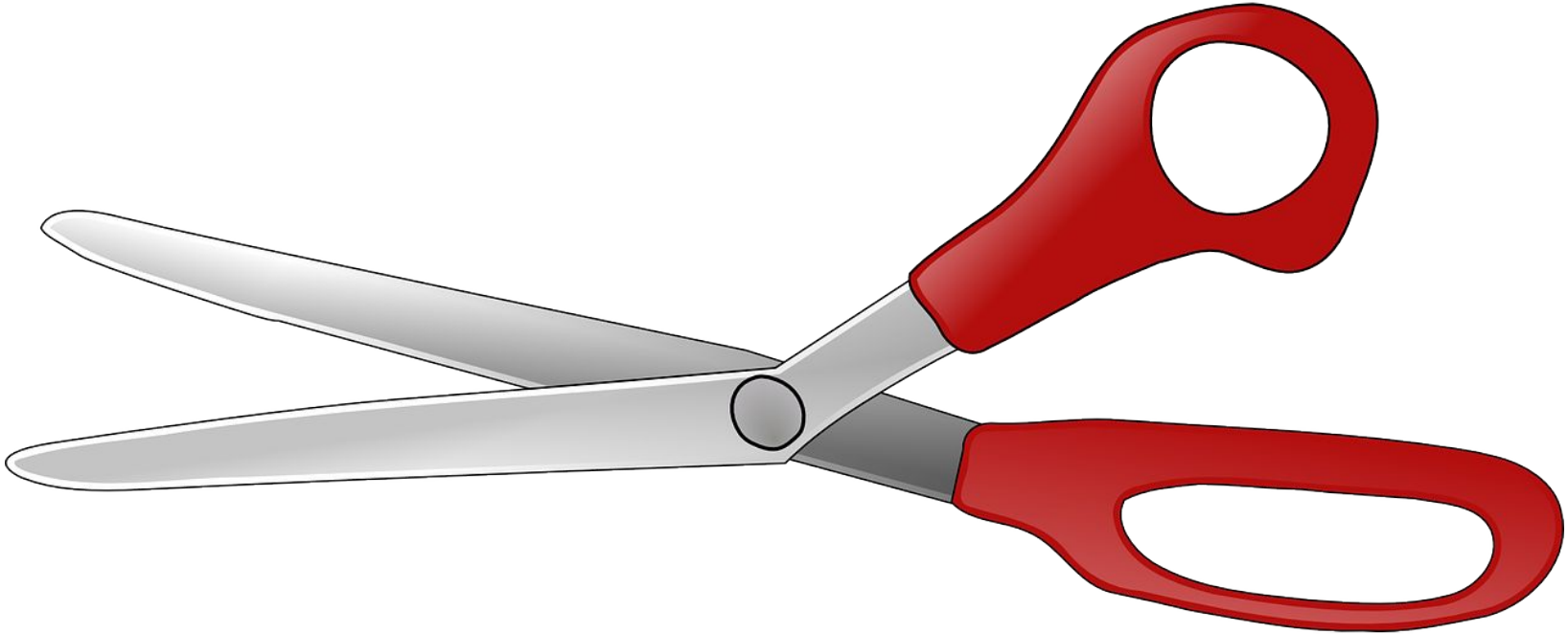
Searchable Home

Where are my SCISSORS?!?

