Project Proposal – S275931

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# Executive Summary

# Overview

I am a senior project manager at Nexus Solutions, a multinational UK based software development company. I have been assigned to manage a project to develop a Human Resources Management System (HRMS) for a large engineering company with 200 employees at three sites.

## Purpose or objectives of this proposal

The purpose of this proposal is to propose (and develop) an automated Human Reesource Management System (HRMS) software for an engineering company with 200 employees at three sites that currently has an outdated manual human resource management system that is currently facing compliance ans Quality of Service issues. The company has a budget of £700,000.00 for this project.

Objectives:

* Initiate project and project charter
* Create baseline plan and planning
* Perform objectives (accepted deliverables)
* Develop an automated Human Resource Management System that has the following functions:
  + HR administration,
  + payroll, recruitment,
  + talent management,
  + Employee data, recruitment, and application tracking
  + Time and attendance management
  + Payroll processing
  + Salaries, performance, and Benefits tracking
  + Training and development, and more.
* Form a project team to deliver the project within the budget and desired time frame. This includes:
  + Developers
  + Coders
  + UI/UX designers
  + Testers
  + Sofware Designers
  + Software Engineers
  + IT Consultants
  + Administrators?
* Gather Requirements for HRMS software (requirements analysis)
* Design HRMS software
* Code HRMS software
* Build HRMS software
* Test HRMS software
* Deploy and Release HRMS software
* Choose development methodology
* Organise DevOps team(s)
* Generate Cost Estimate
* Risk Assessment and Create Risk Management Plan
* Ensure good communication with stakeholders
* Decide on project strategies
* Come up with conflict resolution plan for the teams
* Close project and achieved project documents.
* Stick to £700,000.00 budget
* Must be completed within 1 month.
* [add more]

## Identify the problem to be solved or need to be filled.

Nexus Solutions has consulted with an UK based engineering company with 200 employees and three sites however they currently use an outdated manual human resources management system. This has resulted in problems such a quality of service and compliance issues. We have identified a solution for these problems by developing an automated Human Resources Management System software.

## What will be in scope and what is not going to be included.

Purpose of proposal is to develop HR management software for engineering company,

This project proposal is to develop Human Resources Management Software (HRMS) for an engineering company with 300 employees at three sites and a budget of £700,000.

Software features to be included in the scope are:

* HR administration,
* payroll, recruitment,
* talent management,
* Employee data, recruitment, and application tracking
* Time and attendance management
* Payroll processing
* Salaries, performance, and Benefits tracking
* Training and development.
* Must Address Compliance and Quality of Service issues the company faces

Other items to be included in the scope:

* Must be completed within one month
* Choose an appropriate project management plan
* Choose an appropriate software development methodology
* Choose the Programming Languages, IDEs, Frameworks, APIs and DevOps tools to create the software
* Choose appropriate project, task and team management tools for this project
* Gather Requirements
* Choose a cloud computing platform if required
* Risk Management Plan
* Communications Plan
* Dispute Resolution Plan
* Quality Management Plan

What Not to include:

* Any unnecessary features that the company doesn’t need to the software that will increase costs, time and resources – Known as Gold Plating
* Avoid feature creep, scope creep
* Over Engineering
* Frivolous High-Risk decisions

<https://allfront.io/blog/what-is-gold-plating-and-how-to-avoid-it/>

## Explain how the project will be conducted.

Let people know which approach to use such as agile (and challenges) , Explain how project will be conducted, how many team members/roles

For this project Agile project management will be used as this is a software development project and agile is often used for software development as its iterative nature allows for changes to be made more easily if requirements or scope changes. Agile also allows for improvements to be made throughout the project and development process based on stakeholder feedback.

There will be daily scrums where the project leaders and stakeholders meet daily with the developers, DevOps team and designers to provide feedback for to monitor progress, suggest improvements, fix mistakes and track any requirement changes and weekly sprints where the SCRUM team will set a list of tasks for the DevOps teams to complete. There should be no more than four sprints as the project’s timeframe is one month.

The advantages of Agile project management are:

* Flexibility for changes in requirements and project scope
* Easier to fix mistakes, bugs, design and code smells and antipatterns
* More room for creative problem solving
* Deadline Flexibility
* Increased project value to stakeholders due to regular updates

Challenges of Agile project management:

* Project can slip past the one month deadline because of loose planning
* Risk of loose testing letting bugs, mistakes, antipatterns, code and design smells through
* Pace of project could be too fast for some team members
* Lack of focus causing project to go out of scope

The project will be conducted using the agile method stated above.

