

Module 8

Trust and trustworthiness in a data-driven society

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What is on the menu?

- PART I
 - What are we talking about when we talk about trust?
 - Trust and technology
 - 4C trust model
 - Break
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- PART II
 - What are we talking about when we talk about trust?
 - Trustworthiness and technology
 - Trustworthy tech company
 - The role of the data scientist

Consumer perspective

**Business
perspective**

**Trust and trustworthiness
in a data-driven society**

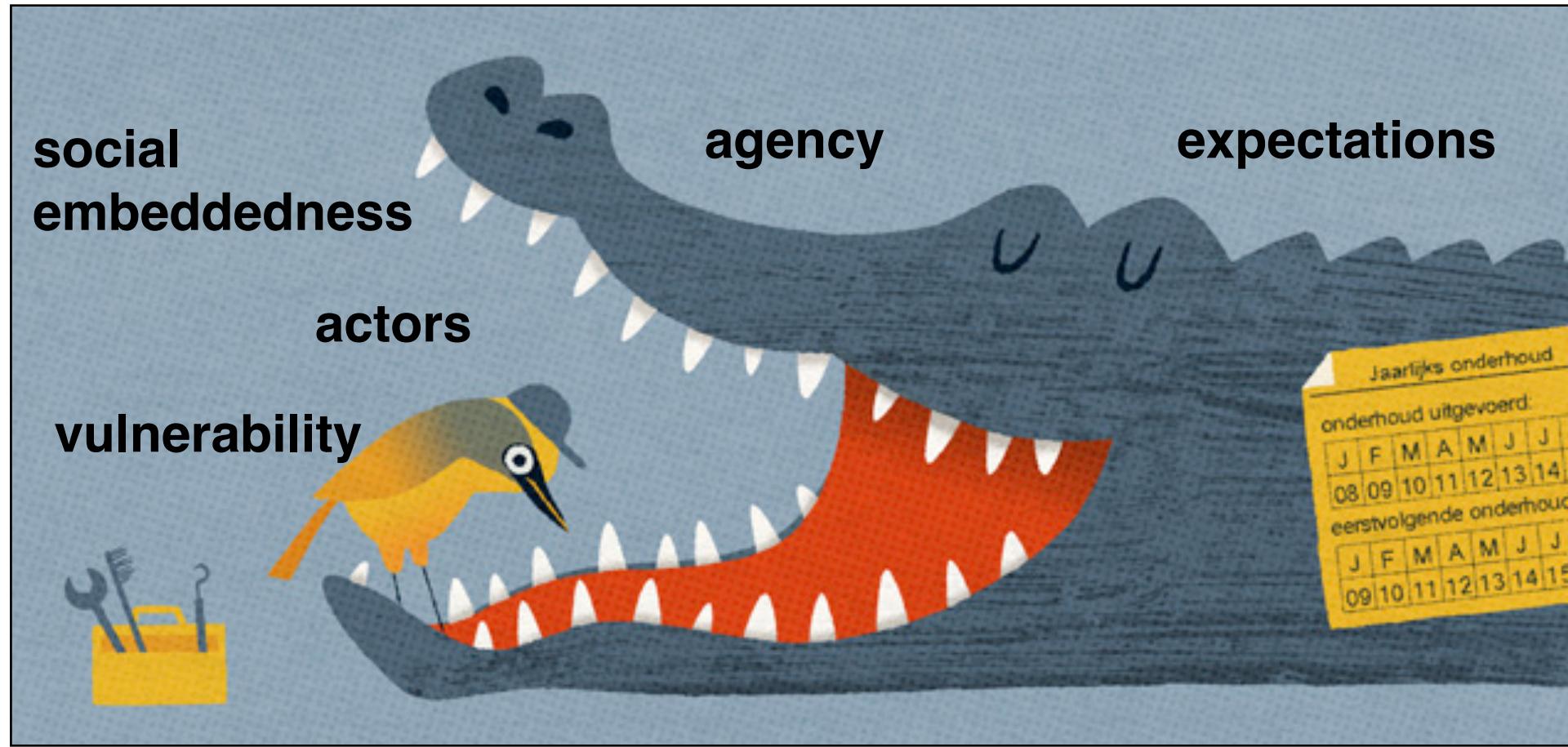
Split or Steal





**Trust:
a strategy to deal
with uncertainty**

Functional fiction



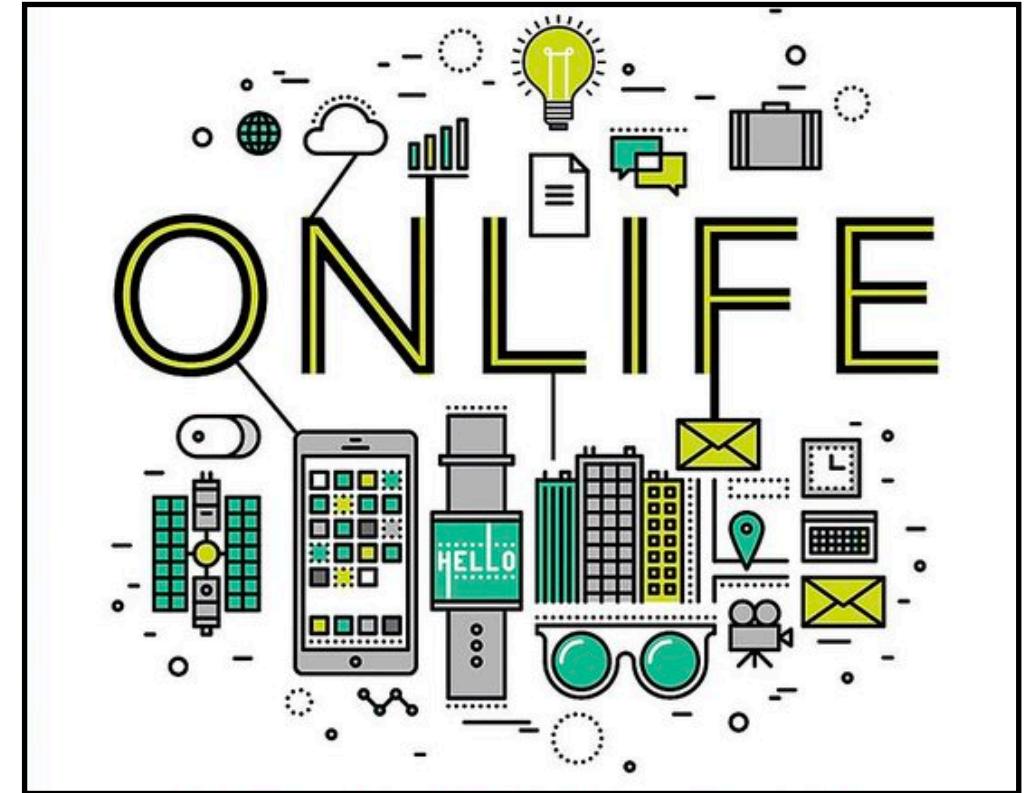
Summary

