VR in Senior Living
Building Communities to Thrive

Arizona LeadingAge
5/17/2023
2:15pm - 3:15pm

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Nice to meet you!

- Growth Manager at Rendever

- University of Minnesota — 2017
  - *B.S. Family Social Science*
  - *Leadership Minor*

- Am fortunate to have all four grandparents still with me
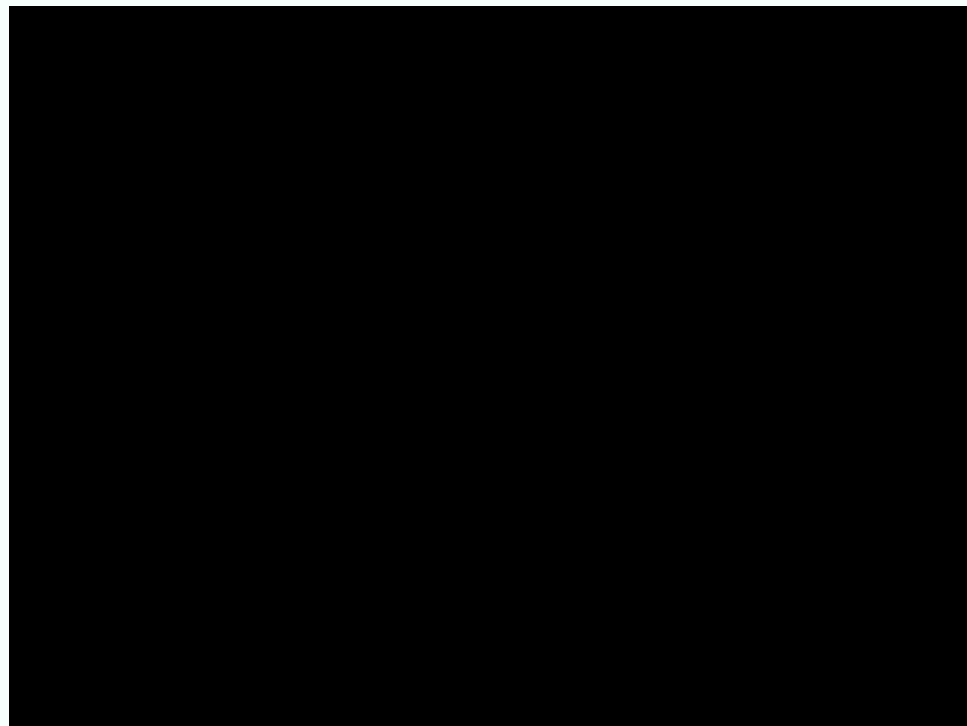
- Green Bay Packers owner

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Rendever ♥'s Arizona

The power of virtual reality evoking memories from the past and feelings of nostalgia... 🥰❤️🥰

TikTok: Magical Moments

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Who uses TikTok or IG/fb REELS for their community?

33
Following

106.1K
Followers

1.8M
Likes

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Session at a Glance

1. Celebrating where we're going: a review of AgeTech
2. Technology Driven Wellness
3. Virtual reality, a brief history
4. Social isolation - before, during, and after the pandemic stage of COVID-19
5. Building community dynamics through the power of shared experiences
6. Making a commitment to modern virtual family engagement
7. The future: Thriving communities through thriving individuals
8. Story sharing/Demo!

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Let's talk about:

AgeTech

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The AgeTech Industry

"**AgeTech** is the growing category of technology solutions designed to meet the needs of the 50-plus audience and the $8.3 trillion-dollar market it represents. Sitting at the intersection of longevity and technology, AgeTech includes products, services and experiences across industries that contribute to longer, healthier lives and empower people to choose how they live as they age."

- AARP

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The AgeTech Industry

Today, there are ~1 billion people over the age of 60 living on this planet, many of them are healthy and active and have discretionary income. Since the population over the age of 60 is growing faster than any other age group, **by 2050, 20% of the world's population (~2 billion people) will be over the age of 60.**

A recent AARP study found that older adults are adopting technology more than ever before. Internet, smartphones, tablet, wearables, and even smart TVs and speakers, are being used by an increasingly growing number of older adults.

