



Jargon to Value: Educating Consumers with DOE Building Science Translator Power Words

Better Buildings Summit

Wednesday, May 11th 2016



CHANGING BEHAVIOR: Seven Proven Strategies

SAM RASHKIN

Chief Architect

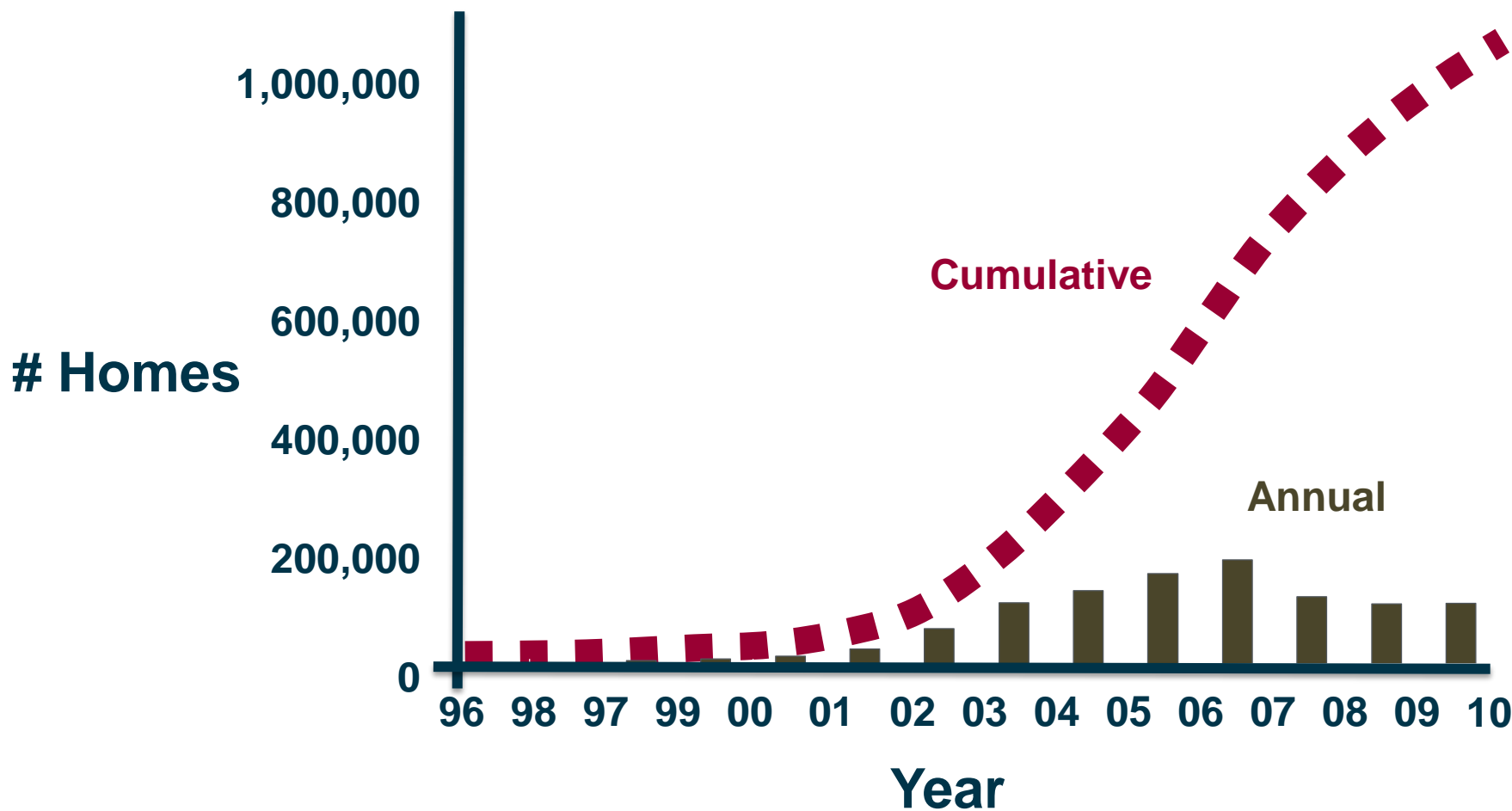
Building Technologies Office

Compelling Business Case

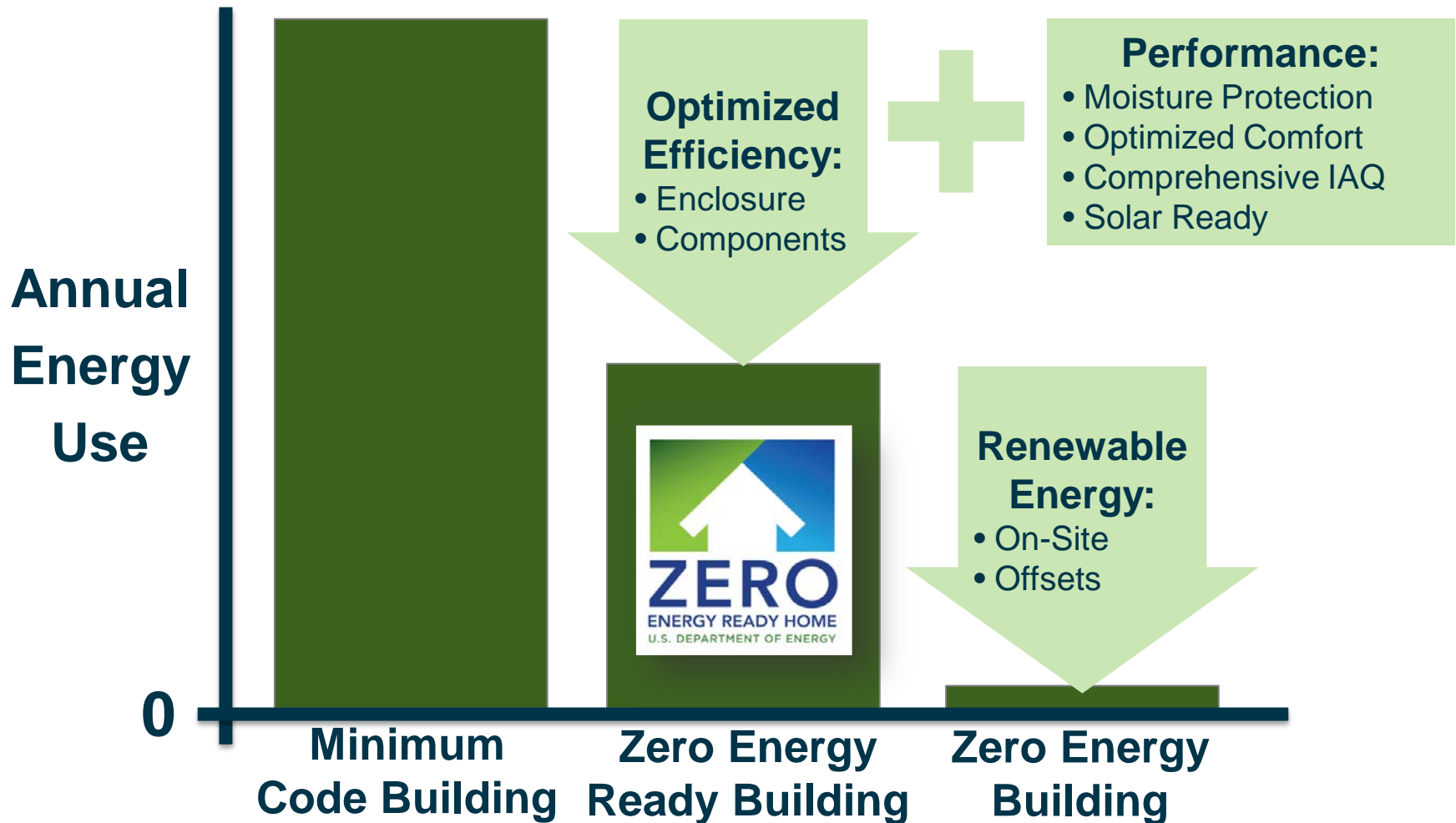
1. Simple Matters
 2. Words Matter
 3. Clarity Matters
 4. Experiences Matters
 5. Trust Matters
 6. Backing Up Performance Matters
 7. Why Matters
- Epilog – Power Words

Curse of Knowledge

ENERGY STAR for Homes Growth



How Change Behavior with This Story?

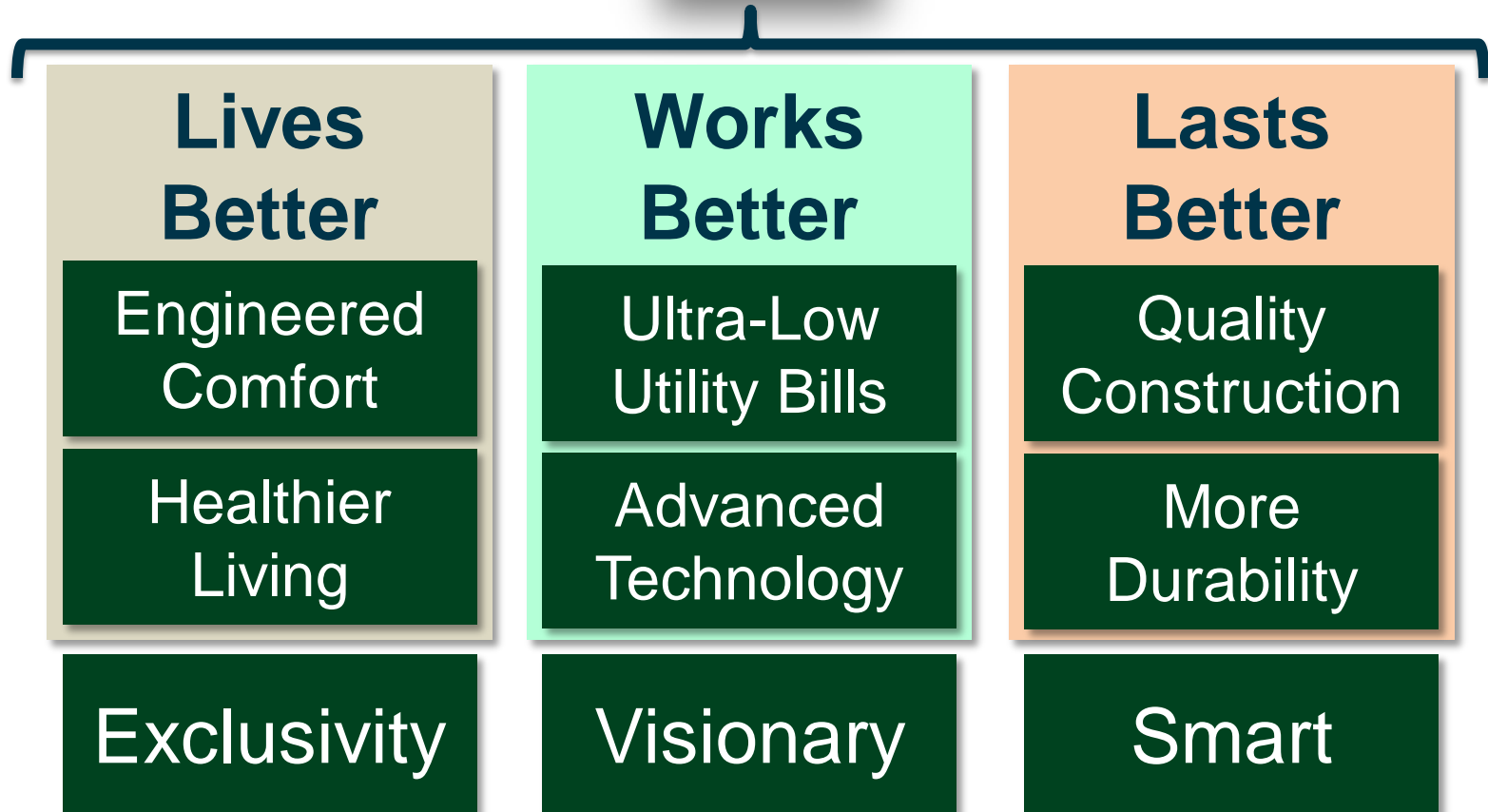




Zero Energy Ready Home:*

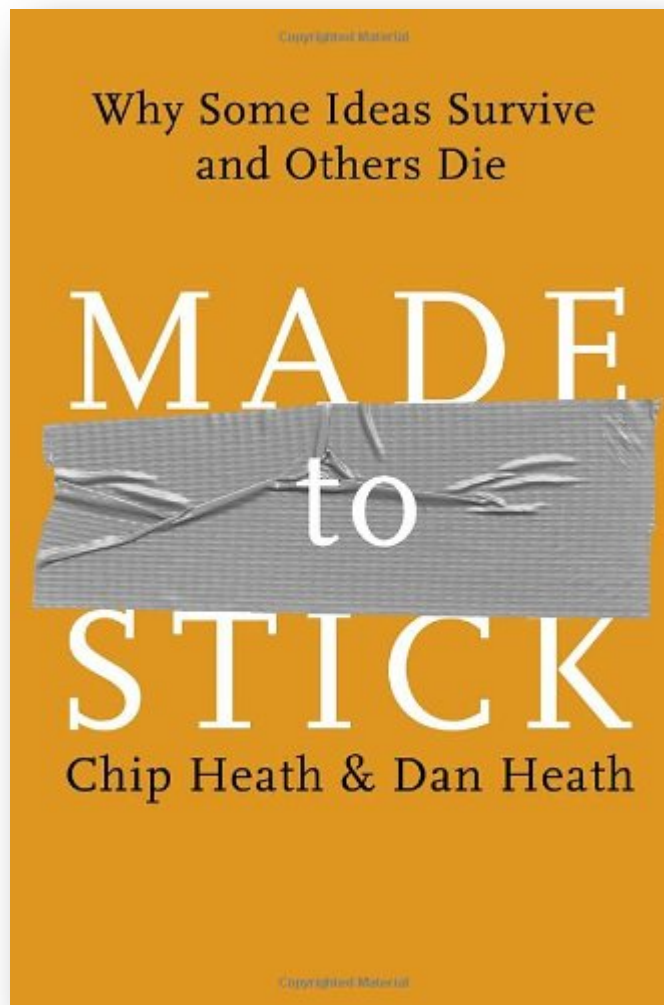
- **~\$350 Billion**
Utility Bill Savings
- **~120,000**
Persistent New Jobs
- **~3 Million**
Job-Years of Work
- **~2,800 MMTCe**
Less Carbon Emissions