- Trust: a strategy to deal with uncertainty
- Trust: to have positive expectations of the actions of others.
- Trust always entails vulnerability => there needs to be something at stake.
- Trust is a risky business
- Trust lowers transactional costs and enables innovation

Onlife trust?

Floridi et al. (2015) The Onlife Manifesto. Being Human in a Hyperconnected Era.

- Blurred distinction between reality and virtuality
- Blurred distinction between human, machine, and nature
- From information scarcity to information abundance
- From stand-alone entities to functioning in processes and networks

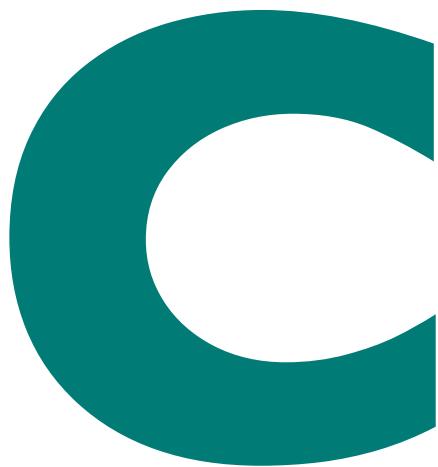


Picture from the book of Kathleen Gabriels (2016)



What do you think are key challenges for trust in the hyperconnected era?