It has also been found that demand for health and wellness technology to enhance provider care is increasing among older adults. If offered a choice, **over half (53%) would prefer to have their health care needs managed by a mix of medical professionals and health care technology.**

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AgeTech Industry Highlights

2015: AARP launched its own innovation lab, **The Hatchery**, with a mission to bring together the best, most creative entrepreneurs to share ideas for keeping people 50 and older top of mind as they design new products and services.

2019: Aging 2.0 announced the launch of **The Collective** initiative, a global, mission-driven initiative to accelerate innovation in aging.

2022: Rendever is the first AgeTech company to be featured on the **TIME 100 Most Influential Companies** List

2012: Stephen Johnston and Katy Fike founded **Aging2.0**, a global organization that strives to accelerate innovation to address the biggest challenges and opportunities in aging.

2018: GreatCall's acquisition by Best Buy. This was both Best Buy's largest acquisition to date, as well as the biggest exit in Gerontech history. PillPack was acquired by Amazon for just under $1B.

2020: >$368 million was invested in >40 age tech companies in 2020 (*Crunchbase*)

2021: AARP launches **AgeTech Collaborative™**, a community connecting the leading AgeTech startups, most forward-thinking venture capitalists, enlightened enterprises and creative testbeds in a communal space.

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The world is looking for an aging experience that is fun, social, and focused on authentic connection.

No matter where you age.

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Let's talk about:

Technology Driven Resident Wellness

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Importance of Broadcasting Proof

Residents lead the way for a change in engagement

Demonstrate how technology provides missing links in everyday connection

- Hearing, speaking, memory revival
- Resident-led engagement through use of technology
- Empowerment
- Education of use
- Connection
- Value proposition of hybrid programs and program set-up
- Committing to a changing idea of "community" and how to strengthen its impact
- Engagement is not the afterthought

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View-Master makes its debut at the 1939 New York World's Fair
1939

1942
The US military purchases 100,000 View-Masters and ~6m photo reels for military training during WWII

Ivan Sutherland creates the first head mounted display (HMD)
1968

1962
Morton Heilig's "Sensorama" prototype set forth the notion of modern day 4D theaters

1970

1979
LEEP optical system designed by Eric Howlett, the first modern-day headset

1980

Popular video game company, Atari, founds a research-focused VR lab
1982

Atari lab shuts down
1984

1985
Mattel purchases technology from Jaron Lanier's VPL Research to create the Power Glove

1990

"Affordable VR by 1994"
1991

Nintendo launches "Virtual Boy" for $179.95
1995

Virtual Boy is discontinued
1996

2000

2014
Facebook acquires Oculus for $2b

2012
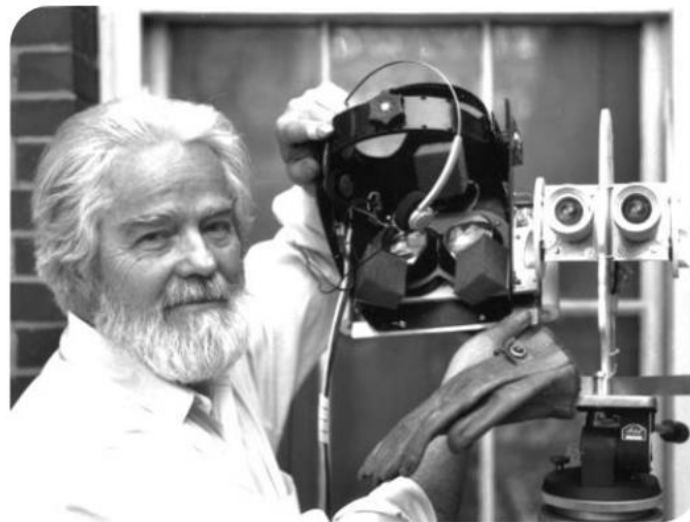Oculus kickstarter is launched

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Ivan Sutherland's 'Sword of Damocles', attached from the ceiling

