

# Is Awareness Enough?



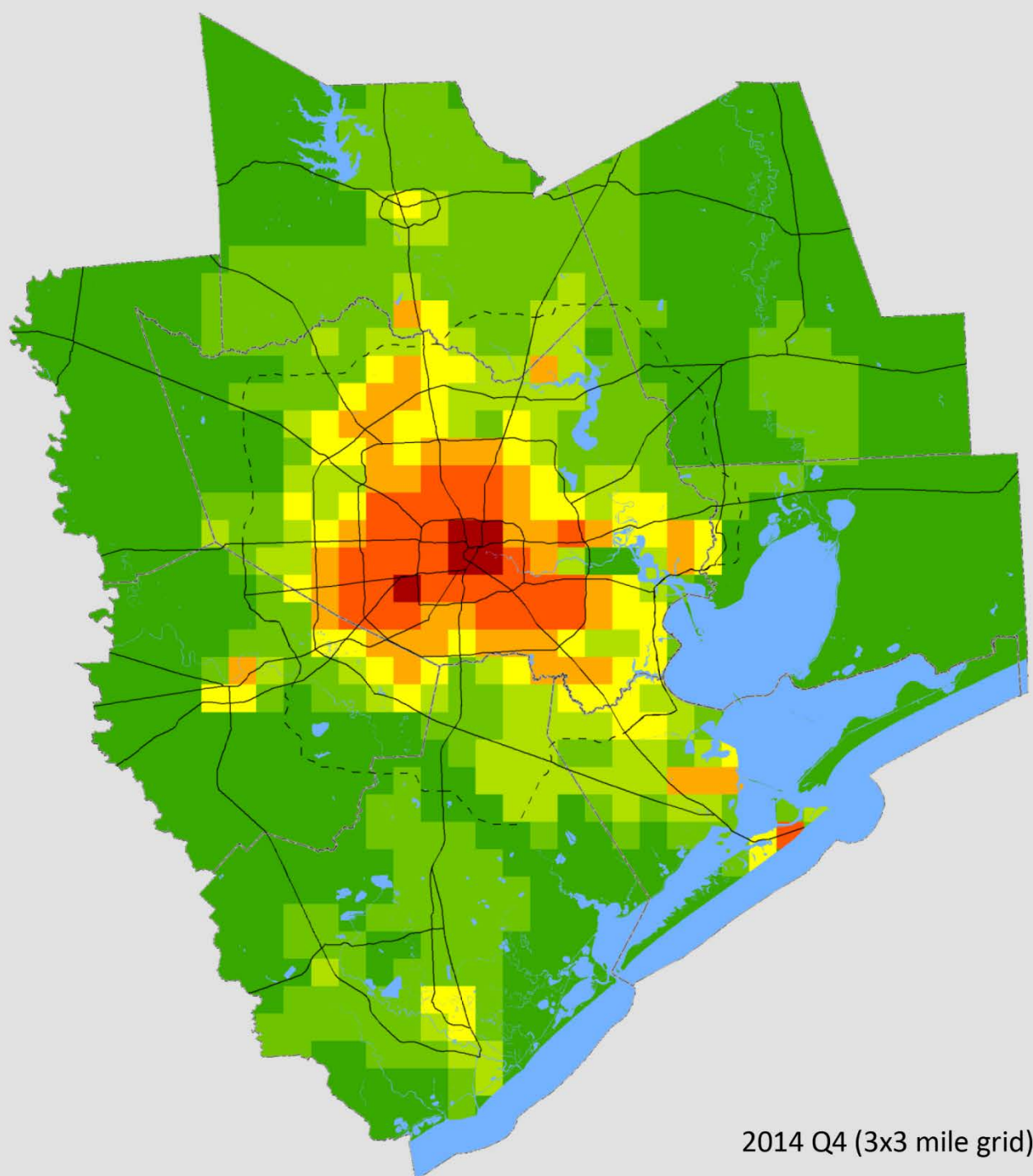
Steve Stelzer AIA, LEED® AP  
Program Director,  
Public Works & Engineering, Code Enforcement  
Green Building Resource Center





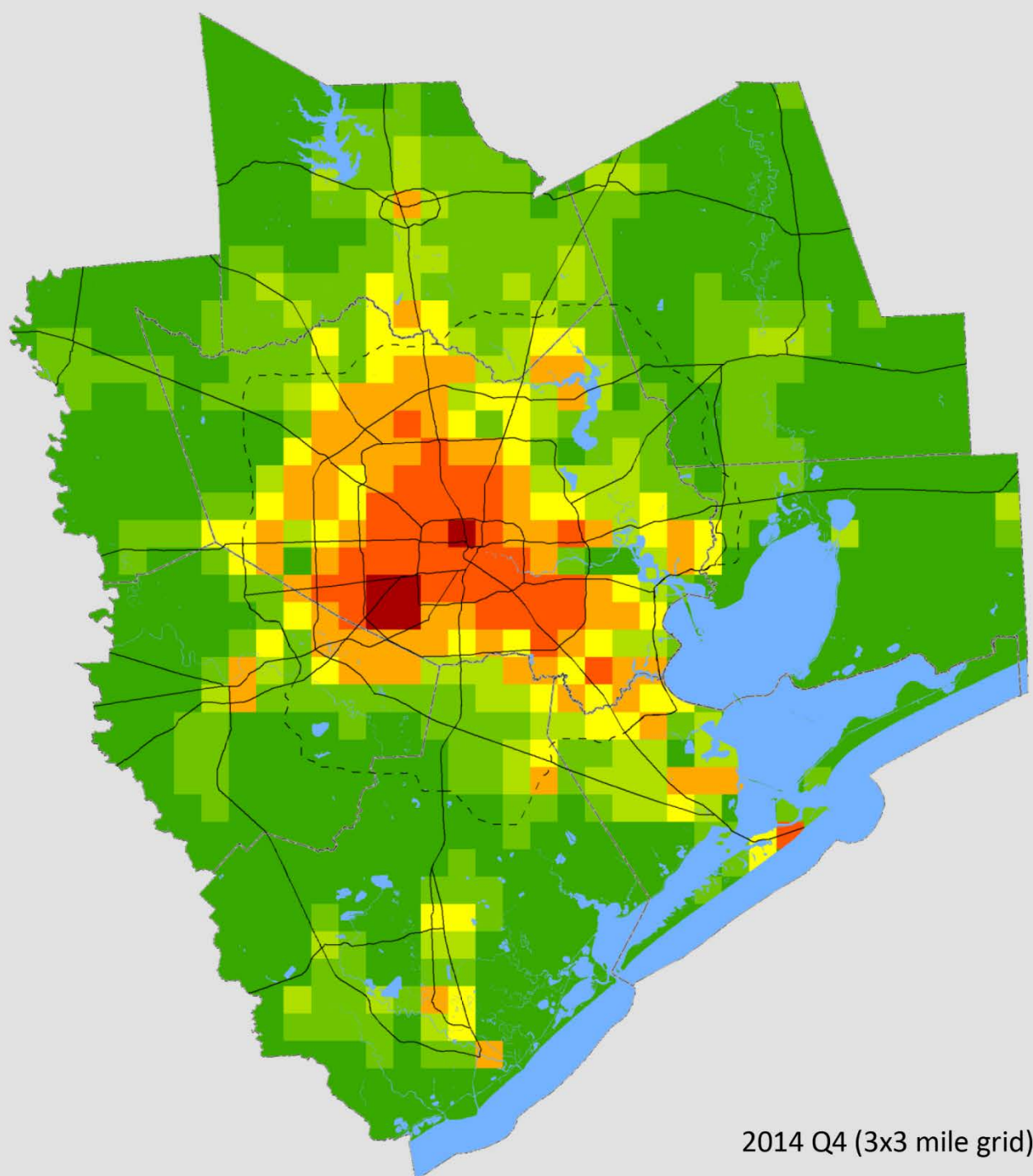
ibar

## 1980 Population



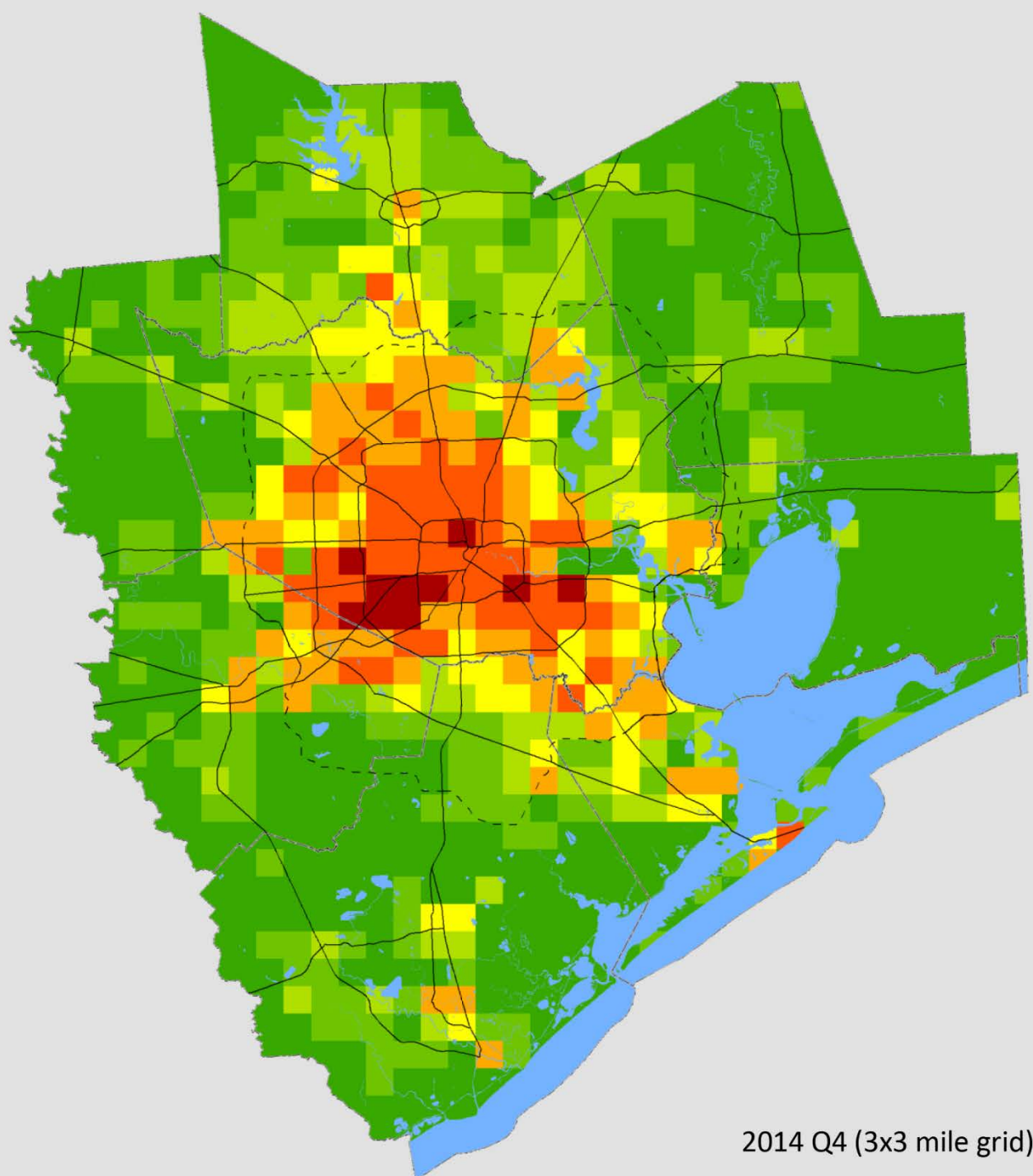
2014 Q4 (3x3 mile grid)

