

Project WBS

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Prepared by: Ryan Amundson, Product Manager
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Proposal number: 123-4567

TABLE OF CONTENTS

| | |
|-------------------------------------|----------|
| TABLE OF CONTENTS | 1 |
| EXECUTIVE SUMMARY | 3 |
| Objective | 3 |
| Project Sponsors and Manager | 3 |
| Project Description | 3 |
| Technical Approach | 4 |
| High-Level Requirements | 4 |
| Summary Schedule | 4 |
| Summary Cost | 5 |
| Project Organization and EOC | 5 |
| PROJECT SCOPE STATEMENT | 6 |
| Objective | 6 |
| Deliverables | 6 |
| Technical Requirements | 6 |
| Milestones | 7 |

| | |
|---------------------------------------|-----------|
| Limits and Exclusions | 7 |
| Review with Sponsor | 7 |
| PROJECT PRIORITY MATRIX | 8 |
| Priority Matrix Explanation | 8 |
| PROJECT WBS | 9 |
| Approach and Explanation | 9 |
| WBS COST SCHEDULE | 10 |
| Resource and Calendar Duration | 13 |
| WBS and Estimate Feasibility | 13 |
| COMMUNICATION MANAGEMENT PLAN | 14 |
| AON DIAGRAM | 15 |
| AON SPREADSHEET | 16 |
| AON SUMMARY | 17 |
| Analysis and Conclusion | 17 |
| PROJECT BUDGET | 18 |
| GANTT CHART | 19 |
| RISK MATRICES | 20 |
| Risk Assessment Matrix | 20 |
| Risk Severity Matrix | 21 |
| Risk Response Matrix | 22 |
| Risk Summary Assessment | 23 |
| PROJECT ORGANIZATION | 24 |
| PROJECT FEASIBILITY | 25 |
| RESPONSIBILITY MATRIX | 26 |

EXECUTIVE SUMMARY

Objective

Data is the cornerstone of any efficient enterprise. Our objective in this project is to provide the data that you need to more effectively make decisions to guide FPD Beverage Company to make the right choices to grow your beverage business. We will collect and maintain the data to provide the right forecasts, right where they are needed so that shipping fulfillment will have everything they need to operate smoothly and efficiently. This FPD Drinking Metrics (FPD DM) looks to solve this problem and deliver the right data to the right people.

Project Sponsors and Manager

Paul reporting will be sponsoring this project and Ryan Amundson will be managing the team. We will be working closely with Frank Modruson and Steve James to identify marketing needs and to help with the hiring and onboarding of our project team.

Project Description

We will be using the waterfall methodology on this project for end to project design to implementation. We will be using cloud based solutions to collect, validate and store customer, product line and distribution and shipping data. We will need to collate, validate and merge both batch and streaming data, both from internal systems and from third party data vendors. We will need to use some third party vendors for the visitation toolset and analytics (Qlik Sense) to perform product line analysis along with tracking delivery and distribution performance, along with using advanced AI techniques and tooling for predictive modeling. Our current team consists of:

- Ryan Amundson - Project Manager, will be responsible for day to day project coordination and status reports.
- Liz Shaddock - IT manager, will be responsible for the data collection and storage, along with supporting the analysts and data scientists and procuring any third party tools or contracts that we need.
- Kolby Coulson - ERP Application Analyst, the resident ERP expert will extract and painting the data from our ERP system and work with Frank on the marketing side to produce the required reports in Qlik Sense.
- Paul Ramey - Our database analyst will work closely with Steve James to create and maintain our cloud based data warehousing solution.
- Kendra Cotton - Our Supply Chain Analyst and expert will report and and analyze data to improve and find efficiencies in our distribution centers.
- Justin Case - The Sales Operations Analyst, will work with the sales and CRM data to optimize our sales performance and also work closely with Frank's team.
- Data Engineer (TBH) - Contractor to be hired. We will need to contract out for a data engineering position so that we can make sure we will quickly, reliably and efficiently write the tooling to collect and maintain all the data from these various sources.

Technical Approach

We will work closely with Steve's team to make sure that we are architecting the system and keep our customer and internal data properly governed. We will use a cloud based data lake to initially store data from our systems where we can use ETL tooling to extract and collate the information into a cloud data-warehousing solution. We already have a contract with Qlik Sense for our current data dashboarding and visualizations, so we should continue to use them in this project, as we have a good amount of expertise and an existing contract. We should also investigate an open source AI framework, like H2O to enable our AI solutions.

High-Level Requirements

Our high-level requirements are to extract, analyze and forecast on our sales, distribution, production and customer data. We need to create reports for internal customers only, so we will need to make sure access is restricted to employee VPN users only.

Summary Schedule

January: Hiring, onboarding, and training. The first month will be dedicated to the hiring and onboarding of our team and contractor. If all goes well in that process, we would like to begin to flesh out the overall architecture and procure any needed third party tools and contracts.

February - March: We should have the design laid out and approved by Steve's team at this point, so we will need to start writing the tooling to pull the data we need into our data-warehousing solution.

April - May: We will be providing the key stakeholders some initial dashboards for their approval. We also need to be testing and validating our AI solutions at this stage.

June: This month will be dedicated to the deployment, testing and validation of our solution.

Summary Cost

| Description | Quantity | Unit Price | Cost |
|------------------|----------|------------|-----------|
| AI Training | 6 | \$10,000 | \$60,000 |
| Labor Costs | 1 | \$88,506 | \$88,506 |
| 10% Cost Overrun | 1 | \$14,850 | \$14,850 |
| Total | | | \$163,356 |

Project Organization and EOC

Ryan Amundson, as the Project Manager, will be the main point of contact for any project related quests and concerns. Liz will work with to set up any emergency operations and route support questions. She will also be in charge of charge of the technical design and work closely with Steve on that, along with managing the TBH contractor and Paul Ramey. The analysts will work closely with the product owners and with Paul to help design the data structures that our customers will need and reporting directly to the Project Manager.

PROJECT SCOPE STATEMENT

Objective

Data is the cornerstone of any efficient enterprise. Our objective in this project is to provide the data that you need to more effectively make decisions to guide FPD Beverage Company to make the right choices to grow your beverage business. We will collect and maintain the data to provide the right forecasts, right where they are needed so that shipping fulfillment will have everything they need to operate smoothly and efficiently. This FPD Drinking Metrics (FPD DM) looks to solve this problem and deliver the right data to the right people. This project has a budget of \$250,000 and a six month timeline to provide the data solution.

Deliverables

For this project our deliverables are:

- A data delivery pipeline and platform
- A Qlik Sense dashboard for the distribution center shipping performance
- A Qlik Sense dashboard for product Line sales analysis
- A Qlik Sense dashboard for product line by customer analysis
- A Qlik Sense dashboard for packaging performance by product line analysis
- A Qlik Sense dashboard for order delivery performance by product line and customer
- An AI solution for forecasting sales metrics

Technical Requirements

We will work closely with Steve's team to make sure that we are architecting the system and keep our customer and internal data properly governed. We will use a cloud based data lake to initially store data from our systems where the can use ETL tooling to extract and collate the information into a cloud data-warehousing solution. We will look into these third party solutions and work with Steve's team for a final solution.

