



**Cyprus International University**

Faculty of engineering  
Department of Software Engineering  
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## **Masked Face Recognition System (MFR) Report 2**

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V1

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# Activity Cost Estimate

## 1.0 Statement of Purpose

The purpose of this document is to provide an estimate of how much it would cost to complete each activity in the work breakdown structure of MFR project. This document contains (a) a list of the activities in the work breakdown structure (WBS) with the activity number in the WBS, (b) the different types of resources needed, (c) the resource units needed or the number of hours worked for each activity, (d) the cost of the resource per unit or hour, (e) the cost of each resource for each activity, (f) the total number of resource units needed or the number of hours worked, (g) the total costs for the different resources, (h) the total costs for completing each activity, (i) any reserves allowed, (j) a total cost for completing the project, and (k) any assumptions made.

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## 2.0 Critical Assumptions and Constraints

1- Because of the war in Europe and the problems of the supply chain from China and many countries of the world, the prices of silicon chips have been rising for more than a year, we assumed that the prices would remain the same until we order them.

2- The dealer of the hardware parts is buying the parts from China with US dollar any they are selling it with Turkish lira, so if the exchange rate changed the price also will be changed, so we assumed the exchange rate will stay on 1USD = 14.75TL.

3- We assumed that we will not pay for any external services such as a programmers or electronic and electrical engineer, which the cost estimation table contains only the hardware parts.

### 3.0 Cost Estimate

<u>WBS Item Number</u>	<u>WBS Item</u>	<u>Resource Type</u> <u>1</u>			<u>Total</u>
1.	Hardware Parts	32/1	-	-	1885 TL
1.1.	RFID parts	3/1	-	-	1136 TL
1.1.1.	RFID	1/1	31 TL/1H	31TL	31 TL
1.1.2.	LED's	2/1	3.5 TL/1H	3.5 TL	7 TL
1.1.3.	Alphanumeric LCD	1/1	219 TL/1H	219 TL	219 TL
1.2.	Masked face recognition parts	2/1	-	-	376.5 TL
1.2.1	Camera	1/1	157.5 TL/1H	157.5 TL	157.5 TL
1.2.2	LCD screen	1/1	219 TL/1H	219 TL	219 TL
1.3.	Sensors part's	4/1	-	-	137.9 TL
1.3.1	Distance sensor	1/1	31.5 TL/1H	31.5 TL	31.5 TL
1.3.2	Gas sensor	1/1	28.4 TL/1H	28.4 TL	28.4 TL
1.3.3	Flame sensor	1/1	35 TL/1H	35 TL	35 TL
1.3.4	Speaker	1/1	43 TL/1H	43 TL	43 TL
1.4.	Network parts	1/1	-	-	107.5 TL
1.4.1	Ethernet port	1/1	107.5 TL/1H	107.5 TL	107.5 TL
1.5.	Power and electricity parts	2/1	-	-	43.47 TL
1.5.1	Battery	1/1	9.45 TL/1H	9.45 TL	9.45 TL
1.5.2	Power Cable	1/1	34.2 TL/1H	34.2 TL	34.2 TL
2.	Coding	0	0	0	0
3.	Database creation	0	0	0	0
4.	Smart contract development	0	0	0	0
5.	Testing	0	0	0	0

# Business Case

## 1.0 Revision History

No Changes

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## 2.0 Statement of Purpose

The purpose of this document is to justify the commitment of resources to MFR project. This document describes (a) the business objective, (b) the current situation and problem, (c) a list of critical assumptions and constraints, (d) an analysis of possible solutions and recommendations, (e) the preliminary project requirements, (f) the budget estimates and financial analysis, (g) a schedule estimate, (h) a list of potential risks, (i) a section with approval signatures, and (j) an appendix section.

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## 3.0 Business Objective

AZFCO. is a company started by three university students in North Cyprus, aims to create a technology similar to (God eye) based on high security network (Blockchain).

