

Being the only canteen in SUTD, the canteen is always packed. During lunchtime, the Western stall's current order and collection system isn't the most efficient...



It is difficult to call for order number and take new food orders from new customers at the same time. This causes great **disruption in workflow** for the canteen vendors.



Without a queue, some customers stand around the stall, resulting in human traffic **congestion** in the canteen.

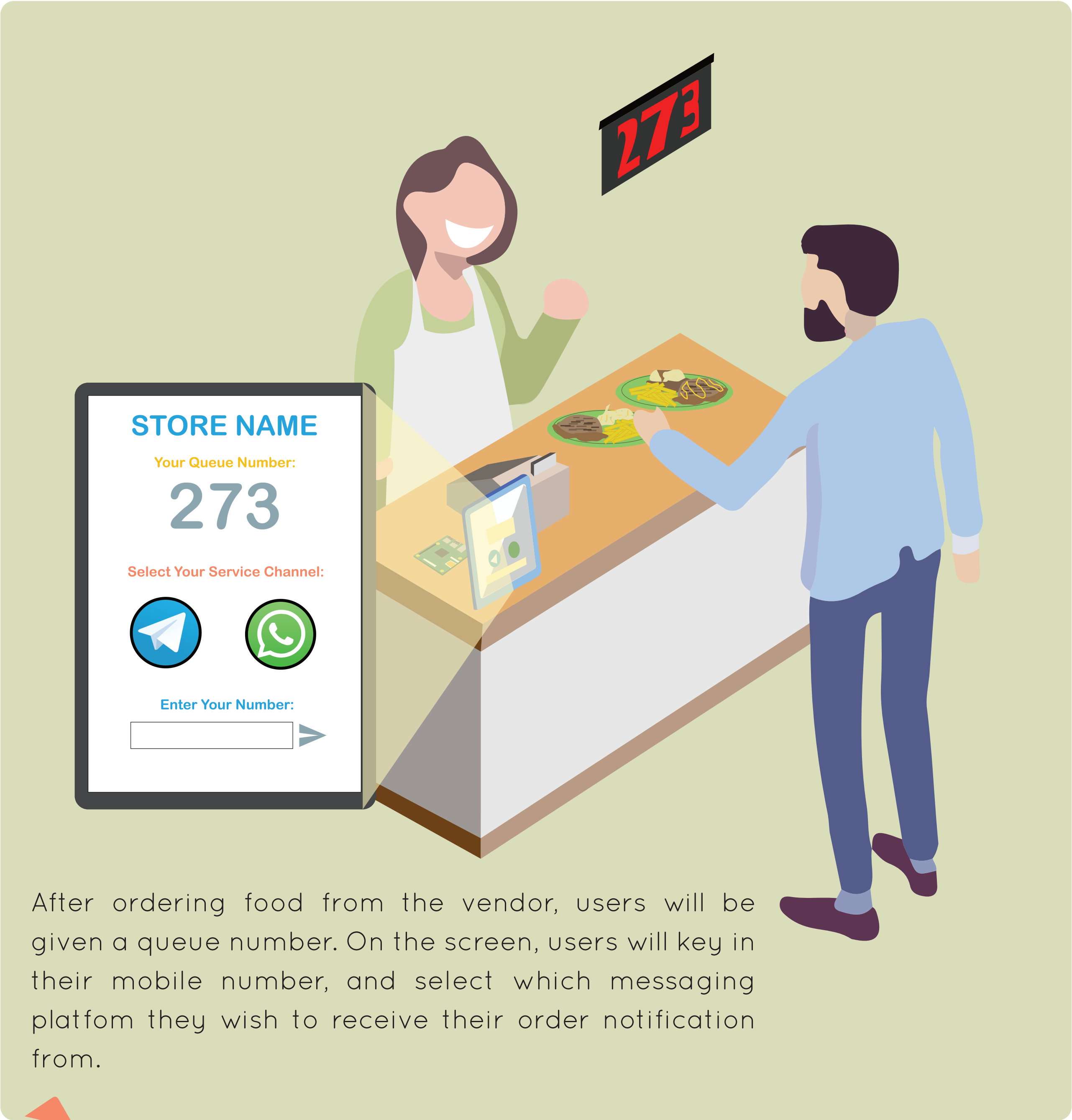


Mr 273

