PROJECT PLAN

FPD Drinking Metrics (PPD DM)

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Project Scope Statement: Outlines projects objectives, deliverables, and limitations. Defines what is included in the project plan and will ensure the Executive Oversight Committee and Management of the goals the project will meet and what is not within project expectations.

Priority Matrix: Aids in defining the elements of the project and prioritize them based on approach to enhance, constrain, or accept issues as they relate performance, time, and project costs. It is a reference for future decision making to align with project goals.

Work Breakdown Structure & WBS Cost Spreadsheet: Project is broken down into activities and work packages for completion for organization and clear depiction of project scope and objectives. The cost spreadsheet breaks down those activities and work packages defining who is responsible and the cost of their labor.

Communications Plan: Depicts how information will be disseminated among the EOC, stakeholders, and project team. Details how, when, and who will receive information.

AON Network Diagram & Spreadsheet: Visualizes project workflow of activities and their relationship to another as project schedule continues. Helps to determine critical path, and available slack. The spreadsheet is another depiction in excel form that presents activity and work package duration and dependencies.

Project Baseline Budget: Presents the financial status of each activity throughout the duration of the project. It is used to measure cost performance compared to Cost Estimate Worksheet.

Gantt Chart: Timeline of project schedule that presents the start and end dates of task based on the critical path and the amount of slack to complete. This presents a clear depiction of the necessary steps to complete the project and expected durations.

Risk Matrices: These matrices asses and prioritize risks based on possibility of occurring, and the impact the risk would have on the project. The risk response matrix entails the actions to mitigate, accept or avoid the risk.

Project Organization Chart: A hierarchical presentation of the structure of the project team. Showing responsibilities, roles, and communication channels for those within the project.

I. Executive Summary

Management and Stakeholders at FPD Beverage Company are looking for assistance in increasing business performance. They are facing issues such as of user dissatisfaction as it relates to shipment arrival time and order fulfillment, business performance inconsistency without identification of variables and constraints that relate to production. Due to this, customers are considering other beverage suppliers for service. FPD currently generates an annual revenue of $350 million USD with large clients such as Target, Costco, Wal-Mart, in addition to specialty and grocery chains. Loss of even one of these major retailers would cause a substantial decrease in company revenue. The goal is to implement the most effective strategies and tools using the $250,000 project budget. Addressing these issues will increase customer satisfaction reducing grievances through the deliverables requested by management and stakeholders and standardize operations and metrics/analysis to increase company performance and optimization.

The management team and stakeholders are requiring the creation of a dashboard implementing the use of an AI cloud service to complete product line sales analysis, package performance line analysis, product line by customer analysis, determine order delivery performance by product line and customer, and identify distribution center performance. Contracting the Big Data Training Group for a one-week training schedule will allow for FPD Data Analysts and Programmers to become proficient in the AI tools to clean, analyze for metrics, and present the data. During this training FDP analysts will learn the AI tools and their function from basic to most advanced, learning the software itself as well as the use in streamlining production, distribution, transportation, and customer feedback/needs. From there, the last two weeks can consist of different scalable applications that are often seen in normal business practice to ensure the team is proficient in use. After training, analysts would be expected to create teams to address issues within each sector of the organization

Qilksense AI tools provide scalability, flexibility, proficient integration and compatibility with many data sources, standardized security and compliance and are cost effective. Data cleaning and preprocessing will allow for storage and scalability of sales records, production workflows and status, delivery records and so forth for analysis as described above. In addition, Qilksense AI's visualization tools can be implemented to present the results and identify the bottleneck issues to attack or high functioning processes than can be replicated elsewhere within the production and distribution system. The dashboard will also include a feedback loop or inquisition bar for highlighting during review and analysis.

To increase business performance and customer satisfaction production will focus on the supply and demand of the product developing cost minimization and revenue maximization functions that will benefit the frequency of production based on need. This will be applied to the company-owned domestic plant as well as the third-party plant. Distribution and Transportation teams will focus on identifying the current pain points in shipment and delivery. They will use these pain points as it relates to customer trends in product requests to determine the most effective means of solving the issue whether it be swapping of vendors or new routes. Customer feedback/needs will determine the most prominent complaints from customers. They will identify any potential trends in location, product type, time of year order etc. Combining each individual process and including consistent goals and time frames will increase company productivity and customer satisfaction which will maintain and have the possibility to increase revenue in the future.

It is assumed to complete this project successfully and reach the goal of optimizing business performance that resource availability, budget and funding, and the AI cloud service technology desired for implementation and use within the metrics dashboard can be defined up-front. In addition, underpins

of the project assume an adherence to regulatory requirements, and ongoing stakeholder support, and a stable market. This plan is designed using the resources as provided by FPD Beverage company including employee labor hours, a $250,00 budget allocation, and the use of a selected AI training vendor and AI cloud service. It is assumed that these designations will provide a result reflective of the EOC and Management's expected deliverable.

Resource allocation for project completion will require use $225,000 of the projects $250,000 budget including a ten percent ($25,000) contingency risk. Internal labor personnel costs across the 26-week duration of the project reach an amount of $188,000 while technology and equipment (AI training and tools) and contingency costs are allocated at $10,000 and $25,000 respectively. It is requested that the full amount be approved for use during project completion.

The project plan is defined through many documents as seen below. The Project Scope Statement, Priority Matrices, Work Breakdown Structure and Cost Worksheet, Communications Plan, Baseline Budget, Gantt Chart and Project Organization Chart are depictions of the necessary phases of project completion. In these documents there are protocols, agreements, requirements, and expectations surrounding project budget, tasks and deliverables, risks and mitigation strategies and communication and team reporting.

The project schedule spans across 26-weeks with key milestones and phase completion requirements as depicted on the Gantt chart. To move forward, we also seek approval to proceed to define requirements of the model and begin personnel training.

II. Project Scope Statement
A. Project Objective

FPD Beverage Drinking Company has experienced customer dissatisfaction with shipment arrival time, order fulfillment, and business performance inconsistency without clear knowledge of specific issues related to production. FPD Beverage Company would like to eliminate customer dissatisfaction by increasing business performance and optimization with the creation and use of an AI programmed metrics dashboard that will present real-time metrics related to sales, production, distribution, and operations management. The project should be completed in less than 6 months and has a budget of $250,000.

B. Project Deliverables

FPD is requesting a high performing AI powered information metrics dashboard capable of being operated by the technical analyst team. The major deliverables throughout the project to reach this goal will be related to each phase of the project. Prior to project commencement the sponsor is requiring budget and projected schedule targets for the project. Providing a projected schedule and cost summary which includes a detailed training and data management schedule will satisfy this requirement.