1969

Eric Howlett's LEEP Panoramic Stereo Photography System

The Original
View-Master

1939

Nintendo's
Virtual Boy

1995

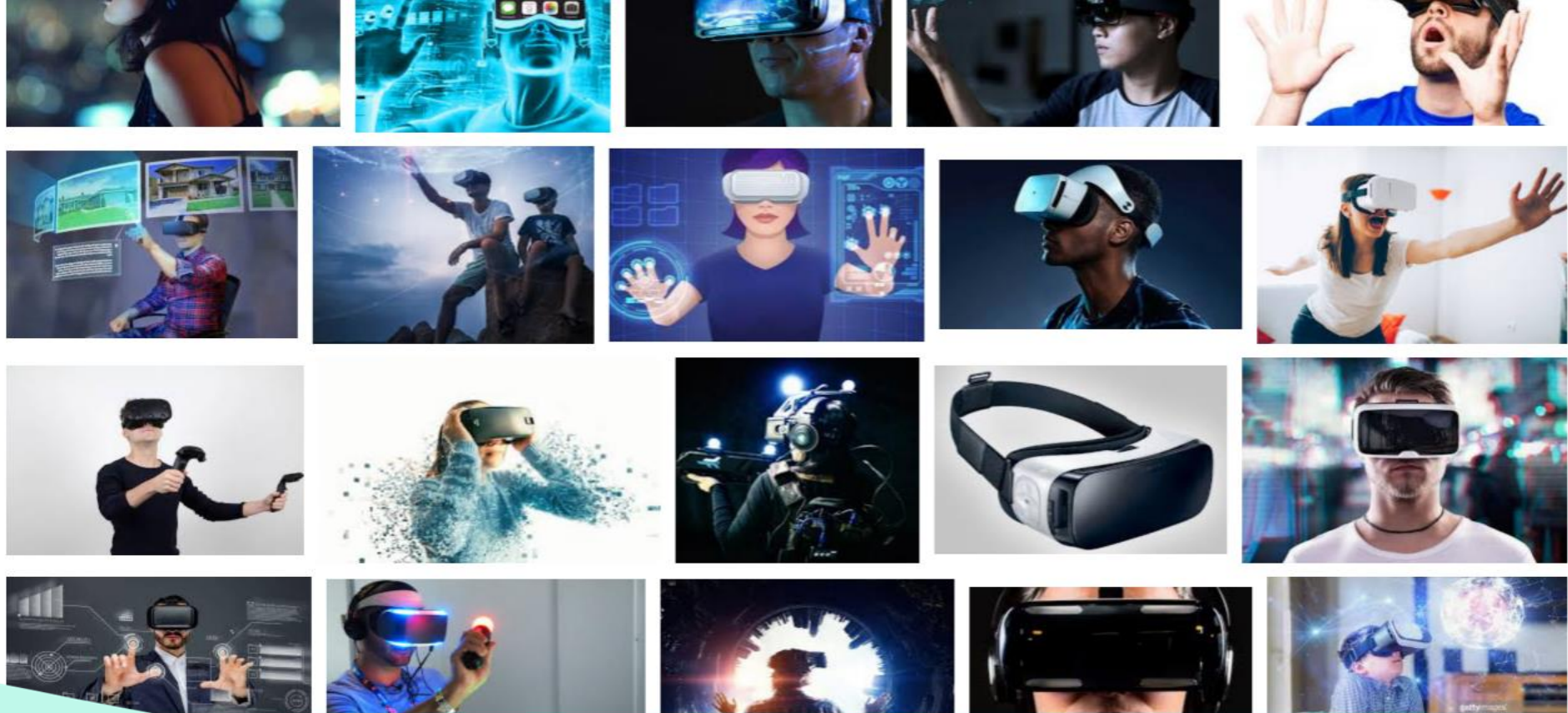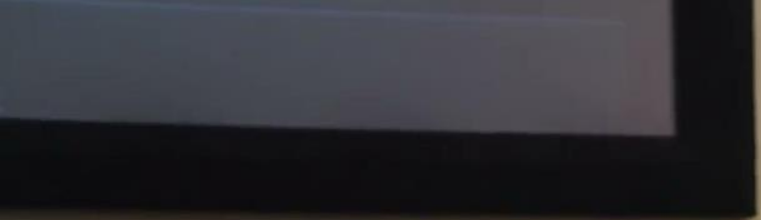Mattel's View Master
(Google Cardboard)

2015

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Oculus Quest 2

HTC Vive Flow

Pico G2 4k

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Let's talk about:
Social Isolation

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As much as 43% of adults age 60 and older experience frequent or intense loneliness

Lonely seniors are at increased risk for cardiovascular disease, hypertension, infections, and premature cognitive decline.

