

ECOSYSTEMS AND BUSINESS MODELS FOR THE SMART HOME MARKET

ANDREA CARUGATI, ASSOCIATE DEAN
AARHUS BSS



SCHOOL OF BUSINESS AND SOCIAL SCIENCES
AARHUS UNIVERSITY

IoTWeek

Aarhus,
17-21 June 2019

ANDREA CARUGATI
ASSOCIATE-DEAN FOR DIGITALIZATION

[HTTP://MGMT.AU.DK/SMART-HOME/](http://mgmt.au.dk/smart-home/)

SMART HOME

Digitale forretningsmodeller
for Smart Home virksomheder

Smart Home projektet er et forsknings- og innovationsprojekt med fokus på virksomheder, der udvikler, producerer, installerer eller servicere IoT baserede produkter og services til private hjem.

Målet er at udvikle ny viden og et udviklingskoncept, der kan hjælpe virksomheder i feltet med at udvikle strategier og nye digitale forretningsmodeller.



Smart Home udviklingsforløb

Smart Home Living Labs

Smart Home Living Labs er et forskningsbaseret udviklingsforløb med fokus på digitale forretningsmodeller for virksomheder inden for Smart Home feltet.



Endagskursus for
virksomhedsledere

Digital Ecosystem and Business Models for the Smart Home industry

Dette kursus stiller skarpt på Smart Home-industrien, og vi vil arbejde med de store linjer om digital ledelse, forretningsmodeller, marked og kunder.



Forskning

Viden

Nyheder

Om projektet

Tilmeld dig Living Labs

Tilmeld dig executive kursus

Read about the project



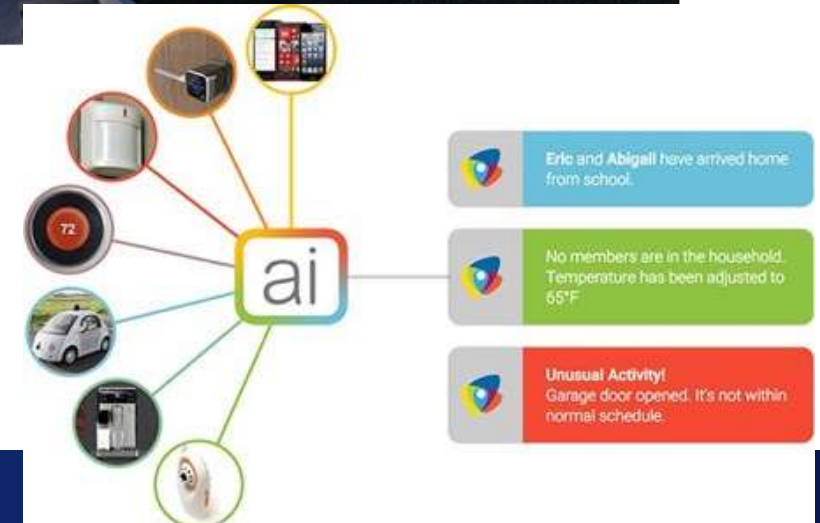
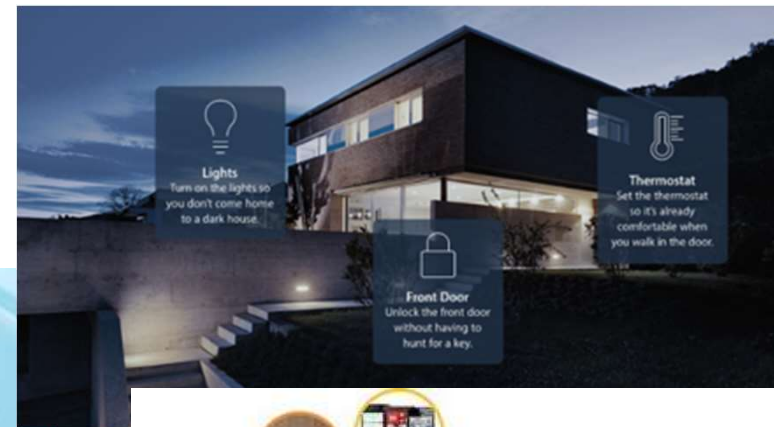
Tilmeld dig nyhedsbrevet



Pressekontakt



SMART HOME?