MFR project is little chunk of our system as the God eye technology based on the facial recognition and having a stable masked facial recognition as sub system worked within God eye system will increase the accuracy and efficiency of the system at all.

## 4.0 Current Situation and Problem/Opportunity Statement

Normal facial recognition systems have ability to recognize not covered faces, so this technology can be used as a personal security system such iPhone face ID, Lock and unlock the doors using face recognition, and etc.

If we need a system for public control like the systems that is used in China for public control, we need a system that is stable, accurate, and high efficiency but the current facial recognition technology is breakable because who want to make a crime will cover his/her face with a mask and the current technology is unable to recognize masked faces, so the criminal will simply get away with his crime, So we need a system meet this specifications and unbreakable, so using a masked facial recognition system will add this advantages to the main system and we will have a high accurate system and using the blockchain networks for the system communication will make the system unbreakable.

This masked face recognition technology can be used as a sub system within God eye technology using the blockchain networks for communicating and chainlink technology to collect off-chain data, here we are talking about closing the gap of the security, accuracy and efficiency.

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## 5.0 Critical Assumptions and Constraints

### 5.1 Critical Assumptions

- We assumed Chainlink - Kadena blockchain bridge will be ready in 1-2 weeks.
- One of the weak points of the system is the system smart contract we assumed the smart contract will be free bug, so no one can use these bugs to break the system.

### 5.2 Critical Constraints

- Chainlink technology: We are forced to use Chainlink technology which allow us to collect off-chain data and pass it through the blockchain to increase the security, we are forcing to use this service provider because they have the most mature technology for off-chain data.
  - External dependencies: The system smart contract depends on having a bridge between Chainlink blockchain and Kadena blockchain.
-



## 6.0 Analysis of Options and Recommendations

The analysis of options depends on the scenario in which the customer wants to use the system. Using the system for public control is completely different from analyzing options if the system is used to open and close doors, so we will assume that the system will be used for public control.

### 6.1 Identification of Options

- Option 1: Enact laws prohibiting the wearing of masks and the winter hats that can be used to cover the face.
- Option 2: Using masked face recognition system with the normal internet networks.
- Option 3: Using normal face recognition system with the blockchain networks.
- Option 4: Using masked face recognition with the blockchain networks.

### 6.2 Comparison of Available Options

- Option 1: Cannot banned the medical masks due to the spread of viruses, also cannot banned the winter hates due to the low tempter in many counties such as Russia.
- Option 2: With this we have solved the problem of masked faces, but our system is still simply hackable (breakable).
- Option 3: This is how we solved the problem of safety, but we still have the problem of masked faces.
- Option 4: This is how we solved the problem of safety, and the problem of masked faces.

### 6.3 Recommended Option

Replacing old technology by a new one is easier than taking any actions or enact laws because the laws can be broken but the decentralization in god eye system or even MFR system (part of god eye system) is very hard to be broken (Closer to being unbreakable).

## 7.0 Preliminary Project Requirements

### 7.1 Target Benefits

- Masked Face recognition system for locking and unlocking the door
- Masked Face recognition system as part of god eye project for public control
- Masked Face recognition system can be used for face passport (Biometric passport)
- Solving the problem of inability to recognize masked faces which means solving of huge crimes.

### 7.2 Outputs

- Masked Face Recognition System
- Alternative authentication method, RFID system
- Blockchain connection to data transfer and validation

### 7.3 Stakeholders

<u>Stakeholder</u>	<u>Document</u>	<u>Format</u>
Ahmad Jawabreh	Project Status Report	Email (Protonmail)
Zaid Mohtaseb	Hardware connection maps	Hard Copy
Ferhat Bal	Project Source Code	GitHub