Research has shown that social isolation is as detrimental to one's health as smoking 15 cigarettes a day.

Separate studies have found social isolation to correlate with a 30% increase in mortality.

Social isolation is associated with $6.7b in additional Medicare spending each year.

(an average additional $1,608 per socially isolated senior)

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Social isolation is reaching epidemic level numbers across the world, especially in the senior population.

30% increase in mortality

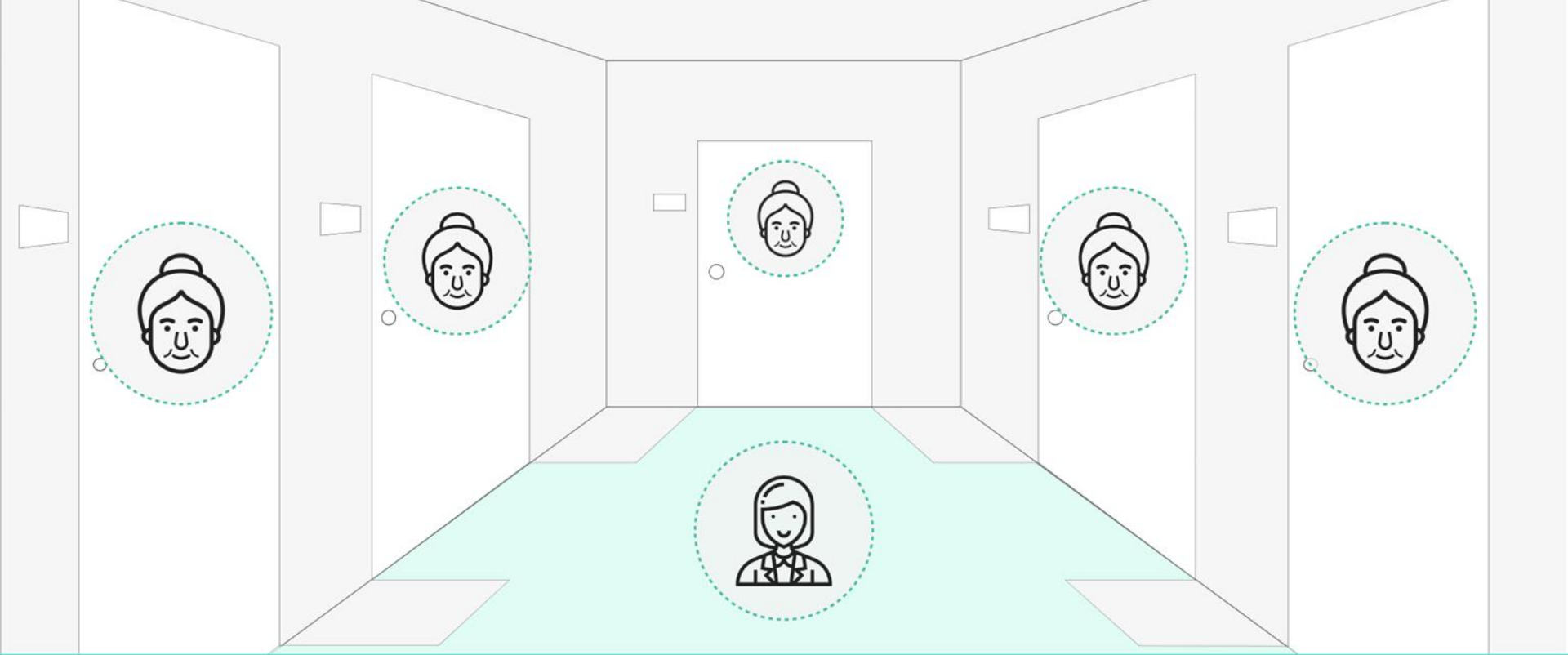|	
50%	Increased risk of dementia
29%	Increased risk of heart attack
32%	Increased risk of stroke

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Voice Communication
Enabling Programming at a Distance

RendeverLive™

Themes to fit modern community lifestyle

With new programming options being added quarterly, there's always something for your community to jump into:

World Travel

Join us each Tuesday and Thursday as we journey around the globe from Mexico to Australia, and even to outer space!

