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THE GLOBAL SPOTLIGHT ON UK INNOVATION

GREAT
BRITAIN & NORTHERN IRELAND

WHY INVEST IN: DIGITAL ECONOMY

DATA AND INTERACTION

Pilgrim Beart

AlertMe LTD & 1248 LTD

@pilgrimbeart @alertmesays @1248_IO

TODAY

- Intro
- AlertMe
  - Connected Home!
  - Scaling!
  - UX!
- IoT
- 1248
  - HyperCat!
  - Openness!

- Engineering Innovation
  - Computers
  - Products
  - Companies
  - Industries

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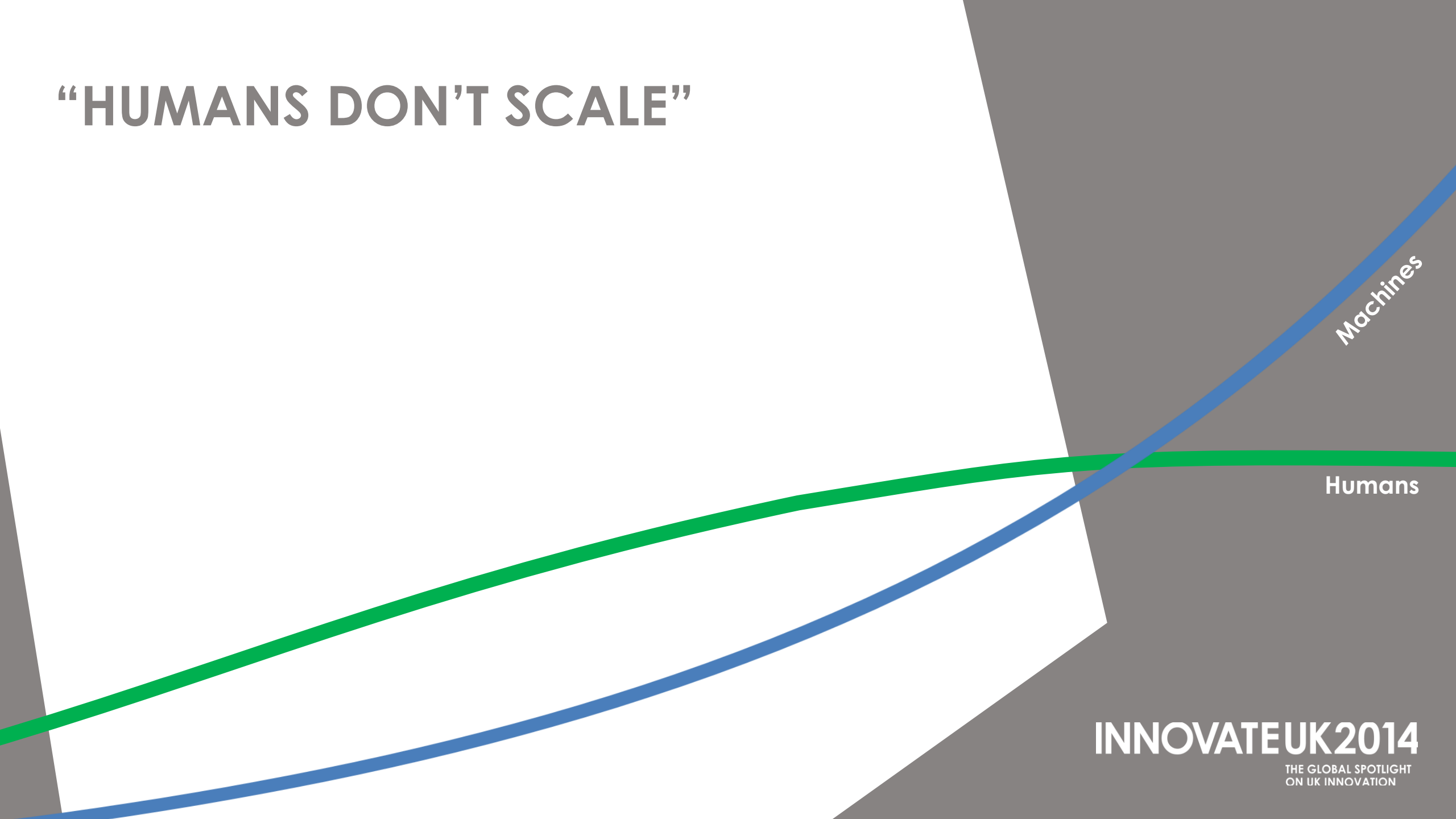
“HUMANS DON’T SCALE”



