

G2 Digital Solutions

# Project Proposal

The Funky Energy Trading Platform

Due Date: 24<sup>th</sup> May 2020

Friday: 10:30 Group 2

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## Executive Summary

This document outlines G2 Digital Solutions' project proposal for Funky Energy's new energy trading platform targeted at retail and consumer markets. The idea behind Funky Energy's new platform is to provide competition with the wholesale energy market by introducing a new disruptive method of power production, sale, and delivery.

The focus of this project is on trading platform development, inclusive of documentation, platform verification, integration with smart battery banks, and deployment on behalf of funky energy. This project is not concerned with sustainment of the platform once development has concluded. Sustainment is expected to be handled in a future project. The platform will integrate with a Funky Energy provided smart battery bank via a web-based interface.

The project will be managed by G2 Digital Solutions, with Funky Energy being the final approver for acceptance of any deliverables, as governed by this document. The project is budgeted to cost no more than \$1,000,000 and will conclude by 31 March 2021. This management plan includes a breakdown of tasks, expected completion for tasks and estimated costing for each section of the project.

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Revision History

Author Name	Date	Reason for Changes	Version
A. Knowles A. Aryan N. Roberts H. Pranavoo	24th May 2020	Initial Release	1.0

## 1.0 Introduction and Objectives of the Project

### Organization Overview

Funky energy is a market leading energy provider. They have been in operation since 1935 and are responsible for several core components of Australia's power generation and distribution infrastructure.

G2 Digital Solutions (G2-DS) is a well-established IT consulting firm. Started in 2003, it has contributed towards several notable projects over the past 17 years. G2-DS has grown to be one of Australia's most prestigious premium consulting firms. Our portfolio includes projects such as the Maykee transport card online management portal, YourEye's insurance quotation system, and the Circle payment system.

### Opportunity and objectives

The Funky Energy trading platform is a digital marketplace where clients can buy and sell units of energy, in a similar way to the stock market, or Amazon EC2 spot instances. Funky Energy trading platform will act as a buy/sell matchup service with a small "brokerage fee" for each trade. Funky energy will also sell its own energy on the marketplace, acting as a baseline to somewhat stabilize buy and sell prices.

The platform will allow customers to generate and sell electricity at a specified rate, where others can purchase it. It is expected that this will help lower the cost of electricity across the country, and will help improve the load capacity of the network as a whole.

## 2.0 Project Charter

### Project Information

Date of Authorisation	24/05/2020
Project Start Date	01/06/2020
Project End Date	05/02/2021
Project Manager	Morgan Freeman
Project Sponsor	Funky Energy

### Project Objectives

- Provide a platform for buyers and sellers to purchase and sell electricity.
- Create an algorithm to match buy prices with sell prices, and to automatically purchase and sell electricity for users.
- Ensure the platform can be accessed via popular internet browsers (Google Chrome, Mozilla Firefox, Microsoft Edge, Apple Safari).
- The platform needs to meet all design and functionality requirements.
- The date of delivery is no later than 12/02/2021 (1 week after the project's end date).

### Project Approach

- The project scope, schedule management plan, cost management plan, quality management plan, risk management plan, and communications management plan must be completed before entering the execution phase of the project.
- Reporting to the client at each milestone to keep them informed with the progress of the project, demonstrating the current state of the project where possible.
- Weekly meetings are undertaken during the execution phase of the project to review what was completed during the previous week, encourage team discussion, and discuss / decide what will be implemented over the coming weeks.
- Team Members of the project must be part of G2 Digital Solutions, or a subcontractor thereof.

### Roles and Responsibilities

Name	Role	Contact Information
Morgan Freeman	Project Manager	<a href="mailto:mfreeman@student.swin.edu.au">mfreeman@student.swin.edu.au</a>
Alastair Knowles	Software Engineer	<a href="mailto:2062674@student.swin.edu.au">2062674@student.swin.edu.au</a>
Aryan	Software Engineer	<a href="mailto:101885185@student.swin.edu.au">101885185@student.swin.edu.au</a>
Nathan Roberts	Software Engineer	<a href="mailto:102113528@student.swin.edu.au">102113528@student.swin.edu.au</a>
Hari Pranavoo	Software Engineer	<a href="mailto:102220240@student.swin.edu.au">102220240@student.swin.edu.au</a>

### Preliminary Schedule and Budget Estimates

The total cost for this project is \$252,532.67 which includes the creation of planning documents, the solution / platform, and the roll out of the website, all by the 31<sup>st</sup> of March 2021 (31/03/2021).

### 3.0 Project Scope

#### Product Description

The Funky Energy Trading Platform will be an energy marketplace, targeted at retail customers, for buying and selling electricity. The platform will be similar in functionality to stock broking platforms, such as the NAB Trade platform, or CMC markets; or Amazon's EC2 spot instance market. Clients can sign up to the platform like any ordinary stock broking, or banking account. Those that already have an energy account with Funky Energy may simply opt in.

