BIP Capstone Project

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May Intern Project

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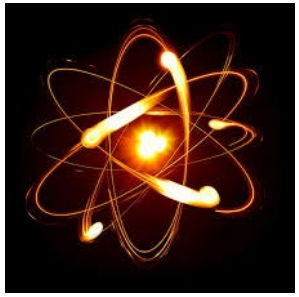
Personal Background

- Education
  - Graduated in 2021 with Bachelor's in Physics
  - Currently in my final year of Master's program for degree in Business analytics

- Hobbies
  - Coaching baseball for a full-time travel program in Shorewood



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Introduction to Fermilab

- New Programs
  - OBIEE
    - Assisting in closing and canceling the balance on purchase orders
  - PowerAutomate
    - Automation of list population, email notifications, form submissions, etc.
  - PowerBI
    - Building metrics and dashboards for data gathered from different processes built within compliance department

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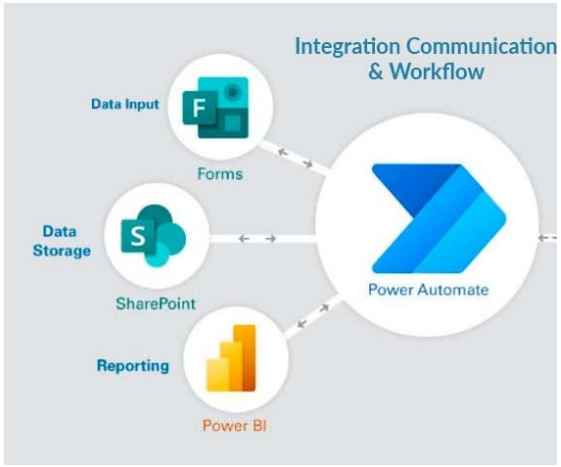
BUSINESS INTELLIGENCE

Assisting with Canceling the Balance

- With the abundant number of invoices that needed to be addressed, I was assigned to assist Amelia Block in canceling the balance or final closing certain purchase orders
  - Process
    - Receiving an email request to close out a purchase order
    - Analyze the attached checklist to see if it needed to be closed or canceled, on which line this action was to take place, and the open amount remaining on the order
    - Go into OBIEE and attach the checklist, confirm the information matched, perform the requested action, email the requestor when the process was complete
  - Purpose
    - With the current budget issues, this task has been moved up in importance to aid in canceling un-used funds for the backlog of opened purchase orders

Power Automate

- Microsoft program used for optimizing and automating business process within the Lab
- Projects
  - IA Findings
  - Pre-Award Review
  - Cancel the Balance/Final Close organization

