimodal, tech-enabled



02. MOBILITY-FRIENDLY CITIES

walkable, bikeable, transit-friendly



03. THE RIGHT VEHICLE FOR THE JOB

efficient, electric, right-sized



04. SELF-DRIVING

driverless, connected



One Seamless App

Multimodal trip planning. Discounted monthly bill. Customer-centered. Pay like Clipper.

	COST	DEPART	ARRIVE	GHG
	\$5.55	1:59PM	2:21PM	11.4
	\$3.25	2:02PM	2:22PM	0
	\$10.50	2:02PM	2:24PM	11.4
	\$4.00	2:05PM	2:35PM	0
	\$7.00	2:02PM	2:35PM	5.7
	\$4.00	2:15PM	2:37PM	5.7
	500 cal	1:59PM	2:49PM	0

CITY OF PALO ALTO

13

Scalable TDM

- Stanford carrots / sticks
 - Inspired by "General Use Permit I - no new trips"
 - "Revenue-neutral workplace parking feebate"
 - About \$3.60 per day for SOVs to park
 - Parking revenue funds Marguerite, GoPass, etc.
 - From 77% to 48% SOV**
 - Saved \$107M in new parking structures not built**
- Palo Alto Pilots: experiment with small carrots & sticks.

Company	SOV
Palantir	38%
Stanford	48%
Google	52%
Downtown PA	55%
Genentech	58%
Facebook	59%
MS Redmond	60%
Apple	72%
Yahoo	75%
City of Palo Alto	XX?

14

SCAP: Transportation Levers

Efficiency. Electrification. Mobility services. Land use.

- **Expand non-auto mobility options**
 - Build out bike network
 - Expand transit facilities & services
 - Facilitate shared transport
- **Create the right financial incentives**
 - Price parking
 - Fund transit & other non-SOV alternatives
- **Implement land-use development approaches**
 - Adopt “balanced community” approach to growth
- **Reduce carbon intensity**
 - Convert to EVs
 - Carbon offsets as bridge



15

Some Possible Starting Points

- **Phase out free parking**
 - Offer “feebate” benefits: Commute benefits? Discounts? Cash?
- **Expand and beef up alternatives**
 - Expanded & improved shuttle service
 - Expanded bikeshare service
 - Telework
- **Add new options**
 - 1st/last mile solutions
- **Make it easier & more economical to not drive**
 - City and/or employer-paid discounts for carpooling & “ride-hailing” services (eg, Uber/Lyft, etc.)
 - Seamless MaaS (Mobility as a Service) apps & ecosystem
- **Key: “parking as a right” to “something better”**



16

What's possible?



Tell Us What You Think

Sustainability & Climate Summit
Coming in November

SCAP Survey

<https://pal Alto.metroquest.com>

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