

**GAA Medical Device Pvt Ltd**

# **Project Charter**

# GAA Medical Device Pvt Ltd

## Document Control

### Document Information

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### Document History

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0.3	7/28/2022	Barcode is newly added

### Document Approvals

Role	Name	Signature	Date
Project Sponsor	Vikram	Vikram	11/07/2022
Project Review Group	Drake Michael George	Drake Michael George	11/07/2022
Project Manager	Genith Silvester	Genith Silvester	11/06/2022
Production Engineer	Avnish	Avnish	11/10/2022
Financial Manager	Aditya	Aditya	11/07/2022
Quality Engineer	Avnish	Avnish	11/10/2022
Design Engineer	Aman	Aman	11/07/2022

# GAA Medical Device Pvt Ltd

## Table of Contents

<b>Executive Summary</b> .....	4
<b>Project Definition</b> .....	4
Vision.....	4
Objectives .....	4
Scope.....	5
Deliverables .....	5
<b>Project Organisation</b> .....	6
Customers .....	6
Stakeholders.....	6
Roles .....	6
Responsibilities .....	7
Structure.....	10
<b>Project Plan</b> .....	11
Approach.....	11
Overall Plan .....	11
Milestones .....	11
Dependencies .....	12
Financial Plan.....	13
Budget Requirements.....	13
Funding Source .....	13
High-Level Requirements.....	13
<b>Project Considerations</b> .....	13
Risks.....	13
Issues.....	14
Assumptions.....	14
Constraints .....	14

# GAA Medical Device Pvt Ltd

## Executive Summary

Erythrocyte Sedimentation Rate is a clinical laboratory test that examines and analyses red blood cells to determine inflammation and the patient's reaction to drugs such as chemotherapy or steroids.

The Qualgen-20, a fully automated Erythrocyte Sedimentation Rate (ESR) analyzer from GAA Medical, employs innovative technology that is transforming the ESR industry globally. The Qualgen-20 takes smaller blood samples and may yield more results in less time, significantly lowering test costs and cutting test turnaround time. It delivers results to laboratories in 15 minutes, compared to 30 or 60 minutes for conventional methods.

The Qualgen-20 fully automated ESR analyzer technical breakthrough is that it directly measures the strength of red cell aggregation, which is responsible for ESR.

## Project Definition

The primary purpose of the project is to improve the existing product to fill the demand gap of the market and fulfil the customer's demand. The product is used in clinical labs to evaluate the rate at which red blood cells in whole blood drop into a standardized tube and is reported in millimetres per hour. Unlike previous ESR techniques, which assess red blood cell aggregation indirectly, the Qualgen-20 measures it directly and provides the results in millimeters per hour. The Qualgen-20's methodology generates ESR findings in 15 minutes for 20 samples without the factors frequently associated with standard ESR testing, the most significant of which is hematocrit.

The goal of this project is to develop and construct a portable ESR analyzer, which is used in clinical labs to evaluate the rate at which red blood cells in whole blood drop into a standardized tube and is reported in millimetres per hour.

### Vision

- To be the industry leader in automated ESR testing using the gold standard Westergren technique.
- To provide high correlation with the manual Westergren technique, allowing your laboratory to present your results with confidence.
- To do a comprehensive sed rate test in 15 minutes.

### Objective

The primary goal of this project is to create an ESR analyzer that can run 20 samples at once. The Qualgen-20 also promises to do up to 40 sed rate tests every hour, with 20 locations and a test period of 15 minutes. The Qualgen 20 also streamlines production rates and quality control while boosting laboratory worker safety with features such as on-board mixing, random access, on-board QC, positive sample identification, integrated barcode scanner, and closed tube testing.

The product has three significant components: getting customers' requirements, designing new product, producing prototype to test quality and technical requirements.

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## Business Objectives

- To be the leader in automated ESR testing based on the gold standard Westergren technique, with a high throughput capability and coverage of the US market.
- To provide an automated testing equipment that can operate 24 hours a day, thereby avoiding human errors.
- To meet specific volume needs, from 50 tests per month up to 3500 tests per month.
- How it will economically benefit the organization.

## Technology Objectives

- To offer quick results with a turnaround rate of 15 minutes or less, depending on the analyzer.
- To improve reproducibility, the readings were normalized to 18°C.
- To improve laboratory staff safety by limiting their exposure to blood. Additionally, the 1.0 ml glass tube delivers improved reading results.
- To save up to 500 patient results with IDs that may be retrieved and printed at any time.

## Scope

- To identify elevated inflammation levels in the body
- Can assist doctors in determining how effectively therapy for inflammation or infection is working
- We can skip the classic Westergren approach, which takes 60 minutes to test one sample, by adopting Qualgen-20, which takes only 15 minutes to test 20 samples at a time.
- The measurement will be exact with this instrument, and human error, which occurs when taking the reading by sight, will be prevented.
- To resolve the manufacturing problem that is being caused by while going for mass production.

## Deliverables

Item	Components	Description
New automatic ESR analyzer	<ul style="list-style-type: none"><li>• Mechanical actuation</li><li>• Hardware</li><li>• Inbuilt software</li></ul>	<ul style="list-style-type: none"><li>• It is used to guide the sensor board from top to bottom.</li><li>• The PC board is used to supply the limited amount of current to the motor and to the sensor board inbuild inside.</li><li>• The software helps shows the readings, name, details, temperature, and result in the screen. It is programmed by C language.</li></ul>
Printer	<ul style="list-style-type: none"><li>• Hardware and outer casing</li></ul>	<ul style="list-style-type: none"><li>• The built-in printer prints patient and QC findings automatically after each test, removing the chance of transcribing mistakes. You may also print all previously saved tests and QC data.</li></ul>

# GAA Medical Device Pvt Ltd

Barcode scanner	<ul style="list-style-type: none"> <li>Hardware and casing</li> </ul>	<ul style="list-style-type: none"> <li>The developed barcode reader reads and records patient information rapidly, reducing the laboratory time.</li> </ul>
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## Project Organisation

### Customers

Customer	Representative
Hospital	<i>Fortis Hospital</i>
Hospital	<i>Apollo Hospital</i>
Distributer	<i>Narulas Healthcare</i>
Laboratory	<i>Medgenome Labs</i>

### Stakeholders

Stakeholder	Interested in
CEO	Consistent with the company's mission and strategy
Financial Controller	Budgetary alignment with the firm
Health and Safety Office	Compliance with health and safety regulations
Doctors	Alignment with obtaining precise results and forecasting
Medical Device Distributors	Alignment with global product sales

### Roles

- Project Sponsor
- Project Review
- Project Manager
- Design Engineer
- Production Engineer
- Quality Engineer
- Finance Manager
- Team members

Role	Resource Name	Assignment Status
<i>Project Sponsor</i>	<i>Vikram</i>	<i>Assigned</i>
<i>Project Reviewers</i>	<i>Drake</i> <i>Michael</i> <i>George</i>	<i>Assigned</i> <i>Assigned</i> <i>Assigned</i>
<i>Project Manager</i>	<i>Genith Silvester</i>	<i>Assigned</i>

# GAA Medical Device Pvt Ltd

<i>Design Engineer</i>	<i>Aman</i>	<i>Assigned</i>
<i>Production Manager</i>	<i>Avnish</i>	<i>Assigned</i>
<i>Quality Manager</i>	<i>Avnish</i>	<i>Assigned</i>
<i>Finance Manager</i>	<i>Aditya</i>	<i>Assigned</i>
<i>Team members</i>	<i>Bavithra, Gaushil &amp; Kokila</i>	<i>Assigned</i>

## Responsibilities

### ***Project Sponsor***

The Project Sponsor is the project's primary owner.

#### Key responsibilities include:

- Establishing the project's vision and high-level goals.
- Approval of the requirements, schedule, resources, and budget.
- Authorizing the distribution of cash or resources (internal or external).
- Approval of the project and quality plans.
- Ensuring the identification and management of important business risks.
- Approval of any significant modifications in scope.
- Receiving Project Review Group minutes and taking appropriate action.
- Resolving concerns raised by the Project Manager or the Project Review Group.
- Making certain that commercial / operational support mechanisms are in place.
- Ensuring the involvement of a corporate resource.
- Upon completion of the project, providing final approval of the proposal.

### ***Project Review Group***

The Project Review Group, which may include both corporate and third-party representatives, is formed to ensure that the project is proceeding as planned.

#### Key responsibilities include:

- Assisting the Project Sponsor in developing the project's vision and objectives.
- Conducting Quality Assurance Reviews prior to completing each project milestone.
- Ensuring that all business risks are identified and addressed.
- Ensuring compliance with the Quality Plan's standards and processes.
- Ensuring that the necessary client/vendor contractual documentation is in place before the project begins.

### ***Project Manager***

The Project Manager ensures that the daily operations on the project are carried out in line with the authorized project plans. The Project Manager oversees ensuring that the project provides the needed deliverables on schedule, within budget, and to the quality level specified in the Quality Plan.

# GAA Medical Device Pvt Ltd

## Key responsibilities include:

- Creating thorough Project Plans and Quality Plans.
- Ensuring that the necessary resources are assigned to and explicitly tasked for the project.
- Managing allotted resources in accordance with the project's established scope.
- Managing the following project processes: time / cost / quality / change / risk / problem / procurement / communication / acceptance
- Project performance monitoring and reporting (re: schedule, cost, quality and risk).
- Ensuring that the processes and standards established in the Quality Plan are followed.
- Monitoring and reporting project risks and concerns.
- Managing interdependencies in projects.
- Making changes to the detailed plan as needed to present a thorough view of the project's progress at any moment.

## ***Design Engineer***

A Design Engineer is a specialist that is in charge of creating practical products that fulfill the goals and needs of clients. They improve existing systems or create new ones to make procedures more efficient.

## Key responsibilities include:

- Create innovative engineering products and procedures.
- Using CAD, create product models and drawings.
- Investigate innovative product concepts and processes.
- Ensure that the industry's safety standards are met.
- Keep precise records
- Ensure that items are both user and environmentally friendly. Write thorough reports.
- Look for innovative design solutions to challenges.
- Customers and project managers should be shown prototypes and designs.

## ***Production Manager***

Technical management, monitoring, and control of industrial manufacturing processes are the responsibility of production managers.

## Key responsibilities include:

- Supervising production procedures
- Material selection, ordering, and purchase.
- Coordinating the repair and normal maintenance of manufacturing equipment
- Coordinating with buyers, marketing, and sales personnel
- putting on relevant training sessions
- Production schedules must be planned and organized.
- determining project and resource needs
- Budgets and timelines are estimated, negotiated, and agreed upon with clients and management.
- establishing quality control standards

## ***Quality Manager***

# GAA Medical Device Pvt Ltd

Quality Engineers monitor, analyze, and report on the quality of product.

Key responsibilities include:

- Establish precise criteria for what has to be examined and the quality requirements.
- Occurrences, repairs, and enhancements should be entered in the Quality Management System (QMS).
- Audit the systems in accordance with ISO 13485.
- Establish quality standards for all production operations.
- Monitor the whole manufacturing cycle and conduct frequent testing to detect any flaws as soon as feasible.
- Determine the source of technical problems and offer solutions
- To take necessary CAPA actions.

## ***Finance Manager***

Finance Managers oversee guiding a company on how to generate profits through sound financial practices, as well as implementing and monitoring conformity with finance-related laws, processes, and rules such as tax return and cash management.

Key responsibilities include:

- Handle financial planning activities such as producing financial data, creating and preparing reports, researching trends in the industry, and evaluating the company's financial performance.
- Manage the growth and operation of the company's finance divisions, including the creation and evaluation of policies, budgeting, recruitment, training, and performing regular financial processes assessments.
- Advise colleagues and top management on financial issues affecting the organization.
- Establish effective corporate strategy based on an examination of the firm's current state and prospects.
- In charge of overseeing the recording of the company's financial situation and predictions.

## ***Project Team Members***

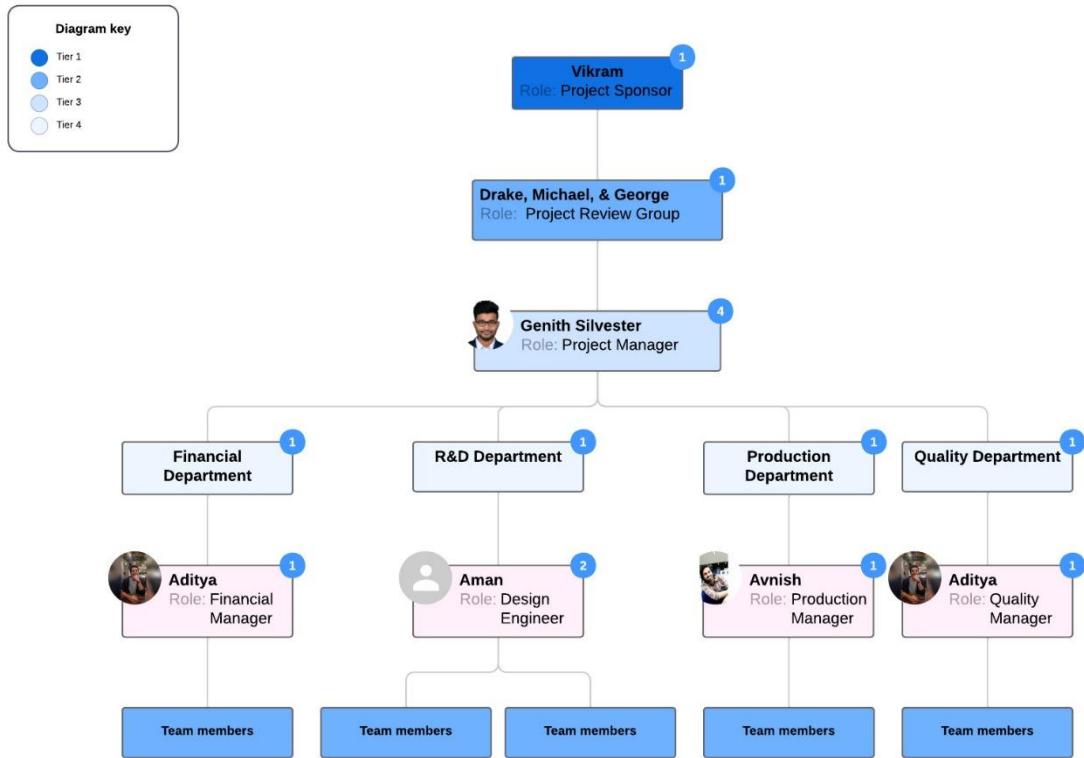
A Project Team member undertakes all tasks necessary to design, build and implement the final solution.

Key responsibilities include:

- Undertaking all tasks allocated by the Project Manager (as per the Project Plan)
- Reporting progress of the execution of tasks to the Project Manager on a frequent basis
- Maintaining all documentation relating to the execution of allocated tasks
- Escalating risks and issues to be resolved by the Project Manager.