CONNECTED HOME

- Not “Home Automation”
- Inexorable trends
  - Connectivity (homes, people, devices)
- Killer apps
  - Security
  - Energy (£30bn/y)
  - Telecare

ALERTME

Modular services that are extendible, avoiding applications in siloes.
Delivering across a wide range of devices, communication protocols and sectors.

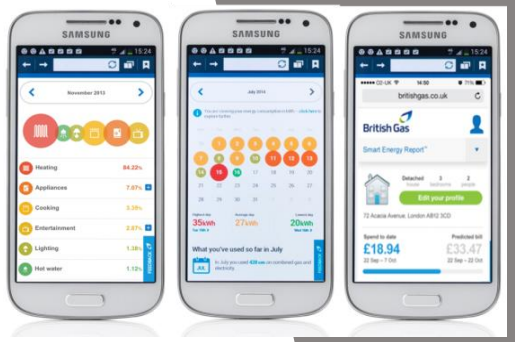
Energy Controls
'Hive'

Control your heating / hot water remotely, predict schedule based cost and link occupancy for intelligent scheduling

Home Automation
'Iris'

A modular set of home automation services, user configurable rules and messaging options e.g. alarm / sensor notification, event triggered recording

Energy Analytics
'Smart Energy Report'



Data analytics for energy consumption trends by category, normative comparisons and tips / advice to save money extending to occupancy based scheduling

SCALING UP

1. Make it work
   - For every 1 way it can work, there are 100 ways it can not work

2. Make it scale
   - Resilience. Making a reliable whole out of unreliable parts
   - Scale in multiple directions (users, apps, device-types, partners)

3. Make it scale cost-effectively
   - Minimise human intervention
   - Process. Automated device adoption (canonical forms)
   - Be able to delegate or automate everything (openness)

- Even simple questions like "is it working?" (SLA) become non-trivial
  - Because of the number of moving parts

- Well-architected platform releases potential to add value in s/w
  - Synthetic devices
  - Sensor fusion

OMNIA™

Engineering Best Practice

5 years 'real world' deployment experience informing architectural and operational principles of SCALABILITY, AVAILABILITY, MAINTAINABILITY AND INTEROPERABILITY