## 1990 Population



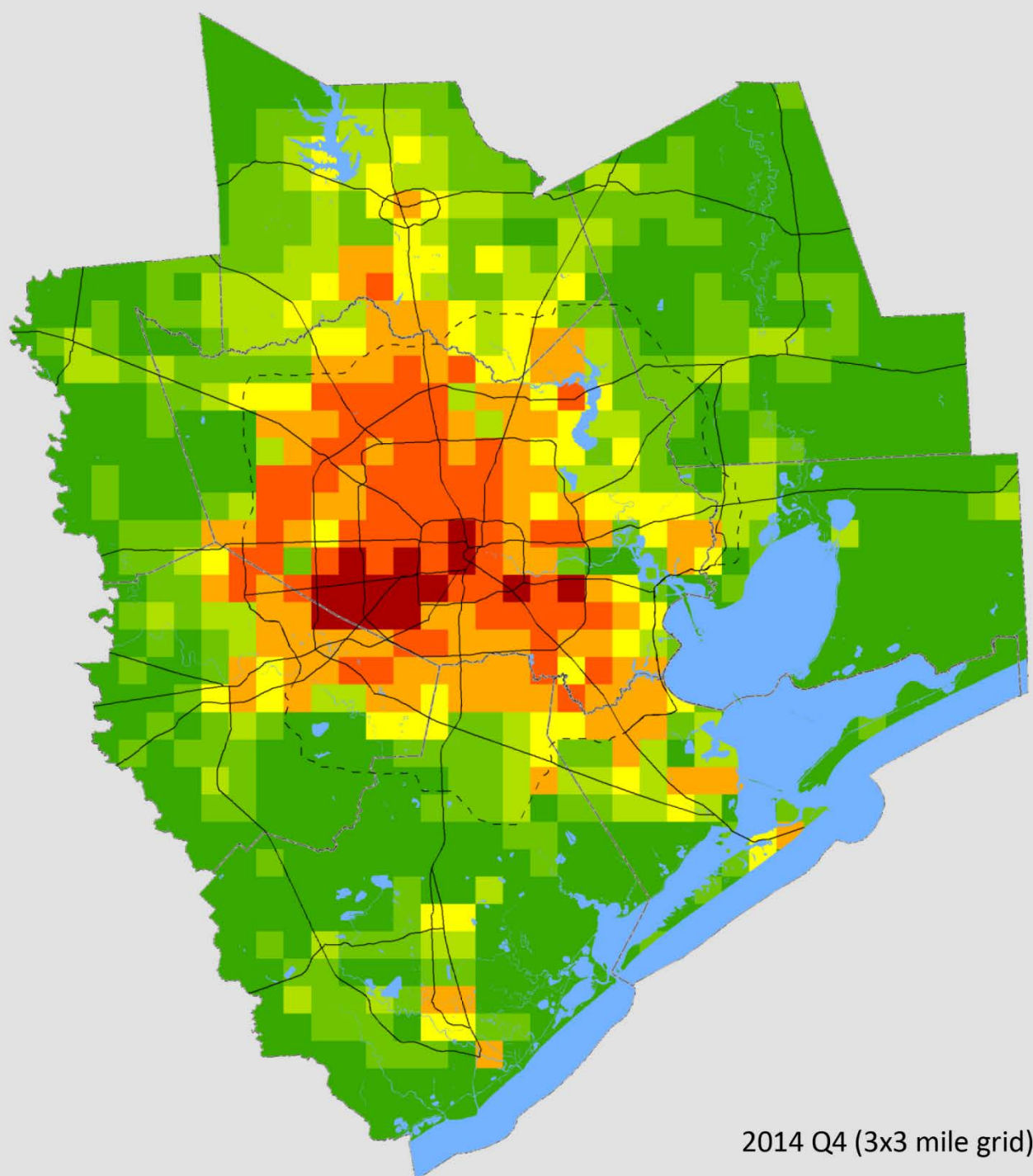
2014 Q4 (3x3 mile grid)

## 2000 Population



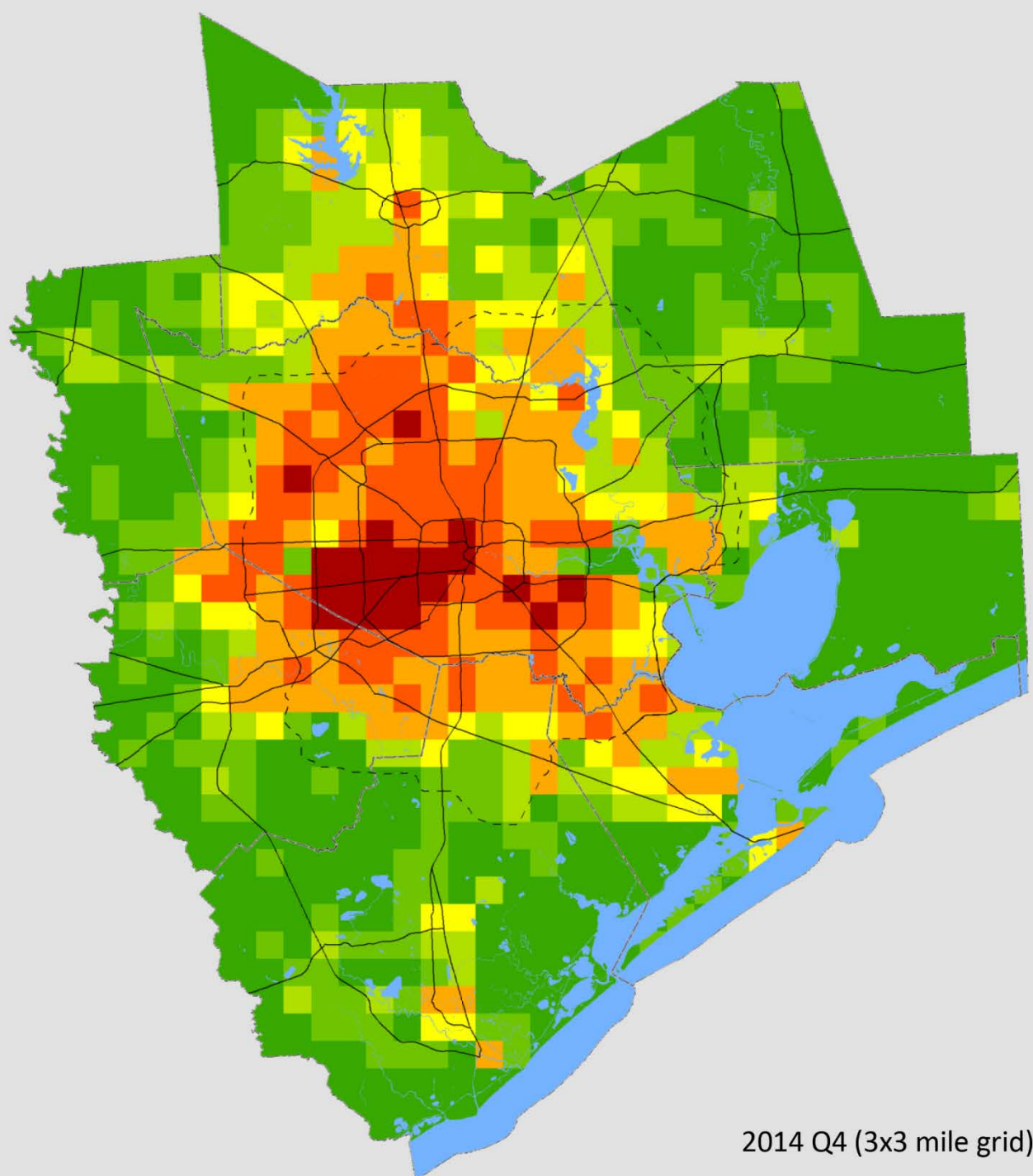
2014 Q4 (3x3 mile grid)

## 2010 Population



2014 Q4 (3x3 mile grid)

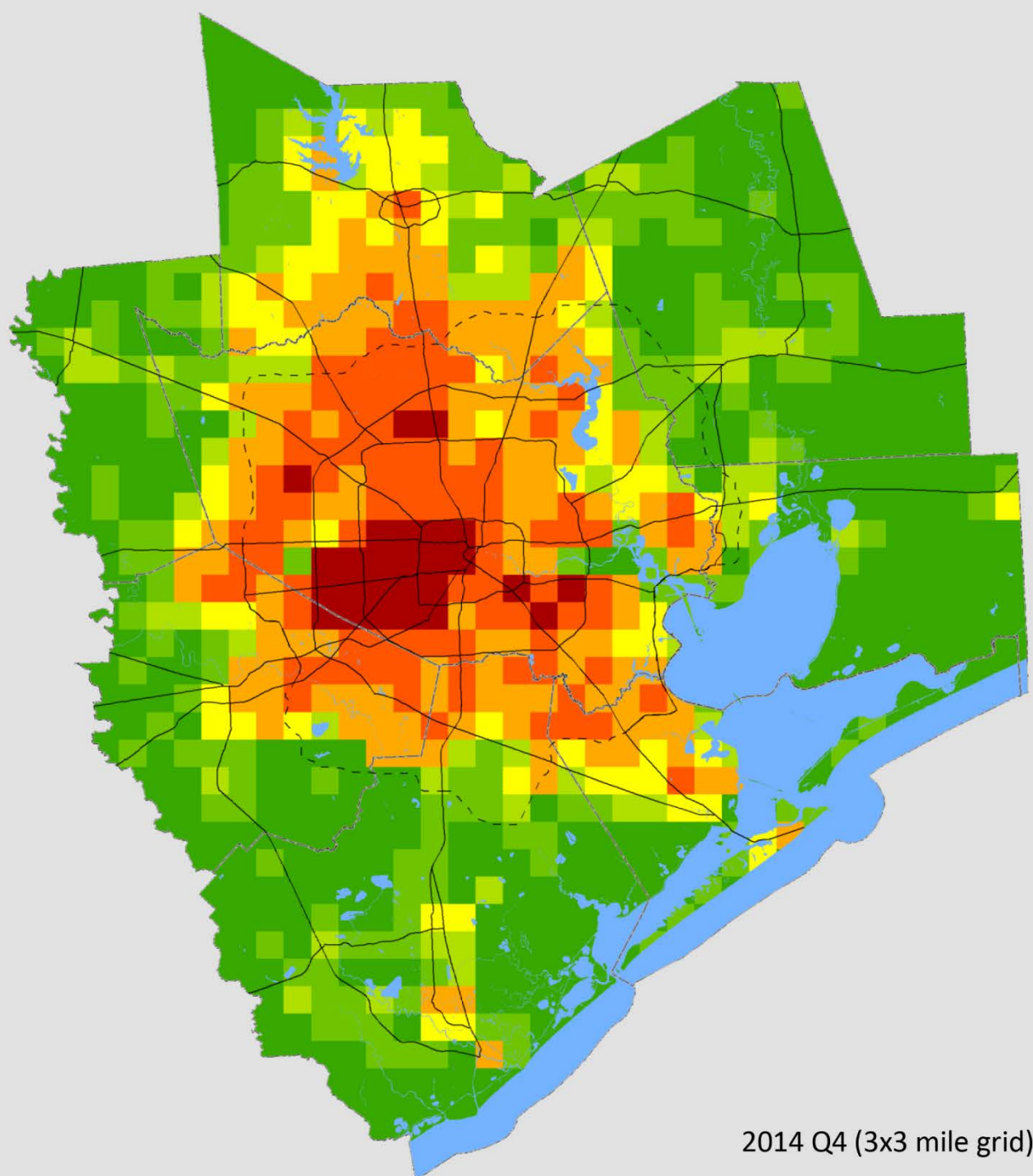
## 2020 Population



2014 Q4 (3x3 mile grid)

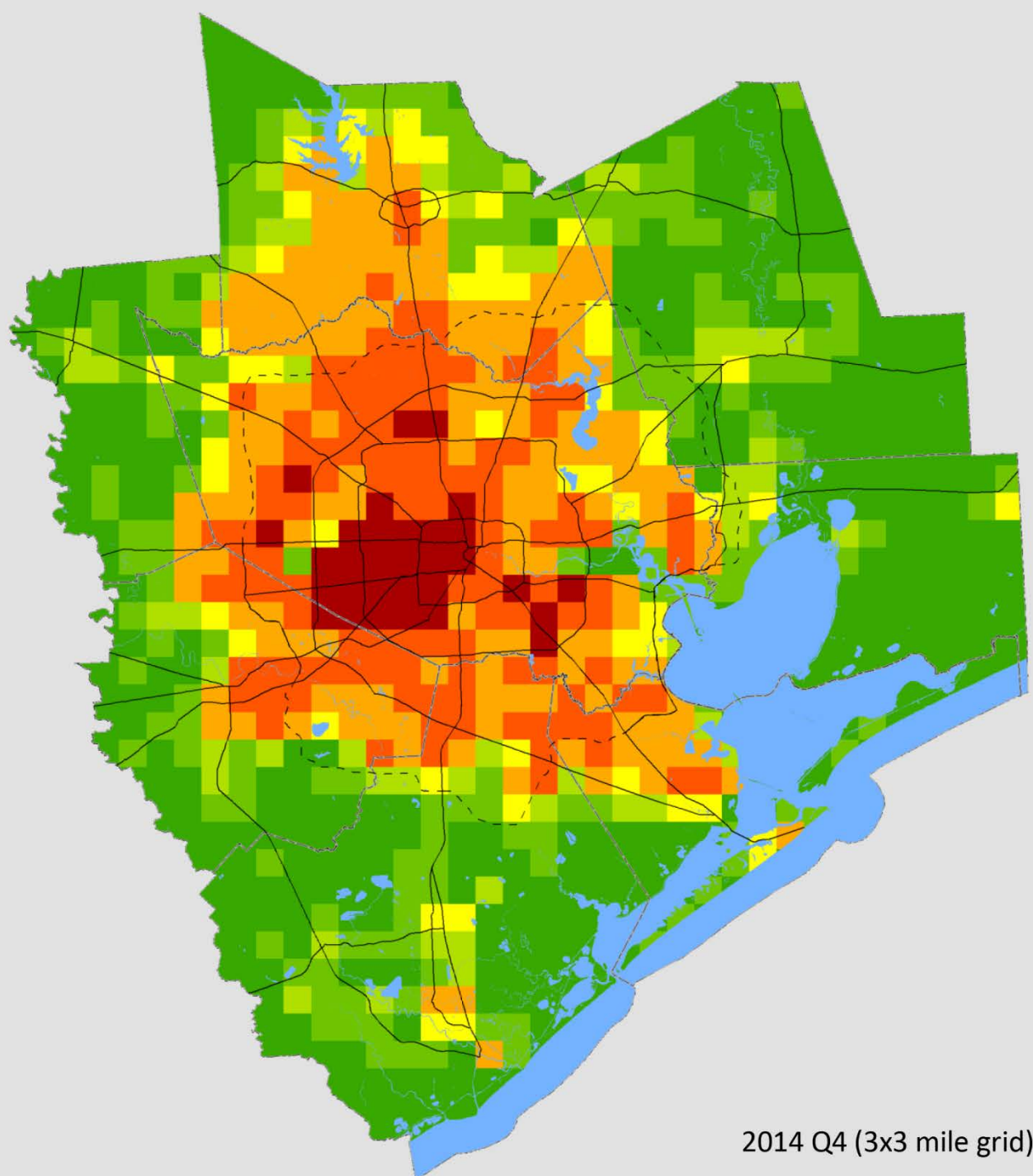


## 2030 Population



2014 Q4 (3x3 mile grid)

## 2040 Population



2014 Q4 (3x3 mile grid)

Can you say  
'Growth'?



