



Nexa Lunch Seminar:

## **What is “ownership” in an Internet of Things world?**

Hanne Melin  
eBay Inc. Public Policy Lab

# Today's seminar

“To think about the kind of smart society we want  
one that balances respect for tradition with confidence  
in the future”

Rob van Kranenburg  
[www.theinternetofthings.eu](http://www.theinternetofthings.eu)

Consumer expenditure accounts for 56% of EU GDP and is essential to meeting the Europe 2020 objective of smart, inclusive and sustainable growth.

European Commission, 2012 Consumer Agenda

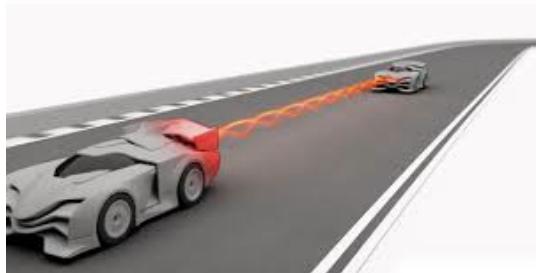
# A definition

Physical Object  
+  
Controller, Sensors, Actuators  
+  
Internet  
=

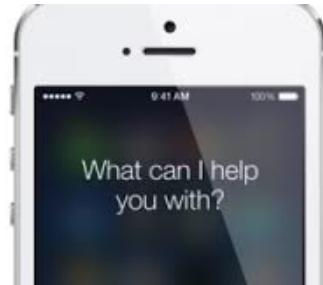
**Internet of Things**

Source: "Designing the Internet of Things", Adrian McEwen and Hakim Cassimally

# Fusion of product and service...



# ... through rich interfaces



*“... call it what you want, but it’s happening, and its potential is huge.*

*We see the IoT as billions of smart, connected ‘things’ (a sort of ‘universal global neural network’ in the cloud) that will encompass every aspect of our lives and its foundation is the intelligence that embedded processing provides.*

*The IoT is comprised of smart machines interacting and communicating with other machines, objects, environments and infrastructures.*

*As a result huge volumes of data are being generated, and that data is being processed into useful actions that can ‘**command and control**’ **things** to make our lives much easier and safer - and to reduce our impact on the environment.”*

Kaivan Karimi and Gary Atkinson  
“What the Internet of Things Needs to Become a Reality”