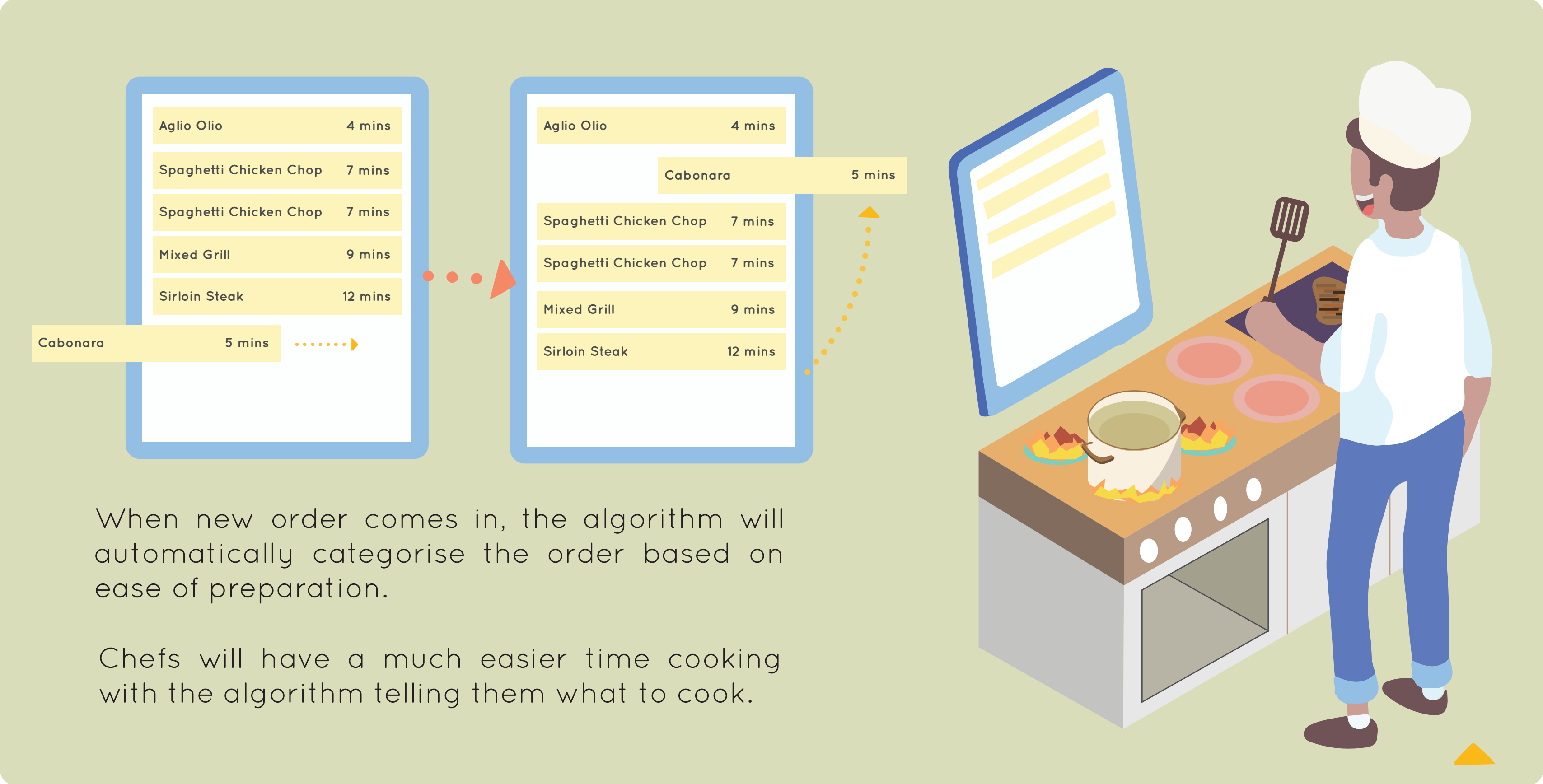
Canteen vendors face much **inconvenience** when they have to constantly shout for customers like Mr 273, who don't pay attention to the collection number.

During peak periods, orders pile up and chefs cook food in batches. This results in **irregular waiting time** for customers and **orders getting mixed up or forgotten**.

The lack of a clear queuing system causes **much confusion** amongst new customers. They are unsure who is queuing to order and who is waiting for their food.