As this is a new concept, the platform will only be targeting retail customers. Whilst an optimistic vision, future expansion to encourage wholesale clients is out of scope at this time.

The platform will work by communicating with a battery bank system, that is used to feed the grid on demand after energy is purchased by clients. Sellers will be required to have one of these battery banks installed to operate as a seller on the Funky Energy Trading Platform. The development of the battery bank system is out of scope for this project. A separate entity has been contacted by funky energy for development of the battery bank system. We will be required to incorporate a REST API for communications with this battery bank.

#### Scope Statement

<b>Project Name</b>	Funky Energy Trading Platform (FETP)	<b>Approval Date</b>	24 May 2020
<b>Sponsor</b>	Funky Energy	<b>Project Manager</b>	Morgan Freeman
<b>Justification</b>	Due to the ever-growing number of households opting to generate their own electricity and feed into the grid, Funky Energy has identified the need for a platform where individual clients may buy and sell electricity amongst each other, rather than		
<b>Scope Description</b>	The Funky Energy Trading Platform (FTPM) will be a stock-exchange, or Amazon EC2 Spot instance like marketplace where individuals can buy and sell electricity on an open market. Sellers will be able to set a price for excess energy that is stored in an on-premises smart battery bank, and buyers will be able to indicate what price they are willing to purchase energy for. Automatic matching algorithms will then match buyers to sellers, taking current buyer capacity into consideration.		
<b>Out-of-scope Items</b>	<ul style="list-style-type: none"> <li>• Development of smart battery bank hardware.</li> <li>• Continued support of the platform. If Funky Energy chooses so, support shall be negotiated as a separate project after the completion of this project.</li> <li>• Anything else not explicitly documented as in scope is out of scope.</li> </ul>		
<b>Objectives</b>	<ul style="list-style-type: none"> <li>• To provide an online energy trading marketplace to appeal to a unique clientele.</li> <li>• The platform should appeal to consumer/retail sellers looking to make a little extra money from excess self-generated home energy.</li> <li>• The platform should also appeal to consumer/retail buyers searching for good electricity deals.</li> <li>• The platform should implement a web-based API for battery banks to communicate their charge levels, and for the platform to communicate when to provide energy to the network. As no such API exists as of yet, this may be a</li> </ul>		

	preemptive development allowing Funky Energy to take the API to the negotiating table with a 3 <sup>rd</sup> party battery bank provider.
<b>Deliverables</b>	<ul style="list-style-type: none"> <li>• System architecture design.</li> <li>• Software verification plan.</li> <li>• Documentation and how-to guides for Funky Energy clients.</li> <li>• Documentation and training for Funky Energy staff.</li> <li>• Battery bank cloud REST API documentation.</li> <li>• The Funky Energy Trading Platform, in a functional and working state, as per specified requirements.</li> </ul>
<b>Acceptance Criteria</b>	<ul style="list-style-type: none"> <li>• The system architecture design must appropriately represent the system architecture. UML diagrams, state transition diagrams and topology diagrams are to be used wherever applicable.</li> <li>• The software verification plan must outlay what verification has been performed on software components to ensure compliance with expected behavior and requirements. The software verification plan should qualify all testing methods for the software.</li> <li>• Software tests must be linked to verification items within the software verification plan.</li> <li>• Software front ends should be verified as working functionally correctly in the latest long term support versions (as at the commencement of the project) of all major web browsers via testing.</li> <li>• All platform screens should be covered by documentation. Documentation should describe any and all fields on web screens, in dialogs and in widgets.</li> <li>• Any information that is not relevant to Funky Energy customers should only exist in Funky Energy staff and support documentation.</li> <li>• Any information that is relevant to Funky Energy customers should be included in customer documentation. This information may also be included in Funky Energy staff documentation, but should also include staff support supplements where applicable, such that staff members may help customers.</li> <li>• How-to guides should be in a web article format.</li> <li>• Battery bank cloud REST API documentation should be of a technical nature, focused at software engineers, such that 3<sup>rd</sup> parties may implement the API in their battery bank products.</li> </ul>
<b>Constraints</b>	<ul style="list-style-type: none"> <li>• Cost shall be no more than \$1,000,000</li> <li>• Project signoff shall occur before 31 March 2021</li> <li>• This document outlines the platform scope. Any additional tasks that fall outside of this document shall be added through change management as specified in the [Error! Reference source not found.] section below.</li> </ul>
<b>Assumptions</b>	<ul style="list-style-type: none"> <li>• Smart battery banks are being developed by another company in collaboration with Funky Energy. We expect to only be working along with Funky Energy for this project. Any 3<sup>rd</sup> party hardware developer will need to interact with Funky Energy directly.</li> <li>• How-To guides are not expected to be produced in video format.</li> </ul>



