

Arlo

Investment Case

March 2022

Investment Thesis

1

#3 Market Position In A Rapidly Growing Market:

- Struggling player and erstwhile leader in the DIY smart surveillance systems market
- The market for DIY security cameras, doorbells, and sensors is attractive and growing at a CAGR of ~22% from 2017 to 2025
- Arlo has lost significant market share to competitors in recent years due to very poor execution in its product line.
- Overall, there are ~7 million households registered on the Arlo platform. Each year, another ~1.1M are added.

2

Product In The High-End Segment Of The Market, With Leading Technological Capabilities:

- The average selling price (ASP) for their products is about 50% and 300% higher than their competitors Ring and Wyze, respectively.
- Arlo's technological capabilities for its camera system are considered leading edge even by engineers I've spoken with who previously worked at Ring.

3

Expanding Product Line That Touches An Increasing Amount Of End Points In A Home:

- Arlo has been slow to launch new products that would improve the smart home experience in the past.
- The newly released sensor system is an important step in the right direction, but a more diverse product line needs to be introduced more quickly.

4

Badly Run Company By A Hardware Focused Management Team

- Senior Management that has experience in the service business day in and day out, is drastically needed. There is not one person on the management team who really understands the service business - the board should definitely change the current CEO and bring in someone from e.g. Netflix or Verizon who knows how to turn things around.

5

Opportunity To Significantly Improve Bottom-Line

- Subscription revenues will account for more than 50% of the company's total revenues by 2026.
- This revenue stream is inherently a high-margin business, generating gross margins in the high 70s.
- Manufacturing costs could potentially be reduced if production could be migrated to HD facilities.

6

Attractive Entry Valuation But Risks And Efforts To Achieve A Decent Return, Outweigh Opportunity

- The company will generate good cash flow in the short term, but we do not believe this will last.
- On a 5-10yr forecast basis, there is very high probability that Arlo is going extinct amidst big tech competition.
- Potentially Arlo could be an interesting Acquisition target for a company like ADT.

Framing Arlo's Business

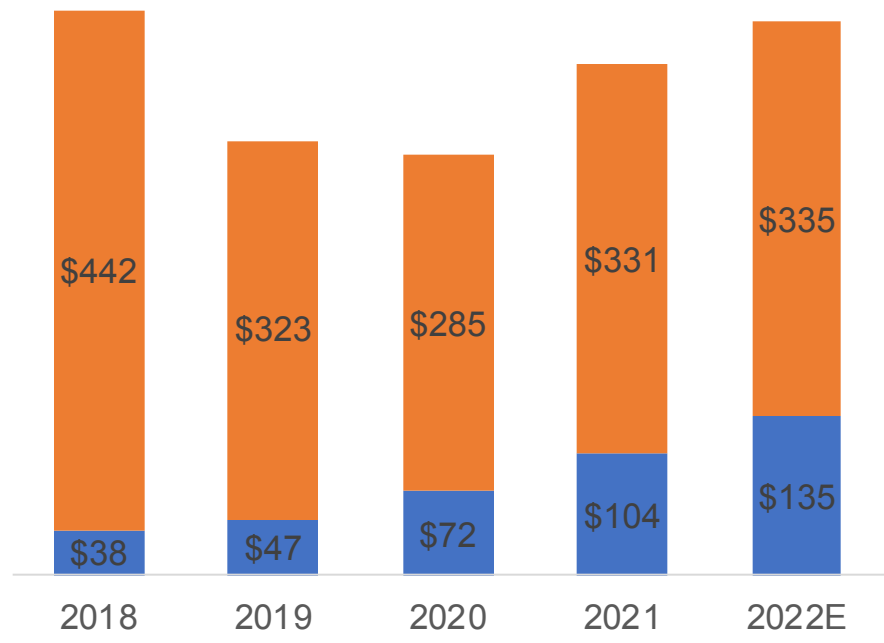
• Arlo spun-off from Netgear in 2018, and was a pioneer in DIY camera system alongside the now Amazon-owned Ring.

Company Overview

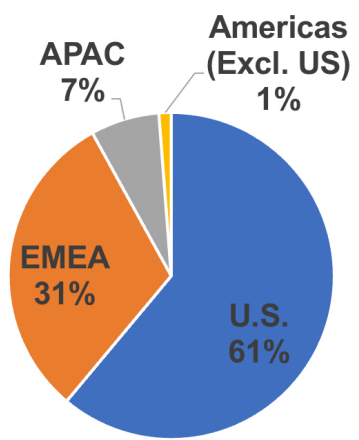
- **2022E Sales:** \$515mn
- **2022E EBITDA:** -\$36mn
- **2022E EBITDA Margin:** -7%
- **Employees:** 350
- **CEO:** Matt McRae
- **Headquarter:** San Jose, California

2016-2022 Net Sales (\$ in mn)

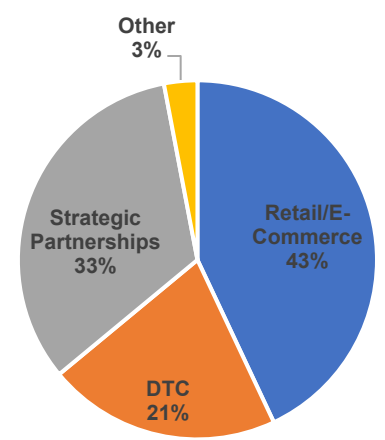
■ Services Revenue ■ Products Revenue
 18-22' CAGR: **37.3%** 18-22' CAGR: **-6.7%**