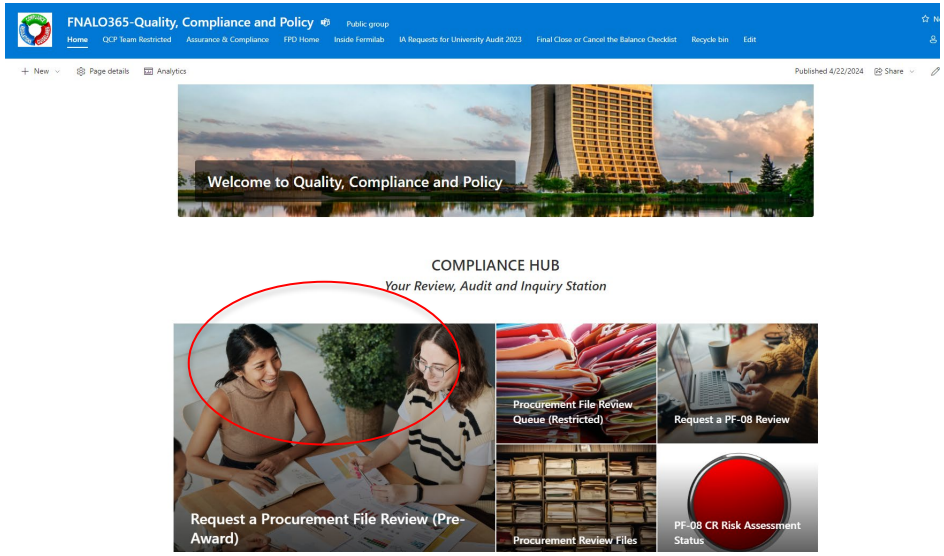


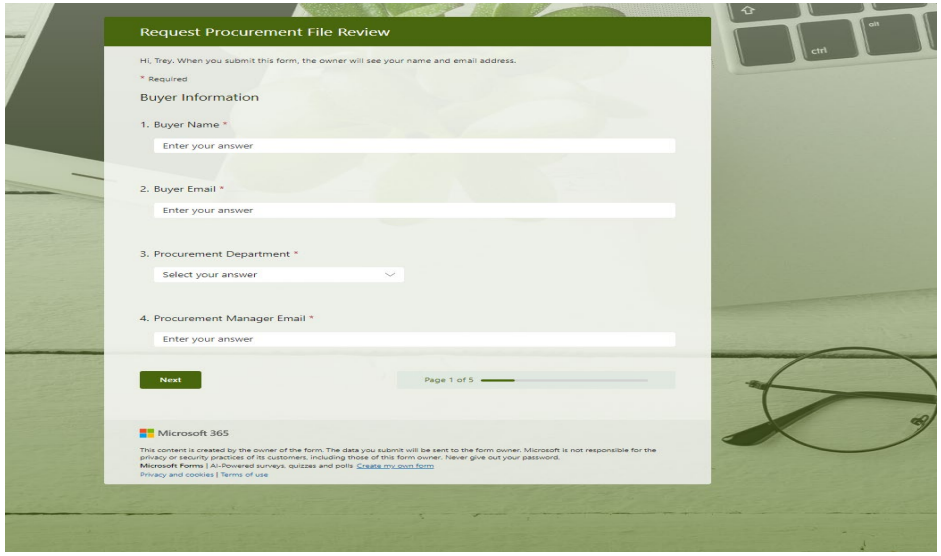
Pre-Award

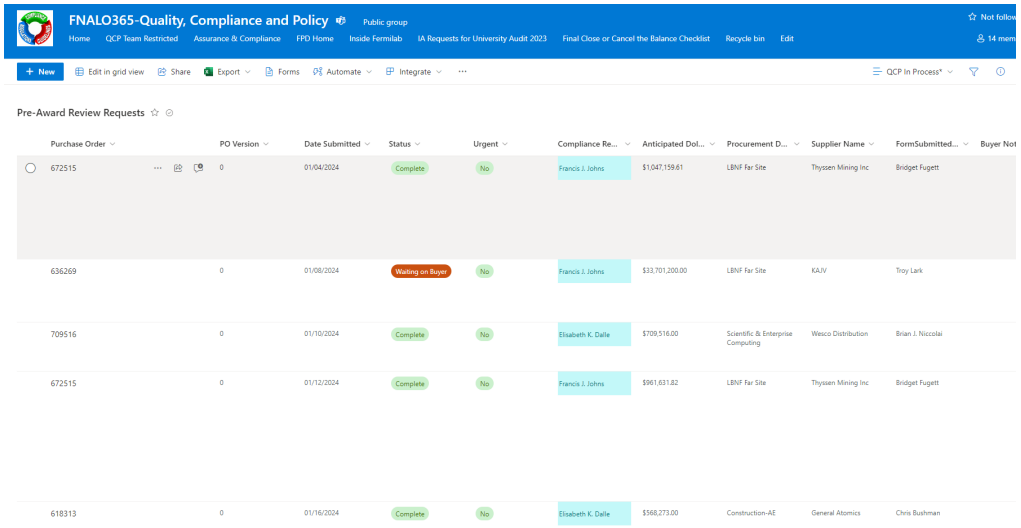
- File Review Requests
  - Create Microsoft Form
    - PowerAutomate flow takes the submitted form and populates a SharePoint list with the information for Compliance Specialist and Buyers to track new requests

- Pre-Award Review Process
  - Compliance Specialist claim requests from the list and review them in a live Excel form, that when submitted is inputted into a SharePoint document library for back and forth between Compliance and Buyers until the review is complete