* Impacts based on internal DOE analysis assuming 30% high-performance new homes by 2025



Changing Behavior Strategies

1. Simple Matters



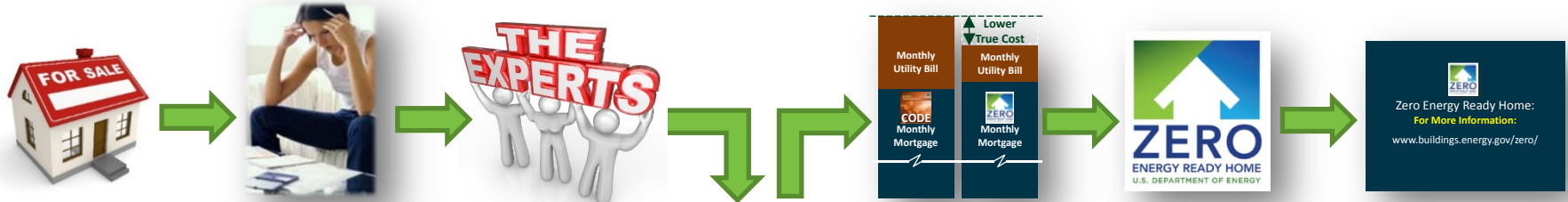
Simple...



Zero Energy Ready Home: **The Experts' Choice**

Making the Largest Purchase of a Lifetime
Just Got Easier

Simple...

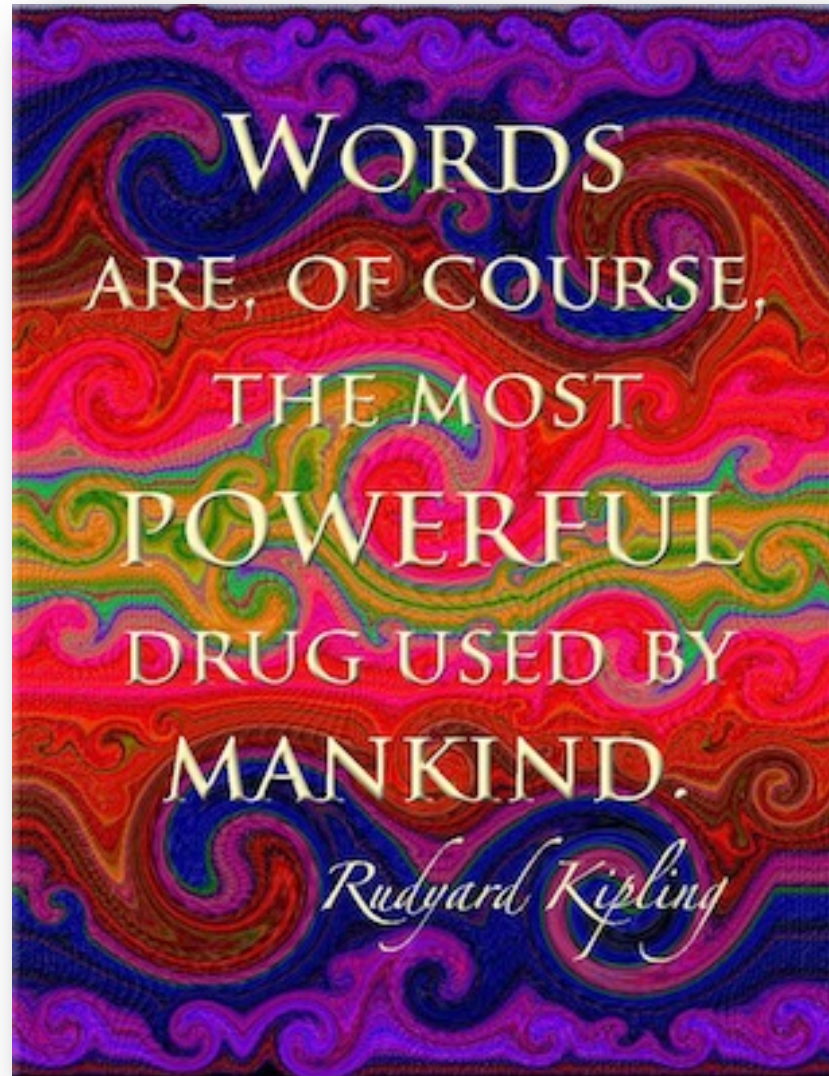


Seven Must-Have Systems

1	2	3	4	5	6	7
<p>Optimized Thermal Protection</p> <p>Future Ready</p>	<p>Whole-House Water Protection</p> <p>Moisture Ready</p>	<p>High-Performance Heating/Cooling</p> <p>Comfort Ready</p>	<p>High-Efficiency Components</p> <p>Tech Ready</p>	<p>Comprehensive Indoor Air Quality</p> <p>Health Ready</p>	<p>Solar Ready Construction</p> <p>Zero Ready</p>	<p>Enhanced Quality Assurance</p> <p>Performance Ready</p>
<p>High-Performance Windows</p>	<p>Dry-By-Design Construction</p>	<p>High-Efficiency Equipment</p>	<p>High-Efficiency Water Heating</p>	<p>Contaminant-Resistant Construction</p>	<p>Solar Wiring-Ready</p>	<p>Independent Verification</p>
<p>High-Performance Insulation</p>	<p>Interior Moisture Control</p>	<p>Professional Installation</p>	<p>High-Efficiency Appliances</p>	<p>Fresh Air Technology</p>	<p>Structural Load-Ready</p>	<p>Certified Performance</p>
<p>Comprehensive Draft Protection</p>		<p>Interior Comfort Delivery System</p>	<p>Advanced Lighting</p>	<p>High-Capture Filtration Technology</p>	<p>Solar Components-Ready</p>	
			<p>High-Efficiency Exhaust Fans</p>			

Changing Behavior Strategies

2. Words Matters



Words Matter (More Than You Think)

by Jeff Goins | 27 Comments

“Your mouth is poison; your mouth is wine.”
—The Civil Wars

This morning, while reading some of the pushback I received from last night's [post](#), I realized I may have been given to extremism. So I wanted to clarify my point. Here goes: *Words matter.*



Photo credit: [Angie Garrett](#)

Did you know the words you say have an effect on other people? Of course you did. So why do we still ignore that reality when we open our mouths?

CULTURE

Words Matter: What the Language We Use Tells Us About Our Current Political Landscape

In politics, definitions change.

By [David Morris](#) / [AlterNet](#) | August 24, 2015



276 COMMENTS

“Sticks and stones can break my bones but words can never harm me.”

A fine sentiment, but any child subjected to cyber bullying knows that words do indeed matter.

Language evolves. Sometimes a word that once was negative becomes positive, like “terrific” which originally meant terrifying. Sometimes a word that was once positive becomes negative, as when “awful” changes from awe inspiring to very bad.

In politics too words matter, and in politics too language evolves. In the last 50 years we have witnessed a politically motivated sea change in the meaning of old words and the introduction of new words, all intended to undermine our sense of compassion.

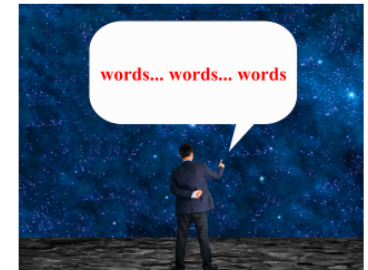


Photo Credit: [Shutterstock.com](#)

It's really difficult to sell...

Patagonian **Toothfish**

It's much easier to sell an...

Chilean Sea Bass

It's difficult to rally public opinion against an...

Estate Tax

It's much easier to rally public opinion against a...

Death Tax

It's really difficult to sell an...

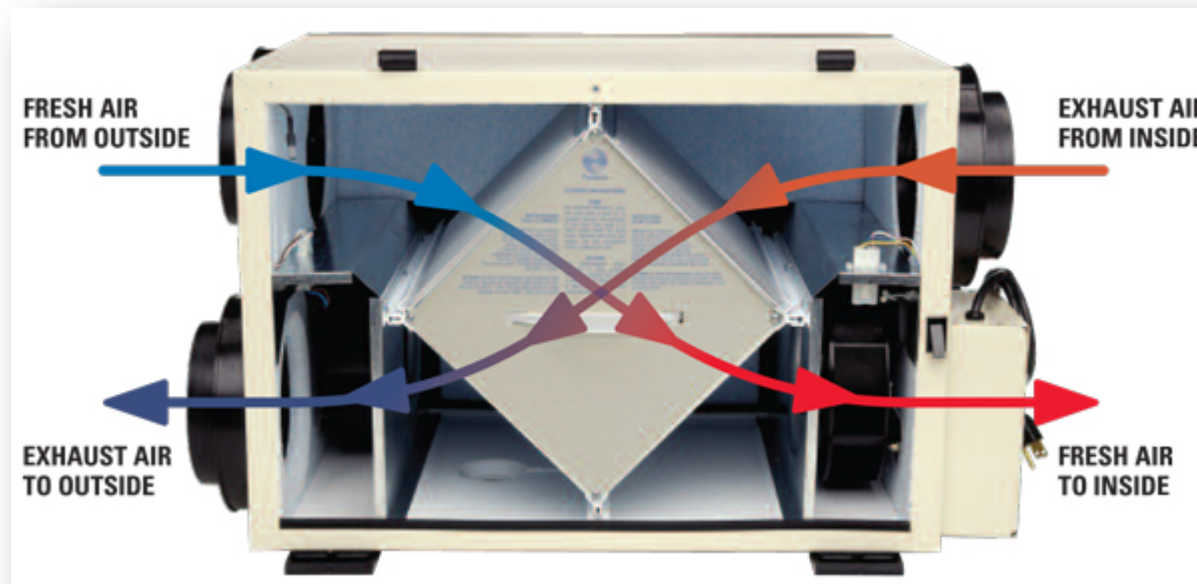
Energy **Audit**

It's much easier to sell an...