Intercommunity Trivia

Work together as a team and compete against other Rendever communities. These sessions are a great way to get residents engaged!

Move & Groove

Tap your toes and hum along to live musical performances and sing alongs. From classic hits to original compositions, these fun sessions will be swinging!

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RendeverLive™ April 2023

Rendever offers a variety of live programming every weekday for you to enjoy and connect with the Rendever community all over the world. Add these events to your calendar and tune in at the scheduled time by simply tapping Join RendeverLive™ on your tablet or visiting live.rendever.com and entering your credentials.

Monday	Tuesday	Wednesday	Thursday	Friday
3 **Mindfulness** 11:00am ET (8:00am PT) **Book Club** Ernest Hemingway 2:00pm ET (11:00am PT) **News Roundup** 4:00pm ET (1:00pm PT)	**4** **Mindfulness** 11:00am ET (8:00am PT) **Travel & Culture** Medieval Paris 2:00pm ET (11:00am PT) **Guess Where?** 4:00pm ET (1:00pm PT)	**5** **Mindfulness** 11:00am ET (8:00am PT) **Primetime Rerun** Broadway Magic 2:00pm ET (11:00am PT) **Trivia!** 4:00pm ET (1:00pm PT) *Passover Begins*	**6** **Mindfulness** 11:00am ET (8:00am PT) **Travel & Culture** History of Golf 2:00pm ET (11:00am PT) **Life Story** 4:00pm ET (1:00pm PT) *The Masters (Golf) Begins*	**7** **Mindfulness** 11:00am ET (8:00am PT) **Tea & Talk** Traditions & Beliefs 2:00pm ET (11:00am PT) **Jazzy Bingo** 4:00pm ET (1:00pm PT) *Good Friday*
10 **Mindfulness** 11:00am ET (8:00am PT) **Book Club** Parables 2:00pm ET (11:00am PT) **News Roundup** 4:00pm ET (1:00pm PT) *Easter Monday*	**11** **Mindfulness** 11:00am ET (8:00am PT) **Travel & Culture** Famous Artists 2:00pm ET (11:00am PT) **Guess Where?** 4:00pm ET (1:00pm PT)	**12** **Mindfulness** 11:00am ET (8:00am PT) **Primetime Rerun** Meet a Toymaker 2:00pm ET (11:00am PT) **Trivia!** 4:00pm ET (1:00pm PT)	**13** **Mindfulness** 11:00am ET (8:00am PT) **Travel & Culture** Book of Exodus 2:00pm ET (11:00am PT) **Life Story** 4:00pm ET (1:00pm PT) *Passover Ends*	**14** **Mindfulness** 11:00am ET (8:00am PT) **Tea & Talk** Swinging 60s 2:00pm ET (11:00am PT) **Jazzy Bingo** 4:00pm ET (1:00pm PT)
17 **Mindfulness** 11:00am ET (8:00am PT) **Book Club** Beauty & the Beast 2:00pm ET (11:00am PT) **News Roundup** 4:00pm ET (1:00pm PT)	**18** **Mindfulness** 11:00am ET (8:00am PT) **Travel & Culture** New Zealand 2:00pm ET (11:00am PT) **Guess Where?** 4:00pm ET (1:00pm PT)	**19** **Mindfulness** 11:00am ET (8:00am PT) **Can't Miss Session** Gardening 101 2:00pm ET (11:00am PT) **Trivia!** 4:00pm ET (1:00pm PT)	**20** **Mindfulness** 11:00am ET (8:00am PT) **Travel & Culture** Animals at Work 2:00pm ET (11:00am PT) **Life Story** 4:00pm ET (1:00pm PT)	**21** **Mindfulness** 11:00am ET (8:00am PT) **Tea & Talk** Nature 2:00pm ET (11:00am PT) **Jazzy Bingo** 4:00pm ET (1:00pm PT) *Earth Day is Tomorrow*

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Family Connection

"**94%** [of families are] more likely to select a community that offered some kind of technology that **kept them up to date and engaged** in the lives of their loved one."
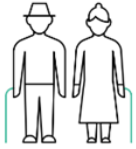
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Family Connection

"Despite family members' best intentions or desires, **41%** of the 1.7 million Americans in assisted living communities **don't receive a weekly family visit**."