## 7.5 Resources

Hardware Part	Version	Piece	Price
Microcontroller	Arduino UNO R3 Kit	1	880 TL
Microchip ports Extenders	74HC595	2	5.25 TL
Ethernet Port	ENC25J60	1	107.5 TL
LCD Screen	1.8inch	1	219 TL
Power Cable	GePro UM-85	1	34.2 TL
Red Led	Red Led Package	1	3.5 TL
NFC Keychain	13.56 MHz	2	4.55 TL
RFID Card	125 kHz	2	4.55 TL
Breadboard	Normal	3	21 TL
Battery	9V	1	9.45 TL
Ticket NFC	13.56 MHz	5	4.2 TL
Jumper Cable Kit	M-M	2	19 TL
RFID Reader	RC522	1	31 TL
Green Led	Green Led Package	1	3.5 TL
Resistors	Resistors Kit	1	56.33 TL
Temperature Sensor	DH11	1	31.3 TL
Welding Gun	ZD 23 30W	1	103 TL
Gas Sensor	MQ-2	1	28.4 TL
Double Faced Pertinax	7*9 cm & 8*12 cm	1	33 TL
Camera	ESP32-CAM	1	157.5 TL
Soldering Tin	1.60 mm 100 g	1	75.7 TL
Multimeter	Marxlow DT-830D	1	51 TL
<b>Total Cost</b>	<b>1885 TL</b>		

## 8.0 Potential Risks

Understand how the system algorithm exactly working.	If the people understood the exact working mechanism of the system they can cover the features that is used to recognize the masked face.
If the system will be used for public there is a risk to give wrong reports.	Using the system in public control and especially in countries such as China that all of the people there they share the same facial features so the system should be well trained on like this scenario.
Breaking the system bridge.	One of the weak point on the system is our smart contract so there is a possibility of breaking the system through the smart contract so we will use trusted auditing company (CertiK) to audit our smart contract
Understand how the system algorithm exactly working.	If the people understood the exact working mechanism of the system they can cover the features that is used to recognize the masked face.
. If the system will be used for public there is a risk to give wrong reports.	Using the system in public control and especially in countries such as China that all of the people there they share the same facial features so the system should be well trained on like this scenario.

## 9.0 Approval Signatures

*As project manager on MFR Project, I have reviewed the information contained in the Business Case and agree to its content.*

Name	Position	Signature	Date
Ahmad Jawabreh	Hardware Specialist - Smart Contract Developer		12-05-2022

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

# Communication Matrix

## 1.0 Statement of Purpose

The purpose of this document is to document each stakeholder involved in MFR project and their communication needs. The matrix includes (a) the name of the stakeholder, (b) the type of communication, (c) the method used for the communication, (d) the timing of the communication, and (e) who is responsible for the communication.

## 2.0 Communication Matrix

Stakeholder	Type	Communication Medium	Frequency	Responsible Party
Ahmad Jawabreh	Work progress report	Email (Protonmail)	Every Day	Zaid Mohtaseb
Ahmad Jawabreh	Software and code status	GitHub	Day after day	Zaid Mohtaseb
Zaid Mohtaseb	Work progress report	Email (Protonmail)	Every Day	Ahmad Jawabreh
Zaid Mohtaseb	Hardware connection maps and documentation	GitHub	Day after day	Ahmad Jawabreh
Ahmad Jawabreh	Work progress report	Email (Protonmail)	Every Day	Ferhat Bal
Zaid Mohtaseb	Code testing	GitHub	Day after day	Ferhat Bal

# Communication plan

## 1.0 Revision History

No Changes

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## 2.0 Statement of Purpose

The purpose of this document is to describe the processes and the requirements that are in place to ensure the proper collection and distribution of data related to MFR project. This document includes (a) the roles and responsibilities of the project team in managing communications, (b) a stakeholder analysis, (c) a list of the different project reports, (d) a list of the differed project meetings to be held, (e) information about project information accessibility, (f) a communication summary, (g) how communication documentation will be conducted (h) the guidelines for managing changes in communications needs, (i) the plan modification rules, and (j) the stakeholders' signatures.