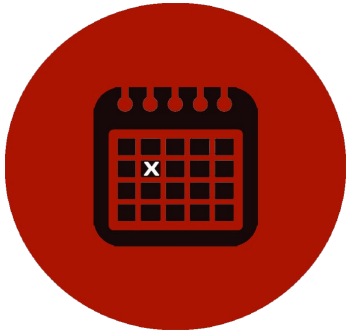


Most Difficult to Keep Track Items

Consequences of Forgetfulness

late to work or school

60%



missed an appointment

49%

argued with a significant other

35%

missed a plane, train, or bus

22%

Wasted Time and Money Every Year

looking for lost items

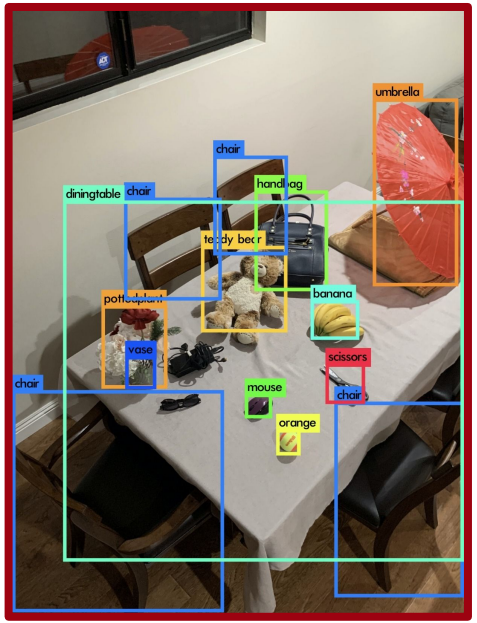
2.5 Days

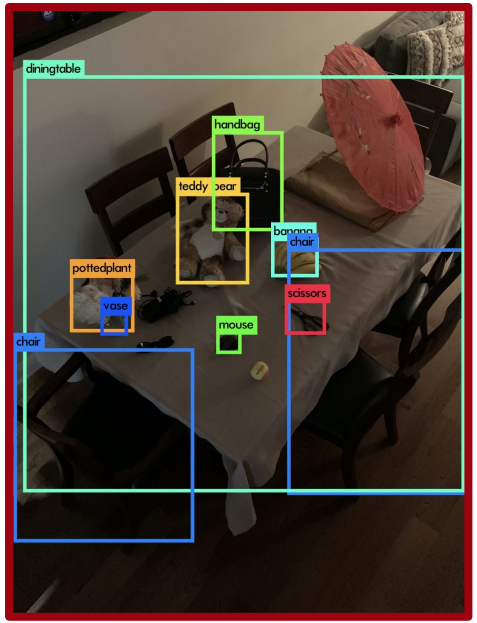
replacing misplaced items

$2.7 Billion

Keep Track of All Your Things

Object Detection in Action

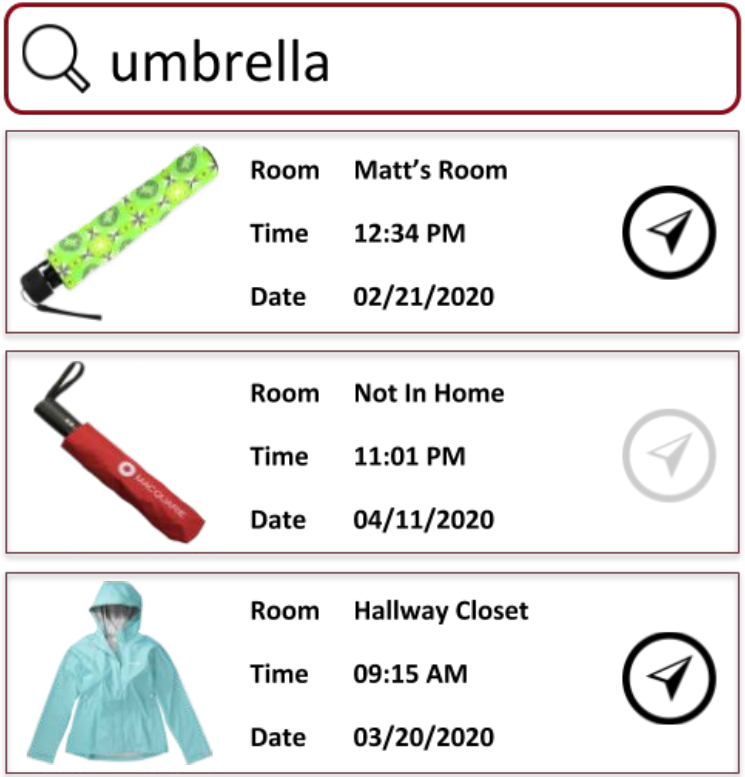




