



Smart Street Solution Company

Supervised by
Dr. Walied Soliman

1	Fahad	2021206250
	Yousef	2021204184
3	Mohammed	2021204163
4	Abdulfattah	2021206225
5	Yasser	2021206343
6	MOUSA	2021200333
7	Basma	2021206282
8	Majed	2021206371
9	Marwan	2021206089

1.0. Introduction	8
1.1. Strategy.	8
1.1.1 Vision Statement:	8
1.1.2 Mission Statement:	9
1.1.3 Our Objectives:	10
1.1.4 Lead and Lag:	11
1.1.5 Project Charter Model:	14
1.2. Governance, Structure, And Process.	15
1.2.1 Organizational Structure:	15
1.2.2 Developing Organizational Chart:	17
1.2.3 Project's Office Model:	17
2.1. Compliance, standers, and regulations.	18
2.1.1 Compliance Model:	18
2.1.2 Project Check List Model:	21
2.2. Power and interest	22
2.2.1 Stakeholder Register:	22
2.2.2 Influence/Interest Diagram:	23
2.2.3 logical diagram:	24
2.3. Culture and Values.	25
2.3.1 The Culture of The Organization:	25
2.3.2 Organization's Values:	25
	25
3.1. Self-Reflection and Self-Management	26
3.1.1 Personal Behavior of The Students:	26
3.1.2 Behaviors Studies and Elimination Techniques:	26
3.1.3 SWOT Model:	27
3.2. Personal Integrity and Reliability	28
3.2.1 Contradiction of Moral Indignity Behavior:	28
3.2.2 Analyses of Contradiction of Moral Indignity Behavior:	28
3.3. Personal Communication	30
3.3.2 Personal Communication and Effective Communication:	30

3.3.3	Shapes, Models, and Channels of The Personal Communication:	32
3.3.4	Communication Matrix:	33
3.3.5	Wrong Scenarios of Communications:	34
3.3.6	Stakeholder Assessment Matrix:	35
4.1.	Leadership	36
4.1.1	Leadership Model:	36
4.1.2	Model Chosen and Reasons:	37
4.1.3	Motivation Methods:	37
4.2.	Teamwork	38
4.2.1	RACI Model:	38
4.3.	Conflict and Crisis	39
4.3.1	Conflict:	39
4.3.2	Expected Scenarios of Conflict:	39
4.3.3	Optimal Strategies to Deal with each Conflict:	39
4.3.4	Root Cause Analysis:	40
5.1.	Resourcefulness	42
5.1.1	Human Resources	42
5.2.	Negotiations	47
5.1.2	Rules for The Negotiation Process	47
5.1.3	Negotiation Plans	48
6.1.	Project Design	49
6.1.1	Triple Constraints of the Project	49
6.1.2	Project Success Factors	50
6.1.3	Work Breakdown Structure (WBS)	51
6.2.	Requirements and Objectives	52
6.2.1	Requirements Traceability Matrix	52
6.2.2	Methods of Requirement Collection	53
6.2.3	Hierarchical Structure of the Objectives of the Project	54
7.1.	Scope	55
7.1.1	Scope Statement	55
7.1.2	Scope Creeping	57
7.1.3	Product Management	58
7.2.	Time	59

7.2.1	Work Packages in WBS	59
7.2.2	Relationship between Activities	74
7.2.3	Logical diagram critical path	75
7.2.4	Gantt chart and milestones	76
7.3.	Quality	77
7.3.1	Deming Model for Quality	77
7.3.2	SIPOC Model and Ishikawa	78
8.1.	Finance	80
8.1.1	Cost Breakdown Structure	80
9.1.	Resources	82
9.1.1	Resource Leveling and Smoothing	82
9.2.	Procurement	83
9.1.2	Procurement Execution	83
9.3.	Plan and Control	85
9.2		85
9.3.1	Agenda and Virtual Record Meeting	85
9.3.2	Performance Measurement	86
9.3.3	Change Request Model	87
10.1.	Risk and Opportunities	89
10.1.1	Risk Opportunities	89
10.1.2	Risk register	91
10.1.3	Qualitative risk analysis	92
10.1.4	Risk Response Strategies	93
10.2.	Stakeholders	94
10.2.1	Stakeholder Engagement Matrix	94
11.1.	References	95

Page number	Table Name	Table number
8	Our Values	1
11	Main objective	2
12	Financial Perspective	3
12	Customer perspective	4
13	Internal process perspective	5
13	Learning and Growth Perspective	6
14	Project Charter Model	7
20	Compliance Model	8
21	Project Check List Model	9
22	Stakeholder Register	10
23	How to deal with Stakeholders	11
23	Project stakeholder's matrix	12
27	SWOT Model	13
28	Contradiction of Moral Indignity Behavior	14
33	Communication Matrix	15
35	Stakeholder Engagement Assessment Matrix	16
38	RACI Model	17
38	Root Cause Analysis	18
45	Job Descriptions	19
46	Normal Timeline	20
46	Crashing and Fast-Tracking	21
52	Requirements Traceability Matrix	22
73	Work Packages in WBS	23
74	Relationship between Activities	24
76	Gantt chart and milestones	25
80	Ishikawa	26
81	Cost Breakdown Structure	27
83	Procurement task	28
84	Procurement Execution	29
85	Agenda and Virtual Record Meeting	30
88	Change Request Model	31
90	Identify Risks	32
90	Risk and Opportunities	33
91	Risk and Opportunities	34
94	Stakeholder Engagement Matrix	35

Page number	Figure Name	Figure number
9	The Business Concept	1
16	Organizational Structure	2
24	Logical diagram	3
25	Organization's Values	4
47	Negotiation Process	5
49	Triple Constraints	6
51	Breakdown Structure	7
75	Logical diagram critical path	8
77	Deming Model for Quality	9
78	SIPOC Model	10
79	Ishikawa	11
82	Resource Leveling and Smoothing	12
94	Stakeholder Engagement	13

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



Smart Street Solution Company

1.0. Introduction

Street Smart furniture is open space furniture especially in sidewalks, parks and compounds with smart solution to improve the life quality in our Cities. As the world is developing to a better innovative technology, it is important to integrate and synchronize with today's technology. In addition, sustainability and environmentally friendly products play a huge impact on our lives and planet. It is significant for Saudi companies and investors to lap with 2030 Vision that stimulates a vibrant society, a thriving economy and an ambitious nation. Therefore, creative individuals have decided to establish Smart Street Solutions Company (SSSC) as there is a gap in the Saudi market and the need of such solutions.

1.1. Strategy.

1.1.1 Vision Statement:

The board of Smart Saudi solutions Company vision is to establish a long-term customer from public or private sectors to provide a better experience in the public and private open spaces aiming easy, smart, self-served, available, weather adopted, well designed and use friendly street furniture.

• Our Values:

- o Quality of life - o Sustainability & Environmentally - o Low-cost & High-Quality - o Ambitious nation	- o UI &UX design - o Vibrant society - o Thriving economy
--	--

Table 1: Our Values

1.1.2 Mission Statement:

The board of Smart Saudi solutions Company's mission is to create innovative smart street furniture solutions that promote the use of public and private open spaces for public users in a more sustainable manner with high standard. Furthermore, this is through providing trades between government and private sectors to create opportunities to sell or advertise their products or services.

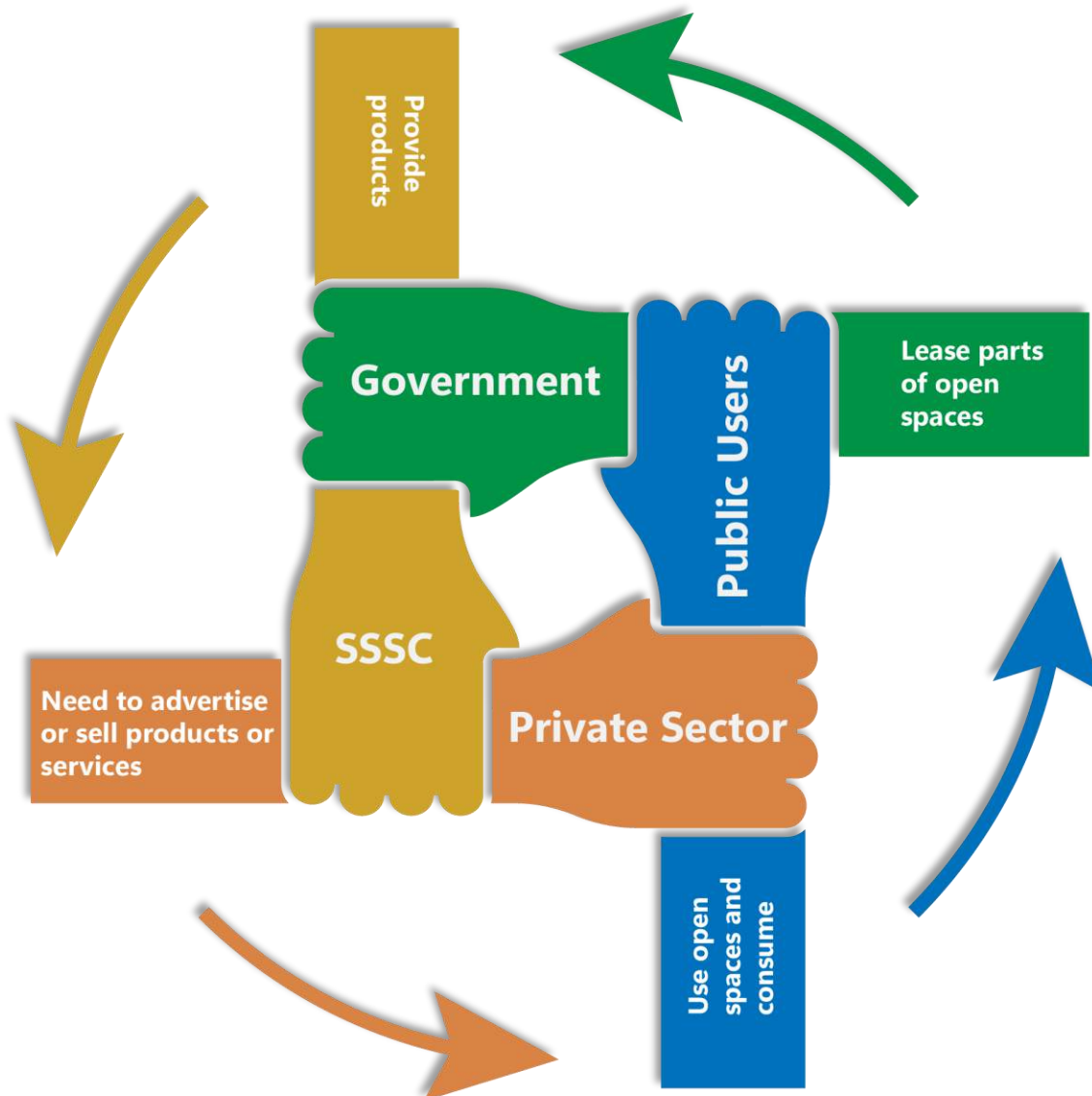


Figure 1: The Business Concept

1.1.3 Our Objectives:

The objectives are obtained using a SMART model and created to have a specific measurable Attainable realistic aim in a specific time frame. This is a good practice for the company to reach its goals and see how well they are progressing.

- The main objective is to establishing a Smart Street Solution Company to create three innovative smart street furniture in one year.
- Financial objective is to reach the breakeven point in the first two years and increase sales by accumulative 20% annually for the first 5 years.
- Customer objective is to Meet the customers expectation of using smart street furniture in terms of design, availability, maintenance, easy use, adoptability, safety, legally and development through a regular public surveys and business development department questioning customers experiences every 4 months.
- Internal process is to Create a smart adoptive flexible system as well as finding gaps and full filling it; by a weekly dashboard to monitor and control the work flow cycle and updating the system by smart innovative ideas to meet customer needs and company objectives.
- Learning and Growth is to develop personal careers by training courses and workshops to improve the skills and the mentality of the workforce including high management and the workers on weekly, monthly and yearly base.

1.1.4 Lead and Lag:

It is important to create the key performance indicators (KPIs) through the lead and lag methodology to product and measure the performance for the business.

- Leading Indicator is used to set goals to reach the strategic objectives based on the actions required to reach the goals before the business starts.
- Lagging Indicator is used to measure the required and the desired result or performance after the business start.

➤ The main objective:

<u>Strategic Objective</u>	<u>Lead Measure</u>	<u>Lag Measure</u>
➤ The main objective: establishing a Smart Street Solution Company to create three innovative smart street furniture in one year.		
Develop three assembly production lines in a plant warehouse	Full life cycle of the three products from initiating to closing. (Human resourcing, Design, supply chain, installing)	Ready three sample products.
Find the startup fund	Funding from current team and, Saudi Industrial Development Fund.	Full Fund is invested

Table 2: main objective

➤ Financial Perspective:

Strategic Objective	Lead Measure	Lag Measure
➤ Financial Perspective: Reach the breakeven point in the first two years and increase sales by accumulative 20% annually for the first 5 years.		
Reduce production time and decrease production cost	Automate some of the cycles in the production lines	Production cost decreased
Add new products and production lines to increase revenues	Add new innovate products and/or develop current products	Revenue increased
Increase sales in other cities to increase revenues	Establish agents in other cities	Sales increased and so revenues

Table 3: Financial Perspective

➤ Customer perspective:

Strategic Objective	Lead Measure	Lag Measure
➤ Customer perspective: Meet the customers expectation of using smart street furniture in terms of design, availability, maintenance, easy use, adoptability, safety, legally and development through a regular public surveys and business development department questioning customers experiences every 4 months.		
Increase the users of smart street furniture in the open spaces	Make the product easy to use, safe and working well. Also, survey their experience.	The users are increased without any complain.
Gain the trust of the service or product providers	Ensure the quality of our services through regular development, effective communication, and fast responses.	Full satisfaction and more sales
Meet the government requirements, legal regulations, and design enquiries	Apply the government specification code and satisfy their needs	Our products are placed in the government public open spaces and is widely used in their projects

Table 4: Customer perspective

➤ Internal process perspective:

Strategic Objective	Lead Measure	Lag Measure
➤ Internal process perspective: Create a smart adoptive flexible system as well as finding gaps and full filling it; by a weekly dashboard to monitor and control the work flow cycle and updating the system by smart innovative ideas to meet customer needs and company objectives		
establish a smart working system	Involve all the departments in creating the working cycle map	First Production is used in place and so in-cashflow arises
Evaluating and improving the system regularly	Create the monitor team and weekly dashboards	The working cycle, the production, sales are improved
Increase the awareness of the working cycle and its updates	Establish weekly news emails and workshops	The culture of improving is spread in the company

Table 5: Internal process perspective

➤ Learning and Growth Perspective:

Strategic Objective	Lead Measure	Lag Measure
➤ Learning and Growth Perspective: Developing personal careers by training courses and workshops to improve the skills and the mentality of the workforce including high management and the workers on weekly, monthly, and yearly base.		
Improve employees' skills	Interduce monthly online training or workshops to improve the workforce	Employees satisfaction and better production
Open communication channels and PMIS between departments	Exchange the skills and knowledge between departments	Effective collaborations between the workforce
Personal career goals and self-evaluation	Set personal goals to achieve yearly	Employees self-recognitions and healthy mind sets

Table 6: Learning and Growth Perspective

1.1.5 Project Charter Model:

Project charter is the most important document in the initiating phase that sets the requirements, specifications and objectives of the project. All stakeholders must agree on this document for proceeding and support.

Project Name:		Smart Street Solutions Company (SSSC)		
Project Description	The project is to establish Smart Street Solution Company to build Smart Street furniture solutions for open spaces by opening trades between public and private sector.			
The need of the project (business case)	The project is required to create a suitable and innovative street furniture to increase the use of public open spaces and to open new business opportunity for public and private sectors.			
The measurable goals of the project	➤ Establishing SSSC ➤ Finish the full business model for three business lines which are Smart mailbox, smart public seats and smart vending machines in the next 6months. ➤ Patterning up with public and private sector 6month from now to the end of the 5 years. ➤ Develop and increase our products and production lines ➤ Develop and implement a training plan for every member in the company ➤ Reach the breakeven point in the first two years and increase sales by accumulative 20% annually for the first 5 years.			
The requirement of the project	Location Requirements: ➤ Assembly plant warehouse ➤ Meeting room ➤ Offices facilities ➤ Food and rest area ➤ Clinic ➤ Storage areas	Human resources: ➤ Managers ➤ Supervisors ➤ Workers ➤ Drivers ➤ A nurse	Other requirements: ➤ Assembly equipment ➤ Transportation automobiles ➤ Lifting automobiles ➤ Safety equipment ➤ Outsourcing fixed products	
deliverables and outcomes	➤ Design drawings ➤ Specifications	➤ Smart street furniture: Mailbox; Vending machines; Smart seats		
General Risk of the project	➤ High startup cost ➤ Outsourcing delays and miscommunication ➤ Not conforming with Government requirement			
Timeline of the project	➤ From Jan. 2023 ➤ To Jan. 2028			
Summary Budget	➤ SR 3,707,124			
Authorized Name	Eng. Mohammed Alsaqa			
Project Manager Name	Eng. Fahad Almawash			
Email:	➤ M.Alsaqa@SSSC.com ➤ F.Almawash@SSSC.com			
Phone Numbers	➤ 0545454545			

Table 7: Project Charter Model

1.2. Governance, Structure, And Process.

1.2.1 Organizational Structure:

An organizational chart is a visual representation of a company's internal structure that shows the relationships, functions, and responsibilities of each individual within the organization. Also, organizational chart illustrates the various positions, divisions, and tasks that link the staff members of the business to one another and to the management group.

Organizational charts can be divided into four primary categories: hierarchical, matrix, divisional, and flat. Organizational hierarchy chart: The four most typical forms of organizational charts are as follows:

1. Hierarchical Org Chart: The government and major global institutions have historically used this form of organizational chart the most. It deals with having one group or person at the top, managing affairs and assigning roles and responsibilities to lower management.
2. Matrix Org Chart: This sort of organization is characterized by the fact that there are multiple managers in charge of overseeing and assigning tasks to employees and individuals. For instance, a company might have a group of programmers or graphic designers who all work under the direction of the department in charge of science and technology or the top manager of ICT.
3. A flat organizational chart: often known as a horizontal organizational chart. Middle management positions are few or nonexistent. The top administrators and the employees normally make up the two levels. These kinds of businesses provide their employees more authority and direct access to decision-making. The self-managed organizational structure is another name for the flat type. Between general workers and supervisors, there aren't many

degrees of management. In other words, every executive would likely be supervising a sizable number of workers or interns.

4. Division chart: A divisional structure is a sort of organizational structure that divides each organizational function into groups of people in the organization. Each division has all the tools needed to work remotely or abroad. It serves to offer the assistance a product line or geography department needs (for example, its own finance team, IT management, and marketing departments)

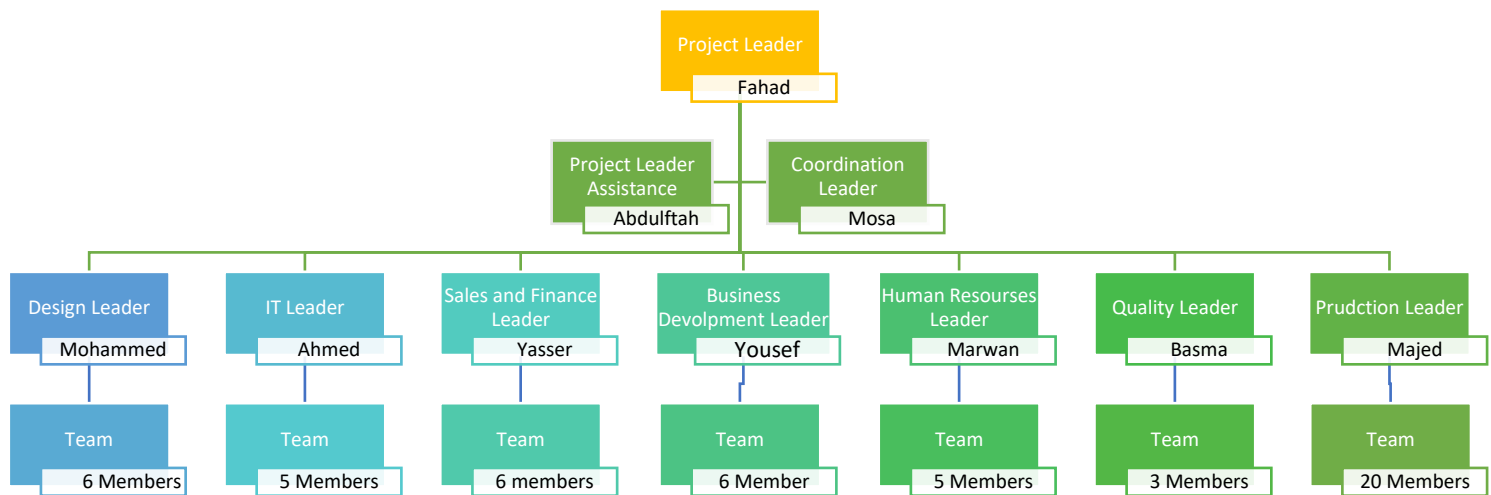


Figure 2: Organizational Structure

1.2.2 Developing Organizational Chart:

The organization charter that our company is going to use is the Hierarchical Org Chart. The reason of using this chart is because it is aligned with the company objectives and vision. Moreover, there are a verity of unrelated disciplines such as designing team and sales team. In addition, this chart is more flexible and adoptable to any required changes or improvement in the organization.

1.2.3 Project's Office Model:

A project management office, or PMO for short, is a division or office inside a company that establishes and upholds project management standards. The Project Management Office offers standards and guidelines for carrying out projects. Furthermore, A successful PMO combines competent people, efficient procedures, and effective tools.

➤ Types of PMO:

- **Supportive PMO**

Provide advice and consultative ideas by supplying templates, best practices, training, and access to information and lessons learned from previous projects. The degree of control is Low

- **Controlling PMO**

Offer support and require compliance by adopting project management methodologies, frameworks, and processes. Also prepare specific templates, forms, and tools for conformance to governance. The degree of control is Moderate

- **Directive PMO**

Control the project by directly managing the projects portfolio The degree of control is High

Controlling PMO management type is the more suitable type of our organization. The reason we choose:

- A. Framework and methodology are the base of our business that will achieve our mission and vision to our business life cycle.
- B. There are different department in our organization that is required to be worked independently to achieve assigned goals. Thus, weekly meeting is required to review the progress and overcome the problems.
- C. Improvement and process altering is required to needed to bring the organization to a better stand.

All team will work in certain Missions in different teams. The project leader, the project leader assistance and the coordinator will help and monitor the work. Also, when the required task is late and require a lot of work at a specific department, the leader of the department will lead all the team to finish the task. This way the whole team will experience the role of being a leader.

2.1. Compliance, standers, and regulations.

2.1.1 Compliance Model:

Timeframe	Goal	Activities	Expected (Outcomes)	Measures of Success
Jan 2023 – Jan 2024	- Find the startup fund - Develop three assembly production lines in a plant warehouse	- Collect the fund from the stakeholder's investors. - Apply for Saudi industrial development fund - Create the processes - Establish the plant equipment, human resources and other requirement - Rend a warehouse - Finish the legal requirement - Start the operation process	- Funding from current team and , Saudi Industrial Development Fund is complete. - Full life cycle of the three products from initiating to closing. (Human resourcing, Design, supply chain, installing)	- Full Fund is invested - Ready three sample products

Timeframe	Goal	Activities	Expected (Outcomes)	Measures of Success
Jan 2023 – Jan 2028	- Reduce production time and decrease production cost - Add new products and production lines to increase revenues - Increase sales in other cities to increase revenues	- Buy and install the automated equipment - Ask the business development team with the designing team to start finding other targeted innovated product - Production line will start to train and apply a new production line. - Establish other agencies on other cities.	- Automating some of the cycles in the production lines are in place - Adding new innovate products are in place - Developing current products are in place - Establishing agents in other cities are in place	- Production cost decreased - Revenue increased - Sales increased and so revenues
Every 4 month from Jan 2023 – Jan 2028	- Increase the users of smart street furniture in the open spaces - Gain the trust of the service or product providers - Meet the government requirements, legal regulations and design enquiries	- Advertise and improve company's products. - Do regular maintenance - Improve products quality - Ease the dealing process with the costumers. - Do full research of the standers and regulations needed. - Meet up with the governmental officials	- The product is easy to use, safe and working well. - Survey users experience is in place. - The quality of our services is set. - Regular development, effective communication and fast responses processes are done. - The government specification code and satisfaction are met.	- The users are increased without any complain. - Full satisfaction and more sales - Our products are placed in the government public open spaces and is widely used in their projects

Timeframe	Goal	Activities	Expected (Outcomes)	Measures of Success
Weekly meetings from Jan 2023 – Jan 2028	- Establish a smart working system - Create the dashboard system. - Evaluating and improving the system regularly - Increase the awareness of the working cycle and its updates	- Apply a smart and easy processes - Create the good PMO. - Do regular meeting and workshops - Establish a weekly newspaper.	- The working cycle map is set. - The monitor and control team are in place and working. - The weekly dashboard is established. - weekly news emails and workshops processed.	- First Production is used in place and so in-cashflow arises - production, sales are improved - The culture of improving is spread in the company
Weekly, monthly, and yearly from Jan 2023 – Jan 2028	- Improve employees' skills - Open communication channels and PMIS between departments - Personal career goals and self-evaluation	- Provide monthly online skills workshops and courses. - Provide access to the PMIS to all employees - Establish a smart phone network and communication data. - Establish an open-door role.	- Interduce monthly online training or workshops to improve the workforce - Exchange the skills and knowledge of departments between each other - Set personal goals to achieve yearly	- Employees satisfaction and better production - Effective collaborations between the workforce - Employees self-recognitions and healthy mind sets

Table 8: Compliance Model

2.1.2 Project Check List Model:

- **Initiation Stage** is launching a process that can result in the authorization of a new project. Where the project is defined, project, constraints, goals, appointment of the project manager, budget, expected timeline.
- **Planning Stage** is the roadmap for the project team to follow, where the scope of the project is defined and a project management plan is developed. In addition to, identifying the cost, quality, available resources, and a realistic timetable.
- **Execution Stage** at which team develops and completes deliverables, assign resources, execute project management plans, procurement management plan, status meetings, update project schedule and modify project plans as needed.
- **Monitoring Stage** is where project performance and monitoring ensure that project results align with the management plan. Key Performance indicators (KPIs) are used on this stage to track performance and progresses of project objectives, quality of deliverables, cost and performance.
- **Closure Stage** is where project is complete, and meetings to evaluate successes and failures are done.

Stage	initiation	planning	execution	monitoring	closure
Requirements	- Project charter. - Project stakeholders. - Project region. - Origination structure. - Project Plan. - Project requirements.	- Project schedule. - Communication plan. - Deliverables. - The scope. - Work breakdown structure. - Project timeline. - S.M.A.R.T. - Risk Management plan.	- Efficient workflows. - Effective collaboration. - Progress	- Progress of work according to the plan and meeting project s objectives. - Key Performance Indicators (KPI). - Critical Success Factors (CSF).	- Detailed report of the entire project. - Ensure project objective is met.

Table 9: Project Check List Model

2.2. Power and interest

2.2.1 Stakeholder Register:

- **Stakeholder** is a party that has an interest in a company and can either affect or be affected by the business. The primary stakeholders in a typical corporation are its investors, employees, customers, and suppliers.
- **Internal Stakeholders** are people whose interest in a company comes through a direct relationship, such as employment, ownership, or investment.
- **External Stakeholders** are those who do not directly work with a company but are affected somehow by the actions and outcomes of the business.

Name	Role	Stakeholder type	Expectations	Contact information	Method of contacting
Public sector	Regulator and leaser	External	Approve our design and leasing spots in open spaces	Email Phone	Meetings, Virtual meeting, Calls, Emails, letters
Private Sector	Investors and sponsors	External	Invest and buy our products	Email Phone	Meetings, Virtual meeting, Calls, Emails, letters
Community	End users	External	Use, consume and buy from our products	Social media Our boards	Survey, QR code
Vendors	Materials suppliers	External	Deliver requirement on time	Email Phone	Meetings, Virtual meeting, Calls, Emails, letters
Contractors	Transportations, installation, maintains and agents (in other cities) teams	External	Deliver, install, maintain and sell our products	Email Phone	Meetings, Virtual meeting, Calls, Emails, letters
Managers	Manage	Internal	Mange the team and meet objectives, bring ideas	Email Phone	Meetings, Virtual meeting, Calls, Emails, letters
Team	Do the tasks	Internal	Finish the tasks, behave well, and create ideas	Email Phone	Meetings, meeting, Calls, Emails

Table 10: Stakeholder Register

2.2.2 Influence/Interest Diagram:

➤ How to deal with Stakeholders:

INFLUENCE	Keep satisfied • Develop advocacy strategy to get their buy-in • Consult or involve in key activities • Work with other actors to influence them	Manage closely • Consult at key decision points • Establish formal partnerships • Conduct joint assessments • Hold regular coordination meeting
	Monitor • Monitor potential negative impact of actor • Work with other supportive actors to influence and gain support	Keep informed • Consult at key decision points • Establish formal partnerships • Capacity building to increase influence • Provide updates on activities
	INTEREST	

Table 11: How to deal with Stakeholders

➤ Project stakeholder's matrix:

INFLUENCE	High influence and low stake • public sector • Private Sector	High influence and high stake • Community • Managers
	Low influence and low stake • Government Sponsors	Low influence and high stake • Team • Vendors • Contractors
	INTEREST	

Table 12: Project stakeholder's matrix

2.2.3 logical diagram:

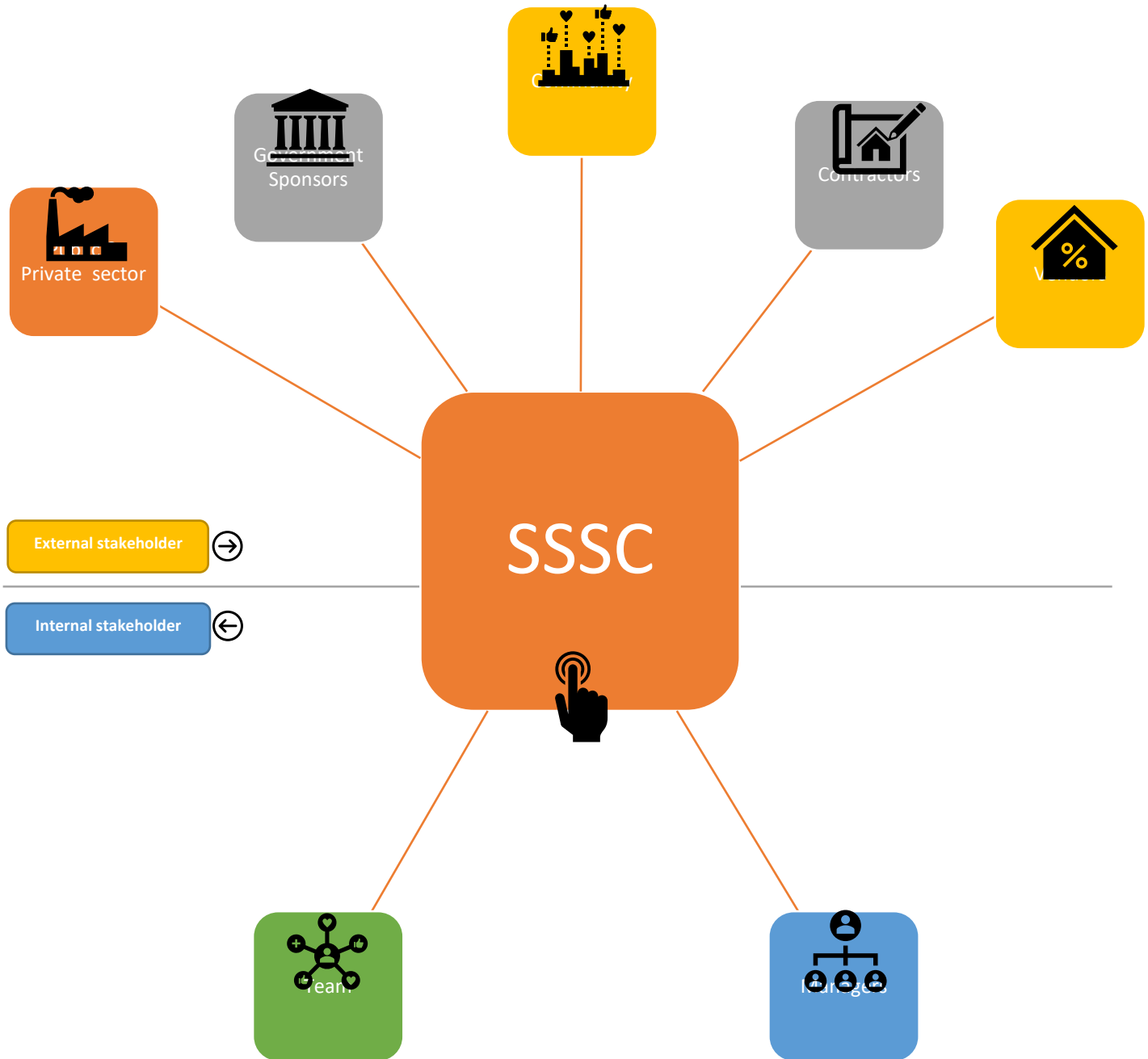


Figure 3: logical diagram

2.3. Culture and Values.

2.3.1 The Culture of The Organization:

An organization's culture defines the proper way to behave within the organization. This culture consists of shared beliefs and values established by leaders and then communicated and reinforced through various methods, ultimately shaping employee perceptions, behaviors and understanding.

2.3.2 Organization's Values:

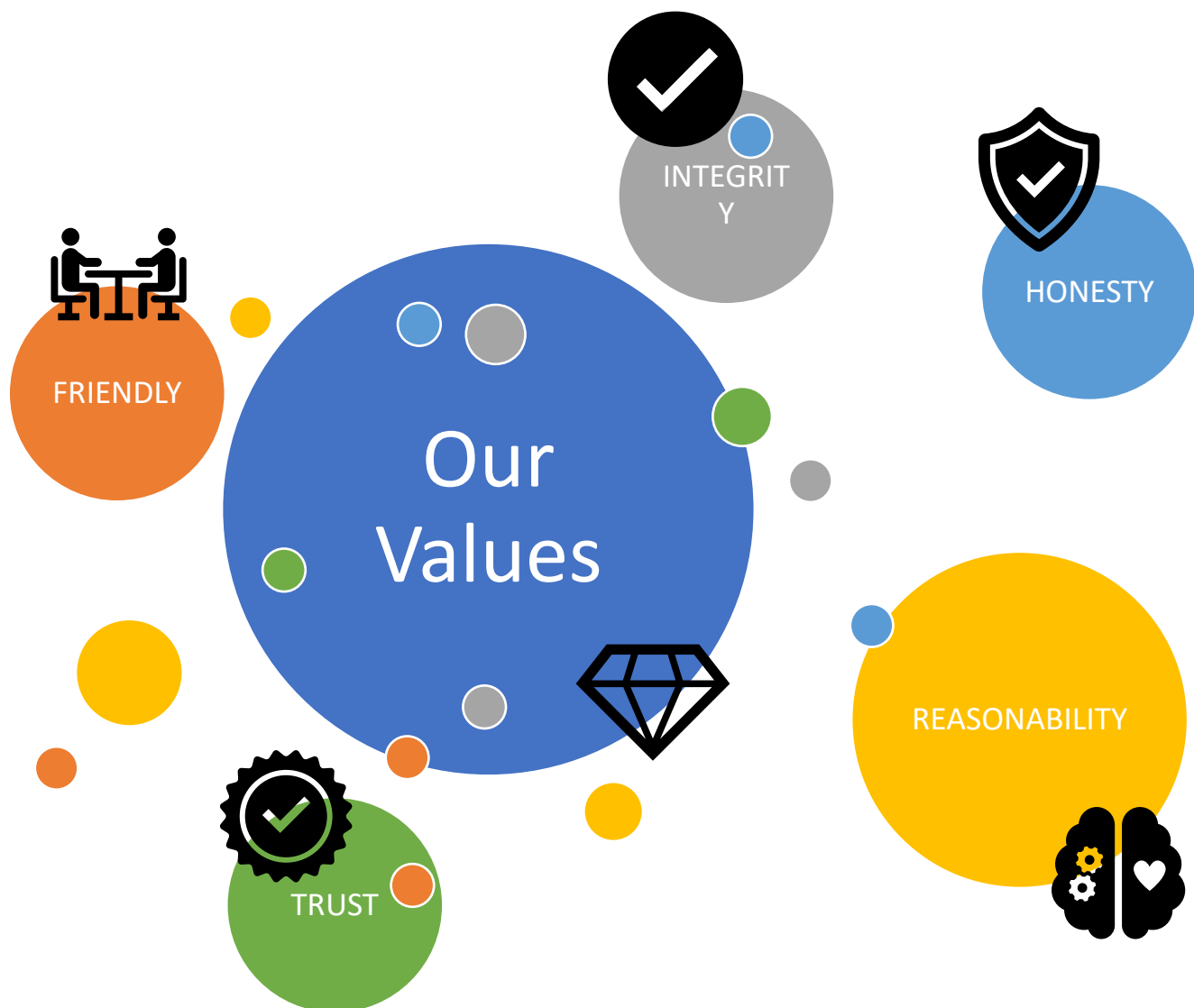


Figure 4: Organization's Values

3.1. Self-Reflection and Self-Management

3.1.1 Personal Behavior of The Students:

- delivery tasks delay.
- Communications gaps.
- Lack of knowledge.

3.1.2 Behaviors Studies and Elimination Techniques:

- delivery tasks delay.
 - o Not attending meeting or classes.
 - Arrange meeting at appropriate time.
 - Make sure everyone will attend the meeting.
 - o Lack of time management.
 - Follow up regularly.
 - Review tasks delivery on regular basis.
- Communications gaps.
 - o No effective communications methods.
 - o Weakness in communication skills.
- Lack of knowledge.
 - o Improving the knowledge.
 - o Reading more about the project.
 - o Meet with professional people in same field.

3.1.3 SWOT Model:



Strengths

- He's very positive thinking person.
- He's great with people.
- He has good experience in his filed.



Opportunities

- He needs to start speaking in front of little groups.
- Reading and growth knowledge.
- Improving his writing skills.



Weaknesses

- He can be easy to get nervous when he stands in large of people.
- He got distracted easily.
- He doesn't good in writing skills.



Threats

- He doesn't have specific professional qualifications.
- He doesn't good public speaker.
- Too much pressure in life.

Table 13: SWOT Model

3.2. Personal Integrity and Reliability

3.2.1 Contradiction of Moral Indignity Behavior:

#	Contradict Moral Behavior	Financial Analysis	Social Analysis	Technical Analysis
1	Favoritism	- Targeted results get blurred.	1-Unhealthy competition. 2-Future resource planning is affected.	-The right people for the right job cannot be hired.
2	Theft	1- Leakage of financial resources. 2-Internal system get drifted.	1-Bad image about company. 2-Shareholders can be hesitant to invest in such companies.	-Company policies will be compromised.
3	Bribe	-System gets derailed.	-Moral and ethical values are compromised.	-Company image will be polluted.
4	Bills fraud	- Products cost will be increased due to manipulation.	- Bad impression among community members about company.	-Company cannot survive in the long run if such practices continue.

Table 14: Contradiction of Moral Indignity Behavior

3.2.2 Analyses of Contradiction of Moral Indignity Behavior:

1. Favoritism:

A. Financial Analysis:

- Targeted results get blurred.

B. Social Analysis

- Unhealthy competition.
- Future resource planning is affected.

C. Technical Analysis:

- The right people for the right job cannot be hired.

2. Theft:

A. Financial Analysis:

- Leakage of financial resources.
- Internal system gets drifted.

B. Social Analysis:

- Bad image about company.
- Shareholders can be hesitant to invest in such companies.

C. Technical Analysis:

- Company policies are compromised.

3. Bribe:

A. Financial Analysis:

- System gets derailed.

B. Social Analysis:

- Moral and ethical values are compromised.

C. Technical Analysis:

- Company image will be polluted.

4. Bills fraud:

A. Financial Analysis:

- Products cost will be increased due to manipulation.

B. Social Analysis:

- Bad impression among community members about company.

C. Technical Analysis:

- Company cannot survive in the long run if such practices continue.

3.3. Personal Communication

3.3.2 Personal Communication and Effective Communication:

- **Personal communication** is a process of continuous and direct interaction between the communicator and the receiver, through which information, opinions and trends are exchanged between the two parties to the communication. Which ultimately leads to influencing the future to achieve a goal.

It can be said that it is that which takes place between a number of people directly and without an intermediary, so that communication is through words, signs or movements or indirectly by using technology to deliver and receive the message.

Communication is one key element which has to be applied effectively throughout a project's life cycle from the beginning till the end. Hence, why is it that Project Managers are not communicating effectively? Examples of personal communication include conversations, email, text messages, online chats or direct messages, personal interviews, telephone conversations, live speeches, unrecorded course lectures, memos, letters, messages from non-archived discussion groups or online bulletin boards, social media shared with "team" only. By observing some relatively easy to remember questions and concerns related to communication, a project team can be more effective in communicating with their project stakeholders.

Effective communication will generally lead to better outcomes and, therefore, a higher likelihood for overall project success.

- Flexibility
- Echo
- Recruitment of opinion leaders
- Bidirectional
- Immediate reaction
- Possibility to control the communication process
- Picture messages accompanying the basic information to be conveyed, which is considered as a “decoration” that serves a particular scene.
- Non-verbal communication
- Spontaneity

➤ **Effective communication**

It is one of the skills that an individual acquires so that he is able to communicate his thoughts, opinions and messages to a particular person or audience in a way that ensures that the target person is convinced of what he says or expresses, and it is more than just an exchange of messages between individuals; It is related to the emotions and intentions that lie behind these messages, in addition to the person's ability to convey these messages clearly and simply, and to understand everything the other person says and feel that he is listening to him and understanding what he says.

- Questioning skill.
- Explanation skill
- Eye communication skill
- civilized behavior
- facial expressions

3.3.3 Shapes, Models, and Channels of The Personal Communication:

Communication is the process of creating, interpreting, and negotiating meaning. Communication can be verbal, nonverbal, or textual. It can be aural, visual, or even physical. Although communication occurs in a variety of different ways, it is always a learned behavior.

➤ Models of Communication

- Linear Models
- Interactional Models
- Transactional Models

➤ Communication Channels

- Face-to-face communication
- Video conferencing
- Phone calls
- Emails
- Text messages
- Online messaging platforms
- social media

3.3.4 Communication Matrix:

A communication matrix is a document summarizing the communication management plan for a project. To remain effective, the communication matrix must be accessible to all stakeholders and updated throughout the project. Let's look at one way a matrix can be formatted.

Communication	Format	Frequency	Owner	Distribution	Escalation
Weekly Status update	E-mail	Once a week	PM	All project team	CEO
Technical & Creative Design Meetings	In person / Face-to- face	Monthly	Technical lead	Technical team	PM
business development	Face-to- face	¼ year	Development Manager	VIP Stakeholders	CEO
Project Status Reports	Email	Monthly	Project manager	Project manager & Stakeholders	PMO & CEO
Risk register update	Face to face & conference	monthly	Risk Manager	All project team	PM & CEO
Training meeting	Face-to- face	Annual	Technical lead	All project team	PMO & CEO
Weekly Status update	E-mail	Once a week	PM	All project team	CEO
Technical & Creative Design Meetings	In person / Face-to- face	Monthly	Technical lead	Technical team	PM
business development	Face-to- face	¼ year	Development Manager	VIP Stakeholders	CEO

Table 15: Communication Matrix

In project management, a communication plan is an outline of how we are going to communicate important, ongoing project information to key stakeholders. Your communication plan will help your team understand who should be getting which notifications and when to loop in project stakeholders. As part of our communication plan, you'll clarify which channel stakeholders should use and when, how frequently different details should be communicated, and who is responsible for each of the different channels. Sharing a communication plan can give our team clarity about which tools to use when and who to contact with each of those tools.

3.3.5 Wrong Scenarios of Communications:

A common denominator in challenged projects is poor communication. What are the results? Stakeholders make bad assumptions. Team members don't trust one another. Work has to be redone. Example of wrong communications:

- **Giving stakeholders irrelevant information.**

Some project managers email the project documents to all stakeholders including the project schedule, budget, process improvement plans, weekly status reports, project risks, and stakeholder analysis, to name a few. What do you think the stakeholders do? Yes, most ignore the email and miss critical information.

- **Not planning project meetings.**

How often have we attended a project meeting and left mumbling—what's was that all about? Many meetings are a complete waste of time. Why? Little thought in the planning.

- **Assuming That Your Message Has Been Understood.**

Always take time to check that people have understood your message. For example, when you send out an email, could encourage people to respond with questions or to reply, if they haven't understood part of your message. Or, if you've given a presentation, build in time for people to discuss your main points or leave time for questions at the end.

3.3.6 Stakeholder Assessment Matrix:

Consists of several rows, each of them representing one stakeholder (or a group of homogenous stakeholders, if applicable). The columns indicate the level of engagement. suggests the following classification: Each stakeholder falls under one of the following five categories, depending on the level of support for the project:

- Unaware: Stakeholders are unaware of the project and its potential impacts.
- Resistant: Stakeholders are aware of but not supportive of the project.
- Neutral: Stakeholders are aware of the project, but they don't have an opinion regarding their support for it.
- Supportive: Stakeholders are supportive of the project & wish it to succeed.
- Leading: Stakeholders are actively engaged in project success and are willing to lend assistance to help it succeed.

Stakeholder	Strength/Interest	Unaware	Resistant	Neutral	Supportive	Leading
CEO	High/High				C	C
Project	High/High				C	C
Technical lead	Low/High				C	
Development	Low/High			D		
Risk Manager	Low/High		D			
Suppliers	Low/Low		D		C	
CEO	High/High				C	C

Table 16: Stakeholder Engagement Assessment Matrix with Desired ("D") And Current ("C") Levels of Engagement Per Stakeholder

4.1. Leadership

4.1.1 Leadership Model:

- **Leadership** is the process of leading a group and influencing that group to achieve its goals, and it requires the development of specific and unique soft skills along with the more typical hard skills (Soft skills are key traits that often apply to communication, decision making, leadership abilities, attitude, instincts, and work ethics.
- **Leadership Models:**
 - o Coaching Leadership Model involves teaching, supervising, helping and motivating followers to improve their skills. A coaching leader is a great mentor is a pioneer who also has a remarkable ability to instruct and train.
 - o Democratic Leadership Model subordinates are involved in making decisions depends on the group been counseled and their feelings being esteemed relies on the skills and knowledge of team members.
 - o Laissez-faire Leadership Model gives authority to employees. Subordinates are allowed to work as they choose, with complete freedom to make decision and with minimal or no interference from the leader.
 - o Pacesetting leadership is when the leader sets an example of high performance, high pace and high quality. Team members are expected to follow suit, and the pacesetting leader values results more than anything. Leader is highly focused on performance and expects the same of the team. Works best with teams that already perform at a high level.
 - o Charismatic Leadership Model a charismatic leader is an enthusiastic, self-confident leader whose personality and actions influence people to behave in certain ways.

4.1.2 Model Chosen and Reasons:

Charismatic Leadership Model is the model that has been chosen. The most comprehensive analysis of charismatic leaders identified the following personal characteristics they share:

- o They have a vision.
- o They have the ability to articulate that vision.
- o They are willing to take risks to achieve that vision.
- o They demonstrate behaviors that are out of the ordinary.

4.1.3 Motivation Methods:

Motivation refers to the process by which a person's efforts are energized, directed, and sustained toward attaining a goal. A successful project leader must have a way of motivational factors for others. they must understand

the basic needs of employees, peers, and his superiors. Leadership is used as a means of motivating others.

- 1- Money / Power: Annual bonus from profits
- 2- Recognition: Certificates of Appreciation for Outstanding Employees
- 3- Interpersonal Relationships:
- 4- Autonomy / Interesting Work
- 5- Purpose
- 6- Mastery / Exploration

4.2. Teamwork

4.2.1 RACI Model:

RACI is an acronym for Responsible, Accountable, Consulted and Inform. A responsibility assignment matrix describes the participation by various roles in completing tasks or deliverables for a project or business process. It is used for clarifying and defining roles and responsibilities in cross-functional or departmental projects and processes, where:

- Responsible is “The Doer” the individual or Individuals who perform an activity - responsible for an action, there may be several Rs.
- Accountable “The Buck Stops Here” The individual who is ultimately Accountable has the yes/no and power to veto an activity or decision providing the Sponsor is in agreement.
- Consulted “In the Loop” The individual or individuals who need to be consulted prior to a task or action being completed their expert knowledge relating to the task is considered important. This is a two-way communication.
- Informed “The individual or individuals who needs to be informed after a decision or action is taken. One-way communication.

Tasks \ Roles	Responsible	Accountable	Consulted	Informed
Mission and Vision	Yousef	Mohammed	Yasser	Fahad (PM)
Project Chart	Mousa	Abdulfattah	Majed	Fahad (PM)
Organizational Structure	Basma	Majed	Abdulfattah	Fahad (PM)

Table 17: RACI Model

4.3. Conflict and Crisis

4.3.1 Conflict:

Conflict is a natural ingredient in every origination and has been defined as “the process which begins when one party perceives that the other has frustrated, or is about to frustrate, some concern of his” (Thomas, 1976, p. 891).

4.3.2 Expected Scenarios of Conflict:

Scenario 1: Miscommunication/Misunderstanding

Which can arise based on that the team has different individuals how come from different practices different and career backgrounds. In addition to not having a good trust on each other.

Scenario 2: Conflict based on priorities/ resources

Which can occur over financial resources between the costumer services department and the marketing department, as they deserve a higher percentage of the budget.

Scenario 3: Conflict over cost/Suppliers' conflict

Which can happen between the organization and the supplier of materials due to notice of delay in delivery of materials after contracting.

4.3.3 Optimal Strategies to Deal with each Conflict:

According to Thomas-Kilmann conflict mode instrument which was developed by K. W. Thomas and R. H. Kilmann (1974, 2000):

- Competing/ Forcing is a win-lose resolution technique.
- Collaborating is a win-win resolution technique.
- Compromising is a lose-lose resolution technique.
- Avoiding is a lose-lose resolution technique.
- Accommodating is a lose-win resolution technique.

4.3.4 Root Cause Analysis:

Root cause analysis defined (RCA) is a systematic process for identifying “root causes” of problems or events and an approach for responding to them. RCA is based on the basic idea that effective management requires more than merely “putting out fires” for problems that develop but finding a way to prevent them. RCA helps organizations avoid the tendency to single out one factor to arrive at the most expedient (but generally incomplete) resolution. It also helps to avoid treating symptoms rather than true, underlying problems that contribute to a problem or event.

Scenario 1	Scenario 1: Miscommunication/Misunderstanding
Conflict description	Which can arise based on that the team has different individuals who come from different practices different and career backgrounds. In addition to not having a good trust on each other.
Conflict resolution strategy	(Win-win strategy). How to deal? Having multiple meetings to increase understanding and allow an appropriate time or enough time for and questions and concerns from different team members to ask other to provide needed explanation and knowledge to make clear understanding.
Root Cause Analysis	- o Define the problem: The design team deliver the wrong model or wrong design. ▪ Countermeasure: Deliver correct requirements. - o Why? (Design Team): because they did not get the correct requirements. ▪ Countermeasure: Coordinate effectively with the design team - o Why? (Design Leader): leader did not attend the weekly meeting with the management and failed to coordinate correct requirements ▪ Countermeasure: Ensure that design leader has the correct requirements. - o Why? (Coordinator): Project coordinator did not coordinate with team leader do to attend the meetings. ▪ Countermeasure: Make sure to coordinate with all leaders from all departments effectively.

Scenario 2	Conflict based on priorities/ resources
Conflict description	Which can occur over financial resources between the production department and the design department, as they deserve a higher percentage of the budget.
Conflict resolution strategy	(Win-lose strategy). From the point of view of the management of the organization, production department is the base line of our products, and the number of customers is few, and I preferred to give a higher budget to the production department to increase the design department.
Root Cause Analysis	- o Define the problem: Overspending of the production department ▪ Countermeasure: efficient production is the most required. - o Why? (Production Department): overtime is open throughout the whole year. ▪ Countermeasure: overtime is only open during the submission of our products. - o Why? (Human Resource Department): Low human resource department performance cause a mis controlling of the working hours in the system. ▪ Countermeasure: redevelop human resources department working hours system to control the required overtime for the needed personals.

Scenario 3	Conflict over cost/Suppliers' conflict
Conflict description	Which can happen between the organization and the supplier of materials due to notice of delay in delivery of materials after contracting.
Conflict resolution strategy	(Lose-lose strategy). Bentley to the supplier has been done by 30% of the value of the last payment due to delay in delivery of materials on time.
Root Cause Analysis	- o Define the problem: miscommunication between vendor supervisor and his employees regarding the schedule and time of transportation. ▪ Countermeasure: re-coordination and multilabel communication from the coordination department must be done through varies types of communication channels to make sure all deliveries on schedule. - o Why? (vendor): one supervisor is responsible with multilabel customers dealings. ▪ Countermeasure: make sure in our contracts that one supervisor is only specialized to our dealing - o Why? (Production department): our team is not trained to handle this type of contracts. ▪ Countermeasure: training and courses for the production team must be in place and done to make sure this will not happen again.

Table 18: Root Cause Analysis

5.1. Resourcefulness

5.1.1 Human Resources

According to the organizational Structure that has been developed, below is a list of human resources needed in the project:

Type of Management	Position	Duties
High management	Project Leader	Responsible for planning and overseeing projects within an organization, from the initial ideation through to completion. In addition, coordinating people and processes to deliver projects on time, within budget and with the desired outcomes aligned to objectives.
High management	Project Leader Assistance	Responsibilities include coordinating with different departments to ensure projects are completed on time, also, responsible for performing administrative tasks such as preparing invoices, building estimates and scheduling meetings as needed.
High management	Coordination Leader	Responsible for helping oversee the successful completion of projects and events. Also, performing specialized tasks, managing a team of staff members and establishing relationships with vendors and freelance professionals.
Mid Management	Design Leader	Responsible for guiding creative teams in the creation of working drawings, budgeting, scheduling, specifications, planning and design on projects with authority to direct, control, and monitor all activities. Responsible for supervision and quality-control review of drawings.
Low Management	Civil Engineer	Responsible for planning, design and oversee construction and maintenance of products structures and infrastructure, such as columns, types of materials.
Low Management	Architecture Engineer	Responsible for designing, analyzing, and altering plans, prototypes, or structures. Ensuring product plans, prototypes, and structures are operating safely, efficiently, and reliably. Assisting team members with project objectives, budgets, and timelines.
Low Management	Electrical Engineer	Responsible for designing, developing, and testing electrical devices and equipment, including communications systems, power generators, motors and navigation systems, and electrical systems for automobiles and aircraft. In addition to, oversee the manufacture of these devices, systems, and equipment.

Low Management	Mechanical Engineer	Responsible for developing, design, build, test, and inspect mechanical devices and systems, such as machines, tools, and engines.
Low Management	Industrial Engineer	Responsible for designing production layouts and processes that increase productivity, eliminate wastefulness and reduce costs while maintaining quality standards within an organization.
Mid Management	Financial Leader	Responsible for collating, preparing and interpreting reports, budgets, accounts, commentaries and financial statements, managing accounting practices across the organization, producing long-term business plans, undertaking research into pricing, competitors and factors affecting performance.
Low Management	Sales Accountant	Responsible for initiating sales process by scheduling appointments; making initial presentation; understanding account requirements. Closes sales by building rapport with potential customers; explaining product and service capabilities; overcoming objections; preparing contracts.
Low Management	Sales Auditor	Responsible for reviewing the sales data from the stores that are assigned to them, reviewing any errors or exceptions and investigating and making corrections as necessary to ensure that stores sales logs are clean and closed on a timely basis so that this data can be passed on to other systems.
Low Management	Purchase Accountant	Responsible for installing, modifying documents and coordinating the implementation of the accounting system and accounting control procedures. Compiles and analyzes financial information.
Low Management	Purchase Auditor	Responsible for overseeing and audits all purchases made by a company. In addition to, working with other operations positions to make sure product and supplies meet the needs of the project or process.
Low Management	Budget Specialist	Responsible for planning and maintaining an organization's finances. They review departmental budgets, conduct cost-benefit analyses, and develop long- and short-term budgets for organizations and individual business lines.
Mid Management	Sales and business development Leader	Responsible for leading sales, marketing, customer-service, and client relationship management teams. Develops and strengthens internal and external relationships that will lead to increased lead generation and market share. Builds cross-functional teams to guide and nourish sustainable, long-term growth
Low Management	Business Development Specialist	Responsible for identifying opportunities for business growth and optimizing marketing strategies. In addition to, analyzing business processes and finances, implementing business plans, and establishing effective networks.

Low Management	Sales Specialist	Responsible for understanding of all company products and services, and the skills and industry knowledge required to sell them. Also, preparing marketing budgets, conducting research and analyzing trends, leading the sales team, and performing sales forecasts.
Low Management	Sales Officer (2)	Responsible for executives that work with companies' sales teams to determine the best strategies to increase customer purchases.
Low Management	Graphic Designer	Responsible for the entire process of defining requirements, visualizing and creating graphics including illustrations, logos, layouts and photos. In addition, shape the visual aspects of websites, books, magazines, product packaging, exhibitions and more.
Mid Management	Human Resources and Talent Leader	Responsible for holding this position entails carrying out tactical execution of strategies and plans on recruitment, training, and retention of highly skilled employees. In addition, including ensuring top level staff performance, as well as executing the process involved in compensations.
Low Management	Human Resource Specialist (2)	Responsible for the day-to-day operations, including recruiting new employees or processing termination paperwork, preparing compensation packages with company policies set out by law, and fostering healthy workplace practices throughout every department.
Low Management	Salary Specialist	Responsible for overseeing and administering employee compensation programs. Establishing a company's pay structure, approves bonuses and commissions, and administers executive compensation programs.
Low Management	Public relationship specialist	Responsible for creating and maintaining a favorable public image for the organization they represent. Also, crafting media releases and developing social media programs to shape public perception of the organization and increase awareness of its work and goals.
Low Management	Talent specialist	Responsible for sourcing, attracting, and interviewing prospective employees to find the perfect match for a company's long-term goals.
Mid Management	Quality Leader	Responsible for coordinating with suppliers to ensure that they meet quality standards. Conducting internal audits of quality control measures to ensure that they are being followed correctly. Coordinating staff training on quality control measures and methods of improvement.
Low Management	Quality design Engineer	Responsible for ensuring that manufactured products meet high-quality standards. A Quality Engineer is responsible for developing processes, testing procedures, and implementing systems to ensure that products and processes comply with safety regulations and meet clients' expectations.

Low Management	Quality Production Engineer	Responsible for developing and implementing quality standards, developing and implementing quality control systems, monitoring and analyzing quality performance, inspecting and testing materials, equipment, processes, and products to ensure quality specifications are met.
Low Management	Quality installation Engineer	Responsible for ensuring technical standards and creating quality, ensuring that manufactured products meet high-quality standards, testing procedures, and implementing systems to ensure that products and processes comply with safety regulations and meet clients' expectations.
Mid Management	Production Leader	Responsible for the entire production process for a set of products. In addition to planning, organizing and recommending strategies in ensuring that the product is developed successfully, in accordance with all specifications, and supervising teams that work in operations and product development.
Low Management	Production supervisor	Responsible for completing production plans by scheduling and assigning personnel, accomplishing work results, establishing priorities, monitoring progress, revising schedules, resolving problems, and reporting results of the processing flow on shift production summaries.
Low Management	Production worker (10)	Responsible for meeting quality standards and deadlines for products. They check for defects, assemble products, monitor manufacturing equipment, and closely follow safety procedures to prevent accidents in environments where materials may be hazardous.
Low Management	Installation Supervisor	Responsible for supervise fabrication and supervise installation teams and Quality check work, troubleshoot fabrication and site issues Keep track of schedules at construction sites, prefab plants or at customer homes, Coordinate material orders and ensure quality control of installations.
Low Management	Installation worker (6)	Responsible for traveling to place of business, installing electronic equipment, troubleshooting problems with existing equipment, testing connections, providing user instructions to customers, and cleaning up after the job is complete.
Low Management	Driver (2)	Responsible for picking up materials, verifying loads for accuracy, and delivering them as instructed. Load and unload cargo. In addition to basic vehicle maintenance; comply with all safe work practices, policies, and processes at all times. Complete and verify paperwork for accuracy

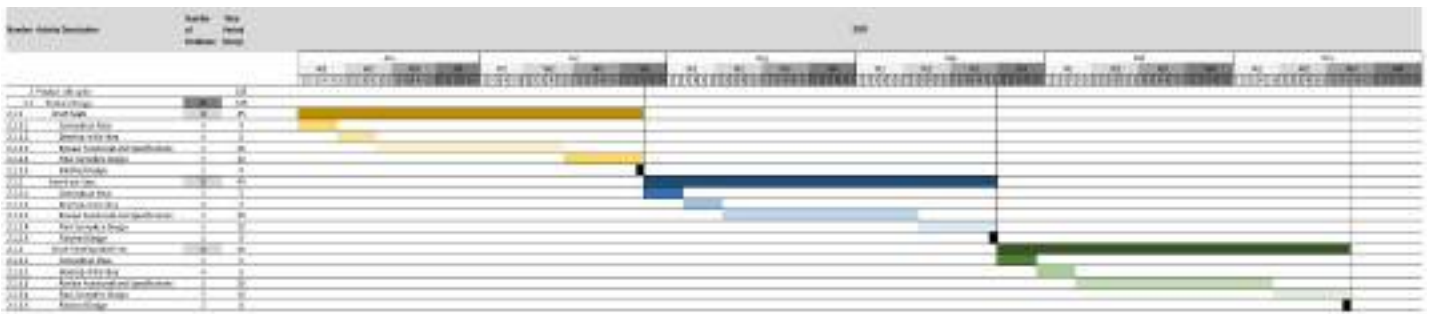
Table 19: Job Descriptions

5.1.1. Crashing and Fast-Tracking Analyses

Crashing and fast tracking are methods that are used to compression the schedule of any given project, and to shorten the duration of the project without changing the scope of the project.

