

Designing Calm Technology

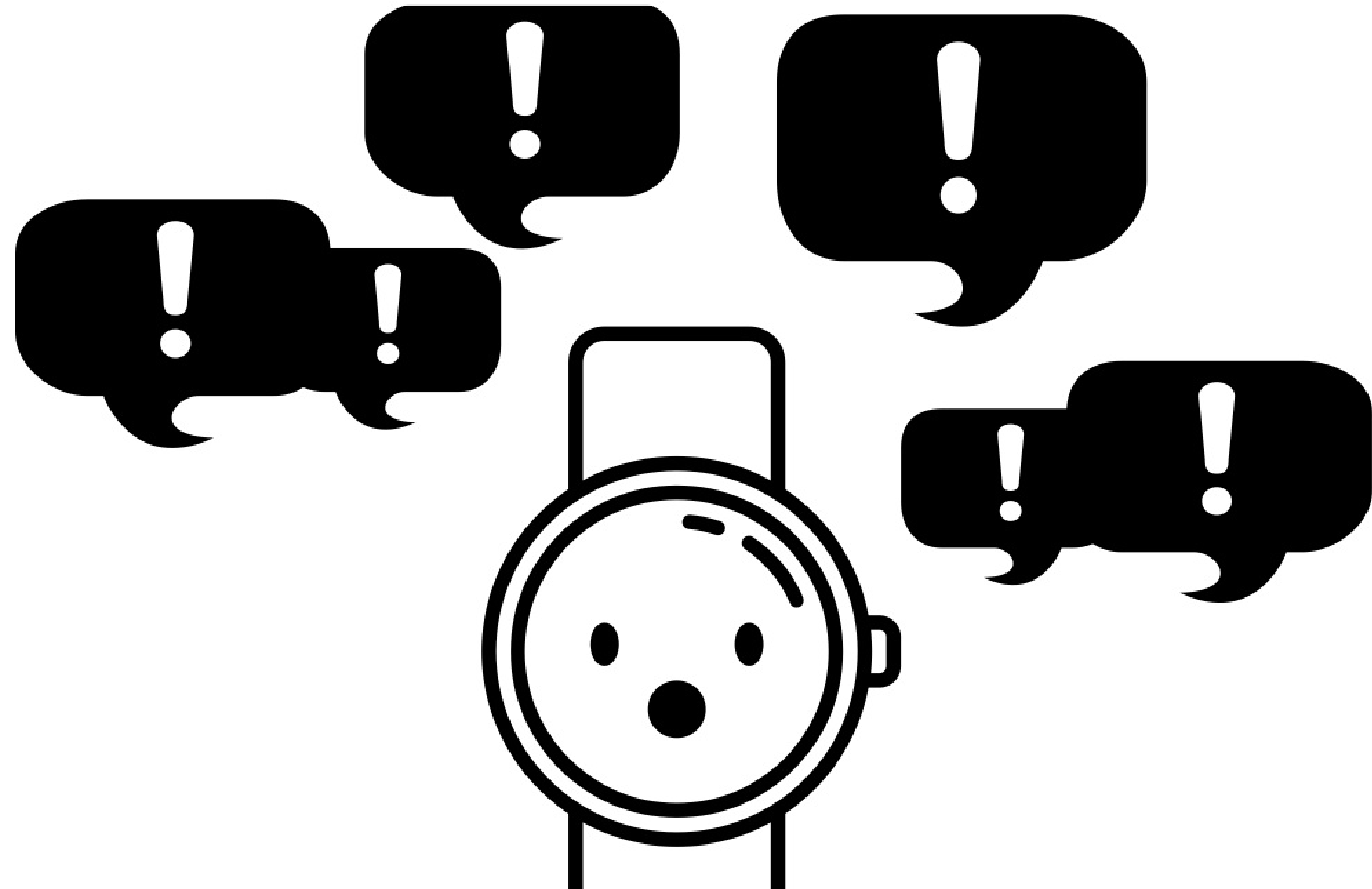
Amber Case
[@caseorganic | calmtech.com](#)

