

Mastering Service for the Future of Things

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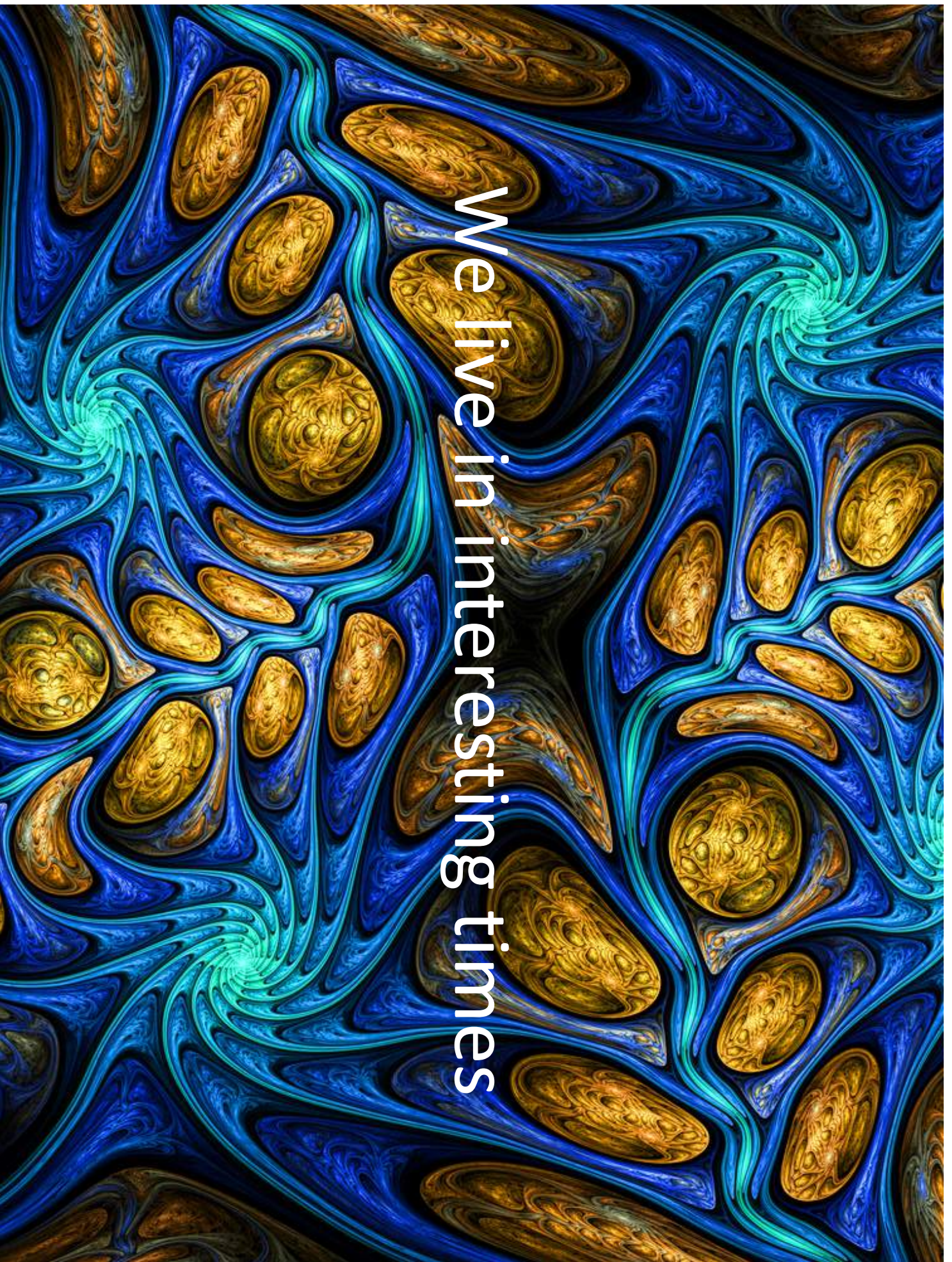


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hatcentral.hubofallthings.net

Compete Through Service Symposium
Arizona State University
27 October, 2016



We live in interesting times



Part 1

BEFORE WE TALK SERVICE.....

Let's talk about things



Specifically, how digitization and connectivity is
changing the world of things

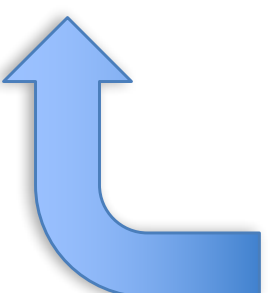


The thing about things (1)

“They **AUGMENT** our capabilities. *The greater we are augmented, the more effective we can live our lives, the greater the market demand.*”

Impact of Digitization & Connectivity

We have superpowers



The thing about things (2)

“They give us freedom of property - they allow us to use, experience, constrained only by ourselves and the law - positive liberty - they allow us to give ourselves and others a service. BUT: its key constraint is **ACCESS**. *The greater our ability to access our things, the more freedoms we have for use and experience.*”
Ownership v Access

Impact of Digitization & Connectivity

Digitization and connectivity made physical things accessible on demand, in context, wherever.

Ownership AND Access.



The thing about things (3)

“They provide standardisation that makes possible for firms to produce them to scale and therefore be viable in getting these products to us. The benefit of standardisation comes with the disadvantage of **RIGIDITY** - there is very little variety in its form and structure. *The greater the standardisation, the better it conforms to economies of scale. But the narrower the market segment. Scalability v Customization.*

Impact of Digitization & Connectivity

Digitization and Connectivity made an item reconfigurable after standardization.

Scalability AND Customization



The thing about things (4)

“They are **TEMPLATE OF BEHAVIOURS**.

How we experience them, use them, be with them, be without them - they embed themselves into our culture and lifestyles. *The greater the freedom of behaviours, the wider the market segment”*

Impact of Digitization & Connectivity

*Digitization and Connectivity
give consumers more freedoms
with a connected product*



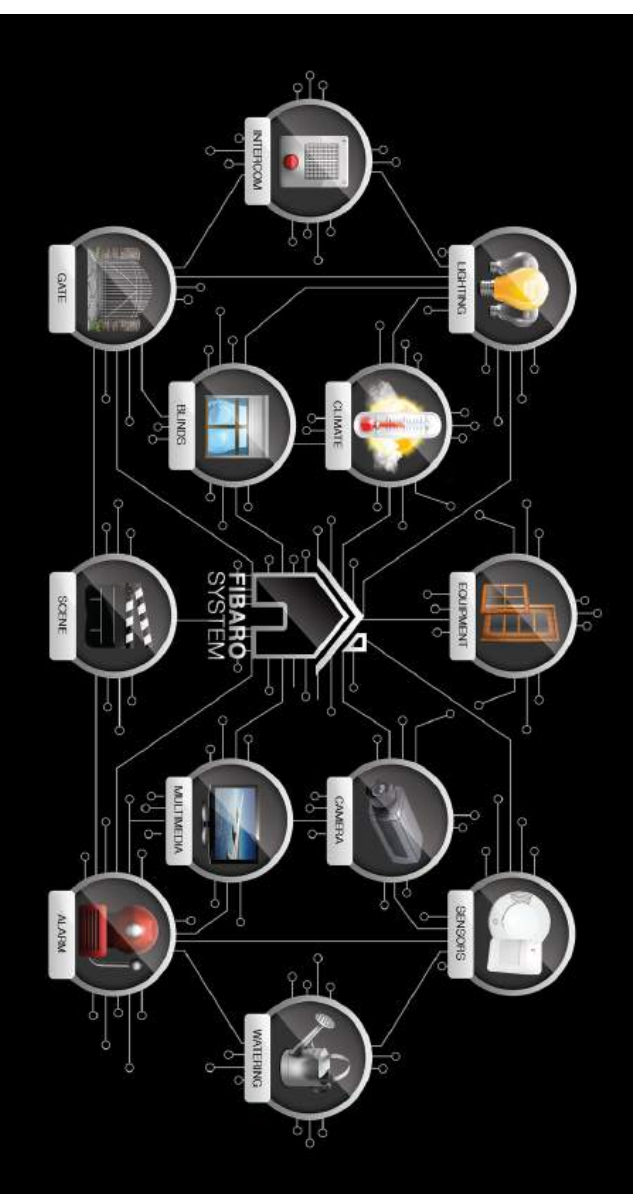
The thing about things (5)

“They are **SOCIALLY CONNECTED** to other things. Bread with butter and toaster. Tea with milk, Washing machine with clothes.

