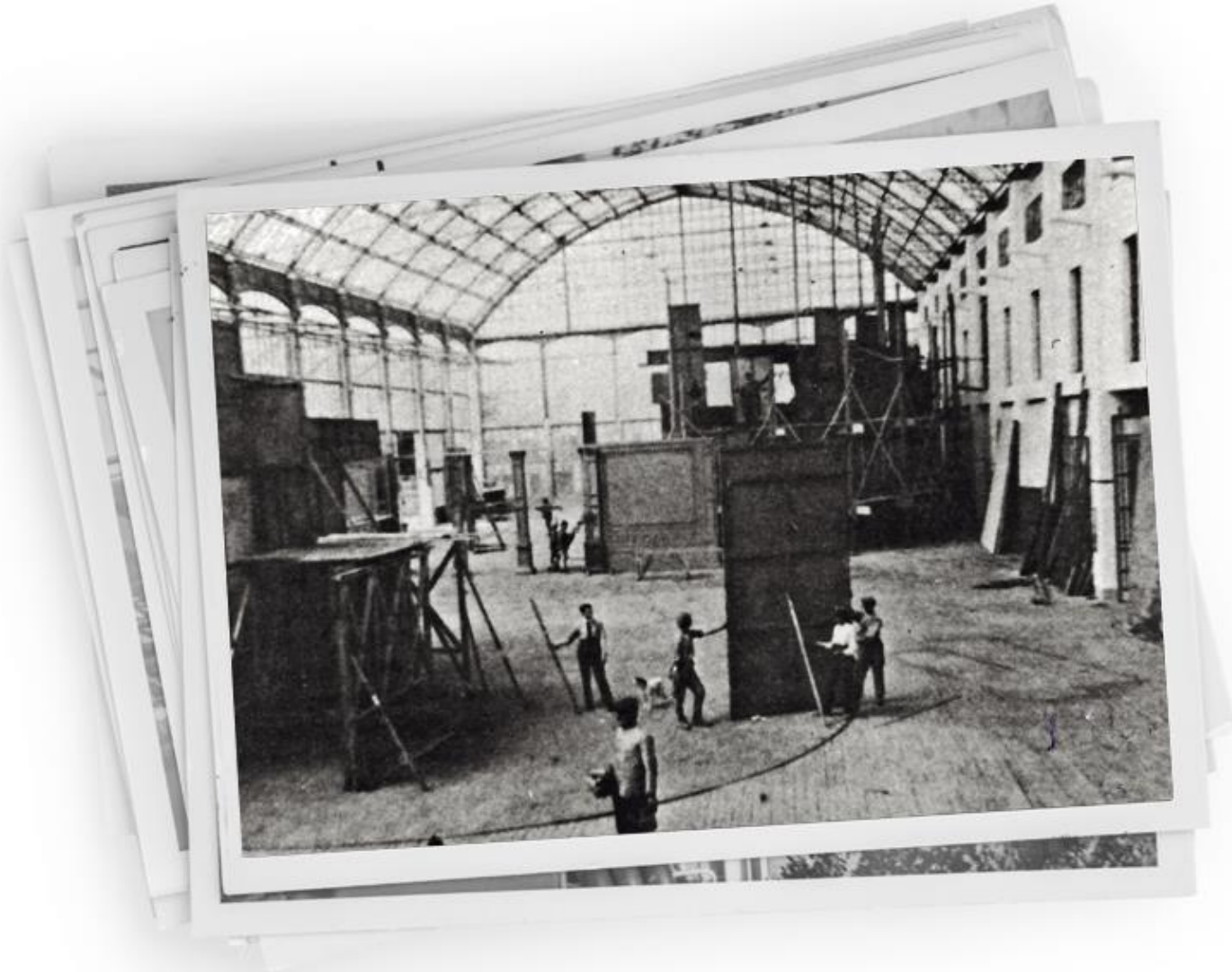




# VIRTUAL REALITY

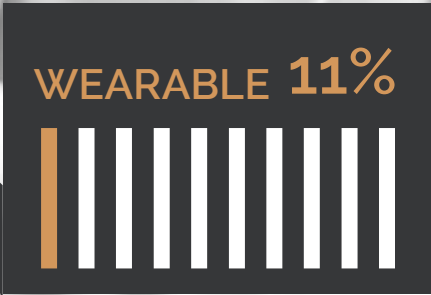
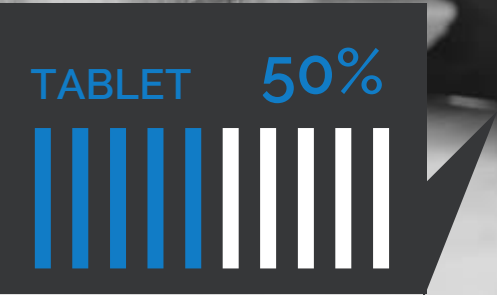
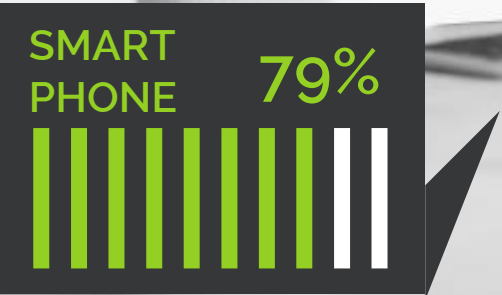
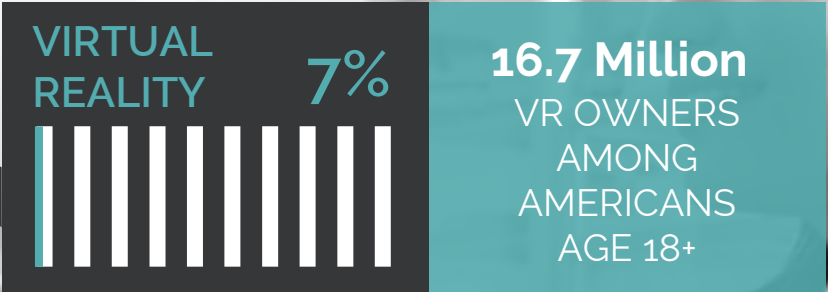
AT THE CROSSROADS

# Virtual Reality Multimedia Park – Turin, Italy



# Penetration trails other types of mobile tech

Percentage of Americans That Own and Use a...