DEVICE TYPES

Control and Connectivity



- Gateways/hubs that are capable of controlling devices of all segments
- Smart speakers with a primary focus on control, and digital assistants
- Control buttons and smart plugs/sockets

Comfort and Lighting



- Digitally connected and controlled devices for living atmosphere improvement
- Smart lighting/bulbs
- Window/door sensors, shading devices, garage door controls

Security



- Digitally connected and controlled devices for burglar prevention and other security issues
- Motion sensors, door locks, security cameras, Hazard prevention devices like water or smoke sensors

Home Entertainment



- Connected and controlled devices for entertainment purposes
- Multiroom entertainment systems with entertainment focus (e.g. Sonos)
- Entertainment remotes

Energy Management



- Digitally connected and controlled devices for energy conservation
- Included products: Thermostats, Radiator controls, Temperature/ wind/ humidity sensors, Air condition controls

Smart Appliances



- Large appliances such as fridges, washing machines, dish washers, ovens
- Small appliances such as coffee machines, vacuum robots, microwaves

A CROWDED SPACE

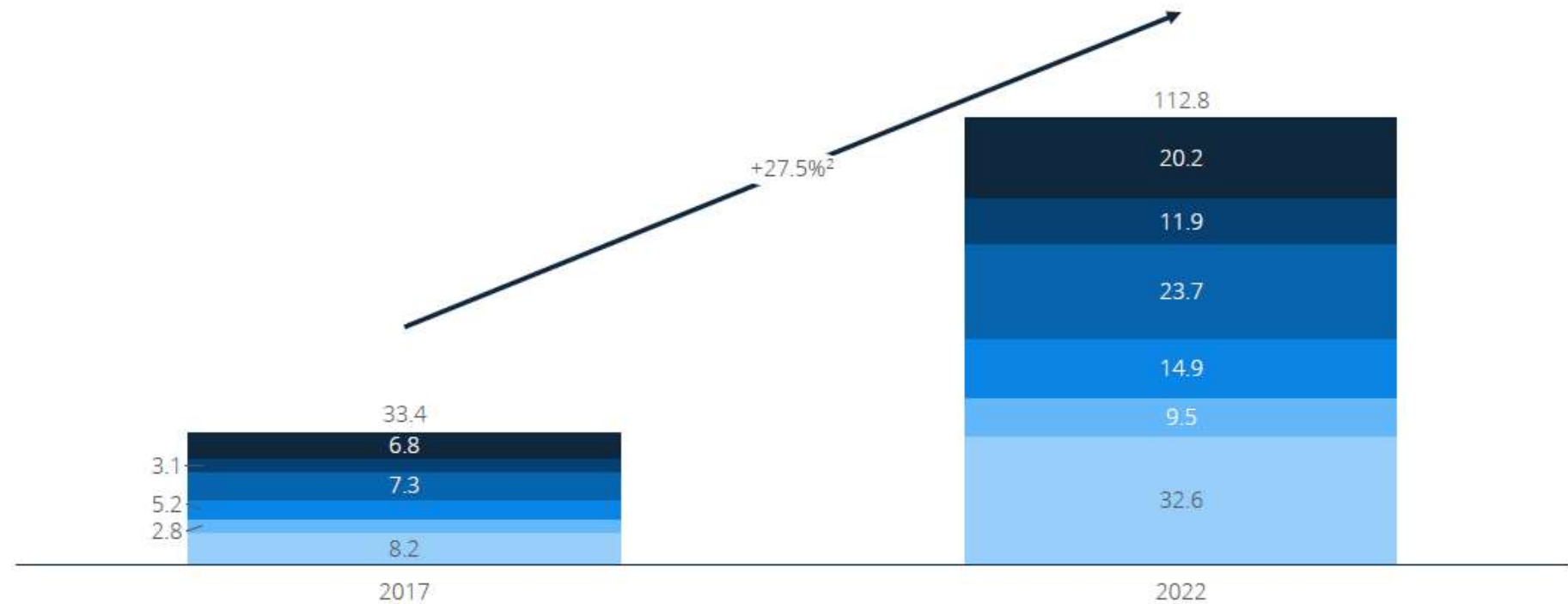
Representative Smart Home key players by type and segment¹