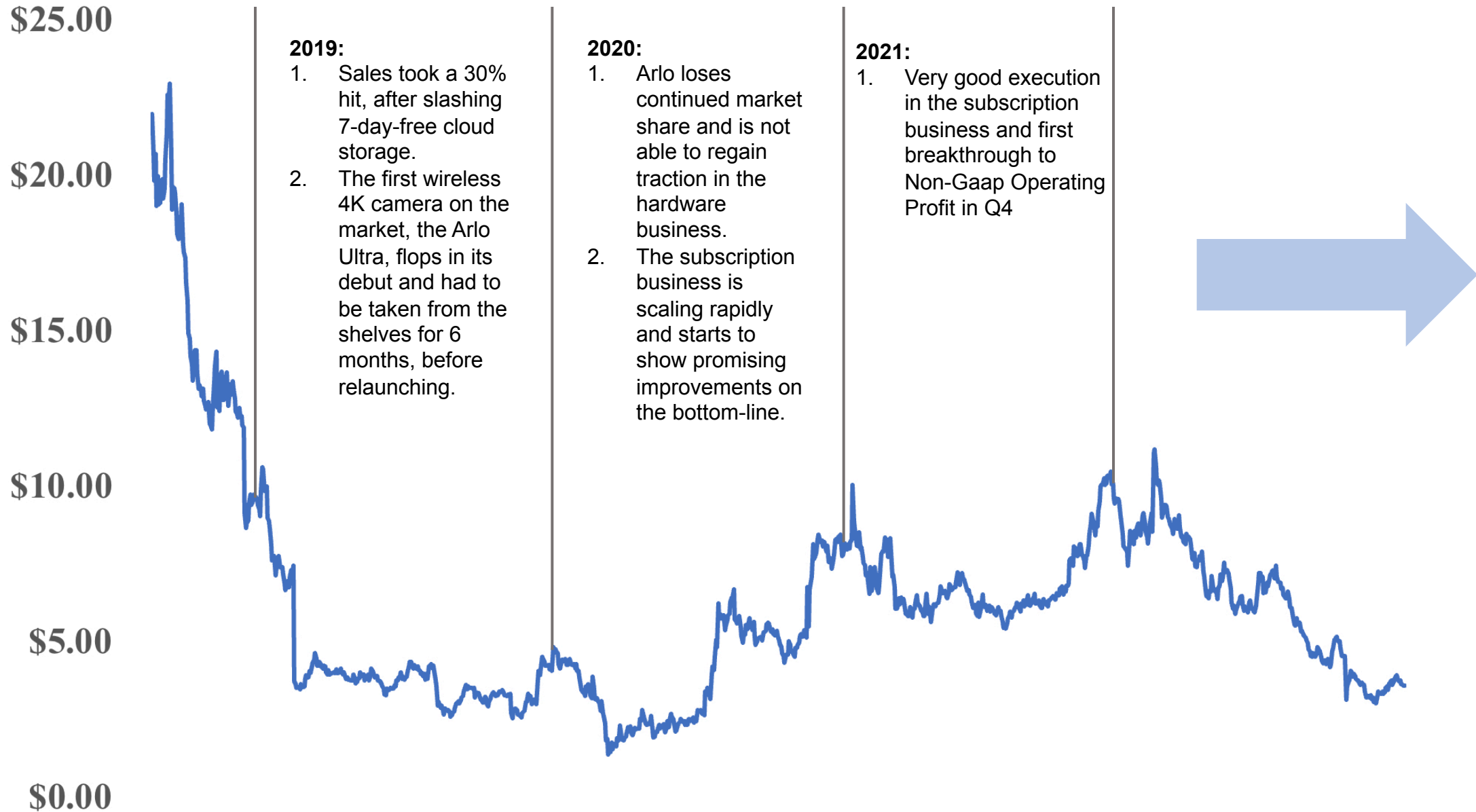
2021E Net Sales by Geography



2022E Net Sales by Channel



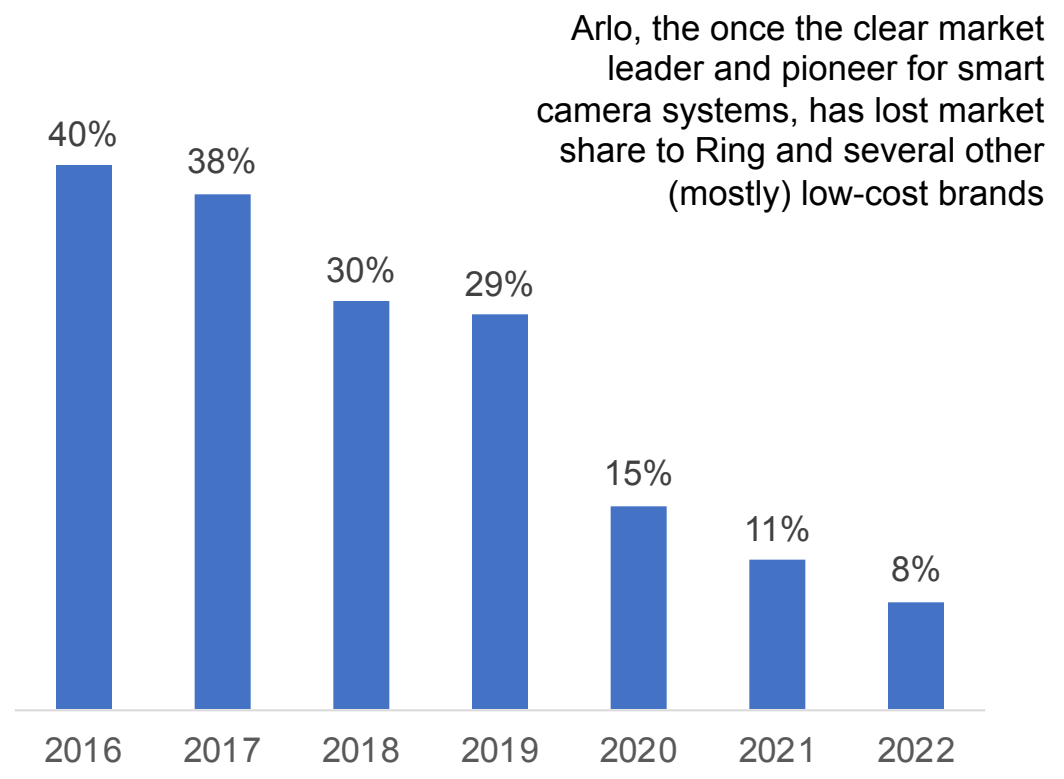
Backdrop – Arlo's Past Stock Performance



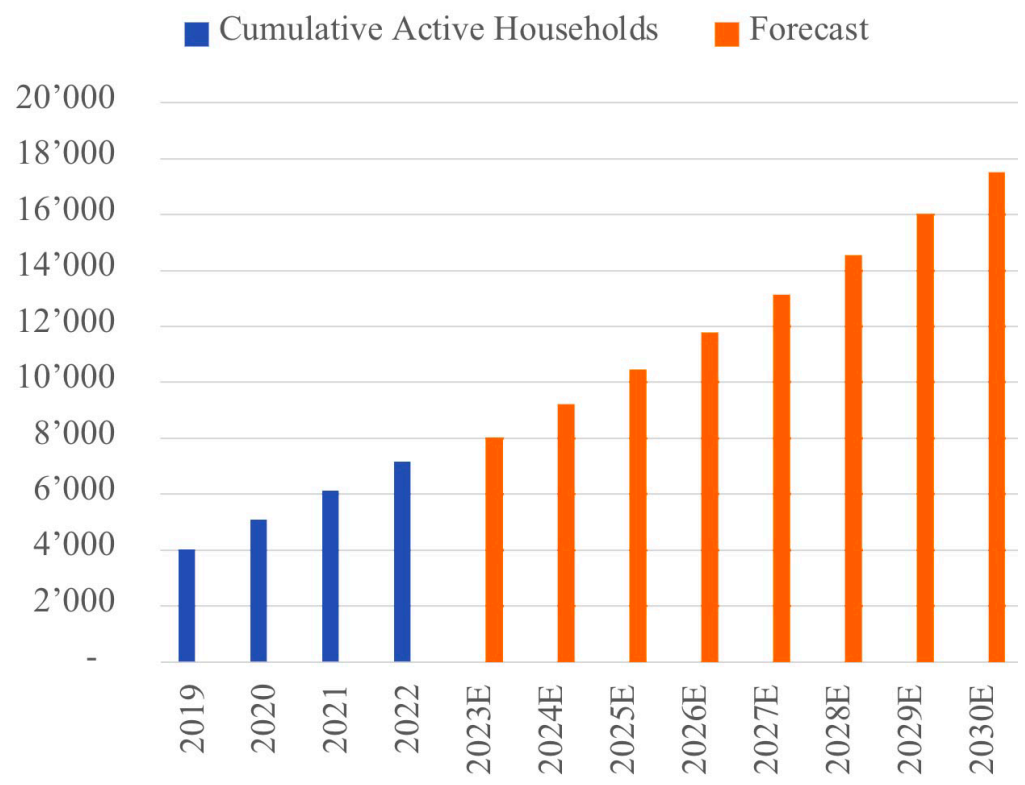
1 #3 Market Position In A Rapidly Growing Market