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GOALS

Feasibility of long distance component of VR with family (adult child or sibling)

Feasibility of VR with residents with dementia and MCI

PURPOSE

Relive

Reinspire

Reconnect

NIH
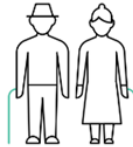
National Institute on Aging

- 2+ year application process

- Grant received in September, 2019

- Research paused due to COVID-19 in March, 2020

- Received green light to accelerate and apply for next phase

- Phase II Clinical Trial began in September 2021

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RESEARCH DESIGN

Family member at home receives a networked Rendever VR headset to use throughout study

Researchers visit community to assist residents with sessions and conduct interviews

20 Dyads MCI

20 Dyads Dementia

Call

VR Travel

Life Story

Family Photos & Videos

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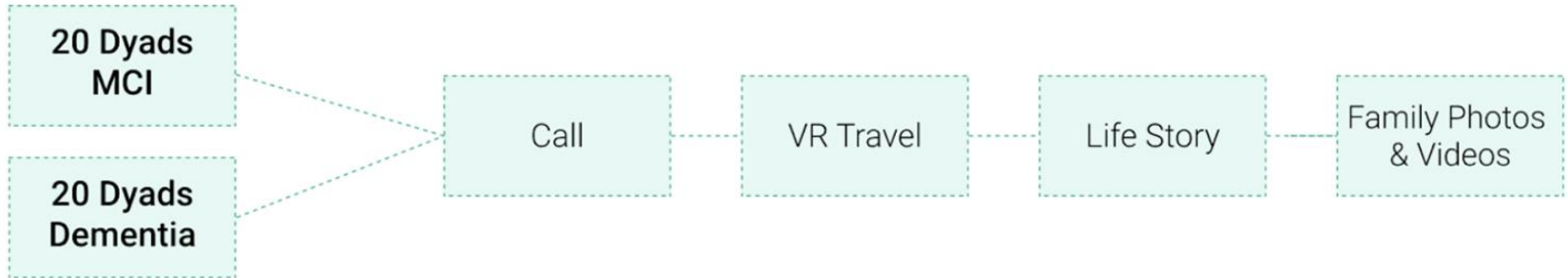
MEAN QUALITY OF LIFE / RELATIONSHIP WITH FAMILY MEMBER

	Baseline	T2	T3	T4	Baseline to VR	Scale
Positive Emotions	3.37_a	3.88_b	3.54	3.91_b	p=.003	1-5
Negative Emotions	1.72_a	1.34_b	1.38_b	1.26_b	p < .001	1-5
Quality of Life	3.11_a	3.28_b	3.31_b	3.14	p = .006	1-4
Emotional Closeness With Family Member	4.18_a	4.71_b	4.57_b	4.67_b	p = .004	1-5
Isolation From Family Member	1.54_a	1.21_b	1.27_b	1.22_b	p = .006	1-4
Satisfaction in Relationship w/ Family Member	5.00_a	5.40_b	5.37_b	5.33_b	p = .057	1-6

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Today's prospects are looking for a lifestyle