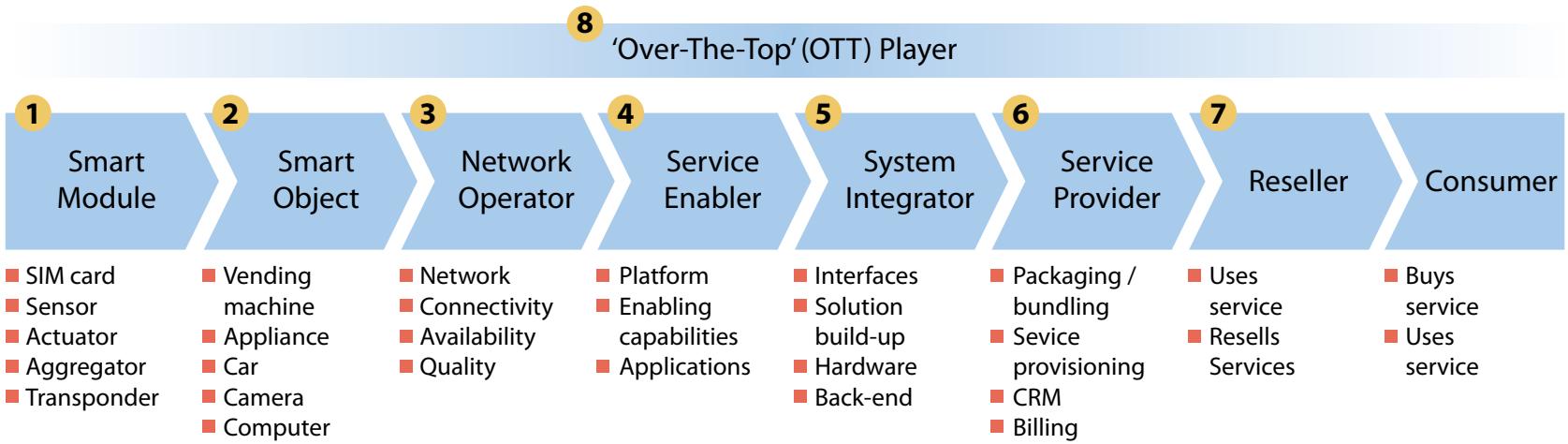
# Technology backbone

- Sensors and actuators
- Embedded processing
- Connectivity and the cloud



**The Robot Factory**  
Hannes Bergkvist teaching me  
the basics of robot building.

# A scattered, complex and dynamic value chain for smart solutions...



Source: "Roadmap for the Emerging 'Internet of Things'", 2014 Carré & Strauss.  
Illustration is adapted from "Wanted: smart market-makers for the 'Internet of Things'", Arthur D Little, Prism 2011.

# ... with fluid positions ...



8/2014 Lays and Uber collaborate for "Do Us a Flavor" picnic.

8/2014 United, Hyatt, Starbucks and 11 others are charter members of Uber's API.

8/2014 Ikea hosts customers to stay over night at stores via Airbnb platform.

9/2014 Daimler acquires RideScout to become more entrepreneurial.

9/2014 Vodafone partners with Mila for customer service support platform.

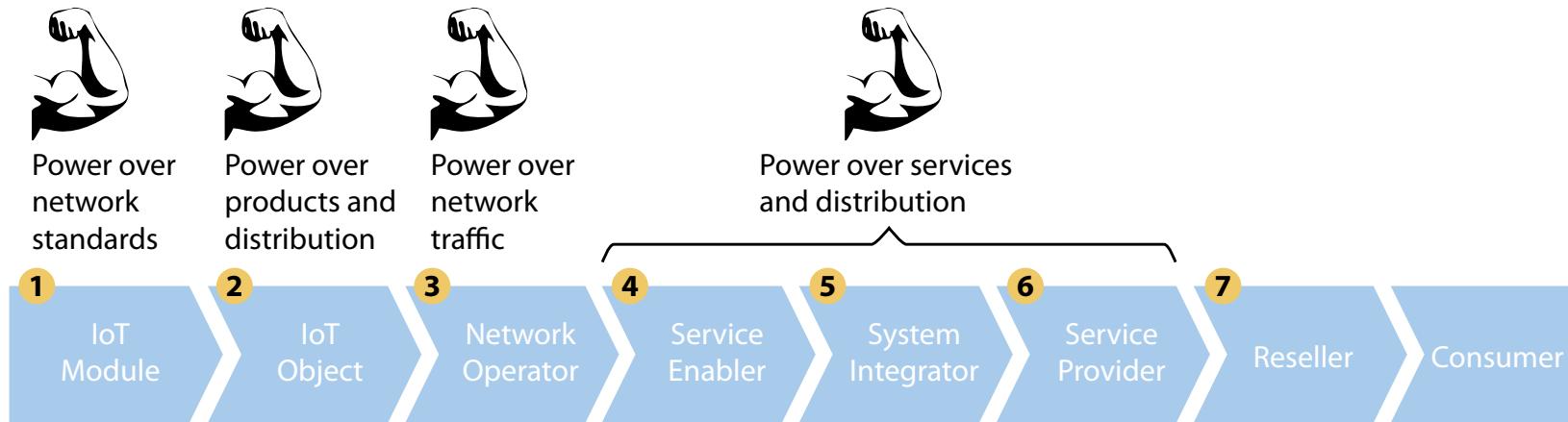
9/2014 Verizon unveils enterprise app for car rental agencies.

9/2014 Famed Lyft driver, DiscoLyft, partners with Toyota for marketing campaign.

# ... fluid positions



RE-SHARERS    NEO-SHARERS



The IoT distributes significant powers to various stakeholders in the value chain which can be potentially exercised to the detriment of others.

“Roadmap for the Emerging ‘Internet of Things’”, 2014 Carré & Strauss

# A “new normal”?

*“I never imagined that Amazon actually had the right, the authority or even the ability to delete something that I had already purchased.”*



**... if the term ‘sale’ ... were not given a broad interpretation ...  
suppliers would merely have to call the contract a ‘licence’  
rather than a ‘sale’ in order to circumvent the rule of exhaustion  
and divest it of all scope.**

Case C-128/11



*“While it's against our terms of service to sell your device, we don't plan on disabling any Explorer's device.”*

# A “new normal”?

... could Nintendo have protected its own or licensed games without preventing or restricting the use of its consoles to play ‘homebrew’ games?

