

Ethical questions robotics agri-food

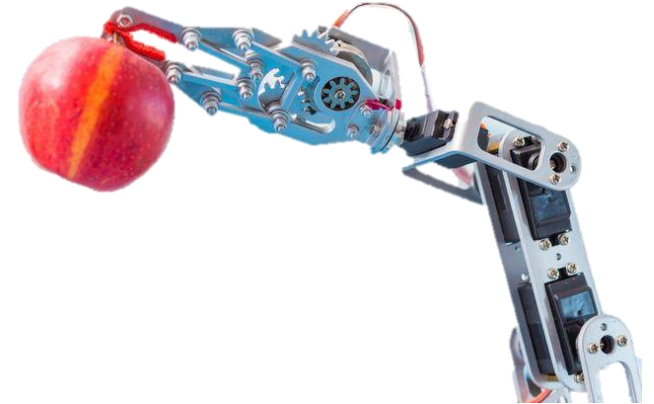
An initial version of the landscape of ethical issues

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Program

- Introduction 'Ethical questions robotics agri-food'
- Value Sensitive Design
- Break out sessions
- Discussion with Erik Pekkeriet



Overview ethical questions robotics agri-food

■ Literature review

- Ryan, Mark; van der Burg, Simone; Bogaardt, Marc-Jeroen. Forthcoming. "Identifying Key Ethical Debates for Autonomous Robots in Agri-Food: An Exploration of the Literature." Journal of Agricultural and Environmental Ethics.

■ Case studies

- Van der Burg, Simone; Giesbers, Else; Bogaardt, Marc-Jeroen; Ouweltjes, Wijbrand; Lokhorst, Kees. Forthcoming. "Ethical aspects of AI robotic systems for Agri-food; an exploration based on four case studies."

Robots



Manure collector – dairy farming



Packaging robot – food processing sector



Robots



Weeding robot – arable farming



Picking robot – greenhouse horticulture



Values – ethical questions

Moral values & norms

- Part of social life, guidance for (inter) action
 - Hidden in tacit expectations
 - Made explicit in principles, (professional) codes etc.

No self-evident guidance

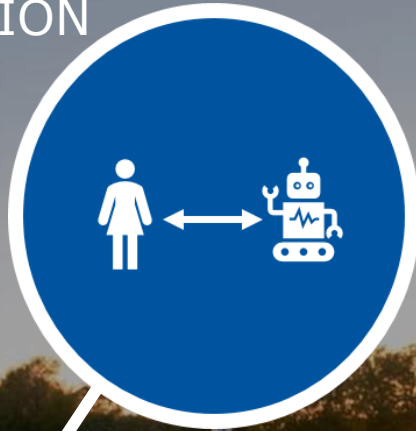
- Sometimes values conflict, or there is disagreement
- Sometimes there are 'new' situations when 'routine' moral values no longer apply
 - Uncertainty about how to act