We may have bought them separately, but we use them together. **The greater we can coordinate our things, the more effective is the consumer.”**

Impact of Digitization & Connectivity

Digitization and Connectivity give consumers Effectiveness from Communication, Coordination between people and things

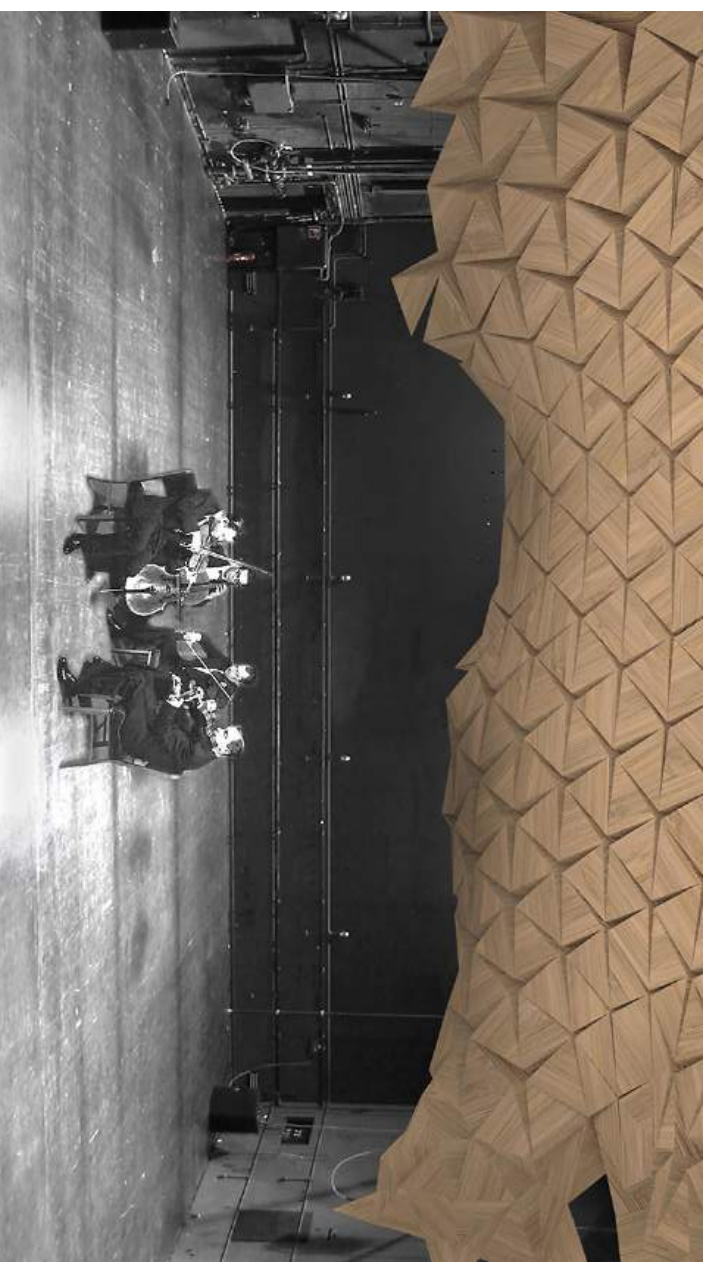


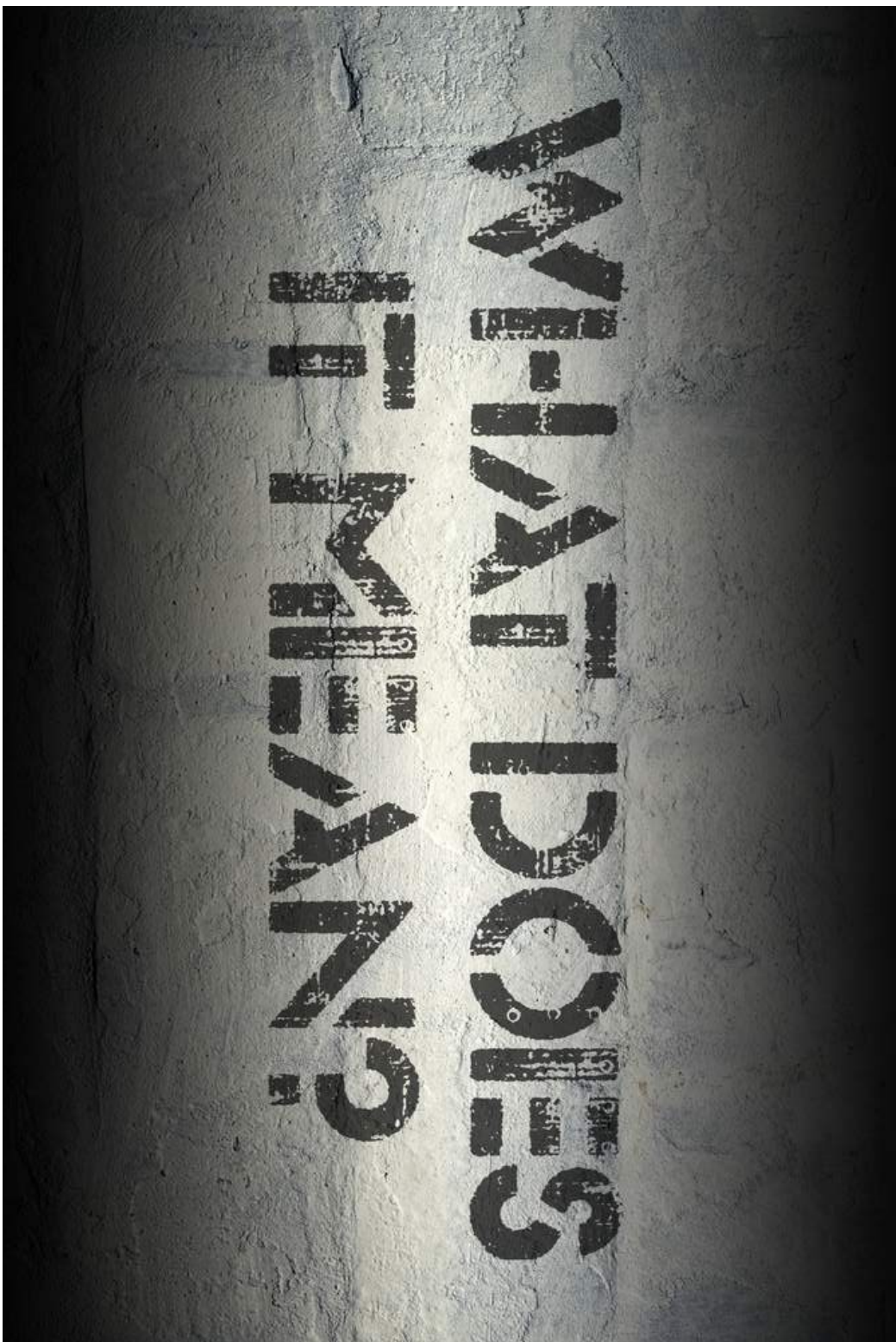
The thing about things (6)