- Crashing is the technique to use when fast tracking has not saved enough time on the project schedule.
- Fast-tracking is a technique where activities that would have been performed sequentially using the original schedule are performed in parallel.

SSSC anticipated that a delay may occurred on the Product Design Stage, due to lack of information – miscommunication-change in specifications, consequently, fast-trucking and crashing technique has been used to shorten the period of those activities.



Resources Before Crashing and Fast-Tracking



Resources After Crashing and Fast-Tracking

Table 21: Crashing and Fast-Tracking

To more information Review Appendix

5.2. Negotiations

Negotiation is a process that can be learned. It is critical to presume that everything about the project is negotiable, and that the project manager is a competent negotiator. To be a competent negotiator, you must be prepared and have done your study before entering the negotiating process.

Moreover, the negotiation lifecycle can be defined into 5 main categories:

- Making the decision to negotiate
- Exciting
- Preparing to negotiate
- Following up after the negotiation
- Negotiating

5.1.2 Rules for The Negotiation Process

1- The competition	In this style, negotiators think strategically, focus on results, neglect compliments, and are usually blunt, and often even aggressive.
2- Cooperate	The negotiators in this method are honest and open, and the ability to understand the concerns and interests of the other party, so they work in order to reach creative solutions that are satisfactory to both parties.
3- Bargaining	Negotiators in this method focus on finding a fair and middle ground for the two parties, and they may make some concessions on their part to satisfy the other party.
4- Avoidance	This method avoids negotiators any situations that may lead to conflict or disagreement with the opposing party
5- Comprehension	In this style, negotiators spend a great deal of time building and maintaining relationships with the other party, and they usually care about the feelings and body cues that permeate the negotiation process.

Figure 5: Negotiation Process

5.1.3 Negotiation Plans

Negotiation can be challenging at times, but with experience and commitment, a project manager can become an excellent negotiator.

There are several bargaining tactics available to get the desired goals. A Win-Win negotiation is an example of this, in which both parties' profit. Another strategy is Win-Lose negotiation, also known as distributive negotiation, in which one side attempts to maximize their profit at the expense of the other.

Another common type of negotiation is coworker negotiation, which we conduct every day to address workplace disagreements. We will employ the Win-Win and Co-worker bargaining approaches in our project.

1. Plan Win-Win technique:

We will concentrate on giving our customers the finest advantages available in the market at the best prices in order to please them with acceptable bargains while creating a profit that covers the expense of doing business.

2. Plan Co-worker negotiation technique:

Depending on the project we will focus on providing our staff and team with appropriate compensations when doing the work on time or earlier with off days or some valuable benefits to them rather than monetary compensations.

6.1. Project Design

6.1.1 Triple Constraints of the Project

of a project management are time, cost and scope, Where:

- Cost is the financial commitment of the project is dependent on several variables, such as materials and people and the resources involved which include labor costs,
- Scope deals with the specific requirements or tasks necessary to complete the project, and
- Time which indicates the schedule for the project to reach completion.

In Smart Street Solution Company, related constrain are:

- **Cost:** establishing the Company and bring home first project.
- **Time:** installing our first product and start sailing our project.
- **Scope:** designing and producing our first unit.

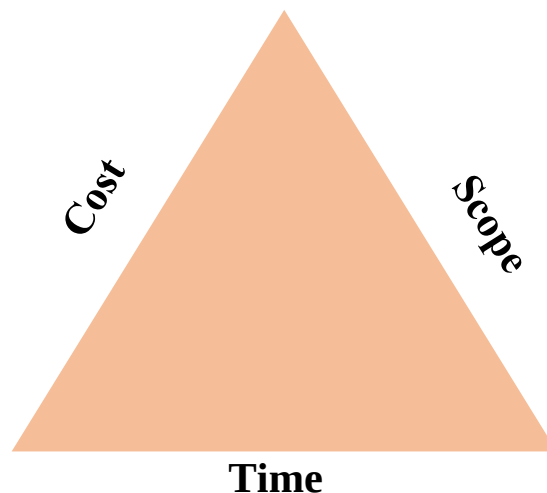


Figure 6: Triple Constraints

6.1.2 Project Success Factors

Project success factors can vary from project to another, depending on project objectives and goals. In Saudi Smart Solution Company, Smart Street Furniture Project, success factors are:

- 1) **Agree on the project goals:** to make sure there is agreement with management, project sponsors, and other stakeholders on the purpose and goals of the project.
- 2) **Experienced Professional Project Team Leaders:** to ensure that the team members have the necessary skills to deliver the results required.
- 3) **Methodical Approach:** to ensure that your process is clear, reliable, and efficient, follow the trends and techniques of the framework.
- 4) **Proper Planning:** invest sufficient time and resources in thorough scheduling.
- 5) **Adhere to the Best Practices:** to draw from the experience of past successes and adapt proven strategies.
- 6) **Monitoring & Control:** to check progress and regularly evaluate the results, and to ensure that the project is on track performance indicators.
- 7) **Use Professional Software:** to promotes safe and easy team collaboration and access to data needed by each team member.
- 8) **Effective Communication:** to ensure that formal communication processes (meetings, documentation), as well as informal processes.
- 9) **Work with Committed People:** allow the core project staffs, specialist resources, manufacturers, and all stakeholders to be involve to share similar project visions and strive to achieve overall success.
- 10) **Careful Management of Risks:** to produce a risk log with an action plan for the project's risks during the planning process.

6.1.3 Work Breakdown Structure (WBS)

WBS is a visual, hierarchical, and deliverable-oriented deconstruction of a project and identifying all the activities needed to achieve a successful project. A well-constructed WBS helps with important project management processes such as cost estimation, resource allocation, and risk assessment. In addition, a WBS helps avoid common project issues such as missed deadlines, scope creep and cost overrun, among others.

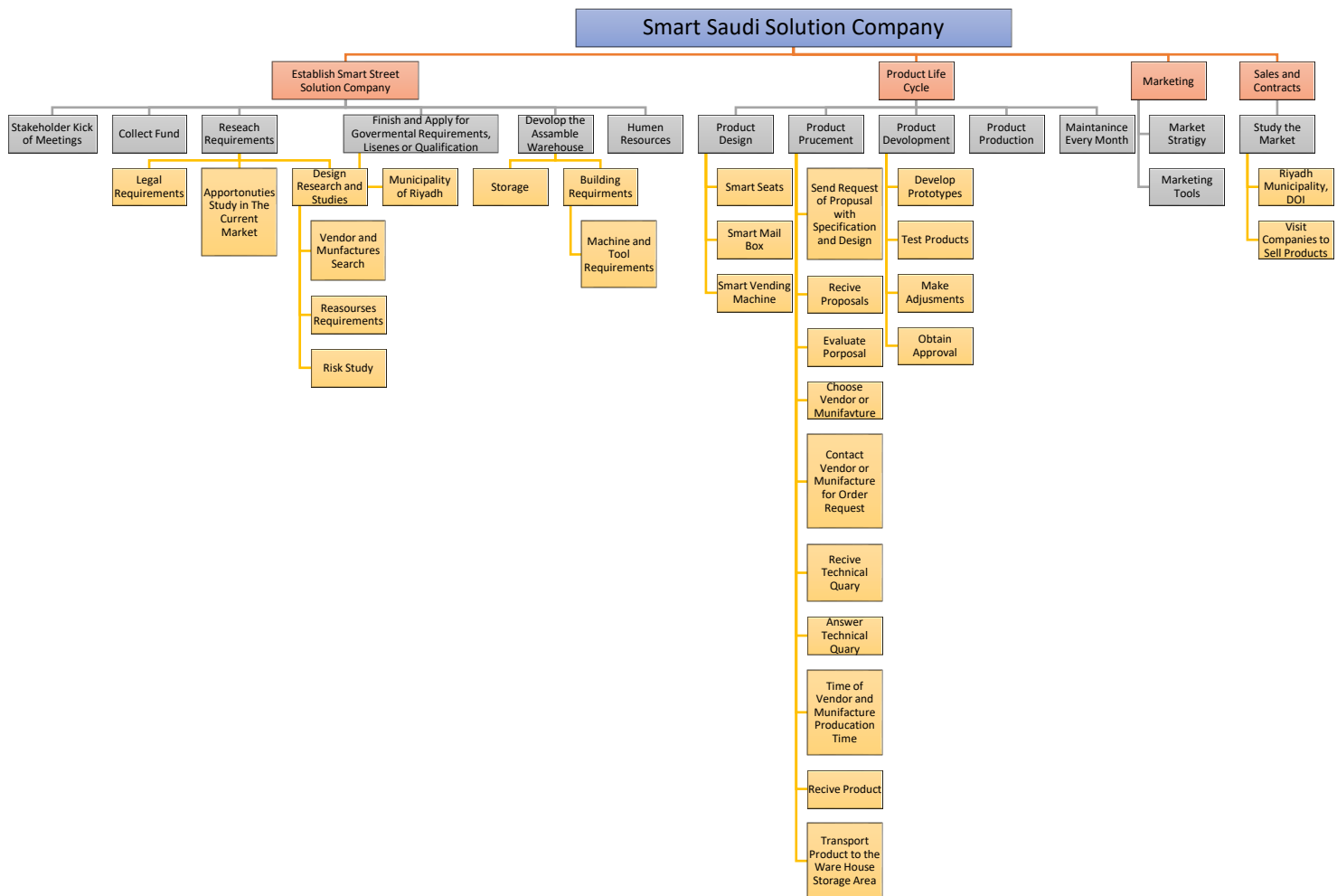


Figure 7: Breakdown Structure

6.2. Requirements and Objectives

6.2.1 Requirements Traceability Matrix

The requirements traceability matrix is a grid that links product requirements, that demonstrates the relationship between requirements and other artifacts, from their origin to deliverables that satisfy them. Which used to prove that requirements have been fulfilled.

Types of Traceability Matrix:

- **Forward Traceability** which allows to trace each project requirement forward into the design implemented by requirements, the code implemented by the design, and the tests that help with the validation of the project.
- **Reverse Traceability** which helps to ensure that the evolving product still satisfies the original requirements without expanding the scope of the project (adding code, design elements, and tests).
- **Bi-Directional Traceability** which helps to determine that all initial requirements have been met, that these requirements can be validated, and if there is a change, it analyzes the impact of the change in requirements.

Req. Code	Category	Description	WBS	Priority	Source	Business Objective	Deliverability	Verification	Validation
Req-001	Mandatory	Commercial Certificate Permit	1.3.1.1	High	Commercial Ministry	Start the company and have a work permit approval for it.	Yes	Yes	Yes, Correct and Stamp
Req-002	Should have	Standard Specifications Authority	and 1.3.1.2	Medium	Saudi Standards, Metrology and Quality Organization	To be align with the standers and specifications that suggested by the SSMQ.	Yes	Yes	Test Prototype
Req-003	Nice to have	Saudi Consulate of Engineering Certificate	1.3.1.3	Low	Saudi Engineering council	Obtain a recognition from Saudi Consulate of Engineering	Yes	Yes	Yes, Company Serial Number

Table 22: Requirements Traceability Matrix

6.2.2 Methods of Requirement Collection

It is the process of determining, documenting, and managing stakeholder needs and requirements to meet project objectives. Which provides basis for defining and managing the project scope including product scope.

Collect Requirement Tools:

- 1- Expert Judgment.
- 2- Data gathering:
 - a) Brainstorming;
 - b) Interviews,
 - c) Focus Groups,
 - d) Observations
 - e) Questionnaires and Surveys, and
 - f) Benchmarking
- 3- Data Analysis:
 - a. Document Analysis
 - b. Context diagrams
- 4- Decision Marking:
 - a) Voting,
 - b) Multi criteria decision analysis
- 5- Data representation:
 - a) Group creativity techniques
 - b) Prototypes
 - c) Affinity Diagrams, and
 - d) Maid Mapping
- 6- Interpersonal and team skills: Nominal Group Technique – Observations/Conversation – Facilitation

6.2.3 Hierarchical Structure of the Objectives of the Project

The hierarchy of objectives is a tool that helps analyze and communicate the project objectives. It organizes these objectives into different levels of a hierarchy or tree. It used to:

- a. Clarify the need or demand for the project and, how to meet those requirements.
- b. Communicate the project objectives to everyone involved in the project.
- c. Promote appropriate project design by encouraging feedback from the people who are involved in, or affected by, the project.
- d. Enable the post-project evaluators to measure the project's success in attaining its objectives.
- e. Demonstrate that the project has different levels of objectives, and clarify how the objectives relate to one another in the hierarchy.

This approach organizes objectives into four broad levels:

1. Policy Objective:

Establishing a Smart Street Solution Company to increase the public user of Street Solution.

2. Strategic Objective:

Creating innovative Smart Street Solution.

3. Project Objective:

Creating three innovative smart street furniture in one year.

4. Input Objective:

Collect fund from internal stakeholders and investors.

7.1. Scope

7.1.1 Scope Statement

Establish smart street solutions company with an aim to make optimum utilization of public places such that custom furniture items could be designed and developed for visitors to public places. Project scope covers following key elements:

- **Short listing of key public places**

Under set criteria specified public places shall be identified to fulfill the set objectives.

- **Conduct feasibility study to evaluate viability of the project**

A comprehensive feasibility shall be conducted to evaluate project viability and its worth in view of various risks at various levels.

- **Compliance with official standards**

Project compliance is necessary in order to align with local government policies and programs.

- **Vendors qualification and selection**

Product vendors shall be short listed against given criteria such that standard and specifications are fulfilled as per government sustainability practices.

- **Staff recruitment and reporting structure**

Competent staff shall be hired through recruitment agencies to cut hiring lead time. Proper reporting structure shall be designed for alignment and smooth flow of operations on routine basis.

- **Team hierarchy and communication levels**

Teams shall be formed to ensure key functions are performed by specified leaders and their teams.

- **Evaluate machines and tools requirements**

Each manufacturing facility shall be equipped with appropriate tools and machines to ensure smooth production of required products in needed volumes.

- **Product design and development**

Technical staff shall take care of product design and development needs. In close communication with relevant department heads, only approved designs shall be produced.

- **Marketing and sales strategy**

In order for evaluation of product demand, surveys shall be conducted at various public places to get first hand feedback. based on feedback received, sales strategy shall be designed

- **Sales contract**

Sales contract shall be signed prior to maturing any deal to ensure that project deals are firm and up to the mark.

- **After sales support services**

After sales support is key element of our service. This service provides guarantee to our existing and potential clients that company fully stands behind these products and shall be ready to provide service against any wear and tear.

7.1.2 Scope Creeping

In order to avoid delays, deliverables shall be frozen such that no one could find reasons to revise or adjust the agreed time line and project scope. Following are the key elements of the project that shall never be compromised at any cost

- Project scope
- Product
- Deliverables time line
- **Project scope**

It has locked for the sake of worthiness and sound health of the project. There are no ifs and buts, as this project shall be accomplished within given time frame as per agreement with stakeholders.

- **Product**

This project revolves around the furniture products specialized for public places therefore this product remains vital element to keep the project in shape until its delivery.

- **Deliverables time line**

Project deliverables have been identified after thorough investigation and exploration of the possible scenarios therefore there is no room for any revision in deliverables time line.

7.1.3 Product Management

In fact, this organization undertakes to develop and design furniture items that are specialized for public places therefore features and design and construction is of utmost importance and must be elaborated for stakeholders to have clear understanding into product application.

- Product design
- Product development
- Product production

Product design

Public places represent community standards and values therefore products for public use shall be developed in consideration of public attitude, mood and acceptable norms and values.

Product development

Product material lies at the core of the product development process therefore prototypes must be developed as per agreed standards of the government.

Product production

Appropriate procedures shall be laid down for product testing, quality inspection, validation and compliance for acceptable standards set by government. Production batches shall be reviewed to test material standards and reactants quality.

7.2. Time

7.2.1 Work Packages in WBS

Outline Number	Task Name	Duration	Start	Finish	Predecessors
1	Establish Smart Street Solution Company	271 days	Sun 1/1/23	Sun 11/12/23	
1.1	Stakeholder Kick of Meetings	20 days	Sun 1/1/23	Mon 1/23/23	
1.1.1	Setup Initial Goals	5 days	Sun 1/1/23	Thu 1/5/23	
1.1.2	Setup visibility study	10 days	Sat 1/7/23	Tue 1/17/23	3
1.1.3	Agree on startup cost	3 days	Wed 1/18/23	Sat 1/21/23	4
1.1.4	Write and sign the agreement and the charter between the stakeholders	2 days	Sun 1/22/23	Mon 1/23/23	5
1.1.5	Project Charter	0 days	Mon 1/23/23	Mon 1/23/23	6
1.2	collect Fund	191 days	Sat 1/21/23	Wed 8/30/23	
1.2.1	Create a Company Bank Account	1 day	Sat 1/21/23	Sat 1/21/23	5SS+2 days
1.2.2	collect the first cost from the team investors	10 days	Sun 1/22/23	Wed 2/1/23	9
1.2.3	collected startup cost	0 days	Wed 2/1/23	Wed 2/1/23	10
1.2.4	SIDF funding the company	60 days	Thu 6/22/23	Wed 8/30/23	102
1.2.5	fund received by SIDF	0 days	Wed 8/30/23	Wed 8/30/23	12
1.3	research requirements	67 days	Tue 1/24/23	Tue 4/11/23	
1.3.1	Legal requirements	7 days	Tue 1/24/23	Tue 1/31/23	
1.3.1.1	Commercial Ministry	2 days	Tue 1/24/23	Wed 1/25/23	2
1.3.1.2	standard and specifications Authority	5 days	Thu 1/26/23	Tue 1/31/23	16
1.3.1.3	Saudi Engineering council	5 days	Thu 1/26/23	Tue 1/31/23	16

1.3.1.4	Environmental Authority	5 days	Thu 1/26/23	Tue 1/31/23	16
1.3.1.5	Industrial Authority	2 days	Tue 1/24/23	Wed 1/25/23	2
1.3.1.6	Municipality of Riyadh	2 days	Tue 1/24/23	Wed 1/25/23	2
1.3.1.7	MOMRAH	2 days	Tue 1/24/23	Wed 1/25/23	2
1.3.1.8	tax and zakat AUTHORITY	2 days	Tue 1/24/23	Wed 1/25/23	2
1.3.1.9	Human Resources Ministry	2 days	Tue 1/24/23	Wed 1/25/23	2
1.3.1.10	Salamh (Safety and security requirement)	2 days	Tue 1/24/23	Wed 1/25/23	2
1.3.2	opportunities study in the current market	10 days	Wed 2/1/23	Sun 2/12/23	
1.3.2.1	Focus group analysis	10 days	Wed 2/1/23	Sun 2/12/23	15
1.3.2.2	Surveys	10 days	Wed 2/1/23	Sun 2/12/23	15
1.3.2.3	Market Research	10 days	Wed 2/1/23	Sun 2/12/23	15
1.3.2.4	Research Analysis	10 days	Wed 2/1/23	Sun 2/12/23	15
1.3.2.5	opportunities study	0 days	Sun 2/12/23	Sun 2/12/23	30
1.3.3	Design Research and studies	60 days	Wed 2/1/23	Tue 4/11/23	
1.3.3.1	GIS Study for public usage and density	14 days	Mon 2/13/23	Tue 2/28/23	26
1.3.3.2	Design the samples of the products research	20 days	Mon 2/13/23	Tue 3/7/23	26
1.3.3.3	Design Research and studies	0 days	Tue 3/7/23	Tue 3/7/23	34
1.3.3.4	Vendor and manufactures search	15 days	Wed 3/8/23	Sat 3/25/23	
1.3.3.4.1	Smart Seats	15 days	Wed 3/8/23	Sat 3/25/23	34
1.3.3.4.2	smart mail box	15 days	Wed 3/8/23	Sat 3/25/23	34
1.3.3.4.3	smart vending machines	15 days	Wed 3/8/23	Sat 3/25/23	34

1.3.3.4.4	Vendor and manufactures found	0 days	Sat 3/25/23	Sat 3/25/23	39
1.3.3.5	Resources requirements	5 days	Sun 3/26/23	Thu 3/30/23	
1.3.3.5.1	Smart Seats	5 days	Sun 3/26/23	Thu 3/30/23	34,36
1.3.3.5.2	smart mail box	5 days	Sun 3/26/23	Thu 3/30/23	34,36
1.3.3.5.3	smart vending machines	5 days	Sun 3/26/23	Thu 3/30/23	34,36
1.3.3.6	location of warehouse study	14 days	Sun 3/26/23	Mon 4/10/23	34,36
1.3.3.7	Resources requirements found	0 days	Mon 4/10/23	Mon 4/10/23	45
1.3.3.8	risk study	60 days	Wed 2/1/23	Tue 4/11/23	
1.3.3.8.1	Hazard Risk	1 day	Tue 4/11/23	Tue 4/11/23	34,45
1.3.3.8.2	Control Risk	5 days	Sat 4/1/23	Wed 4/5/23	4,33,34,36,41
1.3.3.8.3	Opportunity Risk	5 days	Mon 2/13/23	Sat 2/18/23	4,26,6
1.3.3.8.4	Compliance Risk	5 days	Wed 2/1/23	Mon 2/6/23	15
1.3.3.8.5	risk study	0 days	Tue 4/11/23	Tue 4/11/23	48
1.4	Finish and apply for governmental requirements, license or qualification	67 days	Thu 1/26/23	Thu 4/13/23	
1.4.1	standard and specifications Authority	14 days	Wed 2/1/23	Thu 2/16/23	17
1.4.2	Saudi Engineering council	5 days	Wed 2/1/23	Mon 2/6/23	18
1.4.3	Environmental Authority	14 days	Wed 2/1/23	Thu 2/16/23	19
1.4.4	Industrial Authority	14 days	Thu 1/26/23	Sat 2/11/23	20
1.4.5	Commercial Ministry	2 days	Thu 1/26/23	Sat 1/28/23	16
1.4.6	Municipality of Riyadh	3 days	Tue 4/11/23	Thu 4/13/23	
1.4.6.1	choose location and rent it	3 days	Tue 4/11/23	Thu 4/13/23	45,21

1.4.7	MOMRAH	5 days	Thu 1/26/23	Tue 1/31/23	22
1.4.8	tax and zakat AUTHORITY	1 day	Thu 1/26/23	Thu 1/26/23	23
1.4.9	Human Resources Ministry	2 days	Thu 1/26/23	Sat 1/28/23	24
1.4.10	Salamh (Safety and security requirement)	14 days	Thu 1/26/23	Sat 2/11/23	25
1.4.11	finished governmental and legal requirements	0 days	Thu 4/13/23	Thu 4/13/23	59
1.5	Develop the assemble warehouse	25 days	Sat 4/15/23	Sat 5/13/23	
1.5.1	Offices	14 days	Sat 4/15/23	Sun 4/30/23	60
1.5.2	assemble space	14 days	Mon 4/17/23	Tue 5/2/23	67SS+2 days
1.5.3	storage	14 days	Wed 4/19/23	Thu 5/4/23	
1.5.3.1	unfinished products	14 days	Wed 4/19/23	Thu 5/4/23	68SS+2 days
1.5.3.2	finished products	14 days	Wed 4/19/23	Thu 5/4/23	70SS
1.5.4	Clinic	14 days	Wed 4/19/23	Thu 5/4/23	71SS
1.5.5	meeting rooms	14 days	Sat 4/15/23	Sun 4/30/23	67SS
1.5.6	car parking and floor	14 days	Tue 4/25/23	Wed 5/10/23	72SS+5 days
1.5.7	Building requirements	11 days	Mon 5/1/23	Sat 5/13/23	
1.5.7.1	Camera and security setup	2 days	Tue 5/9/23	Wed 5/10/23	67SS,74FF
1.5.7.2	Firefighting and safety check	2 days	Tue 5/9/23	Wed 5/10/23	67SS,74FF
1.5.7.3	disposal and environmental setup	2 days	Thu 5/11/23	Sat 5/13/23	77
1.5.7.4	IT system set up	10 days	Mon 5/1/23	Thu 5/11/23	
1.5.7.4.1	Pay hardware (server, communication devises and computers)	3 days	Mon 5/1/23	Wed 5/3/23	67
1.5.7.4.2	Network Set up	5 days	Thu 5/4/23	Tue 5/9/23	

1.5.7.4.2.1	Server set up	3 days	Thu 5/4/23	Sun 5/7/23	80
1.5.7.4.2.2	PMIS set up	2 days	Mon 5/8/23	Tue 5/9/23	82
1.5.7.4.3	Internet Set up	2 days	Mon 5/8/23	Tue 5/9/23	82
1.5.7.4.4	Emails Set up	2 days	Wed 5/10/23	Thu 5/11/23	84
1.5.7.5	Machin and tool requirements	5 days	Wed 5/3/23	Mon 5/8/23	
1.5.7.5.1	required assemble machines	5 days	Wed 5/3/23	Mon 5/8/23	68
1.5.7.5.2	required tools	5 days	Wed 5/3/23	Mon 5/8/23	68
1.5.8	ready assemble warehouse	0 days	Sat 5/13/23	Sat 5/13/23	75
1.6	Human resources	271 days	Sun 1/1/23	Sun 11/12/23	
1.6.1	Employee Human Resources Leader	30 days	Sun 1/1/23	Sat 2/4/23	
1.6.2	Build Human resources team	30 days	Mon 5/1/23	Sun 6/4/23	67
1.6.3	Employee IT Leader	30 days	Sun 1/1/23	Sat 2/4/23	91SS
1.6.4	Build IT team	30 days	Sat 2/11/23	Thu 3/16/23	93FS+5 days
1.6.5	Employee Design Leader	30 days	Sun 2/5/23	Sat 3/11/23	91
1.6.6	build Design team	30 days	Sun 5/7/23	Sat 6/10/23	67FS+5 days
1.6.7	Employee Financial Leader	30 days	Sun 2/5/23	Sat 3/11/23	91
1.6.8	Build Financial team	43 days	Sun 5/7/23	Sun 11/12/23	67FS+5 days
1.6.9	Employee Sales and business development Leader	30 days	Sun 2/5/23	Sat 3/11/23	91
1.6.10	Build Sales and business development team	30 days	Sat 5/13/23	Thu 6/15/23	67FS+10 days
1.6.11	Employee quality Leader	30 days	Sun 2/5/23	Sat 3/11/23	91
1.6.12	Build the quality team	30 days	Thu 5/18/23	Wed 6/21/23	67FS+15 days

1.6.13	Employee production Leader	30 days	Sun 2/5/23	Sat 3/11/23	91
1.6.14	Build the production team	60 days	Sun 3/12/23	Sat 5/20/23	103
1.6.15	ready team	0 days	Sun 11/12/23	Sun 11/12/23	98
2	Product Life cycle	245 days	Thu 6/22/23	Tue 4/2/24	96FS+10 days
2.1	product Design	135 days	Thu 6/22/23	Sun 11/26/23	
2.1.1	Smart Seats	45 days	Thu 6/22/23	Sun 8/13/23	
2.1.1.1	Conceptual Ideas	5 days	Thu 6/22/23	Tue 6/27/23	96FS+10 days
2.1.1.2	Develop Initial Idea	5 days	Wed 6/28/23	Mon 7/3/23	109
2.1.1.3	Review Functional and Specifications	25 days	Tue 7/4/23	Tue 8/1/23	110
2.1.1.4	Final Complete Design	10 days	Wed 8/2/23	Sun 8/13/23	111
2.1.1.5	Finished Design	0 days	Sun 8/13/23	Sun 8/13/23	112
2.1.2	smart mail box	45 days	Mon 8/14/23	Wed 10/4/23	
2.1.2.1	Conceptual Ideas	5 days	Mon 8/14/23	Sat 8/19/23	112
2.1.2.2	Develop Initial Idea	5 days	Sun 8/20/23	Thu 8/24/23	115
2.1.2.3	Review Functional and Specifications	25 days	Sat 8/26/23	Sat 9/23/23	116
2.1.2.4	Final Complete Design	10 days	Sun 9/24/23	Wed 10/4/23	117
2.1.2.5	Finished Design	0 days	Wed 10/4/23	Wed 10/4/23	118
2.1.3	smart vending machines	45 days	Thu 10/5/23	Sun 11/26/23	
2.1.3.1	Conceptual Ideas	5 days	Thu 10/5/23	Tue 10/10/23	118
2.1.3.2	Develop Initial Idea	5 days	Wed 10/11/23	Mon 10/16/23	121
2.1.3.3	Review Functional and Specifications	25 days	Tue 10/17/23	Tue 11/14/23	122

2.1.3.4	Final Complete Design	10 days	Wed 11/15/23	Sun 11/26/23	123
2.1.3.5	Finished Design	0 days	Sun 11/26/23	Sun 11/26/23	124
2.2	Product procurement	230 days	Thu 6/22/23	Sat 3/16/24	
2.2.1	send request of proposal with specification and design	100 days	Mon 8/14/23	Thu 12/7/23	
2.2.1.1	Smart Seats	10 days	Mon 8/14/23	Thu 8/24/23	108
2.2.1.2	smart mail box	10 days	Thu 10/5/23	Mon 10/16/23	114
2.2.1.3	smart vending machines	10 days	Mon 11/27/23	Thu 12/7/23	120
2.2.2	receive proposals	100 days	Sat 8/26/23	Tue 12/19/23	
2.2.2.1	Smart Seats	10 days	Sat 8/26/23	Tue 9/5/23	128
2.2.2.2	smart mail box	10 days	Tue 10/17/23	Sat 10/28/23	129
2.2.2.3	smart vending machines	10 days	Sat 12/9/23	Tue 12/19/23	130
2.2.3	evaluate proposals	100 days	Wed 9/6/23	Sun 12/31/23	
2.2.3.1	Smart Seats	10 days	Wed 9/6/23	Sun 9/17/23	132
2.2.3.2	smart mail box	10 days	Sun 10/29/23	Wed 11/8/23	133
2.2.3.3	smart vending machines	10 days	Wed 12/20/23	Sun 12/31/23	134
2.2.4	choose vendor or manufactures	100 days	Mon 9/18/23	Thu 1/11/24	
2.2.4.1	Smart Seats	10 days	Mon 9/18/23	Thu 9/28/23	136
2.2.4.2	smart mail box	10 days	Thu 11/9/23	Mon 11/20/23	137
2.2.4.3	smart vending machines	10 days	Mon 1/1/24	Thu 1/11/24	138
2.2.5	contract with vendor or manufactures	90 days	Thu 9/28/23	Thu 1/11/24	
2.2.5.1	Smart Seats	0 days	Thu 9/28/23	Thu 9/28/23	140

2.2.5.2	smart mail box	0 days	Mon 11/20/23	Mon 11/20/23	141
2.2.5.3	smart vending machines	0 days	Thu 1/11/24	Thu 1/11/24	142
2.2.6	contact vendor or manufacture for order request	100 days	Sat 9/30/23	Tue 1/23/24	
2.2.6.1	Smart Seats	10 days	Sat 9/30/23	Tue 10/10/23	140
2.2.6.2	smart mail box	10 days	Tue 11/21/23	Sat 12/2/23	141
2.2.6.3	smart vending machines	10 days	Sat 1/13/24	Tue 1/23/24	142
2.2.7	receive technical quarry	100 days	Wed 10/11/23	Sun 2/4/24	
2.2.7.1	Smart Seats	10 days	Wed 10/11/23	Sun 10/22/23	148
2.2.7.2	smart mail box	10 days	Sun 12/3/23	Wed 12/13/23	149
2.2.7.3	smart vending machines	10 days	Wed 1/24/24	Sun 2/4/24	150
2.2.8	answer technical quarry	205 days	Thu 6/22/23	Thu 2/15/24	
2.2.8.1	Smart Seats	10 days	Thu 6/22/23	Mon 7/3/23	
2.2.8.2	smart mail box	10 days	Thu 12/14/23	Mon 12/25/23	153
2.2.8.3	smart vending machines	10 days	Mon 2/5/24	Thu 2/15/24	154
2.2.9	time of vendor and manufacture production time	205 days	Tue 7/4/23	Tue 2/27/24	
2.2.9.1	Smart Seats	10 days	Tue 7/4/23	Sat 7/15/23	156
2.2.9.2	smart mail box	10 days	Tue 12/26/23	Sat 1/6/24	157
2.2.9.3	smart vending machines	10 days	Sat 2/17/24	Tue 2/27/24	158
2.2.10	Deliver product	205 days	Sun 7/16/23	Sun 3/10/24	
2.2.10.1	Smart Seats	10 days	Sun 7/16/23	Wed 7/26/23	160
2.2.10.2	smart mail box	10 days	Sun 1/7/24	Wed 1/17/24	161

2.2.10.3	smart vending machines	10 days	Wed 2/28/24	Sun 3/10/24	162
2.2.11	receive product	195 days	Wed 7/26/23	Sun 3/10/24	
2.2.11.1	Smart Seats	0 days	Wed 7/26/23	Wed 7/26/23	164
2.2.11.2	smart mail box	0 days	Wed 1/17/24	Wed 1/17/24	165
2.2.11.3	smart vending machines	0 days	Sun 3/10/24	Sun 3/10/24	166
2.2.12	transport product to the ware house storage area	200 days	Thu 7/27/23	Sat 3/16/24	
2.2.12.1	Smart Seats	5 days	Thu 7/27/23	Tue 8/1/23	164
2.2.12.2	smart mail box	5 days	Thu 1/18/24	Tue 1/23/24	165
2.2.12.3	smart vending machines	5 days	Mon 3/11/24	Sat 3/16/24	166
2.3	Product Development	210 days	Wed 8/2/23	Tue 4/2/24	
2.3.1	Develop Prototypes	200 days	Wed 8/2/23	Thu 3/21/24	
2.3.1.1	Smart Seats	5 days	Wed 8/2/23	Mon 8/7/23	172
2.3.1.2	smart mail box	5 days	Wed 1/24/24	Mon 1/29/24	173
2.3.1.3	smart vending machines	5 days	Sun 3/17/24	Thu 3/21/24	174
2.3.2	Test products	200 days	Tue 8/8/23	Wed 3/27/24	
2.3.2.1	Smart Seats	5 days	Tue 8/8/23	Sun 8/13/23	177
2.3.2.2	smart mail box	5 days	Tue 1/30/24	Sun 2/4/24	178
2.3.2.3	smart vending machines	5 days	Sat 3/23/24	Wed 3/27/24	179
2.3.3	Make adjustments	200 days	Mon 8/14/23	Tue 4/2/24	
2.3.3.1	Smart Seats	5 days	Mon 8/14/23	Sat 8/19/23	181
2.3.3.2	smart mail box	5 days	Mon 2/5/24	Sat 2/10/24	182

2.3.3.3	smart vending machines	5 days	Thu 3/28/24	Tue 4/2/24	183
2.3.4	Obtain Approval	195 days	Sat 8/19/23	Tue 4/2/24	
2.3.4.1	Smart Seats	0 days	Sat 8/19/23	Sat 8/19/23	185
2.3.4.2	smart mail box	0 days	Sat 2/10/24	Sat 2/10/24	186
2.3.4.3	smart vending machines	0 days	Tue 4/2/24	Tue 4/2/24	187
3	Marketing	1164 days	Wed 4/3/24	Tue 12/21/27	
3.1	Market Strategy	1164 days	Wed 4/3/24	Tue 12/21/27	
3.1.1	Marketing plan	30 days	Wed 4/3/24	Tue 5/7/24	26,188
3.1.2	Marketing tools	1134 days	Wed 5/8/24	Tue 12/21/27	
3.1.2.1	Brochures	30 days	Wed 5/8/24	Tue 6/11/24	194
3.1.2.2	Advertising	30 days	Wed 5/8/24	Tue 6/11/24	194
3.1.2.3	Commercials	30 days	Wed 11/17/27	Tue 12/21/27	250SS+10 days
4	Sales and contracts	76 days	Wed 6/12/24	Sun 9/8/24	
4.1	Study the Market	21 days	Wed 6/12/24	Sat 7/6/24	
4.1.1	Riyadh Municipality, Department of investment (program فرص)	21 days	Wed 6/12/24	Sat 7/6/24	
4.1.1.1	Visit website and see requirements	3 days	Wed 6/12/24	Sat 6/15/24	#####
4.1.1.2	prepare our documentations and presentation	10 days	Sun 6/16/24	Wed 6/26/24	202
4.1.1.3	make an appointment with the authorized person	2 days	Thu 6/27/24	Sat 6/29/24	203
4.1.1.4	fulfill his/her requirement	5 days	Sun 6/30/24	Thu 7/4/24	204
4.1.1.5	sign the contract	1 day	Sat 7/6/24	Sat 7/6/24	205
4.2	visit companies to sell our products	55 days	Sun 7/7/24	Sun 9/8/24	
4.2.1	interduce our products	10 days	Sun 7/7/24	Wed 7/17/24	206

4.2.2	collect interested calls	20 days	Thu 7/18/24	Sat 8/10/24	208
4.2.3	finalize the technical requirements	10 days	Sun 8/11/24	Wed 8/21/24	209
4.2.4	finalize the financial requirements	10 days	Thu 8/22/24	Mon 9/2/24	210
4.2.5	sign the contract	5 days	Tue 9/3/24	Sun 9/8/24	211
5	Operational process up to 5 years	2206 days	Mon 9/9/24	Thu 9/25/31	
5.1	contact vendor or manufacture for order request	2 days	Sun 8/15/27	Tue 8/17/27	
5.1.1	Smart Seats	0 days	Sun 8/15/27	Sun 8/15/27	206
5.1.2	smart mail box	1 day	Mon 8/16/27	Mon 8/16/27	215
5.1.3	smart vending machines	1 day	Tue 8/17/27	Tue 8/17/27	216
5.2	receive technical quarry	7 days	Mon 8/16/27	Mon 8/23/27	
5.2.1	Smart Seats	5 days	Mon 8/16/27	Sat 8/21/27	215
5.2.2	smart mail box	5 days	Tue 8/17/27	Sun 8/22/27	216
5.2.3	smart vending machines	5 days	Wed 8/18/27	Mon 8/23/27	217
5.3	answer technical quarry	5 days	Sun 8/22/27	Thu 8/26/27	
5.3.1	Smart Seats	3 days	Sun 8/22/27	Tue 8/24/27	219
5.3.2	smart mail box	3 days	Mon 8/23/27	Wed 8/25/27	220
5.3.3	smart vending machines	3 days	Tue 8/24/27	Thu 8/26/27	221
5.4	time of vendor and manufacture production time	12 days	Wed 8/25/27	Tue 9/7/27	
5.4.1	Smart Seats	10 days	Wed 8/25/27	Sun 9/5/27	223
5.4.2	smart mail box	10 days	Thu 8/26/27	Mon 9/6/27	224
5.4.3	smart vending machines	10 days	Sat 8/28/27	Tue 9/7/27	225

5.5	Deliver product	7 days	Mon 9/6/27	Mon 9/13/27	
5.5.1	Smart Seats	5 days	Mon 9/6/27	Sat 9/11/27	227
5.5.2	smart mail box	5 days	Tue 9/7/27	Sun 9/12/27	228
5.5.3	smart vending machines	5 days	Wed 9/8/27	Mon 9/13/27	229
5.6	receive product	7 days	Sun 9/12/27	Sun 9/19/27	
5.6.1	Smart Seats	5 days	Sun 9/12/27	Thu 9/16/27	231
5.6.2	smart mail box	5 days	Mon 9/13/27	Sat 9/18/27	232
5.6.3	smart vending machines	5 days	Tue 9/14/27	Sun 9/19/27	233
5.7	transport product to the ware house storage area	7 days	Sat 9/18/27	Sat 9/25/27	
5.7.1	Smart Seats	5 days	Sat 9/18/27	Wed 9/22/27	235
5.7.2	smart mail box	5 days	Sun 9/19/27	Thu 9/23/27	236
5.7.3	smart vending machines	5 days	Mon 9/20/27	Sat 9/25/27	237
5.8	Product Production	40 days	Sun 9/26/27	Wed 11/10/27	
5.8.1	Production Design Model	5 days	Sun 9/26/27	Thu 9/30/27	241
5.8.2	Production of products	5 days	Sat 10/2/27	Wed 10/6/27	243SS+5 days
5.8.3	Testing & Quality assurance Products	5 days	Thu 10/7/27	Tue 10/12/27	244SS+5 days
5.8.4	Product approval	5 days	Wed 10/13/27	Mon 10/18/27	245SS+5 days
5.8.5	product Transportation	5 days	Tue 10/19/27	Sun 10/24/27	246SS+5 days
5.8.6	product installation	5 days	Mon 10/25/27	Sat 10/30/27	247SS+5 days
5.8.7	final Testing & Quality assurance Products	5 days	Sun 10/31/27	Thu 11/4/27	248SS+5 days
5.8.8	final approval	5 days	Sat 11/6/27	Wed 11/10/27	249SS+5 days

5.9	Maintenance every month	13 days	Thu 12/16/27	Thu 12/30/27	
5.9.1	product check list	3 days	Thu 12/16/27	Sun 12/19/27	242FS+30 days
5.9.2	product repair	10 days	Mon 12/20/27	Thu 12/30/27	252
5.1	operate adds and products	1213 days	Thu 11/11/27	Thu 9/25/31	250,212
5.11	operate adds and products	1030 days	Mon 9/9/24	Thu 12/23/27	212
6	HR Process up to 5 years	1294 days	Mon 11/13/23	Thu 12/30/27	
6.1	Make a training plan and action plan	1294 days	Mon 11/13/23	Thu 12/30/27	
6.1.1	Weekly training	1294 days	Mon 11/13/23	Thu 12/30/27	90
6.1.2	monthly training	1293 days	Tue 11/14/23	Thu 12/30/27	258
6.1.3	yearly training	1290 days	Sat 11/18/23	Thu 12/30/27	259
6.2	goals and task completion system	1290 days	Sat 11/18/23	Thu 12/30/27	
6.2.1	monthly task completion list	972 days	Sat 11/23/24	Thu 12/30/27	213
6.2.2	yearly goals	1290 days	Sat 11/18/23	Thu 12/30/27	260SS
6.3	attendance sheets	1294 days	Mon 11/13/23	Thu 12/30/27	90
6.4	salary sheets	1294 days	Mon 11/13/23	Thu 12/30/27	90
6.5	employees' requests	1294 days	Mon 11/13/23	Thu 12/30/27	90
7	business development up to 5 years	1091 days	Sun 7/7/24	Thu 12/30/27	
7.1	product development	972 days	Sat 11/23/24	Thu 12/30/27	
7.1.1	speed the production development	972 days	Sat 11/23/24	Thu 12/30/27	213
7.1.2	automate development	911 days	Sun 2/2/25	Thu 12/30/27	213SS+180 days
7.1.3	add new products	731 days	Sun 8/31/25	Thu 12/30/27	213SS+360 days

7.2	project tasks	1091 days	Sun 7/7/24	Thu 12/30/27	
7.2.1	customer satisfaction	1091 days	Sun 7/7/24	Thu 12/30/27	213SS
7.2.2	project conformance	972 days	Sat 11/23/24	Thu 12/30/27	213
7.2.3	project closing	972 days	Sat 11/23/24	Thu 12/30/27	213
8	project management process up to 5 years	1294 days	Mon 11/13/23	Thu 12/30/27	
8.1	project estimation	1172 days	Wed 4/3/24	Thu 12/30/27	188
8.2	project initiation	1171 days	Thu 4/4/24	Thu 12/30/27	
8.2.1	Project charter	1171 days	Thu 4/4/24	Thu 12/30/27	277
8.2.2	Stakeholder register	1170 days	Sat 4/6/24	Thu 12/30/27	279
8.2.3	define project and statement	1171 days	Thu 4/4/24	Thu 12/30/27	279SS
8.3	project planning	1170 days	Sat 4/6/24	Thu 12/30/27	
8.3.1	project WBS	1170 days	Sat 4/6/24	Thu 12/30/27	281
8.3.2	define packages	1169 days	Sun 4/7/24	Thu 12/30/27	283
8.3.3	define milestones	1168 days	Mon 4/8/24	Thu 12/30/27	284
8.3.4	project scheduling	1167 days	Tue 4/9/24	Thu 12/30/27	285
8.3.5	define critical path	1166 days	Wed 4/10/24	Thu 12/30/27	286
8.4	Project execution	1091 days	Sun 7/7/24	Thu 12/30/27	
8.4.1	include the operation system in section 5	1091 days	Sun 7/7/24	Thu 12/30/27	213SS
8.5	project monitoring and control	1294 days	Mon 11/13/23	Thu 12/30/27	
8.5.1	create monitoring system	1165 days	Thu 4/11/24	Thu 12/30/27	
8.5.1.1	create dashboards	1165 days	Thu 4/11/24	Thu 12/30/27	287

8.5.2	change order log	1167 days	Tue 4/9/24	Thu 12/30/27	286SS
8.5.3	opportunity log	1167 days	Tue 4/9/24	Thu 12/30/27	293SS
8.5.4	threat log	1167 days	Tue 4/9/24	Thu 12/30/27	293SS
8.5.5	operation monitoring system	1164 days	Sat 4/13/24	Thu 12/30/27	291
8.5.6	reporting	1294 days	Mon 11/13/23	Thu 12/30/27	2
8.6	closing	1091 days	Sun 7/7/24	Thu 12/30/27	
8.6.1	lesson learnt log	1090 days	Mon 7/8/24	Thu 12/30/27	289
8.6.2	section 7.2	1091 days	Sun 7/7/24	Thu 12/30/27	272SS

Table 23: Work Packages in WBS

To more information Review Appendix

7.2.2 Relationship between Activities

what activities comprise the project and, for each activity, what its predecessors (or successors) are. An activity can be in any of these conditions:

- (1) it may have a successor(s) but no predecessor(s);
- (2) it may have a predecessor(s) but no successor(s); and
- (3) it may have both predecessor(s) and successor(s).

The first of these is an activity that starts a network. The second ends a network. The third is in the middle.

Example:

- Finish to Start: Activity 77 1.6.4 build Design team 30 days must not start before Activity 90 2.1.1.1 Conceptual Ideas 5 days Wed 11/23/22 Tue 11/29/22 7FS+10 days has been completed.
- Start to Start: Activity 67 1.5.7.1 Camera and security setup 5 days cannot begin until Activity 58 1.5.1 Offices 14 days has been underway.
- Finish to Finish: Activity 65 1.5.6 car parking and floor 14 days must be complete before Activity 68 1.5.7.2 Firefighting and safety setup 5 days is completed.
- Start to Finish: Activity B cannot be completed before the start of Activity A.

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish	Predecessors
106	2		Product Life cycle	245 days	Thu 6/22/23	Tue 4/2/24	96FS+10 days
107	2.1		product Design	135 days	Thu 6/22/23	Sun 11/26/23	
108	2.1.1		Smart Seats	45 days	Thu 6/22/23	Sun 8/13/23	
109	2.1.1.1		Conceptual Ideas	5 days	Thu 6/22/23	Tue 6/27/23	96FS+10 days

relationships

Table 24: Relationship between Activities

To more information Review Appendix

7.2.3 Logical diagram critical path

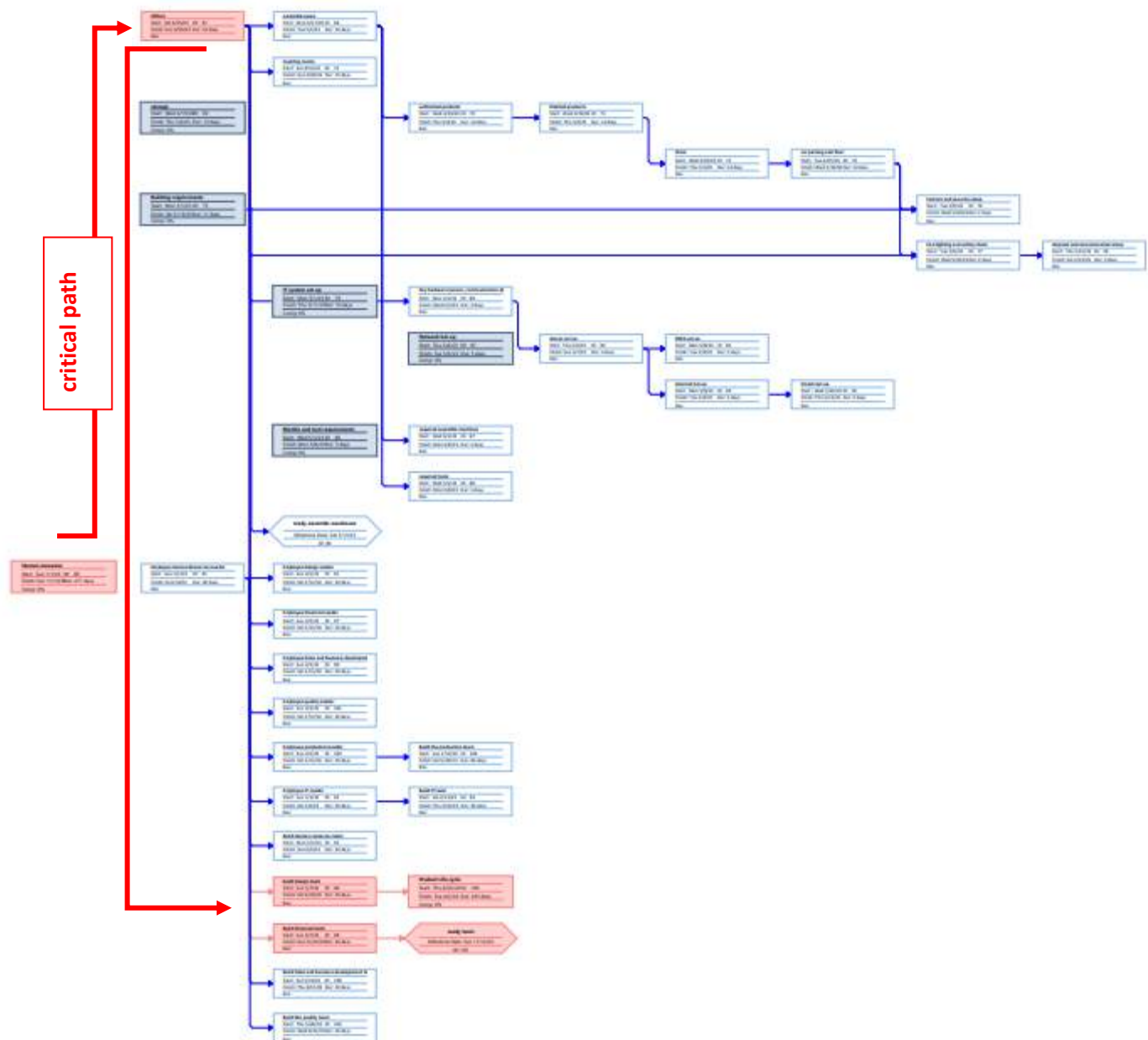
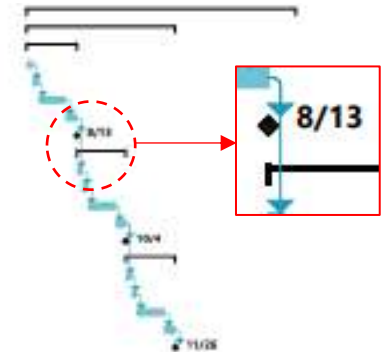


Figure 8: Logical diagram critical path

To more information Review Appendix

7.2.4 Gantt chart and milestones

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish	Predecessors
100	2	MC	Product life cycle	246 days	Thu 6/23/22	Tue 4/2/24	1045=10 days
101	2.1	MC	product Design	336 days	Thu 6/23/22	Sun 11/26/23	
105	2.1.1	MC	Smart Seats	45 days	Thu 6/23/22	Sun 8/13/22	
106	2.1.1.1	MC	Conceptual ideas	5 days	Thu 6/23/22	Tue 6/27/22	1045=10 days
110	2.1.1.2	MC	Develop Initial idea	5 days	Wed 6/23/22	Mon 7/3/22	100
111	2.1.1.3	MC	Review Functional and Specifications	25 days	Tue 7/4/22	Tue 8/1/22	110
112	2.1.1.4	MC	Final Complete Design	30 days	Wed 8/3/22	Sun 8/13/22	111
113	2.1.1.5	MC	Finished Design	8 days	Sun 8/13/22	Sun 8/13/22	112
114	2.1.2	MC	smart mail box	45 days	Mon 6/14/22	Wed 9/9/22	
115	2.1.2.1	MC	Conceptual ideas	5 days	Mon 6/14/22	Sun 6/19/22	111
116	2.1.2.2	MC	Develop Initial idea	5 days	Sun 6/19/22	Thu 6/23/22	115
117	2.1.2.3	MC	Review Functional and Specifications	25 days	Sun 6/26/22	Sun 7/23/22	116
118	2.1.2.4	MC	Final Complete Design	30 days	Sun 7/23/22	Wed 8/24/22	117
119	2.1.2.5	MC	Finished Design	8 days	Wed 8/24/22	Wed 8/24/22	118
120	2.1.3	MC	smart vending machines	45 days	Thu 6/16/22	Sun 8/6/22	
121	2.1.3.1	MC	Conceptual ideas	5 days	Thu 6/16/22	Tue 6/21/22	111
122	2.1.3.2	MC	Develop Initial idea	5 days	Wed 6/21/22	Mon 6/26/22	121
123	2.1.3.3	MC	Review Functional and Specifications	25 days	Tue 6/27/22	Tue 7/12/22	122
124	2.1.3.4	MC	Final Complete Design	30 days	Wed 7/12/22	Sun 7/24/22	123
125	2.1.3.5	MC	Finished Design	8 days	Sun 7/24/22	Sun 7/24/22	124



To more information Review Appendix

Table 25: Gantt chart and milestones

7.3. Quality

7.3.1 Deming Model for Quality

The Deming Cycle is also known as the PDCA cycle. It is a model for continuous improvement of quality which comprises logical sequences of four steps that are repetitive to help in bringing on continuous improvement as well as learning. The four components of the cycle are known as PDCA or Plan, Do, Check or Study and Act. It is also called the Deming Wheel since it is a spiral that leads to continuous improvement.

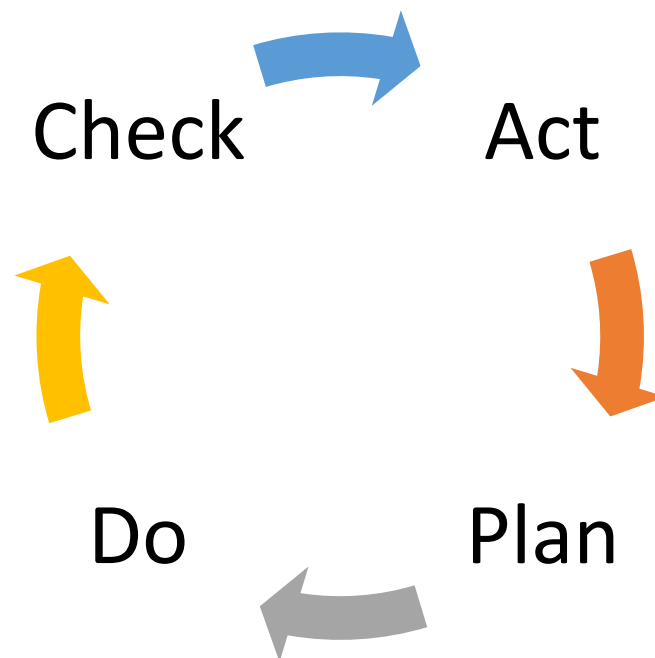


Figure 9: Deming Model for Quality

7.3.2 SIPOC Model and Ishikawa

• SIPOC

Diagram is a visual process mapping. It's a process map that shows how the project goals will be accomplished. It's a way to make sure that the team and leadership all are on the same page about the business process and customer requirements.

The SIPOC diagram is an important visual tool that is easy to create. It helps to define who supplies the input to the process, what raw materials are placed in the inputs, the customer requirements of the process and more.

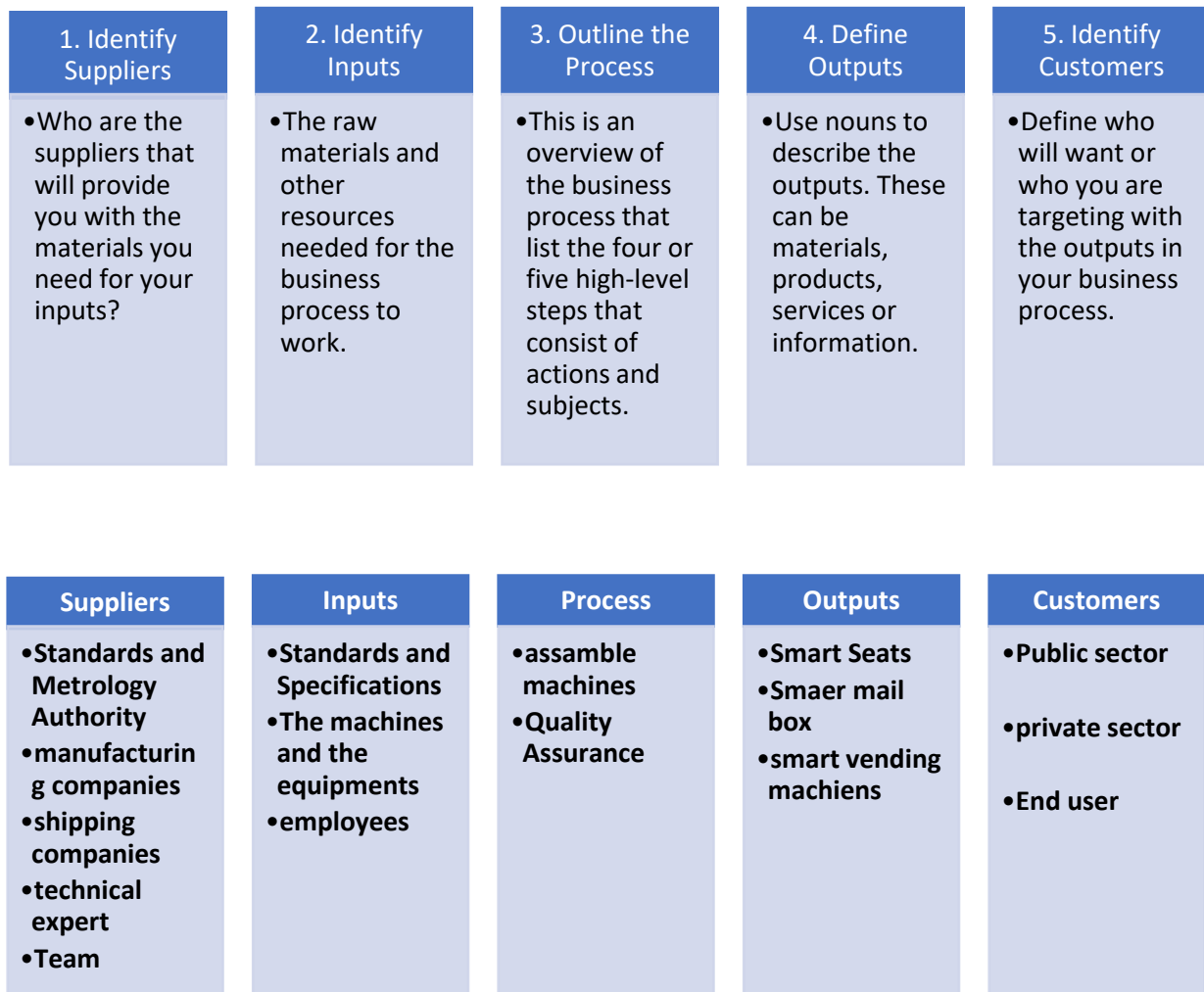


Figure 10: SIPOC Model

• Ishikawa

Ishikawa diagrams (also called fishbone diagrams, herringbone diagrams, cause-and-effect diagrams, or Fishikawa) are causal diagrams created by Kaoru Ishikawa that show the potential causes of a specific event.

Common uses of the Ishikawa diagram are product design and quality defect prevention to identify potential factors causing an overall effect. Each cause or reason for imperfection is a source of variation. Causes are usually grouped into major categories to identify and classify these sources of variation.

