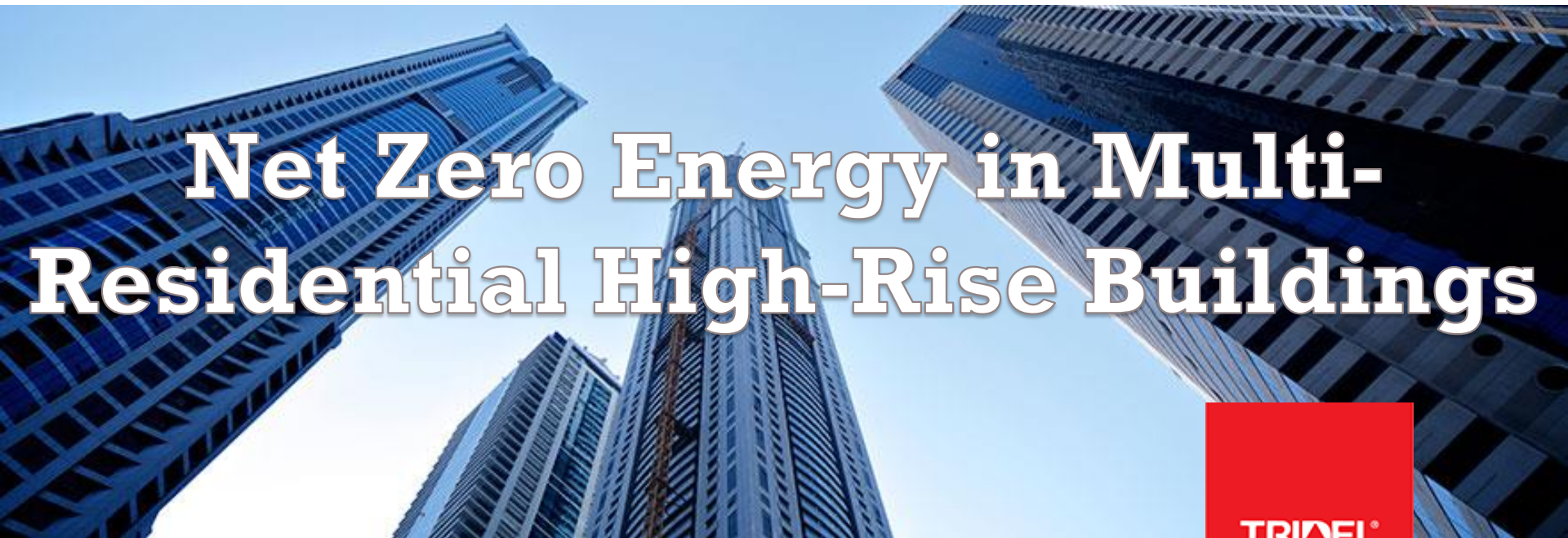


# Municipal Leaders Forum 2016



## Net Zero Energy in Multi-Residential High-Rise Buildings

**TRIDEL**  
BUILT FOR LIFE

**Subhi Alsayed,**

**MBA, P.Eng., LEED AP, CEM**

*Innovation Manager*

TOWER > LABS  
Advancing Green Building Technologies





# WHO WE ARE!



**Quality**



**Built Green**



**Innovation**



**Giving Back**

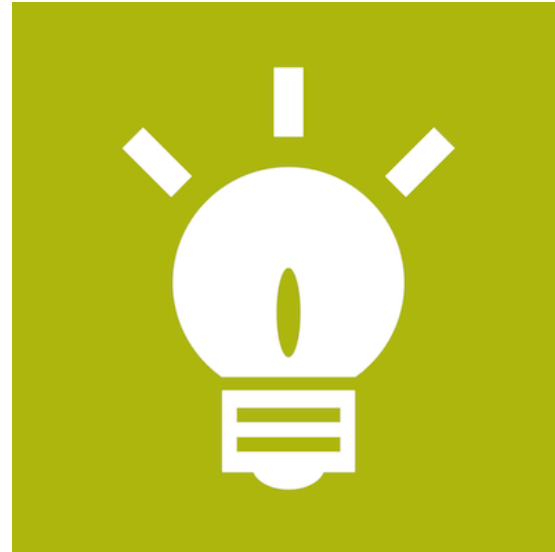