Pre-Award







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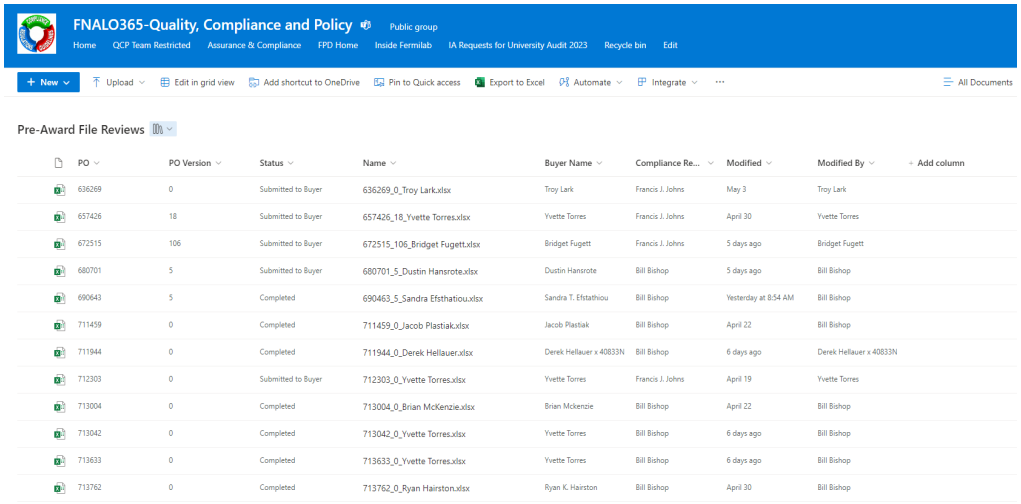
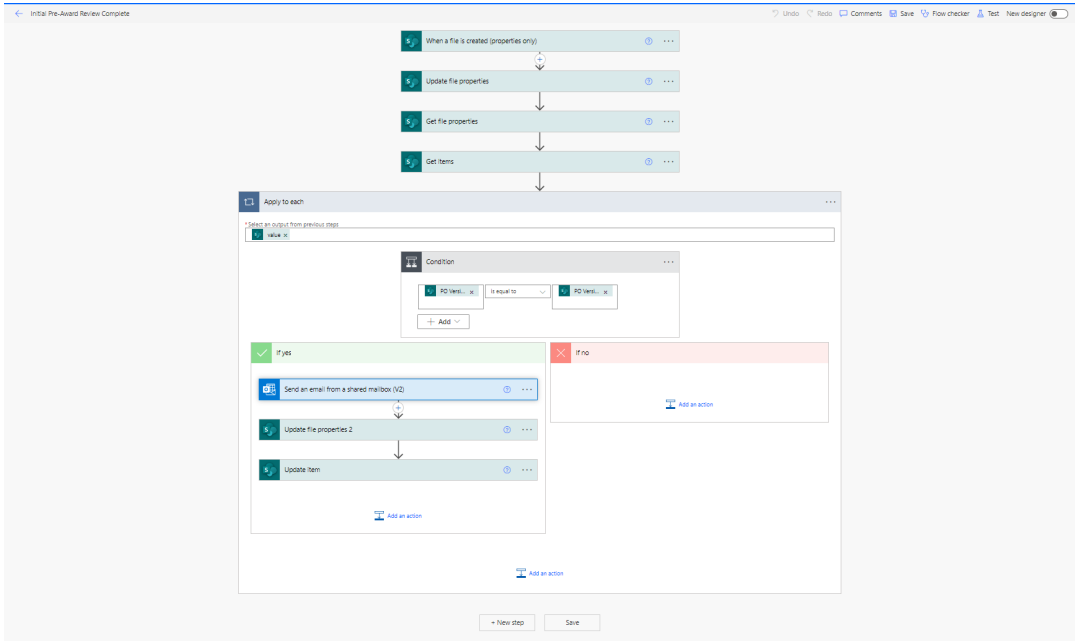
Pre-Award





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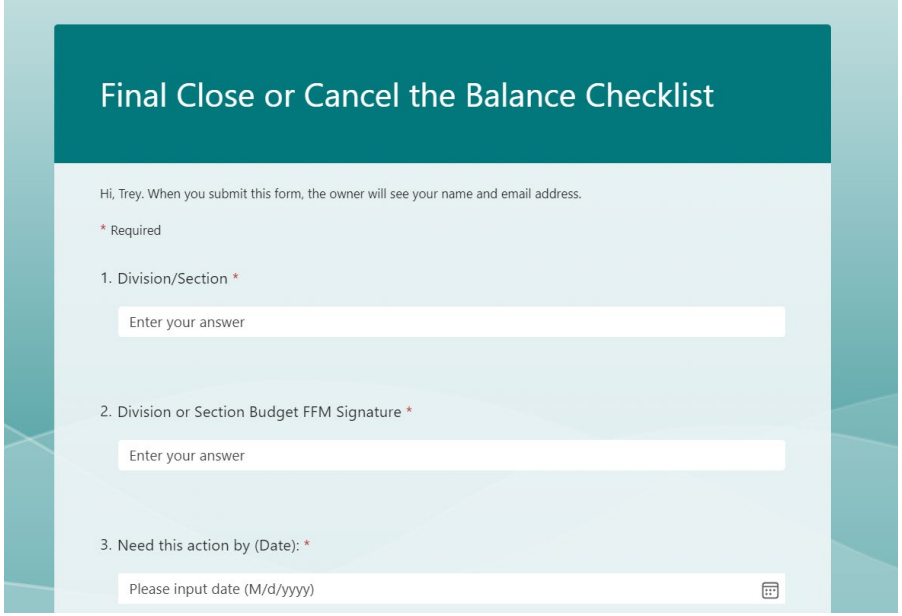
Cancel The Balance/Final Close Automation

