sense

Company intro
May 2016

Your electric bill vs your phone bill

PEOPLE DON'T CARE ABOUT ENERGY.

Well.
Not enough.
And not very frequently.

Sense: Intelligence for the home
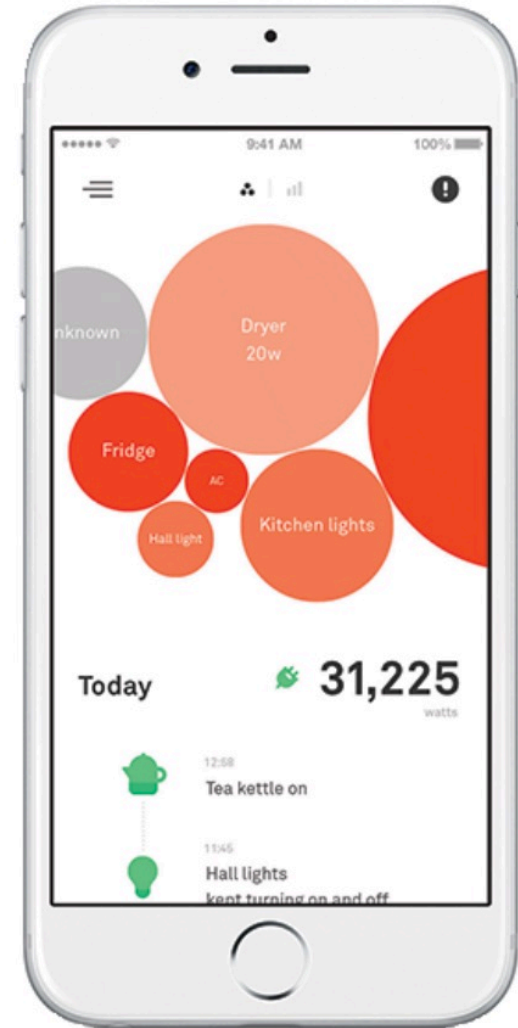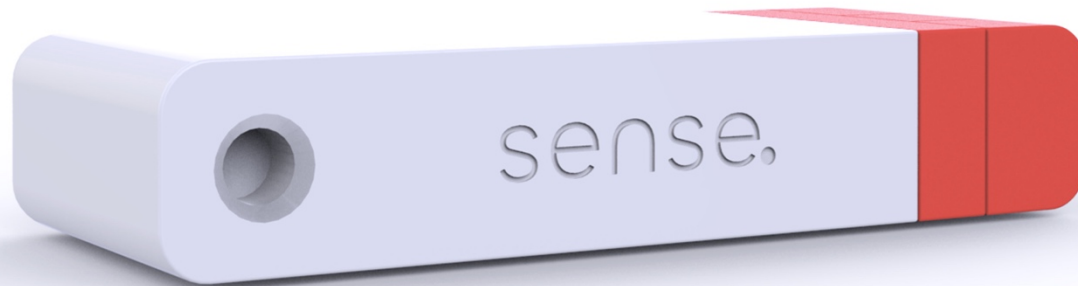
Sense today: Home awareness