	<ul style="list-style-type: none"> <li>A major web browser is considered the PC/Mac OS variant of one of the following: Microsoft Edge, Microsoft Edge (Chromium), Apple Safari, Google Chrome, Firefox.</li> </ul>
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## Work Breakdown Schedule

The breakdown of work into subtasks and sub-components follows the top-down approach. The overall breakdown of the schedule is as follows:

1. Concept and Planning
  - 1.1. Analyze current internal IT infrastructure and systems.
  - 1.2. Define technical user requirements
  - 1.3. Define system architecture requirements
  - 1.4. Define battery bank API requirements, as per provided by Funky Energy's Smart Battery Bank team.
2. Trading platform design
  - 2.1. Platform UI structure
  - 2.2. Page wireframes
  - 2.3. Mock designs
  - 2.4. Usability testing
  - 2.5. Trading platform UI design proposal
3. Trading platform development
  - 3.1. System architecture design documentation.
  - 3.2. Frontend/UI Implementation
  - 3.3. Backend platform development
  - 3.4. Battery Bank API interface
4. Technical testing and validation
  - 4.1. Software verification plan development
  - 4.2. Security penetration testing report.
  - 4.3. Platform load testing
  - 4.4. Operation testing
  - 4.5. Integration testing
5. Platform usage documentation
  - 5.1. End-user facing documentation.
  - 5.2. End-user facing how-to guides
  - 5.3. Funky Energy staff usage documentation.
6. Roll Out
  - 6.1. Documentation hand out.
  - 6.2. Funky Energy staff training.
  - 6.3. Server resource provisioning and mass rollout.
7. Project Signoff

## Change Management Process

The Change Management process specifies the method for introducing any changes to formal project documents, as well as the roles of key stakeholders in the process. It is important that changes follow a formal approval process so that all stakeholders may be kept informed with the expectations of the project.

The objectives of the change management plan are as follows:

- To manage and maintain realistic expectations for the project.
- To ensure all stakeholders are informed of decisions and activities.
- To aid in coordinating communications between all stakeholders

Stakeholders for the purpose of the change management process are divided into the following categories:

Category	Description
<b>Change control board</b>	An independent panel of key company personnel who are able to review a change to ensure its overall impact is considered. This board should be comprised of senior members that are collectively able to criticize all facets of the proposal.
<b>Project Manager</b>	The project manager in charge of the Energy Trading Platform.
<b>Project Team</b>	The group of employees at G2 Digital Solutions working towards the completion of this project.
<b>Client</b>	Funky Energy

The process shall be executed as per the flow chart seen in the Change Control Process section of the appendix. The client, or any team member, may propose a change. When the proposed change is accepted, or rejected, it must be entered into the change log, with the appropriate “Accepted” or “Rejected” flags shown. The change proposal must be included in the log. If a change is rejected, a rationale must also be included in the log.

## 4.0 Project Schedule

The method used to reduce the complexity of the process for Funky Energy Trading Platform is the top-down approach. This approach aims to identify stakeholders, then understand strategies, followed by a risk impact evaluation, and finally a reviewal of those risk assessments. This approach is beneficial as it allows for an easy creation of the work breakdown structure.

The key milestones of the project are:

- Complete the concept and planning phase (02/07/2020).
- Complete the trading platform design phase (07/08/2020).
- Complete the trading platform development phase (23/11/2020).
- Complete the technical testing and validation phase (02/12/2020).
- Complete the platform usage documentation phase (11/12/2020).
- Complete the roll out phase (05/02/2021).
- Project signoff (31/03/2021)

## 5.0 Quality Management Plan

### Quality Planning

In Project Team meeting conducted to plan for quality management of website project. The plan is as following:



### Quality Standards

1. ISO Standard
  - We will be using “ISO9000-QualityManagement” standard for maintaining quality standards while developing the product.
  - For securing product, we will be using “ISO/IEC 27001 Information Security Management” standard.
2. Benchmarking
  - Page Load Time: Studies how much time is taken by the website to load.
3. Company Standard: Following table describes the company standards:

Project Processes/Reports	Quality Standards
<b>Status Reporting</b>	The project manager will monitor the process of collecting project information closely for the status report.
<b>Reports</b>	Weekly reports will be sent to primary stakeholders via E-mail. Quarterly reports about progress will be delivered to Secondary Stakeholder via Email.
<b>Planning Phases</b>	A well structures project management plan detailing project related tasks will be designed. Project Manager asses this plan to keep project on track in achieving scope in time under budget.
<b>Confidentiality</b>	Everyone is promised to keep confidentiality of clients and maintaining confidentiality of sensitive business information.
<b>Function Fit-to-task</b>	The extent to which user believe that the Web site meets their needs.

