BUILDING A BETTER CONSTRUCTION PLUG

Project: The CamPlug Venture

As we heard from the key stakeholders in this venture, they are looking for ways to add value to their invention through instrumentation and dashboard monitoring. They do not have a fully-formed vision, but will accept proposals and ideas related to improving their product and making it more competitive in the marketplace. So far, we've learned:

- the plug is at an advanced prototype stage and is undergoing lab testing for certification
- they want to add, at a minimum, a sensor that detects abnormal operating temperatures
- they are interested in detecting conditions that may represent a gasket failure (safety hazard)
- they are interested in detecting if the plug is locked or not
- they would like to have a way for the plug to indicate if it is live
- they are interested in having plugs communicate and report data to some central server
- they would like clients to have the ability to receive alarms and monitor plug status
- clients will likely use both a website and an app

Some aspects of this project are mechanical/electrical engineering challenges, and we'll minimize the scope of that work to ensure it remains viable as an academic project in MGMT1104. However, with that in mind, let's charge forth and see what we can contribute, practicing our predictive and adaptive project planning along the way.

SCOPE OF WORK

The project scope includes a mix of predictive and adaptive project management activities:

1. Prepare a product vision statement.
2. Prepare a project charter.
3. Identify and rank key stakeholders in a stakeholder map.
4. Collect and manage product requirements in a product backlog, prioritized by value.
5. Identify at least three overall project risks and outline mitigation measures.
6. Create a sprint backlog for the first sprint.
7. Identify at least one architectural or technical spike.
8. Prepare a WBS and project timeline for deploying the system (hint: https://www.teamgantt.com)
9. Allocate and level resources in the deployment project timeline.
10. Determine the BAC.
11. Calculate metrics of project economic viability (ROI, NPV, 5 year horizon, 12% discount rate).
12. [Instructor discretion] Present your plan.

Note: this is not a programming assignment. You are not required to do any coding or technical product development.

SUBMISSION GUIDE

All teams should submit their work on this project in two stages:

Stage 1:

Worksheet Name: Course Project Stage 1
Worksheet Code: PROJS1

Q1. [use text] Please insert your team's product vision statement.

Q2. [use text] Please insert your team's project charter.

Q3. [use text] Please list key stakeholders for your project annoted with a ranking of influence and interest using a scale of one to five.

Q4. [use text] Please insert all the user stories in your team's product backlog as at the submission date. Each user story should start on a new line. Kindly leave a blank line between user stories. Work containing *any* spelling or grammar errors will not be assessed.

After submitting the form, one person from each team should upload the proof of submission **.zip** file to D2L using **Project Dropbox - CamPlug Venture OR Machine Vision Recycling** (all teams use the same dropbox).

Stage 2:

Worksheet Name: Course Project Stage 2
Worksheet Code: PROJS2

Q1. [use text] Identify at least three overall project risks and outline mitigation measures.

Q2. [use text] Insert a sprint backlog for the first sprint, including what you think a regular Agile/Scrum development team could commit to in two weeks, a task breakdown for each story, and acceptance criteria for each story. Please leave a blank line between user stories in your work.

Q3. [use text] Identify at least one possible architectural or technical spike.

Q4. [use file] Upload a **.jpg** file with a one-page estimated project timeline for deploying the system, i.e. moving it from a completed system to field deployment. You should include a realistic set of tasks, resources, and effort/cost estimates, and the schedule should be optimal. For professional results, you can take advantage of free online tools like https://www.teamgantt.com.

Q5. [use text] Please enter the following metrics for your project, one per line:

- BAC
- ROI after five years
- NPV using supplied cash flow information, a five year horizon, and a 12% discount rate

After submitting the form, one person from each team should upload the proof of submission **.zip** file to D2L using **Project Dropbox - CamPlug Venture OR Machine Vision Recycling** (all teams use the same dropbox).

PROJECT DETAILS

Assignment Type: Teams of 2 or 3

Original Work: **Required -- do not copy an online example or the work of others**

Submission: Please use the links provided by your instructor

Due Date: There are several due dates for staggered deliverables; dates are assigned in class

Writing Standard: Business professional

Cover Page: Required

Author Names: Required

Course Code: Required

APA Style: Ensure any material drawn from a third party source is appropriately cited

HOW TO GET TOP MARKS

Remember that uncertainty is part of all projects; work with what you have and reach out if you need additional information; study the problem and the attached information carefully; consider who your key stakeholders would be; identify user needs (your instructor will serve as a proxy if required); create a detailed and realistic product backlog; progressively elaborate product backlog items into tasks and acceptance criteria in a sprint backlog; build a detailed deployment plan; consider project risk; calculate realistic measures of economic viability; avoid submitting incomplete or superficial work; don't plagiarize; follow submission guidelines properly and submit on time!

ASSESSMENT CHECKLIST

Completeness of vision statement & project charter		/10
Completeness of stakeholder map & project risk assessment		/10
Completeness of product backlog		/20
Completeness of sprint backlog & information radiators		/20
Completeness and accuracy of predictive deployment plan		/20
Completeness and accuracy of economic viability metrics		/10
Overall impression of quality and presentation		/10
Total		/100
Days late (@5)		
Spelling/grammar faults (@5)		
Plagiarized or unoriginal work (0% + academic sanction)		
Total adjusted		/100