



Faculty of Business & Economic Business Department

BUSA2301

DIY security system

Prepared by :

Narmeen Mousa 1191656

Alaa Shaheen 1200049

Rawan Sous 1200129

Instructor : Dr. Sanaa Atari

Section : 2

Date : 20/6/2022

Project Initiation:

Project description

Our project specializes in making a security system for companies, homes or any other institution that requires this system. In the nature of the case, the security system consists of several components so that we buy these components online from other countries because their price is lower and we offer them in the name of our company as an integrated group so that the price is higher and thus this increases the profit for our company. With the possibility of making an application that connects them with each other, as well as an application that connects cameras and sensors, as well as a call center that exists in the company to track with the application and act in the event of anything sudden, this is automatically between the application and the call center without the need for human intervention.

Project Feasibility Analysis

feasibility analysis the project is feasible since that the average cost of the cameras in the markets is 466\$ and our company will offer it at 300\$ while it will cost us 204\$ so its 94\$ profit for each unit.

The problem

1. The lack of companies that provide an integrated and advanced security system for customers.
2. It is very costly for the customer to operate the security system himself. Also, this system will lack perfection and experts who follow the system closely in the event of any problem that the company will take care of.
3. The high price of the security system component and the low level of efficiency of its work compared to its lowest price in other countries.

The best approach for solving it

Importing the components of the protection system from outside the country because of the lower price.

Project Concept Document

Overview of the project

Our project specializes in making a security system for companies, homes or any other institution that requires this system. In the nature of the case, the security system consists of several components so that we buy these components online from other countries because their price is lower and we offer them in the name of our company as an integrated group so that the price is higher and thus this increases the profit for our company. With the possibility of making an application that connects them with each other, as well as an application that connects cameras and sensors, as well as a call center that exists in the company to track with the application and act in the event of anything sudden, this is automatically between the application and the call center without the need for human intervention.

Purpose statement

purpose statement: the project will cost us around 44000\$ as a small startup.

Goals and objectives of the project

Importing the components of the protection system from outside the country because of the lower price, and this of course increases the profit and the employment of engineers and employees we need in our field and they are highly qualified and invest their expertise in work, and the development of the department to convince customers because in any case the company for the protection system is much better than that the customer does it himself.

Success factors

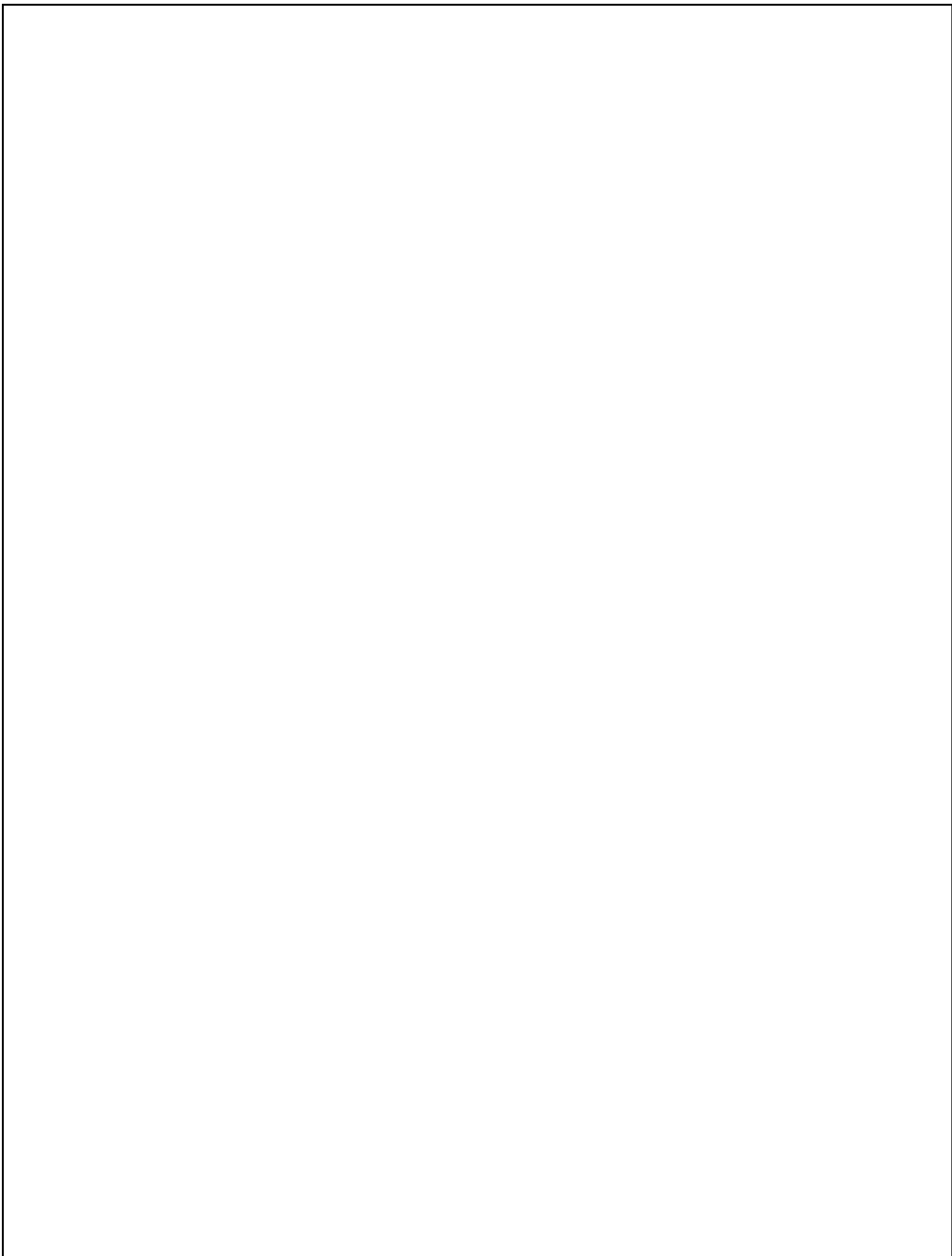
1. Having enough capital to start the company enables us to import the components of the security system from other countries
2. Careful planning of the project
3. Continuous inspection and evaluation during the process of implementing the project to avoid mistakes and problems
4. There are enough engineers and staff able in this field.