	Control and Connectivity	Comfort and Lighting	Security	Home Entertainment	Energy Management	Smart Appliances
Dedicated Smart Home companies						
Players entering the market from foreign industries						

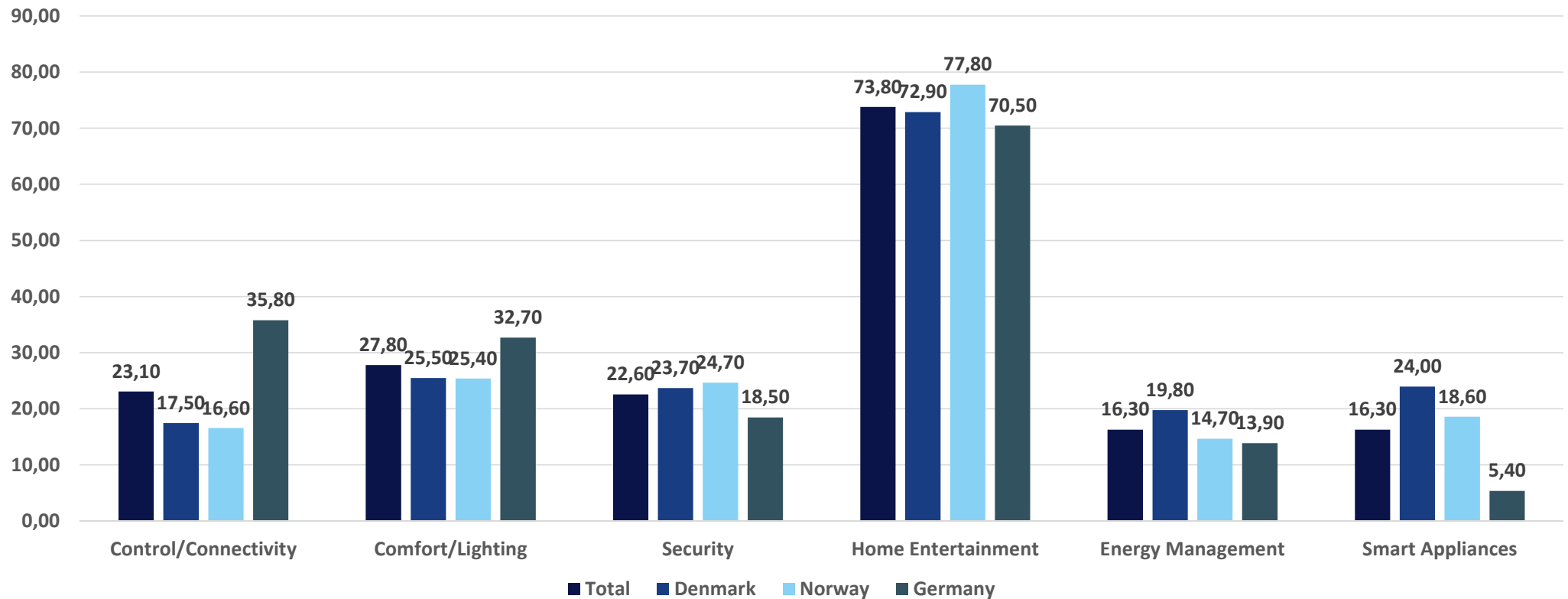
