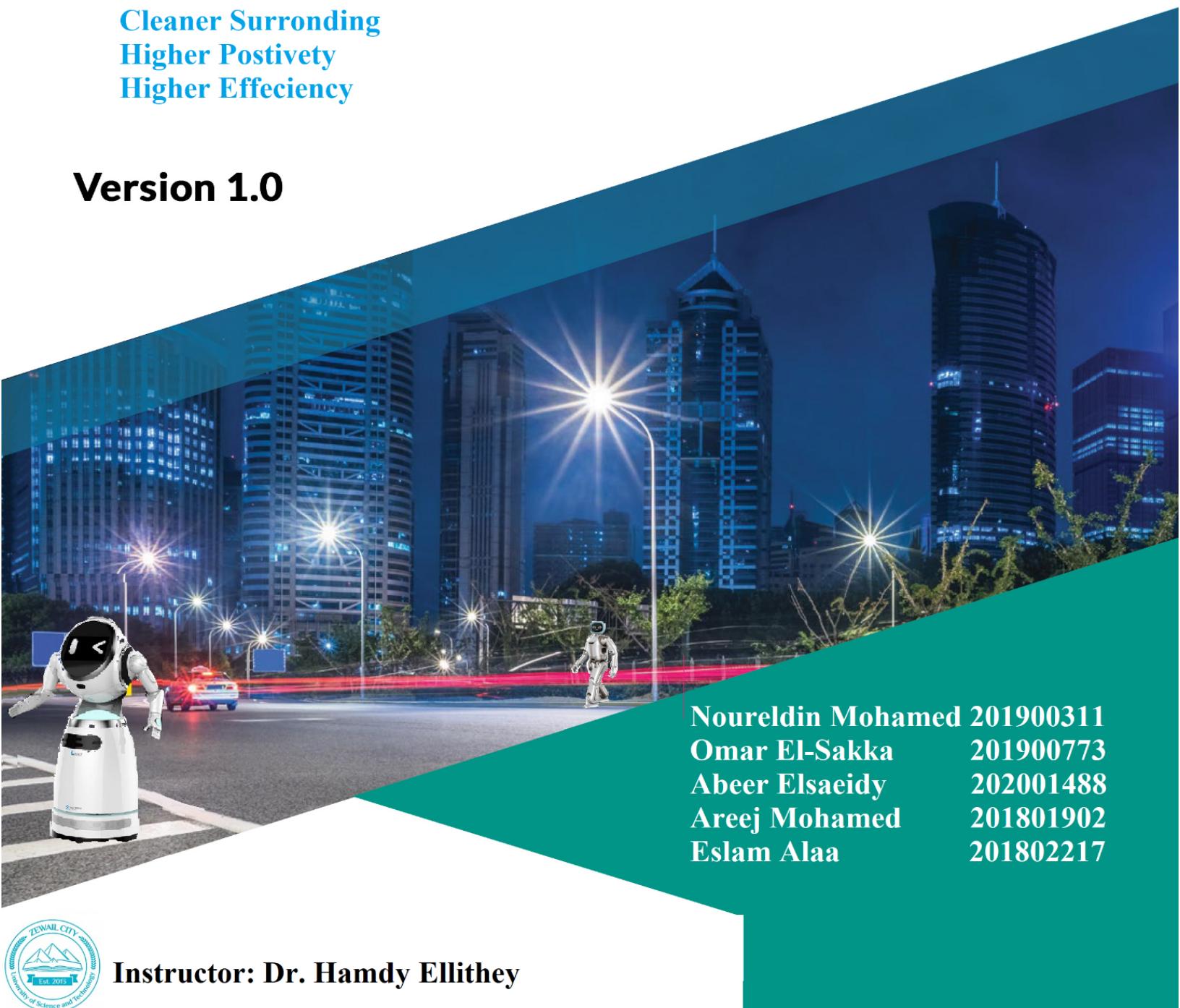


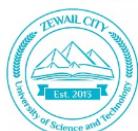
# Model Business Case for Robot Services Industry

Cleaner Surrounding  
Higher Postivety  
Higher Effeciency

**Version 1.0**



Noureldin Mohamed	201900311
Omar El-Sakka	201900773
Abeer Elsaeidy	202001488
Areej Mohamed	201801902
Eslam Alaa	201802217



Instructor: Dr. Hamdy Ellithey

# Table of content:

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1. Overview, Vision, Mission.
2. Project Plan Scope.
3. Main Goals in 5 Years.
3. SWOT Analysis.
4. PESTLE Analysis.
5. Log Frame.
6. If-Then Rule.
7. Work Breakdown Structure.
8. Project Schedule.
9. Business case.