“They are not **PERSONALIZABLE** after they leave the factory. Mass Customization and postponement can only go so far. *The greater a product can be personalized, the bigger the market.*”

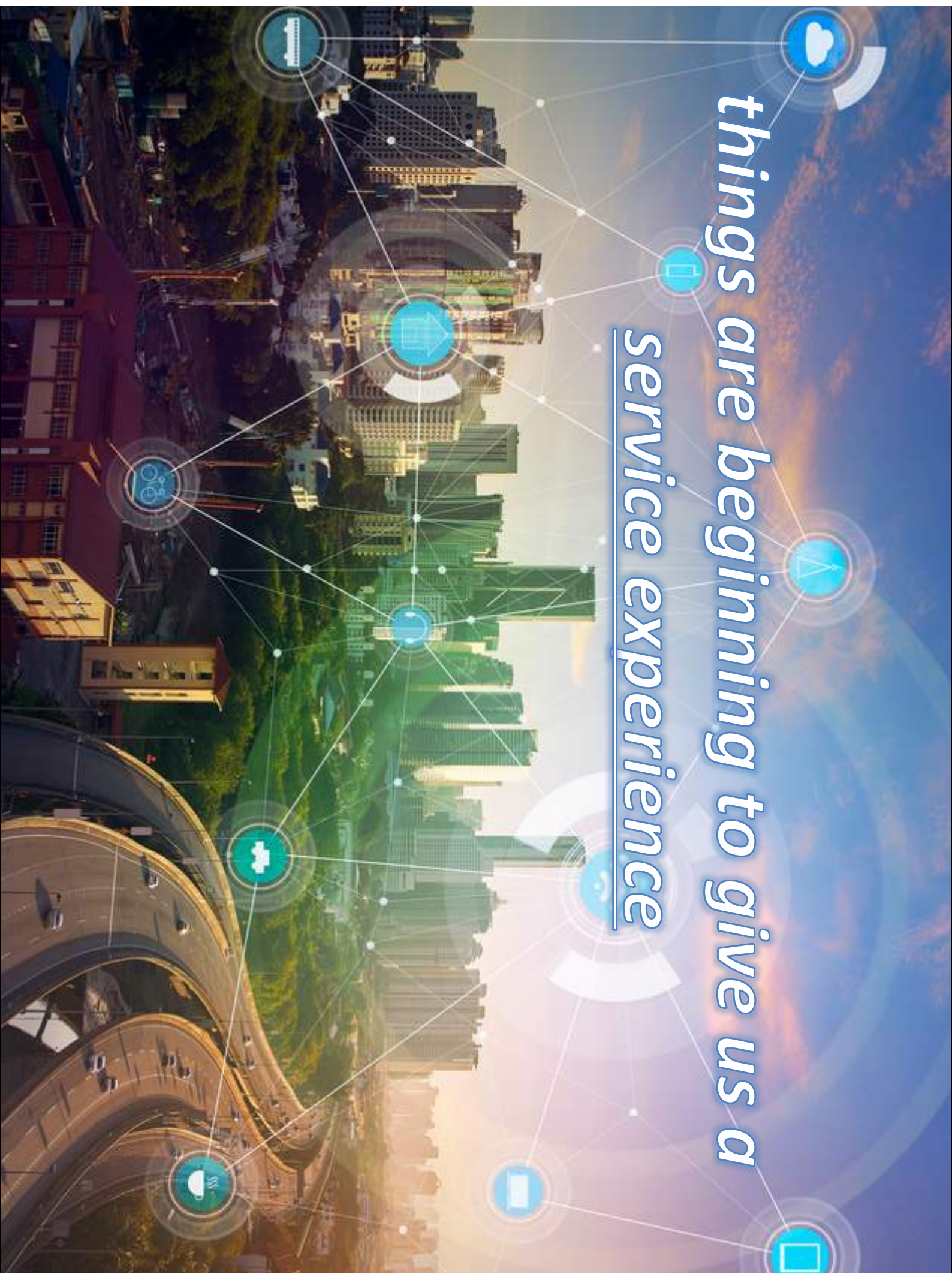
Impact of Digitization & Connectivity

Personalization to context





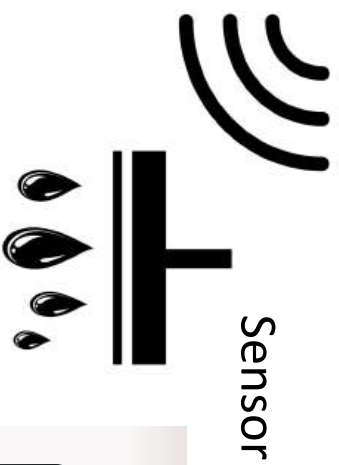
things are beginning to give us a
service experience





