Project background

A global tanker shipping company recently started using a new ERP procurement system to order and manage the provisions required for their numerous vessels. However, after adopting the new system, a large number of inflight orders were discovered on their previous system, which was due to be decommissioned.

BPM-D were tasked to assist with the transfer of open orders from the legacy system to the new system. This involved transferring 1,200 orders and 10,000 line items in 8 weeks.

Robotic Process Automation Opportunity:

The early stage of the data transfer was done manually by end users. They would be presented with an excel sheet containing all the orders that required transfer. They would then create a new order on the new system using the information provided. It was then the responsibility of a Supervisor to manually check that the order created on the new system was correct. The average user was able to transfer 20-30 standard orders per day.

One of the benefits of using Robotic Process Automation is automating repetitive and rules based tasks. The BPM-D team identified the data transfer project as a perfect opportunity to use automation as a means to accelerate the process, prevent errors and complete the project in time.

Analysing the Process:

The starting point for automation is to understand the process. In this case, the information required to create each order was contained in an excel sheet; this included details such as: Order number, Delivery place, Delivery date, Item description and Item prices.

Within the spreadsheet, each row represented the order line items. As shown in the process steps, the user first added the order, which is then sent to another screen on the system where the user can add the line items as required for that order.

These are the steps required for the Data Capture Process:

1 | Capture order header
2 | Add the line items belonging to that order
3 | There are two types of line items:
   a. If an item has a unique ID, it is classified as inventory. The user adds an inventory item, by pasting the unique ID in a search bar. The user can then change the quantity of that item.
   b. If an item does not have a unique ID, then it is considered as non-inventory. The user needs to add the name, description and quantity of the non-inventory items. The information is found in the excel sheet.
4 | In the last step, the user adds the quoted prices for each item. The user then copies all the quoted prices shown on the excel sheet and pastes them on the system.
In practice, the last step was found to be the fastest as the user could copy/paste all the prices at once. This step, therefore, did not have much value for automation as a user could perform this task in under one minute; about the same amount of time for a robot to do it as the computer loading time was the only time-consuming aspect.

Likewise, the team assessed that the value for automation in the first step (Capturing the order header) was minimal. The step was not time consuming and it was found that from one order to another, the process had many exceptions and many variations.

The BPM-D team decided to focus the automation on the 3rd step of the process, as seen below, on the process map of adding items to an order, as it was far more repetitive and very time consuming.

The results

On average, a user would add an item to an order in about 40 seconds. However, after 20 minutes the user would invariably slow down and the time to add an order would climb to a minute. After one hour, the user would start to slow down even more, making mistakes such as forgetting to add an item or adding the same item twice. The robot, however, took 35 seconds to add a line, it did so for the entire length of the project never making errors or slowing down.

For a human to add 200 items to an order it would take them around 4 hours, the robot did it in half that time.

This is a perfect example of where the smooth running and rapid accomplishment of a project was aided by RPA. As a result, automation is now in high demand within the shipping company as they have discovered how much it increases the efficiency of their processes.