**CIRCULAR ECONOMY and Manufacturing**

This assignment is part of wider course.

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This assignment is based on tasks to study certain terms related to context circular economy and manufacturing. The task could be done an individual or a team task. The assignment has been written to have a small team for phase 1 and bigger teams for phase 2. The used study platform has been Moodle.

**ASSIGNMENT instruction: MANUFACTURING**

**Learning objectives**

The objective of this task is to make you to understand basics of manufacturing concept, when a company is following circular economy principles. You will evaluate and create development ideas to company cases or business sector.

This assignment consists of two parts: the searching part in teams of three student and the group assignment.

**Your task at home (before the contact session)**

**Phase 1. Study the main principles of manufacturing in CE and given examples and analyse your case company or a business sector. You can use continue with the same company or business sector than in other assignments.**

*1. Study the CE business models in manufacturing industry*

* Source The Circular Economy Business Models for manufacturing industry booklet <https://www.sitra.fi/en/publications/circular-economy-business-models-manufacturing-industry/> or <https://teknologiateollisuus.fi/fi/circular-economy-playbook>
* Study Chapter 1 and 2. (Understand CE and opportunities)

If you like to recap the butterfly models, please look the video (<https://www.youtube.com/watch?time_continue=5&v=yWFJBldr4kA>)

You can use your own sources. Please remember to add them to your returns.

Study the terms related to the manufacturing and define:

* Green manufacturing
* Eco balance and energy efficiency
* Side stream
* Utilization rates related to machine and materials.

*2. Select one company* ***or*** *business sector.*

* Analyse how well/ efficiently the selected company or business sector behave.

Think about manufacturing principles (side stream, energy efficiency etc.) and try to compare the company’s details and your opinion to manufacturing value chain, (page 23 from Circular Economy Business Models for manufacturing industry-booklet).

* How “circular economy way” does your selected company/ business sector manufacture their products? Can you notice any circle in their processes, etc. please specify.

If you analyse a business sector, please use other than machinery & equipment, marine, energy or transportation. These are already analysed in the booklet. You can use for example textile, constructive industry, food etc.

Post your team findings to study platform **by dd.mm. at latest**. Remember to add your sources to the end of your notes.

**Phase 2. Reflections of the results (in class)**

1. Bring your notes to class (you can bring your computer too) on **dd.mm.**
2. Discuss your results in a small group during the contact hour. (two teams together)
3. Compare your findings and give feedback to another team.
4. Finalized your Power Point slides and return to study platform on dd.mm.
5. Couple of cases will be present to the whole class (Power Point slides).

**Assessment** according to your own criteria.