Know what's happening at home.
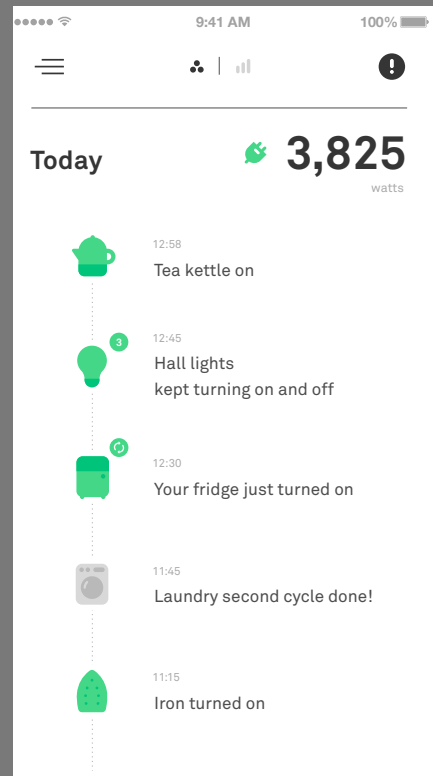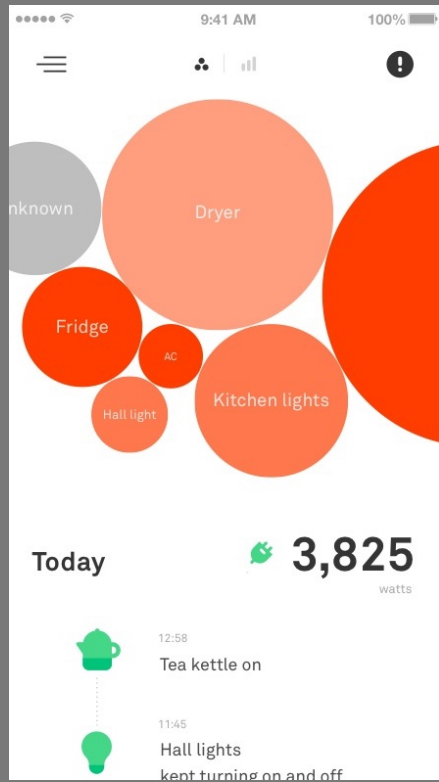
Awareness drives engagement and...

Sense future: Energy efficiency

Track your energy usage by appliance.
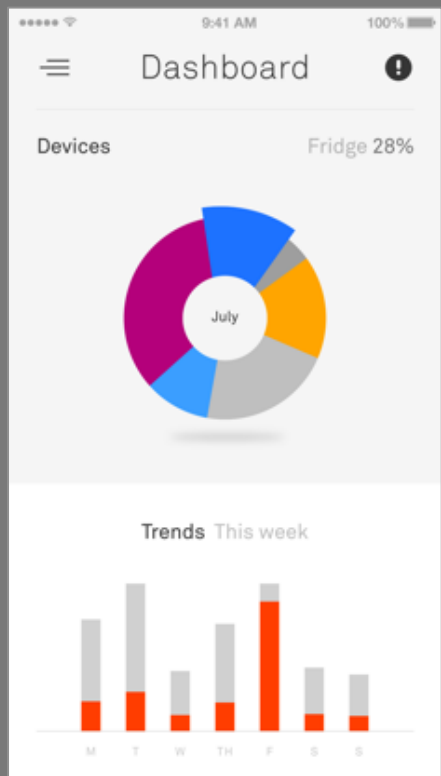
Engagement drives efficiency.

