

A male cyclist is shown from the waist up, leaning forward in a racing posture. He is wearing a black helmet, blue-tinted sunglasses, a red short-sleeved cycling jersey with a small logo on the chest, and black cycling shorts. He is holding the handlebars of a black road bike. The background is a bright, slightly blurred outdoor setting, possibly a road or a field.

Smart Glasses

A landscape study

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**Over the hill and to the
finish line!**

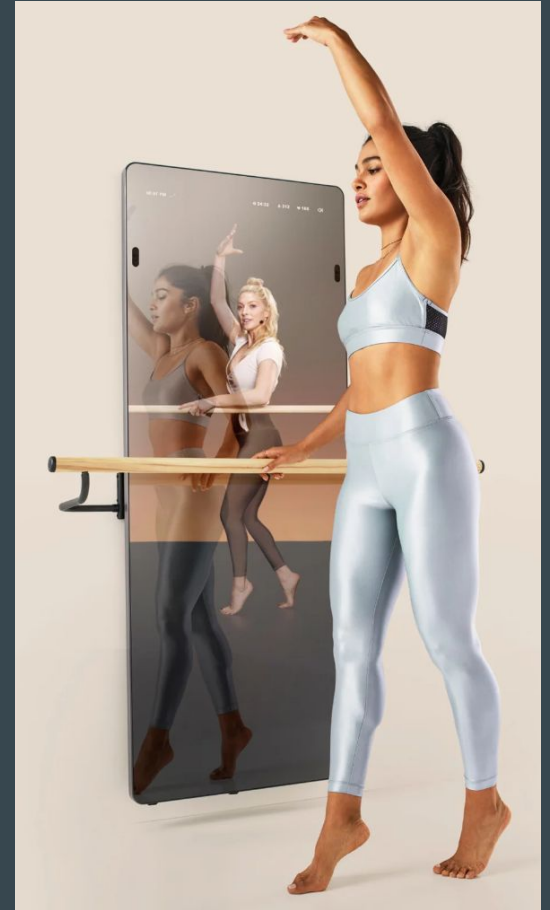
Making bike rides safer!

Nearly **1,000** bicyclists die and over **130,000** are injured in crashes that occur on roads in the United States every year.



Workout with a virtual coach without going to the gym!

The US fitness industry revenue in 2021 was \$33.25 billion. In the United States, 39% of Americans hold gym memberships.



Prominent attempts in past



2011 - 2015

Google
GLASS

- Designed by Google X
- Marketed as “hands-free” replacement for smartphone
- Time Magazine “Invention of the Year” 2012



