



MARCH 18-22, 2024
SAN FRANCISCO, CA

Age-Friendly Design for the 50-Plus Gamer

Bob De Schutter

Northeastern University

College of Arts, Media + Design + Khoury College of Computer Sciences

Maura White

AARP

Digital Strategy & Membership: Gaming & Community

#GDC2024

Bob: Good morning, all. I'm Dr. Bob De Schutter and I'm an Associate Professor at Northeastern University. I specialize in Game Design for older gamers.

Maura

And I am Maura White, Snr. Director, Gaming & Community at AARP.

So, Bob, I don't think I have ever asked you: Do you see yourself as an 'older gamer', Bob? :-)

Bob: What a great time to ask! Well, I guess I am part of the youngest players that I have researched myself! I'm in the 40+ cohort and have played games for as long as I can recall.

Maura: Great! And I'm in the 50-plus gamer cohort! I've been playing games online and on mobile for little less than a decade and today head up AARP's Gaming and Community business.

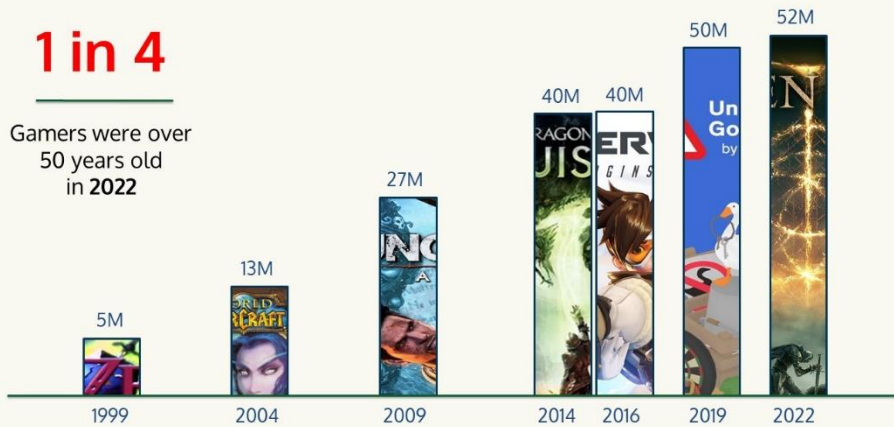
Bob: Oh okay; so less than a decade? So, you are a bit of a noob then when it comes games?

Maura: Yeah, along with millions of others older gamers.

Amount of US Gamers over 50

1 in 4

Gamers were over
50 years old
in 2022



MARCH 18-22, 2024 #GDC2024

GDC

Maura

Although many 50-plus gamers are the original gamers that gave rise to the industry with Sega, Nintendo and Atari, many others have discovered gaming through their kids and through their own desire to stay mentally challenged, relax, and socialize.

In total, over 52M older gamers are playing in the United States according to AARP's and industry research. But there's an issue, Bob, right?



Bob

Yes, a serious one. As the AARP report shown on the slide tells us, the research shows that the 50-plus gamer is underrepresented in the video game industry and older players feel that games are not designed with them in mind.

But...

Don't take our word for it. Let's listen to one of the interviewees of this study so you can hear the story straight from the source.



Bob

So, Ketrick is someone who sees the value of play. This is just an excerpt, but in his interview, he talked about how he used to play and how he feels that it is important for his daughter's development, yet he feels that his age group is not being catered to be the game industry.

A sentiment which according to our research is shared by approximately 36 million other US 50-plus gamers.

And that is what we will talk about today:



MARCH 18-22, 2024
SAN FRANCISCO, CA

How to represent 50-plus gamers?

#GDC2024

Maura: How to represent the 50-plus gamer in your games and business.

Bob: Yes, I am excited! But you know, that is a big question. You know, I've been studying this for 2 decades now and there is so much to that. Where do we even begin?

Maura: Good thing you brought a newbie along then. In my experience, it is usually a good idea to take a look around and see what can learn from others. Maybe people who haven't had their nose in academic papers for 20 years.

Bob: Okay, I hear you. What are thinking of?