## **Overview :**

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- RS is a technology startup based in 6 October district, Egypt. Our world seeks to use and develop technology. By developing the internet of things, machine learning, and AI, we aim to be one of the pioneers in our field. Our project is manufacturing Robots for organizing and cleaning warehouses, homes, streets, and industries. Not only do we focus on creating robots with advanced mobility, dexterity, and intelligence, but we have also developed an array of robots each apt to cope with their intended environment of usage. Our company has platforms that provide seamless communication for customers, technical and usage instructions, and guidance to fix easy problems. Additionally, we offer periodic maintenance, which is free for the first year of purchasing the product.

## **Mission :**

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- Robotic services, in general, seek to make life easier, faster, and more accurate. Our goal is to design robots that work in warehouses and cleaning and have enough information to make them work accurately and store products correctly, especially food products or medicines, to protect them from damage.

## **Vision :**

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- The RS company's mission is to imagine and create exceptional robots that enrich people's lives. Building machines that can approximate people and animals' mobility, dexterity, and agility is a grand challenge. Curiosity and respect for the natural world are at the heart of our work on robots. We see products derived from this work as the next step in the human history of building machines to reduce danger, repetition and physically challenging aspects of work.

## PROJECT PLAN SCOPE

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PROJECT NO.	DATE SUBMITTED
1	30/08/2021
PROJECT OBJECTIVES	
<p>Establish a large scale factory for manufacturing 4 types of robots for cleaning homes/ cleaning industries/cleaning streets or organizing warehouses.</p> <p>Providing satisfactory after sales services.</p> <p>Have the product in 9000 house, 100 street, 1000 industry and 1500 warehouse within 6 years</p> <p>Take part in global market within 3 years</p>	

### Project Deliverables

DELIVERABLE NO.	DESCRIPTION
1. Project Status Report	The team should monthly record the arousing issues, and key points for stakeholders to take a glimpse on.
2. Project Health Report	It is required from each team to submit a monthly report that shows the number of tasks completed, as well as the number of tasks overdue. The cost status, and time status are also expected to be included. This would help stakeholders to know whether the project is suffering from a standstill.
3. Team availability reports	It is required from each team to submit a monthly calendar-like report showing every team member's schedule, when they are free and when they are busy, facilitating the assignment of team members to additional work.

4. Risk reports	The team should produce risk reports on a weekly basis especially at the beginning (could be turned monthly later on) for stakeholders to take requisite steps to adapt for the project.
5. Variance report	The team should write a report containing their milestones, both accomplished and the remaining, so it could be visible whether the team is working efficiently or slacking.
6. Time Management Report	The team should post each task and the time it takes to get it done, this would help the stakeholder to assign each member with the task he is most efficient with.
7. Sales Statistics	Monthly reports should be produced on the sales state, this would help in monitoring the project target, and adapting different paths to reach the company's target.
8. Marketing Statistics	It would help the company to know where it is in the market and what steps can be done to improve sales.
9. IoT Trends Reports	Monthly reports about new trends in the market that could be adapted and implemented to our technology.
10. Application and Website Reports	Reports on bugs and issues regarding the website would help accommodate the consumers in order to facilitate their customer support/ordering/ or even 3d viewing of the products.

## List of Project Tasks

TASK NO.	DESCRIPTION	FOR DELIVERABLE NO. ...
1	<p>Creating a marketing strategy.</p> <p>Create sales and logistics plans.</p> <p>Apply for a license request .</p> <p>State the requirements needed by the technical team.</p>	
2	<p>Develop a market research that states:</p> <p>Who are the competitors? What are their pros and cons?</p> <p>What are the opportunities in the market?</p> <p>How to develop our customers' experience and engagement?</p> <p>What are the customer recommendations for the App and website?</p>	
3	<p>Finding leads and new approaches to make them real customers.</p> <p>Developing incentives and motivations to follow the plans and achieve the target.</p>	

## Step 3. Out of Scope

This project <b>will NOT</b> accomplish or include the following:	The robots will not be equipped with other features than those needed for cleaning and organizing.  Military Robots will not be manufactured.  We will focus on the 4 types of robots(might increase ), yet robots for non economic uses will not be manufactured.
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	Equipping the robots to work through clean energy is out of our scope.
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#### Step 4. Project Assumptions

NO.	ASSUMPTION
1	The stated plans are going to work efficiently no less than 85% of the stated targets.
2	Team will have the required skills
3	Equipments bought will be in good condition
4	The Egyptian government has a vision to support startups. So, it is expected that they will help to avoid any obstacles.
5	Supplier will deliver consumables on the dot.

