

Constructing design requirements based
on more-than-human values and needs

Summary

In this teaching activity, students will learn how to analyse more-than-human values/needs (identified in previous teaching activities). Based on this, they will construct specific design requirements that guide a design process forward. In doing so, the judgments and design decisions involved will be explained in an explicit, debatable, and transparent way.

Learning outcomes

After the teaching activity students should be able to:

- analyse the identified values and needs of more-than-human actors and construct specific design requirements,
- explain the involved judgments and design decisions in an explicit, debatable, and transparent way.

Content

- Value/need hierarchy
- Design objectives
- Design requirements
- Design decisions

Key readings

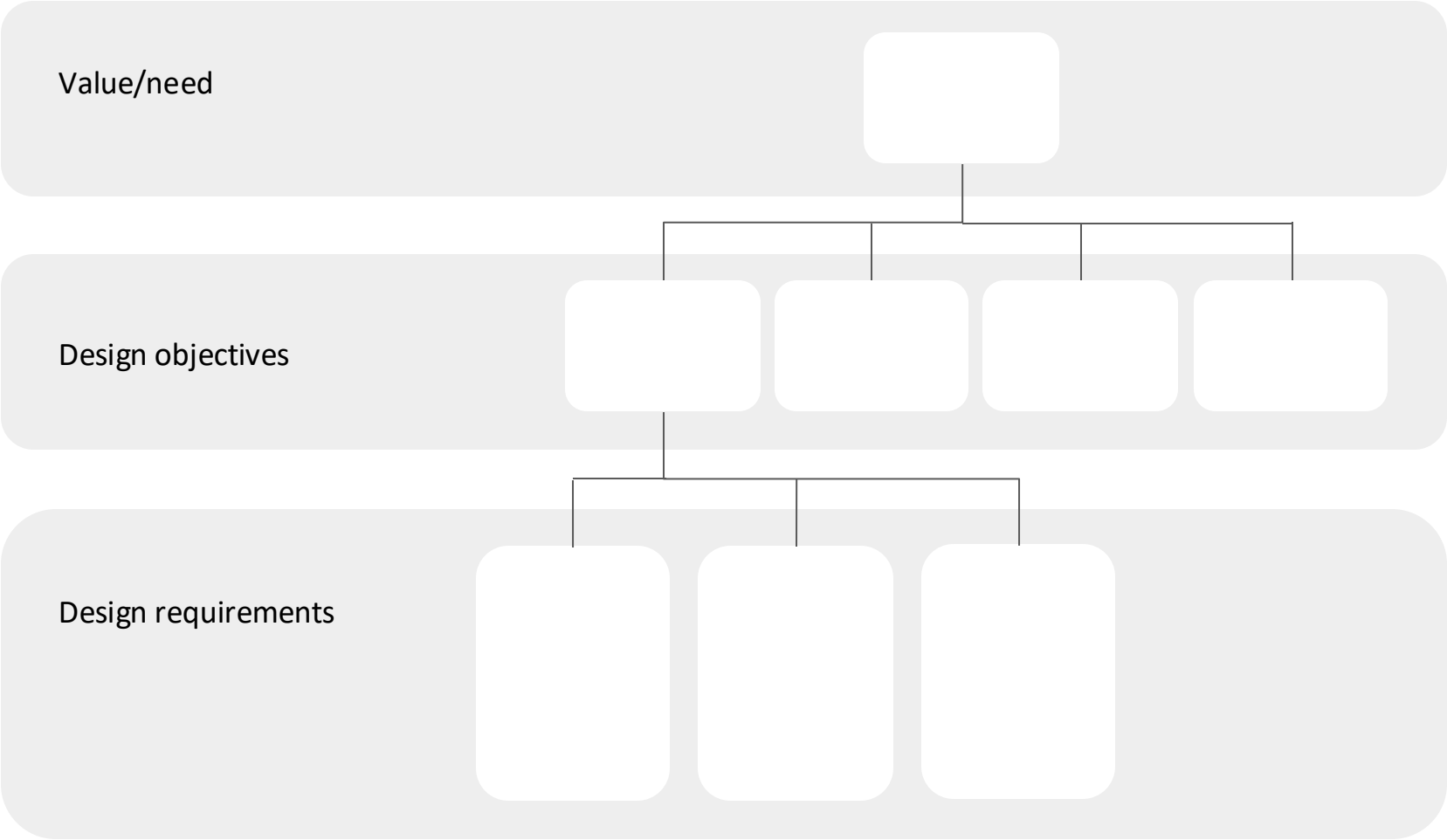
Van de Poel, Ibo (2013). Translating Values into Design Requirements. In: Michelfelder D., McCarthy N., Goldberg D. (Eds.) *Philosophy and Engineering: Reflections on Practice, Principles and Process. Philosophy of Engineering and Technology*. Dordrecht.