And *how many*  
Stop-N-Go's  
do we need?



**Can you say  
'Resilient'?**

**And *how* resilient is  
this kind of growth?**

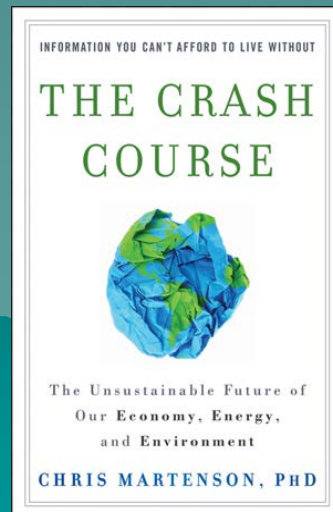


**And NOW,**

**A word from our  
SPONSORS....**

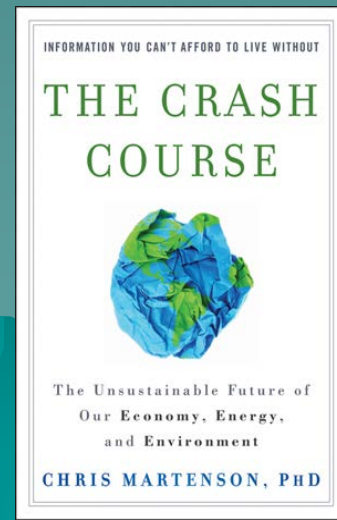
**The Energy Capital of  
the World!**

And how much “work” is embodied in a gallon of gasoline, our favorite substance of them all? Well, if you put a single gallon in a car, drove it away from your home until the gas ran out, and then got out and pushed the car home, you’d find out exactly how much work a gallon of gasoline can do.



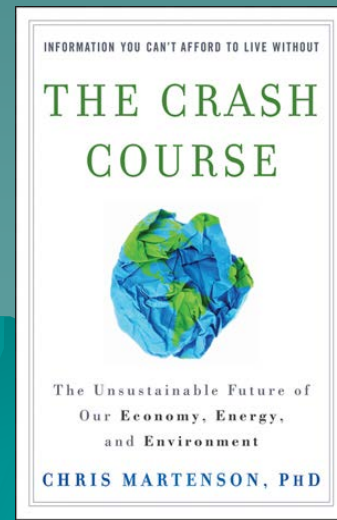


It turns out that a gallon of gas has the equivalent energy of somewhere between 350 and 500 hours of human labor. Given that a gallon of gas can perform that much human work, how much value would you assign it? How much would 350 to 500 hours of your hard physical labor be worth to you? \$4? \$10?





# This is what we *mean* by CHEAP FOSSIL FUEL....





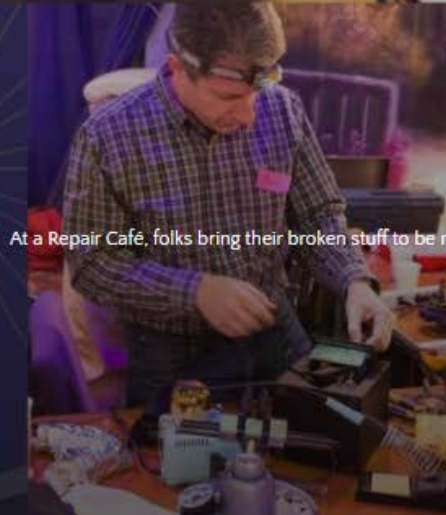




## Cville TimeBank Repair Cafe

Don't toss it—FIX it!

### Toss it? No Way! FIX IT!




At a Repair Café, folks bring their broken stuff to be repaired by volunteers for free. It's a fun, friendly way to keep perfectly good stuff out of the landfill and spend some quality time together as a community.

[Sign up for our mailing list here](#)





## APL Events

[Children](#)[Teen](#)[Adult](#)[Show all events](#)[Calendar](#)Search events by location [Advanced Search](#)

# FIX IT AUSTIN



## FixIt Clinic

Fixit Clinics are all about do-it-together, hands-on disassembly, troubleshooting and learning to repair.

## Events

Saturday, March 24, 2018

12:00 PM **Fix-It Clinic - Bring your broken stuff and learn how to fix it!**



Austin Habitat for Humanity ReStore - 500 W. Ben White Blvd.

*All ages are welcome, but children under the age of 13 must be accompanied by a parent or guardian. Click below to RSVP.*



## About iFixit

Want to know how things work around here? You've come to the right place.

### About Us

iFixit is a wiki-based site that teaches people how to fix almost anything. Anyone can create a repair manual for a device, and anyone can also edit the existing set of manuals to improve them. Our site empowers individuals to share their technical knowledge with the rest of the world.

So what are you waiting for?

[Start a new guide](#) or [improve an existing one!](#)

### Helpful Resources for Repair Guides





Tweets **208** Following **34** Followers **248** Likes **6**

[Follow](#)

**Fixit Clinic**  
@FixitClinic

Fixit Clinic: Guided disassembly of your broken stuff. We provide workspace, specialty tools, and guidance to help you disassemble and troubleshoot your item.




📍 Berkeley, California, USA  
[facebook.com/FixitClinic](https://www.facebook.com/FixitClinic)  
 📅 Joined October 2010

[Tweet to Fixit Clinic](#)

📷 68 Photos and videos

Tweets **Tweets & replies** Media

- 
**Fixit Clinic** @FixitClinic · 13 Nov 2017  
 The Restart Project in the UK is hiring: [therestartproject.org/ops-lead/](http://therestartproject.org/ops-lead/) #repair #fixit #dit #dfm #repaircafe #ZeroWaste #stem #circulareconomy #designformanufacturing #disposableculture #demanufacturing #fixitclinic  
 🗨️ 🔄 1 ❤️ 1 ✉️
- 
**Fixit Clinic** @FixitClinic · 30 Sep 2017  
 Test Video: [youtu.be/TwPc4Nn2x1Y?](https://youtu.be/TwPc4Nn2x1Y?) via @YouTube  
 🗨️ 🔄 ❤️ ✉️
- 
**Fixit Clinic** @FixitClinic · 28 Sep 2017  
 Right to Repair in The Economist this week: [economist.com/news/business/...](http://economist.com/news/business/...) #repair #fixit #dit #dfm #repaircafe #ZeroWaste #stem  
 🗨️ 🔄 ❤️ ✉️

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Repair Café, Palo Alto

@paloaltorepaircafe

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Like Follow + Create Fundraiser ...

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Write something on this Page...

Photos



Nonprofit Organization

4.0 stars

Community

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386 people follow this

About

See All

Send Message

repaircafe-paloalto.org

Nonprofit Organization

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Team Members

Sue Purdy Pelosi

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*Toss it? No way!*



A Repair Cafe celebrates fixing through a fun, collaborative, hands-on, fix-n-learn, community event. People bring us their broken items for assessment, disassembly and repair. Bring your toolkit and join us to have fun and learn while helping others troubleshoot and fix their broken stuff! Volunteers **assess**, **take apart**, and hopefully -- **REPAIR**.

Transition Houston is partnering with **TX/RX Labs**, the **City of Houston Green Building Resource Center**, **Houston Complete Communities**, **Citizens' Environmental Coalition**, **Texas Campaign for the Environment**, and the **Houston Peace and Justice Center** in this effort!

## Do you have an item in need of repair?

We invite you to bring in a broken item and meet local people who have offered to share their skills to help you make repairs. If you have nothing to repair, you can enjoy a cup of tea or coffee. Or you can lend a hand with someone else's repair job. You can also get inspired at the reading table, by leafing through books on repairs and DIY.

### **Acceptable Items to Bring:**

**Clothing, Small Appliances, Bikes**



# Can you volunteer to help with repair or the event?

Calling all handymen, handymen, handy kids, handy teens and families, tinkerers, and sewers! Volunteer to have fun and learn through helping others troubleshoot and fix their broken stuff. Volunteers are also needed on the day of the event as guides and to assist with general coordination.

## Sign Up to Participate!

Online at: <https://repaircafehouston.eventbrite.com>  
use the QR code, or contact Steve Stelzer at 832.394.9050.

## Why a Repair Cafe?

Our society revolves around consumption. Personal consumption of durable goods add up to 8% of GDP, and non-durable goods add up to 15%, totaling about \$4 trillion dollars annually in the USA! The more we buy, the more we throw away, often during the first year! And... most people no longer know how to repair things. For more information, visit [www.transitionhouston.org](http://www.transitionhouston.org).



## The Fixer's Manifesto

- If it's broken, fix it!
- Give your stuff a longer life
- Enjoy hands-on, fix-n-learn, community based discovery
- Nurture curiosity, share ideas and skills
- Fixing is good for us and good for the planet
- Disposability is a choice
- Make fixing a way of life!



# House Rules & Guidelines

Please take a moment to [read the house rules outlining repair cafe and safety guidelines](#). Participation in the event requires all attendees to agree and abide by these rules. In general,

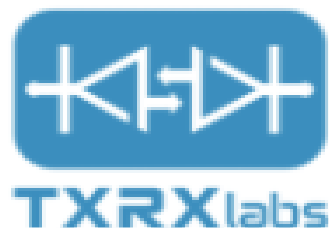
- Local volunteers with a range of skills are available to give you ideas, suggestions or a helping hand if needed with a repair.
- Visitors carry out the repairs themselves whenever possible, but repair experts are on site and can help as needed.
- Please bring one broken or non-working item per person.\*
- Carry-in items only (No stoves, refrigerators, or other large items)
- Volunteers offer no guarantee of items being repaired made by them or with their assistance, and are not liable if objects repaired do not work properly at home.
- Volunteers are not obliged to reassemble disassembled appliances that cannot be repaired.
- If you need replacement parts, such as plugs, fuses etc. you may need to pay for these or pop out and buy them from a local shop.
- Visitors to Repair Café are solely responsible for the removal of broken objects that could not be repaired.
- A voluntary donation for workshop tools and repair materials is greatly appreciated.

\* **Disclaimer** – Please know you bring your items to be repaired at your own risk. Because repairs are made by unpaid volunteers there may be risks. Neither the facilitators of Repair Cafés nor the repair volunteers are liable for any loss or damage that may result from advice or instructions, for the loss of items handed over for repair, for indirect or consequential loss, or for any other kind of loss resulting from repairs made by Repair Café.

## Our Sponsors



HOUSTON



CITIZENS'  
ENVIRONMENTAL  
COALITION



Toss it? No way!



## House Rules

- ✓ **Acceptable Items to Bring:**  
Clothing, Small Appliances, Tools/blades for sharpening
- ✓ Carry-in items only (No stoves, refrigerators, or other large items)
- ✓ Please bring one broken or non-working item per person.\*
- ✓ Local volunteers with a range of skills are available to give you ideas, suggestions or a helping hand if needed with a repair.
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## General Shop Safety

- ✓ While in the shop areas, eye protection is required. Safety glasses will be provided.
- ✓ Closed toe shoes are required.
- ✓ Do not work alone, use the buddy system.
- ✓ Clean up after yourself.
- ✓ If you see something unsafe, say something.
- ✓ Do not work while intoxicated.
- ✓ If you have any concerns or questions, ASK.



**Mary Lee Johns** This looks really cool. When, where, how join, etc?

Like · Reply · 14w



**Peggy Walton** Looking forward to our next one. Thanks for sharing Gabriella Nissen.

Like · Reply · 14w · Edited



**Monica Elizabeth Luna** When is the next one?

Like · Reply · 11w



**Carol Hendrix Burrus** I was there! It was amazing. I will now plan to save things that break instead of figuring out how to recycle them. This service is a welcome return!



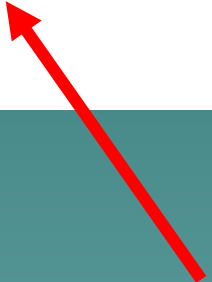


Molly Block is  attending Join Us at Houston's First Repair Cafe! with Steve Stelzer at  TX/RX Labs.

October 28, 2017 · Houston · 

At Houston's first "repair cafe" today -- with volunteers who are lending their expertise to help extend the life of non-working items. Getting one of my not-quite-working vintage lamps looked at. (Carl, pictured, advises me to get a different socket.) Fun stuff!

Kudos to Steve Stelzer for coordinating this project -- a good thing for Houston! 



**ALERT! Shameless Self-Aggrandizement**











FIRE  
EXTINGUISHER

HOV  
CORPORATION  
CITY

Not  
Buying It  
Test  
Without  
Shipping

THE BIG BOOK OF  
HACKS  
UPDATED & EXPANDED  
250  
MADE EASY

HOW TO  
SHARPEN  
ANYTHING

COMPLETE STEP-BY-STEP  
Upholstery

10 COOL THINGS

62 PROJECTS TO MAKE YOUR  
PC A DEAD COMPUTER

DIY Home Energy Audit

DIY Home Energy Audit  
Energy Efficiency  
Energy Conservation  
Energy Savings  
Energy Audit  
Energy Inspection  
Energy Assessment  
Energy Evaluation  
Energy Analysis  
Energy Review  
Energy Check  
Energy Test  
Energy Measure  
Energy Monitor  
Energy Track  
Energy Record  
Energy Report  
Energy Plan  
Energy Implement  
Energy Maintain  
Energy Improve  
Energy Optimize  
Energy Maximize  
Energy Minimize  
Energy Reduce  
Energy Increase  
Energy Decrease  
Energy Stabilize  
Energy Balance  
Energy Harmonize  
Energy Synchronize  
Energy Integrate  
Energy Connect  
Energy Link  
Energy Bind  
Energy Join  
Energy Merge  
Energy Fuse  
Energy Blend  
Energy Mix  
Energy Combine  
Energy Unify  
Energy Synthesize  
Energy Integrate  
Energy Connect  
Energy Link  
Energy Bind  
Energy Join  
Energy Merge  
Energy Fuse  
Energy Blend  
Energy Mix  
Energy Combine  
Energy Unify  
Energy Synthesize





HPL plans to stay involved with and support the Repair Café program. We would like to pursue outreach opportunities and host a Repair Café in the near future.