1.1 Define Requirements:

The first activity deliverable, relating to initial data management and training, a standard protocol for data pre-processing and ERP system status is necessary. VP

Modruson would like all FDP data to be consolidated prior to cloud upload, an operating protocol and status will expedite the process. In addition, receiving a training schedule from the Big Data Training Group will outline dates for completion of training modules maintaining on-time completion. Lastly, defining analytics and data and AI modeling requirements.

1.2 Design Dashboard

After completing training, analyst teams will review current data and performance using the tools and skills learned in training within focus groups. Scale of the project proves it beneficial to document all of the problems encountered. analysis teams will provide documents that outlining issues within production, sales, shipment/delivery, and customer feedback. From there these issues will support creation of the dashboard layout. In addition, KPIs and forecasts for the dashboard will be determined, and create conceptual, logical and physical designs of the dashboard.

1.3   Source/Cleanse Data

Analysts will obtain relevant data, validate data, and clean data. Results for this will be provided via visualizations and reports on data quality status.

1.4 Develop Analytics Model

Analysts, with management will use the identification documents to determine analytics calculations, data modeling, and necessary AI modeling creation. Model validation will also take place in this phase. As well as install database servers and implement schema.

1.5 Construct/Modify Dashboard

Analysts will design and construct dashboard presentation, associate data, build the dashboard and configure security to meet the performance expectations of stakeholders and management as it related to visualization, accuracy, accessibility, and effectiveness of models. Model performance documents will provide a clear depiction of where models have performed well.

1.6 Testing

Analysts will define (UAT Performance Parameters) troubleshoot and validate the performance of the dashboard visualization, accuracy, accessibility business performance and security to determine effectiveness of models. Submission of model performance documents (dashboard system, performance, and security reports) will provide a clear depiction of where models have performed well and business changes have made a positive impact.

1.7 User Training

Analysts and IT employees will create user and technical guides to assist in navigating use of the metrics dashboard. Training of other IT employees and marketing and sales team personnel will be completed.

1.8 Dashboard Deployment

The dashboard will be deployed to UAT and production. A deployment plan, data migration report and testing report will be submitted.

1.9 Project Management

Project Plan, Scope Statement, Teem Meeting Agendas, Project Status Reports and Milestones will be created at the inception of and during the duration of the project.

C. Milestones

Define Requirements: 30 Days after project commencement
Dashboard Design: 35 days after project commencement
Analytics Model and Dashboard Completion: 80 Days after project commencement
EOC Review: 110 Days after project commencement
Users Trained: 110 Days after Commencement
Dashboard Deployed: 120 Days after project commencement
Project Closure: 130 days after project commencement

D. Technical Requirements

There is a requirement for cloud-based AI tools to be used during the project. We will need to address scalability, support for various data sources, visualization capabilities, responsiveness, and if the platform is user-friendly for management and other teams to access and understand. FDP would benefit from a system that had an extremely high storage capacity. Up 10TB per object would be preferable due to the clients served. In addition, visualization that offers real time data exploration, natural language querying and mobile access while on and offline would satisfy the VP – James request for 24/7 access.

E. Limits and Exclusions

One week of AI tool training
6 months to complete project
$250,000 budget with contingency factored in
Use pre-existing data
Non-contracted/Fixed cost third party vendors

F. Review

The Executive Oversight Committee and stakeholders will review and approve project scope.

III.   Priority Matrix

	Time	Cost	Performance
Constrain			⬭
Enhance	⬭		
Accept		⬭	

Constrain Performance: Deliver Metrics
Enhance Time: Complete Project ASAP
Accept Cost: Can Request Additional Funds If Justified

FPD requests and requirements for the project deliverables display a priority matrix reflective of the above. Documents such as final design dashboard, model proposal, data pre-processing/ERP status documents keep the EOC and management team well-informed. FDP would like the project completed as soon as possible to improve customer feedback. Due to this, performance is the man priority. There is a bit of flexibility for cost as it pertains to third party contracting and consulting with the necessary documentation.

IV. Work Breakdown Structure & Cost Estimate Worksheet

Dashboard Design

1.1 Define Requirements
- 1.1.1 AI Training
- 1.1.2 Gather Functional Requirements
- 1.1.3 Gather Non-Functional Requirements
- 1.1.4 Document Requirements
- 1.1.5 Validate Requirements

1.2 Design Dashboard
- 1.2.1 Conceptual Design
- 1.2.2 Create ERD
- 1.2.3 Logical Design
- 1.2.4 Physical Design

1.3 Source/Cleanse Data
- 1.3.1 Identify Data Sources
- 1.3.2 Define Data Mapping
- 1.3.3 Develop Data Extraction/Pre-processing Protocol
- 1.3.4 Perform Data Cleansing
- 1.3.5 Validate Data Migration

1.4 Develop Analytics Model
- 1.4.1 Database Set Up
- 1.4.2 Install Database Server
- 1.4.3 Implement Schema

1.5 Construct/Modify Dashboard
- 1.5.1 Load Initial Data
- 1.5.2 Perform Data Validation
- 1.5.3 Optimize Data Loading

1.6 Testing
- 1.6.1 Test Plan
- 1.6.2 System Testing
- 1.6.3 Performance Testing
- 1.6.4 Security Testing

1.7 User Training
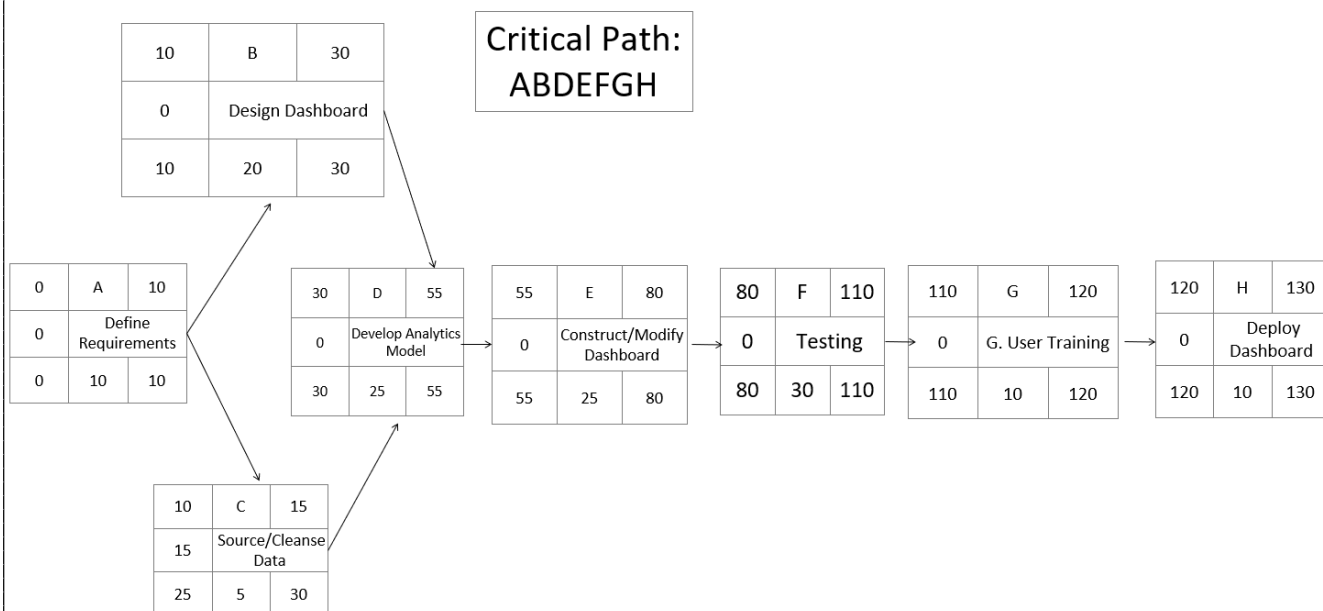- 1.7.1 Create User Guide
- 1.7.2 Create Tech Guide
- 1.7.3 IT Training
- 1.7.4 Marketing & Sales Personnel Training

