TRIWAVE SYSTEMS

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Presentation Overview

1. Current Market
2. Customer Base
3. Business Plan & Model
4. Sale Model
5. Cost Analysis

Global Market

- Search and Rescue (SAR) Equipment Market in 2017: **$113.62 billion** (1)
  - Projected in 2022: **$125.66 billion**
- Global Indoor Location (GIL) Market in 2015: **$3.43 billion** (2)
  - Projected in 2022: **$29.4 billion**

Competition

Same Technology, Different Application

Pozyx	Infsoft	KAUST Innovation
• Production/Logistics • UWB • Tag + Node • Expensive • Less Features	• Production/Logistics • BLE/WiFi • Mobile Device • App Based • Privacy issues	• Medical & SAR • UWB • Handheld Device • Operator Dependency • Patented Tech

Target Customer

Ideal Customers

- Commercial Building owners
- Property management companies
- Need for GIL for occupants in emergencies

Government Incentives

- System increases occupant safety in emergency situations
- Easily integrated into Building Code - Fire Safety
- Reduces risk to emergency personnel

Business Plan

- Start Up
  - OEM - Original Equipment Manufacturer
  - Sell Directly, No distributor, higher margin
  - Build Distributor channel to bring product to market
- Growth And Expansion
  - Acquisition of other platforms & tech to improve service
  - Consideration of other application
  - Hospital, Military, Logistics applications
- Possible Exit
  - Initial Public Offering (IPO)
  - MBO. MBI, Acquisition

Business Model

- Strength
  - Unique Technology and Application
  - Adoption in New Technologies
- Weaknesses
  - Expensive Development Cost
  - Relies on Government Regulations
- Opportunities
  - Areas with High Risk of Earthquake
  - No Direct Competitors, High Market Share
- Threats
  - Growth in UWB popularity result in RF congestion
  - Cost of license of UWB bands

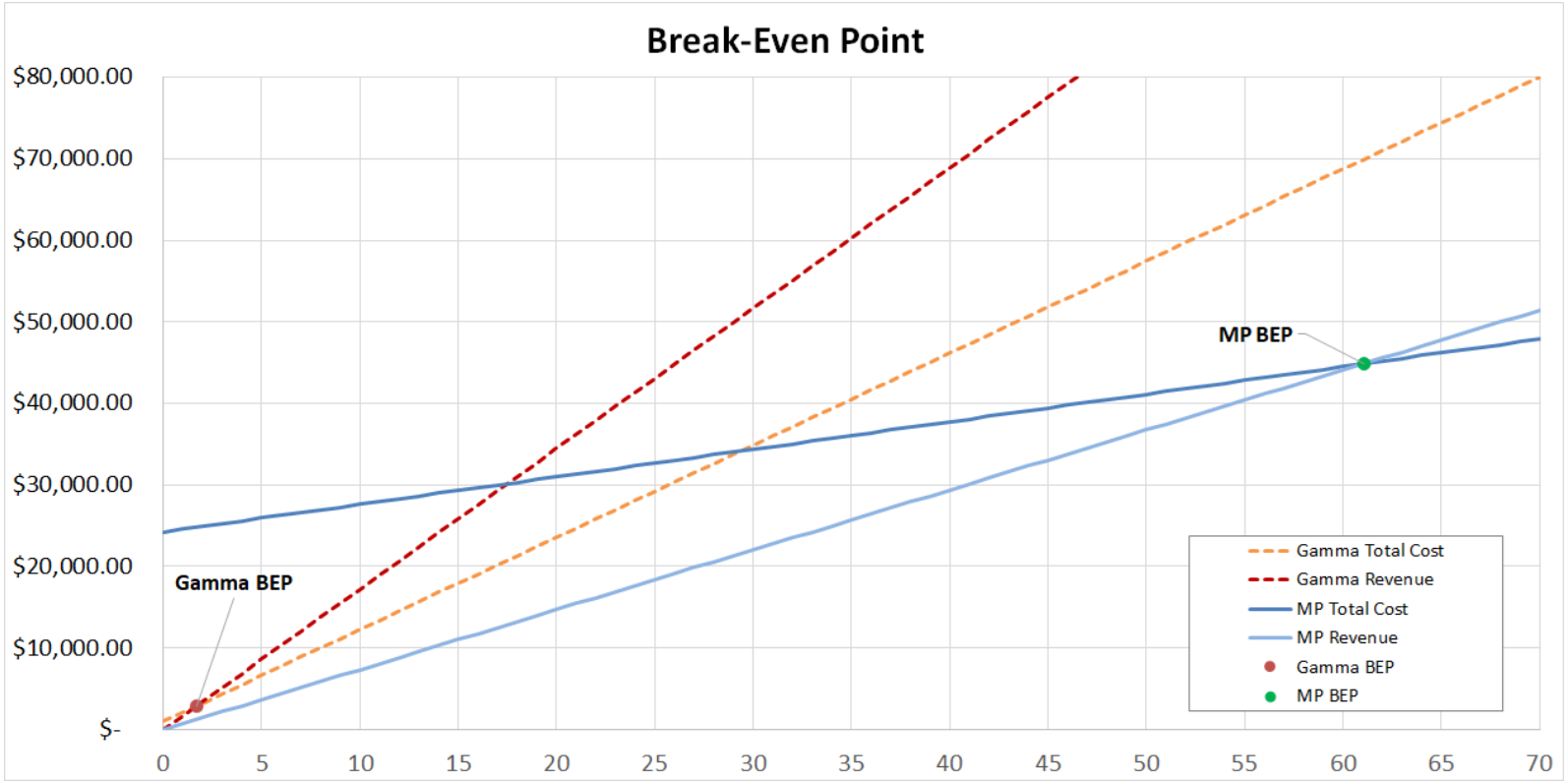
Sales Model

- One-Time Sale
  - **No Contracts = Higher sales**
  - **Appeals to price-sensitive audience**
  - **Inconsistent Revenue Stream**
  - **Cost of servicing after initial sale**
- Subscription Based
  - **Better user experience & up to date service**
  - **Steady Revenue Stream**
  - **Higher maintenance cost**
  - **Requires more work and upkeep for providing service**