Maura: Well, Bob, you know who has been doing this really well?

Hollywood Mega-Stars are Over 50



Maura

In Hollywood today, many mega stars are over the age of 50. You know them. Julia Roberts, Morgan Freeman, Selma Hayek, Meryl Streep and so many more. But it didn't always used to be that way....

AARP Movies for Grownups (MFG)

2

Oscar acting nominees were aged over 50 in 1994

24,25

Ages of top 2 actress winners in 2000



18

Of the 35 acting nominees, 18 are 50-plus in 2024

60,64

Ages of top 2 actress winners in 2023

MARCH 18-22, 2024 #GDC2024



Maura

When AARP saw how its audience loved movies, but the industry lacked representation of older actors in the top roles, AARP launched its Movies for Grown-up program, highlighting movies that the 50-plus audience would enjoy and also created the AARP Movies for Grown-ups Award Gala to shine the light on the representation issue.

Now, 30 years later, the fruits of that labor are in full view with increasing number of actors and actresses ages 50-plus winning top awards. This year alone, 18 of the 35 nominees are 50 years or older and last year the top two actress awards were won by a 60- and 64-year-old. (Michelle Yeoh and Jamie Lee Curtis for Everything Everywhere All at Once

Series that Incorporate Aging Roles



MARCH 18-22, 2024 #GDC2024



Maura

Hollywood now also embraces having actors age on camera as they have in real-life. Take the Harry Potter saga for example, which might not be a series about a 50-plus year-old character, but it works its aging cast seamlessly into the series.

Aging Embraced in Storylines



In the 1986 **Top Gun** movie, Tom Cruise's Maverick character is best buds with Goose. In the 2023 sequel, the writers carry the story line forward having an older Maverick back as an instructor teaching Goose's son, Rooster.



