MSDS 475: Project Management Course Project – Case 210d

The best way to ensure you learn and can apply the project management strategies, techniques, and tools from this course is to use them on a specific project. Below is a business situation description that requires a project to achieve the objectives.

You are hired by Paul Reporting, the CFO and Project Sponsor, to lead a project to improve the sales and operations information for management decision making for FPD Beverage Company. This is an extremely important project for the company's future, even though there are many other company initiatives and projects consuming management's and staff's attention/time. In recognition of the importance of this project, you are assigned to the project on a minimum half time basis. If you determine that you need to be full time on the project, management would approve the request.

Your assignment is to develop a project plan for this project (code named: **FPD Drinking Metrics (FPD DM)**) comprised of several components developed during this course.

Situation Data
- FPD Beverage Company generates annually $350 million in revenue; three product lines (coffee, tea, and organic tea) each sold in several packaging configurations; products sold to large-box retailers (Wal-Mart, Target, Costco…), specialty chains (gas stations, convenience stores, …), and grocery chains (Kroger, Safeway, …)
- Management and team members – CEO (Barbara Coffee) and CFO/Project Sponsor (Paul Reporting); IT Manager, ERP Application Analyst, Database Analyst, Supply Chain Analyst, and Sales Operations Analyst (make up names for these resources)
- Production:
  - Produce coffee in owned domestic plant – production performance is not always as planned
  - Produce tea from third party domestic plant
  - Produce organic tea from another third party international plant – shipping performance is unpredictable due to ocean vessel transportation
- Distribution and Transportation:
  - Utilize network of third party distribution centers close to key customers
  - Utilize third party transportation carriers (refrigerated and isolated sections for odor control) from plants to distribution centers
- Enterprise Resource Planning (ERP) system captures product order data from customers; captures distribution orders based upon inventory levels and customer needs; and assists planners to develop plant production schedules based upon customer needs and planned supply chain inventory levels
- Business performance is unpredictable and the marketing/sales organizations do not generate good/timely sales forecasts by product and customer

- Lately, large customers complained about incomplete shipments, late shipments, and delays in fulfilling orders; these customers are threatening to seek other beverage suppliers

Management and Stakeholder Needs
- Management desires an information/metrics dashboard for sales and operations management to support decision making and planning including, but not limited to:
  - Product Line sales analysis
  - Packaging performance by product line analysis
  - Product Line by Customer analysis
  - Order delivery performance by product line and customer
  - Distribution center shipping performance to customer
- CFO budgeted $250,000 for the FPD DM project with a desired six (6) months duration - planning through go live; FPD DM is an important project and management is very keen on completion within the budget and schedule:
  - CFO wants to know **immediately** if you determine the budget and/or schedule targets cannot be met; justification must be defendable and all assumptions documented
  - CFO is open to engaging third parties (such as consultants), if needed to meet the budget and schedule, but wants to discuss this approach with you before finalizing contracts (justification must be documented and you must describe the contract (see CIO comments))
- CFO was told by Wal-Mart, their largest customer, that Wal-Mart uses artificial intelligence (AI) tools to assist with managing the business. Because of Wal-Mart's recommendation, the CFO wants you to use AI tools for this project (see CIO comments):
  - CFO received a fixed price proposal from Big Data Training Group for one (1) week of AI tools training for the FPD DM team members for $10,000. After the training is completed, he wants the FPD data analysts and programmers to use it for this project. The FPD team uses the AI tools to manage (and cleanse) the data for the dashboard as well as for the metrics development and presentation. He wants you to include this training in the project plan. (Note: you need to include the cost of the time for the project team members to attend the training – a direct project cost (in addition to the training cost))
  - CFO was further told by Wal-Mart that they use cloud-based Artificial Intelligence (AI) tools to analyze data – you need to take this technology direction; these cloud-based AI tools analyze data and propose models and outcomes; significant data sciences analysis is required to evaluate the results validity
- The project manager (**you**) reports to the Executive Oversight Committee (EOC) with the CEO as the chairman. The EOC includes CEO, CFO and at least three (3) other stakeholders whom the CEO asked you to identify (make up names and titles for these resources). The EOC charter includes:
  - Review/approve project status reports from the PM (you)
  - Review/approve/reject project change requests
  - Review/resolve project issues
  - Represent the many FPD Beverage stakeholder groups
- As part of the hiring process, you were interviewed by the following two FPD executives:
  - Steve James (VP – Marketing) who told you these important requirements:
    - Data needed to be processed as quickly as possible
    - Access to the dashboard needs to be 24 x 7 and short response time needed

- - Marketing and sales personnel need to access the data anywhere and on any authorized device (smart phone, tablet, laptop, desktop)
    - Security over dashboard access is important, since proprietary FPD data is exposed
    - FPD needs to take any reasonable actions to keep its customers
  - Frank Modruson (VP - Chief Information Officer) who told you these concerns and constraints:
    - There are currently many ERP system change requests and his resources are very constrained; there might be a need to engage third parties, if significant software development is needed; these third parties must be an approved vendor and the fixed fee contract type (defined scope of work for a certain fee) must be defined (most third parties provide similar services for fixed fees or time & materials fees basis)
    - Any hardware/software requirements must to be documented and submitted to the enterprise architect team for review and approval in accordance with FPD standards
    - Data sourced from FPD ERP system and third party distribution systems is consolidated in FPD servers before moving the data to the cloud storage (for access by cloud-based AI tools)
    - Consistent with CFO's conversation with Wal-Mart, analytics modeling using cloud-based AI tools is the FPD direction (assume QlikSense cloud-based storage and AI tools already contracted and available)
    - Note: AI tools available, but your project must use preliminary data with the AI tools to formulate/test the analytics models, then use these analytic models on the sourced data (data quality/ completeness/… is suspect) to populate the dashboard
    - He agreed to provide work space and laptops/printers for the project team, but you need to communicate to the facilities manager the number of cubicles, laptops, and other hardware/software needs as soon as possible

Additional Information
- The project methodology follows the classical "waterfall" (sequential) approach: planning, design, data sourcing/analysis, model validation, dashboard development, and deployment/implementation
- Cloud-based AI tools are just like any other software – provides tools to get something done; you access these AI tools from your laptop
- QlikSense tools include:
  - Self-service data-prep capabilities
  - Data visualization and color-selection flexibility
  - Geospatial analysis
  - Mobile app that supports offline analysis
  - Advanced analysis capabilities based upon R and Python
- You may use **simplifying assumptions (must be documented)** for your course project plan**,** if you do not change the case situation/requirements