**Carmen P. Abrego**  
**Assistant Manager**  
**Library Events & Community Programs**  
**500 McKinney | Houston, TX 77002**



*We link people to the world.*





# Repair Café

HOUSTON *Toss it? No way!*



Date: <u>10/28/17</u>	Male / Female	Age Group
Name: <u>Quealy</u>		0-20 21-40 41-60 61+
Email Address: <u>banhn@gmail</u>	<input type="checkbox"/> I agree to abide by the House Rules	Zip Code <u>77009</u>
Repair Number: <u>A4</u>	Repair made to:	<input checked="" type="checkbox"/> Small appliance: <u>TOASTER OVEN</u>
	<input checked="" type="checkbox"/> <del>Garment</del>	<input type="checkbox"/> Tool / Knife: _____
	<input type="checkbox"/> Other: _____	
Defect / Issue: <u>Bell down skwis</u>		
Were you helped? <input checked="" type="checkbox"/> Yes. What was repaired?  <input checked="" type="checkbox"/> To a degree. Advice? <u>perfectly workable plus 2 women did it</u>		
<input type="checkbox"/> No. Reason?		
Helped By: <u>Alex &amp; Peggy</u>		
Comments / Suggestions <u>Hinge detached from inner spring. Left pin on door missing. Substituted a screw &amp; glue.</u>		





# Repair Café

HOUSTON *Toss it? No way!*



Date: <u>10/28/17</u>	Male / Female	Age Group
Name: <u>LINDA FOSS</u>		0-20 21-40 <del>41-60</del> 61+
Email Address: <u>lindafoss@gmail.com</u>		<input checked="" type="checkbox"/> I agree to abide by the House Rules Zip Code <u>77004</u>
Repair Number:	Repair made to: <input checked="" type="checkbox"/> Small appliance: <u>ANTIQUE FAN, REPRO FAN</u> <input type="checkbox"/> Garment: _____ <input type="checkbox"/> Tool / Knife: _____ <input type="checkbox"/> Other: _____	
Defect / Issue: <u>Fans Don't turn</u>		
Were you helped? <input type="checkbox"/> Yes. What was repaired? <u>Fans 1 antique, 1 reproduction. repro - bearings seized</u> <input checked="" type="checkbox"/> To a degree. Advice? <u>Antique - break in motor <del>wiring</del> coil wiring</u> <u>Quality Electric → motor rewind</u> <u>1004 Collingsworth on antique</u> <u>713 225-6531</u> <input type="checkbox"/> No. Reason? <u>other needs motor</u>		
Helped By: <u>Curtis &amp; Wade</u> <u>or bearings replaced if possible</u>		
Comments / Suggestions		



HOUSTON  
2017  
POST SEASON  
THE FUTURE

Pamela Williams

Ozark





# Repair Café

HOUSTON *Toss it? No way!*



Date: 10/20/17	Male / Female	Age Group
Name: <u>Quealy Antin</u>		0-20 21-40 41-60 61+
Email Address	<input checked="" type="checkbox"/> I agree to abide by the House Rules Zip Code <u>77009</u>	
Repair Number: <u>S-1</u>	Repair made to: <input type="checkbox"/> Small appliance: <input type="checkbox"/> Garment: <u>stuffed toys (dog)</u> <input type="checkbox"/> Tool / Knife: <input type="checkbox"/> Other:	
Defect / Issue: <u>chewed + ∴ dangerous</u>		
Were you helped? <input checked="" type="checkbox"/> Yes. What was repaired? <u>2 holes dog chewed in their stuffed animals - important because the filler is carcinogenic if they swallow the particles.</u> <input type="checkbox"/> To a degree. Advice? <input type="checkbox"/> No. Reason?		
Helped By: <u>2 sewing ladies, Judy + <del>the</del> Karen</u>		
Comments / Suggestions <u>The 2 seamstresses were so very nice and very enthusiastic about repairing the animals</u>		



# Repair Café

HOUSTON *Toss it? No way!*



Date: 10.28.17		Male / <u>Female</u>	Age Group 0-20 21-40 <u>41-60</u> 61+
Email Address		<input type="checkbox"/> I agree to abide by the House Rules	
		Zip Code <u>77005</u>	
Repair Number:  T-2		Repair made to: <input type="checkbox"/> Small appliance: _____ <input type="checkbox"/> Garment: _____ <input checked="" type="checkbox"/> Tool / Knife: _____ <input type="checkbox"/> Other: _____	
Defect / Issue: Weed wacker string breaks constantly			
Were you helped? <input checked="" type="checkbox"/> Yes. What was repaired? <u>weed whacker</u>			
<input type="checkbox"/> To a degree. Advice? <u>(wound the wrong way)</u>			
<input type="checkbox"/> No. Reason?			
Helped By: <u>Wade / Curtis</u>			
Comments / Suggestions			





# Repair Café Houston

Saturday, October 28, 2017

TXRX Labs

Volunteer Fixers

10

Volunteer Guides

13

Pop Up Table Folks

4

Reception/Closeout Folks

2

Repairs            Success/total

16/20

Appliance

8/10

Tools/Sharpen

4/5

Sewing

4/5

Not recorded, but fixed

4 to 6

# Questions?



## Green Building Resource Center

- HOME
- ABOUT US
- GREEN BUILDING
- NEWS
- EVENTS
- INCENTIVES
- RESOURCES



### EVENTS

- PACE: Liftoff in Houston  
02/28/2018 - 6:00 pm to 8:00 pm
- GBRC Rain Barrel & Compost Bin  
Truckload Sale  
05/12/2018 - 10:00 AM – NOON

### CITY OF HOUSTON LINKS

- + Public Works Home
- + City of Houston Home
- + Houston Permitting Center
- + ReBuild Houston
- + Pay My Waterbill

### Welcome



The City of Houston's Green Building Resource Center, a project of the Department of Public Works and Engineering, offers economical, sustainable building solutions for the public.

Over 50 educational displays, a library of information, and samples of recycled materials provide strategies for green building and in-home energy conservation. Visit the showroom to learn about the impact of recycling, green building materials, solar panel installation, low-impact development techniques for stormwater runoff, energy-efficient windows and lighting strategies, heating and cooling technologies, and water conservation methods.

The Green Building Resource Center is located on the first floor of the Houston Permitting Center, which was constructed to green building standards to reach LEED for New Construction to the Gold level. The building embodies innovative ideas for energy conservation, featuring a raised floor system that provides future flexibility, water efficient plumbing fixtures, energy efficient light fixtures and AC equipment, recycled content acoustical insulation, and recycled artwork. In addition, the HPC boasts the following features:



- A vegetated roof, watered with harvested rainwater and condensate from the air-conditioning system
- A bioswale alternative to a traditional storm sewer, demonstrating permeable pavement, vegetated bio-retention, and turf-covered bio-filtration
- A rooftop array of 387 solar panels