- Arlo is the #4 manufacturer in the DIY camera market, behind Ring, Wyze and Nest. A market that allows for many players to co-exist.
- Currently Arlo’s MS stands in the high single digits, down from 40%MS 5 years ago. The steep decline in market share was caused by too little product line expansion

Google Trends Market Share Indication



7mn Households own an Arlo

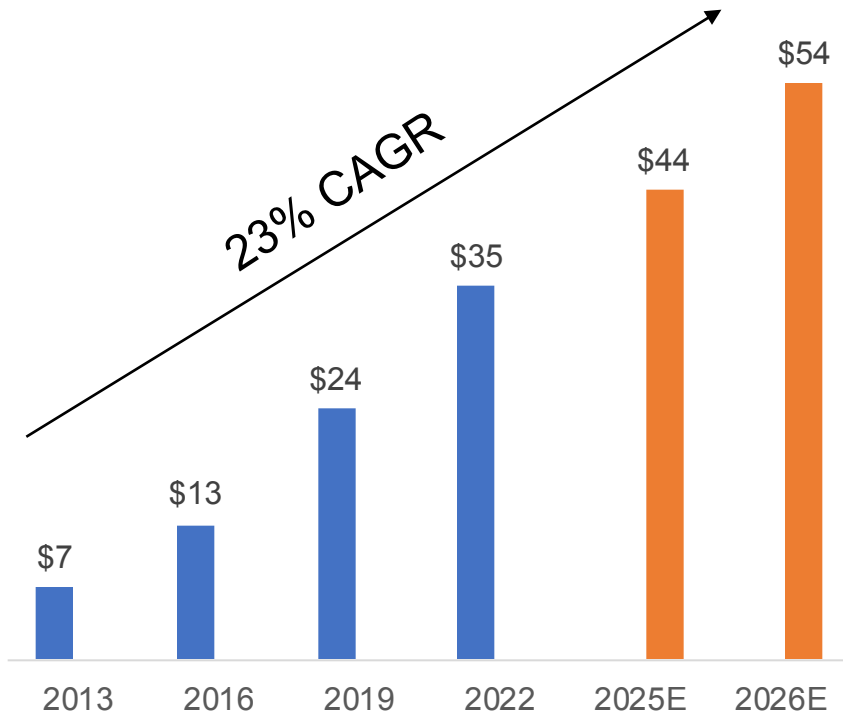


1 #3 Market Position In A Rapidly Growing Market

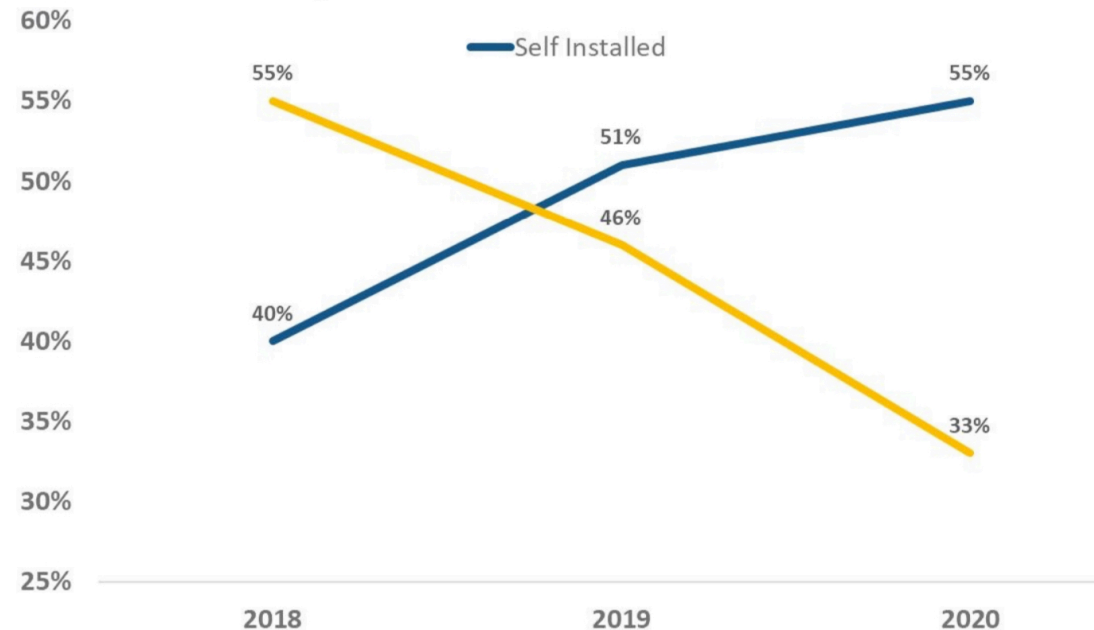
- The DIY camera market has been growing rapidly over the past few years, as more consumers switch from legacy systems towards DIY systems that offer services at lower cost and makes the homes more connected.
- The TAM for high-end DIY cameras in the US is less than 17mn.

Global Video Surveillance Market (in \$bn)

