

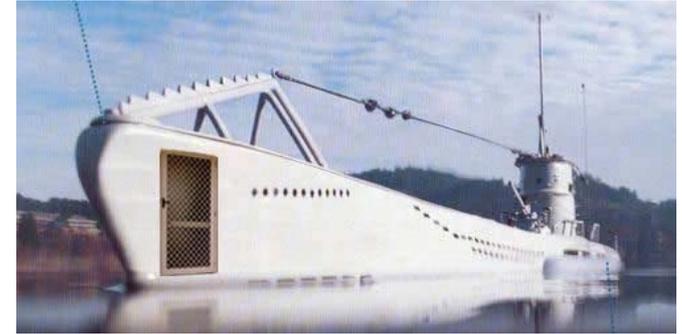


# Marketing and Market Research

A Crucial Part of the Product Development Life Cycle

You already have experience in marketing, whether you realize it or not.

- I. Products no one buys
- II. Products that I don't buy
- III. Products that I do buy



Put the finest label .....on your table

*The Champagne of Beers*

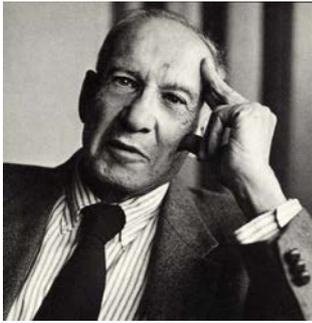


# Group Activity 1

3 products you use/buy

3 products you don't use/buy

If there is overlap with your Sr.  
Design Project, use it!



# Peter Drucker

- "Because the purpose of business is to create a **customer**, the business enterprise has two and only two basic functions: **marketing** and **innovation**."
- "Marketing is . . . the whole business seen from the point of view of the final result, that is, from the **customer's point of view**."

# Group Activity 2

3 products you use/buy

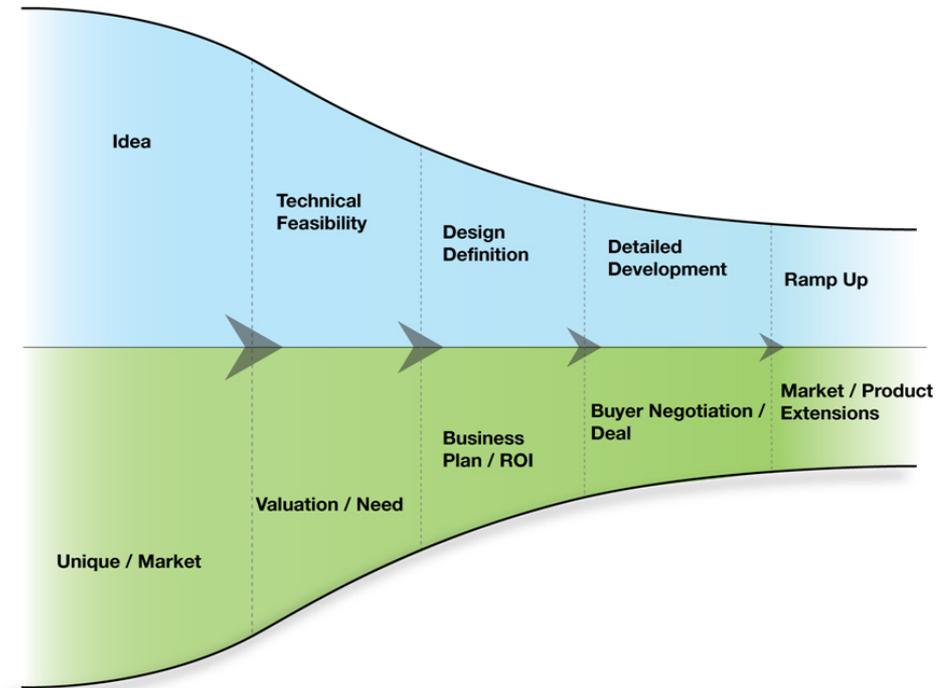
3 products you don't use/buy

1 innovation for each

# Product Development

## Customer

- Needs
- Desires
- Willingness to pay



# Group Activity 3

- Pick 1 senior design project idea
- Discuss
  - What competitive products exist?
  - Who might the target consumer be?
  - What is a reasonable price point?
  - What are the biggest areas of friction/  
reasons someone wouldn't buy?

