

Navigating responsibility and controversy: the case of Ecover and Evolva

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PRISMA

Uncertainties in tech development

- Institutional: how will innovations be regulated?
- Impact: what (environmental) impact will the innovation have?
- Moral: how will the innovation be evaluated ethically?

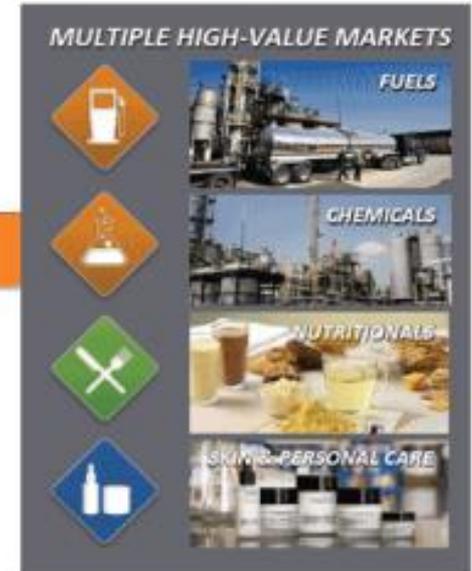
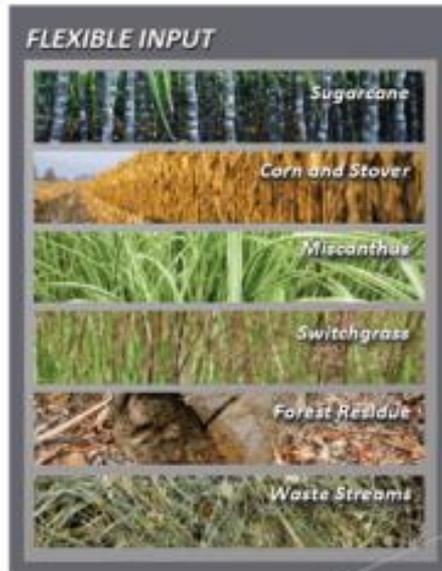
Main question

How to take responsibility as an (commercial) innovator in the bioeconomy in the face of uncertainty?