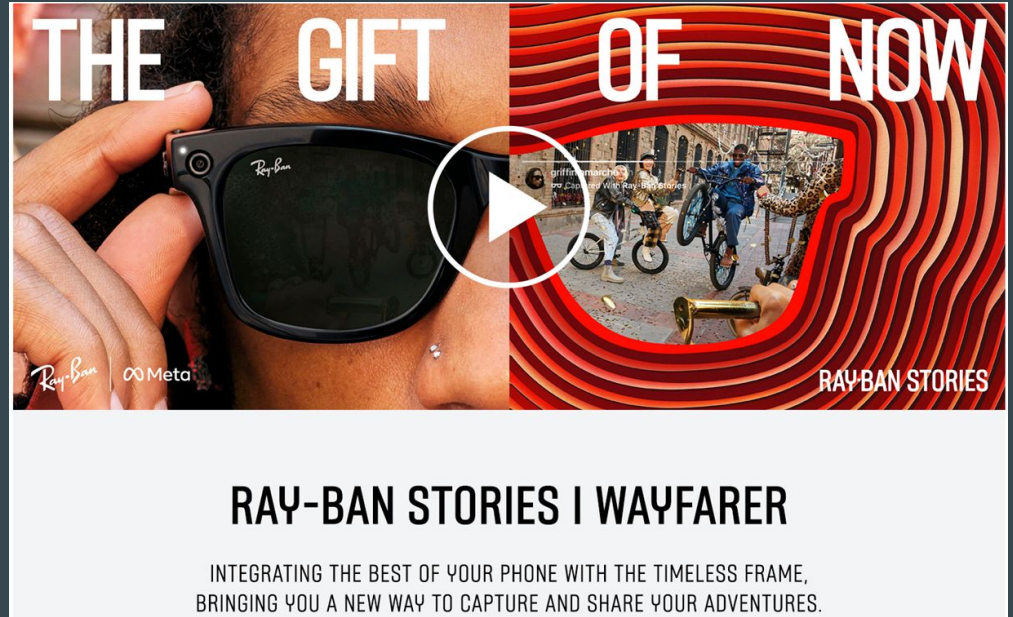
Challenges

- Price (\$1500)
- Smartphone have better hardware & camera
- Battery drain with GPS navigation & video features
- Privacy concerns
- Limited App Ecosystem
- Social acceptance



Why will it succeed NOW?

- Cost reduction + Lightweight
- Better battery life + hardware
- Improved looks
- Industry adoption (shows improved efficiency)
- Killer applications (AR/VR)
- Growth of wearable technology

An advertisement for Ray-Ban Stories sunglasses. The top half features a close-up of a person's face wearing the sunglasses, with a play button icon overlaid on the lens. To the right, a red, wavy, tunnel-like graphic frames a video scene of a street with people and a dog. The text 'THE GIFT OF NOW' is written in large white letters across the top. The Ray-Ban logo and 'Meta' logo are visible on the sunglasses. The text 'RAY-BAN STORIES' is in the bottom right corner of the graphic.

THE GIFT OF NOW

RAY-BAN STORIES

RAY-BAN STORIES | WAYFARER

INTEGRATING THE BEST OF YOUR PHONE WITH THE TIMELESS FRAME,
BRINGING YOU A NEW WAY TO CAPTURE AND SHARE YOUR ADVENTURES.

Introducing next generation Smart Glasses

Smart Glasses will transform the way we live and interact with the world



- **Play**
- **Explore**
- **Communicate**
- **Work**
- **Thrive**
- **Entertain**

Market Research

Potential Smart Glass Market Segments

Sportswear (\$161 billion)



Surgical (\$29 billion)



Social media (\$230 billion)



Industrial Wearable (\$4 billion)