1.8 Deploy Dashboard
- 1.8.1 Create Deployment Plan
- 1.8.2 Create Production Environment
- 1.8.3 Final Data Migration
- 1.8.4 Final Testing, Go Live

1.9 Project Management
- 1.9.1 Project Plan
- 1.9.2 Project Execution – Scheduling, Cost Summary
- 1.9.3 Project Monitoring and Control
- 1.9.4 Project Close

Time-Cost Labor Estimates

WBS ID	Task Description	Task Assigned to	Estimate (hrs)	Estimating Approach	Estimate (hrs)	Estimated Interruptions (hrs) (Estimate * 0.33)	Total Effort (hrs)	Labor Rate $/hr	Labor Cost Total $	Expenses	Total Costs	# of Resources	Calendar duration
1.0	Project FPD DM Dashboard												
1.1	Define Requirements												
1.1.1	Conduct QlikSense AI tool Training (Don't factor the hours - Assume full time training for this only)	Dean, Jess, Paris	40	Expert	120				$ -	$ 10,000	$ 10,000	3	-
1.1.2-4	Requirements	William, Taraji, Nia	80	Expert/Bottom-Up	24	26.4	50.4	$120	$ 6,048	0 $	$ 6,048	3	16.8
1.2	Design Dashboard												
1.2.1	Conceptual Design - Defining Entities Relationships	William, Taraji,	40	Bottom Up Estimating	40	13.2	53.2	$40	$ 2,128		$ 2,128	3	26.6
1.2.2	Create ERD	Nia, Samuel	40	Parametic Estimating	40	13.2	53.2	$40	$ 2,128		$ 2,128	2	13.3
1.2.2	Logical Design	William, Taraji,	40	Parametic Estimating	40	13.2	53.2	$40	$ 2,128		$ 2,128	3	26.6
1.2.3	Physical Design	William, Taraji, Nia	40	Bottom Up Estimating	40	13.2	53.2	$120	$ 6,384		$ 6,384	6	13.3
1.3	Source/Cleanse data												
1.3.2	Data Mapping	Nia	10	Vendor Bid Analysis	10	3.3	13.3	$40	$ 532		$ 532	2	6.65
1.3.3	Data Extracting/Pre-processing Protocol	Nia	15	Bottom Up Estimating	15	5.0	20.0	$40	$ 798		$ 798	2	9.98
1.3.4	Data Cleaning	Nia	10	Bottom Up Estimating	10	3.3	13.3	$40	$ 532		$ 532	2	6.65
1.3.5	Validate Data Migration	Nia	5	Expert	5	1.7	6.7	$40	$ 266		$ 266	2	3.33
1.4	Develop analytics models												
1.4.1	Database Set Up/Frame Work	Analyst Team	120	Parametic Estimating	100	33.0	133.0	$160	$ 21,280		$ 21,280	2	66.50
1.4.2	Install Database Server	Analyst Team	40	Expert	40	13.2	53.2	$160	$ 8,512		$ 8,512	2	26.60
1.4.3	Implement Schema	Analyst Team	40	Bottom Up Estimating	40	13.2	53.2	$160	$ 8,512		$ 8,512	2	26.60
1.5	Construct/Modify dashboard												
1.5.1	Load Inititial Data	Samuel Lincoln	40	Three Point Estimating	140	46.2	186.2	$80	$ 14,896		$ 14,896	2	93.10
1.5.2	Perform Data Validation	William, Taraji	120	Bottom Up Estimating	120	39.6	159.6	$160	$ 25,536		$ 25,536	1	159.60
1.5.3	Optimize Data Loading	William, Taraji,	40	Bottom Up Estimating	40	13.2	53.2	$160	$ 8,512		$ 8,512	1	53.20
1.6	Test dashboard												
1.6.1	Test Plan(s)	William	100	Expert Judgement	100	33.0	133.0	$40	$ 5,320		$ 5,320	1	133.00
1.6.2	Performance Testing	William	100	Three Point Estimating	100	33.0	133.0	$40	$ 5,320		$ 5,320	1	133.00
1.6.3	Security Testing	William	40	Expert Judgement	40	13.2	53.2	$40	$ 2,128		$ 2,128	1	53.20
1.7	Train Users												
1.7.1	User Guide	Jamie Wolf	25	Parametic Estimating	25	8.3	33.3	$40	$ 1,330		$ 1,330	1	33.25
1.7.2	Technical Guide	Jamie Wolf	25	Bottom Up Estimating	25	8.3	33.3	$40	$ 1,330		$ 1,330	1	33.25
1.7.3	IT Training	Jamie Wolf	20	Expert	20	6.6	26.6	$40	$ 1,064		$ 1,064	1	26.60
1.7.4	Makreting and Sales Training	Jamie Wolf	10	Expert	10	3.3	13.3	$40	$ 532		$ 532	1	13.30
1.8	Deploy Dashboard												
1.8.1	Deployment Plan	William	20	Expert Judgement	20	6.6	26.6	$40	$ 1,064		$ 1,064	1	26.60
1.8.2	Production Environment	Taraji	20	Bottom Up Estimating	20	6.6	26.6	$40	$ 1,064		$ 1,064	1	26.60
1.8.3	Final Data Migration	Nia	20	Three Point Estimating	20	6.6	26.6	$40	$ 1,064		$ 1,064	1	26.60
1.8.4	Final Testing, Go Live	William	20	Expert Judgement	20	6.6	26.6	$40	$ 1,064		$ 1,064	1	26.60
1.9	Project Management (Put all project management time here - assume full time or half time and don't factor)												
1.9.1	Project Plan	Project Manager	20	Expert Judgement	20	6.6	26.6	$55	$ 1,463		$ -	1	26.60
1.9.2	Project Exexcution	Project Manager	40	Three Point Estimating	40	13.2	53.2	$55	$ 2,926		$ -	1	53.20
1.9.3	Project Monitoring	Project Manager	60	Three Point Estimating	940	19.8	959.8	$55	$ 52,789		$ -	1	959.80
1.9.4	Final Reports	Project Manager	20	Analogous Estimating	20	6.6	26.6	$55	$ 1,463		$ -	1	26.60
									$ 188,113	$ 10,000	$ 198,113	61	