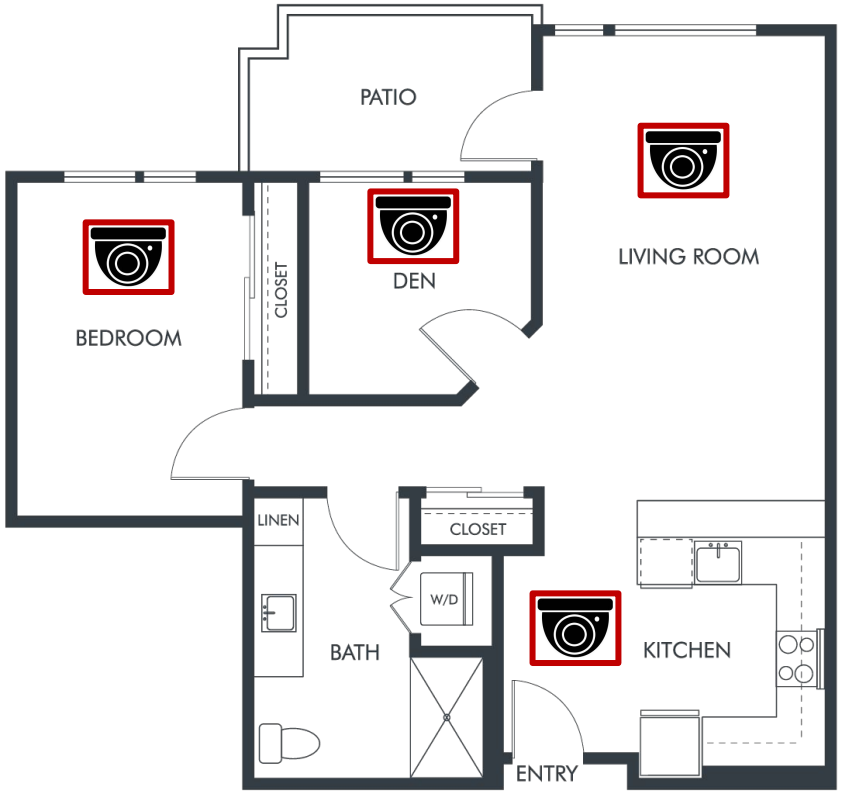
In Light

Low Light

Search for Items



Typical Home Setup



Make Your Home Smarter

Inception

- 50 Common Items
- Rapidly Add New Item Detection

Services

- Home Insurance
- Replenishment

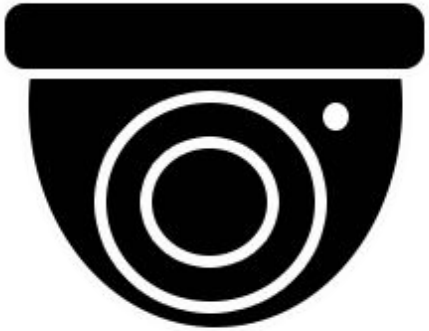
Platformize

- 3rd Party Apps

People Want It, Cameras are Fine

want the product

70%



fine with cameras and images staying local

73%

Market Landscape

Inventory Apps

Sortly

Item Trackers

pixie

tile

Smart Homes

ring Nest

Cashierless Stores