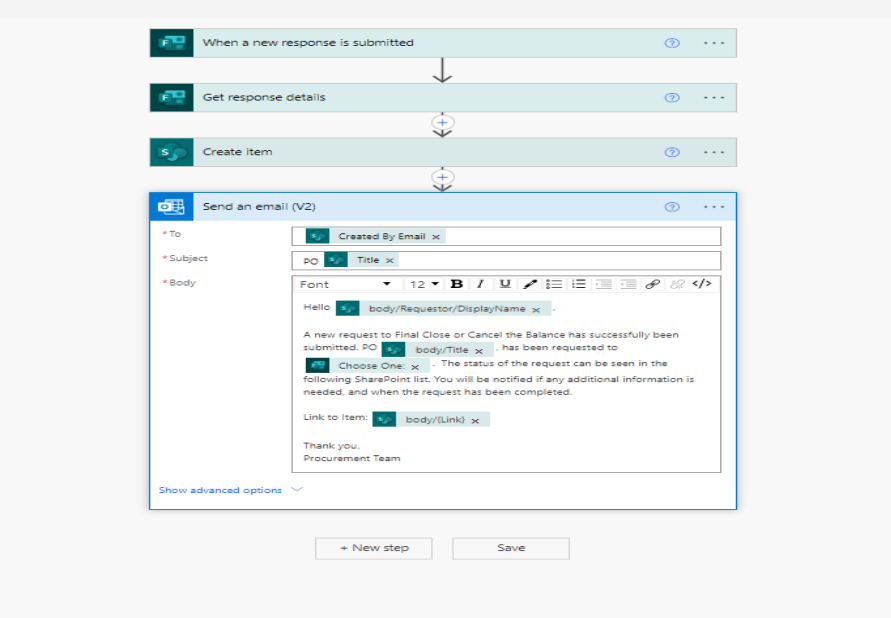
- New process being developed to partially automate and better organize new requests to cancel/close open amounts on purchase orders

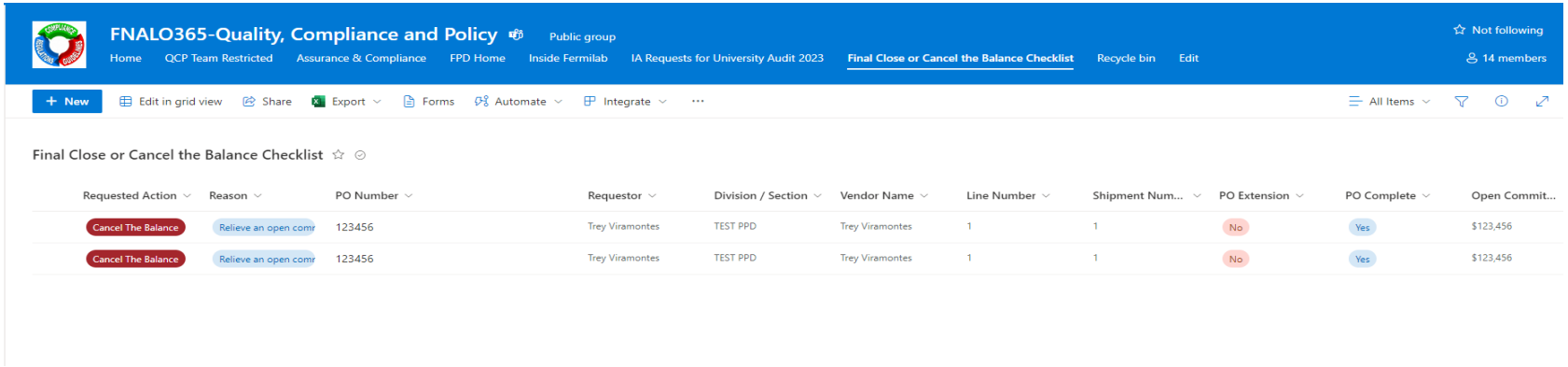
- Develop new Microsoft form to process requests, populate responses into a SharePoint list, create a status column for updates, send notification emails to associated parties throughout the process