### 3.0 Roles and Responsibilities

Project Sponsor: Team members	<p>The Project Sponsor has the following responsibilities and authority in managing the contract:</p> <ul style="list-style-type: none"><li>➤ Suggest the contract closure conditions of the project and agree to any changes regarding the contract closure.</li><li>➤ Suggest the price of the final product and agree to any changes regarding the price.</li><li>➤ Suggest the penalty conditions of the project and agree to any changes regarding the penalty.</li></ul>
Project Manager	<ul style="list-style-type: none"><li>• Project Manager: Ahmad Jawabreh<ul style="list-style-type: none"><li>➤ Information about the details of the project and the contract.</li><li>➤ Responsible to approve the changes to the management plan.</li></ul></li><li>• Project Management team: Zaid Mohtaseb and Ferhat Bal<ul style="list-style-type: none"><li>➤ Information about the details of the project.</li><li>➤ Suggest changes on the management plan.</li></ul></li></ul>
Project Members Assigned to Convey Information	<ul style="list-style-type: none"><li>• Project Management team: Zaid Mohtaseb and Ferhat Bal</li></ul> <p>Project members will be responsible to conveying information to the stakeholders</p>

## 4.0 Stakeholder Analysis

	Zaid Mohtaseb	Ahmad Jawabreh	Ferhat Bal
Role Project	<ul style="list-style-type: none"> <li>Project Sponsor</li> <li>Software Engineer</li> <li>Management team member</li> </ul>	<ul style="list-style-type: none"> <li>Project Sponsor</li> <li>Project Manager</li> <li>Hardware Specialist</li> <li>Smart contract developer</li> </ul>	<ul style="list-style-type: none"> <li>Project Sponsor</li> <li>Quality Assurance team</li> <li>Management team member</li> </ul>
Organization	AZFCO.	AZFCO.	AZFCO.
Contact Information	<a href="mailto:Zaidmoh@protonmail.com">Zaidmoh@protonmail.com</a>	<a href="mailto:Jawabreh@protonmail.com">Jawabreh@protonmail.com</a>	<a href="mailto:Ferhatbal@protonmail.com">Ferhatbal@protonmail.com</a>
Unique Facts	Prefers use GitHub for project code	Prefers use of email for project documents	Prefers use GitHub for project code and test sheets
Level of Interest	High	High	High
Level of Influence	High	High	High
Suggestions for managing relationships	Keep informed of all project progress	Keep informed of all project progress	Keep informed of all project progress



## 5.0 Project Reports

	Data Needed	Frequency of Collection	Responsible Party for Data Collection & Analysis	Report Media & Format	Responsible Party for Distributing Report
Schedule Status	Tracking Gantt Chart	Weekly	Ahmad Jawabreh	Status Form	Ahmad Jawabreh
Work Progress	Tracking weakly achievements	Weekly	Zaid Mohtaseb	Work Progress form	Zaid Mohtaseb
Software quality audit	System code	Weekly	Ferhat Bal	Software quality form	Ferhat Bal

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## 6.0 Project Meetings

	Purpose	Frequency	Attendees	Reporting Requirements
Work Progress	Discussing the work progress on the project	Weekly	<ul style="list-style-type: none"><li>Ahmad Jawabreh</li><li>Zaid Mohtaseb</li><li>Ferhat Bal</li></ul>	Work Progress Report
Schedule Status	Following the schedule according to Gant chart	Weekly	<ul style="list-style-type: none"><li>Ahmad Jawabreh</li><li>Zaid Mohtaseb</li><li>Ferhat Bal</li></ul>	Status Form

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## 7.0 Project Information Accessibility

According to our company aims, there will be no centralize storing of the data all of our documentations and data will be storing using file chain protocol (file coin protocol), which give us a protocol to use thousands of distributed nodes around the world to store our data encrypted and distributed.