amazon go

now

People are Willing to Pay for It

30% **57%** **$21B**

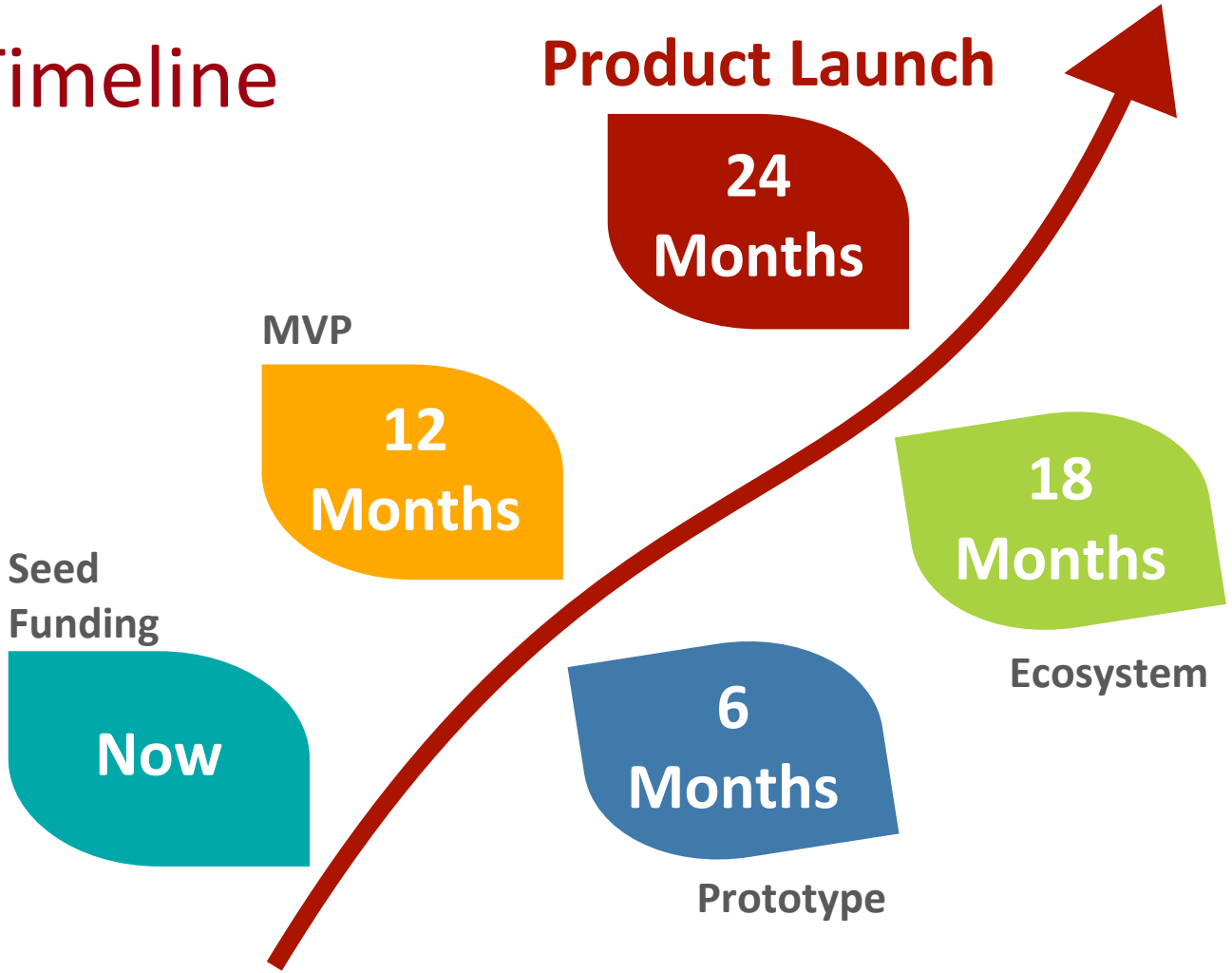
How We Make Money

Standard Home	
4 Rooms	$599
Each Additional Room (Up to 8 Total Rooms)	$100

Large Home	
10 Rooms	$1099
Each Additional Room (Up to 20 Total Rooms)	$125

Services	Monthly Cost
Home Insurance	$10
Cloud Backup	$5
Replenishments	$5
Home Safety	$10
Bundle	*$25*

Our Timeline



Go to Market Strategy

01 Cheerleaders

- Trade Shows
- Tech Confs (AI, Vision, Big Data)
- Tech Reviewers and Influencers

