THE COMING DRIVERLESS CAR AND ITS IMPACT ON REAL ESTATE

Why Driverless Cars Will Change the World
While Driverless Real Estate Investing Will Leave You Behind
About National Real Estate Advisors

- U.S focused real estate investment manager
  - SEC Registered Investment Advisor
  - Wholly owned by the NEBF
  - Fund and Separate Account Management
  - Invests in institutional quality office, industrial, retail, multifamily, senior housing, and data center assets
  - Focus on Build-To-Core Strategy—Since 2000
    - Invested in more than $10 Billion of development projects
  - Full service development and construction management capabilities
  - History of Performance — average annual managed gross returns of more than 10% since 2000

1. Includes returns of predecessor firm, NEBF Real Estate; Returns are gross of fees. Past performance does not guarantee future success. Performance returns: The annualized time-weighted returns are calculated using quarterly investment level data geometrically linked to form annual returns and based on the INDURE ownership interests plus cash and other non-real estate assets and liabilities.

2. Includes development projects of predecessor firm, NEBF Real Estate.

Assets Under Management
- Over $2 Billion in total assets under management
- 66 assets
- 9.8 million SF
- 16 current development projects
Differentiators

- Consistent and Proven Build-to-Core Investment Approach
- Extensive Expertise Investing in Leading U.S. Urban Markets – high barriers to entry, diversified economies, effective transportation networks
- Have the Ability to Work with leading developers or through in-house development group
- Employ equity and debt structures to maximize investor returns, hedge risk and be a more attractive capital source
National's Current Projects

Completed Since 2000: 21.1 Million Man Hours of Work
Under Construction: 4.9 Million Man Hours of Work
Predevelopment: 12.9 Million Man Hours of Work
A Sample of National’s Current Projects
About INDURE Fund

- A $1.7 Billion core-plus, open-end investment fund focused on “Build-to-Core” investment strategy throughout the U.S
- 11% Five year projected total gross returns
- Fund objectives and strategy:
  - Preserve capital
  - Receive annual cash yields and appreciation in excess of index
  - Provide immediate and ongoing diversification
  - Provide reasonable liquidity
- Gross return of 13.1% since inception in 2010 (11.7% net)

Property Type as of 9/30/13
- 6% land
- 28% Industrial
- 3% Hospitality
- 10% Office
- 6% Retail
- 3% Senior Housing
- 8% Mixed Use
- 36% Apartment

1 - Past performance does not indicate future results
2 - Performance returns: The annualized time-weighted returns are calculated using quarterly investment level data geometrically linked to form annual returns and based on the INDURE ownership interests plus cash and other non-real estate assets and liabilities.
3 - Source of all INDURE portfolio information is NREA analysis data 3Q 2013
The Coming Driverless Car and Its Impact on Real Estate
Location, Location, Location

• Real Estate has always been about Location, Location, Location
• Except Locations Change over Time
• Technological Changes can have a huge effect on Real Estate
  • Railroads
  • Automobiles
  • Air-conditioning
  • Telecommuting
  • Jet Planes
  • Driverless Cars?????
A Very Brief History of New York

The Rise of New York

• 1800: Population 60,000
• 1810: New York Becomes Most Populous City in U.S.
• 1820: First Regularly Scheduled Bus Service is Instituted (Horse Powered)
• 1825: Erie Canal is Completed New York becomes gateway between European manufacturing and U.S. raw materials.
• 1832: First Street Car line is Completed Running from Downtown to Harlem (Horse Powered)
• 1860: New York City Population Surpasses 1 million
• Late 1800s: Massive numbers of immigrants swell its population
• 1900: New York is the Second Most Populated City in the World
But NYC Has a Problem

The Horses:
- Human Population: 3.4 million
- Horse Population: 200,000
- Horses are used for everything from trucking, deliveries, busses, trolleys, snow removal and garbage removal