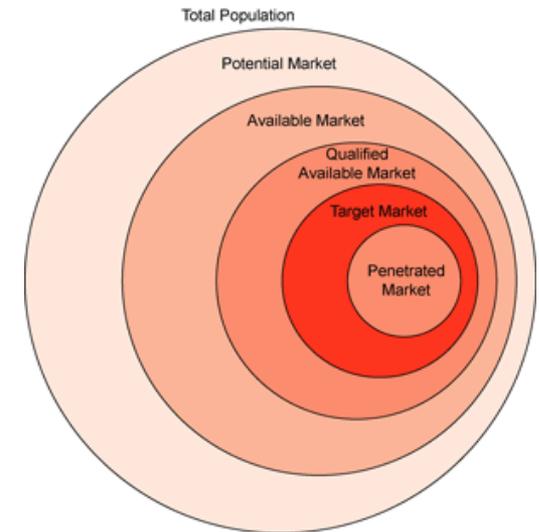
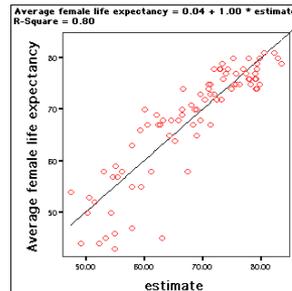
# Market research is used to determine viability of the idea and create a marketing plan

## What?

- Verify need for product
- Determine market size: How big is my idea?
- Choose target customer: Where do we focus first?
- Understand target customer

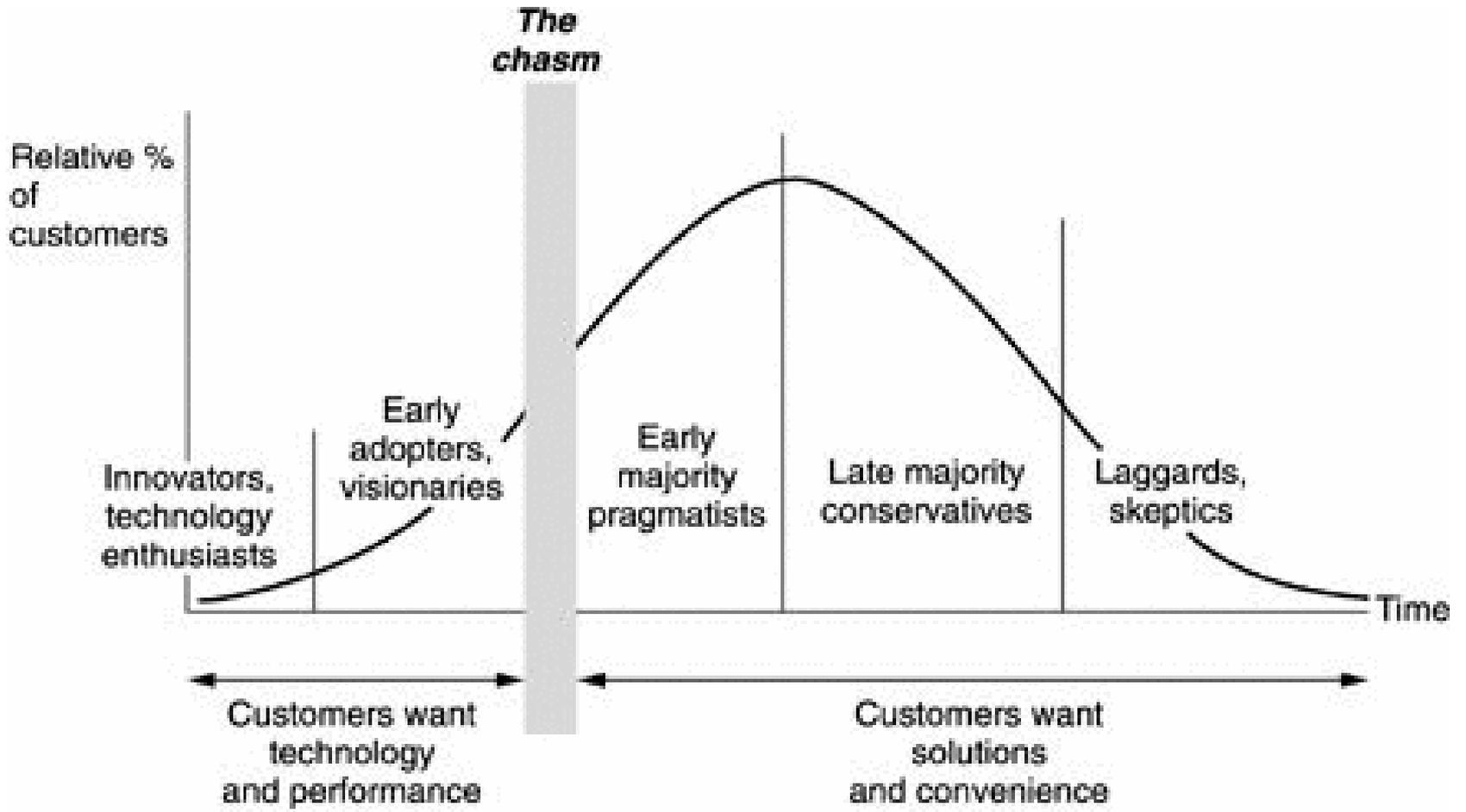
## How?

- Primary
  - Methods
    - Surveys
    - Focus groups
  - Risks: Question & facilitator bias
- Secondary
  - Methods
    - Reports and studies
    - Try not to pay
  - Risks: Report or study bias



# Group Activity 4

- Pick 1 senior design project idea
- Discuss
  - What are three key questions that could be addressed through primary market research?