Energy **Check-up**

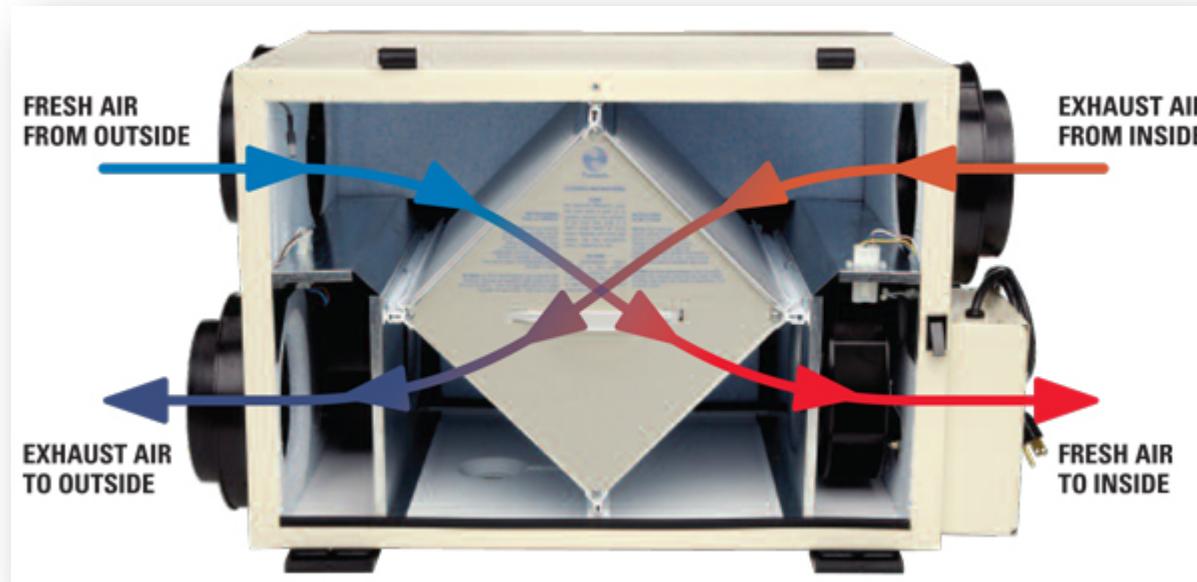
It's really difficult to sell a...

Ventilation System



It's much easier to sell a...

Fresh-Air System



It's hard to sell the...

Technical Function

It's much easier to set the...

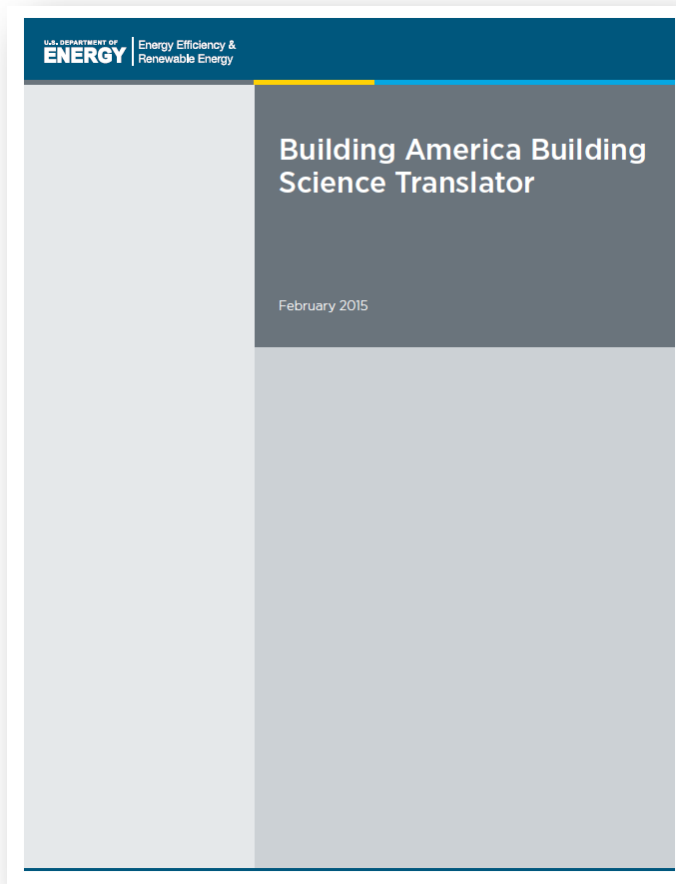
Customer Experience

It's difference between...

Technical Jargon

and a

Language of 'Value'



<http://energy.gov/eere/buildings/downloads/building-america-building-science-translator>

HVAC System = Comfort System = Heating + Cooling + RH Control

- HVAC System = Comfort System
- HVAC Equipment = Comfort Equipment
- HVAC Ducts = Comfort Delivery System
- HVAC Terminals = Comfort Outlets
- HVAC Pressure Balancing = Comfort Balancing
- HVAC Transfer Grill = Comfort Vent
- HVAC Thermostat = Comfort Control Technology

High-Performance = Enhanced Efficiency + Ensured Quality Installation

- High-Performance Window
- High-Performance Insulation
- High-Performance Comfort System

Enhanced Efficiency:

High-Efficiency = $\sim 15\% >$ code/standard

Ultra-Efficient = $\sim 50\% >$ code/standard

- High-Efficiency vs. Ultra-Efficient Insulation
- High-Efficiency vs. Ultra-Efficient Window
- High-Efficiency vs. Ultra-Efficient Refrigerator

Ensured Quality Installation =

Professionally Installed =

compliant with industry and manufacturer standards

- Professionally-Installed Insulation
- Professionally-Installed Window
- Professionally-Installed Comfort System
- Professionally-Installed Comfort Delivery System

Alternate Terms:

Develop alternate terms for each measure that speak to multitude of consumer experiences to enhance ability to communicate value.

Low-E Window Becomes:

- Efficiency: ***High- or Ultra-Efficient Window***
- Comfort: ***Enhanced Comfort Window***
- Healthful Environment: ***Quiet Window***
- Advanced: ***Advanced Window Technology***
- Durability: ***Sun Protection Window***

Building Science Translator

‘Race to Zero’

Guidelines

Translator

Building America Building Science Translator – Page 1a

Building Science Measure	New Building Science Terminology	Alternate Terms					
		Lives Better		Works Better		Lasts Better	
		Engineered Comfort	Healthful Environment	Ultra-Efficient	Advanced Technology	Quality Built	Enhanced Durability
High-Performance Thermal Enclosure	High-Performance Thermal Enclosure	Enhanced Comfort Enclosure	Moisture Managed Enclosure	High-Efficiency Enclosure	Advanced Enclosure Technology	Professionally-Installed Thermal Enclosure	Low-Maintenance Enclosure
High-Performance Window System	High-Performance Window System	Enhanced Comfort Window System	Quiet Window System	High-Efficiency or Ultra-Efficient Window System	Advanced Window System Technology	Professionally-Installed Window System	Enhanced Durability Window System
High-R Window	High-Efficiency Window	Enhanced Comfort Window	Quiet Window	High-Efficiency or Ultra-Efficient Window	Advanced Window Technology		Sun Protection Window
Sealed and Flashed Window	Professionally-Installed Window	Draft-Free Window Installation	Moisture Managed Window Installation	Energy Saving Window Installation	Advanced Window Installation	Professionally-Installed Window	Weather-Protected Window Installation
High-Performance Insulation System	High-Performance Insulation System	Enhanced Comfort Insulation System	Enhanced Quiet Insulation System	High-Efficiency or Ultra-Efficient Insulation System	Advanced Insulation System	Professionally-Installed Insulation System	Next-Gen Insulation System
High-R Insulation	High-Efficiency or Ultra-Efficient Insulation	Enhanced Comfort Insulation	Enhanced Quiet Insulation	High-Efficiency or Ultra-Efficient Insulation	Advanced Insulation Technology		
High-R Wall Insulation	High-Efficiency or Ultra-Efficient Wall Insulation	Enhanced Comfort Wall Insulation	Enhanced Quiet Wall Insulation	High-Efficiency or Ultra-Efficient Wall Insulation	Advanced Wall Insulation		
High-R Floor Insulation	High-Efficiency or Ultra-Efficient Floor Insulation	Enhanced Comfort Floor Insulation	Enhanced Quiet Floor Insulation	High-Efficiency or Ultra-Efficient Floor Insulation	Advanced Floor Insulation		
High-R Attic Insulation	High-Efficiency or Ultra-Efficient Attic Insulation	Enhanced Comfort Attic Insulation	Enhanced Quiet Ceiling Insulation	High-Efficiency or Ultra-Efficient Attic Insulation	Advanced Attic Insulation		
High-R Foundation Insulation	High-Efficiency or Ultra-Efficient Foundation Insulation	Enhanced Comfort Foundation Insulation	Enhanced Quiet Foundation Insulation	High-Efficiency or Ultra-Efficient Foundation Insulation	Advanced Foundation Insulation		
Insulation Quality Installation	Premium-Installed Insulation	Enhanced Comfort Insulation Installation	Enhanced Quiet Insulation Installation	Energy Saving Insulation Installation	Advanced Insulation Installation Practices	Professionally-Installed Insulation	Moisture Control Insulation Installation
Fully Aligned Air Barriers	Whole-House Draft Barrier	Whole-House Draft Barrier	Air Contaminant Barrier	Energy Saving Air Barrier	Advanced Air Barrier Technology	Professionally-Installed Draft Barrier	Moisture Control Air Barrier



VIVID LIVING HEALTHFUL ENVIRONMENT



Fresh Air

- Supply Fresh Air System
- Odor and Moisture Control Fans
- High-Capture Filtration Technology

Quiet

- Quiet Window Technology
- Quiet Wall Technology

Moisture Control

- Dry-by-Design Construction
- Moisture Control System - Whole House
- Moisture Controlled Comfort System
- Moisture Controlled Windows
- Moisture Controlled Lower Level

Pest Control

- Bug Control Barrier
- Pest Screened Home

Outdoor Contaminant Control

- Contaminant Sealed Construction
- Contaminant Sealed Comfort Delivery
- Dust and Pollen Barrier
- Radon Controlled Home

Chemical Control

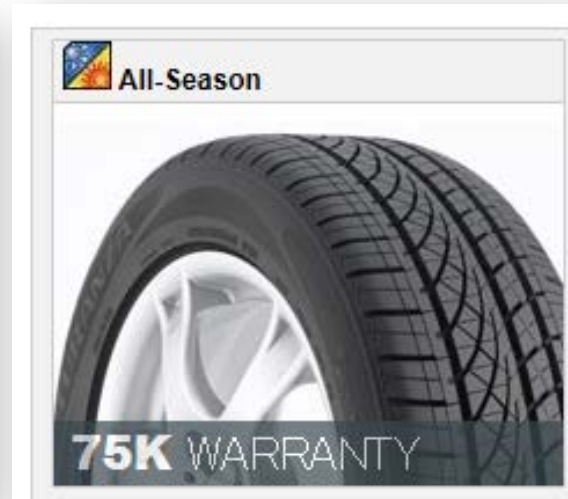
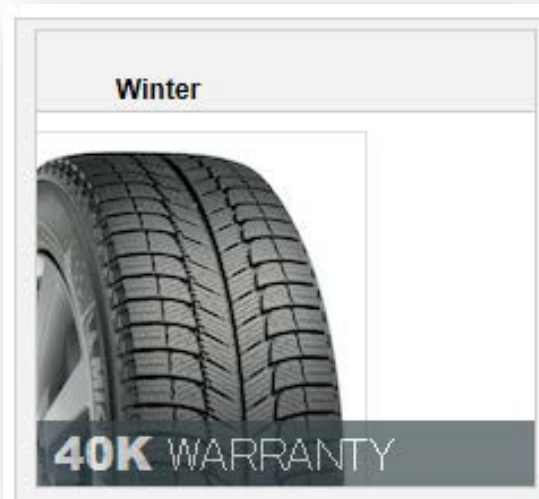
- Formaldehyde Controlled Home
- VOC Controlled Home

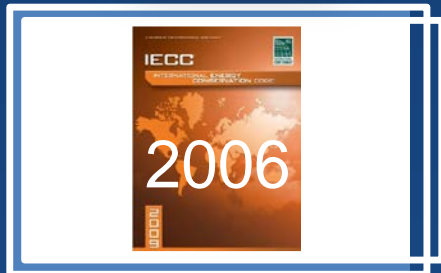
Fume Control

- Carbon Monoxide Controlled Equipment
- Carbon Monoxide Controlled Fireplace
- Fume Controlled Garage

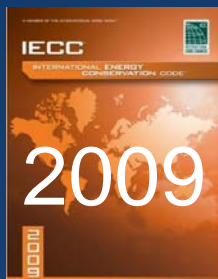
Vivid Living • 42 Sample Street, Suite 500, Anytown, MA 02460 • 617.467.3902 • www.vividliving.com