The Manure:
- Each Horse Produces 24 lbs. of manure per day.
- 1.5 lbs. Per Person
- No Systematic Street Cleaning
- Manure piles line the streets
- It is plowed and piled in vacant lots in the “horse district”

1908: Horse Drawn carts are used to remove snow in Manhattan
It Gets Worse

The Carcasses
• The Average Lifespan is 2.5 Years for Work Horse
• It is More Profitable to Work a Horse to Death than Extend Its Life
• Carcasses are Often Abandoned in the streets
• In 1880 alone New York City was Forced to Remove 15,000 Abandoned Horse Carcasses from the Streets

Early 1900s: Children Play in the Gutter adjacent to Horse Carcass
The Experts:
• 1894: New York Editorial Estimates that by 1930 Manure will Need to be Piled in lots as high as 30 stories

The International Urban Planning Conference:
• 1898: The First International Urban Planning Conference is Held in New York
• The Topic: What to do about Manure
• The Conference is Abandoned after only 3 Days because no one has any Viable Ideas
The Solution Already Existed

Introduction of the Car:
• 1769: First Prototype Steam Car Tested
• 1865: Britain Introduces Laws to Regulate Testing Vehicles on Roadways – Limit Speeds to Avoid Scaring Horses
• 1886: First Production Automobile Manufactured in Germany by Carl Benz
• 1898: Britain Raises Automobile Speed Limit to 14 mph

1771: Early Steam Powered Prototype
And Change Came Quickly

London 1904
And Change Came Quickly

London 1910
Cars Quickly Became Ubiquitous

Total Cars/Household in U.S.

1900: 8,000 Cars

1915: 2,300,000 Cars

1914: Last Horse Drawn Buses Leave Cities

1930: 23,000,000 Cars

Great Depression

Source: U.S. census Bureau, OECD
Big Changes Were on the Way

Major Changes:
• The Rise of the Suburbs
• Cultural Changes – Focus on the Individual
• Cities are Designed around Cars
• New Pollution and Environmental Impact

August 1888: Bertha Benz and her Sons Make First Intercity Trip by Automobile in Germany
The Suburbs

Suburbs were in Reach:

- People have Long Wanted to live in the Suburbs, but It was Rarely Affordable
- 1908: Ford Introduces the Model T
- 1914: Ford Begins Using Assembly Line – Model T costs 4 Months of Worker’s Pay
- 1953: The U.S. Reaches One Car Per Household
- 1956: Interstate Highway System Authorized

“Our property seems to me the most beautiful in the world. It is so close to Babylon that we enjoy all the advantages of the city, and yet when we come home we stay away from all the noise and dust.”

- A letter from an Early Suburbanite to the King of Persia in 539 BCE
Rise of the Suburbs

Source: U.S. Census Bureau
Cultural Changes

Individualist Culture:

• Average Household Size Dropped from almost 5 in 1900 to just over 3 people in 1960
• Every Family Needs own house, yard, pool, ...
• Every Person needs own Car, TV, Phone, Dinner, ...

A Phoenix, AZ Suburb Where Every House has Its Own Pool
Adapting the World to Cars:
• First minimum parking requirements by cities were introduced in the 1920s and became widespread in 1950s
• Almost every jurisdiction in U.S. requires minimum amount of parking for any new construction
• The Result: Over 1 Billion Parking Spaces in the United States. ~8 for every car
• Area Covered by parking spaces is estimated to be larger than RI, DE, VT, and CT combined

Disneyland’s Parking Lot - One of several in the World with Space for Over 10,000 Cars.
Cities Taken Over By Cars

Houston
- Parking 25%
- Streets: 40%
- Buildings: 33%

Little Rock, AR
- Parking 30%
- Streets: 32%
- Buildings: 37%

Milwaukee, WI
- Parking 15%
- Streets: 39%
- Buildings: 44%

Washington, DC
- Parking 1%
- Streets: 43%
- Buildings: 51%
Environmental Consequences

Smog In China’s Cities:
• # of Cars in China: ~250 Million
• New Registrations Per Year: Over 17 Million
• Total: As Many as 20 Days a Month are Reported as Hazardous in Large Cities

Other Environmental Issues:
• Global Warming
• Oil Spills
• Urban Sprawl
• Storm Runoff, Sewer Overflow...