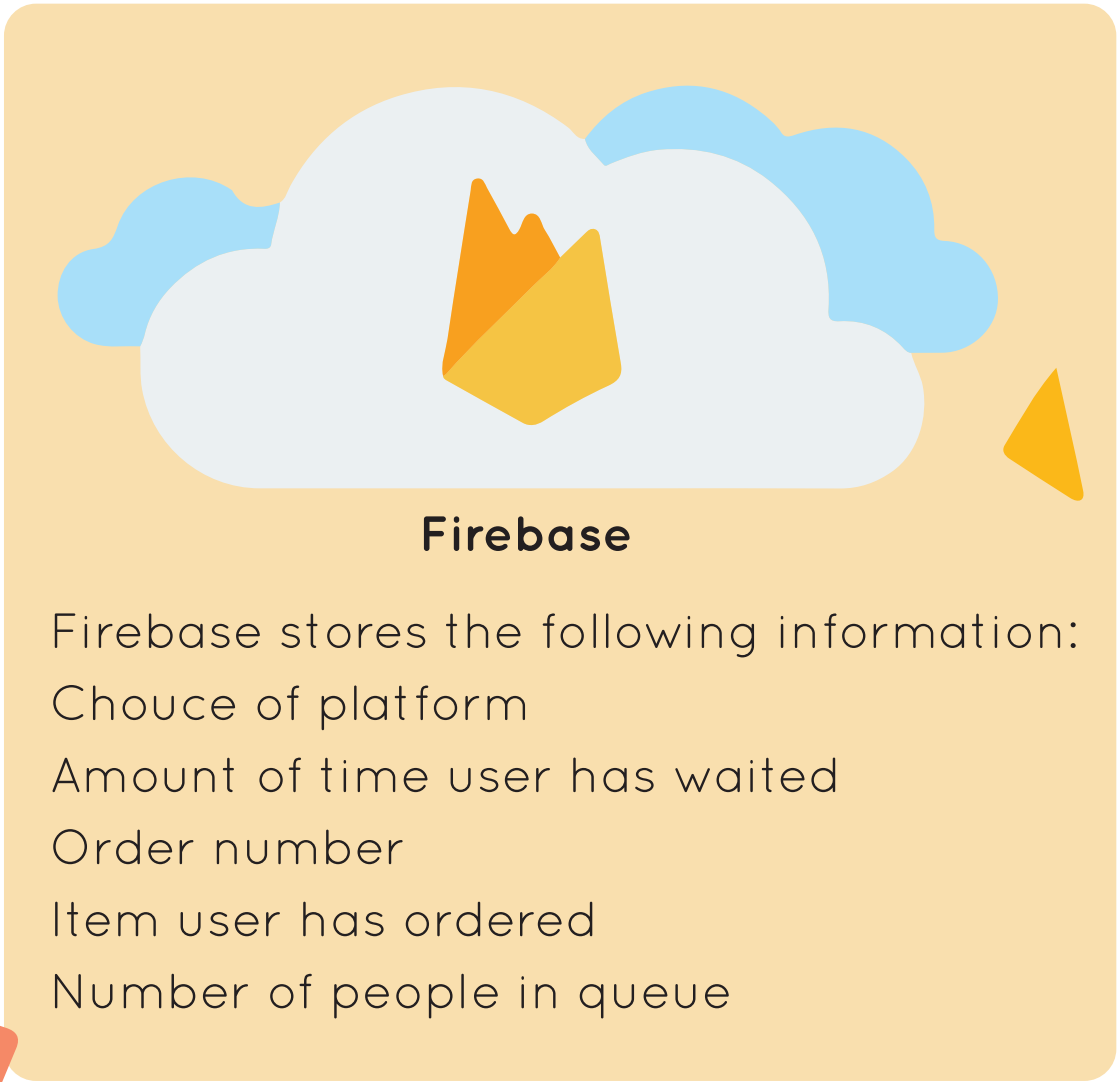


After ordering food from the vendor, users will be given a queue number. On the screen, users will key in their mobile number, and select which messaging platform they wish to receive their order notification from.