MARKET GROWTH

Global market sizes in billion US\$ and growth rate

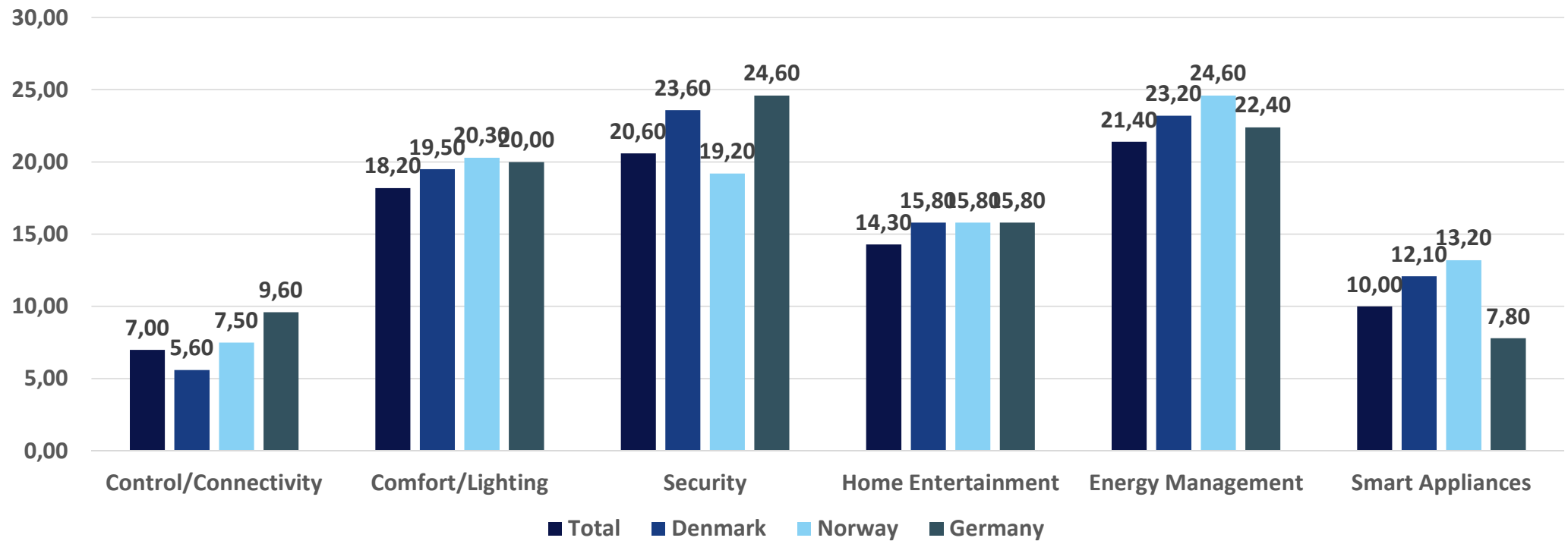
Control and Connectivity Comfort and Lighting Security Home Entertainment Energy Management Smart Appliances