Growth driven by smart security cameras



Installation Method for Home Security Systems Acquired within the Past 12 Months

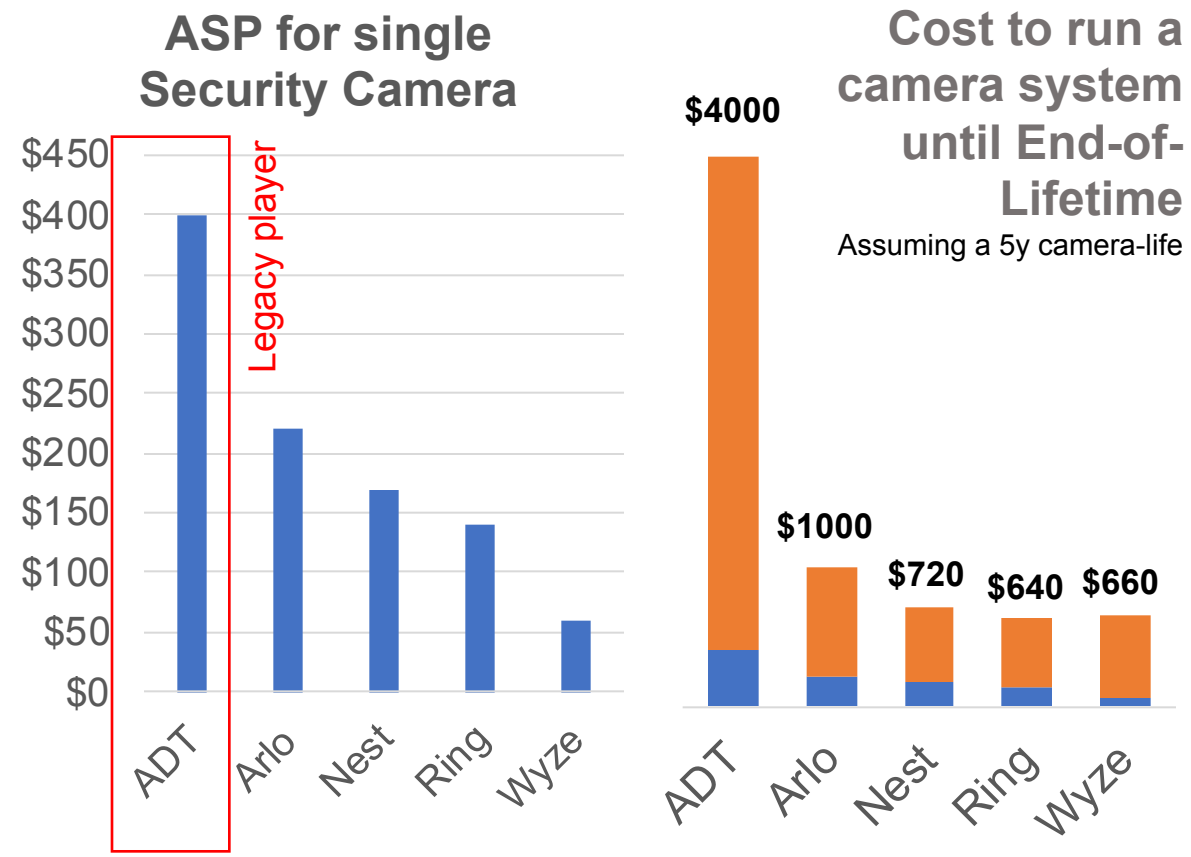


* Systems acquired and installed within the past year.

2 Product In The High-End Segment Of The Market, With Leading Technological Capabilities:

- Subscriptions are the real costs that add up over the lifetime of a camera system. What really made DIY camera systems that disruptive, was the cost saving with subscriptions. Instead of \$60/month, it now was \$10/month.
- I expect that in the coming 5yrs a segmentation of price and design is going to take place in the DIY camera market.

Arlo is in the highest price segment for DIY Cameras



Technologically – Arlo is leading edge






Technological Comparison	Arlo	Ring	Wyze	Nest
Outdoor Cameras	#1	#3	#4	#2
Indoor Cameras	#1	#3	#4	#2
Doorbells	#3	#1	#4	#2
Sensors	#4	#1	#2	#3
Other Smart Home Devices	#4	#2	#1	#3

Arlo, as of now, is a niche player for engineering-enthusiasts who value the differentiation in design, privacy and technological capabilities.

Being a niche player in this market is super difficult, since there no scale that allows for a more cost optimised production.

3 Expanding Product Line That Touches An Increasing Amount Of End Points In A Home

• Arlo has been historically very slow in launching new products. Touching as many different end points as possible is crucial to create a unifying and complete smart home experience for the user.

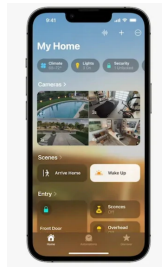
	Doorbell	4K Wireless Camera	Sensor System	Thermostats	Door-Locks	BEYOND
 Release Date:	✓ 2018	✓ 2018	✓ 2022	✗ —	✗ —	<ul style="list-style-type: none"> • Panic Button • Indoor Surveillance Drone • Car Cam & Protection • Vacuum Cleaners • Lightbulbs • Air Filters • WiFi • Smart Plug • Speakers • Displays • WiFi • Smoke Alarm • Vacuum Cleaner • Pet products • Trackable tags
	✓ 2012 <i>Entry Point</i>	✗ 1080p camera only	✓ 2018	~ Partnership with Honeywell	✓ 2019	
	✓ 2018	✗ 2K camera only	✓ 2019	✓ 2020	✓ 2019	
	✓ 2017	✗ 1080p camera only	✓ 2017	✓ 2011 <i>Entry Point</i>	✓ 2018	
	✓ 2022	✗ 2K camera only	✓ 2020	✗ —	✓ 2020	

3 Arlo Needs Its Own Central Nervous System

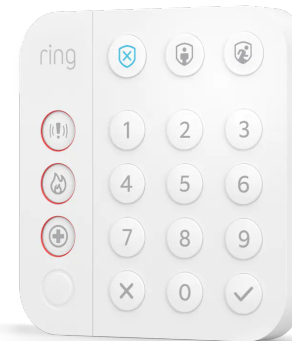
- From a Smart Home standpoint, the most important entrance is to have a hub that can bring first-party and third-party devices together.
- Arlo's All-in-One product hasn't shown much differentiation and is still not able to connect with other 3rd party devices.



Amazon Echo (Speaker System)



Apple Homekit (App on iPhone)



Ring Alarm (Released 2018)



Arlo All-in-One (Released 2022)



SimpliSafe (Keypad)



Google Hub (Tablet)

3

Expanding Product Line That Touches An Increasing Amount Of End Points In A Home

- Arlo will have to significantly speed up product innovation and go beyond just simple cameras, so that this risk becomes less fatal.

Arlo is lagging behind 4yrs when it comes to new product innovation



Arlo All-In-One Sensor System
Launched November 2022
4yrs after „Ring Alarm“



Ring Autonomous Indoor Drone
Expected Go-to-market: 2024

Arlo needs to explore the following key areas, to become a smart home platform.

Door Locks, digital keys.

Smart Lighting

Arlo Home-Control App:
lights, blinds and
cameras — all connected.

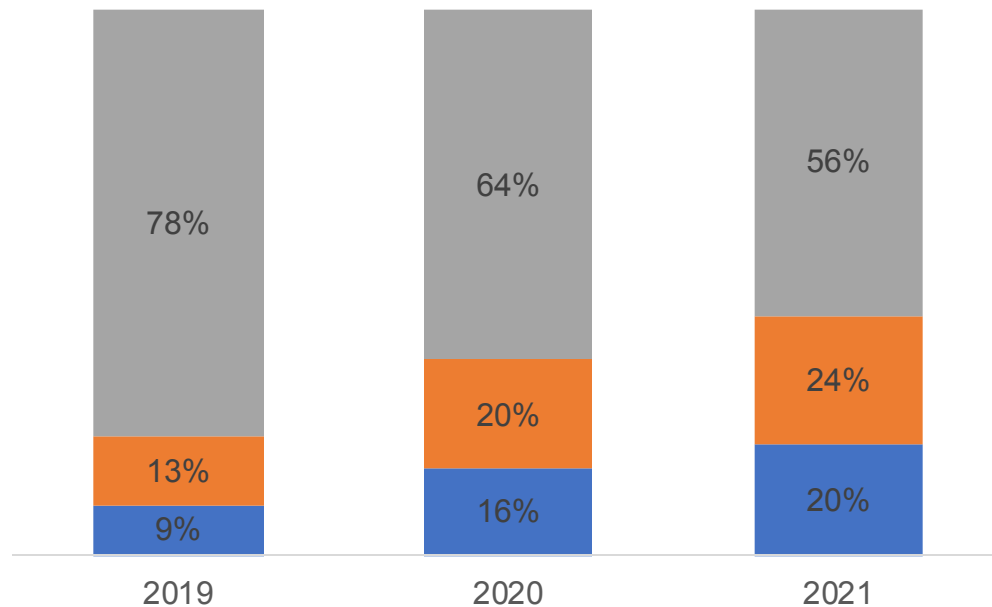
Energy management
and monitoring
(Thermostats)

3 Revenue Mix Diversification

- The main risk is that Ring is able to reverse engineer Arlo's wireless 4K camera, but can shave off, lets say 30% of the price point. Ring is going after consumers by playing the game of price point.
- Arlo has to immediatly diversify away from cameras, to lower risk of a potential revenue fallout.

