

Electric Alternatives:

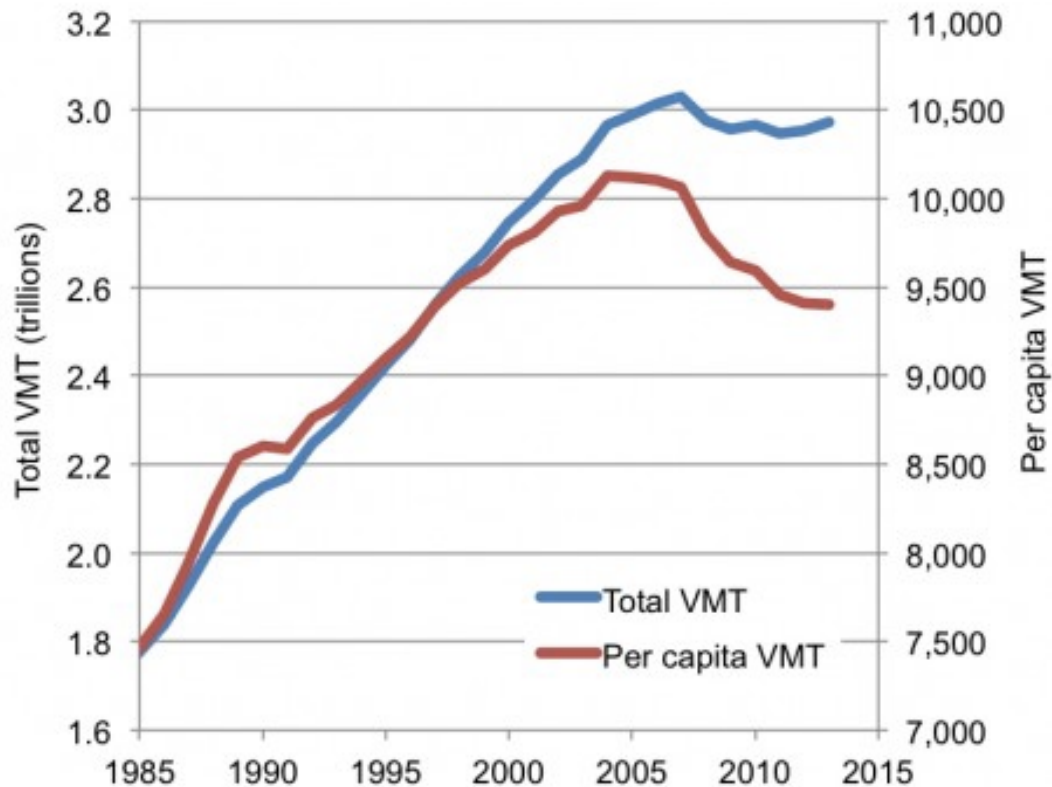
The Key to Driving Less and Moving Forward

Yesim Erez

Head of Marketing

Mahindra genZe

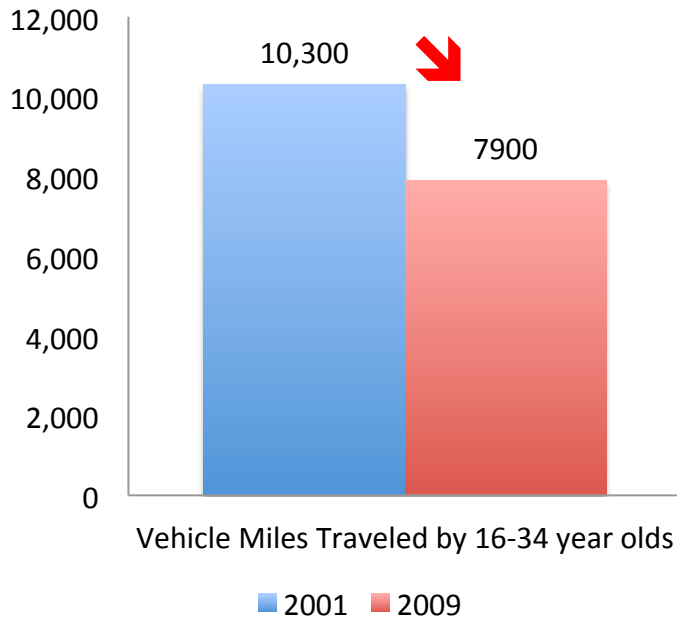
Vehicle miles traveled in consistent decline