We will follow the five steps o the project lifecycle:

1. Project Initiation – Kickoff Meeting and define scope
2. Project Planning –
   1. Financial plan
   2. Risk Management Plan
   3. Communication Plan
   4. Dispute Resolution Plan
   5. Resource Plan
   6. Project Management Plan
   7. Procurement Plan
   8. Quality Plan
   9. Acceptance Plan
3. Project Execution
   1. Team Leadership
   2. Create tasks
      1. Plan and design software
      2. Set up devops
      3. Develop, code and debug software
      4. Build software
      5. Test Software
      6. Deploy and release software
      7. Stakeholder feedback
   3. Brief team members on their tasks
   4. Make sure client deliverables are up to standard
   5. Communicate with team members and stakeholders
4. Project Monitoring and Controlling
   1. Risk Management
   2. Acceptance Management
   3. Cost Management
   4. Time Management
   5. Quality Management
   6. Change Management
5. Project Closure.
   1. Project closure paperwork and documentation
   2. Team Analysis
   3. Write evaluation and lessons learnt (Post implementation review)
   4. Project Perfoemance analysis

<https://thedigitalprojectmanager.com/projects/pm-methodology/project-management-life-cycle/>

Key roles in this project will include:

* The steering committee led by Nexus Solutions will provide senior ledership and management for this project.
* The engineering company will be the project sponsor paying the ~£700,000 for the project. They are the project owners and the primary risk takers.
* The project manager will manage the day-to-day development, operations of the project and ensure it reaches milestones on time. The project manager will communicate with the sponsor (Nexus Solutions) to receive feedback send progress reports and make changes if requirements change
* Project team members – the consultants, designers, developers, DevOps team members, the testers, the security team, the operationsteam, the IT and system administrators, the project administrators, the software engineers, database developers, programmers and UI/UX designers, Tech Leads.
* User/Senior – The employees at the engineering company.

The project will employ up to 100 people with current estimates:

* 1 project manager
* 13 backend programers
* 13 front end programmers
* 2 database developers
* 10 UI/UX designers
* 10 Testers
* 4 DevOps Engineers
* 3 Cybersecurity specialists
* 12 Software Enginers
* 6 Software designers (UML, User Case Diagrams, Class Diagrams, Entity Relaationship Diagrams, Wirefraames and mockups)
* 5 IT Administrators
* 5 Prroject Administrators
* 1 Project Manager
* 1 IT consultant
* 3 Team Leaders (One for development team, one for operations team, one for non technical team)
* Approximately 5-10 in steering committee

~~20 Software developer cost = £38,510 10~~

13 backend programmer £42,800

13 frontend programmer £28700

2 database developer cost = £2104 10

10 UI/UX designer = £7000 3

10 Testers = £4037 3

4 DevOps = £43400 20

3 Cybersecurity = £30000

12 Software engineers = 52500 20

6 Designers = £7500 5

5 IT Administrators = £12,917

5 Project Administrators = £12,917

1 project manager = £4750

2 Tech Leads = £14,333 20

3 Team Leaders = £8750

Steering committee – 5-10 people?

1 IT consultant = £197

£236200 in salaries (rounded)

<https://www.payscale.com/research/UK/Job=Software_Developer/Salary>

<https://www.payscale.com/research/UK/Job=Database_Developer/Salary>

<https://www.glassdoor.co.uk/Salaries/ui-designer-salary-SRCH_KO0,11.htm>

<https://www.glassdoor.co.uk/Salaries/computer-programmer-salary-SRCH_KO0,19.htm>

<https://uk.indeed.com/career/back-end-developer/salaries>

<https://uk.indeed.com/career/front-end-developer/salaries>

<https://www.glassdoor.co.uk/Salaries/cyber-security-engineer-salary-SRCH_KO0,23.htm>

<https://www.glassdoor.co.uk/Salaries/software-engineer-salary-SRCH_KO0,17.htm>

<https://www.glassdoor.co.uk/Salaries/software-designer-salary-SRCH_KO0,17.htm>

<https://www.glassdoor.co.uk/Salaries/it-administrator-salary-SRCH_KO0,16.htm>

<https://www.glassdoor.co.uk/Salaries/project-administrator-salary-SRCH_KO0,21.htm>

<https://www.glassdoor.co.uk/Salaries/tech-lead-salary-SRCH_KO0,9.htm>

<https://www.payscale.com/research/UK/Job=Information_Technology_(IT)_Consultant/Salary>

<https://www.glassdoor.co.uk/Salaries/tech-lead-salary-SRCH_KO0,9.htm>

<https://www.payscale.com/research/UK/Job=Information_Technology_(IT)_Consultant/Salary>

<https://www.payscale.com/research/UK/Job=Software_Tester/Salary>

<https://www.glassdoor.co.uk/Salaries/tech-lead-salary-SRCH_KO0,9.htm>

<https://www.glassdoor.co.uk/Salaries/team-leader-salary-SRCH_KO0,11.htm>

<https://www.productplan.com/learn/agile-vs-waterfall/>

## Describe the appropriate ways to measure the success of the project and explain why your suggested measures are appropriate over alternative measures.

