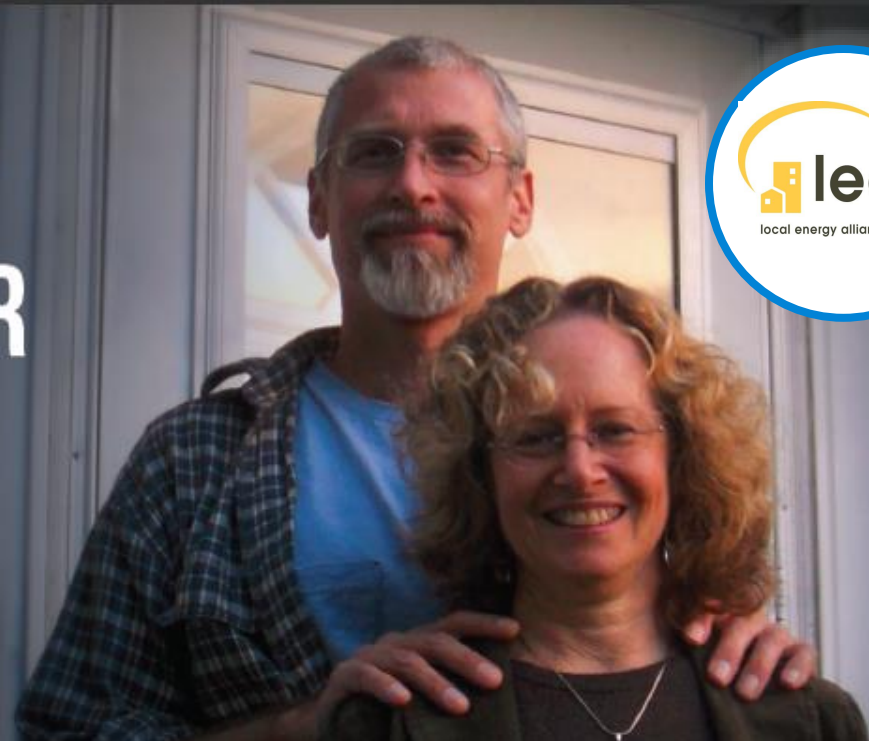


WE SAVED ENERGY AND INCREASED OUR RESALE VALUE.

It started with a five minute survey.



Energy Efficiency in Existing Homes:
Market Transformation through the Real
Estate Transaction

Cynthia Adams, Executive Director, LEAP



The mission of the Local Energy Alliance Program is to lead the effort to retrofit buildings with energy efficient technologies. Our overarching goals include cost savings, job creation, energy self-reliance, and local economic development.

LEAP-VA Mission

Home Performance w/ ENERGY STAR Upgrade

Steps in the HPwES Program

- Online energy profile (enroll)
- In home assessment (test in)
- Energy improvements
- Test out/Quality Assurance inspection
- Certificate and yard sign mailed when improvements provide 20% or more projected energy savings