# The Challenge

- Go talk to your earlier adopters
- Ask them if they would buy your product (show pictures or prototype demo video)
- Ask them what they like and dislike

**Rockstar** challenge: Conduct secondary research, compose a primary research plan, and then execute. A null hypothesis needs to be tested.

- Conduct secondary research and create a primary market research plan
  1. Secondary market research summary (1 page max)
    - List of 3-5 information sources and valuable information you learned, either qualitative, i.e. mothers really like this product, or quantitative, 20MM women in Africa use this product.
    - Secondary research need not be exhaustive. The goal is to gain a basic market understanding to aid in creating your primary market research plan.
  2. Primary market research plan (1 page with three sections)
    - Target Customer Selection. Select target customer and provide rationale. This will be the demographic you will survey. Do not interview your grandparents for your energy beverage idea.
    - Bias Elimination. Question and proctor plan to ensure bias elimination.
    - Study Purpose. Selection of a null hypothesis and explanation of particular choice.
- Conduct primary market research
  1. Responses and statistical analysis in MS Excel format
  2. 1 page summary of plan execution, responses, and results

# Appendix

Lots of boring stuff

- HBS Survey
- Magnus and Corp Survey
- Customer Adoption Curve
- Claw Hanging Systems Channel selection
- Additional files

# A thorough understanding of your customer will influence every aspect in your product lifecycle

## STP

- Segment
- Target
- Position

## 4 P' s

- Product: Features, packaging
- Price
- Place: Channel to market
- Promotion: Branding and message



# Bicycle Storage Rack Case Study

## Initial questions

- Who is the target consumer?
- Where will they buy it?



## CLASS VOTE

- Consumers
  1. Enthusiasts: Bike price > \$350 and ride often
  2. Casual riders: Bike price < \$200 and ride occasionally
- Channels
  1. Independent Bicycle Dealer
  2. Lowes/Home Depot



# Utilized secondary market research to determine viability, then primary to create marketing plan and select channels

- **Secondary** market research, conducted by David Moeller from 2004-2006
  1. The Australian Bicycle Industry Report 2003
  2. U.S. Department of Transportation, Bureau of Transportation Statistics, *Bicycle and Pedestrian Data: Sources, Needs, & Gaps*, BTS00-02, Washington, DC: 2000
  3. REGIONAL SPENDING PATTERNS OF HOUSEHOLDS IN THE U.S. AND, METROPOLITAN AREAS IN THE MIDWEST, 2000-2001, Bureau of Labor Statistics
  4. US Consumer Product Safety Commission, Office of Hazard Analysis and Reduction, Directorate for Economic Analysis, *Bicycle and Bicycle Helmet Use Patterns in the United States: A Description and Analysis of National Survey Data, 1992*
  5. US Consumer Product Safety Commission, Office of Hazard Analysis and Reduction, Directorate for Economic Analysis, *Characteristics of Adult Bicyclists in the United States: Selected Results from a National Survey, April 1993*
  6. The National Bicycle Dealers Association – *Industry Overview*-from web page [www.nbda.com](http://www.nbda.com), 2004
  7. Copyright © 1999 Bicycling Life Website., *Bicycle Vs Auto Production*, [Riley Geary](#)
  8. *Transportation Alternatives- GIANT bicycle presentation, 1999*
  9. *Bicycle/Pedestrian Federation of America, Bicycle Facts and Trends, 1992*
  10. Omnibus Transportation Survey by Bureau of Transportation Statistics, July 2001
- **Primary** market research - fall of 2006: 156 respondents
  - Goals
    - General Demand: Does anyone want it? And what will they pay?
    - Competitive Intel: What rack are people using now?
    - Demographics: Who will buy it? And who will pay the most? Correlating receptivity to current bike price or other demographic variables
- **Primary** market research conducted by Magnus & Co.during July 2007: 256 respondents
  - Goals
    - Obtain data to create realistic market segmentation
    - Use pictures of final prototype to hone pricing

# Harvard Business School Student Survey

- Initial perceptions
  - Tell me about the item. What are your thoughts?
  - What do you think this does? What would you use it for?
  - Do you value it?
  - What are five key words that describe the invention?
  - What else would you use this for?
- Additional Information
  - Do you store bikes at your house?
  - If yes, where do you store them?
  - If yes, how do you store them and why?\*
  - Do you own any current bike racks?
  - If yes, which ones?
  - Based on what you have seen today, would you consider buying the Claw? Why or why not?
  - What price level seems reasonable for the Claw?

# HBS Survey

Business Idea Survey - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address [http://www.surveymonkey.com/Users/34695199/Surveys/709952539451/A40094B8-014F-4676-9ED2-155B44D84E62.asp?U=709952539451&DO\\_NOT\\_COPY\\_THIS\\_LINK](http://www.surveymonkey.com/Users/34695199/Surveys/709952539451/A40094B8-014F-4676-9ED2-155B44D84E62.asp?U=709952539451&DO_NOT_COPY_THIS_LINK) Go

 [Exit this survey >>](#)

## Business Idea Survey

### 1. Section I

Please first go to the [Claw Survey Video and Pictures Page](#) and view the two short video clips. After watching the videos, please take the survey, answering the questions as if you were in your last job and residence prior to starting business school.

