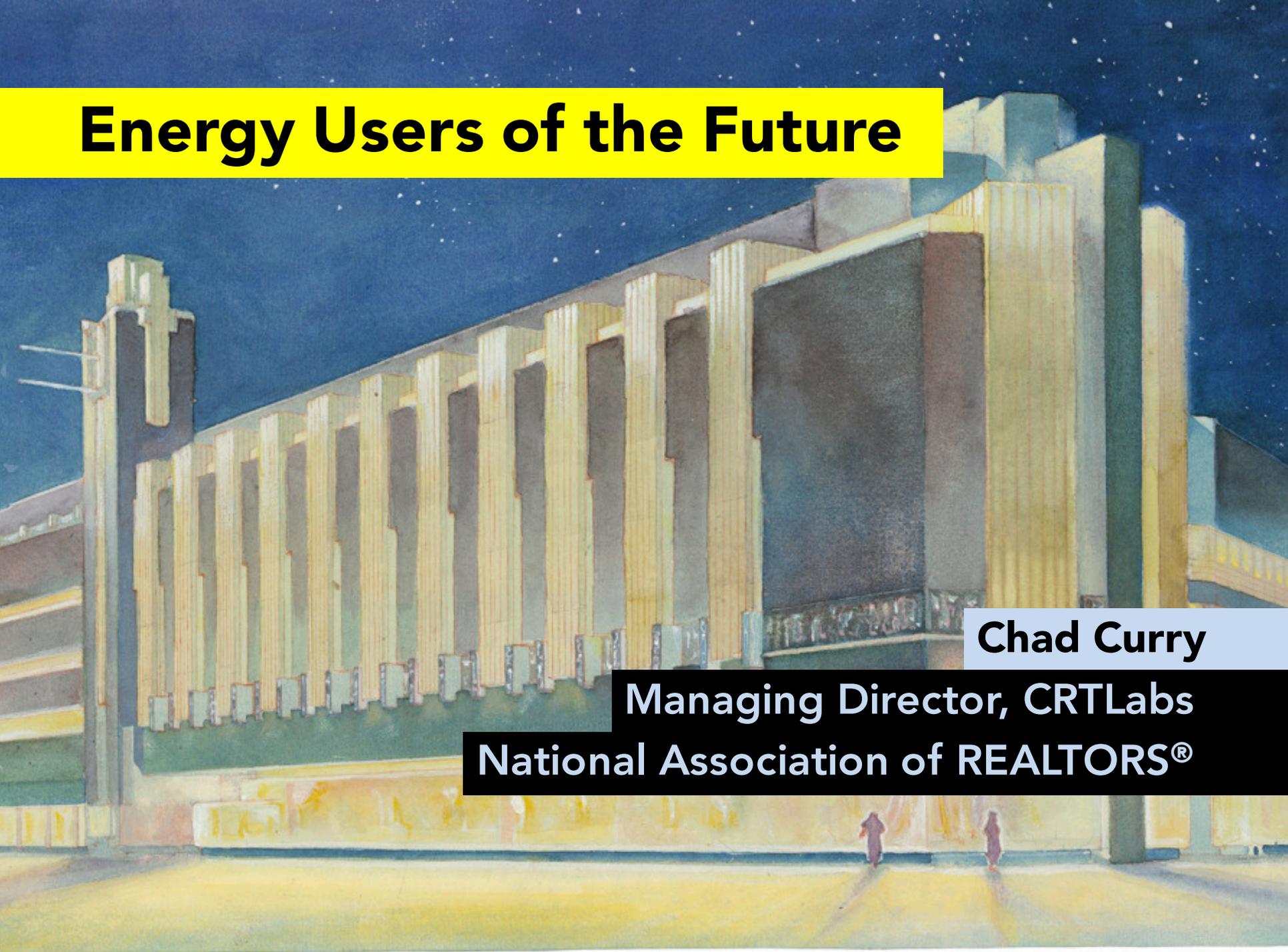


Energy Users of the Future



Chad Curry

Managing Director, CRT Labs

National Association of REALTORS®



CRT LABS

**4th Floor
Across from
Elevators**

**430 N. Michigan Avenue
Chicago, IL 60611**

The logo for CRT LABS is displayed on a frosted glass door. It features the words "CRT LABS" in a bold, black, sans-serif font. The text is enclosed within a yellow, stylized outline that resembles a circuit board or a computer monitor frame, with small circles at the corners and midpoints of the lines.