Constructing design requirements

- *Analyze* the identified values and needs of more-than-human actors and *construct* specific design requirements.
- *Explain* the involved judgments and design decisions in an explicit, debatable, and transparent way.

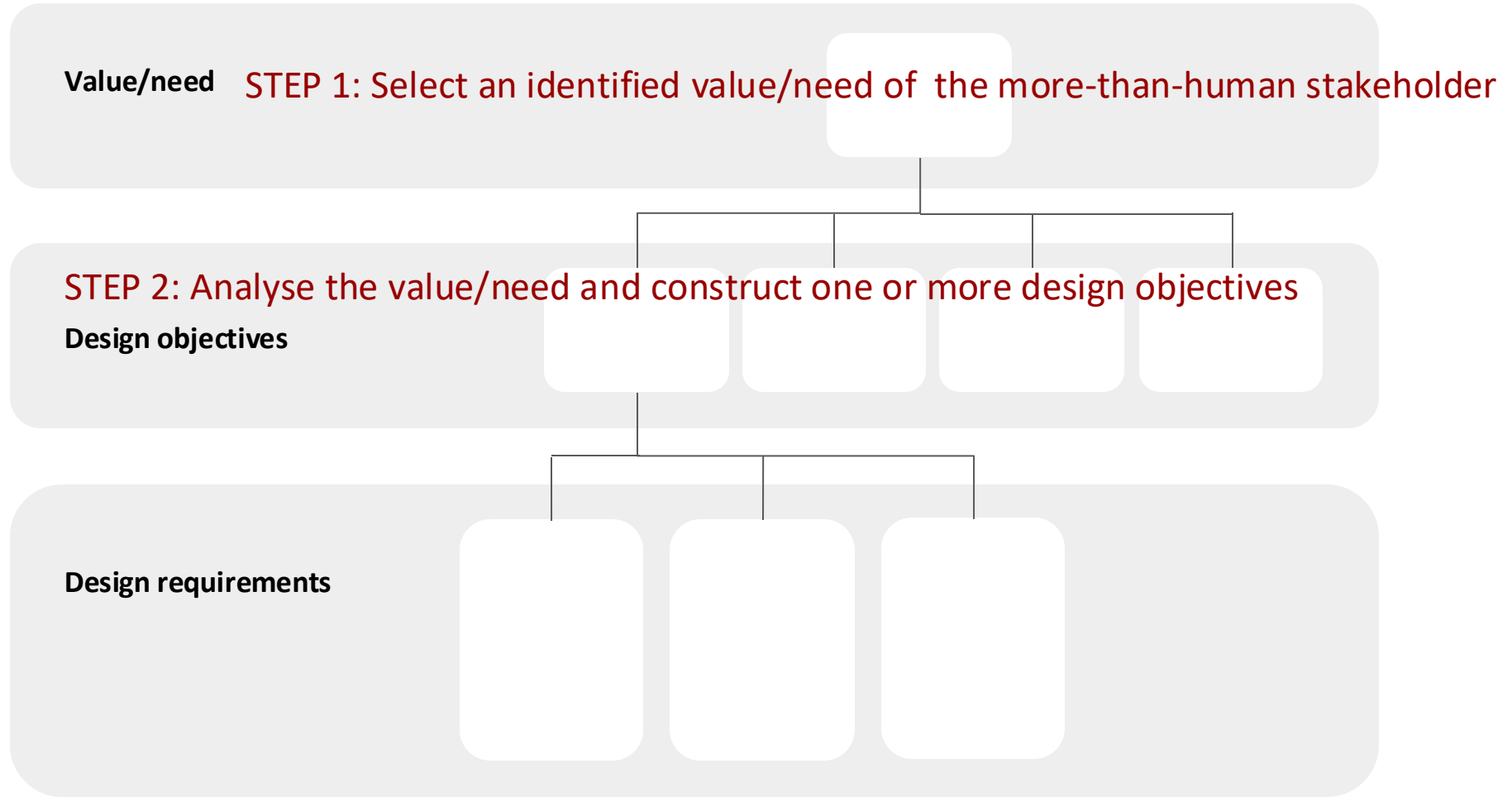
Value/need hierarchy

More-than-human actor:



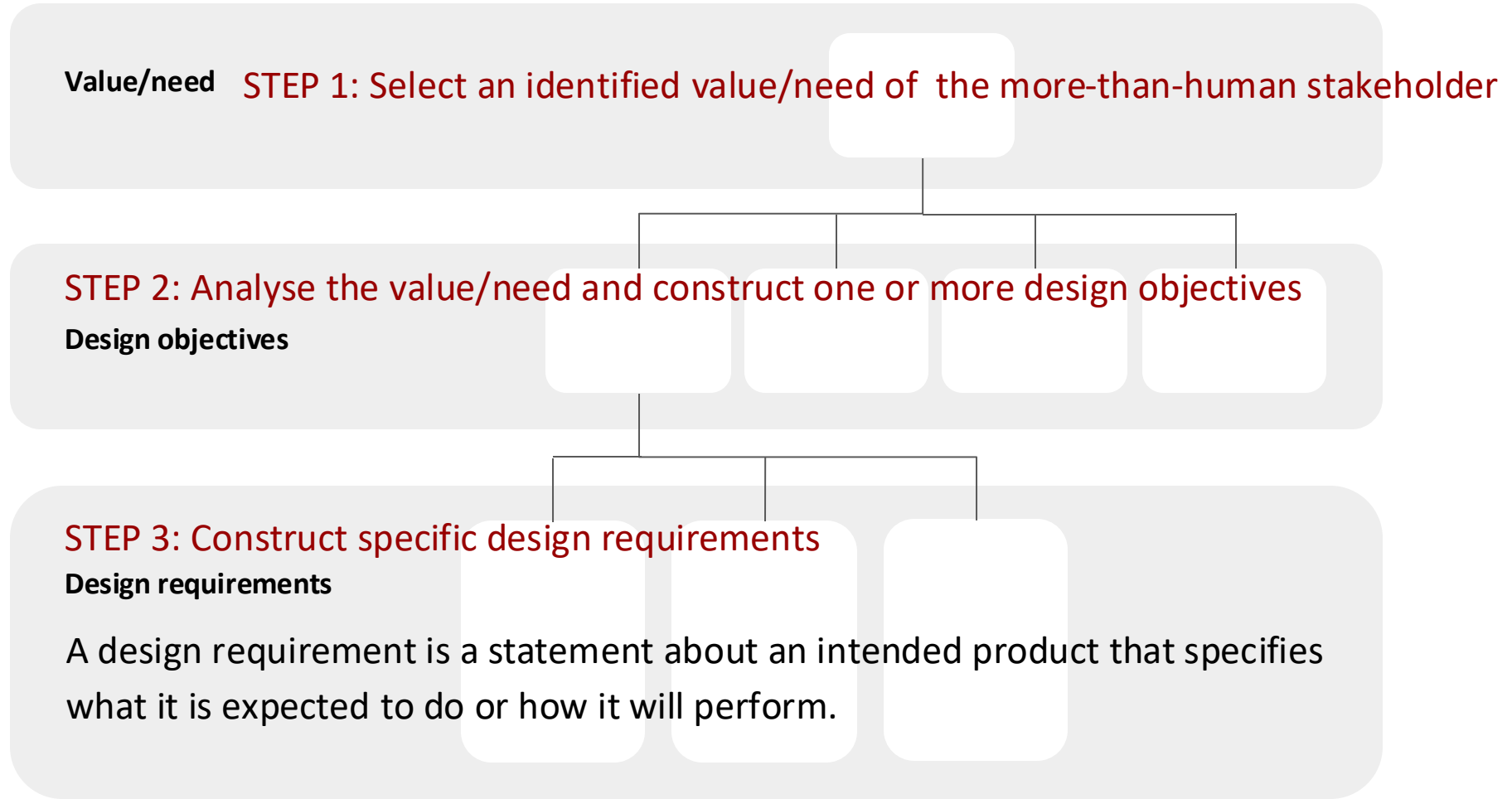
Value/need hierarchy

More-than-human actor:



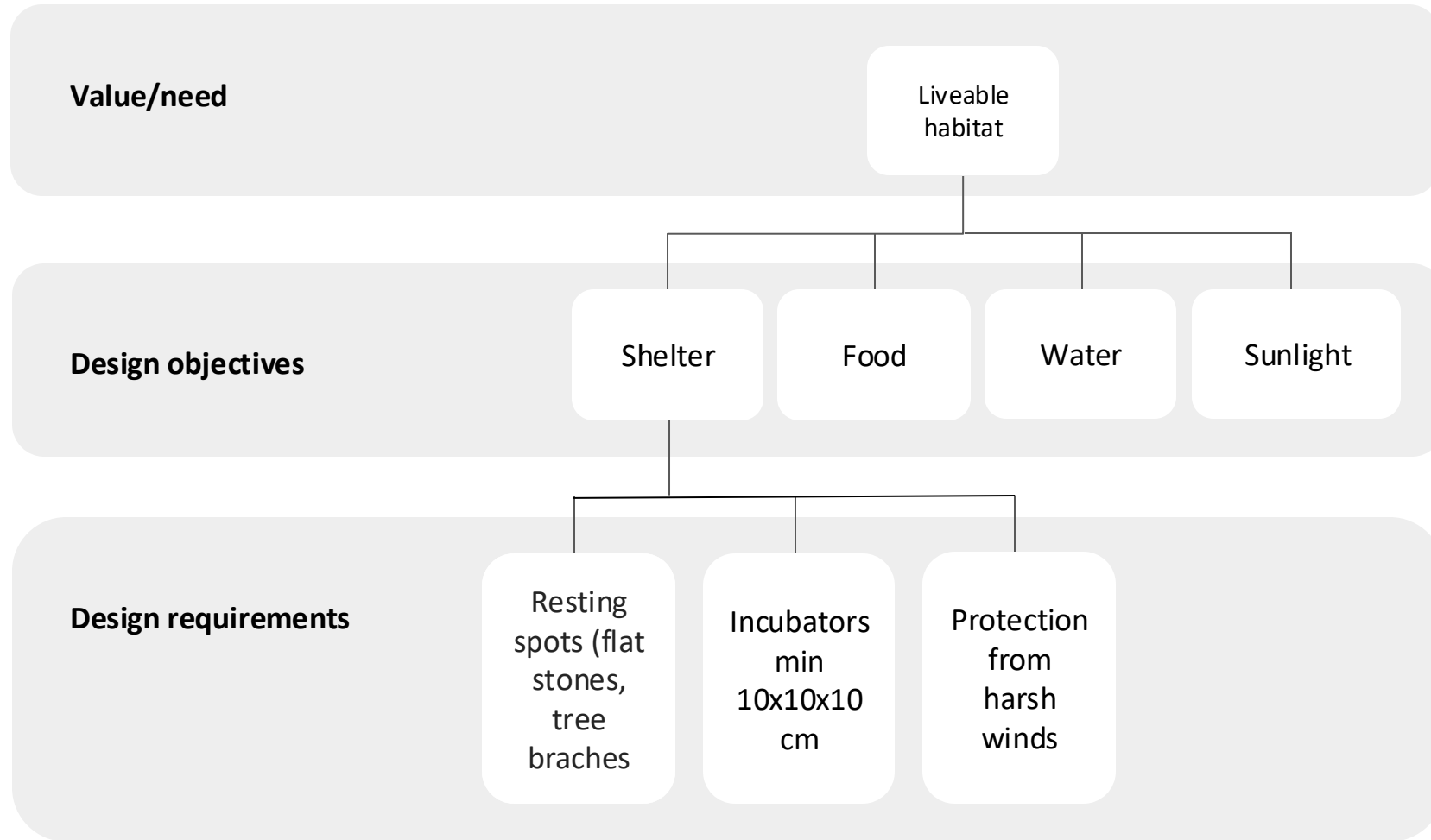
Value/need hierarchy

More-than-human actor:



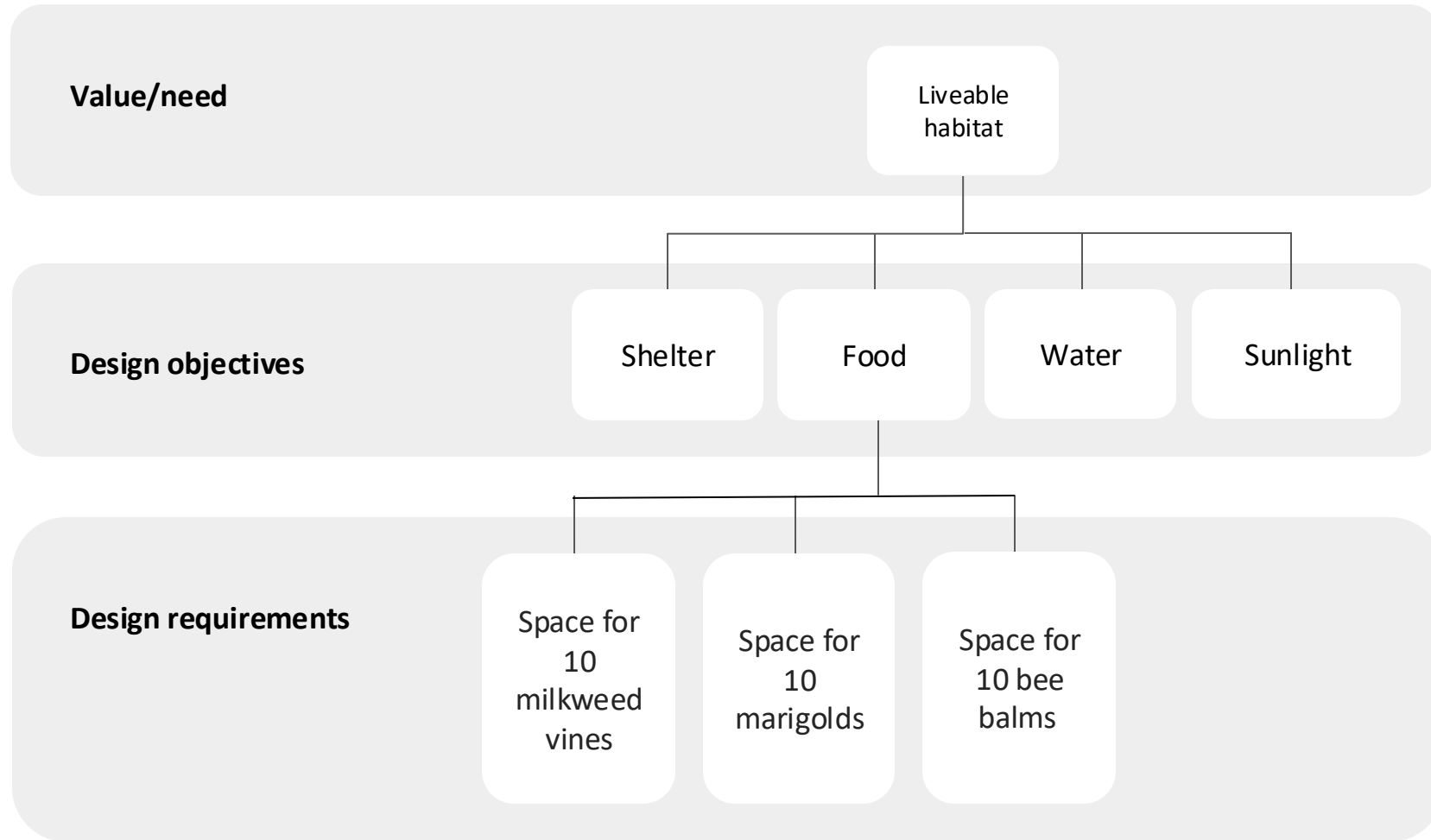
Value/need hierarchy

More-than-human actor: Monarch butterfly



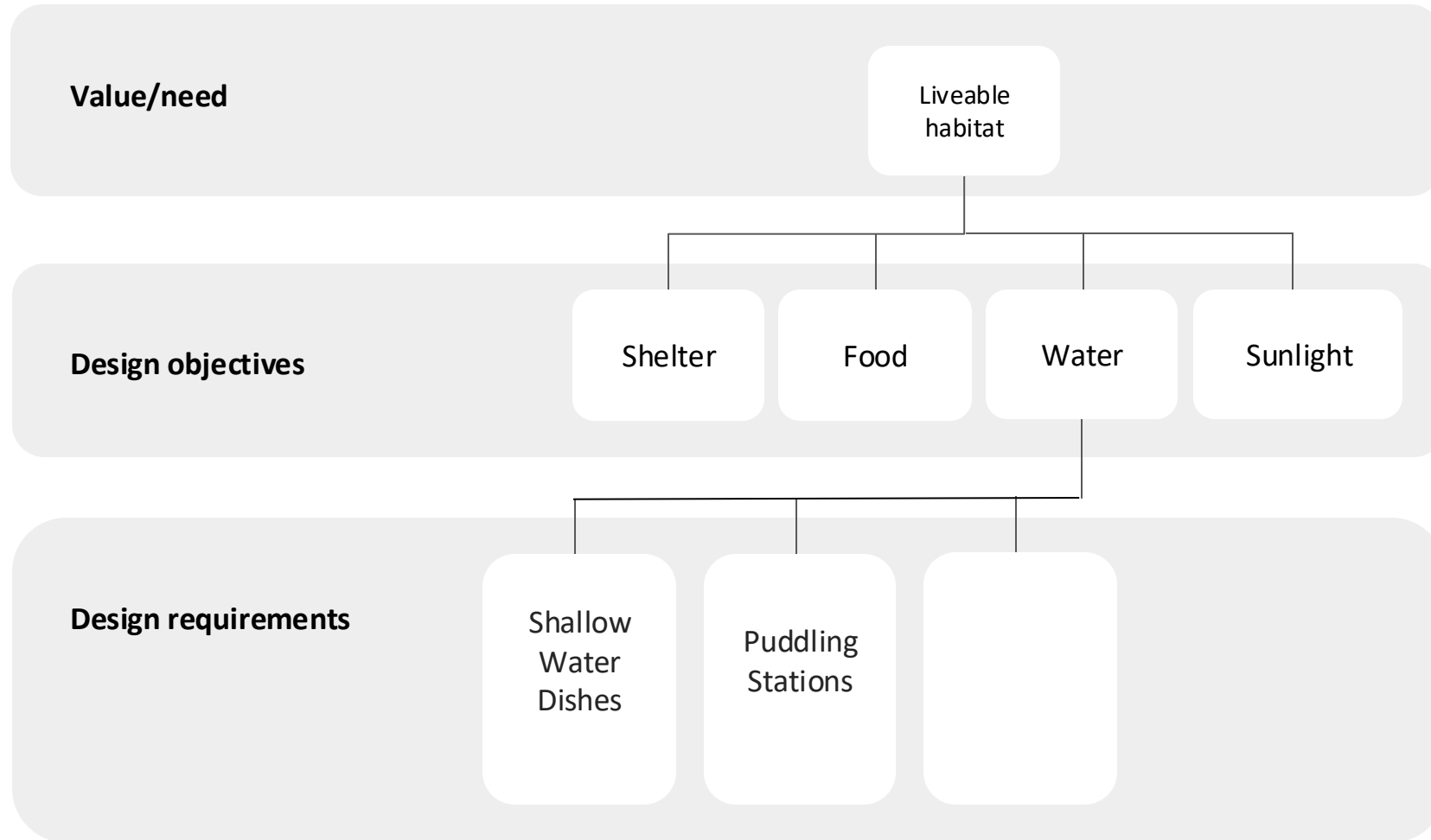
Value/need hierarchy

More-than-human actor: Monarch butterfly



Value/need hierarchy

More-than-human actor: Monarch butterfly