Ethics

- Ethical questions arise

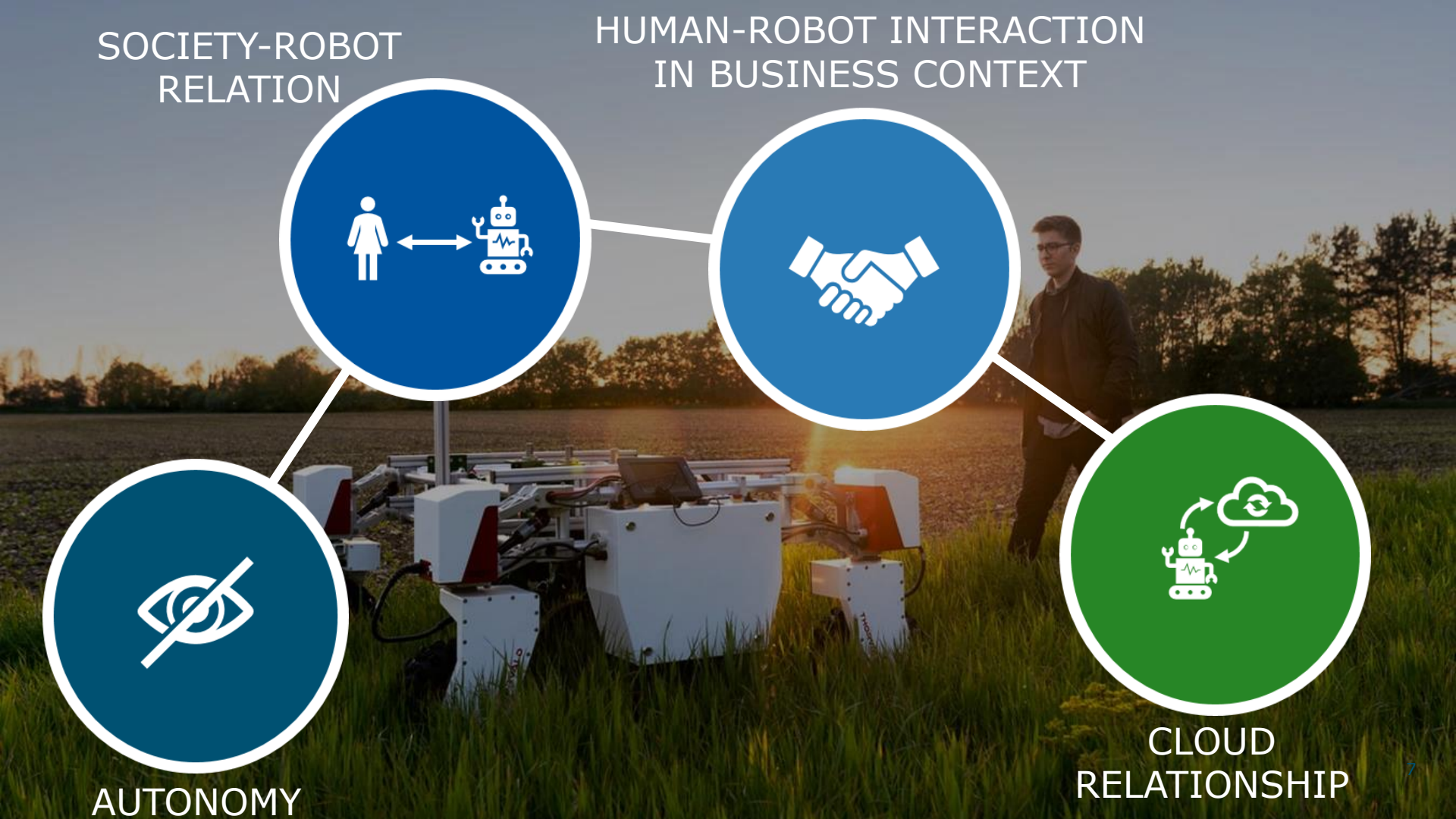
SOCIETY-ROBOT
RELATION

HUMAN-ROBOT INTERACTION
IN BUSINESS CONTEXT



AUTONOMY

CLOUD
RELATIONSHIP



AUTONOMY



EQUALITY

Does a robot deserve to be treated in the same way as human beings?

HUMAN RIGHTS

Should robots have rights?

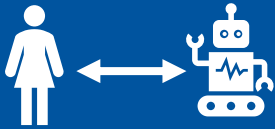
SAFETY

TOLERANCE

Who is responsible for damage resulting from robots?

RESPONSIBILITY

SOCIETY-ROBOT RELATION



NOSTALGIA /
CONSERVATISM

What is the value of traditional craftsmanship vs. robotic craftsmanship?

TRUST

SUSTAINABLE
ENVIRONMENT

Should requirements be imposed on robots with respect to making food production more sustainable?

ANIMAL HEALTH
AND
WELLBEING

HUMAN-ROBOT INTERACTION IN BUSINESS CONTEXT



BUSINESS
SUSTAINABI
LITY

What is an acceptable direction into which robots should help agri-food businesses to develop?

EFFICIENCY

What is the value of labour? (How) should robots contribute to it?

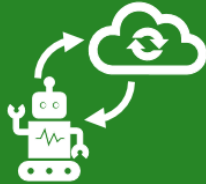
VALUE OF
LABOUR

HEALTH,
WELLBEING,
SAFETY
LABOURERS

What does a fair labour market require with respect to availability and accessibility of labour?

FAIRNESS

CLOUD RELATIONSHIP



ACCESSIBILITY
TO ROBOTS

Should the benefits of robots be accessible to all?

Who should (not) have access to data collected by robots?

DATA SECURITY

TRUST IN DATA
SHARING

Who should have the right to benefit from data collected by a robot?

Questions or remarks?



This project is funded by the KB project on Autonomous Collaborative Robots (Grant nr. KB-38-001-005).