# WHO WE ARE!

## Innovation Program



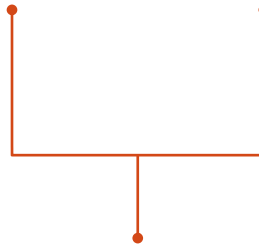
Internal R&D



External Tech  
Innovation



# WHO WE ARE!



TOWER > LABS

*Founded in 2010. Not for Profit*

# WHAT IS A NET ZERO BUILDING?



A building that produces as much energy as it uses



**TRIDEL**  
BUILT FOR LIFE

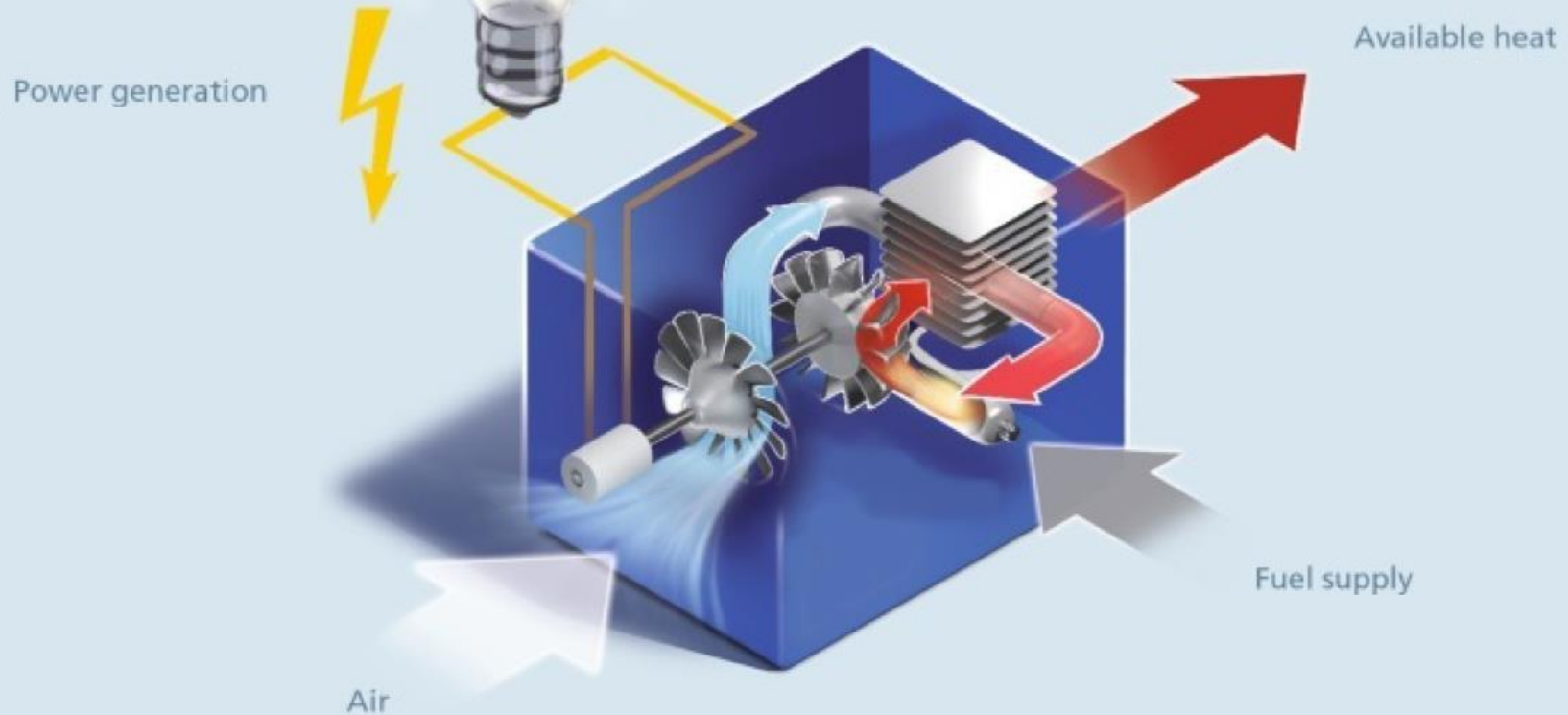
# BARRIERS

## Technology



# BARRIERS

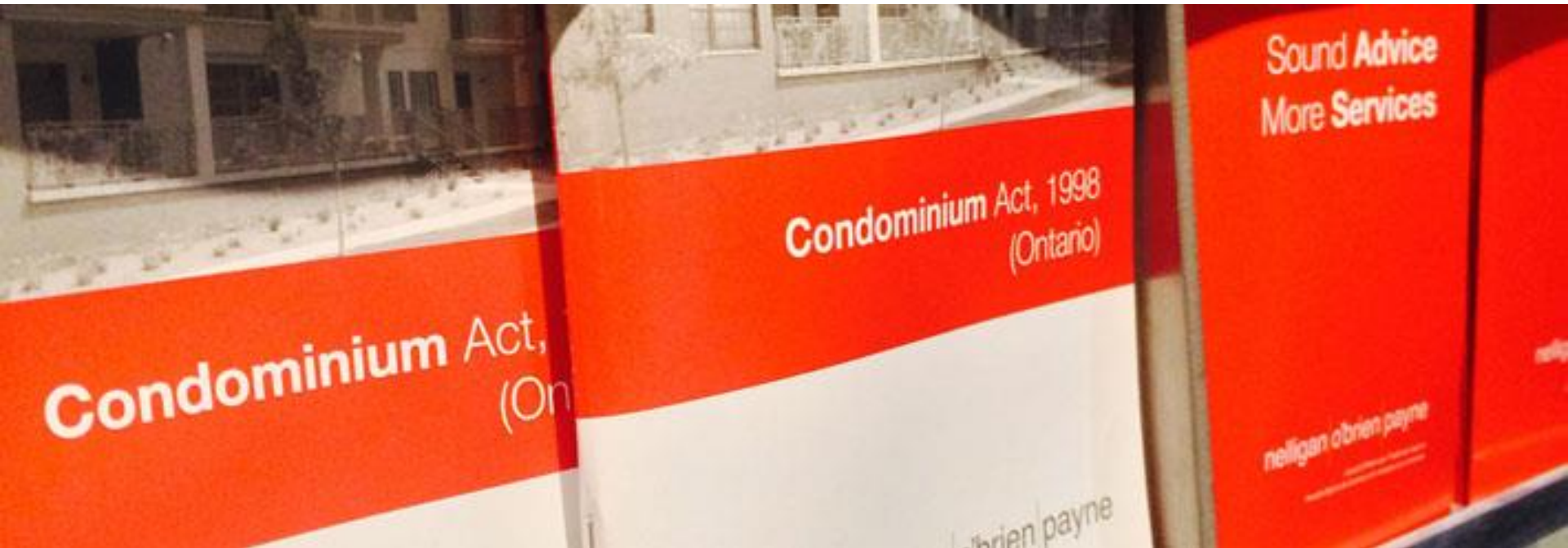