20 billion devices may
be online by 2020. -Cisco

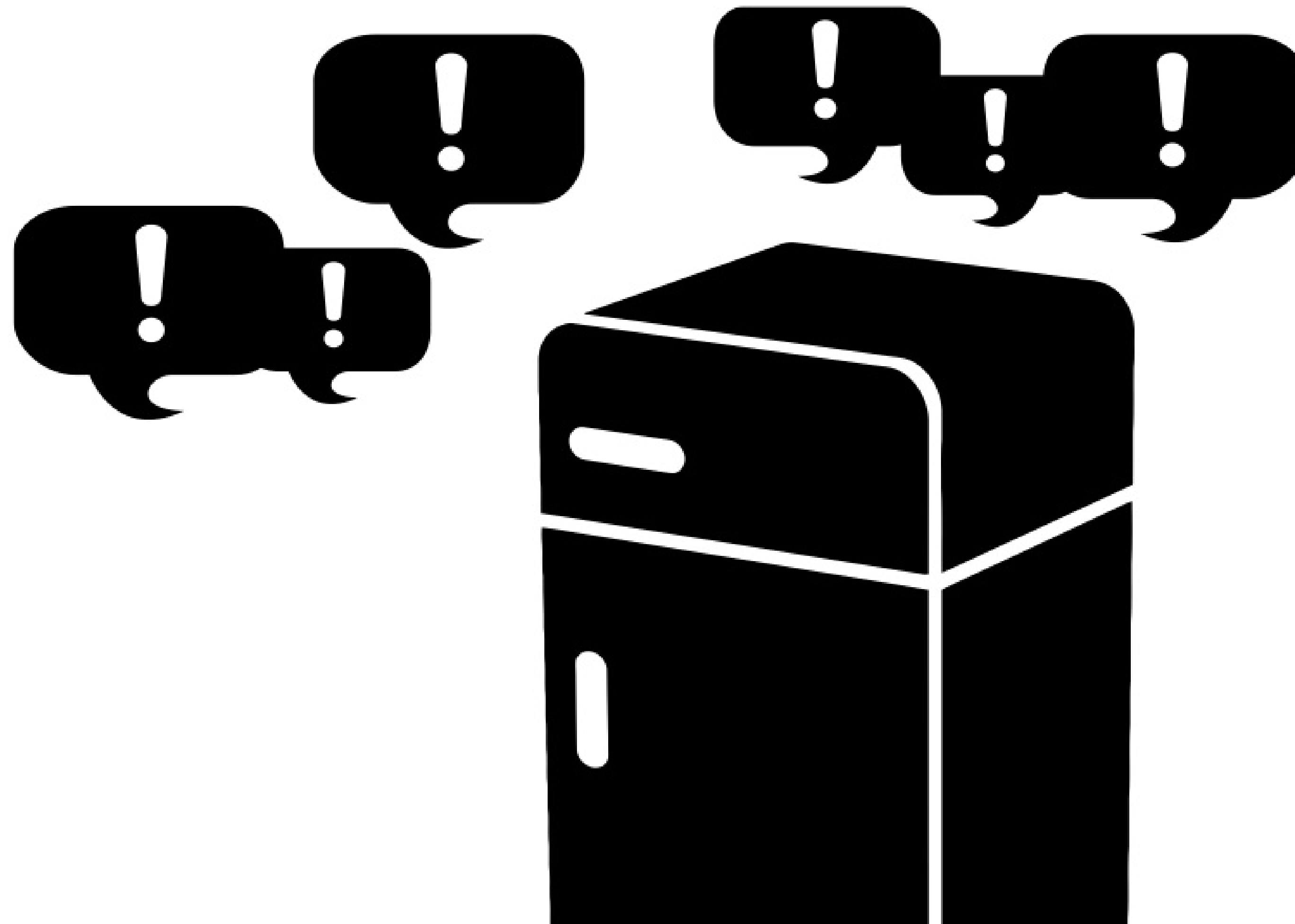
Sound good?

Consider...