- A Particularly Bad Smog Day in Shanghai
- Particulate Levels have been Recorded Up to 25 Times what Experts Consider Safe

National
REAL ESTATE ADVISORS
Suburban Shopping Example:
• Year Built: 2003
• Total Retail: 11 Acres (17.1%)
• Total Parking Area: ~50 Acres
• Total Parking Spaces: 2,578
• Market Feedback: Future Expansion is Constrained by Current Limited Parking – Parking Is Crowded During Holidays
• Additional Development is on Hold Until We Solve the Parking Problem Ourselves or New Technology Does it for Us.

Legacy Village – Suburban Lifestyle Shopping Center outside Cleveland, OH

Source: National Real Estate Advisors
CBD Office Example:
- Year Built: 2004
- Location: 1 block from 4 Metro Lines
- # of Office Levels: 10
- # of Parking Levels: 4
- Total Construction Costs: $57 Million
- Total Parking Costs: $12.6 Million (22% of Total Building)
- Monthly Parking Rate: ~$300

Source: National Real Estate Advisors
Cost of Vehicle Ownership

5-Year Cost of a Ford Fusion

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
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<tbody>
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<td>Downpayment</td>
<td>$ 5,356</td>
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<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
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<tr>
<td>Taxes and Fees</td>
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<td>113</td>
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<td>Interest (4.0%)</td>
<td>643</td>
<td>524</td>
<td>401</td>
<td>272</td>
<td>139</td>
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<td>Principal</td>
<td>2,967</td>
<td>3,085</td>
<td>3,209</td>
<td>3,337</td>
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<tr>
<td>Sale</td>
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<td>-</td>
<td>-</td>
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<td>(11,643)</td>
<td>(11,643)</td>
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<td>Fuel</td>
<td>2,135</td>
<td>2,199</td>
<td>2,265</td>
<td>2,333</td>
<td>2,403</td>
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<td>Insurance</td>
<td>3,115</td>
<td>3,224</td>
<td>3,337</td>
<td>3,454</td>
<td>3,575</td>
<td>16,705</td>
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<td>maintenance</td>
<td>266</td>
<td>739</td>
<td>429</td>
<td>1,082</td>
<td>1,599</td>
<td>4,115</td>
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<tr>
<td>Repairs</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>113</td>
<td>$ 268</td>
<td>$ 390</td>
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<tr>
<td>Total</td>
<td>$ 15,834</td>
<td>$ 9,884</td>
<td>$ 9,866</td>
<td>$ 10,859</td>
<td>$ 46</td>
<td>$ 46,491</td>
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</tbody>
</table>

- Average Price Paid: $21,500
- Average Cost over 5-Years: $46,500
- Average Hrs. Driven: 1.25 Hrs./Day
- Average Cost: $20.40/hr.
- Price of ZipCar: $9.00/hr.

Source: Edmunds.com
Technology Changing The Way Be Can Use Car

Cars OnDemand:

• **ZipCar**: Car Rentals from Urban Locations for an Hourly Rate (Owned by Avis-Budget)

• **Car2Go**: Allows rental by Minute and Hour as well as One-Way trips (Owned by Daimler AG)

• **Uber**: Allows Users to Reserve Taxis and Car Services on Their Phone (Investors Include Google and Goldman Sachs)

• **UBerX**: Allows Users to Reserve Rides in other Users Vehicles

- Uber App in Use
Radical Change is on the Way

Subject to Change:

- Average Time Driving Each Day: 73min. (~2.5 Days per Year)
- 1.3 Million People Die in Car Accidents Each Year Worldwide
- Average Car Spends 22 hrs. Parked Empty Each Day
- $430 Billion Spent on Purchasing Cars in U.S. in 2013
- Over 2 Million People Drive Cars or Trucks for a Living in the U.S. (~1.5% of Workforce)

- A Google Driverless Car Spotted in Highway Traffic in California.
Features Currently in Cars:

- Lane Detection with Warning (2001): Nissan, Audi, GM, BMW, Volvo, Kia, ...
- Lane Detection with Independent Steering (2001): Toyota, Infinity, Mercedes, ...
- Self Parking (2004): Lexus, Nissan, Audi, Ford, ...
- Adaptive Cruise Control (2006): Mercedes, Audi, BMW, VW, Volvo, Chevy, ...
- Self Braking (2008) (EU Mandated by 2014): Volvo, Mercedes, Mazda, ...
- Self Driving in Stop and Go Traffic (2013): Mercedes S-Class
- Pedestrian and Bicycle Detection w/ Self Braking (2013): Volvo
Prototypes & Predictions

The Google Car:
• Prediction: For Sale by 2018

Performance to-Date:
• Driven 500,000 City and Hwy Miles Without incident (Twice as Far as Average Driver)
• Averages 50,000 Hwy Miles without Human Intervention
• Driven from Downtown San Francisco to LA along Hwy 1 without Human Intervention

Mercedes:
• 125th Anniversary of Bertha Benz’s 1888 Inaugural Road Trip a Mercedes Drove itself Along the Same Route

Carnegie Mellon:
• Uses Sensors Embedded in Infrastructure to Drive Guide its Driverless Cars

Other Major Players:
• Tesla – 90% Driverless by 2016
• Volvo – No One Injured in/by a Volvo by 2020

• Big Auto Consensus – Driverless Cars For Sale in 2020
Hurdles to Overcome

Technological:
• Cars Cannot Currently Operate in the Rain
• Currently Jerky and Clumsy in City Traffic
• Vehicle to Vehicle Communications
• Vehicle to Infrastructure Communications

Legislative:
• Legality
  • Experimentally Legal in CA, NV, FL, Japan …
• Liability in an Accident

Social:
• Widespread Adoption Will Not Occur Without Public Trust
### History of Technology Adoptions

<table>
<thead>
<tr>
<th>Years to 10% adoption rate:</th>
<th>Years to 10-50% adoption rate:</th>
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</thead>
<tbody>
<tr>
<td>• Car – 1895 to 1910 (20 yrs.)</td>
<td>• Car – 1910 to 1923 (8 yrs.)</td>
</tr>
<tr>
<td>• Radio – 1909 to 1916 (7 yrs.)</td>
<td>• Radio – 1916 to 1922 (6 yrs.)</td>
</tr>
<tr>
<td>• Telephone – 1878 to 1903 (25 yrs.)</td>
<td>• Telephone – 1903 to 1942 (39 yrs.)</td>
</tr>
<tr>
<td>• TV – 1928 to 1939 (11 yrs.)</td>
<td>• TV – 1939-1942 (3 yrs.)</td>
</tr>
<tr>
<td>• Cell Phone – 1983 to 1994 (11 yrs.)</td>
<td>• Cell Phone – 1994 to 2000 (6 yrs.)</td>
</tr>
<tr>
<td>• Internet – 1986 to 1995 (9 yrs.)</td>
<td>• Internet – 1995 – 2000 (5 yrs.)</td>
</tr>
<tr>
<td>• Driverless Car – 2020 to ?</td>
<td></td>
</tr>
</tbody>
</table>
## Estimated U.S. Savings

