



LEVER

*Light Electric Vehicle Education + Research Center*

# MARKET BEHAVIOR

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ELECTRIC BICYCLES IN NORTH AMERICA

NOVEMBER 3, 2014





“This is going to be the next big thing”

Gary Fisher,  
Godfather of the modern mountain bike

2014 Interbike Awards Gala

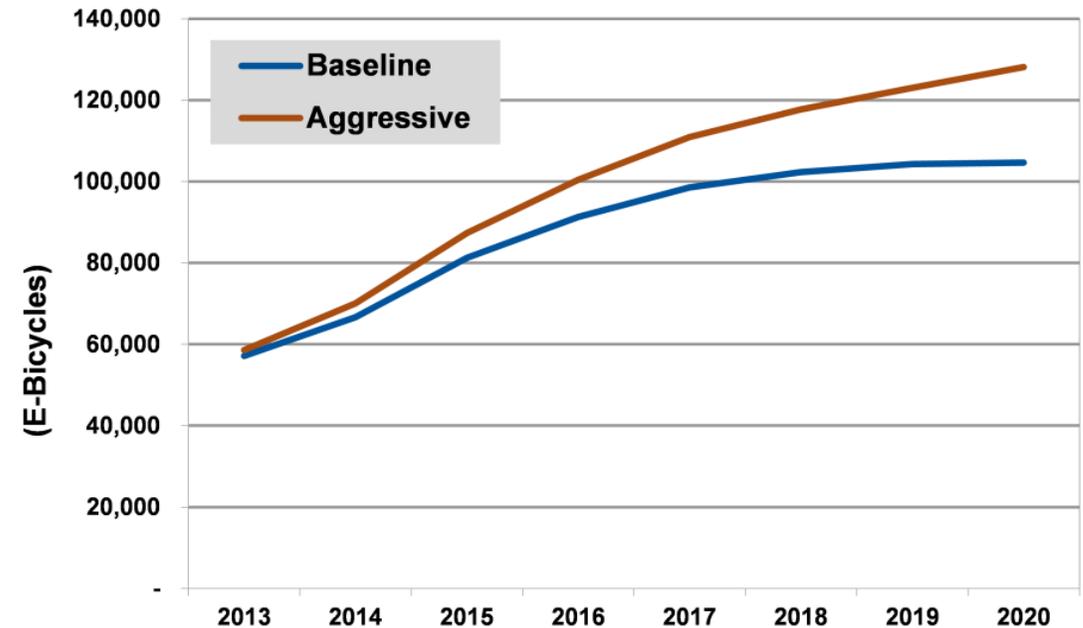
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# THE BICYCLE INDUSTRY



# SPECIALITY RETAIL SELL-IN

- ✓ RETAIL MARKET SIZE (UNITS) GROWING, BUT RELIABLE DATA IS LIMITED
- ✓ THE SPECIALTY (IBD) CHANNEL IS BEGINNING TO HAVE SUCCESS
- ✓ A FEW KEY SUPPLIERS REPORTING A DOUBLING IN REVENUE Y/Y
- ✓ OTHER FRAGMENTED RETAIL CHANNELS STILL EXIST, BUT IN DECLINE AS MORE LOCAL BIKE SHOPS STOCK EBIKES
- ✓ UNDEFINED OR AMBIGUOUS REGULATIONS ARE IMPEADING GROWTH (NOTE: EU)