The Advocate General in Case C-355/12

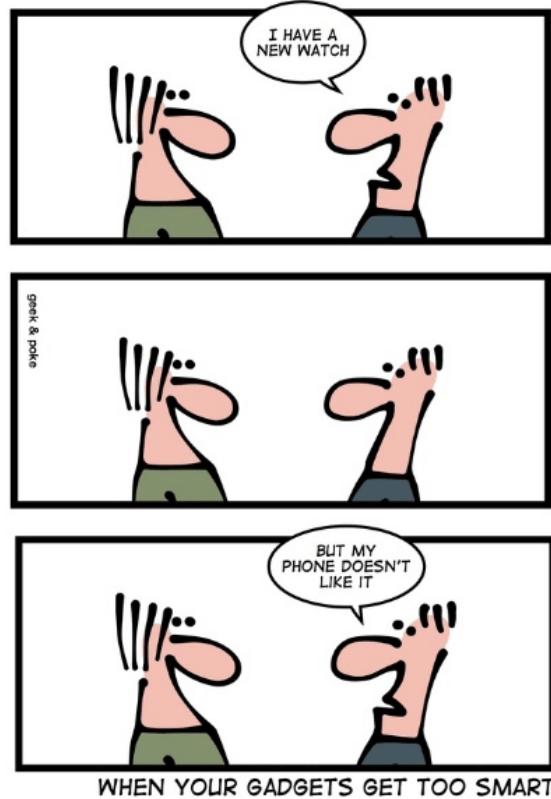
*“It is critical for performance and safety reasons that the system only brews Keurig brand packs.”*  
Green Mountain



*“You'd think Green Mountain would've figured out that they have enough very clever people as customers - and they'd not have made us go to these troubles.”*

**Keurig 2.0 Hack**

# A “new normal”?



... it is necessary to examine whether other measures ... could have caused less interference with the activities of third parties not requiring authorisation by the rightholder ...

Case C-355/12

# A “new normal”?

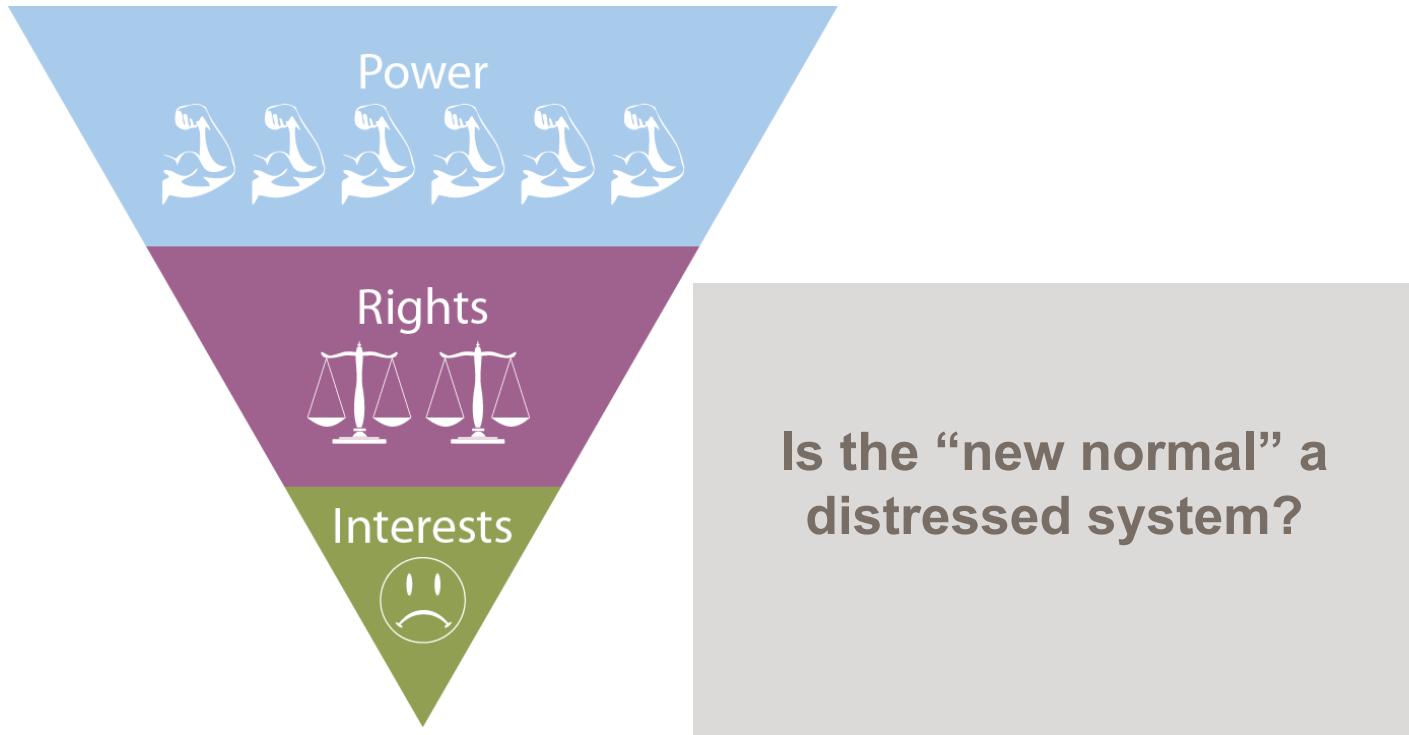
... the functionalities corrected, altered or added on the basis of [a maintenance agreement] form an integral part of the copy originally downloaded and can be used by the acquirer of the copy ...