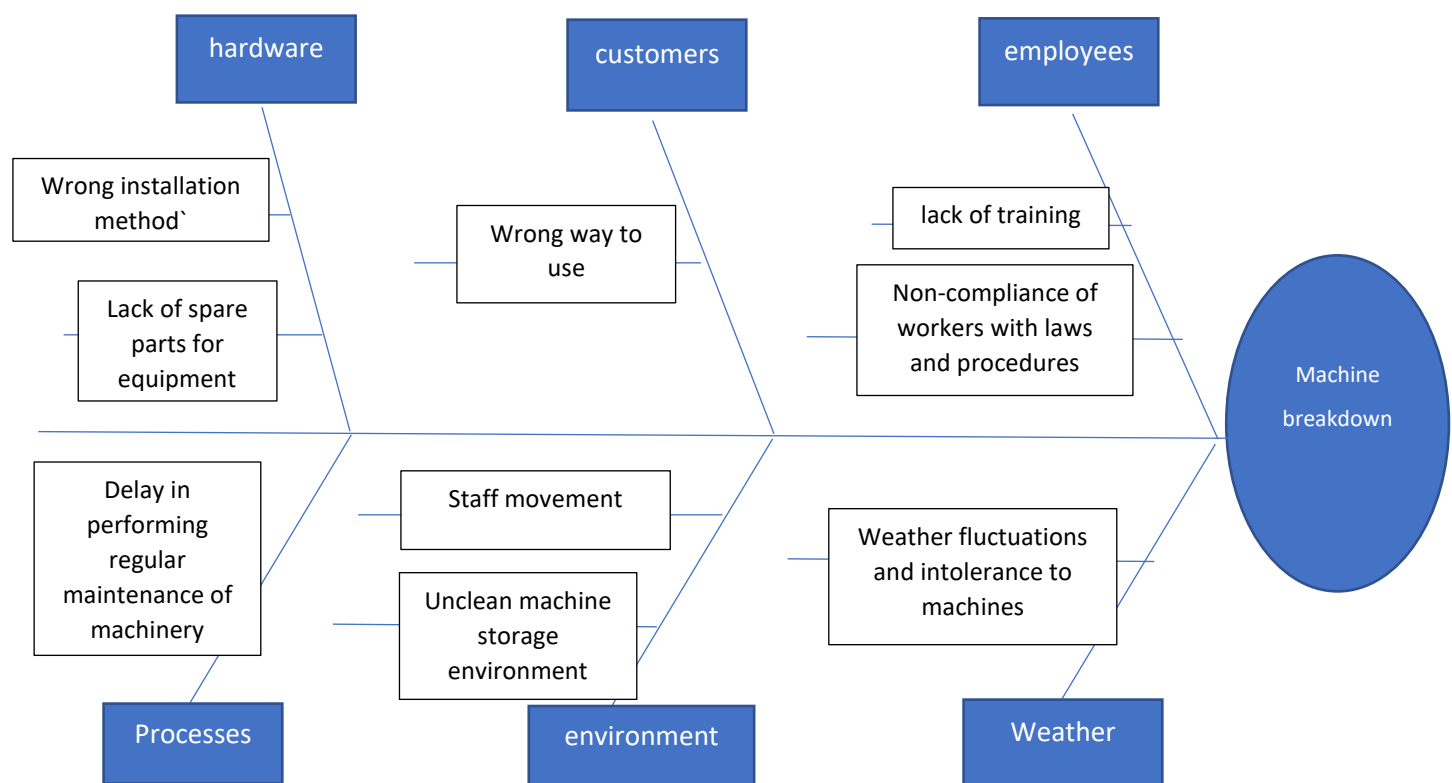


Figure 11: Ishikawa

solutions	issues
employee training	lack of training
Establish laws and penalties for non-compliance of workers	Non-compliance of workers with laws and procedures
Explain the method of use in more than one way and put it next to the machines	Wrong way to use
Training workers on correct installation methods	Wrong installation method
Request spare parts when ordering machines	Lack of spare parts for equipment
Create places for machines to isolate them from exposure to weather fluctuations	Weather fluctuations and intolerance to machines
Commitment to the cleanliness of the storage place and the application of strict laws and penalties for non-compliance	Unclean machine storage environment
Commitment to regular maintenance of machines	Delay in performing regular maintenance of machinery

Table 26 : Ishikawa

8.1. Finance

8.1.1 Cost Breakdown Structure

Payback period is defined as the number of years required to recover the original cash investment. In other words, it is the period of time at the end of which a machine, facility, or other investment has produced sufficient net revenue to recover its investment costs

Rate of return (RoR) is the net gain or loss of an investment over a specified time period, expressed as a percentage of the investment's initial cost. 1 When calculating the rate of return, you are determining the percentage change from the beginning of the period until the end.

Internal rate of return (IRR) is a metric used in financial analysis to estimate the profitability of potential investments. IRR is a discount rate that makes the net present value (NPV) of all cash flows equal to zero in a discounted cash flow analysis. IRR calculations rely on the same formula as NPV does.

Net Present Value (NPV) Net present value (NPV) is the difference between the present value of cash inflows and the present value of cash outflows over a period of time. NPV is used in capital budgeting and investment planning to analyze the profitability of a projected investment or project.

[illegible]

	A	B	C	D	E	F	G	H
1	Yrs	Cost (Outflow)		Investment and Income (Inflow)	Cash Flow	Long Term Governmental Fund		
2	1st	Cost 1st Year	-3,707,124	Stakeholders Investment	2,500,000	-1,207,124	Fund from SIDF	10,000,000
3								
4	2nd	Cost 2nd Year	-24,016,024	2nd Year Sales	9,466,800	-14,549,224	-	-
5	3rd	Cost 3rd Year	-15,135,024	third Year Sales	18,809,400	3,674,376	-	-
6	4th	Cost 4th Year	-17,395,024	fourth Year Sales	45,084,600	7,689,576	-	-
7	5th	Cost 5th Year	-69,456,324	Fifth Year Sales	114,816,000	45,359,676	-	-
8	Total out flow for 5 Yrs	-149,709,720		Total Sales	188,376,000	38,467,080	Total Fund	10,000,000
9	Cumulative Cash flow is the the sum between the cashflows(this year and the previos year)=ABS(F2+F4)				$\text{Project NPV} = I_0 + \sum_{t=1}^n \frac{F_t}{(1+i)^t} \text{ where}$ $= -(E2+H2) + 0 / ((1+0.15)^1) - (E4 / ((1+0.15)^2)) +$ $(E5 / ((1+0.15)^3)) + (E6 / ((1+0.15)^4)) + (E7 / ((1+0.15)^5))$ I_0 = Initial investment (since it is an outflow, the number will be negative) F_t = Net cash inflow for period t			
10								
11								
12	Cumulative Cash flow	15,756,348		SR	Net Present Value	89,886,857		SR
13	Payback=2+(C12/E5) Where: A is the last period number with a negative cumulative cash flow; B is the absolute value (i.e., value without negative sign) of cumulative net cash flow at the end of the period A; and C is the total cash inflow during the period following period A				$EV(0\%) = 0\% \times 3,707,124$			
14								
15								
16	Pay back Period	2.838		Yrs	EV(0%)	0		SR
17								
18	Actual Cost is the cost of of establishing SSSC				$EV(20\%) = 20\% \times 3,707,124$			
19								
20	Actual Cost	3,707,124		SR	EV(30%)	1,853,562		SR
21								
22					$EV(50\%) = 50\% \times 3,707,124$			
23								
24					$EV(20\%)$			

81

9.1. Resources

9.1.1 Resource Leveling and Smoothing

Resource leveling is a project management technique that involves resolving overallocation or scheduling conflicts to ensure a project can be completed with the available resources. Resources include the time, materials, or tools needed to complete a project. The purpose of resource leveling is to get the most out of available resources while working within the project's time, cost, and scope constraints

Resource smoothing is a technique that adjusts the activities of a schedule model such that the requirements for resources on the project do not exceed certain predefined resource limits.” The objective of resource smoothing, therefore, is uniform resource utilization, as it aims to complete the work by the specified date while avoiding ebbs and flows of resource demand. Most of the time, resource smoothing is used after resource leveling

In the following example, resource leveling has been done for designing phase. Which lead to adding another week to the phase process.

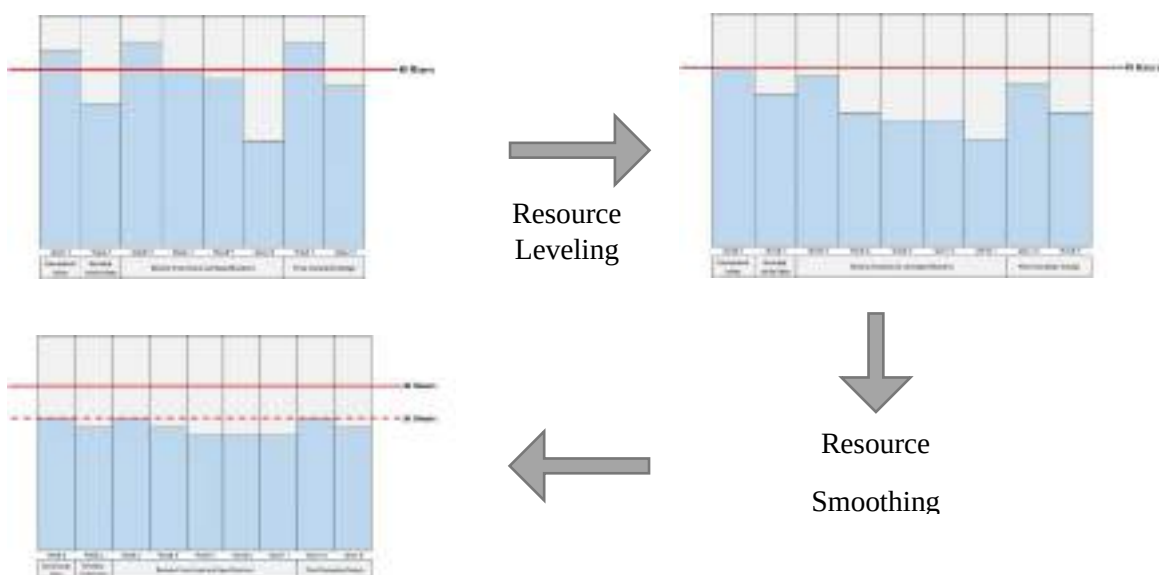


Figure 12 : Resource Leveling and Smoothing

9.2. Procurement

9.1.2 Procurement Execution

Procurement process means the series of processes to get products or services from request for proposal to order request and invoice approval. Also, procurement describes the activities involved in obtaining the goods and services. Thus, the procurement process in each organization differs because it depends on its context and operations. Please see the company procurement process in the 14 steps below.

Step Number	Procurement task
1	Vendor and manufactures search
2	Vendor and manufactures found
3	send request of proposal with specification and design
4	receive proposals
5	evaluate proposals
6	choose vendor or manufactures
7	contract with vendor or manufactures
8	contact vendor or manufacture for order request
9	receive technical quarry
10	answer technical quarry
11	time of vendor and manufacture production time
12	Deliver product
13	receive product and invoice approval
14	transport product to the ware house storage area

Table 28 : Procurement task

The scoring model related to vendor selection is an objective method which is used for vendor and manufacture comparison depending on selected criteria and prioritization to compare weights of each vendor proposal. The proposal with the highest score is picked after these projects have been scored.

Criteria	weight	Requirement score		
		A	B	C
Price	20%	50	30	75
Technical	15%	60	75	35
Sustainability	10%	20	90	40
Easy to use	10%	70	85	20
Easy to assemble	10%	85	65	55
Speed of delivery	10%	90	35	85
Old Customer reviews	5%	90	60	90
Communication	10%	50	70	85
Past projects	5%	30	45	35
Number of provided products	5%	60	85	50
Weighted Score	100%	59.5	61.25	57.5

Table 29 : Procurement Execution

9.3. Plan and Control

9.3.1 Agenda and Virtual Record Meeting

60 min	Duration of the meeting	9:00 pm	Time	10/8/2022	Date	Wednesday	Day of the meeting
Zoom						Meeting Place	
CEO						The convener	
Project Closure						The subject of the meeting	
Discuss Project Closure						The aim of the meeting	
Project Deliverables						The meeting issues	
Conference Telephone		WiFi Internet		Projector		Computer (PC)	Technical requirements
Notes		The organizer – The position			Attendees names		
		Project Leader			Fahad Almawash		
		Quality Leader			Basma almukhlfi		
		Production Leader			Majed		
		Design Leader			Mohammed		
		Human resources Leader			Marwan		

Table 30 : Agenda and Virtual Record Meeting

9.3.2 Performance Measurement

The concept of measuring performance is considered a strategic practice where organizations have to evaluate, respond, and align a set of measures to get anything constructive and valuable around them. The method deals explicitly with the measurement of performance.

It is a process used to assess the efficiency and effectiveness of projects, programs and initiatives, which collecting, analyzing and evaluating how “on track” a project/program is to achieve its desired outcomes, goals and objectives.

The performance measures are quantitative indicators that have to be put in specific places to track the progress which is made in the organization. It will show whether the organization, individual, or group will achieve and accomplish their objectives and goals. These measures include a broad range of criteria:

- People measures
- Process measures
- Customer measures
- Financial measures

Performance measurement techniques:

- Create a mission statement.
- Create both a short-term and a long-term performance plan.
- Create different levels of objectives.
- Define who is responsible for every goal.
- Evaluate and re-evaluate company's goals.

9.3.3 Change Request Model

A change order is a document used to record an amendment to the original project requirements, scope, budget, timeline, or specifications ...etc. Due to that projects are both complex and unique, changes to the scope of a project are natural. The purpose of a change order request is to create a record of change services. To avoid chaos, Change Request orders are used to manage changes to the scope of a project in a controlled way, and to stay up to date and organized with documentation prevents falling behind schedule and eliminate payment disputes.

Key pieces of information contained within this Change Request Template are:

- Request No: A number assigned to uniquely identify each change request. You will see why this is important shortly when we look at a Change Log.
- Change Description: A brief description of the change that has been requested.
- Change Reason: The explanation has to why the change is being requested.
- Impact of change: here we specify what impact the change will have on the project. Will the change mean the project finishes sooner or later? Will the change mean the project costs less or more? Will the change impact quality in some way?
- Proposed Action: here the project manage will outline their recommendation for how they feel the change request should be handled. For example, they may propose that the change is accepted into the project but that some other deliverable is cancelled so the schedule isn't affected.
- Status: every change request will be in review until it is either approved or rejected by the project sponsor. This is important: it is the project sponsor who approves or rejects change requests, not the project manager.

- An example of a completed Change Request Template is shown below. In this example, the client chooses to add a swimming pool to their house build project.

CHANGE REQUEST FORM

Change Description

Project Name:	Change Name:	Requested No:
Requested By:	Contact:	Date:
Description of Change:		
Reason for Change:		
Priority [Circle One]: 1. High 2. Medium 3. Low		
Impact on Deliverables:		
Proposed Action:		
Impact of Not Responding to Change (and Reason Why):		
Status	☐ In review ☐ Approved ☐ Rejected	Date:
Date Needed:	Approval of Request:	Date:

Sign Offs

[Circle One]: 1. Accepted 2. Deferred 3. Rejected 4. More Info Requested

Comments:

Project Manager Signature:

Date:

Decision Maker Signature:

Date:

Table 31 :Change Request Model

10.1. Risk and Opportunities

10.1.1 Risk Opportunities

A Risk and Opportunity Register is part of the overall strategy of building a visual workspace. It allows risks and opportunities to be identified and assessed early and allows the team to apply intellectual capital rather than financial capital to mitigate or avoid risks.

Risk appetite is the amount of risk an organization is willing to take in pursuit of objectives it deems have value. Our organization states that it will not accept risks that could result in a significant loss of its revenue base.

Risk tolerance is the amount of deviation from its risk appetite that an organization is willing to accept to achieve a specific objective, based on parameters that include industry and vertical standards. Our organization risk tolerance is low which will be made conservatively and will include more low-risk investments and less high-risk investment.

Identify Risks (Threats) And Opportunities, with Examples:

The Concept of Risk is Although the concept of risk adopted by most authors considers the positive or negative effects of risk on project objectives, most of the tools developed to date are used only to measure and assess threats (negative effects); opportunities (positive effects) are generally not covered by these tools.

We have Six (6) Simple questions to identify risks

Perhaps the simplest and fastest way to identify risks is to ask your stakeholders, project team, Project Board, operations team etc. some simple, open questions:

- ☐ What could go wrong?
- ☐ What could prevent this from happening?

- ☐ What can harm us?
- ☐ What is the worst-case scenario?
- ☐ What threats do we face?
- ☐ What opportunities could we find?

It is worth asking these questions: • before, during and after the project or initiative • while reviewing each stage of the project life cycle • while reviewing key project documentation:	
• Communication Plan • Business Case • O Project Plan	• Project Initiation Documentation • O Requirements

Table 32 : Identify Risks

At the start of each project stage or phase.

Use PESTLE to find risks Once you have answered the six (6) questions review the headings below and ask, "what threats or opportunities could we face?" (Political, Economic, Socio-cultural, Technological, Legal & Environmental).

Threats	Opportunities
Project purpose and need is not well-defined.	Active Construction Market
Project design and deliverable definition is incomplete.	Closed Management to Construction Site
Project schedule is not clearly defined or understood	Rapid Economic Development
No control over staff priorities	Make Contingency Plan

Table 33 : Risk and Opportunities

10.1.2 Risk register

#	Risk ID	explained	Category	effect	his property	his property
1	A11	The proposed budget does not cover the costs of the project.	Financial	severe	account manager	account manager
2	B11	Ignorance of some of the legal responsibilities of the project.	legal	high	Project manager	Project manager
3	C11	Electronic hacking attacks on the platform.	technology	severe	Platform manager	Platform manager
4	D11	Lack of logical reasoning in the strategic objectives of the project.	strategy	Average	Project manager	Project manager
5	E11	The occurrence of natural disasters that prevent human or natural resources.	environmental	Average	Project manager	Project manager

Table 34 : Risk and Opportunities

10.1.3 Qualitative risk analysis

It is process of assessing and managing the risks that can't be measured.

Qualitative analysis uses subjective approach while analyzing the various scenarios. therefore, different techniques are used while combatting different situations. It presents holistic picture of the project in view of critical situation.

Key benefits of risk analysis

- Provides structured approach for risk assessment
- Develop an effective risk management plan
- Facilitate effective decision making

Common pitfalls to be avoided while conducting risk analysis

Here are common pitfalls that could be avoided in the beginning stage

- Project objective not clearly defined
- Focus on individual risk instead of overall risk
- Over emphasizing the risk impact
- Understanding the dynamics of the risk nature

Common qualitative risk analysis methods

Here are some key methods used to assess' risks at various levels

- Brainstorming
- Delphi method
- Decision tree analysis

10.1.4 Risk Response Strategies

- Positive Risks Opportunities Strategies
 1. Exploit (ensure the opportunity is realized).
 2. Enhance (increase probability or impact of opportunity).
 3. Share (have third party take on responsibility for opportunity)
 4. Accept.
- Negative Risks Threat Strategies
 1. Avoid (eliminate cause of risk).
 2. Mitigate (reduce probability or impact of risk).
 3. Transfer (have third party take on responsibility for risk) like Insurance.
 4. Accept (contingency plans for risk).
 - Active: to do something after risk occurrence.
 - Passive: to do nothing

10.2. Stakeholders

10.2.1 Stakeholder Engagement Matrix

The Stakeholder Engagement Matrix is a technique that used to indicate different type of stakeholders in any given project. The matrix shows comparison between different types of stakeholders, in terms of the current engagement levels of stakeholders and the desired engagement levels required for successful project delivery. There are five levels of stakeholder engagement:

Unaware	Where the stakeholder is unaware of the project and potential impacts.
Resistant	Where the stakeholder is aware of the project and its potential impacts, but resistant to any changes that may occur as a result of the project.
Neutral	In this level, the stakeholder is aware of the project, but neither supportive nor unsupportive.
Supportive	At this level, the stakeholder is aware of the project and potential impacts and supportive of the work and its outcomes.
Leading	The stakeholder is aware of the project and potential impacts and actively engaged in ensuring that the project is a success.

Figure 13: Stakeholder Engagement

Stakeholder	Unaware	Resistant	Neutral	Supportive	Leading
Public sector				C	D
Private Sector			C		D
Community	C			D	
Vendors	C			D	
Contractors	C			D	
Managers					CD
Team				C	D

Table 35: Stakeholder Engagement Matrix

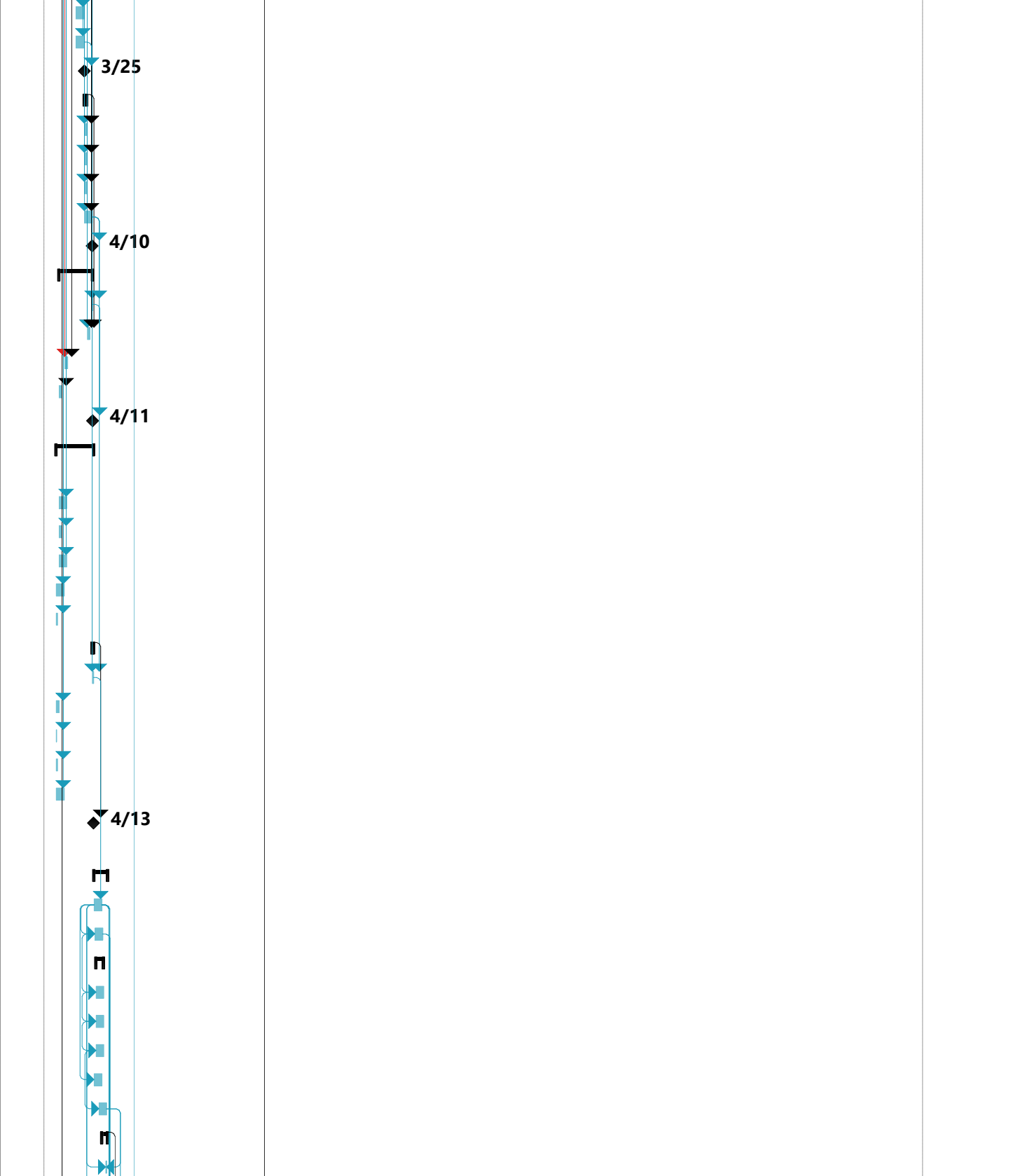
11.1. References

- Duggan, T. (2017, November 21). Leadership Vs. Conflict Resolution. Retrieved from <https://smallbusiness.chron.com/leadership-vs-conflict-resolution-10581.html>
- Jr., J. D. (2018, September 11). The Art Of Conflict Resolution Among Leadership. Retrieved from council/2018/03/22/the-art-of-conflict-resolution-among-leadership/#7dc420261bd6
- Llopis, G. (2014, November 28). 4 Ways Leaders Effectively Manage Employee Conflict. Retrieved from [/4-ways-leaders-effectively-manage-employee-conflict/#712ba1305e15](https://www.4ways-leaders-effectively-manage-employee-conflict/#712ba1305e15).
- Giotis, T. C. (2010). Leadership through conflict: grow and advance project teams! Paper presented at PMI® Global Congress 2010—EMEA, Milan, Italy. Newtown Square, PA: Project Management Institute.
- Project Team Leadership and Communication by Samuel Malachowsky, 2018.
- Project Management Institute (2017) *The standard for project management and a guide to the project management body of knowledge (PMBOK Sixth Edition)*.
- Strategic Analysis, Corporate Finance Institute, 2022
<https://corporatefinanceinstitute.com/resources/knowledge/strategy/strategic-analysis/>
- UX vs. UI Design: What's the Difference? [2022 Guide], Career Foundry, 2022
<https://careerfoundry.com/en/blog/ux-design/the-difference-between-ux-and-ui-design-a-laymans-guide/>
- Organizational charts, Zambianguardian.com, 2021
<https://www.zambianguardian.com/organizational-charts/>
- What Are the Advantages & Disadvantages of Hierarchical Structure?, Small Business - Chron.com <https://smallbusiness.chron.com/advantages-disadvantages-hierarchical-structure-66002.html>
- Stephanie Ray, Project Planning – Project Manager, 2022 [What Is a Project Plan? The Ultimate Guide to Project Planning \(projectmanager.com\)](https://projectmanager.com/what-is-a-project-plan/)
- Learn What Stakeholders Are and the Roles That They Play, Investopedia, 2022
[Stakeholder Definition \(investopedia.com\)](https://www.investopedia.com/stakeholder-definition/)
- Stakeholder and Social Network Analysis, Guidance Note - Usaidlearninglab.org
[stakeholder_and_social_network_analysis_guidance_note.pdf \(usaidlearninglab.org\)](https://www.usaidlearninglab.org/stakeholder-and-social-network-analysis-guidance-note.pdf)
- Stakeholder Matrix: A Practical Guide — Business Analyst Learnings, 2013
<https://www.businessanalystlearnings.com/ba-techniques/2013/1/23/how-to-draw-a-stakeholder-matrix>
- What Is Leadership? Definition & Examples of Leadership, 2020
<https://www.thebalancesmb.com/leadership-definition-2948275>

Appendix

1 Gantt Chart

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish																												
1	1		Establish Smart Street Solution Company	271 days	Sun 1/1/23	Sun 11/12/23																												
2	1.1		Stakeholder Kick of Meetings	20 days	Sun 1/1/23	Mon 1/23/23																												
3	1.1.1		Setup Initial Goals	5 days	Sun 1/1/23	Thu 1/5/23																												
4	1.1.2		Setup visibility study	10 days	Sat 1/7/23	Tue 1/17/23																												
5	1.1.3		Agree on start up cost	3 days	Wed 1/18/23	Sat 1/21/23																												
6	1.1.4		write and sign the agreement and the charter between the stakeholders	2 days	Sun 1/22/23	Mon 1/23/23																												
7	1.1.5		Project Charter	0 days	Mon 1/23/23	Mon 1/23/23																												
8	1.2		collect Fund	191 days	Sat 1/21/23	Wed 8/30/23																												
9	1.2.1		Create a Company Bank Account	1 day	Sat 1/21/23	Sat 1/21/23																												
10	1.2.2		collect the first cost from the team investors	10 days	Sun 1/22/23	Wed 2/1/23																												
11	1.2.3		collected start up cost	0 days	Wed 2/1/23	Wed 2/1/23																												
12	1.2.4		SIDF funding the company	60 days	Thu 6/22/23	Wed 8/30/23																												
13	1.2.5		fund recived by SIDF	0 days	Wed 8/30/23	Wed 8/30/23																												
14	1.3		research requirements	67 days	Tue 1/24/23	Tue 4/11/23																												
15	1.3.1		Legal requirements	7 days	Tue 1/24/23	Tue 1/31/23																												
16	1.3.1.1		Commercial Ministry	2 days	Tue 1/24/23	Wed 1/25/23																												
17	1.3.1.2		standard and specifications Authority	5 days	Thu 1/26/23	Tue 1/31/23																												
18	1.3.1.3		Saudi Engineering council	5 days	Thu 1/26/23	Tue 1/31/23																												
19	1.3.1.4		Environmental Authority	5 days	Thu 1/26/23	Tue 1/31/23																												
20	1.3.1.5		Industrial Authority	2 days	Tue 1/24/23	Wed 1/25/23																												
21	1.3.1.6		Municipality of Riyadh	2 days	Tue 1/24/23	Wed 1/25/23																												
22	1.3.1.7		MOMRAH	2 days	Tue 1/24/23	Wed 1/25/23																												
23	1.3.1.8		tax and zakat AUTHORITY	2 days	Tue 1/24/23	Wed 1/25/23																												
24	1.3.1.9		Human Resources Ministry	2 days	Tue 1/24/23	Wed 1/25/23																												
25	1.3.1.10		Salamh (Safety and security requirement)	2 days	Tue 1/24/23	Wed 1/25/23																												
26	1.3.2		opportunities study in the current market	10 days	Wed 2/1/23	Sun 2/12/23																												
27	1.3.2.1		Focus group analysis	10 days	Wed 2/1/23	Sun 2/12/23																												
28	1.3.2.2		Surveys	10 days	Wed 2/1/23	Sun 2/12/23																												
29	1.3.2.3		Market Reasrch	10 days	Wed 2/1/23	Sun 2/12/23																												
30	1.3.2.4		Reasrch Analysis	10 days	Wed 2/1/23	Sun 2/12/23																												
31	1.3.2.5		opportunities study	0 days	Sun 2/12/23	Sun 2/12/23																												
32	1.3.3		Design Research and studies	60 days	Wed 2/1/23	Tue 4/11/23																												
33	1.3.3.1		GIS Study for public usage and density	14 days	Mon 2/13/23	Tue 2/28/23																												
34	1.3.3.2		Design the samples of the products research	20 days	Mon 2/13/23	Tue 3/7/23																												
35	1.3.3.3		Design Research and studies	0 days	Tue 3/7/23	Tue 3/7/23																												
36	1.3.3.4		Vendor and manufactures search	15 days	Wed 3/8/23	Sat 3/25/23																												
37	1.3.3.4.1		Smart Seats	15 days	Wed 3/8/23	Sat 3/25/23																												
Project: Project2 Date: Thu 8/18/22			Task		Inactive Task		Manual Summary Rollup		External Milestone		Manual Progress																							
			Split		Inactive Milestone		Manual Summary		Deadline																									
			Milestone		Inactive Summary		Start-only		Critical																									
			Summary		Manual Task		Finish-only		Critical Split																									
			Project Summary		Duration-only		External Tasks		Progress																									
Page 1																																		

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish																												
							2023	Q2	Q3	Q4	2024	Q2	Q3	Q4	2025	Q2	Q3	Q4	2026	Q2	Q3	Q4	2027	Q2	Q3	Q4	2028	Q2						
38	1.3.3.4.2		smart mail box	15 days	Wed 3/8/23	Sat 3/25/23																												
39	1.3.3.4.3		smart vending machines	15 days	Wed 3/8/23	Sat 3/25/23																												
40	1.3.3.4.4		Vendor and manufactures found	0 days	Sat 3/25/23	Sat 3/25/23																												
41	1.3.3.5		Resources requirements	5 days	Sun 3/26/23	Thu 3/30/23																												
42	1.3.3.5.1		Smart Seats	5 days	Sun 3/26/23	Thu 3/30/23																												
43	1.3.3.5.2		smart mail box	5 days	Sun 3/26/23	Thu 3/30/23																												
44	1.3.3.5.3		smart vending machines	5 days	Sun 3/26/23	Thu 3/30/23																												
45	1.3.3.6		location of warehouse study	14 days	Sun 3/26/23	Mon 4/10/23																												
46	1.3.3.7		Resources requirements found	0 days	Mon 4/10/23	Mon 4/10/23																												
47	1.3.3.8		risk study	60 days	Wed 2/1/23	Tue 4/11/23																												
48	1.3.3.8.1		Hazard Risk	1 day	Tue 4/11/23	Tue 4/11/23																												
49	1.3.3.8.2		Control Risk	5 days	Sat 4/1/23	Wed 4/5/23																												
50	1.3.3.8.3		Opportunity Risk	5 days	Mon 2/13/23	Sat 2/18/23																												
51	1.3.3.8.4		Compliance Risk	5 days	Wed 2/1/23	Mon 2/6/23																												
52	1.3.3.8.5		risk study	0 days	Tue 4/11/23	Tue 4/11/23																												
53	1.4		Finish and Apply for governmental requirements, license or qualification	67 days	Thu 1/26/23	Thu 4/13/23																												
54	1.4.1		standard and specifications Authority	14 days	Wed 2/1/23	Thu 2/16/23																												
55	1.4.2		Saudi Engineering council	5 days	Wed 2/1/23	Mon 2/6/23																												
56	1.4.3		Environmental Authority	14 days	Wed 2/1/23	Thu 2/16/23																												
57	1.4.4		Industrial Authority	14 days	Thu 1/26/23	Sat 2/11/23																												
58	1.4.5		Commercial Ministry	2 days	Thu 1/26/23	Sat 1/28/23																												
59	1.4.6		Municipality of Riyadh	3 days	Tue 4/11/23	Thu 4/13/23																												
60	1.4.6.1		choose location and rent it	3 days	Tue 4/11/23	Thu 4/13/23																												
61	1.4.7		MOMRAH	5 days	Thu 1/26/23	Tue 1/31/23																												
62	1.4.8		tax and zakat AUTHORITY	1 day	Thu 1/26/23	Thu 1/26/23																												
63	1.4.9		Human Resources Ministry	2 days	Thu 1/26/23	Sat 1/28/23																												
64	1.4.10		Salamh (Safety and security requirement)	14 days	Thu 1/26/23	Sat 2/11/23																												
65	1.4.11		finished governmental and legal requirements	0 days	Thu 4/13/23	Thu 4/13/23																												
66	1.5		Develop the assemble warehouse	25 days	Sat 4/15/23	Sat 5/13/23																												
67	1.5.1		Offices	14 days	Sat 4/15/23	Sun 4/30/23																												
68	1.5.2		assemble space	14 days	Mon 4/17/23	Tue 5/2/23																												
69	1.5.3		storage	14 days	Wed 4/19/23	Thu 5/4/23																												
70	1.5.3.1		unfinished products	14 days	Wed 4/19/23	Thu 5/4/23																												
71	1.5.3.2		finished products	14 days	Wed 4/19/23	Thu 5/4/23																												
72	1.5.4		Clinic	14 days	Wed 4/19/23	Thu 5/4/23																												
73	1.5.5		meeting rooms	14 days	Sat 4/15/23	Sun 4/30/23																												
74	1.5.6		car parking and floor	14 days	Tue 4/25/23	Wed 5/10/23																												
75	1.5.7		Building requirements	11 days	Mon 5/1/23	Sat 5/13/23																												
76	1.5.7.1		Camera and security setup	2 days	Tue 5/9/23	Wed 5/10/23																												

Project: Project2

Date: Thu 8/18/22

Task

Split

Milestone

Summary

Project Summary

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

External Tasks

External Milestone

Deadline

Critical

Critical Split

Progress

Manual Progress

Page 2

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish																												
							2023	Q2	Q3	Q4	2024	Q1	Q2	Q3	Q4	2025	Q1	Q2	Q3	Q4	2026	Q1	Q2	Q3	Q4	2027	Q1	Q2	Q3	Q4	2028	Q1	Q2	
77	1.5.7.2		Fire fighting and safety check	2 days	Tue 5/9/23	Wed 5/10/23																												
78	1.5.7.3		disposal and environmental setup	2 days	Thu 5/11/23	Sat 5/13/23																												
79	1.5.7.4		IT system set up	10 days	Mon 5/1/23	Thu 5/11/23																												
80	1.5.7.4.1		Pay hardware (server, communication devises and computers)	3 days	Mon 5/1/23	Wed 5/3/23																												
81	1.5.7.4.2		Network Set up	5 days	Thu 5/4/23	Tue 5/9/23																												
82	1.5.7.4.2.1		Server set up	3 days	Thu 5/4/23	Sun 5/7/23																												
83	1.5.7.4.2.2		PMIS set up	2 days	Mon 5/8/23	Tue 5/9/23																												
84	1.5.7.4.3		Internet Set up	2 days	Mon 5/8/23	Tue 5/9/23																												
85	1.5.7.4.4		Emails Set up	2 days	Wed 5/10/23	Thu 5/11/23																												
86	1.5.7.5		Machin and tool requirements	5 days	Wed 5/3/23	Mon 5/8/23																												
87	1.5.7.5.1		required assemble machines	5 days	Wed 5/3/23	Mon 5/8/23																												
88	1.5.7.5.2		required tools	5 days	Wed 5/3/23	Mon 5/8/23																												
89	1.5.8		ready assemble warehouse	0 days	Sat 5/13/23	Sat 5/13/23																												
90	1.6		Human resources	271 days	Sun 1/1/23	Sun 11/12/23																												
91	1.6.1		Employee Human Resources Leader	30 days	Sun 1/1/23	Sat 2/4/23																												
92	1.6.2		Build Human resources team	30 days	Mon 5/1/23	Sun 6/4/23																												
93	1.6.3		Employee IT Leader	30 days	Sun 1/1/23	Sat 2/4/23																												
94	1.6.4		Build IT team	30 days	Sat 2/11/23	Thu 3/16/23																												
95	1.6.5		Employee Design Leader	30 days	Sun 2/5/23	Sat 3/11/23																												
96	1.6.6		build Design team	30 days	Sun 5/7/23	Sat 6/10/23																												
97	1.6.7		Employee Financial Leader	30 days	Sun 2/5/23	Sat 3/11/23																												
98	1.6.8		Build Financial team	43 days	Sun 5/7/23	Sun 11/12/23																												
99	1.6.9		Employee Sales and business development Leader	30 days	Sun 2/5/23	Sat 3/11/23																												
100	1.6.10		Build Sales and business development team	30 days	Sat 5/13/23	Thu 6/15/23																												
101	1.6.11		Employee quality Leader	30 days	Sun 2/5/23	Sat 3/11/23																												
102	1.6.12		Build the quality team	30 days	Thu 5/18/23	Wed 6/21/23																												
103	1.6.13		Employee production Leader	30 days	Sun 2/5/23	Sat 3/11/23																												
104	1.6.14		Build the production team	60 days	Sun 3/12/23	Sat 5/20/23																												
105	1.6.15		ready team	0 days	Sun 11/12/23	Sun 11/12/23																												

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish																												
							2023	2024				2025				2026				2027				2028										
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2					
116	2.1.2.2		Develop Initial Idea	5 days	Sun 8/20/23	Thu 8/24/23																												
117	2.1.2.3		Review Functional and Specifications	25 days	Sat 8/26/23	Sat 9/23/23																												
118	2.1.2.4		Final Complete Design	10 days	Sun 9/24/23	Wed 10/4/23																												
119	2.1.2.5		Finished Design	0 days	Wed 10/4/23	Wed 10/4/23																												
120	2.1.3		smart vending machines	45 days	Thu 10/5/23	Sun 11/26/23																												
121	2.1.3.1		Conceptual Ideas	5 days	Thu 10/5/23	Tue 10/10/23																												
122	2.1.3.2		Develop Initial Idea	5 days	Wed 10/11/23	Mon 10/16/23																												
123	2.1.3.3		Review Functional and Specifications	25 days	Tue 10/17/23	Tue 11/14/23																												
124	2.1.3.4		Final Complete Design	10 days	Wed 11/15/23	Sun 11/26/23																												
125	2.1.3.5		Finished Design	0 days	Sun 11/26/23	Sun 11/26/23																												
126	2.2		Product procurement	230 days	Thu 6/22/23	Sat 3/16/24																												
127	2.2.1		send request of proposal with specification and design	100 days	Mon 8/14/23	Thu 12/7/23																												
128	2.2.1.1		Smart Seats	10 days	Mon 8/14/23	Thu 8/24/23																												
129	2.2.1.2		smart mail box	10 days	Thu 10/5/23	Mon 10/16/23																												
130	2.2.1.3		smart vending machines	10 days	Mon 11/27/23	Thu 12/7/23																												
131	2.2.2		receive proposals	100 days	Sat 8/26/23	Tue 12/19/23																												
132	2.2.2.1		Smart Seats	10 days	Sat 8/26/23	Tue 9/5/23																												
133	2.2.2.2		smart mail box	10 days	Tue 10/17/23	Sat 10/28/23																												
134	2.2.2.3		smart vending machines	10 days	Sat 12/9/23	Tue 12/19/23																												
135	2.2.3		evaluate proposals	100 days	Wed 9/6/23	Sun 12/31/23																												
136	2.2.3.1		Smart Seats	10 days	Wed 9/6/23	Sun 9/17/23																												
137	2.2.3.2		smart mail box	10 days	Sun 10/29/23	Wed 11/8/23																												
138	2.2.3.3		smart vending machines	10 days	Wed 12/20/23	Sun 12/31/23																												
139	2.2.4		choose vendor or manufactures	100 days	Mon 9/18/23	Thu 1/11/24																												
140	2.2.4.1		Smart Seats	10 days	Mon 9/18/23	Thu 9/28/23																												
141	2.2.4.2		smart mail box	10 days	Thu 11/9/23	Mon 11/20/23																												
142	2.2.4.3		smart vending machines	10 days	Mon 1/1/24	Thu 1/11/24																												
143	2.2.5		contract with vendor or munufactures	90 days	Thu 9/28/23	Thu 1/11/24																												
144	2.2.5.1		Smart Seats	0 days	Thu 9/28/23	Thu 9/28/23																												
145	2.2.5.2		smart mail box	0 days	Mon 11/20/23	Mon 11/20/23																												
146	2.2.5.3		smart vending machines	0 days	Thu 1/11/24	Thu 1/11/24																												
147	2.2.6		contact vendor or manufacture for order request	100 days	Sat 9/30/23	Tue 1/23/24																												
148	2.2.6.1		Smart Seats	10 days	Sat 9/30/23	Tue 10/10/23																												
149	2.2.6.2		smart mail box	10 days	Tue 11/21/23	Sat 12/2/23																												
150	2.2.6.3		smart vending machines	10 days	Sat 1/13/24	Tue 1/23/24																												
151	2.2.7		receive technical quarry	100 days	Wed 10/11/23	Sun 2/4/24																												
152	2.2.7.1		Smart Seats	10 days	Wed 10/11/23	Sun 10/22/23																												
153	2.2.7.2		smart mail box	10 days	Sun 12/3/23	Wed 12/13/23																												
154	2.2.7.3		smart vending machines	10 days	Wed 1/24/24	Sun 2/4/24																												

Project: Project2

Date: Thu 8/18/22

Task

Split

Milestone

Summary

Project Summary

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

External Tasks

External Milestone

Deadline

Critical

Critical Split

Progress

Manual Progress

Page 4

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish	2023																2024				2025				2026				2027				2028	
							Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2											
230	5.5		Deliver product	7 days	Mon 7/29/24	Mon 8/5/24																																		
231	5.5.1		Smart Seats	5 days	Mon 7/29/24	Sat 8/3/24																																		
232	5.5.2		smart mail box	5 days	Tue 7/30/24	Sun 8/4/24																																		
233	5.5.3		smart vending machines	5 days	Wed 7/31/24	Mon 8/5/24																																		
234	5.6		receive product	7 days	Sun 8/4/24	Sun 8/11/24																																		
235	5.6.1		Smart Seats	5 days	Sun 8/4/24	Thu 8/8/24																																		
236	5.6.2		smart mail box	5 days	Mon 8/5/24	Sat 8/10/24																																		
237	5.6.3		smart vending machines	5 days	Tue 8/6/24	Sun 8/11/24																																		
238	5.7		transport product to the ware house storage area	7 days	Sat 8/10/24	Sat 8/17/24																																		
239	5.7.1		Smart Seats	5 days	Sat 8/10/24	Wed 8/14/24																																		
240	5.7.2		smart mail box	5 days	Sun 8/11/24	Thu 8/15/24																																		
241	5.7.3		smart vending machines	5 days	Mon 8/12/24	Sat 8/17/24																																		
242	5.8		Product Production	40 days	Sun 8/18/24	Wed 10/2/24																																		
243	5.8.1		Production Design Model	5 days	Sun 8/18/24	Thu 8/22/24																																		
244	5.8.2		Production of products	5 days	Sat 8/24/24	Wed 8/28/24																																		
245	5.8.3		Testing & Quality assurance Products	5 days	Thu 8/29/24	Tue 9/3/24																																		
246	5.8.4		Product approval	5 days	Wed 9/4/24	Mon 9/9/24																																		
247	5.8.5		product Transportation	5 days	Tue 9/10/24	Sun 9/15/24																																		
248	5.8.6		product installation	5 days	Mon 9/16/24	Sat 9/21/24																																		
249	5.8.7		final Testing & Quality assurance Products	5 days	Sun 9/22/24	Thu 9/26/24																																		
250	5.8.8		final approval	5 days	Sat 9/28/24	Wed 10/2/24																																		
251	5.9		Maintenance every month	13 days	Thu 11/7/24	Thu 11/21/24																																		
252	5.9.1		product check list	3 days	Thu 11/7/24	Sun 11/10/24																																		
253	5.9.2		product repair	10 days	Mon 11/11/24	Thu 11/21/24																																		
254	5.10		oparate adds and products	1000 days	Thu 10/3/24	Mon 12/13/27																																		
255	5.11		oparate adds and products	1030 days	Mon 9/9/24	Thu 12/23/27																																		
256	6		HR Process up to 5 years	1294 days	Mon 11/13/24	Thu 12/30/27																																		
257	6.1		Make a training plan and action plan	1294 days	Mon 11/13/24	Thu 12/30/27																																		
258	6.1.1		Weekly training	1294 days	Mon 11/13/24	Thu 12/30/27																																		
259	6.1.2		monthly training	1294 days	Mon 11/13/24	Thu 12/30/27																																		
260	6.1.3		yearly training	1290 days	Mon 11/13/24	Sun 12/26/27																																		
261	6.2		goals and task completion system	1290 days	Mon 11/13/24	Sun 12/26/27																																		
262	6.2.1		monthly task completion list	1032 days	Sun 7/7/24	Sat 10/23/27																																		
263	6.2.2		yearly goals	1290 days	Mon 11/13/24	Sun 12/26/27																																		
264	6.3		attendance sheets	1294 days	Mon 11/13/24	Thu 12/30/27																																		
265	6.4		salary sheets	1294 days	Mon 11/13/24	Thu 12/30/27																																		
266	6.5		employees requests	1294 days	Mon 11/13/24	Thu 12/30/27																																		
267	7		business devolpment up to 5 years	1036 days	Sun 7/7/24	Wed 10/27/27																																		
268	7.1		product development	1030 days	Sun 7/7/24	Wed 10/20/27																																		

Project: Project2

Date: Thu 8/18/22

Task

Split

Milestone

Summary

Project Summary

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

External Tasks

External Milestone

Deadline

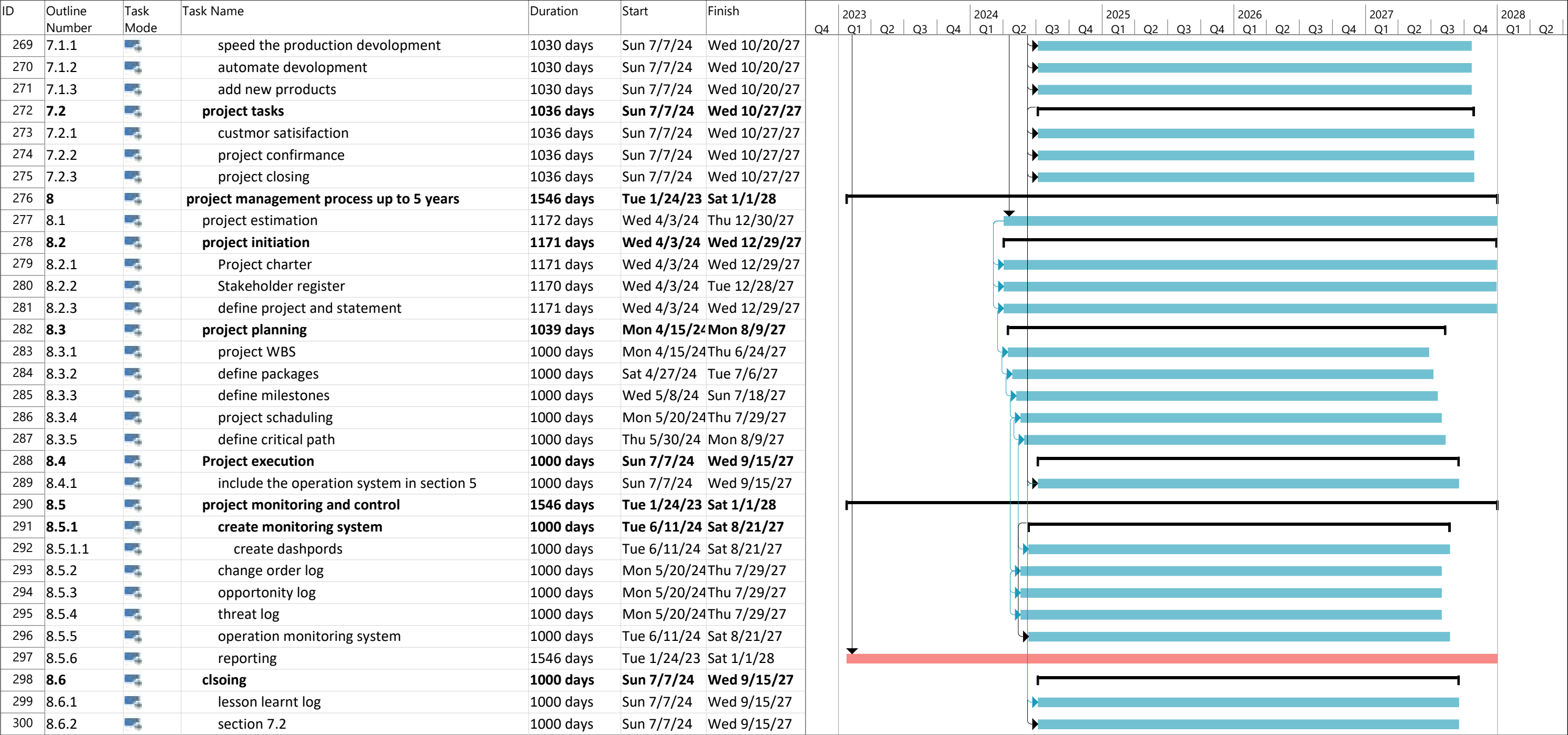
Critical

Critical Split

Progress

Manual Progress

Page 7



Project: Project2
Date: Thu 8/18/22

Task

Inactive Task

Manual Summary Rollup

External Milestone

Manual Progress

Split

Inactive Milestone

Manual Summary

Deadline

Milestone

Inactive Summary

Start-only

Critical

Summary

Manual Task

Finish-only

Critical Split

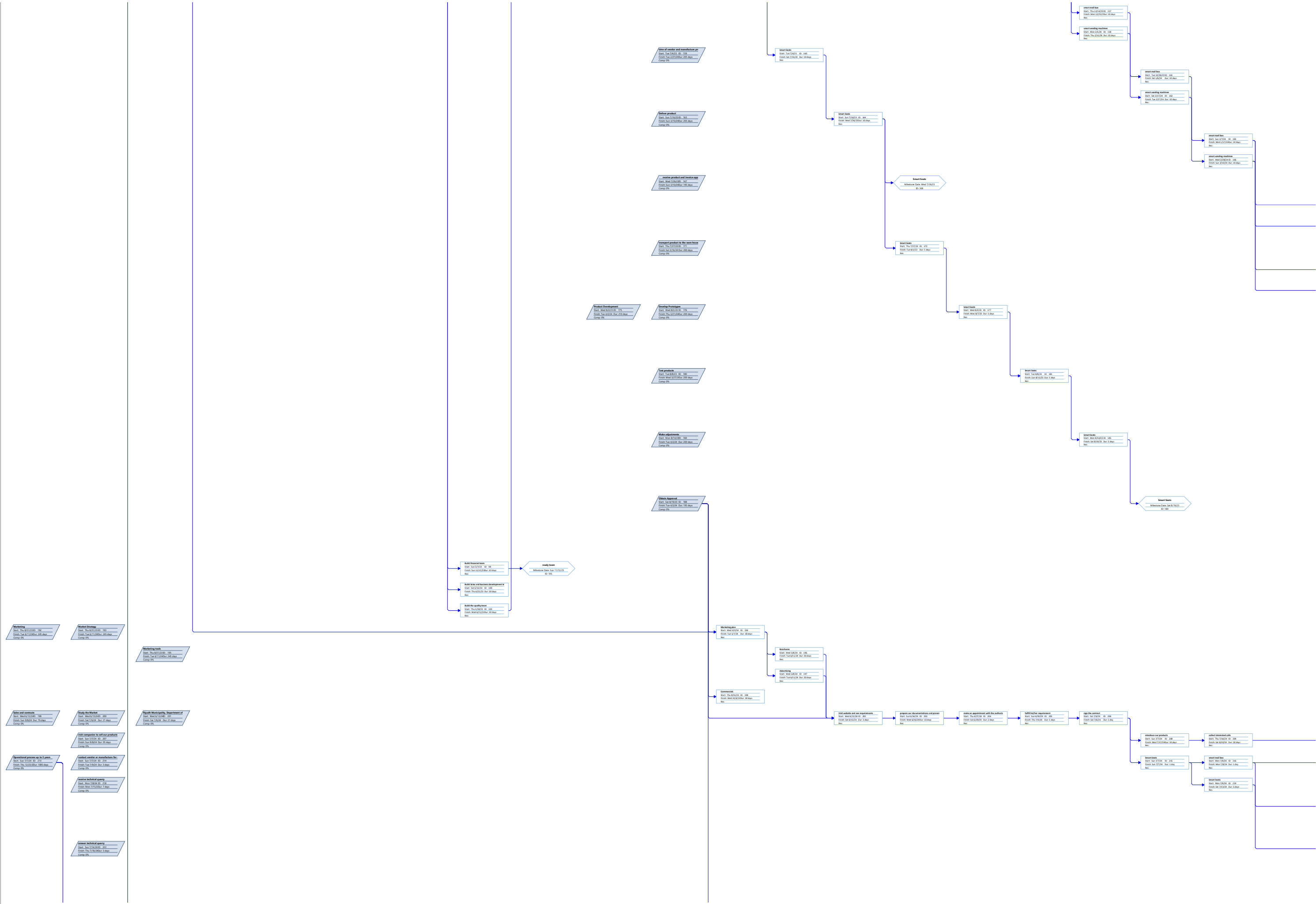
Project Summary

Duration-only

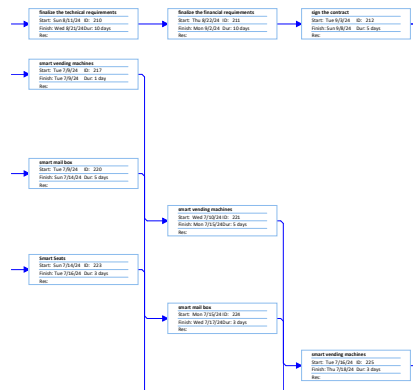
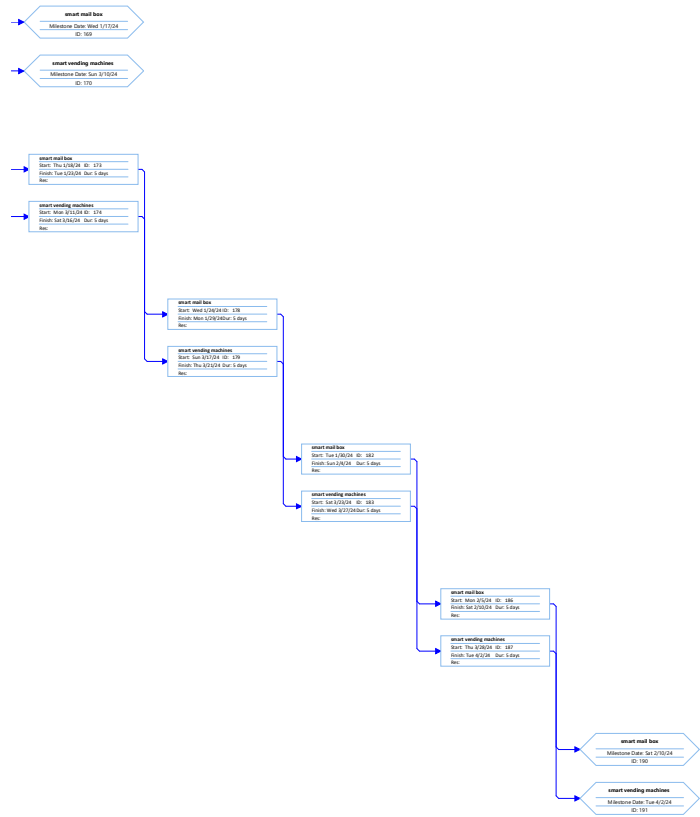
External Tasks

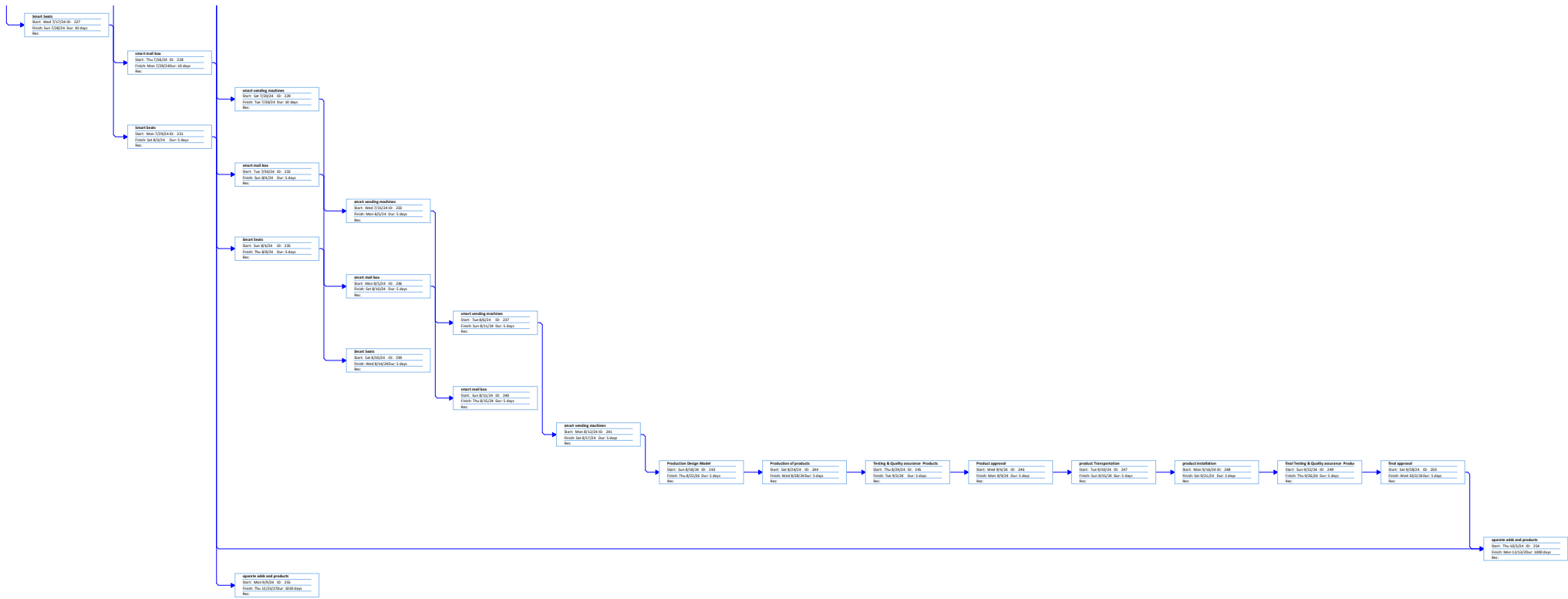
Progress

(2)WBS with Critical Path









(3) Milestones

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish	Predecessors																													
								D	Half 1, 2023						Half 2, 2023						Half 1, 2024															
									J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M											
1	1		Establish Smart Street Solution Company	271 days	Sun 1/1/23	Sun 11/12/23																														
2	1.1		Stakeholder Kick of Meetings	20 days	Sun 1/1/23	Mon 1/23/23																														
3	1.1.1		Setup Initial Goals	5 days	Sun 1/1/23	Thu 1/5/23																														
4	1.1.2		Setup visibility study	10 days	Sat 1/7/23	Tue 1/17/23	3																													
5	1.1.3		Agree on start up cost	3 days	Wed 1/18/23	Sat 1/21/23	4																													
6	1.1.4		write and sign the agreement and the charter between the stakeholders	2 days	Sun 1/22/23	Mon 1/23/23	5																													
7	1.1.5		Project Charter	0 days	Mon 1/23/23	Mon 1/23/23	6																													
8	1.2		collect Fund	191 days	Sat 1/21/23	Wed 8/30/23																														
9	1.2.1		Create a Company Bank Account	1 day	Sat 1/21/23	Sat 1/21/23	5SS+2 days																													
10	1.2.2		collect the first cost from the team investors	10 days	Sun 1/22/23	Wed 2/1/23	9																													
11	1.2.3		collected start up cost	0 days	Wed 2/1/23	Wed 2/1/23	10																													
12	1.2.4		SIDF funding the company	60 days	Thu 6/22/23	Wed 8/30/23	102																													
13	1.2.5		fund recived by SIDF	0 days	Wed 8/30/23	Wed 8/30/23	12																													
14	1.3		research requirements	67 days	Tue 1/24/23	Tue 4/11/23																														
15	1.3.1		Legal requirements	7 days	Tue 1/24/23	Tue 1/31/23																														
16	1.3.1.1		Commercial Ministry	2 days	Tue 1/24/23	Wed 1/25/23	2																													