BASC.energy.gov





v3



v1 and v2

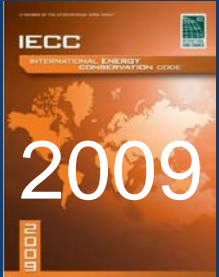




v3



v1 and v2

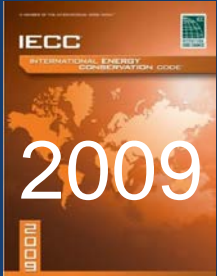




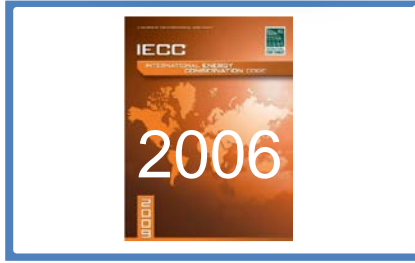
v3



v1 and v2



2009



2006



2009



2012



2012



ENERGY STAR



ENERGY STAR

Power Words: Lifetime



Passive House Institute US

100-Year Enclosure



50-Year Enclosure



10-Year Enclosure



5-Year Enclosure

Power Words: True Cost

2015 MODEL CLEARANCE
ALL REMAINING 2015 200's
UP TO **\$7000 OFF**



NEW 2015 JEEP CHEROKEE LATITUDE



MSRP \$26,090
BANK DISCOUNT \$1,095
REBATE \$3,000

MILITARY \$500
COLLEGE GRAD \$500

TO \$ **\$21,995** / 36 MOS.
CASH RETURNING LEASE \$1000

TO \$ **\$20,495**
CONQUEST LEASE \$1000

TO \$ **\$19,495**

LEASE FOR **\$199** / 36 MOS.
\$1000 CASH OR TRADE
\$1000 CASH RETURNING LEASE
\$1000 CONQUEST LEASE

YOU PAY **\$21,495**

NEW 2015 JEEP GRAND CHEROKEE LAREDO 4x4



ALL-CLIMB WHEELS
FOG LAMPS
CRUISE

LEASE FOR **\$299** / 36 MOS. LEASE
\$1000 CASH OR TRADE
\$1000 CASH RETURNING LEASE
\$1000 CONQUEST LEASE

NEW 2015 JEEP RENEGADE SPORT



AUTOMATIC
POWER AND AIR
GROUP, CRUISE

LEASE FOR **\$219** / 36 MOS. LEASE
\$1000 CASH OR TRADE
\$1000 CASH RETURNING LEASE
\$1000 CONQUEST LEASE

NEW 2015 JEEP COMPASS HIGH ALTITUDE



LEASE FOR **\$189** / 36 MOS. LEASE
\$1000 CASH OR TRADE
\$1000 CASH RETURNING LEASE
\$1000 CONQUEST LEASE

NEW 2015 JEEP PATRIOT HIGH ALTITUDE



LEASE FOR **\$175** / 36 MOS. LEASE
\$1000 CASH OR TRADE
\$1000 CASH RETURNING LEASE
\$1000 CONQUEST LEASE

RAM **\$1 DOWN DELIVERS!**

NEW 2015 CHRYSLER 200 S



\$249 / 36 MOS.

NEW 2015 DODGE JOURNEY R/T



\$299 / 24 MOS.

MS. LEATHER
8.4" TOUCH SCREEN
REMOTE START
HEATED SEATS
20" ALLOY WHEELS

NEW 2015 CHRYSLER 300 S AWD



\$299 / 36 MOS.

LEATHER HEATED SEATS, BACKUP CAMERA, 8.4" NAV READY TOUCHSCREEN, REMOTE START, AWD, 20" ALLOY WHEELS

NEW 2015 RAM BIG HORN CREW CAB 4x4



\$359 / 36 MOS.

NEW 2015 DODGE JOURNEY



\$179 / 36 MOS.

EVER BUY

NEW 2015 DODGE GRAND CARAVAN SE



\$209 / 36 MOS.

EVER BUY

MSRP \$25,180

NEW 2015 RAM 1500 TRADESMAN



\$229 / 36 MOS.

EVER BUY

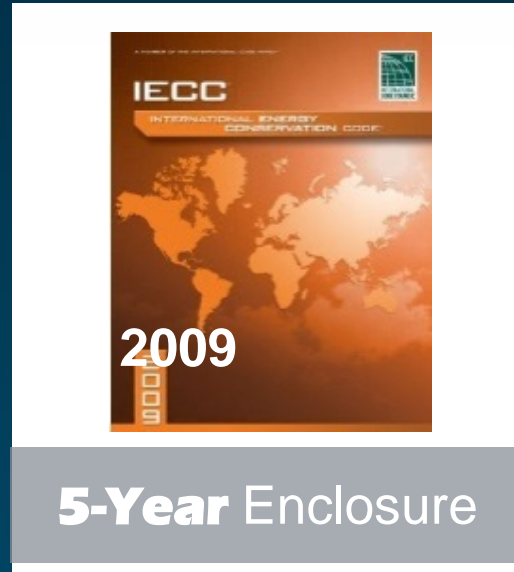
NEW 2015 RAM 1500 QUAD CAB TRADESMAN 4x4



\$299 / 36 MOS.

EVER BUY

Power Words: True Cost



Value¹: \$ 300,000

True Cost²: \$1,400/mo.



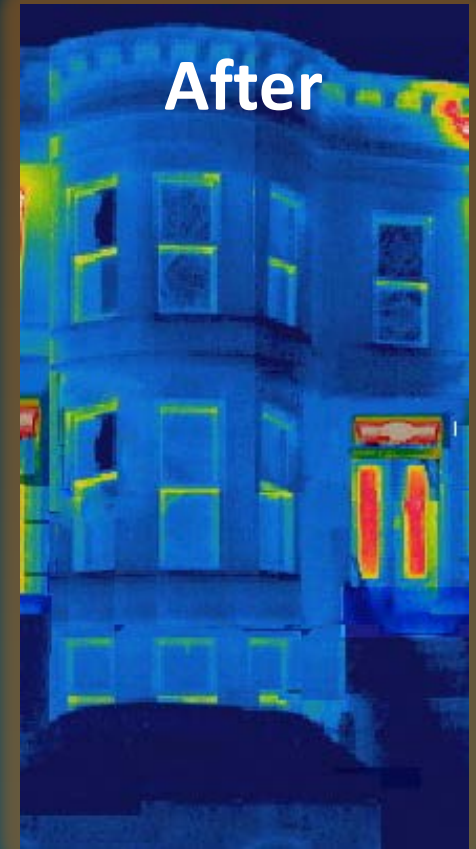
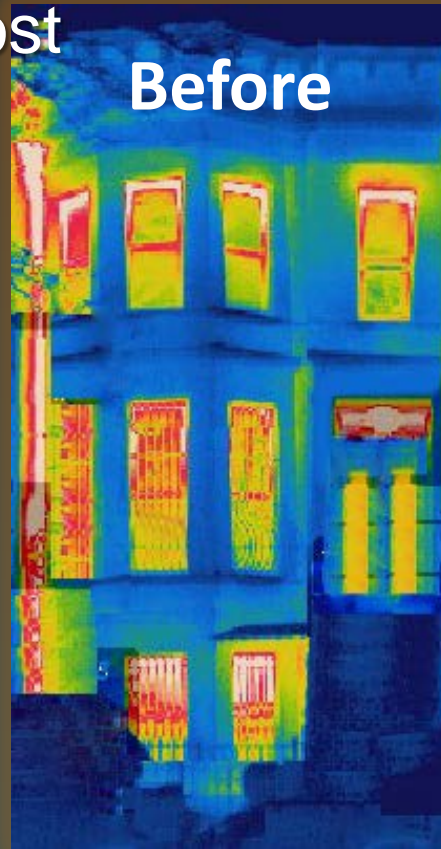
\$ 315,000

\$1,300/mo.

¹ NOT Cost!

² monthly mortgage plus utility payments

Power Words: True Cost



Added Value¹:

\$ 0

\$ 25,000

True Cost²:

\$250/mo.

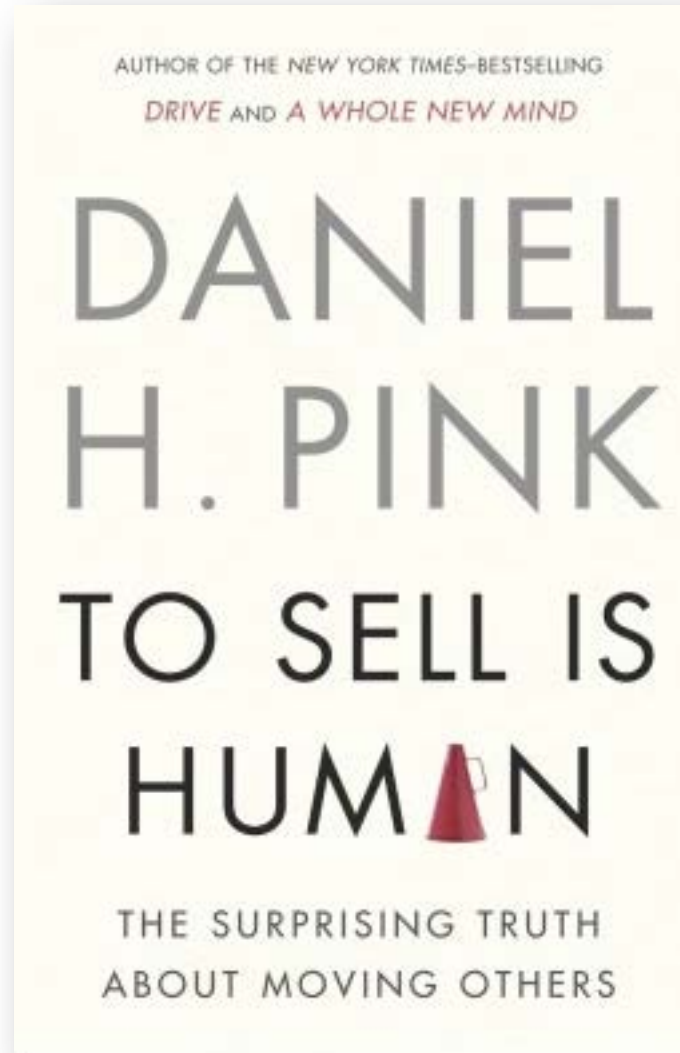
\$250/mo.

¹ NOT Cost!

² Additional monthly mortgage with EIM plus utility payments

Changing Behavior Strategies

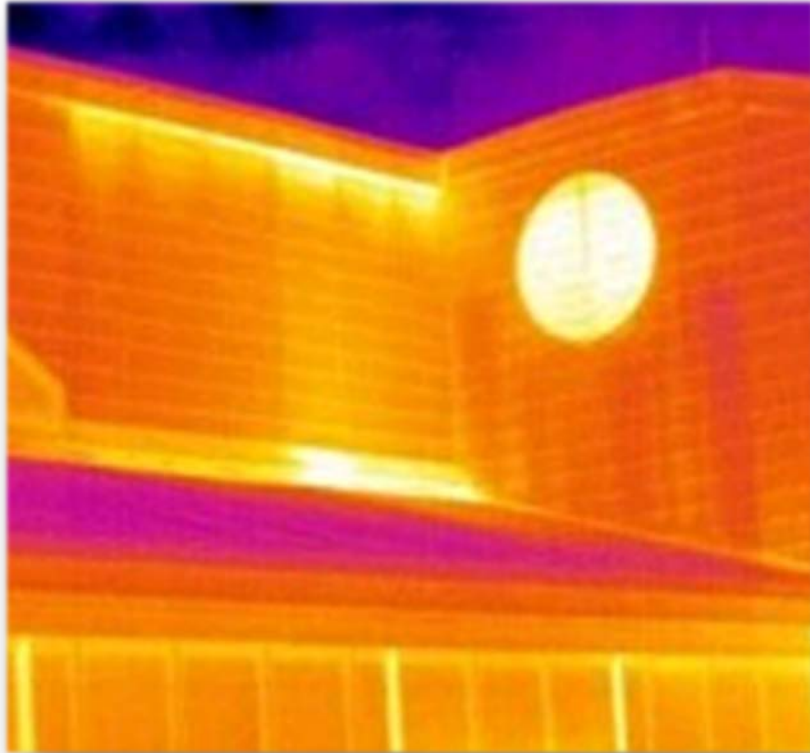
3. Clarity Matters



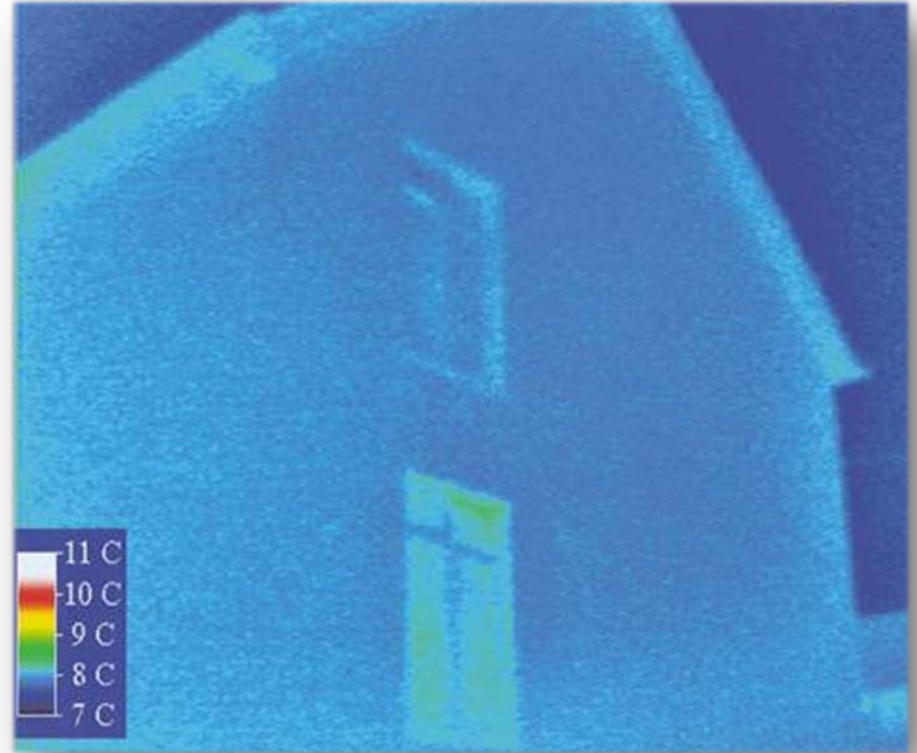
Clarity depends on **contrast**.

