Milestone 1: Problem Analysis & Project Plan

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Problem Analysis

The situation:

       As an intern at the monitoring team of PureLiving, I was given a simple but time consuming weekly task. The task is to organize and execute a master excel file consists of Calibration Sales Orders, Subscription Renewal Opportunities, and possible sale quotes made for monitoring sales with a due date within a half year period. Each week, there will be some of them that need to be renewed and processed with a new record. These data are pulled directly from an enterprise management cloud data base, NetSuite, every Sunday and sent as 5 separate excel sheets to my email. Each Monday, I would organize and combine these excel sheets into one master file and Sort out the ones that needs actions and process them on NetSuite.

The process:

       The detailed work flow for this task is as shown:

1. Download 5 excel files from 5 different Emails to a local folder and label them as (sheet#) "1", "2", "3" …
2. Open sheet 1 from local folder.
3. Copy entire sheet 1 data under header.
4. Open the master file
5. On the master file sheet 1, paste data under the header.
6. Open sheet 2 from local folder.
7. Copy entire sheet 2 data under header.
8. Open the master file
9. On the master file sheet 2, paste data under the header.
10. Sort sheet 2 data column "I" from a to z.
11. Open sheet 3 from local folder.
12. Copy entire sheet 3 data under header.
13. Open the master file
14. On the master file sheet 3, paste data under the header.
15. Open sheet 4, Find the next right blank column, enter VLOOKUP formula: "=VLOOKUP (A ‘Number of column', ‘Location of the Master file sheet 4' !\$A\$4:\$I\$ ‘The number of the last row of master file sheet 4',9,0)" and apply to all rows.
16. Copy the entire sheet 4 under header.
17. Paste value in master file sheet 4 under header.
18. Fill in all missing formulas under each column.
19. Do sorting as specified on master file sheet 4.
20. Open sheet 5, Find the next right blank column, enter VLOOKUP formula: "=VLOOKUP (A ‘Number of column', ‘Location of the Master file sheet 5' !\$A\$4:\$I\$ ‘The number of the last row of master file sheet 5',17,0)" and apply to all rows.
21. Copy the entire sheet 5 under header.
22. Paste value in master file sheet 5 under header.
23. Fill in all missing formulas under each column.
24. Do sorting as specified on master file sheet 5.

25. Look through sheet 4 and find Assets that does not have a Sales Order yet and are due within 1 month.
26. Process them on NetSuite.
27. Paste new SO number in the blank.
28. Look through Sheet 5 and find Subscriptions that are past grace period.
29. Process them on NetSuite.
30. Look through Sheet 5 and find Subscriptions that expires a month from now.
31. Process them on NetSuite.
32. Paste new OPP number in the blank.
33. Save the file and send it to Sarah.

The problem:

This 33-step process can take a while, but excel specialist can finish the process in about 30 minutes. However, there are only hand full of excel specialists in the company, and they will need to prioritize their time toward bigger, more important business deals. This kind of time consuming work is handed down for us to do. I am not an excel specialist, I have sufficient skill to complete the task, but do not have enough experience to finish the task in a short period of time. Usually, this task would take me as long as 3-4 hours.

As a member in a two people monitoring team, I have a lot of duties on my hand to do, too. This task becomes a burden especially when I have onsite jobs all week or many monitors to test.

What makes this worse is that sometimes, I would forget to do a couple steps such as sorting the data, or paste value instead of just paste, or miss typed some wrong information on NetSuite, etc. Sure, they are minor mistakes and will be found out one day, but it will be additional time put into redo something that was already time consuming.

Conclusion:

The problems with this task are:

- Repetitive
- Time consuming
- Inefficient use of labour
- Prone to errors

Solution:

Excel VBA and MACROs will be used for the optimization.

Based on these problems, I came up with solutions to tackle each of them:

- Repetitive:

- o Each week, the exact same processes are repeated. The best way to make it less tedious is to program a tool that can consistently do as programed again and again.

- Time consuming:
  - o Although this task won't be 100% automated (which would save us all the time), but it will take way less time when steps are done automatically by codes.

- Inefficient use of labour:
  - o With this tool, the user can do all steps in a few click of keys, which gives them more time to work on other argent tasks.

- Prone to errors:
  - o Macros will be used to automate many processes. This means that the possible errors you could make are prevented seamlessly.
  - o With this tool, you don't have to be an excel pro to be able to successfully complete this task with no error. Intern friendly user interface will be used to navigate the user step by step towards the completion of the task. This includes user manual, friendly reminders, and automatic highlights of important content.
  - o Friendly reminders will pop up to give helpful tips at each steps, especially when the user is creating SOs and OPPs on NetSuite. There are many details that the user could miss during the creation of SOs and OPPs, so the friendly reminders will list each steps with very clear instruction of what to do. This not only ease up the user's brain, it also saves us from having to go back and redo what was missed.
  - o After the user get the excel sheet sorted, it is easy for the user to miss one or two SOs and OPPs on the excel sheet that needs attention. With the highlighting feature, the user will be able to spot all the SOs and OPPs that will require actions because they will automatically be highlighted.

Project Plan

Objective:

       The objective is to create a tool that helps the monitoring department to manage SOs and OPPs more effectively and efficiently. It will consistently complete repetitive tasks in excel, optimize time by replacing manual operations with automatic programs, free up labour force to focus on more important tasks by simplifying processes, and prevent errors with hard coded macros that does all at once with a simple click. This tool will increase the efficiency of Organizing the master file (An excel file that includes Calibration Sales Orders, Subscription renewal Opportunities, and possible sale Quotes) by up to 300% and improve the effectiveness of the processes to 100%.

Duration of the project & Time management Plan:

       The duration of the Project is from July 10th, 2018 – August 20th, 2018. Each day, 2 hours will be dedicated to completion of each milestones.

Milestone 1
July 10, 2018 - July 13, 2018   *Problem Analysis & Project Plan*

Milestone 2
July 14, 2018 - July 19, 2018   *Design & Rationale*

Milestone 3
July 20, 2018 - July 30, 2018   *Prototype #1*

Milestone 3.5
July 31, 2018 - August 3, 2018   *Feedback*

Milestone 4
August 4, 2018 – August 5, 2018   *Prototype #2*

Milestone 4.5
August 6, 2018 – August 8, 2018   *Feedback*

Milestone 5
August 9, 2018 – August 12, 2018   *Wrap up*

Milestone 6
August 13, 2018 – August 17, 2018   *Official Tool & Time studies*
Note: August 17th to 20th will be flex days in-case of unexpected events.

Potential risks and issues:

- During the duration of the project, there maybe very busy times where no time are free to work on this project. In this case, we will use flex days to make up for the delay.

- There maybe very complex technical knowledge needed to achieve a milestone. In this case, consult an excel expert or research online. If nothing works, seek for an alternative plan.