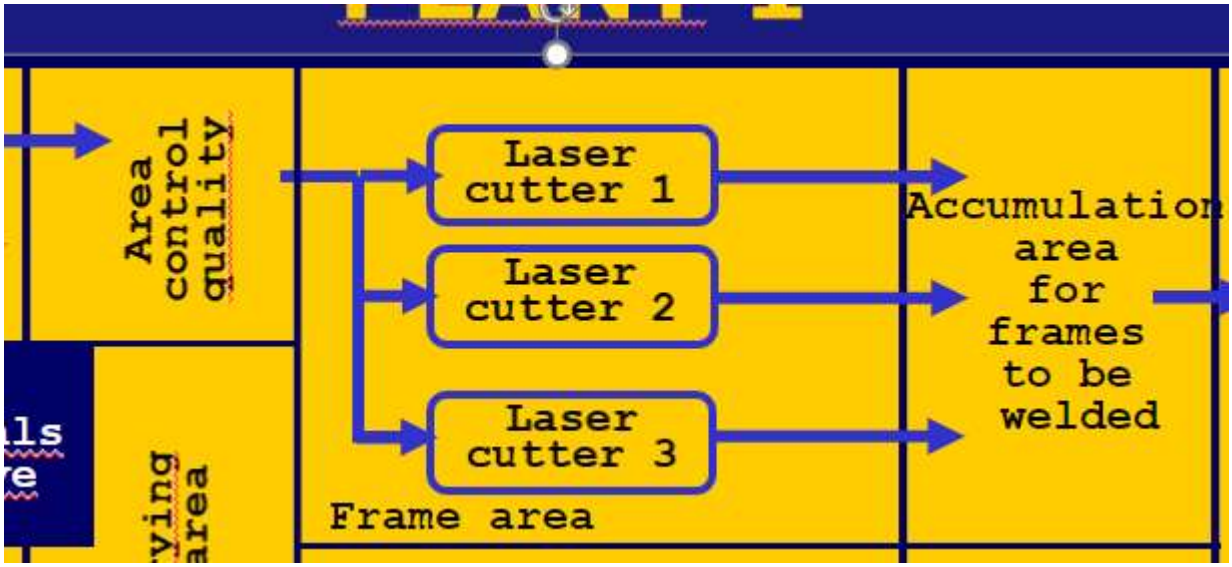
Exercise 2.

With reference to the example “DIBRIS-BIKE” (powerpoint slides partIIIez05, example), focusing on the part of the plant shown below, you are required to design and implement the following activities.



1) Design and implement in MS-Sql server the tables required to store the information related to the “tubes” present in the area control quality (attributes: id, batch_id, arrival time, due_date, processing_time_on_lasercutter1, processing_time_on_lasercutter2, processing_time_on_lasercutter3), and to the jobs (“cutting the tubes”) assignment to the different laser_cutters.
2) Design and implement a scheduling algorithm in Matlab based on dynamic programming to minimise the number of jobs that are late. Store the results in MS-Sql
3) Verify the performance of the algorithms against the definition of the same problem as a mathematical problem
4) Verify such performance generating different instances of the problem