## Step 5. Project Constraints

PROJECT START DATE	10/01/2022
LAUNCH / GO-LIVE DATE	01/10/2022
PROJECT END DATE	10/01/2028
DATES / DESCRIPTIONS OF KEY MILESTONES	<p>01/06/2022 Research and Development finalization.</p> <p>09/08/2022 Releasing two of each type of robot and testing it in warehouses, homes, industries and streets</p> <p>10/09/2022 Marketing Initiation</p> <p>11/09/2022 Website and Application initiation</p> <p>20/11/2022 Selling the device initiation for the target customers</p> <p>Monthly and weekly reports by each team head.</p>
COST	The total project budget ranges between 100M L.E. per 6 Years.
CONSTRAINTS	<p>0.70M L.E. for team gathering and reports.</p> <p>35M Establishment of Manufacturing Facility</p> <p>2.25M L.E. for warehouse and procurements.</p> <p>1.50M L.E. for IT requirements from laptops, services, licenses, etc.</p>
SCOPE	Development of an end to end robots retail website
CONSTRAINTS	<p>Development of a mobile application for robots retail</p> <p>Manufacturing 4 types of High quality, Industrial,House,Street, and Warehouse.</p>

<b>QUALITY OR PERFORMANCE CONSTRAINTS</b>	<p>Equipment with 95% accuracy.</p> <p>Follow ISO rules for manufacturing.</p> <p>Follows the Egyptian Law.</p> <p>Follows Labour Law and Robotics.</p> <p>Follows foreign laws for robots to be exported.</p> <p>Follow IEEE constraints.</p>
<b>EQUIPMENT CONSTRAINTS</b>	<p>The equipment must have a minimum of 4 years insurance.</p> <p>The machines should not be operated more than 8 hours/day</p> <p>The machines must be of efficiency not less than 90%</p>
<b>Customer Satisfaction Constraints</b>	<ul style="list-style-type: none"> <li>● The product should be easy to use and control</li> <li>● Availability as a catalog that easily explains usage, instructions, and warnings</li> <li>● Customer service : platforms that satisfy the customer's needs .</li> <li>● The products have to be certified.</li> <li>● The marketing campaigns have to have the required advantages to attract</li> <li>● the customer.</li> <li>● High quality maintenance</li> <li>● Availability of spare parts at reasonable prices</li> </ul>
<b>REGULATORY CONSTRAINTS</b>	<p>The working hours are limited by 9 hours/ day.</p> <p>Report making, team meetings would be done online</p> <p>Licenses to do business in Egypt.</p> <p>Follow ISO rules for manufacturing.</p>

	<p>Follows the Egyptian Law.</p> <p>Follows Labour Law and Robotics.</p> <p>Follows foreign laws for robots to be exported.</p> <p>Follow IEEE constraints.</p>
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## Step 6. Updated Estimates

<b>Estimate the hours required to complete the project.</b>	Total of 2,500,000 hours for the whole team in 6 years.
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## Step 7. Stakeholders

STAKEHOLDER
The Egyptian Government
Industry owners
Foreign Importers
Warehouse owners
Marketing and Advertising agencies
Households
IoT engineers
Researchers
Retail corporation

## Main Goals in 6 Years :

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- **Have the Product in 9000 house, 100 street, 1000 industry and 1500 warehouse within 6 year**
- **Take 10% of the global market within 4 years.**
- **Increase the rate of return (10-15)%**
- **Develop the product to remain increasing S curve positively**
- **Reduce costs while maintaining high quality**
- **Collaboration with different governmental and non-governmental organizations.**

## **SWOT Analysis:**

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### **Strengths**

- 1- We have a capital of 100M EGY and a total headcount of 60 personnel, 40% of them are engineers.**
  