*throughout the full aging process
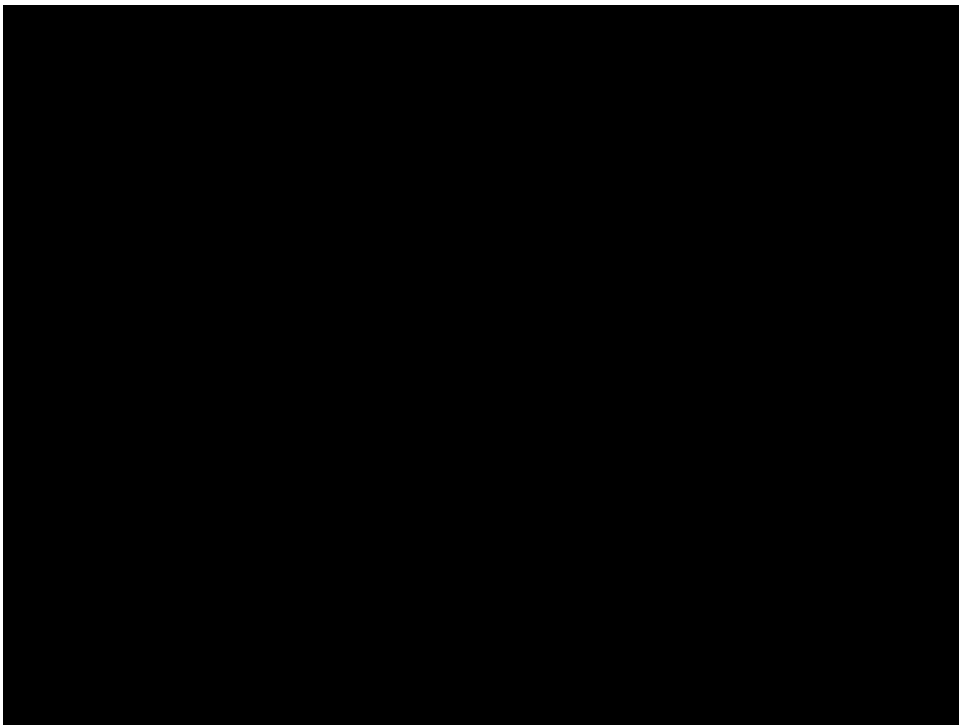
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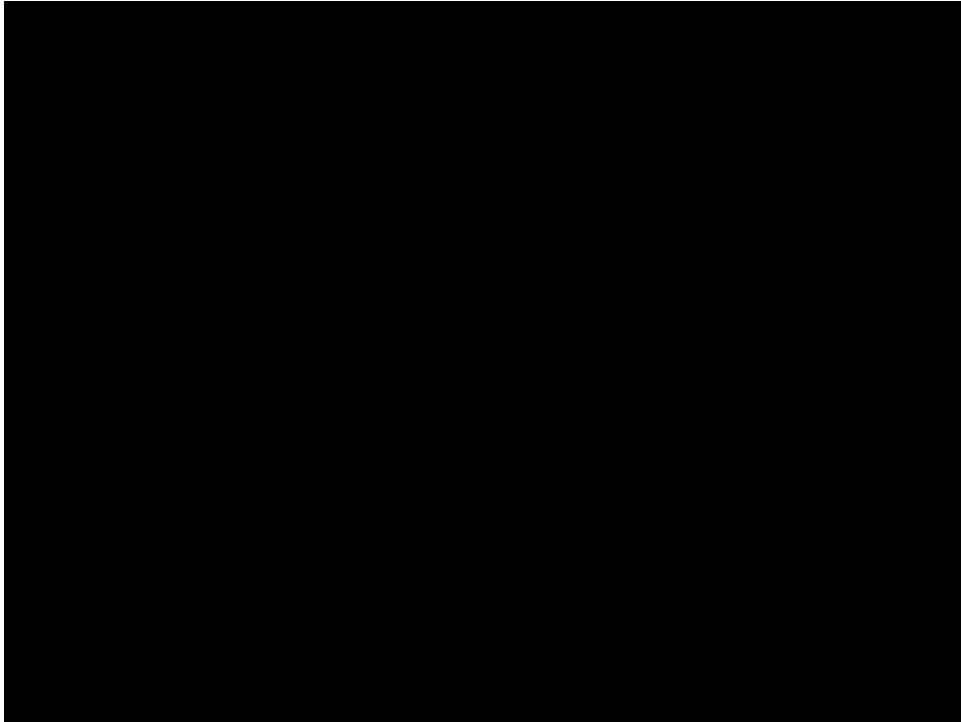
Remote Family Engagement

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The technology is facilitated by researchers