## Quality metrics

Standard name	Metric
<b>Report</b>	Person responsible and 97% accuracy and timeliness in sending emails.
<b>Usability</b>	<p>Effective: Website should deliver what it needs to be delivered measured by customer satisfaction rating on the task they did.</p> <p>Efficient: Website is able to handle the traffic, less complaints regarding slow website.</p> <p>Engaging: Is it interactive to engage people in bidding for the electricity.</p> <p>Error Tolerant: Database and webserver should be secured and available across different platforms</p>
<b>Cost Variance</b>	Cost of the project should be well-maintained within the approved budget.

## Quality Assurance

It is described as the maintenance of a desired level of quality in the product by means of carefully looking into progress at every stage of the process of delivery.

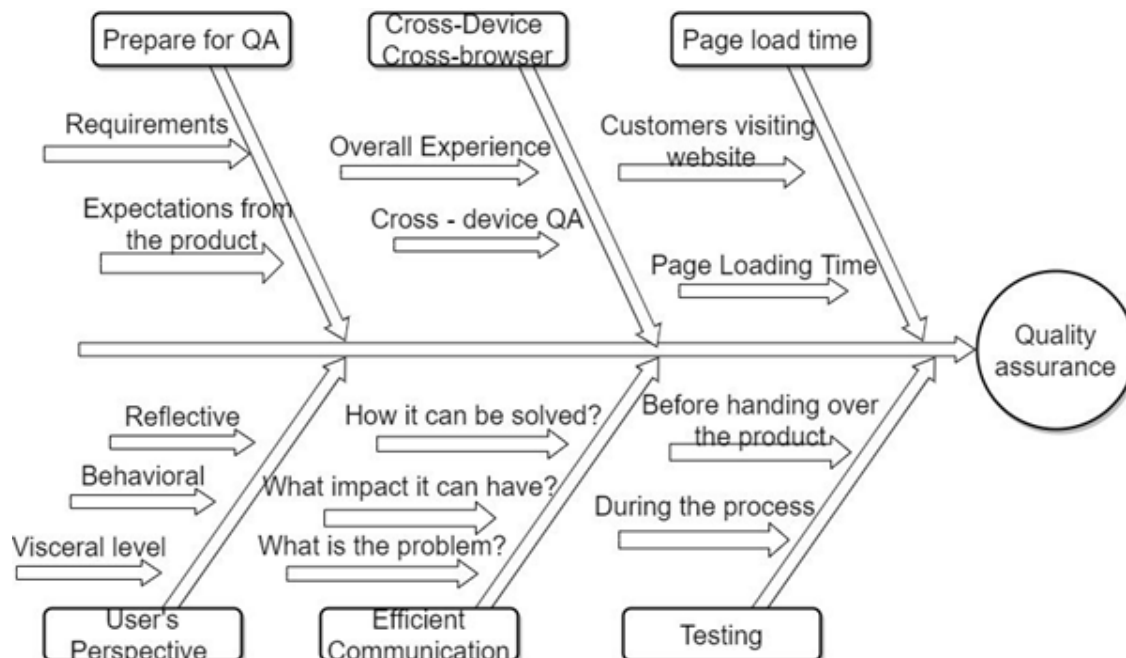


Figure 1: Fish bone diagram – Quality measures for website

Figure1 shows how quality will be assured during handling the product in the project. Following steps will be applied in starting and during the project:

- Prepared Question and Answers
  - Are the requirements met
  - Output (product) is as expected
- Cross Device and Platform tested
- Page load time
  - Customers visiting website

- As per standard, less than 3 seconds for opening a webpage will be kept in consideration
- User perspective: Is website
  - Reflective: website suits the company standards and is of high quality in terms of appealing to users and client
  - Behavioral: Usability of the website
  - Visceral level: First impression of the design

To check if population can use this service. We will be using probability sampling so that each member of targeted population can test the product. This will be done using “stratified sampling”. Figure 2 represents the process of stratified sampling.