### BOOK A GBRC SPEAKER



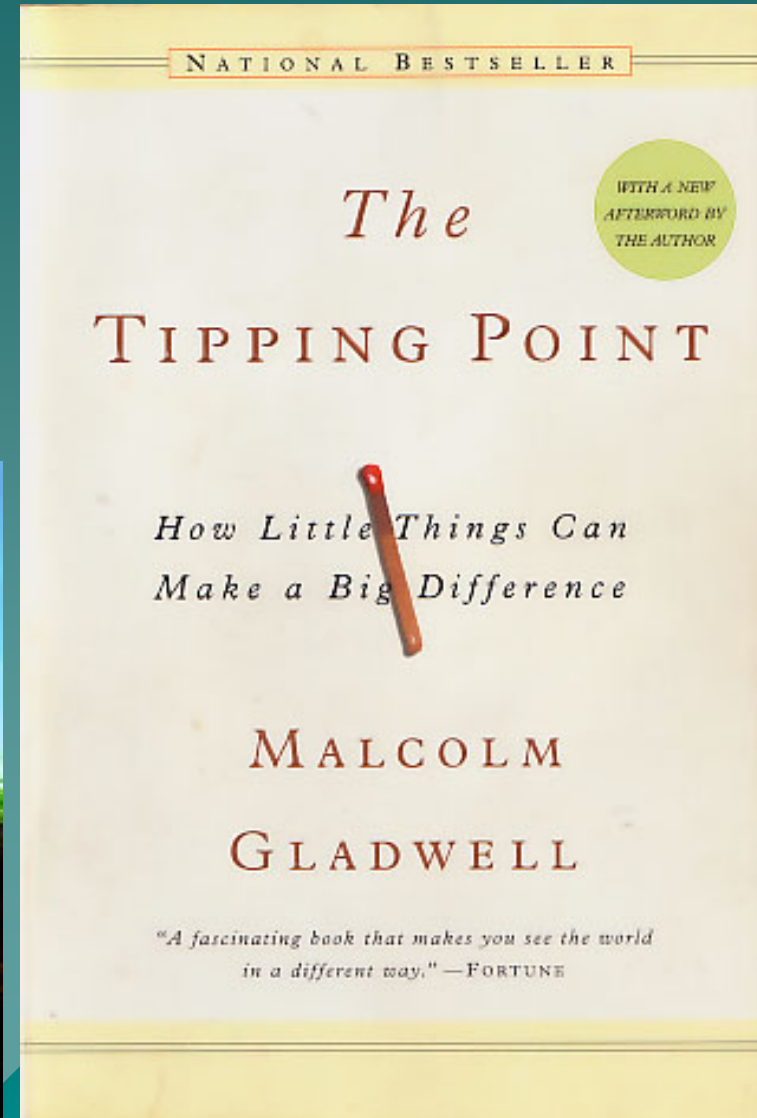
### GREEN INITIATIVES





# So What?

# Are we reaching a TIPPING POINT?



NATIONAL BESTSELLER

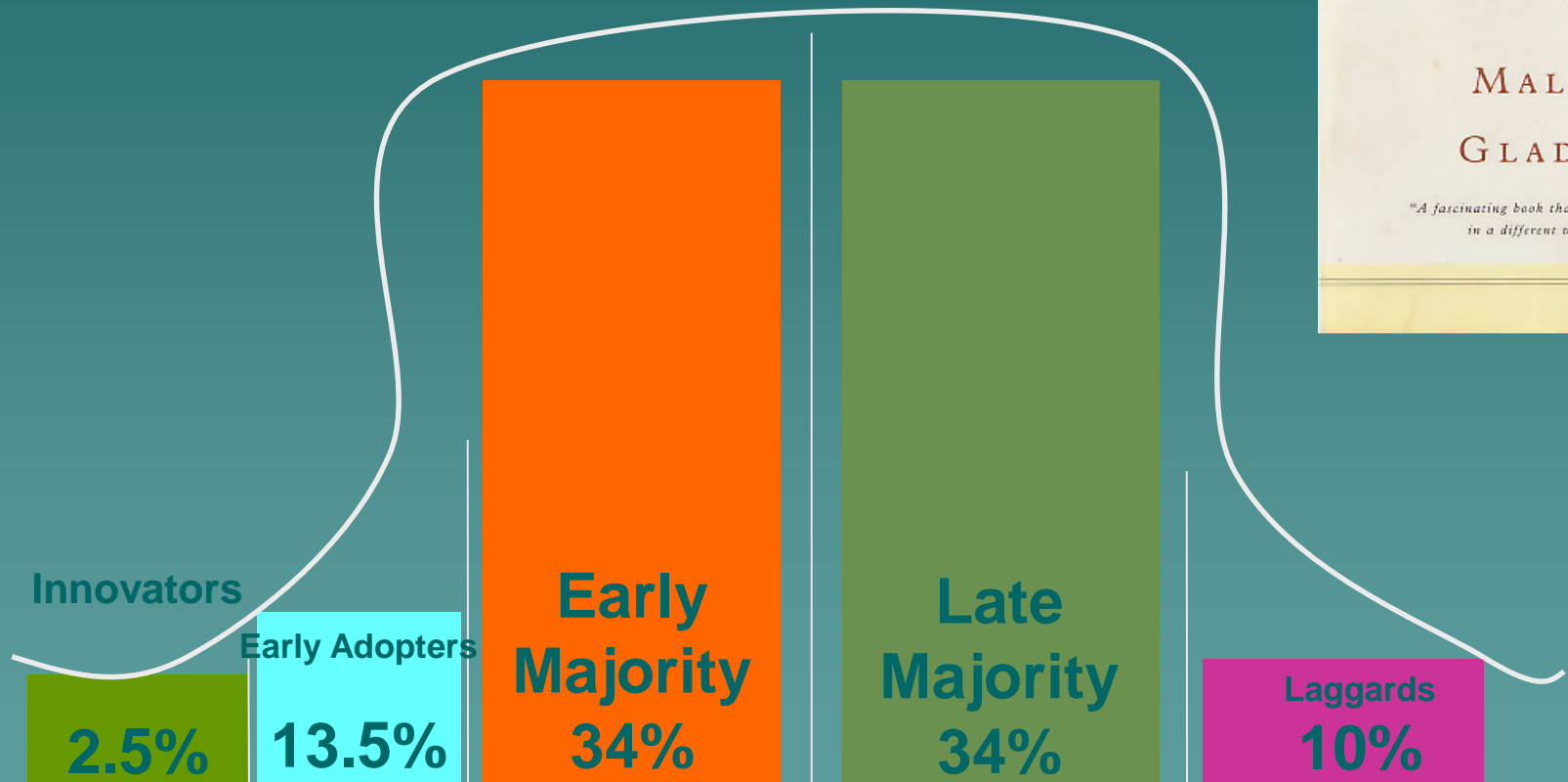
WITH A NEW  
AFTERWORD BY  
THE AUTHOR

# The TIPPING POINT

*How Little Things Can  
Make a Big Difference*

MALCOLM  
GLADWELL

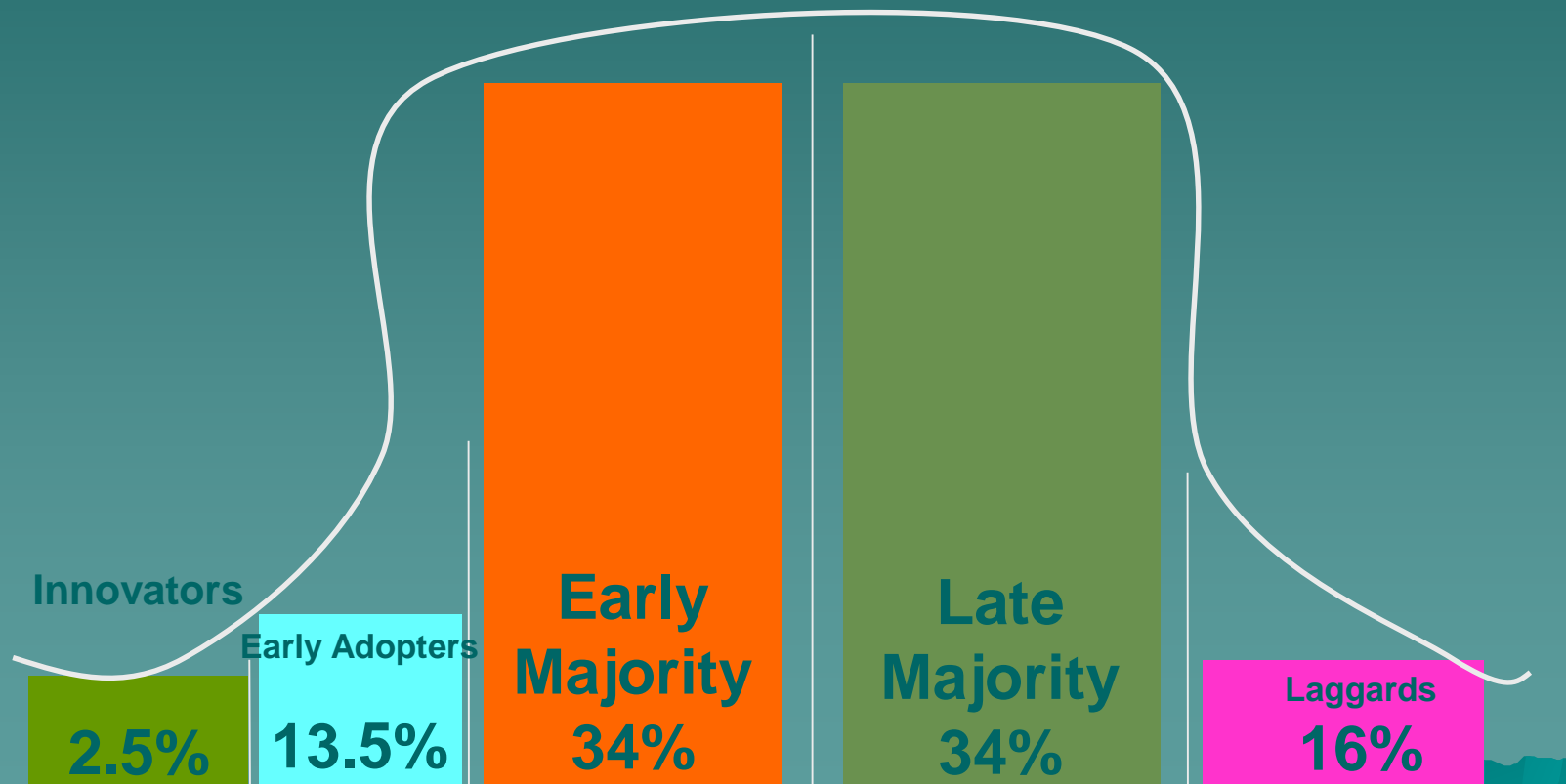
"A fascinating book that makes you see the world  
in a different way." —FORTUNE



# Innovation Adoption Curve



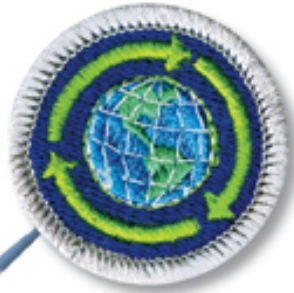
LET'S SEE: the Early Majority, given Houston's population, the **Innovators** in Houston add up to 70,000 people



**Innovation Adoption Curve**



MERIT BADGE SERIES



SUSTAINABILITY

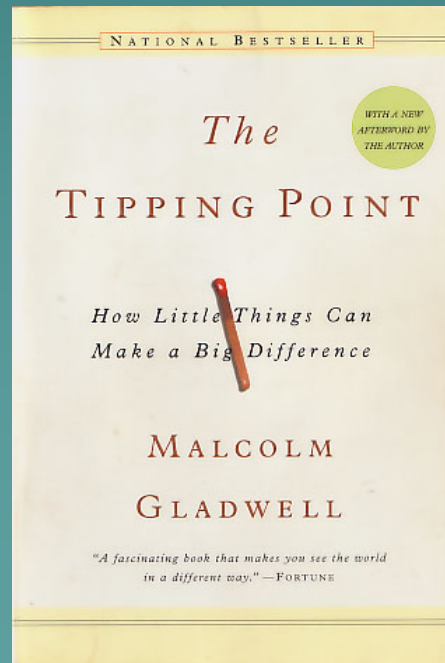


Then  
again...



BOY SCOUTS OF AMERICA

# But we need YOUR HELP!



# DRAWDOWN

THE MOST COMPREHENSIVE  
PLAN EVER PROPOSED TO  
REVERSE GLOBAL WARMING  
EDITED BY PAUL HAWKEN





# Historically, this is what we do.



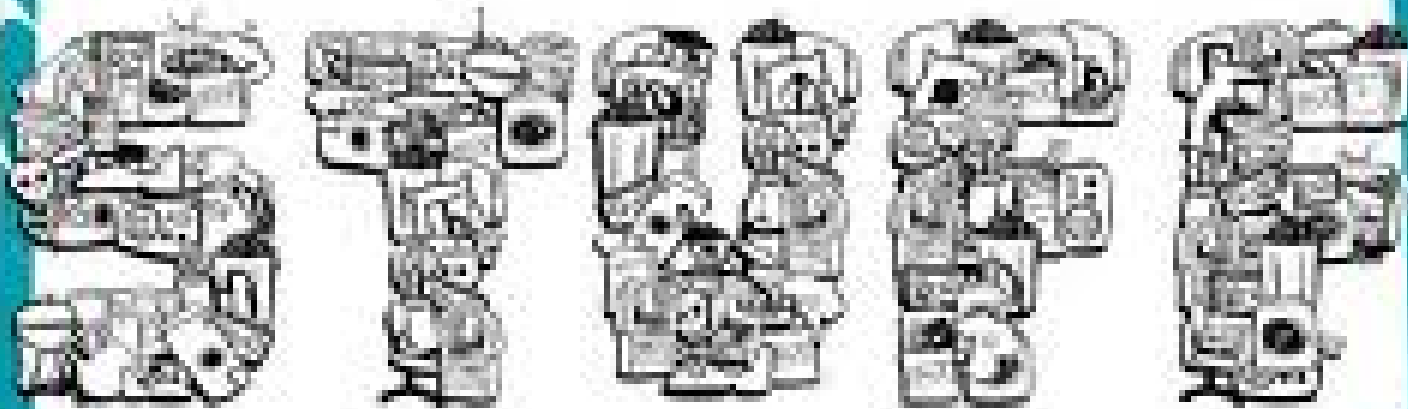
And at that very moment, we heard a loud whack!  
From outside in the fields came a sickening smack  
of an axe on a tree. Then we heard the tree fall.  
*The very last Truffula Tree of them all!*