Technical info on Claw: housing made of durable ABS plastic; arms and base made of steel

1. How new and different do you think this is (unique)?

Extremely

Somewhat

Marginally

Not very

Not at all

2. On a scale of 1-10 how would you rate "The Claw" on (10 indicating strongly like and 1 not like at all):

Ratings

Expected ease of use

Look

Flexibility of use (attach to wall or ceiling)

Expected durability

Brand

3. Is there anything that could be improved on "The Claw"?

4. Knowing what you know about "The Claw", how likely would you be to buy it for a price of \$59.99?

- Definitely would buy
- Probably would buy
- Might or might not buy
- Probably would not buy
- Definitely would not buy

5. Why or why not? (Referring to previous question)

6. How many "Claws" would you consider buying within the next 12 months at each price point listed below?

- Price
- \$29.99
  - \$39.99
  - \$49.99
  - \$59.99
  - \$69.99

7. Which of the following best describes your need for this product?

- I really need this product because nothing else can solve this problem
- This is a minor improvement over what I currently use
- Looks okay but is about the same as what I'm using now
- My current product would serve me better

- My current product would serve me better
- I am not at all interested in this product

Pictures for question 6



8. Please rank the following types of racks in order of preference (1 being most desirable, 5 being least desirable):

	1	2	3	4	5
Hook	<input type="radio"/>				
Arm Rack	<input type="radio"/>				
Standing Bike Rack	<input type="radio"/>				
Pulley System	<input type="radio"/>				
"The Claw"	<input type="radio"/>				

[Next >>](#)

## 2. Section II

### 9. Which best describes your wall or ceiling bicycle rack ownership level?

- Do not own  
(Skip to Section III)
- Considering one
- Own one
- Own more than one
- Owned one or more in the past
- 

### 10. If you own a rack or plan on purchasing one, what was (or is) your reason?

### 11. How often do you use your bicycle rack?

- Once a week or more often
- 2-3 times a month
- Once a month
- 2-3 times a year
- Once a year
- Do not use

### 12. What type of rack do you own (select all that apply)?

- Hook
- Arm Rack
- Standing Bike Rack
- Pulley System
- Cannot recall which type I own

### 13. What brand is (are) your rack(s)?

[<< Prev](#)

[Next >>](#)

## Business Idea Survey

### 3. Section III

14. How often do you ride your bike? (If you do not own a bike, please skip to question 20)

- More than once per week
- Once per week
- Once per month
- Once per year
- Less than once per year

15. Why do you ride?

16. What did you spend on your last bike?

- Below \$100
- \$100-\$200
- \$200-\$300
- \$300-\$400
- \$400-\$500
- \$500+

17. How much have you spent on bike accessories in the last 12 months?

- Below \$100
- \$100-\$200
- \$200-\$300
- \$300+

18. If you had a house with a garage, how would you store your bicycles?

- Lean them against the garage wall
- Hang them on the wall
- Use a standing rack
- Other (please specify)

19. If you owned a Claw and your friends did not, would you show it off to them?

- Yes
- No
- Would not purchase Claw
- Other (please specify)

20. Which best describes you?

- Own or buying a house or condo
- Rent
- Live with a relative
- Other

21. You are:

Male

Female

22. You are:

Married

Not married

23. Would you like for me to send you more information if "The Claw" is released? If yes, please enter your email address:

# Sample respondent data

How new and different do you think this is (unique)?	On a scale of 1-10 how would you rate 'The Claw' on (10 indicating strongly like and 1 not like at all):	Look - R	Flexibility - R	Expected - R	Brand - R	Open-End Response	Knowing what you know about 'The Claw', how likely would you be to buy it for a price of \$59.99?	Why or why not? (Referring to previous question)	How many 'Claws' would you consider buying within the next 12 months at each price			
Response	Expected ease of use							Open-Ended Response	\$29.99 - Price	\$39.99 - P	\$49.99 - P	\$59.99 - F
<b>Extremely</b>	2	9	10	10	6	Definitely would not buy			3	2	1	
<b>Somewhat</b>	10	5	7	7	7	Probably would not buy		Too Expensive -- a 'C' hook in a wall/ceiling stud	1			
<b>Marginally</b>						If I had to r	Definitely would not buy	I'm a biker who has struggled with this problem. I				
<b>Somewhat</b>	9	4	7	5	2	Definitely would not buy		\$59.99...for a hook? are you kidding?				
<b>Not very</b>	2	2	1	2	1	I don't see	Definitely would not buy	I don't see why it is superior to a basic screw in				
<b>Extremely</b>	8	9	3		9	I am conc	Definitely would not buy	Concerned about the 4 factors in #3				
<b>Marginally</b>	5	4	7	6	5	Definitely would not buy		I think it damages the wheel of the bicycle	1			
<b>Extremely</b>	10	6	6	7	5	Yes, thing	Probably would not buy	Not because - too expensive - need to mount on	2	1		
<b>Somewhat</b>	8	5	6	7	8	Might or might not buy		not sure how exactly it differs from a regular				
<b>Somewhat</b>	6	4	3	2	1	don't see	Definitely would not buy	see above.				
<b>Marginally</b>	7	2	5	2	2	Probably would not buy		I'm unclear what functions this serves that could				
<b>Marginally</b>	6	5	5	4	5	Probably would not buy		I'm not sure the claw has many advantages over a	1			
<b>Marginally</b>	9	7	9	9	5	Probably would buy		I have seen many products for hanging bikes up				
<b>Somewhat</b>	8	2	3	7	3	Definitely would not buy		I can achieve the same goal with some simple	1			
<b>Marginally</b>	9	7	9	8	1	Definitely would not buy		looks like something walmart might carry for \$15	1			
<b>Marginally</b>	5	6	5	6	5	Probably would not buy		Unsure of the benefits as opposed to existing				
<b>Extremely</b>	9	9	9	7	8	I would wa	Might or might not buy	Price seems a little high for me personally, but I'm	1	1	1	
<b>Somewhat</b>	8	5	2	7	7	Might or might not buy		Already have an existing wall mount for my bike.	2	1		
<b>Somewhat</b>	8	8	4	6	5	Might or might not buy			2	1	1	
<b>Marginally</b>	8	7	8			Probably would not buy		Many other simpler products on the market that	1			
<b>Somewhat</b>	7	7	8	8	8	Probably would not buy		29.99	2			
<b>Extremely</b>	3	3	4	8	4	Definitely would not buy		Can not see what the benefit of this vs normal	1	1	1	1
<b>Extremely</b>	9	8	8	5		Definitely would not buy		That price is too high, considering I could just buy	4			
<b>Somewhat</b>	8	5	6	10	6	Probably would not buy		Too expensive. I can get a hook from Home				
<b>Somewhat</b>	8	3	6	4	1	Definitely would not buy		too expensive	2			
<b>Somewhat</b>	5	4	7	7	3	Definitely would not buy		I do not see significant value over just buying a				
<b>Marginally</b>	6	5	6	2	5	Neat engir	Definitely would not buy	I'd buy a \$1.30 bike hook from Home Depot that				

## Analysis

### A. Bicycle Price

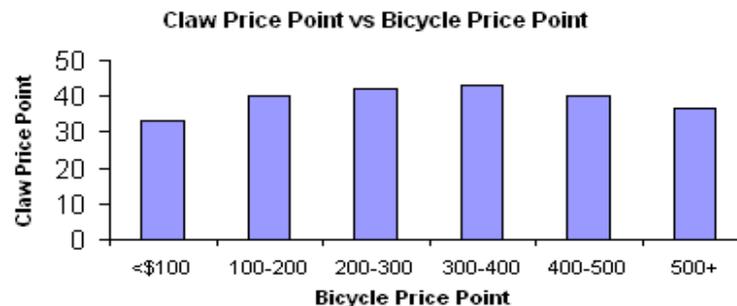
**Null hypothesis: Those who paid more for their bike will be willing to pay more for their bike rack**

#### Steps

1. Using the response data from question 6, "Knowing what you know about the 'Claw', how many are you likely to purchase in the next 12 mos?", I extracted the maximum price each respondent would be willing to pay
2. Converted price ranges into definite values, i.e. Bike price point levels of 300-400 became \$350.
3. Performed a regression analysis, with Claw price point as the independent variable, and Bike price points as the dependent variables

#### Data

Avg Price	Price Point Group	# of respondents
\$ 33	<\$100	6
\$ 40	100-200	8
\$ 42	200-300	9
\$ 43	300-400	7
\$ 40	400-500	4
\$ 36	500+	14



#### Results

**As can be seen clearly from the data above (and verified with a p-value >.05), higher bicycle price point is not predictive of a willingness to pay a premium for the Claw.**

### B. Importance of features

#### Steps

Utilize question 2, focused on claw features. On a scale of 1-10 how would you rate 'The Claw' on (10 indicating strongly like and 1 not like at all): Expected ease of use, Look, Flexibility of use (attach to wall or ceiling), Expected durability, Brand

#### Results

**At a 95% confidence level, durability has a 0.055 p-value, indicating it is an influencing factor on price.**

**Look and expected ease of use are close behind, with p-values of .07 and .11, respectively.**

**Flexibility of use and current brand had no impact on pricing level**

### C. Impact of design uniqueness

#### Uniqueness - Question 1

Uniqueness perception resulted in a p-value of .005 in relation to Claw price point.