We already have a contract with Qlik Sense for our current dash-boarding and visualizations, so we should continue to use them in this project, as we have a good amount of expertise and an existing contract. We should also investigate an open source AI framework, like H2O to enable our AI solutions.

Milestones

January: Hiring, onboarding, and training. The first month will be dedicated to the hiring and onboarding of our team and contractor. If all goes well in that process, we would like to begin to flesh out the overall architecture and procure any needed third party tools and contracts.

February 11th: Design complete. Data pipeline approval from Steve's team and deliver design documents.

March 10th: Database design approval, design mockup for sales dashboard due.

April 18th: Development complete, demo initial reports.

June 6th: Final project delivery, demo reports and trading documents.




Limits and Exclusions

- All dashboards are built using Qlik Sense
- Analytics are for internal uses only
- Data sourced from system and third-party distribution systems are consolidated in local servers before moving to cloud storage

Review with Sponsor

Steve James will be final approval for the sales dashboards and analytics review. Security and pipeline design review will be done by Frank Modruson. Overall data product review will be completed by Paul Reporting and Barbara Coffee on the 1st of July.

PROJECT PRIORITY MATRIX

| | Time | Performance | Cost |
|-----------|---|---|---|
| Constrain |  | | |
| Enhance | |  | |
| Accept | | |  |

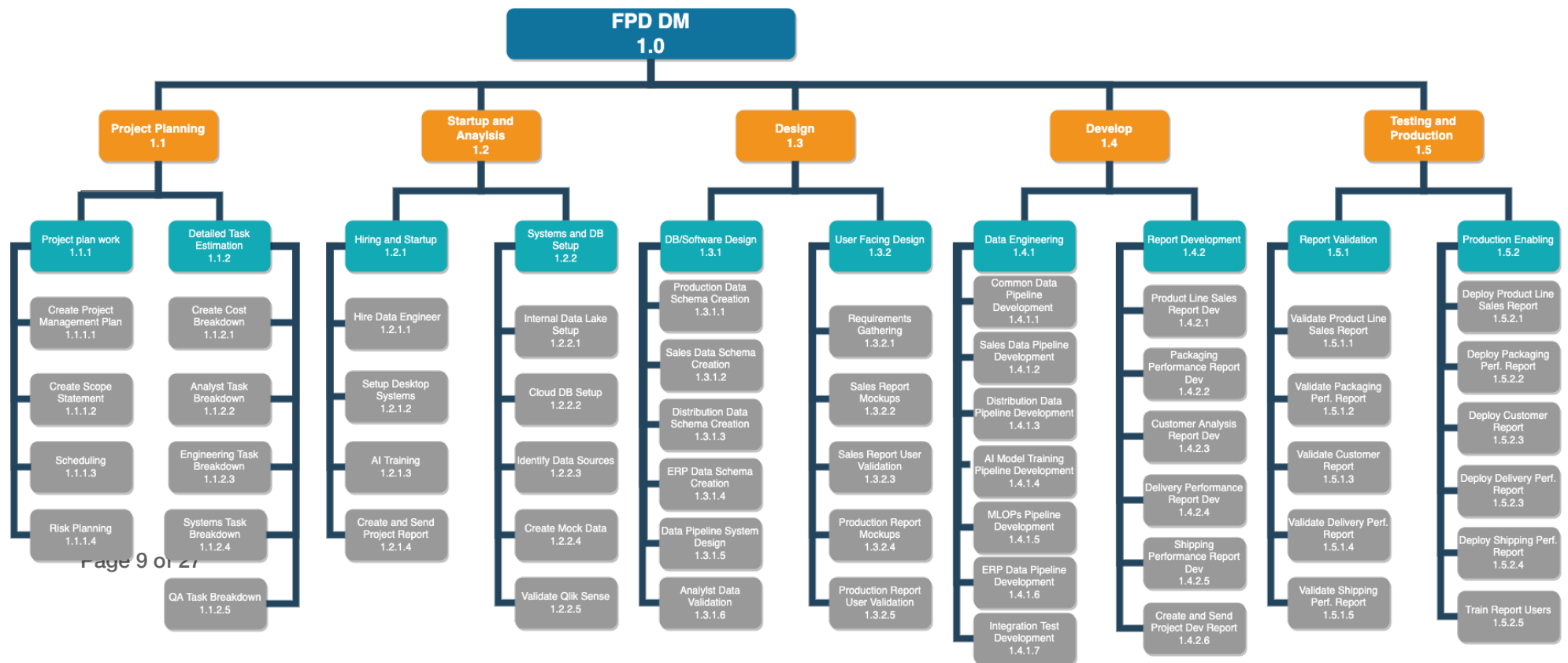
Priority Matrix Explanation

We are constraining the project by time, as we want to address the scope needs within our six month timeline and make sure we can get the main needs met by that time. We can be more flexible in terms of performance as this is an internal only project with no direct needs for an SLA, although we would like to meet all the needs. We also would like to keep the cost on budget, but the CEO has already mentioned that if third party consultants are needed that can get approval if shown the need and, then we can use the extra resources to make sure we can finish the project on time.

PROJECT WBS

Approach and Explanation

For my WBS approach, I've broken the deliverables out into five sub-deliverables and broken those down into two separate sub-components each. My major deliverables are project planning, startup and analysis, design, develop and finally, testing and production. Because we do not have access to development teams for this project, the main estimation approach will be a top-down method. We have included getting more detailed cost and time estimates as part of the initial project planning phase, so we can improve on those estimates with team input early in the project. We have identified 53 individual work packages as a part of this WBS. We have used a top-down approach to the WBS because of schedule constraints for the team, so some considerations as a result are that the work estimates will not be as accurate, but that will be mitigated by updating the estimates early in the project.