Revenue Mix

■ Floodlights, Doorbells & Others ■ Subscription ■ IP Cameras



Two Measures, that have to be taken

- Arlo has to establish a hub in the homes of people, from which it should look to expand with other premium products that would complement their current offering. E.g Premium priced door locks or door knobs that function with Finger-ID.
- Arlo should allow third parties to have access to this hub, allowing customers to have a unified smart home system with all sorts of products that are not even in Arlo's product line.

4

Badly Run Company By A Hardware Focused Management Team

- While Arlo is marketing itself to investors as having shifted to a service-first business model, senior management clearly lacks expertise in the service industry.
- The new CEO and the new team has a very consumer-electronics heavy background. Looking at the entire leadership, apart from Sean Aggarwal, there is really no service-first mentality.

Management	Position	Since	Tenure	Insider Holding	Past Experience	Past Industry
Matthew McRae	Executive Officer	2018	5 yrs	2.48% (\$8.4mn)	Vizio	Electronics
Kurt Binder	Financial Officer	2022	>1yr	0.85% (\$2.3mn)	Vizio, CalAmp	Electronics, Software
Brian Busse	Counsel	2009 (Netgear)	9 yrs	0.67% (\$2.9mn)	Netgear	Electronics, Law
Lily Knowles	Marketing	2020	2yrs	—	Vizio	Electronics
Scott McManigal	Design	2018	5yrs	—	Vizio	Electronics
Antoinette Switzer	HR	2018	5yrs	—	Netgear	Electronics
Vipul Doshi	Operations	2021	>2yrs	—	Vizio, HP, Harman	Electronics
Tim Johnston	Product	2021	>2 yrs	—	Bower & Wilkins	Electronics
Julie Nash	Information Officer	2022	>2yrs	—	Transunion	Finance, Consumer Goods

Board of Directors	Tenure	Annual Compensation	Insider Holding	Past Experience	Past Industry
Matthew McRae	4.5yrs	US\$10.46m	2.48% (\$8.4mn)	Vizio	Electronics
Jocelyn Carter-Miller	4.5yrs	US\$236.99k	0.13% (\$430k)	Marketing Roles	Various
Ralph Faison	4.5yrs	US\$289.49k	0.36% (\$1.2mn)	Managing Roles	Electronics, Telecom
Catriona Fallon	1.5yrs	US\$175.10k	0.030% (\$100k)	CFO	Software
Prashant Aggarwal	4.33yrs	US\$246.09k	NaN	CFO	Internet, Venture Capital
Grady Summers	4.5yrs	US\$241.99k	0.23% (\$766k)	CTO	Cyber Security
Amy Rothstein	3.75yrs	US\$222.08k	0.11% (\$360k)	Legal Officer	Various



Sean (Prashant) Aggarwal:

- Chairman of the Board of Directors at LYFT
- Former CEO of TRULIA (Acquired by Zillow)

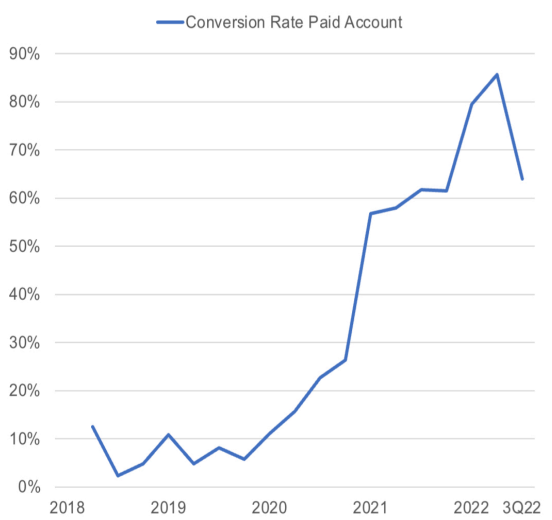
5 Transitioning To A Service-First Business Model

• Arlo has slashed the seven-day-free-cloud-storage for consumers and switched to a subscription based model. The conversion rates are promising, the transition is going well.

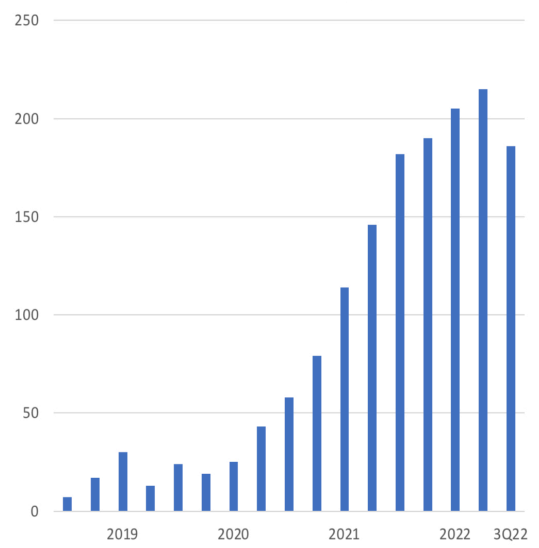
70% of the newly added accounts convert into paid accounts

In 5yrs, two-thirds of all households will be subscribed

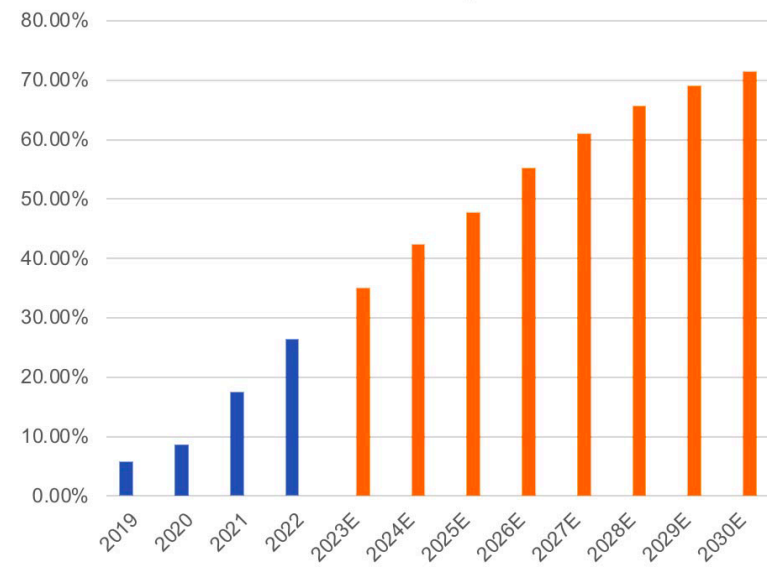
High Conversion Rate to Paid Account



Net Paid Account Additions QoQ in '000



% of Households that are paid subscribers



*older camera series, manufactured before 2020 still have the option of seven-day-free-cloud storage. They will likely be End-Of-Life'd before 2025, „forcing“ them to either switch to another camera brand, or becoming a paid account.