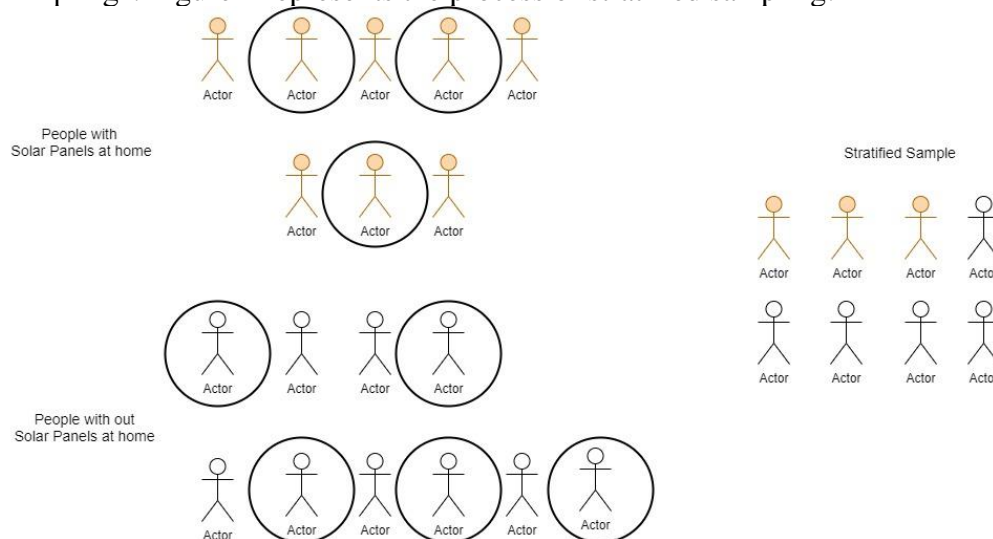


Figure 2

This will be done by grouping population into subgroups (strata) based on people having solar panels in their house and those who do not have solar panel in house. From overall proportions of population, then, selecting how many people should be sampled from each stratum to test the product.

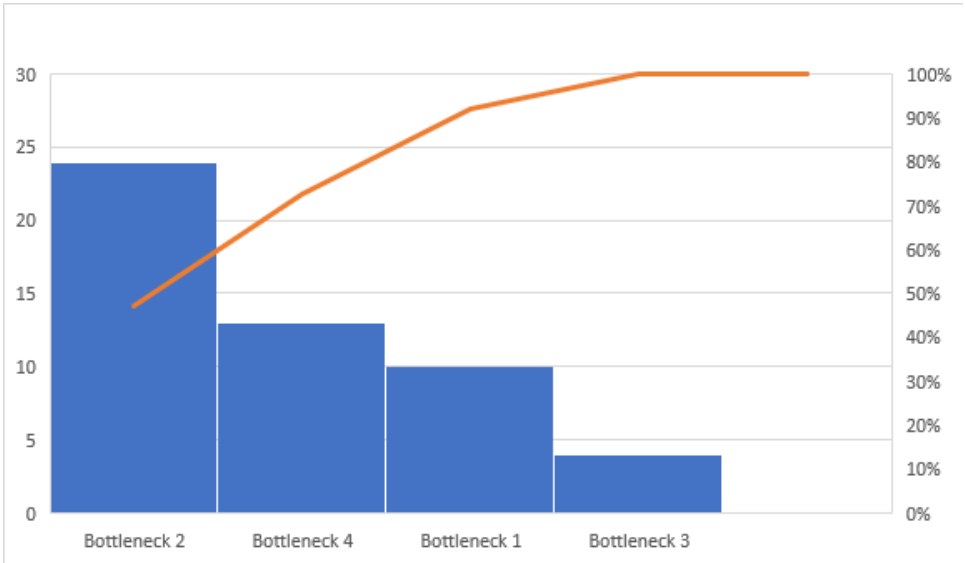
## Quality Control

Quality of the project will be managed by our team headed by Aryan. Starting the project, we may invoke evaluating employees and filling up skill gaps. After every two months the product progress will be tested by taking requirements in consideration. Results of the testing will be examined closely to produce quality product. If the process is not, then the process will be modified.

Bottlenecks that might come during the project is described below using Picto chart which represents the bottleneck with highest number of occurrences will be looked at more deeply and will be prioritizing resources under given budget.

Possible project bottlenecks

Bottleneck	No of occurrence for example
Miss communication	10
Testing	24
Customer Satisfaction	4
Employee Absence	13



## 6.0 Risk Management Plan

### Risk Management Strategies

<b>Risk Identification</b>	The risk team will conduct a meeting in which brainstorming will take place to identify risk associated with the work done for the day.
<b>Qualitative Risk Analysis</b>	Risk will be analyzed in regarding quality of the product.
<b>Quantitative Risk Analysis</b>	Cost included in the risk and cost associated to mitigate that risk.

### Risk Identification

Team used quick meet ups technique to identify risks of the project. As a result, the risk register is as follow:

ID	Description	Category	Root Cause	Triggers	Potential Response	Risk Owner
<b>R1</b>	Less progress of work	Team	Injury, Illness or Personal Issue	Sick leave letter	Workload distributed or find another guy	Project Manager, HR department
<b>R2</b>	Lack of Commitment of a team member	Team	Lack of Motivation	Poor quality of work	Monitor progress and quality of work by engaging into work	Project Manager
<b>R3</b>	Poor communication within the team	Communication Management	Lack of communication	Ineffective discussion in meeting, which effects the working result	Clear Meeting agendas, using a correct platform of communicating technical information within project	Project manager
<b>R4</b>	Scope creep	Stakeholder Involvement	Ineffective communication with stakeholders	Unclear documented requirements	Clarify requirement if unclear, have stakeholder sign-off project scope management, documenting and presenting project to stakeholder at each milestone	Project Manager
<b>R5</b>	Resources haven't been received	Procurement Management	Provider does not have the ability to complete the contract, not enough time	Not received deliverables as identified on the contract	Try to send list of deliverables early in the stage, ask contractor to resend and notify before sending it	Project manager
<b>R6</b>	Duration of a task is longer as then project schedule	Time management	Tasks duration incorrectly estimated	Actual progress behind schedule	Appropriate tools to be used while schedule planning, have project buffer time to deal with unexpected events	Project manager
<b>R7</b>	Errors in the product, not been	Quality management	Some testing has not been done or	Stakeholder/users detected nonconformance on	Specific testing should be conducted during the project and before	Project Manager

	detected during testing		conducted for some reason	delivered service	handing over the project	
<b>R8</b>	Lack of skill/ experience to complete project	Team	HR department not able to recruit applicant with necessary skill, skill gap was not able to discover	Behind schedule/ cannot meet the deliverables	Do knowledge gap analysis at the beginning and plan for gap overcome (short-training course); Support each other with team	Project Manager

Risk impact is ranked based on the impact that happens to project on the risk occurrence. Risk associated with factors are classified as high/medium/low based on its impact on project.

Affected Factors	High Impact	Medium Impact	Low Impact
<b>Cost</b>	Increase the cost of project by > 10%	Increased cost of project by 8 to 10 %	Increase the cost of project by <4%
<b>Schedule</b>	Completion may delay by >3weeks	Completion of project may delay by 2 to 3 weeks	Completion may delay by less than a week
<b>Scope</b>	Affects whole project change in scope lead to failure of project.	Affect minor area of project	Affect may not be noticeable
<b>Quality</b>	Quality reductions require client approval	Reduction in quality may not affect the functionality	The effect is barely noticeable

Below is a probability / impact matrix for the risks defined above:

<b>Probability</b>	<b>High</b>		R2	
	<b>Medium</b>		R5, R7, R8	R4, R6
	<b>Low</b>	R1		R3
		<b>Low</b>	<b>Medium</b>	<b>High</b>
		<b>Impact</b>		



## 7.0 Cost Management Plan

### Budget Summary

The project requires several team members of varying disciplines in order to ensure the project is completed satisfactorily. The project team will consist of a Project Manager, Data management engineers, Back end web infrastructure engineers, Web user Interface Designers and developers, and a content author who is in charge of maintaining platform documentation and correct website contents security testing will be performed by an external provider.

With these role inclusions, it brings the total project labor expenses to \$252,455 AUD. Additionally, \$77.67 AUD will be spent on Amazon AWS infrastructure for a period of 8 months, leading to a total sum of \$252,532.67 AUD.

### Assumptions

- Employees do not work weekends or public holidays.
- Employees work 8-hour days for 5 days in a week with an unpaid 30-minute lunch break each day.
- The project manager will be responsible for all project management related tasks.
- No domain is required for purchase, as this is provided by Funky Energy.
- All non-managerial team members will be on an hourly wage.

### Constraints

- Salaries and wages are based on M&T Resources Salary Guide FY2020/2021
- Each employee is paid 35\$/hour, and the Project Manager is paid 50\$/hour

## 8.0 Procurement Management Plan

### Planning Procurement

Due to G2 Digital Solutions' standard company policy, the project management team have deemed it necessary to outsource security auditing of source code and publicly facing web infrastructure and APIs to external contractors. G2 Digital Solutions has standard security auditing contract procurement processes in place for 3<sup>rd</sup> party consultants.

### Conduct Procurement

Different auditing firms will be asked to propose their costs and will then be shortlisted according to the criteria set beforehand to select the most compatible proposal. Project management team will be given the decision to select the best compact testing team for the project.

### Control Procurement

Several Meetings will be setup before the process and during the testing process to ensure both parties are aware of all auditing procedures and findings.

## Closing Procurement

Once the audit is completed, the management team will finalize the contracts and settle the costs occurred to complete this procedure, the procurement process will be completed once all the testing is done and has met the company standards.

## Selection Criteria

The following criteria is used to evaluate different proposals by the management team

- Overall Cost
- Financial capacity
- Past Performances
- Intellectual Property rights
- Non-disclosure agreement rights
- Meeting the company's objectives

## Outsourcing

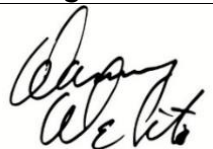
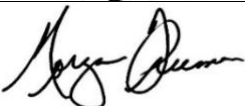
Web Security testing will be done by Science Soft who will be auditing the website, they will run several tests to detect and secure all loopholes that would exist during platform development, the security analysts will run penetration tests to make sure that the platform or the data from the platform wouldn't be compromised during a real-life threat.