Consumer oriented smart glasses for sports

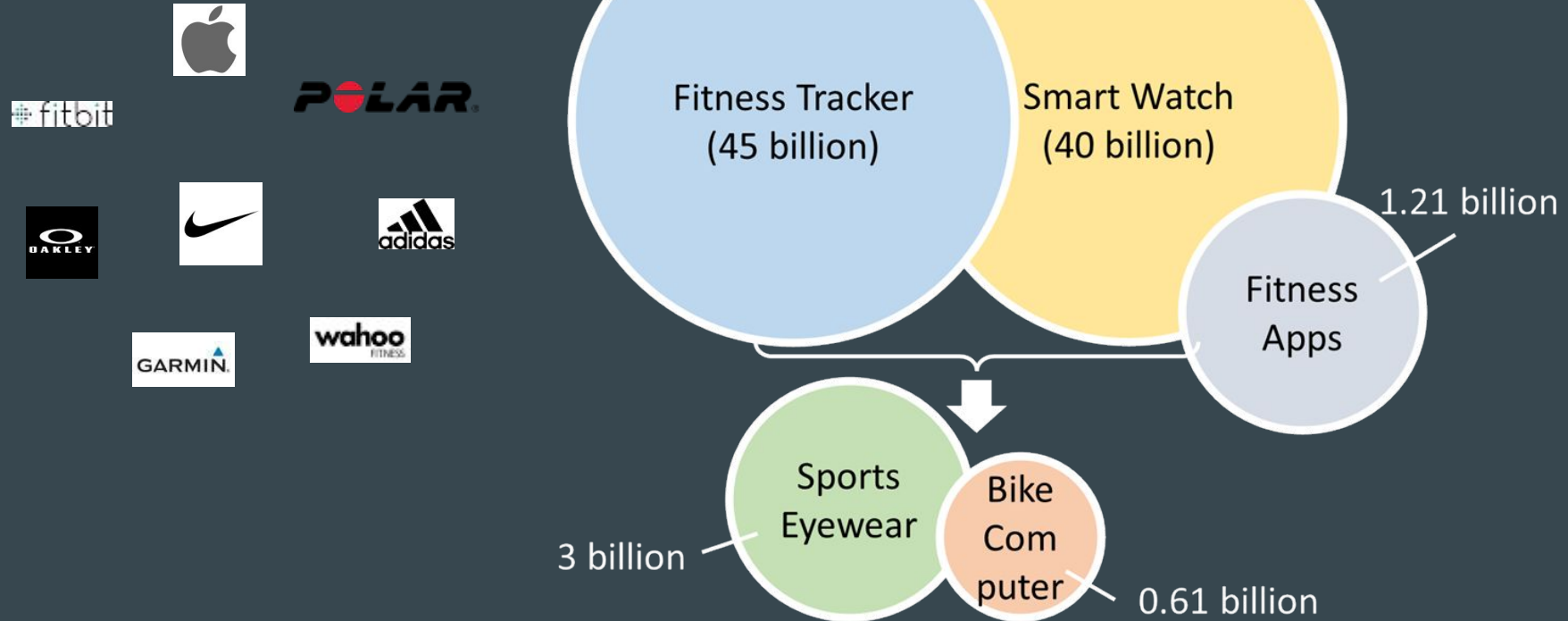


Features:

- Camera
- Speakers
- Touch pad
- Display overlay
- Bluetooth



Market size of potential smart glasses for sports



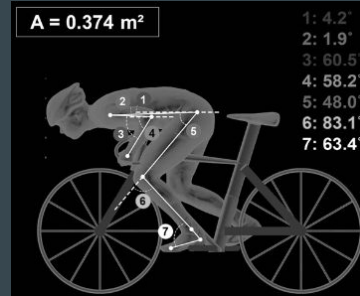
We see market developing in 2 tiers : Base & Pro

Base Model for Entry Level Users

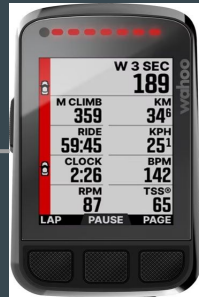
- Hands free Navigation
- Real-time data
- Listen to music, podcast, hand-free voice call.
- Other safety feature



Advanced Model For Pros



- Display data with better ergonomics and aerodynamics
- Improve performance
- Real-time communication with support team
- Light weight



Long Term Vision - augmented reality (AR)

Immersive gaming experience to hit fitness goal

Ghost runner to benchmarking sport performance



Virtual group
biking/running
with friends

Zwift is the largest multiplayer online cycling and running physical training program that has ~1M users.

Current Players

EverySight Raptor (introduced in 2017)

1. Very expensive \$649
2. Bulky, Heavy (98g), limit wearability for some helmet
3. Battery (8h)
4. With camera and touch pad
5. Cannot change lenses for different weathers



ENGO

1. Display only; need to work with cell phone or bike computers
2. Still not cheap \$329.95
3. Lightweight (35g, the display unit is only 6g)
4. long battery life (12h)
5. Charge time 3h
6. No changeable lens. (photochromic lens in the future?)



Garmin Varia (2016)

1. Expensive \$400
2. Clip-on, Aesthetics are not great
3. Battery (6h)



**What is the winning formula for Smart Glasses in
2023 and beyond?**

Top Quality Hardware

Innovations since Google Glass 2013 launch

- Weight : 2 pounds \Rightarrow 100g
- Display : 640x360 \Rightarrow 4k
- Battery Life : 3 hour \Rightarrow 8 hour
- Price : \$1500 \Rightarrow \$800