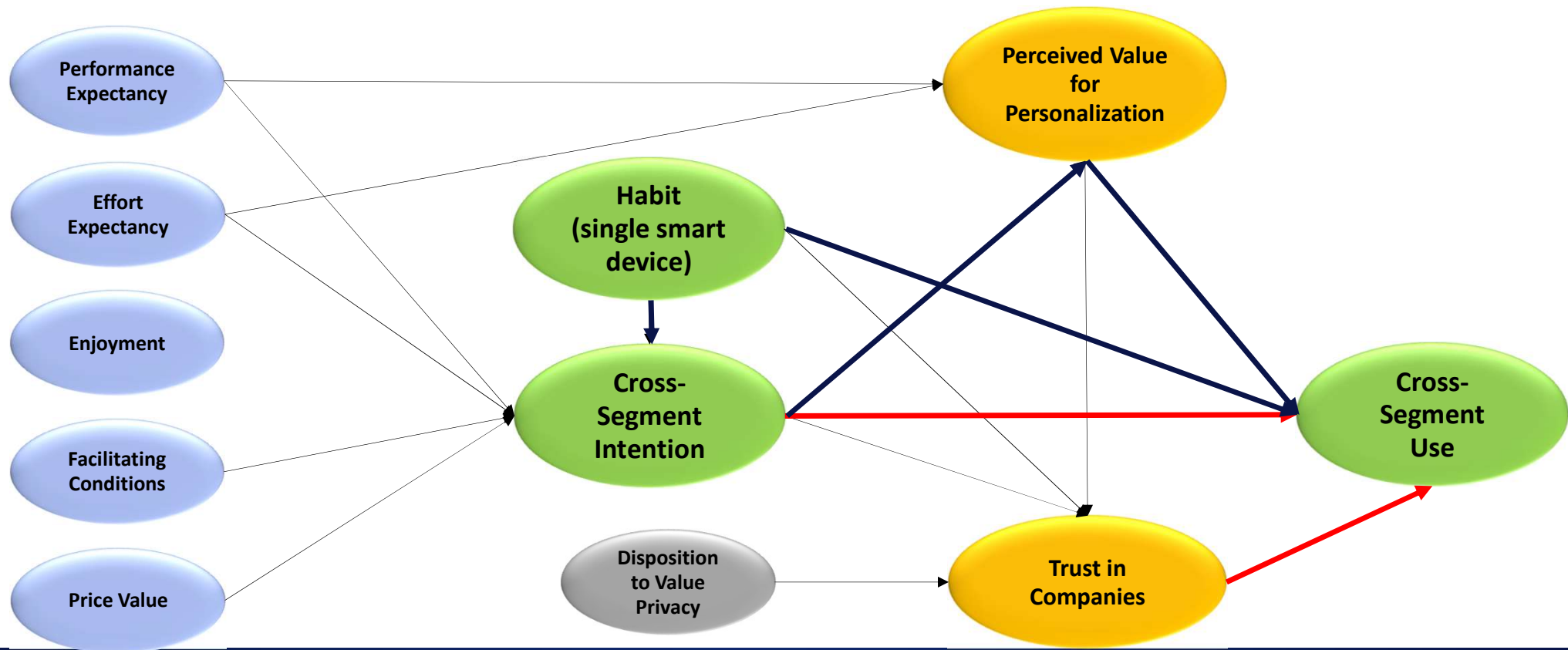
WHAT TO BUY: DEVICE OWNED



DEVICE PLANNED TO BUY



OWNER – CROSS-SEGMENT USE



Users want a integrated ecosystem personalized to their interests and needs



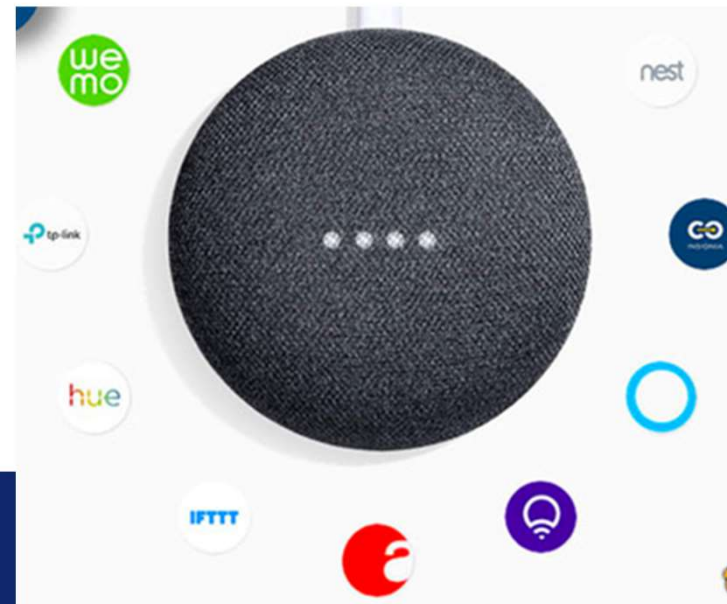
DEVICES VS ECOSYSTEMS

echo dot

Add Alexa to any room



Google HOME



ECOSYSTEMS?

- ▶ Technology ecosystems are **product platforms** defined by **core components** made by the **platform owner** and complemented by applications made by **autonomous companies** in the **periphery**.
- ▶ The **value** of an ecosystem is larger than the sum of the parts.
- ▶ Ecosystems create customer **dependencies**.



WHO HAS THE POWER IN YOUR ECOSYSTEM?

OMNI-CHANNEL

- 'Own' customer relationship
- Create multi product customer experience to address life events
- Customer chooses channels
- Integrated value chain

FIBARO, Bticino,

ECOSYSTEM DRIVER

- Become the destination in your space
- Add complementary and possibly competitor products
- Ensure great customer experience
- Customer data from all interactions
- Match customer needs with providers
- Extract 'rents'

Google, Amazon, Samsung, Apple

SUPPLIER

- Sell through other enterprises
- Potential for loss of power
- Core skills: low cost producer, incremental innovation

Fitbit, IKEA, Denfoss, Velux

MODULAR PRODUCER

- Plug and play product/service
- Able to adapt to any ecosystem
- Constant innovation of product/service