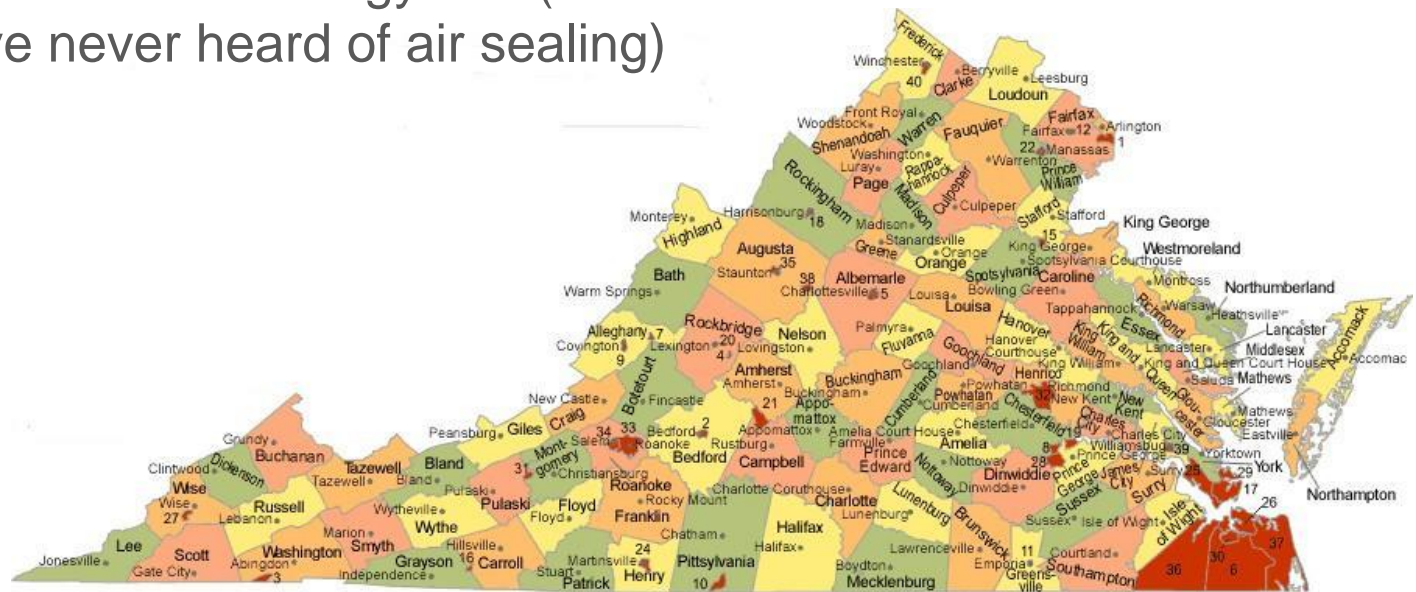
Energy Efficiency Benefits

Healthier living spaces
Improved quality of life
Cost savings
Value

leap
energy program

Virginia Housing Stock: 3.35 Million

- The median age of homes in VA is 34 years
- If no renovations or improvements have been done, these homes are built to 1980 standards
- 1.16M homes built before 1970 (prior to insulation standards)
- Even if insulation has been added in the attic, there is a real opportunity to reduce energy use (because most people have never heard of air sealing)



People *Want* Energy Efficient Features

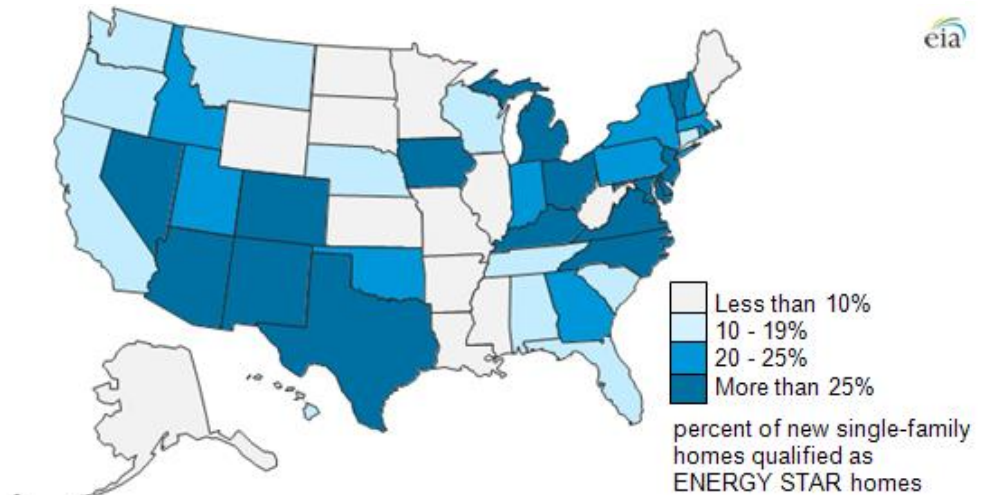


National Association of Realtors survey found 87% thought a home's heating and cooling costs were "important" or "very important" regardless of the home's age

