**Unit 3 pid document**

**Mohammed Mahin Ibnay Mamun (346584)**

**Project Initiation Document**

**Project Details**

|  |  |
| --- | --- |
| **Project Title:** | Designing and installing smart devices /  Smart device installation |
| **Project Sponsor Name:** | MaxP ltd |
| **Project Client Name:** | Ms. Paton |
| **Project Manager Name:** | Mohammed Mahin Ibnay Mamun |
| **Start Date:** | 01/02/22 |
| **Completion Date:** | 02/04/22 |
| **Estimated Cost:** | £116,750 (equipment cost + labour cost) |

**Document Details**

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| --- | --- | --- | --- |
| **Version** | **Modifications** | **Author** | **Date** |
| 1 | Purpose of project and added business case | Mohammed Mahin Ibnay Mamun | 01/02/2021 |
| 2 | Project and added assumptions | Mohammed Mahin Ibnay Mamun & Ms. Paton | 01/02/2021 |
| 3 | Added communication plan | Mohammed Mahin Ibnay Mamun | 05/02/2021 |
| 4 | Added targets and the requirements | Mohammed Mahin Ibnay Mamun | 08/02/2021 |
| 5 | Updated purpose and project aims | Mohammed Mahin Ibnay Mamun | 15/02/2021 |
| 6 | Updated requirements | Mohammed Mahin Ibnay Mamun | 17/02/2021 |

**Approvals**

This document requires the following approvals:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Role** | **Signature** | **Date** | **Version** |
| Ahmed Iftikhar | Senior Software Engineer | Ahmed.iftikhar | 01/02/2022 | 1 |
| Bobbi Gray | App Developer | Bobbi.Gray | 01/02/2022 | 1 |
| Jack Alderdice | Junior Software Engineer | Jack.Alderdice | 01/02/2022 | 1 |
| Sam Mandele | Senior Network Engineer | Sam.mandele | 01/02/2022 | 1 |
| Jessica woods | Junior Network Engineer | Jessica woods | 01/02/2022 | 1 |
| Ms. paton | Managing Director | Ms. paton | 01/02/2022 | 1 |
| Mohammed Mahin Ibnay Mamun | Project Manager | m.mamun | 01/02/2022 | 1 |

**Distribution**

This document has been distributed to:

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| **Name** | **Role** | **Date of Issue** | **Version** |
| Ahmed Iftikhar | Senior Software Engineer | 04/02/2022 | 1 |
| Bobbi Gray | App Developer | 04/02/2022 | 1 |
| Jack Alderdice | Junior Software Engineer | 04/02/2022 | 1 |
| Sam Mandele | Senior Network Engineer | 04/02/2022 | 1 |
| Jessica woods | Junior Network Engineer | 04/02/2022 | 1 |
| Ms. paton | Managing Director | 01/02/2022 | 1 |
| Mohammed Mahin Ibnay Mamun | Project Manager | 01/02/2022 | 1 |

**Purpose of the Project Initiation Document**

Tracking the project and planning it are the determinations of this document. The purpose of this document is to provide developers and stakeholders with information about this project. For example, how successful the project is progressing along with the timestamps on the milestone. The main reason you need to work with a PID document is because it will lead to overall success in management of the assessment.

Without having a pid document, you will see how your project will very easily drop. This would result in overrunning the project as well as going above budget.

**Project Aims:**

Ms. Paton has requested a system that will:

1. Use security cameras
2. use artificial intelligence
3. Have a heat map of the office with sensors
4. track maintenance of printers
5. enable intelligent lighting with smart bulbs
6. track building data over time so that the software can adapt to changes that match occupancy or seasonal changes
7. support 24/7 operation.
8. Smart tag equipment

She feels that the new system will:

1. minimize security risks
2. reduce carbon footprint
3. provide a 30% efficiency saving on utility bills
4. improve the wellbeing of staff through a better office environment

**Project Management and Control:**

Planning and management for this project has been recorded in this document as well as: milestones, goals and targets/requirements which are also shown in this document. This document can be used as a reference by anyone interested in the project. Project team members, managers, stakeholders, and developers will also find in this document assumptions and issues, as well as risk management strategies.

**Background to the Proposed Work:**

In terms of the office environment, Ms. Paton believes the business operates inefficiently. Considering energy bills, employee comfort, and quality of life, the office environment is inefficient. Ms. Paton's business has insufficient security, currently, security is inadequate for her business, improving security by installing cameras and other devices (such as motion sensors) will enhance security.

**Purpose of the project:**

Implementing smart devices into the business will resolve the issue raised above. It is expected that smart devices will replace certain parts and functions of an office, such as thermostats that can be controlled manually or remotely through a custom-built application, and which will control various functions such as heating.