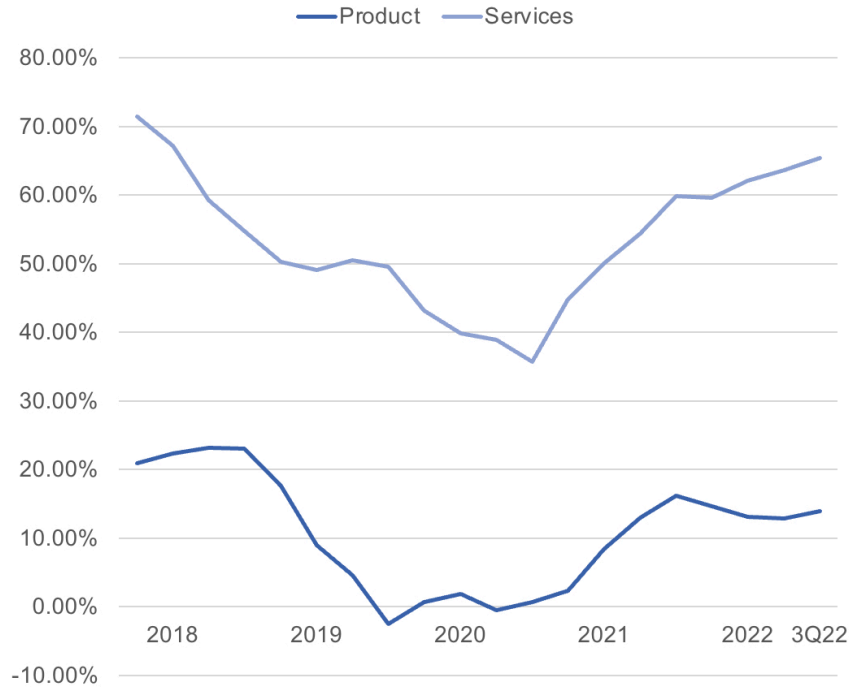
5 Subscriptions Transform Arlo to a high-margin business

• The subscription revenue is an inherently high-margin business that would generate the necessary cashflow for Arlo to raise spending levels in R&D and marketing.

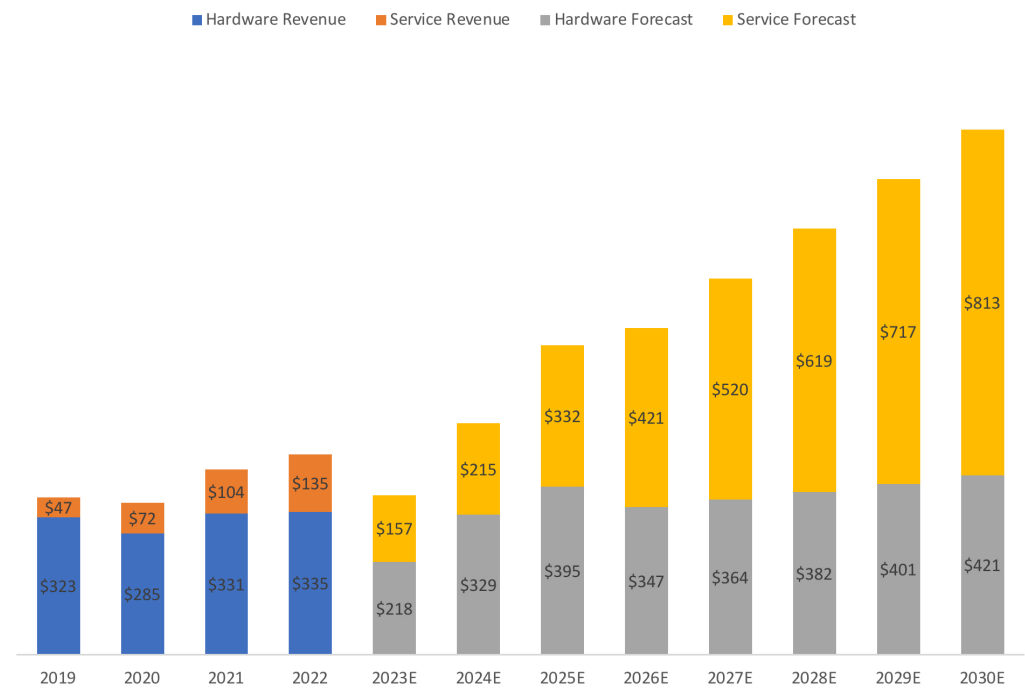
The subscription business could naturally reach 75-80% on a gross basis