4Cs trust model



ontext
onstruction
uration
odification

interface

interface

interface

interface

experience user

technical
design/
infrastructure

Control and
governance

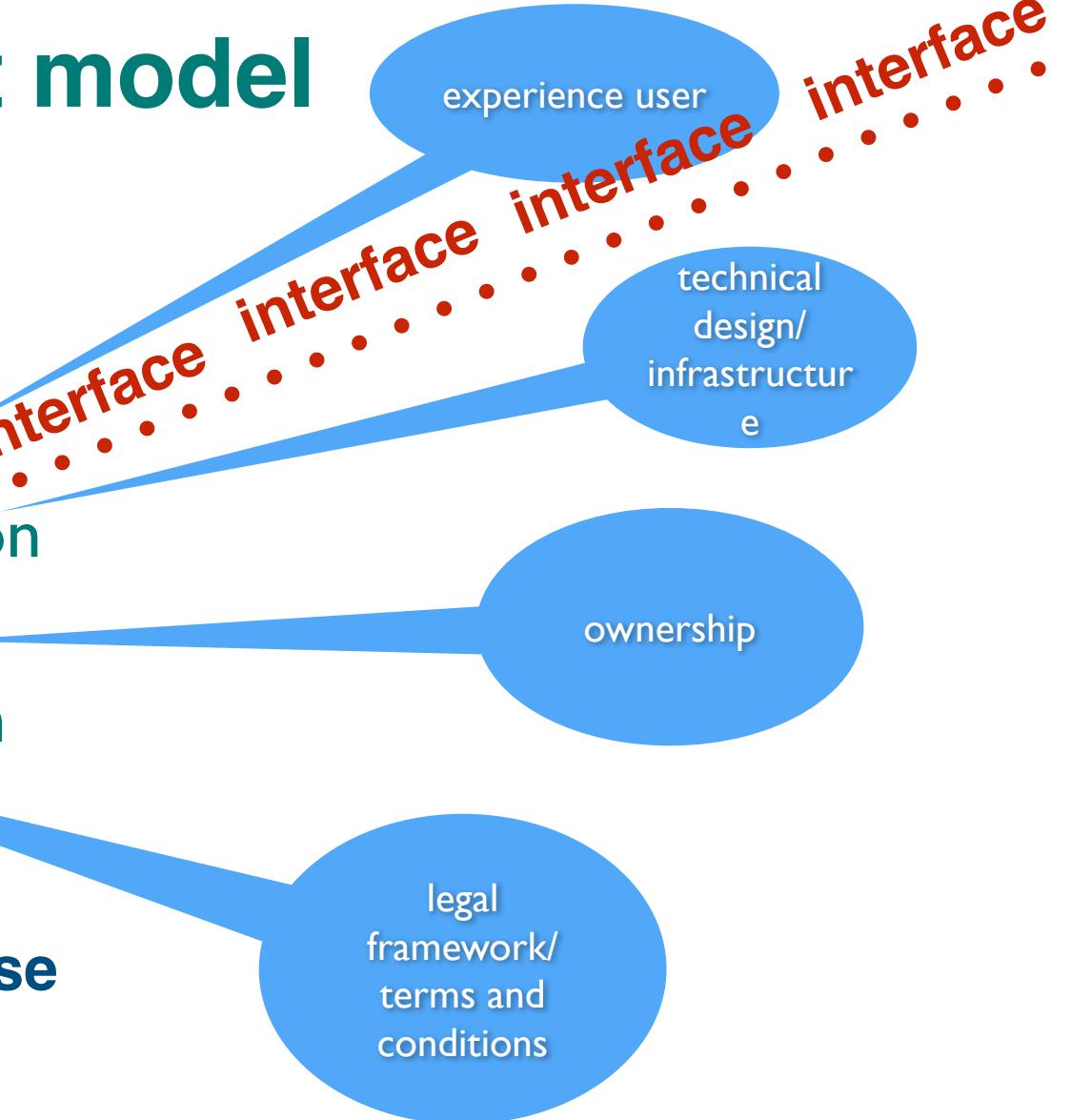
legal
framework/
terms and
conditions

4Cs trust model



ontext
onstruction
uration
odification

- Trust becomes too blind
- Perceived use and ease of use remain the same
- No feedback loop



Questions?

Coffee break

Part II: Trustworthiness

From interpersonal to company-tailored.



A Call for trustworthy AI

AI should be lawful, robust and ethical.

Four key values:

- Respect for human autonomy
- Prevention of harm
- Fairness
- Explicability

AI is “a machine-based system designed to operate with varying levels of autonomy and that may exhibit adaptiveness after deployment and that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments”.



Trustworthiness

- Trust and trustworthiness are situated in interpersonal relationships.
 - **Trust**
 - to have positive expectations of the actions of others
 - Accepting vulnerability
 - **Trustworthiness**
 - Give assurances indicating their trustworthiness
 - Be competent in a certain domain
 - Be committed to putting your competences to work in service of other who count on you

Trustworthiness

- Karen Jones (2012): “B is trustworthy with respect to A in domain of *interaction D*, if and only if she is **competent** with respect to the domain, and she would take the fact that A is counting on her, were A to do so in this domain, to be a **compelling reason** for acting as counted on”.
- Jones (2012): **rich trustworthiness**: agents have to **actively identify themselves** so that we can place trust wisely.
- Nancy Potter (2002): “persons with **more privilege or power** have proportionately more work to do to give assurances which indicate a trustworthy character”.

Trustworthiness

- Epistemic competences (William Tuckwell 2019, Kristie Dotson 2011):
 - Knowledgeable about the interests and vulnerabilities of the trustees.
 - Testimonial competence: being aware of one's own failures in understanding; avoid that trustor is being harmed.