Netatmo, Nest, Philips Hue

Value Chain

Ecosystem

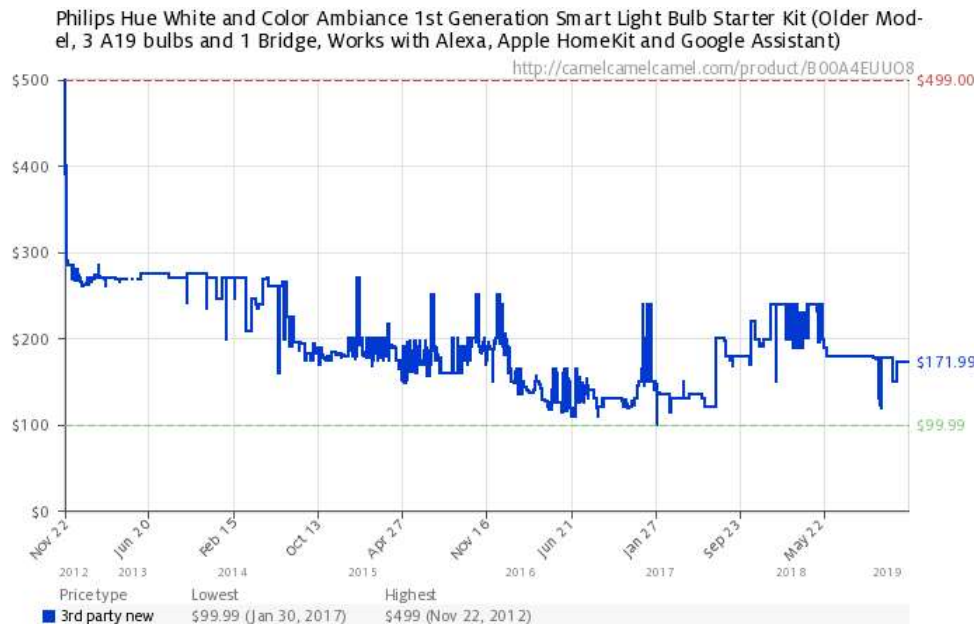
Business Design

Who controls key decisions like brand, contracts, price, quality, participants, IP & data ownership, regulation

P. Weill & S. Woerner, "The Next Generation Enterprise: Thriving in an Increasingly Digital Ecosystem," MIT CISR Research Briefing, Vol. XIII, No. 4, April 2013.

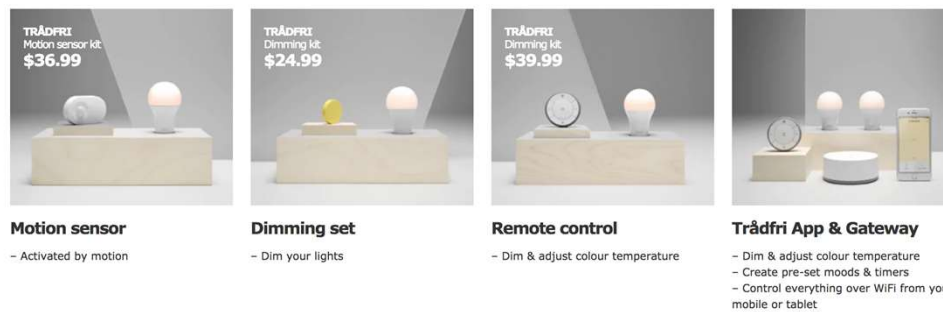
P. Weill & S. Woerner, "What's Your Digital Business Model? Six Questions to Help You Build the Next-Generation Enterprise", Harvard Business School Press, forthcoming 2018.

PHILIPS HUE PRICES AND COMPETITION



“Who would have thought that we could charge 70 dollars for a bulb?” CEO, Philips, 2014

“We do not collect customer data. We focus on making the best lamps. We will let others monetize data. ... IKEA cannot upgrade the lamps. CEO, Signify, 2018





Hue launched in Apple Stores (exclusively)