## Technology





# BARRIERS

## Policy and Regulation





# BARRIERS

## Operations and Maintenance



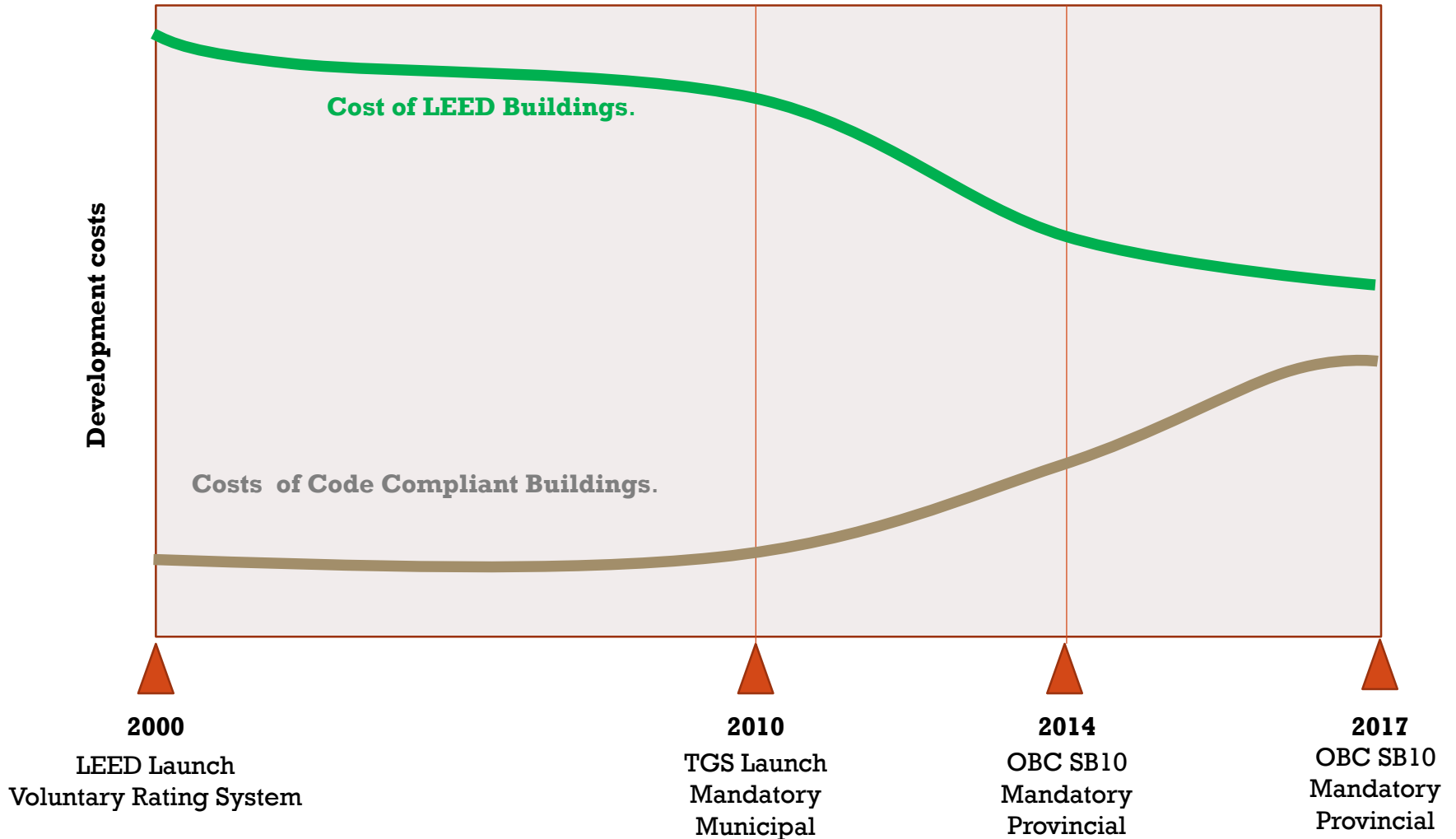


# BARRIERS

Market Demand

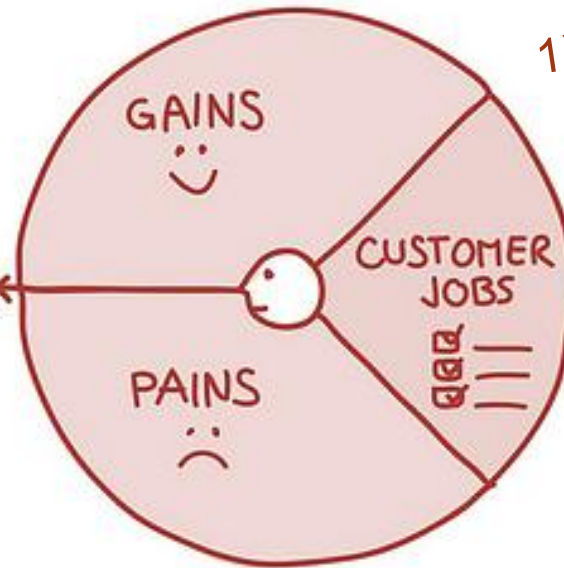


# MARKET TRENDS



# VALUE PROPOSITION

## Net Zero Buildings



- 1) Home Buyers/Tenants
- 2) Builders/Developers
- 3) Regulators/Industry



# VALUE PROPOSITION



▪ Cash flow

▪ Comfort

▪ Quality