# What Else Can YOU Do?



# THE STORY OF

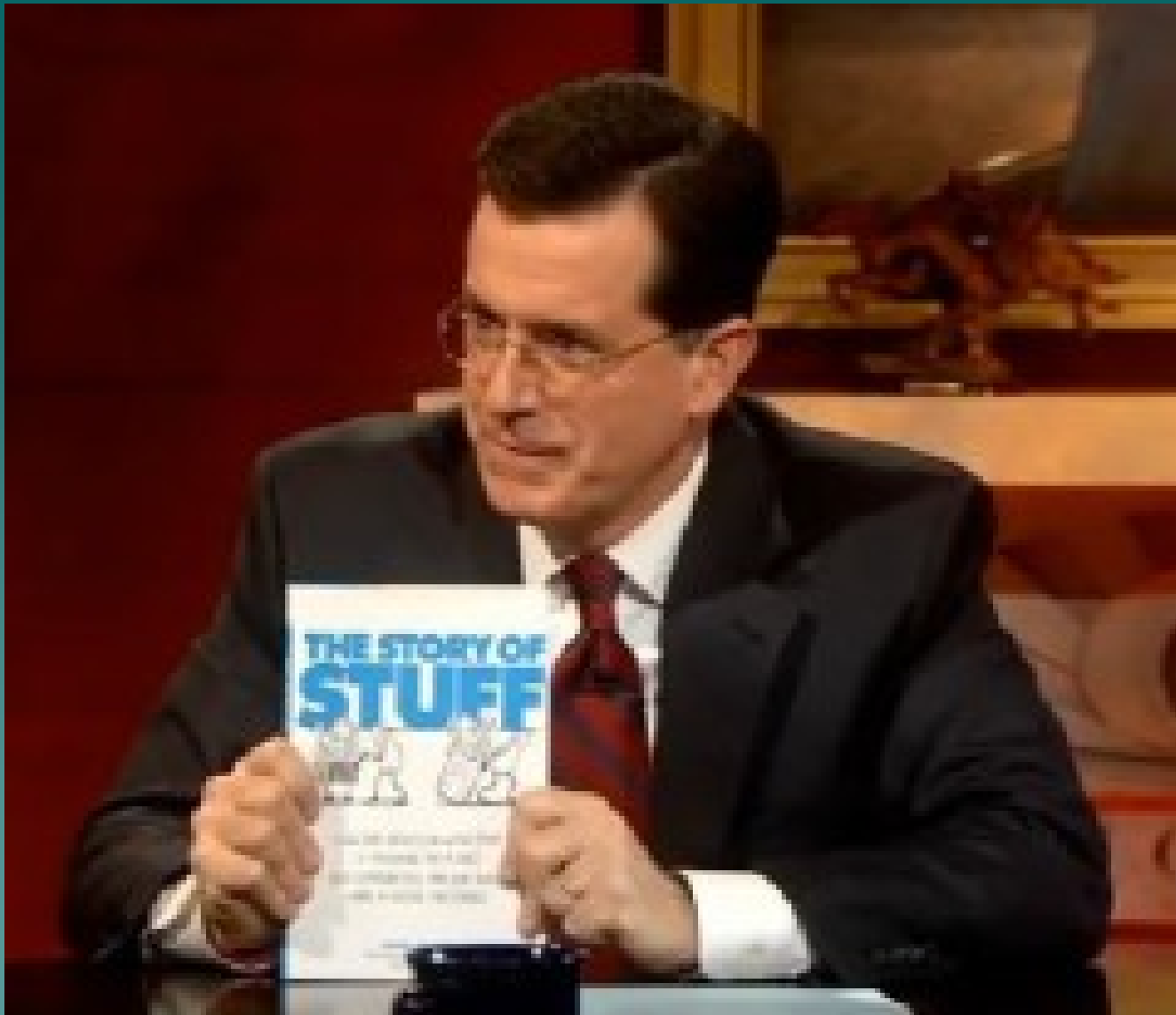


WITH ANNIE LEONARD

Watch the Story of Stuff YouTube

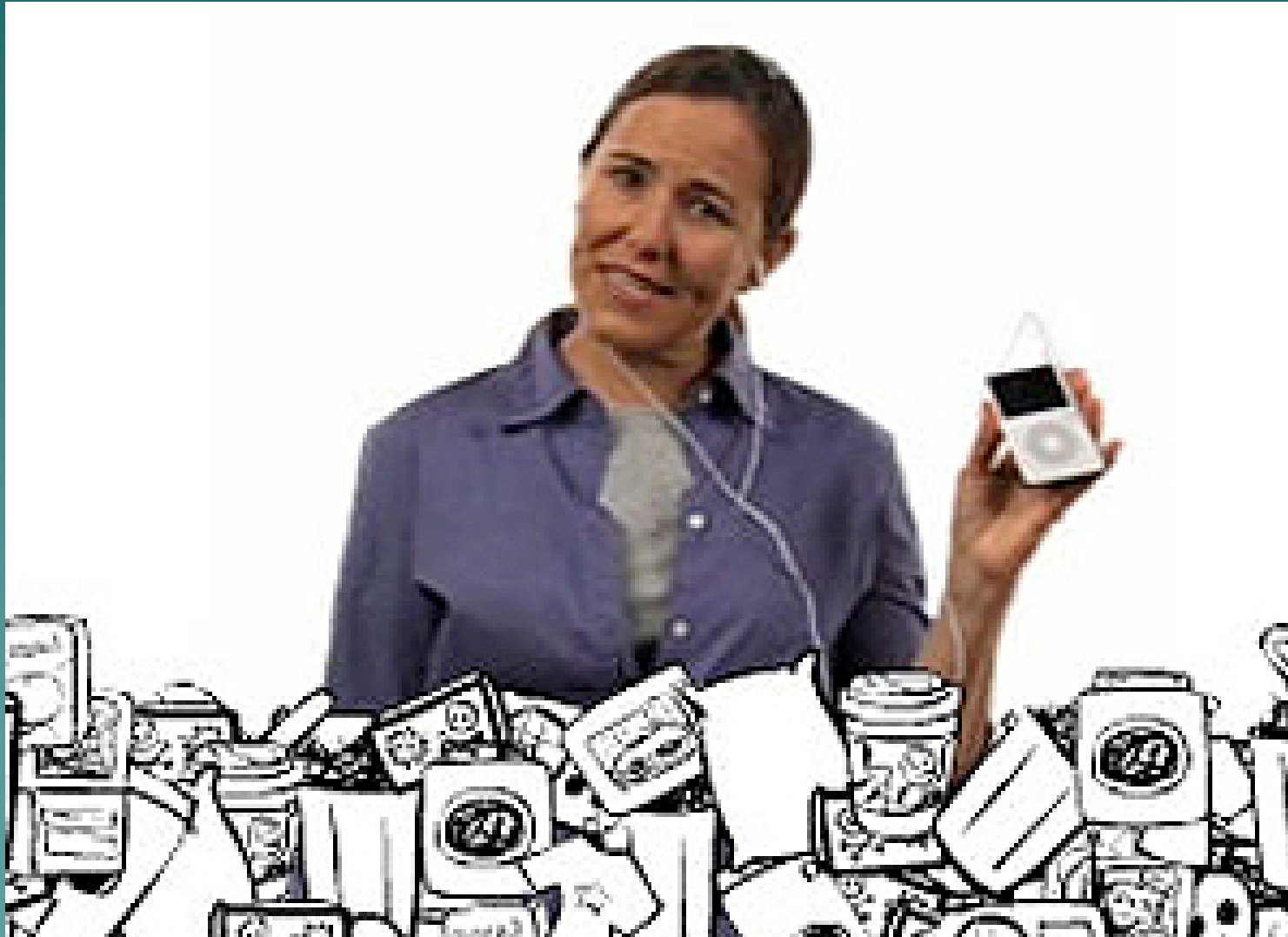
# THE STORY OF STUFF





Then read the book

# Annie Leonard



# This is what we do to make Stuff for us to buy

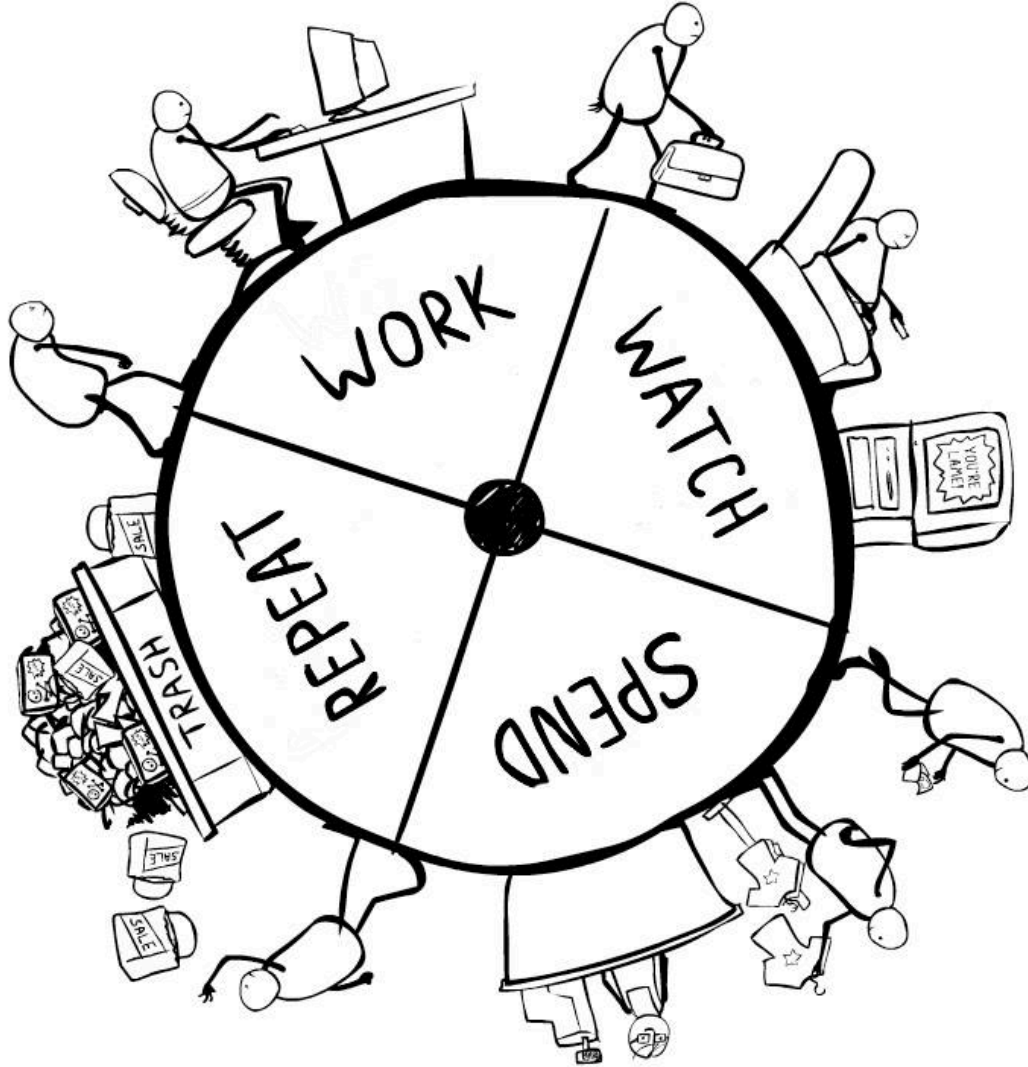


# This is what we do to make us buy Stuff

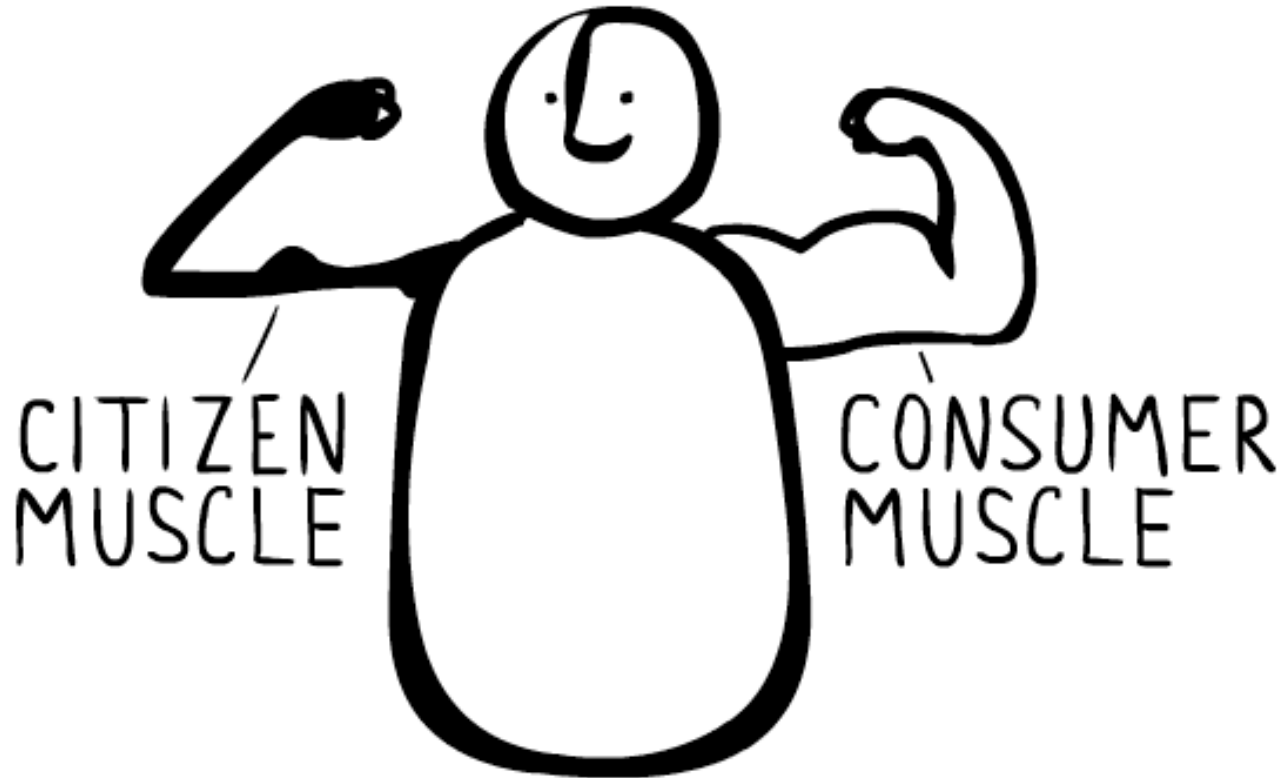




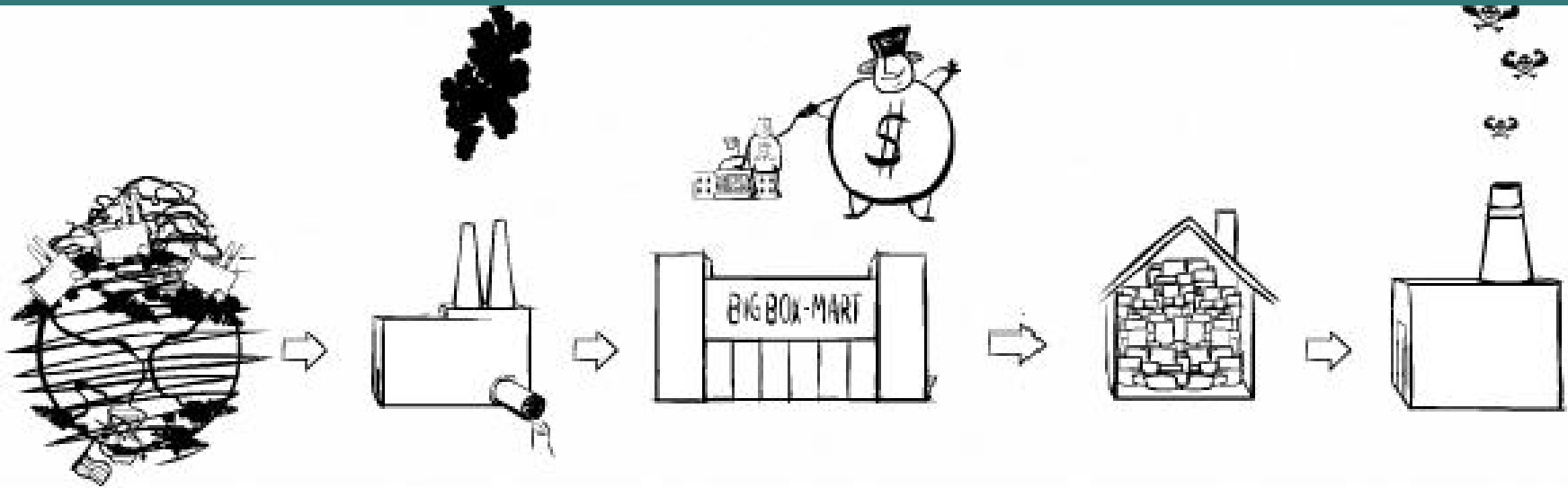
# This is what we do for Stuff



# This is who we are



# This is the story now.....



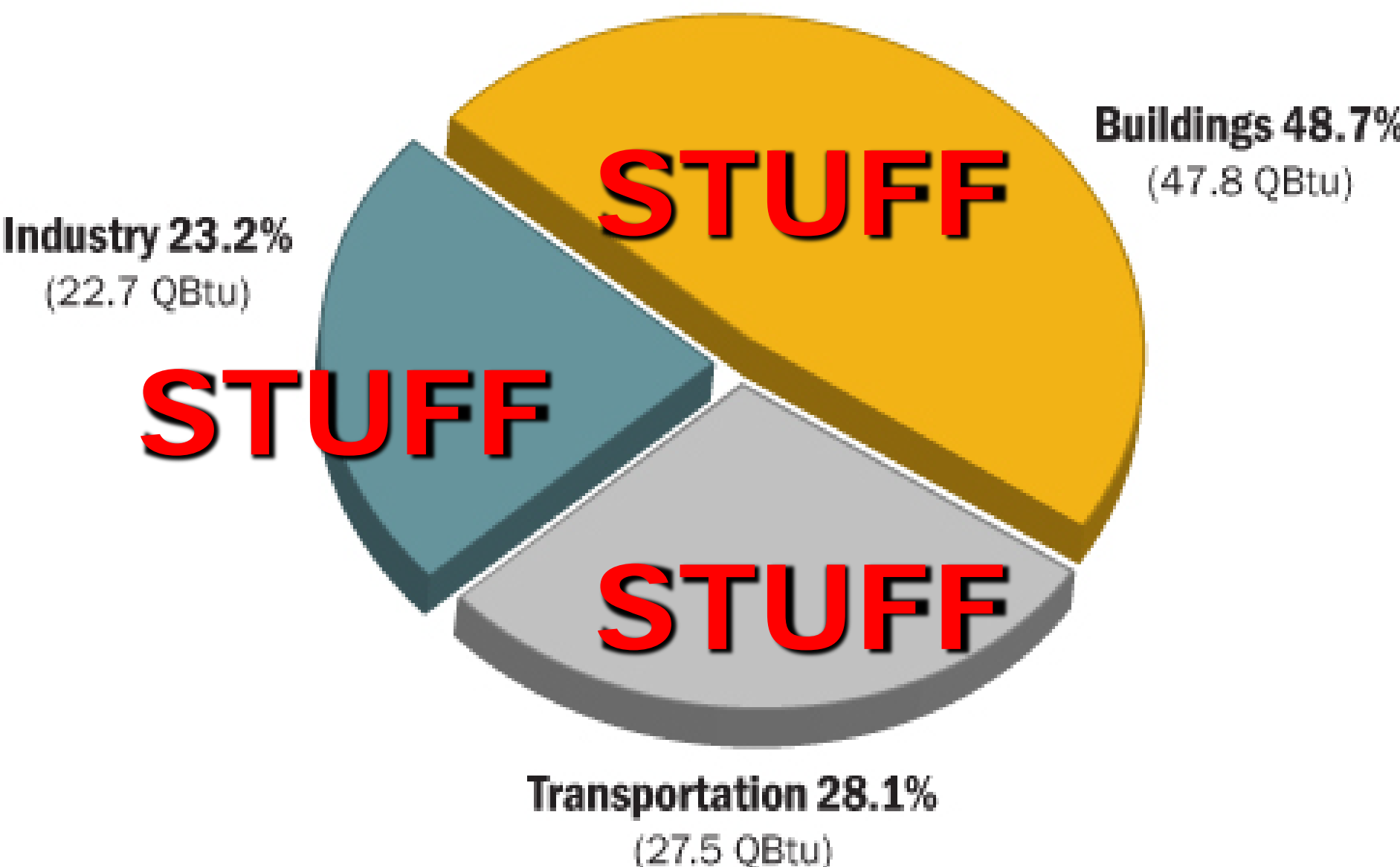
Extraction

Production

Distribution

Consumption

Disposal



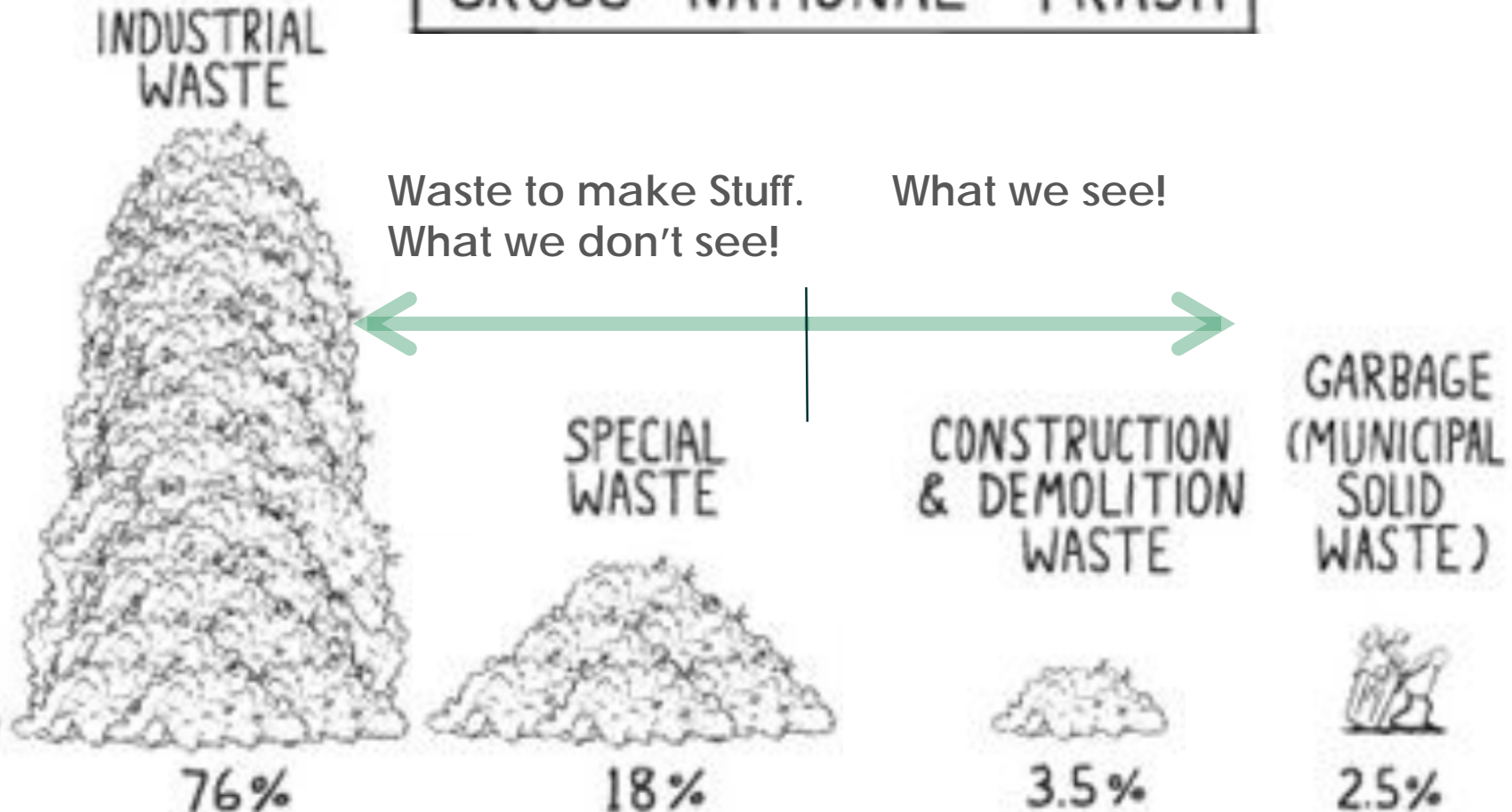
### U.S. Energy Consumption by Sector

Source: ©2011 2030, Inc. / Architecture 2030. All Rights Reserved.  
Data Source: U.S. Energy Information Administration (2011).

# The BIG Waste Story



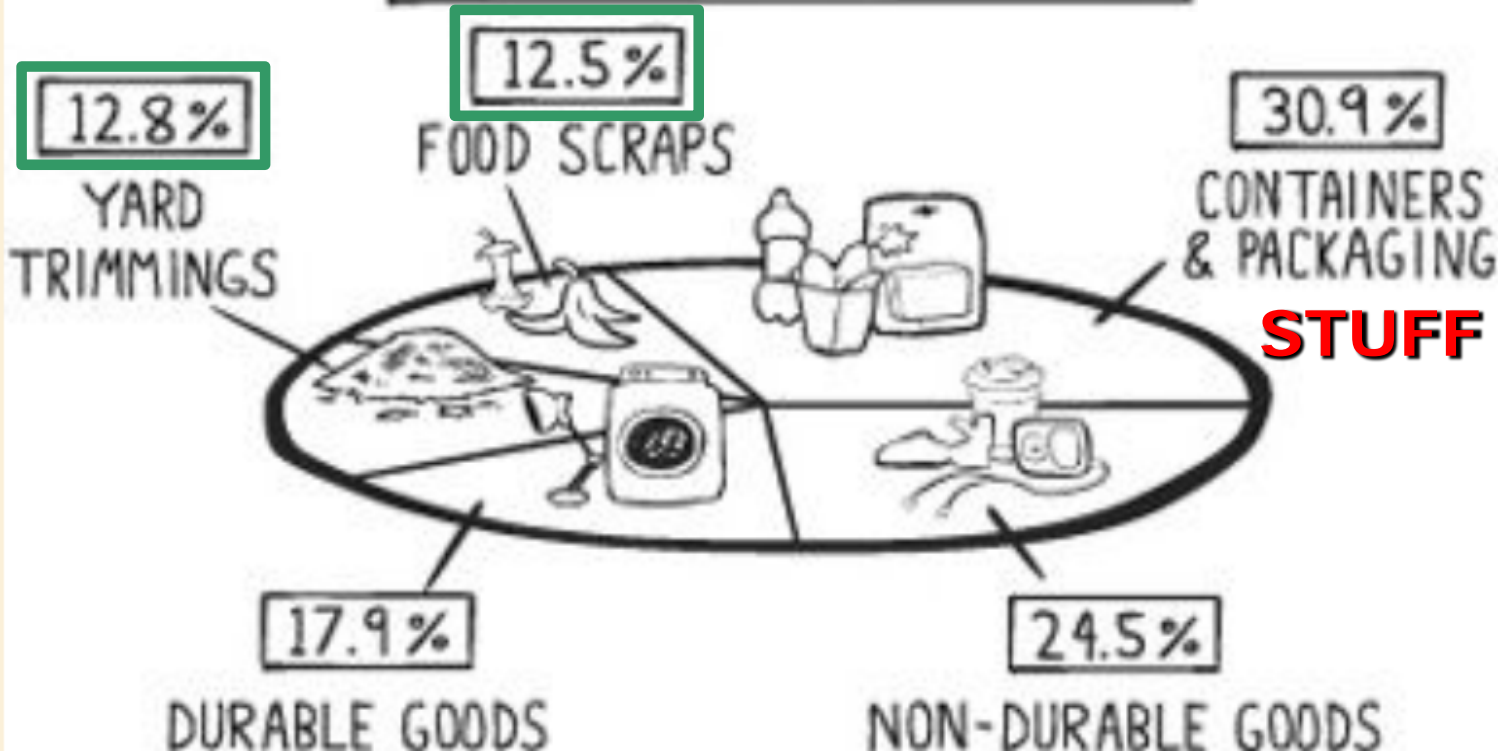
## GROSS NATIONAL TRASH



# Compost Opportunity!



## U.S. HOUSEHOLD GARBAGE (MUNICIPAL SOLID WASTE)



**STUFF**

**STUFF**

# Compared to Others



## PER CAPITA GARBAGE PRODUCTION

AVERAGE POUNDS PER PERSON PER DAY



U.S.A.

4.6



AUSTRALIA

2.70



JAPAN

2.58



CANADA

1.79



CHINA

.70



# Our Story of Stuff Display

## HOW YOU CAN HELP

**Extraction**

Extraction is removing natural resources, like mining and logging, to manufacture Stuff—getting the ingredients. America is responsible for cutting down forest, mountains, and polluting and ruining the area, killing animals, making people sick or even removing them from their homes. Only 4% of America's forest remain and 40% of America's waterways are polluted. Globally 1/3 of the earth's resources are gone.