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## Structure



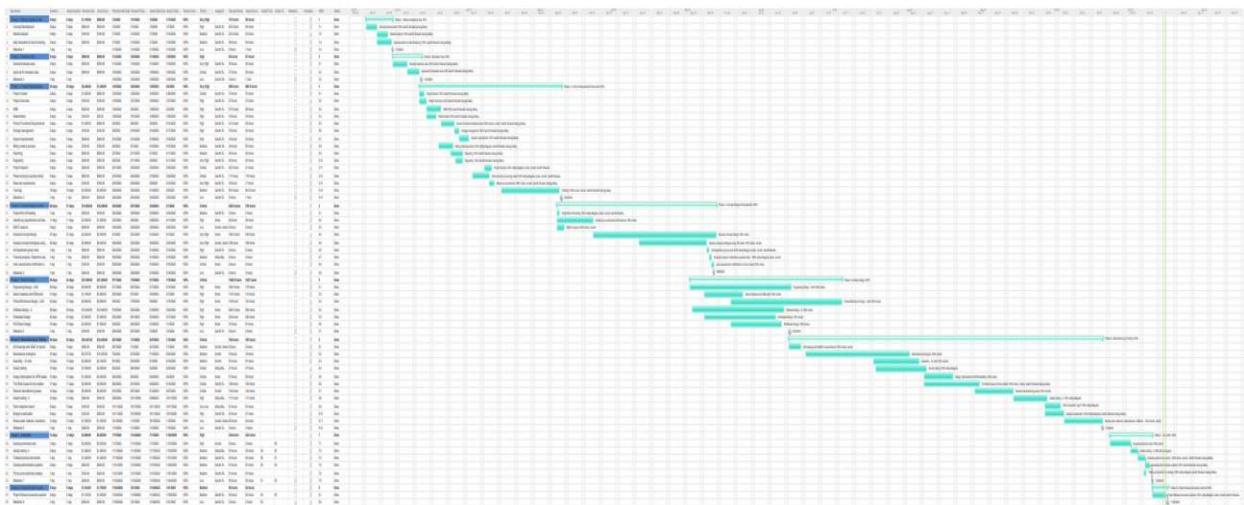
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## Project Plan

### Approach

Phase	Approach
Initiation	Define project goal, set targets, create a project charter, and appoint the project team.
Planning	Define scope, create a project plan, create a budget, define roles and responsibilities and risk assessment, communication plan.
Execution	Build the product, set meetings, fix issues
Performance	Track effort and cost and Monitor project targets
Closure	Hand over product to the customer, lessons learned, document, and trainings

### Overall Plan



### Milestones

Milestone	Date	Description
Initiation phase	1/3/2022	The project is approved for the top-level management.
Project Kick off	3/23/2022	First meeting with the project team to explain the purpose of the project, needs and goal.
Design phase	5/17/2022	Complete the design of the product
Prototype and testing	6/27/2022	Construct the prototypes and test the methodology to verify the product meets the user requirements.
Manufacturing issues	8/22/2022	Resolve the manufacturing/quality issues faced while going for production by finding suitable solutions.
Complete the project	11/18/2022	Complete the project by recording all the details in the document.

# GAA Medical Device Pvt Ltd

Product Handover	11/30/2022	Handover the manufactured parts to the sales or marketing team to make the product to reach the suitable customers or clients.
The Project total estimate length for developing the product is 12 months		

## Dependencies

Project Activity	Impacted on	Impacts by	Criticality®
Design	Resolution	Achieving the resolution of +/-0.1mm was tough due to the lack of material wear and tear in lead screw nut.	High
Quality	Manufactured Parts	The quality of the manufactured parts matters due to this the stability increases	High
Hardware	Manufactured and OEM parts	Supply chain issues order from china	Medium
Enclosure design	Outer casing	The desired enclosure shape was not achievable due to the number of gussets present and wrappage formation while doing injection moulding	Medium

# GAA Medical Device Pvt Ltd

## Financial Plan

Estimated Cost of Project		
Expense Type	Description	Estimated Cost
Concept development	This includes the market analysis and idea screening of the product and coming up with the new methodology to automate the device and fill the demand gap	\$ 5000
Product design and development	Designing and analyzing the Mechanical actuation, product design, PCB Board and architecture of the product.	\$ 35000
Prototype, Manufacturing and Testing	Developing the prototype and compare the actual product parameters with the virtual results	\$ 30000
Labor cost	Cost allocated for every employee	\$ 30000
Total Estimated Cost		\$90000

## Budget Requirements

Staff time and manufacturing is the primary budget need for completing this project. The entire design and development cost estimate is roughly \$80000, however owing to scheduling adjustments and operating expenditures, it was elevated to around \$90000.

## Funding Source

The Project sponsor is Mr. Vikram from the company Biodevice distribution centre located in USA.

## High-Level Requirements

The following are the project's high-level requirements:

- Improve the user requirements by changing the screen to touch model.
- Introduce internal barcode reader and printer which will be an additional feature
- Must be able to run for 24/7 without any wear and tear on the thread and give accurate results with less than 0.1mm

## Project Considerations

### Risks

Description	Likelihood	Impact	Mitigating Actions
Inability to recruit skilled resource	Low	Very High	Outsource project to a company with proven industry experience and appropriately skilled staff
Technology solution is unable	Medium	High	Complete a pilot project to prove the full technology solution

# GAA Medical Device Pvt Ltd

to deliver required results			
Additional capital expenditure may be required in addition to that approved	Medium	Medium	Maintain strict capital expenditure processes during the project

## Issues

Description	Priority	Resolution Actions
Required capital expenditure funds have not been budgeted	High	Request funding approval as part of this proposal
Manufactured parts are not the required dimensions specified by the designer	Medium	GD&T must be applied, and the tools must be replaced with the new one to resolve the issue.
Delivery of the parts from other vendors are delayed	High	To execute and complete the assembly and testing on time the parts can be manufactured or check vendors nearby location.
Product design shape is not suitable for injection moulding and due to complicated design and 2 mm thickness during moulding wrappage occurs	High	The thickness and the shapes can be redesigned based on the manufacturing feasibility.

## Assumptions

- The cost of raw materials will not rise throughout the course of the project.
- The company will provide sufficient human resources to assist the operations.
- The New developed product would meet the market demand and user requirements.
- The product will meet the global regulatory standards of FDA and ISO.
- The project will not cost more than \$90000.

## Constraints

- The project has a hard submission date of Jan 1st, 2023
- The budget estimate is predetermined and therefore does not permit for overpaying
- The project has limited technological capabilities.
- A strict budget constraint of \$90,000 dollars only.
- To minimize the operational impact on the firm, the technological solution must be done after hours.

## Scope Statement

Project Name	Improving a product's efficiency and developing a high-throughput ESR device	Date	1/25/2022
Project Number	01	Project Manager	Genith Silvester George Betsy

### Business Need / Project Objectives

The primary goal of this project is to create an ESR analyzer that can run 20 samples at once. The Qualgen-20 also promises to do up to 40 sed rate tests every hour, with 20 locations and a test period of 15 minutes. The Qualgen 20 also streamlines production rates and quality control while boosting laboratory worker safety with features such as on-board mixing, random access, on-board QC, positive sample identification, integrated barcode scanner, and closed tube testing.

The product has three significant components: getting customers' requirements, designing new products, producing prototype to test quality and technical requirements.

#### *Business Objective:*

- To be the leader in automated ESR testing based on the gold standard Westergren technique, with a high throughput capability and coverage of the US market.
- To provide an automated testing equipment that can operate 24 hours a day, thereby avoiding human errors.
- To meet specific volume needs, from 50 tests per month up to 3500 tests per month.
- How it will economically benefit the organization.

### Project Description and How it Meets the Business Need

The primary purpose of the project is to improve the existing product to fill the demand gap of the market and fulfil the customer's demand. The product is used in clinical labs to evaluate the rate at which red blood cells in whole blood drop into a standardized tube and is reported in millimetres per hour. Unlike previous ESR techniques, which assess red blood cell aggregation indirectly, the Qualgen-20 measures it directly and provides the results in millimeters per hour. The Qualgen-20's methodology generates ESR findings in 15 minutes for 20 samples without the factors frequently associated with standard ESR testing, the most significant of which is hematocrit. The project will have five significant components: Planning, Designing, Prototyping, Testing, Manufacturing/Quality. Project management team will include members for Market Analysis, Documentation, Design, Testing, Problem Solving etc. Project Senior Manager Genith will **oversee** these duties. While certain team members will provide deliverables.

### Project Benefits

1. To be the industry leader in automated ESR testing.
2. To provide an automated testing equipment that can operate 24/7 thereby avoiding human errors.
3. To Fill the market gap and generate more profit to the company.

Project Requirements
1. Project management team to deliver the project in specified time.
2. Resources and cost estimation.
3. Design Software to compute and analyze the developed product virtually.
4. Manpower and Manufacturing Facility

Project Deliverables		
Item	Components	Description
New automatic ESR analyzer	<ul style="list-style-type: none"> <li>• Mechanical actuation</li> <li>• Hardware</li> <li>• Inbuilt software</li> </ul>	<ul style="list-style-type: none"> <li>• It is used to guide the sensor board from top to bottom.</li> <li>• The PC board is used to supply the limited amount of current to the motor and to the sensor board inbuild inside.</li> <li>• The software helps shows the readings, name, details, temperature and result in the screen. It is programmed by C language.</li> </ul>
Printer	Hardware and outer casing	The built-in printer prints patient and QC findings automatically after each test, removing the chance of transcribing mistakes. You may also print all previously saved tests and QC data.
Barcode scanner	Hardware and casing	The developed barcode reader reads and records patient information rapidly, reducing the laboratory time.

Project Does Not Include
1. Mass Manufacturing of the product.
2. Marketing and Sales analysis of the new designed product.

Success / Acceptance Criteria
1. The project should be completed before 1 <sup>st</sup> Jan 2023 and under the specified budget of \$100000
2. Fully automated ESR analyzer should take 15 mins for one sample testing.
3. The product should meet user/customer requirements.
4. The product should be compliant to FDA guidelines and ISO 13485 & 14971.

Milestone	Date	Description
Initiation phase	1/3/2022	The project is approved for the top-level management.
Project Kick off	3/25/2022	First meeting with the project team to explain the purpose of the project, needs and goal.
Design phase	3/28/2022	Complete the design of the product
Prototype and testing	7/18/2022	Construct the prototypes and test the methodology to verify the product meets the user requirements.
Manufacturing issues	8/16/2022	Resolve the manufacturing/quality issues faced while going for production by finding suitable solutions.
Complete the project	10/19/2022	Complete the project by recording all the details in the document.
Product Handover	1/10/2023	Handover the manufactured parts to the sales or marketing team to make the product to reach the suitable customers or clients.
Project total estimate length for developing the product is <b>12 months</b>		

Estimated Cost of Project		
Expense Type	Description	Estimated Cost
Concept development	This includes the market analysis and idea screening of the product and coming up with the new methodology to automate the device and fill the demand gap	\$ 10000
Product design and development	Designing and analyzing the Mechanical actuation, product design, PCB Board and architecture of the product.	\$ 50000
Prototype, Manufacturing and Testing	Developing the prototype and compare the actual product parameters with the virtual results	\$ 20000
Misc. fixed assets	Labor cost, Transportation cost, Property cost, OEM, etc.	\$ 10000
Total Estimated Cost		<b>\$90000</b>

Project Constraints
1. The project has a hard submission date of Jan 1st, 2023
2. A firm budget constraint of \$90,000 dollars.
3. The project has limited technological capabilities.

### Project Assumptions

1. The company will provide sufficient resources to assist the operations.
2. The New developed product would meet the market demand and user requirements.
3. The product will meet the global regulatory standards of FDA and ISO.
4. The project will not cost more than \$90000.

<b>Decision</b>			
<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Rejected		
<input type="checkbox"/> Approved with modifications	<input type="checkbox"/> Deferred		
<b><i>Required Modifications</i></b>			
<b><i>Additional Comments</i></b>			

Mr. Vikram  
Title: Project Sponsor

Vikram  
Signature

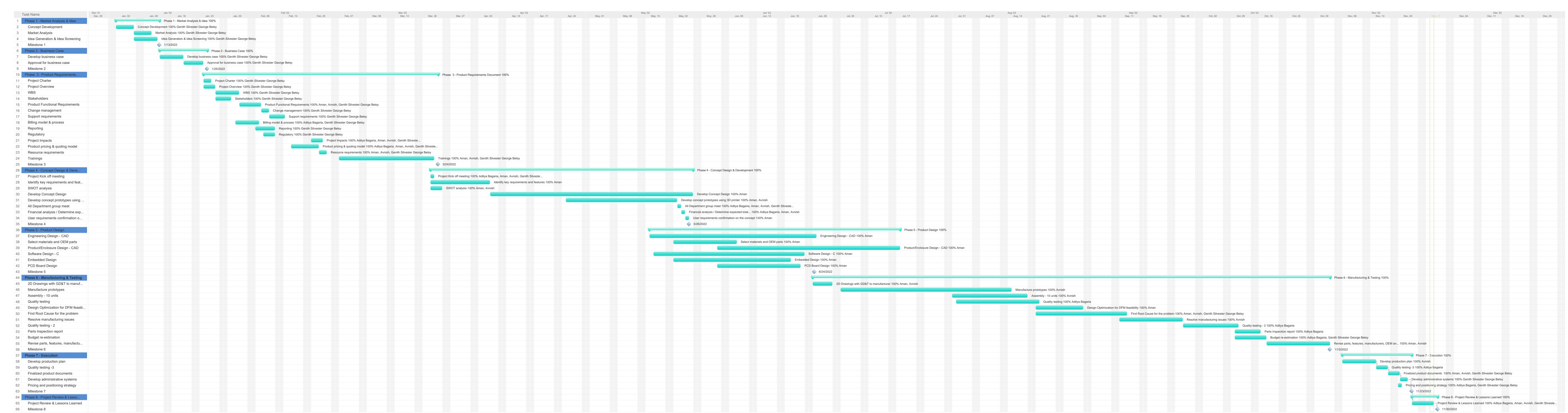
Mr. Genith Silvester George Betsy  
Title: Project Manager

Genith Silvester  
Signature

WORK BREAKDOWN STRUCTURE DIAGRAM

PROJECT TITLE	Improving a product's efficiency and developing a high-throughput ESR device		COMPANY NAME	GAA Medical Device Pvt. Ltd.			
PROJECT MANAGER	Genith Silvester George Betsy		DATE	1/28/2022			
PROJECT	<u>Improving a product's efficiency and developing a high-throughput ESR device</u>						
PHASE	<u>Market Analysis and Idea Generation</u>	<u>Business Case</u>	<u>Product Requirement Documents</u>	<u>Concept design and development</u>	<u>Product Design</u>	<u>Manufacturing and Testing</u>	<u>Execution</u>
TASK	Concept development	Develop Business Case	Project Charter	Kick off meeting	Engineering Design - CAD	2D Drawings with GD&T to manufacturer	Develop production plan
	Install software	Get business case approval	WBS	SWOT analysis	Select materials and OEM parts	Manufacture prototypes	Quality testing -3
	Idea generation and screening		WBS Dictionary	Develop concept design	Product/Enclosure Design - CAD	Assembly - 10 units	Finalized product documents
			Project Function Requirements	Develop concept prototypes using 3D printer	Software Design - C	Quality testing	Develop administrative systems
			Training	Determine expected total product cost	Embedded Design	Design Optimization for DFM feasibility	Pricing and positioning strategy
			User requirements confirmation on the concept		PCD Board Design	Find Root Cause for the problem	Realize milestone
			Realize milestone		Realize milestone	Resolve manufacturing issues	
						Quality testing - 2	
						Parts Inspection report	
						Budget re-estimation	
					Revise parts, manufacturers, OEM and strategies		
					Realize milestone		