- 2- The best location for our project in Egypt specifically in New Egypt because of the advantages it has first, it is near to the richest areas in Egypt such (Nasr city and Cairo airport and others ....) as well as easy transportation.**
  
- 3- The country and government support these kinds of projects.**

### **Weaknesses**

- 1- The lack of knowledge of humans about the benefits of robots in our daily life and the comfort they provide.**
  
- 2- The idea of the company is new and unfamiliar to customers and workers, too.**

### **Threats**

- 1- Lack of public interest and awareness.**
  
- 2- Large competitors get the majority of market share.**
  
- 3- Not many people buy our products.**
  
- 4- Fear of not making the desired profit**

## Opportunities

- 1- Fast growing sector.
- 2- Offering people comfort.
- 3- Taking advantage of the advance of technology in the industry through making robots that help clean the house and the streets as well as organize the warehouse.
- 4- Improve industry by using technology.

## PESTLE Analysis:

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### Political factors:

- Political and government institutions encourage using technology and making robots companies and projects.
- National support for making helper robots in different fields in cleaning and organizing.
- Governmental support to startups firms that increase job chances.
- Stability of the political atmosphere.

### Economic factors:

- New startups, companies and projects contribute to solving the problem of unemployment.
- Egypt has an economical treasure of manpower, so it will help the national economy.
- The national income of many of the individuals is low, so facilitation by governmental and non-governmental association in payment is needed to spread the structure of the solution among customers.
- Currency exchange for imported components.

#### **Technological factors:**

- Technology enables us to command the robots and control remotely.
- International trending technology like using AI in making robots to be able to clean.
- Strong feedback online system to tackle various problems.
- IOT technology will give us the appropriate control even remotely.

#### **Social factors:**

- Some employees don't have the willingness and patience to finish the work on time. However, Egyptians have the required knowledge that may be suitable for the startups.
- Employers have a low cost in general, this will help startups with a good budget.
- Cost of the project may be an obstacle to project vision because of the traditional thoughts.

#### **Legal factors:**

- Legal authorities aim to keep the rights of laborers, customers, and other entities in the systems.
- Some legal delay may occur which is to be enhanced by digitalization systems.

#### **Environmental factors:**

- The environment contributes greatly to the project as Egypt is famous for industry, technology, good climate, and we have a good employer.
- Good transportation system with the new roads and bridges.