# VALUE PROPOSITION



- Competitive Advantage
- Quality Product Differentiation

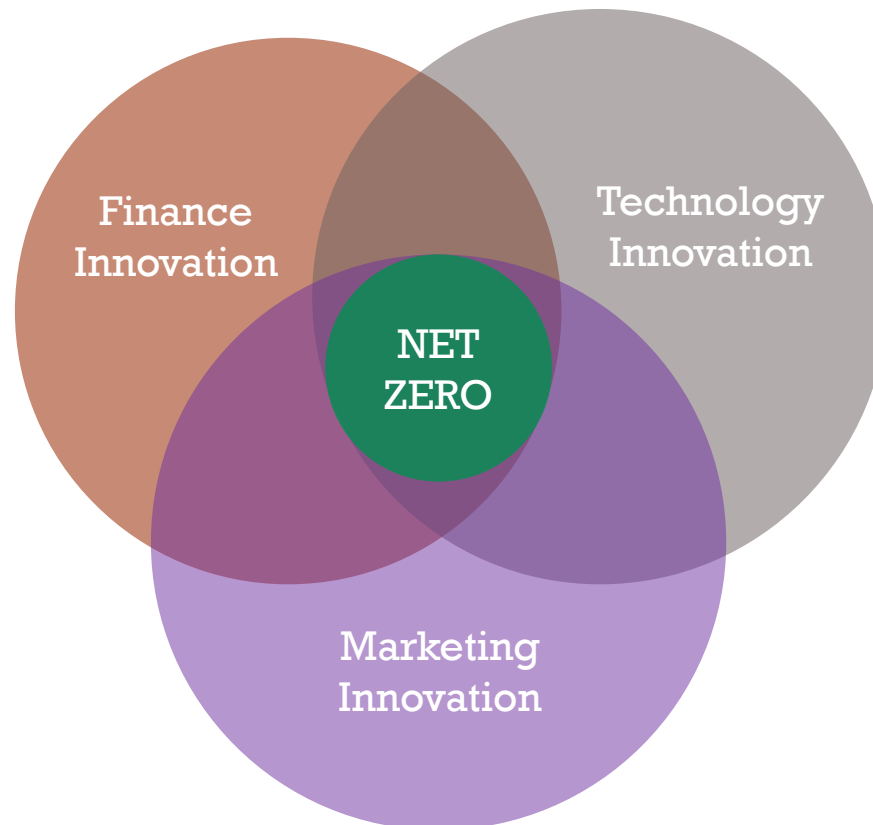
# VALUE PROPOSITION



- Lower Impact on Infrastructure

- Performance Validation

# MARKET STRATEGY





# PILOT & DEMONSTRATION PROJECT

DEMO

A ~~picture~~ is worth  
a thousand  
~~words.~~

STUDIES

~~Napoleon Bonaparte~~

TOWER LABS

# NET ZERO LIVING



BY TOWER LABS

[WWW.NETZED.CA](http://WWW.NETZED.CA)