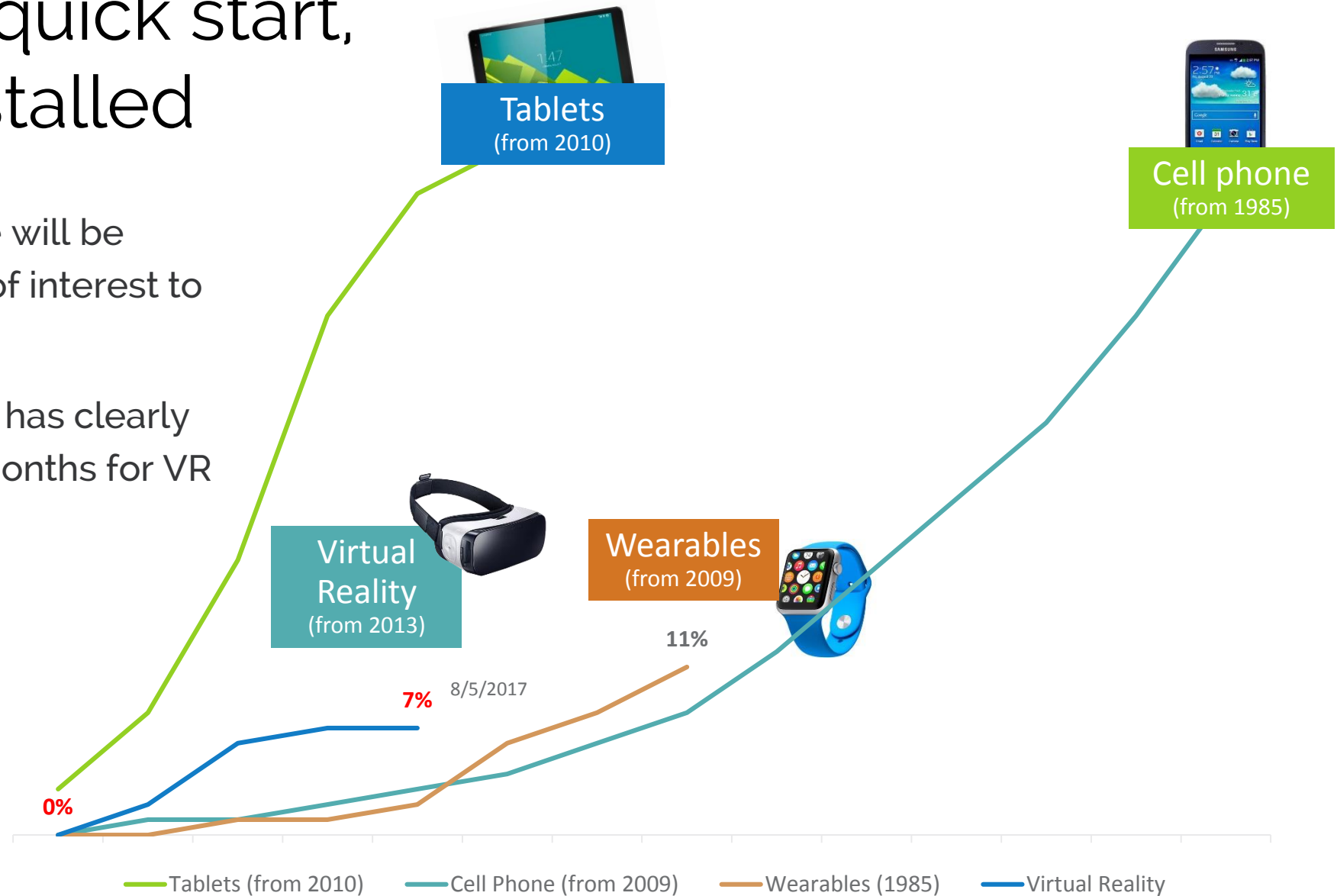




# ...and after a quick start, growth has stalled

- Which adoption curve will be adopted is of course of interest to manufacturers
- That said, penetration has clearly plateaued in recent months for VR

*% Adoption  
Among US Adults  
By years after introduction*



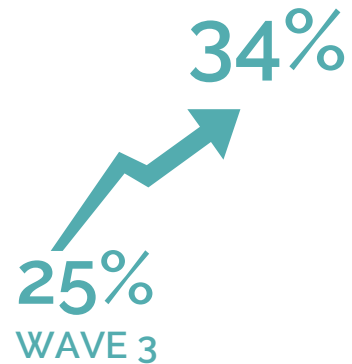
Cell phone data from CTIA, tablet data from Pew Research

# Assessment of VR

*Among users*



Wave 4 saw an increase in the percentage of VR owners who think their VR experience is exceptional.



A decrease was seen this wave in respondents having negative opinions towards VR, **from 39% to 28%**





# Constraints to growth in VR have not been addressed

- “ People are getting terrible first impressions of VR due to inferior hardware (and applications...) But console and PC gaming didn't die because of low quality games back in the 80s