- This new method will remove the need to sift through an email inbox, provide a more organized view of all the requests, and automate responses to requestors when new actions have taken place on the PO in question

Cancel The Balance/Final Close Automation







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PowerBI

- Microsoft program that focuses on business intelligence and allows us to upload excel spreadsheets for interactive data visualization

- Projects
  - Using data from OBIEE some finance metrics were compiled to see an overview of invoice aging
  - Project 2 was to help Chelsen with visualizations/metrics for his work with the Supplier Report Cards

Invoice Aging Dashboard

Vendor Name	Sum of Past Due 1-30	Sum of Past Due 31-60	Sum of Past Due 61-90	Sum of Past Due 91+ Days	Count of Invoice Id	Sum of Past Due Total
NORTHWESTERN UNIVERSITY	$4,605.61	$442,427.36	$33,770.1	$3,696,839.71	17	$4,177,642.78
SOUTH DAKOTA SCIENCE & TECHNOLOGY AUTHORITY	$1,774,565.33	$0	$0	$0	3	$1,774,565.33
UNIVERSITY OF WISCONSIN-MADISON	$392,727.38	$221,422.1	$15,173.7	$101,669.43	12	$730,992.61
AON RISK SERVICES CENTRAL INC	$730,250	$0	$0	$0	4	$730,250
LAWRENCE BERKELEY NATIONAL LABORATORY	$498,046.13	$0	$0	$4,502.19	13	$502,548.32
Total	**$7,213,982.94**	**$1,594,224.68**	**$623,094.49**	**$5,370,273.16**	**1199**	**$14,801,575.27**

Vendor Name	Count of Invoice Id	Count of Count Past Due 1-30	Count of Count Past Due 31-60	Count of Count Past Due 61-90	Count of Count Past Due 91+
AALLTEMP INC.	2	1			
ABDISATAROV, BEKTUR	1	1			
ABRAMOWICZ, HALINA	1	1			
ACCELERATED TECHNOLOGY LABORATORIES, INC.	1				1
Total	**1000**	**277**	**101**	**86**	**321**