Resource requirements

1. human resources needed.
2. Hardware resources.
3. Battery, Wi-Fi modems, sensors, live alert, video verification, HD security camera.
4. Panic Button, Water Sensor, Temperature Sensor, Smoke Detector, Siren, Key Fob, Motion Sensor, Entry Sensor.

Risk information

1. External (unpredictable).
2. Wrong signal from sensor or false alarms.
3. Cameras and sensors don't meet our specification.
4. System get hacked.
5. Easy unauthorized access.
6. Loss of power or Wi-Fi.



Project Charter

PROJECT CHARTER

1. General Project Information				
Project Name:	DIY home security system.			
Executive Sponsors:	Dave sponsor			
Department Sponsor:	Technical department			
Impact of project:	The impact of this project is to have a DIY(do-it-yourself) home security market with a complete line of motion sensors entry, sensors video monitoring ,smoke detectors and carbon monoxide.			
2. Project Team				
	Name	Department	Telephone	E-mail
Project Manager:	Karl Oesterling	Technical department	05789123	KarlOesterling@gmail.com
Team Members:	Team lead	Technical department	45464312	Teamlead@gmail.com
	Member 1	It department	68431321	Member1@gmail.com
	Member 2	Marketing department	64531218	Member2@gmail.com
	Member 3	It department	95515115	Member3@gmail.com
3. Stakeholders (e.g., those with a significant interest in or who will be significantly affected by this project)				
IT companies				
The ministry of communications				
Clients				

4. Project Description
Project Purpose / Business Justification Describe the business need this project addresses
<p>The Do-it-Yourself (DIY) home security systems are essential devices in making ensuring that the homes, offices and business premises are safeguarded.</p> <p>The DIY systems enable the owners to be aware of the security status of their premises through mobile feeds and live alerts through a smart home integration system.</p> <p>Following the fact that every home has different security needs, the DIY systems come in varying forms to meet these varying needs.</p> <p>DIY for home security can be customized for self-monitoring from alert feeds and video live streams.</p> <p>The DIY home security market is estimated at \$3.5B with anticipated growth at 22% per year over the next five years.</p> <p>The DIY product line will have a unique brand identity but will use existing call center operations and R&D services.</p>
Business Need
<p>We are highly confident in a 10% market share by year 2, which will produce \$350M in incremental sales with the potential for additional market penetration in subsequent years. Operating margins in 20% range will produce an incremental 570M in operating income after the 10% market share is realized.</p>
Deliverables List the high-level "products" to be created (e.g., improved xxxx process, employee manual on yyyy)
<p>The outcome of this project is a Mobile app that is easy to use and allows you to control your system from anywhere and provides</p> <p>alerts when activity is detected</p> <ul style="list-style-type: none">• 24/7 professional monitoring against intruders, fire, water damage, and carbon monoxide• Visual verification option allowing you to monitor and watch your home at any time• Power cellular backup that allows a cellular connection to work if your Wi-Fi goes out• Built-in battery backup in case of a power outage

Project Milestones <i>Propose start and end dates for Project Phases (e.g., Inception, Planning, Construction, Delivery) and other major milestones</i>	
Complete End-User Studies	9/1/15
Complete Prototype Field Testing	5/1/16
Manufacturing Pilot Lot	5/1/17
Launch	8/1/17
Major Known Risks (including significant Assumptions) <i>Identify obstacles that may cause the project to fail.</i>	
Risk	Risk Rating (Hi, Med, Lo)
IP Restrictions	High
Call Center Capacity	Medium
Constraints <i>List any conditions that may limit the project team's options with respect to resources, personnel, or schedule (e.g., predetermined budget or project end date, limit on number of staff that may be assigned to the project).</i>	
quality constraints	
resources constraints	
Organizational Structure Constraint	
Scope constraints	

Stakeholders register

Stakeholder Register ABC ENGINEERING AND TECHNOLOGY, INC.	
Stakeholder Name _____	
Position _____	
Contact Information	