Since 2004, Americans have been driving less and less on a per-capita basis

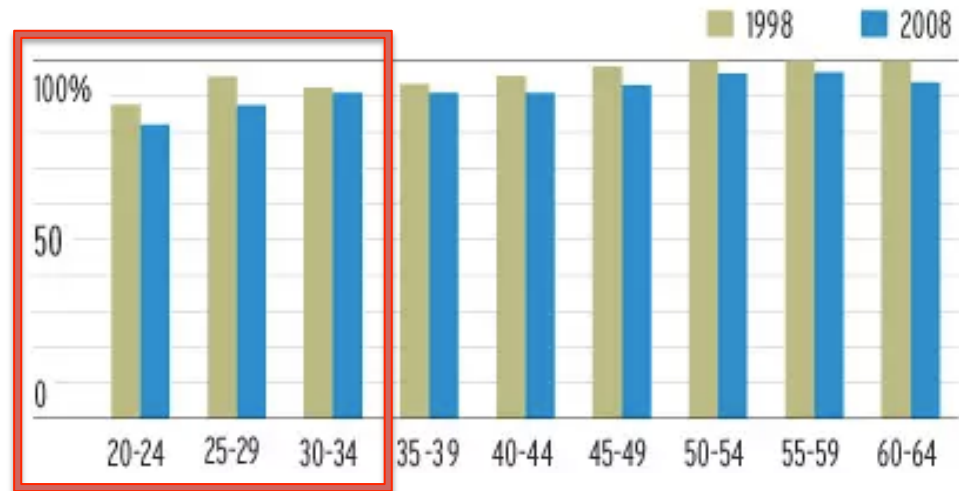
Who is driving less?

23% drop in vehicle miles traveled in just 8 years



Millennials are less and less likely even to get licensed

Percentage of U.S. population with driver's licenses, by age



Increasingly, millennials are driving the trend away from driving

Why are we driving less?

- Underemployment
- Urbanization
- Technology preempting the need to commute
- Availability of alternative modes of transportation
- Impact of IC motor vehicles on the environment

Millennials would rather live in urban places with transit access

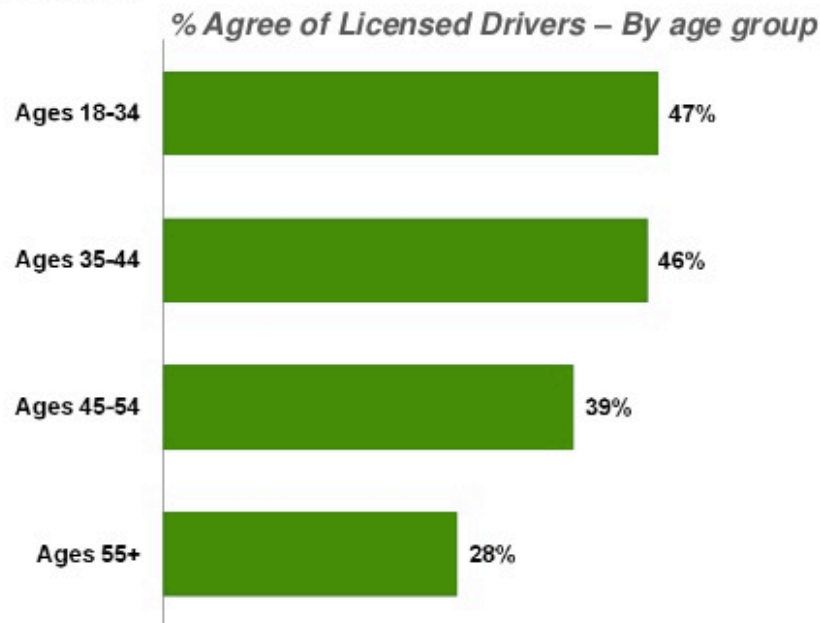
- For the first time since the 1920s, growth in U.S. cities is outpacing growth elsewhere
- 62% of millennials indicate preference for living in urban centers that offer access to robust transportation options
- 66 % of millennials say that access to high quality transportation is one of the top criteria in considering deciding where to live next