## THE THREE KEY BARRIERS HOLDING VR BACK



COST



CONTENT



INTERFACE



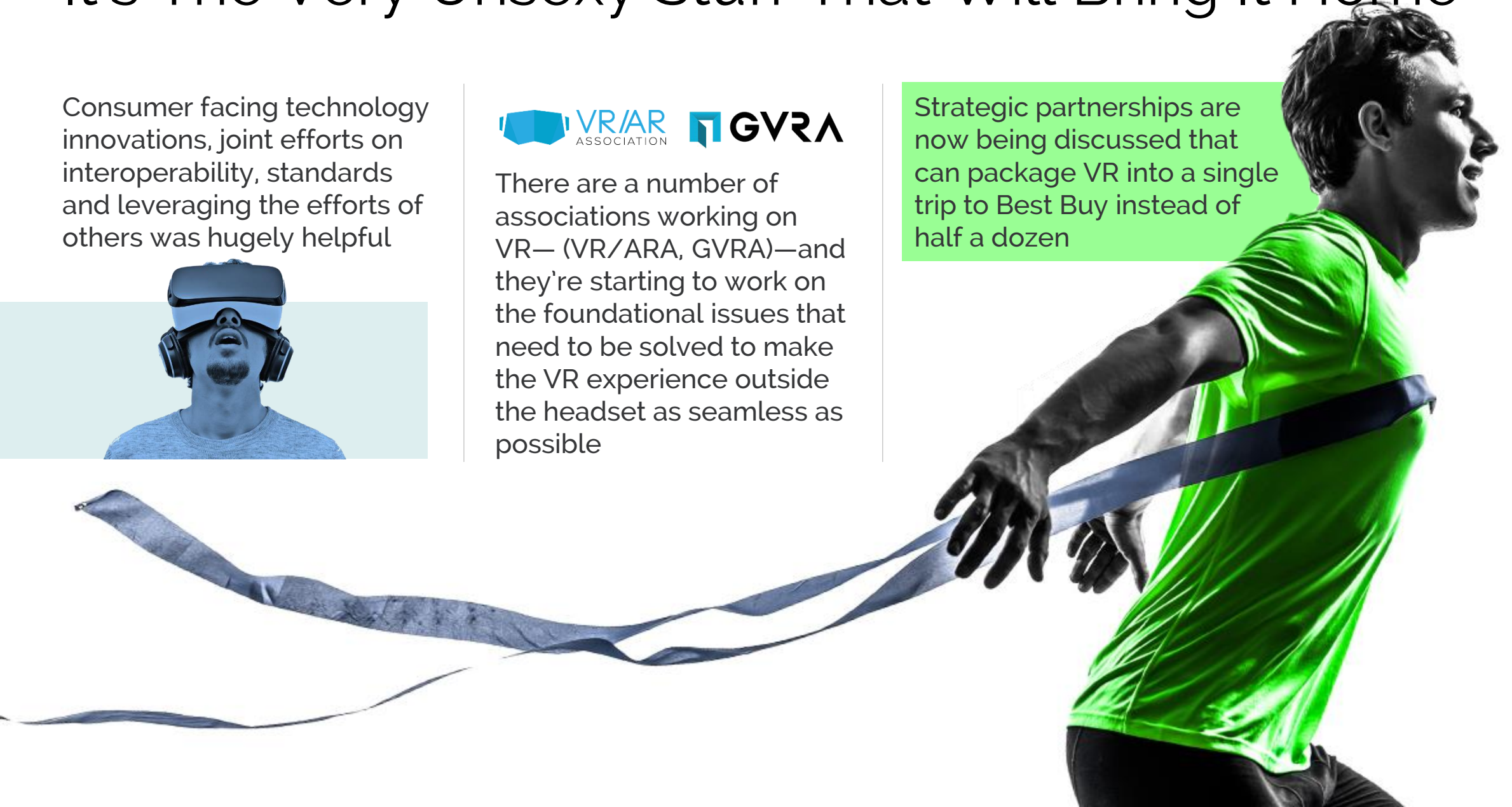
# It's The Very Unsexy Stuff That Will Bring It Home

Consumer facing technology innovations, joint efforts on interoperability, standards and leveraging the efforts of others was hugely helpful



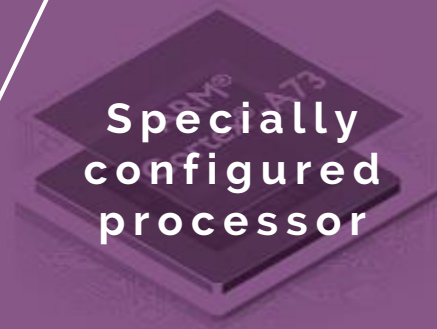
There are a number of associations working on VR— (VR/ARA, GVRA)—and they're starting to work on the foundational issues that need to be solved to make the VR experience outside the headset as seamless as possible

Strategic partnerships are now being discussed that can package VR into a single trip to Best Buy instead of half a dozen