WBS COST SCHEDULE

| WBS ID | Task Description | Task Assigned to | Estimate (hrs) | Estimating Approach | Estimated Duration (hrs) (Estimate * 1.5) | 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 | | | | | | | | | | \$ 148,506 | | 1453.51 |
| 1.1 | Project Planning | | | | | | | | | | \$ 9,457 | | 205.94 |
| 1.1.1 | Project Plan work | Ryan | 68 | Expert | 102.0 | 22.4 | 124.4 | \$40 | \$ 4,978 | \$ - | \$ 4,978 | 1 | 124.44 |
| 1.1.1.1 | Create Project Management Plan | Ryan | 30 | Expert | 60.0 | 13.2 | 73.2 | \$40 | \$ 2,928 | \$ - | \$ 2,928 | 1 | 73.2 |
| 1.1.1.2 | Create Scope Statement | Ryan | 8 | Expert | 12.0 | 2.6 | 14.6 | \$40 | \$ 586 | \$ - | \$ 586 | 1 | 14.64 |
| 1.1.1.2 | Scheduling | Ryan | 20 | Expert | 30.0 | 6.6 | 36.6 | \$40 | \$ 1,464 | \$ - | \$ 1,464 | 1 | 36.6 |
| 1.1.1.2 | Risk Planning | Ryan | 20 | Expert | 30.0 | 6.6 | 36.6 | \$40 | \$ 1,464 | \$ - | \$ 1,464 | 1 | 36.6 |
| 1.1.2 | Detailed Task Estimation | Ryan, Liz, Paul, Kendra, Justin, Kolby | 68 | Expert | 102.0 | 22.4 | 124.4 | \$36 | \$ 4,480 | \$ - | \$ 4,480 | 5 | 81.50 |
| 1.1.2.1 | Create Cost Breakdown | Ryan | 20 | Expert | 30.0 | 6.6 | 36.6 | \$40 | \$ 1,464 | \$ - | \$ 1,464 | 1 | 36.6 |
| 1.1.2.2 | Analyst Task Breakdown | Kendra, Justin, Kolby | 16 | Expert | 24.0 | 5.3 | 29.3 | \$35 | \$ 1,025 | \$ - | \$ 1,025 | 3 | 9.76 |
| 1.1.2.3 | Engineering Task Breakdown | Liz | 8 | Expert | 12.0 | 2.6 | 14.6 | \$35 | \$ 512 | \$ - | \$ 512 | 1 | 14.64 |
| 1.1.2.4 | Systems Task Breakdown | Paul | 8 | Expert | 12.0 | 2.6 | 14.6 | \$35 | \$ 512 | \$ - | \$ 512 | 1 | 14.64 |
| 1.1.2.5 | QA Task Breakdown | Liz, Paul, Kendra, Justin, Colby | 16 | Expert | 24.0 | 5.3 | 29.3 | \$35 | \$ 1,025 | \$ - | \$ 1,025 | 5 | 5.86 |

| | | | | | | | | | | | | | |
|---------|-----------------------------------|--|-----|------------|-------|------|-------|------|-----------|-----------|-----------|---|--------|
| 1.2 | Startup and Analysis | | | | - | | | | | | \$ 77,816 | | 192.27 |
| 1.2.1 | Hiring and Startup | Ryan, Liz, Paul, Kendra, Justin, Kolby | 232 | Expert | 348.0 | 76.6 | 424.6 | \$40 | \$ 16,982 | \$ 50,000 | \$ 66,982 | 5 | 84.91 |
| 1.2.1.1 | Hire Data Engineer | Liz, Paul, Ryan | 20 | Expert | 30.0 | 6.6 | 36.6 | \$38 | \$ 1,373 | \$ - | \$ 1,373 | 3 | 12.20 |
| 1.2.1.2 | Setup Desktop Systems | Liz, Paul | 8 | Expert | 12.0 | 2.6 | 14.6 | \$35 | \$ 512 | \$ - | \$ 512 | 2 | 7.32 |
| 1.2.1.3 | AI training | Liz, Paul, Kendra, Justin, Kolby | 200 | Historical | 300.0 | 66.0 | 366.0 | \$35 | \$ 12,810 | \$ 50,000 | \$ 62,810 | 5 | 73.2 |
| 1.2.1.4 | Create and Send Project Report | Ryan | 8 | Expert | 12.0 | 2.6 | 14.6 | \$40 | \$ 586 | \$ - | \$ 586 | 1 | 14.64 |
| 1.2.2 | Systems and DB Setup | | | | - | - | - | | \$ - | \$ - | \$ 10,834 | 1 | 107.36 |
| 1.2.2.1 | Internal Data Lake Setup | Paul, Liz, TBH | 40 | Expert | 60.0 | 13.2 | 73.2 | \$40 | \$ 2,928 | \$ - | \$ 2,928 | 3 | 24.40 |
| 1.2.2.2 | Cloud DB Setup | Paul, Liz, TBH | 40 | Expert | 60.0 | 13.2 | 73.2 | \$40 | \$ 2,928 | \$ - | \$ 2,928 | 3 | 24.40 |
| 1.2.2.3 | Identify Data Sources | Kendra, Justin, Kolby | 36 | Expert | 54.0 | 11.9 | 65.9 | \$40 | \$ 2,635 | \$ - | \$ 2,635 | 3 | 21.96 |
| 1.2.2.4 | Create Mock Data | TBH, Paul | 24 | Expert | 36.0 | 7.9 | 43.9 | \$40 | \$ 1,757 | \$ - | \$ 1,757 | 2 | 21.96 |
| 1.2.2.5 | Validate Qlik Sense | Liz | 8 | Expert | 12.0 | 2.6 | 14.6 | \$40 | \$ 586 | \$ - | \$ 586 | 1 | 14.64 |
| 1.3 | Design | | | | - | | | | | | \$ 12,115 | | 142.74 |
| 1.3.1 | DB/Software Design | Paul, Kendra, Kolby, Liz, TBH | 100 | | 150.0 | 33.0 | 183.0 | | \$ 6,570 | \$ - | \$ 6,570 | | 81.74 |
| 1.3.1.1 | Production Data Schema Creation | Paul, Kendra, Kolby | 16 | Expert | 24.0 | 5.3 | 29.3 | \$35 | \$ 1,025 | \$ - | \$ 1,025 | 3 | 9.76 |
| 1.3.1.2 | Sales Data Schema Creation | Paul, Kolby | 16 | Expert | 24.0 | 5.3 | 29.3 | \$35 | \$ 1,025 | \$ - | \$ 1,025 | 2 | 14.64 |
| 1.3.1.3 | Distribution Data Schema Creation | Paul, Justin | 8 | Expert | 12.0 | 2.6 | 14.6 | \$35 | \$ 512 | \$ - | \$ 512 | 2 | 7.32 |
| 1.3.1.4 | ERP Data Schema Creation | Paul, Kendra | 8 | Expert | 12.0 | 2.6 | 14.6 | \$35 | \$ 512 | \$ - | \$ 512 | 2 | 7.32 |
| 1.3.1.5 | Data Pipeline System Design | Liz, TBH | 36 | Expert | 54.0 | 11.9 | 65.9 | \$38 | \$ 2,471 | \$ - | \$ 2,471 | 2 | 32.94 |
| 1.3.1.6 | Analyst Data Validation | Kendra, Justin, Kolby | 16 | Expert | 24.0 | 5.3 | 29.3 | \$35 | \$ 1,025 | \$ - | \$ 1,025 | 3 | 9.76 |
| 1.3.2 | User Facing Design | Kendra, Kolby, Liz | 84 | | 126.0 | 27.7 | 153.7 | | \$ 5,545 | \$ - | \$ 5,545 | | 61.00 |
| 1.3.2.1 | Requirements Gathering | Kendra, Kolby, Liz | 16 | Expert | 24.0 | 5.3 | 29.3 | \$35 | \$ 1,025 | \$ - | \$ 1,025 | 3 | 9.76 |
| 1.3.2.2 | Production Report Mockups | TBD, Kolby | 16 | Expert | 24.0 | 5.3 | 29.3 | \$35 | \$ 1,025 | \$ - | \$ 1,025 | 2 | 14.64 |