Potential Impact on Project	

Miscellaneous Comments	

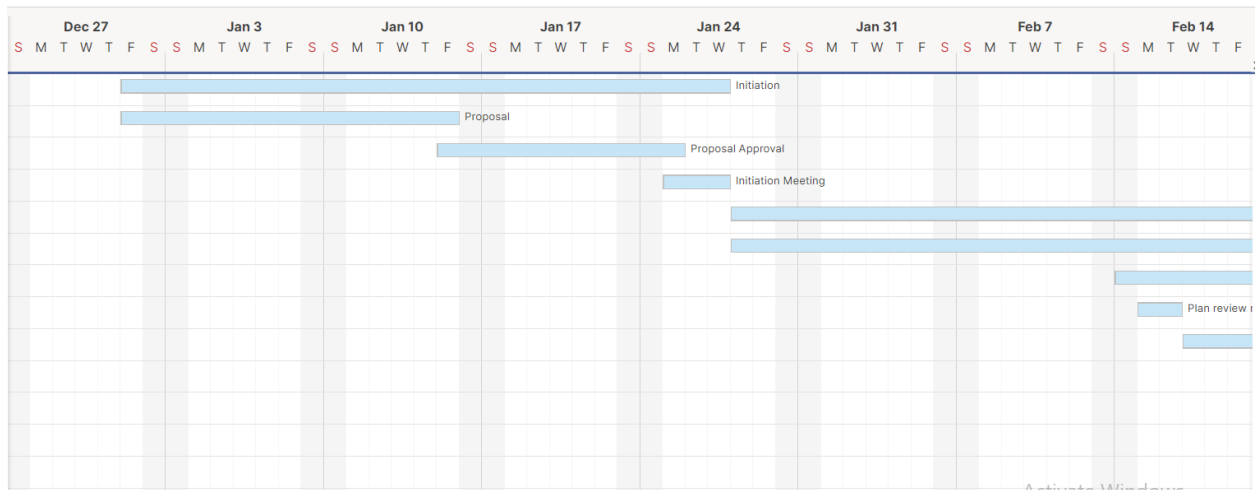
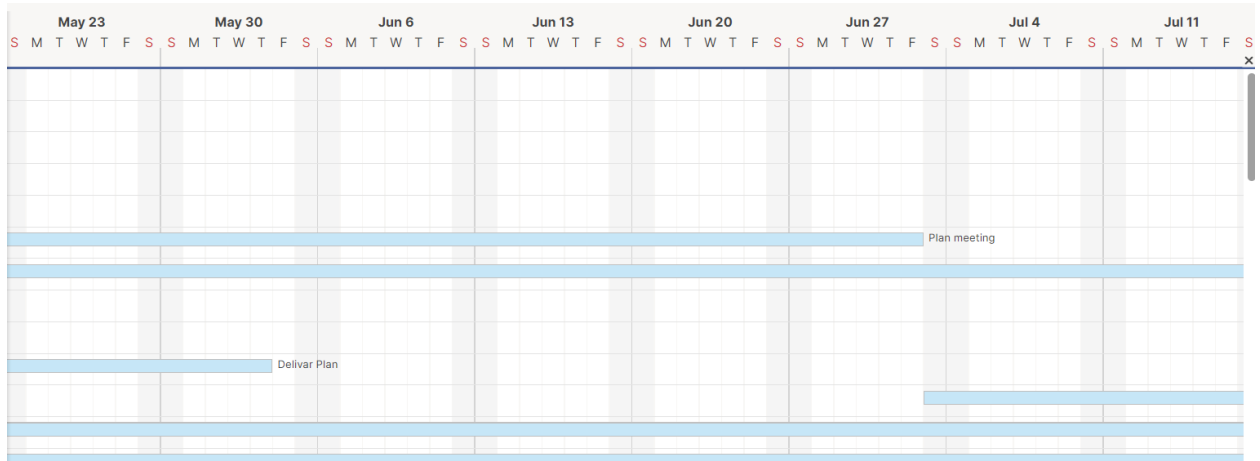
Project Planning