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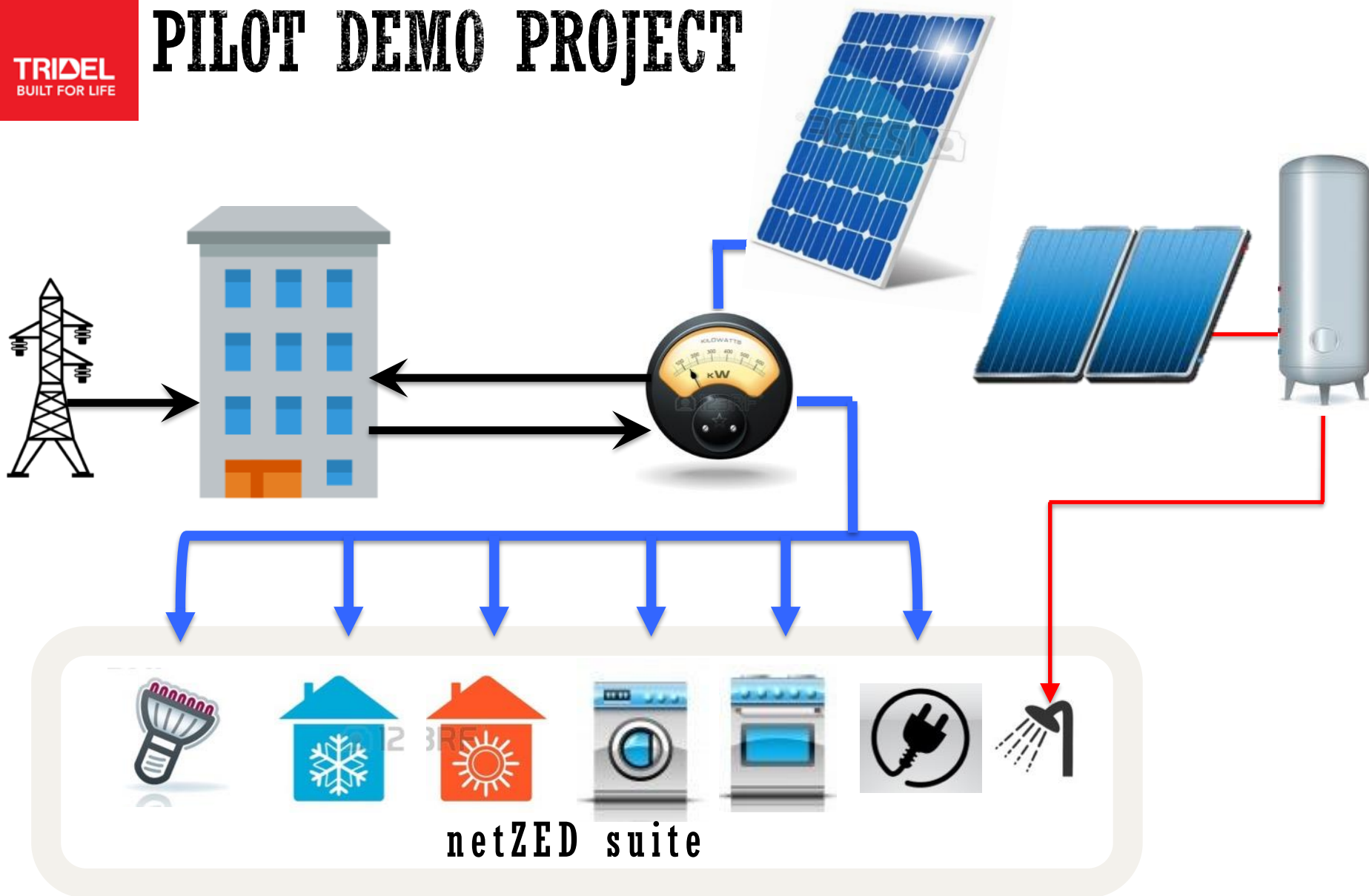
A HOME THAT PRODUCES AS MUCH  
ENERGY AS IT CONSUMES