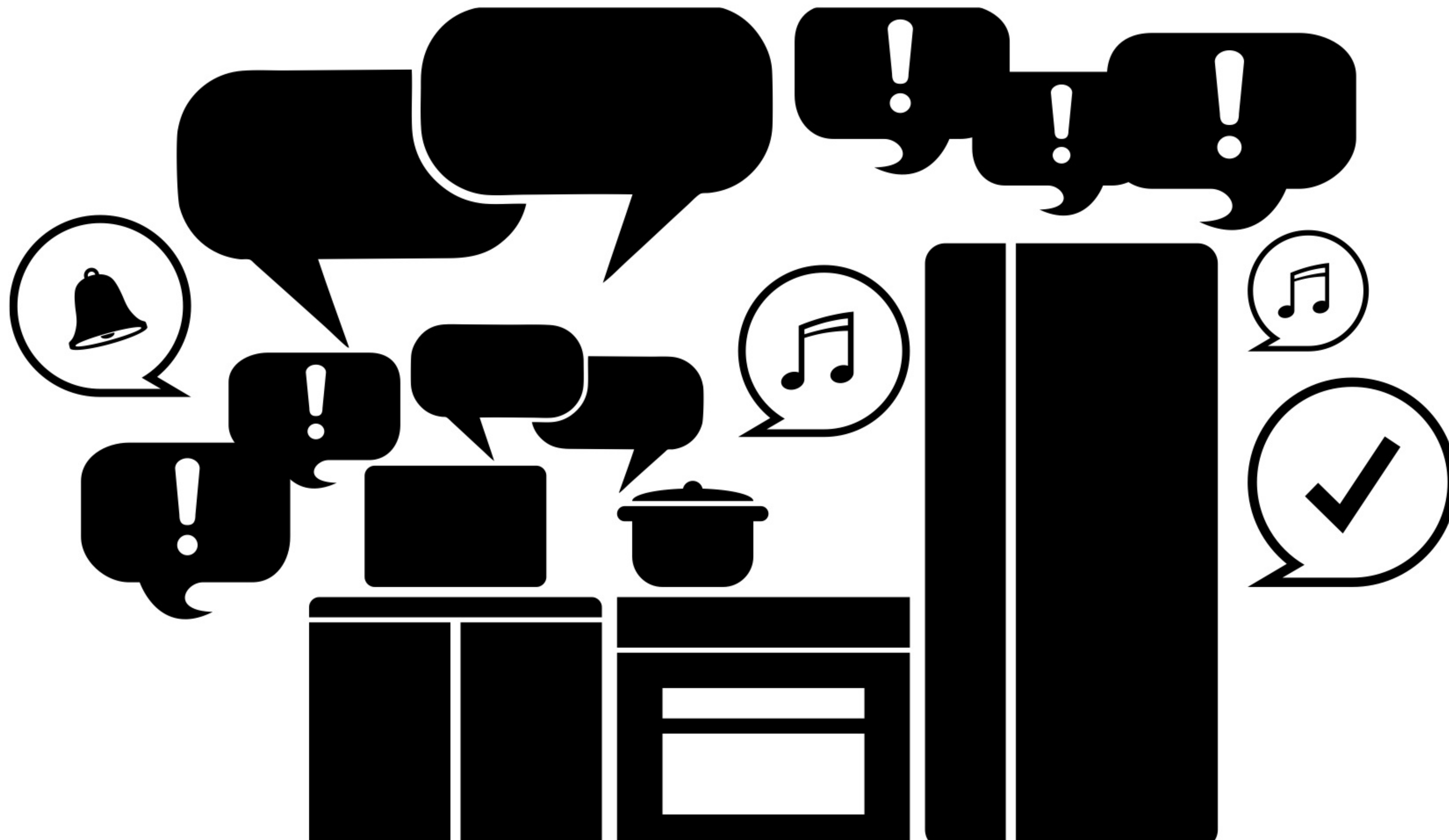
The "Smart" Watch



The "Smart" Fridge



The Dystopian Kitchen of the Future



Connected Animals



Petnet^{io}

The new Schrödinger's Cat



DATA CENTER SOFTWARE SECURITY TRANSFORMATION DEVOPS BUSINESS PERSONAL TECH SC

Data Center ▶ **Cloud**