Project: Project2
Date: Thu 8/18/22

Task

Split

Milestone

Summary

Manual Summary

Project Summary

Rolled Up Task

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Start-only

Finish-only

External Tasks

Deadline

Progress

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish	Predecessors		D	Half 1, 2023							Half 2, 2023				Half 1, 2024					
										J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M
17	1.3.1.2		standard and specifications Authority	5 days	Thu 1/26/23	Tue 1/31/23	16																			
18	1.3.1.3		Saudi Engineering council	5 days	Thu 1/26/23	Tue 1/31/23	16																			
19	1.3.1.4		Environmental Authority	5 days	Thu 1/26/23	Tue 1/31/23	16																			
20	1.3.1.5		Industrial Authority	2 days	Tue 1/24/23	Wed 1/25/23	2																			
21	1.3.1.6		Municipality of Riyadh	2 days	Tue 1/24/23	Wed 1/25/23	2																			
22	1.3.1.7		MOMRAH	2 days	Tue 1/24/23	Wed 1/25/23	2																			
23	1.3.1.8		tax and zakat AUTHORITY	2 days	Tue 1/24/23	Wed 1/25/23	2																			
24	1.3.1.9		Human Resources Ministry	2 days	Tue 1/24/23	Wed 1/25/23	2																			
25	1.3.1.10		Salamh (Safety and security requirement)	2 days	Tue 1/24/23	Wed 1/25/23	2																			
26	1.3.2		opportunities study in the current market	10 days	Wed 2/1/23	Sun 2/12/23																				
27	1.3.2.1		Focus group analysis	10 days	Wed 2/1/23	Sun 2/12/23	15																			
28	1.3.2.2		Surveys	10 days	Wed 2/1/23	Sun 2/12/23	15																			
29	1.3.2.3		Market Reasrch	10 days	Wed 2/1/23	Sun 2/12/23	15																			
30	1.3.2.4		Rearsch Analysis	10 days	Wed 2/1/23	Sun 2/12/23	15																			
31	1.3.2.5		opportunities study	0 days	Sun 2/12/23	Sun 2/12/23	30																			
32	1.3.3		Design Research and studies	60 days	Wed 2/1/23	Tue 4/11/23																				

Project: Project2
Date: Thu 8/18/22

Task Summary Rolled Up Task◆

Split Manual Summary Inactive Task

Milestone◆Project SummaryInactive Milestone◇

Inactive Summary Start-only

Manual Task Finish-only

Duration-only External Tasks

Deadline▼

Progress

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish	Predecessors																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
								D	Half 1, 2023							Half 2, 2023							Half 1, 2024																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
									J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish	Predecessors																												
								D	Half 1, 2023					Half 2, 2023					Half 1, 2024																
								J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M											
65	1.4.11		finished governmental and legal requirements	0 days	Thu 4/13/23	Thu 4/13/23	59																												
66	1.5		Develop the assemble warehouse	25 days	Sat 4/15/23	Sat 5/13/23																													
67	1.5.1		Offices	14 days	Sat 4/15/23	Sun 4/30/23	60																												
68	1.5.2		assemble space	14 days	Mon 4/17/23	Tue 5/2/23	67SS+2 days																												
69	1.5.3		storage	14 days	Wed 4/19/23	Thu 5/4/23																													
70	1.5.3.1		unfinished products	14 days	Wed 4/19/23	Thu 5/4/23	68SS+2 days																												
71	1.5.3.2		finished products	14 days	Wed 4/19/23	Thu 5/4/23	70SS																												
72	1.5.4		Clinic	14 days	Wed 4/19/23	Thu 5/4/23	71SS																												
73	1.5.5		meeting rooms	14 days	Sat 4/15/23	Sun 4/30/23	67SS																												
74	1.5.6		car parking and floor	14 days	Tue 4/25/23	Wed 5/10/23	72SS+5 days																												
75	1.5.7		Building requirements	11 days	Mon 5/1/23	Sat 5/13/23																													
76	1.5.7.1		Camera and security setup	2 days	Tue 5/9/23	Wed 5/10/23	67SS,74FF																												
77	1.5.7.2		Fire fighting and safety check	2 days	Tue 5/9/23	Wed 5/10/23	67SS,74FF																												
78	1.5.7.3		disposal and environmental setup	2 days	Thu 5/11/23	Sat 5/13/23	77																												
79	1.5.7.4		IT system set up	10 days	Mon 5/1/23	Thu 5/11/23																													
80	1.5.7.4.1		Pay hardware (server, communication devises and computers)	3 days	Mon 5/1/23	Wed 5/3/23	67																												
Project: Project2 Date: Thu 8/18/22																																			
Task				Summary		Rolled Up Task		Inactive Summary		Start-only		Deadline																							
Split				Manual Summary		Inactive Task		Manual Task		Finish-only		Progress																							
Milestone				Project Summary		Inactive Milestone		Duration-only		External Tasks																									

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish	Predecessors	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M
81	1.5.7.4.2		Network Set up	5 days	Thu 5/4/23	Tue 5/9/23																			
82	1.5.7.4.2.1		Server set up	3 days	Thu 5/4/23	Sun 5/7/23	80																		
83	1.5.7.4.2.2		PMIS set up	2 days	Mon 5/8/23	Tue 5/9/23	82																		
84	1.5.7.4.3		Internet Set up	2 days	Mon 5/8/23	Tue 5/9/23	82																		
85	1.5.7.4.4		Emails Set up	2 days	Wed 5/10/23	Thu 5/11/23	84																		
86	1.5.7.5		Machin and tool requirements	5 days	Wed 5/3/23	Mon 5/8/23																			
87	1.5.7.5.1		required assemble machines	5 days	Wed 5/3/23	Mon 5/8/23	68																		
88	1.5.7.5.2		required tools	5 days	Wed 5/3/23	Mon 5/8/23	68																		
89	1.5.8		ready assemble warehouse	0 days	Sat 5/13/23	Sat 5/13/23	75																		
90	1.6		Human resources	271 days	Sun 1/1/23	Sun 11/12/23																			
91	1.6.1		Employee Human Resources Leader	30 days	Sun 1/1/23	Sat 2/4/23																			
92	1.6.2		Build Human resources team	30 days	Mon 5/1/23	Sun 6/4/23	67																		
93	1.6.3		Employee IT Leader	30 days	Sun 1/1/23	Sat 2/4/23	91SS																		
94	1.6.4		Build IT team	30 days	Sat 2/11/23	Thu 3/16/23	93FS+5 days																		
95	1.6.5		Employee Design Leader	30 days	Sun 2/5/23	Sat 3/11/23	91																		
96	1.6.6		build Design team	30 days	Sun 5/7/23	Sat 6/10/23	67FS+5 days																		

Project: Project2
Date: Thu 8/18/22

Task Summary Rolled Up Task

Split Manual Summary Inactive Task

Milestone Project Summary Inactive Milestone

Inactive Summary Start-only

Manual Task Finish-only

Duration-only External Tasks

Deadline↓

Progress

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish	Predecessors																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
								D	Half 1, 2023							Half 2, 2023							Half 1, 2024																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
									J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish	Predecessors	D	Half 1, 2023						Half 2, 2023				Half 1, 2024								
									J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M		
129	2.2.1.2		smart mail box	10 days	Thu 10/5/23	Mon 10/16/23	114																				
130	2.2.1.3		smart vending machines	10 days	Mon 11/27/23	Thu 12/7/23	120																				
131	2.2.2		receive proposals	100 days	Sat 8/26/23	Tue 12/19/23																					
132	2.2.2.1		Smart Seats	10 days	Sat 8/26/23	Tue 9/5/23	128																				
133	2.2.2.2		smart mail box	10 days	Tue 10/17/23	Sat 10/28/23	129																				
134	2.2.2.3		smart vending machines	10 days	Sat 12/9/23	Tue 12/19/23	130																				
135	2.2.3		evaluate proposals	100 days	Wed 9/6/23	Sun 12/31/23																					
136	2.2.3.1		Smart Seats	10 days	Wed 9/6/23	Sun 9/17/23	132																				
137	2.2.3.2		smart mail box	10 days	Sun 10/29/23	Wed 11/8/23	133																				
138	2.2.3.3		smart vending machines	10 days	Wed 12/20/23	Sun 12/31/23	134																				
139	2.2.4		choose vendor or manufactures	100 days	Mon 9/18/23	Thu 1/11/24																					
140	2.2.4.1		Smart Seats	10 days	Mon 9/18/23	Thu 9/28/23	136																				
141	2.2.4.2		smart mail box	10 days	Thu 11/9/23	Mon 11/20/23	137																				
142	2.2.4.3		smart vending machines	10 days	Mon 1/1/24	Thu 1/11/24	138																				
143	2.2.5		contract with vendor or munifatures	90 days	Thu 9/28/23	Thu 1/11/24																					
144	2.2.5.1		Smart Seats	0 days	Thu 9/28/23	Thu 9/28/23	140																				
Project: Project2 Date: Thu 8/18/22			Task		Summary		Rolled Up Task		Inactive Summary		Start-only		Deadline												Progress		
			Split		Manual Summary		Inactive Task		Manual Task		Finish-only																
			Milestone		Project Summary		Inactive Milestone		Duration-only		External Tasks																

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish	Predecessors	2023														2024					
								D	Half 1, 2023						Half 2, 2023						Half 1, 2024						
								J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M			
145	2.2.5.2		smart mail box	0 days	Mon 11/20/23	Mon 11/20/23	141												11/20								
146	2.2.5.3		smart vending machines	0 days	Thu 1/11/24	Thu 1/11/24	142												1/11								
147	2.2.6		contact vendor or manufacture for order request	100 days	Sat 9/30/23	Tue 1/23/24																					
148	2.2.6.1		Smart Seats	10 days	Sat 9/30/23	Tue 10/10/23	140																				
149	2.2.6.2		smart mail box	10 days	Tue 11/21/23	Sat 12/2/23	141																				
150	2.2.6.3		smart vending machines	10 days	Sat 1/13/24	Tue 1/23/24	142																				
151	2.2.7		receive technical quarry	100 days	Wed 10/11/23	Sun 2/4/24																					
152	2.2.7.1		Smart Seats	10 days	Wed 10/11/23	Sun 10/22/23	148																				
153	2.2.7.2		smart mail box	10 days	Sun 12/3/23	Wed 12/13/23	149																				
154	2.2.7.3		smart vending machines	10 days	Wed 1/24/24	Sun 2/4/24	150																				
155	2.2.8		answer technical quarry	205 days	Thu 6/22/23	Thu 2/15/24																					
156	2.2.8.1		Smart Seats	10 days	Thu 6/22/23	Mon 7/3/23																					
157	2.2.8.2		smart mail box	10 days	Thu 12/14/23	Mon 12/25/23	153																				
158	2.2.8.3		smart vending machines	10 days	Mon 2/5/24	Thu 2/15/24	154																				
159	2.2.9		time of vendor and manufacture production time	205 days	Tue 7/4/23	Tue 2/27/24																					
160	2.2.9.1		Smart Seats	10 days	Tue 7/4/23	Sat 7/15/23	156																				

Project: Project2
Date: Thu 8/18/22

Task

Split

Milestone◆

Summary

Manual Summary

Project Summary

Rolled Up Task◆

Inactive Task

Inactive Milestone◇

Inactive Summary

Manual Task

Duration-only

Start-only

Finish-only

External Tasks

Deadline↓

Progress

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish	Predecessors	2023														2024						
								D	Half 1, 2023						Half 2, 2023						D	Half 1, 2024						
									J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M			
161	2.2.9.2		smart mail box	10 days	Tue 12/26/23	Sat 1/6/24	157																					
162	2.2.9.3		smart vending machines	10 days	Sat 2/17/24	Tue 2/27/24	158																					
163	2.2.10		Deliver product	205 days	Sun 7/16/23	Sun 3/10/24																						
164	2.2.10.1		Smart Seats	10 days	Sun 7/16/23	Wed 7/26/23	160																					
165	2.2.10.2		smart mail box	10 days	Sun 1/7/24	Wed 1/17/24	161																					
166	2.2.10.3		smart vending machines	10 days	Wed 2/28/24	Sun 3/10/24	162																					
167	2.2.11		receive product and invoice approval	195 days	Wed 7/26/23	Sun 3/10/24																						
168	2.2.11.1		Smart Seats	0 days	Wed 7/26/23	Wed 7/26/23	164															7/26						
169	2.2.11.2		smart mail box	0 days	Wed 1/17/24	Wed 1/17/24	165																1/17					
170	2.2.11.3		smart vending machines	0 days	Sun 3/10/24	Sun 3/10/24	166																	3/10				
171	2.2.12		transport product to the ware house storage area	200 days	Thu 7/27/23	Sat 3/16/24																						
172	2.2.12.1		Smart Seats	5 days	Thu 7/27/23	Tue 8/1/23	164																					
173	2.2.12.2		smart mail box	5 days	Thu 1/18/24	Tue 1/23/24	165																					
174	2.2.12.3		smart vending machines	5 days	Mon 3/11/24	Sat 3/16/24	166																					
175	2.3		Product Development	210 days	Wed 8/2/23	Tue 4/2/24																						
176	2.3.1		Develop Prototypes	200 days	Wed 8/2/23	Thu 3/21/24																						

Project: Project2
Date: Thu 8/18/22

Task

Split

Milestone◆

Summary

Manual Summary

Project Summary

Rolled Up Task◆

Inactive Task

Inactive Milestone◇

Inactive Summary

Manual Task

Duration-only

Start-only

Finish-only

External Tasks

Deadline↓

Progress

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish	Predecessors	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M
177	2.3.1.1		Smart Seats	5 days	Wed 8/2/23	Mon 8/7/23	172																		
178	2.3.1.2		smart mail box	5 days	Wed 1/24/24	Mon 1/29/24	173																		
179	2.3.1.3		smart vending machines	5 days	Sun 3/17/24	Thu 3/21/24	174																		
180	2.3.2		Test products	200 days	Tue 8/8/23	Wed 3/27/24																			
181	2.3.2.1		Smart Seats	5 days	Tue 8/8/23	Sun 8/13/23	177																		
182	2.3.2.2		smart mail box	5 days	Tue 1/30/24	Sun 2/4/24	178																		
183	2.3.2.3		smart vending machines	5 days	Sat 3/23/24	Wed 3/27/24	179																		
184	2.3.3		Make adjustments	200 days	Mon 8/14/23	Tue 4/2/24																			
185	2.3.3.1		Smart Seats	5 days	Mon 8/14/23	Sat 8/19/23	181																		
186	2.3.3.2		smart mail box	5 days	Mon 2/5/24	Sat 2/10/24	182																		
187	2.3.3.3		smart vending machines	5 days	Thu 3/28/24	Tue 4/2/24	183																		
188	2.3.4		Obtain Approval	195 days	Sat 8/19/23	Tue 4/2/24																			
189	2.3.4.1		Smart Seats	0 days	Sat 8/19/23	Sat 8/19/23	185																		
190	2.3.4.2		smart mail box	0 days	Sat 2/10/24	Sat 2/10/24	186																		
191	2.3.4.3		smart vending machines	0 days	Tue 4/2/24	Tue 4/2/24	187																		
192	3		Marketing	245 days	Thu 8/31/23	Tue 6/11/24																			

Project: Project2
Date: Thu 8/18/22

Task Summary Rolled Up Task◆

Split Manual Summary Inactive Task

Milestone◆ Project Summary Inactive Milestone◇

Inactive Summary Start-only

Manual Task Finish-only

Duration-only External Tasks

Deadline▼

Progress

[illegible]

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish	Predecessors	D	Half 1, 2023						Half 2, 2023				Half 1, 2024							
									J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	
209	4.2.2		collect interested calls	20 days	Thu 7/18/24	Sat 8/10/24	208																			
210	4.2.3		finalize the technical requirements	10 days	Sun 8/11/24	Wed 8/21/24	209																			
211	4.2.4		finalize the financial requirements	10 days	Thu 8/22/24	Mon 9/2/24	210																			
212	4.2.5		sign the contract	5 days	Tue 9/3/24	Sun 9/8/24	211																			
213	5		Operational process up to 5 years	1085 days	Sun 7/7/24	Thu 12/23/27																				
214	5.1		contact vendor or manufacture for order request	3 days	Sun 7/7/24	Tue 7/9/24																				
215	5.1.1		Smart Seats	1 day	Sun 7/7/24	Sun 7/7/24	206																			
216	5.1.2		smart mail box	1 day	Mon 7/8/24	Mon 7/8/24	215																			
217	5.1.3		smart vending machines	1 day	Tue 7/9/24	Tue 7/9/24	216																			
218	5.2		receive technical quarry	7 days	Mon 7/8/24	Mon 7/15/24																				
219	5.2.1		Smart Seats	5 days	Mon 7/8/24	Sat 7/13/24	215																			
220	5.2.2		smart mail box	5 days	Tue 7/9/24	Sun 7/14/24	216																			
221	5.2.3		smart vending machines	5 days	Wed 7/10/24	Mon 7/15/24	217																			
222	5.3		answer technical quarry	5 days	Sun 7/14/24	Thu 7/18/24																				
223	5.3.1		Smart Seats	3 days	Sun 7/14/24	Tue 7/16/24	219																			
224	5.3.2		smart mail box	3 days	Mon 7/15/24	Wed 7/17/24	220																			
			Project: Project2 Date: Thu 8/18/22 Task Split Milestone Summary Manual Summary Project Summary Rolled Up Task Inactive Task Inactive Milestone Inactive Summary Manual Task Duration-only Start-only Finish-only External Tasks Deadline Progress																							

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish	Predecessors	D	Half 1, 2023						Half 2, 2023				Half 1, 2024																																																																																																																																																																																																																							
									J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M																																																																																																																																																																																																																	
225	5.3.3		smart vending machines	3 days	Tue 7/16/24	Thu 7/18/24	221																																																																																																																																																																																																																																			
226	5.4		time of vendor and manufacture production time	12 days	Wed 7/17/24	Tue 7/30/24																																																																																																																																																																																																																																				
227	5.4.1		Smart Seats	10 days	Wed 7/17/24	Sun 7/28/24	223																																																																																																																																																																																																																																			
228	5.4.2		smart mail box	10 days	Thu 7/18/24	Mon 7/29/24	224																																																																																																																																																																																																																																			
229	5.4.3		smart vending machines	10 days	Sat 7/20/24	Tue 7/30/24	225																																																																																																																																																																																																																																			
230	5.5		Deliver product	7 days	Mon 7/29/24	Mon 8/5/24																																																																																																																																																																																																																																				
231	5.5.1		Smart Seats	5 days	Mon 7/29/24	Sat 8/3/24	227																																																																																																																																																																																																																																			
232	5.5.2		smart mail box	5 days	Tue 7/30/24	Sun 8/4/24	228																																																																																																																																																																																																																																			
233	5.5.3		smart vending machines	5 days	Wed 7/31/24	Mon 8/5/24	229																																																																																																																																																																																																																																			
234	5.6		receive product	7 days	Sun 8/4/24	Sun 8/11/24																																																																																																																																																																																																																																				
235	5.6.1		Smart Seats	5 days	Sun 8/4/24	Thu 8/8/24	231																																																																																																																																																																																																																																			
236	5.6.2		smart mail box	5 days	Mon 8/5/24	Sat 8/10/24	232																																																																																																																																																																																																																																			
237	5.6.3		smart vending machines	5 days	Tue 8/6/24	Sun 8/11/24	233																																																																																																																																																																																																																																			
238	5.7		transport product to the ware house storage area	7 days	Sat 8/10/24	Sat 8/17/24																																																																																																																																																																																																																																				
239	5.7.1		Smart Seats	5 days	Sat 8/10/24	Wed 8/14/24	235																																																																																																																																																																																																																																			
240	5.7.2		smart mail box	5 days	Sun 8/11/24	Thu 8/15/24	236																																																																																																																																																																																																																																			
Project: Project2 Date: Thu 8/18/22			Task Summary Split Milestone	Rolled Up Task Manual Summary Project Summary	Inactive Summary Manual Task Duration-only	Inactive Task Finish-only External Tasks	Deadline Progress																																																																																																																																																																																																																																			

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Calendar																
								D	Half 1, 2023						Half 2, 2023				Half 1, 2024					
								J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M
241	5.7.3		smart vending machines	5 days	Mon 8/12/24	Sat 8/17/24	237																	
242	5.8		Product Production	40 days	Sun 8/18/24	Wed 10/2/24																		
243	5.8.1		Production Design Model	5 days	Sun 8/18/24	Thu 8/22/24	241																	
244	5.8.2		Production of products	5 days	Sat 8/24/24	Wed 8/28/24	243SS+5 days																	
245	5.8.3		Testing & Quality assurance Products	5 days	Thu 8/29/24	Tue 9/3/24	244SS+5 days																	
246	5.8.4		Product approval	5 days	Wed 9/4/24	Mon 9/9/24	245SS+5 days																	
247	5.8.5		product Transportation	5 days	Tue 9/10/24	Sun 9/15/24	246SS+5 days																	
248	5.8.6		product installation	5 days	Mon 9/16/24	Sat 9/21/24	247SS+5 days																	
249	5.8.7		final Testing & Quality assurance Products	5 days	Sun 9/22/24	Thu 9/26/24	248SS+5 days																	
250	5.8.8		final approval	5 days	Sat 9/28/24	Wed 10/2/24	249SS+5 days																	
251	5.9		Maintenance every month	13 days	Thu 11/7/24	Thu 11/21/24																		
252	5.9.1		product check list	3 days	Thu 11/7/24	Sun 11/10/24	242FS+30 days																	
253	5.9.2		product repair	10 days	Mon 11/11/24	Thu 11/21/24	252																	
254	5.10		oparate adds and products	1000 days	Thu 10/3/24	Mon 12/13/27	250,212																	
255	5.11		oparate adds and products	1030 days	Mon 9/9/24	Thu 12/23/27	212																	
256	6		HR Process up to 5 years	1294 days	Mon 11/13/23	Thu 12/30/27																		

Project: Project2
Date: Thu 8/18/22

Task

Split

Milestone

Summary

Manual Summary

Project Summary

Rolled Up Task

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Start-only

Finish-only

External Tasks

Deadline

Progress

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish	Predecessors																												
								D	Half 1, 2023							Half 2, 2023				Half 1, 2024															
									J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M										
257	6.1		Make a training plan and action plan	1294 days	Mon 11/13/23	Thu 12/30/27																													
258	6.1.1		Weekly training	1294 days	Mon 11/13/23	Thu 12/30/27	90																												
259	6.1.2		monthly training	1294 days	Mon 11/13/23	Thu 12/30/27	258SS																												
260	6.1.3		yearly training	1290 days	Mon 11/13/23	Sun 12/26/27	258SS																												
261	6.2		goals and task completion system	1290 days	Mon 11/13/23	Sun 12/26/27																													
262	6.2.1		monthly task completion list	1032 days	Sun 7/7/24	Sat 10/23/27	213SS																												
263	6.2.2		yearly goals	1290 days	Mon 11/13/23	Sun 12/26/27	260SS																												
264	6.3		attendance sheets	1294 days	Mon 11/13/23	Thu 12/30/27	90																												
265	6.4		salary sheets	1294 days	Mon 11/13/23	Thu 12/30/27	90																												
266	6.5		employees requests	1294 days	Mon 11/13/23	Thu 12/30/27	90																												
267	7		business devolpment up to 5 years	1036 days	Sun 7/7/24	Wed 10/27/27																													
268	7.1		product development	1030 days	Sun 7/7/24	Wed 10/20/27																													
269	7.1.1		speed the production devolpment	1030 days	Sun 7/7/24	Wed 10/20/27	213SS																												
270	7.1.2		automate devolpment	1030 days	Sun 7/7/24	Wed 10/20/27	213SS																												
271	7.1.3		add new prproducts	1030 days	Sun 7/7/24	Wed 10/20/27	213SS																												
272	7.2		project tasks	1036 days	Sun 7/7/24	Wed 10/27/27																													

Project: Project2
Date: Thu 8/18/22

Task Summary Rolled Up Task◆

Split Manual Summary Inactive Task Manual Task Finish-only External Tasks

Milestone◆ Project Summary Inactive Milestone◇ Duration-only

Deadline↓
Progress

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish	Predecessors	D	Half 1, 2023						Half 2, 2023				Half 1, 2024								
									J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M		
273	7.2.1		custmor satisfaction	1036 days	Sun 7/7/24	Wed 10/27/27	213SS																				
274	7.2.2		project confirmance	1036 days	Sun 7/7/24	Wed 10/27/27	213SS																				
275	7.2.3		project closing	1036 days	Sun 7/7/24	Wed 10/27/27	213SS																				
276	8		project management process up to 5 years	1546 days	Tue 1/24/23	Sat 1/1/28																					
277	8.1		project estimation	1172 days	Wed 4/3/24	Thu 12/30/27	188																				
278	8.2		project initiation	1171 days	Wed 4/3/24	Wed 12/29/27																					
279	8.2.1		Project charter	1171 days	Wed 4/3/24	Wed 12/29/27	277SS																				
280	8.2.2		Stakeholder register	1170 days	Wed 4/3/24	Tue 12/28/27	277SS																				
281	8.2.3		define project and statement	1171 days	Wed 4/3/24	Wed 12/29/27	277SS																				
282	8.3		project planning	1039 days	Mon 4/15/24	Mon 8/9/27																					
283	8.3.1		project WBS	1000 days	Mon 4/15/24	Thu 6/24/27	281SS+10 days																				
284	8.3.2		define packages	1000 days	Sat 4/27/24	Tue 7/6/27	283SS+10 days																				
285	8.3.3		define milestones	1000 days	Wed 5/8/24	Sun 7/18/27	284SS+10 days																				
286	8.3.4		project schaduling	1000 days	Mon 5/20/24	Thu 7/29/27	285SS+10 days																				
287	8.3.5		define critical path	1000 days	Thu 5/30/24	Mon 8/9/27	286SS+9 days																				
288	8.4		Project execution	1000 days	Sun 7/7/24	Wed 9/15/27																					

Project: Project2
Date: Thu 8/18/22

Task

Split

Milestone

Summary

Manual Summary

Project Summary

Rolled Up Task

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Start-only

Finish-only

External Tasks

Deadline

Progress

ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish	Predecessors	D	Half 1, 2023						Half 2, 2023				Half 1, 2024							
									J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	
289	8.4.1		include the operation system in section 5	1000 days	Sun 7/7/24	Wed 9/15/27	213SS																			
290	8.5		project monitoring and control	1546 days	Tue 1/24/23	Sat 1/1/28																				
291	8.5.1		create monitoring system	1000 days	Tue 6/11/24	Sat 8/21/27																				
292	8.5.1.1		create dashpords	1000 days	Tue 6/11/24	Sat 8/21/27	287SS+10 days																			
293	8.5.2		change order log	1000 days	Mon 5/20/24	Thu 7/29/27	286SS																			
294	8.5.3		opportunity log	1000 days	Mon 5/20/24	Thu 7/29/27	293SS																			
295	8.5.4		threat log	1000 days	Mon 5/20/24	Thu 7/29/27	293SS																			
296	8.5.5		operation monitoring system	1000 days	Tue 6/11/24	Sat 8/21/27	291SS																			
297	8.5.6		reporting	1546 days	Tue 1/24/23	Sat 1/1/28	2																			
298	8.6		clsioing	1000 days	Sun 7/7/24	Wed 9/15/27																				
299	8.6.1		lesson learnt log	1000 days	Sun 7/7/24	Wed 9/15/27	289SS																			
300	8.6.2		section 7.2	1000 days	Sun 7/7/24	Wed 9/15/27	272SS																			
Project: Project2 Date: Thu 8/18/22			Task		Summary		Rolled Up Task		Inactive Summary		Start-only		Deadline													
			Split		Manual Summary		Inactive Task		Manual Task		Finish-only		Progress													
			Milestone		Project Summary		Inactive Milestone		Duration-only		External Tasks															

Project: Project2

Date: Thu 8/18/22

Task

Split

Milestone

Summary

Manual Summary

Project Summary

Rolled Up Task

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Start-only

Finish-only

External Tasks

Deadline

Progress

J

Half 2, 2024

J

A

S

O

N

D

Half 1, 2025

J

F

M

A

M

J

Half 2, 2025

J

A

S

O

N

D

Half 1, 2026

J

F

M

A

M

J

Half 2, 2026

J

A

S

O

N

D

Half 1, 2027

J

F

M

A

M

J

Half 2, 2027

J

A

S

O

N

D

Half 1, 2028

J

F

M

A

M

J



Project: Project2
Date: Thu 8/18/22

Task

Split

Milestone

Summary

Manual Summary

Project Summary

Rolled Up Task

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Start-only

Finish-only

External Tasks

Deadline

Progress

J	Half 2, 2024						Half 1, 2025						Half 2, 2025						Half 1, 2026						Half 2, 2026						Half 1, 2027						Half 2, 2027						Half 1, 2028		
J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	J	

Project: Project2
Date: Thu 8/18/22

- Task

Split

Milestone
-
- Summary

Manual Summary

Project Summary
-
- Rolled Up Task

Inactive Task

Inactive Milestone
-
- Inactive Summary

Manual Task

Duration-only
-
- Start-only

Finish-only

External Tasks
-
- Deadline

Progress
-

J	Half 2, 2024						Half 1, 2025						Half 2, 2025						Half 1, 2026						Half 2, 2026						Half 1, 2027						Half 2, 2027						Half 1, 2028		
J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	J	

Project: Project2
Date: Thu 8/18/22

- Task

Split

Milestone
-
- Summary

Manual Summary

Project Summary
-
- Rolled Up Task

Inactive Task

Inactive Milestone
-
- Inactive Summary

Manual Task

Duration-only
-
- Start-only

Finish-only

External Tasks
-
- Deadline

Progress
-



Project: Project2
Date: Thu 8/18/22

- Task

Summary

Rolled Up Task

Inactive Summary

Start-only

Deadline
- Split

Manual Summary

Inactive Task

Manual Task

Finish-only

Progress
- Milestone

Project Summary

Inactive Milestone

Duration-only

External Tasks

J	Half 2, 2024						Half 1, 2025						Half 2, 2025						Half 1, 2026						Half 2, 2026						Half 1, 2027						Half 2, 2027						Half 1, 2028			
J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	J		

Project: Project2
Date: Thu 8/18/22

Task		Summary		Rolled Up Task	◆	Inactive Summary		Start-only	[	Deadline	↓
Split		Manual Summary		Inactive Task		Manual Task		Finish-only	]	Progress	
Milestone	◆	Project Summary		Inactive Milestone	◇	Duration-only		External Tasks			

J	Half 2, 2024						Half 1, 2025						Half 2, 2025						Half 1, 2026						Half 2, 2026						Half 1, 2027						Half 2, 2027						Half 1, 2028		
J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	J	

Project: Project2
Date: Thu 8/18/22

Task		Summary		Rolled Up Task	◆	Inactive Summary		Start-only	[	Deadline	↓
Split		Manual Summary		Inactive Task		Manual Task		Finish-only	]	Progress	
Milestone	◆	Project Summary		Inactive Milestone	◇	Duration-only		External Tasks			



Project: Project2
Date: Thu 8/18/22

Task

Split

Milestone

Summary

Manual Summary

Project Summary

Rolled Up Task

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Start-only

Finish-only

External Tasks

Deadline

Progress

J	Half 2, 2024						Half 1, 2025						Half 2, 2025						Half 1, 2026						Half 2, 2026						Half 1, 2027						Half 2, 2027						Half 1, 2028			
J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	J		

Project: Project2
Date: Thu 8/18/22

Task		Summary		Rolled Up Task	◆	Inactive Summary		Start-only		Deadline	↓
Split		Manual Summary		Inactive Task		Manual Task		Finish-only		Progress	
Milestone	◆	Project Summary		Inactive Milestone	◇	Duration-only		External Tasks			



Project: Project2
Date: Thu 8/18/22

Task		Summary		Rolled Up Task	◆	Inactive Summary		Start-only	[	Deadline	↓
Split		Manual Summary		Inactive Task		Manual Task		Finish-only	]	Progress	
Milestone	◆	Project Summary		Inactive Milestone	◇	Duration-only		External Tasks			

Project: Project2

Date: Thu 8/18/22

Task

Split

Milestone

Summary

Manual Summary

Project Summary

Rolled Up Task

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Start-only

Finish-only

External Tasks

Deadline

Progress



Project: Project2
Date: Thu 8/18/22

Task

Split

Milestone

Summary

Manual Summary

Project Summary

Rolled Up Task

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Start-only

Finish-only

External Tasks

Deadline

Progress



Project: Project2
Date: Thu 8/18/22

Task

Split

Milestone

Summary

Manual Summary

Project Summary

Rolled Up Task

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

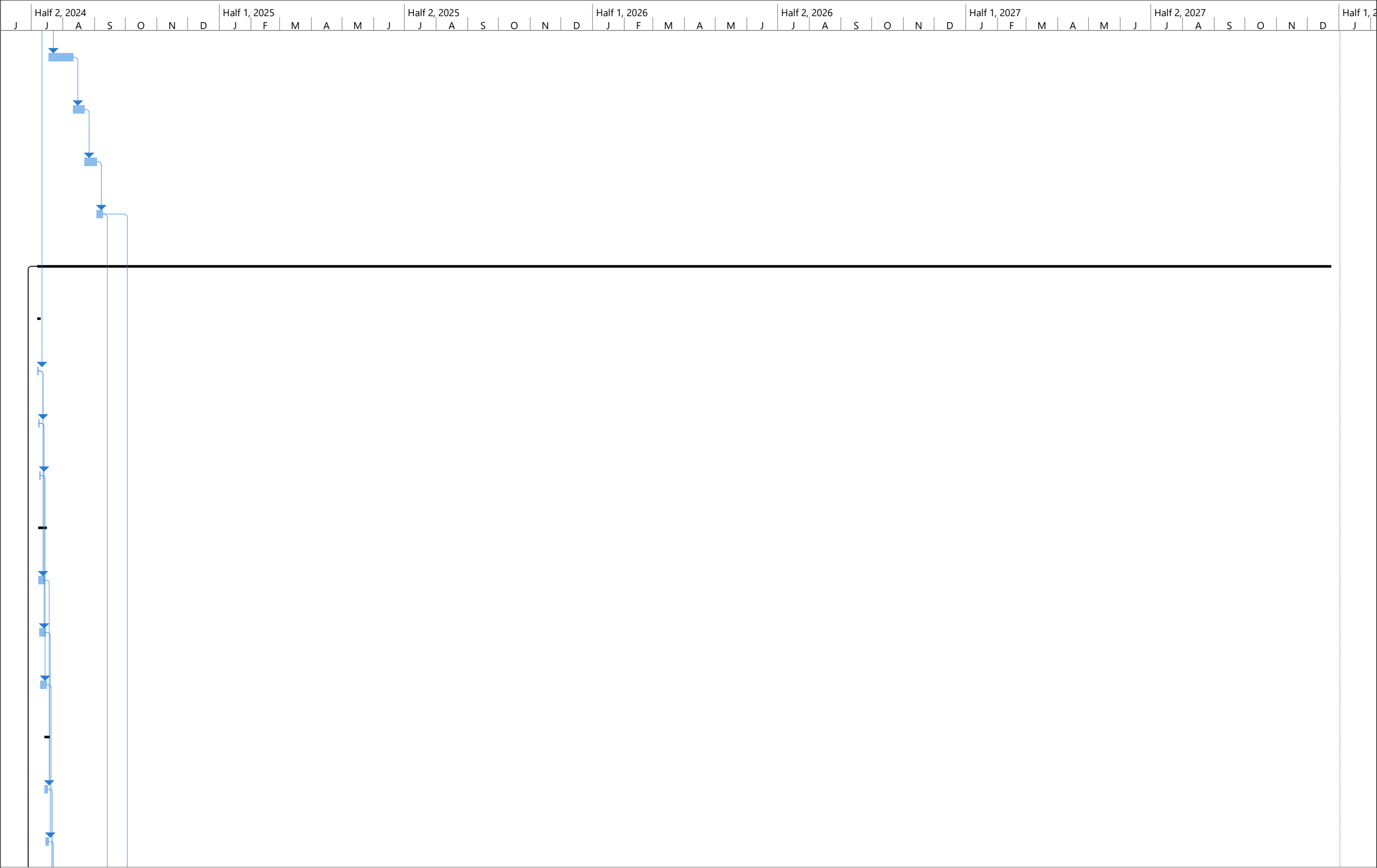
Start-only

Finish-only

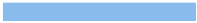
External Tasks

Deadline

Progress

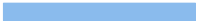


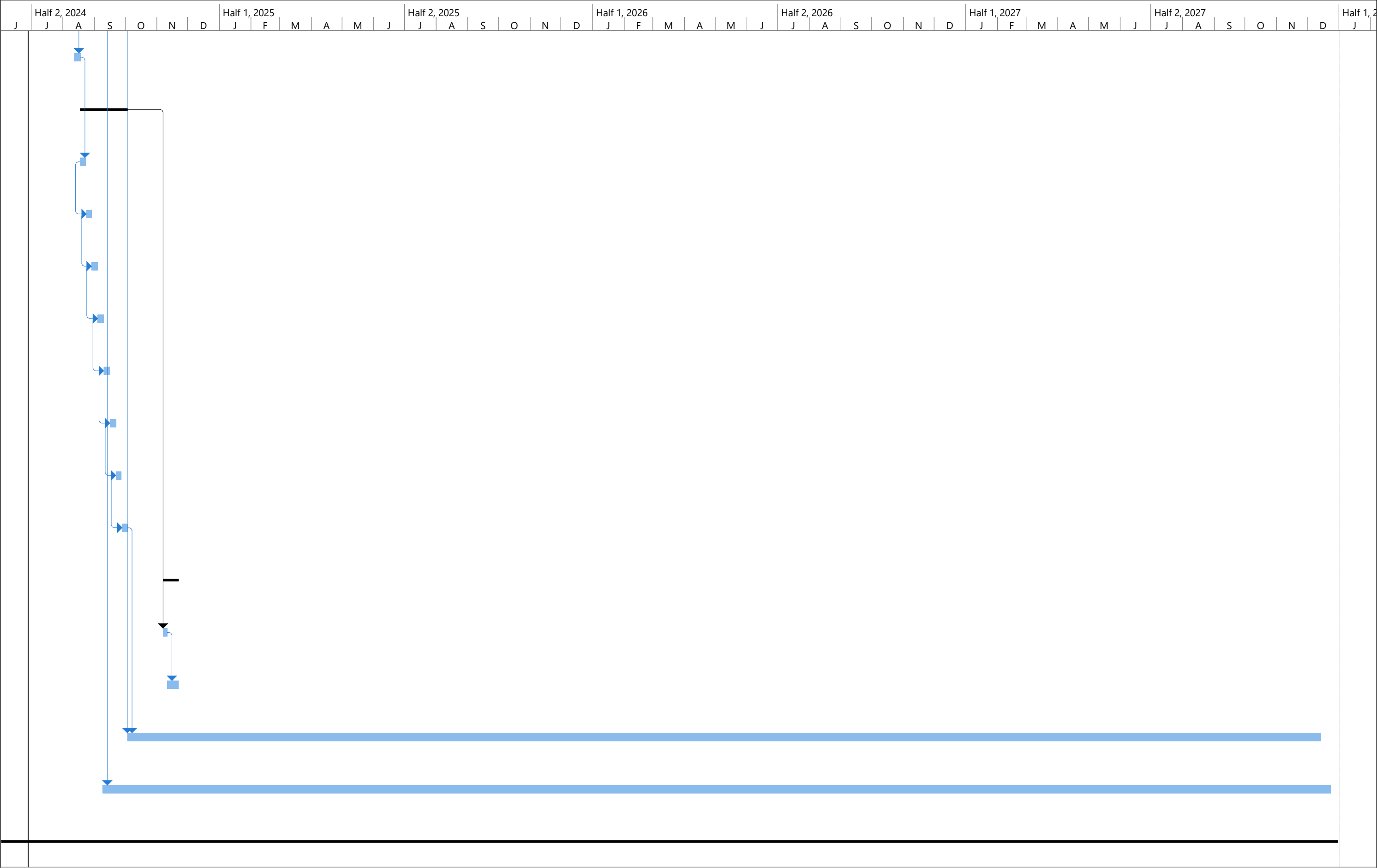
Project: Project2
Date: Thu 8/18/22

Task		Summary		Rolled Up Task		Inactive Summary		Start-only		Deadline	
Split		Manual Summary		Inactive Task		Manual Task		Finish-only		Progress	
Milestone		Project Summary		Inactive Milestone		Duration-only		External Tasks			



Project: Project2
Date: Thu 8/18/22

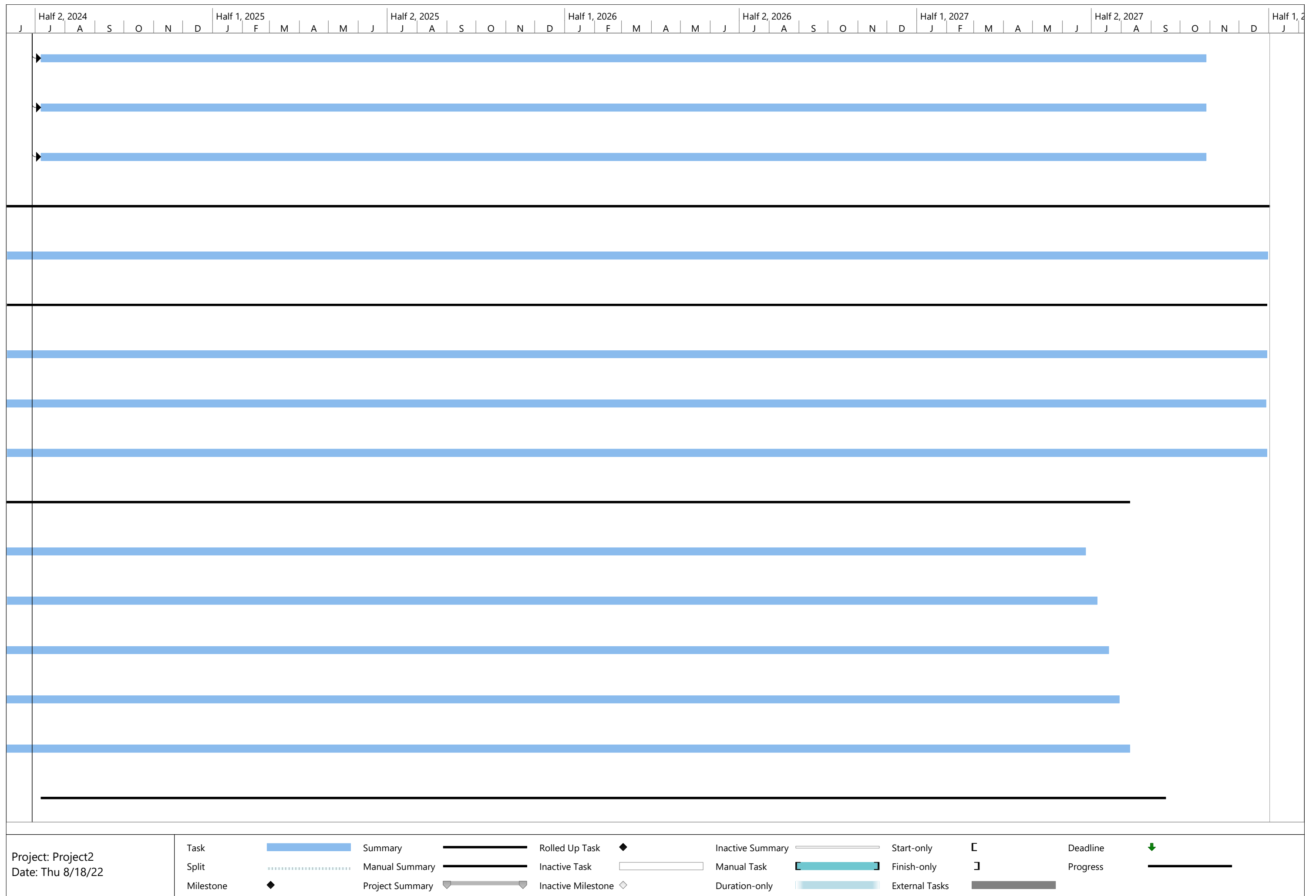
Task		Summary		Rolled Up Task		Inactive Summary		Start-only		Deadline	
Split		Manual Summary		Inactive Task		Manual Task		Finish-only		Progress	
Milestone		Project Summary		Inactive Milestone		Duration-only		External Tasks			

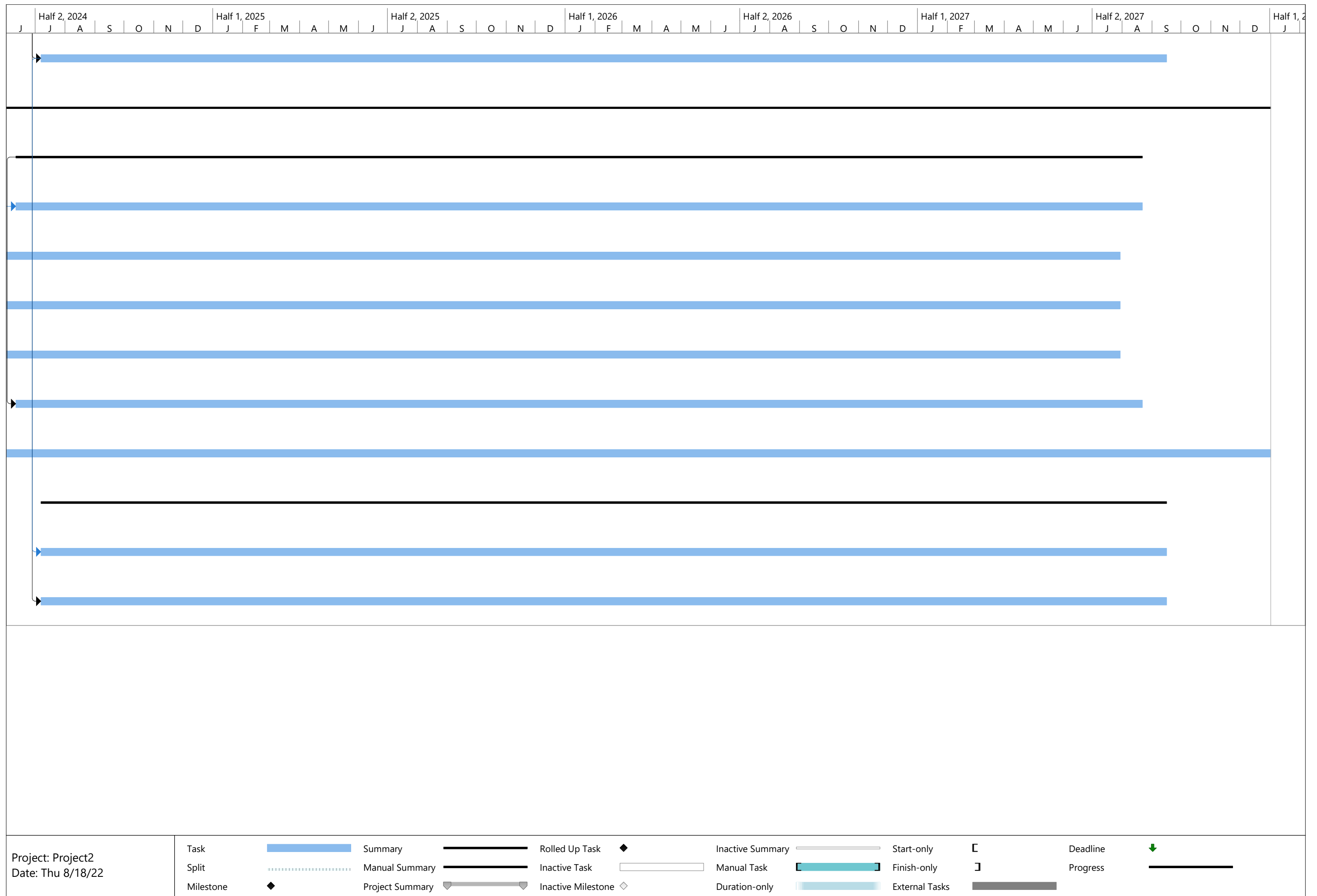


Project: Project2
Date: Thu 8/18/22

Task		Summary		Rolled Up Task		Inactive Summary		Start-only		Deadline	
Split		Manual Summary		Inactive Task		Manual Task		Finish-only		Progress	
Milestone		Project Summary		Inactive Milestone		Duration-only		External Tasks			

[illegible]





(4) Project
cost 5yrs

Outline Number	Name	Duration	unit cost	number of units	cost per full unit	number of units(1yr)	cost 1st year	number of units(2yr)	cost per full unit	cost 2nd year	number of units(3yr)	cost per full unit	cost 3rd year	number of units(4yr)	cost per full unit	cost 4th year	number of units(5yr)	cost per full unit	cost 5th year	total for 5 yrs
0	SSSC Total cost for 5 years		-792,215	2,785	-3,492,324	314	-3,707,124	911	-3,492,324	-24,016,024	790	-3,492,324	-15,135,024	1,504	-3,492,324	-37,395,024	2632	-3492324	-69,456,524	-149,709,720
1	Establish Smart Street Solution Company	271 days	-578,700	232	-1,786,200	191	-3,394,500	187	-1,786,200	-2,773,000	187	-1,786,200	-2,773,000	187	-1,786,200	-2,773,000	187	-1786200	-2,773,000	
1.1	Stakeholder Kick of Meetings	20 days	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.1.1	Setup Initial Goals	5 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.1.2	Setup visibility study	10 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.1.3	Agree on start up cost	3 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.1.4	write and sign the agreement and the charter between the stakeholders	2 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.1.5	Project Charter	0 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.2	collect Fund	191 days	-5000	5	-5000	5	-5000	0	-5000	0	0	-5000	0	0	-5000	0	0	-5000	0	
1.2.1	Create a Company Bank Account	1 day	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.2.2	collect the first cost from the team investors	10 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.2.3	collected start up cost	0 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.2.4	SIDF funding the company	60 days	-5000	1	-5000	1	-5000	0	-5000	0	0	-5000	0	0	-5000	0	0	-5000	0	
1.2.5	fund recived by SIDF	0 days		1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3	research requirements	67 days	0	40	0	32	0	5	0	0	5	0	0	5	0	0	5	0	0	
1.3.1	Legal requirements	7 days	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.1.1	Commercial Ministry	2 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.1.2	standard and specifications Authority	5 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.1.3	Saudi Engineering council	5 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.1.4	Environmental Authority	5 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.1.5	Industrial Authority	2 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.1.6	Municipality of Riyadh	2 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.1.7	MOMRAH	2 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.1.8	tax and zakat AUTHORITY	2 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.1.9	Human Resources Ministry	2 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.1.10	Salamh (Safety and security requirement)	2 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.2	opportunities study in the current market	10 days	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.2.1	Focus group analysis	10 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.2.2	Surveys	10 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.2.3	Market Reasrch	10 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.2.4	Reasrch Analysis	10 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.2.5	opportunities study	0 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.3	Design Research and studies	60 days	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.3.1	GIS Study for public usage and density	14 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.3.2	Design the samples of the products research	20 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.3.3	Design Research and studies	0 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.3.4	Vendor and manufactures search	15 days	0	12	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.3.4.1	Smart Seats	15 days	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.3.4.2	smart mail box	15 days	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.3.4.3	smart vending machines	15 days	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.3.4.4	Vendor and manufactures found	0 days	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.3.5	Resources requirements	5 days	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.3.5.1	Smart Seats	5 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.3.5.2	smart mail box	5 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.3.5.3	smart vending machines	5 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.3.6	location of warehouse study	14 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.3.7	Resources requirements found	0 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.3.3.8	risk study	60 days	0	5	0	5	0	5	0	0	5	0	0	5	0	0	5	0	0	
1.3.3.8.1	Hazard Risk	1 day	0	1	0	1	0	1	0	0	1	0	0	1	0	0	1	0	0	
1.3.3.8.2	Control Risk	5 days	0	1	0	1	0	1	0	0	1	0	0	1	0	0	1	0	0	
1.3.3.8.3	Opportunity Risk	5 days	0	1	0	1	0	1	0	0	1	0	0	1	0	0	1	0	0	
1.3.3.8.4	Compliance Risk	5 days	0	1	0	1	0	1	0	0	1	0	0	1	0	0	1	0	0	
1.3.3.8.5	risk study	0 days	0	1	0	1	0	1	0	0	1	0	0	1	0	0	1	0	0	
1.4	Finish and Apply for governmental requirements, license or qualification	67 days	-112000	11	-111700	11	-112000	1	-111700	-100000	1	-111700	-100000	1	-111700	-100000	1	-111700	-100000	
1.4.1	standard and specifications Authority	14 days	-1500	1	-1500	1	-1500	0	-1500	0	0	-1500	0	0	-1500	0	0	-1500	0	
1.4.2	Saudi Engineering council	5 days	-5000	1	-5000	1	-5000	0	-5000	0	0	-5000	0	0	-5000	0	0	-5000	0	
1.4.3	Environmental Authority	14 days	-2000	1	-2000	1	-2000	0	-2000	0	0	-2000	0	0	-2000	0	0	-2000	0	
1.4.4	Industrial Authority	14 days	-3000	1	-3000	1	-3000	0	-3000	0	0	-3000	0	0	-3000	0	0	-3000	0	
1.4.5	Commercial Ministry	2 days	-200	1	-200	1	-200	0	-200	0	0	-200	0	0	-200	0	0	-200	0	
1.4.6	Municipality of Riyadh	3 days	-100300	6	-100000	6	-100300	1	-100000	-100000	1	-100000	-100000	1	-100000	-100000	1	-100000	-100000	

1.4.6.1	choose location and rent it	3 days	-100000	1	-100000	1	-100000	1	-100000	-100000	1	-100000	-100000	1	-100000	-100000	1	-100000	-100000
1.4.7	MOMRAH	5 days	0	1	0	1	0	1	0	0	1	0	0	1	0	0	1	0	0
1.4.8	tax and zakat AUTHORITY	1 day	0	1	0	1	0	1	0	0	1	0	0	1	0	0	1	0	0
1.4.9	Human Resources Ministry	2 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1.4.10	Salamh (Safety and security requirement)	14 days	-300	1	-300	1	-300	0	-300	0	0	-300	0	0	-300	0	0	-300	0
1.4.11	finished governmental and legal requirements	0 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5	Develop the assemble warehouse	25 days	-360500	119	-1450500	18	-1450500	1	-1450500	-45000	1	-1450500	-45000	1	-1450500	-45000	1	-1450500	-45000
1.5.1	Offices	14 days	-100000	1	-100000	1	-100000	0	-100000	0	0	-100000	0	0	-100000	0	0	-100000	0
1.5.2	assemble space	14 days	-40000	1	-40000	1	-40000	0	-40000	0	0	-40000	0	0	-40000	0	0	-40000	0
1.5.3	storage	14 days	-83000	5	-83000	5	-83000	0	-83000	0	0	-83000	0	0	-83000	0	0	-83000	0
1.5.3.1	unfinished products	14 days	-27000	1	-27000	1	-27000	0	-27000	0	0	-27000	0	0	-27000	0	0	-27000	0
1.5.3.2	finished products	14 days	-27000	1	-27000	1	-27000	0	-27000	0	0	-27000	0	0	-27000	0	0	-27000	0
1.5.4	Clinic	14 days	-10000	1	-10000	1	-10000	0	-10000	0	0	-10000	0	0	-10000	0	0	-10000	0
1.5.5	meeting rooms	14 days	-14000	1	-14000	1	-14000	0	-14000	0	0	-14000	0	0	-14000	0	0	-14000	0
1.5.6	car parking and floor	14 days	-5000	1	-5000	1	-5000	0	-5000	0	0	-5000	0	0	-5000	0	0	-5000	0
1.5.7	Building requirements	11 days	-17500	3	-17500	3	-17500	0	-17500	0	0	-17500	0	0	-17500	0	0	-17500	0
1.5.7.1	Camera and security setup	2 days	-10000	1	-10000	1	-10000	0	-10000	0	0	-10000	0	0	-10000	0	0	-10000	0
1.5.7.2	Fire fighting and safety check	2 days	-2500	1	-2500	1	-2500	0	-2500	0	0	-2500	0	0	-2500	0	0	-2500	0
1.5.7.3	disposal and environmental setup	2 days	-5000	1	-5000	1	-5000	0	-5000	0	0	-5000	0	0	-5000	0	0	-5000	0
1.5.7.4	IT system set up	10 days	-45000	1	-45000	1	-45000	1	-45000	-45000	1	-45000	-45000	1	-45000	-45000	1	-45000	-45000
1.5.7.4.1	Pay hardware (server, communication devises and computers)	3 days	-45000	1	-45000	1	-45000	1	-45000	-45000	1	-45000	-45000	1	-45000	-45000	1	-45000	-45000
1.5.7.4.2	Network Set up	5 days	-15000	4	-15000	4	-15000	0	-15000	0	0	-15000	0	0	-15000	0	0	-15000	0
1.5.7.4.2.1	Server set up	3 days	-3000	1	-3000	1	-3000	0	-3000	0	0	-3000	0	0	-3000	0	0	-3000	0
1.5.7.4.2.2	PMIS set up	2 days	-4000	1	-4000	1	-4000	0	-4000	0	0	-4000	0	0	-4000	0	0	-4000	0
1.5.7.4.3	Internet Set up	2 days	-3000	1	-3000	1	-3000	0	-3000	0	0	-3000	0	0	-3000	0	0	-3000	0
1.5.7.4.4	Emails Set up	2 days	-5000	1	-5000	1	-5000	0	-5000	0	0	-5000	0	0	-5000	0	0	-5000	0
1.5.7.5	Machin and tool requiremets	5 days	-60000	104	-1150000	3	-1150000	0	-1150000	0	0	-1150000	0	0	-1150000	0	0	-1150000	0
1.5.7.5.1	required assemble machines	5 days	-50000	3	-150000	1	-150000	0	-150000	0	0	-150000	0	0	-150000	0	0	-150000	0
1.5.7.5.2	required tools	5 days	-10000	100	-1000000	1	-1000000	0	-1000000	0	0	-1000000	0	0	-1000000	0	0	-1000000	0
1.5.8	ready assemble warehouse	0 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1.6	Human resources	271 days	-101200	52	-219000	120	-1827000	180	-219000	-2628000	180	-219000	-2628000	180	-219000	-2628000	180	-219000	-2628000
1.6.1	Employee Human Resources Leader	30 days	-10000	1	-10000	10	-100000	12	-10000	-120000	12	-10000	-120000	12	-10000	-120000	12	-10000	-120000
1.6.2	Build Human resources team	30 days	-5000	5	-25000	8	-200000	12	-25000	-300000	12	-25000	-300000	12	-25000	-300000	12	-25000	-300000
1.6.3	Employee IT Leader	30 days	-10000	1	-10000	10	-100000	12	-10000	-120000	12	-10000	-120000	12	-10000	-120000	12	-10000	-120000
1.6.4	Build IT team	30 days	-5000	2	-10000	8	-80000	12	-10000	-120000	12	-10000	-120000	12	-10000	-120000	12	-10000	-120000
1.6.5	Employee Design Leader	30 days	-10000	1	-10000	9	-90000	12	-10000	-120000	12	-10000	-120000	12	-10000	-120000	12	-10000	-120000
1.6.6	build Design team	30 days	-5000	5	-25000	8	-200000	12	-25000	-300000	12	-25000	-300000	12	-25000	-300000	12	-25000	-300000
1.6.7	Employee Financial Leader	30 days	-10000	1	-10000	9	-90000	12	-10000	-120000	12	-10000	-120000	12	-10000	-120000	12	-10000	-120000
1.6.8	Build Financial team	43 days	-5000	5	-25000	8	-200000	12	-25000	-300000	12	-25000	-300000	12	-25000	-300000	12	-25000	-300000
1.6.9	Employee Sales and business development Leader	30 days	-10000	1	-10000	9	-90000	12	-10000	-120000	12	-10000	-120000	12	-10000	-120000	12	-10000	-120000
1.6.10	Build Sales and business development team	30 days	-5000	5	-25000	8	-200000	12	-25000	-300000	12	-25000	-300000	12	-25000	-300000	12	-25000	-300000
1.6.11	Employee quality Leader	30 days	-10000	1	-10000	8	-80000	12	-10000	-120000	12	-10000	-120000	12	-10000	-120000	12	-10000	-120000
1.6.12	Build the quality team	30 days	-5000	3	-15000	7	-105000	12	-15000	-180000	12	-15000	-180000	12	-15000	-180000	12	-15000	-180000
1.6.13	Employee production Leader	30 days	-10000	1	-10000	10	-100000	12	-10000	-120000	12	-10000	-120000	12	-10000	-120000	12	-10000	-120000
1.6.14	Build the production team	60 days	-1200	20	-24000	8	-192000	12	-24000	-288000	12	-24000	-288000	12	-24000	-288000	12	-24000	-288000
1.6.15	ready team	0 days		0	0	0	0	12	0	0	12	0	0	12	0	0	12	0	0
2	Product Life cycle	245 days	-80100	63	-80100	63	-80100	0	-80100	0	0	-80100	0	0	-80100	0	0	-80100	0
2.1	product Design	135 days	-28500	15	-28500	15	-28500	0	-28500	0	0	-28500	0	0	-28500	0	0	-28500	0
2.1.1	Smart Seats	45 days	-9500	5	-9500	5	-9500	0	-9500	0	0	-9500	0	0	-9500	0	0	-9500	0
2.1.1.1	Conceptual Ideas	5 days	-1000	1	-1000	1	-1000	0	-1000	0	0	-1000	0	0	-1000	0	0	-1000	0
2.1.1.2	Develop Initial Idea	5 days	-1500	1	-1500	1	-1500	0	-1500	0	0	-1500	0	0	-1500	0	0	-1500	0
2.1.1.3	Review Functional and Specifications	25 days	-4000	1	-4000	1	-4000	0	-4000	0	0	-4000	0	0	-4000	0	0	-4000	0
2.1.1.4	Final Complete Design	10 days	-3000	1	-3000	1	-3000	0	-3000	0	0	-3000	0	0	-3000	0	0	-3000	0
2.1.1.5	Finished Design	0 days		1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1.2	smart mail box	45 days	-9500	5	-9500	5	-9500	0	-9500	0	0	-9500	0	0	-9500	0	0	-9500	0
2.1.2.1	Conceptual Ideas	5 days	-1000	1	-1000	1	-1000	0	-1000	0	0	-1000	0	0	-1000	0	0	-1000	0
2.1.2.2	Develop Initial Idea	5 days	-1500	1	-1500	1	-1500	0	-1500	0	0	-1500	0	0	-1500	0	0	-1500	0
2.1.2.3	Review Functional and Specifications	25 days	-4000	1	-4000	1	-4000	0	-4000	0	0	-4000	0	0	-4000	0	0	-4000	0
2.1.2.4	Final Complete Design	10 days	-3000	1	-3000	1	-3000	0	-3000	0	0	-3000	0	0	-3000	0	0	-3000	0
2.1.2.5	Finished Design	0 days		1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1.3	smart vending machines	45 days	-9500	5	-9500	5	-9500	0	-9500	0	0	-9500	0	0	-9500	0	0	-9500	0
2.1.3.1	Conceptual Ideas	5 days	-1000	1	-1000	1	-1000	0	-1000	0	0	-1000	0	0	-1000	0	0	-1000	0
2.1.3.2	Develop Initial Idea	5 days	-1500	1	-1500	1	-1500	0	-1500	0	0	-1500	0	0	-1500	0	0	-1500	0

