Introduction to Discrete Event Simulation of Warehouses or Distribution Centers with FlexSim

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DISCRETE EVENT SIMULATION (DES)

To the end of Second World War began the promulgation of Operations Research Techniques in large nationalized industries, particularly in the British steel industry Discrete Event Simulation (DES) is introduced by Keith Tocher based in Monte Carlo Simulation (Brailsford, Churilov & Dangerfield, 2014).

"Discrete-event simulation concerns the modeling of a system as it evolves over time by a representation in which the state variables change instantaneously at separate points in time" (Law 2015). Simulate the operations of a warehouse or distribution center enables to establish scenarios that allow analyzing the behavior of receipt, accommodation and picking of goods (Sandström & Hellström, 2012).

THE WORKSHOP

This three-hour workshop provides a practical understanding to use DES for modeling receipt, accommodation and picking of goods, providing the basic theoretical framework and illustrating its application in modeling and solving illustrative examples.

The workshop aims to allow the attendants to learn how to model and solve problems using DES, with this purpose course participants will learn how to implement some of the introduced models using FlexSim.

WHO SHOULD ATTEND?

The seminar is intended for students, academics, researchers and practitioners looking for basic understanding for application of DES as a decision support tool for problems where efficiency and performance metrics may help in the assessment, selection and assignment among different resources (humans, handling tools materials, accommodation of merchandise and others) in warehouses or distribution centers.

REFERENCES

Brailsford Sally,Churilov Leonid & Dangerfield Brian, 2014.Discrete-Event Simulation and System Dynamics for Management Decisions. United Kingdom. Wiley. PP.1-25

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Sandström, M., Zulumovski, D., Bertilsson, C-M., & Hellström, D. (2012). Simulation of Finished Goods Warehouse – Towards a Detailed Factory Simulation. Lund University. Suecia.