Project name	**Parking assistant**		
Project sponsor	**Orascom development**	**Project manager**	**Abd-Elaziz Elsayed Mohamed**
Project approval date	**15th Nov 2021**	**Last revision date**	**15th May 2021**
Project description	**To introduce a solution for the parking spaces problem by building a lot of parking both in multiple floors or underground ,creating an app that helps people find an empty parking spaces ,and pay attention to the streets and infrastructure of crowded cities.**		
Business case	**World is constantly increasing so finding a parking lot is no longer so easy.** **We faced this problem by our project that will help drivers to find a parking easily and we will finish this project in one year.**		
Costraints (in priority time)	Time	**195 Workdays**	
	budget	**Architect, civil engineer, software engineer,and a guard.**	
Project deliverables	**The software engineering team will create an app that helps drivers to get a parking easily. The application will be available for both android and IOS systems. The drivers can easily use the application and it will give them recommendation for a free parking spaces.**		
Benefits (measurable results)	**building a lot of parking both in multiple floors or underground that will increase the parking spaces.** **creating an app that helps people find an empty car park easily.** **paying attention to the streets and infrastructure of crowded cities.**		
Project team members	Architect	**Designing the building in the way to provide many parking spaces.**	
	Civil engineer	**Responsible for building according to the design specified by the architect.**	
	Software engineering team	**Responsible for creating the application.**	
Risks	**1- Problems with the geographical location.** **2- Lack of drivers who have the ability to use the application.** **3- Hacking the system by unethical hacker.** **4- Sudden failure or fracture of any sensor.**		

-Project scope:

* Parking assistant:

-The project helps drivers to get an easy parking.

* Constraints:

-The project should be available in one year of the project intiation.

-The cost is only 1.53 million dollars.

-We have just 3 teams for the project: Architect ,civil engineering team ,and software engineering team.

* The Project in general:

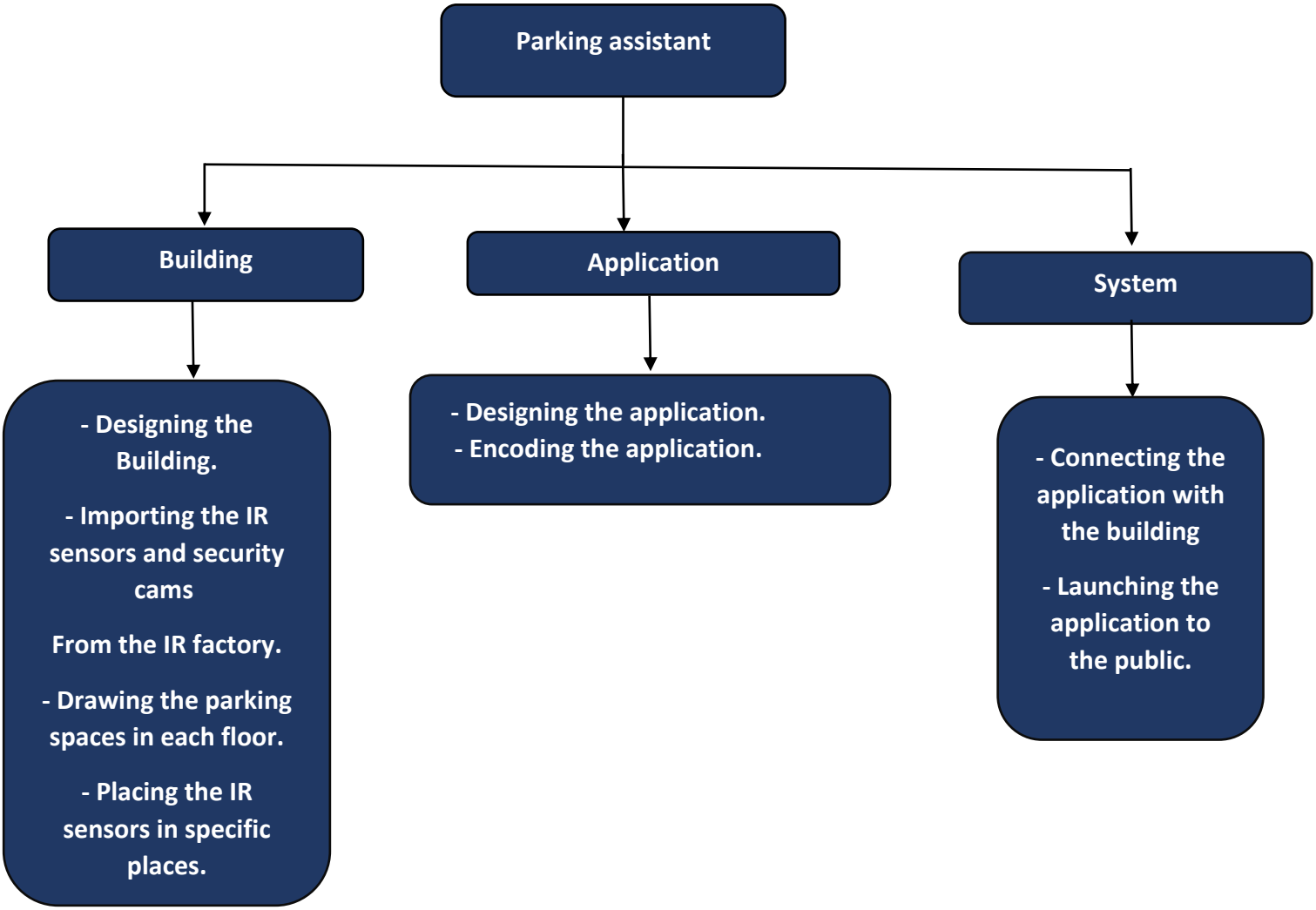
-The project provides an easy and safe parking for drivers by an application that is connected with a sensors in the building which detected the free parking spaces in the building.