CRT LABS

**UNDER ALL
/ IS THE LAND**

Upon its wise utilization and widely allocated ownership depend the survival and growth of free institutions and of our civilization.

REALTORS® should recognize that the interests of the nation and its citizens require the highest and best use of the land and the widest distribution of land ownership. They require the creation of adequate housing, the building of functioning cities, the development of productive industries and farms and the preservation of a healthful environment.

Such interests impose obligations beyond those of ordinary commerce.

IF YOU
CAN'T GIVE ME
POETRY,
CAN'T YOU
GIVE ME
POETICAL
SCIENCE?

ALAN TURING

THE
BEST
WAY TO
PREDICT
THE FUTURE
IS TO
INVENT IT

THE THINKING
THAT GOT US
TO WHERE
WE ARE IS NOT
THE THINKING
THAT WILL
GET US
TO WHERE WE
NEED TO BE

ALBERT EINSTEIN

THE
FUTURE
IS ALWAYS
BEGINNING
NOW

WILLIAM SHAKESPEARE



LABS



CRT LABS

Workbench



CRT LABS

Meeting Area



CRT LABS

Work desks

Smart Home Glossary

Hearing a lot of buzzwords around the smart home space? What's a geofence? What's a hub? What is IoT? Check out our glossary and find out what these terms and many more mean for smart devices. This list will grow over time so check back frequently. Use it to quickly catch up on the commonly used phrases and terms. If you have any questions or suggestions, [send us an email!](#) Thanks!

Bluetooth LE/ Bluetooth Smart:

A wireless [protocol](#) that is popular among smart home devices. Compared to classic bluetooth, it is designed to use considerably less power while maintaining a similar range. BLE is not only aimed at the smart home, but also at fitness, healthcare, and security industries.

Cloud-to-Cloud:

Many smart home products use cloud services for their core functionality. Although it is not ideal having your devices relying on an internet connection, it does sometimes allow for increased [interoperability](#). Two devices in the same room might not be able to communicate directly. Instead, messages are sent back and forth through their respective cloud services over the internet. This is known as "cloud to cloud" and is becoming a popular way for hardware vendors to increase compatibility.

Geofence:

A virtual perimeter for the real world. Using your WiFi, Bluetooth, or GPS radios, your Smart Home software can trigger events based on your physical location. For example, you can use a geofence to automatically turn off your lights when you leave for the day.

Quick Links

- [Smart Home Checklist](#)
- [Smart Thermostat Tearsheet](#)
- [Smart Home Glossary](#)
- [Smart Home and IoT FAQ](#)

Recent Posts

- [#003 - Things Thursday - Tribu Uses Amazon Echo integration and Always On Microphones & More!!](#)
- [#002 - Things Thursday - Forget Wearables, Here Come Implantables and Standards!!](#)
- [#001 - Things Thursday - AI is Here, are You Ready?, Stopping the Revolv-alution, & more](#)
- [CRTLabs On the Road for April 2016 - Las Vegas, Utah, San Antonio & more!!](#)
- [#000 - Things Thursday - A New Series](#)

Smart Home and Internet of Things FAQ

In addition to our [Smart Home Glossary](#), CRTLabs has put together this Internet of Things FAQ.

[Send us an email](#) and let us know what you think (and if we missed anything!)