Ecover



Solazyme



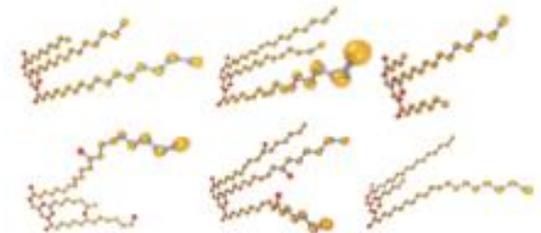
HIGHLY PRODUCTIVE MICROALGAE



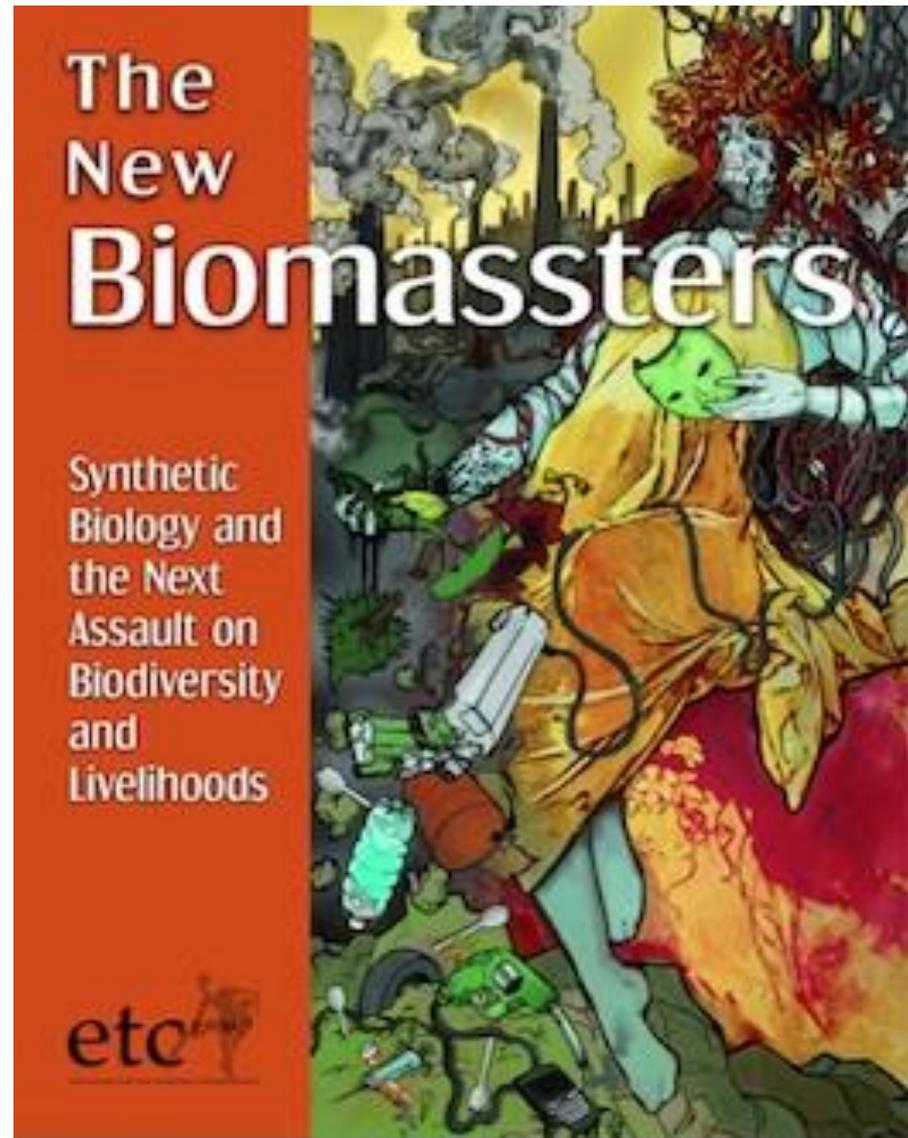
> 80% oil*

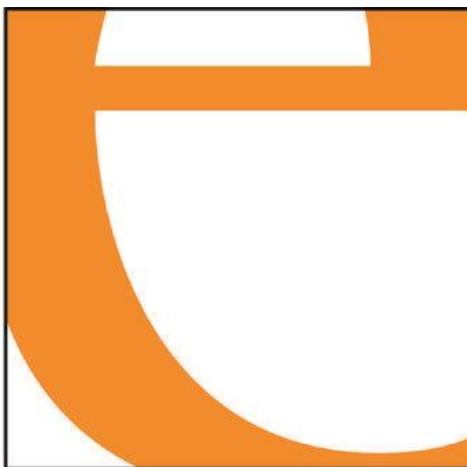
**The average wild algae only has a 5-10% oil content*