Sense installation

- **Installed in the electric panel**

- **One monitor + 2 current transformers**

- **CTs attach to service mains**

- **Sense recommends electrician install**

No need for sensors on each circuit breaker.
No need for smart plugs for each appliance.
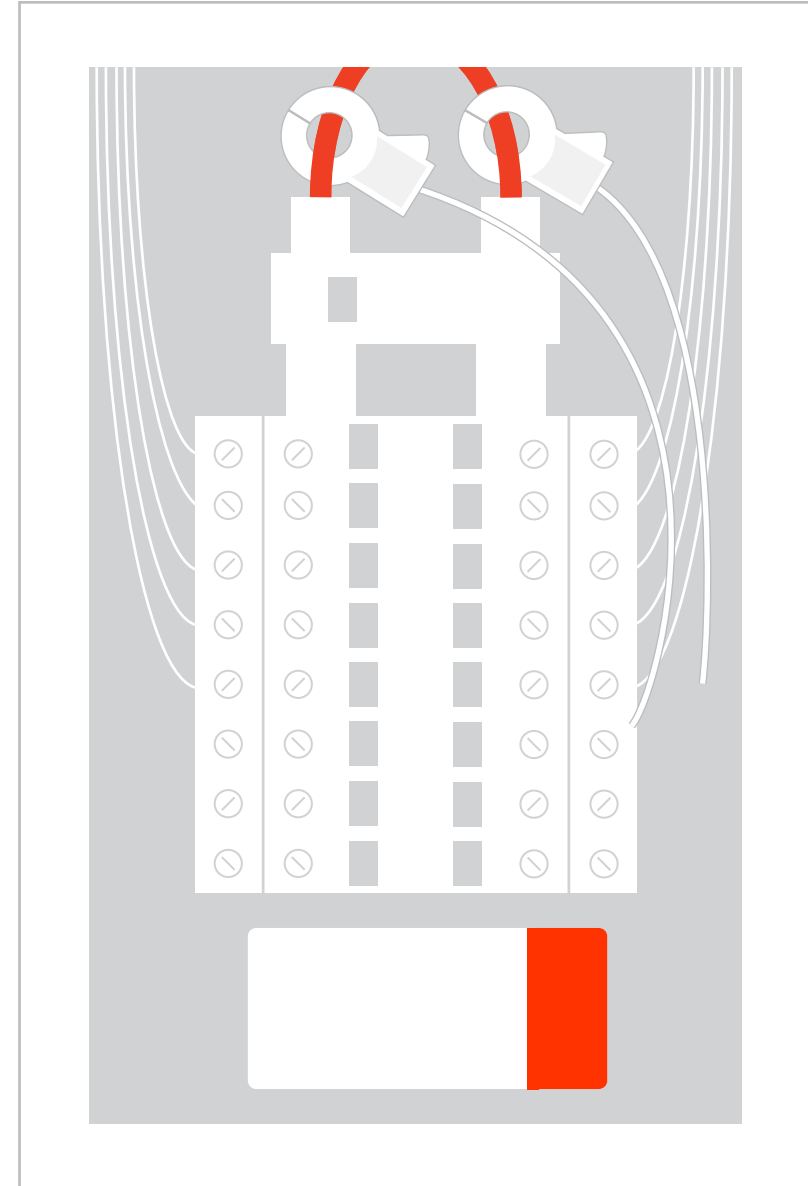
How does Sense work?

- **Sense measures the incoming power in high resolution (current and voltage at sub-cycle times)**

- **Machine learning to determine state and power use of active devices.**

- **Over time, we build up a library of signatures.**

  - **"House Independent"**

  - **"House Specific"**
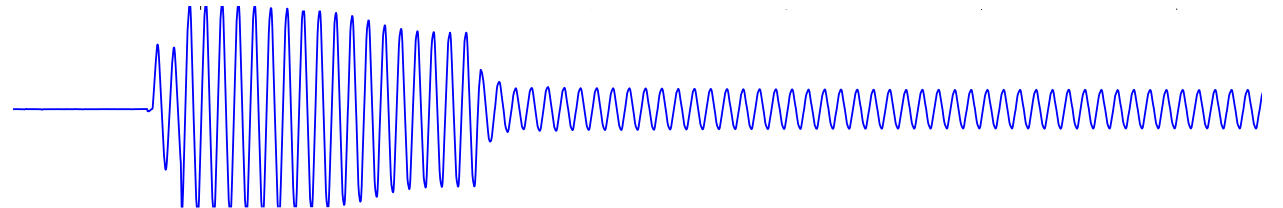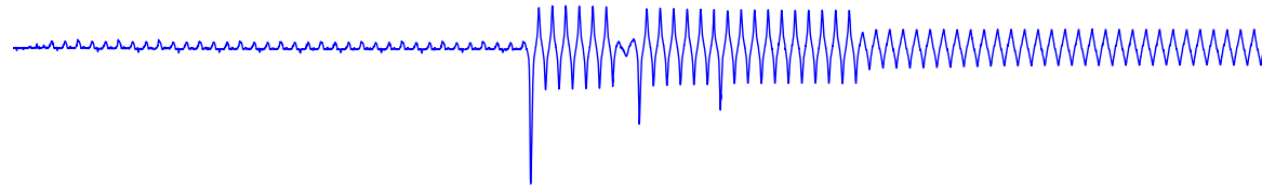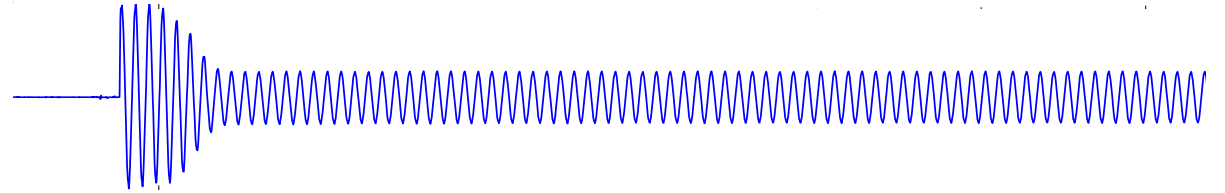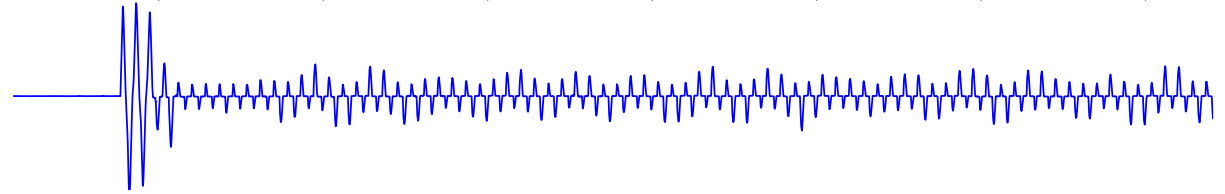
Technology