SOURCE: NAVAGENT RESEARCH 2013



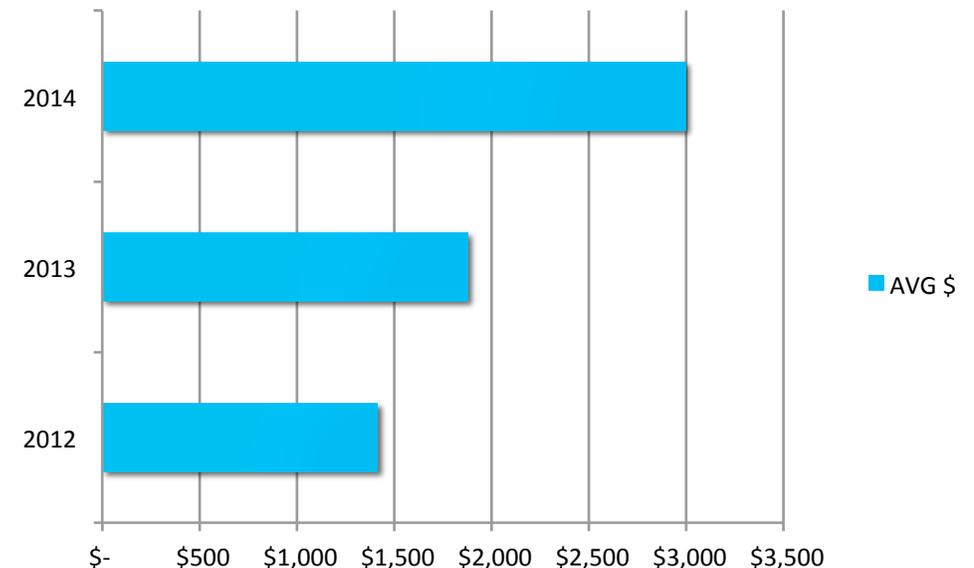


# THE CONSUMER

# SPECIALTY RETAIL SELL-THROUGH

- ✓ SPECIALTY RETAIL MARKET VALUE (DOLLARS) UP 48%\* YEAR OVER YEAR, BUT COMPLETE MARKET IS DIFFICULT TO ESTIMATE DUE TO UNRELIABLE DATA
- ✓ SPECIALTY RETAIL AVERAGE SELLING PRICE (DOLLARS) UP 60%\* YEAR OVER YEAR
- ✓ AGAIN, UNDEFINED OR AMBIGUOUS REGULATIONS ARE IMPEADING GROWTH (NOTE: EU)