Production Costs

Gamma	Mass Production
Fix Cost = $1000.00 Variable Cost • Beacon = $127.55 • ID Tag = $74.56 Require Sale Price = $1722.81 BEP = **2 Units**	Fix Cost = $24237.96 Variable Cost • Beacon = $36.70 • ID Tag = $22.78 Require Sale Price = $734.88 BEP = **62 Units**

Mass Production BEP Calculation



References

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2. Reuters. (2018) Indoor location market 2018 global trends, market share, industry size, growth, opportunities and forecast to 2023. [Online]. Available: [Online].Available:https: //www.reuters.com/brandfeatures/venture-capital/article?id=50849.[Accessed:14-Jun-2019]

PM33						
ID	Name	BOM_Manufacturer	Part Number	Quantity	Unit Price	Total Price
1	ATMEGA32U4-AU	ATmega	C44854	1	$ 0.133	$ 0.133
2	1uF(105)	FENGHUA	C108463	2	$ -	$ -
3	100nF(104)	Samsung Electro-Mechanics	C143639	3	$ -	$ -
4	8MHz	Yangxing Tech	C70615	1	$ 0.080	$ 0.080
5	CD1206-S01575	Bourns Inc.	C75465	1	$ 0.028	$ 0.028
6	10KΩ	Murata Electronics	C89600	3	$ -	$ -
7	1K	Walsin Tech Corp	C171210	4	$ 0.009	$ 0.036
8	micro 5P 5.9 M	Jing Extension of the Electronic Co.	C40939	1	$ 0.057	$ 0.057
9	led Green	Foshan NationStar Optoelectronics	C75560	2	$ 0.060	$ 0.120
10	3528 Red LED	Foshan NationStar Optoelectronics	C185806	3	$ 0.060	$ 0.180
12	10nF(103)	Murata Electronics	C17313	1	$ -	$ -
13	8.2nH	Murata Electronics	C136487	1	$ 0.019	$ 0.019
14	2.7nH	Murata Electronics	C136461	1	$ 0.002	$ 0.002
15	3.9nH	Murata Electronics	C87541	1	$ 0.007	$ 0.007
16	1.8pF	Murata Electronics	C258490	1	$ -	$ -
18	1MΩ	Murata Electronics	C258488	1	$ -	$ -
19	22pF	Murata Electronics	C76903	2	$ -	$ -
21	100nF(104)	Murata Electronics	C26087	3	$ -	$ -
22	1K	Murata Electronics	C258503	1	$ -	$ -
23	22uF	Murata Electronics	C49036	1	$ -	$ -
24	FC-A2012BK-470H2	Foshan NationStar Optoelectronics	C253372	1	$ 0.004	$ 0.004
					Total	**$ 0.666**

ESP32						
ID	Name	Manufacturer	Part Number	Quantity	Unit Price	Total Price
1	ESP32-D0WDQ6	ESPRESSIF	C95209	1	$ 2.37	$ 2.37
2	10k	UniOhm	C128781	5	$ -	$ -
3	SKSCLAE010	ALPS Electric	C130445	3	$ 0.13	$ 0.40
4	CP2104-F03-GM	SILICON LABS	C47742	1	$ 1.42	$ 1.42
5	10uF	MuRata	C86277	2	$ -	$ -
6	MMBT2222A	SK	C171740	2	$ 0.01	$ 0.02
7	MCP73831T-2ATI/OT	MICROCHIP	C14879	1	$ 0.56	$ 0.56
8	4.7k	UniOhm	C148464	3	$ -	$ -
9	SMD BUZZERMLT-7525	HNDZ	C95299	1	$ 0.31	$ 0.31
10	1N4148W	PANJIT	C116002	2	$ 0.01	$ 0.03
11	MMBT3904	FMS	C163254	2	$ 0.01	$ 0.02
12	1K	UniOhm	C25585	1	$ -	$ -
13	Micro USB-B 5P-Female-SMT_C40940	ValuePro	C40940	1	$ 0.07	$ 0.07
14	TLV73333PDBVR	TI	C134139	1	$ 0.07	$ 0.07
15	47uF	FH	C178330	2	$ -	$ -
16	1uF	FH	C157684	1	$ -	$ -
17	CONN_PERIPHERAL	BOOMELE	C68234	1	$ 0.05	$ 0.05
18	CONN_ESP	BOOMELE	C68234	1	$ 0.05	$ 0.05
19	LTST-S270KGKT	LITEON	C125113	1	$ 0.03	$ 0.03
20	100k	UniOhm	C133733	7	$ -	$ -
21	K3-1293S-E2	Rectangular Connectors	C145852	1	$ 0.18	$ 0.18
22	Header-Male-2.54_1x4	Ckmtw	C124378	1	$ 0.02	$ 0.02
23	DMG3415U-7	Diodes Incorporated	C96616	1	$ 0.09	$ 0.09
24	MBR120LSF	SK	C130880	1	$ 0.03	$ 0.03
					Total	$ 5.72