Cats, dogs starve as web-connected chow chute PetNet plays dead

Failure forces humans to 'manually' feed ravenous pets



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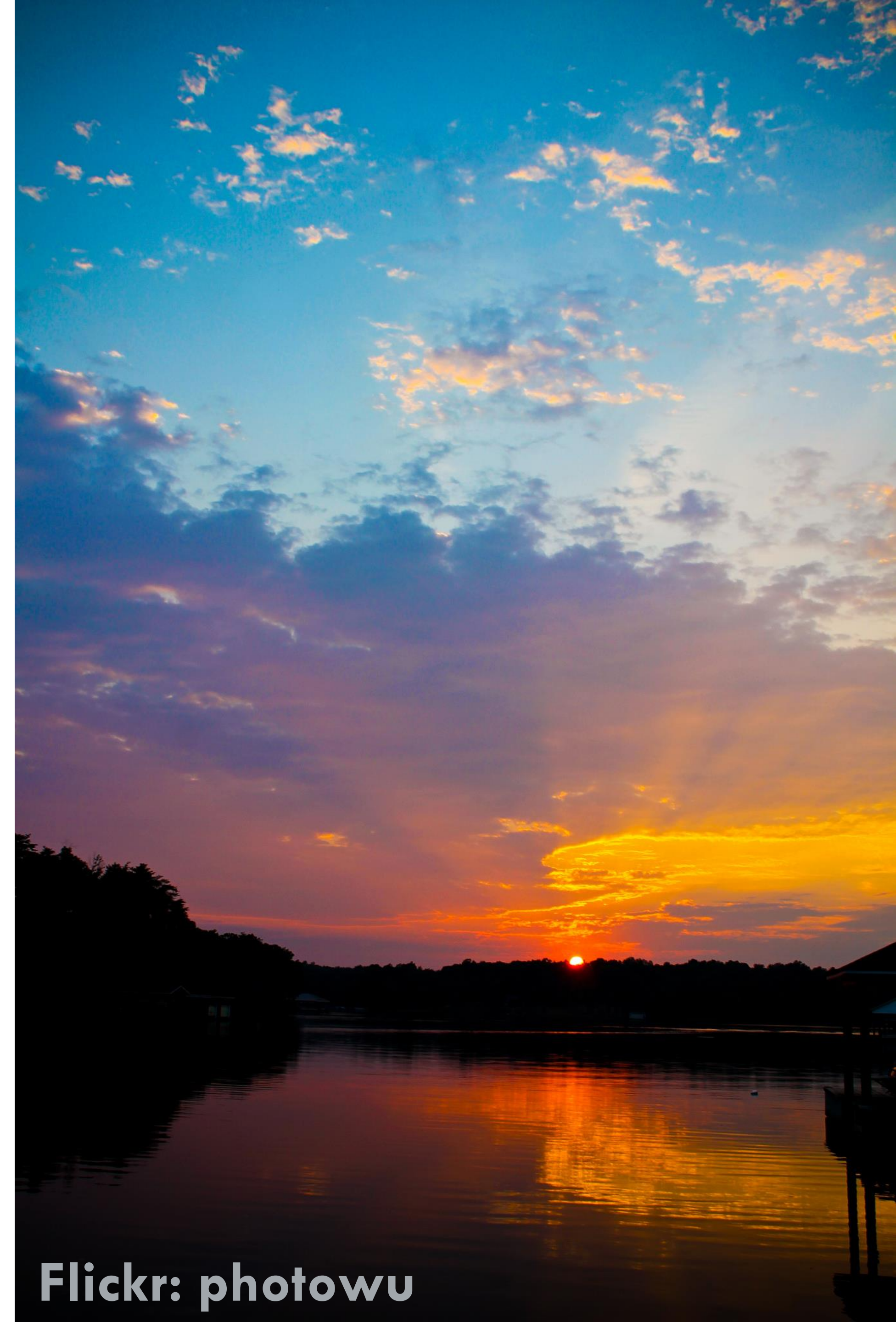
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Source: <http://readwrite.com/2016/08/01/petnet-shows-happens-iot-fails-dl1/>