The revenue mix is increasingly going to consist of the subscription business

Gross Margin per Revenue Stream



LTM Revenue Forecast

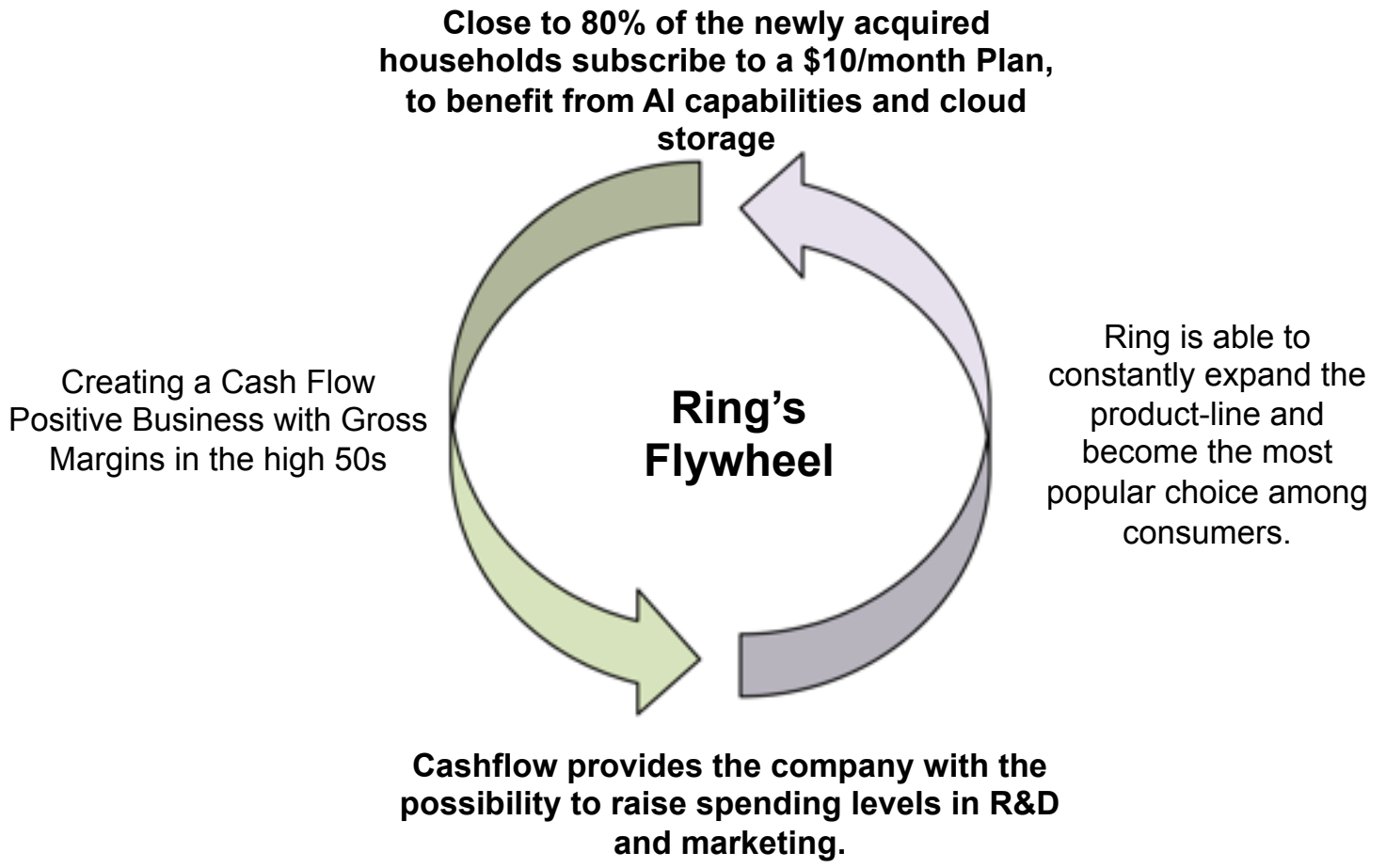
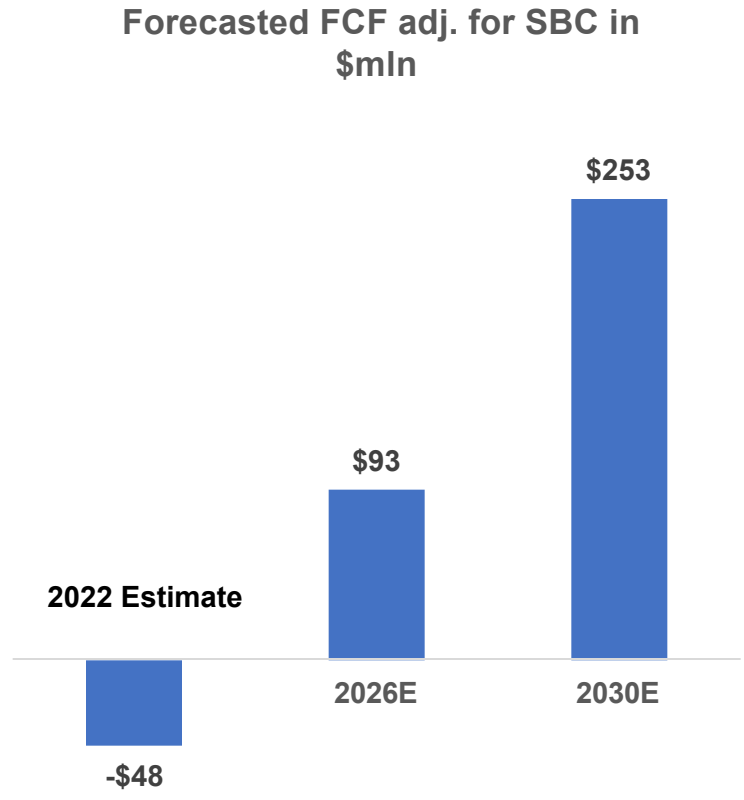


5 Subscriptions Make Arlo An Innovation Leader Again

• The CF Generated From The Subscription Business Has Made Ring What It Is Today

The subscription business will raise Arlo's FCF margin to ~20%

Continued Hardware Innovation, Thanks To CF Generated In The Subscription Business

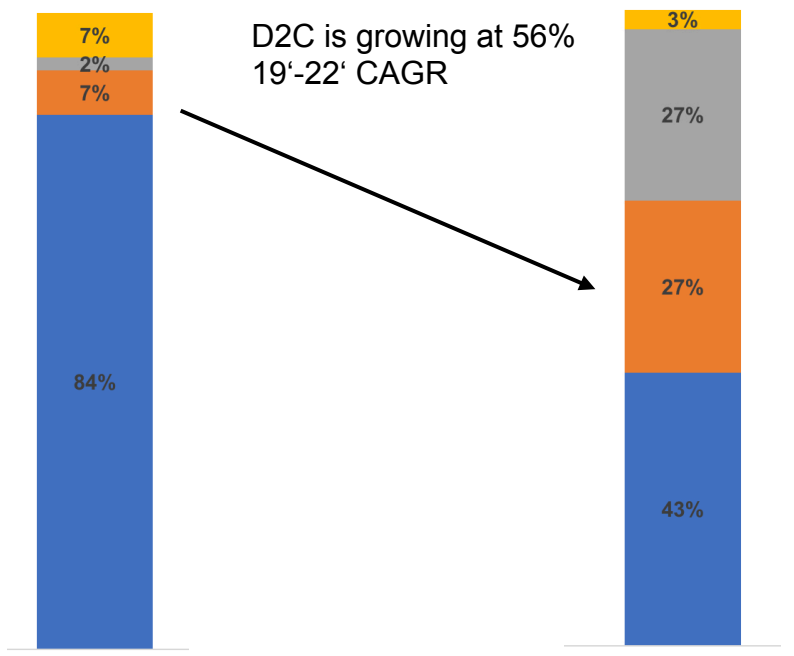


5 A Shift In The Sales Channel To Lift Margins

• Arlo is shifting the sales channel to its Arlo.com website. Moving away from retail, to D2C will lead to substantial margin improvements. Competitor Ring, is estimated to have 70% of its sales through D2C.