V.   Communications Plan

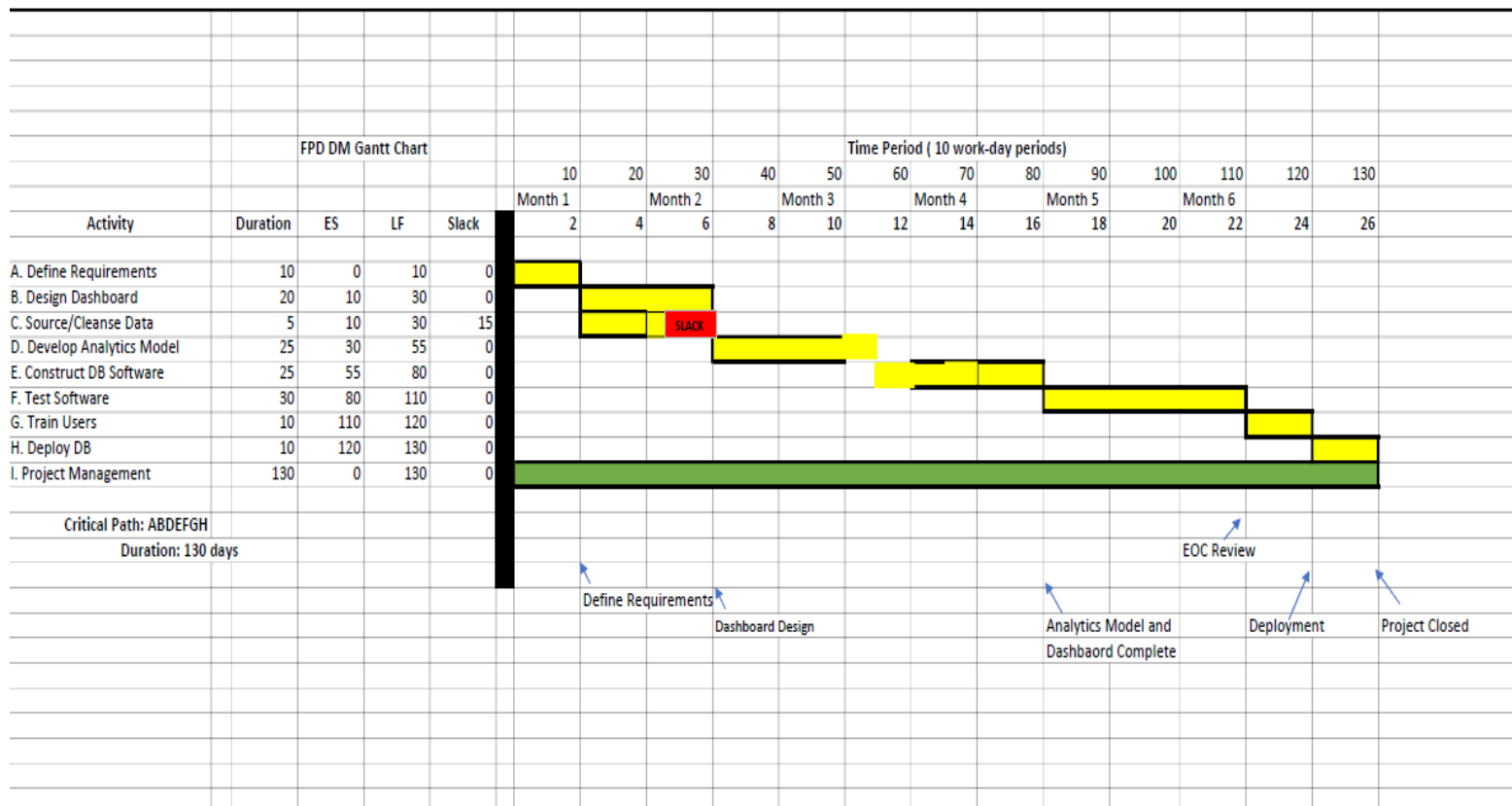| What Information	Target Audience	When?	Method of Communication	Provider
Project Plan	Management, Sponsor, EOC, Analyst Team	ASAP	Email and Hardcopy	Project Manager
Milestone Status Report	EOC, Sponsor, Management	Biweekly	Email and Hardcopy	Project Manager
Project Status Reports and Agendas	EOC, Sponsor, Management	Weekly	Email and Hardcopy	Project Manager
Project Team Status Reports	PM	Weekly	Email	Analyst Team – Designated Recorder
Issue Reports	EOC, Management	Weekly	Email	Project Manager
Escalation Reports	EOC, Management, EOC	When needed	Meeting & Hardcopy	Project Manager
Issue Identification Document(s)	Management EOC, PM, Sponsor	1.2 Design Dashboard	Email	Project Manager Analyst Team – By Focus
Protocol for Pre-Processing/ERP Status Report	Management, PM, Sponsor	1.1 Define Requirements	Meeting	Analyst Team
Training Schedule	PM, Analyst, Management, Sponsor	1.1 Define Requirements	Email & Hardcopy	Big Data Training Group
Dashboard Design	PM, Management, Sponsor	1.2 Design Dashboard	Email, Meeting, Physical Copy	Analyst Team
Model Proposal	PM, Management	1.4 Develop Analytics Model	Meeting, Email, Hardcopy	Analyst Team – By Focus

VI. AON Network & Spreadsheet

Activity/ Work Pkg	Description	Duration (days)	Duration (Weeks)	Immediate Predecessor	ES (Days)	LS	EF	LF	Slack
A	Define Requirements	10	2	/	0	0	10	10	0
A-A	Functional Requirements Document	2							
A-B	Gather Non-Functional Requirements	2							
A-C	Document Requirements	2							
A-D	Validate Requirements	4							
B	Design Dashboard	20	4	A	10	10	30	30	0
B-A	Conceptual Dashboard Design	10							
B-B	ERD Diagram	5							
B-C	Logical Design	3							
B-D	Physical Design	2							
C	Source/Cleanse Data	5	1	A	10	25	15	30	15
C-A	Data Sourcing Document	1							
C-B	Data Mapping Document	1							
C-C	Data Extraction/Pre-processing Protocol	1							
C-D	Data Cleansing Report	1							
C-E	Data Migration Validation Report	1							
D	Develop Analytics Model	25	5	B,C	30	30	55	55	0
D-A	Dashboard Set Up Outline	10							
D-B	Dashbaord Server Installation	8							
D-C	Schema Implementation	7							
E	Construct Modify Dashboard	25	5	D	55	55	80	80	0
E-A	Initial Data Loading	5							
E-B	Data Validation Report	10							
E-C	Data Optimization Report	10							
F	Testing	30	6	E	80	80	110	110	0
F-A	Test Plan(s)	5							
F-B	System Testing Report	10							
F-C	Performance Testing Report	10							
F-D	Security Testing Report	5							
G	User Training	10	2	F	110	110	120	120	0
G-A	User Guide	3							
G-B	Technical Guide	2							
G-C	IT Training	4							
G-D	Marketing and Sales Teams Training	1							
H	Deploy Dashboard	10	2	G	120	120	130	130	0
H-A	Deployment Plan	2							
H-B	Production Environment	2							
H-C	Final Data Migration Report	2							
H-D	Final Testing Report	2							
I	Project Management	130		/					
I-A	Project Plan								
I-B	Project Execution								
I-C	Project Monitoring and Control								
I-D	Project Close								