We often understand something better
when we see it in comparison
with something else
than when we see it in isolation.

Contrast: Excessive vs. No Defects



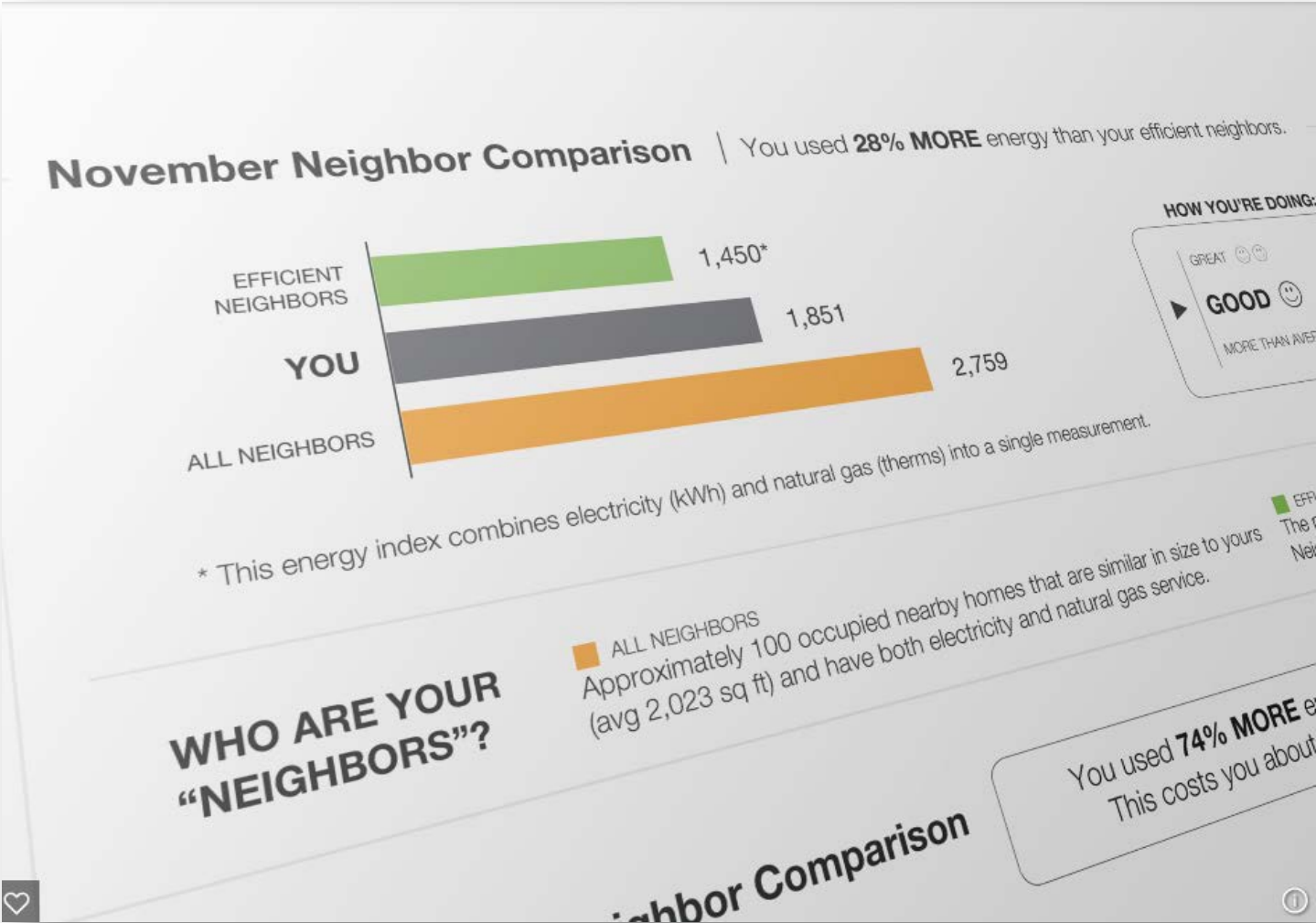
Used Homes



Our New Homes

Contrast Applied: Esses





Homes to the Power of **ZERO**



What is the DOE Zero Energy Ready Home™ Label?

It is a Symbol of Excellence for energy savings, comfort, health, quality, and durability met by a select group of leading builders meeting U.S. Department of Energy Guidelines.

What is a Zero Energy Ready Home?

It is a high-performance home so energy efficient, all or most annual energy consumption can be offset with renewable energy. In other words, it is the Home of the Future.

A Symbol of Excellence

HEALTHFUL ENVIRONMENT

COMFORT PLUS

ADVANCED TECHNOLOGY

ULTRA EFFICIENT

QUALITY BUILT

DURABILITY

KEY

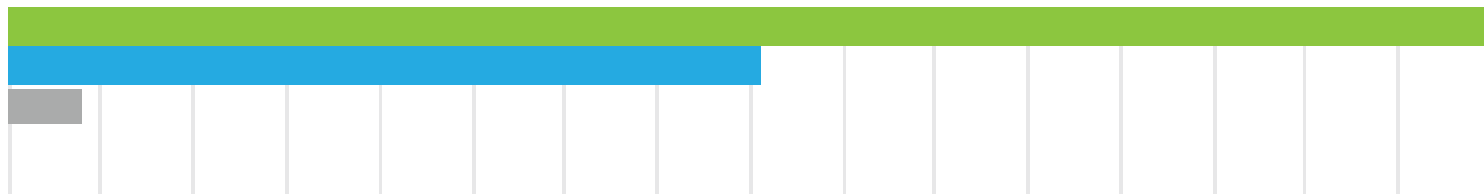
- DOE Zero Energy Ready Home
- ENERGY STAR® Certified Home
- Existing Home




This graphic comparison chart demonstrates relative performance of this DOE Zero Energy Ready Home to existing homes (built between 1990 and 2010) and ENERGY STAR Certified Homes. Actual performance may vary.



303-231-4567
NewTown@net.com
123 Main Street, Denver, CO 34567

HEALTHFUL ENVIRONMENT



- KEY**
-  DOE Zero Energy Ready Home
 -  ENERGY STAR Home
 -  Existing Home

This label indicates relative performance of this DOE Zero Energy Ready Home to existing homes (built between 1990 and 2010) and ENERGY STAR qualified homes. Actual performance may vary.



Consistent Contrast: ZERH Brochure



A Symbol of Excellence

Every Zero Energy Ready Home offers a cost-effective, high performance package of energy savings, comfort, health, and durability unparalleled in today's marketplace.



Lives Better

HEALTHFUL ENVIRONMENT

Every DOE Zero Energy Ready Home has a comprehensive package of measures to minimize dangerous pollutants, provide continuous fresh air, and effectively filter the air you breathe.

COMFORT PLUS

Superior insulation, windows, air sealing and space conditioning systems included in every DOE Zero Energy Ready Home surround you with even temperatures, low-humidity, and quiet in every room on every floor.

KEY

- DOE Zero Energy Ready Home
- ENERGY STAR Certified Home
- Existing Home



Works Better

ADVANCED TECHNOLOGY

Every DOE Zero Energy Ready Home begins with solid building science specified by ENERGY STAR for Homes, and then adds advanced technologies and practices from DOE's world-class research program, Building America.

ULTRA EFFICIENT

Compared to a typical home, an ultra efficient Zero Energy Ready Home is inexpensive to own. In fact, every DOE Zero Energy Ready Home is so energy efficient, a small solar electric system can easily offset most, or all, of your annual energy consumption. We call this Zero Net-Energy Ready.



Lasts Better

QUALITY BUILT

Advanced construction practices and technologies are specified for every DOE Zero Energy Ready Home. Then they are enforced by independent verifiers with detailed checklists and prescribed diagnostics.

DURABILITY

The advanced levels of energy savings, comfort, health, durability, quality and future performance in every DOE Zero Energy Ready Home provide value that will stand the test of time, and will meet and exceed forthcoming code requirements.

LEARN MORE AT: buildings.energy.gov/zero

The Future of Housing—Today

Only a select group of the top builders in the country meet the extraordinary levels of excellence and quality specified by U.S. Department of Energy guidelines.



LEARN MORE AT:
buildings.energy.gov/zero



Call us at:
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A Symbol of Excellence

HEALTHFUL ENVIRONMENT

COMFORT PLUS

ADVANCED TECHNOLOGY

ULTRA EFFICIENT

QUALITY BUILT

DURABILITY

KEY

- DOE Zero Energy Ready Home
- ENERGY STAR Certified Home
- Existing Home

This label indicates relative performance of this DOE Zero Energy Ready Home to existing homes (built between 1990 and 2010) and ENERGY STAR Certified Homes. Actual performance may vary.

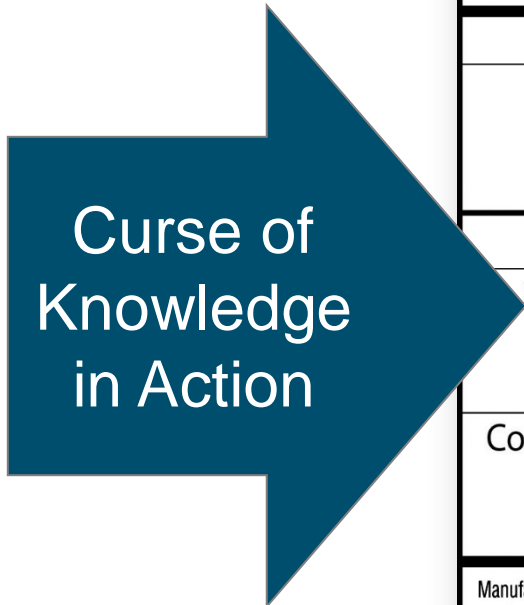



Front Cover

Inside Spread

Flap

Back Cover



		<p>Restorations Windows Vinyl Extruded, UltraCore Frame, Triple Glazed, Krypton90, Low-E Product Type: Vertical Slider</p>	
ENERGY PERFORMANCE RATINGS			
U-Factor (U.S./I-P)		Solar Heat Gain Coefficient	
0.18		0.22	
ADDITIONAL PERFORMANCE RATINGS			
Visible Transmittance		Air Leakage (U.S./I-P)	
0.42		0.1	
Condensation Resistance			
70			
<p>Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. Consult manufacturer's literature for other product performance information. www.nfrc.org</p>			
Actual test sample .03 air leakage.			