Vendor Name

Search

$7.21M
Sum of Past Due 1-30

$1.59M
Sum of Past Due 31-60

$623.09K
Sum of Past Due 61-90

$5.37M
Sum of Past Due 91+ Days

$14.8M
Sum of Past Due Total

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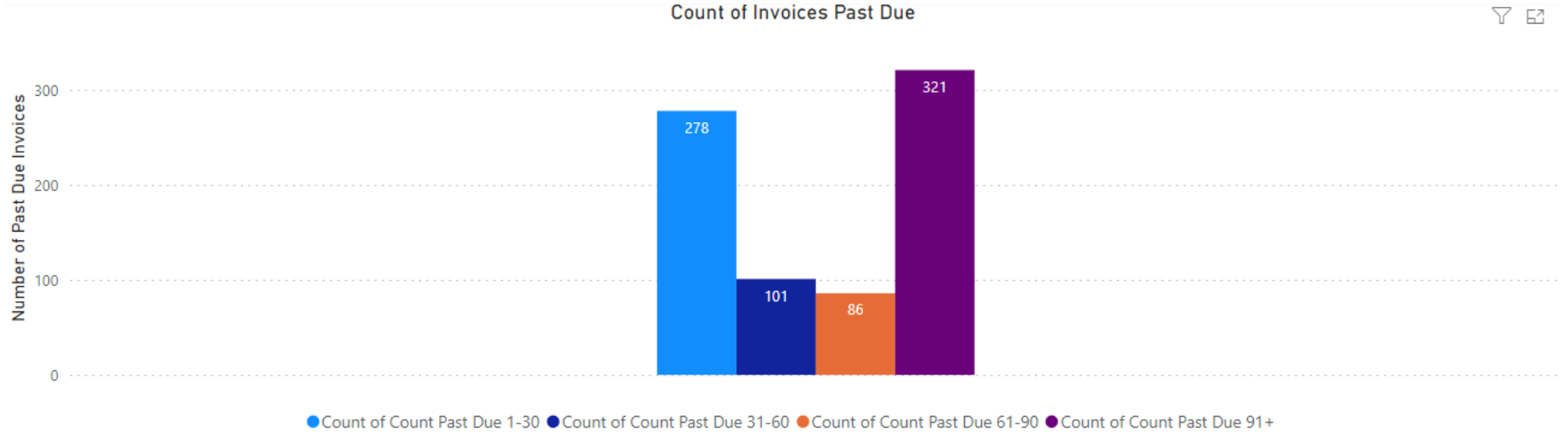
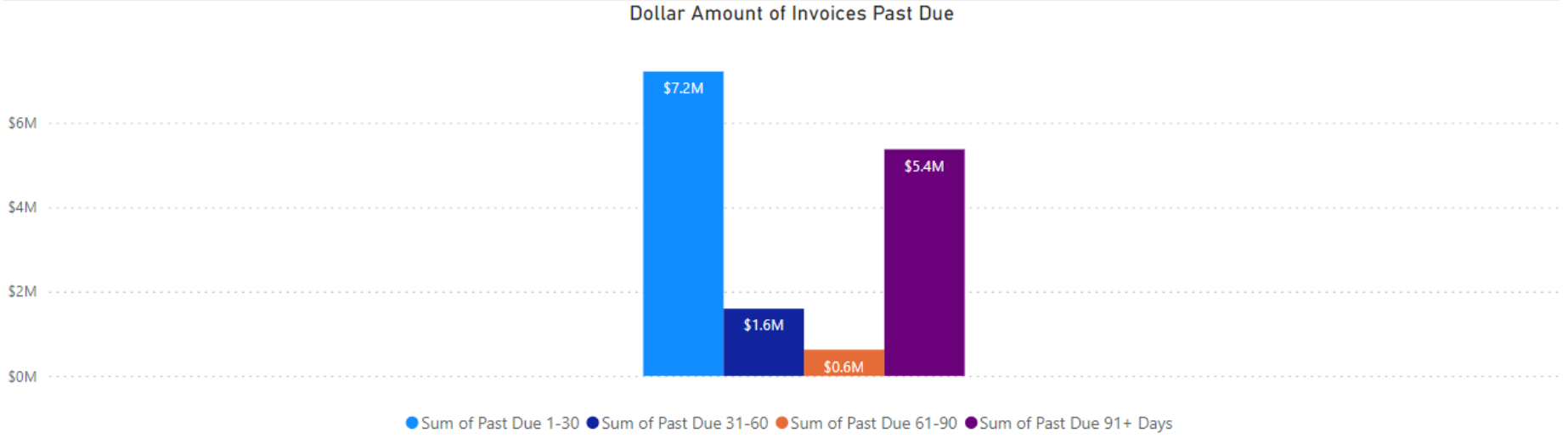
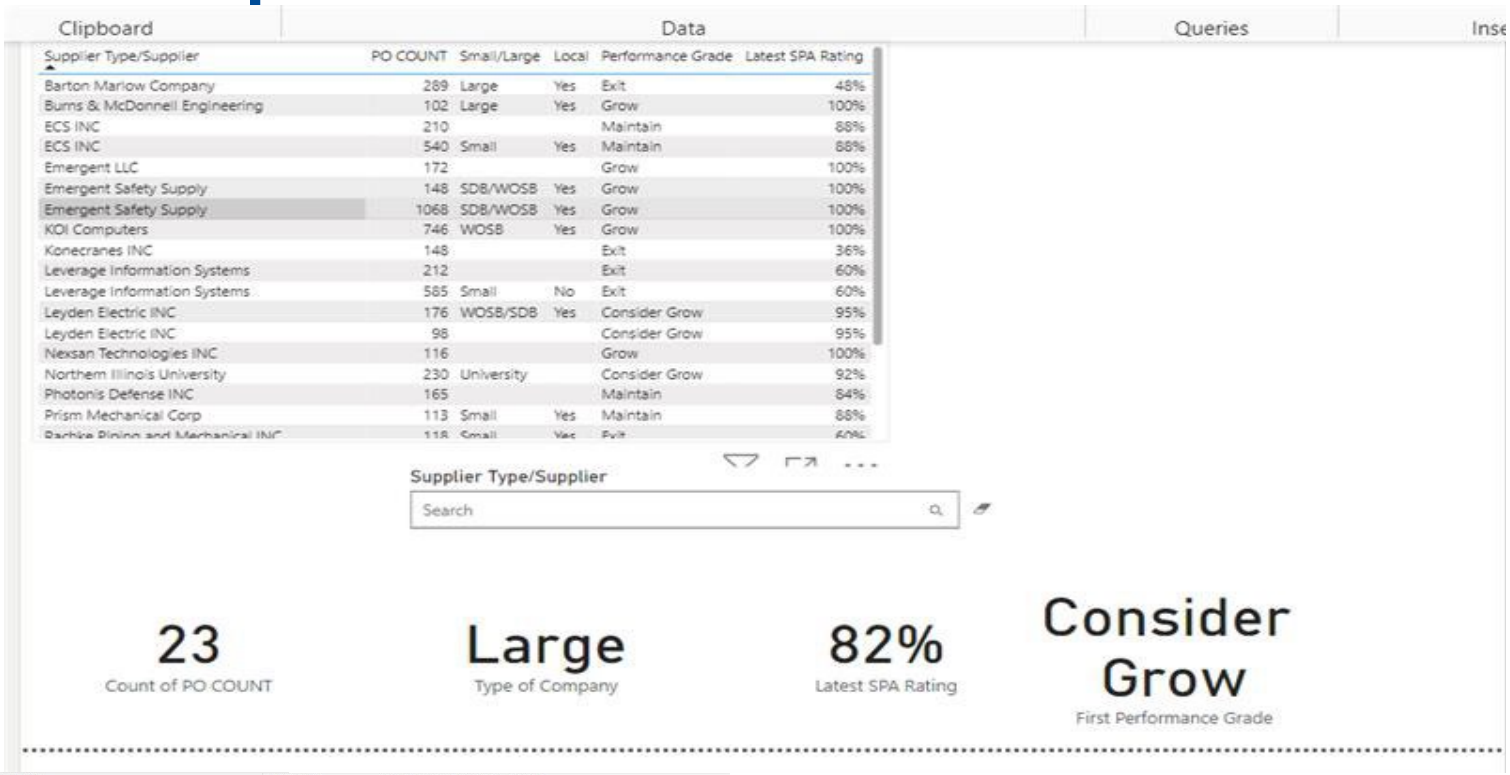
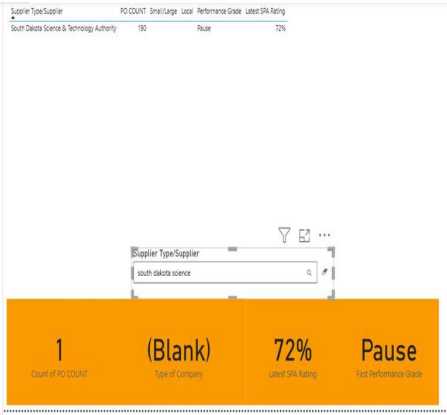
Invoice Aging Dashboard