25% of new home starts in 2012 were ENERGY STAR certified

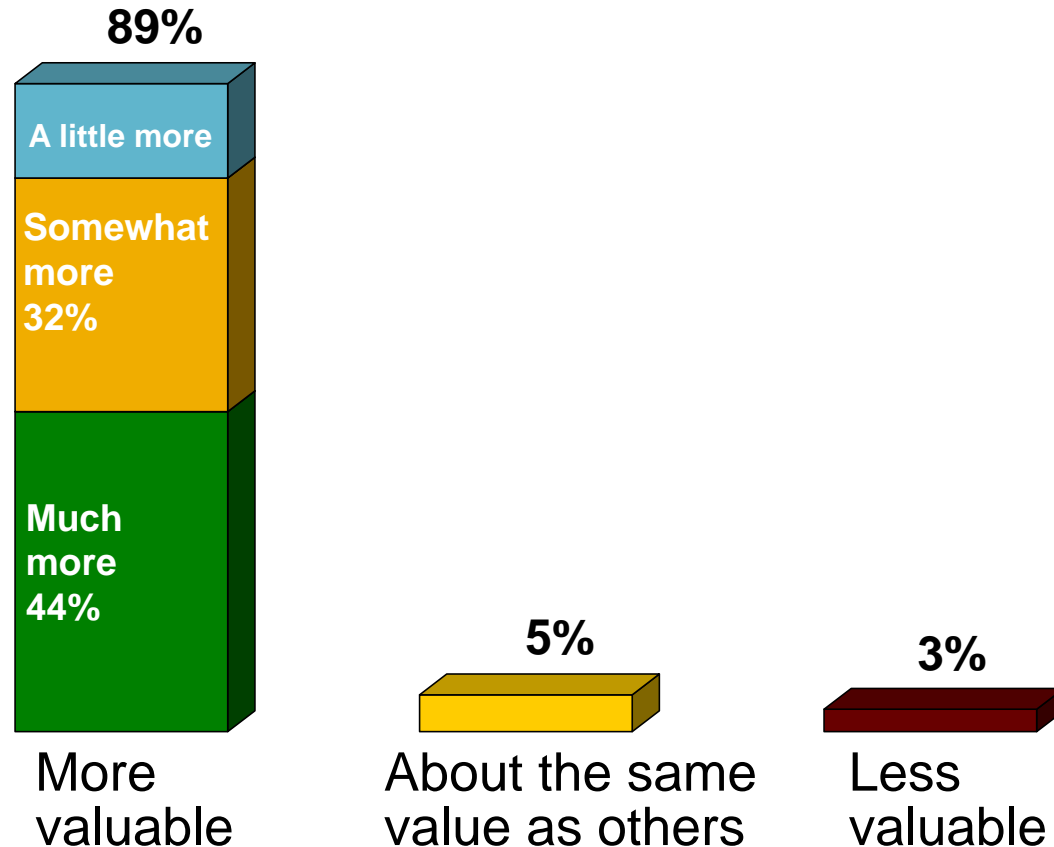


50% of furnances and 25% of heat pumps installed are ENERGY STAR certified

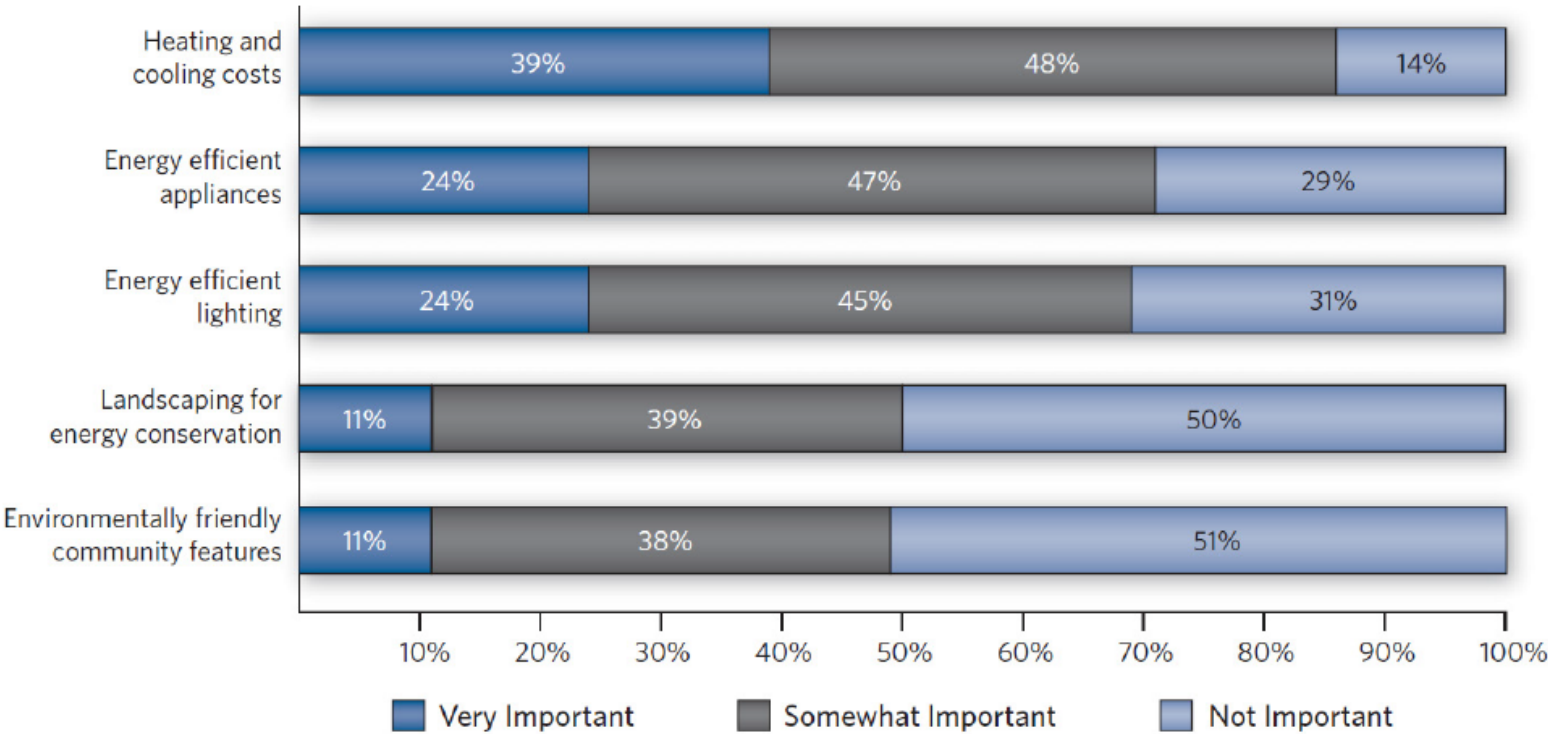


Virginians view energy efficient homes as more valuable.