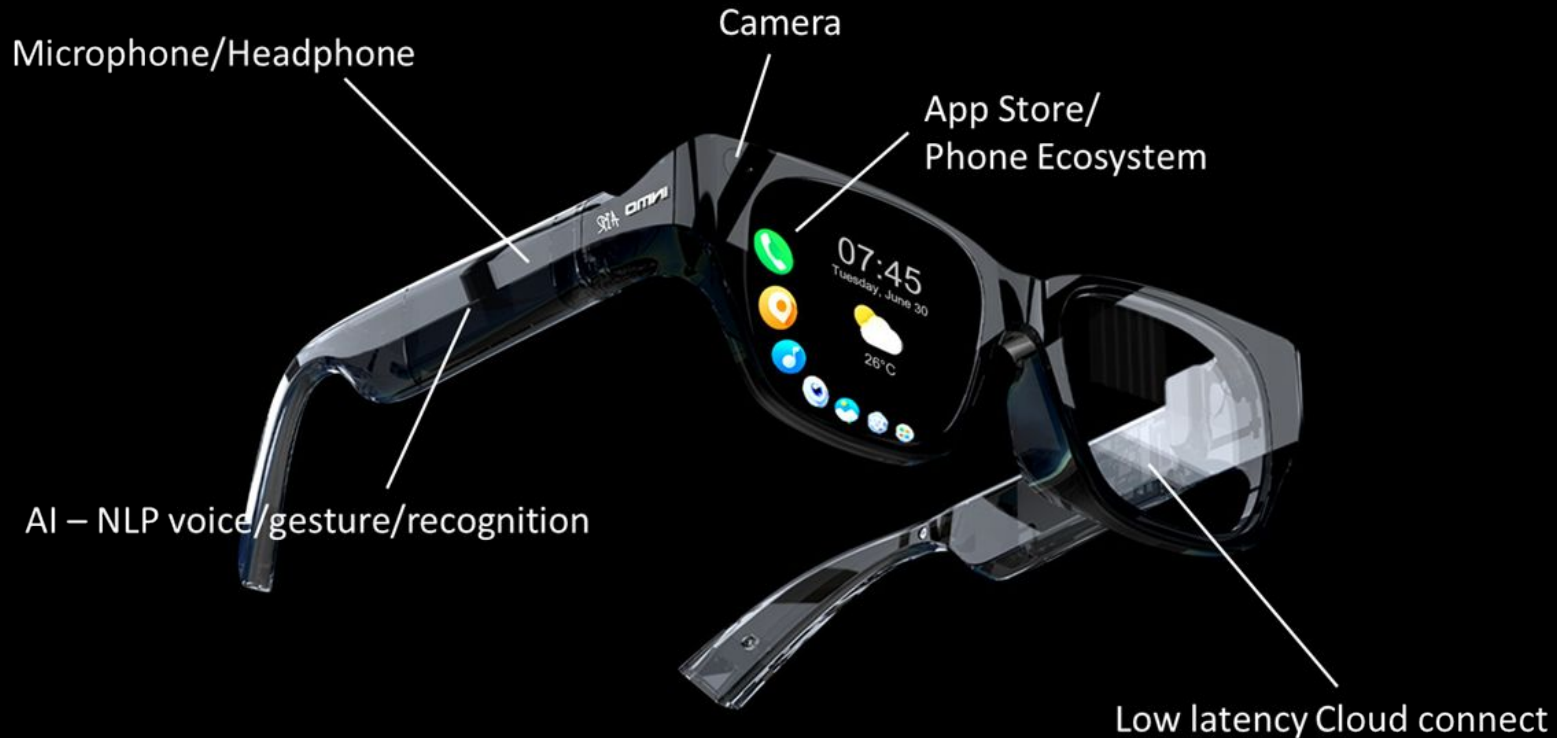


Learning from advances in mobile phone technology

- Low Power Sensors
- Low Latency, High Throughput Networking
- Noise cancelling
- AI Features
- Hi-Res Camera



AI & Cloud - the winning ingredients



Winners



LEARN FROM MISTAKES

HARDWARE DIVISION

STRONG AI DIVISION



*CONSUMER PRODUCT
GIANT*

HARDWARE EXPERTISE

*AI + APP STORE +
iCLOUD(Privacy)*



AI/AR/VR

BOUGHT OCULUS

GAMING MARKET

A glimpse into the future - *Apple*

Apple was wrong on AR, says Tim Cook; Steve taught him to admit it

By Ben Lovejoy | Apr 3 2023 - 6:38 am PT | 34 Comments



Apple Glass patent reveals killer feature for mass appeal

By [Kate Kozuch](#) last updated June 06, 2020

Apple Glass could provide the ultimate prescription lens solution

Apple Glasses could skip the display and beam images into your eyes

By [Tom Pritchard](#) last updated November 13, 2021

No 'retina display' jokes please

Apple Glasses delayed 'indefinitely' — but a cheaper VR/AR headset could be coming

By [Tom Pritchard](#) published January 18, 2023

Apple Glasses could be on the backburner while Apple makes mixed reality more affordable

A safer ride to the finish line!



THANK YOU !