- **Real-world signals, real-time feedback are significant challenges**

- **Our speech recognition backgrounds have been useful preparation!**

- **We have a working solution that will improve as we scale # of houses**

High sampling frequency is required for accurate device detection

Two different high wattage devices at low-resolution look identical:
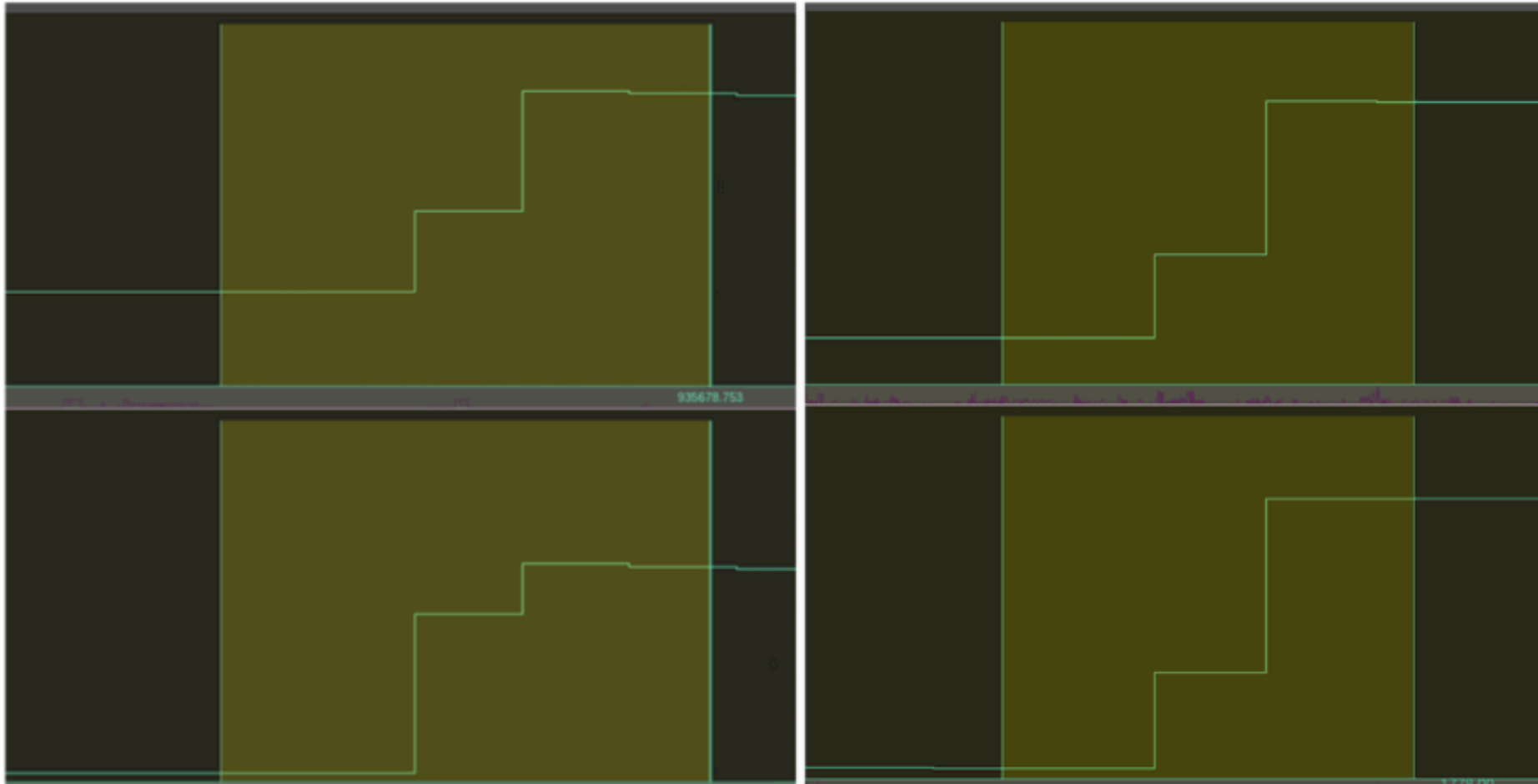
High sampling frequency is required for accurate device detection