***And the future of physical products is a
socio-cyber-physical service experience***

Let me give you an example



Sensor

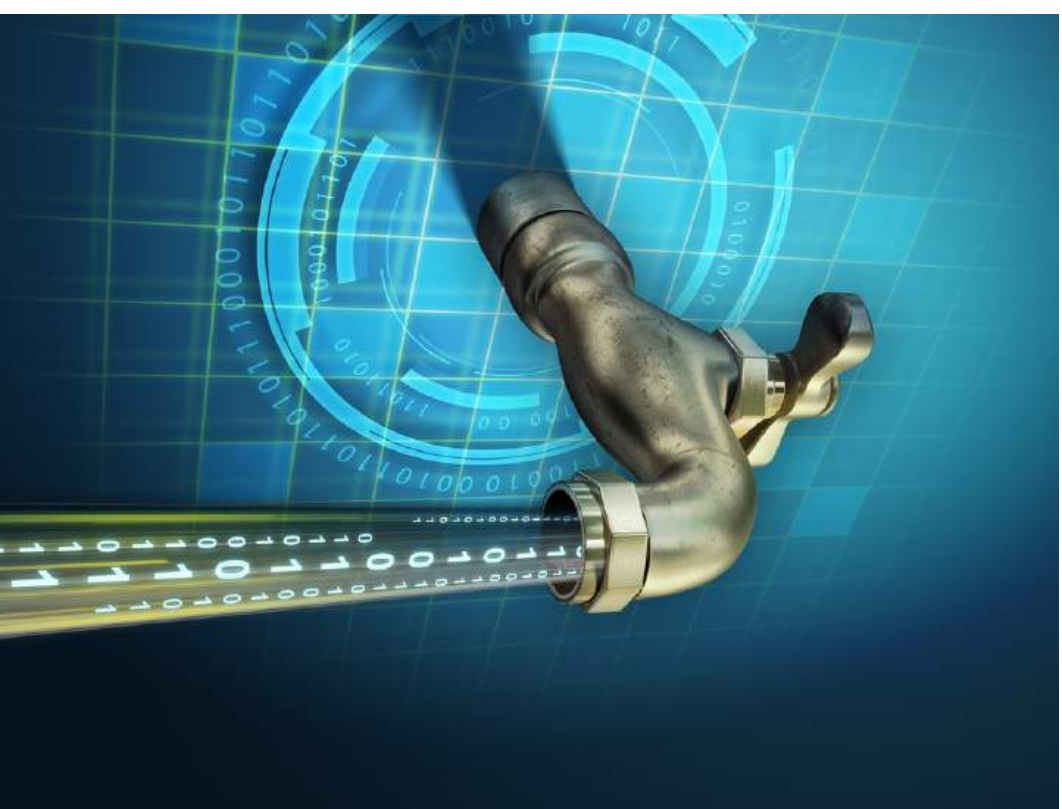


Urine analysis as a service



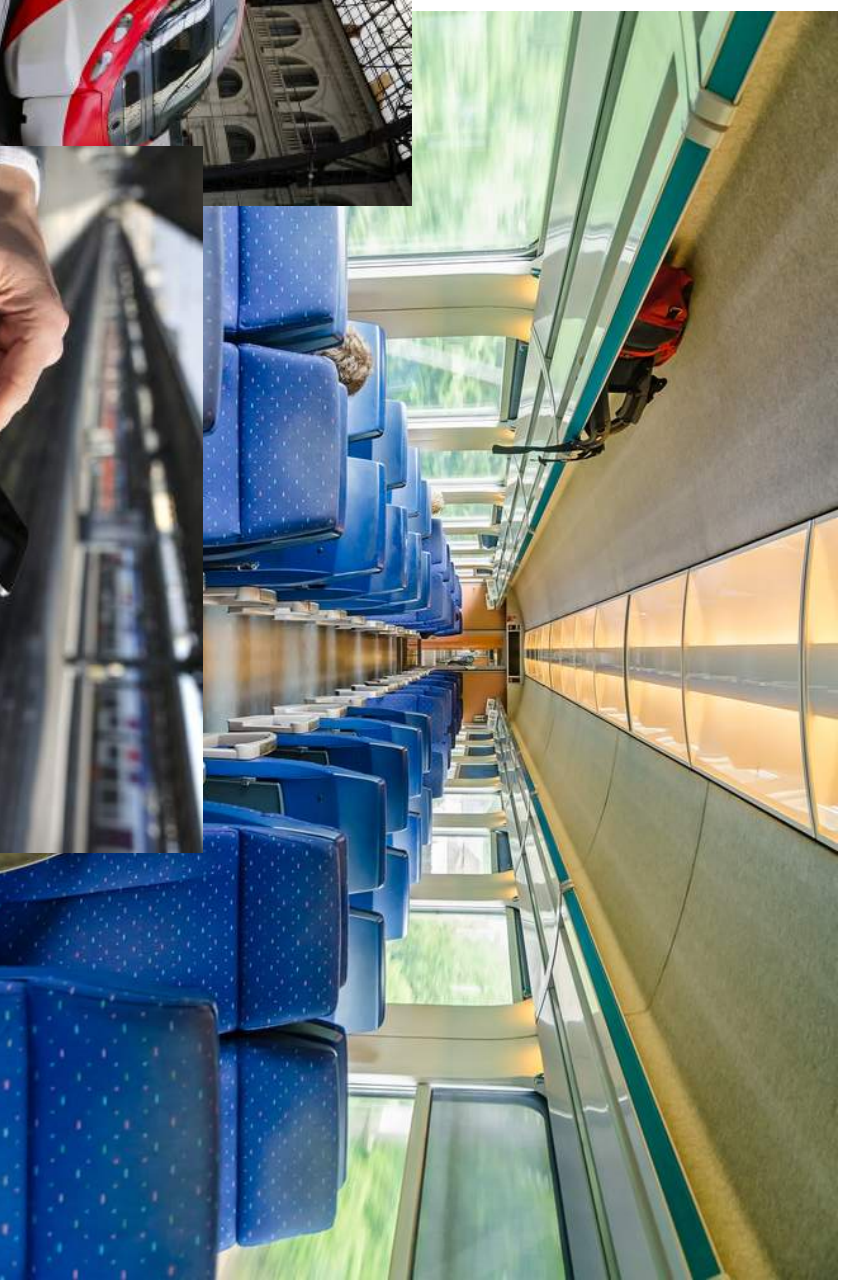
Information is leaking out everywhere

data is ubiquitous



Redrawing boundaries of markets across physical, social and cyber spaces

How do we
pay for train
journeys
again?



**We need to design & innovate
better in the world of things**

We can do that by mastering service

Working with UK government on innovation of things: **the Business Model Innovation Wheel**



Blog
Innovate UK

Organisations: [Innovate UK](#)

Innovation: beyond things and widgets

Dan Hodges and Professor Tim Worley, 28 September 2016 — Business advice

Innovation is a key determinant of economic growth.

Innovate UK is a central to the UK innovation ecosystem, and performs a key role by working with businesses to de-risk, enable and support innovation.

In a recent [Innovate UK blog about outcomes and connections](#), Kevin Baughan rightly noted that 'everyone has a different definition for innovation' but for many businesses, innovation is still regarded as all about things and widgets.

Innovate UK

Search blog

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A blog on the work of Innovate UK. Contributors are Innovate UK staff and our wider family, partners and experts from the world of innovation.

