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Challenge: Finding the solution 4.0 to improve our supply chain.

IT and logistics working together!

(Document for students)

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Time to solve the challenge

20 hours

Description of the situation

You work in a company that designs, produces and sells drones. You have received an order to produce a quadcopter with a camera embedded.

The logistics department processes the order and sends it to production. But the production manager tells you that they miss a part to produce the drone (the frame of the quadcopter) and your company won´t be able to deliver the product in time, losing the customer, as a result.

It´s not the first time something like this happens and the management of the company wants to solve this for good. Therefore, the logistics and the IT department of the company are called upon a meeting to find possible solutions. In particular, the management wants you guys to propose solutions to avoid these past situations:

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- Lack of stock of key production parts (be aware of: better stock management, anticipation of demand, changes in demand, better communication with the providers of the different pieces…).
- Defective assembly or damaged pieces or final product.
- Sale returns due to difficulties for the final user to pilot the drones and/or use their features.
- Delays in transport or delivery of damaged goods or packaging.

The management gives you 3 days to come with possible solutions, for these troubles in the supply chain. For the solutions given, you will need to describe:

- The specific problem you are addressing.
- Which part of the value/supply chain is being affected, how and which are the consequences in other parts of the value/supply chain.
- The solution proposed and the digital tool / technology necessary to implement it. You will also need to describe which steps are necessary to implement it (buy equipment, programming, reorganization, training of workers…)
- The sources used to identify the solution proposed and possibly a success story behind it which supports it.
- The expected benefits of the solution in your company.

Learning objectives

LO1: Understanding the concept of value chain and the roles of IT and logistics in it.

LO2: Understanding the interdependences existing between the IT and logistics departments in a value chain.

LO3: Apply different IT tools in order to improve the logistics operations in a value chain.

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LO4: Being able to work as a team with peers from different technical backgrounds in order to solve a common challenge.

Schedule of the challenge

Suggested below are notional time allocations for the challenge:

- 1 hour to identify the parameters of the challenge (possibly including identifying who will carry out which task (s))
- 6 hours to look for information
- 2 hours to select information
- 3 hours to generate alternatives
- 4 hours to present proposals / collate findings and discuss them (within the student´s group)
- 1 hour to identify how findings will be presented (if not stipulated by teacher)
- 2 hours to prepare findings into appropriate format i.e. PowerPoint for presentation
- 0,5 hours to present / discuss findings
- 0,5 hours to evaluate / assess how you carried out the challenge and how you might make improvements for the future

Assessment criteria

The teacher will tell you which are the assessment criteria. Nevertheless, bear in mind that this will be a 360º evaluation, meaning that each member of your team will be evaluated by your teacher, evaluated by the rest of the members of the team and self-evaluated (he/she will evaluate him/herself as well). The weight of the result of each of these evaluations will be decided by your teacher.


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