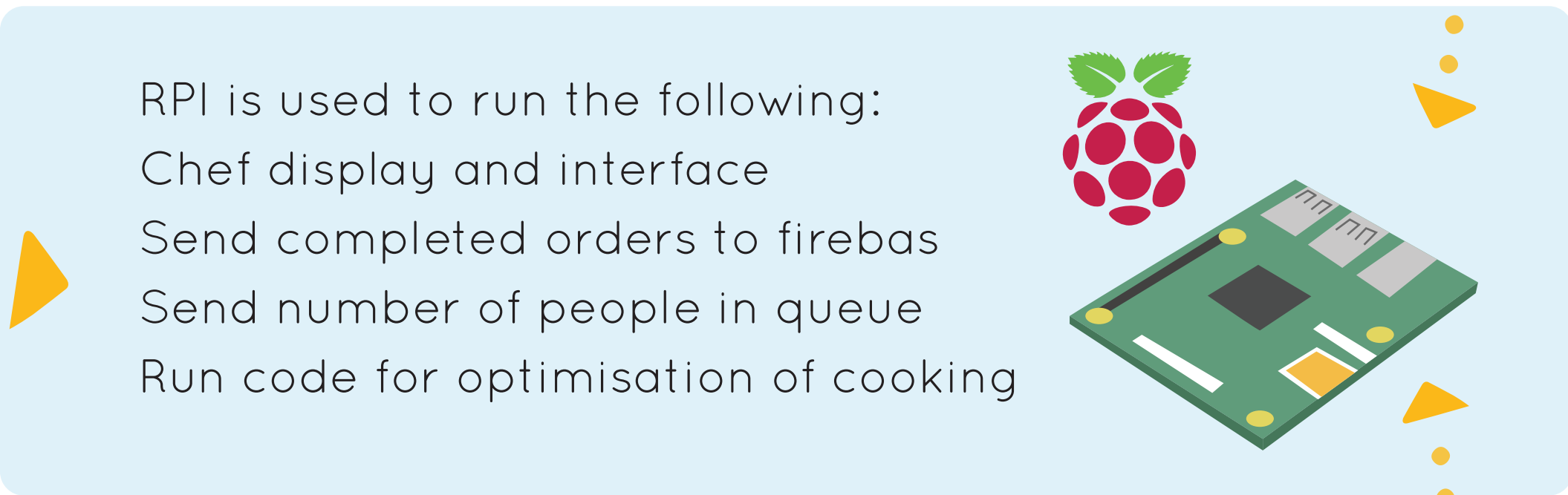


When new order comes in, the algorithm will automatically categorise the order based on ease of preparation.

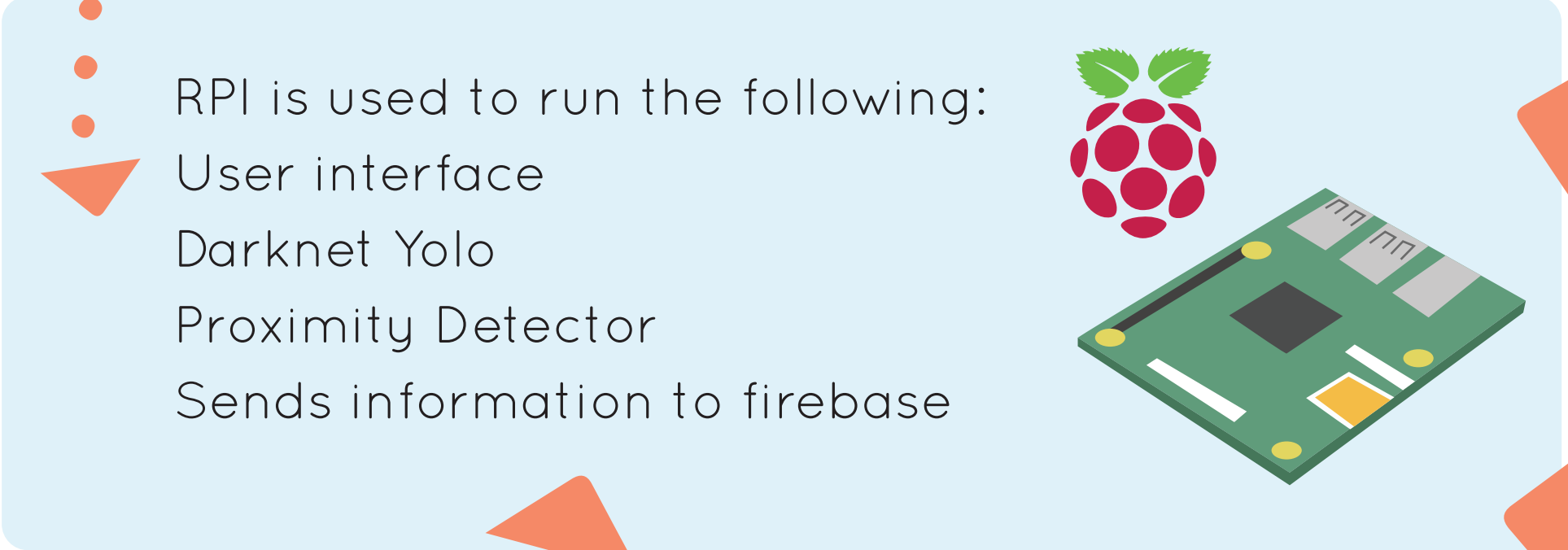
Chefs will have a much easier time cooking with the algorithm telling them what to cook.