The same two devices at a higher sampling rate.
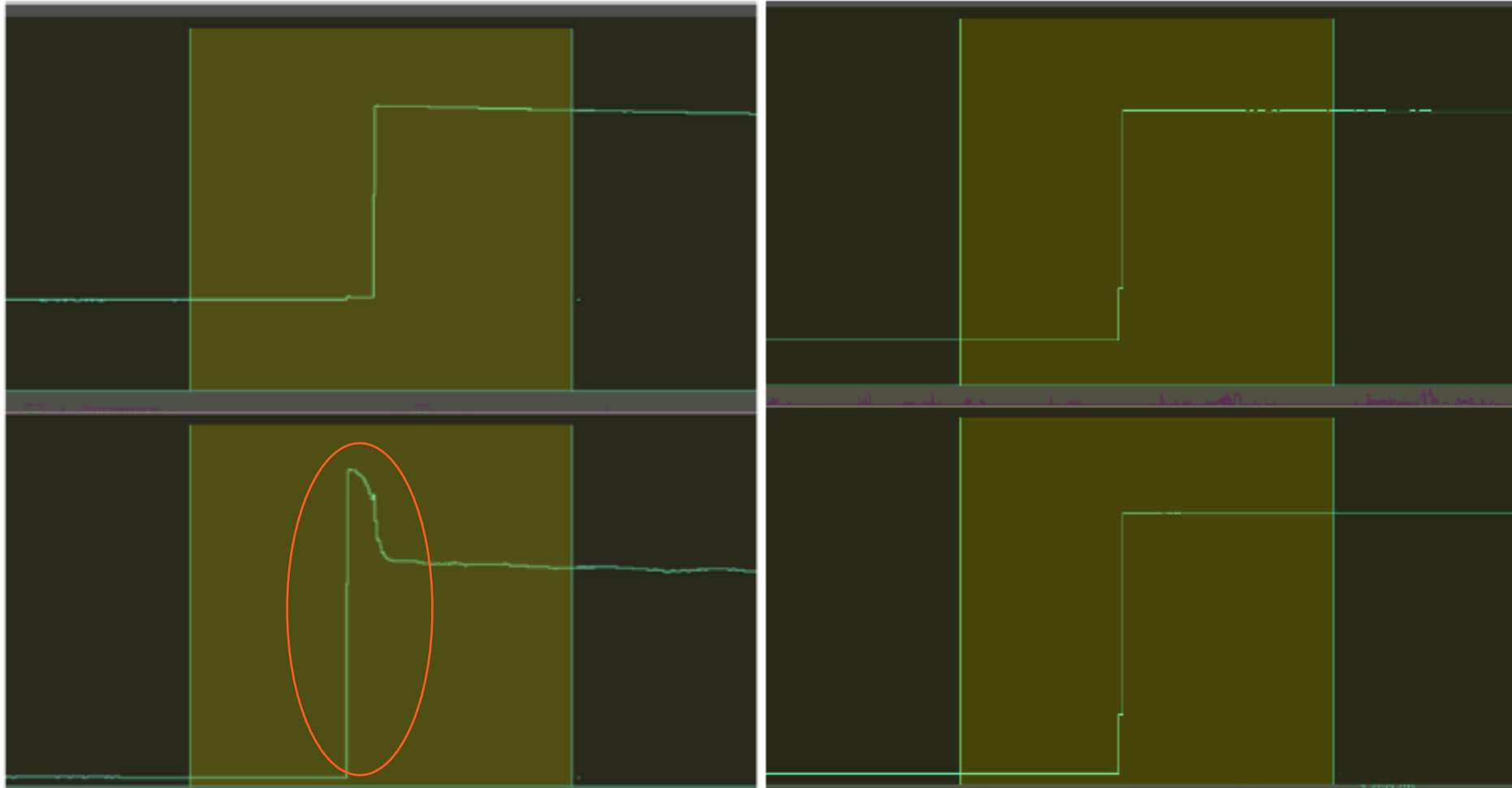
Dryer