MARCH 18-22, 2024 #GDC2024



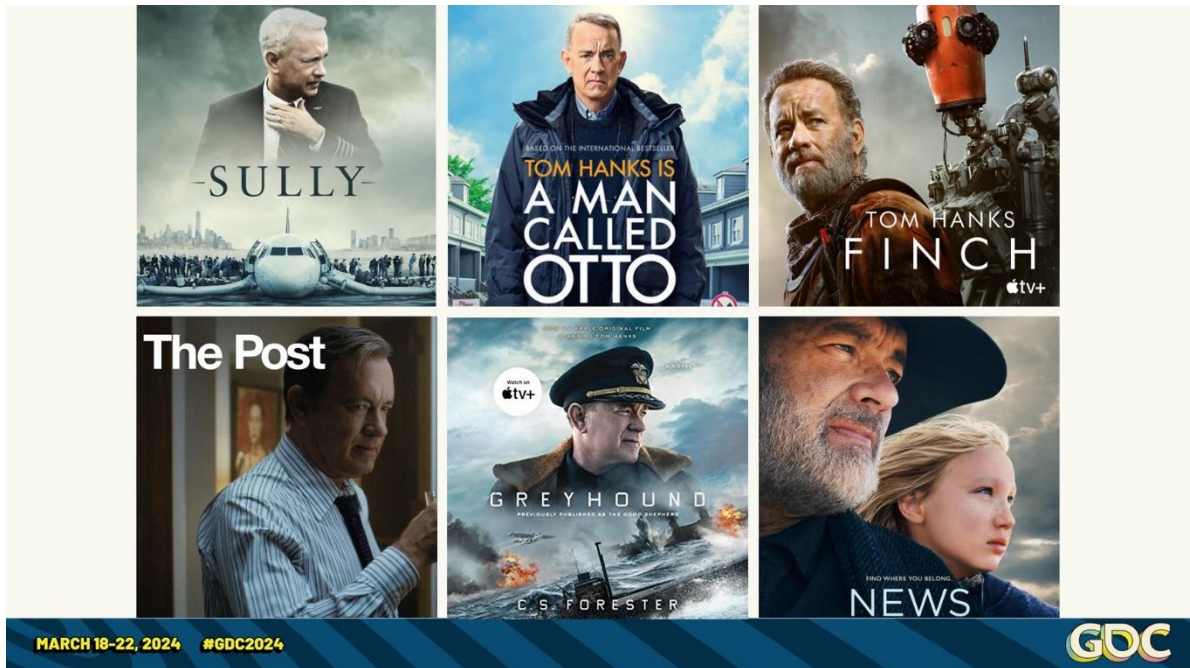
Maura

And then there is the aging storyline in Top Gun, casting the 1986 movie's flying dare-devil Maverick, played by Tom Cruise, as an instructor at the elite flying school in the 2022 sequel. Taking the storyline further, the writers acknowledged the deep friendship of Maverick's best friend Goose, who died in the original movie, and created a role for Goose's son Rooster, as a student of Maverick's. The tension between Maverick's guilt over Goose's death and Rooster's blame of Maverick tee'd up the perfect scenario that the movie successfully resolved and soared above.



Maura

And there are many more examples, including lots of great TV shows, and of course,



Maura

every movie that starred Tom Hanks in the last ten years.

So, this leads to the question of why wouldn't we make sure that aging characters are represented properly? Aging is not what it used to be. It has truly just become a number.

Just look at professional sports...



Maura

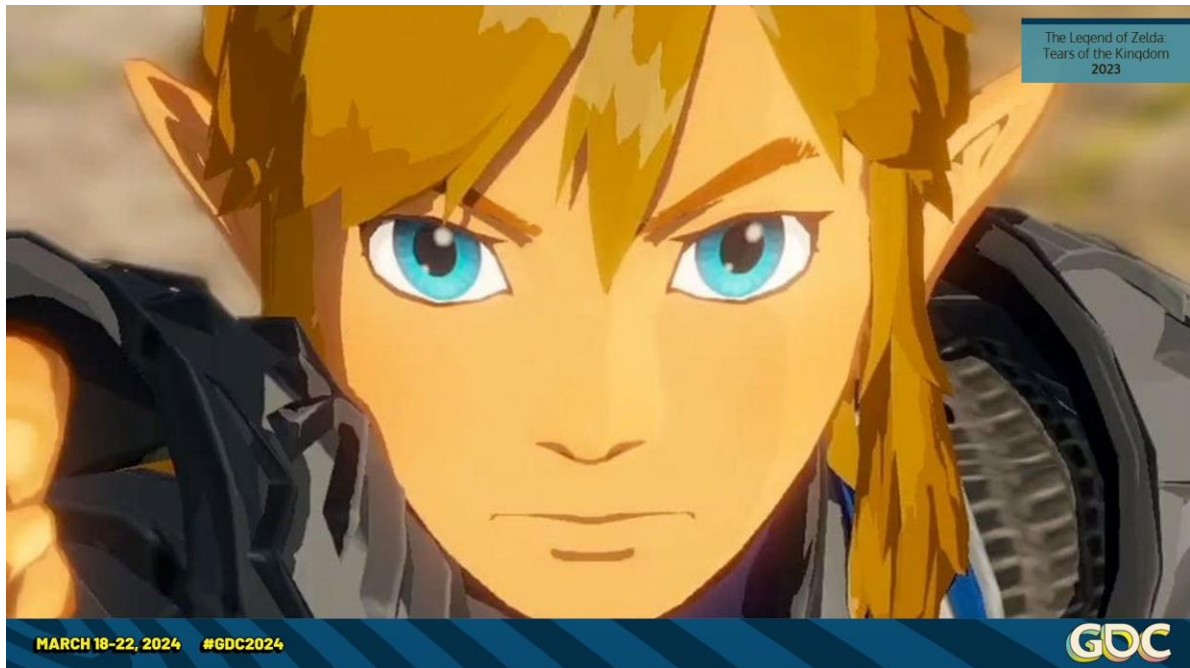
Novak Djokovic in tennis, Alex Ovechkin in hockey, LeBron James in basketball, Tom Brady in Football and Diane Nyad in long distance swimming have all defied the boundaries of age and excelled in their respective fields moving the expectations of what the age limit is for their sport.