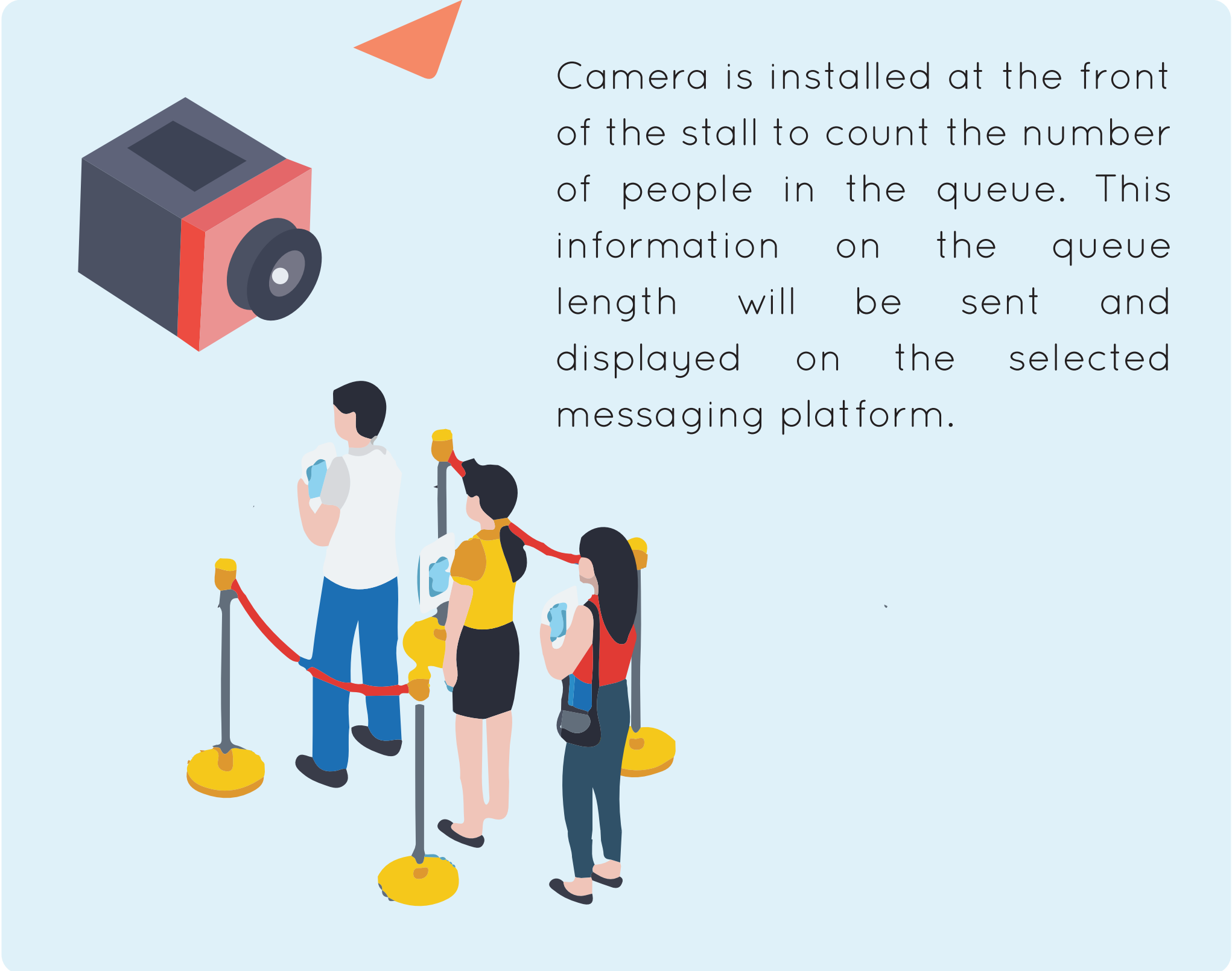
Firestore stores the following information:  
Choice of platform  
Amount of time user has waited  
Order number  
Item user has ordered  
Number of people in queue