| | | | | | | | | | | | | | |
|---------|--|---------------------------------------|-----|--------|-------|-------|-------|------|-----------|------|-----------|---|--------|
| 1.3.2.3 | Distribution Data Schema Creation | TBD, Justin | 8 | Expert | 12.0 | 2.6 | 14.6 | \$35 | \$ 512 | \$ - | \$ 512 | 2 | 7.32 |
| 1.3.2.4 | Production Report Mockups | TBD, Kendra | 8 | Expert | 12.0 | 2.6 | 14.6 | \$35 | \$ 512 | \$ - | \$ 512 | 2 | 7.32 |
| 1.3.2.5 | Production Report User Validation | Kendra, Kolby, Liz, Users | 36 | Expert | 54.0 | 11.9 | 65.9 | \$38 | \$ 2,471 | \$ - | \$ 2,471 | 3 | 21.96 |
| 1.4 | Development | | | | - | | | | | | \$ 34,843 | | 663.68 |
| 1.4.1 | Data Engineering | Paul, Liz, TBH, Kendra, Justin, Kolby | 320 | | 480.0 | 105.6 | 585.6 | | \$ 20,862 | \$ - | \$ 20,862 | | 268.40 |
| 1.4.1.1 | Common Data Pipeline Development | Paul, Liz, TBH | 40 | Expert | 60.0 | 13.2 | 73.2 | \$35 | \$ 2,562 | \$ - | \$ 2,562 | 3 | 24.40 |
| 1.4.1.2 | Sales Data Pipeline Development | Paul, TBH, Kolby | 40 | Expert | 60.0 | 13.2 | 73.2 | \$35 | \$ 2,562 | \$ - | \$ 2,562 | 2 | 36.60 |
| 1.4.1.3 | Distribution Data Pipeline Development | Paul, TBH, Justin | 40 | Expert | 60.0 | 13.2 | 73.2 | \$35 | \$ 2,562 | \$ - | \$ 2,562 | 2 | 36.60 |
| 1.4.1.4 | AI Model Training Pipeline Development | Liz, TBH | 80 | Expert | 120.0 | 26.4 | 146.4 | \$35 | \$ 5,124 | \$ - | \$ 5,124 | 2 | 73.20 |
| 1.4.1.5 | MLOPs Pipeline Development | Liz, TBH | 80 | Expert | 120.0 | 26.4 | 146.4 | \$38 | \$ 5,490 | \$ - | \$ 5,490 | 2 | 73.20 |
| 1.4.1.6 | ERP Data Pipeline Development | Kendra, Paul, TBH | 40 | Expert | 60.0 | 13.2 | 73.2 | \$35 | \$ 2,562 | \$ - | \$ 2,562 | 3 | 24.40 |
| 1.4.1.7 | Integration Test Development | Liz, TBH | 40 | Expert | 60.0 | 13.2 | 73.2 | \$35 | \$ 2,562 | \$ - | \$ 2,562 | 3 | 24.40 |
| 1.4.2 | Report Development | Ryan, Kendra, Justin, Kolby | 216 | | 324.0 | 71.3 | 395.3 | | \$ 13,981 | \$ - | \$ 13,981 | | 395.28 |
| 1.4.2.1 | Product Line Sales Report Dev | Justin | 40 | Expert | 60.0 | 13.2 | 73.2 | \$35 | \$ 2,562 | \$ - | \$ 2,562 | 1 | 73.20 |
| 1.4.2.2 | Packaging Performance Report Dev | Kolby | 40 | Expert | 60.0 | 13.2 | 73.2 | \$35 | \$ 2,562 | \$ - | \$ 2,562 | 1 | 73.20 |
| 1.4.2.3 | Customer Analysis Report Dev | Justin | 40 | Expert | 60.0 | 13.2 | 73.2 | \$35 | \$ 2,562 | \$ - | \$ 2,562 | 1 | 73.20 |
| 1.4.2.4 | Delivery Performance Report Dev | Kendra | 40 | Expert | 60.0 | 13.2 | 73.2 | \$35 | \$ 2,562 | \$ - | \$ 2,562 | 1 | 73.20 |
| 1.4.2.5 | Shipping Performance Report Dev | Kendra | 40 | Expert | 60.0 | 13.2 | 73.2 | \$35 | \$ 2,562 | \$ - | \$ 2,562 | 1 | 73.20 |
| 1.4.2.6 | Create and Send Project Dev Report | Ryan | 16 | Expert | 24.0 | 5.3 | 29.3 | \$40 | \$ 1,171 | \$ - | \$ 1,171 | 1 | 29.28 |
| 1.5 | Testing and Production | | | | - | | | | | | \$ 12,810 | | 248.88 |
| 1.5.1 | Report Validation | Liz, TBH, Kendra, Justin, Kolby | 120 | | 180.0 | 39.6 | 219.6 | | \$ 7,796 | \$ - | \$ 7,796 | | 109.80 |
| 1.5.1.1 | Validate Product Line Sales Report | Justin, TBH | 24 | Expert | 36.0 | 7.9 | 43.9 | \$35 | \$ 1,537 | \$ - | \$ 1,537 | 2 | 21.96 |
| 1.5.1.2 | Validate Packaging Perf. Report | Justin, TBH | 24 | Expert | 36.0 | 7.9 | 43.9 | \$35 | \$ 1,537 | \$ - | \$ 1,537 | 2 | 21.96 |
| 1.5.1.3 | Validate Customer Report | Kolby, Liz | 24 | Expert | 36.0 | 7.9 | 43.9 | \$35 | \$ 1,537 | \$ - | \$ 1,537 | 2 | 21.96 |

| | | | | | | | | | | | | | |
|---------|----------------------------------|-----------------------------|----|--------|-------|------|-------|------|----------|------|----------|---|--------|
| 1.5.1.4 | Validate Delivery Perf. Report | Kendra, Liz | 24 | Expert | 36.0 | 7.9 | 43.9 | \$35 | \$ 1,537 | \$ - | \$ 1,537 | 2 | 21.96 |
| 1.5.1.5 | Validate Shipping Perf. Report | Kendra, TBH | 24 | Expert | 36.0 | 7.9 | 43.9 | \$38 | \$ 1,647 | \$ - | \$ 1,647 | 2 | 21.96 |
| 1.5.2 | Production Enabling | Ryan, Kendra, Justin, Kolby | 76 | | 114.0 | 25.1 | 139.1 | | \$ 5,014 | \$ - | \$ 5,014 | | 139.08 |
| 1.5.2.1 | Deploy Product Line Sales Report | Justin | 12 | Expert | 18.0 | 4.0 | 22.0 | \$35 | \$ 769 | \$ - | \$ 769 | 1 | 21.96 |
| 1.5.2.2 | Deploy Packaging Perf. Report | Kolby | 12 | Expert | 18.0 | 4.0 | 22.0 | \$35 | \$ 769 | \$ - | \$ 769 | 1 | 21.96 |
| 1.5.2.3 | Deploy Customer Report | Justin | 12 | Expert | 18.0 | 4.0 | 22.0 | \$35 | \$ 769 | \$ - | \$ 769 | 1 | 21.96 |
| 1.5.2.4 | Deploy Delivery Perf. Report | Kendra | 12 | Expert | 18.0 | 4.0 | 22.0 | \$35 | \$ 769 | \$ - | \$ 769 | 1 | 21.96 |
| 1.5.2.5 | Deploy Shipping Perf. Report | Kendra | 12 | Expert | 18.0 | 4.0 | 22.0 | \$35 | \$ 769 | \$ - | \$ 769 | 1 | 21.96 |
| 1.5.2.6 | Train Report Users | Ryan | 16 | Expert | 24.0 | 5.3 | 29.3 | \$40 | \$ 1,171 | \$ - | \$ 1,171 | 1 | 29.28 |