<b>Project Name</b>	Improving a product's efficiency and developing a high-throughput ESR device							
<b>Project Manager</b>	Genith Silvester George Betsy							
<b>Date</b>	1/28/2022							
<b>WBS DICTIONARY</b>								
Task No	Task Description	Task Owner	Dependency	Resources Needed	Task Status	Start Date	Estimated Completion	Notes
<b>1</b>	<b>Market Analysis and Idea Generation</b>						<b>9 days</b>	
1.1	Concept Development	Genith Silvester Geo	R&D	Reports	Complete	1/3/2022	4.5 days	Develop a new project which will benefit the company
1.2	Market Analysis	Genith Silvester Geo	Marketing	Reports	Complete	1/7/2022	2.5 days	Do market analysis and define the product
1.3	Idea Generation & Idea Screening	Genith Silvester Geo	Production	PM	Complete	1/7/2022	4 days	Create innovative technology or concept to overcome the existing product issue
<b>2</b>	<b>Business Case</b>						<b>8 days</b>	
2.1	Develop Business Case	Genith Silvester Geo	Production	Reports	Complete	1/14/2022	4 days	Develop Business case document to show all the details of the project to the stakeholders
2.2	Get business case approval	Aditya Bagaria,Genit	Quality	Manuals	Complete	1/20/2022	3 days	Approval from the stakeholders, reviewers and sponsor.
<b>3</b>	<b>Product Requirement Documents</b>						<b>45 days</b>	
3.1	Project Charter	Genith Silvester Geo	PM	Manuals	Complete	1/25/2022	8 days	Create a detailed project charter which has all the details from roles, finance, stakeholders, etc.
3.2	WBS	Genith Silvester Geo	PM	Manuals	Complete	1/25/2022	3 days	Work Breakdown structure of each task in the project
3.3	WBS Dictionary	Genith Silvester Geo	PM	Manuals	Complete	1/28/2022	7.5 days	WBS dictionary has the detailed information of the task and who has the responsibility
3.4	Product Functional Requirements	Aditya Bagaria,Aman	Quality	Manuals	Complete	2/9/2022	3.5 days	Technical details that are to be documented in a project are carried by the design engineers
3.5	Trainings	Aman,Avnish,Genith	Production	Reports	Complete	3/14/2022	9.5 days	proper trainings are need to be given to the team members and explain the scope
<b>4</b>	<b>Concept design and development</b>						<b>36 days</b>	
4.1	Kick off meeting	Aditya Bagaria,Aman	PM	Manuals	Complete	3/28/2022	1 day	First kick off meeting with all the team members
4.2	SWOT analysis	Aman,Avnish	Production	Software	Complete	3/28/2022	1 day	A proper technical SWOT analysis that explains the project strength and weakness
4.3	Develop Concept Design	Aman	R&D	Software	Complete	4/12/2022	18.5 days	3D CAD design of the initial engineering design
4.4	Develop concept prototypes using 3D printer	Aman,Avnish	Production	3D Printers	Complete	4/26/2022	12 days	The concept designs are need to be 3D printed to check the functionality and aesthetic
4.5	Determine expected total product cost	Aditya Bagaria,Amar	Finance	Software	Complete	5/13/2022	1 day	The finance manager discuss with all the team members and also checks the purchase items to reevaluate the cost
4.6	User requirements confirmation on the concept	Aman	R&D	Software	Complete	5/16/2022	1 day	The concept design is checked whether it meets the user requirements
4.7	Realize milestone	Genith Silvester Geo	PM	Manuals	Complete	5/16/2022	1 day	All department meeting on the concept design and to proceed with the next stage
<b>5</b>	<b>Product Design</b>						<b>35 days</b>	
5.1	Engineering Design - CAD	Aman,Avnish	Production	Software	Complete	5/17/2022	18.5 days	A complete DFMA design of the acutation which helps to scan the sedimentation rate of the blood.
5.2	Select materials and OEM parts	Aman,Avnish	Production	Reports	Complete	5/23/2022	12.5 days	Suitable OEM parts are used by the design engineer in the product to reduce the manufacturing cost
5.3	Product/Enclosure Design - CAD	Aman,Avnish	Production	Software	Complete	6/8/2022	17 days	product designer defines and complete the whole design once after being in touch with all the department engineers and parts that are finalized that comes inside the product
5.4	Software Design - C	Aman,Avnish	Production	Software	Complete	5/18/2022	32.5 days	The coding is done by the software engineer it helps to display the results on the screen
5.5	Embedded Design	Aman,Avnish	Production	Software	Complete	5/23/2022	26 days	It ties the bridge between the hardware and software.The embedded designers will be in touch with software team to ensure the hardware is running as expected
5.6	PCD Board Design	Aman,Avnish	Production	Software	Complete	6/10/2022	9 days	The hardware board which has capacitors, resistors to supply the current
5.7	Milestone 5	Aman,Genith Silvest	PM	Manuals	Complete	7/4/2022	1 day	General meeting
<b>6</b>	<b>Manufacturing and Testing</b>						<b>67 days</b>	
6.1	2D Drawings with GD&T to manufacturer	Aman,Avnish	Production	Software	Complete	7/11/2022	1 day	The design engineer provides the detailed drawing to the manufacturer to machine the parts
6.2	Manufacture prototypes	Avnish	Production	Machinery	Complete	7/12/2022	2 days	The production team machines and provide the number of prototypes to the assembly team
6.3	Assembly - 10 units	Avnish	Production	Machinery	Complete	7/14/2022	9 days	The assembly team uses mistake proofing method to assemble all the parts
6.4	Quality testing	Aditya Bagaria	Quality	Machinery	Complete	7/27/2022	3 days	The Quality team inspects the manufactured parts, maintain inspection report and also checks the product operation
6.5	Design Optimization for DFM feasibility	Aman	R&D	Machinery	Complete	8/4/2022	3 days	The quality issues occurred while testing is reported to the design team. They check the data, compare and redesign to improve the quality
6.6	Find Root Cause for the problem	Aman,Avnish,Genit	R&D	Machinery	Complete	8/1/2022	12 days	issues that are caused while manufacturing are need to be find out by the production team
6.7	Resolve manufacturing issues	Aditya Bagaria,Avni	Quality	Machinery	Complete	8/17/2022	5 days	The required methodologies and bottlenecks are implied to find and resolve the issue by the production team
6.8	Quality testing - 2	Aditya Bagaria	Quality	Machinery	Complete	8/24/2022	13 days	Issues which are resolved on the product are again manufactured and gone for quality testing. The quality teams compares the previous result and the new results to check the accuracy.
6.9	Parts Inspection report	Aditya Bagaria	Quality	Manuals	Complete	7/14/2022	9 days	The quality team maintains all the data in the inspection report once parts are manufactured
6.10	Budget re-estimation	Aditya Bagaria,Genit	Finance	Software	Complete	9/12/2022	5 days	The finance manager re-estimate the budget and explains the team
6.11	Revise parts, manufacturers, OEM and strategies	Aman,Avnish	R&D	Reports	Complete	9/19/2022	5 days	based on the budget and to maintain the product cost as mentioned by the sponsor the design team revise the materials, features, and strategies in the manufacturing team to cut down it.
6.12	Milestone 6	Genith Silvester Geo	PM	Manuals	Complete	9/26/2022	12 days	General meeting by the manager to check the teams status
<b>7</b>	<b>Execution</b>						<b>22 days</b>	
7.1	Develop production plan	Avnish	Production	Software	Complete	10/13/2022	1 day	The design engineer and the production team develops a plan to overcome the budget constraints and use simple methods to find the problems and reduce the prototyping cost
7.2	Quality testing -3	Aditya Bagaria	Quality	Machinery	Complete	10/14/2022	5 days	The quality team rechecks the final product and then provide it to 10 different customer to know the results
7.3	Finalized product documents	Aman,Avnish,Genit	R&D	Software	Complete	10/14/2022	5 days	A detailed designed report, SOP and production report are maintained to meet the regulator compliance
7.4	Develop administrative systems	Genith Silvester Geo	PM	Software	Complete	10/21/2022	9 days	The manager with management develops the administrative plan
7.5	Pricing and positioning strategy	Aditya Bagaria,Genit	Finance	Software	Complete	10/21/2022	9 days	The management by seeing the manufacturing cost, labor cost and time sets the product price
7.6	Milestone 7	Genith Silvester Geo	PM	Manuals	Complete	11/3/2022	7 days	General meeting with team on the project closure

**Milestone**

## Project Budget

<b>Project Name:</b>	Improving a product's efficiency and developing a high-throughput ESR device
<b>Department:</b>	Finance
<b>Supervisor Name:</b>	Aditya Vikram Bagaria

WBS	Project Tasks	Assigned To:	BUDGETED	ACTUAL	BALANCE
			\$ 90,000.00	\$ 104,059.00	\$ (14,059.00)
1.0	<b>Market Analysis and Idea Generation</b>		1,900.00	800.00	1,100.00
1.1	<i>Concept Development</i>	Genith,Silvester,George,Betsy	800.00	500.00	300.00
1.2	<i>Market Analysis</i>	Genith,Silvester,George,Betsy	100.00	100.00	-
1.3	<i>Idea Generation &amp; Idea Screening</i>	Genith,Silvester,George,Betsy	200.00	200.00	-
2.0	<b>Business Case</b>		800.00	800.00	-
2.1	<i>Develop Business Case</i>	Genith,Silvester,George,Betsy	500.00	500.00	-
2.2	<i>Get business case approval</i>	Aditya,Bagaria,Genith,Silvester,George,Betsy	300.00	300.00	-
3.0	<b>Product Requirement Documents</b>		8,400.00	7,400.00	1,000.00
3.1	<i>Project Charter</i>	Genith,Silvester,George,Betsy	1,000.00	800.00	200.00
3.2	<i>WBS</i>	Genith,Silvester,George,Betsy	150.00	150.00	-
3.3	<i>WBS Dictionary</i>	Genith,Silvester,George,Betsy	200.00	200.00	-
3.4	<i>Product Functional Requirements</i>	Aditya,Bagaria,Aman,Avnish,Genith,Silvester,George,Betsy	2,550.00	2,350.00	200.00
3.5	<i>Trainings</i>	Aman,Avnish,Genith,Silvester,George,Betsy	4,500.00	3,900.00	600.00
4.0	<b>Concept design and development</b>		13,000.00	16,489.00	(3,489.00)
4.1	<i>Kick off meeting</i>	Aditya,Bagaria,Aman,Avnish,Genith,Silvester,George,Betsy	300.00	100.00	200.00
4.2	<i>SWOT analysis</i>	Aman,Avnish	2,000.00	1,930.00	-
4.3	<i>Develop Concept Design</i>	Aman	300.00	259.00	41.00
4.4	<i>Develop concept prototypes using 3D printer</i>	Aman,Avnish	4,600.00	5,400.00	(800.00)
4.5	<i>Determine expected total product cost</i>	Aditya,Bagaria,Aman,Avnish	5,000.00	8,000.00	(3,000.00)
4.6	<i>User requirements confirmation on the concept</i>	Aman	500.00	500.00	-
4.7	<i>Realize milestone</i>	Genith,Silvester,George,Betsy	300.00	300.00	-
5.0	<b>Product Design</b>		33,000.00	37,400.00	(4,400.00)
5.1	<i>Engineering Design - CAD</i>	Aman,Avnish	6,000.00	6,000.00	-
5.2	<i>Select materials and OEM parts</i>	Aman,Avnish	1,100.00	2,000.00	(900.00)
5.3	<i>Product/Enclosure Design - CAD</i>	Aman,Avnish	6,600.00	8,600.00	(2,000.00)
5.4	<i>Software Design - C</i>	Aman,Avnish	10,200.00	12,200.00	(2,000.00)
5.5	<i>Embedded Design</i>	Aman,Avnish	7,000.00	7,000.00	-
5.6	<i>PCB Board Design</i>	Aman,Avnish	2,000.00	1,500.00	500.00
5.7	<i>Milestone 5</i>	Aman,Genith,Silvester,George,Betsy	100.00	100.00	-
6.0	<b>Manufacturing and Testing</b>		26,100.00	33,670.00	(7,570.00)
6.1	<i>2D Drawings with GD&amp;T to manufacturer</i>	Aman,Avnish	\$300.00	\$300.00	-
6.2	<i>Manufacture prototypes</i>	Avnish	\$12,000.00	\$15,000.00	(3,000.00)
6.3	<i>Assembly - 10 units</i>	Avnish	\$300.00	\$400.00	(100.00)
6.4	<i>Quality testing</i>	Aditya,Bagaria	\$500.00	\$500.00	-
6.5	<i>Design Optimization for DFM feasibility</i>	Aman	\$1,000.00	\$750.00	250.00
6.6	<i>Find Root Cause for the problem</i>	Aman,Avnish,Genith,Silvester,George,Betsy	\$1,800.00	\$1,800.00	-
6.7	<i>Resolve manufacturing issues</i>	Aditya,Bagaria,Avnish	\$3,000.00	\$5,000.00	(2,000.00)
6.8	<i>Quality testing - 2</i>	Aditya,Bagaria	\$400.00	\$100.00	300.00
6.9	<i>Parts Inspection report</i>	Aditya,Bagaria	100.00	100.00	-
6.1	<i>Budget re-estimation</i>	Aditya,Bagaria,Genith,Silvester,George,Betsy	\$300.00	\$300.00	-
6.1	<i>Revise parts, manufacturers, OEM and strategies</i>	Aman,Avnish	6,300.00	9,320.00	(3,020.00)
6.1	<i>Milestone 6</i>	Genith,Silvester,George,Betsy	100.00	100.00	-
7.0	<b>Execution</b>		6,800.00	7,500.00	(700.00)
7.1	<i>Develop production plan</i>	Avnish	\$2,000.00	\$2,000.00	-
7.2	<i>Quality testing - 3</i>	Aditya,Bagaria	\$2,800.00	\$3,500.00	(700.00)
7.3	<i>Finalized product documents</i>	Aman,Avnish,Genith,Silvester,George,Betsy	\$1,200.00	\$1,200.00	-
7.4	<i>Develop administrative systems</i>	Genith,Silvester,George,Betsy	\$200.00	\$200.00	-
7.5	<i>Pricing and positioning strategy</i>	Aditya,Bagaria,Genith,Silvester,George,Betsy	\$400.00	\$400.00	-
7.6	<i>Milestone 7</i>	Genith,Silvester,George,Betsy	\$200.00	\$200.00	-
<b>SUBTOTAL</b>			<b>\$ 90,000.00</b>	<b>\$ 104,059.00</b>	<b>(14,059.00)</b>

# RACI ROLES AND RESPONSIBILITIES TEMPLATE

## PROJECT TITLE

Improving a product's efficiency and developing a high-throughput ESR device

## DESCRIPTION

Reengineering an ESR device by applying new technology to reduce the testing time and for high throughput results.

**R** RESPONSIBLE

**A** ACCOUNTABLE

**C** CONSULTED

**I** INFORMED



## NAME

[Genith Silvester George Betsy]

[Aman Kumar Lathura]

[Aditya V Bagaria]

[Avnish S Rai]

## ROLE

Project Manager

Design Engineer

Quality and Finance Manager

Production Manager

## PROJECT DELIVERABLE / ACTIVITY

Detailed Project Plan	<b>R</b>	<b>I</b>	<b>A</b>	<b>A</b>
Planning and Progress Report	<b>R</b>	<b>C</b>	<b>C</b>	<b>R</b>
Stakeholder Management	<b>R</b>	<b>C</b>	<b>C</b>	<b>R</b>
Project Risks and Issues Management	<b>R</b>	<b>C</b>	<b>A</b>	<b>R</b>
Project Scope Definition	<b>R</b>	<b>C</b>	<b>C</b>	<b>A</b>
Project Scope and Project Plan Sign-off	<b>R</b>	<b>A</b>	<b>C</b>	<b>C</b>

# RACI ROLES AND RESPONSIBILITIES

## PROJECT TITLE

Improving a product's efficiency and developing a high-throughput ESR device

## DESCRIPTION

Reengineering an ESR device by applying new technology to reduce the testing time and for high throughput results.