Distributed Service Orientated Architecture, best practice CI/CD

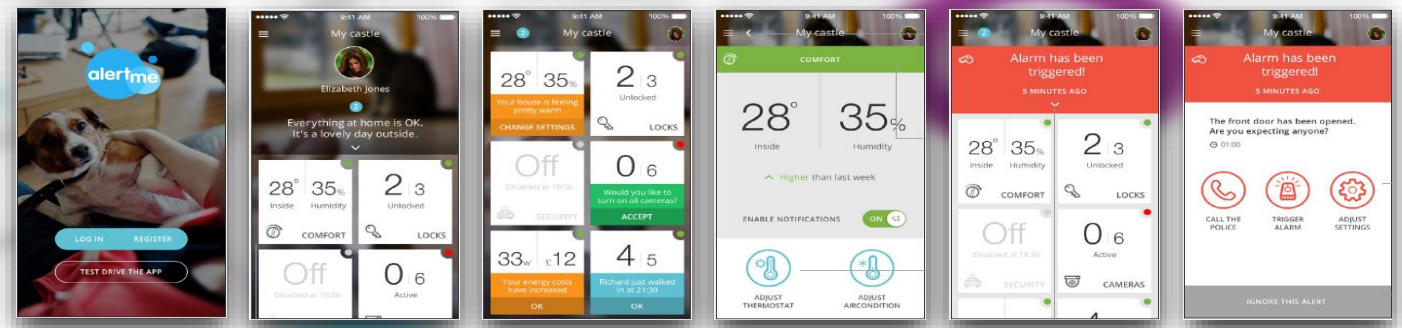
The 'Uniqueness' Factors

Portability: To run software in the cloud, on the hub or in other CPE

Device Adoption: Standardising device and network protocol adoption

Synthetic Devices: Combining hardware devices and disaggregated device data in software

Sensor Data Fusion: Using data from multiple sensors & external data for 'sentient awareness'



UX

alertme

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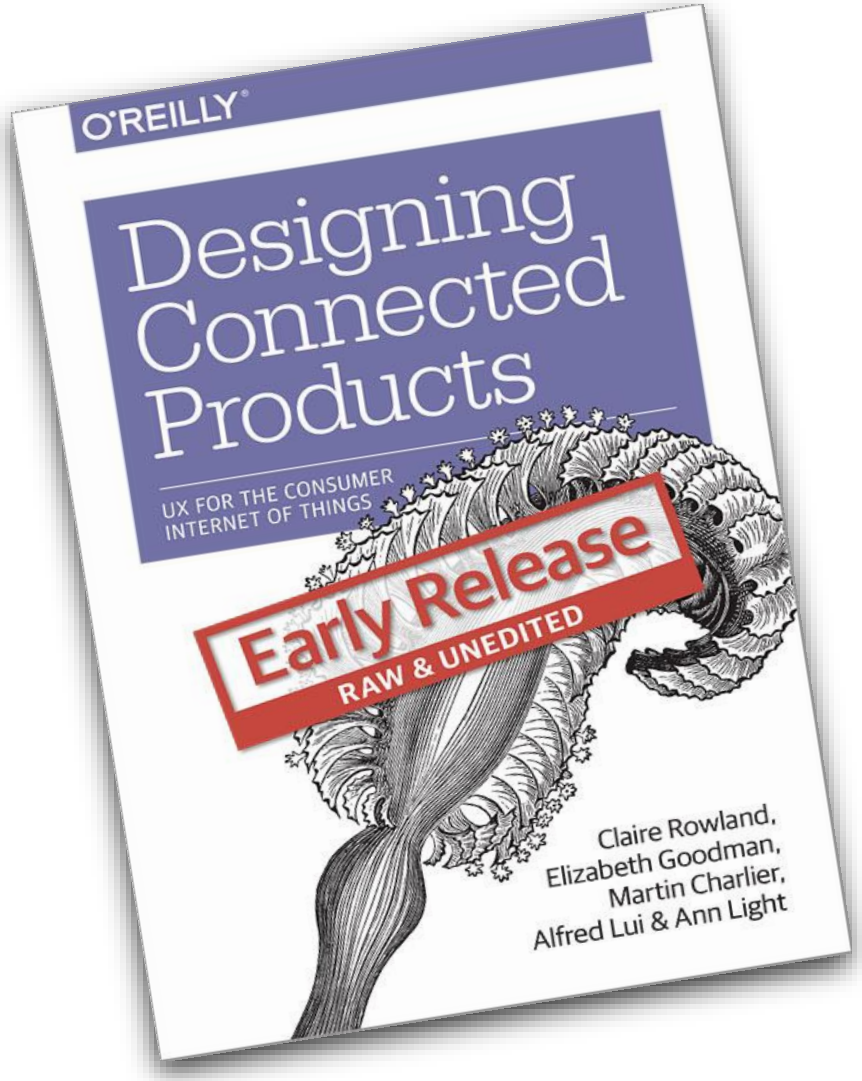
UX FOR IOT