# How to spend \$1,000 without even trying

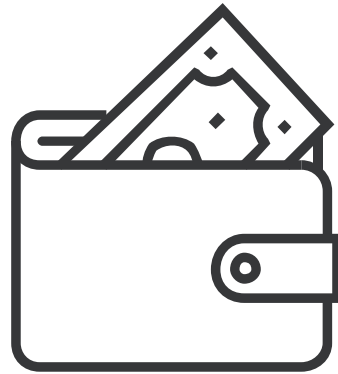
## Pieces of the Puzzle





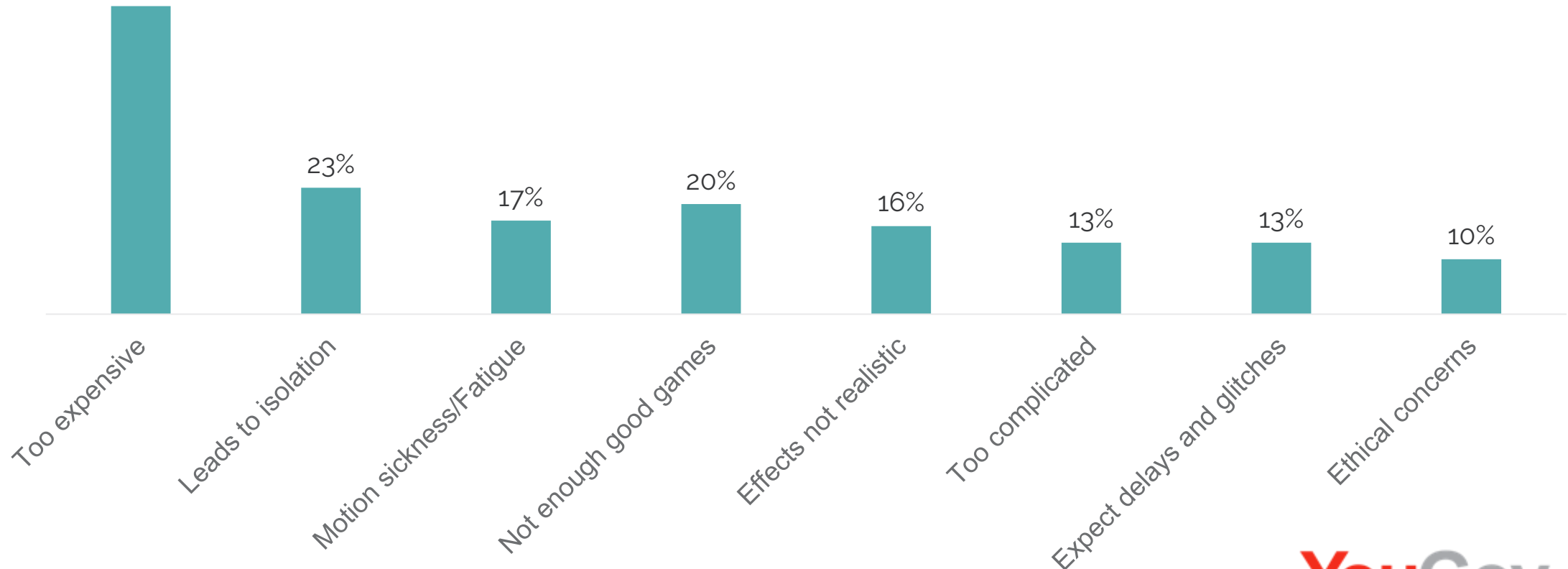
# Cost counts

# 56%



Cost is still perceived as the biggest barrier to adoption of VR—and by a large margin

Other concerns taken alone would not be troubling—but together they