If I were in the market for a new home and found a home that had been upgraded to use energy more efficiently and use less electricity, I would see this home as:



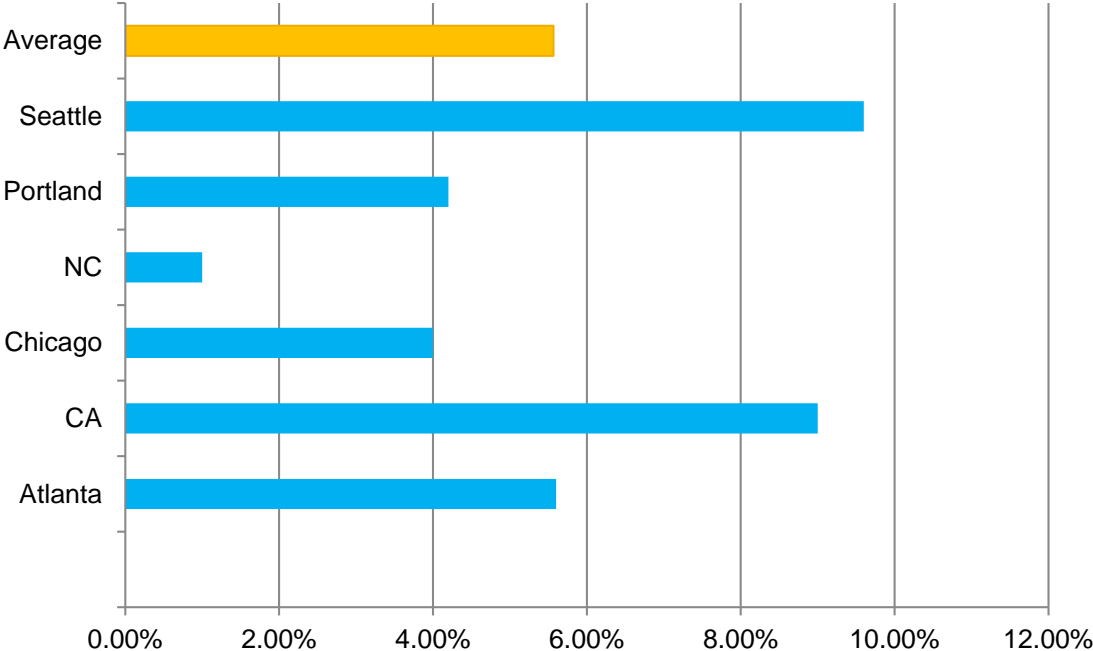
Importance of a Home's Environmental Features



