Sheet : 1	Review Date: 23/02/2023

Name:
Bad assembly and loss of equipment in components

1. Description:
The development of IoT nodes implies an expense in the acquisition of sensors, electronic elements, boards and in the construction of the IoT nodes themselves. Component failure or poor construction can burn out the main board so that the main component is lost.

2. Impact on the baseline:
Low

3. Priority:
Regular

4. Resource involved (Human Resource, Money and time):
Loss of 1 job of 1 mechatronics member. Lost Arduino Nano ($8.71 dollars)
Lost from the RaspBerryPy ($200.84 dollars)

5. Risk assessment:
The loss of equipment due to damage implies a great loss of the capital destined for the project, which would increase the costs of the project and, if frequent, could delay the mechatronics team in their duties.

6. Opportunities and risk mitigation:
To mitigate the risk, it is suggested to make the corresponding schematic of the device, in addition to generating an assembly guide for mechatronics personnel.

Sheet : 2	Review Date: 23/02/2023

Name:
Intermittent transmission service

1. Description:
The implementation of IoT nodes implies having a network and electrical service for its operation, in case of not having a network, the IoT node will not be able to transmit, until the network returns and in case of losing power supply, the IoT node will not be operational.

2. Impact on the baseline:
Low

3. Priority:
Regular

4. Resource involved (Human Resource, Money and time):
The administrator or person in charge will have to find a way to put the IoT node back into operation, wasting time in the process.

5. Risk assessment:
A constant failure in the IoT node can imply the loss of administrators' time, for the relocation of the IoT node or for the correction of errors that prevent the correct transmission of data.

6. Opportunities and risk mitigation :
To mitigate the risk, a study must be carried out of the strategic points where the device will be placed, so that it can monitor points of interest, in addition to having network and electricity services.

SMMA

Sheet : 3	Review Date: 23/02/2023

Name:
Overload of requests to the Database

1. Description:
Having a large pool of Iot nodes means that the database will receive multiple insert requests to the database, which could clutter the database and lead to problems querying or adding information.

2. Impact on the baseline:
Half

3. Priority:
High

4. Resource involved (Human Resource, Money and time):
additional server rental
Time would be lost when changing the requirements and structuring a distributed database (the annual rent is approximately 47.35 dollars).

5. Risk assessment:
By not creating a suitable method for inserting data from various nodes, you can generate an overflow of requests to the database, which would make the service inoperative. At the same time, more capital would have to be contributed to the creation of a distributed database.

6. Opportunities and risk mitigation:
To mitigate the request problem, you can create a method using JSON to extract a set of information from the database with a single query so that only the JSON file is received.

Sheet : 4	Review Date: 23/02/2023

Name:
Instability of the script for sending data

1. Description:
For the insertion of data to the database through the IoT node, a script in python is used which will be in charge of cleaning, processing and sending the information to the database, having a delay or a failure in this script would invite the transmissions.

2. Impact on the baseline:
Low

3. Priority:
High

4. Resource involved (Human Resource, Money and time):
Lost time from software development work

5. Risk assessment:
It is very frequent that these errors happen and it can cause that nodoIoT does not work correctly since this would disable the sending of information and the obtaining of data.

6. Opportunities and risk mitigation:
To prevent this from happening, the software must be tested and subjected to different tests, trying to emulate different situations to which the IoT node can be subjected, in addition to adding a structure that does not abruptly close the script.

Sheet : 5	Review Date: 23/02/2023

Name:
Loss of equipment due to the weather and birds

1. Description:
As the IoT nodes are exposed to the elements, it is possible that deterioration and damage to the components is accelerated, in addition, birds and other living beings can physically damage the equipment.

2. Impact on the baseline:
Low

3. Priority:
Regular

4. Resource involved (Human Resource, Money and time):
Loss of equipment and the cost of an IoT node (approximately 293.10 dollars) Loss of work time spent with the assembly.

5. Risk assessment:
The loss of equipment due to the weather or other factors implies a great loss of the capital destined for the project, which would increase the costs of the project.

6. Opportunities and risk mitigation:
To reduce the risk, it has been planned to design a casing that correctly protects the components from the weather, in addition, a proximity sensor was added so that it emits a noise when an animal approaches.

SMMA

Sheet : 6	Review Date: 23/02/2023

Name:
insufficient storage

1. Description:
Being a system based mainly on storage, the size of the database becomes important over time, so it is important to consider the way in which the data will be protected.

2. Impact on the baseline:
Half

3. Priority:
High

4. Resource involved (Human Resource, Money and time):
storage costs (approximately $47 per year for each module)

5. Risk assessment:
It is a very constant risk because in SMMA you can unexpectedly obtain too much data.

6. Opportunities and risk mitigation:
To mitigate the risk, it was suggested that only two years of information from each IoT node be saved so that we can sustain the information with a single data module for now