Maura

And with the 50-plus now highly engaged in work and continuing to be physically active, AARP and Getty collaborated on creating a 'Disrupt Aging' collection of over 1400 images that more accurately reflect the audience of today. And yet, it continues to be a struggle to have the older audience reflected accurately. Just recently, I requested an image for a promotion and the graphic artist provided a suggestion of a granny with blue hair. Still so far to go!

Representation is one of the keywords that makes everything else fall into place. And yes, if we look at the game industry and how aging is represented, there is certainly some work to do. Look at this 117-year-old video game character:



Bob

Well, Link got into a healing chamber when he was 17 and slept for 100 years, but you're right. Link in Breath of the Wild is the best-looking centenarian of all time and I don't think we'll ever see someone his age climbs mountains like he does. But Link aside for moment, if we are looking at how 50-plus characters are usually portrayed in games, it is usually through stereotypes.

Common stereotypes for 50-plus characters



SUPPORTING GRANNY

Menial task provider
Mentor/tutorial character
Often cute or in distress
Non-playable



ACTION GRANNY

Action Hero
Comedy
Over-the-top
Sometimes playable



HORROR GRANNY

Villain
Creepy elderly
Body horror
Enemy

MARCH 18-22, 2024 #GDC2024

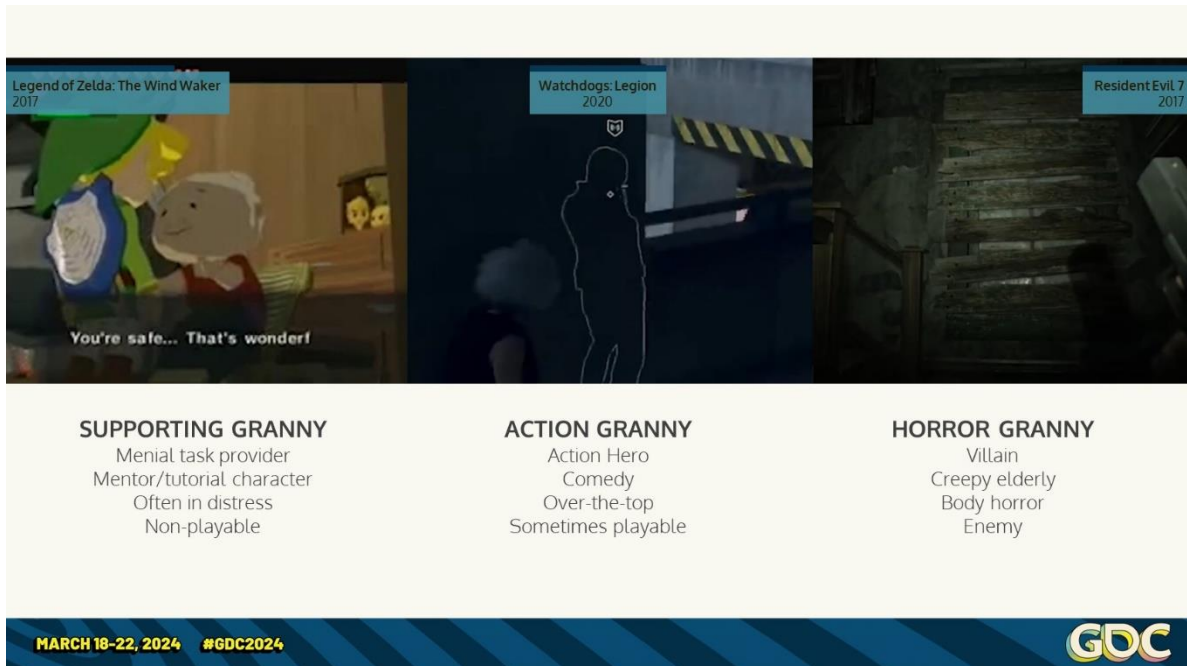


Bob

I am over-simplifying here, but there is

- the cute, Chibi, menial task granny that needs your help or teaches you a skill. Sometimes she even follows the grandmother-in-the-fridge trope and becomes the reason for you to go on your hero's journey.
- Then there is the super-powered action hero granny, shotgun optional, who can accomplish the most incredible feats of strength and endurance, often to comedic effect.
- And finally, there is the terrifying "give your grandma a kiss" body horror Granny that represents fear of the aging body.