Make use of requirements, constant checking, go back to client, feedback, if still in bounds of expectations

Mention:

Projetct lifecycle stages eg initiation, planning, execution and handover, each stage, key documents such as network diagrams, gantt charts, charter, other required documents, stakeholder register, cost estimate document (include documents in appendix)

I have proposed several ways to measure the success of the project at all phases of the project to make sure it is completed on time, within budget, with minimal risk and meets the stakeholders’ client’s and users’ requirements:

* Set up the 11 performance metrics that are Key Performance Indicators:
  + Time Management – Measure the actual timeline of the project against the one month timeline using tools such as Gantt Charts, burndown charts and Kanban charts and use a meteric called schedule variance to compare the actual timeline against the scheduled timeline.
  + Budget – Use a cost estimate and risk management plan for financial risks to come up with with an estimated cost to see if it is within the £700,000 budget then monitor and measure actual costs against the cost estimate and budget to check if the project is still within the budget or if it has gone over budget. The client/stakeholders will be satisfied if the project is completed within the £700,000 budget however if the project is over budget then this will be problematic with the client/stakeholders and the project sponsor.
  + Project output quality and compliance – The HRMS software project must meet the desired quality standards set by Nexus Solutions, The Client (Engineering company) and national and international standards for software development and project management. Software development must meet specific quality standards including:
    - Fast response time
    - Reasonable throughput relevant to size of the engineering company and number of employees using it.
    - Good resource utilisation – Does not use up computer and server system resources unnecessarily (no excessively high CPU, GPU, Memory, Disk Space or network bandwidth usage)
    - Must be scalable in case engineering company expands
    - Very low error rate – software must be thoroughly debugged and tested, with disaster management and backups in place.
    - Low latency
    - Use load testing metrics
    - The project must comply with the relevant UK, international and local laws and regulations of all countries this software will operate in such as:
      * Data Protection Act 2018
      * UK General Data Protection Regulations 2018
      * Computer Misuse Act 1990
      * Network and Informaton Security Regulations 2018
      * Telecommunications Act 2021
      * Electronic Identification and Trust Services for Electronic Transactions Regulations 2016
      * Electronic Identification and Trust Services for Electronic Transactions Regulations 2016
      * <https://www.upguard.com/blog/cybersecurity-laws-regulations-uk>
  + <https://project-management.com/6-ways-of-measuring-project-success/>
  + Profit – As Nexus Solutions is a private third party company incontract with the Engineering company, the project must be profitable for Nexus Solutions where there is a profit margin after including the wages for all team members and the cost of resources. If the project overruns exceeding the one month timeframe or the £700,000 budget is exceeded and is determined to be the fault of the project sponsor (engineering company) for example due to poor cost estimates, unrealistic timeframe or budget or the engineering company keeps adding more features that will takelonger than one month then the project sponsor will be liable to pay the extra costs. If the project is delayed and takes longer than one month or the budget is exceeded and is determined to be the fault of Nexus Solutions for example they made a poor cost estimate, or due to poor management. Then Nexus Solutions will have to cover the costs as this is not a fault of the project sponsor therefore will result in a loss for Nexus Solutions. Profitability is therefore a metric of the project’s financial success
  + Cycle time – We will use tools to monitor the project’s lifecycle as a shorter lifecycle has a better outcome for the clients/stakeholders.
  + Compatibility Development – We can measure success of this project by monitoring how many new skills the team members learnt such as learning new software, programming languages, frameworks and software development methodologies.
  + Customer Satisfaction – Use the Customer Satisfaction Index to measure the project’s customer satisfaction by measuring its ability to meet and exceed the engineering company’s expectations in quality, outcome, delivery and to meet deadlines.
  + Project Value – The engineering company may set its own meterics for success such as making sure that the project remains within the scope and that all requirements are met.
  + Improvement – The ability to for the project teams to improve their efficiency based on analysing other project meterics.
  + Sustainability – Measuring the project’s impact on the environment, society and economy such as monitoring the project’s carbon footprint, pollutant emissions, waste and recycling, number of people employed, energy efficiency and resource consumption and stakeholder satisfaction.
* Identify Key Performance Indicators by reviewing business and project goals and aligning them so they have an idea what success looks like and define how it will be measured. This will help stakeholders understand what success looks like by providing the neccessary frameworks.
* Identify measurable factors such as meeting deadlines, staying within the budget, making a good quality product, achieving desired outcomes and staying within the one month time limit.