### D. Impact of current storage solution

#### Rack Ownership - Question 20

P-value = .018; rack owners were willing pay \$7.5 more than non-owners

## Case study – Claw Hanging Systems

# When market research is utilized correctly to determine the target customer (STP), it should drive channel selection

### Executive Summary

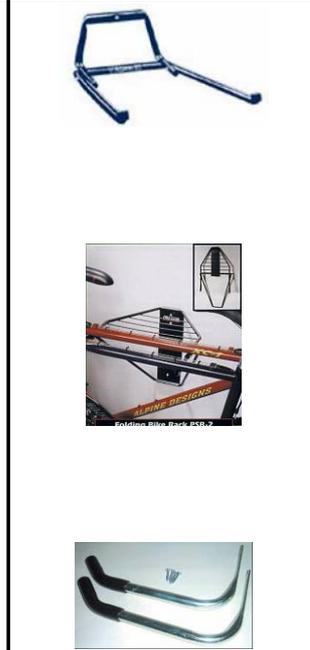
156 HBS first-year students were interviewed via surveymonkey.com from 9/16/06 to 9/18/06; 66 of the respondents stated they would consider purchasing a Claw during the next 12 mos for an average price of \$38.32

The most startling result was the lack of correlation between the price the respondent paid for their last bike and the price they would be willing to pay for the Claw. Also, the expected durability and the perception of uniqueness were significant factors that influenced the customer's perceived value premium. Consumers were willing to pay roughly \$6 more for each level of uniqueness (range from "not at all" to "very").

As a result of this analysis it has been determined the target market is not the "enthusiast" bikers who paid >\$500 for their last bike purchase, but rather those bikers with a need for space, who currently own hooks.

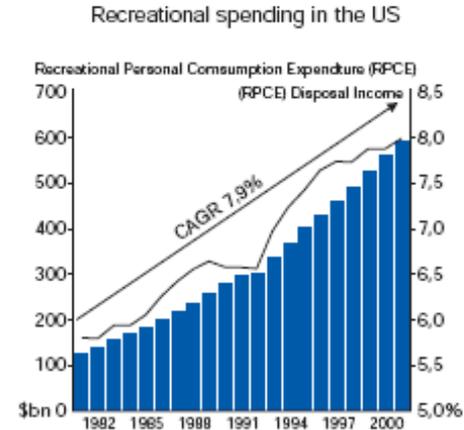


# Hook & arm racks are the primary competition

Type of Rack (Options for Garage Storage)	Cable & Pulley Ceiling Suspenders (\$35-\$50)	Standing Bike Rack (\$80- \$240)	Leaning Racks (\$40-\$75)	Hook racks (\$2-\$30)	Arm racks (\$20-\$30)
Pro	Effective	Easy to use	Easy to use	Cheap	Moderate Price, Ease of use
Con	Difficult to install, ease of use, time to raise & lower the bike	Takes up space	Could fall over, takes up space	Ease of use	Uses horizontal wall space
Pictures					

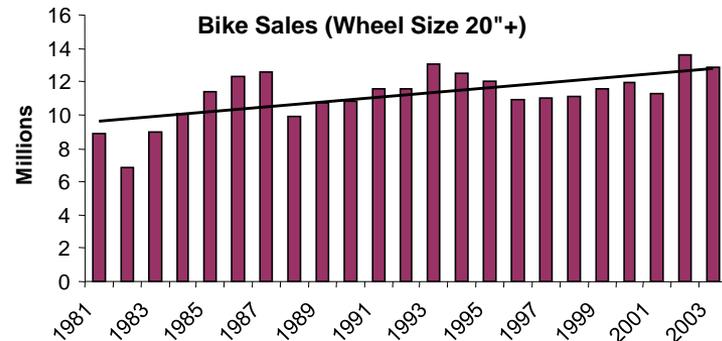
# Recreational spending and new bike sales are increasing

Recreational spending in US increasing at a CAGR of 7.9%



Source: US Department of Commerce: Bureau of Economic Analysis  
CAGR = Compounded annual growth rate

Average 11.2M new bikes purchased yearly





# Magnus Survey

**If we could offer you a such an easy-to-use, secure, simple, space-saving solution that' s affordable, would you buy it or convert to it?**

- Absolutely       Probably       No

Would you want to use it on your ceiling or wall?

**What would this solution be worth to you?**

- \_\_\_ More than \$ 40      \_\_\_ \$ 30 to \$ 40      \_\_\_ Less than \$ 30

**May we ask your age?**

- \_\_\_ Under 30      \_\_\_ 30 – 45      \_\_\_ 45 +

May we ask your homeownership level?

- \_\_\_ Apt – Rent      \_\_\_ Apt – Own  
\_\_\_ Home – Rent      \_\_\_ Home – Own  
\_\_\_ Other