[What is the Internet of Things?](#)

[What is a smart home?](#)

[What are smart devices, and how much do they cost?](#)

[What is a smart hub?](#)

[What are the benefits of a smart home?](#)

[What are the financial benefits of smart home technology?](#)

[Who owns the data, and how is smart home device data used?](#)

[What are the connectivity options for a smart home?](#)

[Do smart devices affect selling prices?](#)

[Can I install smart home devices myself?](#)

[What are some of the challenges of a smart home?](#)

[Are there security risks associated with smart home devices?](#)

[What is CRTLabs?](#)

What is the Internet of Things?

The Internet of Things (**IoT**) is a broad term that refers to everyday devices like lights, thermostats, and locks that are able to connect to the Internet and to each other. These connected devices can exchange data and work together, automating tasks that used to be manually performed. By 2020, it is predicted that there will be anywhere between [26 billion](#) to [200 billion](#) devices connected to the Internet.

Quick Links

[Smart Home Checklist](#)

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NATIONAL ASSOCIATION of REALTORS®



URBAN CENTER FOR COMPUTATION AND DATA



gogo®



NYU

accenture

INFOBRIGHT



IoT COUNCIL



POWERED BY ITA



First Analysis



CATERPILLAR®

Coldwell Banker/CNET Survey

45% of homeowners either have smart home tech or plan to invest by end of 2016.

Coldwell Banker/CNET Survey

54% would install smart home tech if it meant their home would sell faster.

Coldwell Banker/CNET Survey

Of those, **65%** would spend **\$1,500 or more** on smart home technology.

What Millennial Buyers Want (Now)

1. Fast information gathering.
2. Urban and smaller.
3. Fewer embellishments.
4. Multifunctional interiors.
5. Less Maintenance.
6. Green & healthy.
7. Bright and comfortable.
8. Less outdoor space.
9. Value-minded.
10. Ready, set, go.

"What Millennial Buyers Want Now" by Barbara Ballinger – 10/2014

<http://realtomag.realtor.org/home-and-design/architecture-coach/article/2014/10/what-millennial-buyers-want-now>

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AIA Home Design Trends Survey

1. Smarter homes.
2. Healthier homes.
3. Disaster-proof.
4. Energy efficiency.
5. Age-in-place.
6. All about the kitchen.
7. Outdoor living spaces.
8. Home offices.
9. Smaller but better designed homes.
10. Urban influence.