AWS cloud services have been chosen to be the platforms host for the 8-month development period. Hosting costs are accrued on a per-resource and per-hour basis, with service instances easily brought up and shut down as necessary.

## 9.0 Approval Signatures

Project Manager:

*As project manager on the Funky Energy Trading Platform, I have reviewed the information contained in the Project Management Plan and agree to its content.*

Name	Position	Signature	Date
Danny Devito	Funky Energy CEO		24/05/2020
Morgan Freeman	Project Manager		24/05/2020

The signatures above represent stakeholders' agreement and acknowledgement of the information contained in this document.

## Appendix

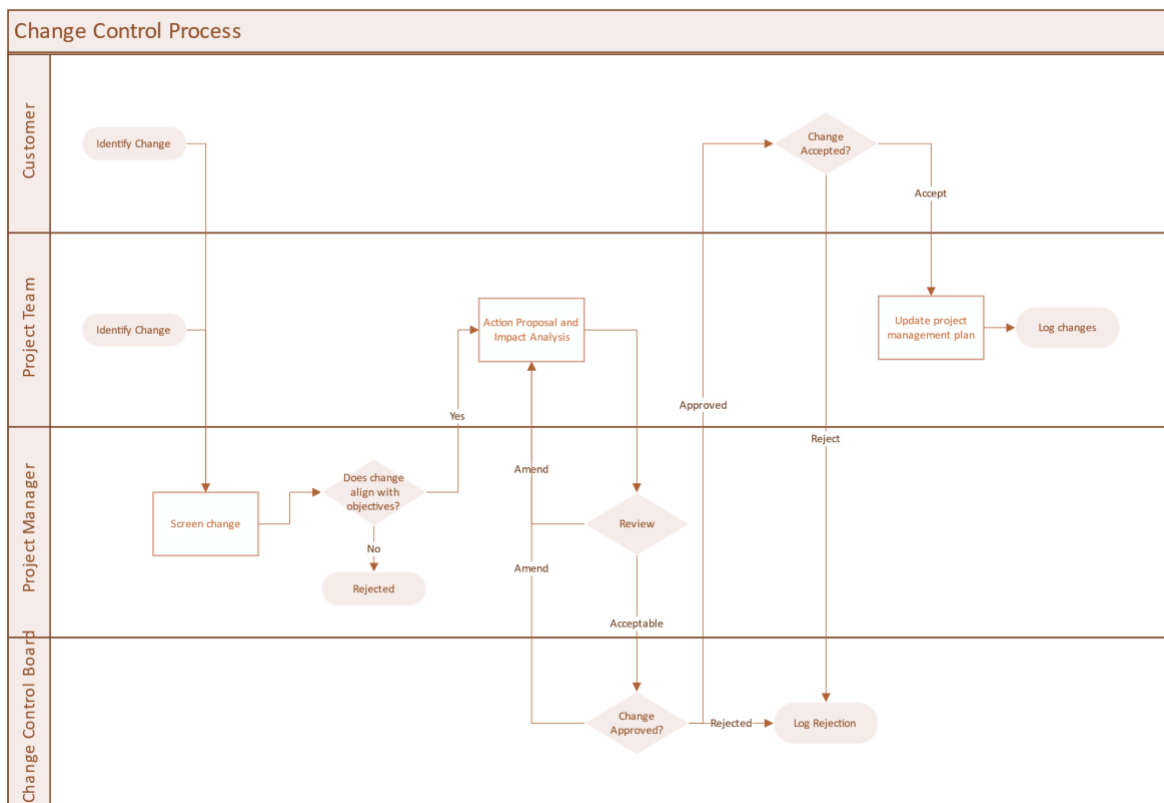
### A Acronyms

API	Application programming interface
AWS	Amazon Web Services
EC2	Elastic Compute Cloud
ID	Identifier
REST	Representational state transfer
UI	User Interface
UML	Unified Modeling Language