Oakridge® Shingles

Shingle Family: Architectural

Wind Resistance: 110/130 MPH****

Algae Resistance: 10 years

Warranty: Limited Lifetime Warranty**†

[Click to view all colors](#)



Supreme® Three-Tab Shingles

Shingle Family: Traditional

Wind Resistance: 60 MPH

Algae Resistance: 10 years

Warranty: 25-Year Limited Warranty*

[Click to view all colors](#)



Mineral Surfaced Roll for Low-Sloped Roofing

Acme Window: Model 240



50-Year Window

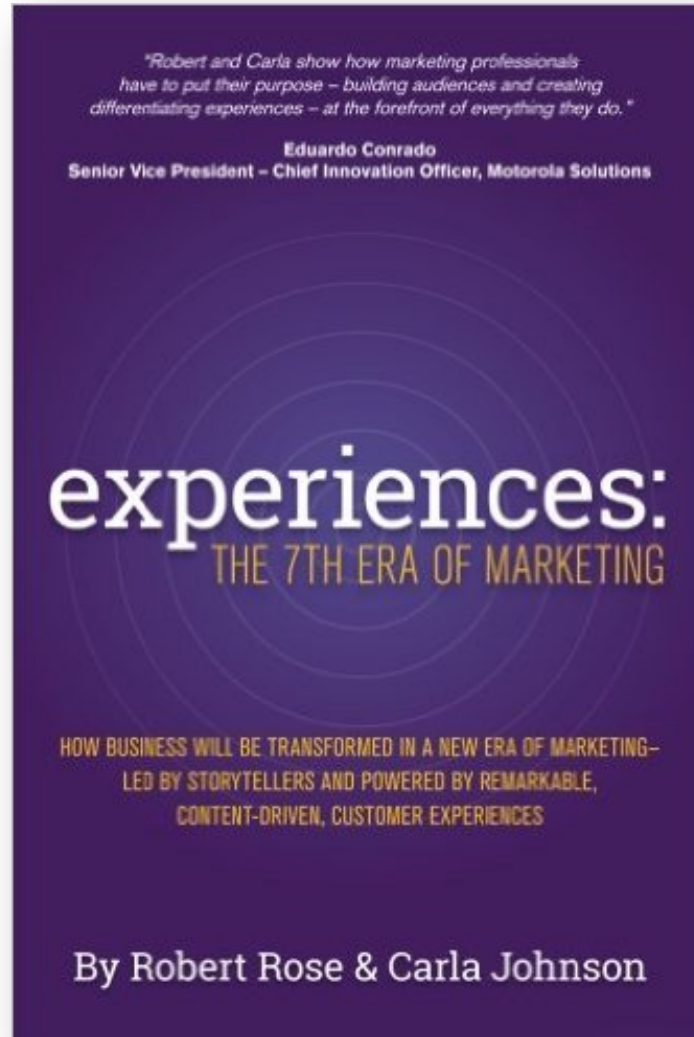
Acme Window: Model 120



10-Year Window

Changing Behavior Strategies

4. Experiences Matters




The screenshot shows the iMedia website interface. At the top, there is a navigation bar with the iMedia logo, menu items for ARTICLES, SUMMITS, VIDEOS, and GET CONNECTED, and social media icons for Twitter, LinkedIn, Facebook, YouTube, and Instagram. There are also links for SIGN UP and LOGIN. Below the navigation bar is a sub-header for EMERGING PLATFORMS. The main article title is "Why Experiences Really Matter for our Brands" in a large, bold, serif font. Below the title is the author's name, Katelyn Watson, with a small profile picture, her title "Guest Writer", and a "FOLLOW" button. To the right of the author information are statistics for COMMENTS, VIEWS (91), and social media shares for Twitter (0), Facebook (0), and LinkedIn (0). Below the author information is the date "SEPTEMBER 10, 2015" and icons for print and share. The main body of the article contains two paragraphs of text. The first paragraph discusses the importance of experiences in consumer behavior and how they affect brands. The second paragraph discusses how brands are researching their customers and how experiences are valued more than things. On the right side of the article, there is a section titled "Upcoming Summits" with a red square icon. Below this section are two featured events: "iMedia Commerce Summit" (Apr 10 - 12, 2016, Nashville, Tennessee) and "iMedia Agency Summit" (May 1 - 4, 2016). Each event has a small image and a "LEARN MORE" button.

iMEDIA ARTICLES ▾ SUMMITS ▾ VIDEOS ▾ GET CONNECTED ▾

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EMERGING PLATFORMS

Why Experiences Really Matter for our Brands

 **Katelyn Watson**
Guest Writer
[FOLLOW](#)


COMMENTS 91 VIEWS Twitter 0 Facebook 0 LinkedIn 0


SEPTEMBER 10, 2015

We all believe experiences are an important part of life. Generally it is because we all know that we are consuming too much, “things” are a commodity, and we all have too many of them. Experiences are a much more thoughtful gift, and we know that they build lasting memories. These are all intuitive reasons for why everyone agrees, experiences matter. The trend in experiences goes well beyond consumer behavior, it also covers how our brands can drive stronger connections, how our companies can retain employees, and how our B2B customers can retain clients. It comes down to more than just user experience, but to real-life experiences and how these experiences define us as people.

Everywhere you turn, you are hearing from brands, consumers, and companies about how they are researching their customers and hearing that they are interested in experiences, especially millennials. Why is this trend happening? How do you go behind the obvious to understand why do we as humans value experiences more than things?

Upcoming Summits


iMedia Commerce Summit
Apr 10 - 12, 2016
Nashville, Tennessee
The Future of Shopping in a Cross-Channel World
[LEARN MORE](#)


iMedia Agency Summit
May 1 - 4, 2016

Experience: Excessive Noise vs. Quiet

U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy



“Our daughter couldn’t breathe without discomfort for years. Within two months of moving into our new **Cobblestone Zero Energy Ready Home**

we threw away

the inhaler.
That was
priceless!”

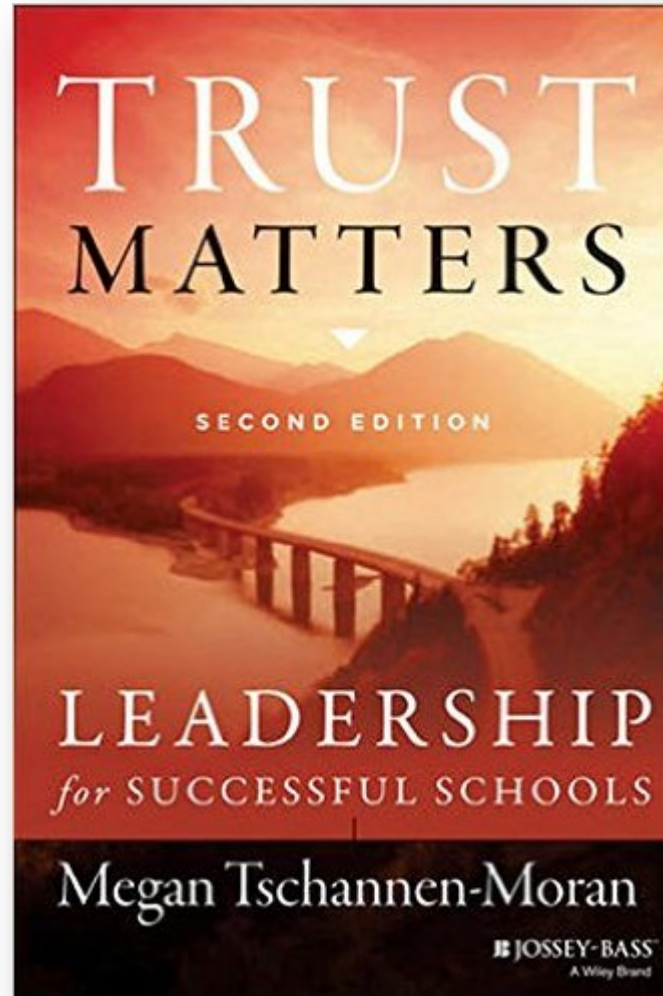
Charley and Mary Jones,
Cobblestone homeowner





Changing Behavior Strategies

5. Trust Matters



Nearly 1 in 3 consumers indicated they

do not trust

home building and real estate companies.

Source: The business of Trust – The Most Trusted Builders in America,
Lifestory Research, January 2013



Independent Voice of Authority vs. "Trust me."

Trust with ZERH 'Brand'



Trust with Housing Innovation Award



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CONTACT US



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Office: (989) 692-0140

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Design Studio Address:

5474 Garfield Rd
Suite 2
Saginaw, MI 48603
MAP

Mailing Address:

P.O. Box 604
Freeland, MI 48623
EMAIL



Drop-In Messaging

As a registered DOE Zero Energy Ready Home partner, enjoy access to the following pre-approved messages for insertion into your promotional materials. Simply insert your company name and use the message as it appears below.

- According to the U.S. Department of Energy, **<Partner Name>** is in a select group of top builders in the nation who have certified one or more homes that meet or exceed Zero Energy Ready Home guidelines for excellence in performance and energy efficiency.
- As a committed DOE partner who provides certified Zero Energy Ready Homes, **<Partner name>** is in the top one percent of builders in the country meeting the extraordinary levels of excellence in energy and performance specified in the national program requirements.
- As a Zero Energy Ready Home Partner, **<Partner Name>** offers high performance homes that are so energy efficient, all or most of their annual energy consumption can be offset with renewable energy.

Changing Behavior Strategies

6. Backing up Performance Matters

Warranty = Quality = Confidence

Consumer perception of warranty as signal of quality:

An empirical study of powertrain warranties

BUSIK CHOI
POSCO Research Institute

busike@posri.re.kr

JUN ISHII
Amherst College
Department of Economics

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March 2010

Abstract

This paper empirically explores the degree to which consumers perceive a manufacturer's warranty as a signal of unobservable product quality. Data on household pur-

Industrial Engineering Letters
ISSN 2224-6096 (print) ISSN 2225-0581 (online)
Vol 1, No.1, 2011

www.iiste.org

Effects of Warranty on Purchase Decision of Electronic Products: An Empirical Research from the Perspective of Bangladesh

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Abstract

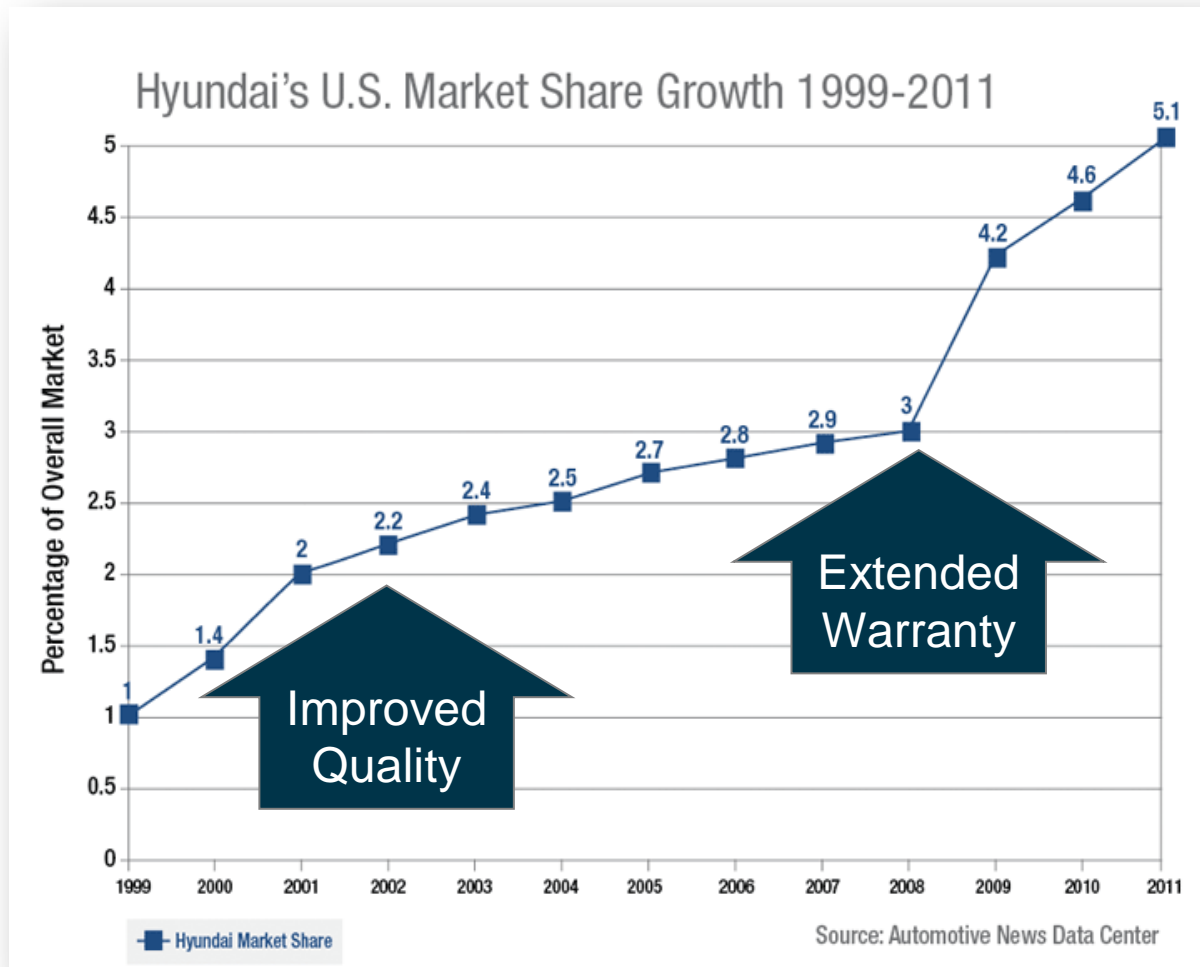
Warranty can be defined as a part of the common law system that states and assures the consumers that a product or service is fit for the purpose for which it is sold. This study focuses on effects of warranty in the purchase decision of electronic products in Bangladesh. After conducting an effective exploratory research to gain initial idea and knowledge, the study proceeded further to draw a conclusion about the research

sion but an important one for signaling. We find warranty length especially appealing for brands that consumers have not previously experienced and for recently introduced makes not yet rated in *Consumer Reports* – precisely the type of automobiles for which asymmetric information is the greatest and signals of product quality the most valuable.