present a significant obstacle—to date, YouGov has not seen a concerted effort to address any, let alone all of them



# Content 1: Respondents think Virtual Reality's future is...

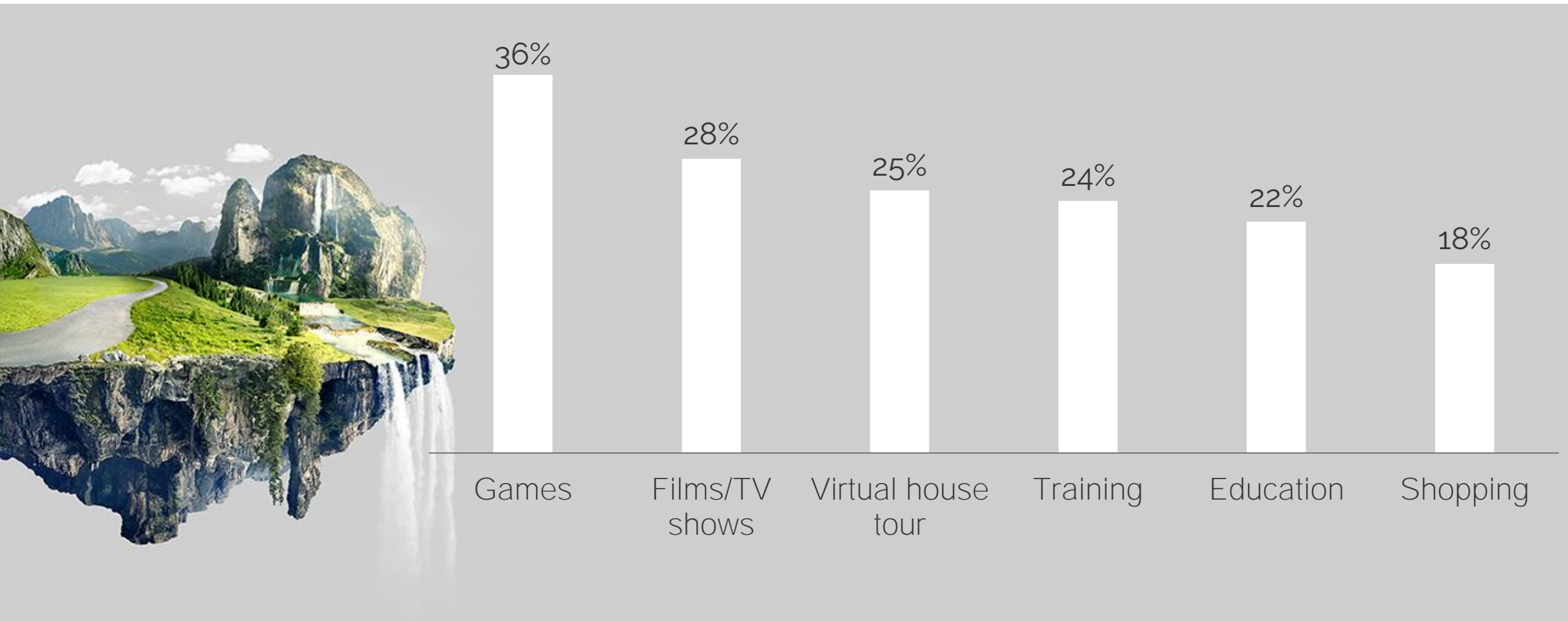
Respondents continue to hold strong to the belief that Gaming will be the future of growth in VR applications