2.1.3.3	Review Functional and Specifications	25 days	-4000	1	-4000	1	-4000	0	-4000	0	0	-4000	0	0	-4000	0	0	-4000	0
2.1.3.4	Final Complete Design	10 days	-3000	1	-3000	1	-3000	0	-3000	0	0	-3000	0	0	-3000	0	0	-3000	0
2.1.3.5	Finished Design	0 days		1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2	Product procurement	230 days	-45600	36	-45600	36	-45600	0	-45600	0	0	-45600	0	0	-45600	0	0	-45600	0
2.2.1	send request of proposal with specification and design	100 days	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.1.1	Smart Seats	10 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.1.2	smart mail box	10 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.1.3	smart vending machines	10 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.2	receive proposals	100 days	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.2.1	Smart Seats	10 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.2.2	smart mail box	10 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.2.3	smart vending machines	10 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.3	evaluate proposals	100 days	-6000	3	-6000	3	-6000	0	-6000	0	0	-6000	0	0	-6000	0	0	-6000	0
2.2.3.1	Smart Seats	10 days	-2000	1	-2000	1	-2000	0	-2000	0	0	-2000	0	0	-2000	0	0	-2000	0
2.2.3.2	smart mail box	10 days	-2000	1	-2000	1	-2000	0	-2000	0	0	-2000	0	0	-2000	0	0	-2000	0
2.2.3.3	smart vending machines	10 days	-2000	1	-2000	1	-2000	0	-2000	0	0	-2000	0	0	-2000	0	0	-2000	0
2.2.4	choose vendor or manufactures	100 days	-3000	3	-3000	3	-3000	0	-3000	0	0	-3000	0	0	-3000	0	0	-3000	0
2.2.4.1	Smart Seats	10 days	-1000	1	-1000	1	-1000	0	-1000	0	0	-1000	0	0	-1000	0	0	-1000	0
2.2.4.2	smart mail box	10 days	-1000	1	-1000	1	-1000	0	-1000	0	0	-1000	0	0	-1000	0	0	-1000	0
2.2.4.3	smart vending machines	10 days	-1000	1	-1000	1	-1000	0	-1000	0	0	-1000	0	0	-1000	0	0	-1000	0
2.2.5	contract with vendor or munufactures	90 days	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.5.1	Smart Seats	0 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.5.2	smart mail box	0 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.5.3	smart vending machines	0 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.6	contact vendor or manufacture for order request	100 days	-3000	3	-3000	3	-3000	0	-3000	0	0	-3000	0	0	-3000	0	0	-3000	0
2.2.6.1	Smart Seats	10 days	-1000	1	-1000	1	-1000	0	-1000	0	0	-1000	0	0	-1000	0	0	-1000	0
2.2.6.2	smart mail box	10 days	-1000	1	-1000	1	-1000	0	-1000	0	0	-1000	0	0	-1000	0	0	-1000	0
2.2.6.3	smart vending machines	10 days	-1000	1	-1000	1	-1000	0	-1000	0	0	-1000	0	0	-1000	0	0	-1000	0
2.2.7	receive technical quarry	100 days	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.7.1	Smart Seats	10 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.7.2	smart mail box	10 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.7.3	smart vending machines	10 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.8	answer technical quarry	205 days	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.8.1	Smart Seats	10 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.8.2	smart mail box	10 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.8.3	smart vending machines	10 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.9	time of vendor and manufacture production time	205 days	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.9.1	Smart Seats	10 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.9.2	smart mail box	10 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.9.3	smart vending machines	10 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.10	Deliver product	205 days	-3000	3	-3000	3	-3000	0	-3000	0	0	-3000	0	0	-3000	0	0	-3000	0
2.2.10.1	Smart Seats	10 days	-1000	1	-1000	1	-1000	0	-1000	0	0	-1000	0	0	-1000	0	0	-1000	0
2.2.10.2	smart mail box	10 days	-1000	1	-1000	1	-1000	0	-1000	0	0	-1000	0	0	-1000	0	0	-1000	0
2.2.10.3	smart vending machines	10 days	-1000	1	-1000	1	-1000	0	-1000	0	0	-1000	0	0	-1000	0	0	-1000	0
2.2.11	receive product and invoice approval	195 days	-30000	3	-30000	3	-30000	0	-30000	0	0	-30000	0	0	-30000	0	0	-30000	0
2.2.11.1	Smart Seats	0 days	-9000	1	-9000	1	-9000	0	-9000	0	0	-9000	0	0	-9000	0	0	-9000	0
2.2.11.2	smart mail box	0 days	-12000	1	-12000	1	-12000	0	-12000	0	0	-12000	0	0	-12000	0	0	-12000	0
2.2.11.3	smart vending machines	0 days	-9000	1	-9000	1	-9000	0	-9000	0	0	-9000	0	0	-9000	0	0	-9000	0
2.2.12	transport product to the ware house storage area	200 days	-600	3	-600	3	-600	0	-600	0	0	-600	0	0	-600	0	0	-600	0
2.2.12.1	Smart Seats	5 days	-200	1	-200	1	-200	0	-200	0	0	-200	0	0	-200	0	0	-200	0
2.2.12.2	smart mail box	5 days	-200	1	-200	1	-200	0	-200	0	0	-200	0	0	-200	0	0	-200	0
2.2.12.3	smart vending machines	5 days	-200	1	-200	1	-200	0	-200	0	0	-200	0	0	-200	0	0	-200	0
2.3	Product Development	210 days	-6000	12	-6000	12	-6000	0	-6000	0	0	-6000	0	0	-6000	0	0	-6000	0
2.3.1	Develop Prototypes	200 days	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
2.3.1.1	Smart Seats	5 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.3.1.2	smart mail box	5 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.3.1.3	smart vending machines	5 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.3.2	Test products	200 days	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
2.3.2.1	Smart Seats	5 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.3.2.2	smart mail box	5 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.3.2.3	smart vending machines	5 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.3.3	Make adjustments	200 days	-6000	3	-6000	3	-6000	0	-6000	0	0	-6000	0	0	-6000	0	0	-6000	0
2.3.3.1	Smart Seats	5 days	-2000	1	-2000	1	-2000	0	-2000	0	0	-2000	0	0	-2000	0	0	-2000	0

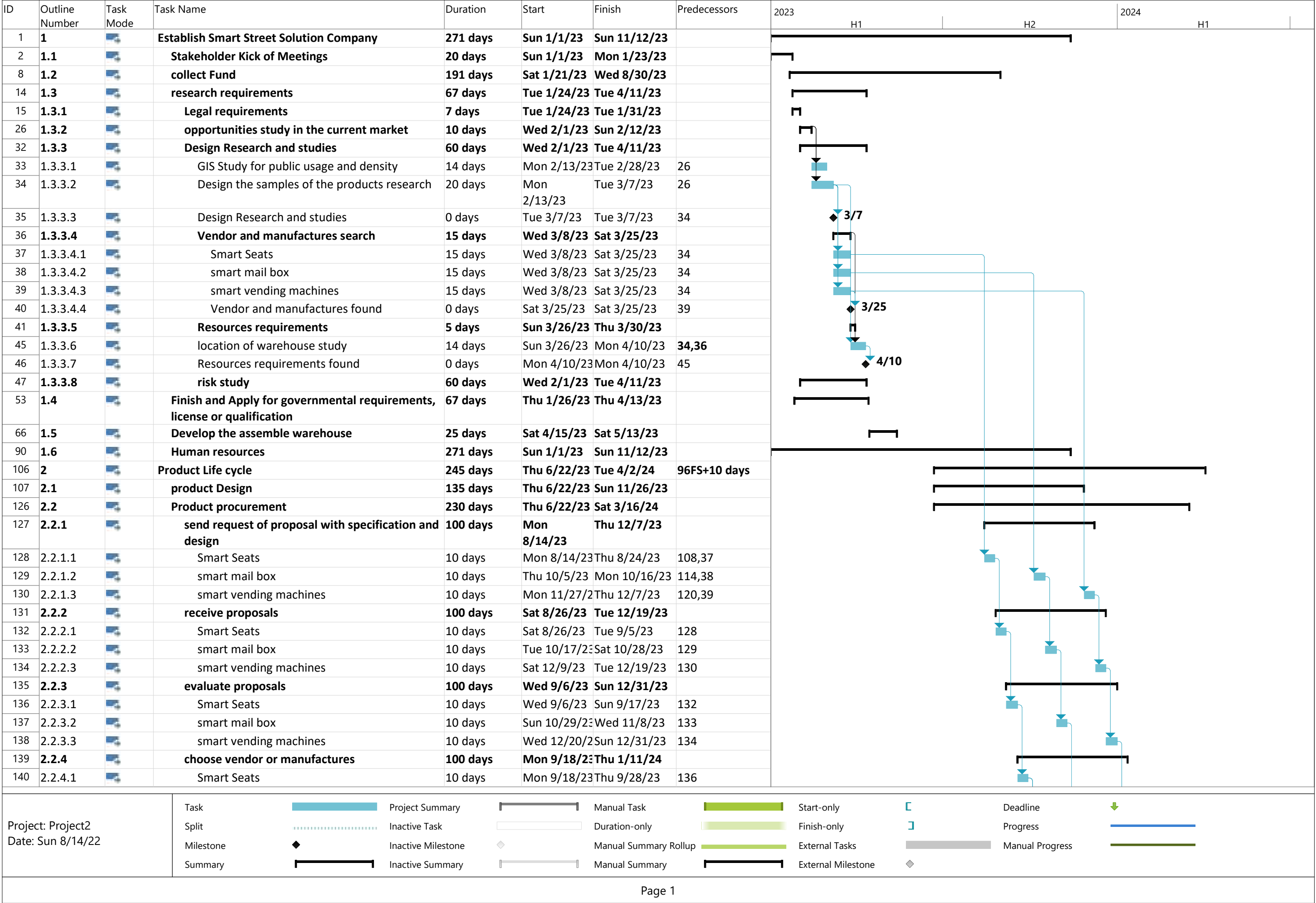
2.3.3.2	smart mail box	5 days	-2000	1	-2000	1	-2000	0	-2000	0	0	-2000	0	0	-2000	0	0	-2000	0
2.3.3.3	smart vending machines	5 days	-2000	1	-2000	1	-2000	0	-2000	0	0	-2000	0	0	-2000	0	0	-2000	0
2.3.4	Obtain Approval	195 days	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
2.3.4.1	Smart Seats	0 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.3.4.2	smart mail box	0 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.3.4.3	smart vending machines	0 days	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Marketing	245 days	-29000	4	-29000	4	-29000	4	-29000	-29000	4	-29000	-29000	4	-29000	-29000	4	-29000	-29000
3.1	Market Strategy	245 days	-29000	4	-29000	4	-29000	4	-29000	-29000	4	-29000	-29000	4	-29000	-29000	4	-29000	-29000
3.1.1	Marketing plan	30 days	-10000	1	-10000	1	-10000	1	-10000	-10000	1	-10000	-10000	1	-10000	-10000	1	-10000	-10000
3.1.2	Marketing tools	245 days	-19000	3	-19000	3	-19000	3	-19000	-19000	3	-19000	-19000	3	-19000	-19000	3	-19000	-19000
3.1.2.1	Brochures	30 days	-4000	1	-4000	1	-4000	1	-4000	-4000	1	-4000	-4000	1	-4000	-4000	1	-4000	-4000
3.1.2.2	Advertising	30 days	-10000	1	-10000	1	-10000	1	-10000	-10000	1	-10000	-10000	1	-10000	-10000	1	-10000	-10000
3.1.2.3	Commercials	30 days	-5000	1	-5000	1	-5000	1	-5000	-5000	1	-5000	-5000	1	-5000	-5000	1	-5000	-5000
4	Sales and contracts	76 days	-6715	44	-201025	55	-201025	55	-201025	-201025	55	-201025	-201025	55	-201025	-201025	55	-201025	-201025
4.1	Study the Market	21 days	-6715	39	-201025	5	-201025	5	-201025	-201025	5	-201025	-201025	5	-201025	-201025	5	-201025	-201025
4.1.1	Riyadh Municipality, Department of investment (فرص program)	21 days	-6715	39	-201025	5	-201025	5	-201025	-201025	5	-201025	-201025	5	-201025	-201025	5	-201025	-201025
4.1.1.1	Visit website and see requirements	3 days	0	1	0	1	0	1	0	0	1	0	0	1	0	0	1	0	0
4.1.1.2	prepare our documentations and presentation	10 days	-1000	1	-1000	1	-1000	1	-1000	-1000	1	-1000	-1000	1	-1000	-1000	1	-1000	-1000
4.1.1.3	make an appointment with the authorized person	2 days	0	1	0	1	0	1	0	0	1	0	0	1	0	0	1	0	0
4.1.1.4	fulfill his/her requirement	5 days	0	1	0	1	0	1	0	0	1	0	0	1	0	0	1	0	0
4.1.1.5	sign the contract	1 day	-5715	35	-200025	1	-200025	1	-200025	-200025	1	-200025	-200025	1	-200025	-200025	1	-200025	-200025
4.2	visit companies to sell our products	55 days	0	5	0	50	0	50	0	0	50	0	0	50	0	0	50	0	0
4.2.1	interduce our products	10 days	0	1	0	10	0	10	0	0	10	0	0	10	0	0	10	0	0
4.2.2	collect interested calls	20 days	0	1	0	10	0	10	0	0	10	0	0	10	0	0	10	0	0
4.2.3	finalize the technical requirements	10 days	0	1	0	10	0	10	0	0	10	0	0	10	0	0	10	0	0
4.2.4	finalize the financial requirements	10 days	0	1	0	10	0	10	0	0	10	0	0	10	0	0	10	0	0
4.2.5	sign the contract	5 days	0	1	0	10	0	10	0	0	10	0	0	10	0	0	10	0	0
5	Operational process up to 5 years	1085 days	-23700	2412	-1293500	0	0	622	-1293500	-20910500	501	-1293500	-12029500	1215	-1293500	-34289500	2343	-1293500	-66351000
5.1	contact vendor or manufacture for order request	3 days	0	200	0	0	0	35	0	0	22	0	0	58	0	0	111	0	0
5.1.1	Smart Seats	1 day	0	100	0	0	0	27	0	0	11	0	0	44	0	0	88	0	0
5.1.2	smart mail box	1 day	0	30	0	0	0	2	0	0	3	0	0	4	0	0	7	0	0
5.1.3	smart vending machines	1 day	0	70	0	0	0	6	0	0	8	0	0	10	0	0	16	0	0
5.2	receive technical quarry	7 days	0	3	0	0	0	35	0	0	22	0	0	58	0	0	111	0	0
5.2.1	Smart Seats	5 days	0	1	0	0	0	27	0	0	11	0	0	44	0	0	88	0	0
5.2.2	smart mail box	5 days	0	1	0	0	0	2	0	0	3	0	0	4	0	0	7	0	0
5.2.3	smart vending machines	5 days	0	1	0	0	0	6	0	0	8	0	0	10	0	0	16	0	0
5.3	answer technical quarry	5 days	0	3	0	0	0	27	0	0	22	0	0	58	0	0	111	0	0
5.3.1	Smart Seats	3 days	0	1	0	0	0	2	0	0	11	0	0	44	0	0	88	0	0
5.3.2	smart mail box	3 days	0	1	0	0	0	6	0	0	3	0	0	4	0	0	7	0	0
5.3.3	smart vending machines	3 days	0	1	0	0	0	2	0	0	8	0	0	10	0	0	16	0	0
5.4	time of vendor and manufacture production time	12 days	0	3	0	0	0	35	0	0	22	0	0	58	0	0	111	0	0
5.4.1	Smart Seats	10 days	0	1	0	0	0	27	0	0	11	0	0	44	0	0	88	0	0
5.4.2	smart mail box	10 days	0	1	0	0	0	2	0	0	3	0	0	4	0	0	7	0	0
5.4.3	smart vending machines	10 days	0	1	0	0	0	6	0	0	8	0	0	10	0	0	16	0	0
5.5	Deliver product	7 days	-1500	200	-100000	0	0	35	-100000	-1590000	22	-100000	-875000	58	-100000	-2610000	111	-100000	-5065000
5.5.1	Smart Seats	5 days	-500	100	-50000	0	0	27	-50000	-1350000	11	-50000	-550000	44	-50000	-2200000	88	-50000	-4400000
5.5.2	smart mail box	5 days	-500	30	-15000	0	0	2	-15000	-30000	3	-15000	-45000	4	-15000	-60000	7	-15000	-105000
5.5.3	smart vending machines	5 days	-500	70	-35000	0	0	6	-35000	-210000	8	-35000	-280000	10	-35000	-350000	16	-35000	-560000
5.6	receive product	7 days	-18000	200	-1090000	0	0	35	-1090000	-16080000	22	-1090000	-9020000	58	-1090000	-26460000	111	-1090000	-51280000
5.6.1	Smart Seats	5 days	-5000	100	-500000	0	0	27	-500000	-13500000	11	-500000	-5500000	44	-500000	-22000000	88	-500000	-44000000
5.6.2	smart mail box	5 days	-8000	30	-240000	0	0	2	-240000	-480000	3	-240000	-720000	4	-240000	-960000	7	-240000	-1680000
5.6.3	smart vending machines	5 days	-5000	70	-350000	0	0	6	-350000	-2100000	8	-350000	-2800000	10	-350000	-3500000	16	-350000	-5600000
5.7	transport product to the ware house storage area	7 days	-300	200	-20000	0	0	35	-20000	-318000	22	-20000	-175000	58	-20000	-522000	111	-20000	-1013000
5.7.1	Smart Seats	5 days	-100	100	-10000	0	0	27	-10000	-270000	11	-10000	-110000	44	-10000	-440000	88	-10000	-880000
5.7.2	smart mail box	5 days	-100	30	-3000	0	0	2	-3000	-6000	3	-3000	-9000	4	-3000	-12000	7	-3000	-21000
5.7.3	smart vending machines	5 days	-100	70	-7000	0	0	6	-7000	-42000	8	-7000	-56000	10	-7000	-70000	16	-7000	-112000
5.8	Product Production	40 days	-400	1600	-80000	0	0	280	-80000	-2800000	176	-80000	-1760000	464	-80000	-4640000	888	-80000	-8880000
5.8.1	Production Design Model	5 days	0	200	0	0	0	35	0	0	22	0	0	58	0	0	111	0	0
5.8.2	Production of products	5 days	0	200	0	0	0	35	0	0	22	0	0	58	0	0	111	0	0
5.8.3	Testing & Quality assurance Products	5 days	0	200	0	0	0	35	0	0	22	0	0	58	0	0	111	0	0
5.8.4	Product approval	5 days	0	200	0	0	0	35	0	0	22	0	0	58	0	0	111	0	0

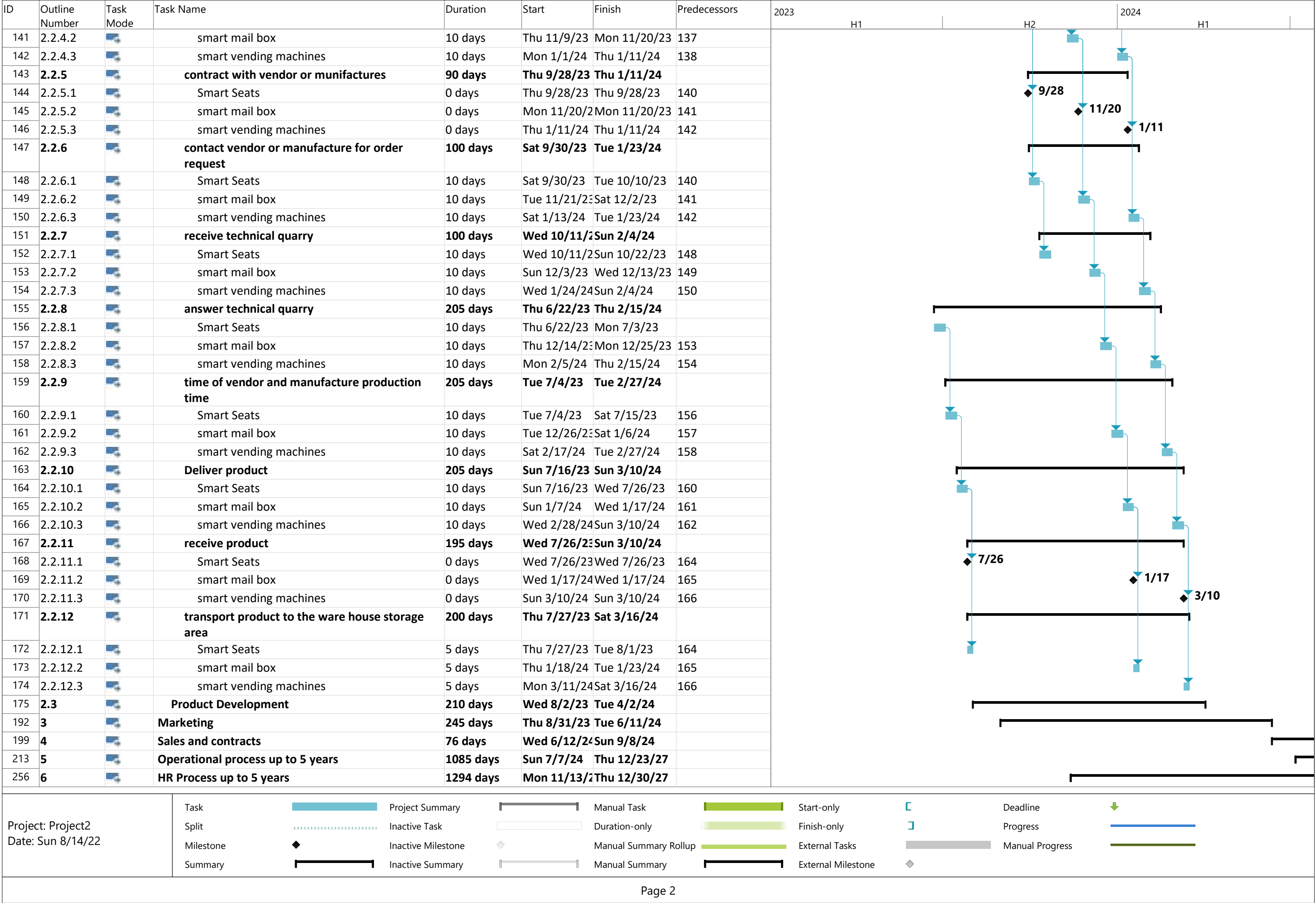
5.8.5	product Transportation	5 days	-200	200	-40000	0	0	35	-40000	-1400000	22	-40000	-880000	58	-40000	-2320000	111	-40000	-4440000
5.8.6	product installation	5 days	-200	200	-40000	0	0	35	-40000	-1400000	22	-40000	-880000	58	-40000	-2320000	111	-40000	-4440000
5.8.7	final Testing & Quality assurance Products	5 days	0	200	0	0	0	35	0	0	22	0	0	58	0	0	111	0	0
5.8.8	final approval	5 days	0	200	0	0	0	35	0	0	22	0	0	58	0	0	111	0	0
5.9	Maintenance every month	13 days	-500	2	-500	0	0	70	-500	-17500	114	-500	-28500	230	-500	-57500	452	-500	-113000
5.9.1	product check list	3 days	0	1	0	0	0	35	0	0	57	0	0	115	0	0	226	0	0
5.9.2	product repair	10 days	-500	1	-500	0	0	35	-500	-17500	57	-500	-28500	115	-500	-57500	226	-500	-113000
5.10	operate adds and products	1000 days	-3000	1	-3000	0	0	35	-3000	-105000	57	-3000	-171000	115	-3000	0	226	-3000	0
6	HR Process up to 5 years	1294 days	-65000	8	-52500	0	-2500	19	-52500	-52500	19	-52500	-52500	19	-52500	-52500	19	-52500	-52500
6.1	Make a training plan and action plan	1294 days	-65000	3	-52500	0	-2500	14	-52500	-52500	14	-52500	-52500	14	-52500	-52500	14	-52500	-52500
6.1.1	Weekly training	1294 days	0	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
6.1.2	monthly training	1294 days	-15000	1	-2500	0	-2500	12	-2500	-2500	12	-2500	-2500	12	-2500	-2500	12	-2500	-2500
6.1.3	yearly training	1290 days	-50000	1	-50000	0	0	1	-50000	-50000	1	-50000	-50000	1	-50000	-50000	1	-50000	-50000
6.2	goals and task completion system	1290 days	0	2	0	0	0	2	0	0	2	0	0	2	0	0	2	0	0
6.2.1	monthly task completion list	1032 days	0	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
6.2.2	yearly goals	1290 days	0	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
6.3	attendance sheets	1294 days	0	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
6.4	salary sheets	1294 days	0	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
6.5	employees requests	1294 days	0	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
7	business devolpment up to 5 years	1036 days	-9000	15	-45000	0	0	6	-45000	-45000	6	-45000	-45000	6	-45000	-45000	6	-45000	-45000
7.1	product development	1030 days	-9000	15	-45000	0	0	3	-45000	-45000	3	-45000	-45000	3	-45000	-45000	3	-45000	-45000
7.1.1	speed the production devolpment	1030 days	-2000	5	-10000	0	0	1	-10000	-10000	1	-10000	-10000	1	-10000	-10000	1	-10000	-10000
7.1.2	automate devolpment	1030 days	-2000	5	-10000	0	0	1	-10000	-10000	1	-10000	-10000	1	-10000	-10000	1	-10000	-10000
7.1.3	add new prducts	1030 days	-5000	5	-25000	0	0	1	-25000	-25000	1	-25000	-25000	1	-25000	-25000	1	-25000	-25000
7.2	project tasks	1036 days	0	0	0	0	0	3	0	0	3	0	0	3	0	0	3	0	0
7.2.1	custmor satisifaction	1036 days	0		0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
7.2.2	project confirmance	1036 days	0		0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
7.2.3	project closing	1036 days	0		0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
8	project management process up to 5 years	1546 days	0	7	-4999	1	1	18	-4999	-4999	18	-4999	-4999	18	-4999	-4999	18	-4999	-4999
8.1	project estimation	1172 days	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8.2	project initiation	1171 days	0	0	0	0	0	3	0	0	3	0	0	3	0	0	3	0	0
8.2.1	Project charter	1171 days	0		0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
8.2.2	Stakeholder register	1170 days	0		0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
8.2.3	define project and statement	1171 days	0		0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
8.3	project planning	1039 days	0	0	0	0	0	5	0	0	5	0	0	5	0	0	5	0	0
8.3.1	project WBS	1000 days	0		0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
8.3.2	define packages	1000 days	0		0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
8.3.3	define milestones	1000 days	0		0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
8.3.4	project schaduling	1000 days	0		0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
8.3.5	define critical path	1000 days	0		0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
8.4	Project execution	1000 days	0	0	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
8.4.1	include the operation system in section 5	1000 days	0		0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
8.5	project monitoring and control	1546 days	0	6	-5000	0	0	6	-5000	-5000	6	-5000	-5000	6	-5000	-5000	6	-5000	-5000
8.5.1	create monitoring system	1000 days	-5000	6	-5000	0	0	6	-5000	-5000	6	-5000	-5000	6	-5000	-5000	6	-5000	-5000
8.5.1.1	create dashpords	1000 days	-5000	1	-5000	0	0	1	-5000	-5000	1	-5000	-5000	1	-5000	-5000	1	-5000	-5000
8.5.2	change order log	1000 days	0	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
8.5.3	opportonity log	1000 days	0	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
8.5.4	threat log	1000 days	0	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
8.5.5	operation monitoring system	1000 days	0	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
8.5.6	reporting	1546 days	0	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
8.6	clsioing	1000 days	0	0	0	0	0	2	0	0	2	0	0	2	0	0	2	0	0
8.6.1	lesson learnt log	1000 days	0		0	0	0	1	0	0	1	0	0	1	0	0	1	0	0
8.6.2	section 7.2	1000 days	0		0	0	0	1	0	0	1	0	0	1	0	0	1	0	0

(5) Sales Est.

second year Sales	Number of Units			Cost Per Unit			Sales Per Month			Sales Per Year			total
	Unit Seat	Unit Vinding	Unit Mailbox	Seat(SR/u)	Vinding(SR/u)	Mailbox(SR/u)	Seat(SR/mon)	Vinding(SR/mon)	Mailbox(SR/mon)	Seat(SR/yr)	Vinding(SR/yr)	Mailbox(SR/yr)	
KSU	20	4	1	20,000	18,000	19,000	400,000	72,000	19,000	4,800,000	864,000	228,000	
KAP	7	2	1	20,000	18,000	19,000	140,000	36,000	19,000	1,680,000	432,000	228,000	
total							540,000	108,000	38,000	6,480,000	1,296,000	456,000	
Tax													1,234,800
total with tax													9,466,800
third year Sales	Number of Units			Cost Per Unit			Sales Per Month			Sales Per Year			total
	Unit Seat	Unit Vinding	Unit Mailbox	Seat(SR/u)	Vinding(SR/u)	Mailbox(SR/u)	Seat(SR/mon)	Vinding(SR/mon)	Mailbox(SR/mon)	Seat(SR/yr)	Vinding(SR/yr)	Mailbox(SR/yr)	
KSU	20	8	2	25,000	22,000	21,000	500,000	176,000	42,000	6,000,000	2,112,000	504,000	
KAP	7	4	2	25,000	22,000	21,000	175,000	88,000	42,000	2,100,000	1,056,000	504,000	
KAFD	11	2	1	25,000	22,000	21,000	275,000	44,000	21,000	3,300,000	528,000	252,000	
total							950,000	308,000	105,000	11,400,000	3,696,000	1,260,000	16,356,000
Tax													2,453,400
total with tax													18,809,400
fourth year contract	Unit Seat	Unit Vinding	Unit Mailbox	Seat(SR/u)	Vinding(SR/u)	Mailbox(SR/u)	Seat(SR/mon)	Vinding(SR/mon)	Mailbox(SR/mon)	Seat(SR/yr)	Vinding(SR/yr)	Mailbox(SR/yr)	total
KSU	20	10	3	30,000	25,000	23,000	600,000	250,000	69,000	7,200,000	3,000,000	828,000	
KAP	7	6	3	30,000	25,000	23,000	210,000	150,000	69,000	2,520,000	1,800,000	828,000	
KAFD	11	4	2	30,000	25,000	23,000	330,000	100,000	46,000	3,960,000	1,200,000	552,000	
KSP	44	4	1	30,000	25,000	23,000	1,320,000	100,000	23,000	15,840,000	1,200,000	276,000	
total							2,460,000	600,000	207,000	29,520,000	7,200,000	2,484,000	39,204,000
Tax													5,880,600
total with tax													45,084,600
Fifth year contract	Unit Seat	Unit Vinding	Unit Mailbox	Seat(SR/u)	Vinding(SR/u)	Mailbox(SR/u)	Seat(SR/mon)	Vinding(SR/mon)	Mailbox(SR/mon)	Seat(SR/yr)	Vinding(SR/yr)	Mailbox(SR/yr)	total
KSU	20	10	4	40,000	28,000	25,000	800,000	280,000	100,000	9,600,000	3,360,000	1,200,000	
KAP	7	8	3	40,000	28,000	25,000	280,000	224,000	75,000	3,360,000	2,688,000	900,000	
KAFD	11	6	2	40,000	28,000	25,000	440,000	168,000	50,000	5,280,000	2,016,000	600,000	
KSP	44	6	3	40,000	28,000	25,000	1,760,000	168,000	75,000	21,120,000	2,016,000	900,000	
Sport Boulevard	88	10	4	40,000	28,000	25,000	3,520,000	280,000	100,000	42,240,000	3,360,000	1,200,000	
total							6,800,000	1,120,000	400,000	81,600,000	13,440,000	4,800,000	99,840,000
Tax													14,976,000
total with tax													114,816,000
total with tax													188,176,800

(6) Procurement Process





ID	Outline Number	Task Mode	Task Name	Duration	Start	Finish	Predecessors	2023		2024	
								H1	H2	H1	
267	7		business devolpment up to 5 years	1036 days	Sun 7/7/24	Wed 10/27/27					
276	8		project management process up to 5 years	1546 days	Tue 1/24/23	Sat 1/1/28					

Project: Project2
Date: Sun 8/14/22

Task

Split

Milestone

Summary









Project Summary

Inactive Task

Inactive Milestone

Inactive Summary









Manual Task

Duration-only

Manual Summary Rollup

Manual Summary









Start-only

Finish-only

External Tasks

External Milestone







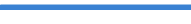


Deadline

Progress

Manual Progress



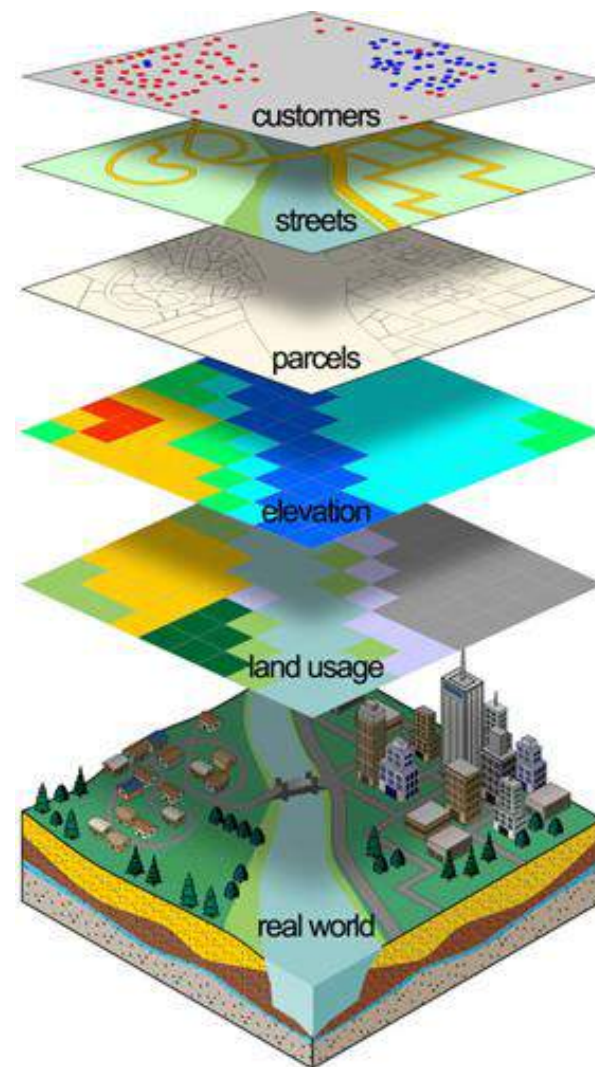






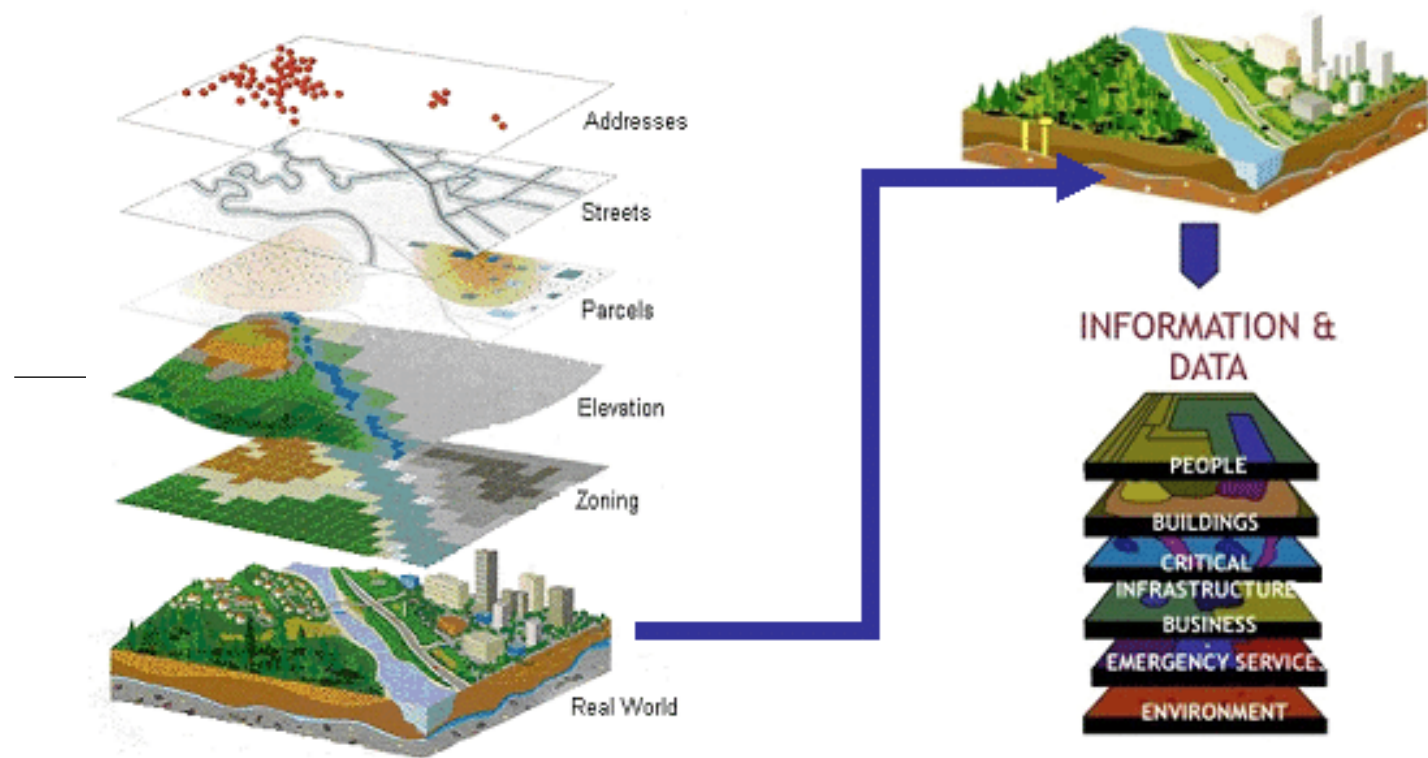
7 GIS Spatial Analyst

Input

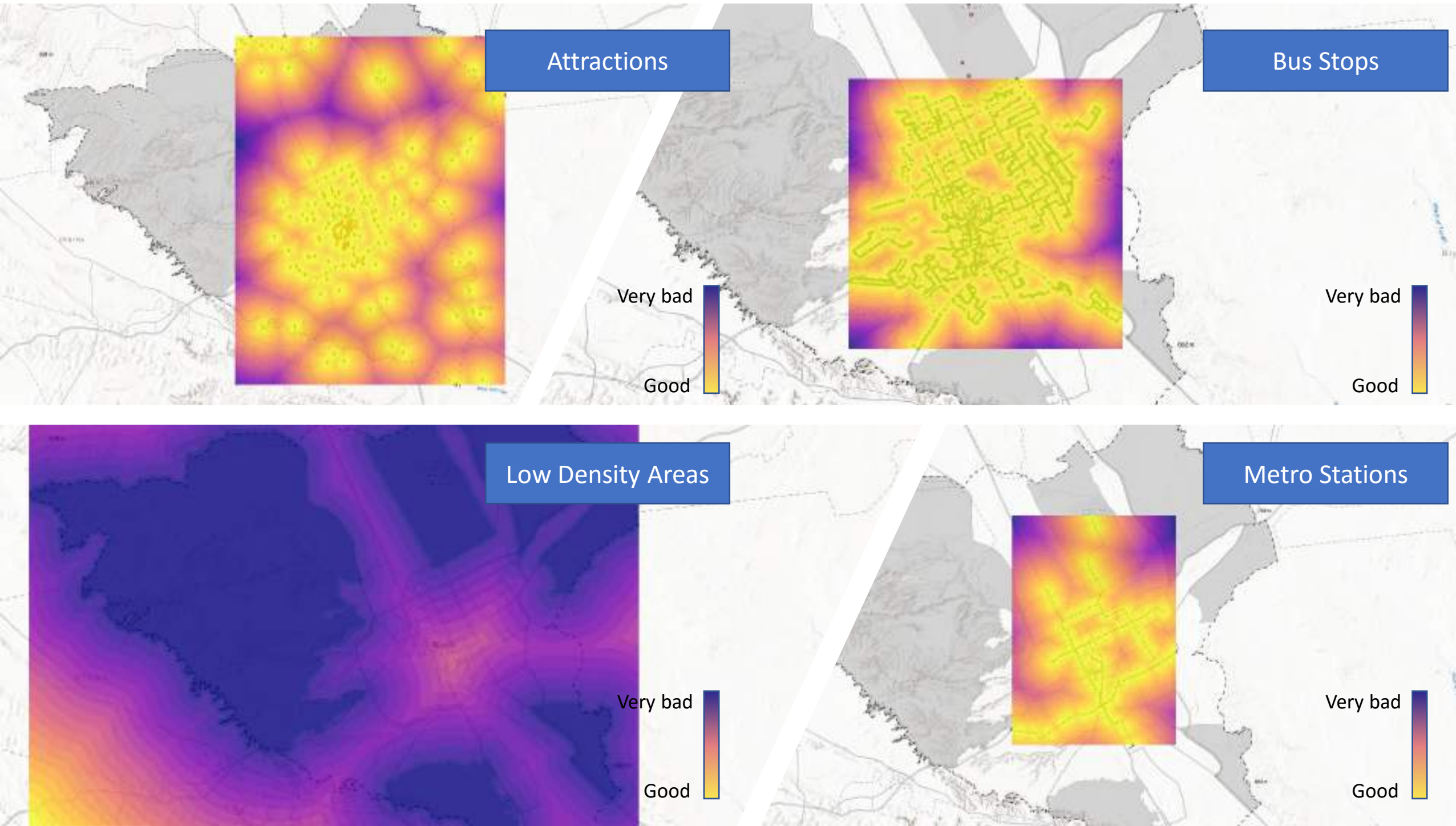




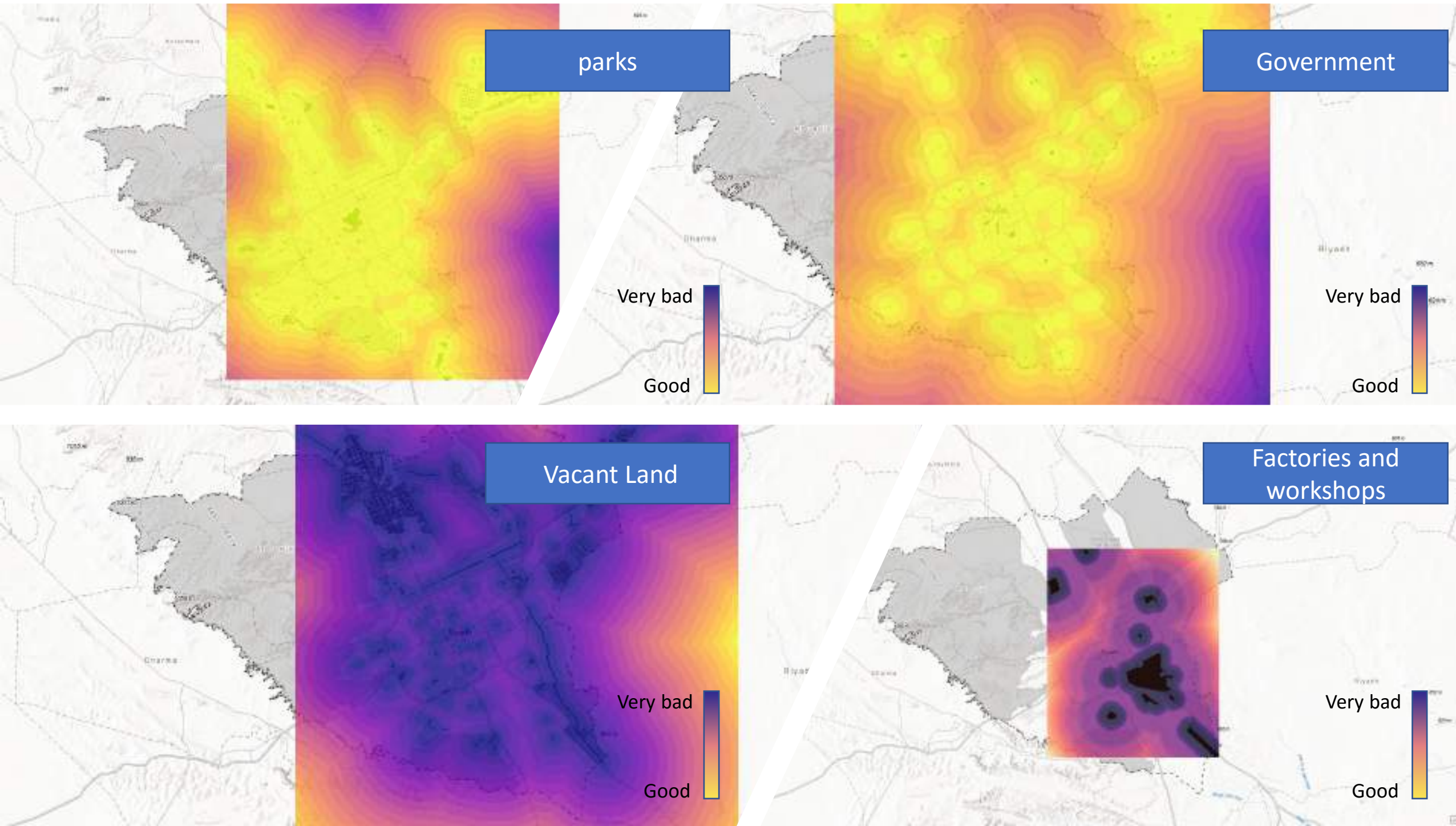
Euclidean Distance



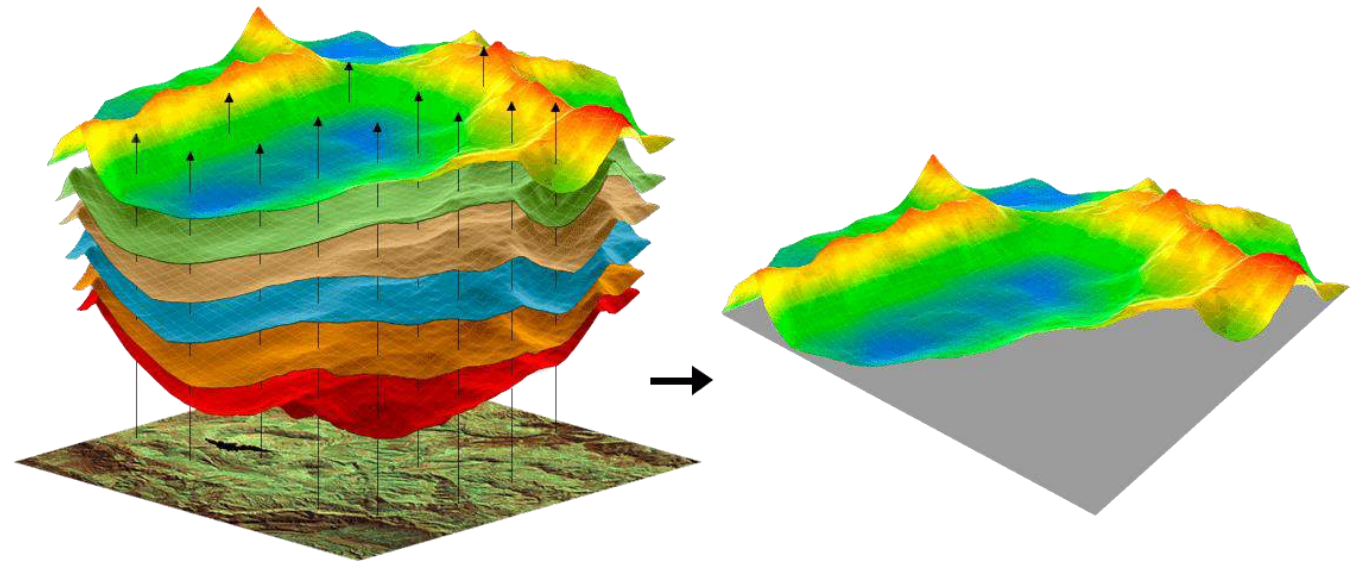
Euclidean Distance



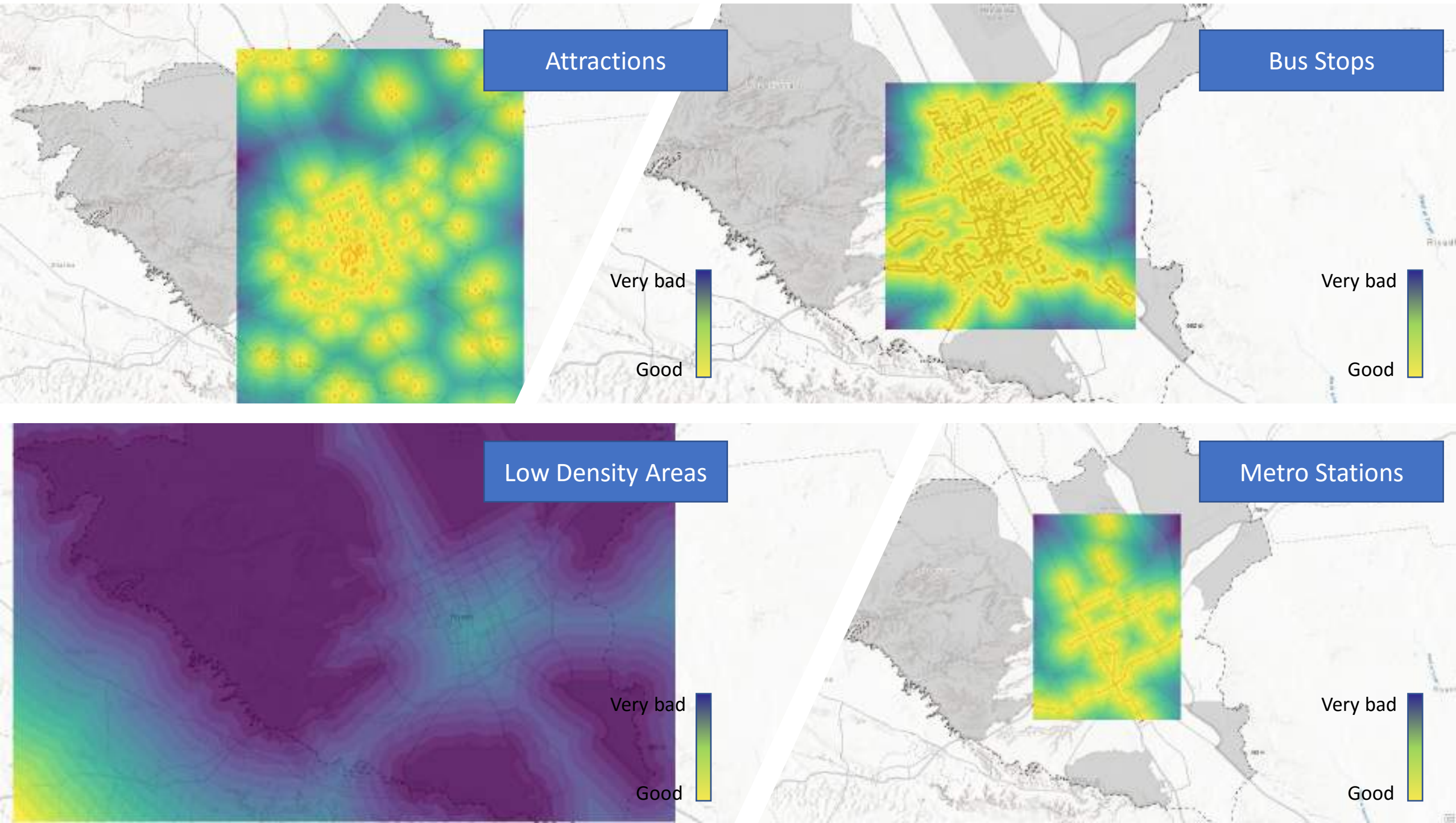
Euclidean Distance



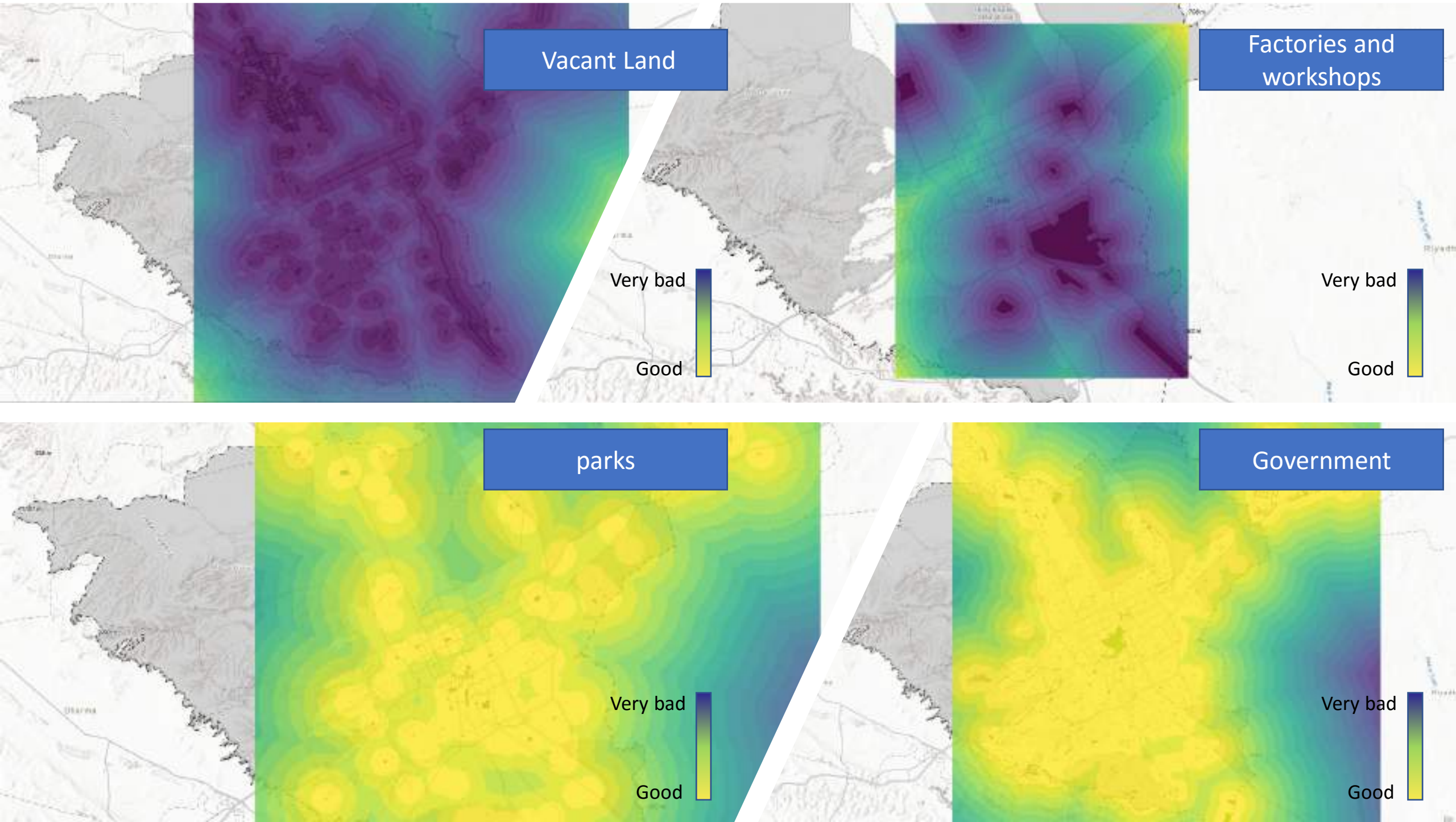
Reclassify



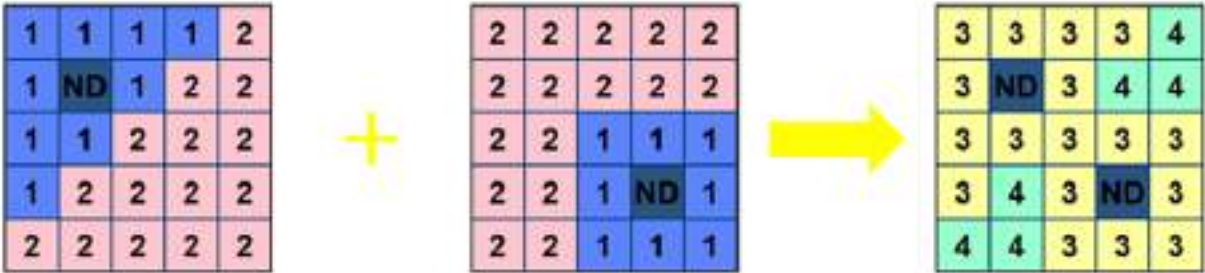
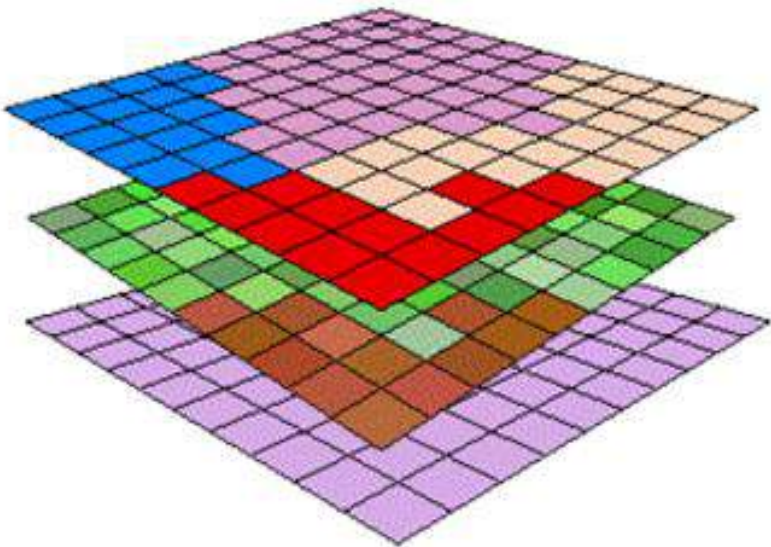
Reclassify