Resource and Calendar Duration

After doing the WBS and the cost and time breakdown of the tasks involved, the FPD DM project is projected to take almost 1600 calendar hours, so assuming a 40 hour workweek it would take 40 weeks, or a little over 9 months, but because we can do several tasks in parallel, we will be able to finish ahead of time. Also, it is currently estimated to cost around 150k, which it is significantly under budget, so we can also use additional budget to crash certain key tasks if necessary.

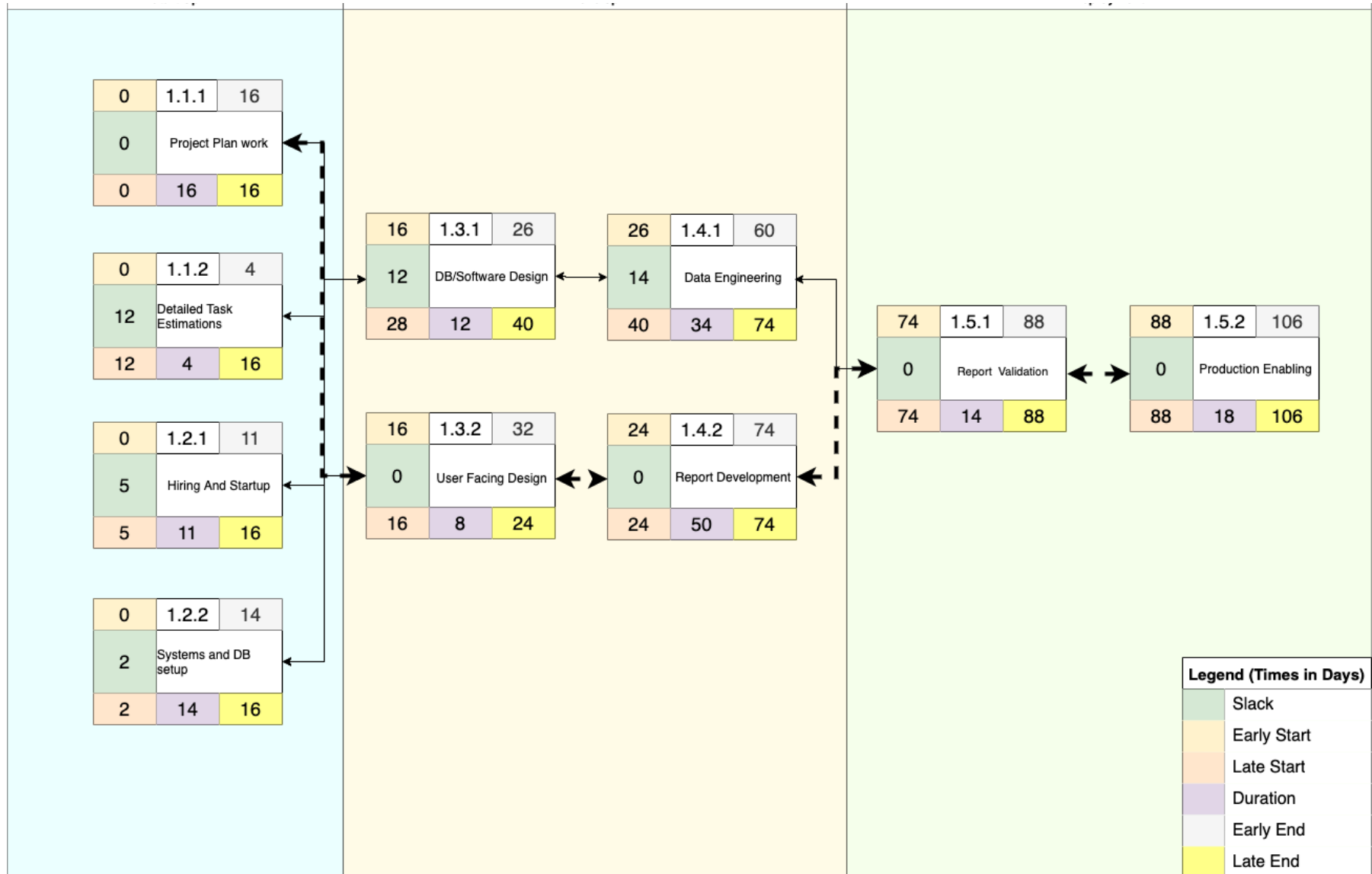
WBS and Estimate Feasibility

It seems like the project is feasible to get done in the nine months timeframe, we could accelerate window that with the hiring of additional contractors or using third party consultants. There is also a lot of risk involved in the top-down estimates, so that is important to note. Part of the first deliverable is to update and fine-tune our cost and time estimates, so we should be able to have improved estimates early in the project. Because of that, the time estimate is 106 man days, or around 5 months calendar time, giving us overhead in case the improved estimates increase the project timeframe.

COMMUNICATION MANAGEMENT PLAN

| What Information? | Target Audience | When? | Method of Communication | Provider |
|-------------------------------|----------------------------------|-----------------|---|----------------------|
| Project Milestone Report | CEO and CFO/Project Sponsor | Bimonthly | E-Mail and Google Doc | Project Manager |
| Team Status Report | Project Manager | Weekly | Zoom Meeting | Project Team Members |
| Daily Status/Blockers | Team Members | Daily, mornings | Slack | Project Team Members |
| Escalation Report | Project Manager and Sponsors | As needed | Meeting and Google Doc | Project Manager |
| Approvals and Change requests | Project Manager and Team Members | As needed | Jira, will have separate projects for change requests and approvals | Customers |
| Task burndown | Project Manager | Weekly | Email | Project Team Members |