OIL DESIGNED TO SPECIFICATION



ETC group





evolva

NATURE SUSTAINED

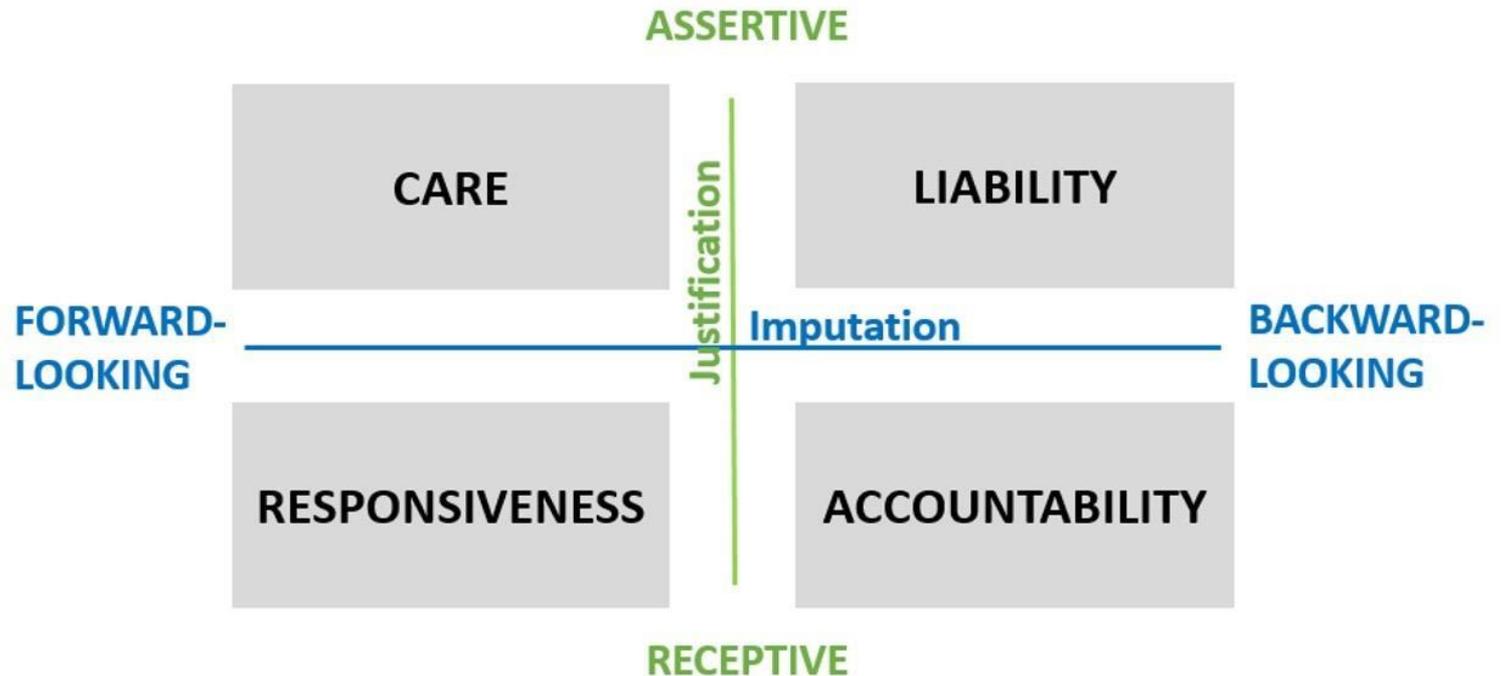
Extreme genetic engineering in your ice cream?