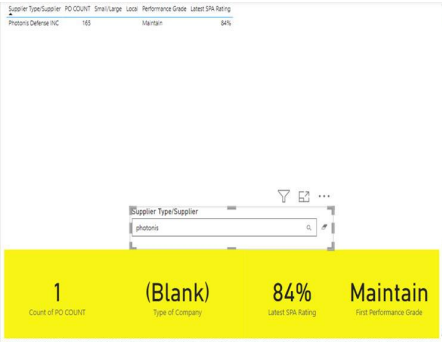


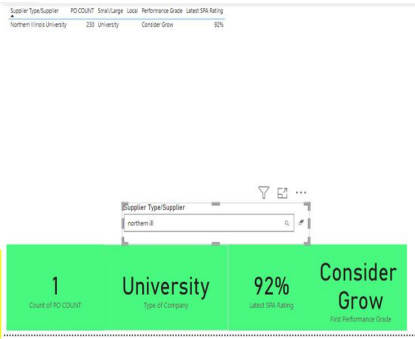


Supplier Report Card









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Overall Takeaways

- Major improvement of my skills in data cleaning, interpreting, and visualizing
- New experience and skills with new programs such as OBIEE, SharePoint, PowerAutomate, and PowerBI
- Collaborating with new people to achieve common goals
- See how knowledge gained in school applies to real world problems and within the industry of business as a whole

Thank you for your time!