AON DIAGRAM



AON SPREADSHEET

| | | AON SPREADSHEET | | | | | |
|---------------|------------------------|---|----|----|-----|-----|-------|
| | | | | | | | |
| | Activity/ Work Pkg | Duration (days) | ES | LS | EF | LF | Slack |
| | | | | | | | |
| | 1.1.1 | 16 | 0 | 0 | 16 | 16 | 0 |
| | 1.1.2 | 4 | 0 | 12 | 4 | 16 | 12 |
| | 1.2.1 | 11 | 0 | 5 | 11 | 16 | 5 |
| | 1.2.2 | 14 | 0 | 2 | 14 | 16 | 2 |
| | 1.3.1 | 12 | 16 | 28 | 26 | 40 | 12 |
| | 1.3.2 | 8 | 16 | 16 | 24 | 24 | 0 |
| | 1.4.1 | 34 | 26 | 40 | 60 | 74 | 14 |
| | 1.4.2 | 50 | 24 | 24 | 74 | 74 | 0 |
| | 1.5.1 | 14 | 74 | 74 | 88 | 88 | 0 |
| | 1.5.2 | 18 | 88 | 88 | 106 | 106 | 0 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Page 16 of 27 | Critical Path | 1.1.1 -> 1.3.2 -> 1.4.2 -> 1.5.1 -> 1.5.2 | | | | | |
| | Critical Path Duration | 106 Days | | | | | |

AON SUMMARY

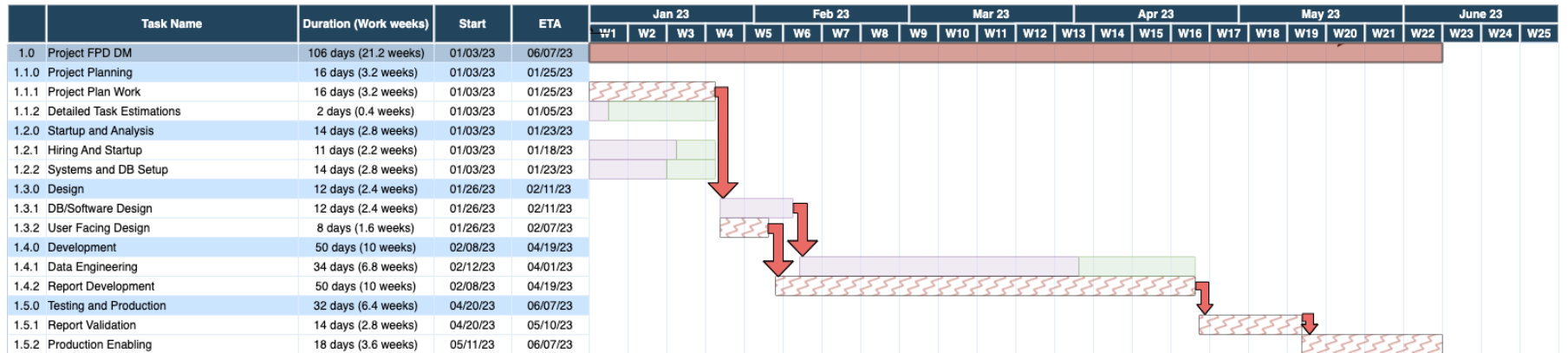
Analysis and Conclusion

After doing the WBS and the cost and time breakdown of the tasks involved and using the sub-component deliverables in the AON where we can do much of the work in parallel with two teams, the critical path is to create the project plan, finish the user facing design, then do the report development, validation and finally enable for production. That path would take 106 man days, which means we can complete to project in a little over five months of calendar time, and should give us plenty of time to finish the product in under six months.

PROJECT BUDGET

| Project Baseline Budget | | | | | | | | | | | | | | | | | | | |
|-------------------------|--|----|----|-----|-----|-------|------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Activity/ Work Pkg | Duration (days) | ES | LS | EF | LF | Slack | COST | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 |
| 1.1.1 | 16 | 0 | 0 | 16 | 16 | 0 | \$ 6,442 | \$3221.00 | \$3221.00 | | | | | | | | | | |
| 1.1.2 | 4 | 0 | 12 | 4 | 16 | 12 | \$ 4,480 | \$4480.00 | | | | | | | | | | | |
| 1.2.1 | 11 | 0 | 5 | 11 | 16 | 5 | \$66,982 | \$66982.0 | | | | | | | | | | | |
| 1.2.2 | 14 | 0 | 2 | 14 | 16 | 2 | \$10,834 | \$5417.00 | \$5417.00 | | | | | | | | | | |
| 1.3.1 | 12 | 16 | 34 | 26 | 48 | 18 | \$ 6,570 | | | \$3285.00 | \$3285.00 | | | | | | | | |
| 1.3.2 | 8 | 16 | 16 | 24 | 24 | 0 | \$ 5,545 | | | \$5545.00 | | | | | | | | | |
| 1.4.1 | 34 | 26 | 48 | 60 | 82 | 22 | \$20,862 | | | | | \$6954.00 | \$6954.00 | \$6954.00 | | | | | |
| 1.4.2 | 50 | 24 | 24 | 74 | 74 | 0 | \$13,981 | | | \$2796.20 | \$2796.20 | \$2796.20 | \$2796.20 | \$2796.20 | | | | | |
| 1.5.1 | 14 | 74 | 74 | 88 | 88 | 0 | \$ 7,796 | | | | | | | | | \$3898.00 | \$3898.00 | | |
| 1.5.2 | 18 | 88 | 88 | 106 | 106 | 0 | \$ 5,014 | | | | | | | | | | | \$2507.00 | \$2507.00 |
| | | | | | | | \$148,506 | \$80100.0 | \$8638.00 | \$8830.00 | \$6081.20 | \$9750.20 | \$9750.20 | \$9750.20 | \$2796.20 | \$3898.00 | \$3898.00 | \$2507.00 | \$2507.00 |
| | | | | | | | | \$80100.0 | \$88738.0 | \$97568.0 | \$103649. | \$113399. | \$123149. | \$132899. | \$135696. | \$139594. | \$143492. | \$145999. | \$148506. |
| Critical Path | 1.1.1 -> 1.3.2 -> 1.4.2 -> 1.5.1 -> 1.5.2 | | | | | | | | | | | | | | | | | | |
| Critical Path Duration | 106 Days | | | | | | | | | | | | | | | | | | |

GANTT CHART



| Legend | |
|--------|-------------------|
| | Critical Path |
| | Slack |
| | Baseline duration |
| | Total |

| Milestones | |
|----------------------------------|--|
| 1st milestone 02/11/23 | Design complete - Deliver design documents |
| 2nd milestone 04/19/23 | Development complete - Show initial reports |
| 3rd milestone 06/07/23 | Delivery complete - Deliver completed product and training materials |