**If respondent is willing to talk further, go ahead and ask:**

**How often do you replace your bike?**

- \_\_\_ every yr    \_\_\_ every 3 yrs    \_\_\_ once in 5 yrs

# Storage Rack Market Overview

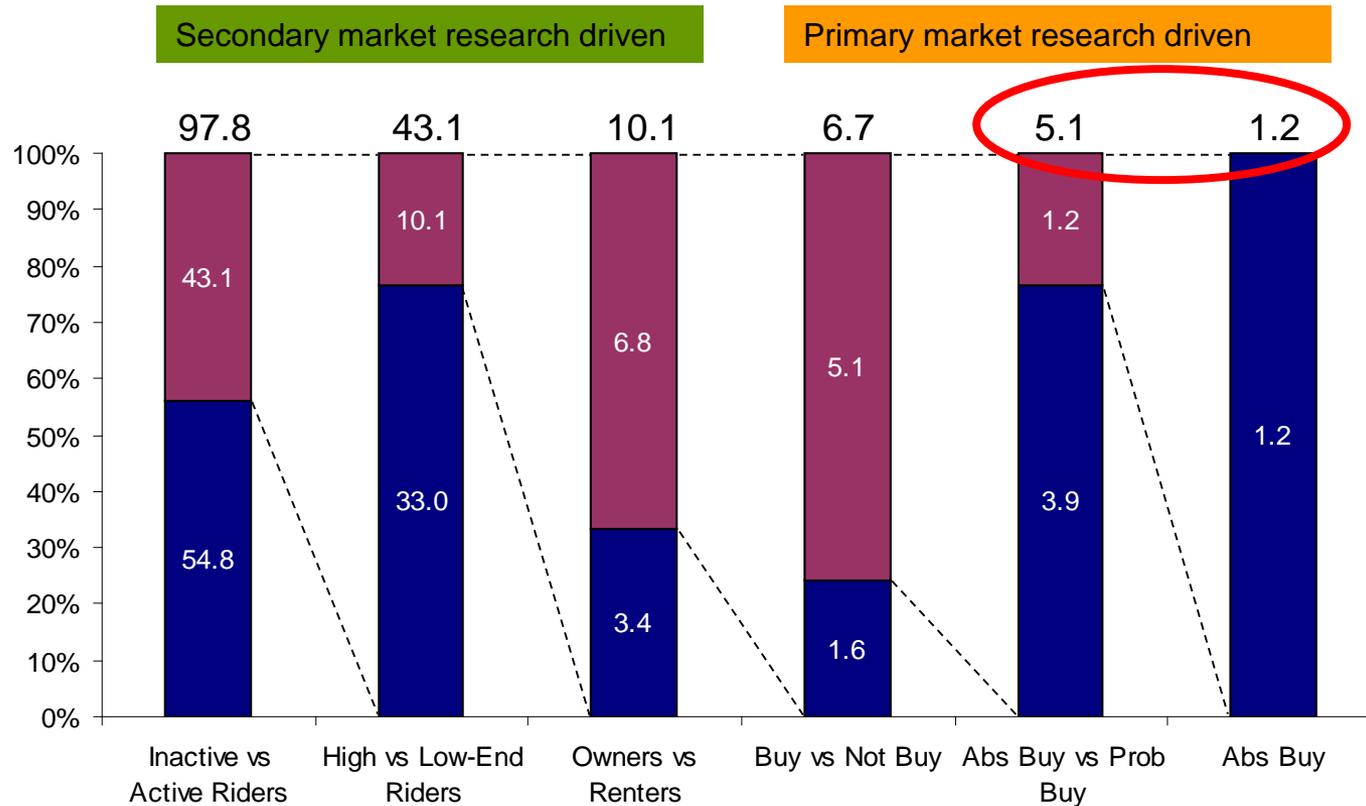
Use	User	Dist Channel	Size
Bike	Active	IBD	10M
Bike	Active	Mass merchants/DIY	33M
Bike	Inactive	Mass merchants/DIY	55M
Non-bike	-	DIY	30M



High-end consumer (>\$213 on last bike); visits independent retailer 1+ times/yr

Mid-level consumer (<\$213 on last bike, but buys bikes new); purchases bicycle from mass merchant