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NAME [Genith Silvester George Betsy]

[Aman Kumar Lathura]

[Aditya V Bagaria]

[Avnish S Rai]

ROLE Project Manager

Design Engineer

Quality and Finance Manager

Production Manager

## PROJECT DELIVERABLE / ACTIVITY

Requirement Gathering	I	R	I	I
Overall Solution Design	I	R	I	I
Integration Design	I	R	I	I
Solution Demo	I	R	I	I
Test Strategy & Scenarios	I	I	I	I
Overall Solution Design Sign-off	I	I	I	I
Production Prototype Planning	I	I	I	R
Material Selection for Production	I	I	I	R
Production Planning	I	I	I	R
Identify Process Changes and Design To-Be processes	I	I	I	R
Sign off Production Schedule	I	I	I	R
Inspection of Prototype	I	I	R	I
Check the necessary dimensions parameters	I	I	R	I
Compare the actual prototype with virtual	I	I	R	I
Sign off Quality Schedule	I	I	R	I



# Risk Register

Date of last review: 10/28/2022

ID	Description of Risk	Impact	Risk Response	Risk Level	Risk owner
1	Supplier delay	Pushes launch	Confirm delivery dates by Phase 2	High	Avnish Rai
2	Too many prototype failure	Overuse of time and manpower	Increase R&D budget for better development	High	Avnish Rai
3	Production cost increment	Exceeding budget	Maintain project boundaries in terms of material and features of the product	Medium	Aman Lathura
4	Workplace hazards	Harms manpower	Maintain strict safety standards	High	Genith Silvester
5	Inspection errors	Poor performance of the final product	Have multiple quality checks	High	Aditya Bagaria
6	HR unavailability	Exceeding time	Keep backup staff/labours	Low	Genith Silvester
7	Poor quality performance	Poor performance of the final product	Recheck quality and inspection reports	High	Aditya Bagaria
8	Internal conflicts	May lead to project failure	Better communication and problem resolution	High	Genith Silvester
9	Estimation risk	Cost and time overrun	Confirm estimates with industry experts	Medium	Aman Lathura
10	Poor input quality	Lack of quality in finished product	Stern supplier selection process	Low	Aditya Bagaria

## Lessons Learned

**Today's Date:** 12/1/2022

**Project Name:** Improving a product's efficiency and developing a high-throughput ESR device

**Project Manager:** Genith Silvester George Betsy

**Notes:** Final stage

WIN or ISSUE	Describe What Happened	What Was the Impact?	How Does This Change Future Projects?	Action Items
WIN	We implemented a new software that can perform FEA analysis and reduce the prototype cost and time	We saved around \$4000 dollars in terms of prototyping the parts. In addition, we saved 150 hours of time.	We don't have to invest cost on materials and wait for the parts to reach the firm.	1. Purchase software licenses for all employees 2. Send email to the management to get the license.
ISSUE	The raw materials were not arriving on time due to supply chain issues	This delayed the time for the manufacturing team to finish the manufacturing of the 10 units	We have to identify the materials that are readily available in the market.	1. Check the properties of the raw materials and replace with the one that match. 2. Discuss with the production manager to know about the raw materials and current market.
WIN	Nearly 40% of the assembly parts are brought as OEM from other vendors which reduced the manufacturing cost	Design engineers used the parts that can be purchased and available at all the time from other manufacturers. This reduced the raw material cost and manufacturing cost	This makes the design engineers process so simple and develop the product within the given time.	1. Purchase items are readily available in the market. 2. Compare the same item with different vendors to get the cheap and best one.
ISSUE	While manufacturing we encounter the quality issues which needs to be sorted out.	The quality issue was delaying the project timeline.	We eliminated some of the least desirable features to make the project complete on time.	Always evaluate and analyze the least and most important features needs to be included in the project before manufacturing.
ISSUE	Proper trainings was not enough to the team members to know the technical objective.	During manufacturing the parts were not manufactured at its desired tolerance and measurements.	We need to ensure that the production team has proper knowledge on operating the machines and knowing the GD&T.	Discuss with the design engineer to know about the part requirements.
WIN	The sponsor was happy with the deliverable and the completion of the project within the specified budget	This creates more positivity towards the sponsor to invest more on the upcoming projects and idea.	A proper technical project manager is required to carry out the project in the success track.	Hire more resources in the management domain to divide the work and reduce further timeline.
WIN	The product enclosure was designed once after the all the engineering design, PCB board and inbuilt devices are confirmed.	This helped the design engineers to come up with three enclosure ideas and later finalized and designed it based on DFMA. This reduced the redesign work on the product.	A proper flow in the design stage will help the engineers and management to stay on track, time and reduce the cost.	1. The project needs to be planned ahead and each stage needs to be planned to avoid collision during development. 2. Tools like MS project needs to be implemented to stay on track and let managers know about the progress on the project.

## Minutes of the meeting - 1

<b>Project Name</b>	<b>Meeting Date</b>
Improving a product's efficiency and developing a high-throughput ESR device	1/13/2022
<b>Meeting Place</b>	<b>Duration</b>
Conference Room A	Two hours
<b>Meeting Purpose</b>	
Brainstorming	

### In Attendance

<b>Attendee's Name</b>	<b>Dept./Company</b>	<b>Contact Info.</b>
Vikram	Project Sponsor	<a href="mailto:vikram@gmail.com">vikram@gmail.com</a>
Drake	Project Reviewer	<a href="mailto:drake@gmail.com">drake@gmail.com</a>
Michael	Project Reviewer	michael@gmail.com
George	Project Reviewer	<a href="mailto:george@gmail.com">george@gmail.com</a>
Genith Sylvester George Betsy	Project Manager	<a href="mailto:genithsi@gmail.com">genithsi@gmail.com</a>
Aditya V Bagaria	Finance	aditya@gmail.com

### Agenda

<b>Agenda Item</b>	<b>Owner</b>
Is project financially viable?	Vikram
Can project meet deadline?	Drake
Is Project Feasible?	Michael
Is Product really required in the market?	Vikram

### Takeaways

<b>Action Item</b>	<b>Owner</b>
Create a detailed project plan	Genith Sylvester George Betsy
Prepare a business case	Genith Sylvester George Betsy

### Next Meeting

<b>Project Name</b>	<b>Meeting Date</b>
Improving a product's efficiency and developing a high-throughput ESR device	1/25/22
<b>Meeting Place</b>	<b>Meeting Purpose</b>
Conference Room A	Approval of business

## Minutes of the meeting - 2

<b>Project Name</b>	<b>Meeting Date</b>
Improving a product's efficiency and developing a high-throughput ESR device	1/25/2022
<b>Meeting Place</b>	<b>Duration</b>
Conference Room A	Two hours
<b>Meeting Purpose</b>	
Approval of Business Case	

### In Attendance

<b>Attendee's Name</b>	<b>Dept./Company</b>	<b>Contact Info.</b>
Vikram	Project Sponsor	<a href="mailto:vikram@gmail.com">vikram@gmail.com</a>
Drake	Project Reviewer	<a href="mailto:drake@gmail.com">drake@gmail.com</a>
Michael	Project Reviewer	michael@gmail.com
George	Project Reviewer	<a href="mailto:george@gmail.com">george@gmail.com</a>
Genith Silvester George Betsy	Project Manager	<a href="mailto:genithsi@gmail.com">genithsi@gmail.com</a>
Aditya V Bagaria	Finance	aditya@gmail.com

### Agenda

<b>Agenda Item</b>	<b>Owner</b>
How many resources required?	Vikram
Risk involved in the project?	Drake
What is the Budget of the project?	Michael

### Takeaways

<b>Action Item</b>	<b>Owner</b>
Preparing project documents	Genith Silvester George Betsy
Prepare the detailed documents of resources required.	Genith Silvester George Betsy

### Next Meeting

<b>Project Name</b>	<b>Meeting Date</b>
Improving a product's efficiency and developing a high-throughput ESR device	3/25/22
<b>Meeting Place</b>	<b>Meeting Purpose</b>
Conference Room A	Documents Required and Approval

### Minutes of the meeting - 3

<b>Project Name</b>	<b>Meeting Date</b>
Improving a product's efficiency and developing a high-throughput ESR device	3/25/22
<b>Meeting Place</b>	<b>Duration</b>
Conference Room A	Two hours
<b>Meeting Purpose</b>	
Documents Required and Approval	

### In Attendance

<b>Attendee's Name</b>	<b>Dept./Company</b>	<b>Contact Info.</b>
Vikram	Project Sponsor	<a href="mailto:vikram@gmail.com">vikram@gmail.com</a>
Drake	Project Reviewer	<a href="mailto:drake@gmail.com">drake@gmail.com</a>
Michael	Project Reviewer	<a href="mailto:michael@gmail.com">michael@gmail.com</a>
George	Project Reviewer	<a href="mailto:george@gmail.com">george@gmail.com</a>
Genith Silvester George Betsy	Project Manager	<a href="mailto:genithsi@gmail.com">genithsi@gmail.com</a>
Aditya V Bagaria	Finance Manager	<a href="mailto:aditya@gmail.com">aditya@gmail.com</a>
Avnish S Rai	Production Manger	<a href="mailto:avnish@gmail.com">avnish@gmail.com</a>
Aman Kumar	Design Engineer	<a href="mailto:aman@gmail.com">aman@gmail.com</a>

### Agenda

<b>Agenda Item</b>	<b>Owner</b>
How many documents are required?	Vikram
Do existing documents and data sets are required for reference?	Genith

### Takeaways

<b>Action Item</b>	<b>Owner</b>
Approval of the documents	Genith Silvester George Betsy

### Next Meeting

<b>Project Name</b>	<b>Meeting Date</b>
Improving a product's efficiency and developing a high-throughput ESR device	3/28/22
<b>Meeting Place</b>	<b>Meeting Purpose</b>
Conference Room A	Project Kick off- Explaining the project to the team member

## Minutes of the meeting - 4

<b>Project Name</b>	<b>Meeting Date</b>
Improving a product's efficiency and developing a high-throughput ESR device	3/28/22
<b>Meeting Place</b>	<b>Duration</b>
Conference Room A	Two hours
<b>Meeting Purpose</b>	
Project Kick off- Explaining the project to the team member.	

### In Attendance

<b>Attendee's Name</b>	<b>Dept./Company</b>	<b>Contact Info.</b>
Genith Silvester George Betsy	Project Manager	<a href="mailto:genithsi@gmail.com">genithsi@gmail.com</a>
Aditya V Bagaria	Finance Manager	aditya@gmail.com
Avnish S Rai	Production Manger	avnish@gmail.com
Aman Kumar	Design Engineer	aman@gmail.com

### Agenda

<b>Agenda Item</b>	<b>Owner</b>
Type of technology is anticipated?	Aman
What improvements can be done in the existing product?	Avnish
What quality issues were faced by users?	Aditya

### Takeaways

<b>Action Item</b>	<b>Owner</b>
Design parameters of the new concept	Genith Silvester George Betsy
Existing data sets	Genith Silvester George Betsy
New concept should outweigh the other competitors	Genith Silvester George Betsy

### Next Meeting

<b>Project Name</b>	<b>Meeting Date</b>
Improving a product's efficiency and developing a high-throughput ESR device	5/16/22
<b>Meeting Place</b>	<b>Meeting Purpose</b>
Conference Room A	Design Concept

## Minutes of the meeting - 5

<b>Project Name</b>	<b>Meeting Date</b>
Improving a product's efficiency and developing a high-throughput ESR device	5/16/22
<b>Meeting Place</b>	<b>Duration</b>
Conference Room A	Two hours
<b>Meeting Purpose</b>	
Product Kick off meeting	

### In Attendance

<b>Attendee's Name</b>	<b>Dept./Company</b>	<b>Contact Info.</b>
Genith Silvester George Betsy	Project Manager	<a href="mailto:genithsi@gmail.com">genithsi@gmail.com</a>
Aditya V Bagaria	Finance Manager	aditya@gmail.com
Avnish S Rai	Production Manger	avnish@gmail.com
Aman Kumar	Design Engineer	aman@gmail.com

### Agenda

<b>Agenda Item</b>	<b>Owner</b>
Materials from Medical Grades should be chosen to meet regulatory complaints?	Avnish
Whether patient name id should be displayed?	Aman

### Takeaways

<b>Action Item</b>	<b>Owner</b>
Present the detailed design of the product and provide 2D drawings for the manufacturing.	Aman
Figure out the materials required .	Avnish

### Next Meeting

<b>Project Name</b>	<b>Meeting Date</b>
Improving a product's efficiency and developing a high-throughput ESR device	9/26/22
<b>Meeting Place</b>	<b>Meeting Purpose</b>
Conference Room A	Prototype Manufacturing and Quality Assurance

## Minutes of the meeting - 6

<b>Project Name</b>	<b>Meeting Date</b>
Improving a product's efficiency and developing a high-throughput ESR device	9/26/22
<b>Meeting Place</b>	<b>Duration</b>
Conference Room A	Two hours
<b>Meeting Purpose</b>	
Prototype Manufacturing and Quality assurance	

### In Attendance

<b>Attendee's Name</b>	<b>Dept./Company</b>	<b>Contact Info.</b>
Genith Silvester George Betsy	Project Manager	<a href="mailto:genithsi@gmail.com">genithsi@gmail.com</a>
Aditya V Bagaria	Finance Manager	aditya@gmail.com
Avnish S Rai	Production Manger	avnish@gmail.com
Aman Kumar	Design Engineer	aman@gmail.com

### Agenda

<b>Agenda Item</b>	<b>Owner</b>
Manufacturing Bottlenecks for prototype?	Avnish
Bottlenecks observed in the manufacturing of components of product.	Avnish
Surface roughness was observed in the final prototype.	Aditya
The designed product enclosure is not suitable for injection molding. The product design needs to be reconsidered for DFMA design	Aman

### Takeaways

<b>Action Item</b>	<b>Owner</b>
The enclosure has to be redesign.	Aman
Prepare the Ishikawa diagram for the root cause of the problem.	Avnish

### Next Meeting

<b>Project Name</b>	<b>Meeting Date</b>
Improving a product's efficiency and developing a high-throughput ESR device	11/3/22
<b>Meeting Place</b>	<b>Meeting Purpose</b>
Conference Room A	Final Execution of the Product

## Minutes of the meeting - 7

<b>Project Name</b>	<b>Meeting Date</b>
Improving a product's efficiency and developing a high-throughput ESR device	11/3/22
<b>Meeting Place</b>	<b>Duration</b>
Conference Room A	Two hours
<b>Meeting Purpose</b>	
Final Execution of the Product.	

### In Attendance

<b>Attendee's Name</b>	<b>Dept./Company</b>	<b>Contact Info.</b>
Genith Silvester George Betsy	Project Manager	<a href="mailto:genithsi@gmail.com">genithsi@gmail.com</a>
Aditya V Bagaria	Finance Manager	aditya@gmail.com
Avnish S Rai	Production Manger	avnish@gmail.com
Aman Kumar	Design Engineer	aman@gmail.com

### Agenda

<b>Agenda Item</b>	<b>Owner</b>
Final manufacturing of the prototype.	Avnish
Bottlenecks removal and checking the quality parameters of the final product.	Avnish

### Takeaways

<b>Action Item</b>	<b>Owner</b>
Presenting the final project to the stakeholders.	Genith Silvester George Betsy
Asserting that our product is more efficient than the competitors with all required testimony.	Genith Silvester George Betsy

# Stakeholder Register

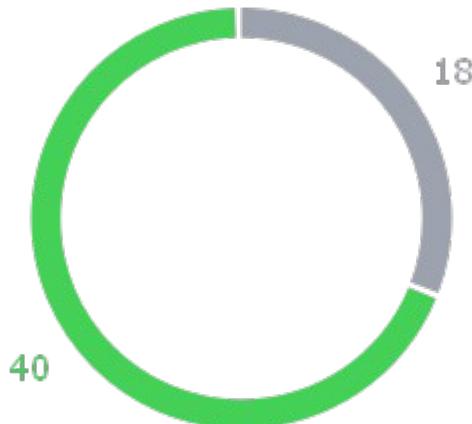
Project Name				Project Description			
Basics				Project Information			
Stakeholder	Title	Email	Influence	Priority	Decision-Maker	Comm. Freq.	Comm. Method
Genith Sylvester George Bets	Project Manager	<a href="mailto:genithsi@buffalo.edu">genithsi@buffalo.edu</a>	High	High	Yes	Weekly	In Person
Avnish Surendra Rai	Production Manager	<a href="mailto:avnishsu@buffalo.edu">avnishsu@buffalo.edu</a>	High	High	Yes	Weekly	In Person
Aditya Vikram Bagaria	Quality and finance manager	<a href="mailto:abagaria@buffalo.edu">abagaria@buffalo.edu</a>	Medium	High	No	Monthly	In Person
Aman Kumar Lathura	Design engineer	<a href="mailto:aluthra@buffalo.edu">aluthra@buffalo.edu</a>	Medium	Low	No	Monthly	In Person
Vikram	Sponsor	<a href="mailto:vikramab@buffalo.edu">vikramab@buffalo.edu</a>	High	High	Yes	Monthly	In Person
Drake	Project reviewer	<a href="mailto:drake@buffalo.edu">drake@buffalo.edu</a>	Low	Low	No	Quarterly	In Person
Michale	Project reviewer	<a href="mailto:michale@buffao.edu">michale@buffao.edu</a>	Low	Low	No	Quarterly	Email
George	Project reviewer	<a href="mailto:george@buffalo.edu">george@buffalo.edu</a>	Low	Low	No	Quarterly	Email

## Health

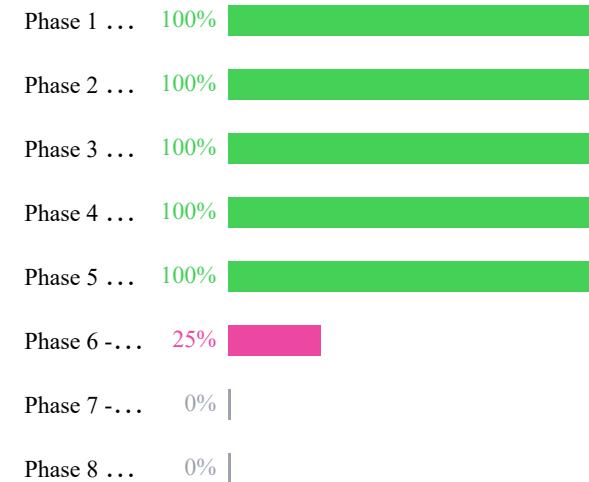
Time	26% behind schedule.
Tasks	18 tasks to be completed.
Workload	16 tasks overdue.
Progress	73% complete.
Cost	13% under budget.