02 Retail Channel Demos

- Smart Device Retailers
- Home Improvement Stores

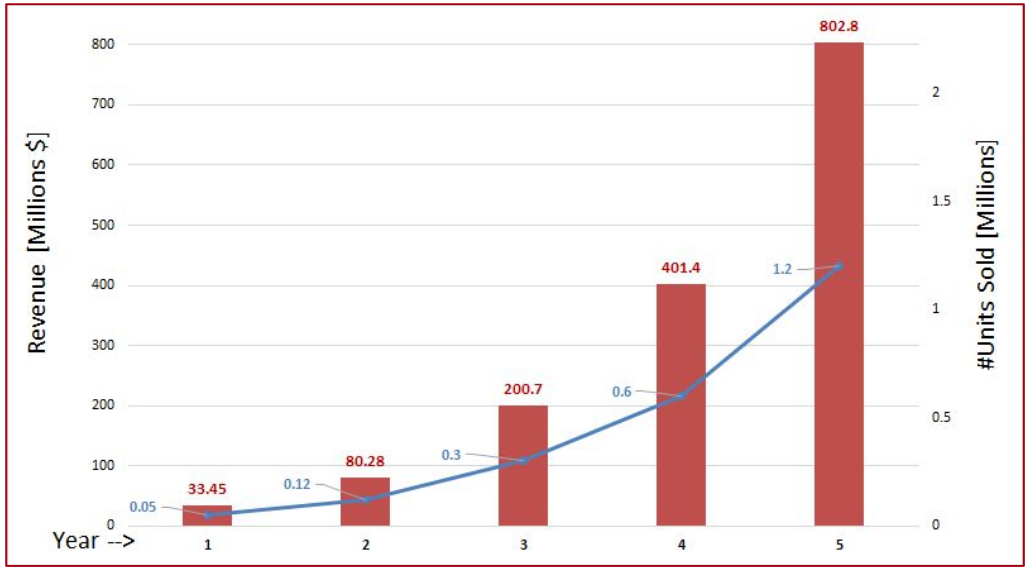
03 Partnerships

- Security Systems
- Home Builders and Realtors

04 Targeted Ads

- HGTV
- FB, YouTube

Projected Growth and Financials



		MILLIONS $					
Year	# Unit Sales (Millions)	Revenue	COGS	GM	OPEX	Operating Income	Operating Income %
1	0.05	$33.45	$23.75	29%	$ 17.19	$ (7.49)	-22%
2	0.12	$80.28	$57.00	29%	$ 38.06	$ (14.78)	-18%
3	0.30	$200.70	$142.50	29%	$ 62.50	$ (4.30)	-2%
4	0.60	$401.40	$285.00	29%	$ 106.00	$ 10.40	3%
5	1.20	$802.80	$570.00	29%	$ 192.00	$ 40.80	5%

Request $500K for MVP

Michael Natkovich

Saurabh Dixit

Venky Ramachandra

Sunitha Reddy

Sandeep Khadkekar

Patricia Liu

Thank You!

Responses to Questions

Why now or Tech feasibility?

- Advances in Image Recognition in recent Years
  - Computer Vision, in general sense, is clearly far from being solved problem.
  - That being said the technology has gotten fairly good. Both in terms of
    - detecting a finite set of objects.
    - At performance range which makes this use case viable
    - Example (see next slide for an Image that we processed with **Yolo V3**)
- Compute Advancement
  - Viable compute if available
  - For example SoC - Nvidia Jetson Xavier NX offers 21 TOPS (INT8) @ $399
  - Price to performance expected to get better in coming years looking at pace of development.

Can you really detect Scissors?

Corollary Question: What about it in low light situation.

We think it's a very good question.

Before we answer it we have included a similar image to one shown above but this time the image was shot at night with no direct light with ambient light from other rooms flowing and from ceiling height as earlier.

Detector is still able to detect scissors on the table.

...

Can you really detect Scissors?... (contd)

The reality is, it is a complex problem. It has many layers and a fine balancing act.

- What was the resolution of image? (more bandwidth)
- What was the image size fed to algo; could we have split it? Could we do background elimination to improve performance focus to feed large image. (more processing)
- Was there additional ir lighting (ir), which we had factored for low light in our cost model.
- Specialized Small Object Algos (Feature Pyramid Networks)
- Would it still be tech feasible?

Based on preliminary testing and research we this we can address this.

How did you estimate the Market Size?

Our product is new and is creating a new market and merging different markets. So we defined our TAM by value theory.

- 120 Million Households in USA
  - With our survey, 30% of people were ready to pay over 500$ for our product.
  - Out of this 30%, 57% were ready to pay a 10$/month subscription for value added services
  - 120 Million x 30% x (500$ + 57% x 10$ x12) = 20.5 Billion USD

Additional Market research-

- Online market research by pixie in 2017 shows,
  - Americans on an average spend 2.5 Days a year searching for lost items.
  - Average income of Americans is 56,000$.
  - 2.5 Days a year with average income of 56,000$ for 156 Million employed Americans is 60 Billion USD
  - On an average people spend 2.7 Billion $ every year replacing lost/misplaced items.
    - This only accounts for money spent replacing items, does not account for the consequences people face due to lost items. (missing meetings, air travel)
- 85% of Households in USA have home insurance.
  - Average house insurance premium is 1100$/year.
  - House insurance market size is 120 Million x 85% x 1100$= 112 Billion $.
  - Major coverage in house insurance claims is personal property.
  - Our product with value added service in the future can help homeowners claim personal property loss.