Source: <http://www.nielsen.com/content/corporate/us/en/insights/news/2014/millennials-prefer-cities-to-suburbs-subways-to-driveways.html> and Transportation 4America, April 2014 Rockefeller Millennials Survey

Millennials would rather connect online than spend the time / money to drive

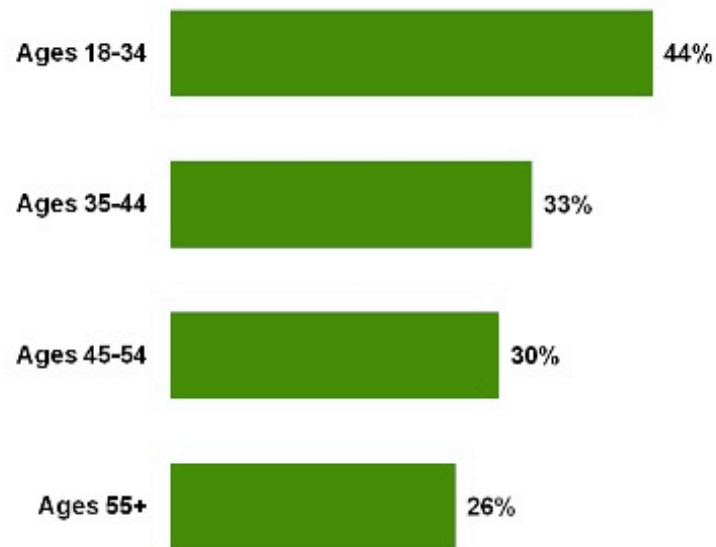
Increasingly, younger consumers are choosing to communicate via social network sites, text messaging and online gaming instead of driving to see friends:



Having options also helps to avoid driving

In addition, young people are making an effort to take public transport, bike, walk or carpool in order to reduce driving

% Agree of Licensed Drivers – By age group



Options include share models



Peer : Peer

Business : Consumer

...and vehicles more efficient than cars



Mahindra genZe

How are alternatives more efficient?

For millennials,
electric is a logical
choice

EFFICIENCY

Smaller Footprint	1 or 2 riders vs. 4-6
Time	No waiting for mass transport No need to use multiple modes of transport Easier parking
Lack of hassles	No gas Low maintenance Reduced parking hassles
Drive train	ICE at 20-35% efficiency vs. EVs at 80-90%



Challenges and barriers are real but surmountable

- Investment required to change consumer habits
 - America is not a 2 wheeler culture: only 0.01% of population buy scooters every year - 10X lower than in France, 28X lower than in China, and 40X lower than in the Netherlands
- Cost
 - Cost of batteries and reliable drive train technology
 - Highway legal products remain expensive
- Policy
 - Federal and state subsidies only for highway vehicles when the congestion problem also resides in the urban core
- Infrastructure
 - Distribution: to date, only specialty dealers have been effective
 - IC/EV combination dealer models proven to not work due to price premium and lack of after sales service income from EV's