Work Breakdown Structure

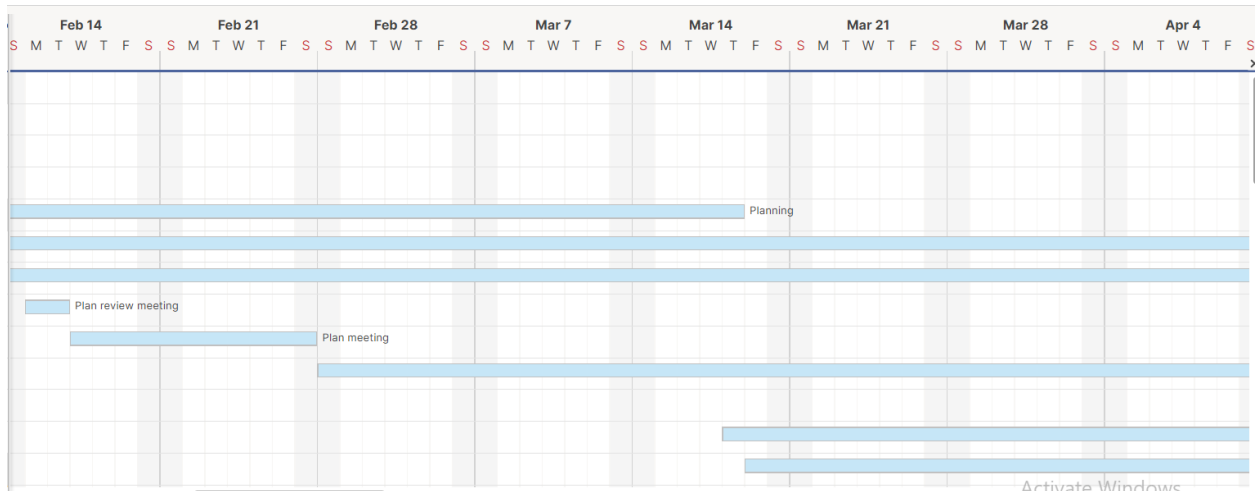
Schedule

Project		Friday 01/01/2021	
Initiation	27 days	Friday 01/01/2021	wedensday 27/01/2021
Proposal	15 days	Friday 01/01/2021	Friday 15/01/2021
Proposal Approval	10 days	Friday 15/01/2021	Monday 25/01/2021
Initiation Meeting	2 days	Monday 25/01/2021	Wedensday 27/01/2021
Planning	46 days	Thursday 28/01/2021	Tursday 18/03/2021
Plan meeting	10 day	Thursday 28/01/2021	Sunday 07/02/2021
Delivar Plan	7 days	Monday 08/02/2021	Sunday 14/02/2021
Plan review meeting	1 day	Monday 15/02/2021	Tuesday 16/02/2021
Plan meeting	10 day	Wedensday 17/02/2021	Saturday 27/02/2021
Delivar Plan	7 days	Sunday 28/02/2021	Saturday 06/03/2021
Plan review meeting	1 day	Sunday 07/03/2021	Monday 08/03/2021
Plan approval	10 days	Tuesday 09/03/2021	Tursday 18/03/2021
Execution	185 days	Friday 19/03/2021	Wedensday 22/09/ 2021
Project Management	80 days		
Team Organization	20 days	Friday 19/03/2021	Thursday 08/04/2021
Resources Allocation	20 days	Friday 09/04/2021	Wedensday 28/04/2021
Activities Scheduling	20 days	Thursday 29/04/2021	Tuesday 18/05/2021
Cost Analysis	20 days	Wedensday 19/05/2021	Monday 07/06/2021
Product Management	75 days		
Orders Registration	35 days	Tuesday 08/06/2021	Tuesday 13/7/2021
Deliveries Management	40 days	Wedensday 14/7/2021	Monday 23/8/ 2021
Advertising	30 days		
Shooting Ad Video and Photo	15 days	Tuesday 24/8/ 2021	Tuesday 07/09/ 2021
Social Media Campaign	15 days	Wedensday 08/09/ 2021	Wedensday 22/09/ 2021
Closing	32 days	Thursday 23/09/ 2021	Monday 25/10/ 2021
Handoff Meeting	2 days	Thursday 23/09/ 2021	Saturday 25/09/ 2021
Expert judgment	10 days	Sunday 26/09/ 2021	Tuesday 05/10/ 2021
Data analysis	5 days	Wedensday 06/10/ 2021	Sunday 10/10/ 2021
Regression analysis	5 days	Thursday 11/10/ 2021	Friday 15/10/ 2021
Trend analysis	5 days	Suterday 16/10/ 2021	Wedensday 20/10/ 2021
Variance analysis	5 days	Thursday 21/10/ 2021	Monday 25/10/ 2021