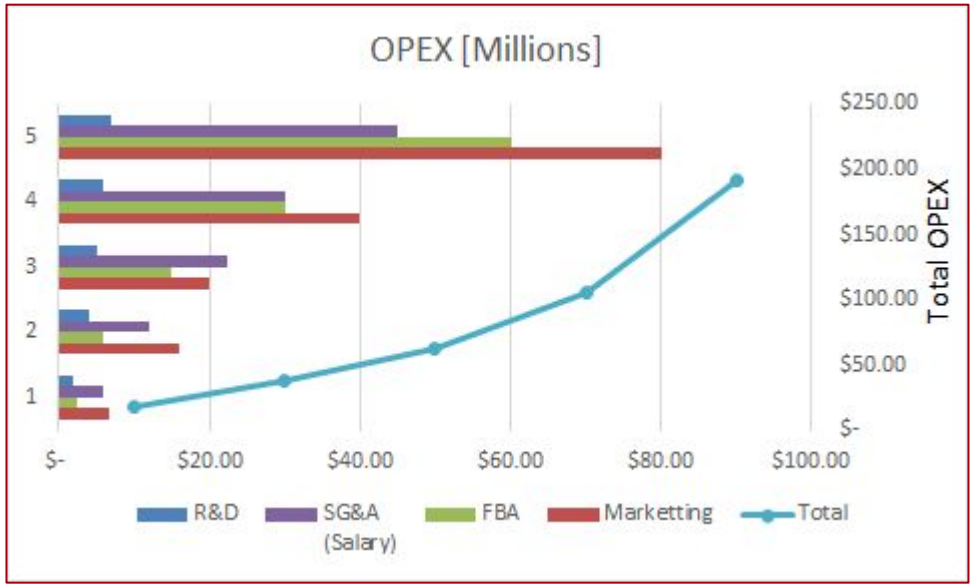
Market Size

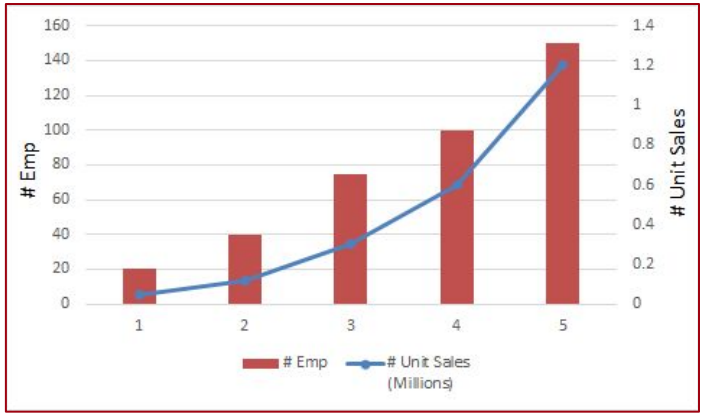

Market Size
Billions $
$120.00
$100.00
$80.00
$60.00
$40.00
$20.00
$-
$2.70
$60.00
$112.00
$21.00
Replacing Lost items
Days spent searching lost items
House Insurance Market size
Searchable Home Marklet Size

APPENDIX

Financials

- **OPEX**
  - Salary Average: 300,000$/year
  - Fulfillment By Amazon: FBA online Calculator estimates 50$/Unit
  - Marketing expense ~20% first 2 years to penetrate market
  - R&D expense at 5% first 2 years to deploy new services
  - Employee headcount to increase with Revenue growth





Projected Growth and Financials (More)

			MILLIONS $										
Year	# Unit Sales (Millions)	# Emp	Revenue	SG&A (salary)	R&D	Marketing	FBA	Total	Market % (Revenue)	R&D % (Revenue)	Unit Growth	Revenue Growth	FBA as revenue
1	0.05	20	$ 33.45	$ 6.00	$ 2.00	$ 6.69	$ 2.50	$ 17.19	20%	6%			7%
2	0.12	40	$ 80.28	$ 12.00	$ 4.00	$ 16.06	$ 6.00	$ 38.06	20%	5%	140%	140%	7%
3	0.30	75	$ 200.70	$ 22.50	$ 5.00	$ 20.00	$ 15.00	$ 62.50	10%	2%	150%	150%	7%
4	0.60	100	$ 401.40	$ 30.00	$ 6.00	$ 40.00	$ 30.00	$ 106.00	10%	1%	100%	100%	7%
5	1.20	150	$ 802.80	$ 45.00	$ 7.00	$ 80.00	$ 60.00	$ 192.00	10%	1%	100%	100%	7%