Launch of developer docs/portal

200+ third party apps



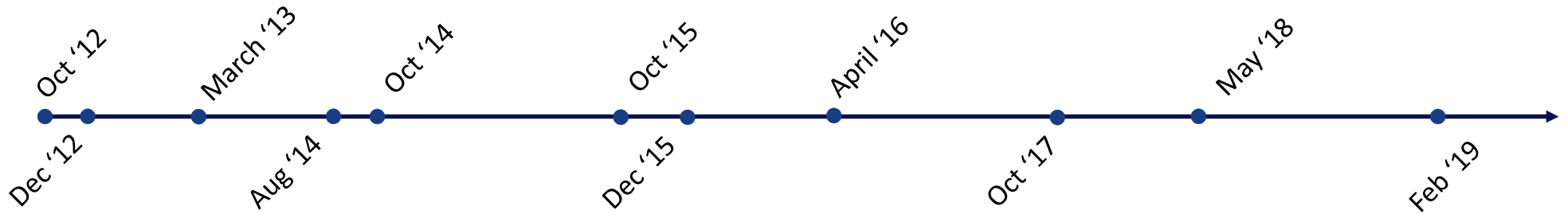
Hue bridge 2 with HomeKit support



New Philips Hue app (2.0)



Hue Sync and Entertainment



Philips Hue Android app available



New Hue Lux bulb



Friends of Hue partnership program



Hue works with Amazon Echo



Hue outdoor lights



APPROACHING THE MATURITY STAGE

Husholdningsapparater > Personvægte > Diagnostisk vægt



Fitbit Aria 2

★★★★★ 4 (43 bedømmelser)

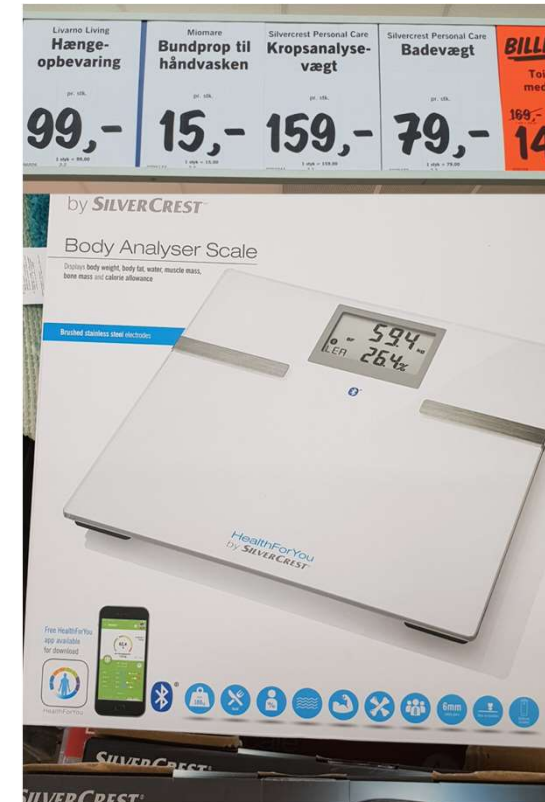
Diagnostisk vægt, 8 brugere, BMI, Kropsfedt, Hvid, Sort, Glas, P

Fra 824 kr. til 1.199 kr.