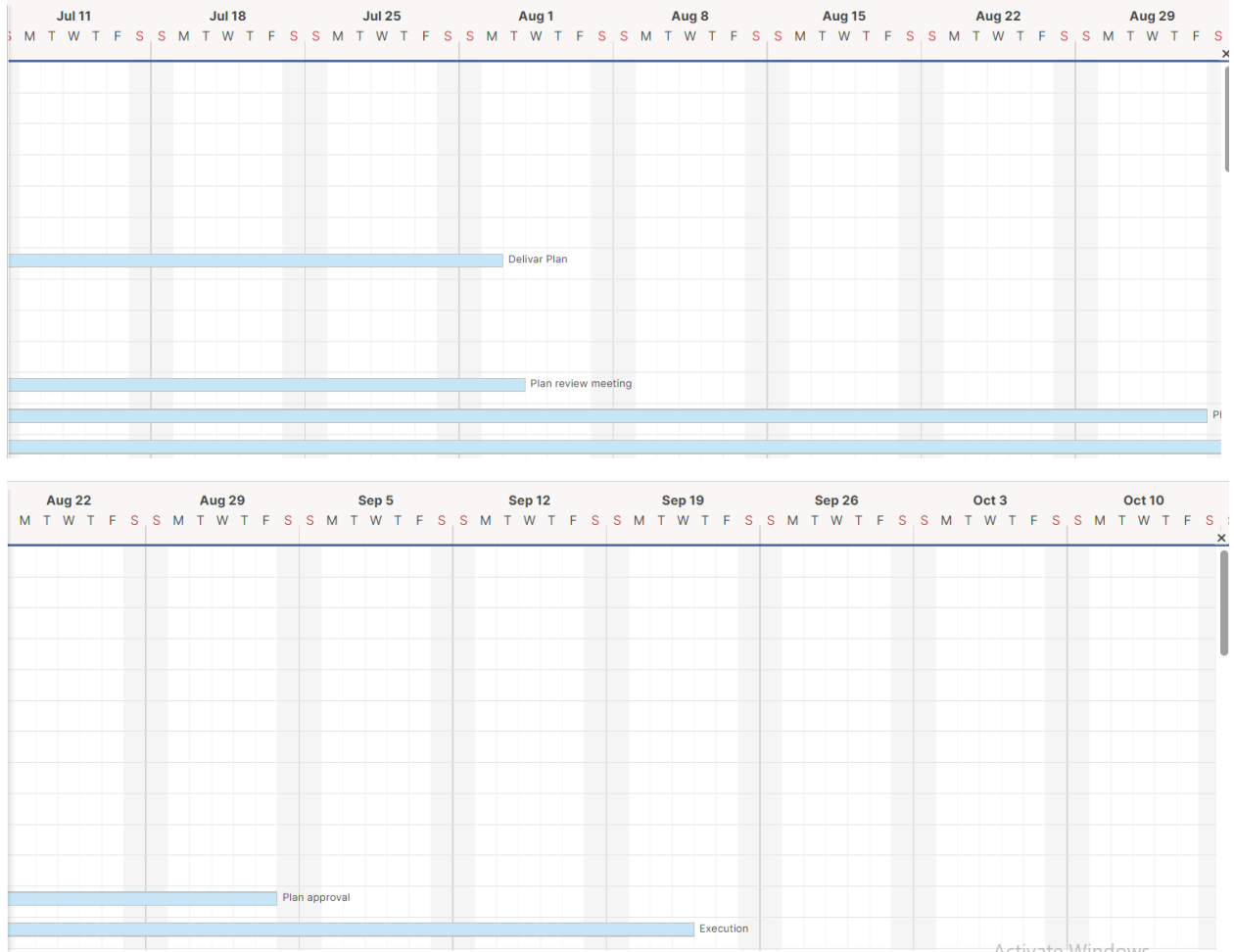
Gantt chart



Activate Windows
Go to Settings to activate Windows.



Activate Windows



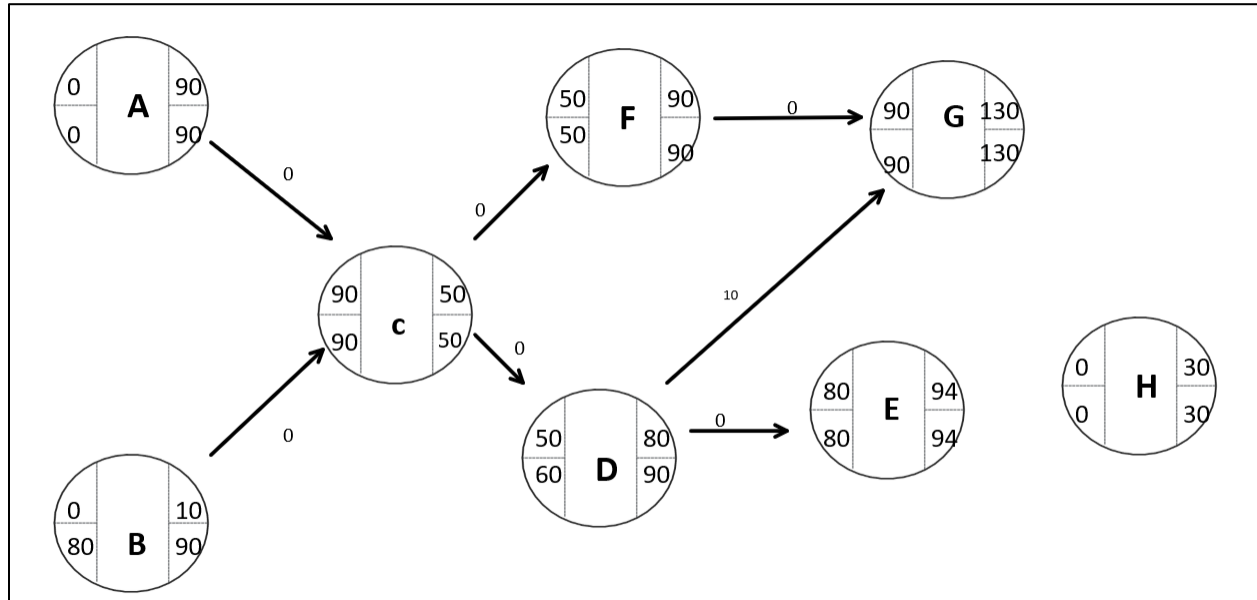
//link for the chart above

<https://app.smartsheet.com/sheets/XxqVPF5GfVf4PQpQQJHw6FpcgWvR6wGWhjv37Pr1?view=gantt>

CPM chart

Activates, Predecessors and Time Estimates			
Activity	Description	Duration	Immediate Predecessors
A	Finishing the feasibility study and making precise time and resource estimations.	3 months	----
B	Finding a warehouse	10 days	----
C	Order products	40 days	A,B
D	Receipt of products	30 days	C
E	rebrand the products with our company name	14 days	D
F	Receipt of customer requests	40days	C
G	Delivery of customer orders	50 days	F,D
H	Advertising	30 days	-----

Critical path



Critical Path (CP) is defined as the longest estimated sequence of interdependent activities that should be accomplished on time to ensure completion of the project on due-date. The critical path activities are performed under the “predecessor-successor” relationship, so that any next activity cannot be started until its predecessor is complete.

In our CPM there are different paths then we determine the critical path as follows:

$$A \rightarrow C \rightarrow F \rightarrow G = 90+40+40+50$$

$$A \rightarrow C \rightarrow D \rightarrow G = 90+40+30+50$$

$$A \rightarrow C \rightarrow D \rightarrow E = 90+40+30+14$$

$$B \rightarrow C \rightarrow F \rightarrow G = 10+40+40+50 = 140$$

$$B \rightarrow C \rightarrow D \rightarrow G = 10+40+30+50 = 130$$

$$B \rightarrow C \rightarrow D \rightarrow E = 10+40+30+14 = 94$$

So the critical path is **B -> C -> D -> E** equals 94.