## Log Frame & IF-Then Rule:

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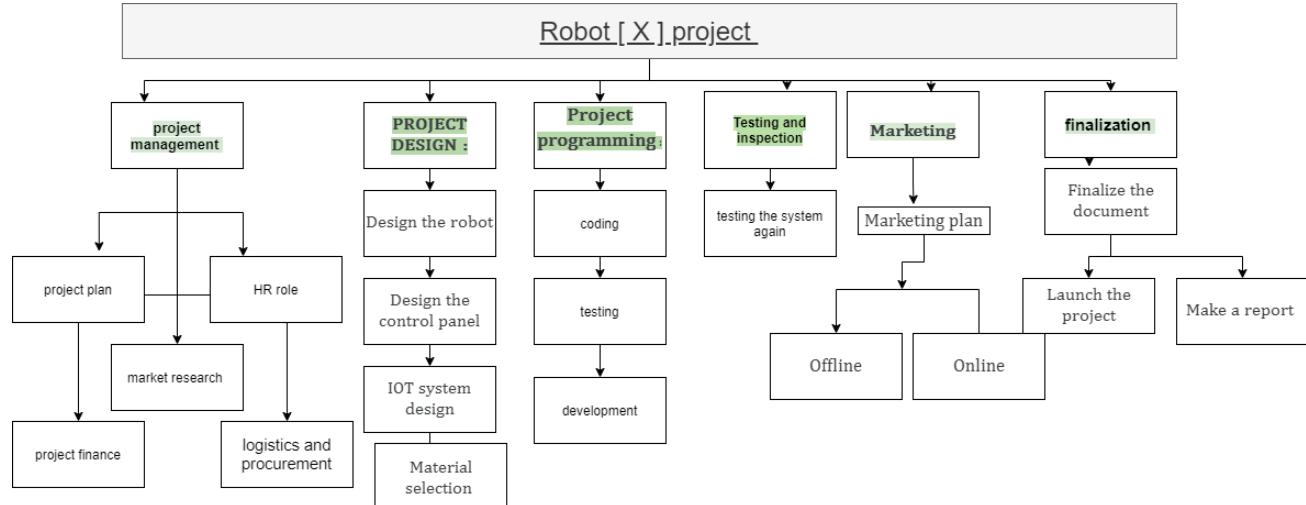
Objectives	Success measure	Verification	Assumptions
<p><b>Goal:</b>  Have the Product in 9000 house, 100 street, 1000 industry and 1500 warehouse within 6 year</p>	<p><b>Goal measures:</b></p> <ol style="list-style-type: none"> <li>1. RS continues to operate at high standards with professional staff</li> <li>2. Organization and cleaning tasks are known to be highly demanded, yet it has a low recruitment rate..</li> </ol>	<ol style="list-style-type: none"> <li>1. Time consuming work could be handled by robots, saving money for individuals, and providing more time for people to work less tiring jobs.</li> <li>2. Follow-up annual surveys with no negative findings.</li> </ol>	<p><b>Assumption to reach the goal:</b></p> <ol style="list-style-type: none"> <li>1. There are no market crisis or catastrophes affecting the economy</li> <li>2. The Research Phase ends in time</li> <li>3. There are no troubles with the government or Federal certification unit.</li> <li>4. Significant changes will not occur in the way most shared files are distributed, used, and updated.</li> </ol>
<p><b>Purpose:</b></p> <ol style="list-style-type: none"> <li>1. Time consuming work could be handled by robots, saving money for individuals, and providing more time for people to work less tiring jobs.</li> <li>2. Ensure a cleaner environment with less effort.</li> </ol>	<p><b>Purpose measures:</b></p> <ol style="list-style-type: none"> <li>1. Building machines that can approximate people and animals' mobility, dexterity, and agility is a grand challenge.</li> <li>2. Curiosity and respect for the natural world</li> </ol>		<p><b>Assumptions to achieve purpose:</b></p> <ol style="list-style-type: none"> <li>1. People are open to the new technology and target to increase their factories' productivity, and save households' time.</li> <li>2. Consultants have real background and relations to reach the target customers smoothly.</li> </ol>

	<p>are at the heart of our work on robots.</p> <p>3. We see products derived from this work as the next step in the human history of building machines to reduce danger, repetition and physically challenging aspects of work.</p>		
<b>Outcomes:</b> <ul style="list-style-type: none"> <li><b>1. Make a robot that facilitates humans' lives.</b></li> <li><b>2. Lower the amount of human waste, and pollution.</b></li> <li><b>3. Reduce number of waste pickers</b></li> </ul>	<b>Outcomes Measures:</b> <ul style="list-style-type: none"> <li>1. Quality Assurance data is used to improve the current types of robots.</li> <li>2. Professional Staff</li> </ul>	<b>Verifications:</b> <ul style="list-style-type: none"> <li>Provide all facilities</li> <li>-Monorating and Follow up the Training</li> <li>- Evaluation</li> <li>- Project logo</li> <li>- Schedule and financial records</li> </ul>	<b>Assumption to produce Outcomes:</b> <ul style="list-style-type: none"> <li>I. Training staff.</li> <li>Activities and concepts are relevant; they work in practice and add high value</li> <li>Technical support and testing the product .</li> <li>Make sure that product will be useful and helpful</li> </ul>
<b>Inputs:</b> <ul style="list-style-type: none"> <li><b>1. Quality assurance</b></li> </ul>			

<p><b>system:</b></p> <p>“All buildings should be fully covered by monitoring cameras”</p> <p>1.1 Employed people from the government to monitor.</p> <p>1.2 Place designed to have cameras.</p> <p>1.3 Develop corrective action plans for problem areas.</p> <p>1.4 Tools and techniques applied by highly efficient professionals used to measure quality.</p> <p><b>2. Reorganization:</b></p> <p>2.1 - New serious changes</p> <p>2.2 - Assigning professionals</p> <p>2.3 - Notify affected Staff</p> <p><b>3. Business Campaigns:</b></p> <p>3.1 - Survey Locals, and companies</p> <p>3.2 - Prepare meeting conferences with government</p>			
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# Work Breakdown Structure:

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## Project management

**project plan**

**HR role**

**project finance**

**logistics and procurement**

## PROJECT DESIGN :

**Team management , mission and deadlines :**

- Design the robot
- Design the control panel
- IOT system design
- Material selection

## Project programming :

- Coding
- Testing
- Development

### Inspection :

- Test the system again

### Marketing :

#### Marketing plan :

- Online
- Offline

### Finalization :

- Make a report
- Finalize the document
- Launch the project

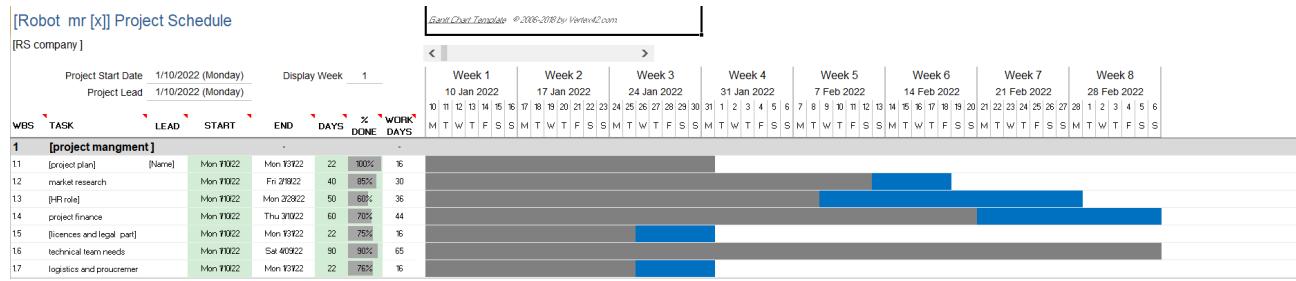
## Schedule:

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### [Robot mr [x]] Project Schedule

RS company ]

Project Start Date	1/10/2022 (Monday)	Display Week	1				
Project Lead	1/10/2022 (Monday)						
VBS	TASK	LEAD	START	END	DAYS	% DONE	WORK DAYS
	[project mangment ]		-	-	-	-	-
.1	[project plan]	[Name]	Mon 1/10/22	Mon 1/31/22	22	100%	16
.2	market research		Mon 1/10/22	Fri 2/18/22	40	85%	30
.3	[HR role]		Mon 1/10/22	Mon 2/28/22	50	60%	36
.4	project finance		Mon 1/10/22	Thu 3/10/22	60	70%	44
.5	[licences and legal part]		Mon 1/10/22	Mon 1/31/22	22	75%	16
.6	technical team needs		Mon 1/10/22	Sat 4/09/22	90	90%	65
.7	logistics and proucremer		Mon 1/10/22	Mon 1/31/22	22	76%	16



## Business Case:

## **Executive Summary :**

Our project is manufacturing Robots for organizing and cleaning warehouses, homes, streets, and industries with The machines must be of efficiency not less than 90% . And we have also developed an array of robots each apt to cope with their intended environment of usage. Through platforms that provide seamless communication for customers, technical and usage instructions, and guidance to fix easy problems .

## Business Opportunity

- New generation & high trending technology
  - Growing market
  - Low price compared to the servicecon

## **Alternatives :**

- Ordinary human ways (Higher cost and lower quality).
  - Importing technology from abroad, but it will face a problem with prices and security permits.

### **Benefits :**

- Meet the demand of the customers .
  - Effective technology any time anywhere with less effort .

- Its daily need product and it going to be beneficial in the long run

**Cost :** Depending on the area the robot working in

- purchase price: from 10,000EGP.
- Estimated life cycle: six years.
- Installation fee: from 500 EGP.
- Annual maintenance contract: from 500 EGP/year

**Financial Analysis :**

- The total project budget ranges between 100M L.E. per 6 Years.
- 0.70M L.E. for team gathering and reports.
- 35M Establishment of Manufacturing Facility
- 2.25M L.E. for warehouse and procurements.
- 1.50M L.E. for IT requirements from laptops, services, licenses, etc.

**Assumptions :**

- Significant changes will not occur in the way most shared files are distributed, used, and updated.

**Thredes :**

- The local market does not accept the product and its tendency to traditional methods.
- The tendency of competing companies to reduce prices in order to eliminate competition, but with the specified budget for the project, we can overcome that, reduce prices, bear the difference, and carry out a huge advertising campaign for our product.

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