"10 Trends Driving the Next Decade of Home Design" by Melissa Tracey

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Acre Designs

acredesigns.com

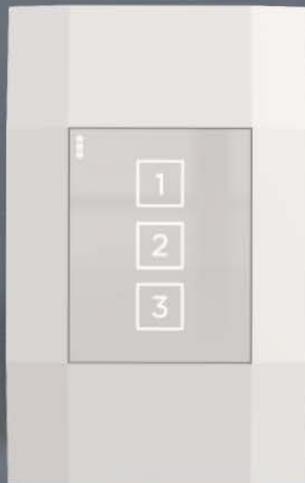


Deako Lighting

OUR SWITCHES



Deako Simple Switch



Deako Smart Switch



Deako Smart Dimmer

Orison Home Energy Storage



Freevolt RF Energy Storage

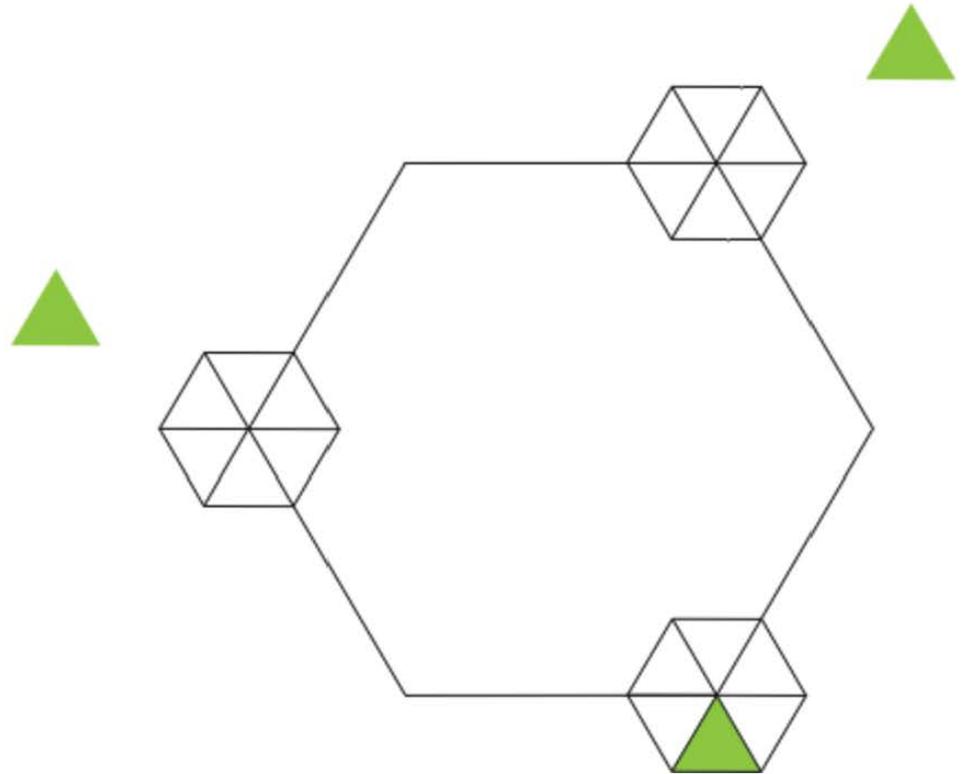
Powering The Low Energy Internet Of Things

We are at the start of a third wave of Internet connectivity - a world where billions of things will be connected; **Sensors - Beacons - Wearables.**

Battery swap or cable charging is one of the biggest limitations to the mass-market deployment in the LE-IoT industry, economically and environmentally.

getfreevolt.co

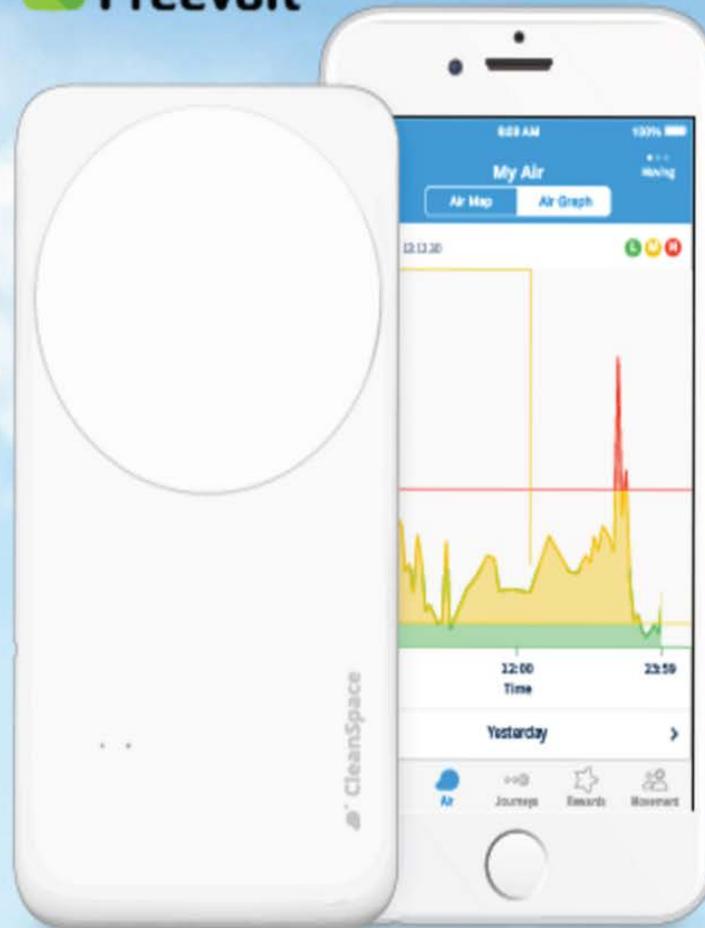
m



CleanSpace Tag

The world's first personal air pollution smart sensor.