And while these are not necessarily a problem in certain contexts and for some purposes



Bob

It is a limited portrayal of aging in games.

The Wind Waker, Watchdogs and Resident Evil are all great games, but they do illustrate how restricted the representative potential of an aging character becomes once it adheres to one of these stereotypes.

And that is not great, as the research shows us that 50+ players do want to see themselves represented in games, just like anybody else.

Sometimes that means playing as a younger or idealized version of themselves, but other times that means characters that are accepting of their aging.

That is why we wanted to start with "representation" as our first point for this talk today, as it is the core concept through which everything else falls into place.

So, let's ask ourselves here: How do you represent a 50-plus gamer well in your game? ... To answer that question, you need to ask yourself another one: Who is the 50-player gamer?



MARCH 18-22, 2024
SAN FRANCISCO, CA

Who is the 50-plus Gamer?

#GDC2024

Maura

I am glad you asked, Bob! AARP has been gathering data on this topic since 2015 and we have a lot to share here that can really help game developers answer that question.



Longevity Economy

The 50-plus in the United States generate nearly \$8 trillion of annual economic activity.

If they were a country, the 50-plus population in the United States would be the **3rd** largest economy in the world.

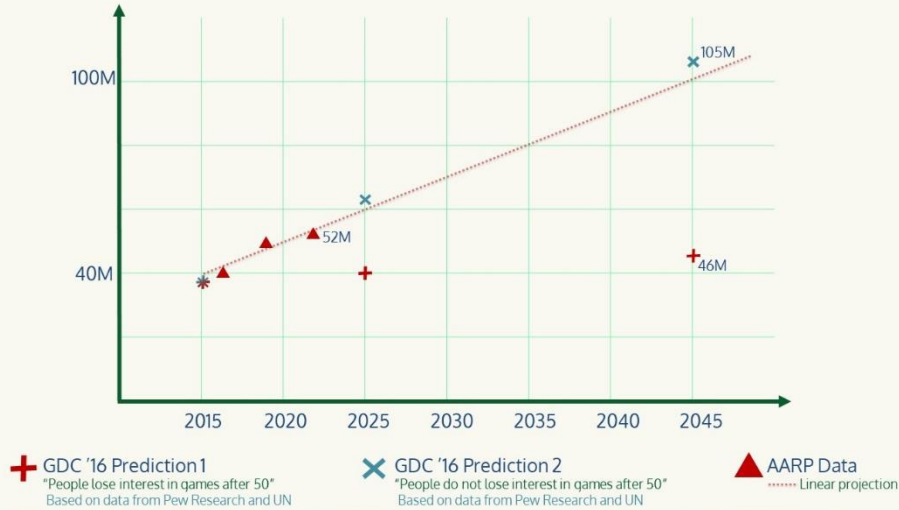
MARCH 18-22, 2024 #GDC2024

GDC

Maura

There are 52.4 million 50-plus gamers in the United States. When we look at the 50-plus population overall, we see it has an enormous economic power generating \$8 trillion dollars of annual economic activity. If a country, the 50-plus population in the US would be the 3rd largest economy in the world after China and well... the US as a whole.

The 50-plus demographic will double in 10-20 years



MARCH 18-22, 2024 #GDC2024



Bob

Wow! That's a market all right. But that is today, but what are we looking at tomorrow?

Now, 8 years ago at GDC, I made two projections, so I thought it'd be fun to bring them back up to see how well that went.

The first one assumed that people would lose interest in games after 50 and it projected an estimate for the 50-plus demographic of 46 million by 2045. Not very exciting and if you've paid attention, you know that we are already past that number.

The second one assumed that people who were gaming once would keep gaming and that one led to a total of 105 million by 2045.

Now that was just conjecture of course, even if it was based on data from PEW and the United Nations, but AARP Research

Provided 3 data points starting with 40 million back in 2016 and most recently 52 million in 2022.

