

# Talking About NZE Retrofits

Language that shapes perception

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James Geppner, RetrofitNY



**NYSERDA**

# Start With The End...

...the day we must hit zero emissions.

- > Days until January 1, 2050: 10,306
- > Retrofits in U.S. required per day: 9,023\*
- > **Retrofits required per hour: 751\*\***

\*Based on 102 million buildings (source: DOE) and 93% of existing building stock remaining in 2050.

\*\*Assumes installations occurring 7 days per week and through a 12 hour workday.

# Language is perception



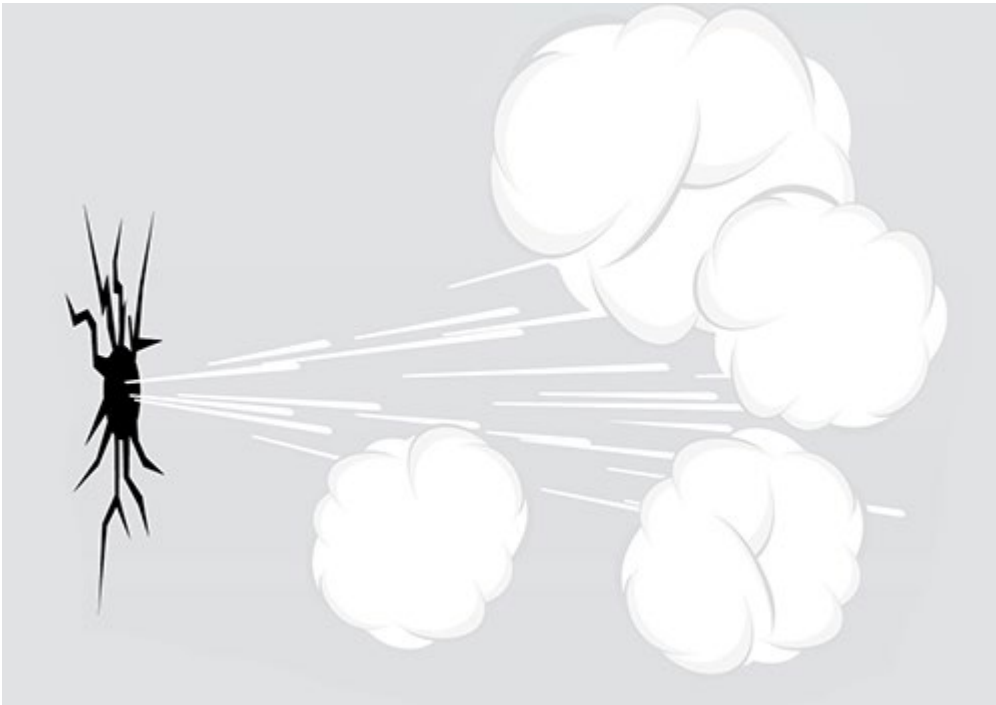
**Language can help us see things we might otherwise miss.**



# A Different Machine



# Air leak



**A loss of usable space.**

**A driver of energy and tenant turnover costs, and a reason why buildings are porous to noise.**

**Why pay for space you can't use?**

# Impaired space



**Space the owner or tenant can't fully use.**

**Cold near a window. A room you avoid because it's too hot in the summer. Avoiding a basement because it's damp or moldy.**

**Limitations on the use of a space amount to paying for a thing you will not use. What is the percentage of impaired space in a typical house or apartment?**

# An oil or gas tank



**The point of sale of the building owner's competitor.**

**Buying an oil or natural gas tanks or systems are investing in your competitors.**



# Avoidable costs



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**Tenant dollars that could go to other purposes (such as paying rent, saving money, seeing a doctor) all which benefit the tenant and the building owner.**