- Non-modal
- Subconscious

- Info->
- Control->
- Automate



alertme

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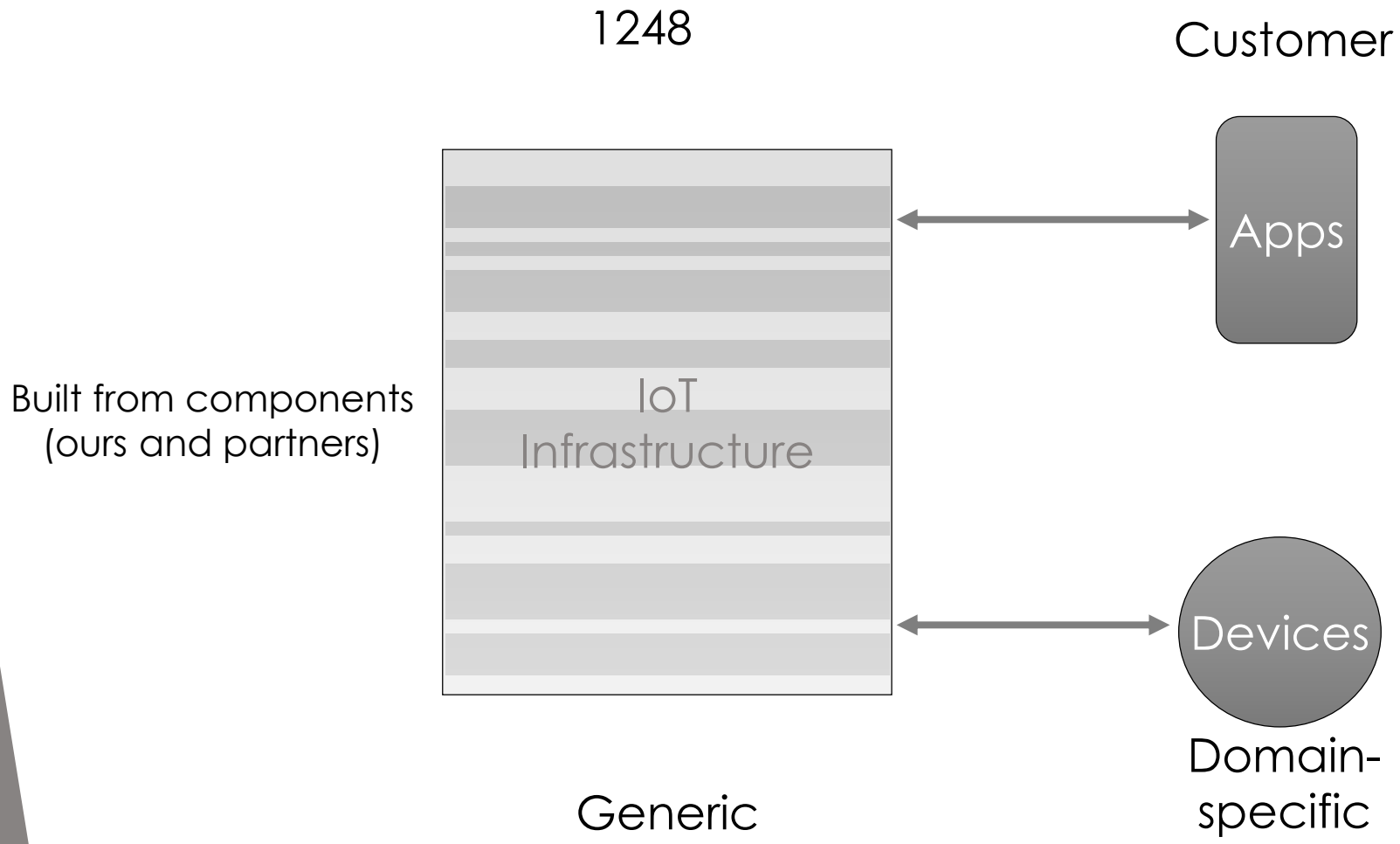
PROPOSITION



No lock-in: open infrastructure, not a closed platform.
Stable API's: we run on the tech treadmill so you don't have to.

