Queuing in PkJu Distribution's docks



PkJu Distribución is a small distribution firm where Pancho works as a manager. The warehouse stands in the former (and old) premises that the company built. Paco is an Industrial Engineer who was hired 1 year ago, first as a grant holder to take charge of the warehouse. Now his contract has been renewed with a poor salary, which he decided to accept because he thinks he can move up in the company.

Pancho's direct boss is Curro, the head of the company's operations. For some time now, he has wanted to move the work done in this bay to other new and more suitable premises nearer the company's headquarters.

The company is owned by Don Francisco, a successful businessman who operates many other activities. "PKJU Distribución" is only one of them.

The premises are quite far apart in the Industrial estate, which has emptied due to the crisis (2008). The adjoining bay closed a long time ago, but was recently bought by a businessman from the area. The new neighbor in the industrial estate is starting to get a lot of work, and some weeks ago he complained to Paco about trucks on the street as they get in his way. Pancho told him he knew about the problem, which they were studying, but lacked the money to solve it.

It was not altogether untrue that they were studying this problem. In fact, 2 months ago, Paco mentioned to Curro the problem with truck drivers' long waiting times to load and unload. Curro, who works in another section of the company, told him "it wasn't that urgent" and that everything would be sorted out when they moved to the new premises.

The 3 times that Curro had visited in the last month, the system was filled with waiting trucks, while there was only one truck on the street on one occasion: "see, it's not that serious".

Don Francisco arrived today "all worked up", and this side of him shocked Pancho. In fact, Pancho had only ever seen him at the Christmas lunch. He had come on purpose to tell him that at the tennis club on Sunday, his neighbor had told him that he "was absolutely fed up" and that "the young person in charge you hired is taking no notice of me".

Don Francisco had told him that "he would solve the problem urgently as he does not want anyone to show him up again", and then left.

The way docks operate is typical in such cases. When a truck arrives to be unloaded, hand truck operators take the merchandise off the truck and leave it on the docks. Office workers receive the merchandise which, once verified and included in the receiving system, is taken to the most suitable warehouse. Next, warehouse staff members generate orders according to delivery routes. When all the material to be delivered on the route is ready (and checked by office workers), the delivery truck is loaded.





When he arrived for work, Pancho asked the team of hand truck operators to make a note of the time taken to unload and load. The person in charge told him it took some 30 minutes to unload and about 20 minutes to load, but it all depended on how loaded the truck was, if the load was ready and how full docks were, because sometimes there was no space to leave things.

There are six docks and four hand trucks for work on the docks for loading/unloading operations. Three docks are for deliveries and three for loads being received. During the 10 hours the warehouse opens, some 50 delivery trucks are loaded and about 30 arrive and are received. If some trucks are still queuing at the end of the day, a hand truck operator remains to finish unloading them.

Pancho realises there are times when trucks wait in the street because they do not fit on the company's roads. He remembers well in his first week on the job a serious conflict with a truck driver who shouted and said he had been waiting 3 hours to unload his truck.

Pancho was shocked at the time, but the hand truck operators team calmed him down saying that truck drivers sometimes have to wait, they do not often complain and another hand truck operator was called.

He had to face a serious conflict that day when he ordered some hand truck operators (he has seven orders to promise and prepare) to go and help the hand truck operators on the docks when there was a long queue. The conflict involved all the parties. In the following figure, the layout of the current situation is given.

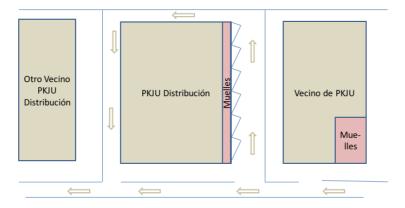


Figure: PkJu Distribution's warehouses representation

