Assignment 5: Manufacture of different products, with different batch sizes, with different processes

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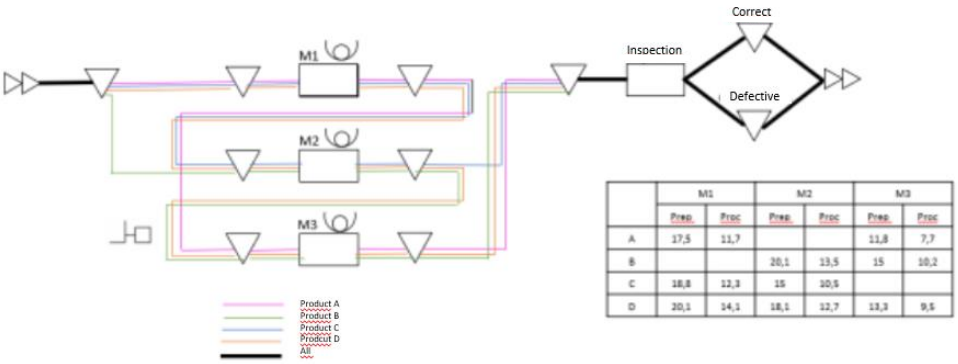
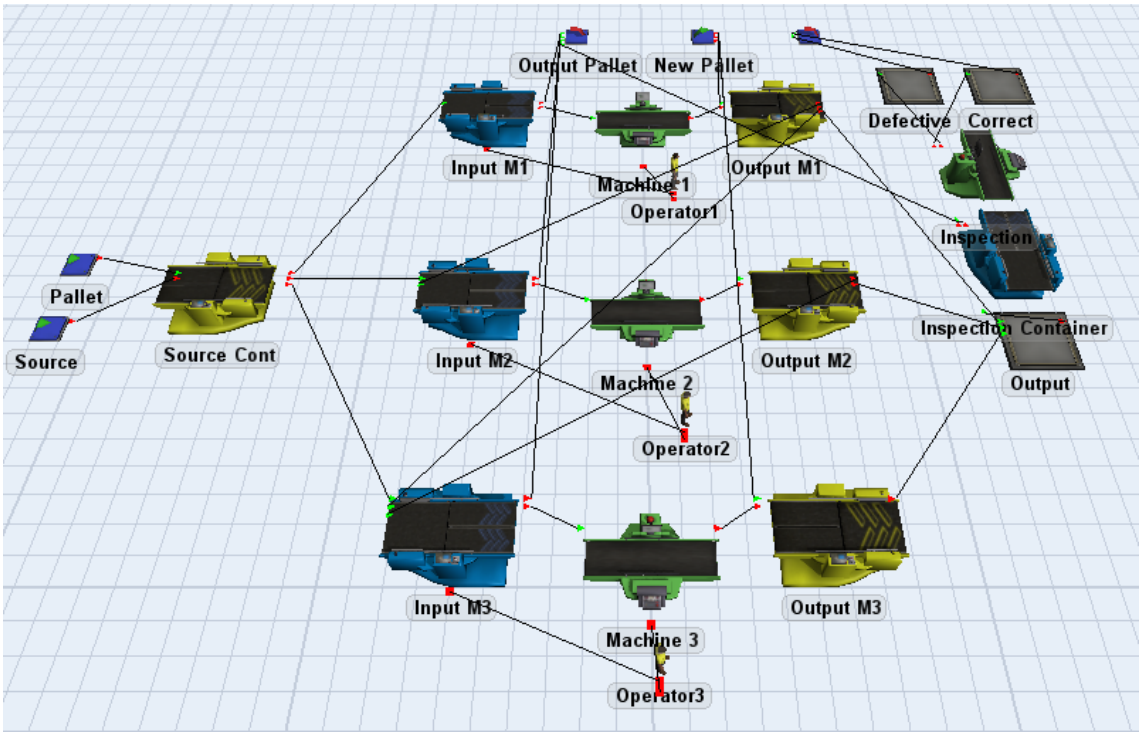
1. VSM



	M1		M2		M3	
	Prep.	Proc.	Prep.	Proc.	Prep.	Proc.
A	17,5	11,7			11,8	7,7
B			20,1	13,5	15	10,2
C	18,8	12,3	15	10,5		
D	20,1	14,1	18,1	12,7	13,3	9,5

2. FXS Model



3. Summary

Depending on the type of product, it will follow one or another cycle of operations and it will have different production times. So we created a model where we can see the production times when the model executes. We create a code that save the time on different variables when the object enters each point of the line.

Also, the time is affected by the result of the inspection. Operator time has been considered to be the sum of loading and unloading time is the sum of loading and unloading time + machine running time, as the operator will have to be watching that everything is working correctly. operator will have to make sure that everything is working correctly.

It has also been considered that the total cycle time includes from the time the first piece of the pallet is unloaded into the incoming container until the last piece is unloaded into the incoming container. first pallet part is unloaded into the incoming container until the last part is unloaded into the outgoing container, due to the fact that production is batch-oriented container.

Theoretical Times			M1	M2	M3	M4	Total
	A		503	0	331,6	220	1054,6
	B		0	445,2	336	165	946,2
	C		264,8	225	0	110	599,8
	D		483,3	435,3	324,9	165	1408,5

On the other hand, it should be noted that the percentages of defective parts in the model are very low, so that very few parts are rejected. After running the model 20 times, it has been concluded that an average of 2.5 parts per week are rejected. These parts should be replenished from a safety stock which is kept in another warehouse in the plant. The following illustration shows the FlexSim model, in which Separators and Combiners are used. Separators and Combiners that act as warehouses are used to simulate the packing of objects on pallets. objects on pallets.