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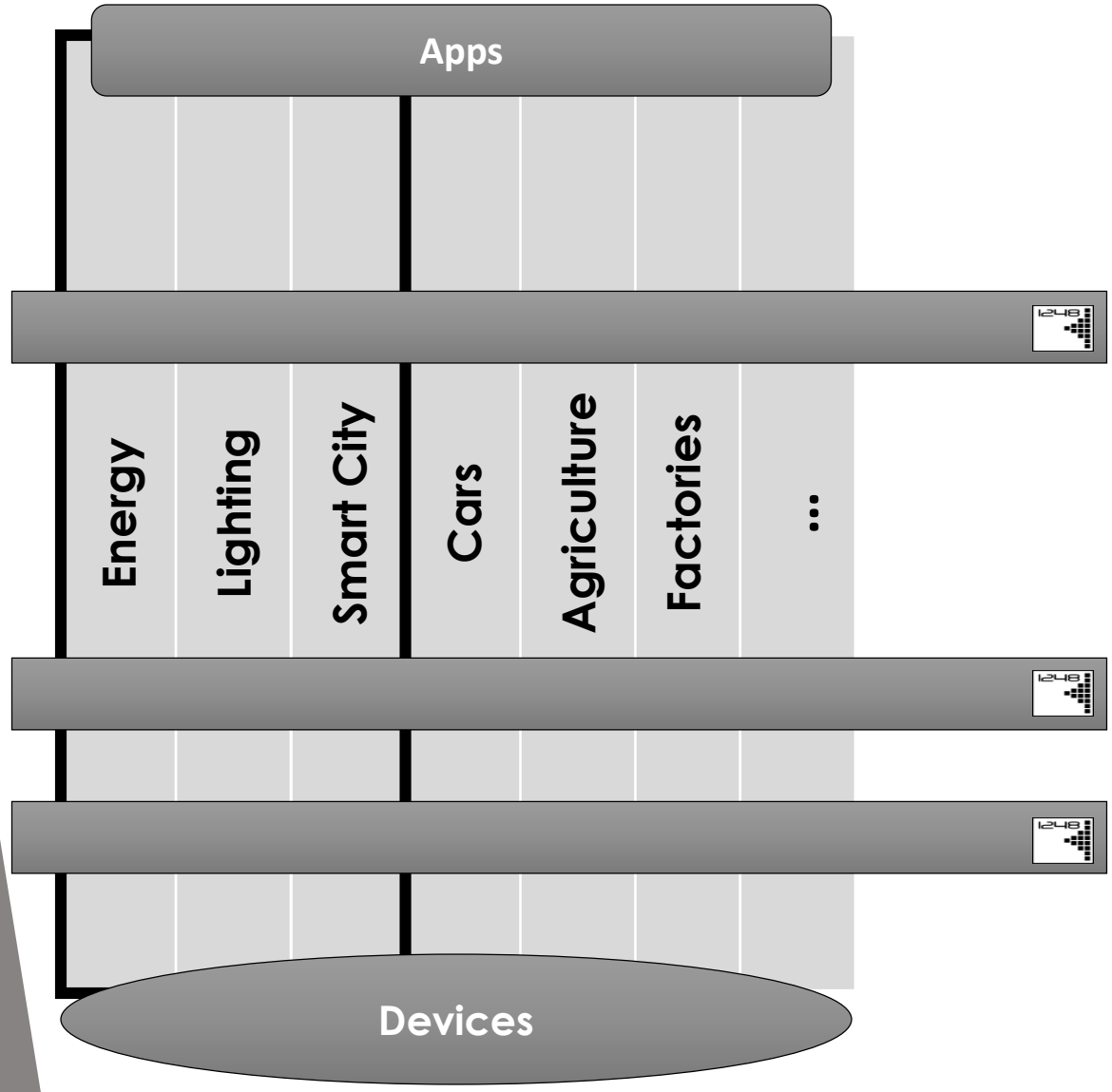
VERTICAL SILOS… TO HORIZONTAL LAYERS