GAMING  
37%

Adult entertainment	9%
Training / simulations	5%
Films / TV shows	4%
Social media	3%
Health / fitness	3%
Other	18%
Don't know	21%

# Although they think gaming's in the driver's seat, they really want more from VR

*(All Respondents)*

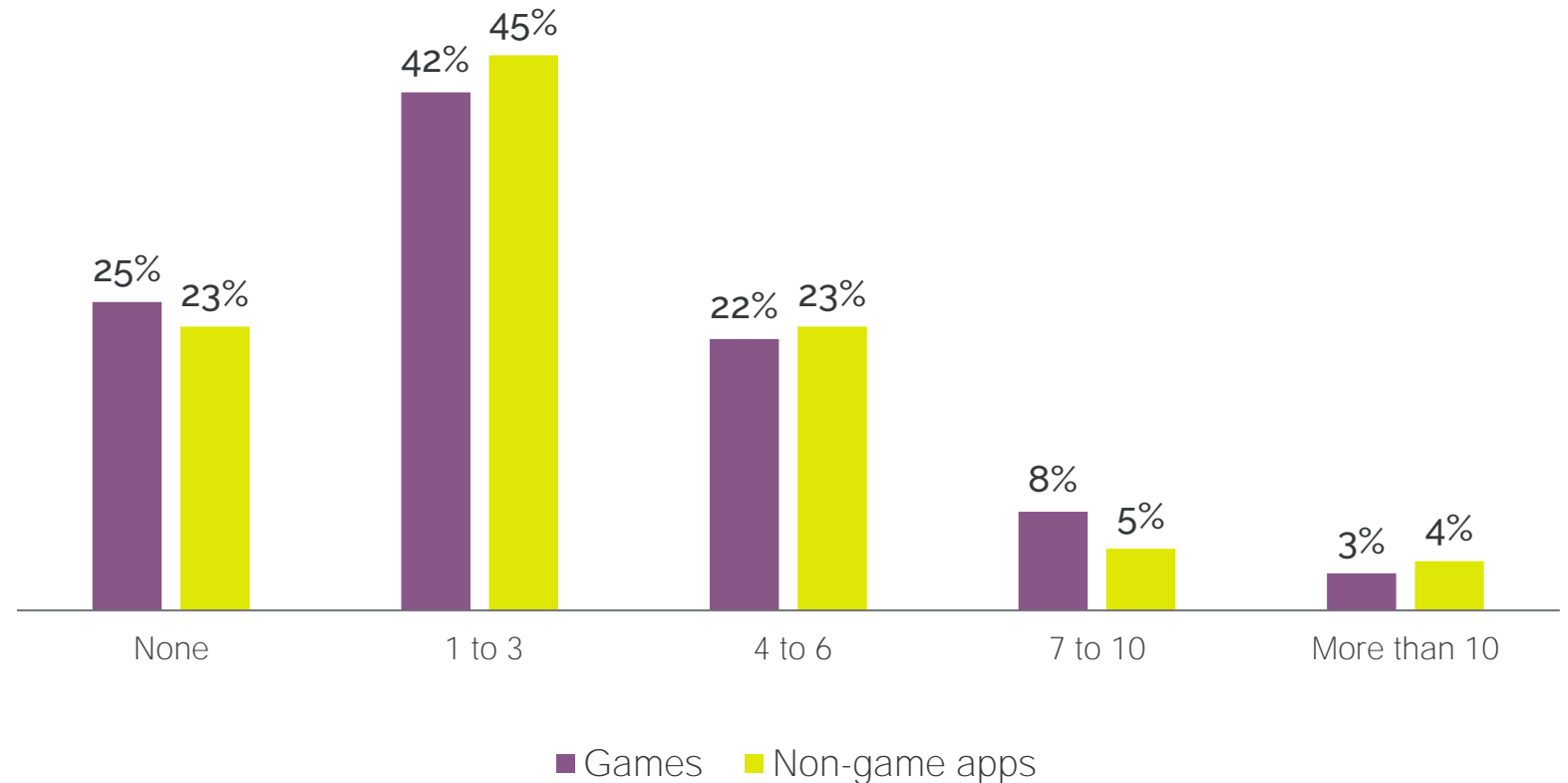




While games are the most popular application that owners are interested in, penetration among VR owners stays relatively low



**23%** do not own any games



# End result: Gathering dust in a closet?

We asked almost owners of Virtual Reality equipment how often they use it.  
We were surprised.



27% Use daily

35% Use their rig at once a month or less



# The industry view: We're stuck in the middle

## Consumer

“ Why would I spend more than a grand for VR equipment when there are no compelling applications?



## Application Developer

Why would I spend tens of millions developing high end applications for such a small user base?”





# Interface—58% say they need a haptic upgrade

VR Owners say they need hand controllers or other devices to make their VR environment better



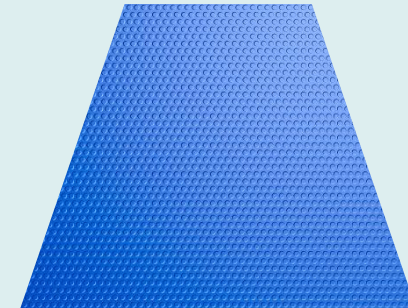
24%

Say they need wands, sword or sabers



19%

Say they need mats or devices to mark out a VR stage or play area.



15%

# Why don't they try...?

Sometimes proposed solutions from outside an industry community can be laughably naïve, ill-informed or just downright stupid

*Very occasionally, it takes an outsider to point out the obvious*



# Solution 1—Haptics: Borrow from wearables

Both Wearables and Virtual Reality are seeing sales stall -- or even decline in some cases.  
**WHAT TO DO?**



The tools VR provides for interacting with the virtual environment are improving, but are not yet best of breed—and Wearables could actually be part of the solution to one of Virtual Reality's problems.

The Fitness Wearables that have gotten so much media attention are just one class of Wearable Technology. There are also **jewelry and accessories that are 'Smart.'** **There is Smart fashionable clothing out there.** There are also some very effective industrial uses of wearable technology



# Solution 1—Haptics: Borrow from wearables

**Wearables  
configured to  
interact with Virtual  
Reality**



Showing grip, direction, movement—masks under VR headgear could show emotion and track speech. This stuff is not new.

**YouGov**



# Solution 2: Different apps for different audiences

Perhaps it's time to target niche audiences—captive audiences, as it were. VR is as much about what it excludes as what it shows. It excludes the outside world. There are large audiences who are happy to shut the world out...



Students, patients, gym rats and even those incarcerated may need and want the cocooned environment found in VR



These applications can be developed at a far lower cost than Triple A game titles, and marketing to specific audiences (that often have one purchasing agent in front of them) is a lot easier than stacking titles in Walmart