Chronos and *Kairos* time

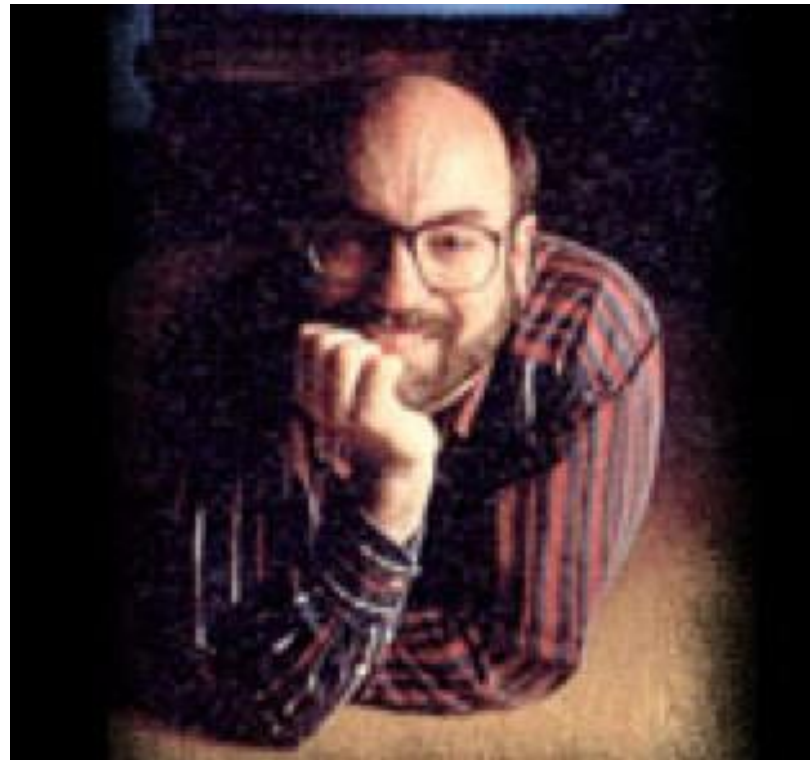


An era of interruptive technology

We need a *Calm Technology*

XEROX PARC: mid-90s

Mark Weiser



John Seeley Brown



THE COMING AGE OF CALM TECHNOLOGY¹

Mark Weiser and John Seely Brown

Xerox PARC

October 5, 1996

INTRODUCTION

The important waves of technological change are those that fundamentally alter the place of technology in our lives. What matters is not technology itself, but its relationship to us.

“A good tool is an invisible tool. By invisible, we mean that the tool does not intrude on your consciousness; *you focus on the task, not the tool.*”