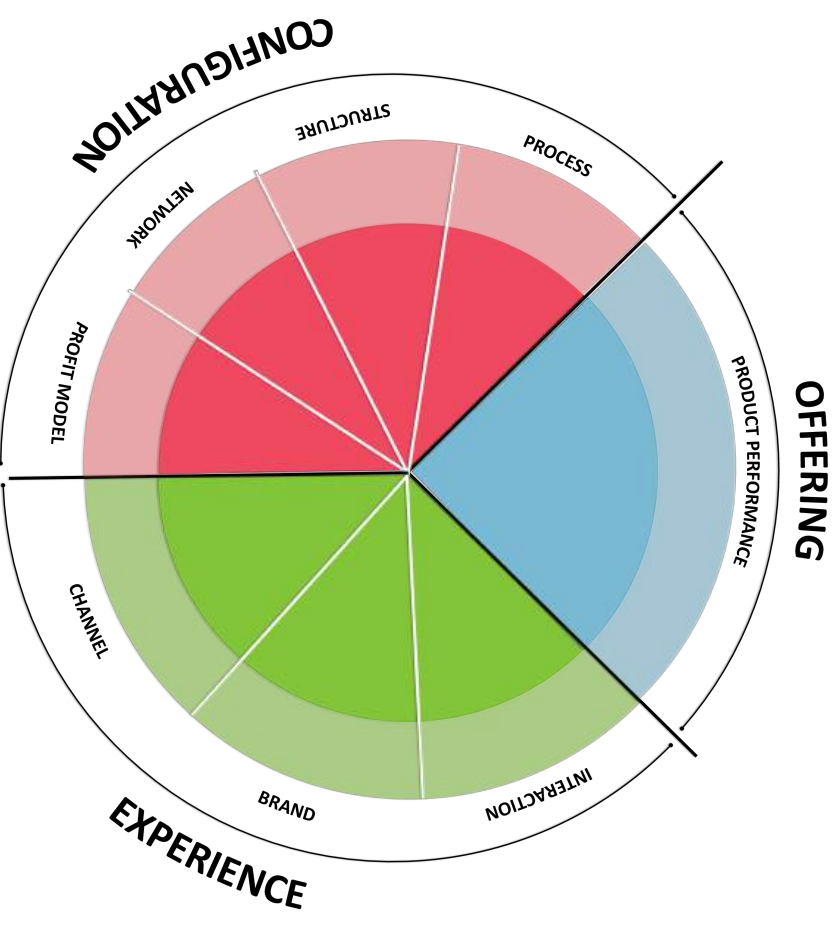
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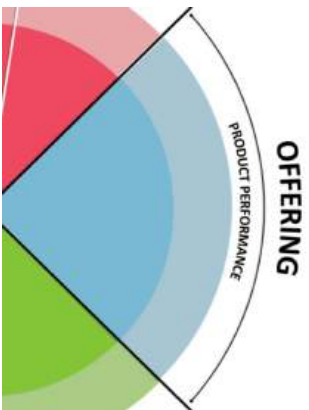
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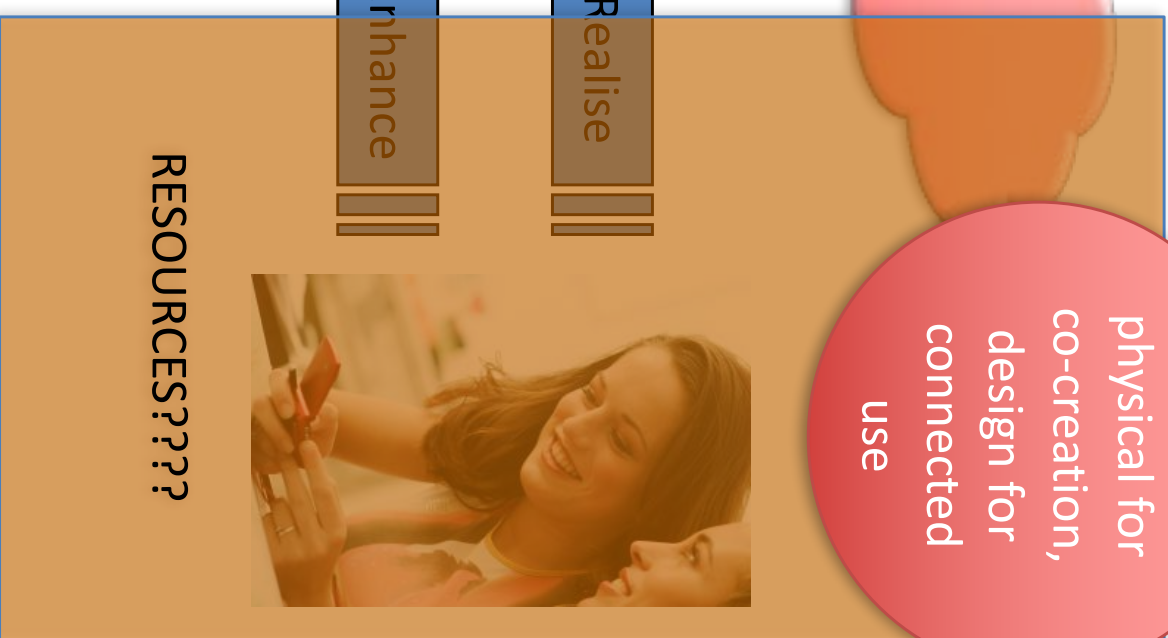
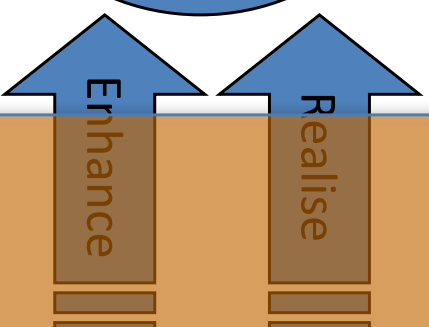
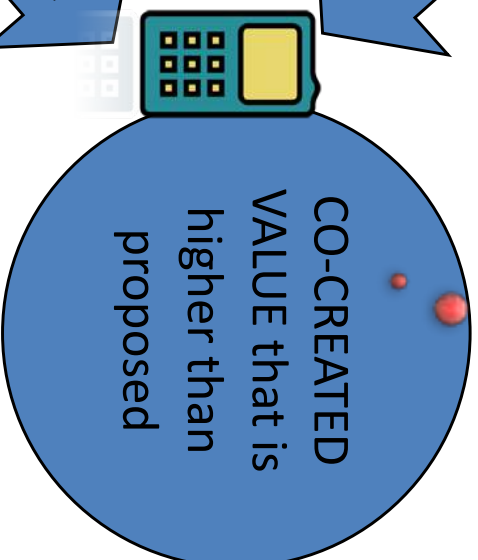
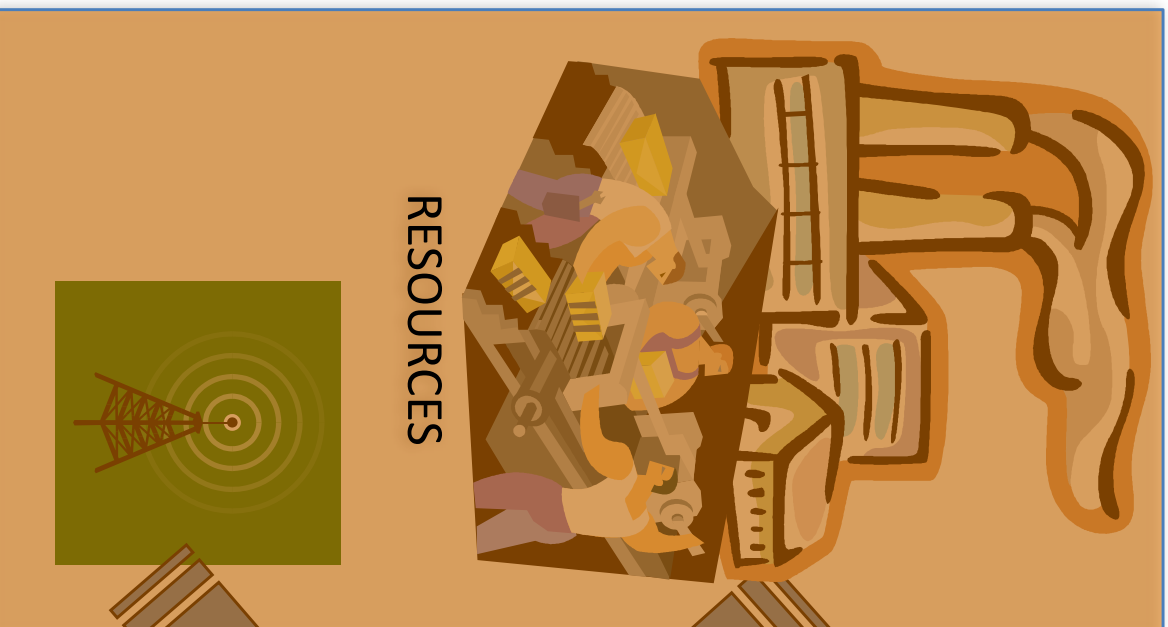


<https://innovateuk.blog.gov.uk/2016/09/28/innovation-beyond-things-and-widgets/>

Service in the Future of Things



Service is the **co-creation of value** for
outcomes/benefits/value-in-use

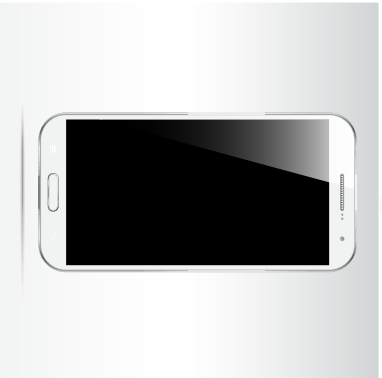


RESOURCES???