**Production**

Production: natural resources are made into products—mixing the ingredients forming our Stuff. This requires huge amounts of energy, water, and toxins in addition to the natural resources, and disperses a huge amount of pollution and waste. We have created over 100,000 synthetic chemicals, few have been tested, and none have been tested for synergistic impact (their effects when combined). Every person alive today carries in his or her body a diverse range of toxic chemicals. *Toxins in—Toxins out.*

**Distribution**

Distribution is the moving of Stuff from where it is made to where you can consume it. Also called a supply chain: from suppliers, component producers, workers, middlemen, financiers, warehouses, loading docks, ships, trains, trucks—from natural resource to retail. And it is global requiring huge amounts of fuel and human energy, and dispersing a huge amount of pollution.

**Consumption**

Consumption is the purchasing of goods, both necessary and unnecessary. The leaders of the American economy decided in the 1950s that consumption would be the priority with their new strategies: planned obsolescence (creating short lived products that are easily broken/replaced) and perceived obsolescence (creating the desire to buy a new product before wearing the old one). And they developed the field of advertising to manufacture our desire to acquire new products.

**Disposal**

Disposal is the act of ridding ourselves of Stuff that we no longer want. An astonishing 9% of products that we acquire are still in use after just six months! Americans are throwing away 4.5 lbs of trash per day, which is going into a dump or incinerator. Incinerators burn trash, which is a means to release toxins to the atmosphere as well as the ground or ocean such as dioxin (the most toxic man-made substance known to scientist). Unfortunately, on planet earth there is no 'away'.