And if we do a linear trend plot on those, it puts us on this line, which is not too dissimilar from scenario 2.

Sure, maybe this does not end up a linear trend, but we'll see. It did flatten a bit during Covid.

In any case, all these animations are here to make a point: This is a growth market, people, and we are expecting it to DOUBLE in the 10-20 years from now; will you be ready for it?

Well, let's get you ready: What does this market look like? One word:

Heterogenous. There are many different kinds of 50-plus gamers. Right, Maura?



Maura

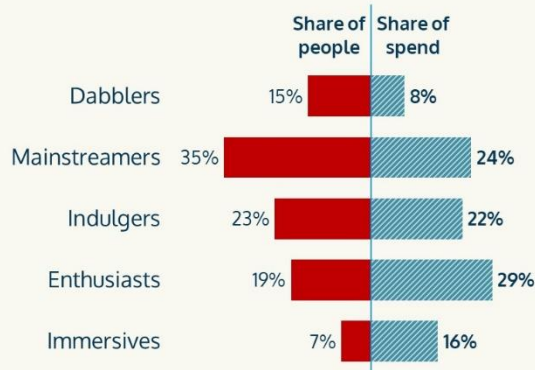
You bet! There are a number of different ways at representing the various audience segments of our gamers, including the one you shared Bob in 2016. In 2022, AARP Research developed a Passion model, which includes the following types:

- The Dabbler is the least passionate. A casual gamer who plays card and puzzle games, mostly just when they are bored or because they feel it might be good for their health.
- The Mainstreamer plays similar games, but they bring mental stimulation and challenges in the mix. This is the word game and puzzler, an enormous fan of Wordle.
- Indulgers see games as a way to relax and reduce their stress levels. Still very casual, but casino and card games, along with word games are part of this group, which sometimes feels a little guilty about playing games.
- Next, the Enthusiasts are passionate but also able to keep game play limited to either the morning or evening entertainment slot. These gamers are unique because of their genre preferences – they like action adventure, story-heavy games, and playing with family members and people they know.
- Finally, the Immersives, are, as you might expect, the most engaged audience segment and the one that enjoys all genres of video gaming, including RPG, action, and multi-player games.

As you might expect, the more passionate the gamer, the bigger spender they are,

As passion for gaming increases, so does spending.

Share of **people** versus share of **spend**
By gamer segment



Average six-month spend [January-June]
By gamer segment



MARCH 18-22, 2024 #GDC2024



Maura

which is also a function of the genres of games they play. Enthusiasts and immersives spend substantially more than the other three categories and are responsible for 45% of the spending despite being only 26% of the audience.



Bob

BD: Now this is all very abstract, so before we move on, we want to briefly show you the people behind the stock images and give you an idea of what they are like in person.

Actually, before we do that; I am in the 40-50 demographic, probably one of the youngest card-carrying AARP members, and I am down here. Not enough time for games, it is something I do with family, I am very passionate, but certainly not absorbed by it. Well, unless we are talking Tabletop Simulator, Phasmaphobia or Dave the Diver these days, but that makes me think about a key point here as well. People move around during the lives. I wasn't there forever; for most of my life I was up here.

How about you, Maura?

Maura

Right! I am there – in the Indulger group – definitely passionate and like to start AND end my day with playing games.

But before I got into games, I was here ...barely a Dabbler, joining friends and college mates to solve the New York Times Crossword puzzle.

So yes, people's gaming behavior changes over time; it might change more after you turn 50.