A new efficient category is needed



Back Bay™ - 3X storage and utility space



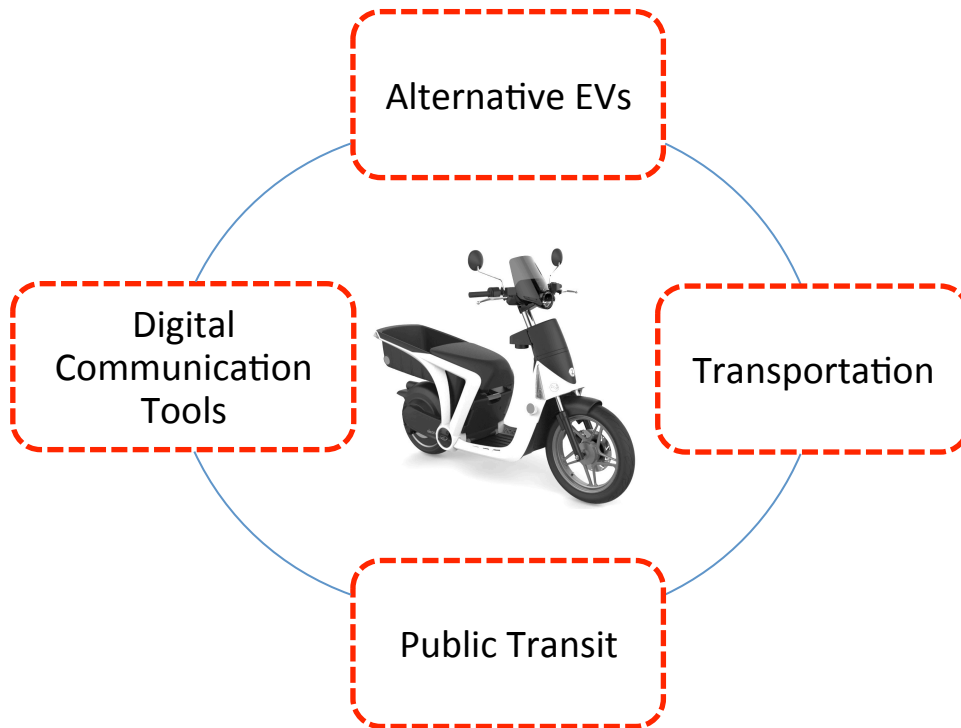
Cruise-Connect™ 7" Touchscreen



SmartPack™ Removable Battery

- Aluminum Exoskeleton
- Cell Phone & Laptop Charging

To solve urban mobility issues – integrated solutions are key



Transport issues are too complex to be tackled by “siloes” companies and technologies

Private and public sector stakeholders need to develop innovative business models that can successfully execute an integrated transport scheme

Mahindra GenZe aims to solve the urban mobility problems of the twenty-first century – and we welcome working with partners that are similarly driven

Specs

Performance

- Top Speed 30 mph (48.3 kph)
- Range Minimum of 30 miles (48.3 kilometers) per charge
- Driving mode Sport mode (High performance) Economy mode (Range maximizing) Easy mode (New rider orientation)
- Acceleration 0 mph to 30 mph < 8 seconds (170 lb rider and 20 lbs cargo)

Battery Specs:

- Battery type Removable Li-Ion battery pack
- Battery capacity 1.6 kWh nominal
- Voltage 58.8 VDC at max charge and 42 VDC at min charge - 52V nominal
- Charge Time 100% in 3.5 hours
- Charger Input power 110V AC, 5 amps
- Charger output Up to 60 VDC and 500W
- Battery life cycle 800 cycles to 80% of initial capacity

Motor & Structure

Motor

- Peak Torque (Nm) 130 Nm
- Motor Type Brushless permanent magnet hubmotor
- Climbing Performance Up to 20% grade (Assuming 20mph for 0.5 mile, then@ 15mph)

Structural

- Frame Cast, welded, and powder-coated aluminum exoskeleton
- Suspension Telescopic oil damped front fork with internal coil springs, twin oil damped coil over shock rear swing arm suspension
- Brakes Single piston hydraulic disc brakes front and rear
- Regenerative braking Yes
- Tire- Front 100/80-R16
- Tire- Rear 130/70-R12
- Curb Weight 215 lbs. (97.5 kg.)
- Seat Height 29.5 inches (749 mm)
- Ground clearance @max load 5.5 inches (139 mm)
- Carrying capacity 275 lbs. rider plus cargo (125kg)
- Wheelbase 50 inches (1267 mm)

UX

User Interface

- Instrumentation 7" touchscreen monitor with controls including odometer, speed, energy consumption, battery status, estimated range and CO2 reduction
- Pin code security lock
- On-board owners manual
- Lighting All All LED lights with 85% lower energy consumption
- Auxiliary Power Connections in front and rear for 12v charging