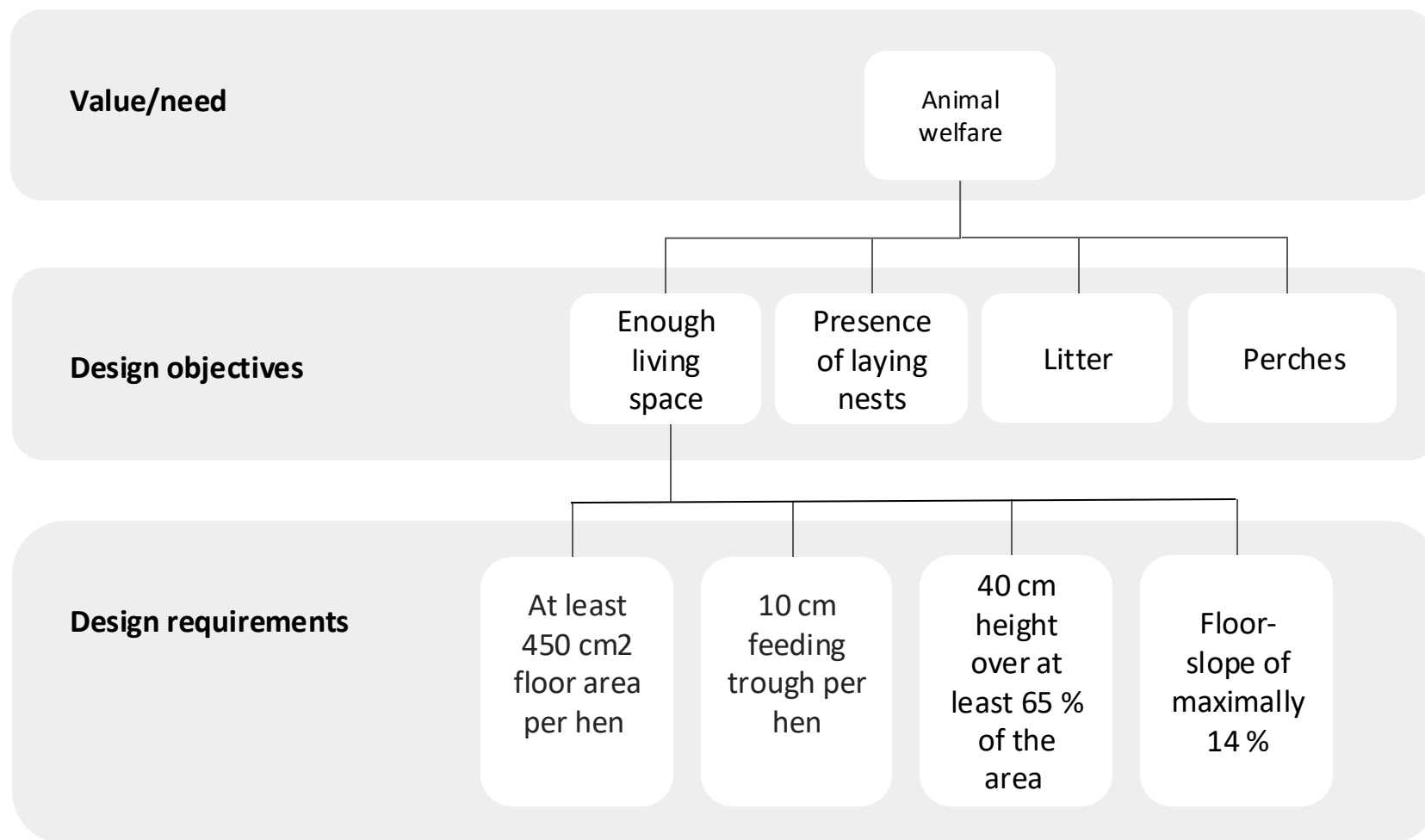


The Monarch Sanctuary (NYC), <https://www.terreform.org/monarch-sanctuary>



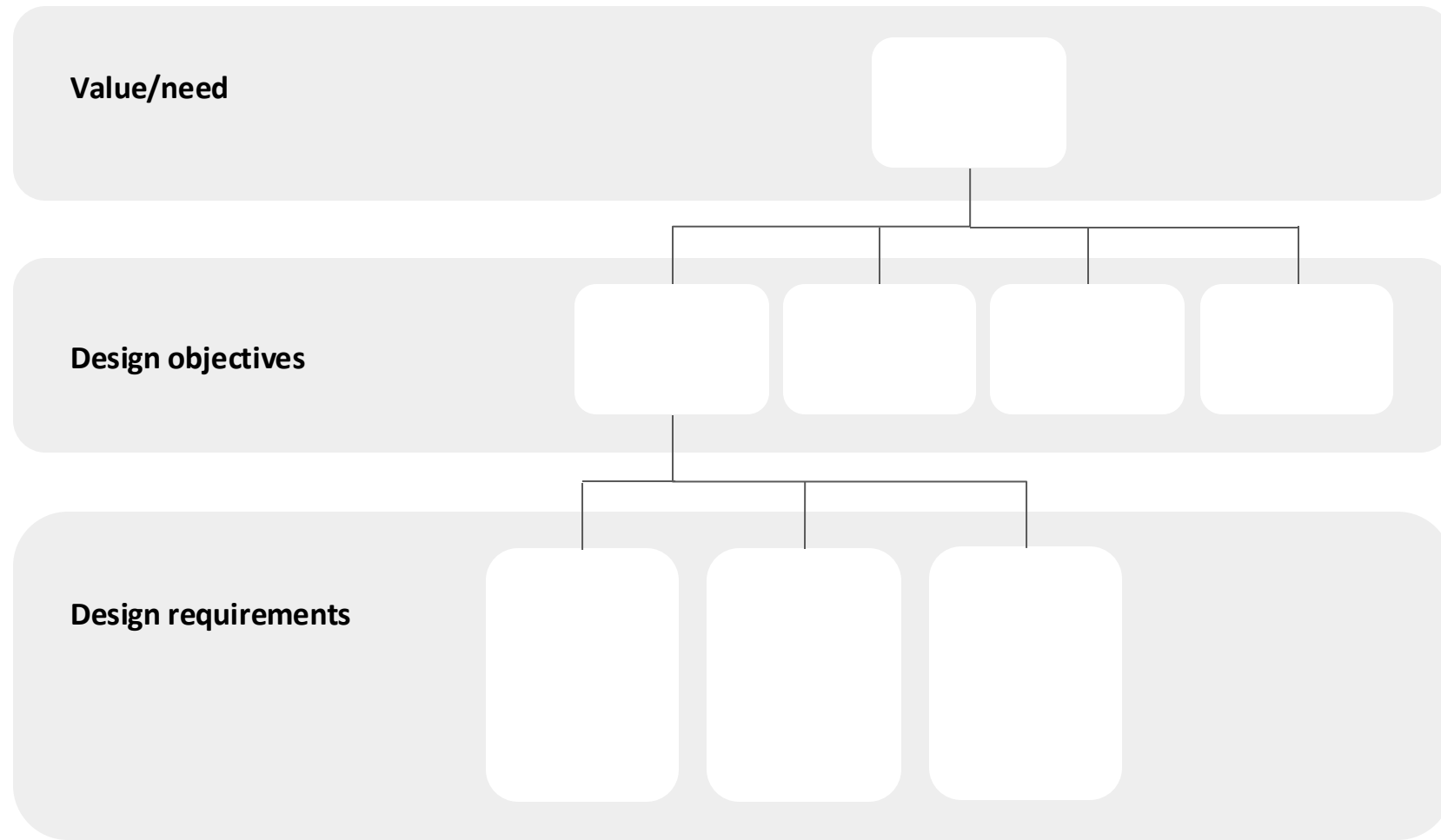
Value/need hierarchy

More-than-human actor: Egg-laying hens



Value/need hierarchy

More-than-human actor:



Assignment

- Select one or more of the identified values/needs of a more-than-human actor that affect or are affected by your design (maybe from a stakeholder analysis that you have conducted in a previous teaching activity).
- Develop a value/need hierarchy and construct design requirements based on more-than-human values and needs.
- Use the worksheet: `value-need_hierachy_worksheet.ppt`
- Meet back in the classroom in 1 h.

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<https://mova.uni.mau.se/>



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