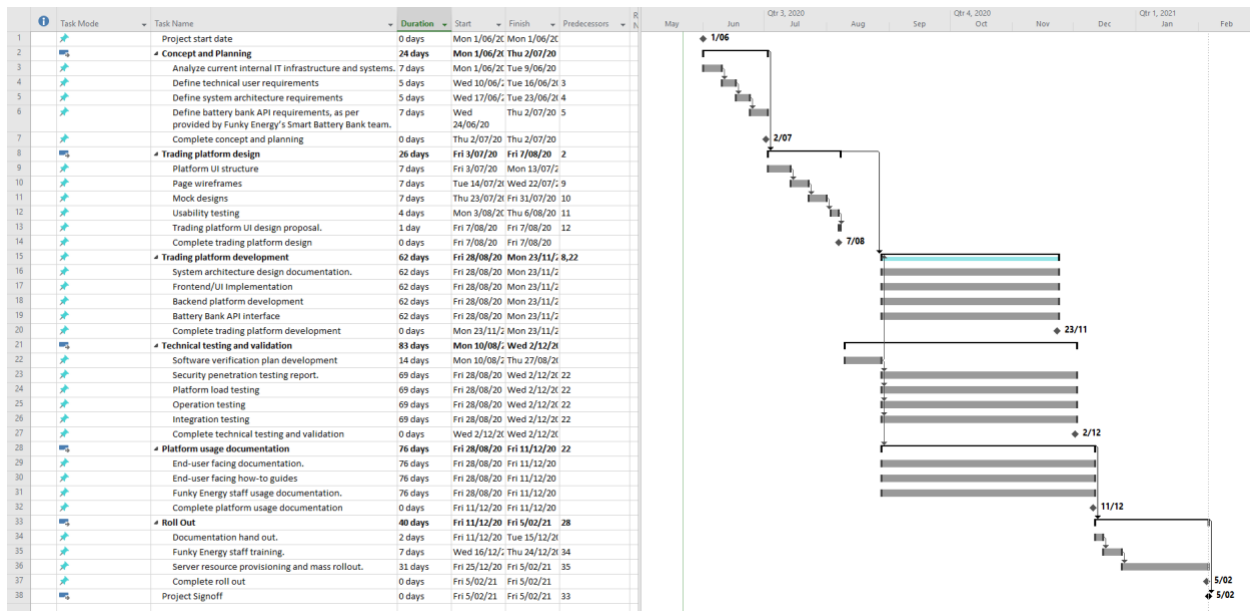
### B Definitions

Amazon EC2 Spot instance platform	Amazon's spare computing resource marketplace, where unused compute resources may be purchased at lower than standard resource prices.
REST API	A modern web-based communications methodology.
UML	A standardized visual modeling and design framework.

### C change control process



## D Project Schedule



## E Cost Baseline

1	Labour Cost Model					
2	Funky Energy			Budget = \$1000000		
3						
4	Project Expenses					
5						
6	Road Map	Hours/Day	No of days	No of people	Total Hours	
7						
8	1.1 Analyze current internal IT infrastructure and systems.	7.5	7	3	157.5	
9	1.2 Define technical user requirements	7.5	5	3	112.5	
10	1.3 Define system architecture requirements	7.5	5	3	112.5	
11	1.4 Define battery bank API requirements, as per provided by Funky Energy's Smart Battery Bank team	7.5	7	3	157.5	
12	1. Concept and Planning				540	
13	2.1 Platform UI structure	7.5	7	2	105	
14	2.2 Page wireframes	7.5	7	3	157.5	
15	2.3 Mock designs	7.5	7	2	105	
16	2.4 Usability testing	7.5	4	5	150	
17	2.5 Trading platform UI design proposal	7.5	1	2	15	
18	2. Trading platform design				532.5	
19	3.1 System architecture design documentation.	7.5	15.5	2	232.5	
20	3.2 Frontend/UI Implementation	7.5	15.5	2	232.5	
21	3.3 Backend platform development	7.5	15.5	2	232.5	
22	3.4 Battery Bank API interface	7.5	15.5	2	232.5	
23	3. Trading platform development				930	
24	4.1 Software verification plan development	7.5	14	5	525	
25	4.2 Security penetration testing report.	7.5	17.25	2	258.75	
26	4.3 Platform load testing	7.5	17.25	2	258.75	
27	4.4 Operation testing	7.5	17.25	2	258.75	
28	4.5 Integration testing	7.5	17.25	2	258.75	
29	4. Technical testing and validation				1560	
30	5.1 End-user facing documentation.	7.5	19	2	285	
31	5.2 End-user facing how-to guides	7.5	19	2	285	
32	5.3 Funky Energy staff usage documentation.	7.5	19	1	142.5	
33	5. Platform usage documentation			2	712.5	
34	6.1 Documentation hand out.	7.5	2	2	30	
35	6.2 Funky Energy staff training.	7.5	7	3	157.5	
36	6.3 Server resource provisioning and mass rollout.	7.5	31	5	1162.5	
37	6. Roll Out				1350	
38	7. Project Signoff				5625	
39						
40						
Roles		Total Hours	\$/Hr	Cost/Unit in \$		
Database Developer		547.5	35	19162.5		
Web Developer		975	35	34125		
UI designer		843	35	29505		
Content Manager		1372.5	35	48037.5		
Outsourced Testers				5000		
Project Manager		2332.5	50	116625		
Total Labor Cost				\$252,455		
Aws Server Costs		Total Hours	\$/Hr	Cost/Unit in \$		
EC2		2332.5	0.0333	77.67225		
Total Cost				\$252532.67 AUD		