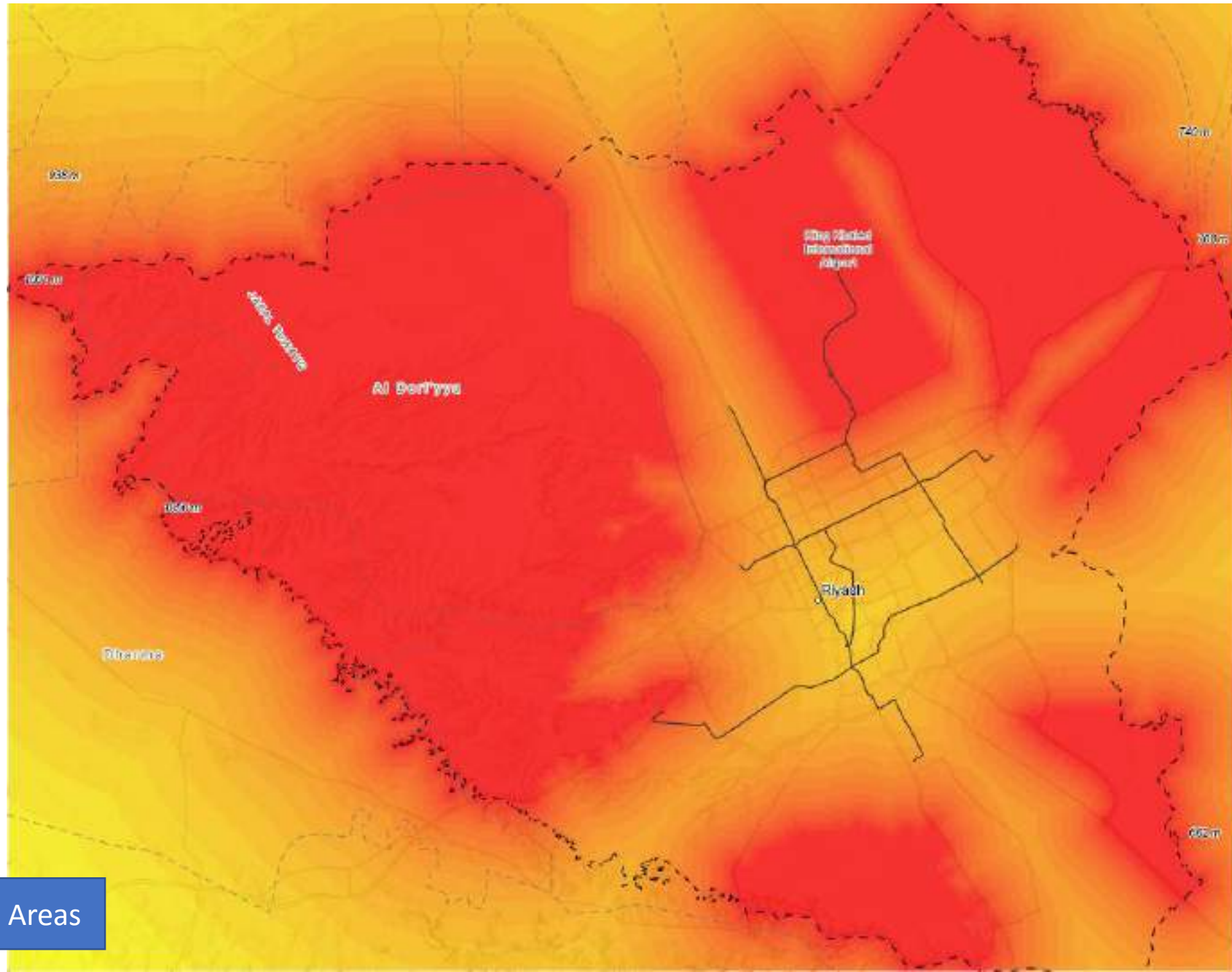
Reclassify



Weighted Overlay



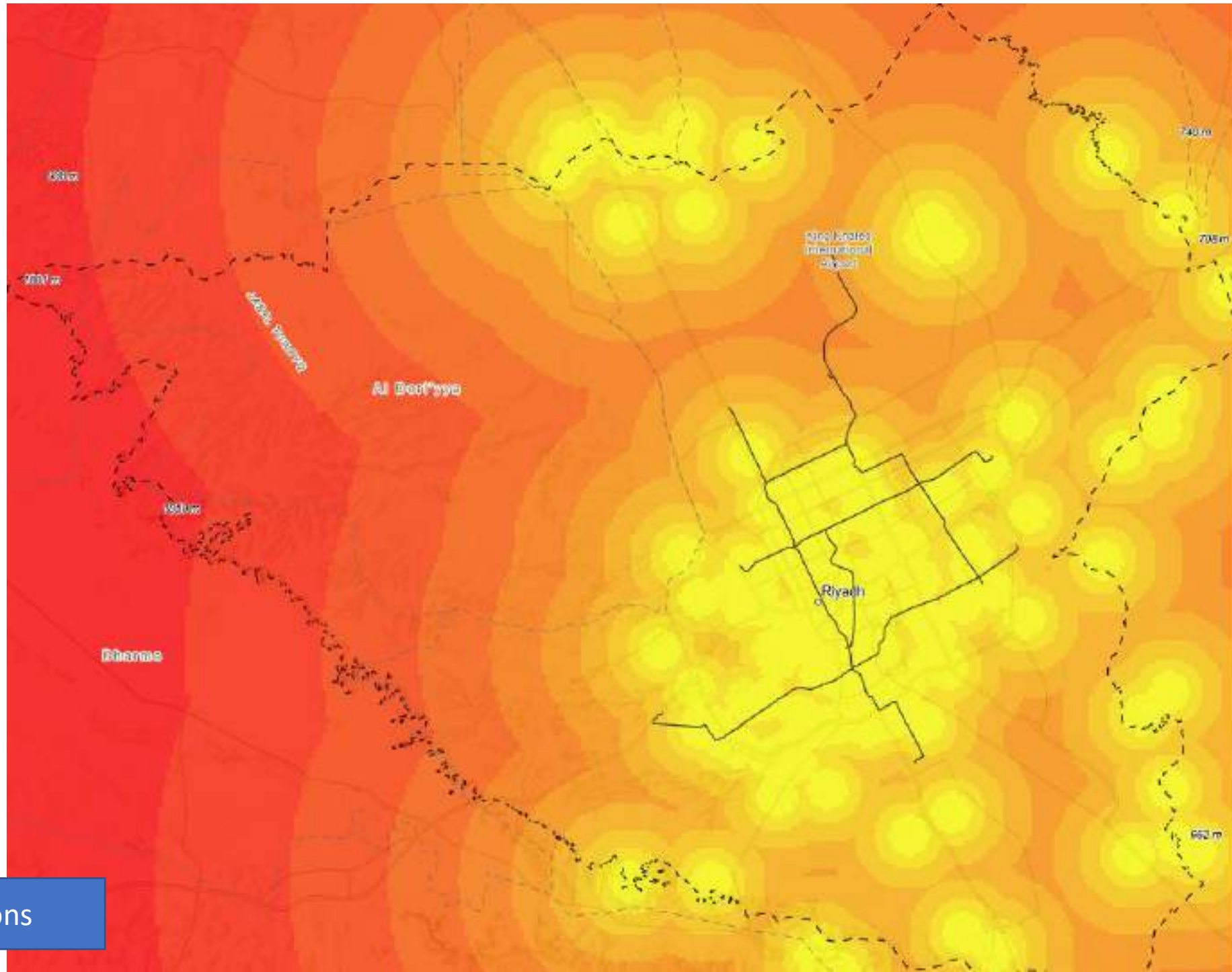
Weighted Overlay



Low Density Areas



Weighted Overlay



Attractions

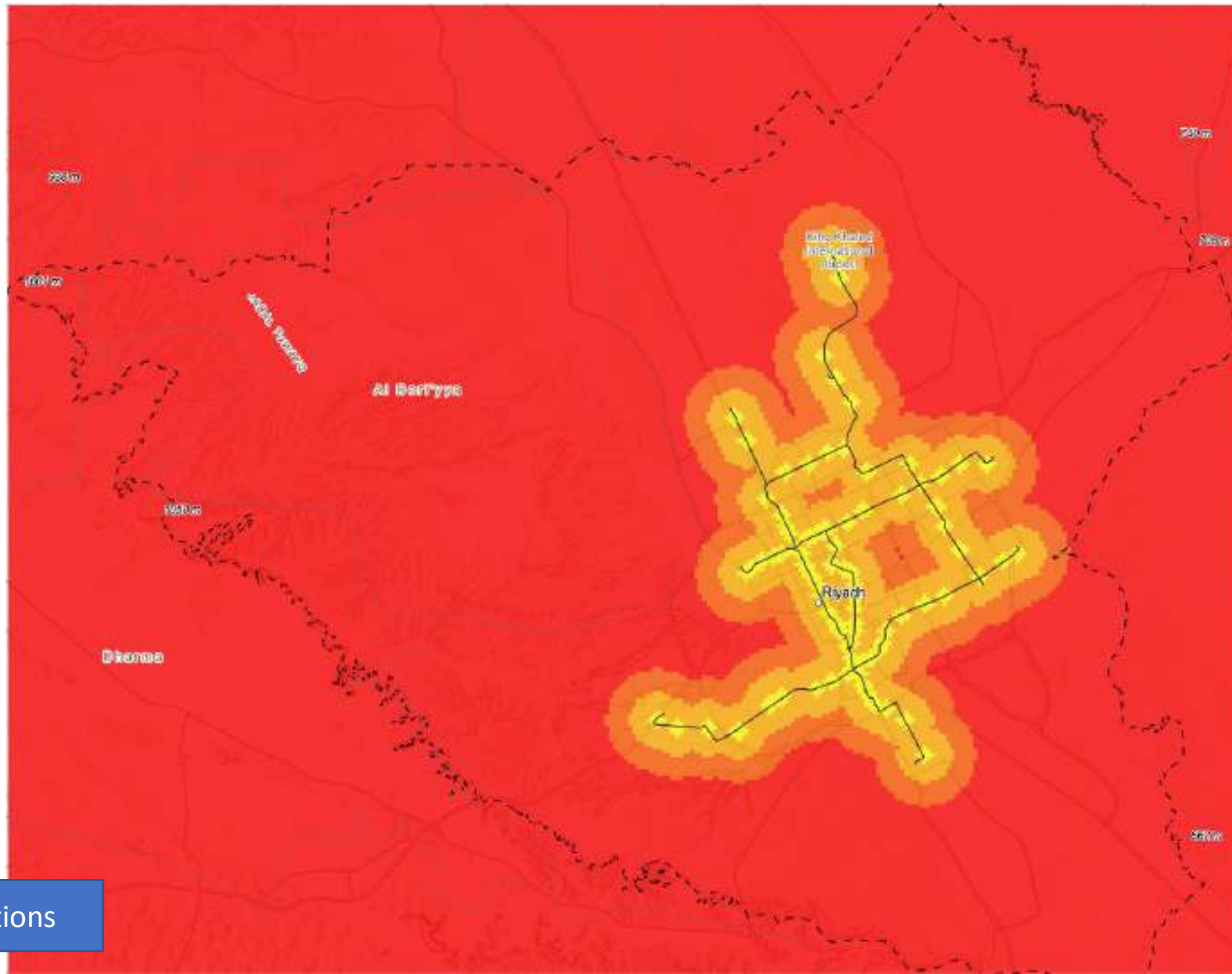
Very bad

Good



Bus Stops

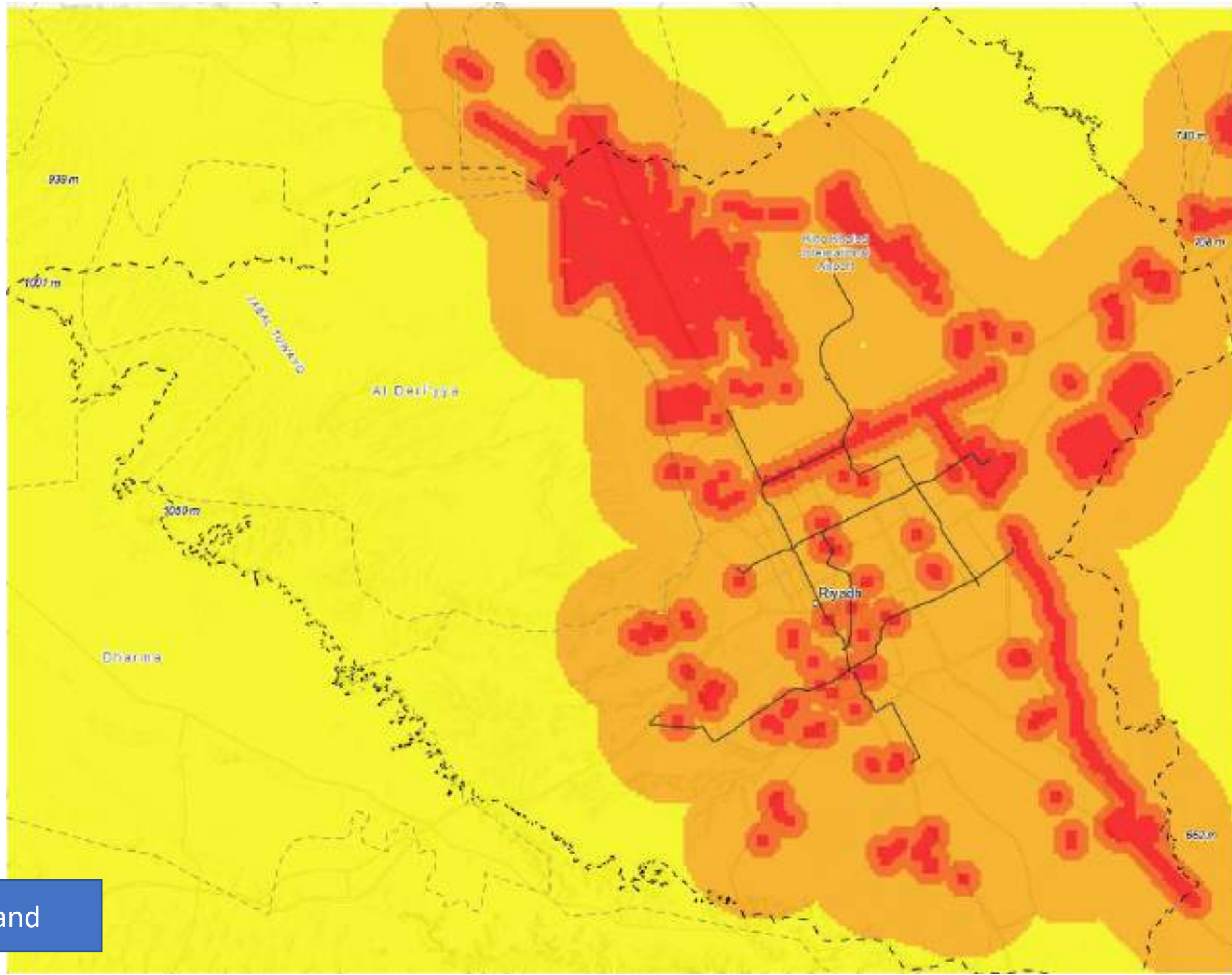
Weighted Overlay



Metro Stations

Very bad
Good

Weighted Overlay

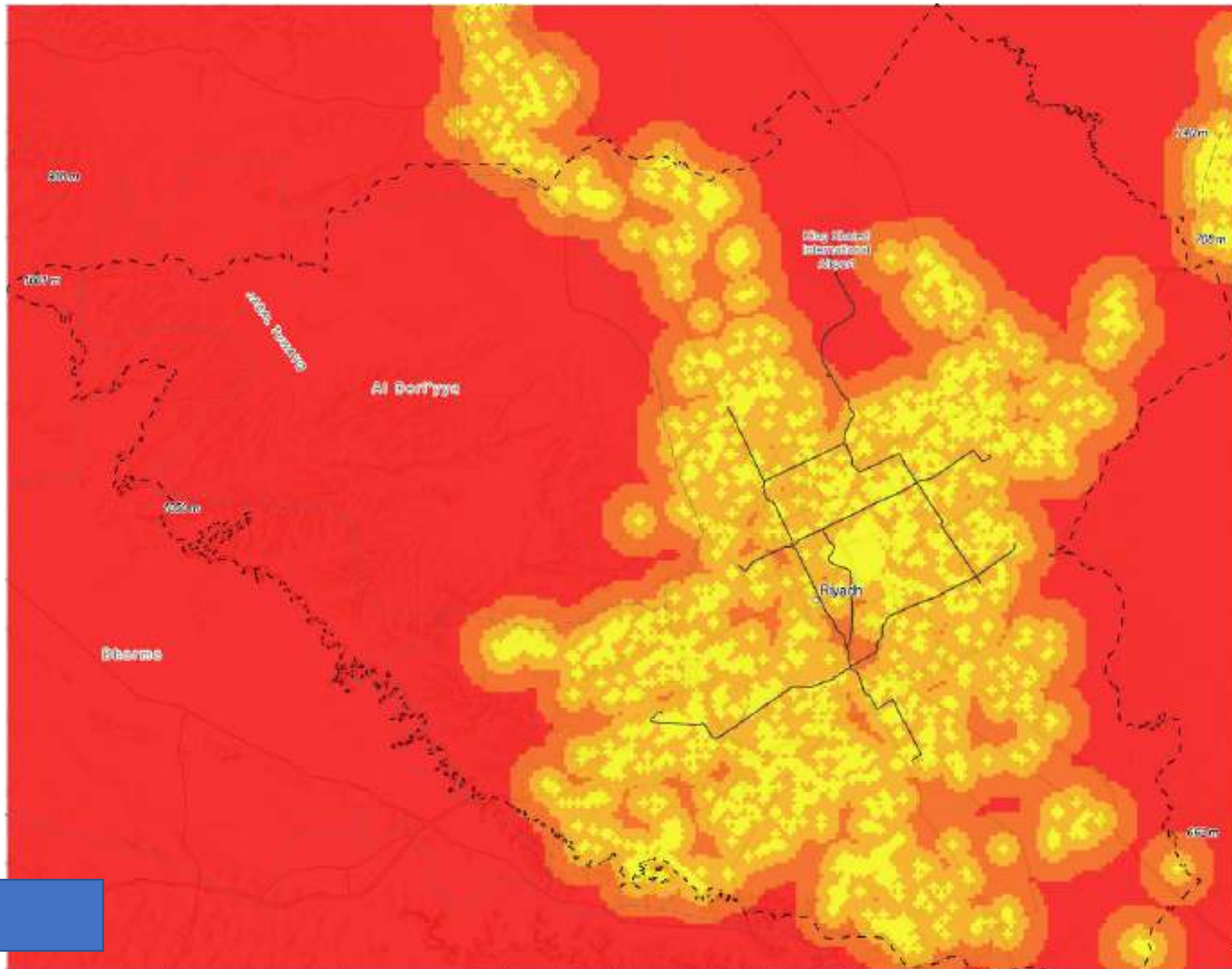


Vacant Land

Very bad

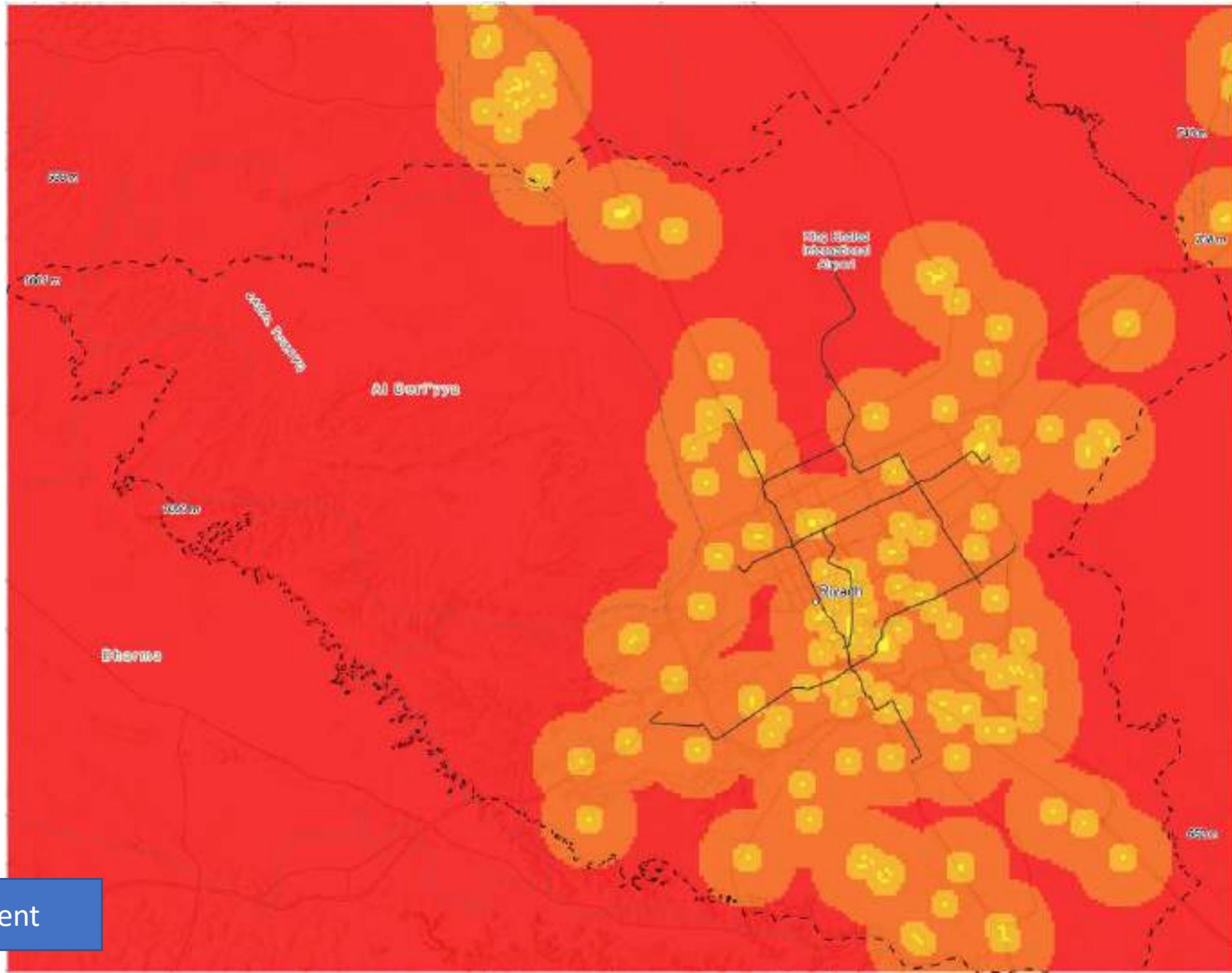
Good

Weighted Overlay



parks

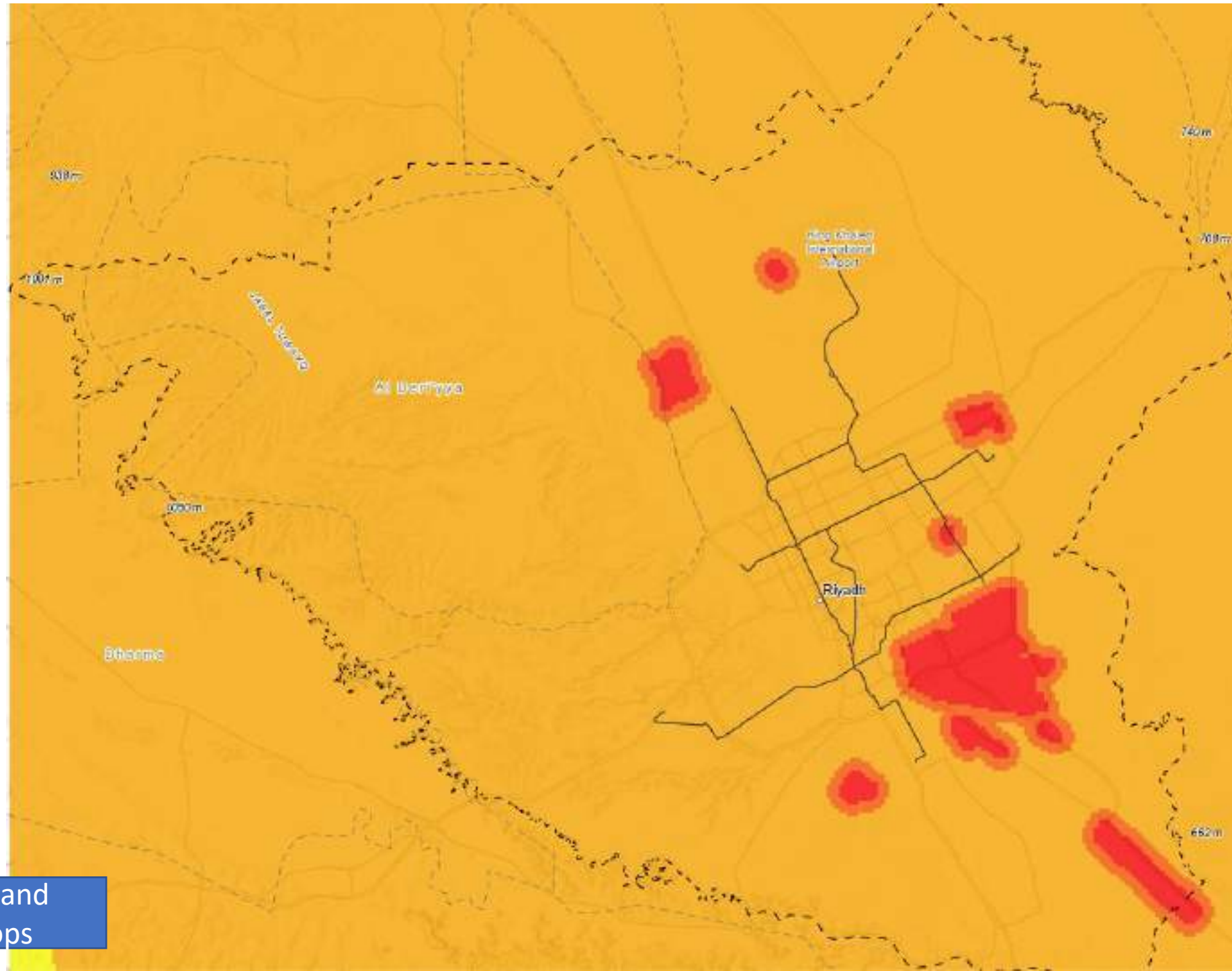
Weighted Overlay



Government



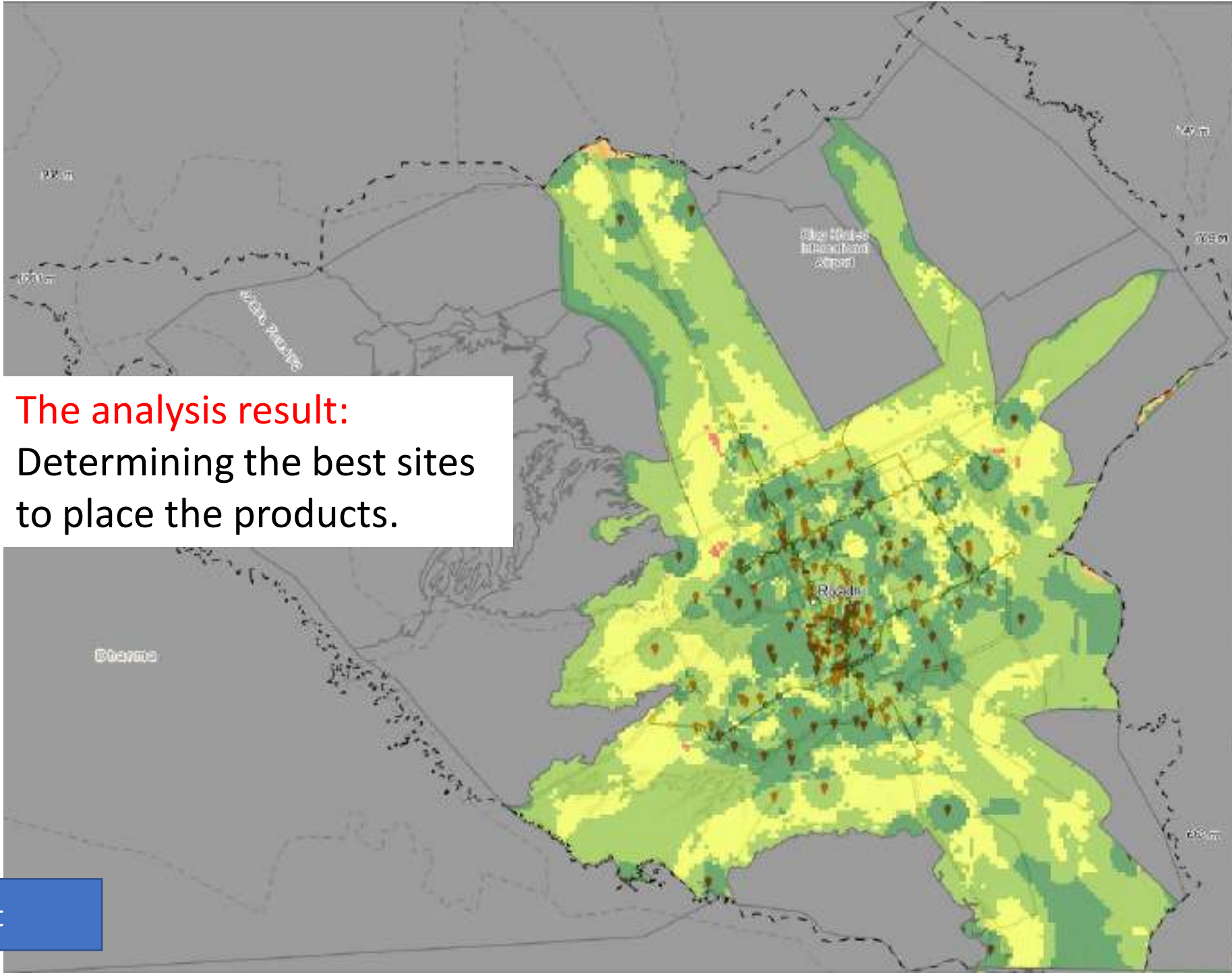
Weighted Overlay



Factories and
workshops

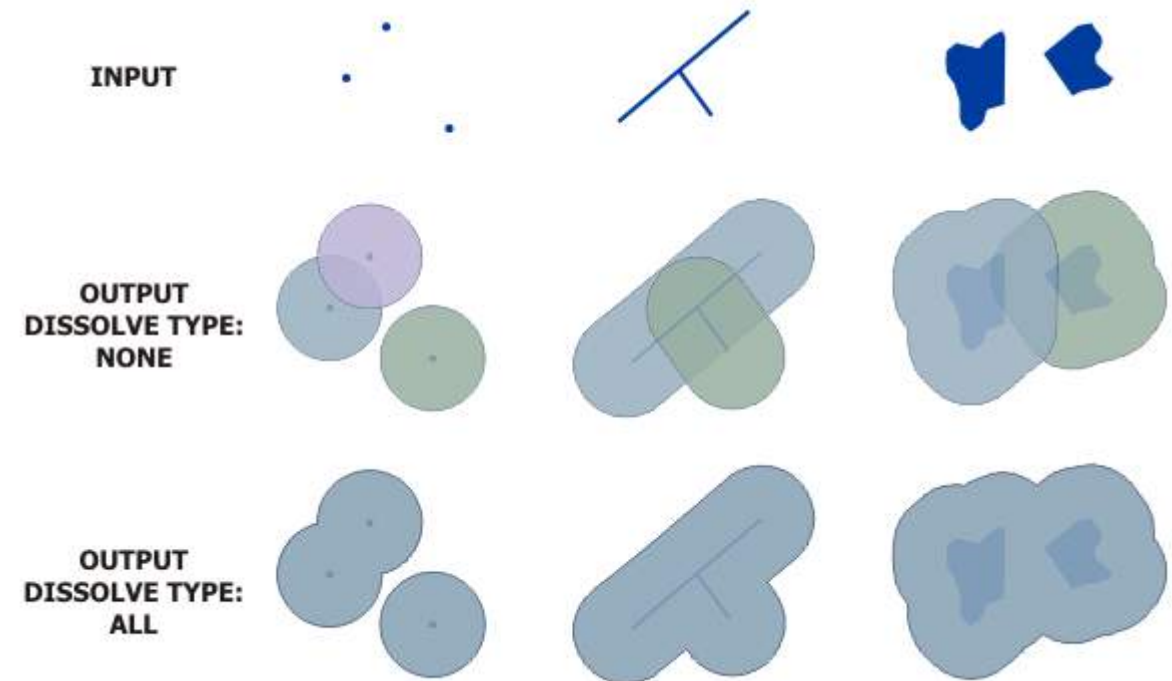
Very bad
Good

Weighted Overlay

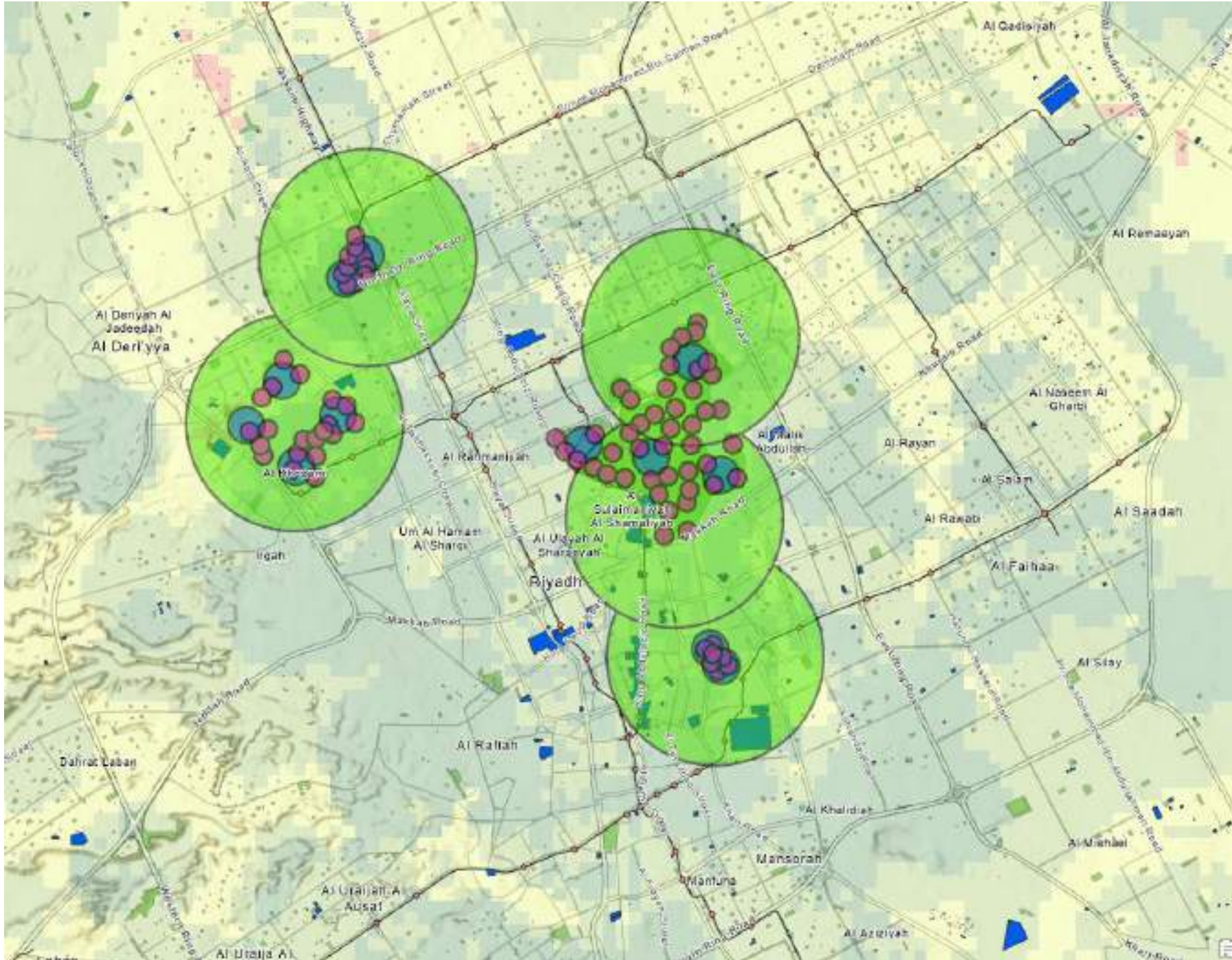


Output

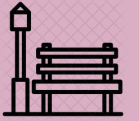
Buffering



Buffering



Smart Seat



250 /M

Service cover

Vending Machine



500 /M

Service cover

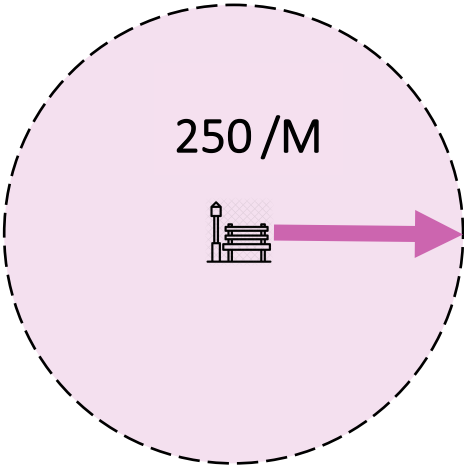
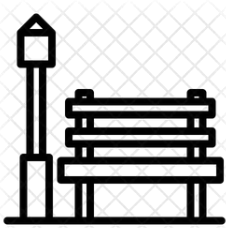
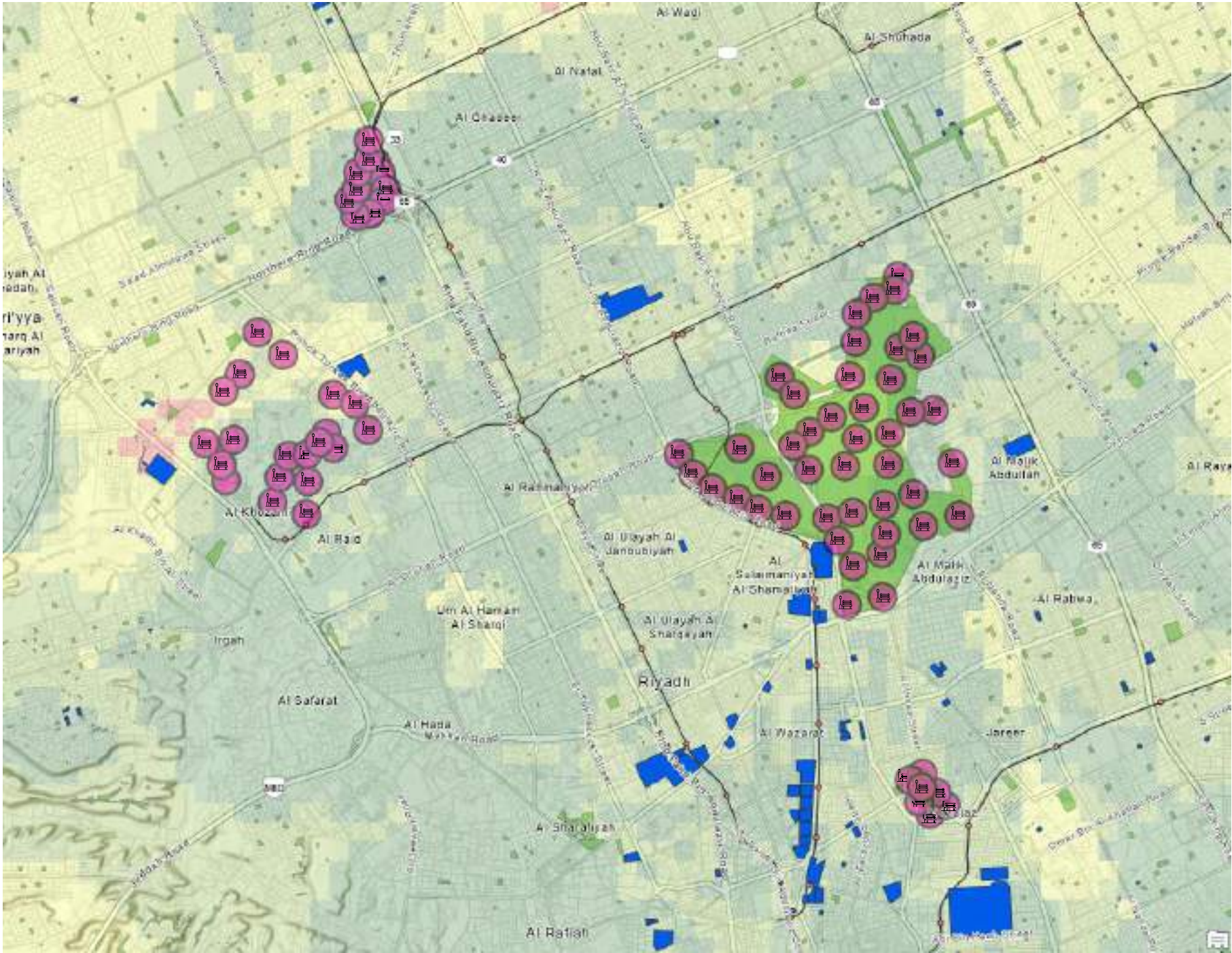
Mailbox



2000 /M

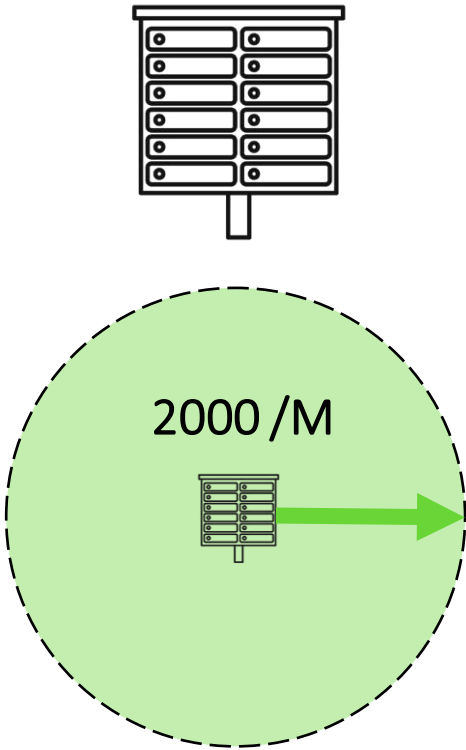
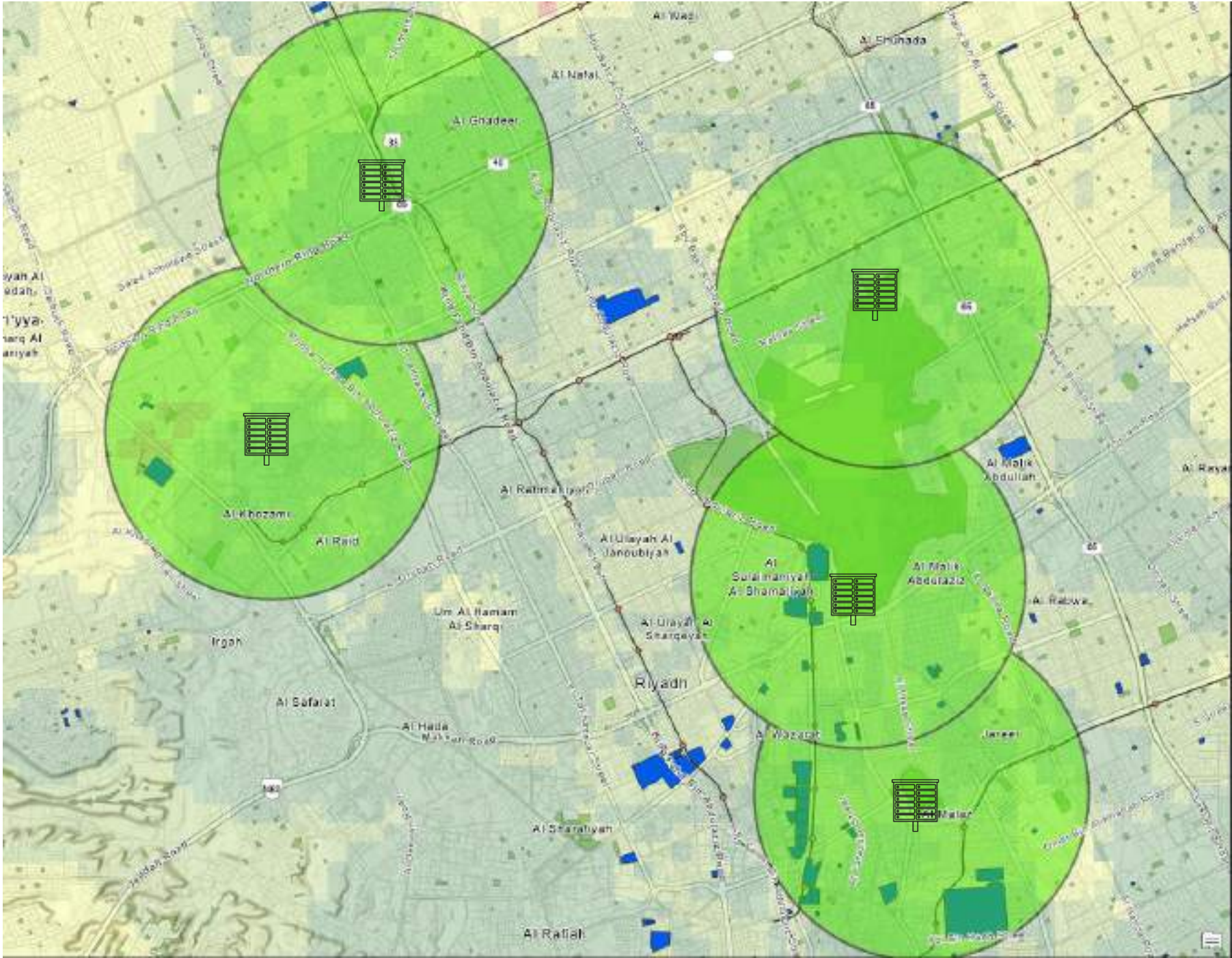
Service cover

Smart Seat



King Saud University	20	
King Salman Park	44	
King Abdullah Financial District	11	
King Abdullah Park	7	

Mailbox

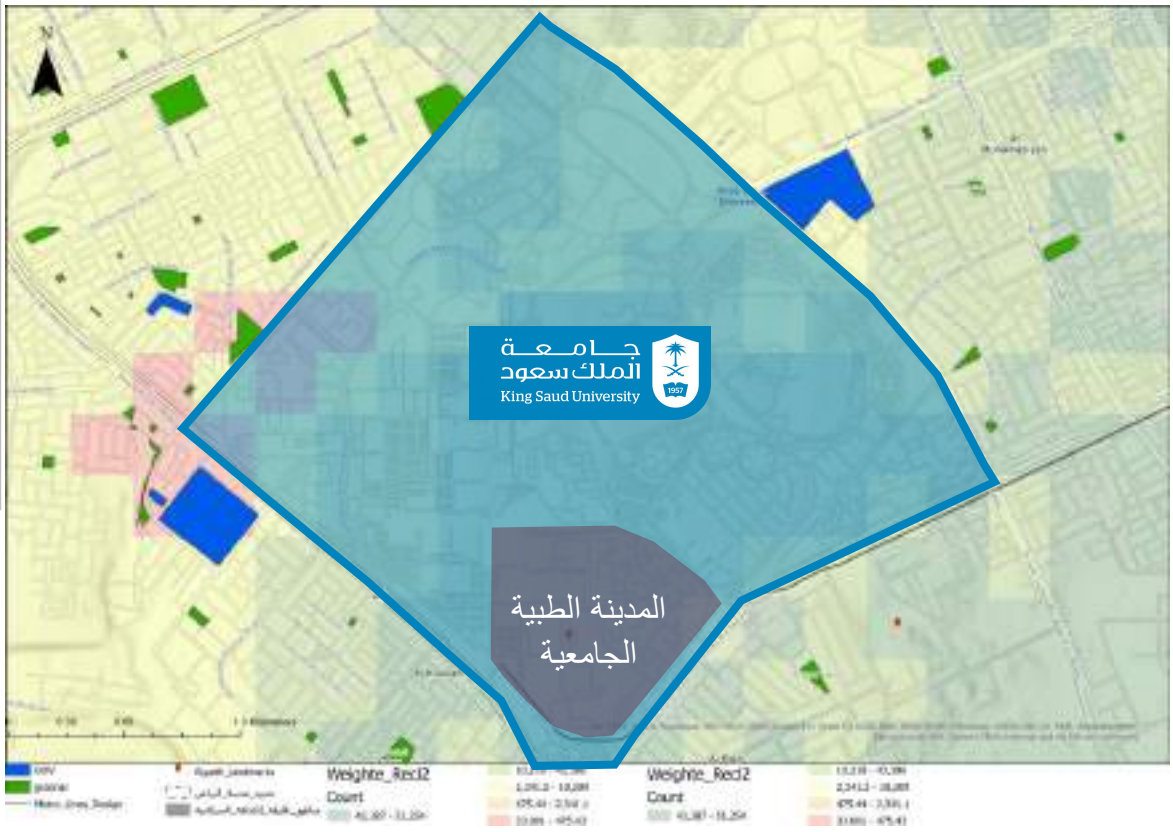
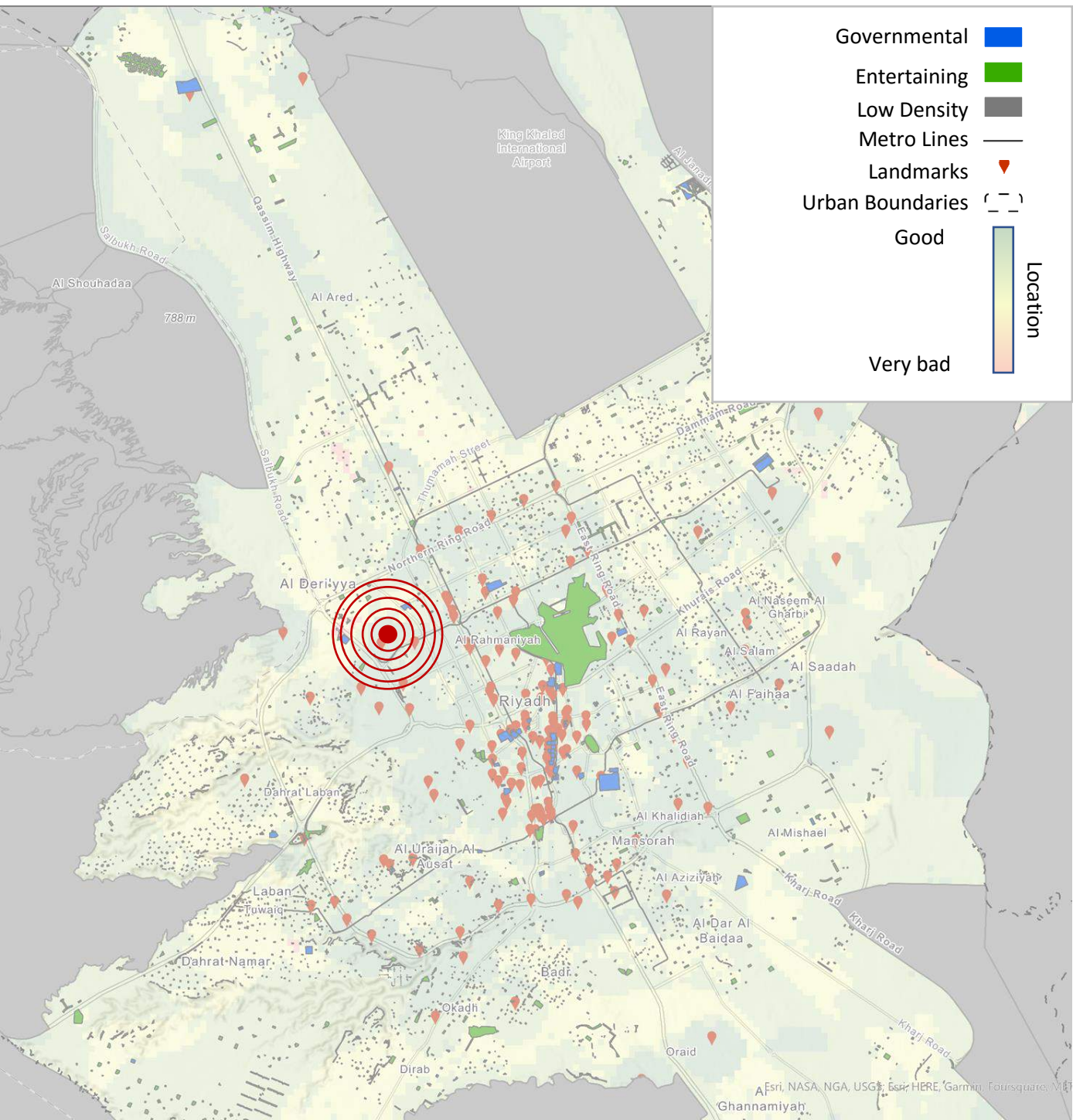


- | | | |
|----------------------------------|---|---|
| King Saud University | 1 |  |
| King Salman Park | 2 |  |
| King Abdullah Financial District | 1 |  |
| King Abdullah Park | 1 |  |

King Saud
University



King Saud University



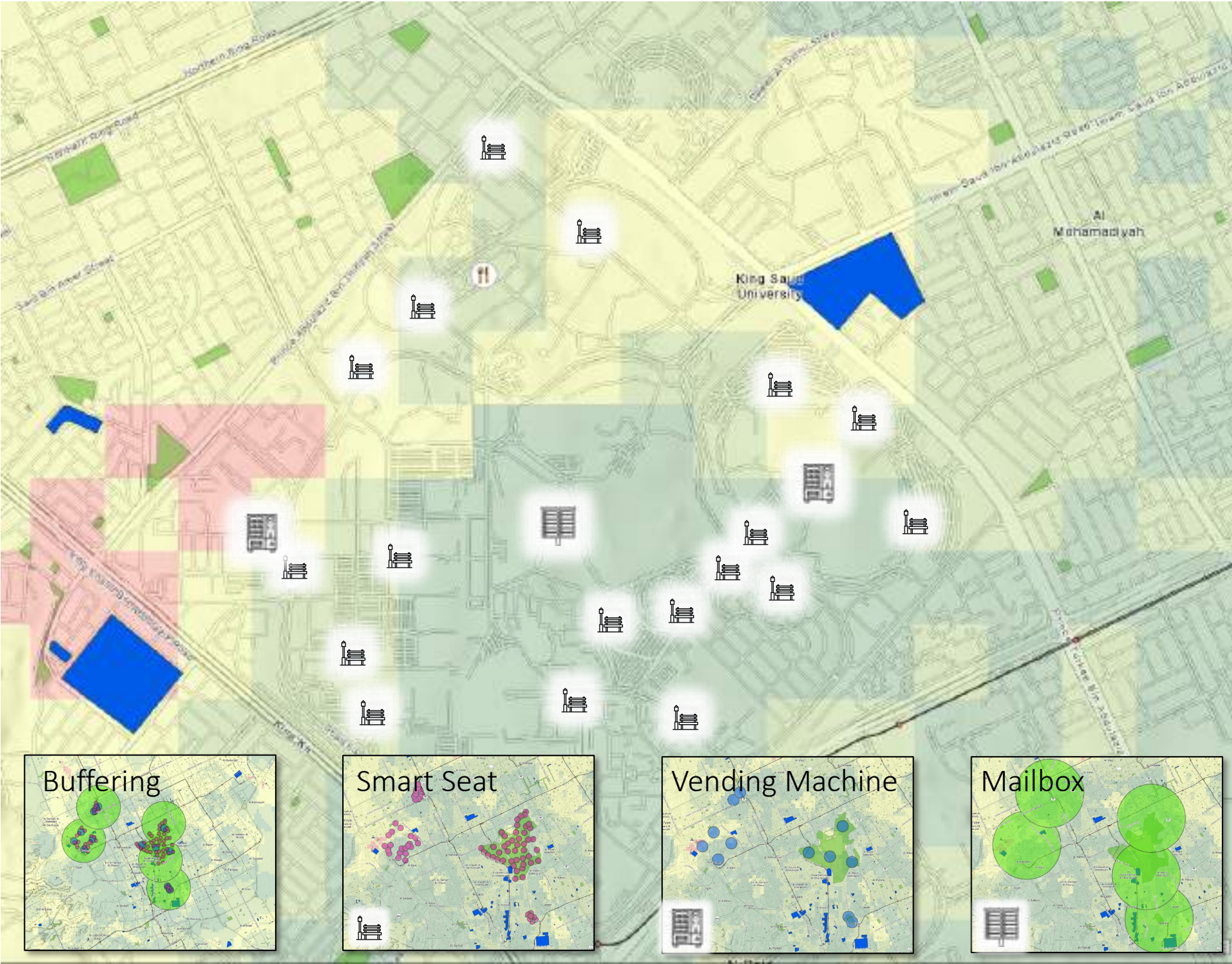
Medical City

Clinics	402
Visit clinics	413.060
Hospitalization	39.988
Surgeries	15.248
Pharmacy	1.120.963

King Saud University

Capacity	70,000
Number of students	51,000
Number of employees	6,322
Area is 9 million square meters	

King Saud University



Smart Seat



20 

Vending Machine



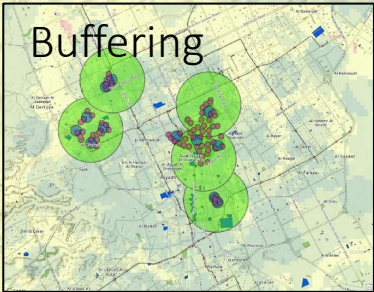
4 

Mailbox

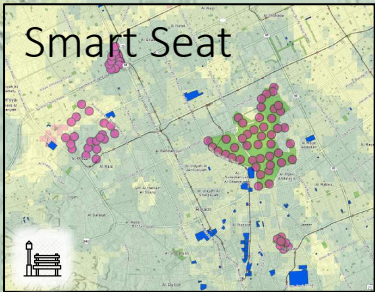


1 

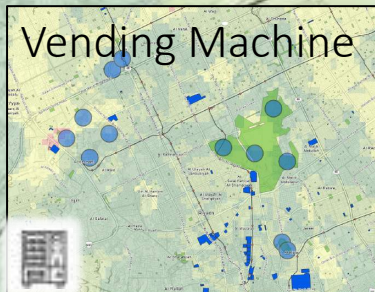
Buffering



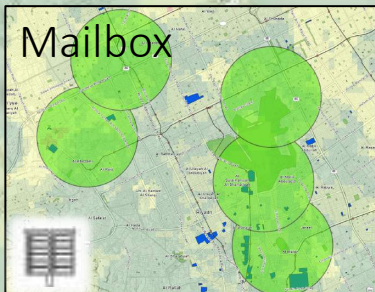
Smart Seat



Vending Machine



Mailbox



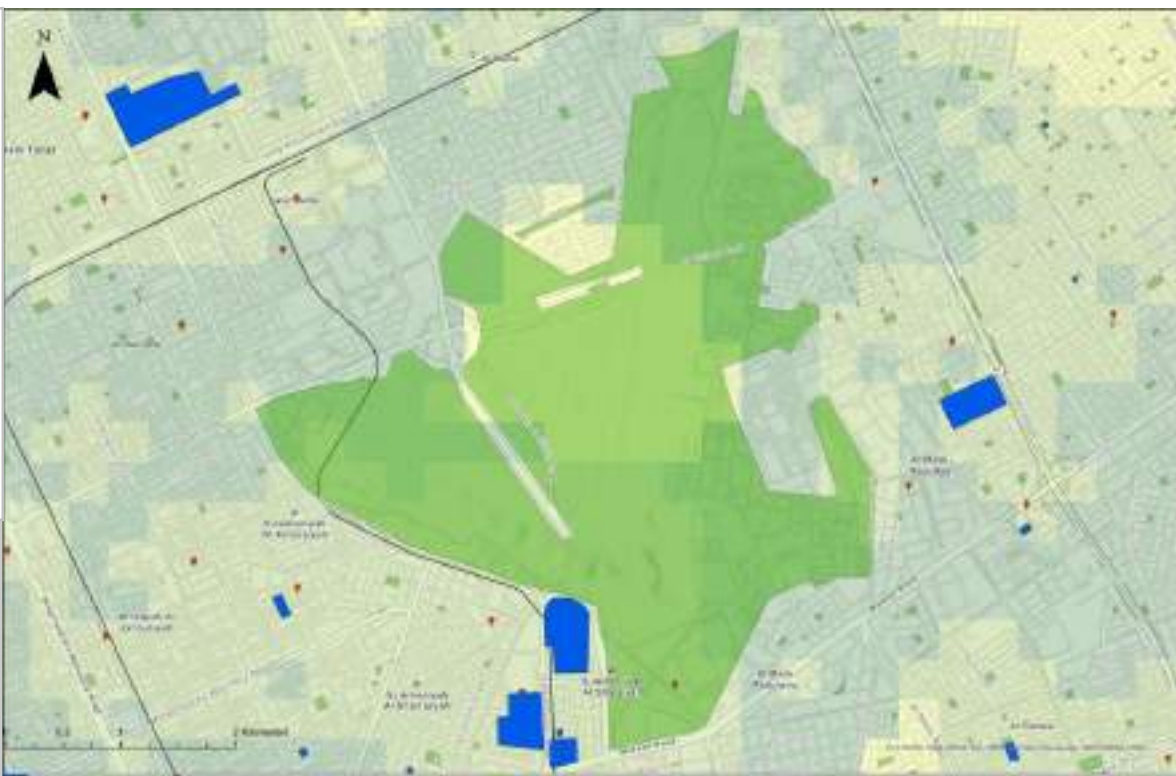
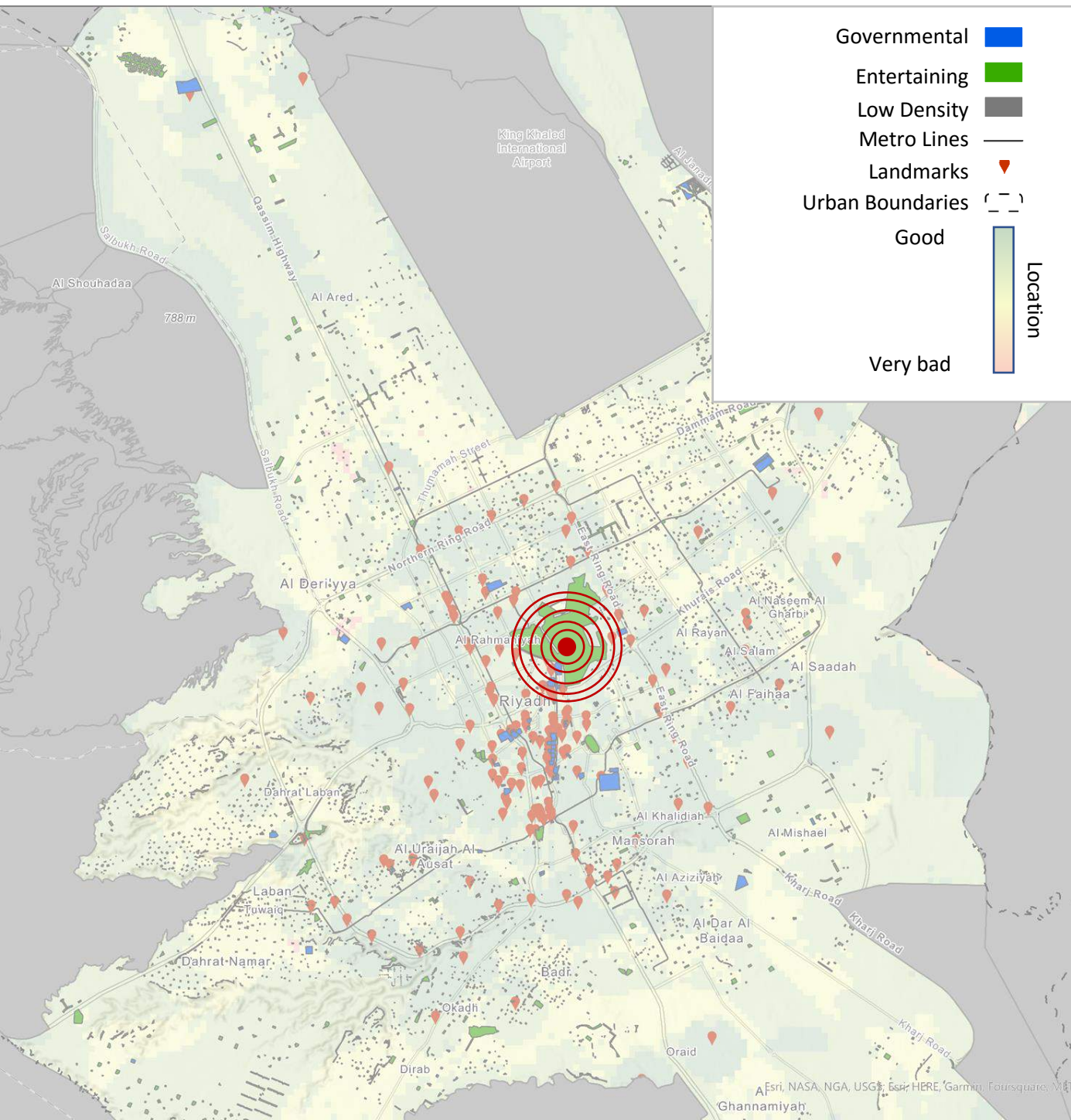