Financials

- Unit cost 599$
- BOM 425$
- Manufacturing -->Assemble --> Package: 50$
- COGS: 425$+50$=475$
- Subscription COGS:3$/month

		MILLIONS $					
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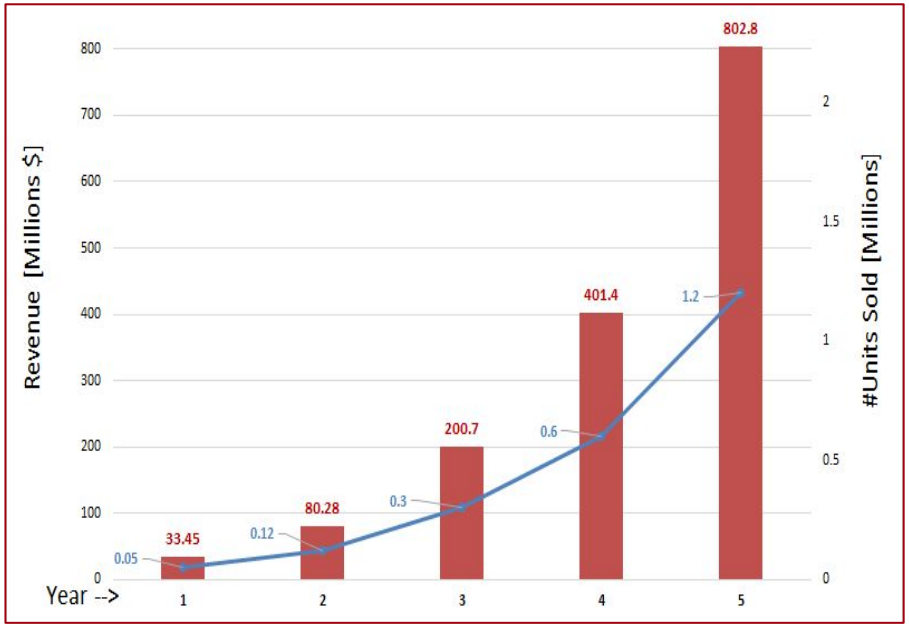