**Smarter Stuff**

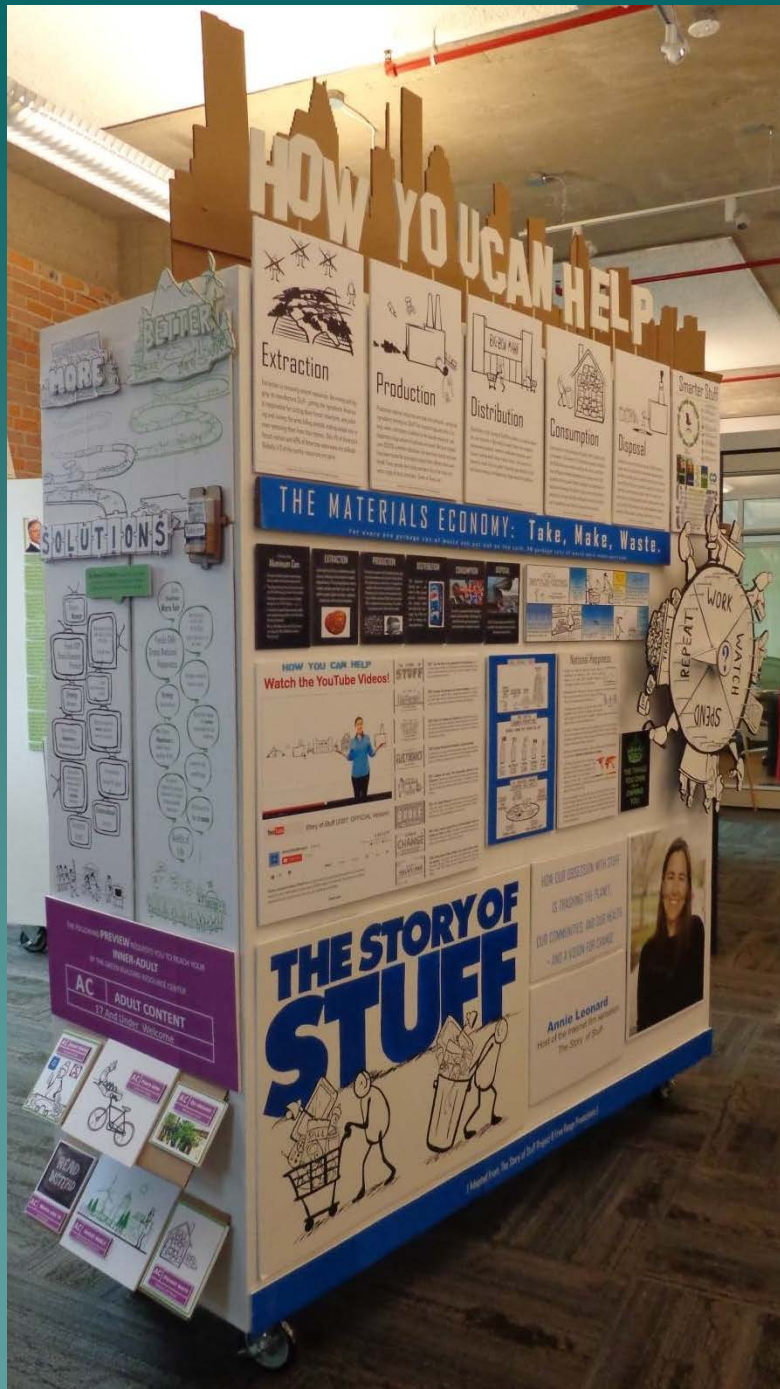
Smarter Stuff is a guide to making better choices. It includes a circular diagram showing the lifecycle of a product and various icons representing different types of products and their environmental impacts.

**THE MATERIALS ECONOMY: Take, Make, Waste**

For every one garbage can of waste you put out on the curb, 70 garbage cans of waste were made upstream.

TRASH







Bring Your Green to Work - Full download from GBRC website...





**75%** SAY THEY ARE  
DOING A GREAT JOB  
RECYCLING



**BUT ONLY**

**34%** OF MUNICIPAL  
SOLID WASTE IS  
RECYCLED



**18% in  
Houston**



# KEEP THE DIRTY DOZEN



FOOD



HOUSEHOLD  
HAZARDOUS WASTE



NEEDLES



CHORDS/WIRE



CLOTHING



DIAPERS



CUPS & DISHES



PLASTIC BAGS



FOOD SOILED  
PAPER/BOX



FOAM  
PACKING



SNACK BAGS &  
WRAPPERS



GARDEN HOSES

## Out of Your Recycling

Go to [www.wm.com](http://www.wm.com)  
to learn where they belong.



# Seriously

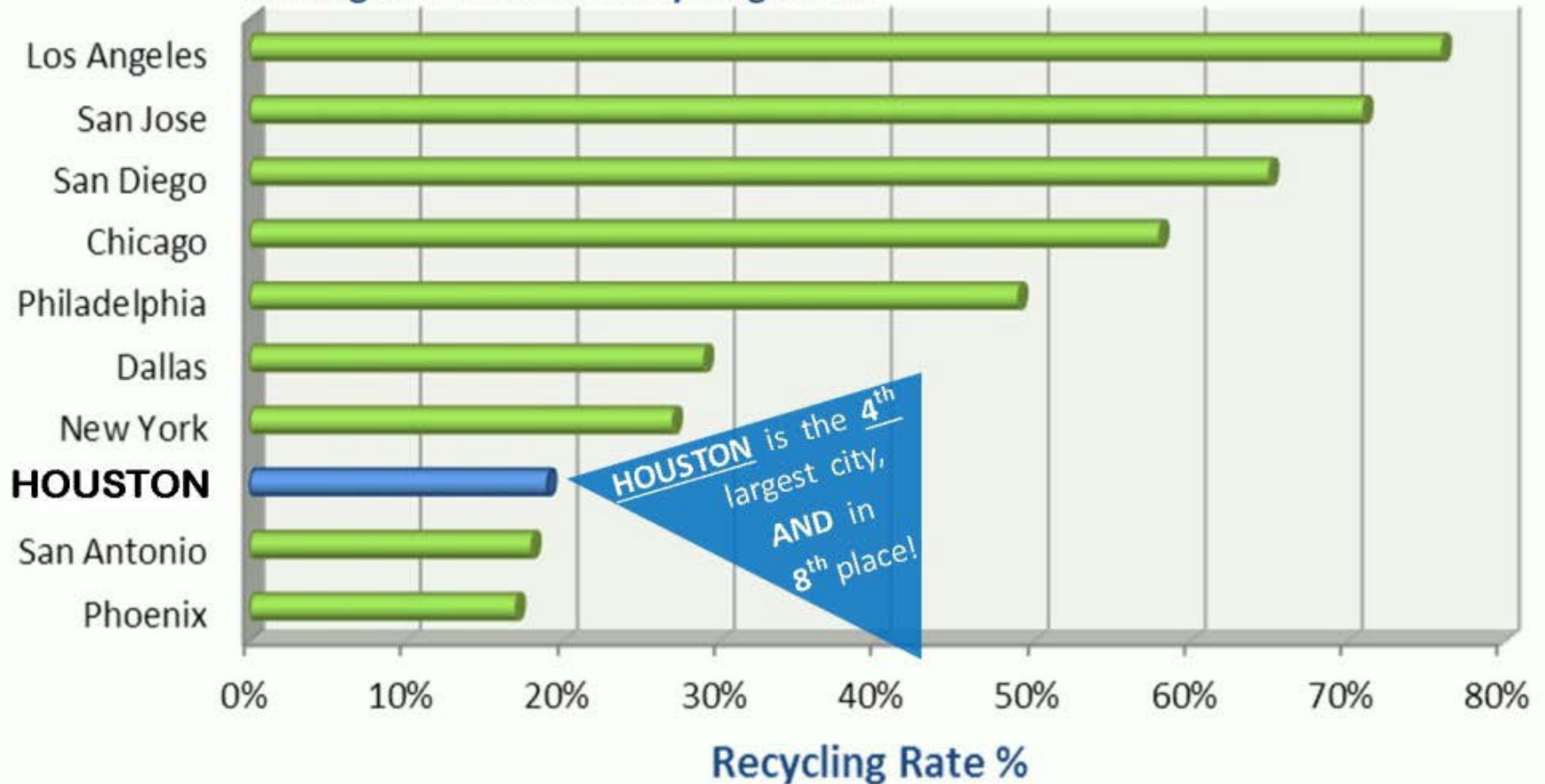


I am emotionally scarred  
from WMM's need to tell  
people that disposable  
diapers aren't recyclable

# HOUSTON'S SHADE OF RECYCLING



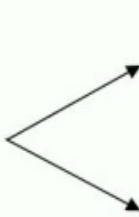
10 Largest U.S. Cities Recycling Rates



Houston has had recycling since the 80's....

The SWMD operates two types of recycling collection services for participating areas of the City of Houston. Both programs allow residents to conveniently recycle at their curbside on a bi-weekly basis.

**Why is HOUSTON still so far behind?**

**ARE YOU**  **HELPING**  
or  
**HURTING**

10 Largest U.S. Cities Recycling Rates			
	City	Recycling Rate	Population
1	2. Los Angeles	76%	3,928,864
2	10. San Jose	71%	1,015,785
3	8. San Diego	65%	1,381,069
4	3. Chicago	58%	2,722,389
5	5. Philadelphia	49%	1,560,297
6	9. Dallas	29%	1,381,069
7	1. New York	27%	8,491,079
8	4. HOUSTON	19%	2,239,558
9	7. San Antonio	18%	1,436,697
10	6. Phoenix	17%	1,537,058

> 50% = Dark Green  
25 - 49% = Medium Green  
< 24% = Light Green

**HOUSTON RECYCLE?**



# EMBODIED ENERGY & MATERIAL TO LANDFILL

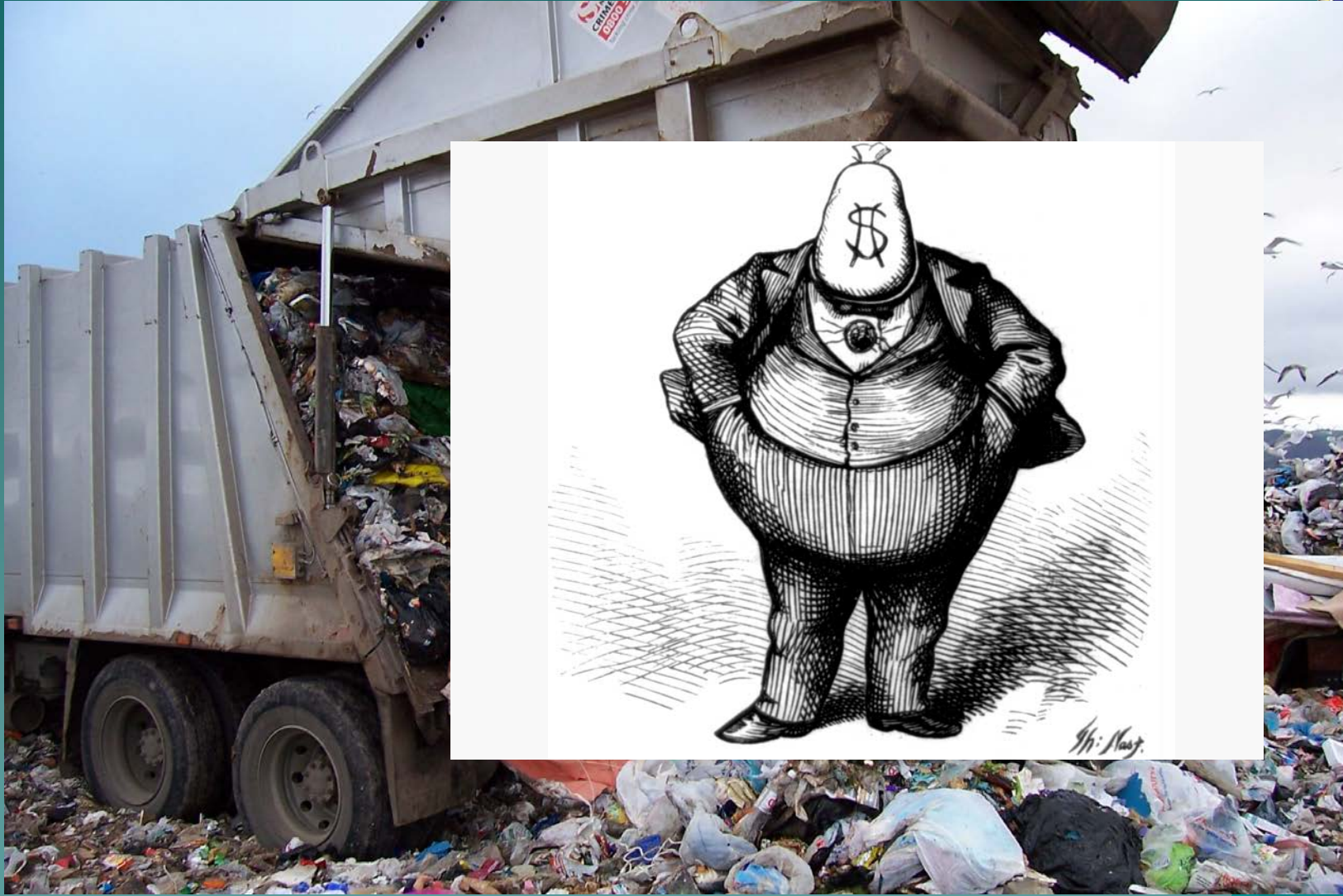
**EPIC FAIL!**







**DOES NOT  
WORK FOR  
FOOD!**





It is clear that the challenge for humanity today is no longer anything like what it faced in the 1960's and 1970's, when developing pollution abatement technologies and lessening the degree to which resources were wasted provided a more-or-less adequate answer to the most pressing problems of the day.



The world now needs to adopt solutions that change the entire system of production and consumption in a fundamental manner, that move societies from conditions of energy and materials surplus to scarcity, and that develop the foresight needed to recognize still-hidden threats to sustainability.

This goes far beyond the realm of technical adaptations, and instead requires large-scale social, economic, and political engineering - in an effort to create the foundations for a more sustainable human civilization.

[State of the World 2015]



# More questions?



Mother Jones

SUBSCRIBE DONATE



FEATURED

Tim O'Brien

## Making America Toxic Again

REBECCA LEBER