But enough about us, let's look at how others fit this model, starting with our good friend Ketrick



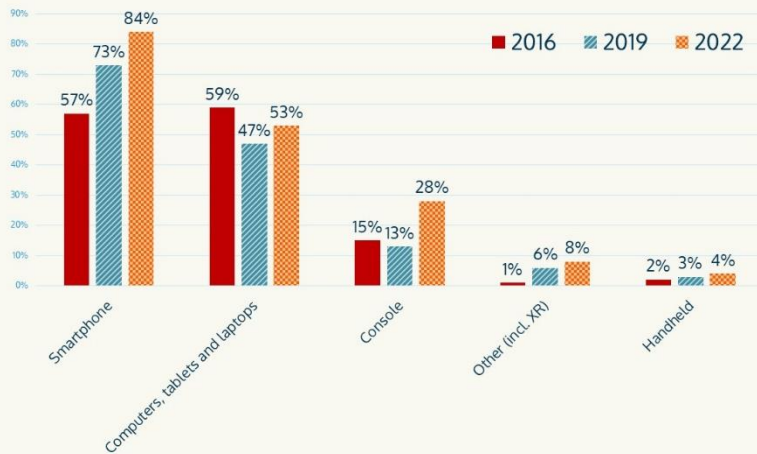
Bob

I hope it is clear from this video how heterogenous of an audience this. Even when we try to put them into neat little box, and all the categories make statistical sense, it is still difficult to pin-point a specific category to a single person.

Humans are complicated and there is obviously overlap between the categories when you talk to individual people. One size does not fit all.

But there are certainly trends that developers can work with. Let's look at platform preferences, Maura.

Platform Preferences



AARP

MARCH 18-22, 2024 #GDC2024

Maura

Looking at the orange-colored columns in the chart representing 2022 data, we see Mobile keeps rising and is dominant with 84% of 50-plus gamers playing with their smartphone – up 47% since 2016.

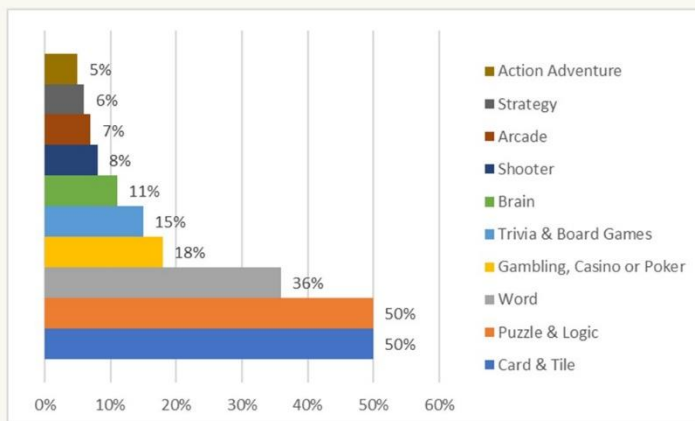
PC dropped a bit in 2019 but stabilized in 2022 at 53%.

Console is on the rise, almost doubling since 2016 at 28%, and this is one of those spots where we see the 40-50 demographic push the platform.

XR is making the Other category relevant, but remains small overall at 8%.

Handheld is small, but this data hasn't really gotten the Steam Deck influence yet. I will say I hear about adult children giving Switches to their parents.

Preferred Game Genres



For the 50-plus, the most popular genres are **Card, Puzzle, Word and Trivia**.

The success of *Wordle* has lifted the Word genre overall.

AARP

MARCH 18-22, 2024 #GDC2024

GDC

Maura

When it comes to game genres, recent AARP Research shows that the 50plus still prefers the Card, Puzzle, Word, and Trivia games.

Part of what we observed as well is that there was a 'Wordle effect' that justified separating out a separate Word category out on its own. Specifically, we saw people who prefer trivia and board games dropped from 22% to 15%, but 36% who say word games are their favorite genre, aka the 'Wordle effect'.

Bob

This is great, but do you remember that Wayne Gretzky quote you told me about some time ago?

Maura

Yes! You need to skate where the puck is going, not where it has been.

Bob

That's right! So, let's see where



Bob

...that puck is going, and take a look at the 40-50 demographic that will be 50+ gamers before you know it?

Well, puzzle and arcade are not going away as everybody loves those, no matter how old you are. Which also means that we shouldn't act like it is an old folks genre.