**Responsibilities:**

Resource and material management will fall to the project manager. Project managers are responsible for budgeting and payroll. They also communicate with clients, users, and Ms. Paton, who is the company's managing director, who requested the project.

As project managers, the senior managers will be responsible for handling their specific areas of expertise. App development and database development will be overseen by the senior software engineer. A public application created under the supervision of the senior software engineers will be used by users, while a junior software engineer will test and fix software and general system problems.

**Materials:**

It is estimated that the entire budget for this project will come to around £125,000, which covers all the desired outcomes. It is anticipated that a portion of this budget will be used to purchase and install the system's hardware.

This will include developing the application and software, as well as paying the salaries of each member of the team, including network engineers, software engineers, app developers, and project managers.

In addition to smart locks, lights, cameras and lightbulbs, smart heating sensors, advanced motion sensors, and smartphones for employees, there are also cables and Wi-Fi access points needed. To be able to remotely access various features and parts of the system, employees will also need additional hardware such as network infrastructure and Wi-Fi devices.

**objectives**

|  |  |  |
| --- | --- | --- |
| **SMART objective** | **Achieved?** | **Date and Comments** |
| Create the application's user interface keeping in mind the mobile devices the project has purchased. The phones will have this application loaded, and it will be used to communicate with the system. Over the course of the project's whole design and development stage, which lasts for around 4 weeks, the design for the interface should be developed and implemented with all the system's functionalities incorporated. | y | 05/03/2021 |
| Develop a strategy for the system and construct it; the database must be capable of storing all the system's data. Along with the design of the main application, this needs to be created. The application needs to cover this. This needs to be developed over the course of three weeks. | y | 25/02/2021 |
| Purchase and set up smart devices. All necessary smart equipment, such as sensors, thermostats, motion sensors, security cameras, and smart locks, are included in this group. This must be done over the course of the application's and system's development and should take two weeks to complete. | y | 15/03/2021 |
| Assemble server hardware; a cloud-based system that can be used by staff members and managers should be placed in the workplace. The database and system that the mobile application and smart devices link should be hosted here. This should happen about halfway through the project, and it will take two weeks to put it into action. | y | 21/03/2021 |
| To ensure that the system's components—including the application, database, system, and smart devices—are all functional, the system should be tested. Once all defects and known errors have been detected and addressed, the system should be functioning. Bugs and issues should be fixed as soon as they are discovered during testing. This should take place at the project's conclusion and last for about two weeks. | y | 27/03/2021 |

**Scope**

It will provide various smart devices that will make the workplace environment more comfortable for the employees. The project is designed to improve the quality of life for the employees at the allocated workspace.

The building's efficiency will also be improved, which will result in lower energy and gas costs because of this project. With the installation of motion sensors and cameras, this project will also provide improved security, enhancing the safety of the company. The project will also involve the construction of an artificial intelligence system; this system will serve as an assistance to the staff, helping with various system and application duties.

**Business Case**

The owners and managers of the company currently believe that the existing business climate is insufficient. Gas and energy costs have increased because of wasteful and ineffective use. The office environment can be improved, which will also assist the company's workers by providing a better work environment. Additionally, inadequate security has been reported, and an updated security system is required. Smart devices, which can be utilized at work to assist in saving expenses in energy bills and to improve the workplace environment, can be used to solve the problems. Nevertheless, these can be pricey.

**Assumptions**

|  |  |  |  |
| --- | --- | --- | --- |
| **Assumption** | **Validated by** | **Status** | **Comments** |
| The database and application systems will be integrated. | Mohammed Mahin Ibnay Mamun & Ms. Paton |  |  |
| An assistant powered by artificial intelligence will not be used by the system. | Mohammed Mahin Ibnay Mamun & Ms. Paton |  |  |
| Every device will be available within the system. | Mohammed Mahin Ibnay Mamun & Ms. Paton |  |  |
| Certain people will be able to use a remote control. | Mohammed Mahin Ibnay Mamun & Ms. Paton |  |  |

**Constraints**

|  |  |  |  |
| --- | --- | --- | --- |
| **Constraint** | **Validated by** | **Status** | **Comments** |
| scope for budget prevention | Mohammed Mahin Ibnay Mamun & Ms. Paton |  |  |
| Smart gadget prices | Mohammed Mahin Ibnay Mamun & Ms. Paton |  |  |
| limiting the use of devices with open APIs | Mohammed Mahin Ibnay Mamun & |  |  |
| Testing with a time constraint and quality control of the user experience. | Mohammed Mahin Ibnay Mamun & Ahmed Iftikhar |  |  |

