

Systems Thinking in Climate & Sustainability Systems - Application5: Describe a renewable energy system

This is a team assignment. Every team member should contribute to this assignment, and only the team members should work on this assignment. Once you submit this form, you will receive a copy of your responses to your email address.

For this assignment, you will describe an existing system, a solar charger.

You may use the following resources for this assignment:

- Preparation2: Systems thinking article
- NEET Climate & Sustainability Systems presentation
- 22.03 Final review

You are allowed to use additional resources, as long as you report on your use below.

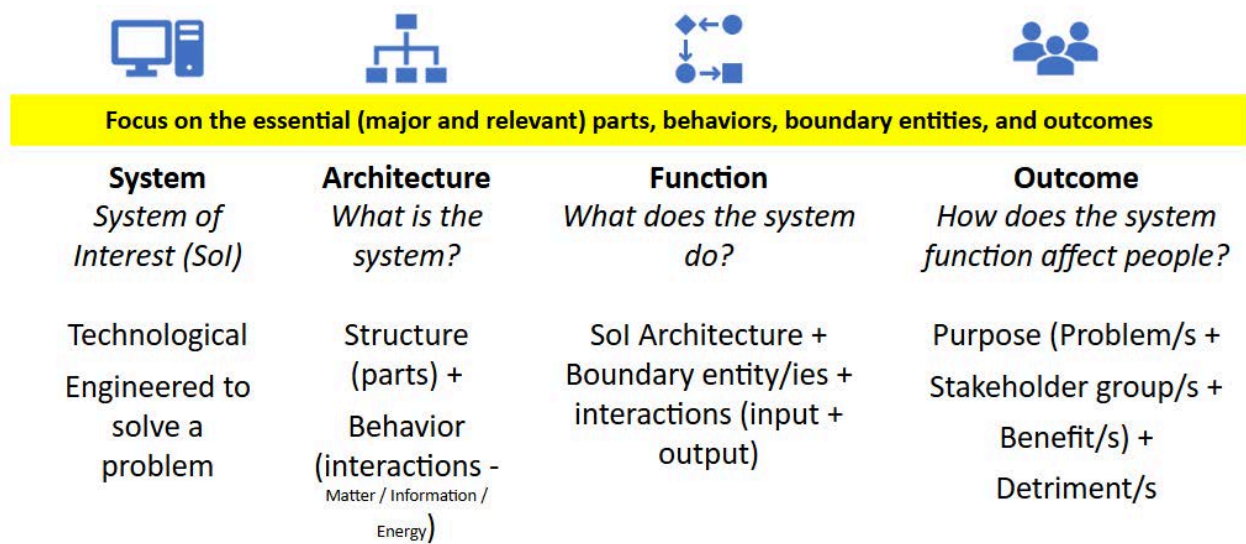
You are allowed to use generative AI, as long as you report on your use below.

* Indicates required question

1. Email *

2. First name and last name of every team member *

System Architecture-Function-Outcome construct



3. System Architecture - Structure: Name five, six, or seven major parts of the system. *

4. System Architecture - Behavior: Describe major interactions between the parts of the system you mentioned. Each part must be included at least once. *

An interaction can be unidirectional or bidirectional and involve matter, energy, or information.

5. System Function - Input: Describe one or two major input entities/systems and how they interact with the architecture of the system of interest. *

An input entity/system can be technological, social, natural, or a mix. An input interaction must be unidirectional from the input entity to the Sol and involve matter, energy, or information.

6. System Function - Output: Describe one or two major output entities/systems and how they interact with the architecture of the system of interest. *

An output entity/system can be technological, social, natural, or a mix. An output interaction must be unidirectional from the Sol to the output entity and involve matter, energy, or information.

7. Draw a diagram for the system function (Input + System of Interest's Architecture + Output) and upload it [HERE](#). The file name should contain the first name of every team member. *

You can use the diagram in "Preparation2: Systems thinking" (Sep23 Canvas module) as reference. You can create a digital drawing or a pen-and-paper drawing, as you prefer.

8. What external sources, if any, did you use for your responses to "Function"?

If you did not use any external sources then you can skip this item.

9. System Outcome - Problem: What is the problem, lack, or need the system function * is meant to solve or improve?

Mention exactly one problem.

10. System Outcome - Stakeholders: What group of people is majorly affected by the * problem?

Mention exactly one stakeholder group.

11. **System Outcome - Benefit:** What major intended positive outcome is brought about by the system function? *

Mention exactly one benefit. It should be directly related to your stakeholder group.

12. What external sources, if any, did you use for your responses to "Outcome"?

If you did not use any external sources, you can skip this item.

13. If you made use of generative AI (like chatGPT) while working on this assignment, please provide details here about what tool/s you used, how you used them, how you found it useful, and what potential shortcomings you found. Add any other information you deem relevant.

If you didn't use genAI then you can skip this item.

14. If there was anything that was not clear in this assignment, please add your comments here.

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