King Salman Park

حديقة
الملك سلمان
King Salman Park



King Salman Park

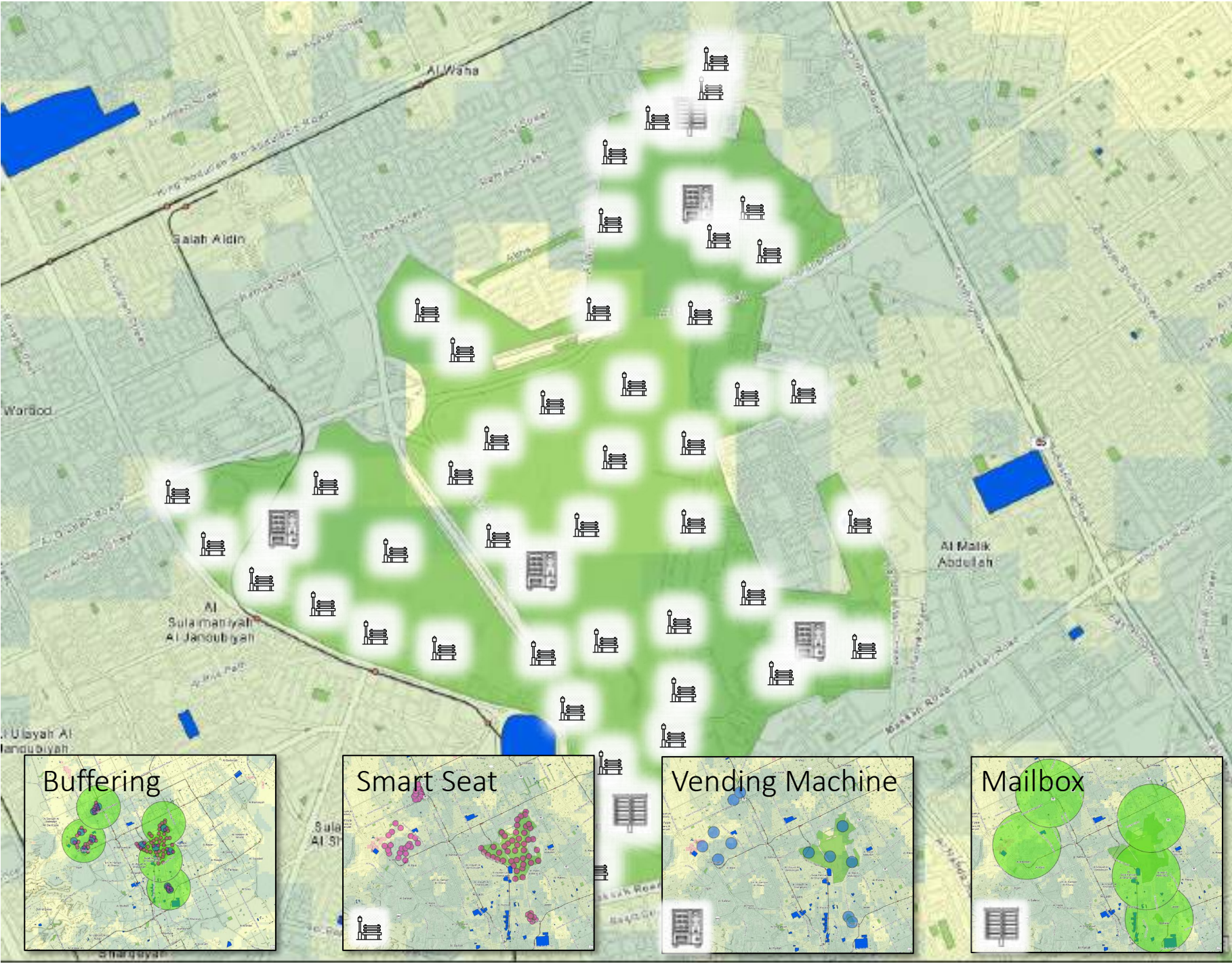


King Salman Park

Area	+16 Km ²
Residential Units	15,000
Hotel Rooms	2,225
Museum	6
Sports Courts	+20
Retail	250 Km ²
Office	390 Km ²



King Salman Park



Smart Seat



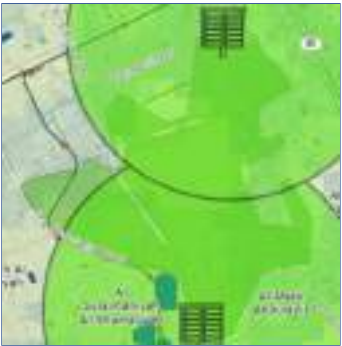
44 

Vending Machine



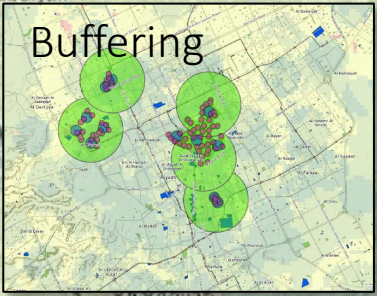
4 

Mailbox

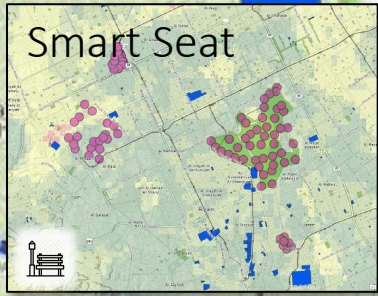


2 

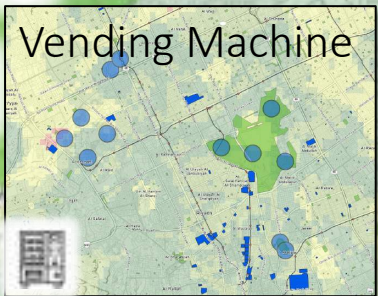
Buffering



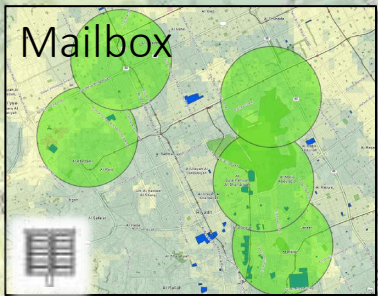
Smart Seat



Vending Machine



Mailbox

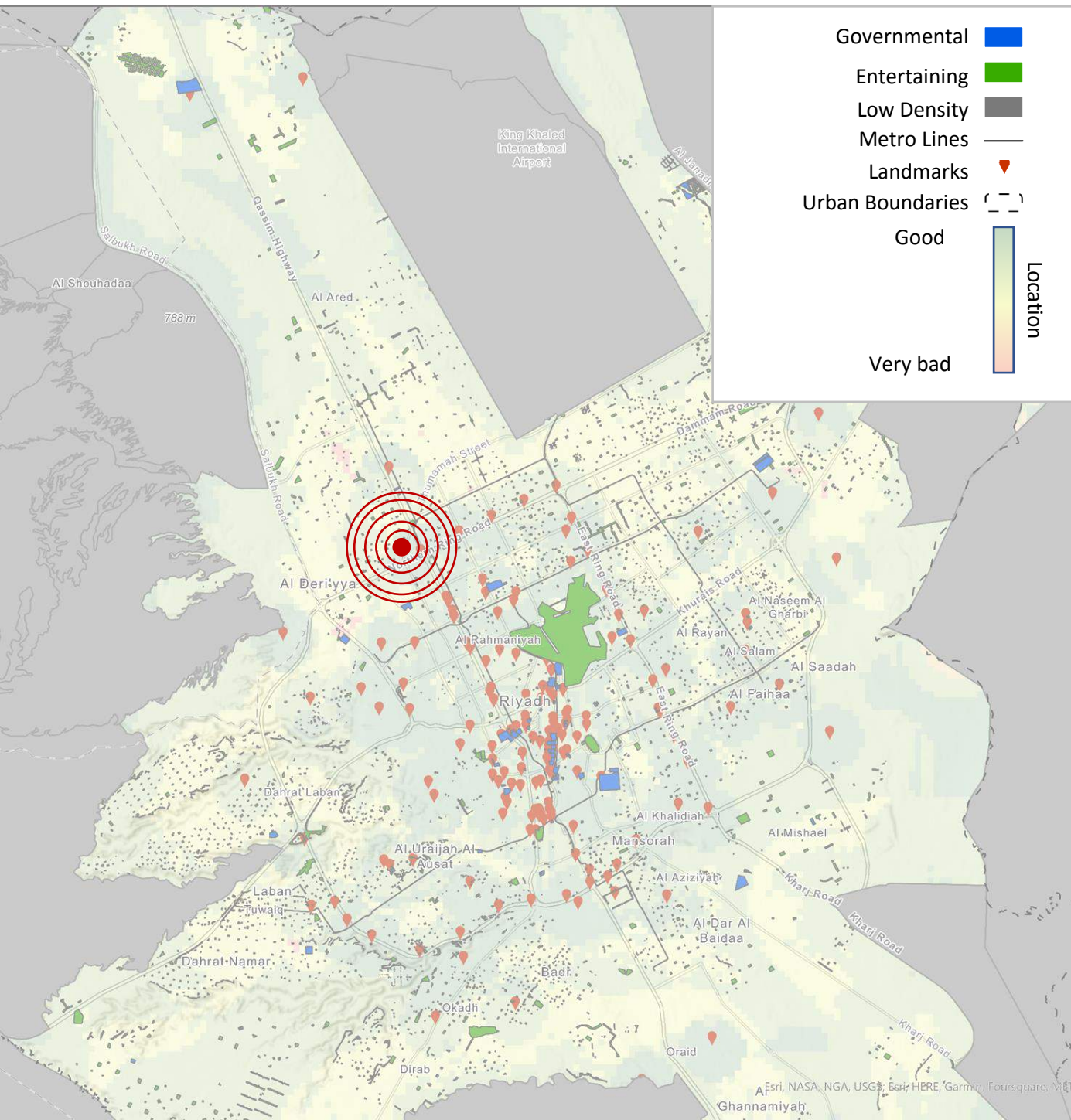




King Abdullah Financial District



King Abdullah Financial District



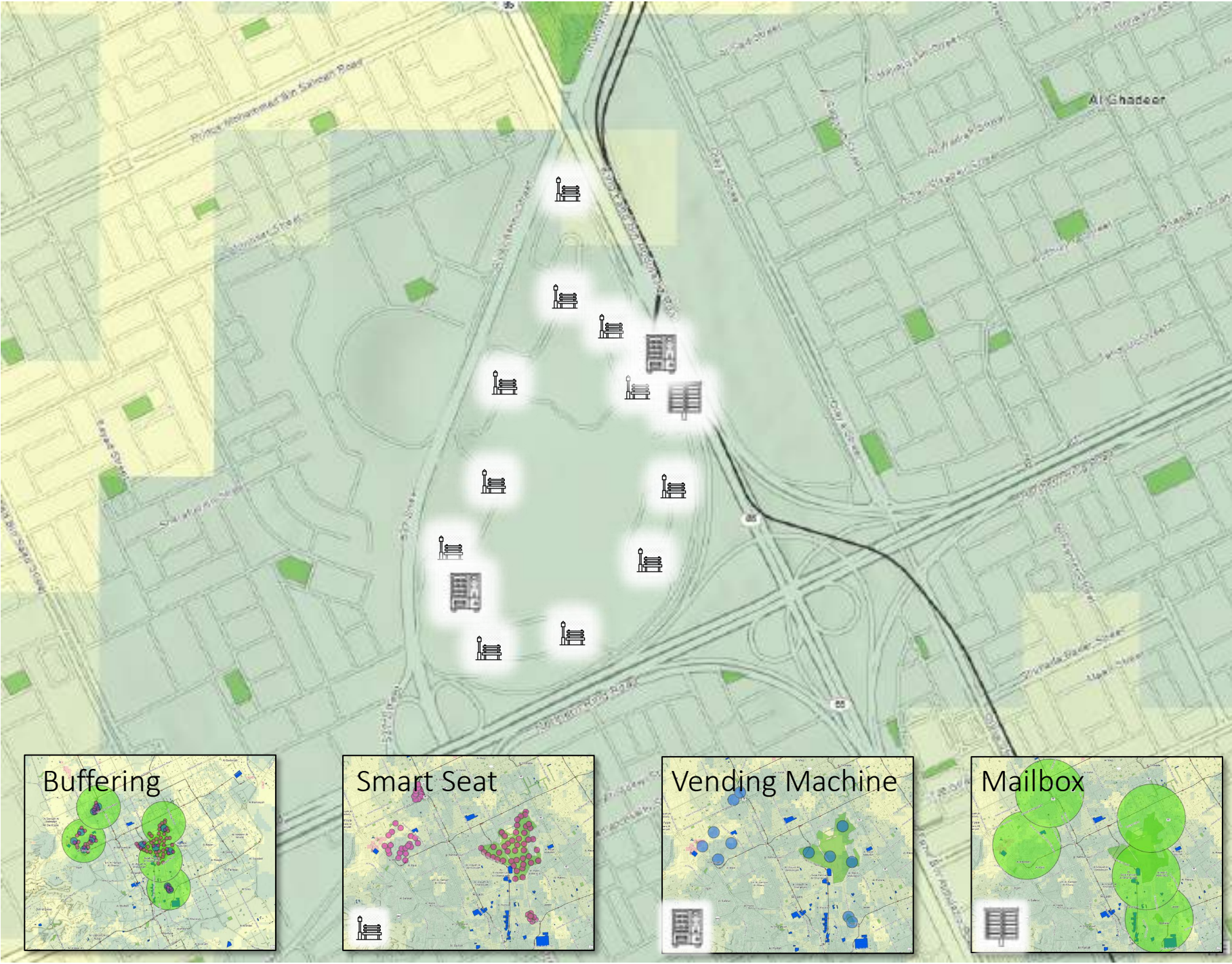
King Abdullah Financial District

Area	1.6 million square meters
Towers	59 towers
Residents	12,000

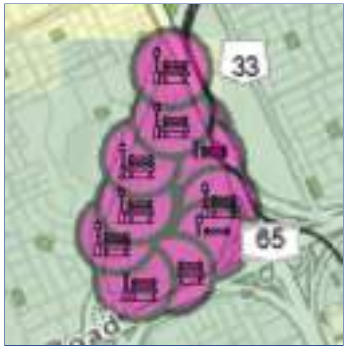
(KAFD) Metro Station

Area	45,000 m2
Metro lines	1, 4, 6, and the KAFD monorail

King Abdullah Financial District

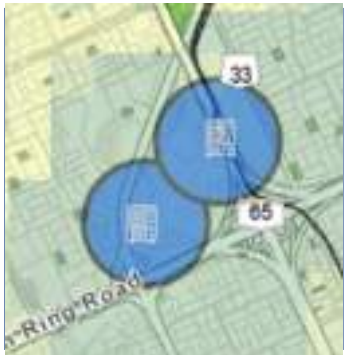


Smart Seat



11 

Vending Machine



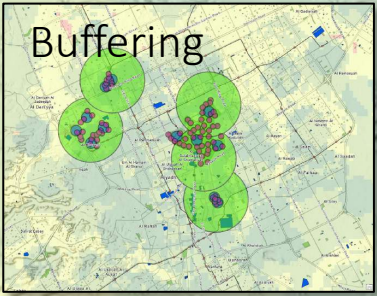
2 

Mailbox

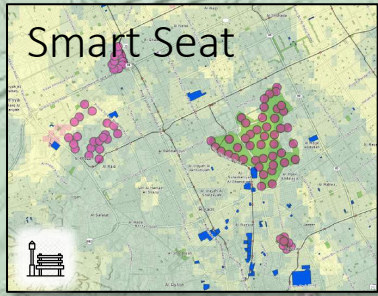


1 

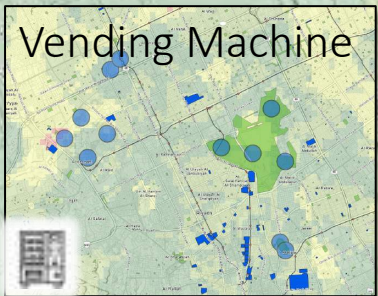
Buffering



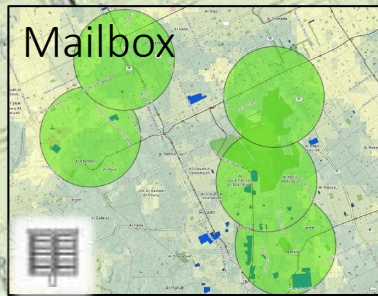
Smart Seat



Vending Machine



Mailbox



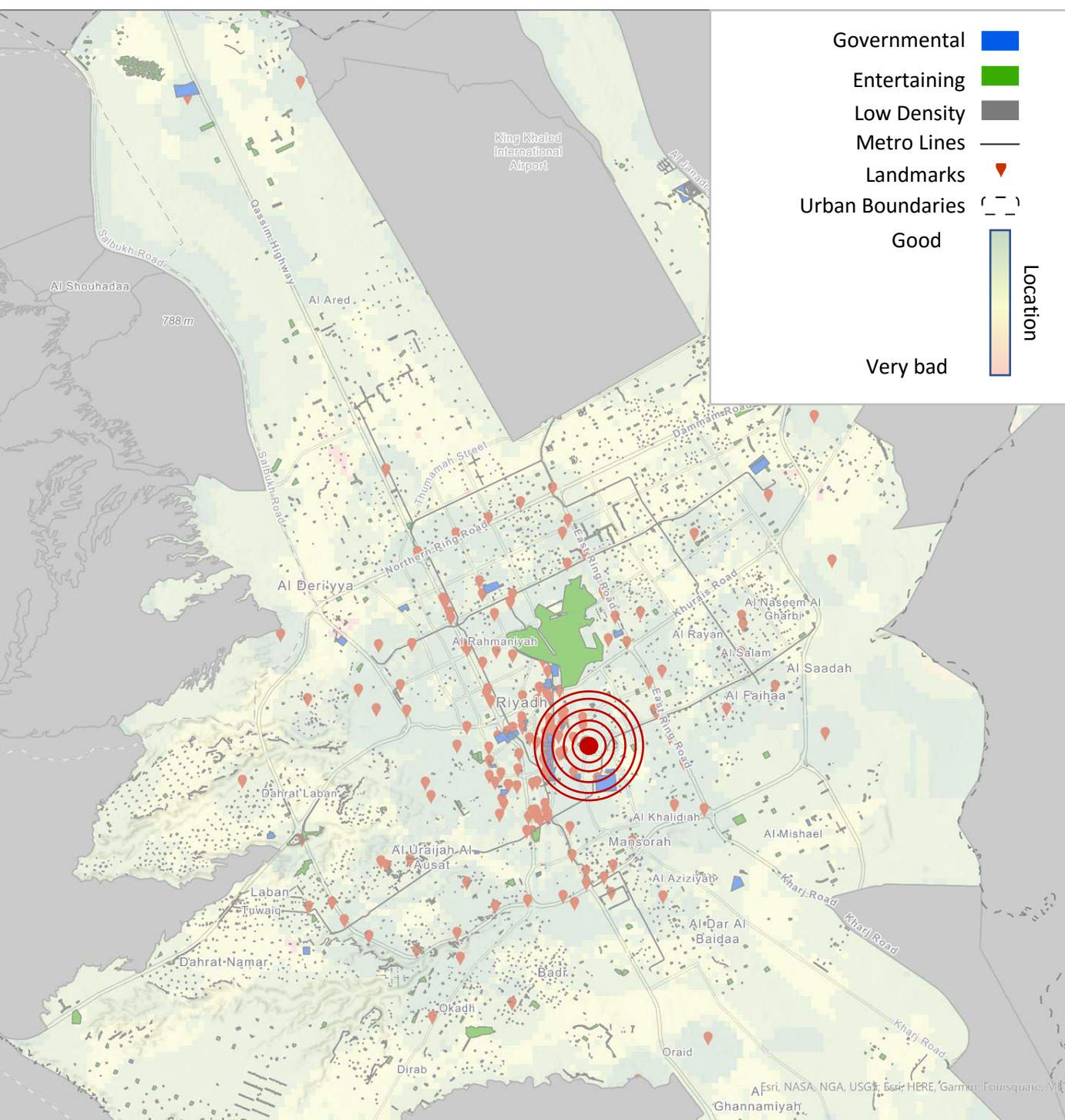
أمانة منطقة الرياض
RIYADH REGION MUNICIPALITY



King Abdullah
Park



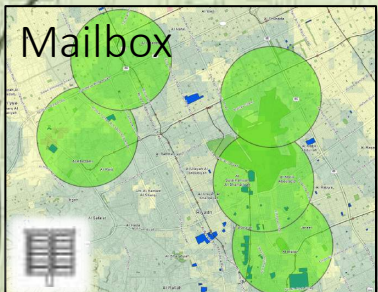
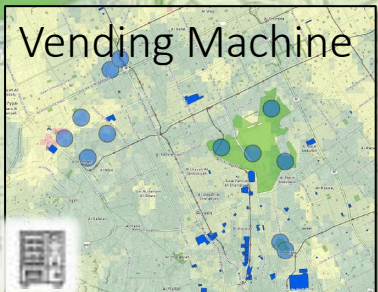
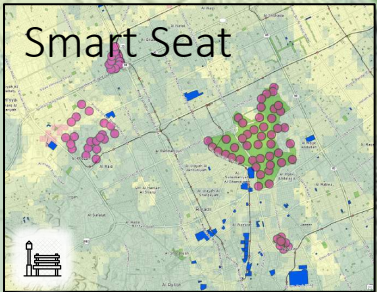
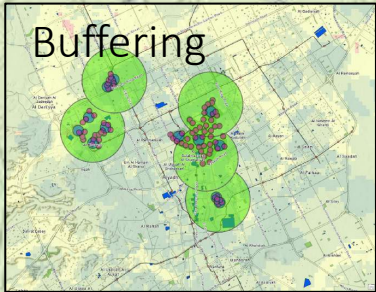
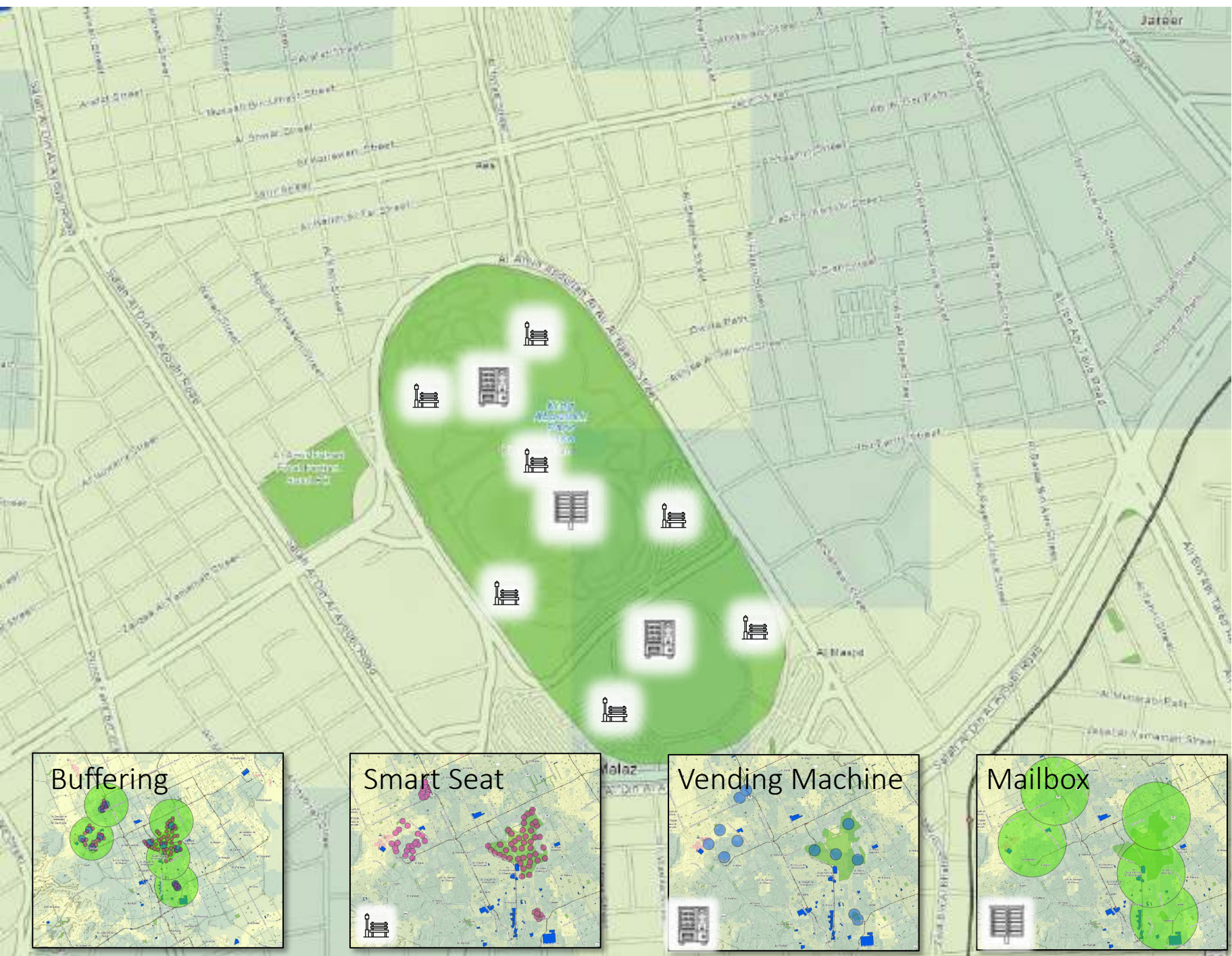
King Abdullah Park



King Abdullah Park

Capacity	More than 35,000 person
Area	318,000 square meters green areas.
Celebrations and Performances	12,000 square meters
Event Building	1,160 square meters
Lake Area	13,000 square meters

King Abdullah Park



Smart Seat



7

Vending Machine



2

Mailbox



1

8 Mailbox

Outdoor Locker Tower Specifications

1 of 2 (Continued on next page)

227 HIGH (UNLEVELED)



15-DOOR MAIN

- 15 doors.
- Touchscreen.
- Battery back-up.
- Surge protection and electronics.
- One main unit is required with every installation.

Weight: 250 kg



17-DOOR ADD-ON

- 2 large doors.
- 4 medium doors.
- 10 small doors.
- Add as many as you need.

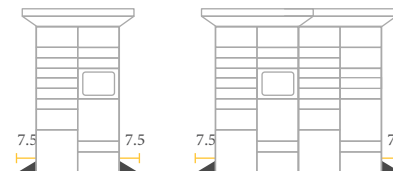
Weight: 250 kg



14-DOOR ADD-ON

- 14 medium doors.
- Add as many as you need.

Weight: 250 kg



Brackets required on exposed sides of locker bank. Brackets add 7.5 width to locker bank footprint on each side.

unit of measure in centimeters

Outdoor Locker Tower Specifications

2 of 2 (Continued from previous page)

227 HIGH (UNLEVELED)



OVERSIZED

- 1 oversized door.
- Accepts 100% of parcels, including oversized and oddly-shaped packages.
- At least one of these units strongly recommended for every installation.

Weight: 145 kg



4-DOOR ADD-ON

- 4 extra-tall doors.
- Add as many as you need.

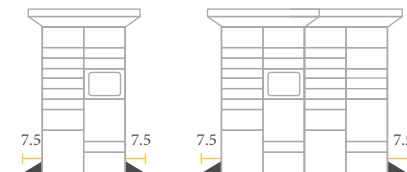
Weight: 182 kg



24-DOOR ADD-ON

- 4 medium doors.
- 20 small doors.
- Add as many as you need.

Weight: 182 kg

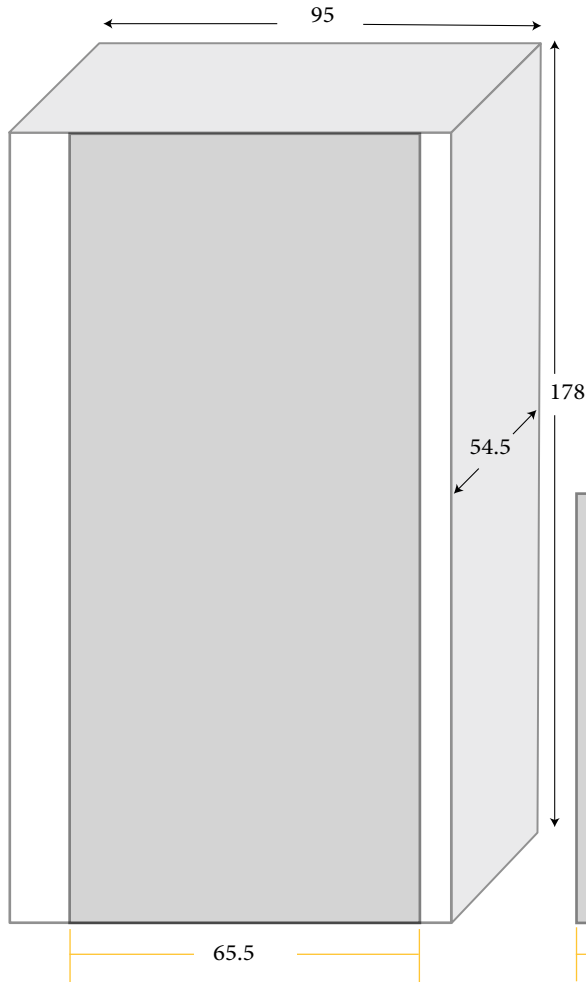


Brackets required on exposed sides of locker bank. Brackets add 7.5 width to locker bank footprint on each side.

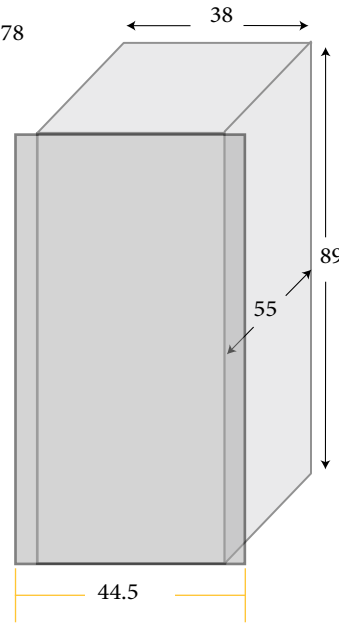
unit of measure in centimeters

Locker Compartment Dimensions

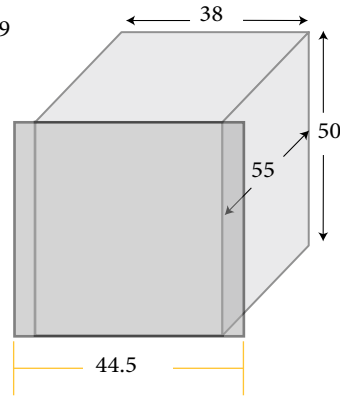
OVERSIZED



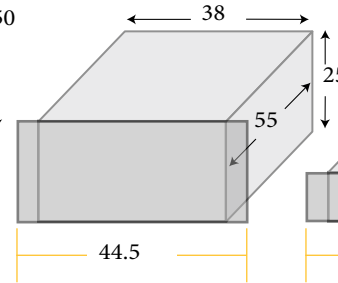
EXTRA-TALL



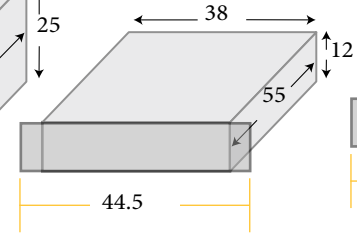
LARGE



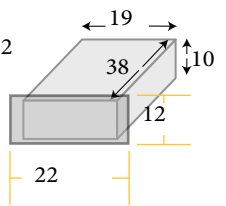
MEDIUM



SMALL



EXTRA SMALL



↔ COMPARTMENT DIMENSIONS
└─┘ DOOR DIMENSIONS

unit of measure in centimeters



TECHNICAL SPECIFICATIONS

OUTDOOR LOCKERS

Leveling

Leveling feet
Outdoor mounting brackets

Operating Temperature

(-20°C to 45°C)

Humidity

0-95% RH, non-condensing

Power Consumption

.7A nominal
6.25 peak*

*Based on single row of up to 8 locker towers including Main

AC Voltage

Recommended: 220VAC
Minimum: 110VAC
50/60Hz nominal

Ethernet/Data

Minimum upload speed: 1.5MB
DHCP connection with open port preferred

Cellular and WiFi connectivity options available as an alternative to Ethernet

Outdoor Lockers: What's Included



Roof Package

- Required for outdoor installs, unless located under an enclosed area.
- Protects unit from the elements.
- Provides mount for LED lights for nighttime illumination.
- Provides mount for surveillance cameras.



Electronics Package

- Protects the computer from extreme heat and cold.
- Seals the electronics bay contained in the main unit, and provides airflow and temperature modulation.



Camera Package

- Weather-proof outdoor-compliant camera.
- Mounts to roof package.



Outdoor Mounting Package

- Brackets included for anchoring towers to the concrete pad.
- Requires use of concrete anchors.

Please notify us if your installation site is located in an extreme weather region.

Outdoor Lockers: Installation Requirements

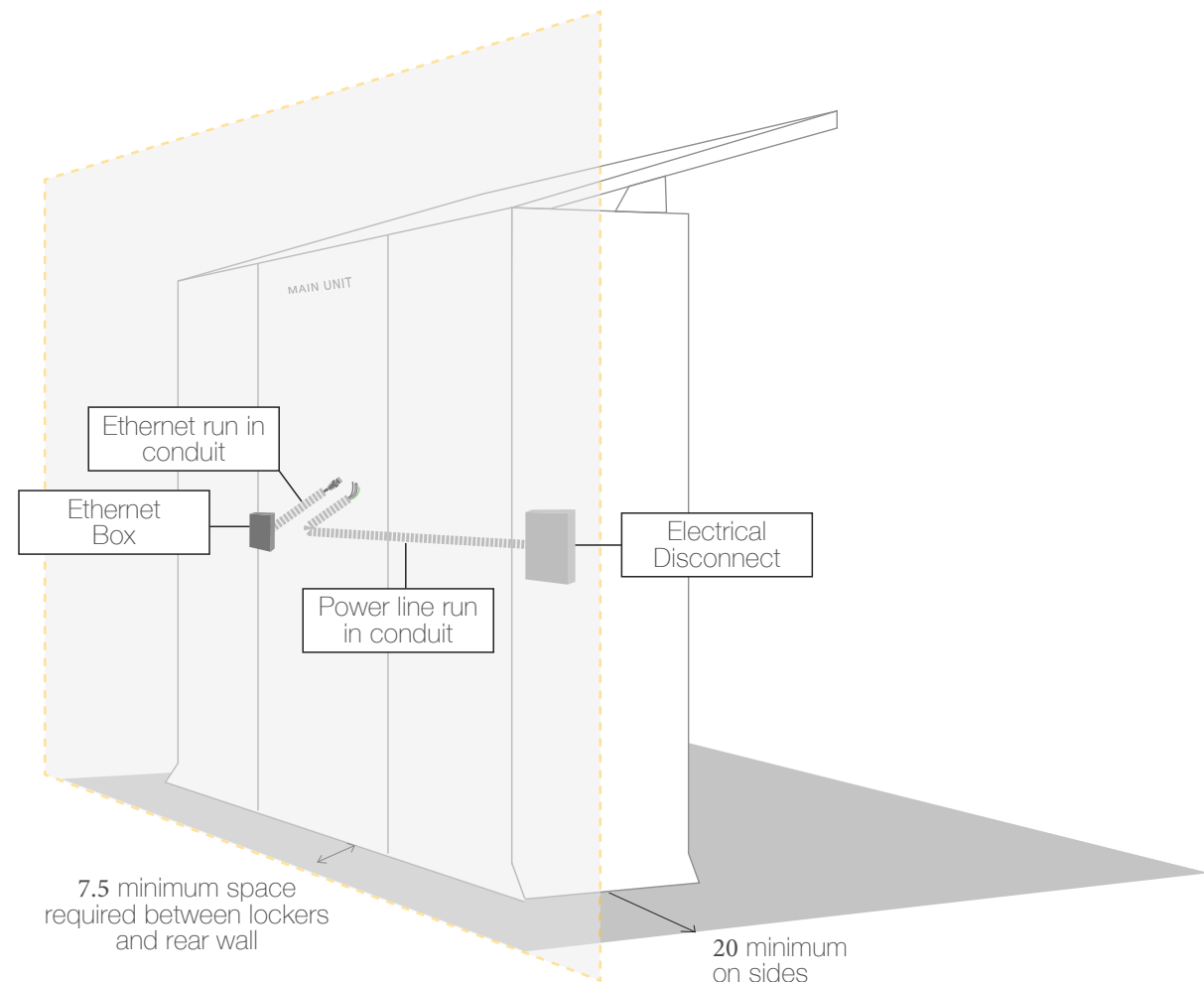
Power & Data

- Power: 220 VAC, 50/60Hz from 20A electrical disconnect. Outdoor-rated #12 electrical wire run from an accessible outdoor-rated disconnect in 3/4" conduit. Electrician must be onsite to complete connectivity.
- Ethernet: Outdoor-rated CAT6 cable run in 3/4" conduit. Ethernet cable terminated with an RJ45 tip.
- Cellular connectivity option available as an alternative to ethernet.

Video Surveillance

One provides 24/7 video surveillance.

- One (1) surveillance camera is included.
- One camera needed for every four lockers.
- Footage is available for ten (10) days.
- Your team may request footage directly from your Luxer One Account Representative.



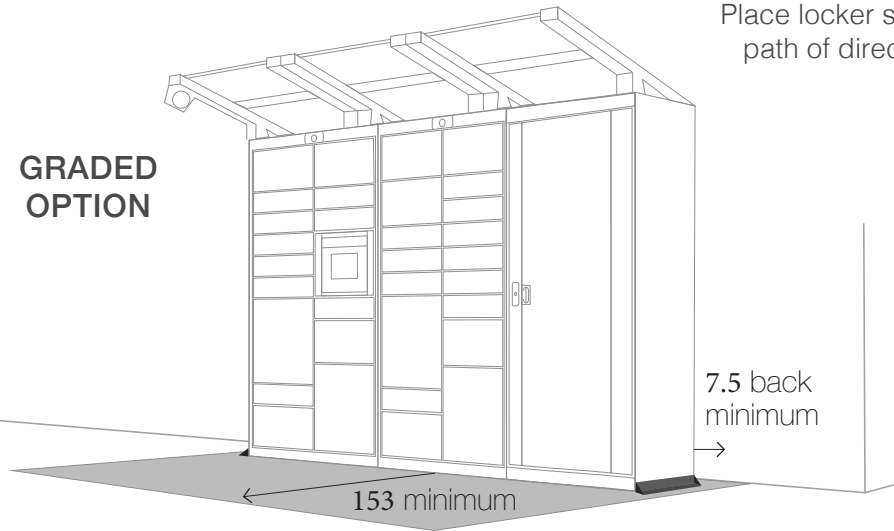
For illustrative purposes only. Refer to site-specific floorplan.

Outdoor Lockers: Location Options

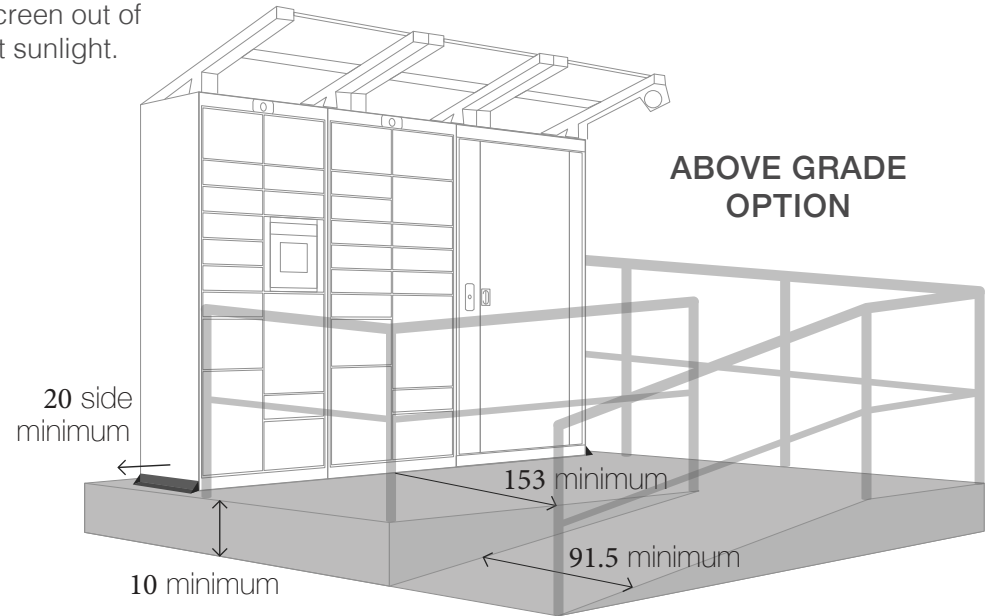


Place locker screen out of path of direct sunlight.

**GRADED
OPTION**



**ABOVE GRADE
OPTION**



Concrete Pad Installation Requirements

- Sides: 20 required on each side of locker bank for mounting feet and anchors.
- Back: 7.5 required for power connections, network connectivity, and airflow.
- Front: Minimum of 60" of free space in front of lockers for ADA compliance.
- If above grade, ramp required for ADA accessibility.
- Maximum drainage slope of level pad not to exceed rise or fall of more than 3.8.

A concrete pad or equivalent surface is required.



جامعة الجميع الذكية
Everyone's Smart University

Smart Street Solution Company

Supervised by

Dr. Walied Soliman



Fahad	2021206250	Abdulfattah	2021206225	Basma	2021206282
Yousef	2021204184	Yasser	2021206343	Majed	2021206371
Mohammed	2021204163	Mousa	2021200333	Marwan	2021206089

Contants

Introduction	1
Vision and Mission Statements	2
Values	3
Objectives	4
Project Charter	5
Stakeholders	6
Organizational Structure	7
Five Years Plan	8
Establish Smart Street Solution Company	9
Product Life cycle	10
Marketing and Sales Plan	11
GIS Spatial Analysis	12
GIS Spatial Analysis	13
GIS Spatial Analysis	14
GIS Spatial Analysis	15
Smart Solution Products	16
Smart Solution Products	17
Smart Solution Products	18
Finance and Fund	19
Project Constraints	20
Risks	21

The goals of 2030 Vision is:

- stimulates a vibrant society
- a thriving economy
- an ambitious nation

The thought of using modern technology to improve the quality of life led to three ideas:

- coordinating between shipping companies and endusers
 - ↳ smart mail boxes
- improve the public open space seats
 - ↳ smart seats
- provide food and drink goods in open spaces
 - ↳ smart vending machines

Thus, stakeholders have decided to establish SSSC

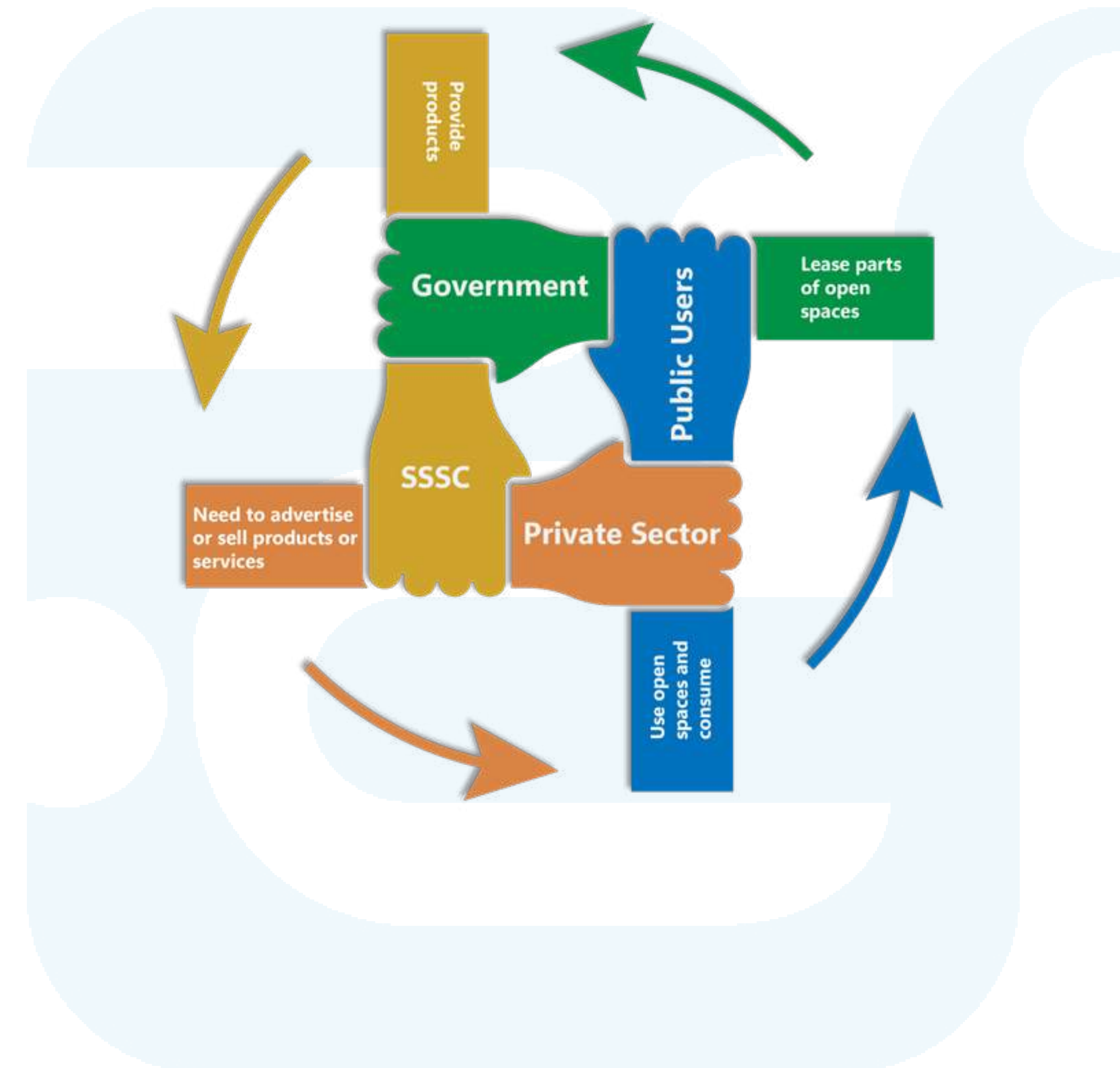
Vision and Mission Statements

SSSC's Vision:

The board of Smart Saudi solutions Company vision is to establish a long-term customer from public or private sectors to provide a better experience in the public and private open spaces aiming easy, smart, self-served, available, weather adopted, well designed and use friendly street furniture.

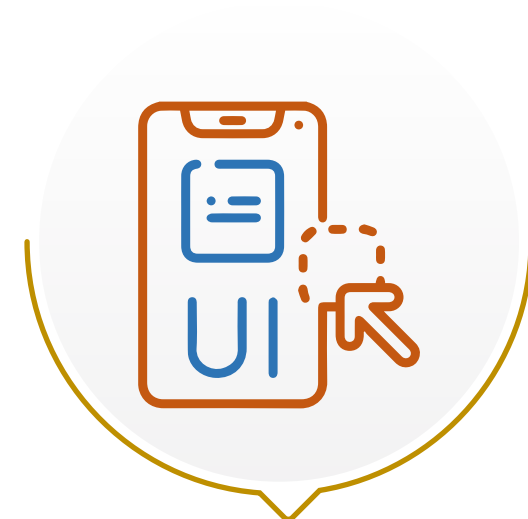
SSSC's Mission:

The board of Smart Saudi solutions Company's mission is to create innovative smart street furniture solutions that promote the use of public and private open spaces for public users in a more sustainable manner with high standard. Furthermore, this is through providing trades between government and private sectors to create opportunities to sell or advertise their products or services.

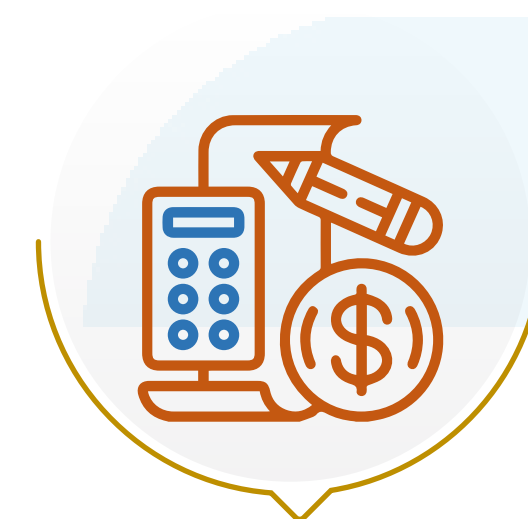




Quality of life



Thriving economy



UI & UX design



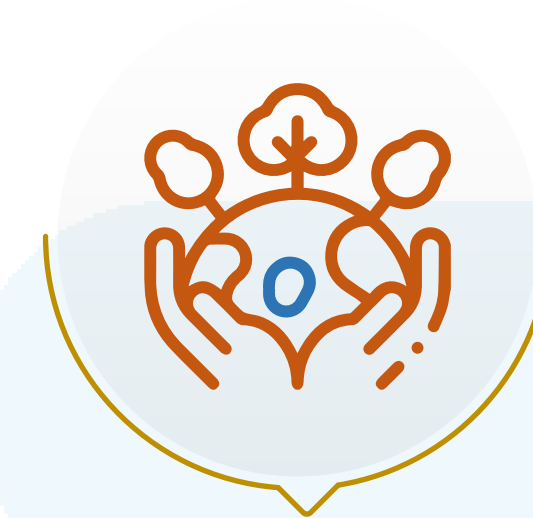
Vibrant society



Ambitious nation



Low-cost & High-Quality



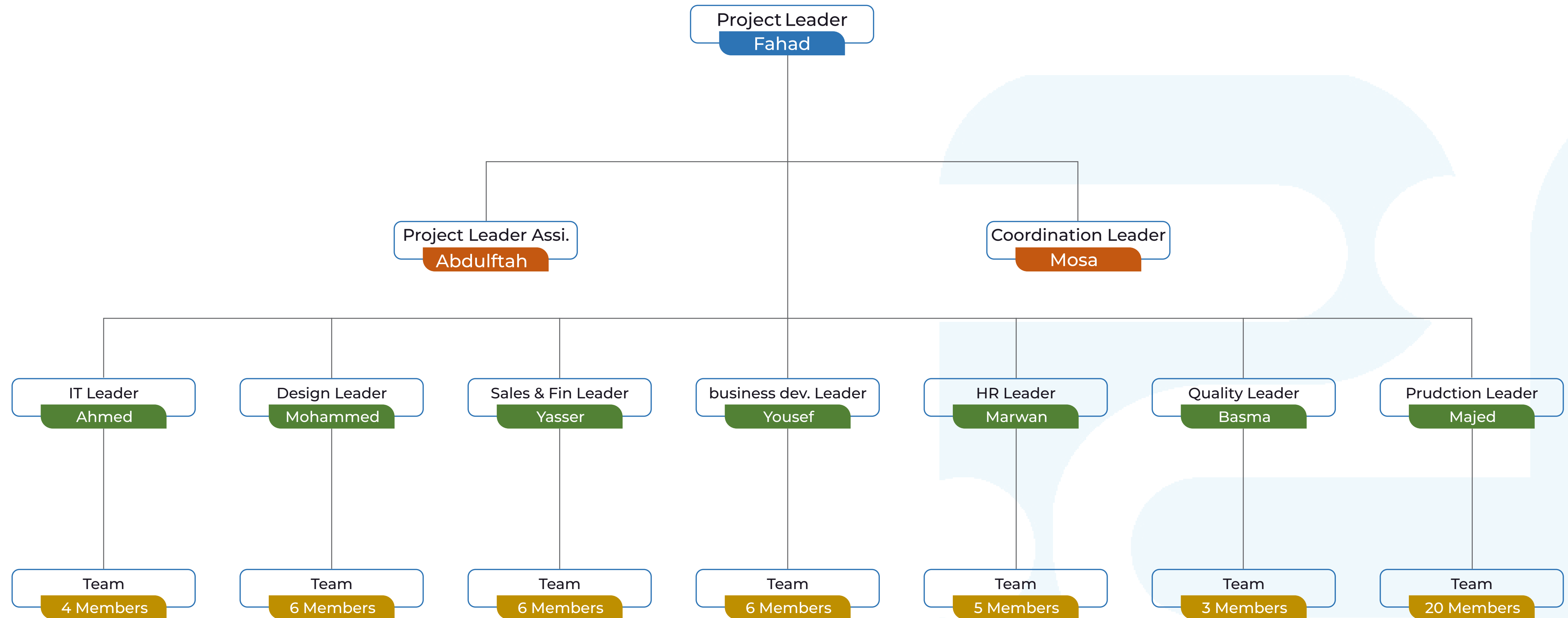
Sustainability & Environmentally

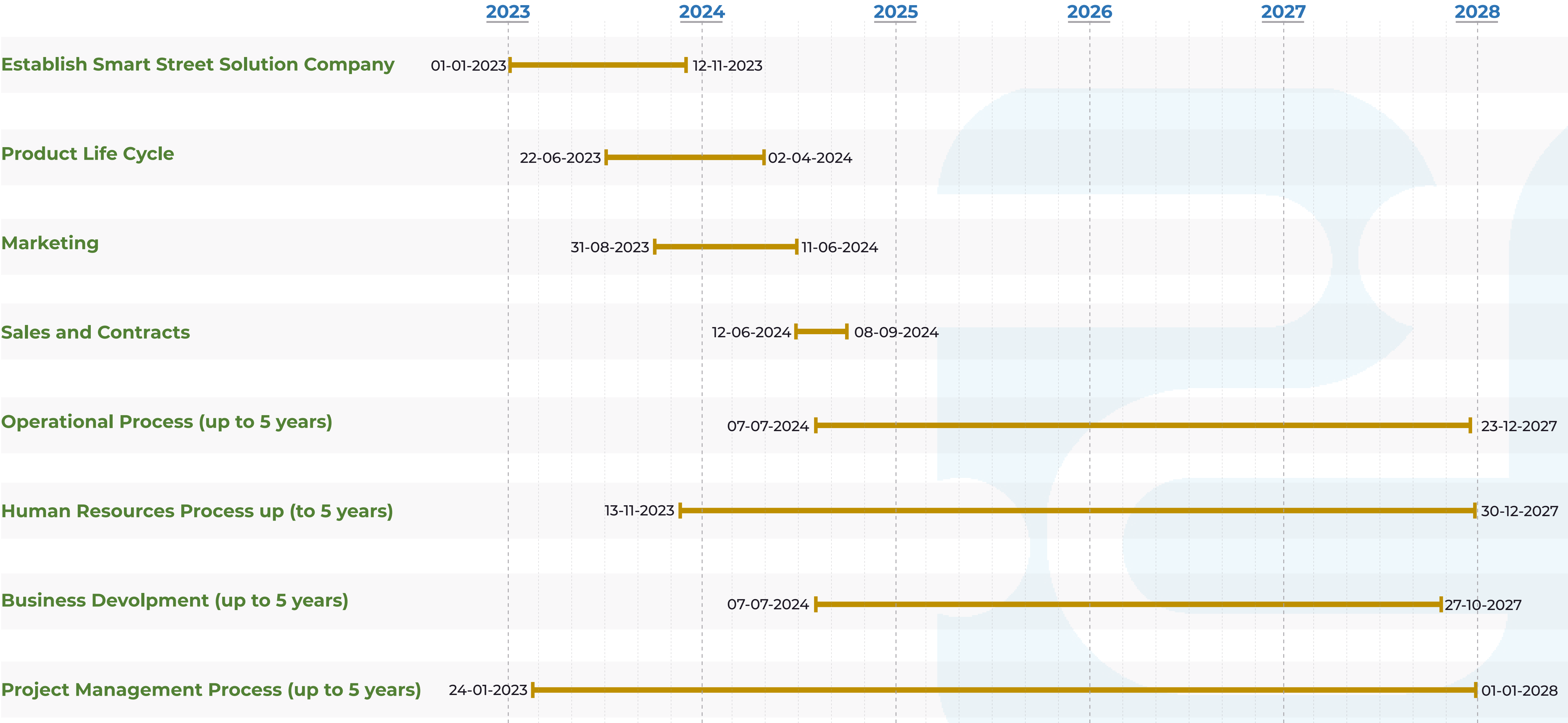
- The main objective is to establishing a Smart Street Solution Company to create three innovative smart street furniture in one year.
- Financial objective is to reach the breakeven point in the first two years and increase sales by accumulative %20 annually for the first 5 years.
- Customer objective is to Meet the customers expectation of using smart street furniture in terms of design, availability, maintenance, easy use, adoptability, safety, legally and development through a regular public surveys and business development department questioning customers experiences every 4 months.
- Internal process is to Create a smart adoptive flexible system as well as finding gaps and full filling it; by a weekly dashboard to monitor and control the work flow cycle and updating the system by smart innovative ideas to meet customer needs and company objectives.
- Learning and Growth is to develop personal careers by training courses and workshops to improve the skills and the mentality of the workforce including high management and the workers on weekly, monthly and yearly base.