 Friends of
the Earth



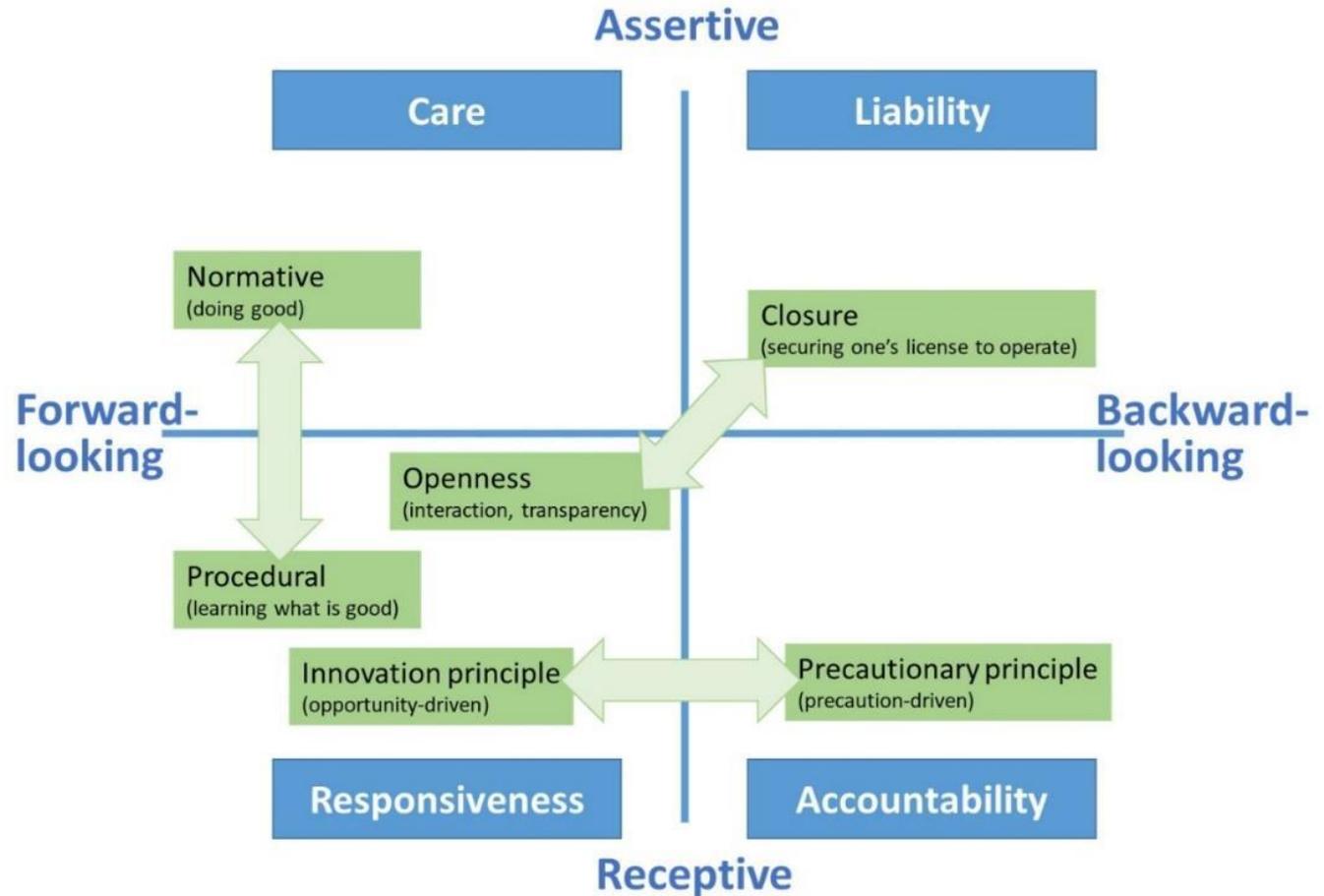
- Commercial innovators struggle with various kind of responsibilities
- Meta-responsibility maps different kinds of responsibilities and can help innovators to balance them

Different types of responsibility



Derived from Pellizzoni, L. (2004). Responsibility and environmental governance. *Environmental politics*, 13(3), 541-565.