Keywords: Warranty, Signaling, Mixed Logit JEL Codes: D8, D12, L15, L62

products (Chen et al. 2004). Many companies, whether they are established and reputed or new and non-reputed are offering different types of warranty to the target market. But the question is whether this warranty has any significant influence over the purchasing decision considering other intrinsic and extrinsic

Warranty = Sales Growth



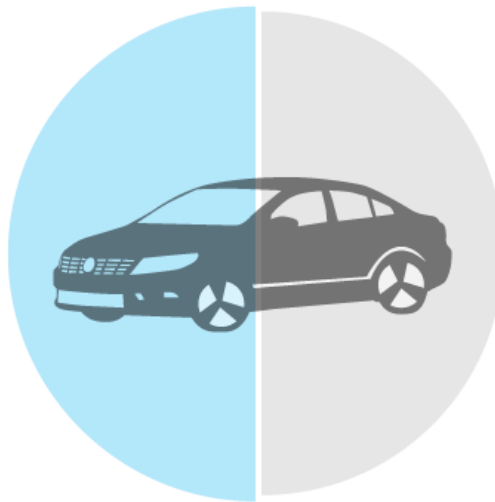
BIG BUILDER

PERFORMANCE ANXIETY

What if a car came with a 2,000 mile warranty?

By Sam Rashkin

50%
OF LIFETIME
WARRANTY COVERAGE



1%
OF LIFETIME
WARRANTY COVERAGE



Source: Sam Rashkin

Healthy Air Warranty

- Lead-Free*
- Asbestos-Free*
- Particulates Filtered to 3 Microns*
- Mold-Free*
- Combustion Safety *
- 100,000 CF per Day Fresh/Filtered Air*
- VOC-Free*
- Formaldehyde-Free*
- Pest-Free*
- Radon-Free*

Affordable Comfort Warranty

- \$60/Month Average Heating/Cooling Bill*
- Even Room-by-Room Temperatures*
- No Outdoor Drafts*
- Outside Noise Reduction*
- No Excessive Humidity*

Durability Warranty

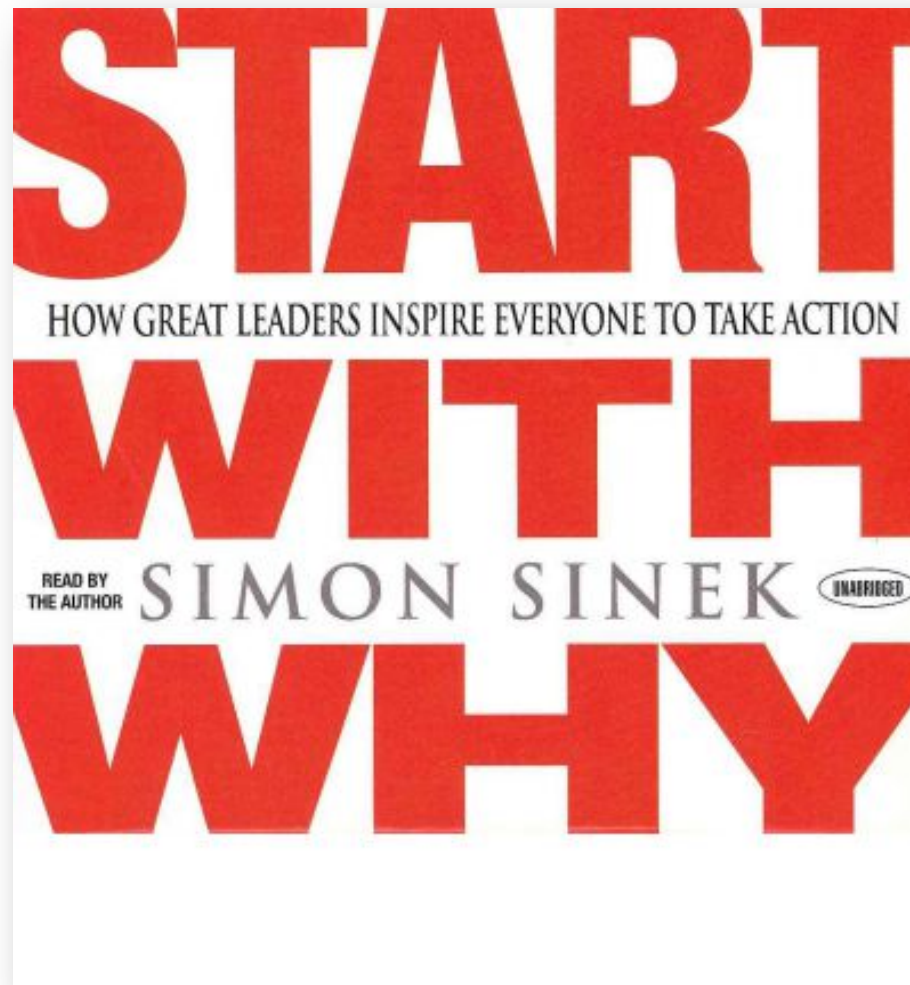
- Structural Integrity *
- No Moisture Damage*
- Dry Basements*
- No Thermal Defects*
- 90% UV Sunlight Blocked
- No Window Condensation*
- Roofing
- Siding*
- Windows
- Termite Damage *

Why * in Warranty...

- Specified Operating Conditions
- Specified Weather Assumptions
- Specified Number of Occupants
- Specified Limitations
- **Requirements for Warranty Service!!!**

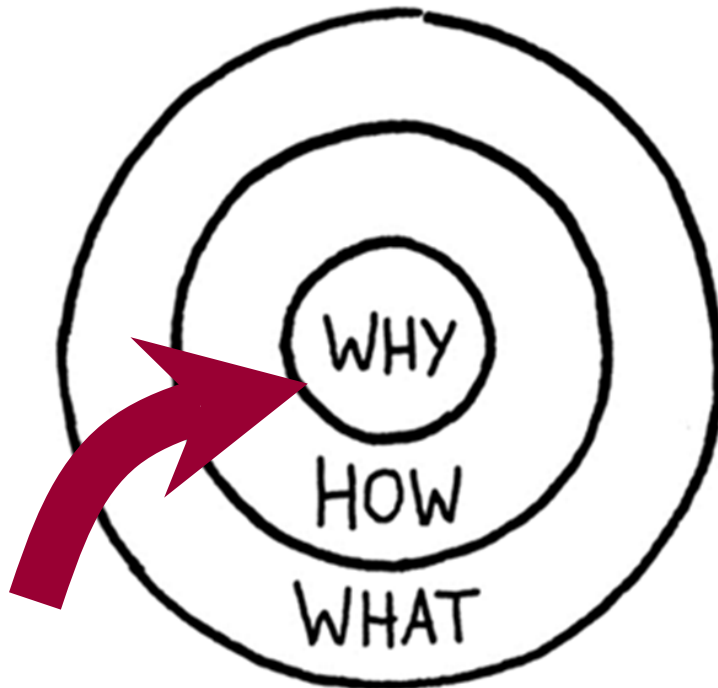
Changing Behavior Strategies

7. Why Matters



“People don’t buy what you do;
they buy *why* you do it.”

Simon Sinek



© 2013 Simon Sinek, Inc.

What

Every organization on the planet knows WHAT they do. These are products they sell or the services they offer.

How

Some organizations know HOW they do it. These are the things that make them special or set them apart from their competition.

Why

Very few organizations know WHY they do what they do. WHY is not about making money. That’s a result. It’s a purpose, cause or belief. It’s the very reason your organization exists.

	Return too Investors	
	Good to Great Companies ¹	Firms of Endearment ²
3 Years	75%	73%
5 Years	77%	128%
10 Years	331%	1,026%

¹ 'Good to Great' by James Collins

² Purpose-driven companies in "Firms of Endearment" by Sisodia, Sheth, Wolfe



An aerial photograph of New York City, showing the dense urban landscape of Manhattan and the surrounding areas. The Hudson River is visible on the left, and the East River is on the right. The city is characterized by a grid of streets and numerous skyscrapers. The text is overlaid on the upper left portion of the image.

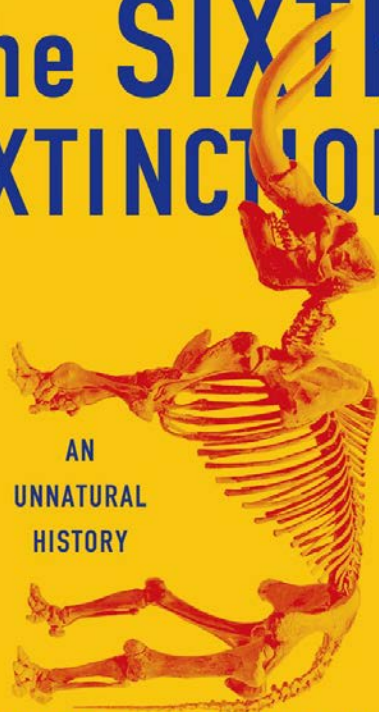
*“The earth is not inherited from our fathers
but borrowed from our children.”*

Native Proverb

Changing Behavior Strategies

Epilog – Power Words

The SIXTH EXTINCTION



AN
UNNATURAL
HISTORY

ELIZABETH KOLBERT Author of FIELD NOTES
FROM A CATASTROPHE

AUTHOR OF NO LOGO AND THE SHOCK DOCTRINE

NAOMI KLEIN

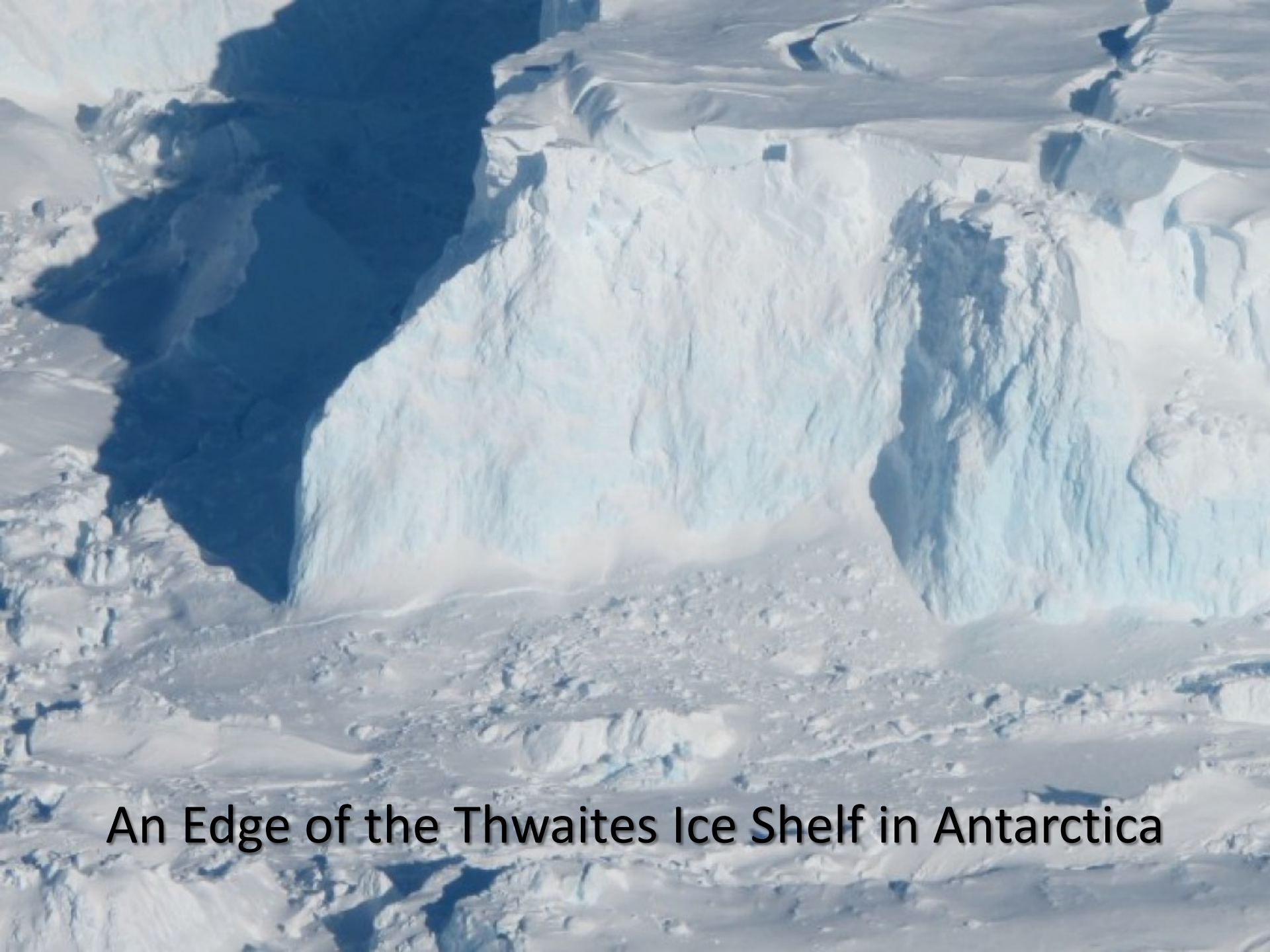
THIS CHANGES EVERYTHING
CAPITALISM vs
THE CLIMATE