<table>
<thead>
<tr>
<th>Adoption Rate</th>
<th>10%</th>
<th>50%</th>
<th>90%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lives Saved (per Year)</td>
<td>1,100</td>
<td>9,600</td>
<td>21,700</td>
</tr>
<tr>
<td>Fewer Crashes</td>
<td>211,000</td>
<td>1,800,000</td>
<td>4,220,000</td>
</tr>
<tr>
<td>Annual Savings</td>
<td>$17.7 B</td>
<td>$158.1 B</td>
<td>$355.4 B</td>
</tr>
<tr>
<td>Hours of Times Saved</td>
<td>756 M</td>
<td>1,680 M</td>
<td>2,772 M</td>
</tr>
<tr>
<td>Annual Savings</td>
<td>$16.8 B</td>
<td>$37.4 B</td>
<td>$63.0 B</td>
</tr>
<tr>
<td>Gallons of Gas Saved</td>
<td>102 M</td>
<td>224 M</td>
<td>724 M</td>
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<tr>
<td>Decrease in Total Vehicles</td>
<td>4.7%</td>
<td>23.7%</td>
<td>42.6%</td>
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<tr>
<td>Annual Parking Savings</td>
<td>$3.2 B</td>
<td>$15.9 B</td>
<td>$28.7 B</td>
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<tr>
<td><strong>Total Annual Savings</strong></td>
<td>$37.7 B</td>
<td>$211.5 B</td>
<td>$447.1 B</td>
</tr>
</tbody>
</table>

Source: Eno Center for Transportation
Commuting

• The average Person Spends an Hour per day Commuting

• Many People Commute For Many Hours a Say – A Complete Waste of Time

New Free Time:

• Work
• Watch TV
• Socialize
• Sleep
The Future Family Routine

Work Day:
• 7am - Car leaves and takes Parent to Work
• 8am – Car Arrives Home and Picks up Children and Parent to School and 2nd Workplace
• 10am – Car Takes Itself to Repair Shop
• 3pm – Car Picks up Children Drops one at Soccer Practice and One at Piano Lesson
• 5pm – Car Picks up Everyone on Way Home for Dinner Together

Weekend:
• 6pm Friday – Picks up Parents and then Children in NYC
• 9am Saturday – Family Arrives Rested in Chicago
• Saturday and Sunday – Family Spends at Grandparents in Chicago
• 4pm Sunday – Family Leaves Chicago
• 7am – Family Arrives Home Ready to get Ready for Work and School
Rent by the Trip

• Today the Average car Spends 23hrs Parked and 1 hour driving per day – Why pay for That Time?

• Cars can Drop off Passengers and Immediately Pick up More

• It Should be Cheaper to Pay for Just the Time you Actually Use the Car – Cars could Always be in Use

• Let Someone Else Worry About Maintenance and Filling up Gas

- Taxi-Like Service will be Far Cheaper and more Widespread
Rent the Car You Need

- Every Time you Rent a Car you can Rent the Car you Need
- A minivan for Weekends, a Compact for Commuting, a Pickup Truck for Moving
- Or a Sleeper Car for Vacation, A Dining Car for After work, A Workout car for the Ride Home
- Some of this is Already Used by People who Don’t Own Cars

- Someone Who Did Rent A Pickup Truck by the Hour
Car Pools

• Car Sharing could Be Organized by Rental Car Companies
• Just Enter Your Location and the Car Service would Pair You with People going the Same Way
• This Service Already Exists but is Not Ideal Relying on Strangers to Organize and Drive

Zimride.com – Shows Trip Available from San Francisco to Lake Tahoe on December 17th
New Populations Can Drive

• 210 Million Licensed Driver’s in the U.S.

• 66 Million People over the Age of 10 do not have a Driver’s License

• Unprecedented Mobility to the Young, Old, Blind, Disabled...