Critical Path	
Critical Path Duration	26 weeks	ABDEFGH

Critical Path: ABDEFGH

VII. Project Baseline Budget

Baseline Budget

Time Period (10-work-day periods)

Activity	Duration	ES	LF	Slack	Cost	0	2	4	6	8	10	12	14	16	18	20	22	24	26
							Month 1		Month 2		Month 3		Oct		Nov		Dec		
A. Define Requirements	10	0	10	0	16,048		16,048												
B. Design Dashboard	20	10	30	0	12,768			6,384	6,384										
C. Source/Cleanse Data	5	10	30	15	2,128			1,064	1,064										
D. Develop Analytics Model	25	30	55	0	38,304					10,640	27,664								
E. Construct DB Software	25	55	80	0	48,944								23,406	25,538					
F. Test Software	30	80	110	0	12,768										5,320	5,320	2,128		
G. Train Users	10	110	120	0	4,256													4,256	
H Deploy DB	10	120	130	0	4,256														4,256
I. Project Management	130			0	58,641		4,511	4,511	4,511	4,511	4,511	4,511	4,511	4,511	4,511	4,511	4,511	4,511	4,511

Critical Path: ABDEFG
Duration: 130 days

| | | | | BAC= | 198,113 | 0 | 20,559 | 11,959 | 11,959 | 15,151 | 32,175 | 4,511 | 27,917 | 30,049 | 9,831 | 9,831 | 6,639 | 8,767 | 8,767 | Cumulative 198,113 |
| | | | | | | | 20,559 | 32,518 | 44,477 | 59,628 | 91,803 | 96,314 | 123,511 | 154,280 | 164,111 | 173,942 | 180,581 | 189,348 | | 198,113 |

VIII. Gantt Chart

FPD DM Gantt Chart

Time Period (10 work-day periods)

Activity	Duration	ES	LF	Slack										
					10 Month 1 2	20 Month 2 4	30 6	40 Month 3 8	50 10	60 Month 4 12	70 14	80 Month 5 16	90 18	100 Month 6 20	110 22	120 24	130 26
A. Define Requirements	10	0	10	0										
B. Design Dashboard	20	10	30	0										
C. Source/Cleanse Data	5	10	30	15	SLACK									
D. Develop Analytics Model	25	30	55	0										
E. Construct DB Software	25	55	80	0										
F. Test Software	30	80	110	0										
G. Train Users	10	110	120	0										
H. Deploy DB	10	120	130	0										
I. Project Management	130	0	130	0										

Critical Path: ABDEFGH
Duration: 130 days

EOC Review

Define Requirements

Dashboard Design

Analytics Model and Dashbaord Complete

Deployment

Project Closed

ABDEFGH is the critical path. This critical path allows the project to be completed in 130 days (26 weeks) with 15 days (3 weeks) of slack to start to fit into the 6-month requirement. This slack makes project completion feasible. There is much room for delays and issues to occur and be corrected while staying within the timeframe.

Please see the comprehensive critical path analysis to ensure the successful delivery of the FPD Beverage Company's information and metrics dashboard project. This process involved a meticulous review of all project tasks, dependencies, durations, and resource allocations. Utilizing project management tools and methodologies, we identified the sequence of essential tasks that directly influence the project's timeline keeping it within the requested 6 month timeframe.

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IX.   Risk Matrices

A. Risk Assessment Matrix

Risk Event	Likelihood	Impact	Detection Difficulty	Risk Rating (Likelihood x Impact)	When
(R1) Receiving unclean data with low data integrity and missing elements	4	3	2	12	**1.3: Source/Cleanse data**
(R2) Requiring additional resources to meet schedule due to other duties and lack of appropriate skills/experience	2	4	3	8	**1.4: Develop analytics models**
					1.5: Construct/Modify dashboard
					1.6: Test dashboard
(R3) Define/socialize/accept performance metrics	3	4	3	12	**1.6: Test dashboard**
					1.8: Deploy dashboard
(R4) Scope creep	2	3	2	6	**1.4: Develop analytics models**
					1.5: Construct/Modify dashboard
(R5) Going over project duration	4	3	2	12	**1.4: Develop analytics models**
					1.5 Construct/Modify dashboard
					1.6: Test dashboard

R1) Receiving unclean data with low data integrity and missing elements

- Likelihood: 4 (Likely) - Based on previous experience, it is highly likely that some data quality issues will arise during the data migration and integration phases of the comprehensive information/metrics dashboard implementation.

- Impact: 3 (Moderate) - Unclean data can severely impact the accuracy of reporting, analytics, and decision-making, potentially leading to significant operational challenges.

- Detection Difficulty: 2 (Fairly Low) - While data cleansing can be time-consuming, well-established techniques and tools are available, making this risk relatively easy to mitigate.

- When: 1.3 (Source/Cleanse data) - Data quality issues related to unclean data, low integrity, and missing elements are most likely to surface and require attention during the initial data sourcing and cleansing phase.

2. (R2) Requiring additional resources to meet schedule due to other duties and lack of appropriate skills/experience

- Likelihood: 2 (Fairly Unlikely) - While it is possible, it is relatively unlikely that the project will face significant resource constraints due to proper planning and resource allocation.

- Impact: 4 (High) - Resource constraints may cause minor delays or inefficiencies, but can be managed with proper contingency planning.

- Detection Difficulty: 3 (Moderate) - Acquiring additional resources with the right skills and experience can be moderately challenging, but achievable with proper planning and budgeting.

- When: 1.4 (Develop analytics models)/1.5 (Construct/Modify dashboard)/1.6 (Test dashboard) - Resource constraints may become more apparent during the analytics model development phase, dashboard construction, and dashboard testing, when more specialized skills and review are required.

3. (R3) Define/socialize/accept performance metrics

- Likelihood: 3 (Moderately Possible) - It is possible that there may be some disagreements or challenges in defining and socializing the performance metrics among stakeholders.