Source: National Association of REALTORS®. Profile of Home Buyers and Sellers 2012. Chicago, IL: National Association of REALTORS®.

Homeowners Pay More for Energy Efficiency

Local Market Studies on Increased % Premium for Home Certification



New Homes Sell
for More with
ENERGY STAR
Certification



***25% of new home starts in 2012 were ENERGY STAR certified.**

How do we value energy efficiency?

- Real estate appraisal process
- Through the lending process

Stakeholders: buyer/seller, real estate agent, appraiser, lender, builder, contractors



➔ homeowner



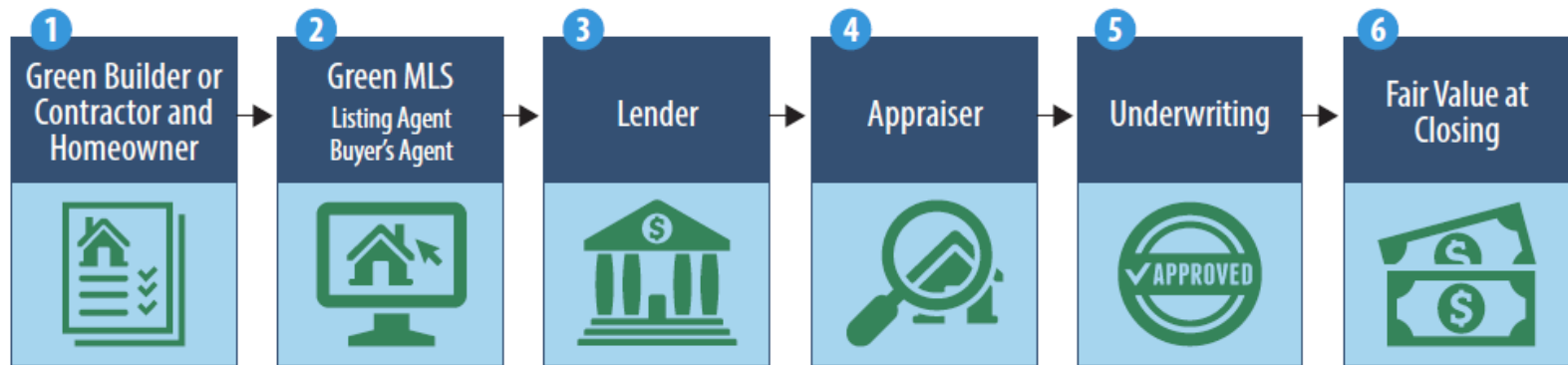
➔ contractor



➔ appraiser/lender

The Issue is DATA

- What data?
- How do we access it?
- Who provides it?
- Reliability and liability



Documentation is key:

- ✓ Green building certificate
- ✓ Performance test results
- ✓ Local green disclosure form
- ✓ 12 month utility usage

What data can we have?


