**CIRCULAR ECONOMY and Sourcing/Purchasing**

Assembled and Created by Mervi Saarela, Laurea UAS 2020

Laurea is introducing a pilot study unit in autumn 2020 where theory and practice are combined - a Circular Economy simulation game as a part of Customer-based Supply Chain Management study aimed for the 3rd year students. The 10 cr study unit contains a 5 cr part of The Blue Connection game (<https://theblueconnection.org/>) where the concept of Circular Economy is combined with the decision making in a company.

The Blue Connection game by Inchainge is based on licenses. The game´s cloud-based distribution and browser-based delivery allows the students to access the game easily also as an online part.

The pilot group is a multicultural group and the implementation of the study unit is virtual, in Zoom.

**Learning objectives**

One of the main targets of this study unit is to give an opportunity for experiential learning and to give the students the possibility to test different Circular Economy strategies and how decisions in the four roles in game (sales, purchasing, SCM and finance) affect the company´s material circularity (MCI%) and profitability (ROI%).

In the purchasing role the main task is the supplier selection. The Purchasing Manager is responsible for purchasing the components for the company´s product which is an e-bike. The components for the e-bike are frame, wheels, mechanism, saddle**,** motor, battery and luxury box. The purchasing manager compares different suppliers and negotiates the agreements; the best alternative for each component which supports the selected circular strategy should be chosen.

**The Circular Economy game part is consisting of several tasks:**

1. Getting introduced with the circular economy and the game (individual work) by doing Task 1
2. Forming the teams, four students in a team, everyone chooses one role e.g. Purchasing Manager. If there is team of e.g. only three student, one student can take two roles.
3. Getting introduced with the Circular Economy Task 2 (individual work)
4. Getting introduced to own responsibility area in the game Task 3 (teamwork in temporary teams: all Purchasing Managers in one team)
5. Test round played in teams without any Circular Strategy -> outcome teams understand that a strategy which would give some guidelines for the decision making is needed
6. Circular Economy strategies: Lifetime Extension, Product as a Service and Recycling are introduced. It could be possible that all teams would choose one strategy and would play all rounds with the chosen strategy but in this pilot, we have planned the game rounds so that the teams test all strategies so there will be 3 rounds/strategy.
* First 3 game-rounds Lifetime Extension strategy
* Next 3 rounds Product as Service strategy
* Last 3 rounds Recycling strategy

The decision making is teamwork although there are the roles. Zoom breakout rooms are used for the teamwork.

1. A game round documentation is done. Situation analysis, decisions/role are documented before the game round results are calculated. It is done centrally by the instructor which means that a deadline for the decision making must be agreed with the students. After the game round the outcomes are documented, what went well (as planned)? What did not go so well? Task 4 example of the game round documentation. (individual and teamwork)
2. A final report where e.g. experiences and outcomes from the three different strategies are summarized. Also, own learning process and the study unit structure and the implementation of the Blue Connection Game in this pilot study unit is evaluated by the teams (teamwork). There is also a personal own learning experience evaluation part (individual work). The game round documentation is an important part of the final report and will be attached to the final report.
3. Grading for the game part was decided to be based on the Final report, game round documentation and active participation in this pilot study unit. It might be possible that a part of the grade would come from the game results: the two KPIs: MCI (Material Circularity Indicator), Purchasing, ROI (Return on Investment)

Last game round will be played 3 Dec and the final reporting is done after that. 29 October we will play the first real game round with the first strategy. The previous two rounds have been so called practice rounds but very useful because the students need to have the opportunity to test the game environment and e.g. the one round without strategy motivated the teams a lot to think and learn about the strategy.

Recently,The Blue Connection was included in Sitra’s list of Inspiring Circular Economy Solutions <https://www.sitra.fi/en/projects/inspiring-solutions/>

My own recommendation if planning to take the Blue Connection game on a study unit is to participate in the training offered by Inchainge. For more information Kirill Chelombitko, Business Development Manager k.chelombitko@inchainge.com

Keywords: Circular Economy, SCM, MCI (Material Circularity Indicator), Purchasing, ROI (Return on Investment), Lifetime Extension, Product as a Service and Recycling