Case C-128/11



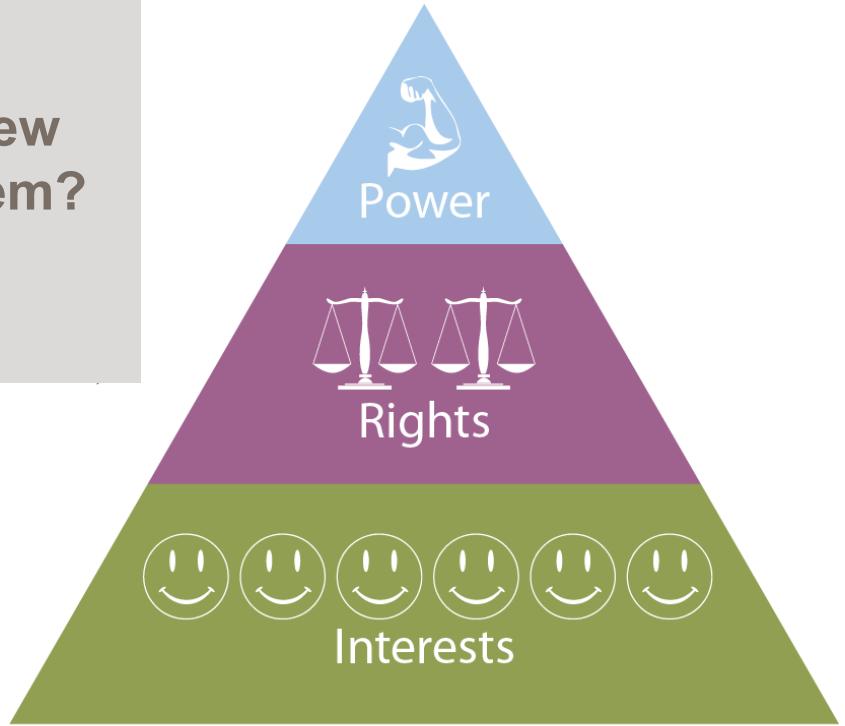
Empowered consumers who ... can actively participate in the market and make it work for them by exercising their power of choice ...

European Commission, 2012 Consumer Agenda



*Comparatively few disputes are resolved through reconciling interests, while many are resolved through determining rights and power.*

**What would make the “new normal” an effective system?**



*Most disputes are resolved through reconciling interests, some through determining who is right, and the fewest through determining who is more powerful.*

Empowering consumers means providing a robust framework of **principles** and **tools** that enable them to drive a smart, sustainable and inclusive economy.

European Commission, 2012 Consumer Agenda

# Principles

- How do consumer interests look when “Everything-as-a-Service” meets commerce?
- Do consumers enjoy the necessary rights to drive inclusive and sustainable growth in an IoT world?
- Are consumers equipped with the requisite power to assert their position in the IoT value chain?

# Tools

- How do we raise awareness?
- How do we empower citizens/consumers in a broad sense, including through technological means?
- For instance, are design choices available that promote balanced interests and suppress straightforward use of (market) power?

# Today's seminar

Start discussing and thinking about the “new normal”

Begin identifying areas and concepts for further research

Form a loose Community of Interested for information exchange?