- Impact: 4 (High) - Poorly defined or widely unaccepted performance metrics can significantly impact the effectiveness of the comprehensive information/metrics dashboard implementation and the resulting analytics and reporting.

- Detection Difficulty: 3 (Moderate) - Aligning stakeholder expectations and reaching a consensus on performance metrics can be a moderately complex process.

- When: 1.6 (Test dashboard)/1.8 (Deploy dashboard) - Issues related to defining, socializing, and gaining acceptance of performance metrics may arise during the dashboard testing phase when stakeholders can review the metrics, and also during the final deployment phase when the metrics are presented to the broader user community.

4. (R4) Scope creep·

- Likelihood: 2 (Possible) - It is possible for scope creep to occur, as stakeholders may request additional features or changes during the project lifecycle.

- Impact: 3 (Moderate) - Scope creep can lead to schedule delays, increased costs, and resource constraints, but can be managed with proper change control processes.

- Detection Difficulty: 2 (Fairly Low) - Managing scope creep requires effective communication, stakeholder alignment, and a robust change control process, which can be somewhat challenging.

- When: 1.4 (Develop analytics models)/1.5 (Construct/Modify dashboard) - Scope creep is a risk that may materialize during the analytics model development and dashboard construction/modification phases, as stakeholders provide feedback and potentially request additional features or changes beyond the initial scope.

5. (R5) Going over project duration

- Likelihood: 4 (Likely) - Given the complexity of the project, involving multiple stakeholders, tight budget constraints, and the integration of new technologies like cloud-based AI tools, it is likely that the project may encounter delays and go over the planned duration.

- Impact: 3 (Moderate) - Exceeding the project duration can have moderate consequences, potentially leading to increased costs, missed deadlines, and dissatisfied stakeholders, which could jeopardize the successful completion of the project.

- Detection Difficulty: 2 (Fairly Low) - While managing project timelines can be challenging, there are established techniques and tools available to mitigate this risk, such as resource allocation, schedule adjustments, and effective communication with stakeholders.

- When: 1.4 (Develop analytics models)/1.5 (Construct/Modify dashboard)/1.6 (Test dashboard) - The risk of going over the project duration may become more apparent during the development of analytics models, dashboard construction, and testing phases, where delays or unforeseen issues could potentially impact the project timeline.

Risk Severity Matrix

Likelihood		1	2	3	4	5
	5					
	4			(R1) Receiving unclean data with low data integrity and missing elements (R5) Going over project duration		
	3				(R3) Define/socialize/accept performance metrics	
	2			(R4) Scope creep	(R2) Requiring additional resources to meet schedule due to other duties and lack of appropriate skills/experience	
	1					
		Very low	Low	Moderate	High	Very high
				Impact		

Very Low: Negligible risks in this category are highly unlikely to materialize and would have minimal consequences if they did occur.

Low: While possible, risks at this level would cause relatively minor issues to the project plan.

Moderate: Moderate risks with a moderate chance of occurrence that could generate a considerable amount of project issues.

High: Highly likely risks that will undoubtedly impact and significantly disrupt the project if they arise.

Very High: Catastrophic risks in this category are near-inevitable occurrences that would likely derail the entire project if not properly mitigated.

The placement of each Risk Event in the Risk Severity Matrix (RSM) is based on the Likelihood and Impact ratings from the Risk Assessment Matrix (RAM).

1. (R1) Receiving unclean data with low data integrity and missing elements is placed in the top-middle quadrant (Likelihood: 4, Impact: 3) as it is considered a "High" risk due to its likely occurrence and potential for significant impact on data quality and reporting.

2. (R2) Requiring additional resources to meet schedule due to other duties and lack of appropriate skills/experience is placed in the low-right quadrant (Likelihood: 2, Impact: 4) as it is considered a "Moderate" risk, with a relatively unlikely occurrence, but with high potential impact on project timelines.

3. (R3) Define/socialize/accept performance metrics is placed in the middle-right quadrant (Likelihood: 3, Impact: 4) as it is considered a "Moderate" risk, with a possible occurrence and potential for high impact on the effectiveness of the comprehensive information/metrics dashboard implementation.

4. (R4) Scope creep is placed in the low-middle quadrant (Likelihood: 2, Impact: 3) as it is considered a "Low-Moderate" risk, with a possible occurrence and moderate impact on project schedules and costs.

5. (R5) Going over project duration is placed in the top-middle quadrant (Likelihood: 4, Impact: 3) as it is considered a "High" risk due to its near-certainty of occurrence and potentially catastrophic impact on the project.

C. Risk Response Matrix

Risk Event	Response	Contingency Plan	Trigger	Responsible Party	Cost Estimate
(R1) Receiving unclean data with low data integrity and missing elements	Accept	Add additional resources to cleanse data, and develop data protocols/quality standards/quality checks	Data is of lower quality than expected	ERP Analyst, Database Analyst	$10,000 - $20,000
(R2) Requiring additional resources to meet schedule due to other duties and lack appropriate skills/experience	Accept	Add additional resources to help with duties	Current resources require more time overall to complete everything; Persistent and consistent overtime accrued	Project Manager	$30,000 - $50,000
(R3) Define/socialize/accept performance metrics	Mitigate: meetings with stakeholders to validate metrics	Gather feedback from stakeholders to implement changes of the dashboard	Widespread user criticism	Executive Oversight Committee (EOC)	$5,000 - $10,000
(R4) Scope creep	Mitigate: meetings with stakeholders redefine scope	Redefine stakeholder expectations	Stakeholders, clients, or users start requesting more features not listed in proposal	Project Manager	$20,000 - $40,000
(R5) Going over project duration	Avoid	Add more resources, either funds or people; Reconstruct project timeline	Project is consistently performing behind on schedule	Project Manager, Project Sponsor (CFO)	$50,000 - $100,000

(R1) Receiving unclean data with low data integrity and missing elements

- Response: Accept - The project team acknowledges the likelihood of this risk occurring and plans to address it through contingency measures.

- Contingency Plan: Add additional resources to cleanse data - If data quality issues arise, the plan is to allocate additional resources (personnel or tools) to cleanse data and improve the data integrity.

- Trigger: Data is of lower quality than expected - The contingency plan will be triggered if the data quality falls below the expected standards, as determined by the project team or stakeholders.

- Responsible Party: ERP Analyst/ Database Analyst - The ERP Analyst and Database Analyst will be responsible for monitoring data quality, identifying issues, and implementing the data cleansing efforts as needed.

- Cost Estimate: $10,000 - $20,000

  - This cost range accounts for the additional resources and effort required to cleanse and fix the unclean data.

  - It may involve hiring temporary data analysts or bringing in external data cleansing services.

  - The lower end of the range ($10,000) assumes a moderate amount of data cleaning is required, while the higher end ($20,000) accounts for more extensive data issues.