## Tasks

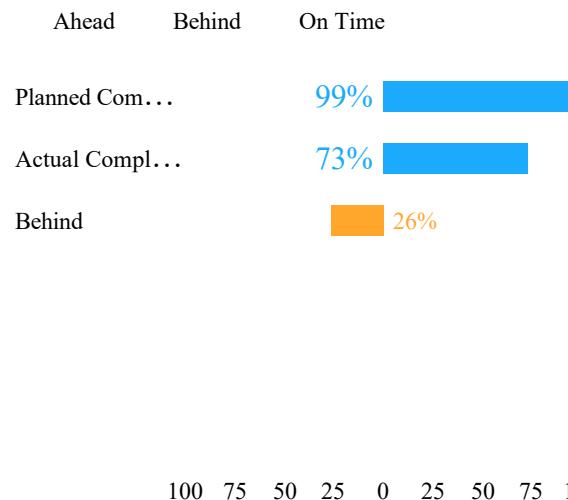
Not Started (18)    Complete (40)    In Progress (0)



## Progress

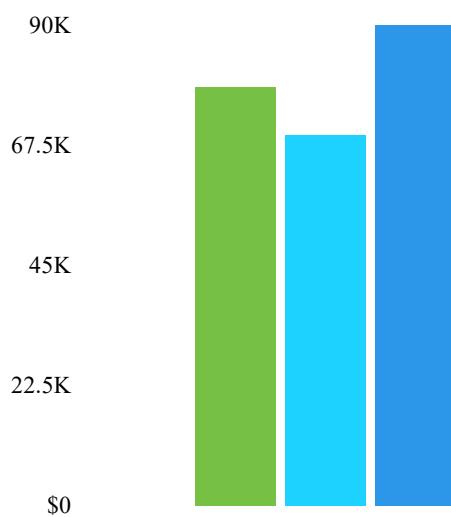


## Time

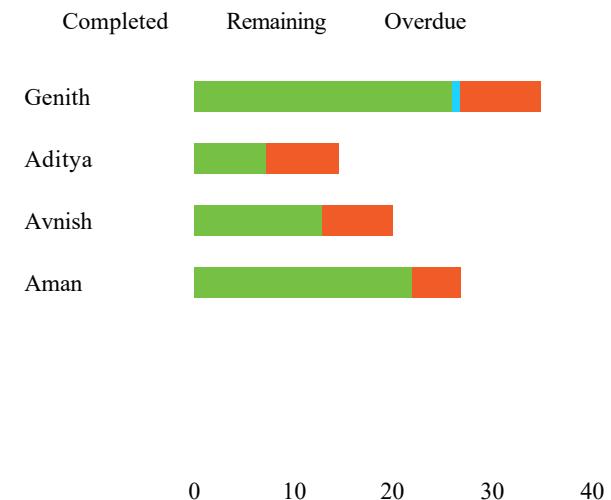


## Cost

Actual    Planned    Budget



## Workload



Portfolio - All Projects  
on 29 November 2022 EST

Project Name	Time	Workload	Cost
Improving a product's efficiency and developing a high-throughput ESR device_Qualgen-20	26% behind schedule.	16 tasks overdue.	13% under budget.

Project Name	Project Short Name	Project Manager	Charge Code	Customer	Priority	Status	Status Update	Budget	Percent Complete	Ahead Of Schedule	Planned Start Date	Planned Finish Date	Actual Start Date	Actual Finish Date	Actual Hours	Tasks Complete	Tasks Not Started	Tasks In Progress	Budget Remaining	Groups	Target Date	Description	Notes
Improving a product's efficiency and developing a high-throughput ESR device_Qualgen-20	Improv	Genith Silvester George Betsy			Important	Open		\$90,000.00	73	-26%	1/3/2022	12/1/2022	1/3/2022		3387	40	18	0	\$11,286.00		12/30/2022		

# Project Status Report

29 November 2022 EST

## Health

Time  
Workload  
Cost



## Summary

Status:  
% Complete:  
Customer:  
Charge Code:  
Target Date:  
Start:  
Actual Effort:  
Actual Cost:

**Open**  
73%  
  
30 December 2022  
03 January 2022  
3387.50 hours  
\$78,714.00

Priority:  
Schedule:  
Project Manager:  
Budget:  
  
Finish:  
Planned Effort:  
Planned Cost:

**Important**  
26% behind schedule.  
Genith Silvester George Betsy  
\$90,000.00  
  
01 December 2022  
3387 hours  
\$69,367.00

## Overdue

### Tasks

Name	WBS	Planned Start Date	Planned Finish Date	Planned Duration	Planned Cost	Planned Hours	Planned Resource Cost	Percent Complete	Assigned	Actual Start Date	Actual Finish Date	Actual Duration	Actual Hours	Actual Cost	Actual Resource Cost	Remaining Hours	Milestone	Complete	Priority	Baseline Start Date	Baseline Finish Date	Baseline Duration	Tags	Board	Notes
Assembly - 10 units	6.3	8/1/2022	8/19/2022	15 days	\$0.00	81 hours	\$0.00	0	Avnish				81 hours	\$0.00	\$0.00	0 hours	False	False	Medium					To Do	
Quality testing	6.4	8/2/2022	8/22/2022	15 days	\$0.00	27 hours	\$0.00	0	Aditya Bagaria				27 hours	\$0.00	\$0.00	0 hours	False	False	Critical					To Do	
Design Optimization for DFM feasibility	6.5	8/22/2022	9/2/2022	10 days	\$0.00	27 hours	\$0.00	0	Aman				26 hours	\$0.00	\$0.00	1 hour	False	False	Critical					To Do	
Find Root Cause for the problem	6.6	8/22/2022	9/13/2022	17 days	\$0.00	108 hours	\$0.00	0	Genith Silvester George Betsy, Avnish, Aman				109 hours	\$0.00	\$0.00	-1 hours	False	False	Critical					To Do	
Resolve manufacturing issues	6.7	9/12/2022	9/27/2022	12 days	\$0.00	144 hours	\$0.00	0	Avnish				144 hours	\$0.00	\$0.00	0 hours	False	False	Critical					To Do	
Quality testing - 2	6.8	9/28/2022	10/11/2022	10 days	\$0.00	117 hours	\$0.00	0	Aditya Bagaria				117 hours	\$0.00	\$0.00	0 hours	False	False	High					To Do	
Parts Inspection report	6.9	10/11/2022	10/17/2022	4.5 days	\$0.00	81 hours	\$0.00	0	Aditya Bagaria				81 hours	\$0.00	\$0.00	0 hours	False	False	Very Low					To Do	
Budget re-estimation	6.10	10/11/2022	10/18/2022	6 days	\$0.00	45 hours	\$0.00	0	Genith Silvester George Betsy, Aditya Bagaria				47 hours	\$0.00	\$0.00	-2 hours	False	False	High					To Do	
Revise parts, features, manufacturers, OEM and strategies	6.11	10/19/2022	11/3/2022	12 days	\$0.00	45 hours	\$0.00	0	Avnish, Aman				44 hours	\$0.00	\$0.00	1 hour	False	False	Low					To Do	
Milestone 6	6.12	11/3/2022	11/3/2022	1 day	\$0.00	2 hours	\$0.00	0	Genith Silvester George Betsy				2 hours	\$0.00	\$0.00	0 hours	True	False	Low					To Do	
Develop production plan	7.1	11/7/2022	11/15/2022	6.5 days	\$0.00	9 hours	\$0.00	0	Avnish				9 hours	\$0.00	\$0.00	0 hours	False	False	High					To Do	
Quality testing - 3	7.2	11/15/2022	11/18/2022	3 days	\$0.00	45 hours	\$0.00	0	Aditya Bagaria				45 hours	\$0.00	\$0.00	0 hours	False	False	Medium					To Do	
Finalized product documents	7.3	11/18/2022	11/21/2022	1 day	\$0.00	45 hours	\$0.00	0	Genith Silvester George Betsy, Avnish, Aman				44 hours	\$0.00	\$0.00	1 hour	False	False	Medium					To Do	
Develop administrative systems	7.4	11/21/2022	11/23/2022	2 days	\$0.00	81 hours	\$0.00	0	Genith Silvester George Betsy				81 hours	\$0.00	\$0.00	0 hours	False	False	Medium					To Do	
Pricing and positioning strategy	7.5	11/21/2022	11/21/2022	1 day	\$0.00	81 hours	\$0.00	0	Genith Silvester George Betsy, Aditya Bagaria				81 hours	\$0.00	\$0.00	0 hours	False	False	Medium					To Do	
Milestone 7	7.6	11/23/2022	11/24/2022	1 day	\$0.00	63 hours	\$0.00	0	Genith Silvester George Betsy				62 hours	\$0.00	\$0.00	1 hour	True	False	Low					To Do	
Project Review & Lessons Learned	8.1	11/24/2022	11/30/2022	3.5 days	\$0.00	63 hours	\$0.00	0	Genith Silvester George Betsy, Aditya Bagaria, Avnish, Aman				62 hours	\$0.00	\$0.00	1 hour	False	False	Medium					To Do	

## Due This Week

### Tasks

Name	WBS	Planned Start Date	Planned Finish Date	Planned Duration	Planned Cost	Planned Hours	Planned Resource Cost	Percent Complete	Assigned	Actual Start Date	Actual Finish Date	Actual Duration	Actual Hours	Actual Cost	Actual Resource Cost	Remaining Hours	Milestone	Complete	Priority	Baseline Start Date	Baseline Finish Date	Baseline Duration	Tags	Board	Notes
Milestone 8	8.2	11/30/2022	12/1/2022	1 day	\$0.00	2 hours	\$0.00	0	Genith Silvester George Betsy				2 hours	\$0.00	\$0.00	0 hours	True	False	Low					To Do	

## Milestones

Tasks																									
Name	WBS	Planned Start Date	Planned Finish Date	Planned Duration	Planned Cost	Planned Hours	Planned Resource Cost	Percent Complete	Assigned	Actual Start Date	Actual Finish Date	Actual Duration	Actual Hours	Actual Cost	Actual Resource Cost	Remaining Hours	Milestone	Complete	Priority	Baseline Start Date	Baseline Finish Date	Baseline Duration	Tags	Board	Notes
Milestone 6	6.12	11/3/2022	11/3/2022	1 day	\$0.00	2 hours	\$0.00	0	Genith Silvester George Betsy				2 hours	\$0.00	\$0.00	0 hours	True	False	Low				To Do		
Milestone 7	7.6	11/23/2022	11/24/2022	1 day	\$0.00	63 hours	\$0.00	0	Genith Silvester George Betsy				62 hours	\$0.00	\$0.00	1 hour	True	False	Low				To Do		
Milestone 8	8.2	11/30/2022	12/1/2022	1 day	\$0.00	2 hours	\$0.00	0	Genith Silvester George Betsy				2 hours	\$0.00	\$0.00	0 hours	True	False	Low				To Do		

## Summary Tasks

Tasks																									
Name	WBS	Planned Start Date	Planned Finish Date	Planned Duration	Planned Cost	Planned Hours	Planned Resource Cost	Percent Complete	Assigned	Actual Start Date	Actual Finish Date	Actual Duration	Actual Hours	Actual Cost	Actual Resource Cost	Remaining Hours	Milestone	Complete	Priority	Baseline Start Date	Baseline Finish Date	Baseline Duration	Tags	Board	Notes
Phase 6 - Manufacturing & Testing	6	6/27/2022	11/3/2022	94 days	\$9,067.00	704 hours	\$0.00	25	Unassigned	6/27/2022			705 hours	\$15,825.00	\$0.00	-1 hours	False	False	Critical					To Do	
Phase 7 - Execution	7	11/7/2022	11/24/2022	13.5 days	\$0.00	324 hours	\$0.00	0	Unassigned				322 hours	\$0.00	\$0.00	2 hours	False	False	High					To Do	
Phase 8 - Project Review & Lessons Learned	8	11/24/2022	12/1/2022	4.5 days	\$0.00	65 hours	\$0.00	0	Unassigned				64 hours	\$0.00	\$0.00	1 hour	False	False	Medium					To Do	

# Project Plan

From 01 January 2022 to 31 December 2022. As at 29 November 2022 EST.

Planned Start Date:  
Planned Due Date:

03 January 2022  
01 December 2022

Budget:  
Cost To Date:

\$90,000.00  
\$78,714.00

Target Date:

30 December 2022

WBS	Name	Planned Start Date	Planned Finish Date	Planned Duration	Planned Hours	Planned Cost	Percent Complete	Assigned	Actual Start Date	Actual Finish Date	Actual Duration	Actual Hours	Actual Cost	Milestone	Complete	Priority	Board
1.4	Milestone 1	1/13/2022	1/13/2022	1 day	2 hours	\$0.00	100	Genith Silvester George Betsy	1/13/2022	1/13/2022	1 day	1 hour	\$0.00	True	True	Low	Done
2.3	Milestone 2	1/25/2022	1/25/2022	1 day	2 hours	\$0.00	100	Genith Silvester George Betsy, Aditya Bagaria	1/25/2022	1/25/2022	1 day	1 hour	\$0.00	True	True	Low	Done
3.15	Milestone 3	3/24/2022	3/24/2022	1 day	2 hours	\$200.00	100	Genith Silvester George Betsy, Avnish, Aman	3/25/2022	3/25/2022	1 day	1 hour	\$200.00	True	True	Low	Done
4.9	Milestone 4	5/26/2022	5/26/2022	1 day	9 hours	\$300.00	100	Genith Silvester George Betsy	5/16/2022	5/16/2022	1 day	9 hours	\$300.00	True	True	Low	Done
5.7	Milestone 5	6/24/2022	6/27/2022	1 day	9 hours	\$100.00	100	Genith Silvester George Betsy, Aman	7/4/2022	7/4/2022	1 day	9 hours	\$100.00	True	True	Low	Done
6.12	Milestone 6	11/3/2022	11/3/2022	1 day	2 hours	\$0.00	0	Genith Silvester George Betsy				2 hours	\$0.00	True	False	Low	To Do
7.6	Milestone 7	11/23/2022	11/24/2022	1 day	63 hours	\$0.00	0	Genith Silvester George Betsy				62 hours	\$0.00	True	False	Low	To Do
8.2	Milestone 8	11/30/2022	12/1/2022	1 day	2 hours	\$0.00	0	Genith Silvester George Betsy				2 hours	\$0.00	True	False	Low	To Do