NAOMI
KLEIN
THIS
CHANGES
EVERY
THING
CAPITALISM vs
THE CLIMATE

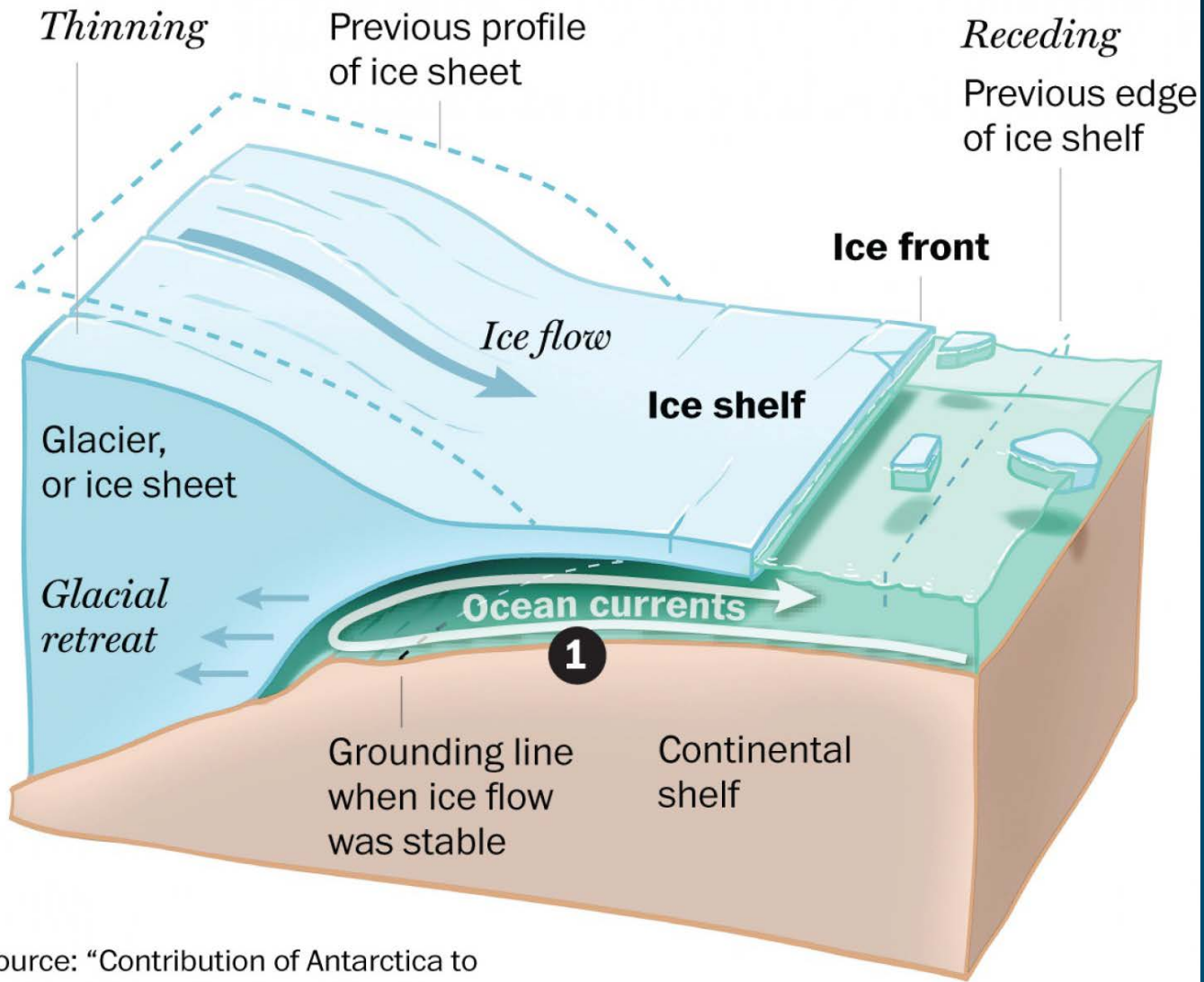
THIS CHANGES EVERY THING

400+

4'–6' by 2100



An Edge of the Thwaites Ice Shelf in Antarctica



Source: "Contribution of Antarctica to Past and Future Sea-Level Rise," by Robert M. DeConto and David Pollard, in Nature

CHIQUI ESTEBAN, BONNIE BERKOWITZ, PATTERSON CLARK / THE WASHINGTON POST

Substance

An addictive consumptive product
with harmful side-effects.

Fossil Fuel

~~Fossil Fuel~~

Fossil Substance

~~Fossil Fuel~~

Fossil Substance

An addictive energy resource
with harmful side-effects associated with
exploration, extraction, processing,
distribution, consumption, and emissions.

Sample Fossil Substances

- Gasoline
- Oil
- Natural Gas
- Coal

Fossil Fuel Dependency

~~Fossil Fuel Dependency~~

Fossil Substance Abuse

~~Fossil Fuel Dependency~~

Fossil Substance Abuse

The excessive use of fossil substances that leads to negative environmental, health, and economic impacts.

Fossil Substance Negative Impacts

- High/Volatile Energy Costs
- Reduced National Security
- Reduced Economic Development
- Air Pollution
- Water Pollution
- Environmental Damage/Risk
- Species Extinction
- Melting Polar Caps/Sea Level Rise
- Acidification of the Oceans

Fossil Fuel Consumers

~~Fossil Fuel Consumers~~

Fossil Substance Addicts

~~Fossil Fuel Consumers~~

Fossil Substance Addicts

Compulsive users of fossil substances
despite their harmful consequences.

Addictive Behavior

- **Constant State of Denial**
 - Dependency
 - Steady Atrophy to Quality of Life
 - Ignored Responsibilities
 - Negative Impacts to Themselves
 - Negative Impacts to Loved Ones
- **Take Risks Can't Afford**
 - Costs
 - Health
 - Physical Harm
 - Without Treatment, Things Don't End Well

Fossil Fuel Companies

~~Fossil Fuel Companies~~

Fossil Substance Dealers

~~Fossil Fuel Companies~~

Fossil Substance Dealers

Business enterprises that substantially control fossil substance production, distribution, and pricing, and are vested in a growing number of fossil substance addicts.

The Atlantic

SUBSCRIBESEARCH MENU

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Why the Saudis Are Going Solar

The fate of one of the biggest fossil-fuel producers may now depend on its investment in renewable energy.

External Costs

~~External Costs~~

True Cost

~~External Costs~~

True Cost

The full cost incurred using a product or service that include all direct and indirect costs.

Fossil Fuel External Costs

~~Fossil Fuel External Costs~~

Fossil Substance True Cost

~~Fossil Fuel External Costs~~

Fossil Substance True Cost

The full cost of fossil substance use that entails all direct costs and significant economic, health, and environmental indirect costs.

Fossil Substance High Indirect Costs

- **Costs for Protection of Strategic Interests**
 - Military Interventions
 - Lost Income from Lives Lost in Military Interventions
 - Lifetime Health Services for Injured Veterans
- **Costs of Emissions, Extraction and Transport**
 - Public Health Problems Due to Polluted Air
 - Pollution Clean-up from Spills/Extraction
 - Cost of Repairing Environmental Damage
 - Cost of Long-Term Climate Impacts
- **Costs for National Security**
 - Cost of Strategic Reserves
 - Cost of Protecting Shipping Lanes
- **Costs due to Job Loss and Trade Imbalance**

Renewable Energy External Costs

~~Renewable Energy External Costs~~

Renewable Energy True Cost

~~Renewable Energy External Costs~~

Renewable Energy True Cost

The full cost of renewable energy use that entails all direct costs and minimal economic, health, and environmental indirect costs.

Renewable Energy Low Indirect Costs

- Minimal to No Air Emissions
- Minimal to No Health Impacts
- Increased Number of Persistent Jobs
- Minimal to No Energy Security Costs
- No Military Obligations
- Minimal to No Environmental Damage
- Minimal to No Climate Change Impacts

Proper Communication About Cost

Hypothetical Fuel Substance Example:

Direct cost of gasoline at the pump is \$2.50/gallon

Indirect costs of gasoline are \$7.00/gallon.

- The **partial cost** of gasoline is \$2.50/gallon
- The **true cost** of gasoline is \$9.50/gallon
(\$2.50 direct plus \$7.00 indirect cost/gallon)
- In other words the government would be spending nearly **\$1 trillion/year** to subsidize our nation's addiction to cheap gasoline.

Proper Communication About Cost

Hypothetical Electricity Cost Example:

Coal: \$.04/kWh direct cost with \$.04/kWh indirect cost

Solar: \$.07/kWh direct cost with negligible indirect cost

- The **partial cost** for electricity from coal is \$.04/kWh.
- The **true cost** for electricity from coal is \$.08/kWh (\$.04/kWh direct plus \$.04/kWh indirect costs)
- The **true cost** of electricity from solar is \$.07/kWh
- In other words, solar electricity is the lower cost source of electricity.

Cheap Fossil Fuel

~~Cheap Fossil Fuel~~

Subsidized Fossil Substance

~~Cheap Fossil Fuel~~

Subsidized Fossil Substance

Artificially low cost fossil substance made possible by massive public expenditures hidden in tax policies, government budgets, health-care costs, environmental clean-up, economic job loss, and national defense.

Carbon Tax

~~Carbon Tax~~

Fossil Substance

Free-Market Adjustment

~~Carbon Tax~~

Fossil Substance

Free-Market Adjustment

Cost adjustment to ensure the government does not unintentionally impact **free-market forces** by neglecting the indirect costs of fossil substances.

Renewable Tax Subsidy

~~Renewable Tax Subsidy~~

Renewable Energy
Free-Market Adjustment

~~Renewable Tax Subsidy~~

Renewable Energy

Free-Market Adjustment

Cost adjustment to ensure the government does not unintentionally impact **free-market forces** where **no** Fossil Substance Free Market Adjustment.

Clean Energy Programs

~~Clean Energy Programs~~

Fossil Substance Abuse
Treatment Centers

~~Clean Energy Programs~~

Fossil Substance Abuse Treatment Centers

Programs provided to help fossil substance addicts become economically, environmentally, physically, and spiritually healthier by switching to clean energy alternatives.

Fossil Substance Abuse Sample Treatment Centers

- ENERGY STAR
- DOE Zero Energy Ready Home
- Passive House
- NAHB Green Building Standards
- USGBC LEED
- Living Building Challenge
- Architecture 2030 Challenge/Achieving 80x50
- World Wildlife Fund
- Environmental Defense Fund
- Climate Action Network

Fossil Substance Abuse Sample Treatment Centers

- **ENERGY STAR**
- **DOE Zero Energy Ready Home**
- Passive House
- NAHB Green Building Standards
- USGBC LEED
- Living Building Challenge
- Architecture 2030 Challenge/Achieving 80x50
- World Wildlife Fund
- Environmental Defense Fund
- Climate Action Network

Fossil Substance Abuse Treatment Center Effectiveness

ENERGY STAR Certified Home Impacts:*

15-Year Investment:

~\$40 Million

[total program costs]

Return:

>\$1.5 Billion

[consumer energy savings]

>\$1 Billion

[non-participant savings]

~\$3 Billion

[local govt. tax revenue]

>450,000 Cars

[GHGC emission savings]



* Based on estimated impacts as of 2011







Which brings up what be may
the ultimate power word...

Power

Thank You



For More Information:

www.buildings.energy.gov/zero