**Examples: energy costs, avoidable health costs, space heaters, dehumidifiers, etc.**

# Outcomes



**What people want when they hand over their money. They aren't after things.**

# Adrift

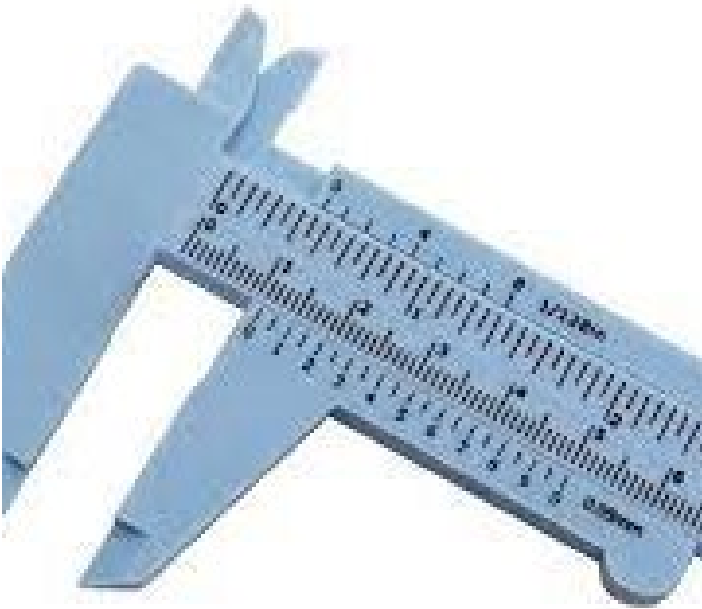


**The goal upon which we fix our attention and measure our actions. With every step we can move toward it or away.**

**For a portfolio owner looking to the future:**

- **Stable returns with low risk profile**
- **High returns on capex (high # of unit years)**
- **New revenue streams**
- **Low asset use costs**
- **High tenant wallet share**
- **Maximum lifetime value of tenant**

# Lifetime value of tenant



**A metric that moves any rise in rents, any decrease in turnover due to higher tenant satisfaction, decreases in operating costs and capital expenditures, and new revenues.**

**It's a metric that shows the value of a NZE building.**

# Unit Years



**A metric that factors in the longevity of the NZE retrofit and gives the building owner a more accurate picture of what they are buying with upgrade dollars.**

**Units X Time**

# Uncertainty



**A unique type of pain and one people go to great lengths to avoid.**

# Product



**Knowing what you're getting before you pay for it.**

**A high degree of confidence in the outcomes which facilitates the valuing of those outcomes.**

**The ability to value outcomes before making the purchase decision.**

# Price Discovery



**The period of uncertainty in which you wait to learn the price.**

**Until the customer knows the price they are in a state of uncertainty and the transaction costs are high.**



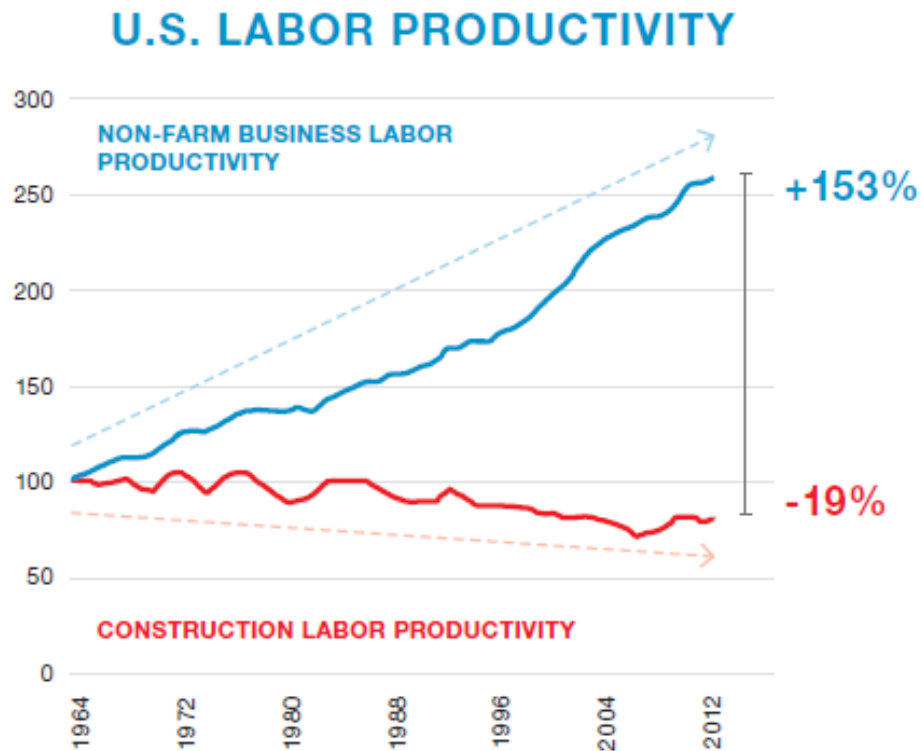
# A Decision



**A prediction of the future.**

**A bad decision is one that fails to account for likely scenarios in the future, frequently preferring to see the past or present as stable and as perpetuating indefinitely.**