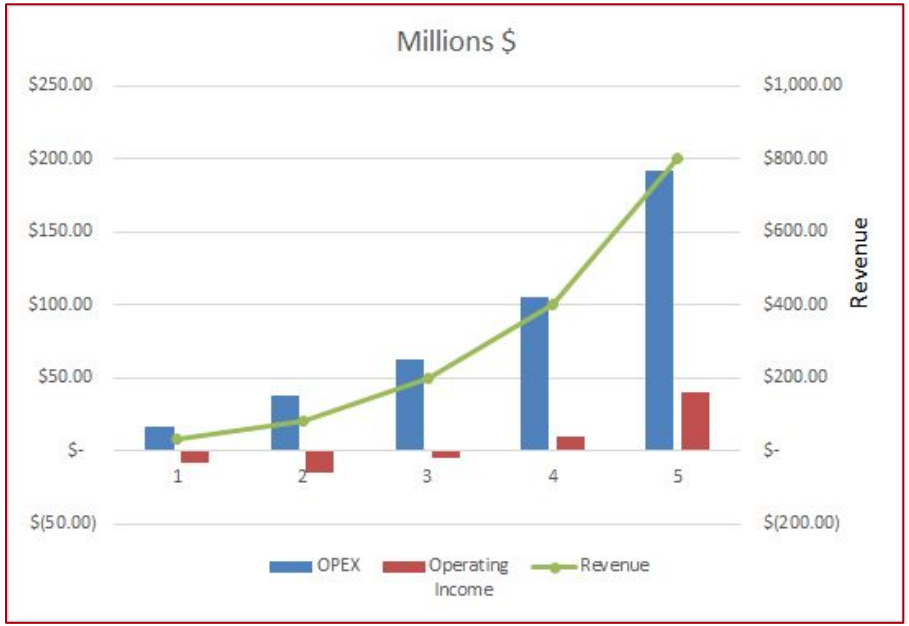

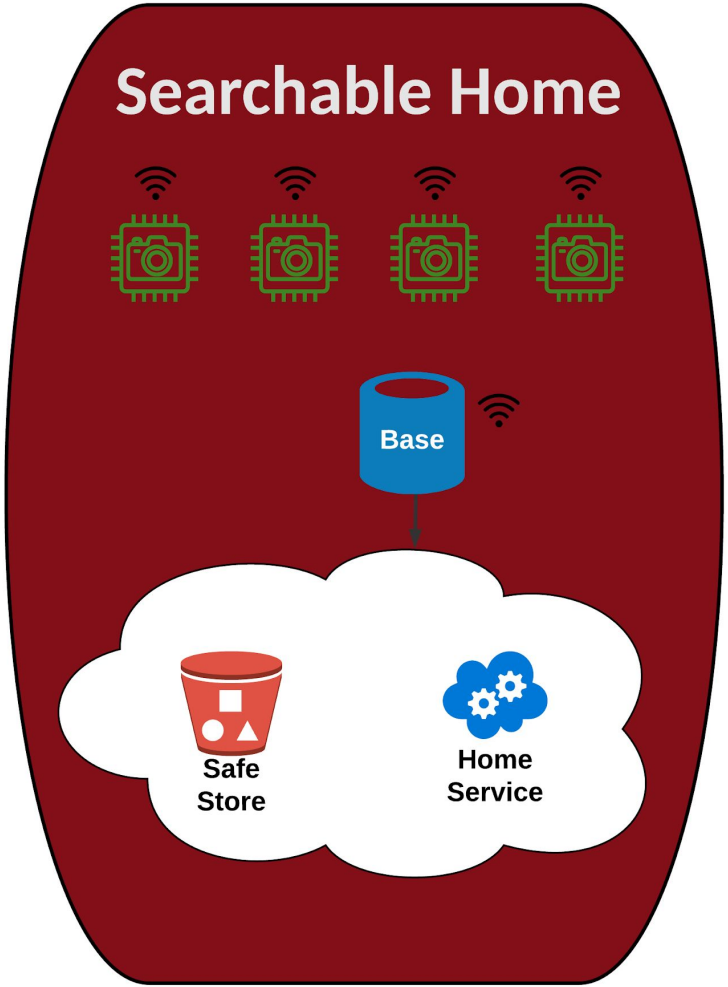
Searchable Home
Base
Safe
Store
Home
Service


Searchable Home

On Device Computing

Compute	Normal Home	Large Home
Cost (not pricing)	$451 **($599)**	$611 **($1099)**
Cost B.Down	**Compute $331** ($299) Nvidia Jetson TX2 ($12) microSD 64GB ($20) wifi/antenna **Cameras $120 (4 Rooms, 8 U)**	**Compute $431** ($399) Nvidia Xavier NX ($12) microSD 128GB ($20) wifi/antenna **Cameras $180 (12 U)**
Performance **((960×544, 480×272, 300×300)**	20-100 FPS	240 FPS
Capabilities	6 Active Camera	20+ Active Cameras

SoC Capabilities

Compute	Nvidia Jetson TX2	Nvidia Xavier NX	Nvidia AGX Xavier
Cost	$299	$399 (available 2020 spring)	$999
Stated Capabilities	**Video Encode:** 500MP/sec 4x 1080p @ 60 1x 4K @ 60 **AI Perf:** 1.33 TFLOPs	**Video Encode:** 2x464MP/sec 6x 1080p @ 60 2x 4K @ 30 **AI Perf:** 21 TOPS (INT8)	**Video Encode:** 2x1000MP/sec 16x 1080p @ 60 4x 4K @ 60 **AI Perf:** 32 TOPS (INT8)
Object Reco (SSD Mobilenet-V2 (960×544)) **Resnet (Full HD)**	24 FPS 1-2	240 FPS 24 - 42(30W)	360 FPS 36-64
OR Capabilities @ 4FPS/Cam	6 Active Camera	Practically Unlimited	Practically Unlimited
FHD OR	2 Active Camera	6-10 Active Cam	9-16 Active Cam