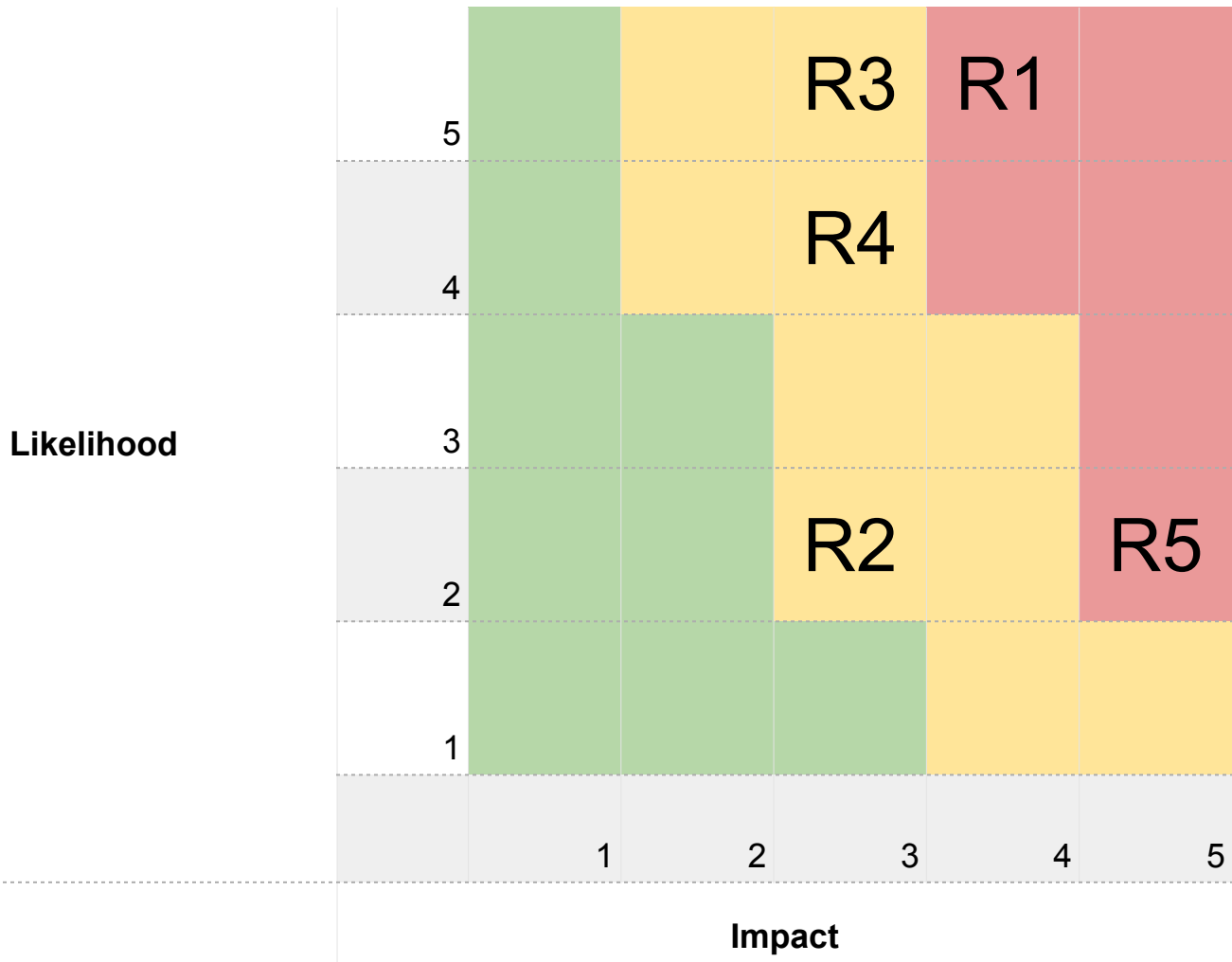
RISK MATRICES

Risk Assessment Matrix

| Risk Event | Likelihood | Impact | Detection Difficulty | When |
|---|------------|--------|----------------------|--------------------|
| Risk 1 (R1): Receiving unclean data with low data integrity and missing elements | 5 | 4 | 2 | Development |
| Risk 2 (R2): Requiring additional resources to meet schedule due to other duties and lack of appropriate skills/experience | 2 | 3 | 3 | Development |
| Risk 3 (R3): Define/socialize/accept performance metrics (how to calculate) | 5 | 3 | 4 | Testing/Validation |
| Risk 4 (R4): Changing the project requirements or scope | 4 | 3 | 5 | Anytime |
| Risk 5 (R5): Important project members leave mid-project | 2 | 5 | 1 | Anytime |

| Likelihood/Impact Legend | | |
|--------------------------|-----------|--|
| 1 | Very Low | Insignificant increase in cost/time, no scope affected |
| 2 | Low | <%5 Increase to cost/time, no scope affected |
| 3 | Moderate | %5-10 Increase to cost/time, minimal scope affected |
| 4 | High | %10-20 Increase to cost/time, medium scope affected |
| 5 | Very High | >%20 Increase to cost/time, drastic scope changes |

Risk Severity Matrix



Risk Response Matrix

| Risk Event | Response | Contingency Plan | Trigger | Responsible Party |
|------------|---|--|--|--------------------------------------|
| R 1 | Mitigate: Ask vendor to clean and provide new set of data | Remove dirty data from current data set. Identify secondary data vendors. | Data analysts report issues with the data | Lead Data Analyst Vendor |
| R 2 | Mitigate: Create plan for adding additional resources | Reallocate available underused resource | Team lead projected that the task won't be completed by deadline | PM Team leads |
| R 3 | Avoid: Use employee productivity tracking software | PM to create temporary performance metrics; ask employees to carry out self-evaluation | Team members are missing deadlines, unprepared for meetings,... | Project manager |
| R 4 | Avoid: Develop and enforce a well defined requirement development and change management process | Put requirements through a change request workflow. If accepted, update WBS and tasks timelines. | Stakeholders want to change requirements | Project manager Business analysts |
| R 5 | Mitigate: Have a plan for adding technical and human resources | Share responsibility and work load with members of the same team | Team member leaves a company or changes position | PM Team leads |