# “This Is The Way We Do Things”



**A defense of current and past decisions, usually without fully considering the alternatives.**

**Source:** Global Vantage; Compustat; Bloomberg; [www.aecbytes.com/viewpoint/2013/issue\\_67.html](http://www.aecbytes.com/viewpoint/2013/issue_67.html); [www.nber.org/papers/w1555.pdf](http://www.nber.org/papers/w1555.pdf); S&P Capital IQ; BCG ValueScience Center; World Economic Forum

# Scale

THINGS THAT  
**FEEL**

INEXPENSIVE  
THINGS THAT

**FEEL**

EXPENSIVE

A way to increase a person's buying power, their ability to get a lot for their money.

It's also a way to transmit the expertise of a person to a broader population than would otherwise be possible.

# Strategy



**To do different things than the competitor rather than trying to do the same things better.**

**Example:**

**Fee for service design firm A VERSUS Fee for service design firm B**

# Strategy

<b>Customer acquisition</b>	Remote customer acquisition using image analysis data
<b>Price discovery</b>	Immediate estimate (1-3 days)
<b>Financing</b>	Standardized loan application and process for more efficient loan origination and underwriting, a simple financing package
<b>Product</b>	Consistent across buildings of a similar typology, predictable performance and attributes
<b>Fabrication</b>	Offsite in controlled conditions with lower labor costs, high quality control, repeatable process, greater ability to constantly improve unit economics
<b>Delivery</b>	Franchisee installers

# Whole Building Retrofit Solution

## **Outcomes:**

*IAQ Performance*

*Energy Performance*

*Usable Space*

*Estimated Longevity*

## **Components:**

*Envelope System Specifications*

*Mechanical System*

*Specifications*

*Monitoring System Specifications*

*Price Estimate:*

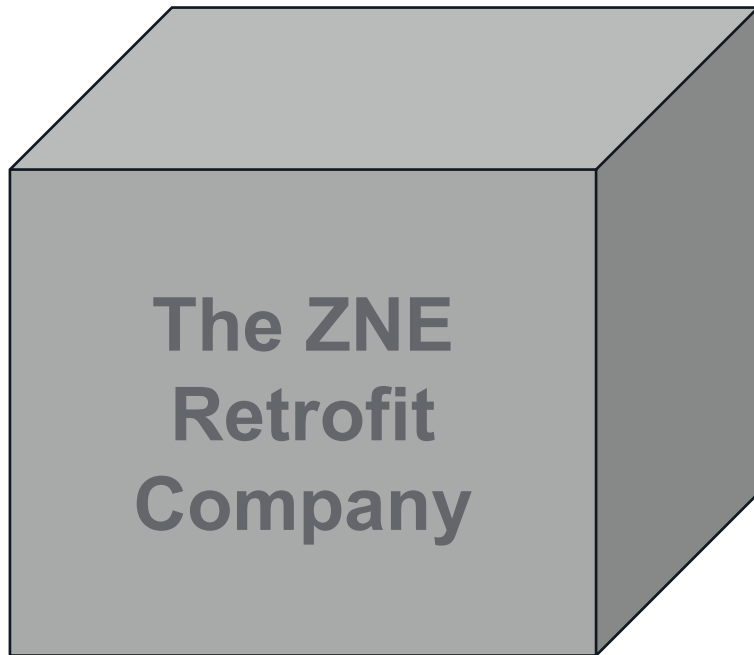
*Installation Time:*

**It's knowing what you're getting.**

**It's a product that reduces uncertainty for building owners, allows for scale and allows for continuous improvement and knowledge aggregation by the company behind it.**

# NZE Retrofit Company

**A company that can deliver a scalable solution and increase access to the benefits of a NZE retrofit.**



# Next Steps: Action

- > Use these terms so that we're all talking the language of change. Seek out different business models (e.g., developer designer)
- > Apply to our Solution Provider and Component Manufacturer RFQLs
- > Contact one of the qualified companies and offer your assistance



# Contact Information

James Geppner

[james.geppner@nyserda.ny.gov](mailto:james.geppner@nyserda.ny.gov)



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