# Project Variance

29 November 2022 EST

S1 = Actual S2 = Planned

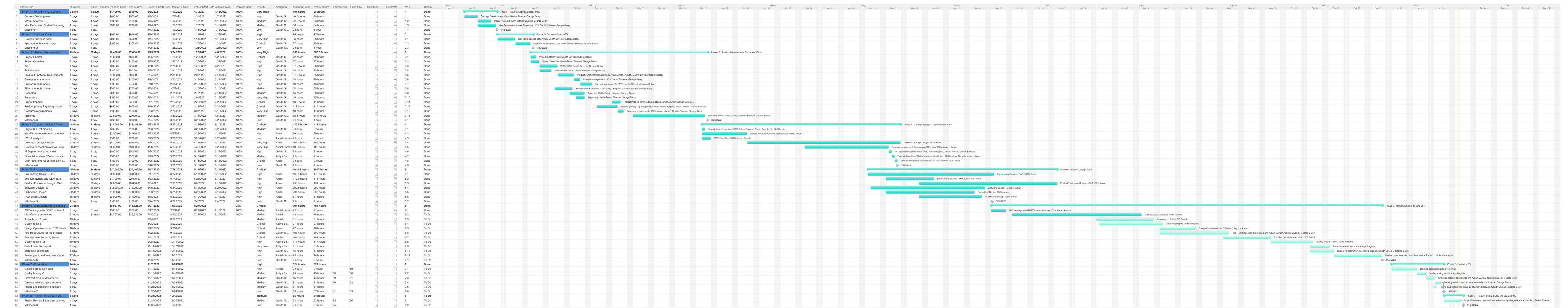
WBS	Task	Start			Finish			Hours			%	Duration (days)		
		S1	S2	Diff	S1	S2	Diff	S1	S2	Diff		S1	S2	Diff
1	Phase 1 – Market Analysis & Idea	1/3/22	1/3/22	0	1/13/22	1/13/22	0	98.0	101.0	-3	100	9.0	9.0	0
2	Phase 2 – Business Case	1/14/22	1/14/22	0	1/25/22	1/25/22	0	67.0	65.0	2	100	8.0	8.0	0
3	Phase 3 – Product Requirements Document	1/25/22	1/25/22	0	4/6/22	3/24/22	-9	665.5	659.0	6.5	100	52.0	43.0	9
4	Phase 4 – Concept Design & Development	3/23/22	3/23/22	0	6/1/22	5/27/22	-3	419.0	420.5	-1.5	100	51.0	48.0	3
5	Phase 5 – Product Design	5/17/22	5/17/22	0	7/15/22	7/18/22	1	1047.0	1048.5	-1.5	100	43.5	45.0	-1.5
6	Phase 6 - Manufacturing & Testing	6/27/22	6/27/22	0	N/A	11/3/22		705.0	704.0	1	25	N/A	94.0	0
7	Phase 7 - Execution	N/A	11/7/22		N/A	11/24/22		322.0	324.0	-2	0	N/A	13.5	0
8	Phase 8 – Project Review & Lessons Learned	N/A	11/24/22		N/A	12/1/22		64.0	65.0	-1	0	N/A	4.5	0
<b>Total</b>				<b>0</b>			<b>-11</b>			<b>0.5</b>				<b>10.5</b>

# Improving a product's efficiency and developing a high-throughput ESR device\_Qualgen-20 - 29 Nov 2022

Page 1

Task Name	Planned Start Date	Planned Cost	Actual Cost	Percent Com...	Planned Hours	Planned Finish...	Actual Finish...	Actual Hours	Assigned	Actual Start Date	Status	Priority	Duration	Actual Duration	Milestone	Complete	WBS
1 Phase 1 - Market Analysis & Idea	1/3/2022	\$1,100.00	\$800.00	100%	101 hours	1/13/2022	1/13/2022	98 hours		1/3/2022	Done	Very High	9 days	9 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1
2 Concept Development	1/3/2022	\$800.00	\$500.00	100%	40.5 hours	1/7/2022	1/7/2022	40 hours	Genith Si...	1/3/2022	Done	High	5 days	5 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1.1
3 Market Analysis	1/7/2022	\$100.00	\$100.00	100%	22.5 hours	1/12/2022	1/12/2022	23 hours	Genith Si...	1/7/2022	Done	Medium	3 days	4 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1.2
4 Idea Generation & Idea Screening	1/7/2022	\$200.00	\$200.00	100%	36 hours	1/13/2022	1/13/2022	34 hours	Genith Si...	1/7/2022	Done	Medium	4 days	5 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1.3
5 Milestone 1	1/13/2022			100%	2 hours	1/13/2022	1/13/2022	1 hour	Genith Si...	1/13/2022	Done	Low	1 day	1 day	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1.4
6 Phase 2 - Business Case	1/14/2022	\$800.00	\$800.00	100%	65 hours	1/25/2022	1/25/2022	67 hours		1/14/2022	Done	High	8 days	8 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2
7 Develop business case	1/14/2022	\$500.00	\$500.00	100%	36 hours	1/19/2022	1/19/2022	36 hours	Genith Si...	1/14/2022	Done	Very High	4 days	4 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2.1
8 Approval for business case	1/20/2022	\$300.00	\$300.00	100%	27 hours	1/24/2022	1/24/2022	30 hours	Genith Si...	1/20/2022	Done	Critical	3 days	3 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2.2
9 Milestone 2	1/25/2022			100%	2 hours	1/25/2022	1/25/2022	1 hour	Genith Si...	1/25/2022	Done	Low	1 day	1 day	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2.3
10 Phase 3 - Product Requirement...	1/25/2022	\$8,400.00	\$7,400.00	100%	659 hours	3/24/2022	4/6/2022	665.5 hours		1/25/2022	Done	Very High	43 days	52 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3
11 Project Charter	1/25/2022	\$1,000.00	\$800.00	100%	72 hours	1/26/2022	1/26/2022	70 hours	Genith Si...	1/25/2022	Done	Critical	2 days	2 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3.1
12 Project Overview	1/25/2022	\$150.00	\$150.00	100%	27 hours	1/27/2022	1/27/2022	27 hours	Genith Si...	1/25/2022	Done	High	3 days	3 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3.2
13 WBS	1/28/2022	\$200.00	\$200.00	100%	67.5 hours	2/2/2022	2/2/2022	68 hours	Genith Si...	1/28/2022	Done	High	4 days	4 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3.3
14 Stakeholders	1/28/2022	\$100.00	\$50.00	100%	18 hours	1/31/2022	1/28/2022	18 hours	Genith Si...	1/28/2022	Done	High	2 days	1 day	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3.4
15 Product Functional Requirements	2/3/2022	\$1,000.00	\$800.00	100%	31.5 hours	2/8/2022	2/14/2022	35 hours	Genith Si...	2/9/2022	Done	High	4 days	4 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3.5
16 Change management	2/8/2022	\$100.00	\$100.00	100%	18 hours	2/10/2022	2/17/2022	20 hours	Genith Si...	2/14/2022	Done	High	2 days	4 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3.6
17 Support requirements	2/10/2022	\$400.00	\$400.00	100%	18 hours	2/14/2022	2/18/2022	18 hours	Genith Si...	2/16/2022	Done	High	2 days	3 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3.7
18 Billing model & process	2/2/2022	\$700.00	\$700.00	100%	54 hours	2/7/2022	2/15/2022	55 hours	Genith Si...	2/10/2022	Done	Medium	4 days	4 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3.8
19 Reporting	2/7/2022	\$600.00	\$600.00	100%	45 hours	2/11/2022	2/11/2022	50 hours	Genith Si...	2/7/2022	Done	Medium	5 days	5 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3.9
20 Regulatory	2/9/2022	\$300.00	\$350.00	100%	45 hours	2/11/2022	2/11/2022	45 hours	Genith Si...	2/9/2022	Done	Very High	3 days	3 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3.10
21 Project Impacts	2/21/2022	\$400.00	\$350.00	100%	40.5 hours	2/23/2022	2/25/2022	41 hours	Genith Si...	2/23/2022	Done	Critical	3 days	3 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3.11
22 Product pricing & quoting model	2/16/2022	\$650.00	\$600.00	100%	117 hours	2/22/2022	2/24/2022	116 hours	Genith Si...	2/18/2022	Done	Critical	5 days	5 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3.12
23 Resource requirements	2/23/2022	\$100.00	\$100.00	100%	18 hours	2/24/2022	3/10/2022	17 hours	Genith Si...	3/9/2022	Done	Very High	2 days	2 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3.13
24 Trainings	2/28/2022	\$2,500.00	\$2,000.00	100%	85.5 hours	3/23/2022	4/6/2022	84.5 hours	Genith Si...	3/14/2022	Done	Medium	18 days	18 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3.14
25 Milestone 3	3/24/2022	\$200.00	\$200.00	100%	2 hours	3/24/2022	3/25/2022	1 hour	Genith Si...	3/25/2022	Done	Low	1 day	1 day	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	3.15
26 Phase 4 - Concept Design & Dev...	3/23/2022	\$13,000.00	\$16,489.00	100%	420.5 hours	5/27/2022	6/1/2022	419 hours		3/23/2022	Done	Critical	48 days	51 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4
27 Project Kick off meeting	3/23/2022	\$300.00	\$100.00	100%	2 hours	3/23/2022	3/23/2022	2 hours	Genith Si...	3/23/2022	Done	Medium	1 day	1 day	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4.1
28 Identify key requirements and fea...	3/23/2022	\$2,000.00	\$1,930.00	100%	99 hours	4/6/2022	4/11/2022	99 hours	Aman	3/28/2022	Done	High	11 days	11 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4.2
29 SWOT analysis	3/23/2022	\$300.00	\$259.00	100%	9 hours	3/25/2022	3/25/2022	9 hours	Avnish, Aman	3/23/2022	Done	Low	3 days	3 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4.3
30 Develop Concept Design	4/7/2022	\$4,200.00	\$5,000.00	100%	166.5 hours	5/27/2022	6/1/2022	166 hours	Aman	4/12/2022	Done	Very High	37 days	37 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4.4
31 Develop concept prototypes using...	4/26/2022	\$5,000.00	\$8,000.00	100%	108 hours	5/23/2022	5/23/2022	108 hours	Avnish, Aman	4/26/2022	Done	Very High	20 days	20 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4.5
32 All Department group meet	5/24/2022	\$500.00	\$500.00	100%	9 hours	5/24/2022	5/12/2022	8 hours	Genith Si...	5/12/2022	Done	High	1 day	1 day	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4.6
33 Financial analysis / Determine ex...	5/25/2022	\$300.00	\$300.00	100%	9 hours	5/25/2022	5/13/2022	9 hours	Aditya Ba...	5/13/2022	Done	Medium	1 day	1 day	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4.7
34 User requirements confirmation o...	5/26/2022	\$100.00	\$100.00	100%	9 hours	5/26/2022	5/16/2022	9 hours	Aman	5/16/2022	Done	Critical	1 day	1 day	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4.8
35 Milestone 4	5/26/2022	\$300.00	\$300.00	100%	9 hours	5/26/2022	5/16/2022	9 hours	Genith Si...	5/16/2022	Done	Low	1 day	1 day	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	4.9
36 Phase 5 - Product Design	5/17/2022	\$37,000.00	\$37,400.00	100%	1048.5 hours	7/18/2022	7/15/2022	1047 hours		5/17/2022	Done	Critical	45 days	44 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5
37 Engineering Design - CAD	5/17/2022	\$6,000.00	\$6,000.00	100%	166.5 hours	6/27/2022	6/13/2022	170 hours	Aman	5/17/2022	Done	High	30 days	20 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5.1
38 Select materials and OEM parts	5/23/2022	\$1,100.00	\$2,000.00	100%	112.5 hours	6/7/2022	6/7/2022	113 hours	Aman	5/23/2022	Done	High	12 days	12 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5.2
39 Product/Enclosure Design - CAD	6/3/2022	\$8,600.00	\$8,600.00	100%	153 hours	7/18/2022	7/15/2022	152 hours	Aman	6/8/2022	Done	High	32 days	27 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5.3
40 Software Design - C	5/18/2022	\$12,200.00	\$12,200.00	100%	292.5 hours	6/24/2022	6/24/2022	292 hours	Aman	5/18/2022	Done	High	28 days	28 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5.4
41 Embedded Design	5/23/2022	\$7,000.00	\$7,000.00	100%	234 hours	6/21/2022	6/17/2022	230 hours	Aman	5/23/2022	Done	High	22 days	20 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5.5
42 PCD Board Design	6/3/2022	\$2,000.00	\$1,500.00	100%	81 hours	6/23/2022	7/1/2022	81 hours	Aman	6/10/2022	Done	High	15 days	15 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5.6
43 Milestone 5	6/24/2022	\$100.00	\$100.00	100%	9 hours	6/27/2022	7/4/2022	9 hours	Genith Si...	7/4/2022	Done	Low	1 day	1 day	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5.7
44 Phase 6 - Manufacturing & Testing	6/27/2022	\$9,067.00	\$15,825.00	25%	704 hours	11/3/2022		705 hours		6/27/2022	Done	Critical	94 days		<input type="checkbox"/>	<input checked="" type="checkbox"/>	6
45 2D Drawings with GD&T to manuf...	6/27/2022	\$300.00	\$300.00	100%	9 hours	7/1/2022	7/1/2022	9 hours	Avnish, Aman	6/27/2022	Done	Medium	5 days	5 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6.1
46 Manufacture prototypes	7/4/2022	\$8,767.00	\$15,525.00	100%	18 hours	8/15/2022	8/24/2022	18 hours	Avnish	7/13/2022	To Do	Medium	31 days	31 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6.2
47 Assembly - 10 units	8/1/2022				81 hours	8/19/2022		81 hours	Avnish		To Do	Medium	15 days		<input type="checkbox"/>	<input checked="" type="checkbox"/>	6.3
48 Quality testing	8/2/2022				27 hours	8/22/2022		27 hours	Aditya Ba...		To Do	Critical	15 days		<input type="checkbox"/>	<input checked="" type="checkbox"/>	6.4
49 Design Optimization for DFM feasi...	8/2/2022				27 hours	9/2/2022		26 hours	Aman		To Do	Critical	10 days		<input type="checkbox"/>	<input checked="" type="checkbox"/>	6.5
50 Find Root Cause for the problem	8/2/2022				108 hours	9/13/2022		109 hours	Genith Si...		To Do	Critical	17 days		<input type="checkbox"/>	<input checked="" type="checkbox"/>	6.6
51 Resolve manufacturing issues	9/12/2022				144 hours	9/27/2022		144 hours	Avnish		To Do	Critical	12 days		<input type="checkbox"/>	<input checked="" type="checkbox"/>	6.7
52 Quality testing - 2	9/28/2022				117 hours	10/11/2022		117 hours	Aditya Ba...		To Do	High	10 days		<input type="checkbox"/>	<input checked="" type="checkbox"/>	6.8
53 Part Inspection report	10/11/2022				81 hours	10/17/2022		81 hours	Aditya Ba...		To Do	Very Low	5 days		<input type="checkbox"/>	<input checked="" type="checkbox"/>	6.9
54 Budget re-estimation	10/11/2022				45 hours	10/18/2022		47 hours	Genith Si...		To Do	High	6 days		<input type="checkbox"/>	<input checked="" type="checkbox"/>	6.10
55 Revise parts, features, manufact...	10/19/2022				45 hours	11/3/2022		44 hours	Avnish, Aman		To Do	Low	12 days		<input type="checkbox"/>	<input checked="" type="checkbox"/>	6.11
56 Milestone 6	11/3/2022				2 hours	11/3/2022		2 hours	Genith Si...		To Do	Low	1 day	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6.12
57 Phase 7 - Execution	11/7/2022				324 hours	11/24/2022		322 hours			Done	High	14 days		<input type="checkbox"/>	<input checked="" type="checkbox"/>	7
58 Develop production plan	11/7/2022				9 hours	11/15/2022		9 hours	Avnish		To Do	High	7 days		<input type="checkbox"/>	<input checked="" type="checkbox"/>	7.1
59 Quality testing - 3	11/15/2022				45 hours	11/18/2022		45 hours	Aditya Ba...		To Do	Medium	3 days		<input type="checkbox"/>	<input checked="" type="checkbox"/>	7.2
60 Finalized product documents	11/18/2022				45 hours	11/21/2022		44 hours	Genith Si...		To Do	Medium	1 day		<input type="checkbox"/>	<input checked="" type="checkbox"/>	7.3
61 Develop administrative systems	11/21/2022				81 hours	11/23/2022		81 hours	Genith Si...		To Do	Medium	2 days		<input type="checkbox"/>	<input checked="" type="checkbox"/>	7.4
62 Pricing and positioning strategy	11/21/2022				81 hours	11/21/2022		81 hours	Genith Si...		To Do	Medium	1 day		<input type="checkbox"/>	<input checked="" type="checkbox"/>	7.5
63 Milestone 7	11/23/2022				63 hours	11/24/2022		62 hours	Genith Si...		To Do	Low	1 day	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	7.6
64 Phase 8 - Project Review & Less...	11/24/2022				65 hours	12/1/2022		64 hours			To Do	Medium	5 days		<input type="checkbox"/>	<input checked="" type="checkbox"/>	8
65 Project																	

# Improving a product's efficiency and developing a high-throughput ESR device\_Qualgen-20 - 29 Nov 2022



**Earned Value for 27 weeks:**

<b>Task Completed</b>	<b>Planned Value</b>	<b>Actual Value</b>	<b>Completed %</b>	<b>Earned Value</b>	<b>Total Expenditure</b>
Market Analysis and Idea Generation	\$ 1,900	\$ 800	100	\$ 1,900	\$ 800
Business Case	\$ 800	\$ 800	100	\$ 800	\$ 800
Product Requirement Documents	\$ 8,400	\$ 7,400	100	\$ 8,400	\$ 7,400
Concept design and development	\$ 13,000	\$ 16,489	100	\$ 13,000	\$ 16,489
Product Design	\$ 33,000	\$ 37,400	100	\$ 33,000	\$ 37,400
Manufacturing and testing	\$ 26,100	\$ 33,670	47	\$ 12,267	\$ 15,825
	<b>\$ 83,200</b>	<b>\$ 96,559</b>		<b>\$ 69,367</b>	<b>\$ 78,714</b>

## CHANGE REQUEST FORM

Change Description		
Project Name:	Change Name:	Number:
Improving a product's efficiency and developing a high-throughput ESR device	Resource change	01
Requested By: Genith Silvester	Contact: 11190001	Date: 7/4/2022
Description of Change: We need additional 3 skilled labor force in manufacturing and 1 in design team. Additionally, 1 new technology machine was required to produce the parts efficiently.		
Reason for Change: The machines were semi-automatic to produce the parts which resulted in poor quality of prototyping hence new machines were required. In addition, skilled labors were required in R&D and manufacturing because in order to find the problem root cause of the problem and optimize the product.		
Priority: 1. High 2. Medium 3. Low		
Impact on Deliverables: It is increasing the planned budget cost of the project and time.		
Impact of Not Responding to Change (and Reason Why): It may lead to the poor quality of the product.		
	Approval of Request: Sponsor and Reviewer	Date:

Change Impact		
Tasks/Scope Affected: No		
Cost Evaluation: Yes, the budget needs to be increased.		
Risk Evaluation: There is low risk that we may not complete project on time.		
Quality Evaluation: No		
Additional Resources: Yes, this additional resource will reduce trimline and increase the productivity		
Duration: No		
Additional Effort: Yes, we are required to redesign and manufacturing the prototypes.		
Impact on Deadline: This change will help us to meet the deadline.		
Comments: Please approve the request.		