**Risk Management Strategy**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Risk** | **Probability** | **Impact** | **Severity** | **Contingency Plan** |
| Installing hardware in the building is difficult. |  |  |  | Place the equipment in a different location in the office. |
| The development time goes over the allotted period due to errors and faults. |  |  |  | Give yourself more time to rectify any unforeseen defects or errors. |
| The project's client requests additional functionality, which results in scope creep. |  |  |  | Ask the customer and users about anticipated costs and timely delivery for further features or obtain all the necessary information before commencing. |
| inconsistent with Inadequate hardware bought costs time and money |  |  |  | Discover the various smart gadgets' API compatibility by conducting some research. |
| Hardware failure or damage necessitates a project delay. |  |  |  | Before beginning the following parts of the project and testing it, obtain all the necessary hardware. |

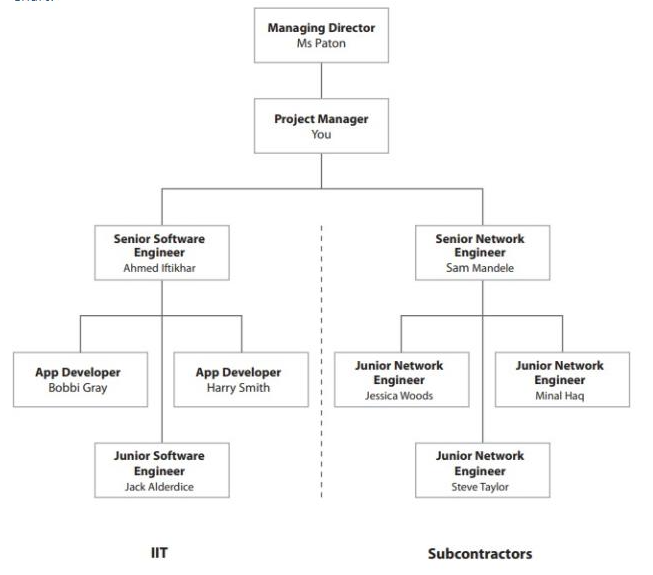
**Deliverables**

|  |  |  |
| --- | --- | --- |
| **Item** | **Components** | **Description** |
| Smart Devices | -Network hardware/infrastructure connection | It will be possible to remotely control sensors, cameras, and thermostats that are connected to the system. |
| Phones / mobile devices | -Internet access -Application | Employees are given phones and mobile devices |
| Software application | -API access to smart devices  -Access to network hardware  -Mobile GUI (User interface) | the program that managers and staff will use to access and manage the system. |
| database | -MySQL database system  -Application interaction | Keeping track of personnel, files, and logs. |
| Network hardware | -Wi-Fi access points -Wires and connections | This enables access to and connection between internet-connected systems and smart gadgets. The management and staff can now communicate with the system thanks to this. |

**Stakeholders**

|  |  |
| --- | --- |
| **Stakeholder** | **Responsibility** |
| Managing Director | The managing director oversees presenting the project's needs as well as inputting it to the project team and project manager. The project's requirements, which should be designed around, should be provided by the director. |
| developers | The system and application must be designed and made by the project's developers. The senior software developer oversees supervising the development of this system and application by the software developers. |
| Network engineers | The server on which the system will run, as well as the database for the system, must be built by network engineers. For the network to be integrated, the senior network engineer must ensure that it functions and is compatible with the hardware and application. |
| employees | Based on their own usage of the system, the employees can provide the project team with feedback. This can be used to improve the system in upcoming releases and upgrades and can include both positive and negative feedback about specific system components. |

**Project Management Team Structure/Organizational chart**



**Communication Plan**

|  |  |  |  |
| --- | --- | --- | --- |
| **Stakeholder(s)** | **Frequency** | **Type** | **Purpose** |
| -Project manager  -Client | Start and end of project. | Meetings and in person | Discuss the project's status, budget, and deadlines. |
| -Senior software engineer  -Senior network engineer | Daily from the implementation of hardware and software | Phone and in-person | Integrate and test your devices and software. |
| -Project manager  -Senior software engineer  -App Developers  -Junior software engineers | Biweekly | Meeting | Discuss development and unforeseen challenges, problems, and milestones to determine whether the development is proceeding as planned. |
| -Project manager  -Project manager  -Senior network engineer  -Junior network engineers | Biweekly | Meeting | Learn about and monitor the integration of the hardware and software, as well as any issues. |
| -Project manager  -Team | Weekly | Meeting | Reporting on the project's progress and communicating what needs to be done to finish it. |