- Certificates (HPwES)
- Scores and labels (HERS, HEScore, ENERGY STAR)
- Energy improvements (invoices)
- Utility bills
- Home inspection/audit

How do “we” access the data?

- **Buyers:** Multiple Listing Service
850 local/regional; 10 data vendors
who feed it
- **Appraisers:** must be able to “see” the
features (and be paid for listing them)
- **Lenders:** Uniform Residential Appraisal
Report (oops, no data fields)

Green and Efficient Appraisal Addendum

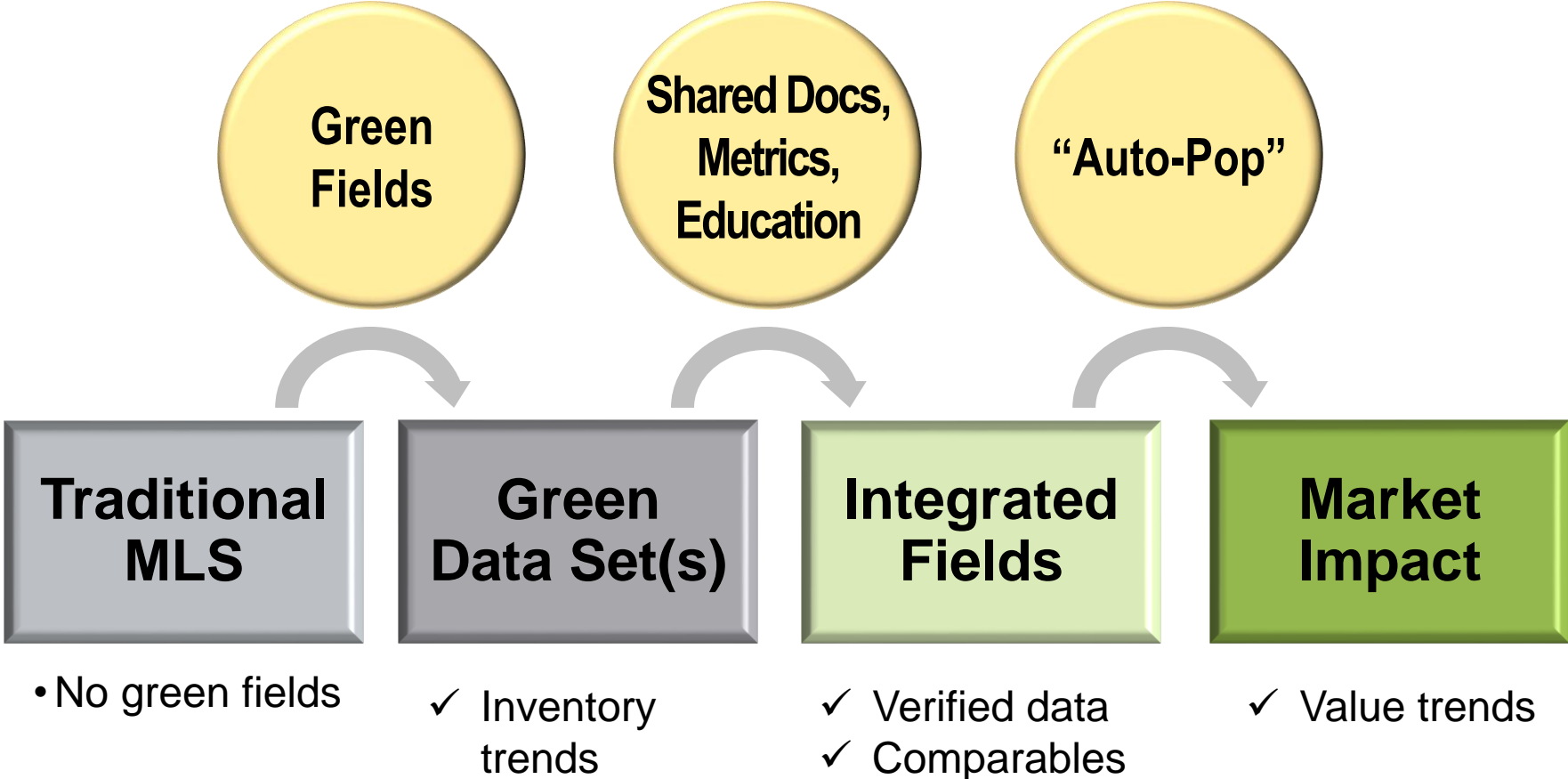
- Created by the Appraisal Institute
- Supplemental to URAR Form 1004
- Assists appraisers in valuing green features on properties
- Must be filled out by appraiser or approved third party (e.g., HPwES program administrator)