• Unprecedented Lack of Chauffeuring for Parents
Accident Free Roads

Top Ten Causes of Death in the Developed World

Source: World Health Organization
Faster and More Efficient

- Driverless Cars Will Have Faster Reaction Times
- They Could be able to Drive Closer Together in Order To Draft and Save Fuel
- Less Space in Between Cars Means Smaller Highways and Less Traffic

- Driverless Car Driving on Driver-Free Highway in the Movie I, Robot
Sewers

Combined Sewers:
• Heavy Rain overwhelms Sewer System – Rainwater and Sewage are Released into the River
• Vast Paved Areas Direct Water into Sewers Immediately causing Flash Flooding in Sewers and Streams
• Fewer Parking Lots = Less Flooding = Less Sewage in Rivers

- Sign warning of Sewage Overflow along the Waterfront in Washington, DC.
Advertising and Television

- If People Don’t Own Cars Appearance May not Matter
- Cabs, limos, busses all look the same from the outside
- Function – Not Appearance or Status Symbol – will Dominate
- 2011 GM Spent $1.8 Billion on Advertising
- TV, Radio and Print may Lose This – Cabs and Rental Cars Don’t Advertise much

- Rows of Identical Cabs in New York
On-Street Parking

San Francisco Example:
• San Francisco Has over 280,000 on-street parking spaces – 2/3 of all its Parking
• Over 1,000 acres – Approximately 1% of the City’s Area
• All this Space Could be Put to Better Use
  • Parks
  • Wider Sidewalks
  • Bike Lanes
  • Expansion of Adjacent Buildings

- Street in Washington, DC with One Lane for Driving and Two Lanes for parking
San Francisco’s Parklets

• Local Businesses or Residents Sacrifice the Space in Front of their Property to Use as a public Park or Even Additional Patio Seating
The End of Convenience Stores

• In 2012 there were 149,000 Convenience Stores in the U.S.
• Approximately 85% of these Sell Gas
• If Drivers Don’t buy their Own Gas they Won’t Stop at Convenience Stores
• Often Well Located on Busy Corners in Suburbs and Big Cities – Could be A huge Redevelopment Opportunity

Downtown Chicago – Every Red Dot is a Gas Station, Convenience Store or Repair Shop
Transit-Oriented Development

- Developments centered around urban transit far more valuable than car-oriented development
- Boston (2006-2011)
  - Homes near transit increased in value 130%
  - Homes away from transit lost 45% of their value
- If car sharing becomes cheap and widespread there could be severely reduced transit use
- Transit-oriented development may not have an appeal in the future

Arlington County VA – All the major development is along the Blue and Orange Metro Lines
The Continued Rise of the Suburbs?

Source: U.S. Census Bureau
The End of Inner-City?

- The Hassle of Owning a Car in the City will be Gone
- Parking Garages and Gas Stations will Free up Space Potentially Lowering the Cost of Real Estate
- Rental Cars on Demand Allow Easy Access to Country Side and Suburban Amenities
- Perhaps City Centers will Actually Expand

- The Number of Cars Per Household Has Already Peaked. Perhaps Driverless Cars will Allow People to Continue the Trend

Source: U.S. Census Bureau, OECD
One Congress – Boston, MA

- Existing Garage:
  - 2,310 Parking Spaces
  - Underutilized
- Phase 1: 464 Apt Units
- Phase 2: Demolish Half Of Garage
- Phase 3: 1 million sf Office Tower
- Phase 4: 400,000 sf Mixed Use
- Phase 5: 291 Apt Units
• Final Product:
  • Office: 1,150,000 sf
  • Residential: 812 Units
  • Hotel: 196 Rooms
  • Retail: 82,500 sf

• 1,150 Fewer Parking Spaces
Conclusions

• Technological Advancements Can Dramatically Affect Real Estate Usage and Values
• Driverless Car Are Coming and Will Be Quickly Adopted
• Driverless Cars Will Have a Dramatic Affect on Real Estate Usage and Values
• National’s Research Based, Thoughtful Build-to-Core Investment Approach is the Best Way to Profit From and Protect Against the Coming Changes

Source: U.S. Census Bureau, OECD