Three important dynamics



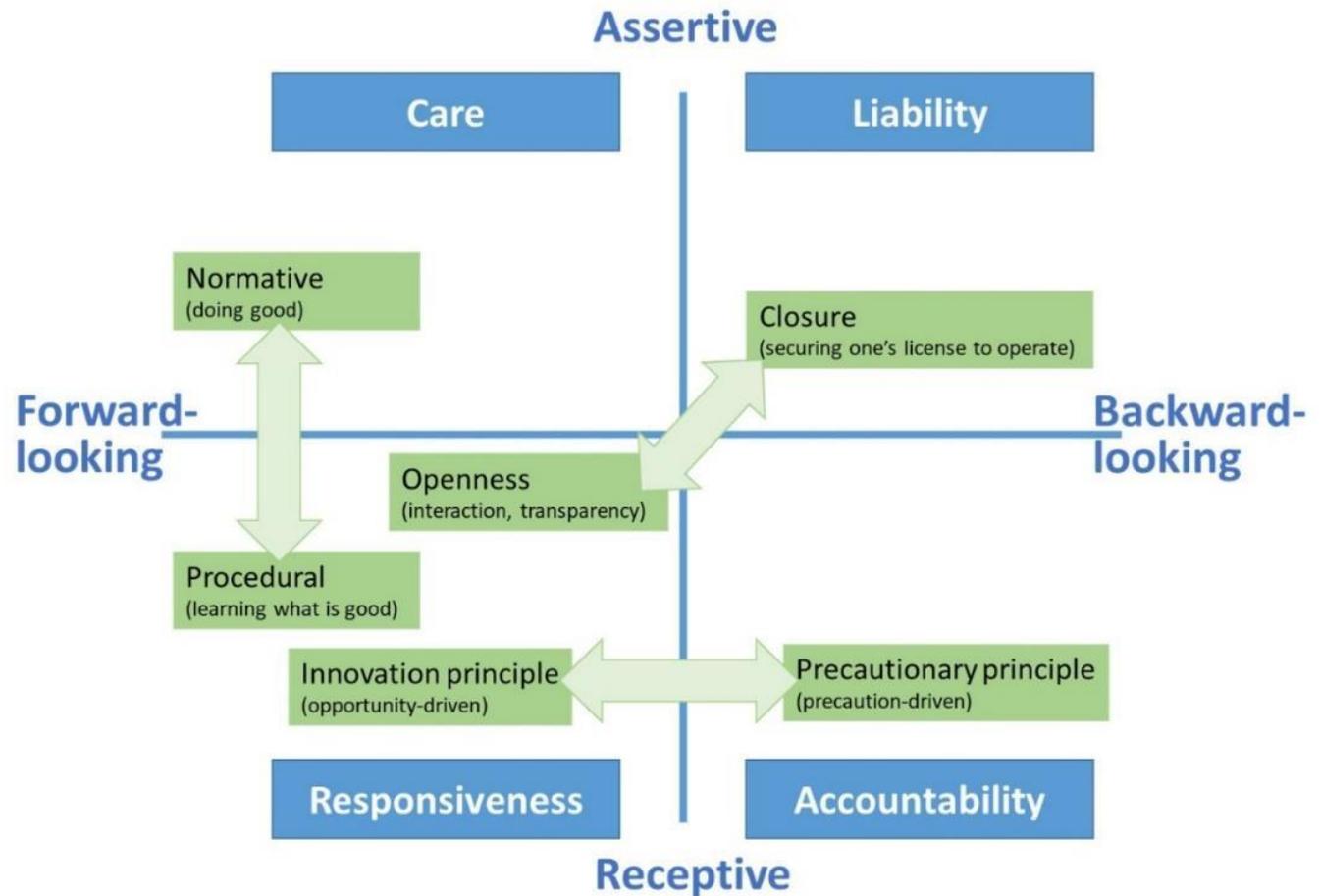
Innovation vs Precaution

- Responsiveness vs Accountability
- Promoting a promising but uncertain technology vs ensuring solid investigation of impacts
- LCA/pre-LCA
- Possible solution: transparent learning process, focus on specific application early on

Responsiveness vs accountability 2

- Stakeholders vs shareholders
- Stakeholders may require openness to a wide range of concerns whereas shareholders need accountability about what happens to their investment
- Solutions: finding common interests between both groups