Sign Offs		
1. Accepted 2. Deferred 3. Rejected 4. More Info Requested		
Comments: waiting for the sponsor and management approval		
Project Manager Signature:	Genith Silvester	
Decision Maker Signature:	Vikram	

## CHANGE REQUEST FORM

Change Description		
Project Name:	Change Name:	Number:
Improving a product's efficiency and developing a high-throughput ESR device	Vendor Change	02
Requested By: Avnish	Contact: 20999922	Date: 08/22/2022
Description of Change: We need to change the material supplier for manufacturing of the part.		
Reason for Change: Previous vendor was supplying the material at higher cost. So to cut down the cost of manufacturing new vendor has been finalized only approval is pending.		
Priority: 1. High 2. Medium 3. Low		
Impact on Deliverables: This may impact the quality of the new product. Because we will be producing prototype with new material		
Impact of Not Responding to Change (and Reason Why): The cost of the project would increase.		
	Approval of Request: Sponsor and Reviewer	Date:

Change Impact		
Tasks/Scope Affected: No		
Cost Evaluation: Yes, the budget would decrease.		
Risk Evaluation: No risk is involved with this change.		
Quality Evaluation: No		
Additional Resources: No, we don't need additional resources.		
Duration: There little risk that it may affect duration if new vendor does not respond quickly.		
Additional Effort: No		
Impact on Deadline: This change will not impact deadline.		
Comments: Please approve the request.		

Sign Offs	
1. Accepted 2. Deferred 3. Rejected 4. More Info Requested	
Comments: waiting for the sponsor and management approval	
Project Manager Signature:	Genith Silvester
Decision Maker Signature:	Vikram

## CHANGE REQUEST FORM

Change Description		
Project Name:	Change Name:	Number:
Improving a product's efficiency and developing a high-throughput ESR device	Design and Manufacturing Change	03
Requested By: Aman and Avnish	Contact:304449999	Date:08/22/2022
Description of Change: The product design needs to be optimized based on the manufacturing feasibility of DFMA and eliminate unnecessary features from the design to reduce the manufacturing and material cost of the project.		
Reason for Change: To cut down the manufacturing time, wastage of materials and reduce weight of the product.		
Priority: 1. High 2. Medium 3. Low		
Impact on Deliverables: The final product cost would cut down.		
Impact of Not Responding to Change (and Reason Why): It would extra manufacturing cost for the producing 10mm plate.		
Date Needed:	Approval of Request: Sponsor and Reviewer	Date:

Change Impact		
Tasks/Scope Affected: No		
Cost Evaluation: Yes, this will reduce the overall cost of producing the part.		
Risk Evaluation: No risk is involved		
Quality Evaluation: The quality of part would be same.		
Additional Resources: No additional resources required		
Duration: The duration of producing part will decrease.		
Additional Effort: New design of part will be required		
Impact on Deadline: No		
Comments: Please approve the request		

Sign Offs	
: 1. Accepted 2. Deferred 3. Rejected 4. More Info Requested	
Comments: waiting for the sponsor and management approval	
Project Manager Signature:	Date: Genith Silvester
Decision Maker Signature:	Date: Vikram

## Change Log Template

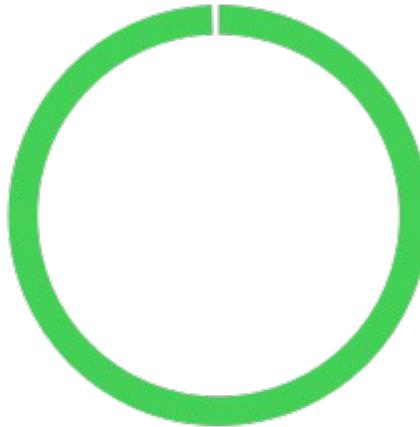
Project Name:	Improving a product's efficiency and developing a high-throughput ESR device									
Project Manager Name:	Genith Silvester George Betsy									
Change No.	Type	Description	Date Identified	Status	Priority	Assigned	Expected Resolution	Impact	Signoff	Comments
1	Resource	We need additional 3 skilled labor force in manufacturing and 1 in design team. Additionally, 1 new technology machine was required to produce the parts efficiently in the future	7/4/2022	Open	High	Genith Silvester	1 months	It is increasing the planned budget cost of the project and time	PM	Identify the good and bad resource
2		We need to change the material supplier for manufacturing of the part in the future	8/22/2022	Open	High	Genith Silvester	20 days	The cost of the project would increase.	PM	Renegotiate with vendors to reduce the cost
3	Product Design and Manufacturing Change	The product design need to be optimized based on the manufacturing feasibility of DFMA and eliminate unnecessary features from the design to reduce the manufacturing and material cost of the project.	8/22/2022	Open	High	Avnish	17 days	The final product cost would cut down.	PM	Design plan has to be made earlier.

## Health

Time	1% ahead of schedule.
Tasks	0 tasks to be completed.
Workload	0 tasks overdue.
Progress	100% complete.
Cost	16% over budget.

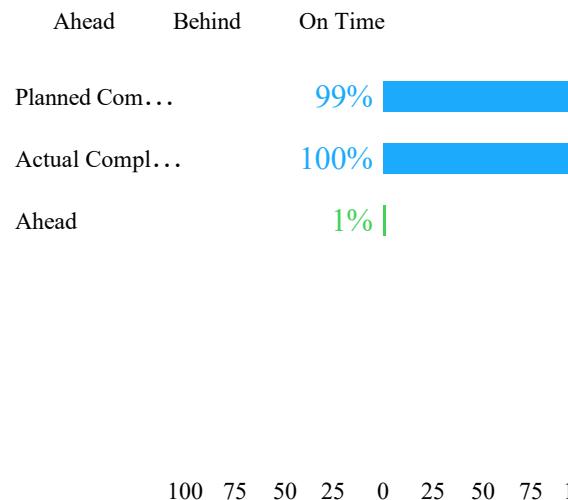
## Tasks

Not Started (0)    Complete (58)    In Progress (0)



58

## Time



## Cost

Actual    Planned    Budget

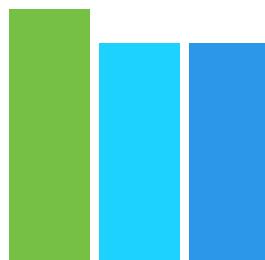
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150K

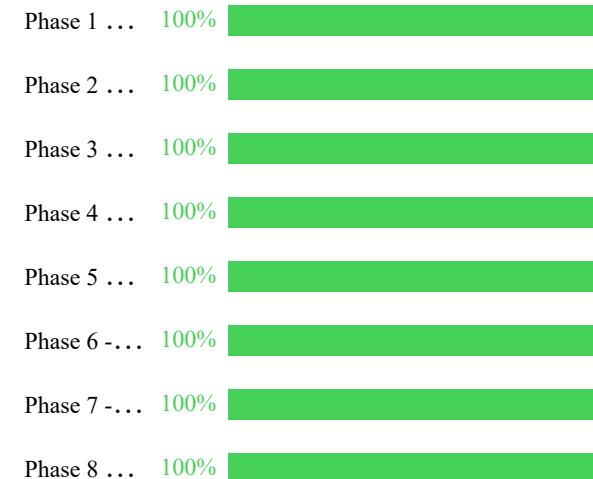
100K

50K

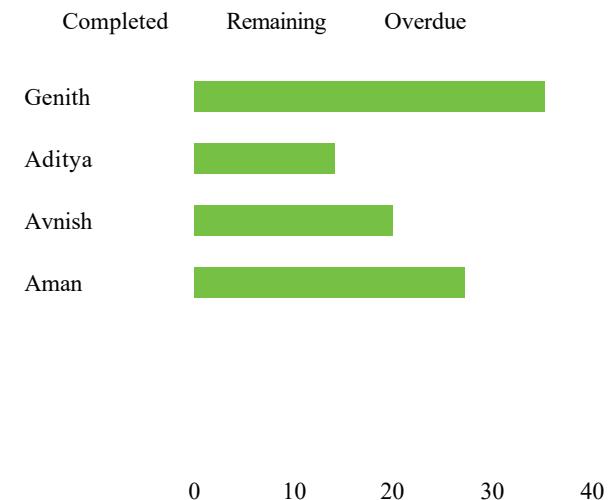
\$0



## Progress



## Workload



Portfolio - All Priorities  
on 29 November 2022 EST

Project Name	Time	Workload	Cost
Improving a product's efficiency and developing a high-throughput ESR device_Qualgen-20	1% ahead of schedule.	0 tasks overdue.	16% over budget.

Project Name	Project Short Name	Project Manager	Charge Code	Customer	Priority	Status	Status Update	Budget	Percent Complete	Ahead Of Schedule	Planned Start Date	Planned Finish Date	Actual Start Date	Actual Finish Date	Actual Hours	Tasks Complete	Tasks Not Started	Tasks In Progress	Budget Remaining	Groups	Target Date	Description	Notes
Improving a product's efficiency and developing a high-throughput ESR device_Qualgen-20	Improv	Genith Silvester George Betsy			Important	Open		\$90,000.00	100	1%	1/3/2022	12/1/2022	1/3/2022	12/1/2022	3387	58	0	0	\$-14,059.00		12/30/2022		

# Project Plan

From 01 January 2022 to 31 December 2022. As at 29 November 2022 EST.

Planned Start Date:  
03 January 2022  
Planned Due Date:  
01 December 2022

Budget:  
Cost To Date:

\$90,000.00  
\$104,059.00

Target Date:

30 December 2022

WBS	Name	Planned Start Date	Planned Finish Date	Planned Duration	Planned Hours	Planned Cost	Percent Complete	Assigned	Actual Start Date	Actual Finish Date	Actual Duration	Actual Hours	Actual Cost	Milestone	Complete	Priority	Board
1.4	Milestone 1	1/13/2022	1/13/2022	1 day	2 hours	\$0.00	100	Genith Silvester George Betsy	1/13/2022	1/13/2022	1 day	1 hour	\$0.00	True	True	Low	Done
2.3	Milestone 2	1/25/2022	1/25/2022	1 day	2 hours	\$0.00	100	Genith Silvester George Betsy, Aditya Bagaria	1/25/2022	1/25/2022	1 day	1 hour	\$0.00	True	True	Low	Done
3.15	Milestone 3	3/24/2022	3/24/2022	1 day	2 hours	\$200.00	100	Genith Silvester George Betsy, Avnish, Aman	3/25/2022	3/25/2022	1 day	1 hour	\$200.00	True	True	Low	Done
4.9	Milestone 4	5/26/2022	5/26/2022	1 day	9 hours	\$300.00	100	Genith Silvester George Betsy	5/16/2022	5/16/2022	1 day	9 hours	\$300.00	True	True	Low	Done
5.7	Milestone 5	6/24/2022	6/27/2022	1 day	9 hours	\$100.00	100	Genith Silvester George Betsy, Aman	7/4/2022	7/4/2022	1 day	9 hours	\$100.00	True	True	Low	Done
6.12	Milestone 6	11/3/2022	11/3/2022	1 day	2 hours	\$200.00	100	Genith Silvester George Betsy	11/3/2022	11/3/2022	1 day	2 hours	\$200.00	True	True	Low	Done
7.6	Milestone 7	11/23/2022	11/24/2022	1 day	63 hours	\$200.00	100	Genith Silvester George Betsy	11/23/2022	11/24/2022	1 day	62 hours	\$200.00	True	True	Low	Done
8.2	Milestone 8	11/30/2022	12/1/2022	1 day	2 hours	\$200.00	100	Genith Silvester George Betsy	11/30/2022	12/1/2022	1 day	2 hours	\$200.00	True	True	Low	Done

# Project Status Report

29 November 2022 EST

Health



## Summary

Status:	Open	Priority:	Important
% Complete:	100%	Schedule:	1% ahead of schedule.
Customer:		Project Manager:	Genith Silvester George Betsy
Charge Code:		Budget:	\$90,000.00
Target Date:	30 December 2022	Finish:	01 December 2022
Start:	03 January 2022	Planned Effort:	3387 hours
Actual Effort:	3387.50 hours	Planned Cost:	\$90,000.00
Actual Cost:	\$104,059.00		

Overdue

Tasks							Planned Resource Cost	Percent Complete	Assigned	Actual Start Date	Actual Finish Date	Actual Duration	Actual Hours	Actual Cost	Actual Resource Cost	Remaining Hours	Milestone	Complete	Priority	Baseline Start Date	Baseline Finish Date	Baseline Duration	Tags	Board	Notes
Name	WBS	Planned Start Date	Planned Finish Date	Planned Duration	Planned Cost	Planned Hours	Planned Resource Cost	Percent Complete	Assigned	Actual Start Date	Actual Finish Date	Actual Duration	Actual Hours	Actual Cost	Actual Resource Cost	Remaining Hours	Milestone	Complete	Priority	Baseline Start Date	Baseline Finish Date	Baseline Duration	Tags	Board	Notes

## Due This Week

Tasks							Planned Resource Cost	Percent Complete	Assigned	Actual Start Date	Actual Finish Date	Actual Duration	Actual Hours	Actual Cost	Actual Resource Cost	Remaining Hours	Milestone	Complete	Priority	Baseline Start Date	Baseline Finish Date	Baseline Duration	Tags	Board	Notes
Name	WBS	Planned Start Date	Planned Finish Date	Planned Duration	Planned Cost	Planned Hours	Planned Resource Cost	Percent Complete	Assigned	Actual Start Date	Actual Finish Date	Actual Duration	Actual Hours	Actual Cost	Actual Resource Cost	Remaining Hours	Milestone	Complete	Priority	Baseline Start Date	Baseline Finish Date	Baseline Duration	Tags	Board	Notes

## Milestones

Tasks							Project Overview																		
Name	WBS	Planned Start Date	Planned Finish Date	Planned Duration	Planned Cost	Planned Hours	Planned Resource Cost	Percent Complete	Assigned	Actual Start Date	Actual Finish Date	Actual Duration	Actual Hours	Actual Cost	Actual Resource Cost	Remaining Hours	Milestone	Complete	Priority	Baseline Start Date	Baseline Finish Date	Baseline Duration	Tags	Board	Notes

## Summary Tasks

Tasks							Project Overview																		
Name	WBS	Planned Start Date	Planned Finish Date	Planned Duration	Planned Cost	Planned Hours	Planned Resource Cost	Percent Complete	Assigned	Actual Start Date	Actual Finish Date	Actual Duration	Actual Hours	Actual Cost	Actual Resource Cost	Remaining Hours	Milestone	Complete	Priority	Baseline Start Date	Baseline Finish Date	Baseline Duration	Tags	Board	Notes