 AI Reports® Form 820.04*	Client File #:	Appraisal File #:
	Residential Green and Energy Efficient Addendum	
Client:		
Subject Property:		
City: _____ State: _____ Zip: _____		
Additional resources to aid in the valuation of green properties and the completion of this form can be found at http://www.appraisalinstitute.org/education/green_energy_addendum.aspx		
The appraiser hereby certifies that the information provided within this addendum: <ul style="list-style-type: none"> • has been considered in the appraiser's development of the appraisal of the subject property only for the client and intended user(s) identified in the appraisal report and only for the intended use stated in the report. • is not provided by the appraiser for any other purpose and should not be relied upon by parties other than those identified by the appraiser as the client or intended user(s) in the report. • is the result of the appraiser's routine inspection of and inquiries about the subject property's green and energy efficient features. Extraordinary assumption: Data provided herein is assumed to be accurate and if found to be in error could alter the appraiser's opinions or conclusions. • is not made as a representation or as a warranty as to the efficiency, quality, function, operability, reliability or cost savings of the reported items or of the subject property in general, and this addendum should not be relied upon for such assessments. 		
Green Building: The practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a building's lifecycle from siting to design, construction, operation, maintenance, renovation, and deconstruction. This practice expands and complements the classic building design concerns of economy, utility, durability, and comfort. ¹ High Performance building and green building are often used interchangeably.		
Six Elements of Green Building: A green building has attributes that fall into the six elements of green building known as (1) site, (2) water, (3) energy, (4) materials, (5) indoor air quality, and (6) maintenance and operation. A Green Building will be energy efficient but an energy efficient building is not synonymous with Green Building.		
Green Features		
The following items are considered within the appraised value of the subject property:		
Certification	Year Certified:	Certifying Organization: <input type="checkbox"/> Home Innovation Research Labs (ICC-700) <input type="checkbox"/> Verification Reviewed on site <input type="checkbox"/> Certification attached to this report <input type="checkbox"/> USGBC (LEED) <input type="checkbox"/> Other:
Rating	Score:	<input type="checkbox"/> LEED Certified: <input type="checkbox"/> LEED Silver <input type="checkbox"/> LEED Gold <input type="checkbox"/> LEED Platinum <input type="checkbox"/> ICC-700 National Green Building Standard Certified: <input type="checkbox"/> Bronze <input type="checkbox"/> Silver <input type="checkbox"/> Gold <input type="checkbox"/> Emerald Green Certifying Organization URL (website)