Cost estimation

Year:		0	0	1	1	2	2	3	3	Total	
Ref	Project Expenditures	Rate \$ per Unit/Day	Quantity Units/Days	\$	Quantity Units/Days	\$	Quantity Units/Days	\$	Quantity Units/Days	\$	Total \$
1	Procurement process										
1.1	Internal resources / staff costs:										
1.1.1	- Information Systems (IS) department	100	1	100							100
1.1.2	- user departments	100	1	100							100
1.1.3	- procurement department	100	1	100							100
1.2	_procurement exporting	100000	1	10000							10000
1.3	Specification / RFP tools and programs	500	1	500							500
1.4	Consultancy assistance	0	0	0							0
1.5	Legal assistance	0	0	0							0
	Total procurement costs			10800		0		0		0	10800
	Excution process										
2	Software costs										
2.1	Application software user licences	1000	0	0	1	1000	1	1000	0	0	2000
2.2	Software modifications	0	0	0	0	0	0	0	0	0	0
2.3	Database user licences	5000	0	0	0	0	0	0	0	0	0
2.4	Additional security applications	1000	0	0	1	1000	0	0	0	0	1000
2.5		0	0	0	0	0	0	0	0	0	0
2.6		0	0	0	0	0	0	0	0	0	0
	Sub total			0		2000		1000		0	3000
3	Hardware costs										
3.1	Servers (new or upgraded, dedicated or shared)	1000	0	0	2	1000	0	0	0	0	1000
3.2	PC's (new or upgrades)	1000	0	0	10	1000	0	0	0	0	1000
3.3	Additional memory	1000	1	1000	0	0	0	0	0	0	1000
3.4	Additional cpu	1000	1	1000	0	0	0	0	0	0	1000
3.5	Additional processing services (temporary or permanent) eg via cloud services or other internal resource	0	0	0	0	0	0	0	0	0	0
3.6	Back up devices	1000	0	0	5	100	0	0	0	0	100
3.7	Disk storage	0	0	0	0	0	0	0	0	0	0
3.8		0	0	0	0	0	0	0	0	0	0
3.9		0	0	0	0	0	0	0	0	0	0
3.10		0	0	0	0	0	0	0	0	0	0
	Sub total			2000		2100		0		0	4100
4	Network costs										
4.1	Cabling or wireless LAN, WAN or other network	5000	0	0	1	5000	0	0	0	0	5000
4.2	Routers	1000	0	0	0	0	0	0	0	0	0
4.3	Modems	1000	0	0	0	0	0	0	0	0	0
4.4	Internet access eg ADSL / broadband, satellite	1000	0	0	1	1000	0	0	0	0	1000
4.5		0	0	0	0	0	0	0	0	0	0
4.6		0	0	0	1	0	0	0	0	0	0
4.7		0	0	0	0	0	0	0	0	0	0
4.8		0	0	0	0	0	0	0	0	0	0
	Sub total			0		6000		0		0	6000

Human Recourses budget

CLIENT: Example Client
CREATED BY: rawanafifsous
HISTORY: 1 of 1
ONLINE SHARES: 0 Shares

Preparation and exporting					\$960
exporting from other companies					\$660
Auditors	10 /Hour	20 Low	40 High		\$300
Engineer	12 /Hour	20 Low	40 High		\$360
Project Planning and meeting					\$300
Engineers	10 /Hour	20 Low	40 High		\$300
Advertising					\$200
Designs					\$200
Designers	10 /Hour	10 Low	30 High		\$200
Development and system building					\$1,200
Project Development					\$600
Engineer	10 /Hour	40 Low	80 High		\$600
Finishing					\$600
Engineers	10 /Hour	40 Low	80 High		\$600

+ Add New
0% Markup
Show All
Show Tasks & Sections
Show Sections

LOW

\$1,540

AVERAGE

\$2,360

HIGH

\$3,180

Sections Roles

Activate Windows
Go to Settings to activate Windows.

Procurement budget

Budget

Description	Quantity	Price	Unit	Total
simplesafe package	100	USD 100	Unit	USD 10,000
starter package	100	USD 40	Unit	USD 4,000
cables and power sources	200	USD 20	Unit	USD 4,000
Total				USD 18,000

100\$

Meet the system

Base Station

The brains. Comes with a built-in cell connection to rapidly alert our emergency dispatch center.

Try It. Test It. Love It or Return It.

Test SimpliSafe in your home for 60 days. Your system arrives ready to work. No drilling or tools needed. If you aren't 100% satisfied, return it for a full refund (we'll even pay return shipping).