Risk Summary Assessment

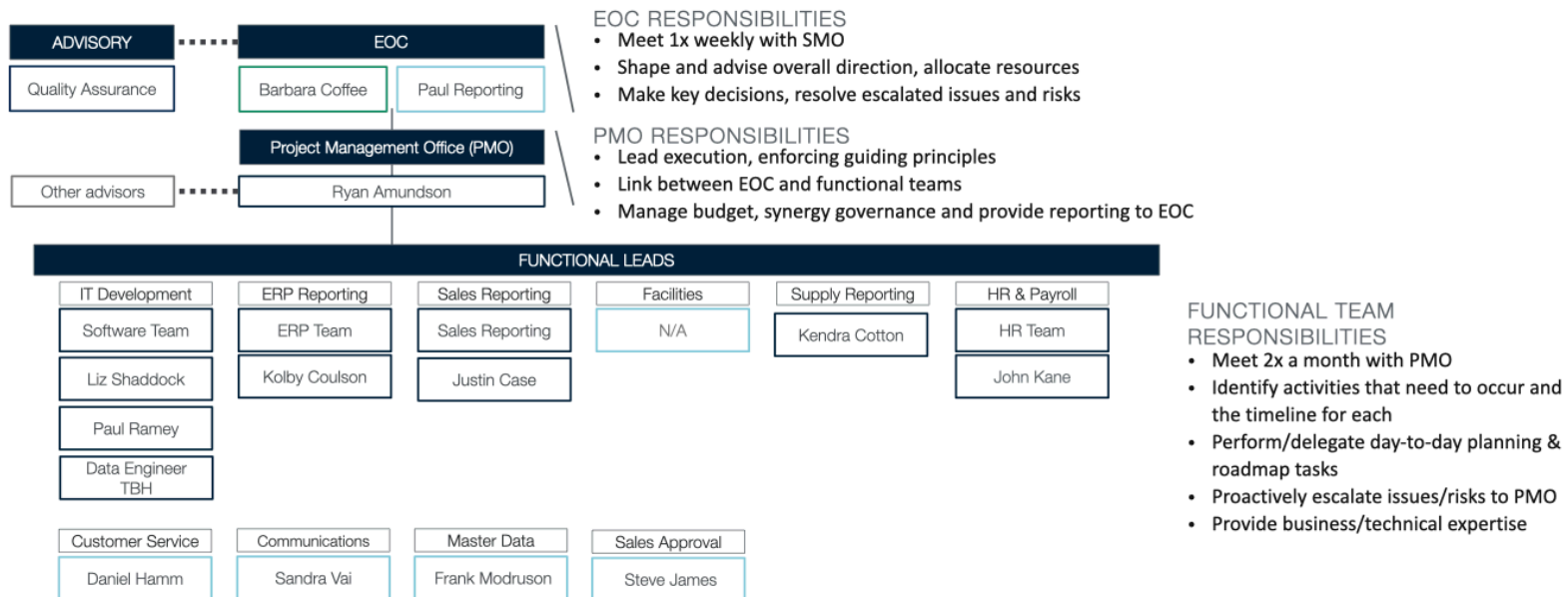
After putting together visuals and analyzing our identified risks, we can now take a holistic view and summarize our overall risk. We know from our risk assessment matrix that we need to pay close attention to risk 1 and risk 5 because the impact is the highest for those two risks. Risk 5 can also happen anytime during the course of the project, so we should be on high alert at all times. Being proactive when it comes to analyzing risks is just as important as identifying them.

We put together a risk response matrix so that we are prepared to respond to our identified risks. The immediate response for risk 1 is to ask the vendor to clean and provide a new set of data, or to find a secondary vendor for the data if it cannot be cleaned. The contingency plan to go along with it is to remove the dirty data from the current data set. Then we identify the negative results if this risk were to occur. In this case the data analysts will report issues with the data. Lastly, we identify who is responsible for responding to the risk.

We finish our analysis of risks with the process of change requests and change request forms. As mentioned previously, we have identified risks and understand the impact and likelihood that they will happen. Risk 1 and Risk 5 we will pay close attention too. Risk 4 and risk 3 raise a red flag as well because of its detection difficulty. We believe we have put together a good plan for responding and reacting to known risks.

PROJECT ORGANIZATION

Project Governance Structure



PROJECT FEASIBILITY

With this plan as defined, we have a high likelihood of success. We have planned so that there is both time and cost under runs in case of any unidentified risks.

We have also prepared the plan with some commons risks in mind and have identified ways in which we could mitigate those risks.

Our recommendation would be to move forward with this project in the beginning of the new year so that the new reporting will be available as soon as possible, and we would like to formally request approval to proceed with the project at the beginning of 2023.

RESPONSIBILITY MATRIX

| Responsibility Matrix | | | | | | | |
|-----------------------|---------------------------|---------------|--------------|---------------|-------------|-------------|---------------|
| Activity/ Work Pkg | Description | Ryan Amundson | Liz Shaddock | Kolby Coulson | Paul Ramey | Justin Case | Kendra Cotton |
| 1.1.1 | Project Plan work | Responsible | | | | | |
| 1.1.2 | Detailed Task Estimations | Responsible | Consulted | Consulted | Consulted | Consulted | Consulted |
| 1.2.1 | Hiring And Startup | Accountable | Responsible | | | | |
| 1.2.2 | Systems and DB setup | | Consulted | | Responsible | | |
| 1.3.1 | DB/Software Design | | Responsible | | Consulted | | |
| 1.3.2 | User Facing Design | | | Responsible | | Consulted | Consulted |
| 1.4.1 | Data Engineering | | Consulted | | Responsible | | |
| 1.4.2 | Report Development | | | Responsible | | Accountable | Accountable |
| 1.5.1 | Report Validation | | | Accountable | | Responsible | Accountable |
| 1.5.2 | Production Enabling | Accountable | Responsible | Accountable | Accountable | Accountable | Accountable |
| | | LEGEND | | | | | |
| | | Responsible | Accountable | Consulted | Informed | | |

| | | | | | | | | |
|--|---------------|--------------|---------------|-------------|-------------|-----------|---------------|--------------|
| Project Plan | | Name: | Ryan Amundson | | | | | |
| Student Self Assessment | | | | Some | Done | Mostly | | |
| | | | Some | Elements of | with some | done with | Completely | |
| Project Plan Components | Points | Not Done | Elements | Competency | Major Flaws | Min Flaws | Present | Score |
| Executive Summary | 15 | 1 | 3 | 5 | 8 | 11 | 15 | |
| Project Scope Statement | 10 | 1 | 2 | 4 | 6 | 8 | 10 | |
| Priority Matrix | 5 | 1 | 1 | 2 | 3 | 4 | 5 | |
| Work Breakdown Structure & WBS Cost Spreadsheet | 10 | 1 | 2 | 4 | 6 | 8 | 10 | |
| Communications Plan | 5 | 1 | 1 | 2 | 3 | 4 | 5 | |
| AON Network Diagram & AON Spreadsheet | 10 | 1 | 2 | 4 | 6 | 8 | 10 | |
| Project Baseline Budget | 10 | 1 | 2 | 4 | 6 | 8 | 10 | |
| Gantt Chart w 3-4 milestones | 10 | 1 | 2 | 4 | 6 | 8 | 10 | |
| Risk Assmt, Severity, & Response Matrices; FPD Project Risk Impact Summary | 5 | 1 | 1 | 2 | 3 | 4 | 5 | |
| Project Organization | 5 | 1 | 1 | 2 | 3 | 4 | 5 | |
| Feasibility | 5 | 1 | 1 | 2 | 3 | 4 | 5 | |
| Integration | 10 | | | | | | 10 | |
| Scope ties with WBS | | | | | | | | |
| Comm Plan identifies key stakeholders | | | | | | | | |
| WBS ties to Gantt Chart | | | | | | | | |
| WBS ties to Project Baseline Budget | | | | | | | | |
| AON Diagram consistent w/ Gantt Chart | | | | | | | | |
| Risk identification ties to WBS | | | | | | | | |
| Extra Credit: enhances story | | | | | | | | |
| Responsibility matrix | 5 | 1 | 1 | 2 | 3 | 4 | 5 | |
| Other | 0 | 0 | 1 | 2 | 3 | 4 | 5 | |
| Project Plan Total | 100 | | | | | | | 0 |
| 25% Course Grade - 600 points | | | | | | | Points Earned | 0 |