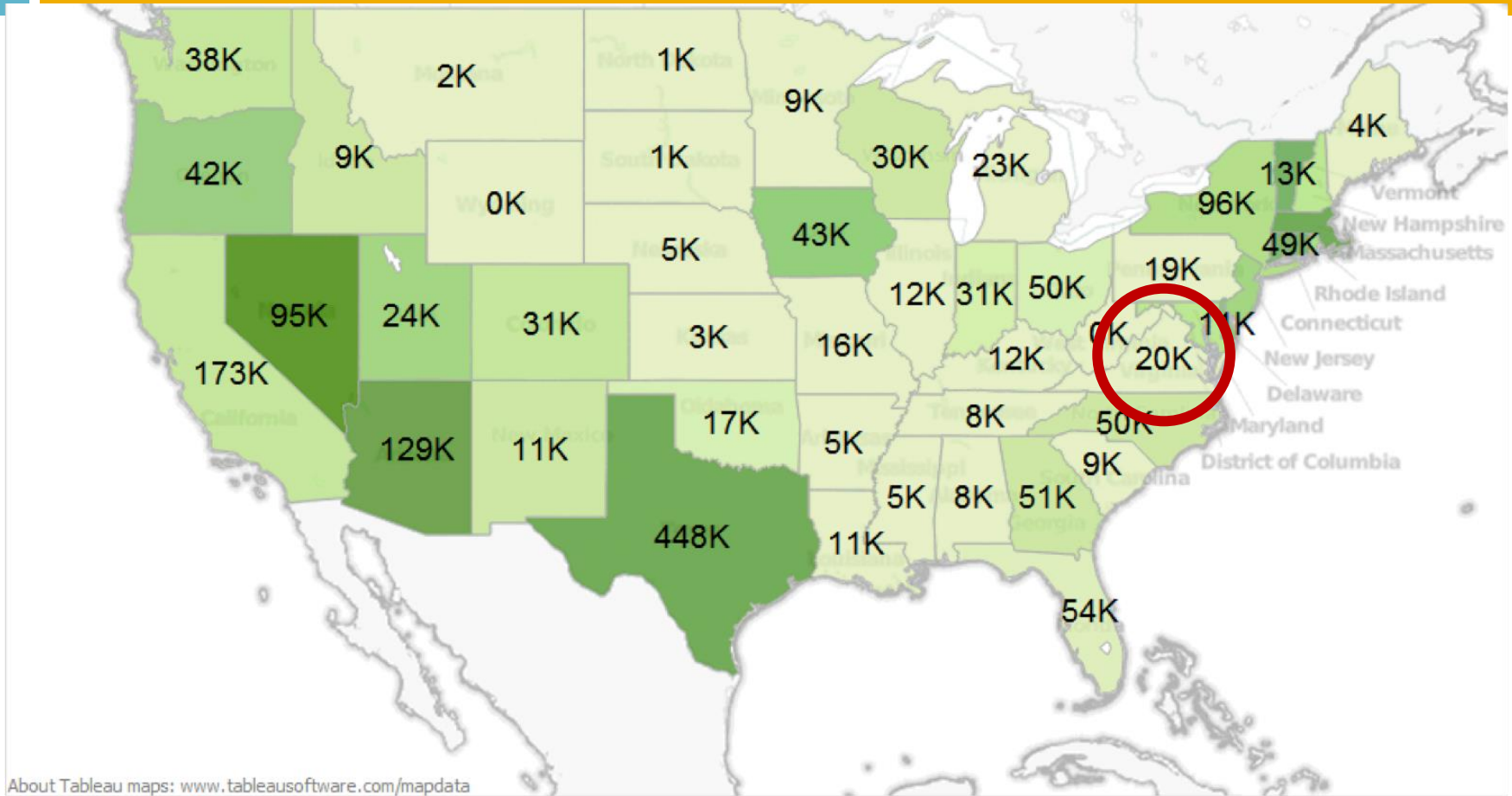
New opportunities

- BPI 2100 (Home Performance XML)
- Green MLS (RESO/RETS Data Dictionary)
- BPI-2101-S-2011 Standard Requirements for a Certificate of Completion for Whole-House Energy Efficiency Upgrades
- AI Green and Energy Efficient Appraisal Addendum

Market Progression towards Value for High Performance Homes



Verified High Performance Inventory



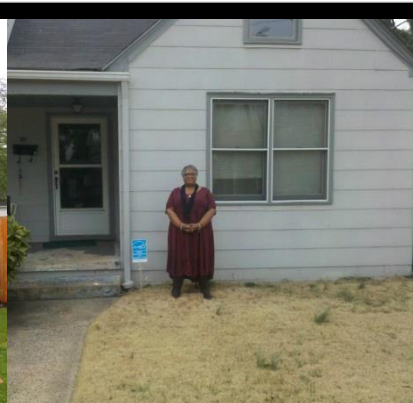
About Tableau maps: www.tableausoftware.com/mapdata

% of all 1 Unit Detached ..

1.0% 8.0%

Nearly 2.5 million verified high performance homes

Source: CNT Energy research as reported by verification programs and census data, October 2013.



Questions?