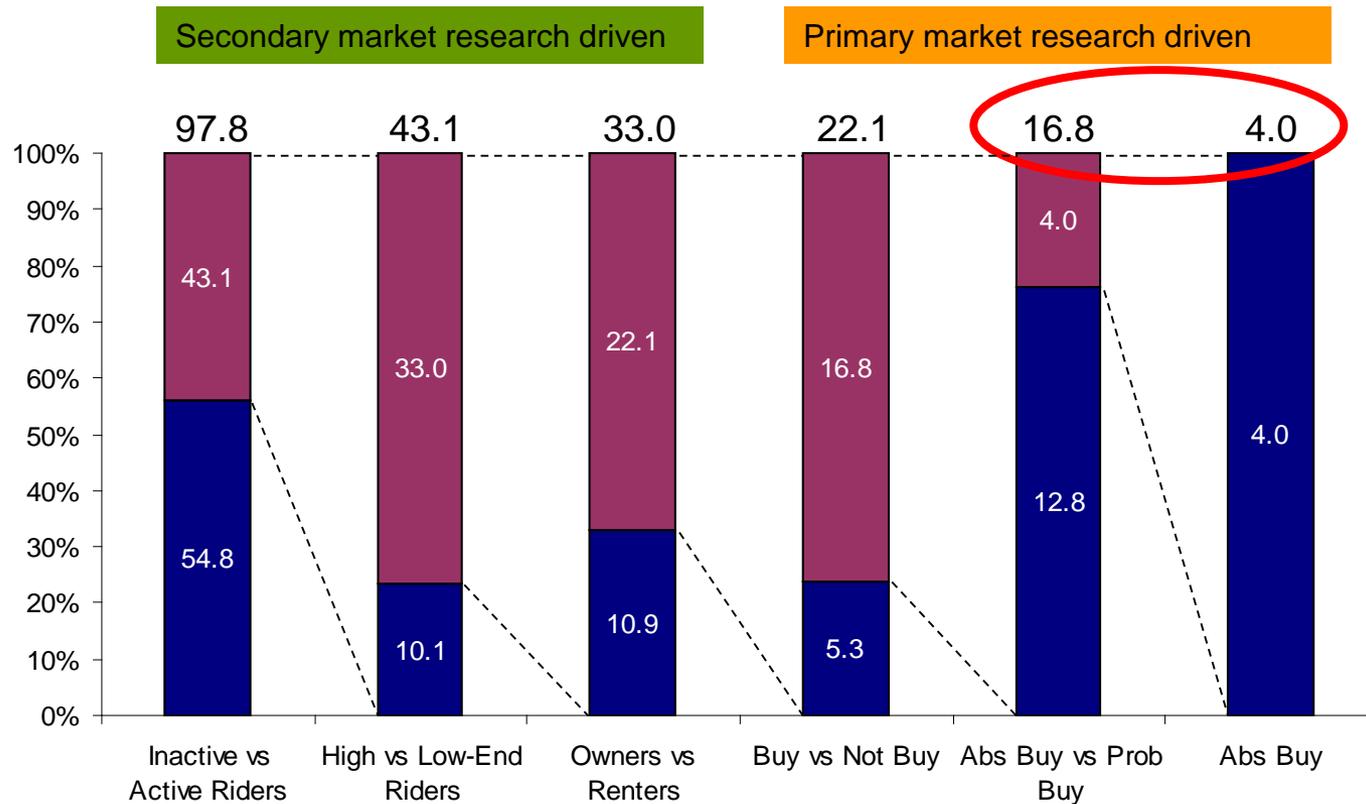
# Size of IBD channel (high-end) is 1.2M to 5.1M consumers



## Assumptions and Sources

1. **US Bike Riders** – Mintel/Simmons NSC 2001/US Census 2000
2. **Active Riders** – Magnus Corporation 2007/US Sporting Goods Association
3. **High-end** – 10.1mm riders, composed of 0.9 mm enthusiasts, 2.4 mm moving-up, and 6.8 mm casual riders - Rodale Press, The Cycling Consumer of the 90's, A Comprehensive Report on the U.S. Adult Cycling Market, Emmaus, PA: Author; 1991
4. **Home or Apt Owner** – 67% of riders live in their own home or apt- Rodale Press, The Cycling Consumer of the 90's, A Comprehensive Report on the U.S. Adult Cycling Market, Emmaus, PA: Author; 1991
5. **Probably or Absolutely Buy** – 76% of all riders would consider purchase – Magnus and Company, Primary Market Research, 2007
6. **Absolutely Buy Claw** – 18% of all adult riders would absolutely buy – Magnus and Company, Primary Market Research, 2007

# Size of DIY channel (non high-end) is 4.0M to 16.8M consumers



## Assumptions and Sources

- 1. US Bike Riders** – Mintel/Simmons NSC 2001/US Census 2000
- 2. Active Riders** – Magnus Corporation 2007/US Sporting Goods Association
- 3. High-end** – 10.1mm riders, composed of 0.9 mm enthusiasts, 2.4 mm moving-up, and 6.8 mm casual riders - Rodale Press, The Cycling Consumer of the 90's, A Comprehensive Report on the U.S. Adult Cycling Market, Emmaus, PA: Author; 1991
- 4. Home or Apt Owner** – 67% of riders live in their own home or apt- Rodale Press, The Cycling Consumer of the 90's, A Comprehensive Report on the U.S. Adult Cycling Market, Emmaus, PA: Author; 1991
- 5. Probably or Absolutely Buy** – 76% of all riders would consider purchase – Magnus and Company, Primary Market Research, 2007
- 6. Absolutely Buy Claw** – 18% of all adult riders would absolutely buy – Magnus and Company, Primary Market Research, 2007

# Independent retailer should be first channel due to higher likelihood of early adopters

## Channels to market

- Independent Retailers (Neighborhood Bike Shop)
- Mass Merchants (Wal-Mart, Toys R Us)
- Full-line Sporting Goods Stores (Dicks, Sports Authority)
- Other (Internet, Container Store)

“Specialty bike dealers commanded the vast majority of parts and accessories sales . . .They dominate the market in bicycles selling for \$250 and up.”

	% of 2002 units	% of dollars	avg bike cost	Mkt Size (M \$s)
Mass Merchant	74	35.8	65	892
<b>Ind Retailer</b>	<b>16.2</b>	<b>46.6</b>	<b>387</b>	<b>1,161</b>
Full-Line Sporting	2.5	2.9	157	72
Other	7.3	14.7	270	366

2,491

Bike Sales Revenue	Parts and Accessories Revenue
\$1,160,806,000	\$ 913,826,000

# Additional Files



**HBS Market Survey  
Results and Analysis**