OFFERING



This camera is available so it is a resource in context



This camera is not



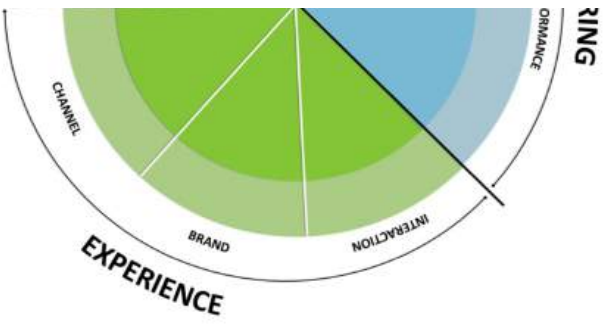
Service is **Contextual**



Design the physical product for Context

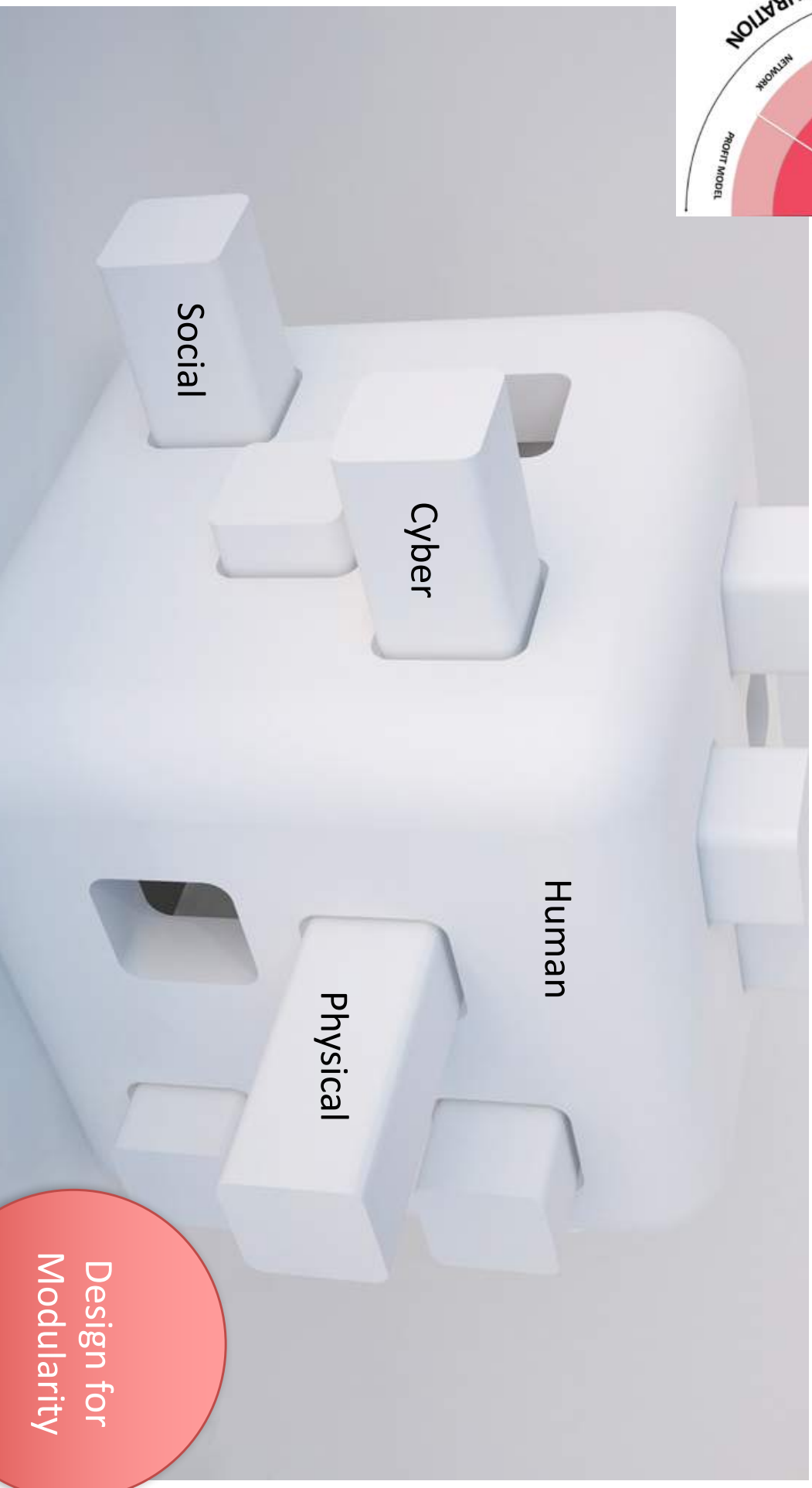
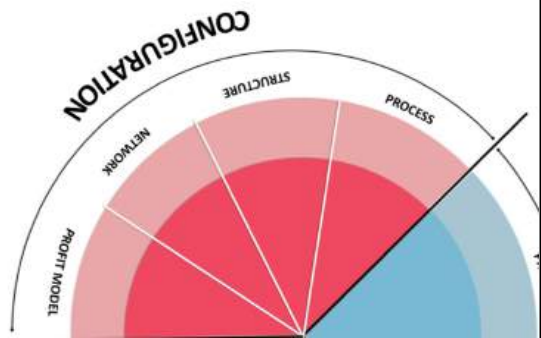
Things become more valuable *in context* because they enable resources for value creation

Service is **experience**



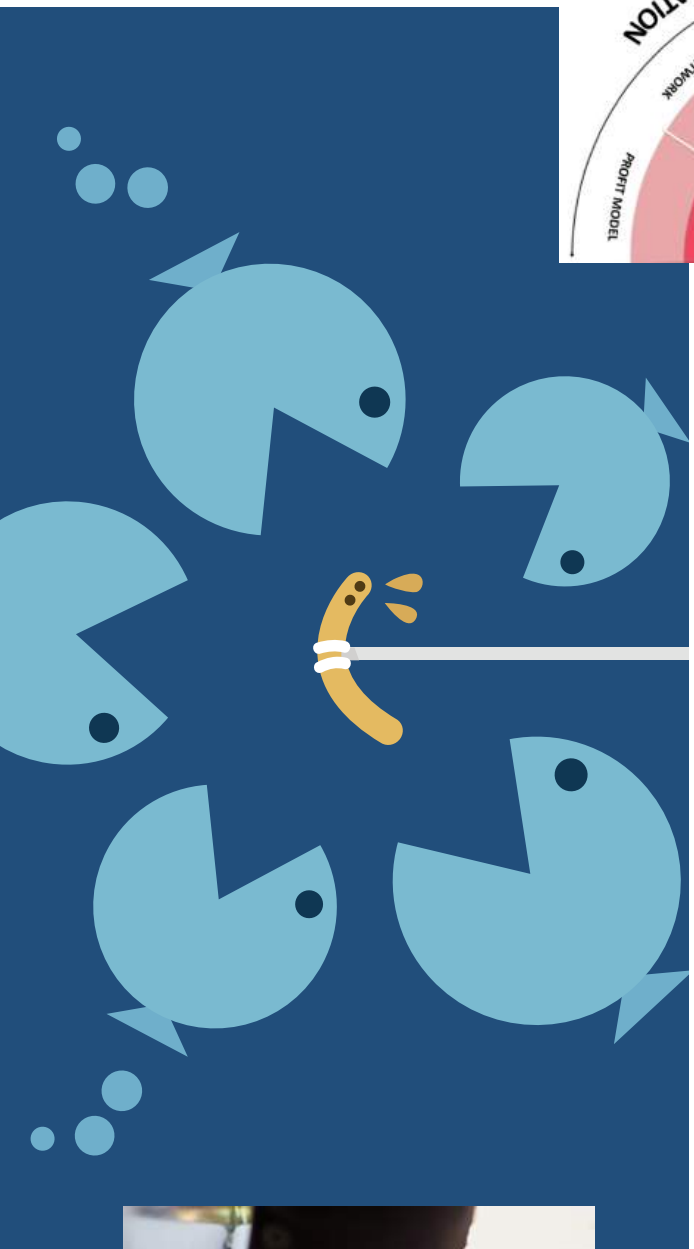
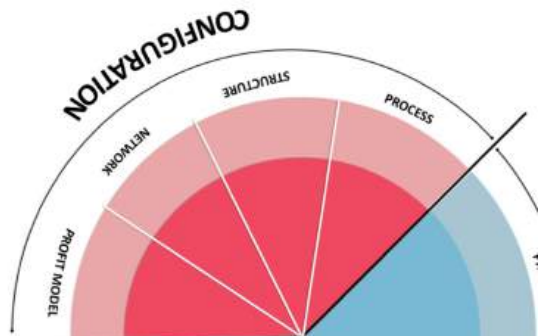
Design for
Experience:
brand,
channel &
interaction

