



## SOFTWARE ENGINEERING IMPROVEMENT PROGRAM

### โครงการปรับปรุงวิศวกรรมซอฟต์แวร์ด้านประสิทธิภาพระบบจัดคิวรถรับน้ำมัน

#### BACKGROUND

Because during the year 2021, it was found that the queuing system to receive fuel by car is slow. As a result, the car receives fuel intermittently, and unable to extract the highest efficiency in paying out.

Therefore, an initiative was initiated to make a project to improve the process of queuing to receive fuel by car. Through the invention of a new Queue algorithm using Stable Matching Algorithm and Divide and Conquer Algorithm principles together with the original concept and improved to make the program faster and suitable for choosing vehicles to receive fuel.

#### OBJECTIVE

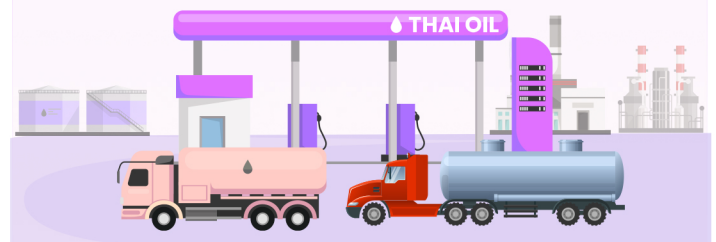
To increase sale of gasoline by lorry can be sold in increased quantities by improving the software engineering system to make the queuing for receiving fuel by lorry to work more efficiently.

#### BENEFIT AND CONCLUSION

This project allows the company to increase sales volume through the truck sales channel, which is a higher price distribution channel than other distribution channels to 374 million liters compared to the previous year. As well as being able to generate profits for the organization up to 86 million baht, it is also a project that can meet the highest needs of customers. create a competitive advantage and generate profits for the company as well.

#### PROCESS

- 1 Gather information with those involved in working in the Lorry Terminal about problems and pain points that occur in work regarding the arrangement of vehicles to receive fuel that are slow and not on time
- 2 Study the working process of the queuing system Including various steps of getting fuel by lorry.
- 3 Study the coding of the queue scheduling program to develop the working system.
- 4 Study and develop an algorithm that is suitable for the development of the oil receiving queue system.
- 5 Write a program by using Stable Matching Algorithm and Divide and Conquer Algorithm into the developed program.
- 6 Test the program in the simulator.
- 7 Test the real system with a backup plan If an error occurs
- 8 Launch and measures the results.



Remark : %Participating = 6% (108 Staffs from 1,881 Staffs)