Trustworthiness



Kristen Uroda for NPR

- Give **assurances** indicating their trustworthiness
- Be **competent** in a certain domain
- Be **committed** to putting your competences to work in service of other who count on you

Trustworthiness in the context of tech companies



- Give **assurances** indicating their trustworthiness
 - Signalling trustworthiness through design
- Be **competent** in a certain domain
 - Techno-moral competences of tech employees
- Be **committed** to putting your competences to work in service of others who count on you
 - Legal compliance (external motivation) and data ethics (internal motivation)

Assurances: signalling trustworthiness through design

- Interaction on the interface level
- Current design approaches with a focus on user-friendliness and efficiency nurture trust, not necessarily trustworthiness
- Designing for trustworthiness may ask for friction in the design

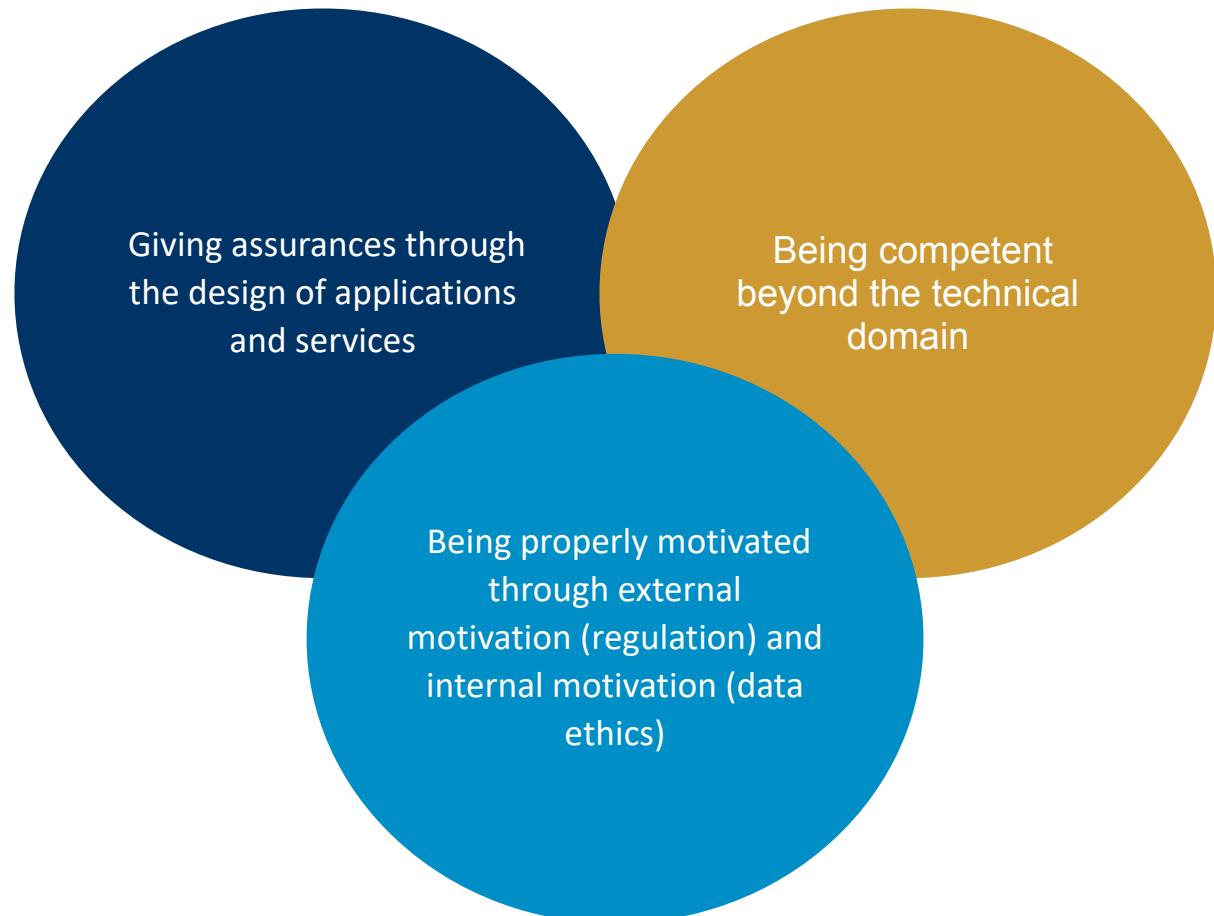
Competences : techno-moral competences for tech employees

- Current focus on technical competences
 - More needs to be done
 - Cultivating an understanding of the ethical and societal implications of their products and services
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- *Also see the excellent work of Shannon Vallor (2016) on techno-moral virtues*

Committed : legal compliance (external motivation) and data ethics (internal motivation)

- Difficult to see how only internal motivation could contribute to acting trustworthy
- Legal frameworks as an external motivation to act trustworthy are needed
- Internal motivation:
 - Beyond checkbox mentality
 - Beyond what the law requires
 - Data ethics

Trustworthy Tech Company



Thank you!

Get in touch:

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