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## 8.0 Communications Summary

Stakeholder	Type	Communication Medium	Frequency	Responsible Party
Ahmad Jawabreh	Work progress report	Email (Protonmail)	Every Day	Zaid Mohtaseb
Ahmad Jawabreh	Software and code status	GitHub	Day after day	Zaid Mohtaseb
Zaid Mohtaseb	Work progress report	Email (Protonmail)	Every Day	Ahmad Jawabreh
Zaid Mohtaseb	Hardware connection maps and documentation	GitHub	Day after day	Ahmad Jawabreh

## 9.0 Documentation

Communication Matrix	Ahmad Jawabreh: <a href="mailto:Jawabreh@protonmail.com">Jawabreh@protonmail.com</a> Zaid Mohtaseb: <a href="mailto:Zaidmoh@protonmail.com">Zaidmoh@protonmail.com</a> Ferhat Bal: <a href="mailto:Ferhatbal@protonmail.com">Ferhatbal@protonmail.com</a>
Performance Report	Work that has been accomplished on <project name> during a certain period of time will be recorded. Information in this documentation helps in monitoring and controlling progress on MFR project
Meeting Ground Rules Report	The rules for ensuring that meetings will be run effectively over MFR project duration are included in this document.
Walkthrough Review Form	<ul style="list-style-type: none"><li>➤ The following information is included about walkthrough meetings that will be conducted:</li><li>➤ Some suggestions include a checklist of the activities to be completed before the meeting.</li><li>➤ A list of all participants along with their roles in the meeting.</li><li>➤ The agenda of the meeting, and a list of the possible outcomes of the meeting.</li></ul>
Walkthrough Action List	This document lists the different issues that will be discussed in a walkthrough meeting and whether these issues have been resolved or not.
Lessons Learned Report	This report provides a repository of knowledge gained from experience so that future projects, and the organization may benefit. This document contains a project journal and the close-out discussion of lessons learned.

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## 10.0 Communications Change Management Process

There will be a special form for the employees to request a change and the communication basket with an explanation of the reason and hand it over to the project manager. Accordingly, a meeting will be held between the project manager and team members to discuss the alternative (the new means of communication) after which the employees will be given a form to fill out their IDs on the new communication medium.

## 11.0 Plan Modification Rules


project manager has the authority to change this plan, need to prepare a form for the employees to enter their IDs on the new platform (New communication platform).

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## 12.0 Approval Signatures

Project Manager:

*As project manager on MFR project I have reviewed the information contained in the Communications Management Plan and agree to its content.*

Name	Position	Signature	Date
Ahmad Jawabreh	Hardware Specialist - Smart Contract Developer		12-05

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

# Contract Agreement

## 1.0 Revision History

No Changes

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## 2.0 Statement of Purpose

The purpose of this document is to provide a description of the agreements that comply the seller to provide certain products/services, as well as the specific clauses that are included to manage project risks. This document includes (a) a description of the work required, (b) the quality standards of the final product or service, (c) the date by which the work should be delivered, (d) any incentives that are available to the seller to provide high-quality products or services by or before the due date, (e) any penalties that would be applied should the product/service not meet the required standards, (f) the conditions that would lead to contract closure, (g) information about the payment option used, (h) the change management process, and (i) a section for approval signatures.

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## 3.0 Work Required

Provide a description of what needs to be accomplished. Specify the format and specifications of each of the deliverables to be produced. Clear definitions will mitigate any risks associated with incomplete or poor definition of the scope.

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## 4.0 Delivery of Work

Evaluation of system quality: according to the pass/fail percentage of tests

Delivery date: 31-05-2022

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## 5.0 Incentives

- The customer will pay more 10% if the system done within 75% of contracted period
  - The customer will pay more 25% if the system done within 50% of contracted period
- 

## 6.0 Penalty

There will be 14 days grace period, and the seller will pay 3.5% for each day, and after that the seller will be forced to submit the product working correctly and fully evaluated with pass testing percentage.

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## 7.0 Contract Closure

- If the product quality does not meet the standards
  - If the work on the product finished after the grace period
- 

## 8.0 Payment

Evaluation of system quality: according to the pass/fail percentage of tests

Delivery date: 31-05-2022




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## 9.0 Change Management Process

Explain how changes in the contract will be addressed. This involves a description of how any changes in work required will be identified, addressed, communicated, and documented. Provide a list of the members of the Change Control Board who will be approving/rejecting any changes, as well as the procedures in place to request a change.