Mark Weiser -- 1993

O'REILLY



Calm Technology

PRINCIPLES AND PATTERNS FOR NON-INTRUSIVE DESIGN

Amber Case

Calm Technology

Published 2015

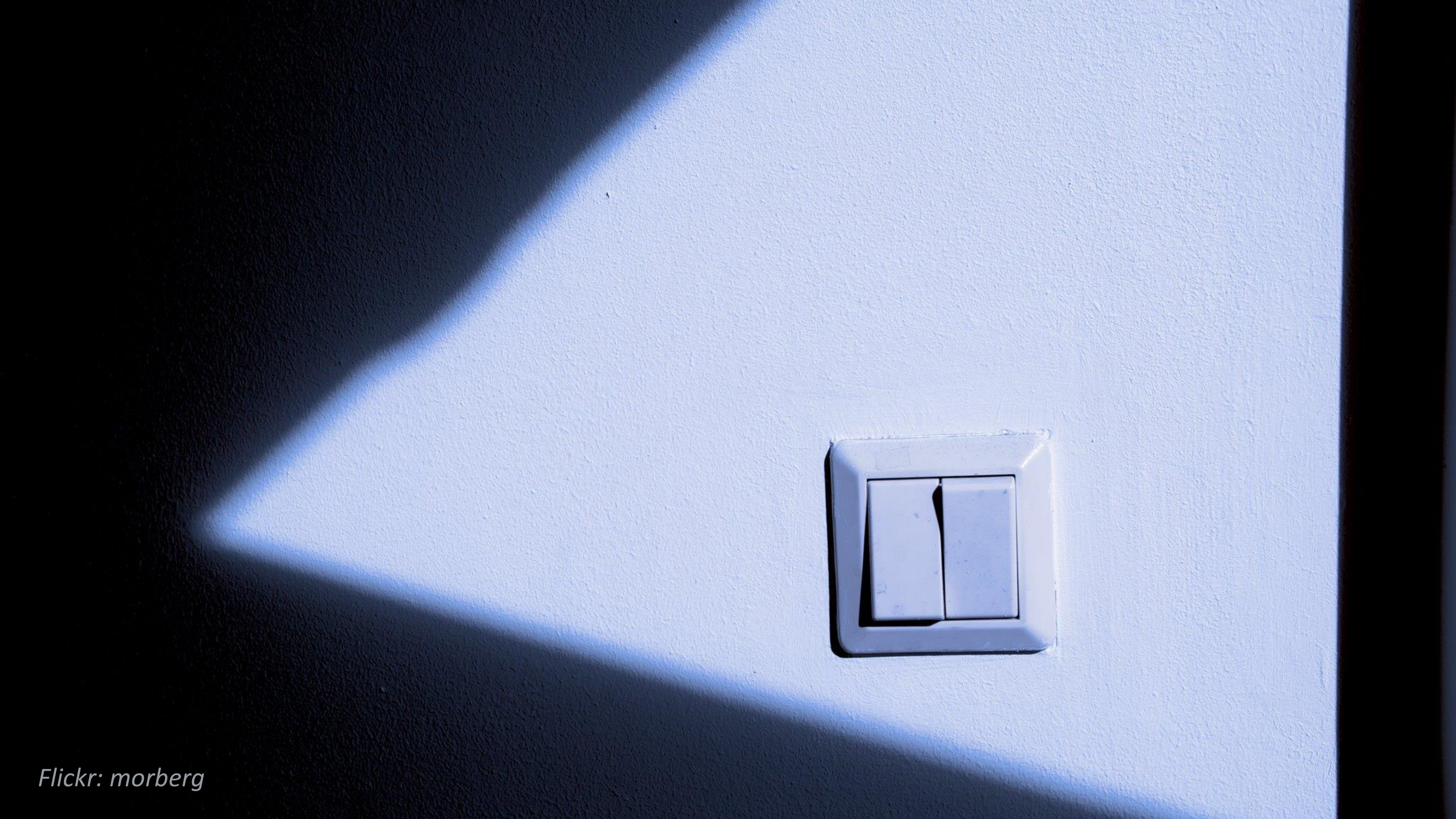
Calm Technology

5 years later

- More washers and dryers allow you to turn alarms off
- Microsoft adopting new principles of design influenced by calm technology
- Mui - designed to be calm
- Humane Technology Effort
- Design alternatives to Silicon Valley

Designing Calm Technology

I. Technology shouldn't require all of our attention, just *some of it*, and *only when necessary*



II. Technology should inform and *encalm*

III. Technology should empower the *periphery*



Weather Status Lighting

Hue Lightbulb connected to a weather report

Aaron Parecki
@aaronpk 2014

Seeing temperature



Figure 6. Heat Sink

IV. Technology should amplify the best of technology and the best of humanity.

1. Machines shouldn't act like humans
2. Humans shouldn't act like machines

Human Universals

No matter what changes,
human universals stay the
same.

01 / Belonging

02 / Safety

03 / Ease

04 / Awe

05 / Variety

Google

Search Google or type URL



Humans *alongside*
technology

Harmonious design: humans alongside technology



Onta Yaki Ceramics in Hita - Kyushuu prefecture



'Omotenashi'