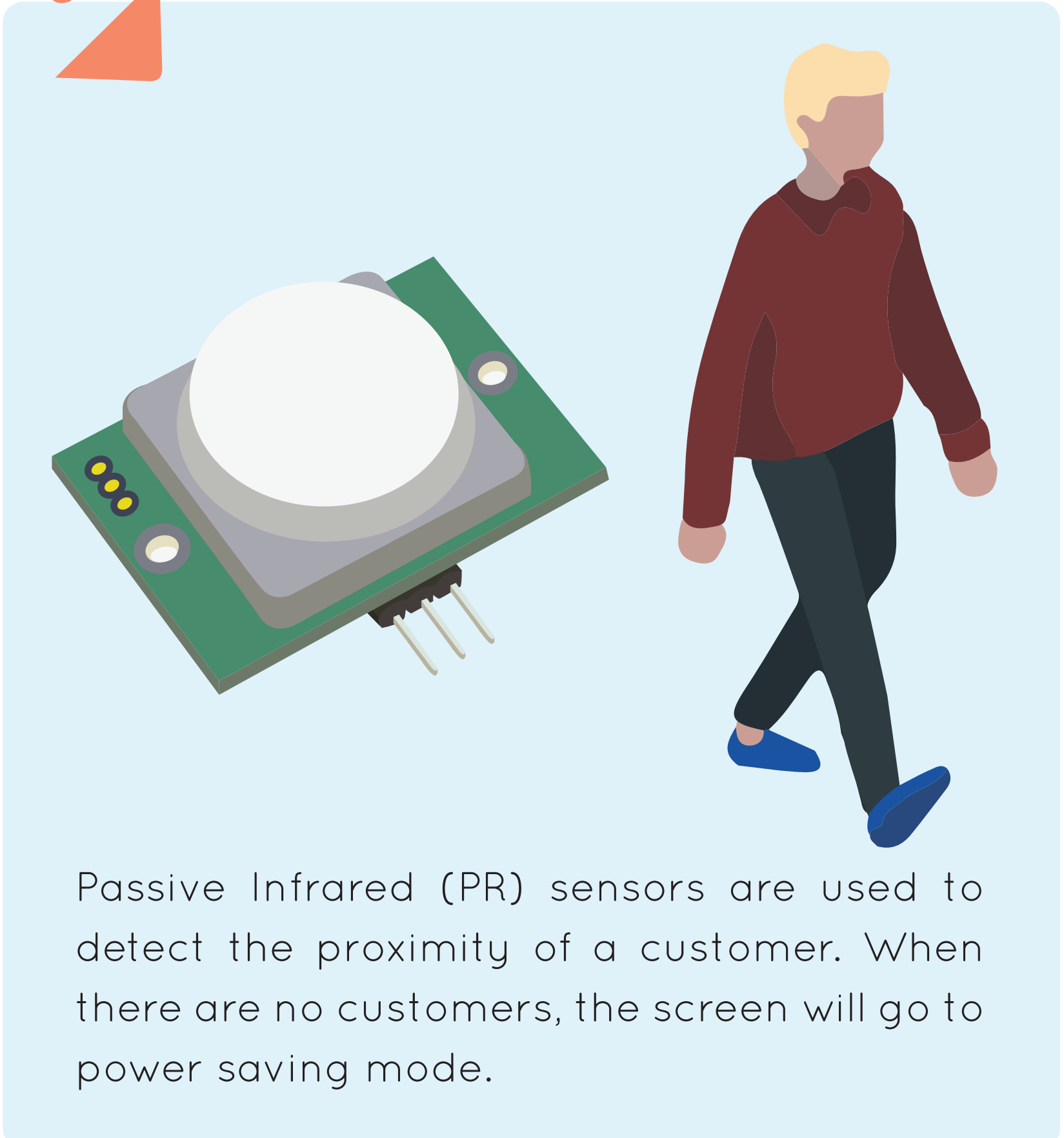
RPI is used to run the following:  
Chef display and interface  
Send completed orders to firebase  
Send number of people in queue  
Run code for optimisation of cooking



RPI is used to run the following:  
User interface  
Darknet Yolo  
Proximity Detector  
Sends information to firebase



Camera is installed at the front of the stall to count the number of people in the queue. This information on the queue length will be sent and displayed on the selected messaging platform.



Passive Infrared (PIR) sensors are used to detect the proximity of a customer. When there are no customers, the screen will go to power saving mode.



When your order is ready, you will receive a notification to collect your food. Now you can sit back, relax, while your order is being prepared like a Dival!

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