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## 10.0 Approval Signatures

Name	Position	Signature	Date
Ahmad Jawabreh	Hardware Specialist - Smart Contract Developer		12-05
Zaid Mohtaseb	Software Engineer		12-05
Ferhat Bal	Quality Assurance		12-05

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

# Contract management plan

## 1.0 Revision History

No Changes

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## 2.0 Statement of Purpose

The purpose of this document is to outline how AZFCO. will manage the contract that was awarded to the selected seller for the product/service to be acquired. This document includes (a) some background information about the contract, (b) the term of the contract, (c) the total value of the contract, (d) the required standards for the product/service to be acquired, (e) the roles and responsibilities of the people involved in the management of the contract, (f) any contract conditions, (g) a list of the reports that the seller will provide, (h) the schedule of contract meetings, (i) an explanation of how the seller's performance will be monitored, (j) a description of the implementation process, (k) any penalties that would be applied should the product/service not meet the required standards, (l) the conditions that would lead to contract closure, (m) the change management process, (n) the rules for modifying the contract management plan, and (o) the signature of key stakeholders.

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## 3.0 Background Information

The purpose of the contract is:

- To guarantee the right of both parties.
  - Determine the project delivery date.
  - Determining the total cost of the project and the quality and prices of the parts used in the project in detail.
  - Determine the evaluation method of the system.
  - Specify the work required.
  - Specify the incentives.
  - Specify the penalty and grace period.
  - Specify the payment method and the installments.
-



## 4.0 Contract Term

Contract Date: 07-02-2022.

Contract Duration: 4 months.

Grace period: 14 days.

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## 5.0 Pricing

- Total value of the contract:
  - Total value of the contract is 1500 USD.
- Installment:
  - 25% Before starting work
  - 25% After finishing the masked face recognition system and the alternative authentication method (RFID).
  - 25% After finishing the smart contract work.
  - 25% After finishing the system at all.
- Incentive arrangements:
  - The customer will pay more 10% if the system done within 75% of contracted period.
  - The customer will pay more 25% if the system done within 50% of contracted period.

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## 6.0 Product/Service Standards

- Software:
  - All of the software work will be fully tested by our QA team, and the system will be evaluated as pass only if the system passes with 100% of software quality tests
- Hardware:
  - Using only the contracted hardware parts
  - Test the hardware parts and hardware connection status and the system will be evaluated as pass only if the system passes with 100% of hardware quality tests
- Smart contract:
  - Test the smart contract by trusted auditing company (CertiK)

## 7.0 Roles and Responsibilities

Project Sponsor: Team members	<p>The Project Sponsor has the following responsibilities and authority in managing the contract:</p> <ul style="list-style-type: none"><li>➤ Suggest the contract closure conditions of the project and agree to any changes regarding the contract closure.</li><li>➤ Suggest the price of the final product and agree to any changes regarding the price.</li><li>➤ Suggest the penalty conditions of the project and agree to any changes regarding the penalty.</li></ul>
Contract Manager: Ahmad Jawabreh	<p>The Contract Manager will be the one responsible for handling any matters associated with the management of the contract. For instance, the contract manager will resolve any deviations from the plan when and if they happen.</p>
Legal Staff Members: Ferhat Bal	<p>The legal staff members provide assistance with the legal aspects of the contract. For example, they will be responsible for drafting the terms of the contract.</p>
Technical writer: Zaid Mohtaseb	<p>The technical write will help the stockholders to understand the issues that related to the technology directly that may affect in accepting the project and may affect the final price of the product.</p>

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## 8.0 Contract Conditions

The customer and the company will using simple smart contract designed and audited by trusted company (CertiK), the customer will pay the installments on the time directly to the smart contract, and after meeting the smart contract conditions the contract will convert the money directly to the company, If the company dose not meet the conditions the smart contract will return the money to the customer.