Project Name:	Smart Street Solutions Company (SSSC)		
Project Description	The project is to establish Smart Street Solution Company to build Smart Street furniture solutions for open spaces by opening trades between public and private sector.		
The need of the project (business case)	The project is required to create a suitable and innovative street furniture to increase the use of public open spaces and to open new business opportunity for public and private sectors.		
The measurable goals of the project	» Establishing SSSC » Finish the full business model for three business lines which are Smart mailbox, smart public seats and smart vending machines in the next 6months. » Patterning up with public and private sector 6month from now to the end of the 5 years. » Develop and increase our products and production lines » Develop and implement a training plan for every member in the company » Reach the breakeven point in the first two years and increase sales by accumulative 20% annually for the first 5 years.		
The requirement of the project	Location Requirements: » Assembly plant warehouse » Meeting room » Offices facilities » Food and rest area » Clinic » Storage areas	Human resources: » Managers » Supervisors » Workers » Drivers » A nurse	Other requirements: » Assembly equipment » Transportation automobiles » Lifting automobiles » Safety equipment » Outsourcing fixed products
deliverables and outcomes	» Design drawings » Specifications » Smart street furniture: Mailbox; Vending machines; Smart seats		
General Risk of the project	» High start up cost » Outsourcing delays and miscommunication » Not conforming with Government requirement		
Timeline of the project	» From Jan. 2023 » To Jun. 2028		
Summary Budget	» SR 2,500,000		
Authorized and sponsor Name	• Eng. Mohammed Alsaqa		
Project Manager Name	• Eng. Fahad Almawash		
Email:	• M.Alaqa@SSSC.com • F.Almawash@SSSC.com		
Phone Numbers	• 0545454545		

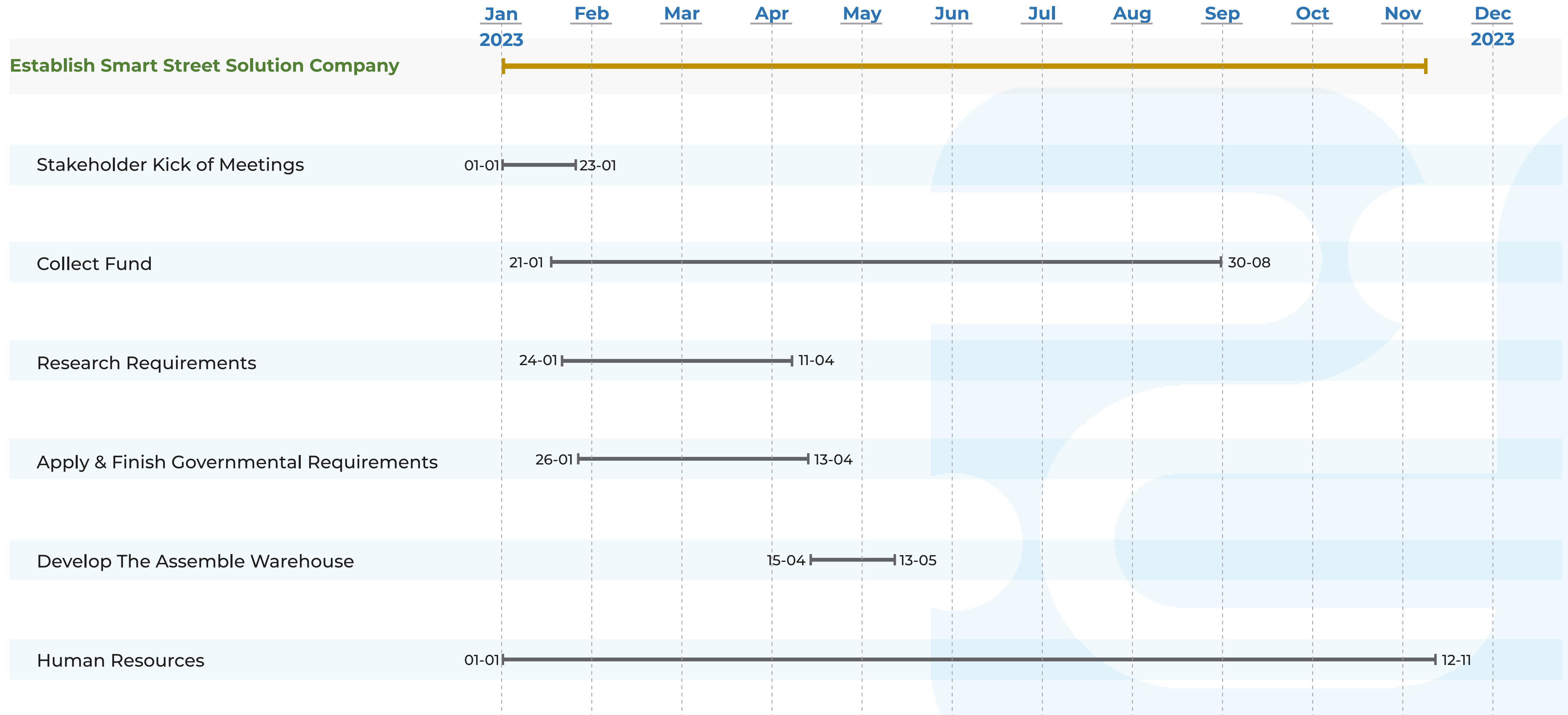


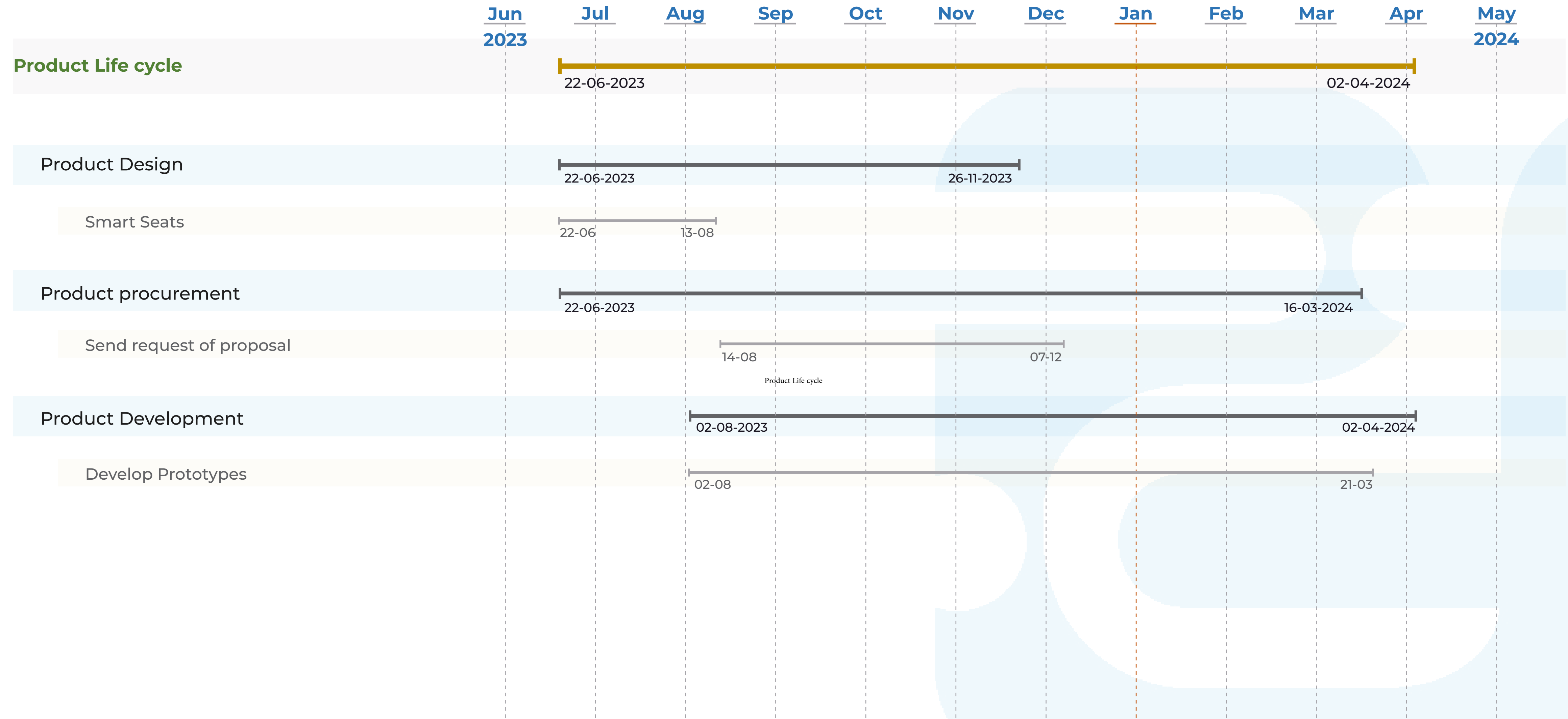
Organizational Structure

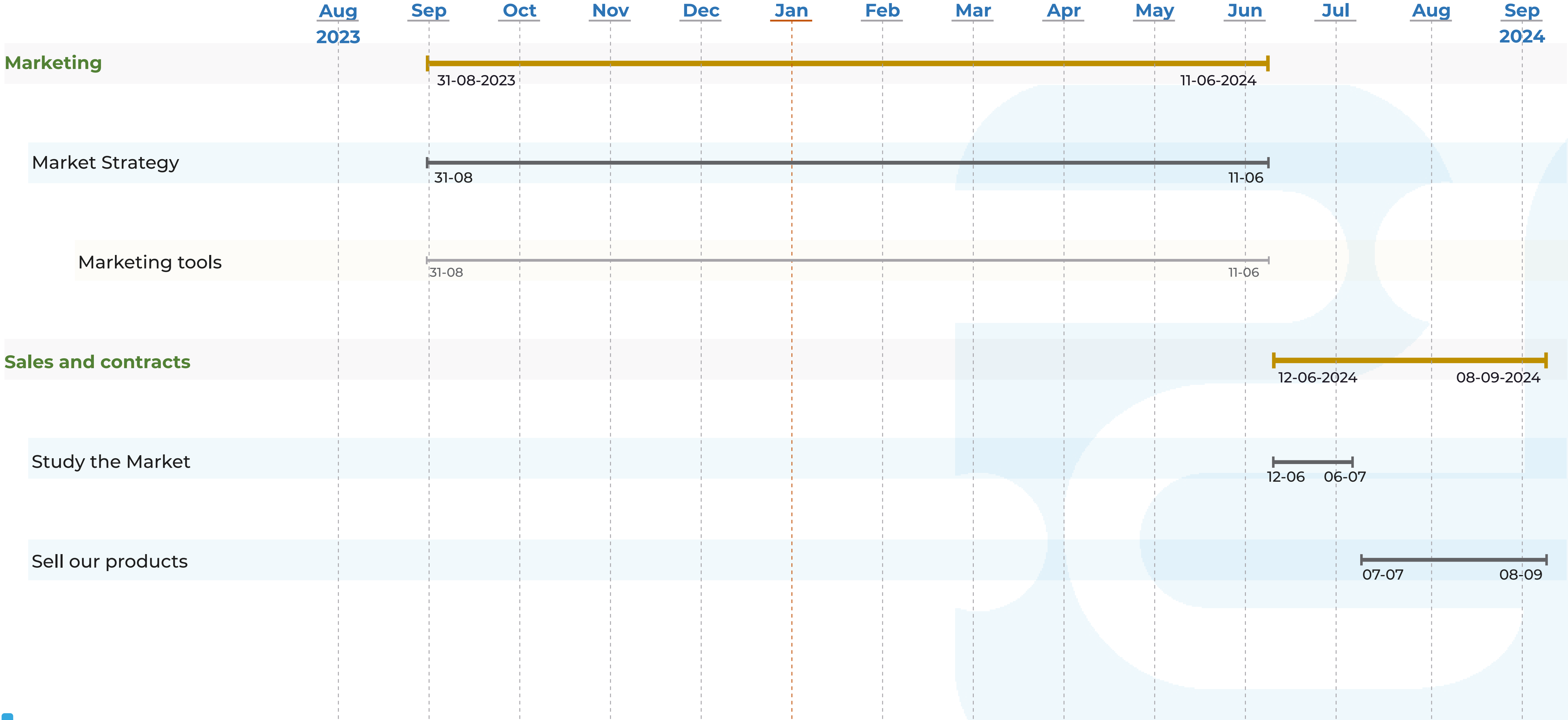




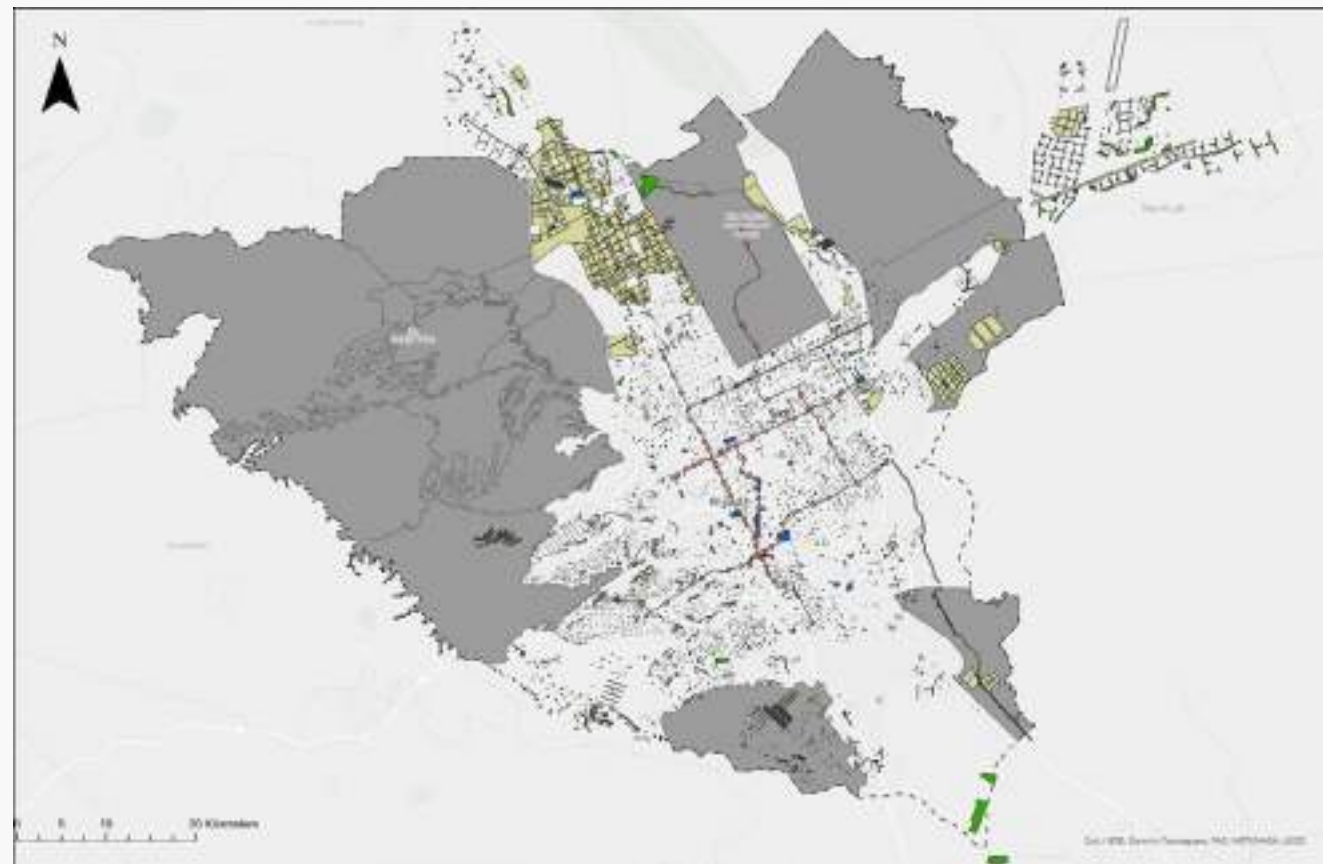
Establish Smart Street Solution Company





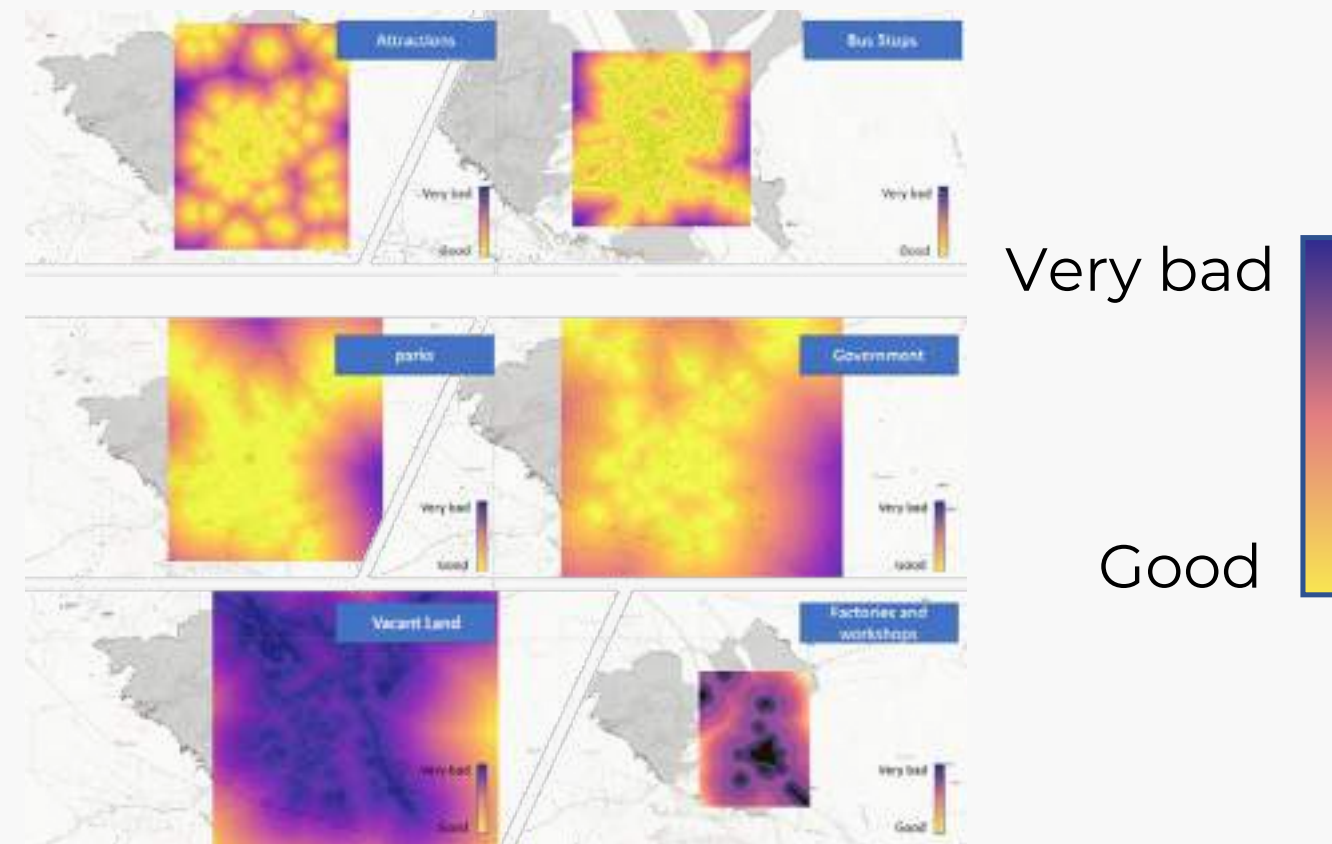


Input



- Governmental ■
- Entertaining ■
- Low Density ■
- Metro Lines —
- Landmarks ▼
- Urban Boundaries ---

Euclidean Distance



Attractions

Bus Stops

Un-desired

Factories and
workshops

Low Density
Areas

Metro Stations

parks

Government

Reclassify



Attractions

Bus Stops

Un-desired

Factories and
workshops

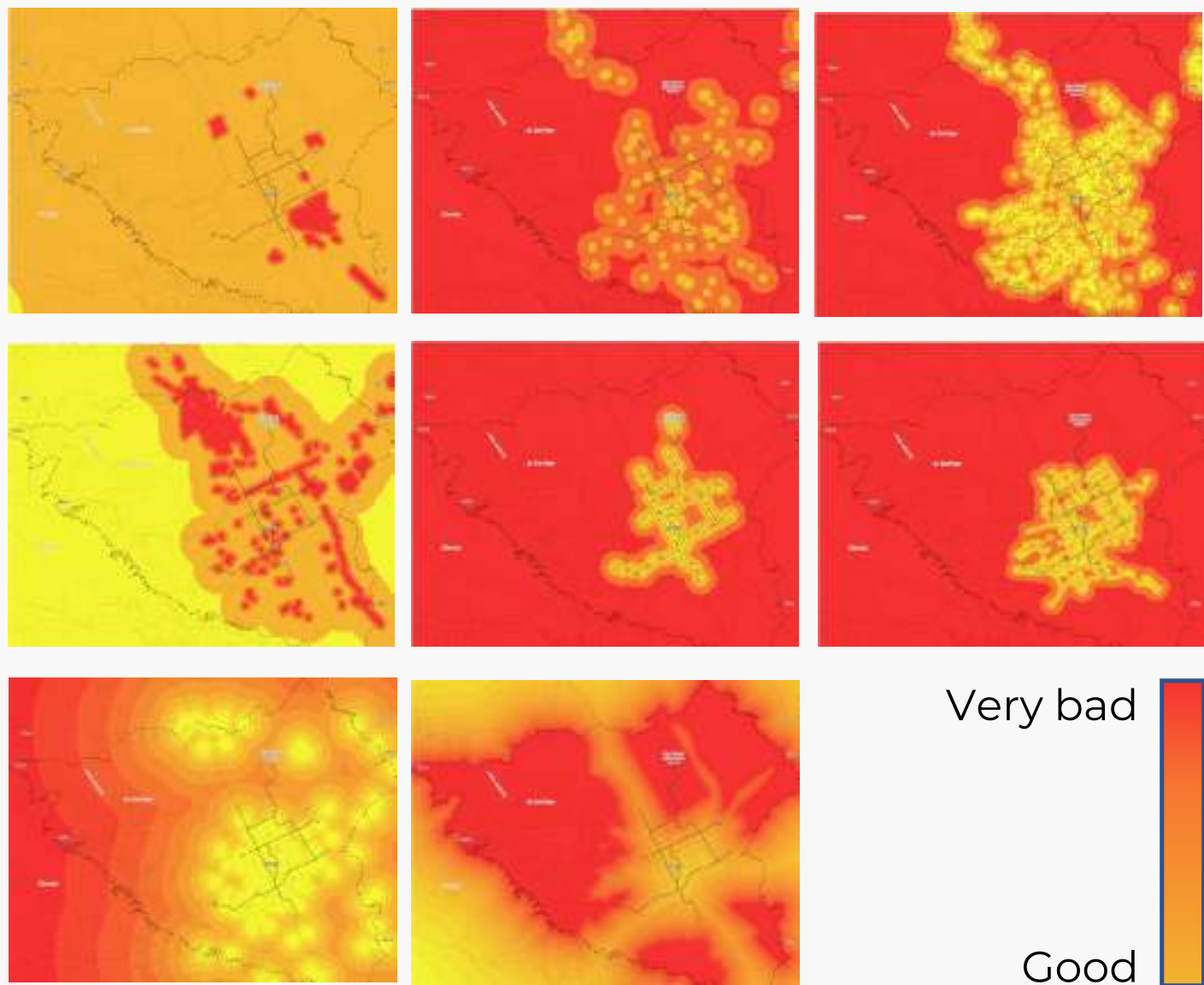
Low Density
Areas

Metro Stations

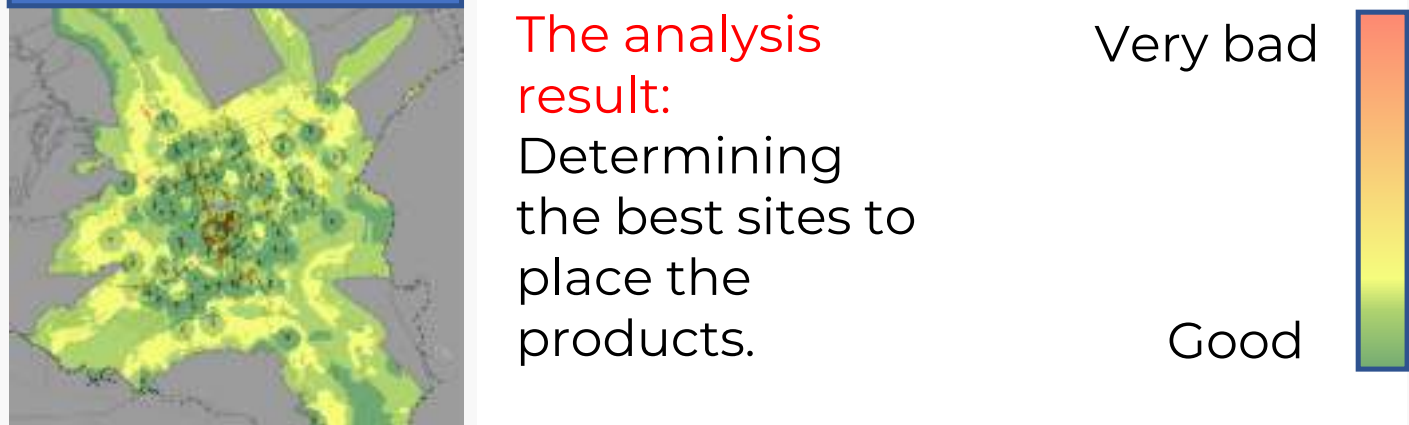
parks

Government

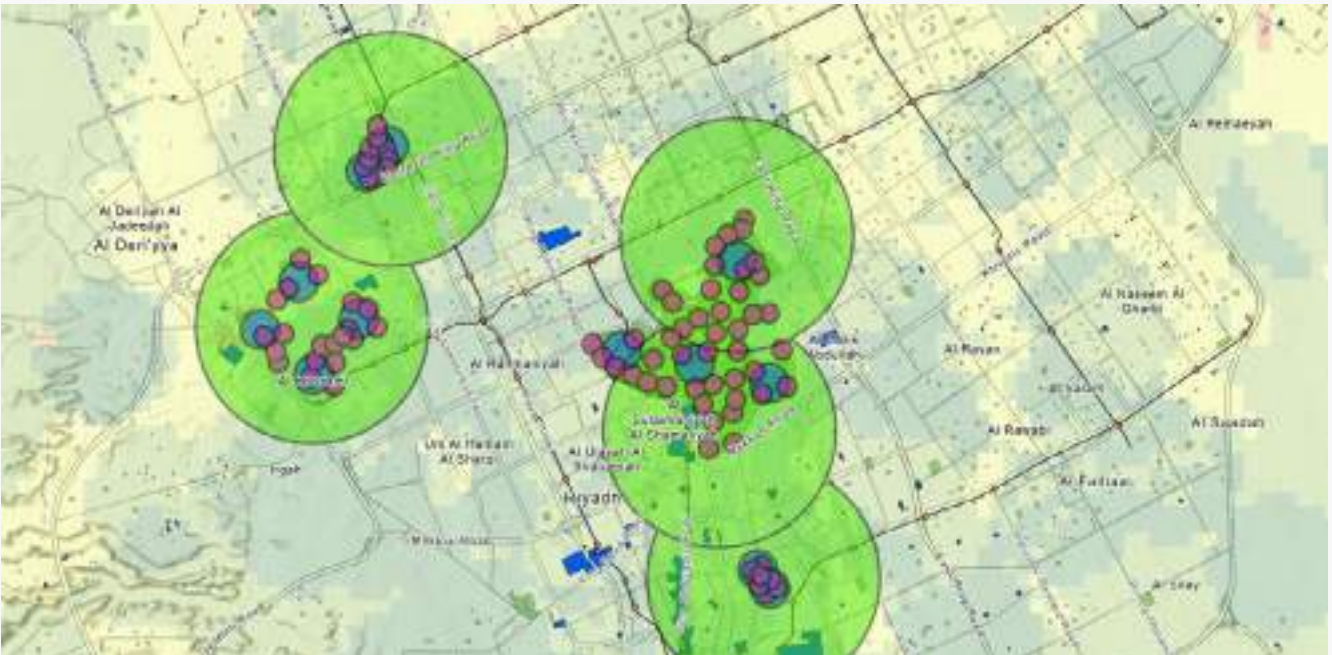
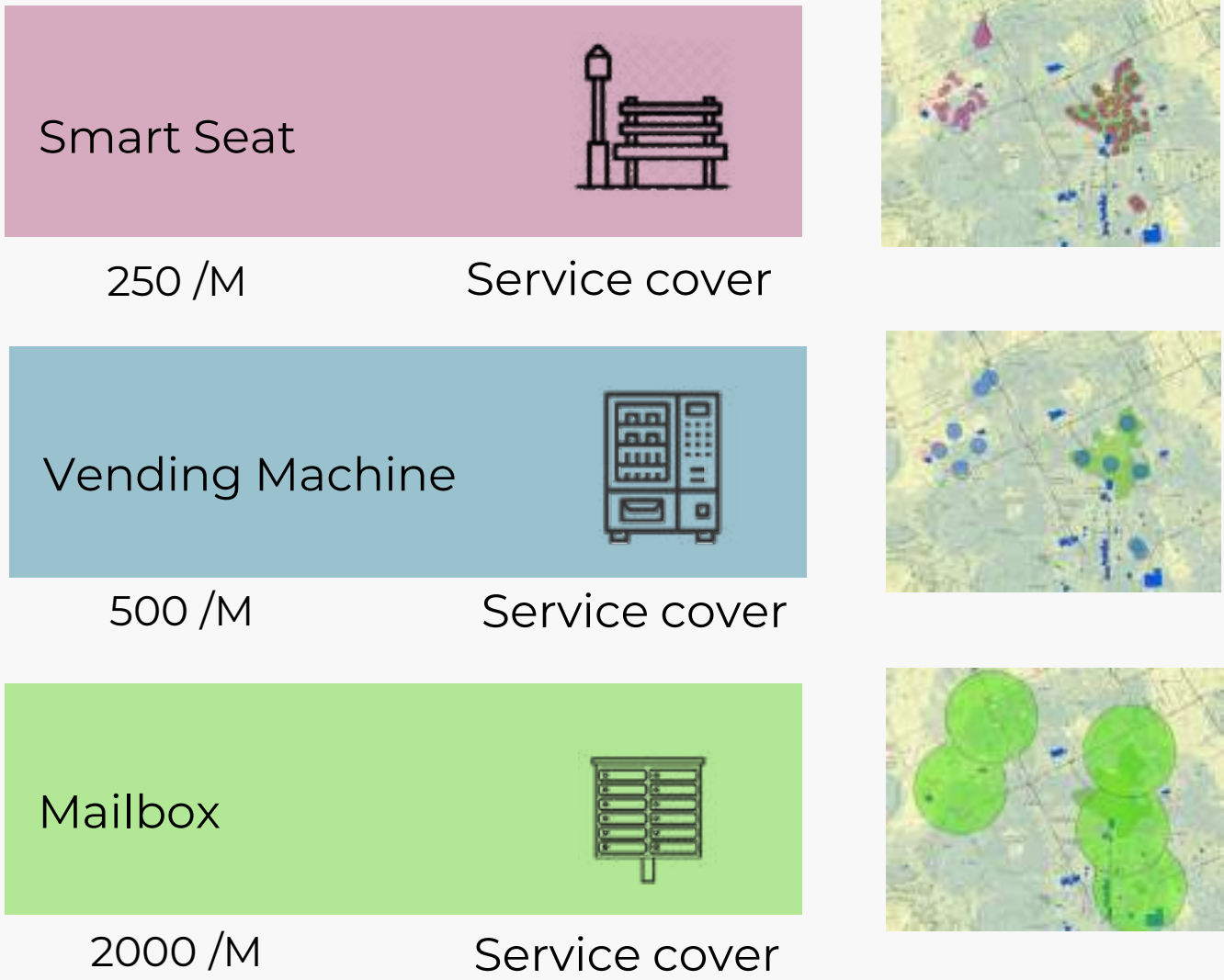
Weighted Overlay



Output



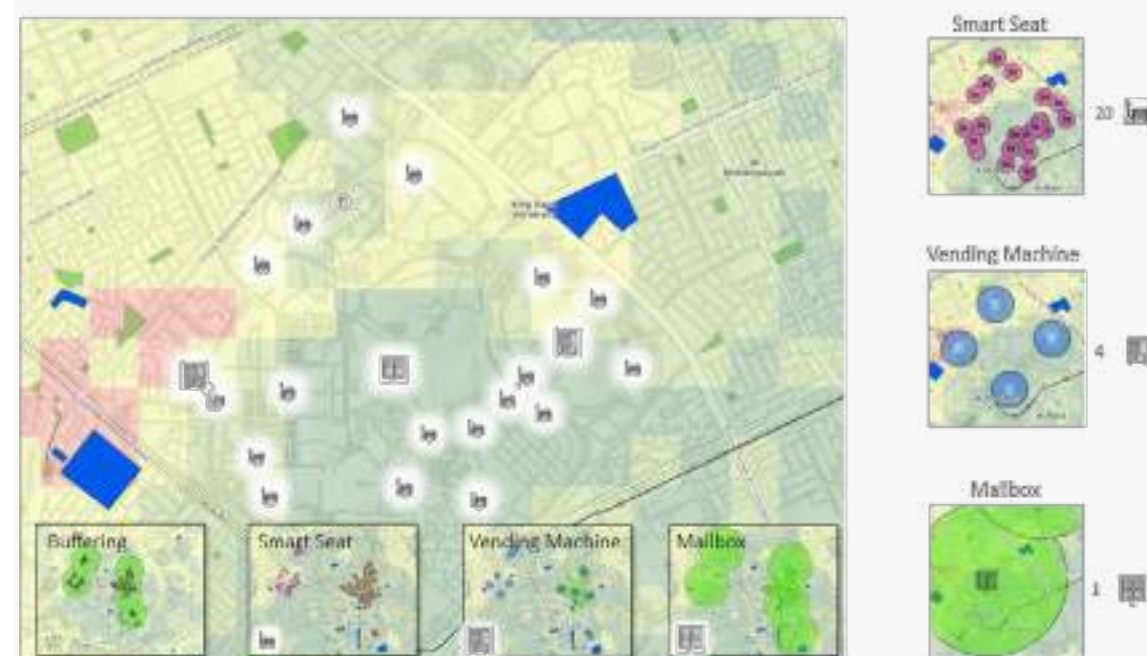
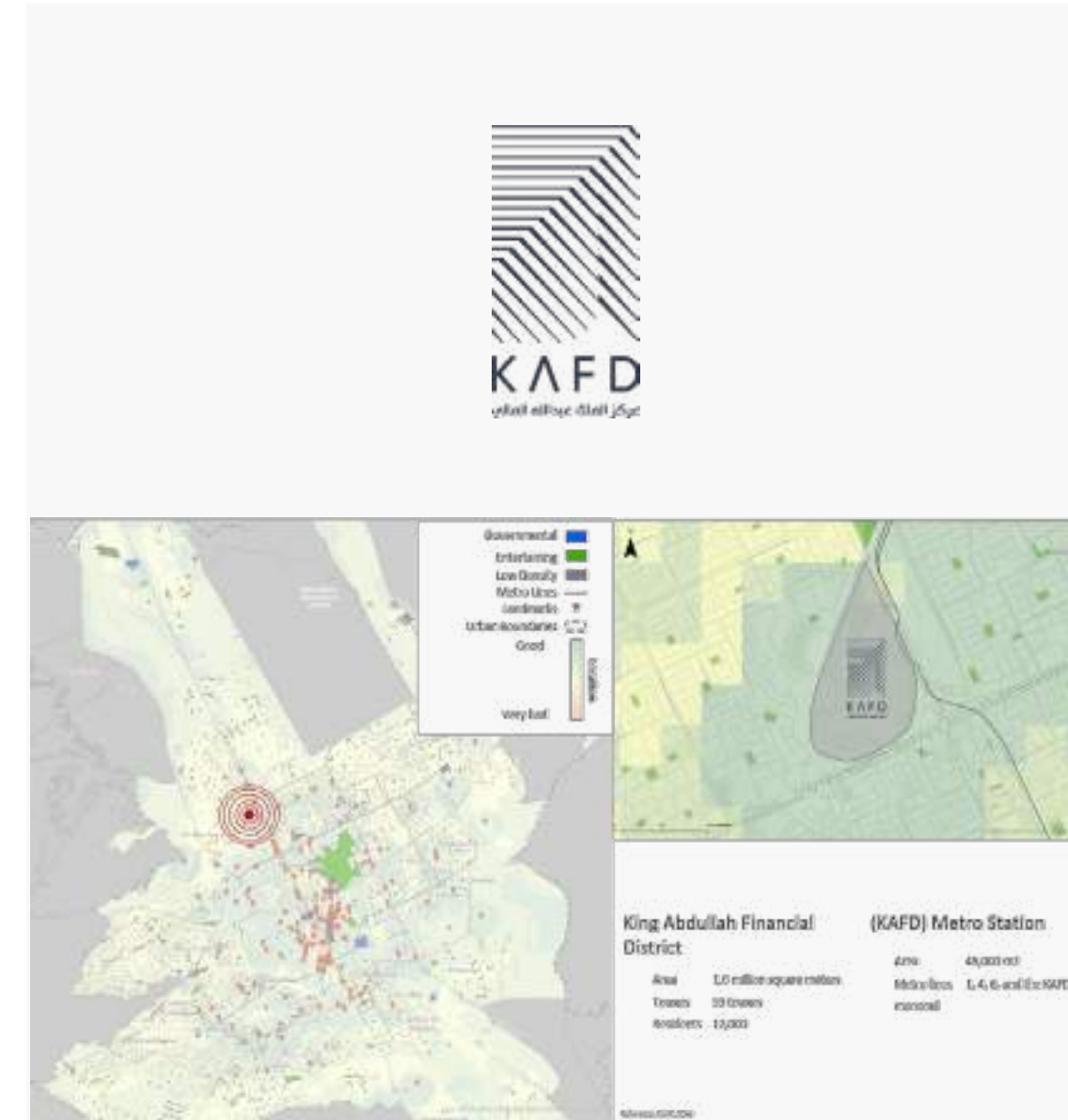
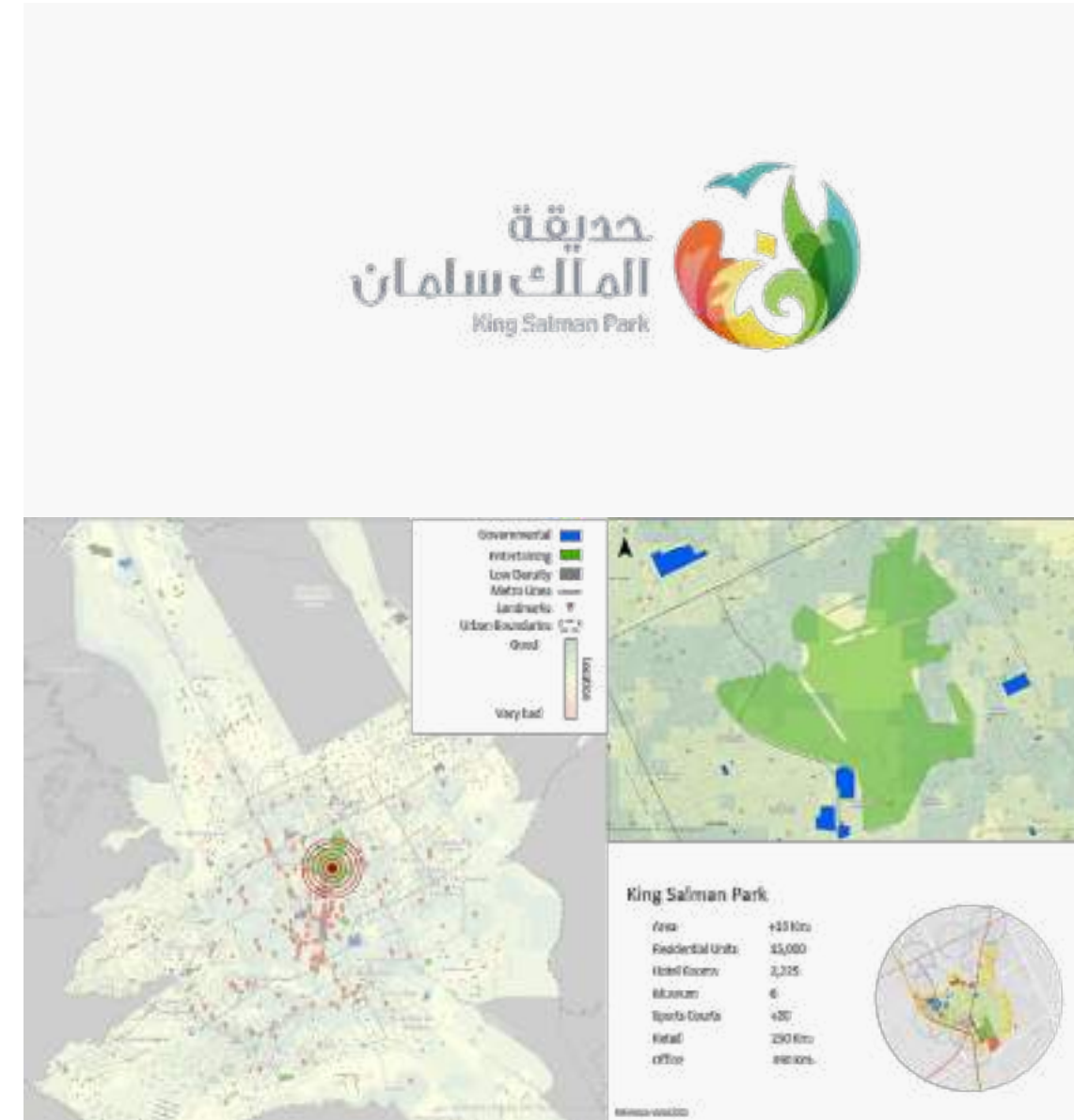
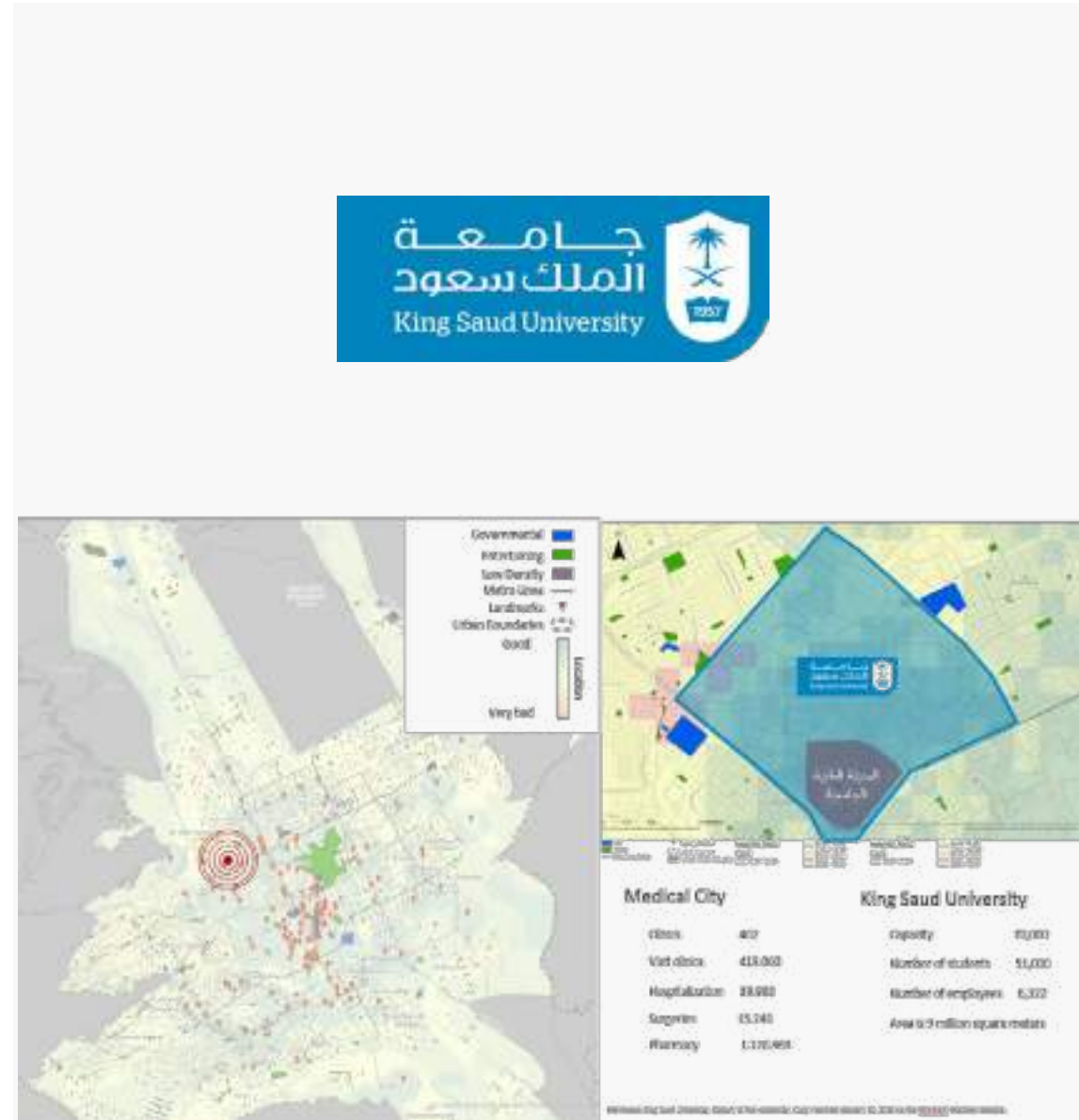
Buffering



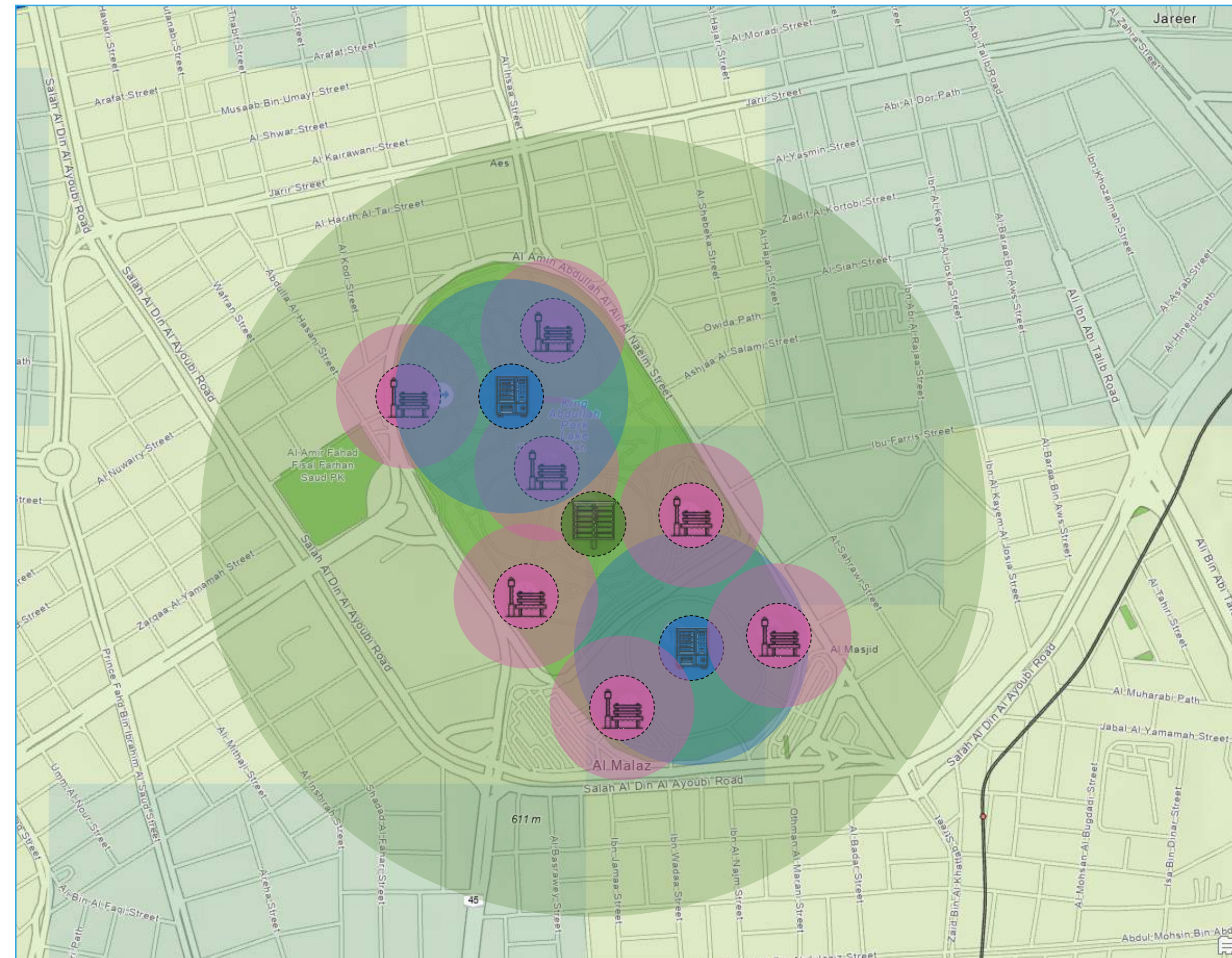
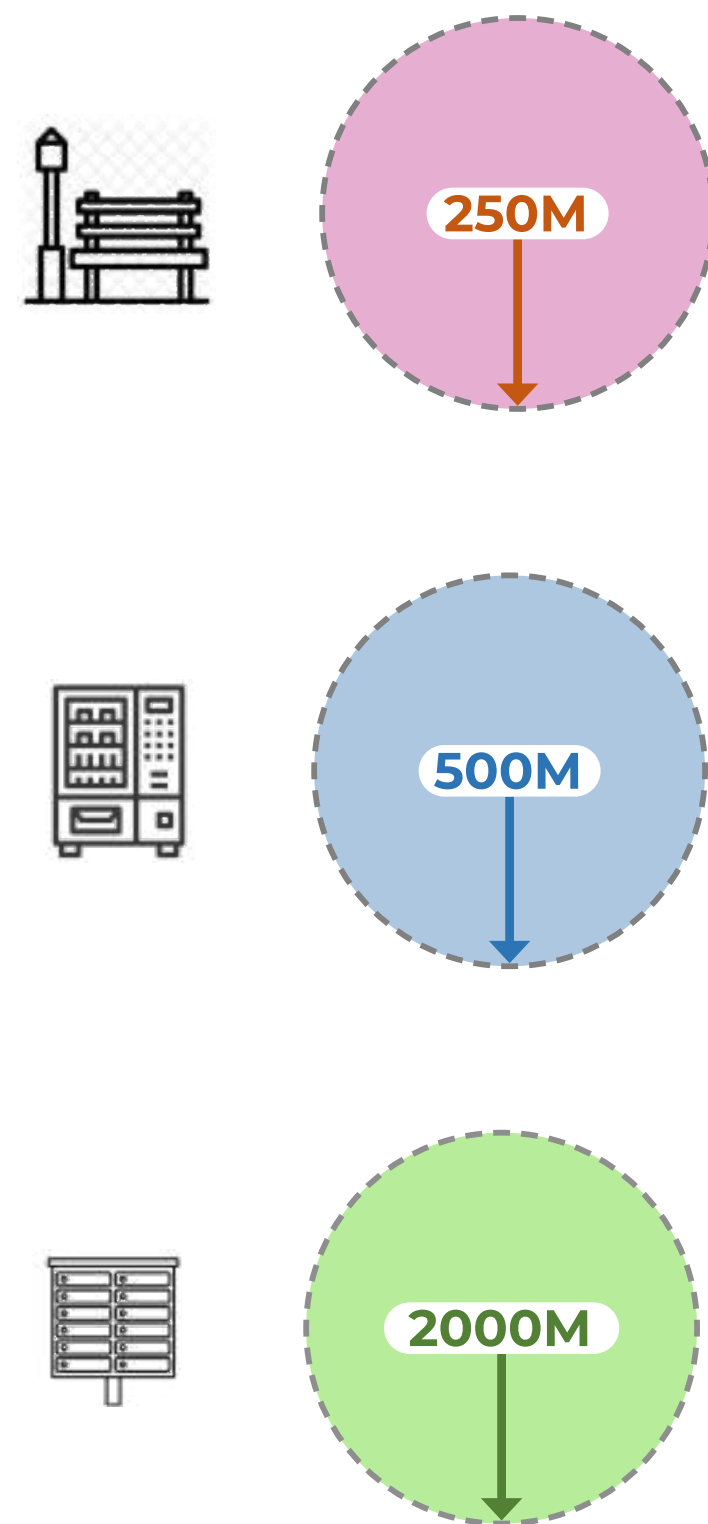
King Saud University	20		4		1	
King Salman Park	44		4		2	
KAFD	11		2		1	
King Abdullah Park	7		2		1	



GIS Spatial Analysis



ServiceCover:



Number of Product:

7

2

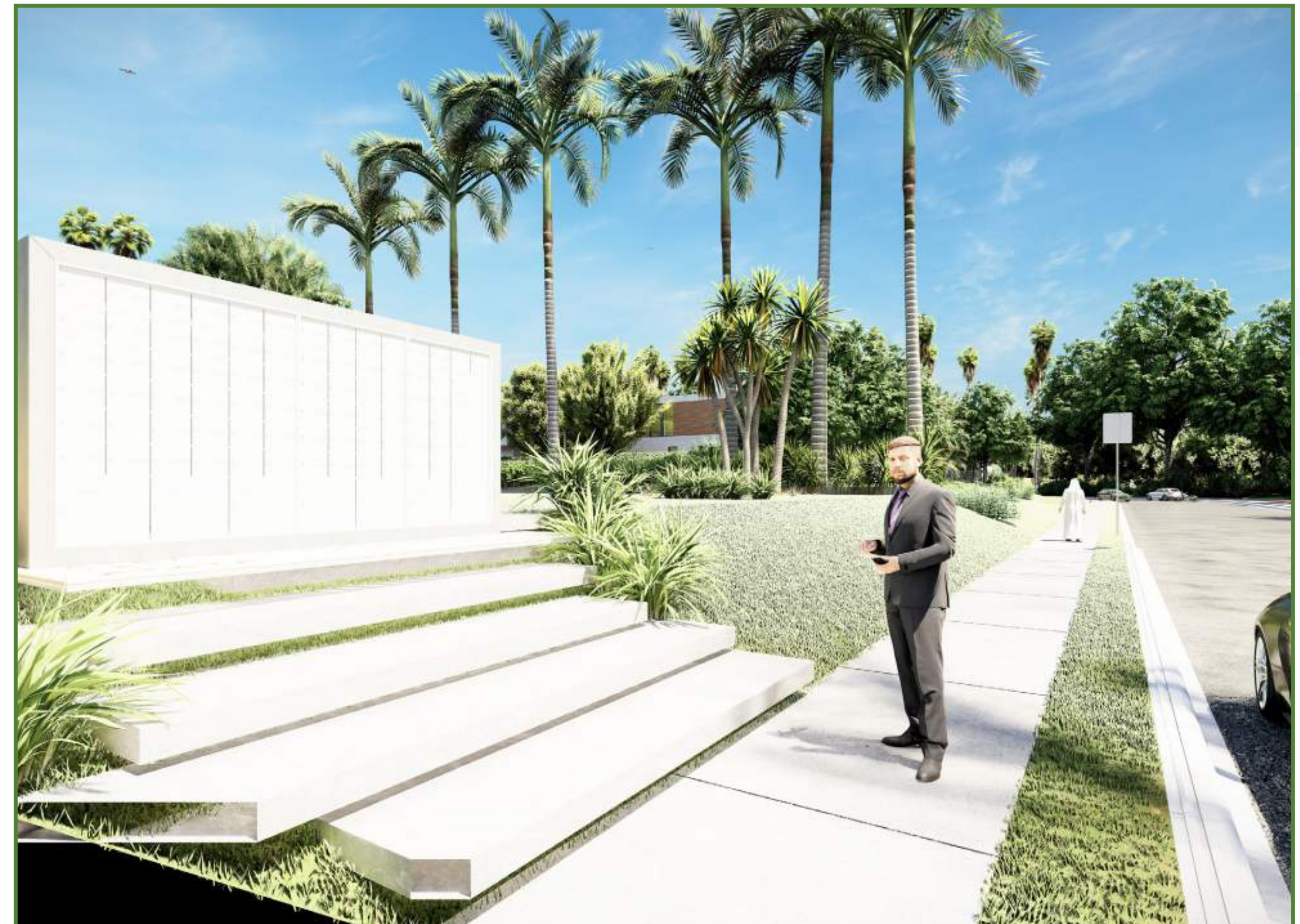
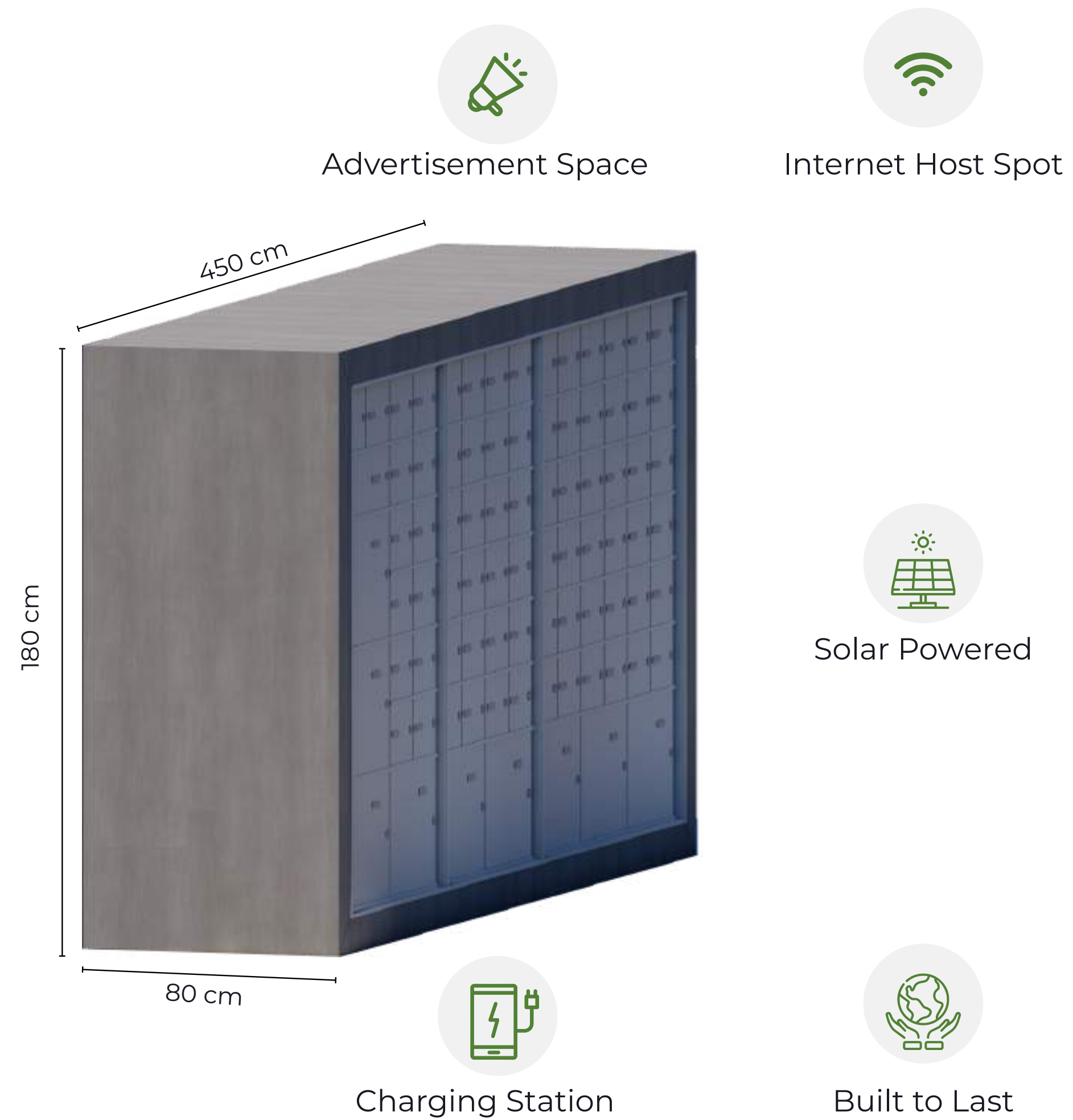


Smart Seat:



3D View

Smart Mailbox:



3D View

Smart Vending Machine:



second year Sales	Number of Units			Cost Per Unit			Sales Per Month			Sales Per Year			total
	Unit Seat	Unit Vinding	Unit Mailbox	Seat (SR/u)	Vinding (SR/u)	Mailbox (SR/u)	Seat (SR/mon)	Vinding (SR/mon)	Mailbox (SR/mon)	Seat (SR/yr)	Vinding (SR/yr)	Mailbox (SR/yr)	
KSU	20	4	1	20,000	18,000	19,000	400,000	72,000	19,000	4,800,000	864,000	228,000	8,232,000
KAP	7	2	1	20,000	18,000	19,000	140,000	36,000	19,000	1,680,000	432,000	228,000	
total							540,000	108,000	38,000	6,480,000	1,296,000	456,000	
Tax													1,234,800
total with tax													9,466,800
third year Sales	Number of Units			Cost Per Unit			Sales Per Month			Sales Per Year			total
	Unit Seat	Unit Vinding	Unit Mailbox	Seat (SR/u)	Vinding (SR/u)	Mailbox (SR/u)	Seat (SR/mon)	Vinding (SR/mon)	Mailbox (SR/mon)	Seat (SR/yr)	Vinding (SR/yr)	Mailbox (SR/yr)	
KSU	20	8	2	25,000	22,000	21,000	500,000	176,000	42,000	6,000,000	2,112,000	504,000	16,356,000
KAP	7	4	2	25,000	22,000	21,000	175,000	88,000	42,000	2,100,000	1,056,000	504,000	
KAFD	11	2	1	25,000	22,000	21,000	275,000	44,000	21,000	3,300,000	528,000	252,000	
total							950,000	308,000	105,000	11,400,000	3,696,000	1,260,000	16,356,000
Tax													2,453,400
total with tax													18,809,400

Yers	(Cost (Outflow		(Invistment and inCome (inflow		Cash Flow	Long Term Governmental Fund	
1st	Cost 1st Year	-3,707,124	Stakeholders Investment	2,500,000	-1,207,124	Fund from SIDF	10,000,000 5000000
2nd	Cost 2nd Year	-24,016,024	2nd Year Sales	9,466,800	-14,549,224	-	-
3rd	Cost 3rd Year	-15,135,024	third Year Sales	18,809,400	3,674,376	-	-
4th	Cost 4th Year	-37,395,024	fourth Year Sales	45,084,600	7,689,576	-	-
5th	Cost 5th Year	-69,456,524	Fifth Year Sales	114,816,000	45,359,476	-	-
Total out flow for 5 Yrs		-149,709,720	Total Sales	188,176,800	38,467,080	Total Fund	10,000,000



No	explained	Category	effect
1	The proposed budget does not cover the costs of the project.	Financial	severe
2	Ignorance of some of the legal responsibilities of the project.	legal	high
3	Electronic hacking attacks on the platform.	technology	severe
4	Lack of logical reasoning in the strategic objectives of the project.	strategy	Average
5	The occurrence of natural disasters that prevent human or natural resources.	environmental	Average



Thank You...