2. (R2) Requiring additional resources to meet schedule due to other duties and lack of appropriate skills/experience

- Response: Accept - The project team acknowledges the possibility of resource constraints and plans to address them through contingency measures.

- Contingency Plan: Add additional resources to help with duties - If resource constraints arise, the plan is to acquire additional resources (personnel or consultants) to supplement the existing team and ensure timely project completion.

- Trigger: Current resources require more time overall to complete everything; Persistent and consistent overtime accrued - The contingency plan will be triggered if the existing resources are consistently struggling to meet deadlines or working excessive overtime.

- Responsible Party: Project Manager - The Project Manager will be responsible for monitoring resource utilization, identifying constraints, and coordinating the acquisition of additional resources as needed.

- Cost Estimate: $30,000 - $50,000

  - This cost range covers the expenses associated with hiring additional personnel or contracting external resources to supplement the existing team.

  - The lower end ($30,000) may include hiring a temporary resource or consultant for a shorter duration.

  - The higher end ($50,000) may involve bringing on multiple resources or more specialized expertise for a longer period.

3. (R3) Define/socialize/accept performance metrics
- Response: Mitigate - The project team aims to proactively mitigate this risk by involving stakeholders in the performance metric definition process.
- Contingency Plan: Gather feedback from stakeholders to implement changes to the dashboard - If widespread criticism or dissatisfaction with the performance metrics arises, the plan is to gather stakeholder feedback and make necessary adjustments to the dashboard or reporting.

- Trigger: Widespread user criticism - The contingency plan will be triggered if there is significant negative feedback or lack of acceptance from stakeholders and the project team regarding the performance metrics.

- Responsible Party: Executive Oversight Committee (EOC) - The Executive Oversight Committee will be responsible for facilitating stakeholder meetings, gathering feedback, and overseeing any necessary changes to the performance metrics or dashboard.

- Cost Estimate: $5,000 - $10,000

    o This relatively lower cost range ($5,000) is associated with the effort required to hold meetings, gather feedback, and align stakeholders on the performance metrics.

    o It may include costs for organizing workshops, facilitating discussions, and implementing minor adjustments to dashboards or reporting.
    o The upper end ($10,000) accounts for more extensive stakeholder engagement and potential design changes.

4. (R4) Scope creep
- Response: Mitigate - The project team aims to mitigate scope creep through regular stakeholder meetings and effective change control processes.

- Contingency Plan: Redefine stakeholder expectations - If scope creep occurs, the plan is to reassess and redefine the project scope, expectations, and timelines in consultation with stakeholders.

- Trigger: Stakeholders, clients, or users start requesting more features not listed in the proposal - The contingency plan will be triggered if stakeholders begin requesting additional features or changes beyond the initially agreed-upon scope.

- Responsible Party: Project Manager - The Project Manager will be responsible for facilitating stakeholder meetings, managing change requests, and overseeing the scope redefinition process as needed.

- Cost Estimate: $20,000 - $40,000

    o Scope creep can have significant cost implications as it may require additional resources, extended timelines, and rework.

    o The lower end ($20,000) may cover the costs of managing minor scope changes and realigning expectations.

    o The higher end ($40,000) accounts for more substantial scope expansions, which may require additional development, testing, and integration efforts.

5. (R5) Going over project duration

- Response: Avoid - The project team aims to avoid this risk by proactively managing the project schedule and taking preventive measures.

- Contingency Plan: Add more resources, either funds or people; Reconstruct project timeline - If the project consistently falls behind schedule, the plan is to either allocate additional resources (funds or personnel), or reconstruct the project timeline to ensure timely completion.

- Trigger: Project is consistently performing behind schedule - The contingency plan will be triggered if the project consistently fails to meet milestones or deadlines, indicating a high risk of running out of time.

- Responsible Party: Project Manager, Project Sponsor (CFO) - The Project Manager and Project Sponsor (CFO) will be responsible for monitoring project progress, identifying schedule slippages, and implementing the contingency plan by allocating additional resources or adjusting the timeline as needed.

- Cost Estimate: $50,000 - $100,000

    o This cost range represents the most significant financial impact, as it addresses the risk of project delays and potential failure.

    o The lower end ($50,000) may involve adding limited resources or making minor timeline adjustments.

Overall Risk Assessment

The FPD Drinking Metrics (FPD DM) project represents a critical initiative for FPD Beverage Company, aiming to develop a comprehensive information and metrics dashboard to support data-driven decision-making in sales and operations. However, as with any complex undertaking, the project faces several potential risks that necessitate meticulous assessment and effective management strategies to ensure successful execution.

The risk of (R1) Receiving unclean data with low data integrity and missing elements is rated as highly likely (4) with a moderate impact (3), reflecting the potential for severe data quality issues that could undermine the accuracy and reliability of the dashboard's reporting and analytics capabilities. This risk is expected to manifest during the crucial data sourcing and cleansing phase (WBS Task 1.3), which lays the foundation for the entire project. The Risk Severity Matrix (RSM) further underscores the criticality of this "High" risk, placing it in the top-middle quadrant, denoting a risk that could severely compromise the accuracy and reliability of the dashboard's reporting and analytics capabilities. The contingency plan outlined in the RRM involves allocating additional resources, overseen by the ERP and Database Analysts, to cleanse and enhance the data quality. The cost estimate of $10,000 to $20,000 for this contingency plan is appropriate, as it accounts for the potential need to hire temporary data analysts or bring in external data cleansing services. The lower end of $10,000 assumes a moderate level of data cleaning is required, while the higher end of $20,000 accounts for more extensive data quality issues that may necessitate a greater investment in resources and effort.

Equally concerning is the risk of (R5) Going over the project duration, which shares the same likelihood (4 - Likely) and impact (3 - Moderate) ratings as (R1), similarly positioning this "High" risk in the top-middle quadrant of the RSM. Given the project's complexity, involving multiple stakeholders, tight budgets, and the integration of new technologies, it is understandable that adhering to the planned timeline could be challenging. Failure to meet deadlines could result in escalating costs, stakeholder dissatisfaction, and potentially jeopardize the successful completion of the project. To mitigate this risk, the RRM proposes a significant contingency plan involving the addition of resources or adjusting the project timeline, overseen by the Project Manager and Project Sponsor (CFO). The estimated cost range of $50,000 to $100,000 for

this contingency plan is justified, as it represents the most significant financial impact and addresses the risk of project delays and potential failure. The lower end of $50,000 may involve adding limited resources or making minor timeline adjustments, while the higher end of $100,000 accounts for more substantial delays and the need for significant resource augmentation or timeline revisions.