Sales Channel Evolution Over Time

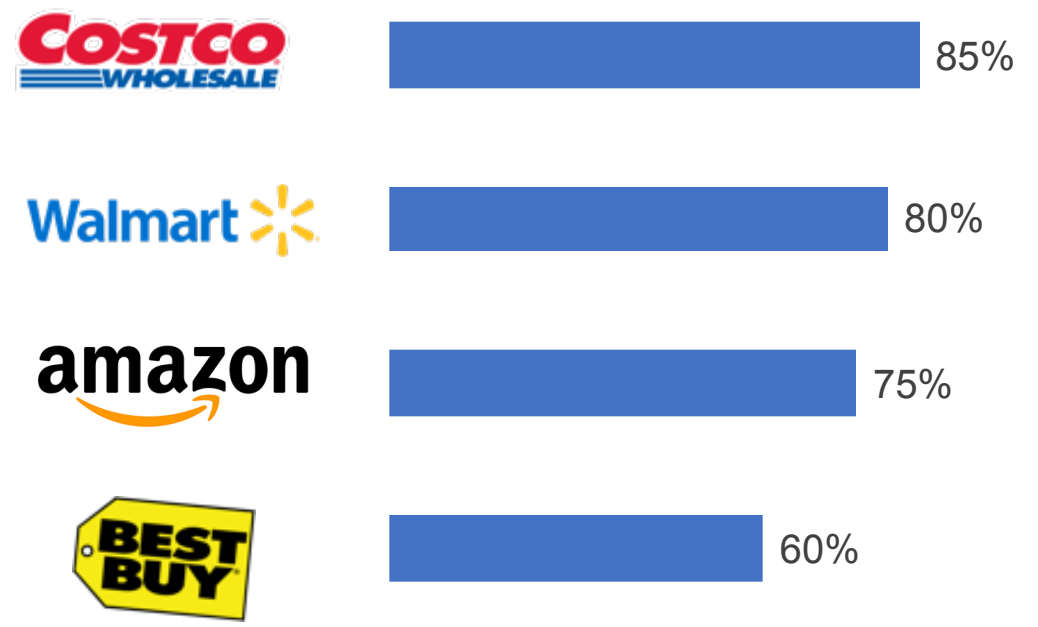
2019 Today



■ Retail/E-Commerce ■ D2C ■ Strategic Accounts ■ Other

Arlo's biggest retail partner Best Buy, takes a heavy chunk of any sale

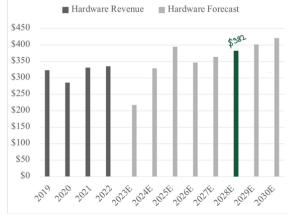
Channel margin by retailer



6

Attractive Entry Valuation

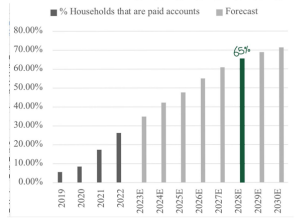
Sizing the Opportunity by 2028



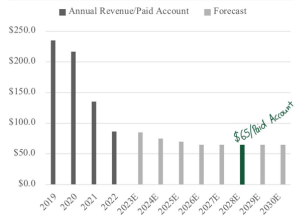
\$382 million
Hardware Revenue



14,5 million
households

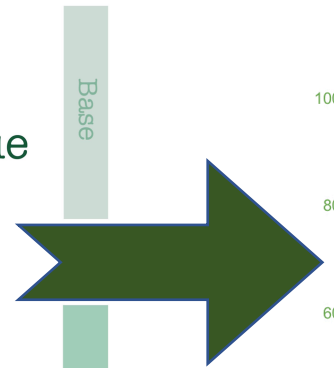


65% of them,
subscribers



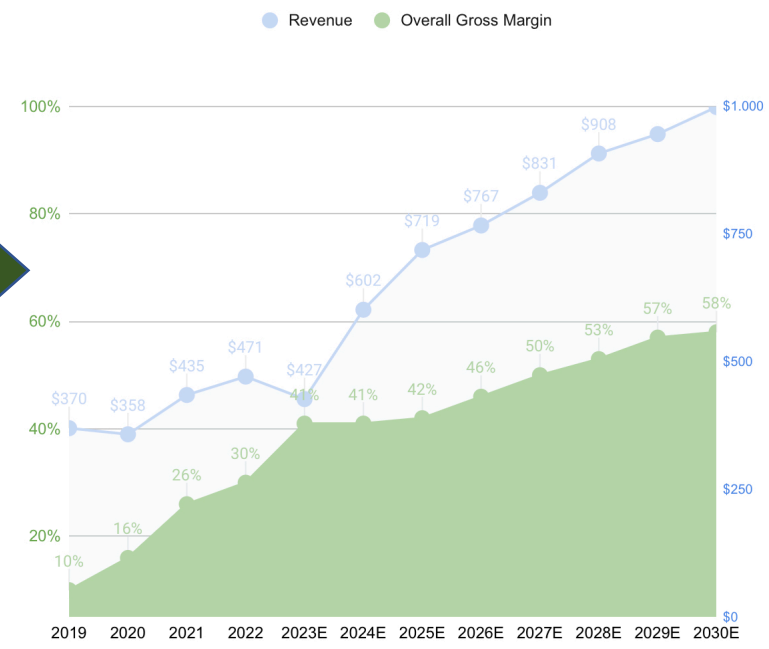
\$65 service revenue
per paid account

\$1,0 BILLION
in total revenue

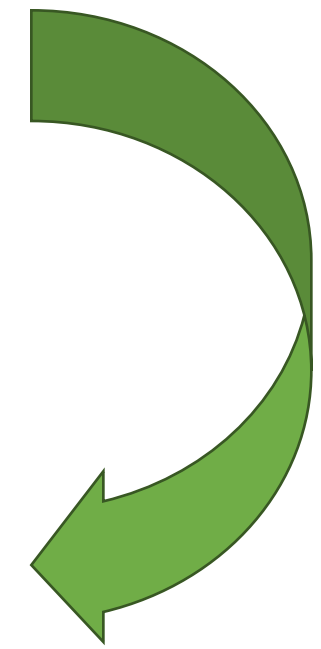
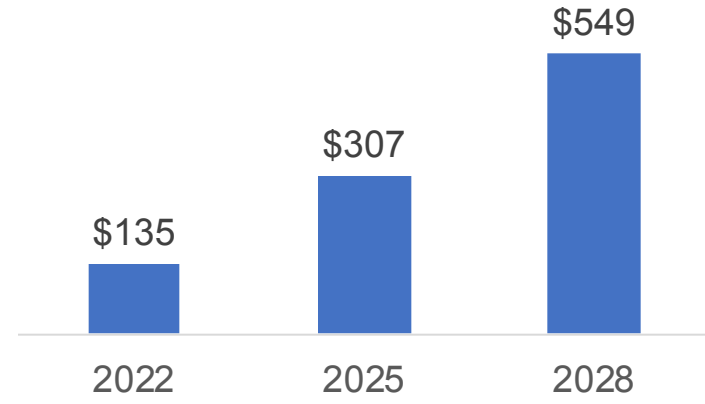


Base
New Business Model

Subscriptions will transform Arlo into a high-margin business



Projected Gross Profit



6 Attractive Entry Valuation But Risks Outweigh Opportunity

- Arlo's key differentiator, the only 4K wireless video camera on the market, is likely to be weakened in the coming years by Ring/Wyze.
- Consumer electronics companies are something you don't want to own. Arlo will need to bring in new cash flow every year before the holiday season to stay ahead of the curve and continue to be #1 in the camera market. I think it would be naive to think that Arlo is another David vs. Goliath story where it can compete against rivals like Ring.
- Management needs to aggressively shift focus away from being the best camera brand, to a diversified smart home ecosystem.
- Arlo is sandwiched between very powerful players like Google, Amazon and others. Competition in the DIY camera market is fierce and Arlo is unlikely to reverse the trend of losing market share.
- Projected Revenue and cash flow growth will come exclusively from the subscription business. If Arlo is able to successfully convert its existing user base into paid accounts, Arlo would be a nice cash flow-generating business.
- Cash Flow margins in the long run however (5-10yrs) will ultimately suffer from rising annual R&D costs, with Arlo trying to stay ahead and afloat amongst all the competition.

Conclusion: We will pass on this investment. Management has not adapted quick enough to diversify its product line. The dynamics of the DIY camera market will not allow for weakened players like Arlo.