[shop now](#)



40\$

THE STARTER PACK

- 1 Frontpoint Hub & Keypad
- 1 Door/Window Sensor
 - 1 Motion Sensor
- 1 Home Defense Kit



HR plan:

21

Process Name / Description:	DIY HOME SECURITY SYSTEM				
Created On:	Feb-22	Revision:	2/7/2022		
Created by:	RAWAN SOUS				
	Procurement Mg	Project Mgr	HR	auditors	Engineer
team organization	I	R	A	I	I
cost analysis	I	R	A	R	I
warehouse mangment	R	I	I	-	C
order registration socail media campaigne	I	I	R	I	A
Customers service	I	I	R	I	I
Resourses Allocation	C	R	I	-	I
Activities mangment	-	R	I	-	I
R = Responsible, A = Accountable, C = Consulted, I = Informed					

Procurement plan

ACTION	NAME	DEADLINE	STATUS
Contact suppliers and place orders of the home security packages	*****	May 17, 2022	Ongoing
Inspect the quality of products purchased.	*****	June 17, 2022	Upcoming

ACTION	NAME	DEADLINE	STATUS
Check and record all lacking packages	*****	May 1, 2022	Completed
Monitor the packages in the warhouses	*****	July 11, 2022	Upcoming

Budget

Description	Quantity	Price	Total
simplesafe package	100	USD 100 Unit	USD 10,000
starter package	100	USD 40 Unit	USD 4,000
cables and power sources	200	USD 20 Unit	USD 4,000
Total			USD 18,000

Communication plan

COMMUNICATION

PROJECT COMMUNICATION PLAN

TRACKING RISKS AND ISSUES

Description

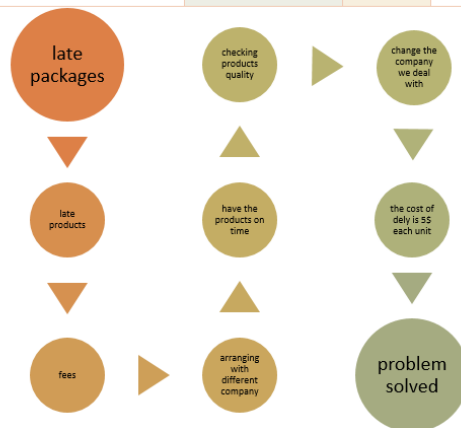
TRACKING RISKS AND ISSUES

Document	Recipients	Responsibilities	Update frequency
Executive status report	Name	HR manager	5
Risk management document	Name	HR manager and engineers	1
Issue management document	Name	HR manager	3
Change control document	Name	HR manager and engineers	1
Project schedule	Name	HR manager	4

TRACKING RISKS AND ISSUES



Date recorded	Risk description	Probability	Impact	Mitigation plan
Date 1	Packages arrive late	medium	Late products	Arranging with other companies and let the first company pay delay fees
Date 2	Description	Probability	Impact	Plan
Date 3	Description	Probability	Impact	Plan