Service understands the trade offs in Value, Viability & Variety



Design for
Modularity

Service understands transactions



40 years of revenue management, pricing and demand management, spot, advanced, in-service transactions

But even for service, we need to do better

- **There is much work to do on the Internet**



The Internet is about to change, to put individuals back in focus

Part 2

The Internet

Bringing service approaches to the Internet

- The Internet hasn't been a great system to put individuals front and center of service
 - Our relationships on the Internet are rather fraught, some may call it exploitative e.g. Forward use of data, sold data
 - Direct relationships between individuals and corporation don't seem to be very symmetric and do not work well

The Internet hasn't been a great system for service markets either

- Companies that want to provide a service to consumers have to build a lot, in terms of linkages and interactions with individuals.
- To do an app, you either have to build all the plumbing to hold personal data, content and assets before you have to create a service for the individual OR
- you build it on an another corporation's platform, with a whole lot of privacy issues OR
- you build it to link data owned by 3/4 companies who can change the terms of engagement at any time



How about an Internet Platform for US – the customer

- Imagine if a lot of the plumbing is done
 - and the individual owns his own Internet platform
 - we have our own servers, data, assets, content, and all shareable to build new services
 - we could make a B2C world into a B2B world
 - And companies can focus on service, rather than plumbing
 - AND THE RELATIONSHIP IS DIRECT WITH THE CUSTOMER, not a company holding the customer's data



Our recent article on Scientific American...

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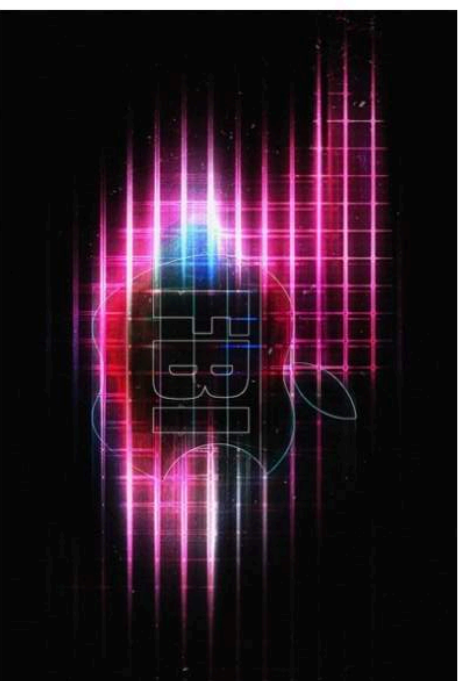
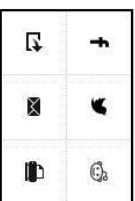
SHA

What the Apple versus FBI Debate Taught Us

And then the issue
of custodial rights ...

Legal wrangling in Congress and the courts over data encryption is opening the door for new approaches to managing our personal data.

By Mark Skilton, Irene Ng on May 20, 2016



Credit: Image by Surian Soosay/Flickr under Creative Commons license

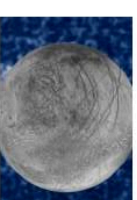
The December 2015 terrorist attack in San Bernardino, Calif., continues to be felt around the world in many ways—not only as a brutal act of terrorism but also for bringing the ongoing struggle between digital privacy and security to an inflection point.

<http://blogs.scientificamerican.com/guest-blog/what-the-apple-versus-fbi-debate-taught-us/>

LATEST NEWS



They Do What?!: The Wide
Wild World of Animal Sex



Astronomers Spy Shadowy
Plumes Around Europa



The Sparrows: Sniping and
Science Behind the Nobels



Zeno on the Mountain

Introducing the HAT



Dear Corporations,

**Personal data is co-produced.
Your tech, my information.**

**Can I have it too?
I have a HAT.**



Claim your data: Organise, Visualise, Control

<https://youtu.be/Li2U-MjsnEA>



CLAIM YOUR DATA

For the first time, see what organisations like Facebook, Google, Apple know about you. You can also claim your data from other organisations like broadband providers, supermarkets, online stores, streaming services and transport providers.

ORGANISE YOUR DATA

Combine your personal information like calendar, photos and notes with the data you've claimed and organise your Internet interactions to help with day to day decisions and planning.

TRADE YOUR DATA

Trade your data for personalised offers. Discounts, services, and even cash! Exchange your data again and again to maximise your benefits.

<http://hatdex.org>

Designed Ecosystem for Multi-sided Market of Personal Data and New Economic & Business Models

£1.7m UK Research Council funding
£140k community & startup funding

University of Warwick
University of Edinburgh
University of Surrey
University of West England
University of Cambridge
University of Nottingham
University of Exeter

4 platforms
3.5 years
2 startups
30 partners

Demo: HAT

The HAT Community



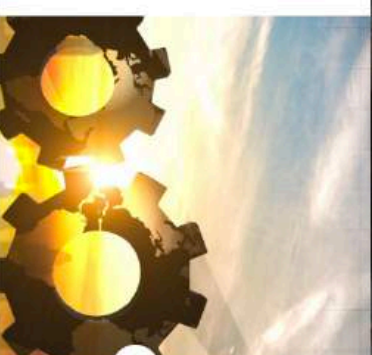
Get involved... be a HATster

"Getting involved with the HAT community is easy! The HAT Community Foundation have several projects involving personal data that is of interest to everyone. Our projects range from increasing awareness of personal data use and rights, to hackathons for developers"



The HAT ecosystem

"The HAT ecosystem is a global network of HAT users, developers, organisations and government bodies that subscribe to a world where individuals can exercise their rights and control over their personal data and be responsible for their digital futures. It is also an ecosystem that



Who we are

"The HAT Community Foundation (HCF) is the non-profit arm of the HAT Foundation social enterprise group dedicated to fostering the growth of HATs and the HAT Ecosystem. Founded in 2016, The HAT Community Foundation is supported by HAT Platform and Service Providers, open source

Community Foundation

<http://hatcommunity.org>



**There is a new and rare
mineral on the Internet**

It's your data

Start mining. Get a HAT.