HYPER/CAT

Geras™ TSDB

HyperWeave™ AP

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HYPERCAT CONSORTIUM (2013)

1248

AIMES GRID SERVICES

alertme creating smart homes

amey

ARM

avanti communications

Balfour Beatty

bre

BT

carillion

Critical software

Ctrl SHIFT

eDF

EnLight ADVANCED LIGHTING TECHNOLOGY

Mission:Explore

flexeye

GUILDFORD BOROUGH

IBM

intel

IntelliSense.io SENSE. PREDICT. ACT

intouch

LIVING PLANIT

London City Airport Get closer.

Merseyside Transport Trust

milligan inspiring retail

neul

ODI Open Data Institute

plāçr

science scope Linking ICT with Science

SH&BA Smart Homes & Buildings Association

Stakeholder Design WORLD CLASS. WORLD FIRST.

traak

HIGHWAYS AGENCY

xively

RED NINJA STUDIOS

City of Westminster

University of BRISTOL

UNIVERSITY OF CAMBRIDGE

UNIVERSITY OF SURREY

LANCASTER UNIVERSITY

UNIVERSITY OF BIRMINGHAM

UCL

The Open University

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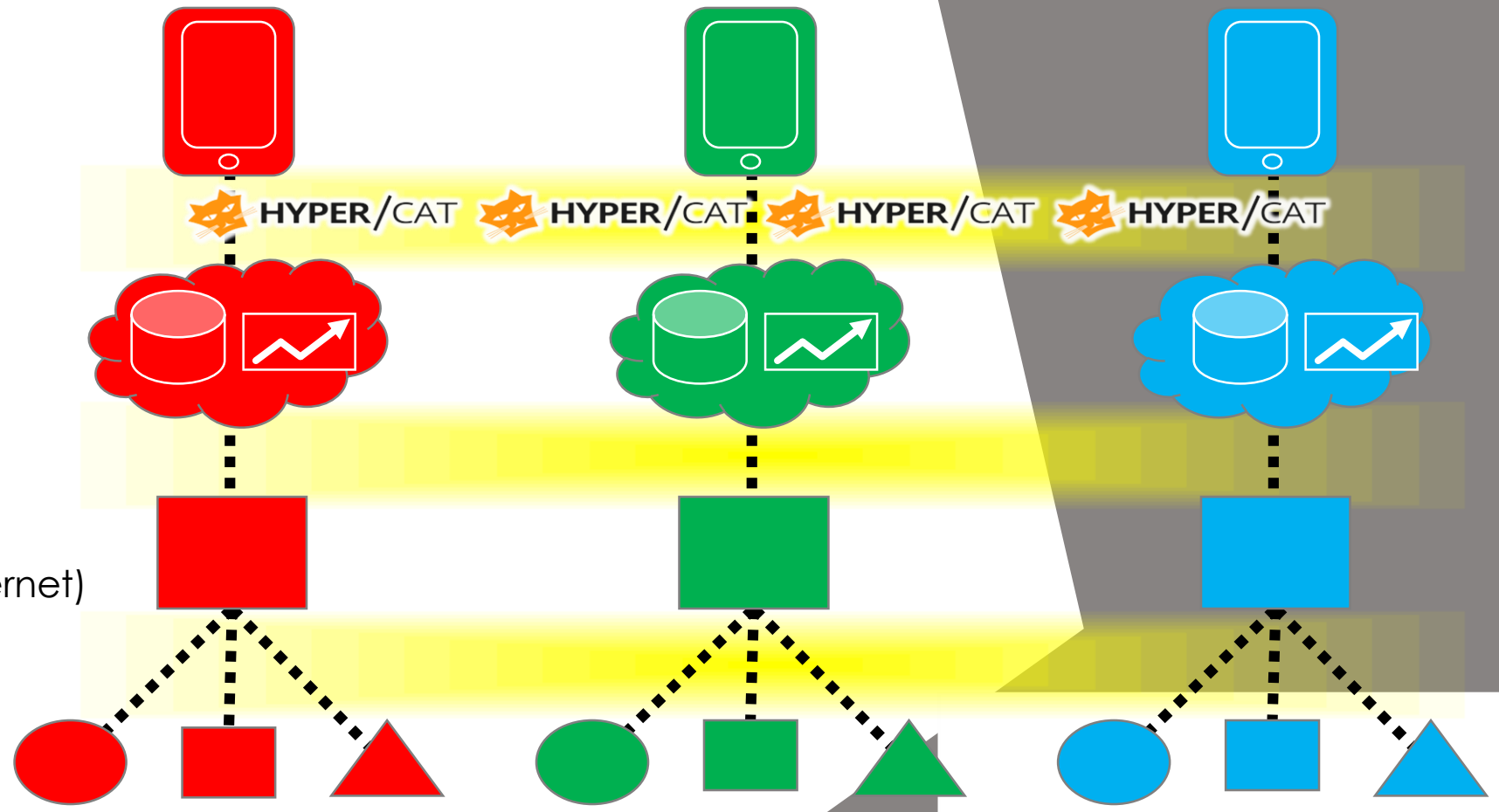
HYPER/CAT