# Project Variance

29 November 2022 EST

S1 = Actual S2 = Planned

WBS	Task	Start			Finish			Hours			%	Duration (days)		
		S1	S2	Diff	S1	S2	Diff	S1	S2	Diff		S1	S2	Diff
1	Phase 1 – Market Analysis & Idea	1/3/22	1/3/22	0	1/13/22	1/13/22	0	98.0	101.0	-3	100	9.0	9.0	0
2	Phase 2 – Business Case	1/14/22	1/14/22	0	1/25/22	1/25/22	0	67.0	65.0	2	100	8.0	8.0	0
3	Phase 3 – Product Requirements Document	1/25/22	1/25/22	0	4/6/22	3/24/22	-9	665.5	659.0	6.5	100	52.0	43.0	9
4	Phase 4 – Concept Design & Development	3/23/22	3/23/22	0	6/1/22	5/27/22	-3	419.0	420.5	-1.5	100	51.0	48.0	3
5	Phase 5 – Product Design	5/17/22	5/17/22	0	7/15/22	7/18/22	1	1047.0	1048.5	-1.5	100	43.5	45.0	-1.5
6	Phase 6 - Manufacturing & Testing	6/27/22	6/27/22	0	11/3/22	11/3/22	0	705.0	704.0	1	100	94.0	94.0	0
7	Phase 7 - Execution	11/7/22	11/7/22	0	11/24/22	11/24/22	0	322.0	324.0	-2	100	13.5	13.5	0.0
8	Phase 8 – Project Review & Lessons Learned	11/24/22	11/24/22	0	12/1/22	12/1/22	0	64.0	65.0	-1	100	4.5	4.5	0.0
<b>Total</b>				<b>0</b>			<b>-11</b>			<b>0.5</b>				<b>10.5</b>

# Improving a product's efficiency and developing a high-throughput ESR device\_Qualgen-20 - 29 Nov 2022

Page 1

	Task Name	Planned Start Date	Planned Cost	Actual Cost	Percent Com...	Planned Hours	Planned Finish...	Actual Finish...	Actual Hours	Assigned	Actual Start Date	Status	Priority	Duration	Actual Duration	Milestone	Complete	WBS
1	Phase 1 - Market Analysis & Idea	1/3/2022	\$1,100.00	\$800.00	100%	101 hours	1/13/2022	1/13/2022	98 hours		1/3/2022	Done	Very High	9 days	9 days		✓	1
2	Concept Development	1/3/2022	\$800.00	\$500.00	100%	40.5 hours	1/7/2022	1/7/2022	40 hours	Genith Si...	1/3/2022	Done	High	5 days	5 days		✓	1.1
3	Market Analysis	1/7/2022	\$100.00	\$100.00	100%	22.5 hours	1/12/2022	1/12/2022	23 hours	Genith Si...	1/7/2022	Done	Medium	3 days	4 days		✓	1.2
4	Idea Generation & Idea Screening	1/7/2022	\$200.00	\$200.00	100%	36 hours	1/13/2022	1/13/2022	34 hours	Genith Si...	1/7/2022	Done	Medium	4 days	5 days		✓	1.3
5	Milestone 1	1/13/2022			100%	2 hours	1/13/2022	1/13/2022	1 hour	Genith Si...	1/13/2022	Done	Low	1 day	1 day		✓	1.4
6	Phase 2 - Business Case	1/14/2022	\$800.00	\$800.00	100%	65 hours	1/25/2022	1/25/2022	67 hours		1/14/2022	Done	High	8 days	8 days			2
7	Develop business case	1/14/2022	\$500.00	\$500.00	100%	36 hours	1/19/2022	1/19/2022	36 hours	Genith Si...	1/14/2022	Done	Very High	4 days	4 days		✓	2.1
8	Approval for business case	1/20/2022	\$300.00	\$300.00	100%	27 hours	1/24/2022	1/24/2022	30 hours	Genith Si...	1/20/2022	Done	Critical	3 days	3 days		✓	2.2
9	Milestone 2	1/25/2022			100%	2 hours	1/25/2022	1/25/2022	1 hour	Genith Si...	1/25/2022	Done	Low	1 day	1 day		✓	2.3
10	Phase 3 - Product Requirement...	1/25/2022	\$8,400.00	\$7,400.00	100%	659 hours	3/24/2022	4/6/2022	665.5 hours		1/25/2022	Done	Very High	43 days	52 days			3
11	Project Charter	1/25/2022	\$1,000.00	\$800.00	100%	72 hours	1/26/2022	1/26/2022	70 hours	Genith Si...	1/25/2022	Done	Critical	2 days	2 days		✓	3.1
12	Project Overview	1/25/2022	\$150.00	\$150.00	100%	27 hours	1/27/2022	1/27/2022	27 hours	Genith Si...	1/25/2022	Done	High	3 days	3 days		✓	3.2
13	WBS	1/28/2022	\$200.00	\$200.00	100%	67.5 hours	2/2/2022	2/2/2022	68 hours	Genith Si...	1/28/2022	Done	High	4 days	4 days		✓	3.3
14	Stakeholders	1/28/2022	\$100.00	\$50.00	100%	18 hours	1/31/2022	1/28/2022	18 hours	Genith Si...	1/28/2022	Done	High	2 days	1 day		✓	3.4
15	Product Functional Requirements	2/3/2022	\$1,000.00	\$800.00	100%	31.5 hours	2/8/2022	2/14/2022	35 hours	Genith Si...	2/9/2022	Done	High	4 days	4 days		✓	3.5
16	Change management	2/8/2022	\$100.00	\$100.00	100%	18 hours	2/10/2022	2/17/2022	20 hours	Genith Si...	2/14/2022	Done	High	2 days	4 days		✓	3.6
17	Support requirements	2/10/2022	\$400.00	\$400.00	100%	18 hours	2/14/2022	2/18/2022	18 hours	Genith Si...	2/16/2022	Done	High	2 days	3 days		✓	3.7
18	Billing model & process	2/2/2022	\$700.00	\$700.00	100%	54 hours	2/7/2022	2/15/2022	55 hours	Genith Si...	2/10/2022	Done	Medium	4 days	4 days		✓	3.8
19	Reporting	2/7/2022	\$600.00	\$600.00	100%	45 hours	2/11/2022	2/11/2022	50 hours	Genith Si...	2/7/2022	Done	Medium	5 days	5 days		✓	3.9
20	Regulatory	2/9/2022	\$300.00	\$350.00	100%	45 hours	2/11/2022	2/11/2022	45 hours	Genith Si...	2/9/2022	Done	Very High	3 days	3 days		✓	3.10
21	Project Impacts	2/21/2022	\$400.00	\$350.00	100%	40.5 hours	2/23/2022	2/25/2022	41 hours	Genith Si...	2/23/2022	Done	Critical	3 days	3 days		✓	3.11
22	Product pricing & quoting model	2/16/2022	\$650.00	\$600.00	100%	117 hours	2/22/2022	2/24/2022	116 hours	Genith Si...	2/18/2022	Done	Critical	5 days	5 days		✓	3.12
23	Resource requirements	2/23/2022	\$100.00	\$100.00	100%	18 hours	2/24/2022	3/10/2022	17 hours	Genith Si...	3/9/2022	Done	Very High	2 days	2 days		✓	3.13
24	Trainings	2/28/2022	\$2,500.00	\$2,000.00	100%	85.5 hours	3/23/2022	4/6/2022	84.5 hours	Genith Si...	3/14/2022	Done	Medium	18 days	18 days		✓	3.14
25	Milestone 3	3/24/2022	\$200.00	\$200.00	100%	2 hours	3/24/2022	3/25/2022	1 hour	Genith Si...	3/25/2022	Done	Low	1 day	1 day	✓		3.15
26	Phase 4 - Concept Design & Dev...	3/23/2022	\$13,000.00	\$16,489.00	100%	420.5 hours	5/27/2022	6/1/2022	419 hours		3/23/2022	Done	Critical	48 days	51 days			4
27	Project Kick off meeting	3/23/2022	\$300.00	\$100.00	100%	2 hours	3/23/2022	3/23/2022	2 hours	Genith Si...	3/23/2022	Done	Medium	1 day	1 day		✓	4.1
28	Identify key requirements and fea...	3/23/2022	\$2,000.00	\$1,930.00	100%	99 hours	4/6/2022	4/11/2022	99 hours	Aman	3/28/2022	Done	High	11 days	11 days		✓	4.2
29	SWOT analysis	3/23/2022	\$300.00	\$259.00	100%	9 hours	3/25/2022	3/25/2022	9 hours	Avnish, Aman	3/23/2022	Done	Low	3 days	3 days		✓	4.3
30	Develop Concept Design	4/7/2022	\$4,200.00	\$5,000.00	100%	166.5 hours	5/27/2022	6/1/2022	166 hours	Aman	4/12/2022	Done	Very High	37 days	37 days		✓	4.4
31	Develop concept prototypes using...	4/26/2022	\$4,000.00	\$5,000.00	100%	108 hours	5/23/2022	5/23/2022	108 hours	Avnish, Aman	4/26/2022	Done	Very High	20 days	20 days		✓	4.5
32	All Department group meet	5/24/2022	\$500.00	\$500.00	100%	9 hours	5/24/2022	5/12/2022	8 hours	Genith Si...	5/12/2022	Done	High	1 day	1 day		✓	4.6
33	Financial analysis / Determine ex...	5/25/2022	\$300.00	\$300.00	100%	9 hours	5/25/2022	5/13/2022	9 hours	Aditya Ba...	5/13/2022	Done	Medium	1 day	1 day		✓	4.7
34	User requirements confirmation o...	5/26/2022	\$100.00	\$100.00	100%	9 hours	5/26/2022	5/16/2022	9 hours	Aman	5/16/2022	Done	Critical	1 day	1 day		✓	4.8
35	Milestone 4	5/26/2022	\$300.00	\$300.00	100%	9 hours	5/26/2022	5/16/2022	9 hours	Genith Si...	5/16/2022	Done	Low	1 day	1 day	✓		4.9
36	Phase 5 - Product Design	5/17/2022	\$37,000.00	\$37,400.00	100%	1048.5 hours	7/18/2022	7/15/2022	1047 hours		5/17/2022	Done	Critical	45 days	44 days			5
37	Engineering Design - CAD	5/17/2022	\$6,000.00	\$6,000.00	100%	166.5 hours	6/27/2022	6/13/2022	170 hours	Aman	5/17/2022	Done	High	30 days	20 days		✓	5.1
38	Select materials and OEM parts	5/23/2022	\$1,100.00	\$2,000.00	100%	112.5 hours	6/7/2022	6/7/2022	113 hours	Aman	5/23/2022	Done	High	12 days	12 days		✓	5.2
39	Product/Enclosure Design - CAD	6/3/2022	\$8,600.00	\$8,600.00	100%	153 hours	7/18/2022	7/15/2022	152 hours	Aman	6/8/2022	Done	High	32 days	27 days		✓	5.3
40	Software Design - C	5/18/2022	\$12,200.00	\$12,200.00	100%	292.5 hours	6/24/2022	6/24/2022	292 hours	Aman	5/18/2022	Done	High	28 days	28 days		✓	5.4
41	Embedded Design	5/23/2022	\$7,000.00	\$7,000.00	100%	234 hours	6/21/2022	6/17/2022	230 hours	Aman	5/23/2022	Done	High	22 days	20 days		✓	5.5
42	PCB Board Design	6/3/2022	\$2,000.00	\$1,500.00	100%	81 hours	6/23/2022	7/1/2022	81 hours	Aman	6/10/2022	Done	High	15 days	15 days		✓	5.6
43	Milestone 5	6/24/2022	\$100.00	\$100.00	100%	9 hours	6/27/2022	7/4/2022	9 hours	Genith Si...	7/4/2022	Done	Low	1 day	1 day	✓		5.7
44	Phase 6 - Manufacturing & Testing	6/27/2022	\$23,467.00	\$33,425.00	100%	704 hours	11/3/2022	11/3/2022	705 hours		6/27/2022	Done	Critical	94 days	94 days			6
45	2D Drawings with GD&T to manuf...	6/27/2022	\$300.00	\$300.00	100%	9 hours	7/1/2022	7/1/2022	9 hours	Avnish, Aman	6/27/2022	Done	Medium	5 days	5 days		✓	6.1
46	Manufacture prototypes	7/4/2022	\$8,767.00	\$15,525.00	100%	18 hours	8/15/2022	8/24/2022	18 hours	Avnish	7/13/2022	Done	Medium	31 days	31 days		✓	6.2
47	Assembly - 10 units	8/1/2022	\$2,000.00	\$2,100.00	100%	81 hours	8/19/2022	8/19/2022	81 hours	Avnish	8/1/2022	Done	Medium	15 days	15 days		✓	6.3
48	Quality testing	8/2/2022	\$1,500.00	\$2,000.00	100%	27 hours	8/22/2022	8/22/2022	27 hours	Aditya Ba...	8/2/2022	Done	Critical	15 days	15 days		✓	6.4
49	Design Optimization for DFM feasi...	8/22/2022	\$1,300.00	\$2,000.00	100%	27 hours	9/2/2022	9/2/2022	26 hours	Aman	8/22/2022	Done	Critical	10 days	10 days		✓	6.5
50	Find Root Cause for the problem	8/2/2022	\$3,000.00	\$3,500.00	100%	108 hours	9/13/2022	9/13/2022	109 hours	Genith Si...	8/22/2022	Done	Critical	17 days	17 days		✓	6.6
51	Resolve manufacturing issues	9/12/2022	\$5,000.00	\$6,000.00	100%	144 hours	9/27/2022	9/27/2022	144 hours	Avnish	9/12/2022	Done	Critical	12 days	12 days		✓	6.7
52	Quality testing - 2	9/28/2022	\$200.00	\$200.00	100%	117 hours	10/11/2022	10/11/2022	117 hours	Aditya Ba...	9/28/2022	Done	High	10 days	10 days		✓	6.8
53	Part Inspection report	10/11/2022	\$100.00	\$100.00	100%	81 hours	10/17/2022	10/17/2022	81 hours	Aditya Ba...	10/11/2022	Done	Very Low	5 days	5 days		✓	6.9
54	Budget re-estimation	10/11/2022	\$100.00	\$500.00	100%	45 hours	10/18/2022	10/18/2022	47 hours	Genith Si...	10/11/2022	Done	High	6 days	6 days		✓	6.10
55	Revise parts, features, manufact...	10/19/2022	\$1,000.00	\$1,000.00	100%	45 hours	11/3/2022	11/3/2022	44 hours	Avnish, Aman	10/19/2022	Done	Low	12 days	12 days		✓	6.11
56	Milestone 6	11/3/2022	\$200.00	\$200.00	100%	2 hours	11/3/2022	11/3/2022	2 hours	Genith Si...	11/3/2022	Done	Low	1 day	1 day	✓		6.12
57	Phase 7 - Execution	11/7/2022	\$4,900.00	\$6,045.00	100%	324 hours	11/24/2022	11/24/2022	322 hours		11/7/2022	Done	High	14 days	14 days			7
58	Develop production plan	11/7/2022	\$2,000.00	\$3,000.00	100%	9 hours	11/15/2022	11/15/2022	9 hours	Avnish	11/7/2022	Done	High	7 days	7 days		✓	7.1
59	Quality testing - 3	11/15/2022	\$1,000.00	\$1,000.00	100%	45 hours	11/18/2022	11/18/2022	45 hours	Aditya Ba...	11/15/2022	Done	Medium	3 days	3 days		✓	7.2
60	Finalized product documents	11/18/2022	\$1,200.00	\$1,200.00	100%	45 hours	11/21/2022	11/21/2022	44 hours	Genith Si...	11/18/2022	Done	Medium	1 day	1 day		✓	7.3
61	Develop administrative systems	11/21/2022	\$400.00	\$400.00	100%	81 hours	11/23/2022	11/23/2022	81 hours	Genith Si...	11/21/2022	Done	Medium	2 days	2 days		✓	7.4
62	Pricing and positioning strategy	11/21/2022	\$100.00	\$245.00	100%	81 hours	11											

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