powered by
Freevolt™



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our.clean.space

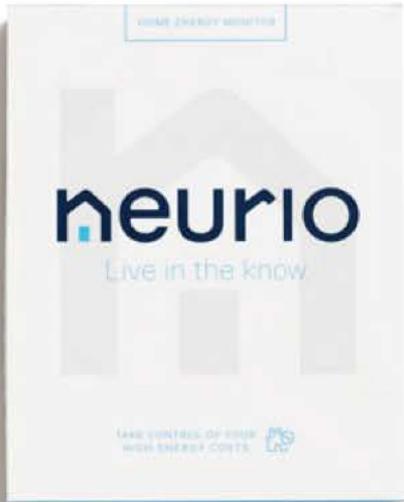
#SeeTheAirYouBreathe

Rosetta Home

\$179+



ENERGY



ENVIRONMENT

\$99



\$149



Locations



7467 Sheridan **\$765,000.00**

Enormous, 4,100 sq ft., solid brick mini-mansion on 50x175' lot awaits new owner. Grand entry & staircase, double parlor. DR w/ cross beamed ceilings opens to enclosed greenhouse. Grand, open kitchen. Oak floors & trim throughout. Big BR's, vintage tile in



1761 MORSE **\$267,000.00**

Stunning!Extra large 1500sf newer all brick/limestone construction, with PRIVATE GARAGE included!Lush gardens welcome you to this intimate 8 unit bldg. Situated on the south side of the building, this unit is LOADED with SUNLIGHT! Open Living/Dining/Kitchen



7625 Eastlake **\$215,000.00**

Highly Sought after Boutique elevator Building on Eastlake Terrace, Sunny & Bright Corner unit, Huge private Deck with a Beautiful Lake View, secure indoor heated Garage parking, features open floor plan, 2 bedrooms/2bath, Gas fireplace, newly



1737 Division **\$299,900.00**

Spectacular location for a 2 bedroom 2 bath unit. Unit offers an efficient layout with kitchen and eating area, living room, 2 bedrooms and 2 bathrooms. Quality finishes throughout – hardwood floors, granite counters and contemporary cabinetry. Washer dryer



1833 73rd **\$279,000.00**

GREAT CURB APPEAL! MANY UPDATES! ADORABLE GEORGIAN HAS LIV RM, FORMAL DIN RM, 1ST FL FAM RM W/ YARD VIEW. ALL HDWD FLRS EXCEPT FAM RM. NWR KIT W/CORIAN CNTRS SS STL APPL. NEW 1ST FL POWDER RM.

ClosePrice	None
ListAgentMlsId	112446
OriginalEntryTimesta...	None
Latitude	42.018051
CloseDate	None
VOWConsumerCom...	True
OperatingExpense	None
BathroomsTotal	3.1
BathroomsFull	3
OriginalListPrice	765000
OffMarketDate	None
Green	{}
StreetDirPrefix	N
IDXAddressDisplayYN	True
PublicRemarks	Enormous, 4,100 sq ft., solid brick mini-mansion on 50x175' lot awaits new owner. Grand entry & staircase, double parlor. DR w/ cross beamed ceilings opens to enclosed greenhouse. Grand, open kitchen. Oak floors & trim throughout. Big BR's, vintage tile in kit and baths, 3 FP's. Tile roof, 2 car brick gar + 3 pkg spaces, 6ft. iron fence, expandable full walk-up 3rd fl., high ceiling basement, 1/2 block to Lake.
ContingentDate	None
ListingContractDate	2015-05-03 05:00:00
ListAgentCellPhone	None
StreetSuffix	RD
NetOperatingIncome	None
StateOrProvince	IL
PropertySubType	D
LivingArea	4100
ListOfficeName	Baird & Warner
Make	None

Not This



**It's
VOLTRON!**

Thank you

Chad Curry

**Managing Director, CRT Labs
National Association of REALTORS®**

ccurry@realtors.org

crtlabs.org