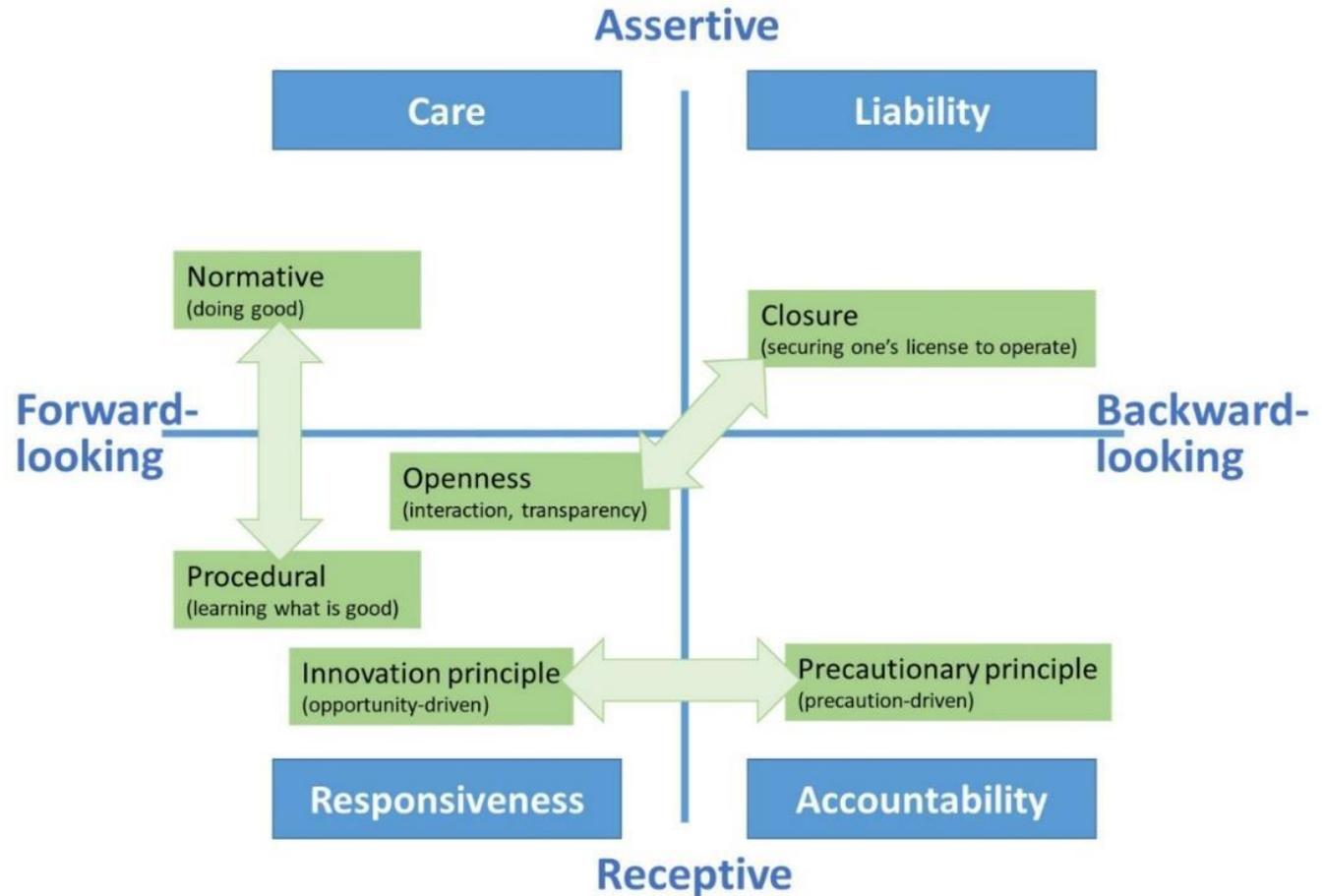
Three important dynamics



Normative vs Procedural

- Care vs Responsiveness, i.e. knowing what is the right thing to do vs moral uncertainty
- Approach: specify what are normative goals of the innovator (e.g. a framework), communicate this with stakeholders
- Goal is to strenghten own moral compass, not to blindly follow the opinions of others

Three important dynamics



Liability vs Responsiveness

- Openness vs closure, e.g. access to information vs intellectual property rights
- Can be partly solved by NDA, MTA, patents
- But remains partly unresolvable.

Take-away

Meta-responsibility can help specify what responsibilities that innovators have, identify possibly conflicts and hence support reflection on those responsibilities.

It does not guarantee a societally acceptable innovation, nor should it.

But it can help clarify what it is the right thing to do.

Asveld L., Osseweijer P., Posada J.A. (2019) Societal and Ethical Issues in Industrial Biotechnology. In: Fröhling M., Hiete M. (eds) Sustainability and Life Cycle Assessment in Industrial Biotechnology. Advances in Biochemical Engineering/Biotechnology, vol 173. Springer, Cham. https://doi-org.tudelft.idm.oclc.org/10.1007/10_2019_100

Sonck, M., Asveld, L., & Osseweijer, P. (2020). Meta-responsibility in corporate research and innovation: A bioeconomic case study. *Sustainability*, 12(1), 38. <https://doi.org/10.3390/su12010038>