**SPECIALTY BICYCLE SHOPS  
RETAIL AVG SELLING PRICE**

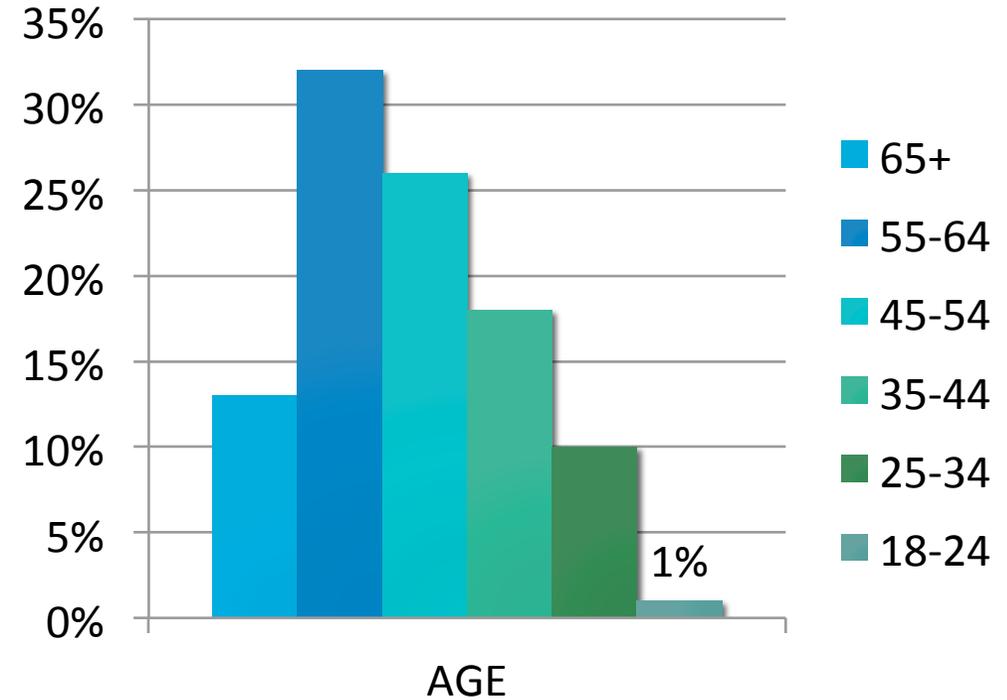


\*SOURCE: NPD / LEISURE TRENDS



# DEMOGRAPHICS

- ✓ 58% AGED 45 - 64, 25% AGED 25 - 44
- ✓ 63% MALE, 37% FEMALE
- ✓ 72% COLLEGE DEGREE
- ✓ 52% HOUSEHOLD INCOME > \$100K



SOURCE: ANA PRODUCT REGISTRATION 2014

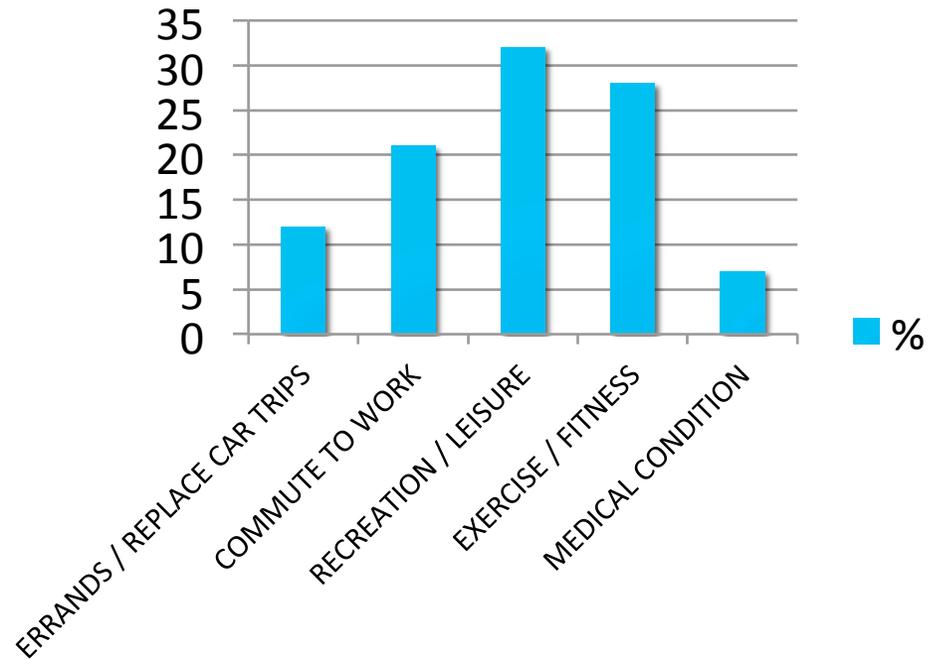


# CONSUMER NEEDS

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- ✓ 33% ERRANDS / COMMUTE TO WORK
- ✓ 32% RECREATION / LEISURE
- ✓ 28% EXERCISE / FITNESS
- ✓ 7% MEDICAL CONDITION