## 9.0 Reporting Requirements

Report	Format	Frequency	Source
Work progress	Each department will be responsible to send weakly report of what each team member did in this week	Weakly	AZFCO.
Software quality test	<ul style="list-style-type: none"> <li>➤ Unit testing</li> <li>➤ Control flow testing</li> <li>➤ Dataflow testing</li> <li>➤ Domain testing</li> <li>➤ System integration testing</li> <li>➤ System functional test</li> </ul>	<ul style="list-style-type: none"> <li>➤ After finishing the software work.</li> <li>➤ After finishing the system at all.</li> </ul>	AZFCO.
Hardware quality test	<ul style="list-style-type: none"> <li>➤ Hardware working status</li> <li>➤ Hardware connection status</li> </ul>	<ul style="list-style-type: none"> <li>➤ After finishing the hardware work.</li> <li>➤ After finishing the system at all.</li> </ul>	AZFCO.
Smart Contract auditing	<ul style="list-style-type: none"> <li>➤ Audit Summary</li> <li>➤ Vulnerability Summary</li> <li>➤ Audit Scope</li> </ul>	<ul style="list-style-type: none"> <li>➤ After finishing the smart contract.</li> <li>➤ After finishing the system at all.</li> </ul>	CertiK

## 10.0 Contract Meetings

AZFCO. And the customer will meet two times to solve the contract issues first time will be done online to discuss the issues and the second time will be face to face with our lawyer to document the changes

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## 11.0 Contract Measurement

- The performance of the seller will be monitored and any discrepancies or issues will be resolved through the weekly report that will be delivered to the customer by the management department.
- Key performance measures for the software and hardware is the testing reports that will be done by the quality assurance team.
- Our quality assurance team will audit the quality assurance for the hardware and the software, and CertiK company will audit the smart contract.

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## 12.0 Implementation

According to our activity duration estimate we need 39-46 days to deliver the system, our team is well trained so starting work on the project will be done directly after signing the contract, the activity duration estimate is described as following

Task	Time (days)
Order the hardware parts from Turkey	7- 15
Hardware Connecting	5
RFID coding	1
Face recognition coding	3
Masked Face Recognition	4
Database creation	2
Testing the hardware & software	2
Testing the system in many scenarios	5
EVMC Smart Contract coding	3
EVMC Smart Contract Testing	2
Chainlink to Kadena bridge	2
Testing the smart contract on the mainnet	2
<b>Total days</b>	<b>39 - 46</b>

## 13.0 Penalties

There will be 14 days grace period, and the seller will pay 3.5% for each day, and after that the seller will be forced to submit the product working correctly and fully evaluated with pass testing percentage.

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## 14.0 Contract Closure

- If the product quality does not meet the standards
  - If the work on the product finished after the grace period
- 

## 15.0 Change Management Process

Explain how changes in the contract will be addressed. This involves a description of how any changes will be identified, addressed, communicated, and documented. Provide a list of the members of the Change Control Board who will be approving/rejecting any changes, as well as the procedures in place to request a change

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## 16.0 Plan Modification Rules

- Any changes on the contract need the contract manager.
  - Changes related to the financial issues needs the approval of the finance department with the contract manager approval.
  - Changes related to the hardware work needs the approval of the hardware department with the contract manager approval.
  - Changes related to the software work needs the approval of the software department with the contract manager approval
-

## 17.0 Approval Signatures

Contract Manager:

*As contract manager, I have reviewed the information contained in the Contract Management Plan and agree to its content.*