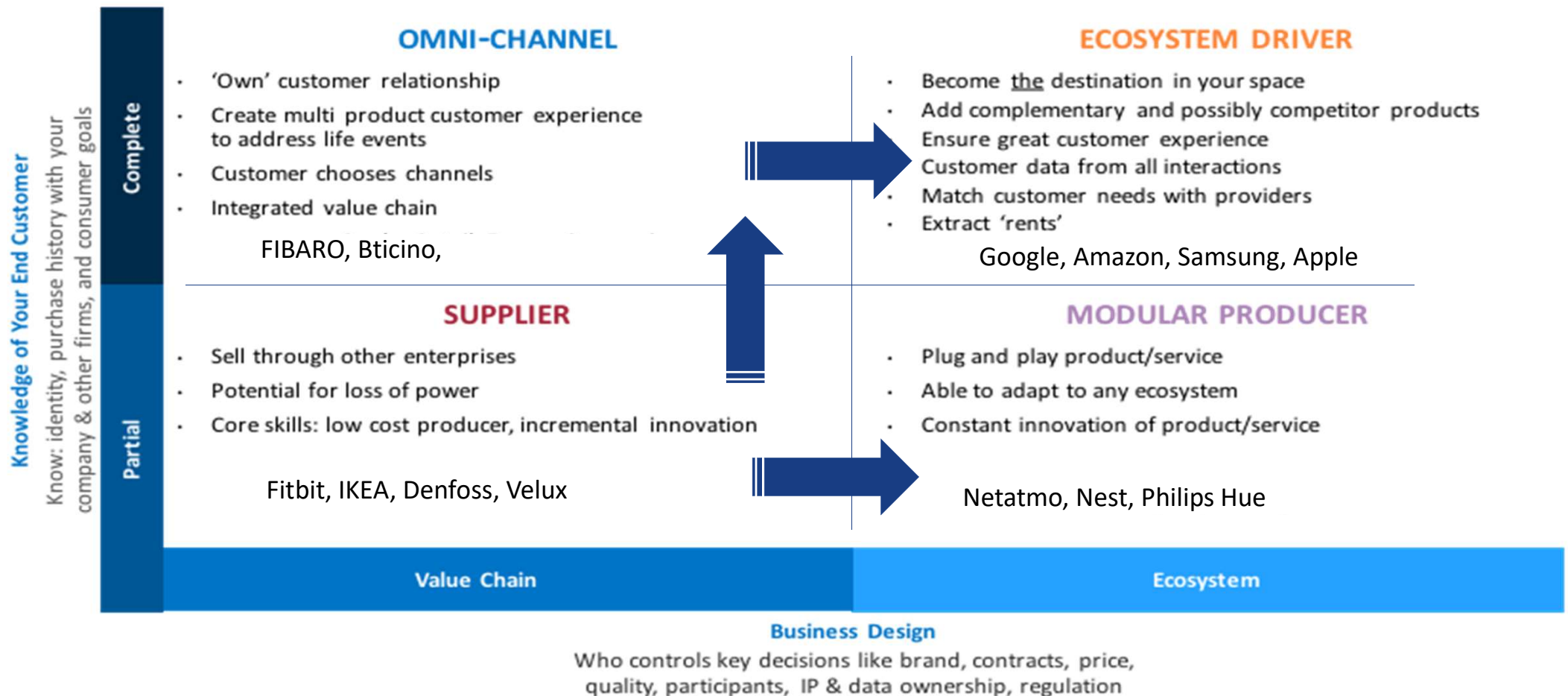
① Superdeal! ✓ Fri fragt ✓ Købsgaranti ✓ På lager

Fitbit Aria 2 - Badevægte - sort 982 kr. >

Sælges af ComputerSalg
online MEGAstore



IF YOU WERE HUE OR FITBIT SHOULD YOU WORRY?



P. Weill & S. Woerner, "The Next Generation Enterprise: Thriving in an Increasingly Digital Ecosystem," MIT CISR Research Briefing, Vol. XIII, No. 4, April 2013.

P. Weill & S. Woerner, "What's Your Digital Business Model? Six Questions to Help You Build the Next-Generation Enterprise", Harvard Business School Press, forthcoming 2018.

[HTTP://MGMT.AU.DK/SMART-HOME/](http://mgmt.au.dk/smart-home/) ... JOIN US 😊

SMART HOME

Digitale forretningsmodeller
for Smart Home virksomheder

Smart Home projektet er et forsknings- og innovationsprojekt med fokus på virksomheder, der udvikler, producerer, installerer eller servicere IoT baserede produkter og services til private hjem.

Målet er at udvikle ny viden og et udviklingskoncept, der kan hjælpe virksomheder i feltet med at udvikle strategier og nye digitale forretningsmodeller.



Smart Home udviklingsforløb

Smart Home Living Labs

Smart Home Living Labs er et forskningsbaseret udviklingsforløb med fokus på digitale forretningsmodeller for virksomheder inden for Smart Home feltet.



Endagskursus for
virksomhedsledere

Digital Ecosystem and Business Models for the Smart Home industry

Dette kursus stiller skarpt på Smart Home-industrien, og vi vil arbejde med de store linjer om digital ledelse, forretningsmodeller, marked og kunder.



Forskning

Viden

Nyheder

Om projektet

Tilmeld dig Living Labs

Tilmeld dig executive kursus

Read about the project



Tilmeld dig nyhedsbrevet



Pressekontakt



THANK YOU

--

FIND ME ON LINKEDIN:
ANDREA CARUGATI

IOTWeek

**Aarhus,
17-21 June 2019**