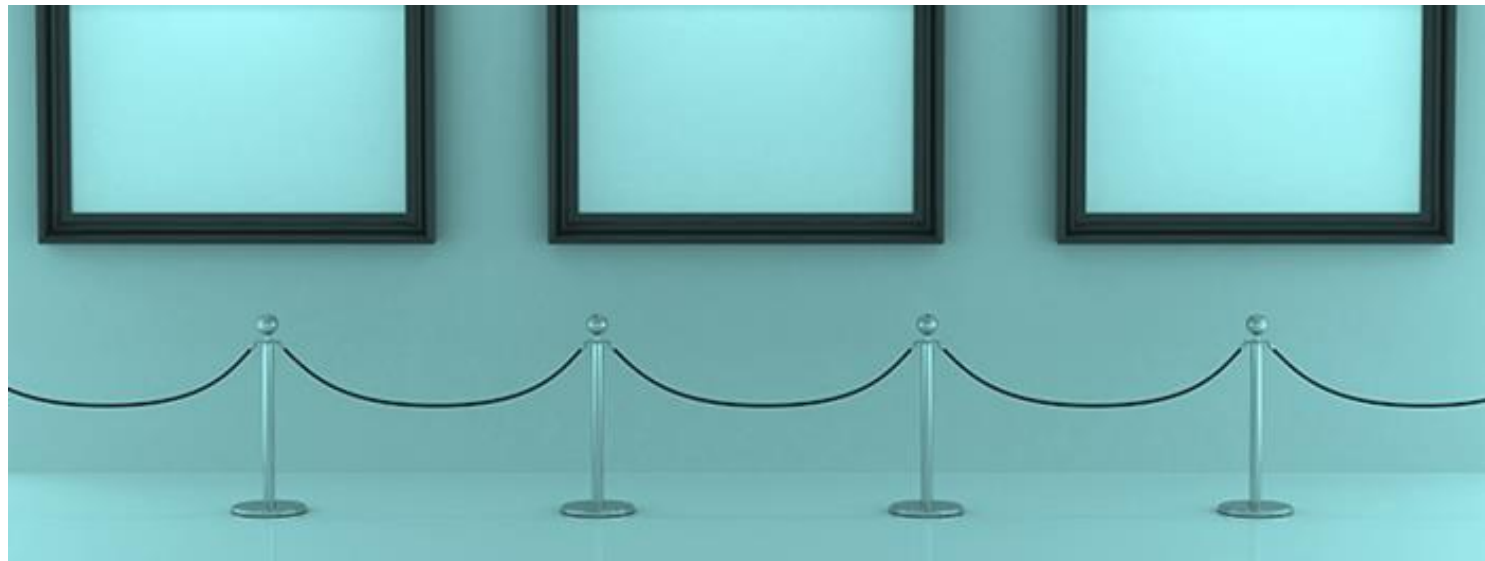


Education's (limited) success with VR shows that institutional buyers can drive both hardware sales and application development

# Solution 3: Different stages can set the... umm... stage

Consumers may not be willing to buy a lot of VR right now... but there's every indication that they're happy to rent it. Kinda unfair to talk about this as a 'potential' solution as so much is being done with it now.

- Location-based applications can be VR's foot in the door
- Proof of concept can be found in a variety of places
- Habituating consumers to a technology has worked before





# Solution 4: Attention Surplus, Not Deficit

The Never-Ending Story... Ended. *But it didn't have to.* Because people are willing to engage in a narrative more or less forever.



Movies have increased in average length by 5 minutes every decade since 1940



The average length of popular books has grown from 320 pages to 407 over the past 20 years. Every book in the Game of Thrones series was longer than 650 pages.



Binge watching is already a cliché



Games regularly update, add levels and new versions

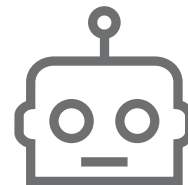
# Solutions 5 – Life-Long stories with limited interaction for segmented audiences

Narratives with forked  
alternative story paths  
and automatic  
bookmarking for session  
end—slow developing,  
never-ending—pace like  
Downton Abbey for  
some, Game of Thrones  
for others

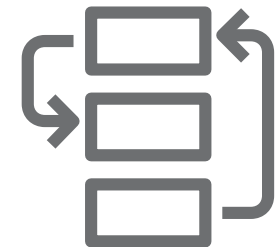
Developed for niche  
audiences in prisons,  
schools, hospitals and  
retirement homes



Audience actions adapted to  
existing haptic interfaces—Bot  
Avatars can control the narrative  
and the pace



Watch for the winners  
and develop them into  
your next Triple A title



A man and a child are sitting on a large rock, both wearing VR headsets. The man is on the left, wearing a white t-shirt and green shorts, with his right hand raised towards a glowing digital network of lines and nodes that fills the sky. The child is on the right, wearing a dark t-shirt and dark shorts. The background is a clear blue sky with some clouds. A red horizontal bar is positioned across the middle of the image, containing the text "Thank you!".

Thank you!