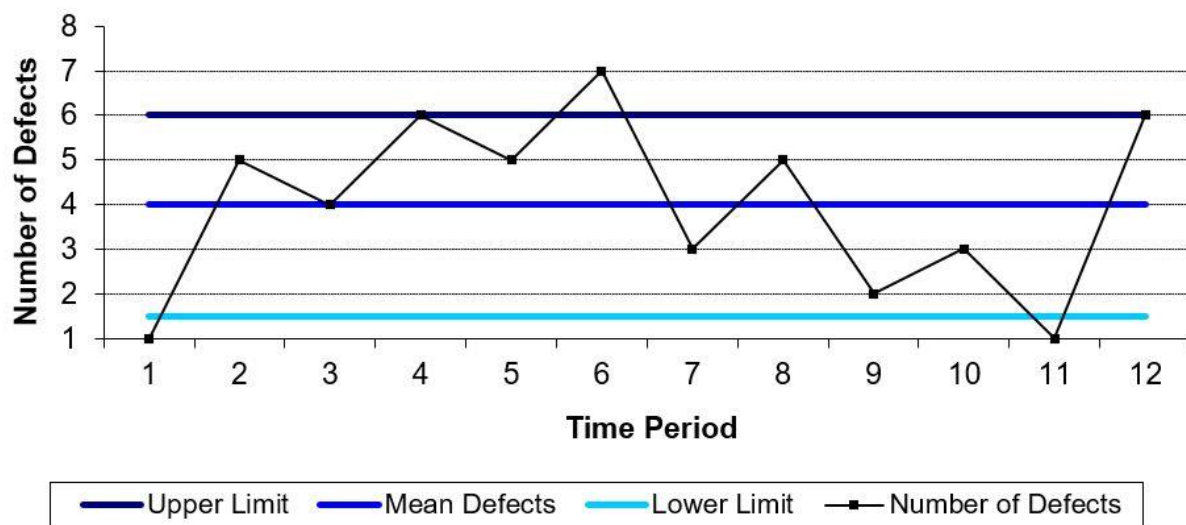
Name	Position	Signature	
Ahmad Jawabreh	Hardware Specialist - Smart Contract Developer		12-

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

# QUALITY CONTROL

Time Period	1	2	3	4	5	6	7	8	9	10	11	12
Upper Limit	6	6	6	6	6	6	6	6	6	6	6	6
Mean Defects	4	4	4	4	4	4	4	4	4	4	4	4
Lower Limit	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Number of Defects	1	5	4	6	5	7	3	5	2	3	1	6

**Quality Control Chart**



# Corrective Action List

## 1.0 Statement of Purpose

The purpose of this document is to provide a list of the corrective actions that are needed to ensure defective products or processes comply with quality standards. This document includes (a) a description of the issue that needs corrective action along with a identification number, (b) a description of the corrective action, (c) the name of the person who is responsible for this corrective action, (d) the target date by which this corrective action should be implemented, (e) the status of the implementation of the corrective action, and (f) the metrics that will be used to determine whether the corrective action had the desired impact.

## 2.0 Corrective Actions List

<u>No.</u>	<u>Issues Description</u>	<u>Description of Corrective Action</u>	<u>Assigned To</u>	<u>Target Date</u>	<u>Status</u>	<u>Metrics</u>
1	Make the hardware parts order and missing to order some parts	Contacting with the supplier and dealing to send the missing parts correctly	Zaid Motasib	22/04/2022	Completed	Supplier sent the parts quickly
2	Very slow truffle environment	Contacting to Eng. Kostis Karantias in chainlink labs	Ahmad Jawabreh	28/04/2021	Completed	Sending the solution by chainlink labs
3	Hardware parts stuck in the airport customs	Contacting with the airport customs department and solve the issue	Ferhat Bal	11/05/2022	Completed	finishing the customs clearance quickly



# Risk Breakdown Structure

## 1.0 Statement of Purpose

The purpose of this document is to provide a record of the different risks that have been identified and will be managed for MFR project, arranged in a hierarchical order.

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## 2.0 Risk Breakdown Structure

1. Understand how the system algorithm exactly working.

1.1. Break the face analyzing algorithm

1.1.1. Hide face feature that is important for the system

2. If the system will be used as (God eye) there is a risk to give wrong reports.

2.1. Give report to arrest peoples by wrong.

3. Breaking chainlink bridge.

3.1. Steal the user's information that cross the bridge.