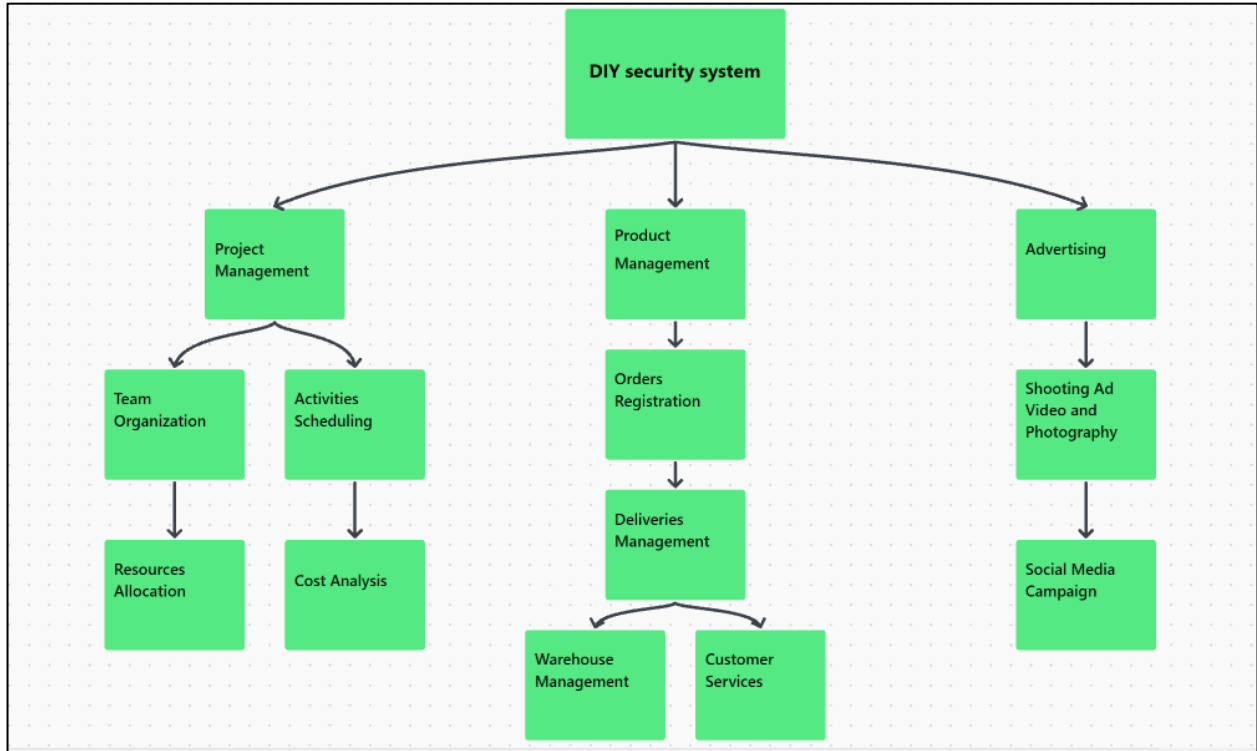


Risk management

1	Description	Severity	Likelihood	Calculation
DIY home security system				
Project Event 1				
IDENTIFIED RISK	BRIEF DESCRIPTION	RISK SEVERITY	RISK LIKELIHOOD	RISK RATING CALCULATION (this section will auto-populate results)
	procurement (cameras and sensors)arrives late	Undesirable	Probable	High
	wrong signals from sensors or false alarms	Acceptable	Probable	Medium
	cameras and sensors don't meet our specification	Undesirable	Improbable	Medium
	system get hacked	Intolerable	Improbable	High
	Easy unauthorized access	Intolerable	Improbable	High
+	loss of power or wifi	Acceptable	Possible	LOW

Activate Windows

ACTION (this section will auto-populate results)	MITIGATIONS / WARNINGS / REMEDIES / NOTES
SEEK SUPPORT	always have plan b companies to get cameras and sensors. List in the procurement paper a limited time for good to arrive late and if it exceed this time legal action will take place for this company
TAKE MITIGATION EFFORTS	false alarms happen a lot in these systems annual checking from the company and cameras allows you to see the house and make sure if the alarm is false or not
TAKE MITIGATION EFFORTS	always have a special team to read the company specifications for their cameras and sensors and make sure that it will meet our specification and with the best quality possible
SEEK SUPPORT	we will provide our customers with 24/7 service call centre with a professional team of engineers which are trained if something like this happened to take action immediatly and protect the system
SEEK SUPPORT	
provide sepcail packages that deal with wifi loss and power	



Controlling and monitoring management

HTNA Clarification

As a general rule, the supplier at a minimum should have systems in place that control, monitor, and evaluate

TIMING

SUPPLIER

HTNA

Production Validation (PV)

According to date on
Supplier Advanced Quality
Planning Schedule

Pilot Production Trials

- Continuous improvements based on feedback and trials
- Use prototype build experience to develop preliminary Control Plan

Final Approval Request

- Finalize Control Plan
- Submit PPAP package
- Submit Request for PSW provisional approval

- Review Draft of preliminary control plan
- Provide feedback to supplier

Change Requests

Revisions after Provisional
Approval stage (including
current production)

- If change meets PPAP issuance criteria, issue PSW w/ marked up copy of control plan to HTNA QE/QC

- If change does not meet issuance criteria, issue revised copy of control plan to HTNA QE/QC

Quality control

A-4 PRODUCT/PROCESS QUALITY CHECKLIST

+ Customer or Internal Part No.

	Question	Yes	No	Comment / Action Required	Person Responsible	Due Date
1	Is the assistance of the customer's quality assurance or product engineering activity needed to develop or concur to the control plan?				Engineers	planning
	Has the supplier identified who will be the quality liaison with the customer?				engineers	planning
3	Has the supplier identified who will be the quality liaison with its suppliers?				Engineers	
4	Has the quality assurance system been reviewed using the Chrysler, Ford, and General Motors Quality System Assessment?					
Are there sufficient personnel identified to cover:						
5	• Control plan requirements†					
6	• Layout inspection?					
7	• Engineering performance testing†					
8	• Problem resolution analysis?					
Is there a documented training program that:						
9	• <u>includes all employees?</u>			Engineers	HR manager	Initiation plan
10	• Lists those been trained†					
11	• <u>Provides a training schedule?</u>					
Has training been completed for:						
12	• Statistical process control?					
13	• Capability studies?					
14	• Problem solving†					
15	• <u>Mistake proofing?</u>					
16	• Other topics as identified?					
17	Is each operation provided with process instructions that are keyed to the control plan†					
18	Are standard operator instructions available at each operation?					
19	Were operator/team leaders involved in developing standard operator instructions?					

Variance analysis

The control phase is done through the whole project using various tools , one of the tools is variance analysis

<u>Standard Production Cost (per gadget)</u>	<u>Quantity</u>	<u>Unit Cost</u>	
Direct Materials (pieces)	20	\$40.00	
Direct Labor (hrs)	10	\$10	
Variable Manufacturing Overhead (hrs)	1.3	\$4	
Fixed Manufacturing Overhead (hrs)	1.3	\$6	
Actual Gadget Production	800		
Fixed Overhead Expense Budget	\$8,000		
<u>Actual Costs</u>	<u>Quantity</u>	<u>Cost</u>	
Direct Materials (pieces)	25	\$45.00	(per piece)
Direct Labor (hrs)	15	\$10	
Variable Manufacturing Overhead (hrs)		\$4,000	
Fixed Manufacturing Overhead (hrs)		\$9,000	

<u>Materials Variance</u>		
Actual Quantity	25	
Actual Price	\$45.00	
Standard Quantity Allowed	16,000	
Standard Price	\$40.00	

<u>Labor Variance</u>		
Actual Hours	15	
Actual Rate	\$1	
Standard Hours Allowed	8,000	
Standard Rate	\$10	

Price Variance	-\$125	Unfavorable
Quantity Variance	\$639,000	Favorable
Overall Materials Variance	\$638,875	Favorable

Rate Variance	\$140	Favorable
Efficiency Variance	\$79,850	Favorable
Overall Labor Variance	\$79,990	Favorable