Clients
(UX and other services)

Cloud Services
(Storage, analytics)

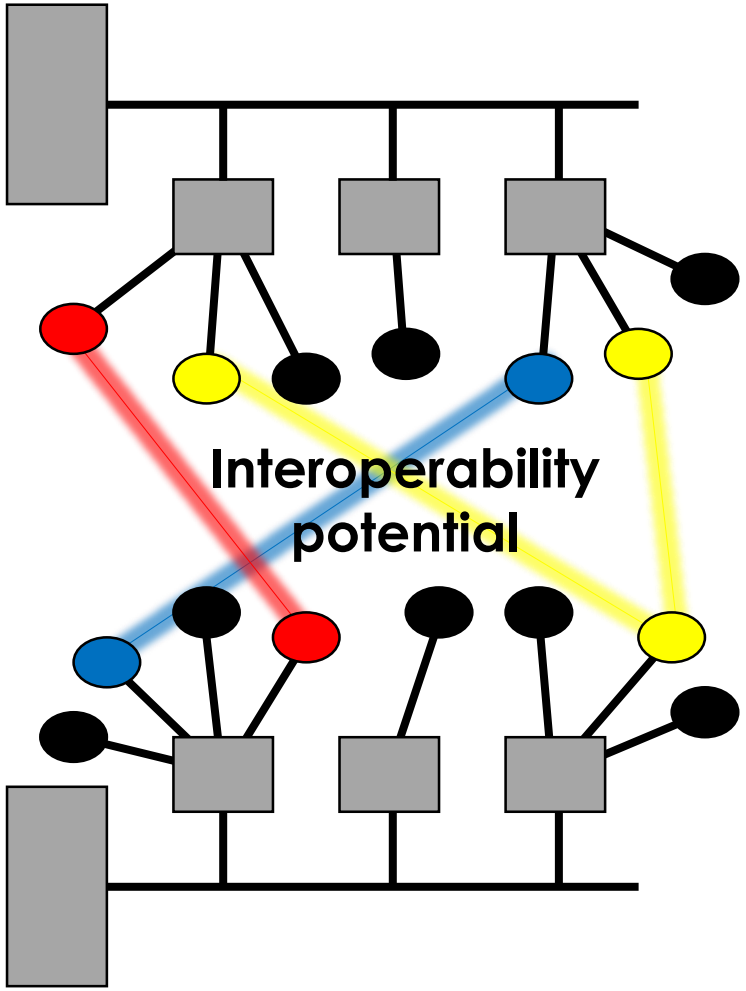
Gateways
(gets devices onto the Internet)

Devices
(sensors & actuators
in the real world)



HYPER/CAT

Allows discovery of interoperability



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