Claim your data: Organise, Visualise, Control



**Exchanging data for service
is normal**

Giving it away is not.

**Share your data again and again
for benefits.
Get a HAT.**



Claim your data: Organise, Visualise, Control

There's a new way of interacting on the Internet



**One that puts you in
control.
Time to get a HAT.**



Claim your data: Organise, Visualise, Control

**A new
platform to
build
applications
on the
Internet.
Owned by
individuals
themselves.**



**Power to the people.
Build it on the HAT.**



**Claim your data:
Organise, Visualise, Control.**

**Won't it be nice to not
worry about privacy
when we get online?**

**When we all have our HATs on?
Take back control. Get a HAT.**

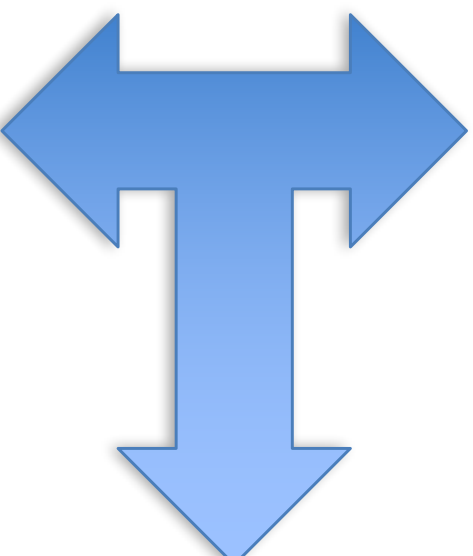


Claim your data: Organise, Visualise, Control.

The Internet grows up: Data and Content can finally become a Service



World wide web



Self wide web

- Match
- Personalized offers
- Personalized things
- Recommendations
- Cognitive assistance
- Recall
- Computation
- Synchronised personal data
- Nudges/prompts
- Behavioral assistance



Have you got your HAT yet? <http://hubofallthings.com>

Part 3

Civil Liberties

What did you do the first half hour on

waking up this morning

- 30 years ago
– a huge
variety
- Today – 64%
of us check
our phones
or tablets

We are starting to behave alike, in the name of efficiency and convenience.



Things shape us

- type of society to which we wish to belong to is inherently shaped by the things we make.



From 'Devil Wears Prada' (20th century Fox, 2006)



This... stuff'? Oh. Okay. I see. You think this has nothing to do with you. You go to your closet and you select... I don't know... that lumpy blue sweater, for instance because you're trying to tell the world that you take yourself too seriously to care about what you put on your back. But what you don't know is that that sweater is not just blue, it's not turquoise. It's not lapis. It's actually cerulean. And you're also blithely unaware of the fact that in 2002, Oscar de la Renta did a collection of cerulean gowns. And then I think it was Yves Saint Laurent... wasn't it who showed cerulean military jackets? ...then cerulean quickly showed up in the collections of eight different designers. And then it, uh, filtered down through the department stores and then trickled on down into some tragic Casual Corner where you, no doubt, fished it out of some clearance bin. However, that blue represents millions of dollars and countless jobs and it's sort of comical how you think that you've made a choice that exempts you from the fashion industry when, in fact, you're wearing the sweater that was selected for you by the people in this room from a pile of stuff.

Service and the Future of Things

- The need to design human-centric ecosystems, markets, offerings etc. in the future of Things
- Service research and practice community has always put human beings in the front and centre of the design of markets, offerings and other ecosystems
- a world where our choices and behaviours will be restricted by 'wonderful', 'amazing' but rigid products and systems created in the name of efficiency and convenience. We will behave the same, we will be robots of convenience.
- We think we have free will and choices when in fact, our consideration sets have already been limited by people who have not understood there are different ways to design



Key Takeaways

- Things are becoming a service experience: impact on design, innovation and markets
- The Internet is reshaping itself to be a service platform: with digital asset aggregators (HAT). to enable better data, connectivity and content to be a service (and work with things!)
- The things we make shape the society we live in. Our behaviours are templates of the products/services we use. We have a responsibility to make that template as liberating and free as we can

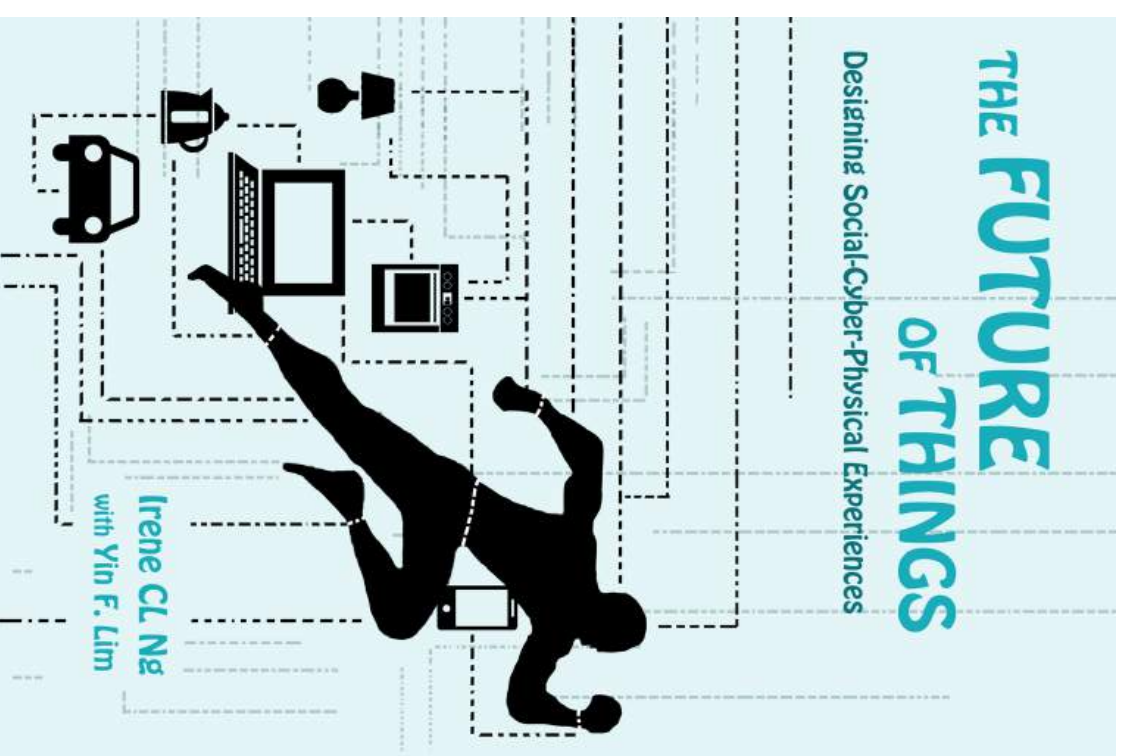


Creating New Markets in the Digital Economy

Value and Worth

IRENE C. L. NG

CAMBRIDGE



THE FUTURE OF THINGS

Designing Social-Cyber-Physical Experiences

Irene CL Ng
with Yin F. Lim

<http://Innovorsa.com/press>

A hand is shown holding a card that features a landscape background. The background is split into three horizontal sections: a blue sky with white clouds at the top, a bright sun in the middle, and a green field at the bottom. The card is held against a dark wooden surface. The text on the card is oriented vertically.

**MAY YOUR FUTURE
BE BRIGHT.**

THANK YOU

**GET YOUR HAT ON.
HUBOFALLTHINGS.COM**