- The drivers can deal with the application easily.

* Project exclusions:

-The driver is not able to reserve a parking space.

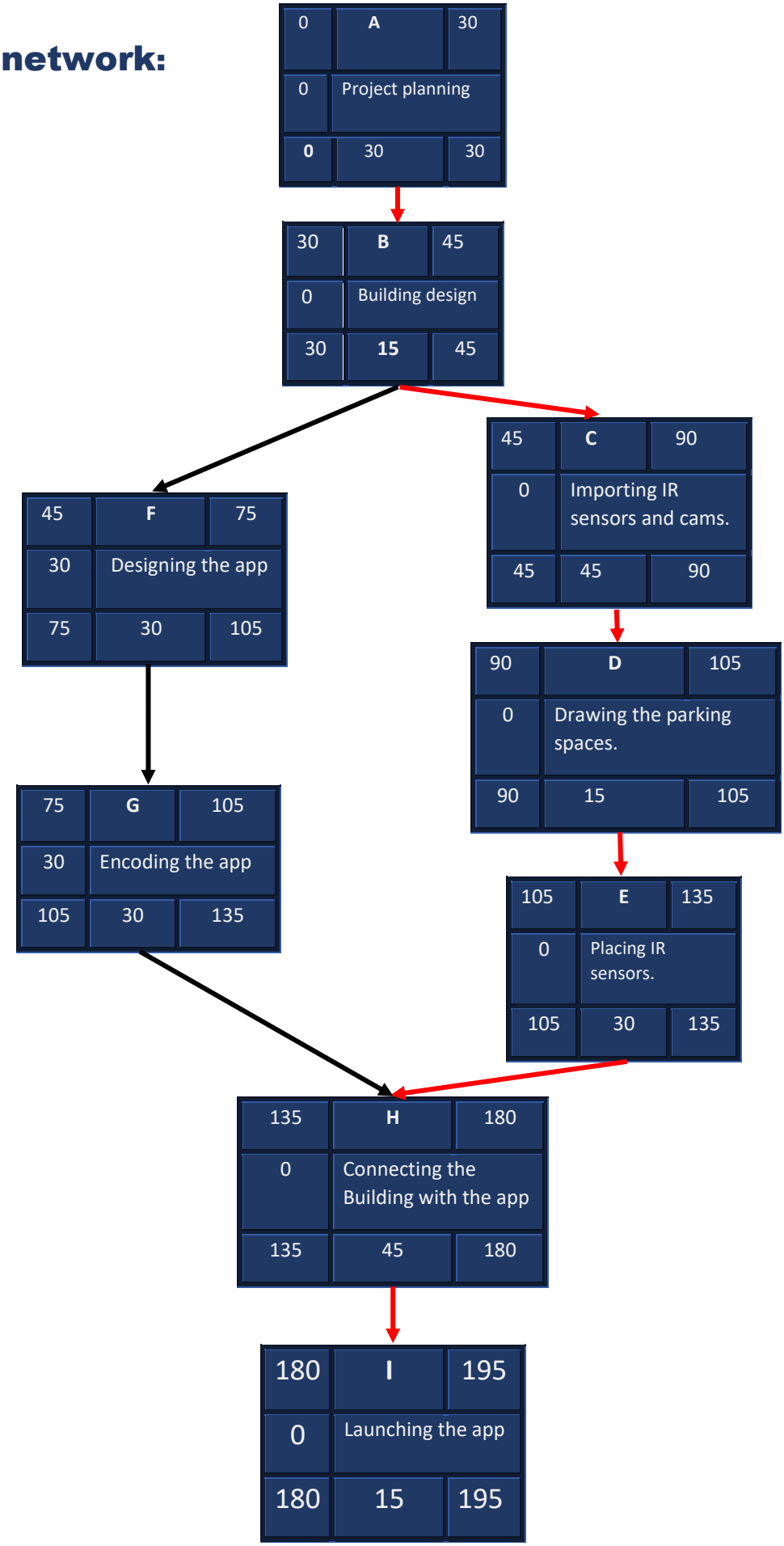
- WBS:


Parking assistant
Building
Application
System
- Designing the Building.
- Importing the IR sensors and security cams
From the IR factory.
- Drawing the parking spaces in each floor.
- Placing the IR sensors in specific places.
- Designing the application.
- Encoding the application.
- Connecting the application with the building
- Launching the application to the public.

- Responsibility matrix:

tasks	Abdelaziz	Arwaa	Aysel	Rawan	Gaser	Ahmed	Omar	Oday	Rana	Selim
Project planning	R I	A	C	R I	C	C	A	C	C	A
Prepare techn,Documention	A I	C	R C	I	C					
Meeting protocols	C	R	A	I	C					
Design the building					C					R
Importing IR sensors and security cams.					C	R	A	I	I	
Drawing Parking Spaces.					C				R	
Placing the sensors in their places.					C				R	
Designing the application.					C	R	A	I	I	
Encoding the application.					C	R	A	I	I	
Connecting the app with the Building.			C	A	C	R	A	I	I	
Launching the app.			C	A	C	R	A	I	I	

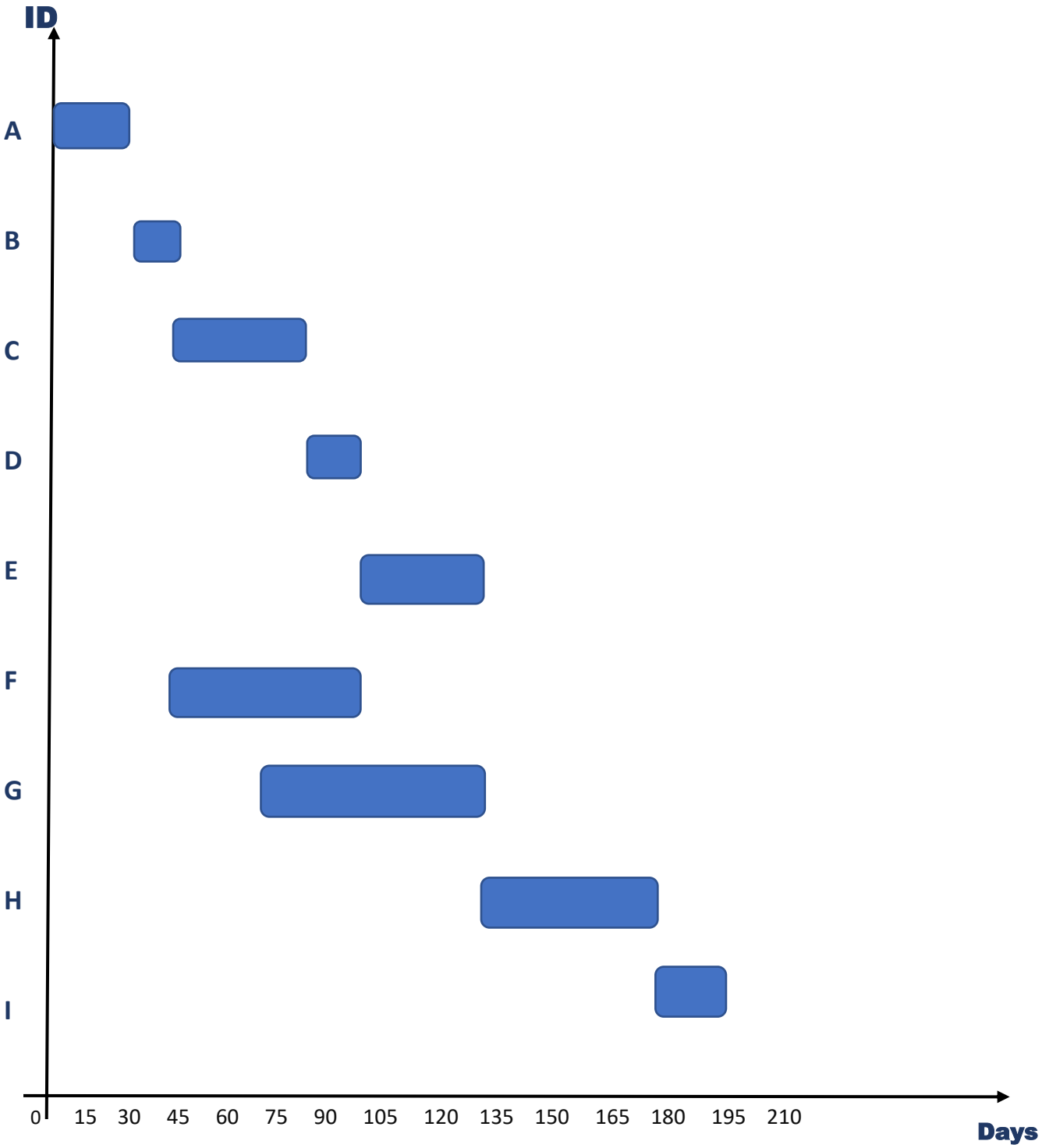
- Project network:



- Critical path:

A, B, C, D, E, H, I

- Gantt chart:

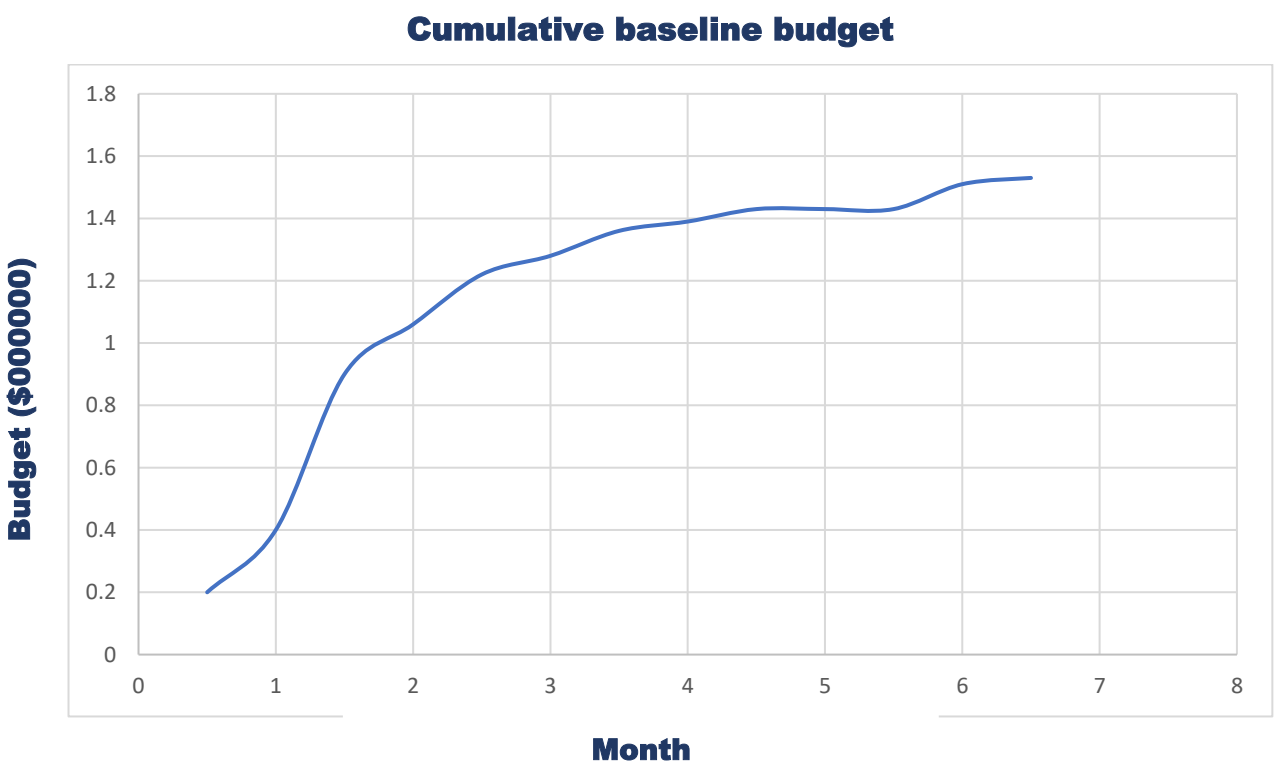

ID
A
B
C
D
E
F
G
H
I
0
15
30
45
60
75
90
105
120
135
150
165
180
195
210
Days

- Resource-constrained schedule:

ID	RES	ES	LF	DUR	SL	0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5
A	10	0	30	30	0	10	10												
B	2	30	45	15	0			2											
C	5	45	90	45	0				5	5	5								
D	2	90	105	15	0							2							
E	2	105	135	30	0								2	2					
F	5	45	105	30	30				5	5									
G	5	75	135	30	30						5	5							
H	7	135	180	45	0										7	7	7		
I	7	180	195	15	0													7	
Total resources						10	10	2	10	10	10	7	2	2	7	7	7	7	
Reference						10	10	10	10	10	10	10	10	10	10	10	10	10	

- Time phased budget: ($000000)

ID	Activity	DUR	Budget	0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5
A	Project plan	30	400	200	200												
B	Building design	15	500			500											
C	Importing resources	45	30				10	10	10								
D	Drawing spaces	15	30							30							
E	Placing resources	30	70								30	40					
F	Application design	30	300				150	150									
G	Application encoding	30	100						50	50							
H	Connecting the building with The application	45	80												80		
I	Launching the app	15	20													20	
Half-month total			1530	200	200	500	160	160	60	80	30	40	0	0	80	20	
Cumulative				200	400	900	1060	1220	1280	1360	1390	1430	1430	1430	1510	1530	



- Risks:

-Here are some potential risks and how to deal with them:

1- A problems with the geographical location:

*** There may be a problem with the geographical location, to avoid it, the site must be examined by the architect before completing the building design.**

2- Lack of drivers who have the ability to use the application:

*** In order to face this problem, we have allocated a month to train the drivers to understand how to use the application. Any driver can subscribe during this month and within a three days he will be able to use the application well.**

3- Hacking the system by unethical hacker:

*** This would be a big trouble, so we assigned a software engineer who is responsible for securing the system and making it safe against hacking.**

4- Sudden failure or fracture of any sensor:

*** To solve this problem, we contact the company sponsoring the project to provide us with a responsible person to solve this problems with sensors.**