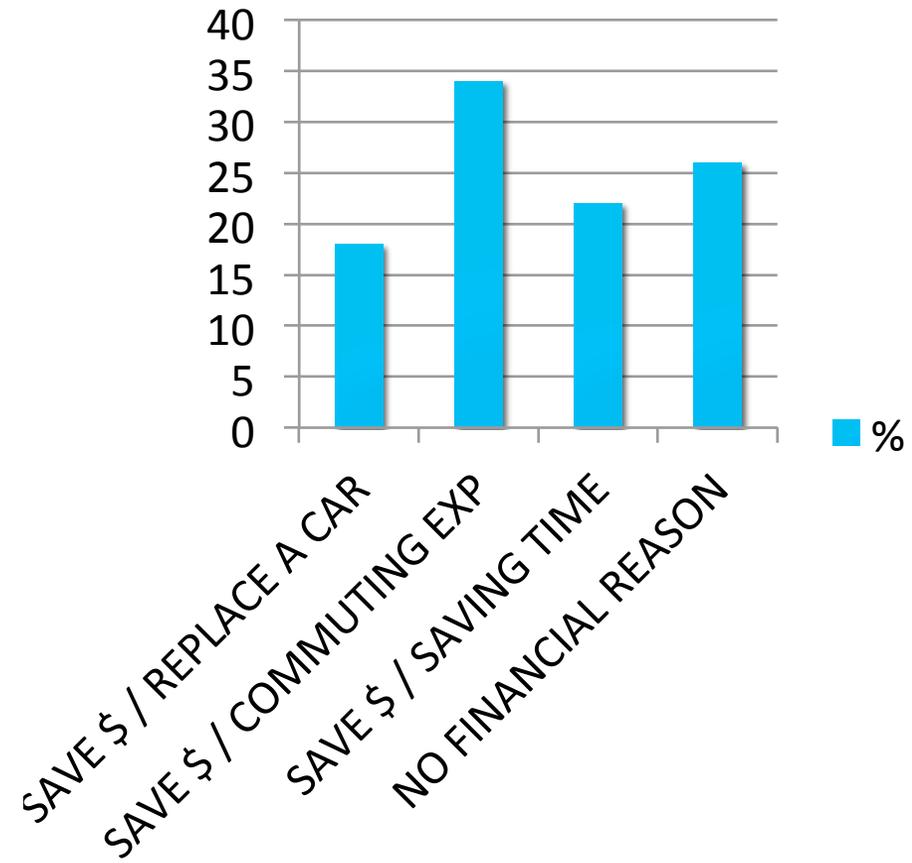
## PRODUCT USE



SOURCE: ANA PRODUCT REGISTRATION 2014

# ECONOMIC DRIVERS

- ✓ 18% SAVE MONEY / REPLACE A FAMILY CAR
- ✓ 34% SAVE ON COMMUTING / PARKING COSTS
- ✓ 22% SAVE TIME / GET TO DESTINATION FASTER
- ✓ 26% NO FINANCIAL REASON