# Project Approach

## Methodology: Describe the approach and methodology that will be used to execute the project, including any frameworks or methodologies employed (e.g., Agile, Waterfall).

Choose methodology and justify it, pros and cons, comparison

## Project Management Plan: Provide an overview of how the project will be managed. You will also need to discuss roles and responsibilities, quality assurance processes. The report must demonstrate the project manager actions and how you will balance responsibility, authority and accountability within your team.

# Project Timeline and Milestones

Put Gantt Chart Here.

# Resource Allocation

## Human Resources: Specify the roles and responsibilities of team members, as well as any external resources or expertise required.

## Budget: Outline the budget allocation for the project, including costs associated with personnel, materials, equipment, and any other relevant expenses. Use a software estimation technique of your choice with proper justification.

Cost Estimation Template

## To provide context, briefly explain, why your organisation/team is interested in this project and how the proposed project will align to your organisational objectives

Improve HR Department

## Provide the key technical skills that your organisation/team will require to give a reader of your proposal a balanced understanding.

Programming, Project and Team Management, DevOps etc

## Identify the expected benefits and dis-benefits, ensuring they are informed by the strategic context (social responsibility context you have explained above).This paragraph is an opportunity to sell the value of your project to decision makers.

Identify benefits of system from a social or community perspective, less stress for HR department, Fewer errors with salaries and less financial stress, fewer disputes strikes etc

# Project Management Approaches

## Team Structure and roles

People involved (specify management methodology), pros and cons,

## Conflict Resolution Strategies

Refer to lecture and online resources

## Risk Management Plan

Refer to lecture and online resources

## Identify five (5) risks and quantify their potential likelihood and severity.

Brainstorm risks associated with the project, identify the 5 highest risks

## Indicate how each of the above-mentioned risks will be managed

Details on how to manage the 5 highest risks

# Communication Plan

Lorem Ipsum (paragraph explaining it)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description | Frequency | Channel/Medium | Audience | Owner |
| Project Kick-off Meeting, Define Scope, Initiation Phase, cost estimate, feasibility study | Start of Project | In Person Meeting, possibly others joining on Zoom or MS Teams, Project Charter | All project and team members, Stakeholders, Clients, Project Manager, Tech Lead, Team Leader | Stakeholders, Nexus Solutions, Engineering company? Project Sponsor |
| Collaboration between project and team members, clients, stakeholders | Daily, Constant | In person, Face-toFace, Zoom, MS Teams, Slack, Email, Phone | Project and Team Members, Project Manager, Tech Lead, Team Leader |  |
| Updates and contact with stakeholders | As needed | In person, Face-toFace, Zoom, MS Teams, Slack, Email, Phone | Project Manager, Tech Lead, Stakeholders | Project Sponsor |
| Project Meetings | Weekly or more frequently | In person or online | Project and team members |  |
| SCRUM Meetings | Weekly | Hybrid – In person or online | Developers, SCRUM Master, Tech Lead, Project Manager, DevSecOps team |  |
| Daily Scrum | Daily | In person or online | Developers, SCRUM Master, Tech Lead, DevSecOps team |  |
| Project Planning | Start of Project / Planning phase | In person or remote, Gantt Chart, resource plan, risk management plan, quality plan, acceptance plan | All project and team members, Project Manager, Tech Lead, Team Leader, stakeholders, clients? |  |
| Project Execution Meeting | Start of execution phase | In person or remote, set up other communication methods, team, task and project management systems | All project and team members, Project Manager, Tech Lead, Team Leader, stakeholders |  |
| Project Monitoring and Control meetings | Start of and during monitoring and controlling phase. | In person or remote | All project and team members, Project Manager, Tech Lead, Team Leader, stakeholders |  |
| Post project review meeting (closure phase), project evaluation | End of project | In person or remote | All project and team members, Project Manager, Tech Lead, Team Leader, stakeholders, clients |  |
| Milestones and deliverables | As required | In person or remote | All project and team members, Project Manager, Tech Lead, Team Leade |  |
| Project Check Ins | Daily | Slack | Project and team members |  |

Project Handover (documents ending project, due payments, lessons learnt).

# Conclusion

Cnclude the management process

# References

**There are no sources in the current document.**