Oven

Team background in speech recognition (Speechworks and Vlingo)

Mike Phillips
CEO & Co-Founder

Founder & CTO,
Speechworks & Vlingo
CMU, MIT

Ryan Houlette
VP Engineering & Co-Founder

Senior Architect, Vlingo
Stanford

Chris Micali
VP Product & Co-Founder

Product Manager, Vlingo.
Tufts

Charlie Rutledge
VP Operations

COO, Vlingo
VP Professional Services,
Speechworks, MIT Sloan

Rhoda Ullmann
Marketing & Biz Dev

Biz dev Bertelsmann
New retail channels
Staples. INSEAD

John Watlington
Hardware

VP Hardware, OLPC
Research Scientist,
France Telekom & MIT
Media lab MIT

Shakwan Burnett
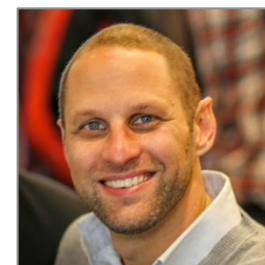Field Ops, Device Discovery

Etienne Bernard
Sr Data Scientist

Ghinwa Choueiter
Sr Data Scientist

Caleb Marcus
Data Scientist

Fadi Saffouri
Software Engineer

Joe Bamberg
Hardware

■ Vlingo
■ Speechworks

Thank you

www.sense.com

From Sense customers

The app kicks ass, it's engaging, gorgeous, pretty addicting. I feel like I have a little glimpse into the future of energy, analytics, and customer engagement. I am pretty addicted to this app.

I have to first commend you on an amazing approach to whole home monitoring. I have been wanting this type of system for a lot of years, but did not want to go through the cost and complexity of installing CTs on each circuit.

This is like a Twitter feed for my home.

It's the product I have dreamed of. When I get a letter from the power company telling me my usage vs my neighbors is the highest, now we will find out!

Installation was easy. It has been recognizing new appliances on an average of 1 every 2 - 3 days for the past 2 weeks. Things like our heating system, garage door opener, etc. I like gadgets and this fits in well with our home automation and focus on energy conservation. Even the kids like to learn and see what is consuming a lot of energy and enjoy finding ways to reduce waste.