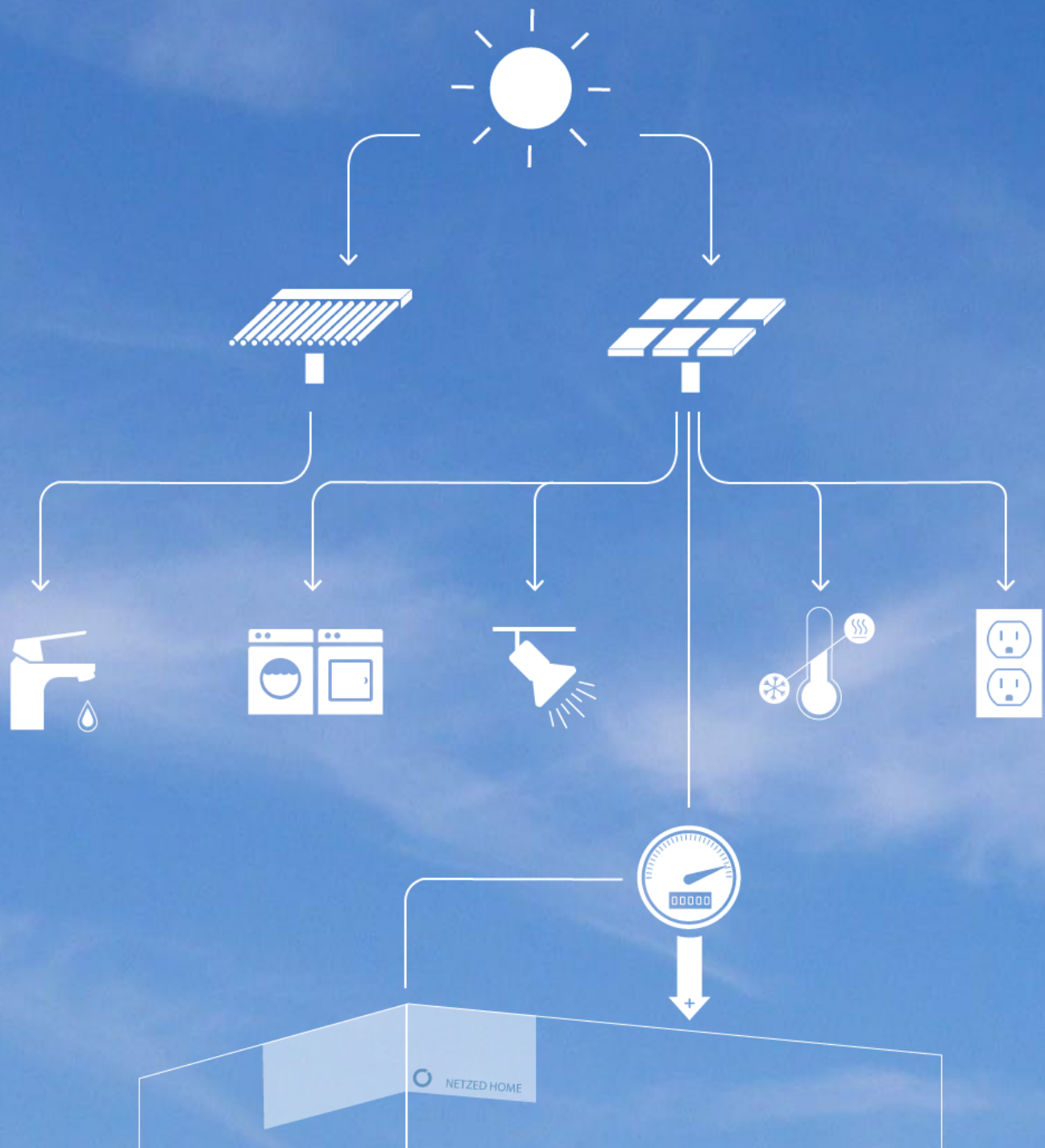
AQUALINA  
AT BAYSIDE TORONTO

# PILOT DEMO PROJECT

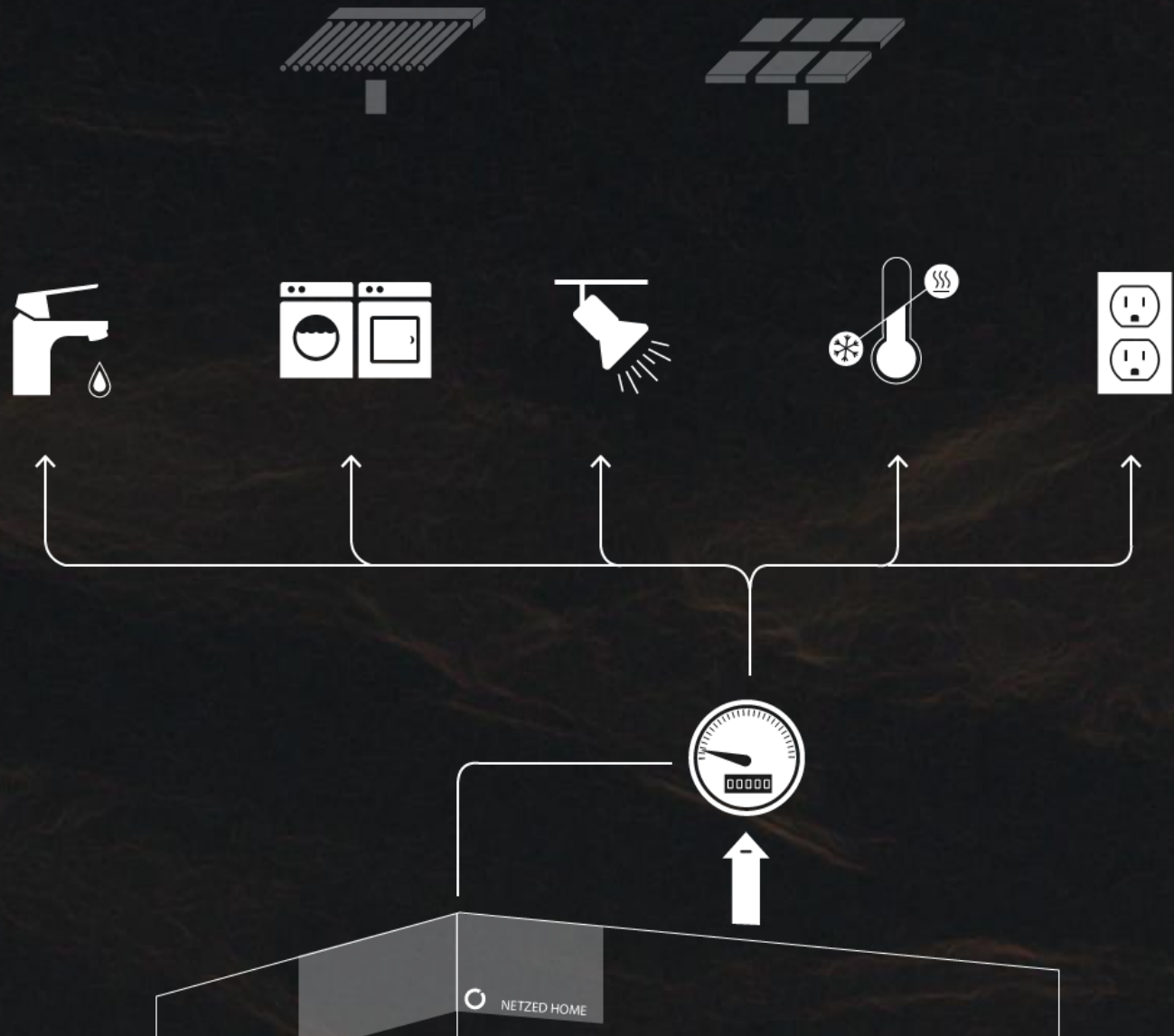


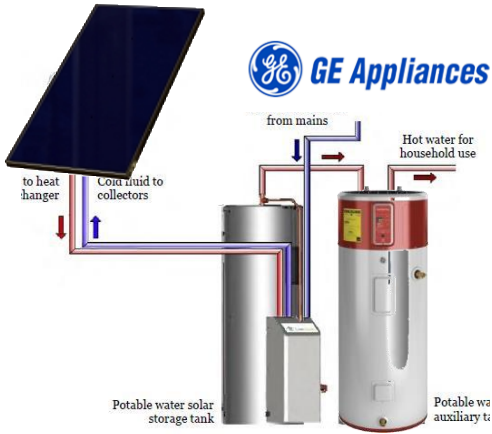


# netZED CONCEPT



# netZED CONCEPT

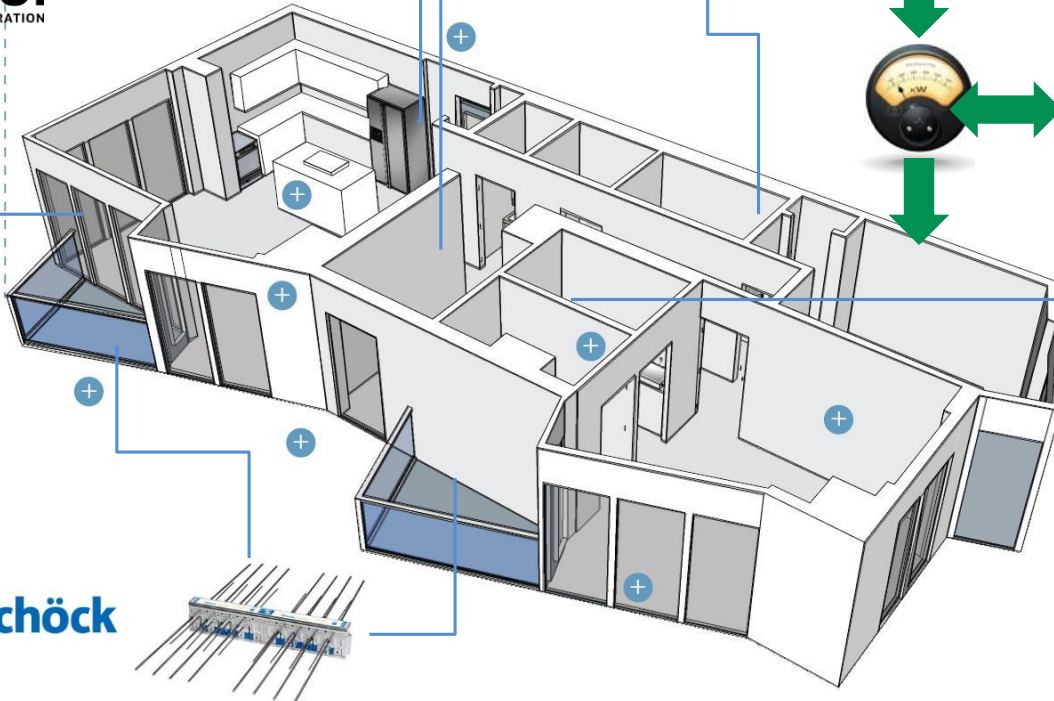




BY TOWER LABS



**REVERSOMATIC**  
MANUFACTURING LIMITED



Triple  