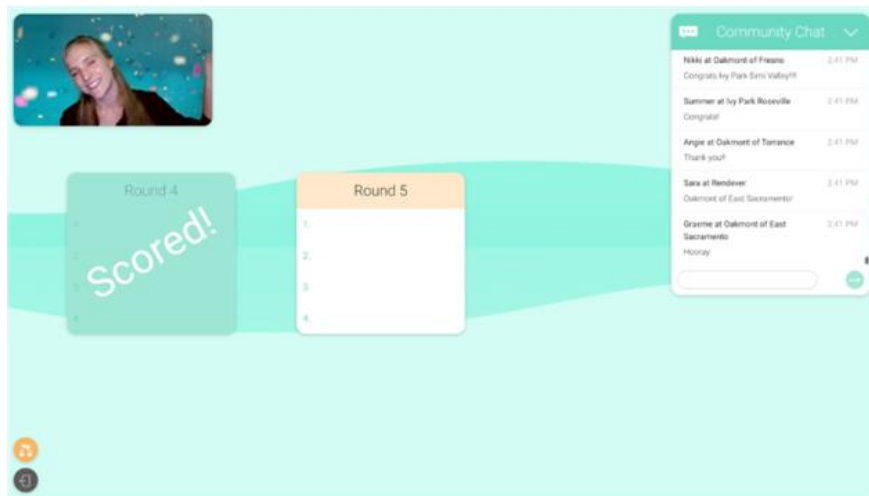The conversations are led organically by the family members

Computerized Coding of Kinesics

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We found the highest level of kinesic engagement with residents with dementia while viewing their life story (e.g. revisiting their childhood home)

Other Ideas: Hybrid-Engagement Program Through Technology
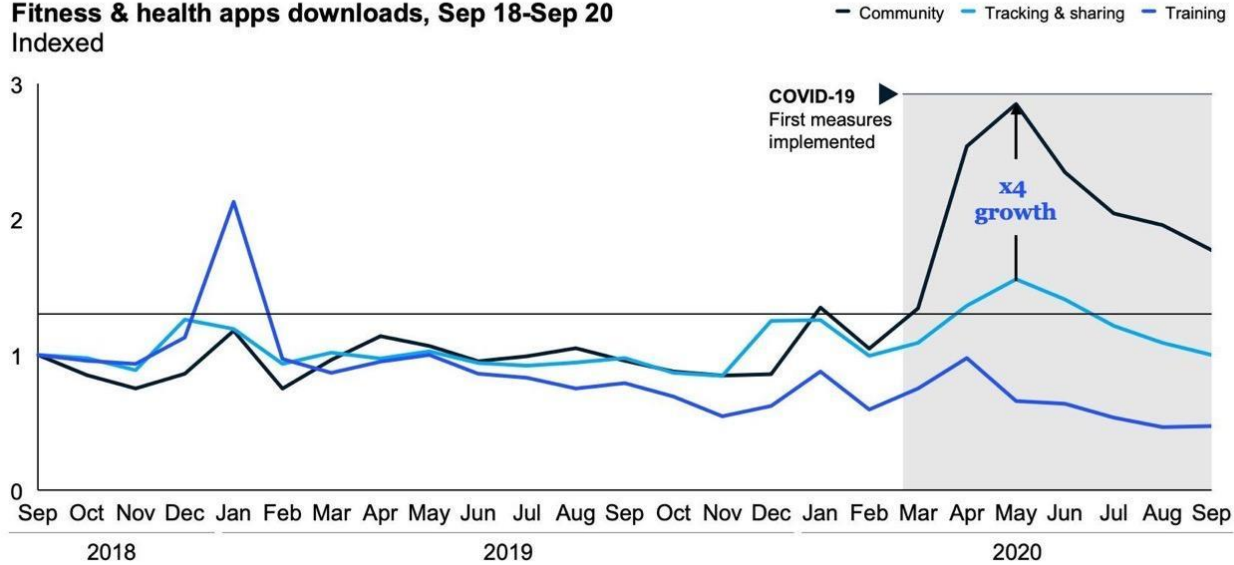

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11/2: 26 communities together!

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Exhibit 21

The most successful fitness apps offer a community

Downloads of health and fitness apps spiked in Q2 2020

Fitness & health apps downloads, Sep 18–Sep 20
Indexed

Legend: — Community — Tracking & sharing — Training

COVID-19 ▶
First measures implemented

x4 growth

2018   2019   2020

Questions?

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