Flickr: mrhayata

'Omotenashi' and Automation



V. Technology can communicate,
but it *doesn't need to speak*

The Roomba Robotic Vacuum Cleaner

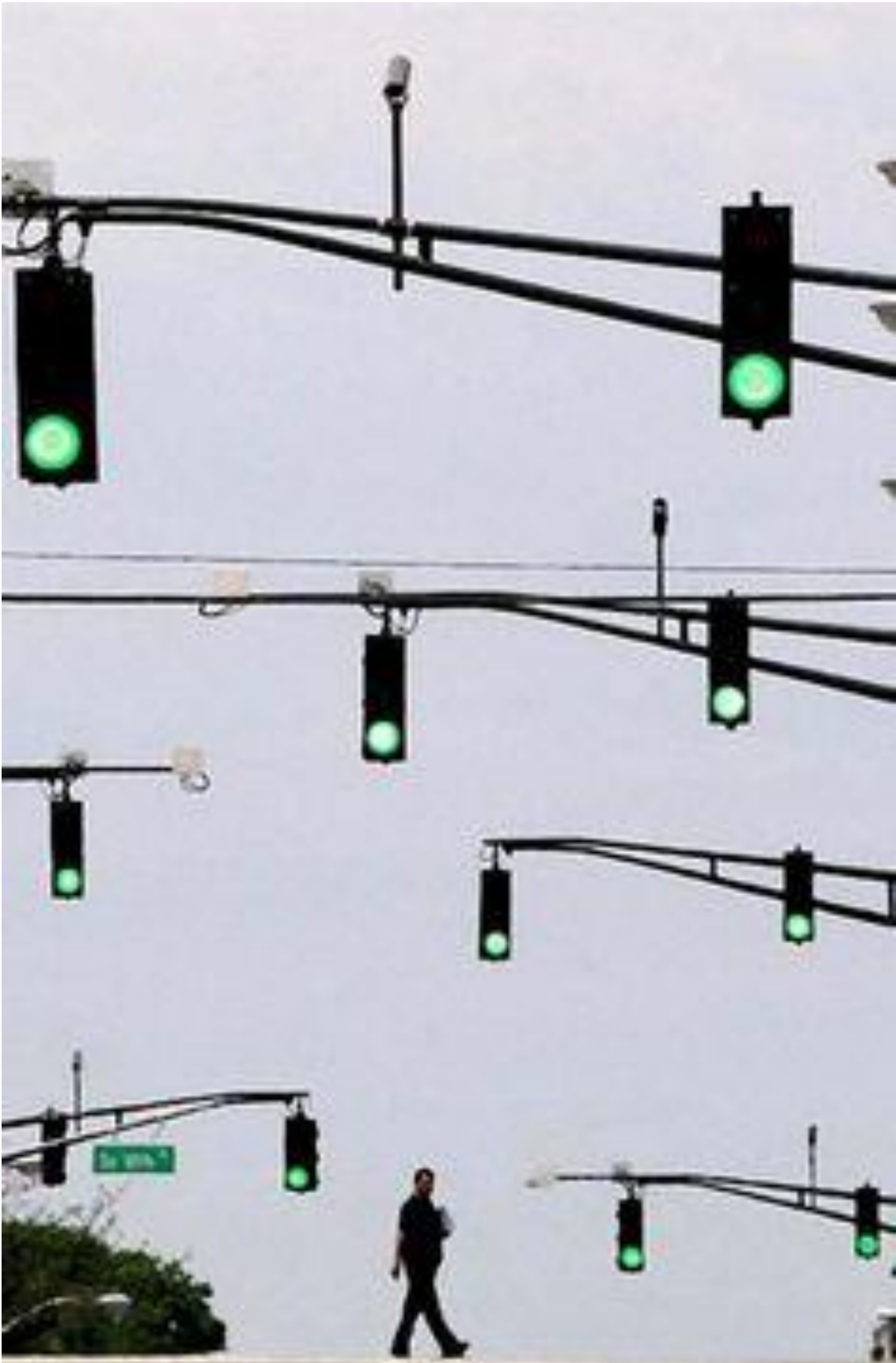




VI. Technology should work
even when it fails

VII. The right amount of technology is the minimum amount to solve the problem

Street Lights



Toilet Occupied Sign



Good design allows people to accomplish their goals in the least amount of moves

Calm Technology allows people to accomplish the same goals with the *least amount of mental cost*

A person's primary task should not be computing, but being human.

The scarce resource in the 21st
Century will not be *technology*.
It will be *attention*. - Mark Weiser

8 Principles at Calmtech.com

CalmTechnology.com

Papers

People

Products

Press

PARC

The world around is made up of information that competes for our attention. How much is necessary? How much is not?

We cannot interact with our everyday life in the same way we interact with a desktop computer.

Technology shouldn't require all of our attention, just some of it, and only when necessary.

Take a teapot, for example. It tells us when it is ready, and is off or quiet the rest of the time. If technology works well, we can ignore it most of the time.

"The most profound technologies are those that **disappear**. They weave themselves into the fabric of everyday life until they are **indistinguishable from it.**"

-Marc Weiser (1952-1999) Xerox Parc, 1988

Thank you very much!

Amber Case | @caseorganic

<http://caseorganic.com>

case@caseorganic.com

<http://calmtech.com>