SOURCE: ANA SOCIAL MEDIA POLL

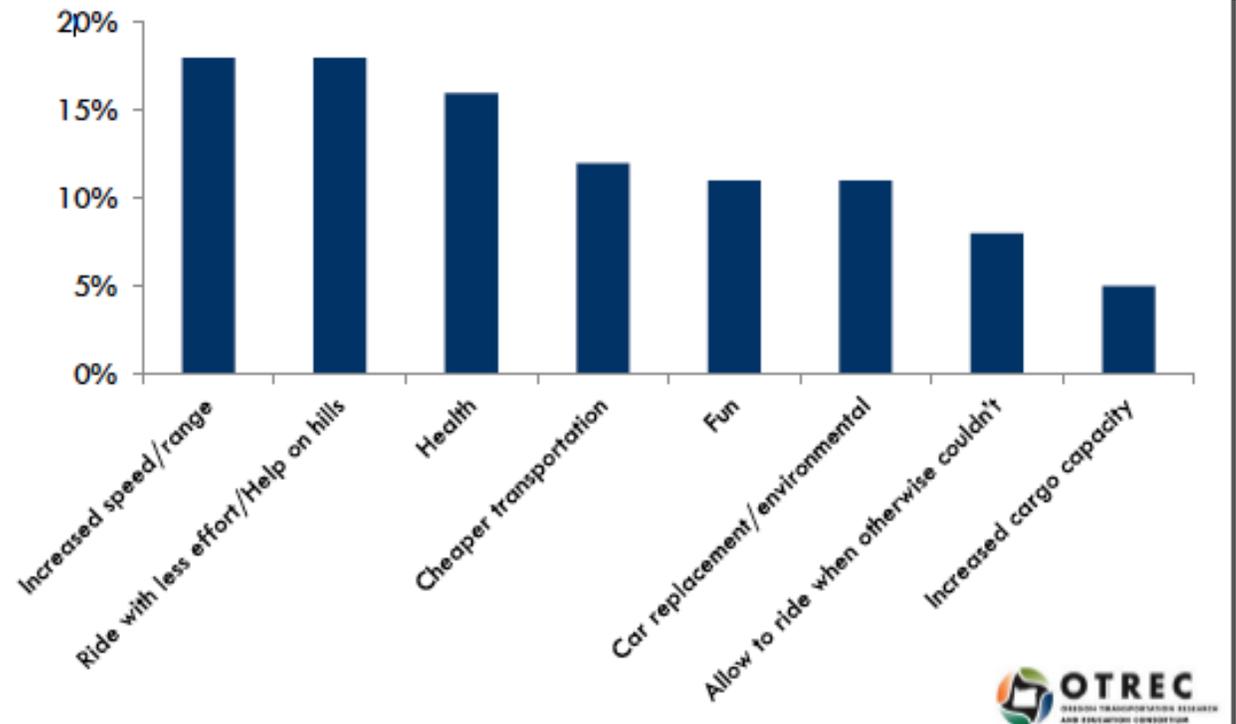
# TOP 5 ADVANTAGES / DISADVANTAGES

## ADVANTAGES

- ✓ INCREASED SPEED / RANGE
- ✓ RIDE WITH LESS EFFORT / HELP ON HILLS
- ✓ HEALTH BENEFITS
- ✓ CHEAPER TRANSPORTATION
- ✓ FUN

## DISADVANTAGES

- ✓ WEIGHT
- ✓ INCLEMENT WEATHER
- ✓ NONE
- ✓ COST
- ✓ LIMITED RANGE



SOURCE: OTREC ONLINE SERVEY 2013



# EXISTING MARKETS

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- ✓ TRANSPORTATION
- ✓ RECREATION
- ✓ SPORT / FITNESS

# POTENTIAL MARKETS (UNREALIZED)

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- ✓ BIKE SHARE / FLEETS – CAMPUS, CORPORATE
- ✓ URBAN PACKAGE DELIVERY / POST
- ✓ PEDICAB / PEOPLE MOVING

# IN SUMMARY

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- ✓ THE N.A. BICYCLE INDUSTRY IS WAKING UP TO EBIKES
- ✓ RETAIL PRICES ARE NOW ON PAR WITH EUROPE (ALLOWING FOR QUALITY, PERFORMAMCE AND RELIABILITY)
- ✓ ACCURATE MARKET DATA IS LACKING
- ✓ REGULATIONAL CLARITY IS IMPEDING PROLIFERATION
- ✓ BOOMERS AND MILLENIALS ARE THE PRIME DEMOGRAPHIC
- ✓ EBIKES MAKE BICYCLING MORE ACCESSABLE and PRACTICAL FOR REAL TRANSPORTATION
- ✓ UTILITARIAN OPPORTUNITIES ARE JUST BEGINNING TO BE CONSIDERED

# ADDITIONAL RESEARCH NEEDED

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- ✓ PRODUCT SAFETY STANDARDIZATION
- ✓ SAFE PLACES TO RIDE
- ✓ ACCESS TO BICYCLING INFRASTRUCTURE
- ✓ INTERACTIONS WITH OTHER ROAD and TRAIL USERS
- ✓ STATE and FEDERAL LEGAL AND LEGISLATIVE ISSUES
- ✓ BROADER STUDIES OF EXISTING USERS
- ✓ STUDIES OF POTENTIAL USERS
- ✓ IMPACT ON PHYSICAL FITNESS

***WHAT ARE THE BIG AREAS OF ADDITIONAL RESEARCH THAT WE NEED TO MOVE IN?***



# THANK YOU

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Larry Pizzi

805.915.4901

[lpizzi@currietechnology.com](mailto:lpizzi@currietechnology.com)