Glazing



**PHILIPS**  
Lighting



# PILOT & DEMONSTRATION PROJECT

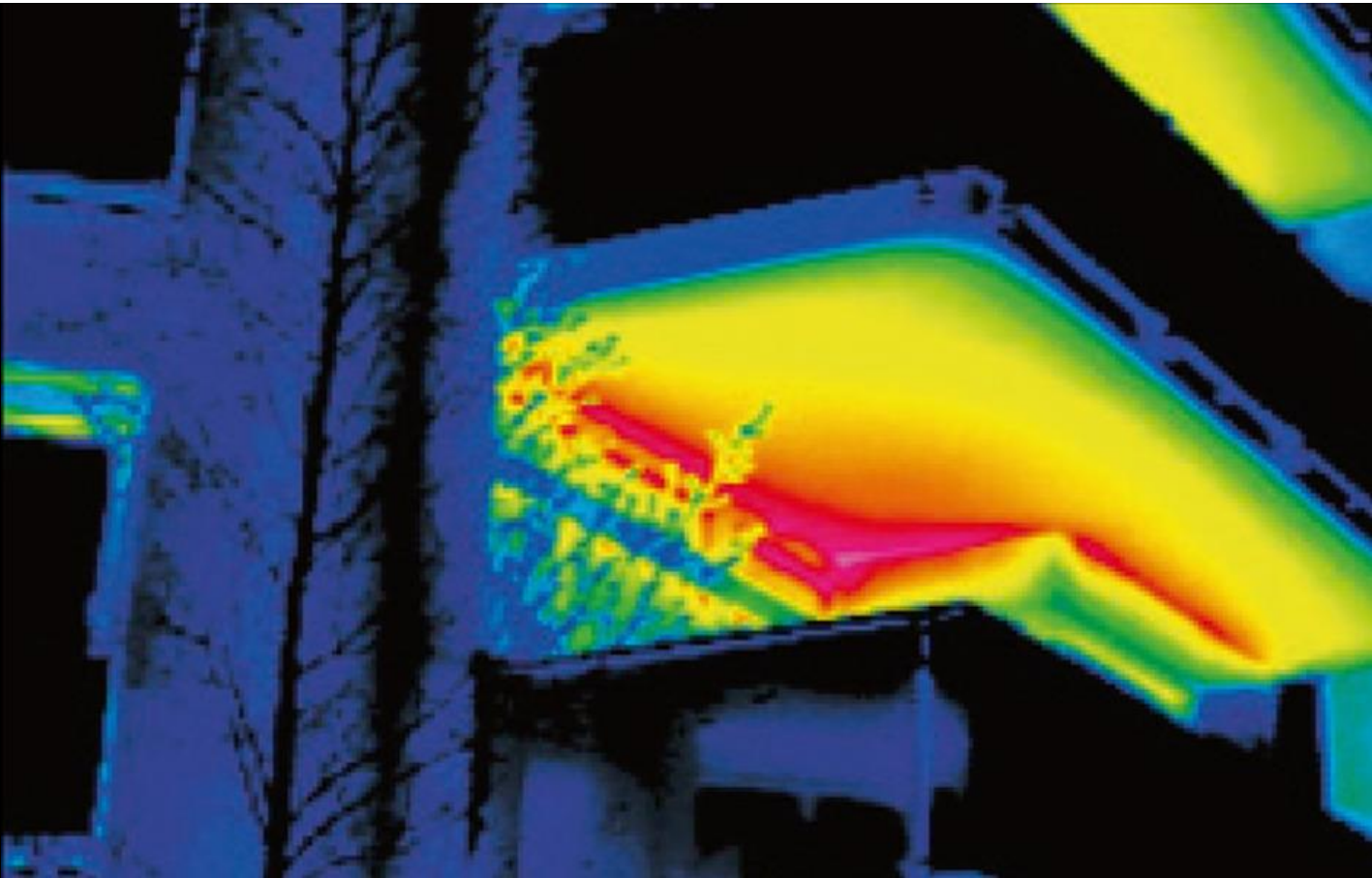
## The Envelope in The Room





# PILOT & DEMONSTRATION PROJECT

## The Mysteries of Thermal Bridging



# PILOT & DEMONSTRATION PROJECT

High  
Performance  
Fenestration



# PILOT & DEMONSTRATION PROJECT

## Window Wall Improvements





# PILOT & DEMONSTRATION PROJECT





# PILOT & DEMONSTRATION PROJECT

## CONTROLS AND M&V



**“ Change will not come if we wait for some other person or some other time. We are the ones we've been waiting for. We are the change that we seek. “**

**Barack Obama**

**THANK YOU**

<http://netzed.ca/>