The "Moderate" risk of (R3) Define/socialize/accept performance metrics is also noteworthy in the middle-right quadrant of the RSM, rated as moderately possible (3) with a high impact (4). Aligning stakeholder expectations and reaching a consensus on the performance metrics is crucial for the effectiveness of the comprehensive information and metrics dashboard implementation. The proposed mitigation strategy of stakeholder meetings and feedback gathering, led by the Executive Oversight Committee (EOC), with an estimated cost of $5,000 to $10,000, appears reasonable. The lower end of $5,000 accounts for the basic effort required to hold meetings, gather feedback, and align stakeholders on the performance metrics, potentially including costs for organizing workshops and facilitating discussions. The upper end of $10,000 allows for more extensive stakeholder engagement and potential design changes, which may be necessary if significant adjustments to the dashboards or reporting are required based on stakeholder feedback.

While the risks of (R2) Requiring additional resources to meet schedule due to other duties and lack of appropriate skills/experience, and (R4) Scope creep are lower in probability, their potential impacts on project timelines, costs, and resource constraints should not be overlooked.

For "Moderate" risk (R2) Requiring additional resources to meet schedule due to other duties and lack of appropriate skills/experience in the low-right quadrant of the RSM, the RRM outlines an acceptance strategy with a contingency plan to add additional resources to assist with duties, managed by the Project Manager. The cost estimate range of $30,000 to $50,000 is appropriate, as it covers the expenses associated with hiring additional personnel or contracting external resources to supplement the existing team. The lower end of $30,000 may include hiring a temporary resource or consultant for a shorter duration, while the higher end of $50,000 accounts for the need to bring on multiple resources or more specialized expertise for a longer period.
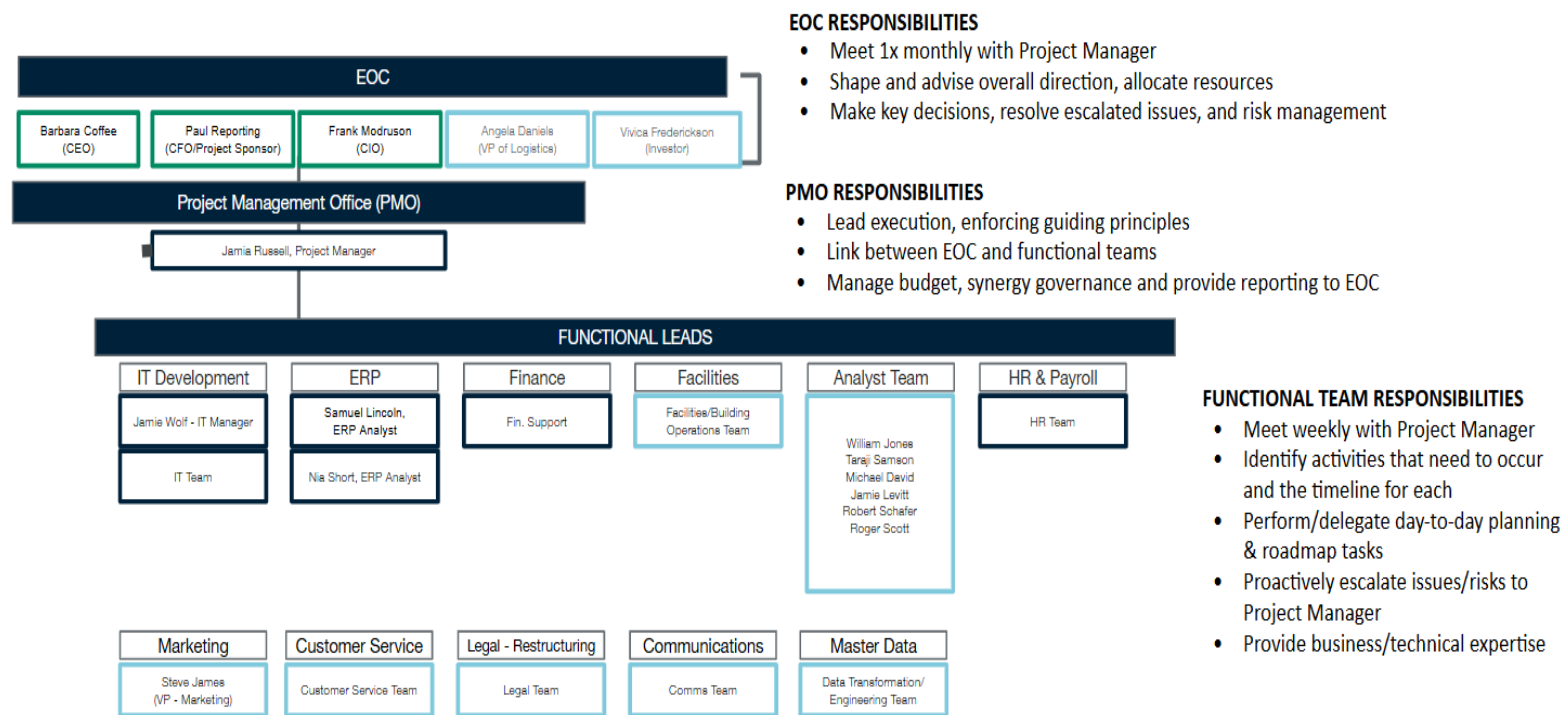
Similarly, for the "Low-Moderate" risk of (R4) Scope creep in the low-middle quadrant of the RSM, the RRM proposes a mitigation strategy involving meetings with stakeholders to redefine the scope and reset expectations, led by the Project Manager. The estimated cost range of $20,000 to $40,000 aligns with the potential impact of scope creep, as it can have significant cost implications due to the need for additional resources, extended timelines, and rework. The lower end of $20,000 may cover the costs of managing minor scope changes and realigning expectations, while the higher end of $40,000 accounts for more substantial scope expansions, which may require additional development, testing, and integration efforts.

Collectively, the identified risks and their associated cost estimates for mitigation and contingency plans highlight the criticality of thorough risk management for the FPD DM project. The total additional cost estimate for these risk response strategies ranges from approximately $5,000, if only the low-end cost estimate of (R3) Define/socialize/accept performance metrics comes to fruition, all the way up to $220,000

across all risk response strategies in the scenario that they all occur at their highest cost estimate, representing a substantial investment in risk mitigation efforts. However, this investment is justified by the strategic importance of the project and the potential financial and operational consequences of project delays, data quality issues, or stakeholder dissatisfaction.

X. Project Organization Chart

The below project organization chart is a representation of the relationships between the Executive Oversight Committee, stakeholders and the project team members. The matrix depiction of project and company structure provides a clear understanding of project governance. Project managers may have issues with coordinating meetings and authority as members span across differing departments at different levels of employment.

XI. Feasability

Project success can be measured by accessing the dashboards effect on business performance and customer feedback. FPD will measure effectiveness of the dashboard and the use benefit during quarterly review to gain insight on the model's application to the production and distribution system. In addition, FPD executives can communicate directly with their large-scale customers to receive any updates feedback on the previous complaints submitted. Internally, project success completes the task underneath the $250,00 budget and within the 6-month period.