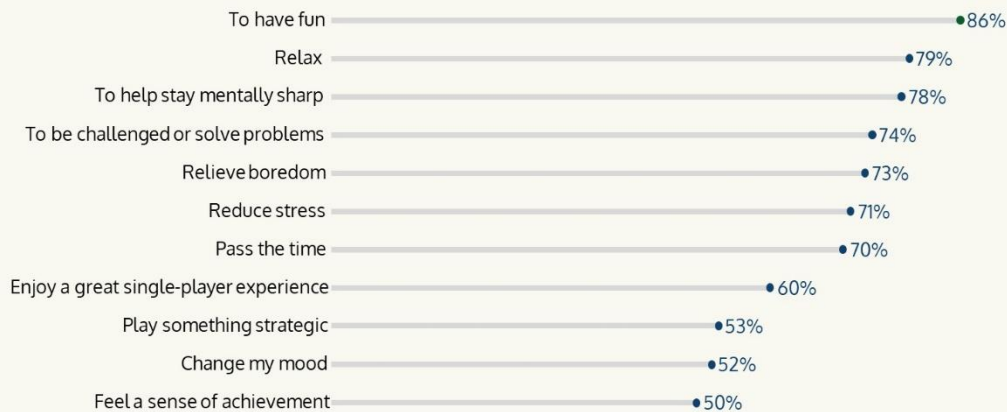
Second, here's how the genres change for the 40-50 demographic.

All these genres that did not make the 50% on the previous slide are gaining popularity with the 40-50-year-old crowd. Sure, they are still at in the 10%-20% range, but that is easily 10 million people that gets added to the existing 50plus player-base for these genres.

There are a lot more players that you can categorize as immersives and enthusiasts in the 40-50 age group, and it really shows in their genre and motivation.

Speaking of motivation, what does that look like for the 50-plus demographic, Maura?

Player Motivation for 50-plus gamer



AARP

MARCH 18-22, 2024 #GDC2024

GDC

Maura

To no one's surprise, the 50-plus demographic likes to have fun. But there are also additional key motivators including: to relax, stay mentally sharp, be challenged, and reduce stress. All are part of staying healthy, which is a growing concern as one ages.

But I have a hunch here that you are going to tell us that the puck is heading somewhere else again, right, Bob?

Motivation to Play 40-50 vs. 50-plus

	<u>40-50</u>	<u>50+</u>	<u>+/-</u>		<u>40-50</u>	<u>50+</u>	<u>+/-</u>	
Fun	86%	86%	0%	—	Change my mood	62%	52%	+10% ▲▲
					Play something strategic	62%	56%	+8% ▲
Challenge	68%	74%	-7%	▼	Have a thrilling experience	50%	32%	+18% ▲▲
Help stay mentally sharp	63%	78%	-15%	▼▼	Be immersed	48%	27%	+21% ▲▲▲
Learning	45%	51%	-6%	▼	Experience a story	42%	21%	+21% ▲▲▲
					Explore new places	41%	22%	+19% ▲▲



MARCH 18-22, 2024 #GDC2024



Bob

I'm glad you asked!

First, 40-50's overall ranking is not too dissimilar. Most motivations are in similar spots and fun was exactly the same even.

In general, the motivations go up slightly, and there are only three that take a hit.

Still, while staying mentally sharp has the biggest difference, it is still relevant at 63%. As mentioned earlier, health becomes important as we age.

Finally, then, as mentioned, 40-50 has more Immersives and Enthusiasts and we can see this reflected in the motivations below 50% where those two player profiles can push their weight:

First, there are "immersive" motivations that you would expect from Action-Adventure games, RPGs, shooters, sports games, and so on.

Next, there are social motivations

– although it is noteworthy that they are specifically social motivations with people they already know.

And finally, there is some childhood nostalgia coming through.

Now, we do want to take this with a grain of salt.

Motivation to Play 40-50 vs. 50-plus

	40-50	50+	+/-		40-50	50+	+/-	
Fun	86%	86%	0%	Relieve my mood	62%	52%	+10%	▲▲
				Learn something strategic	62%	56%	+8%	▲
Challenge	68%	74%	-7%	Have a thrilling experience	50%	32%	+18%	▲▲
Help stay mentally sharp	63%	78%	-15%	Get immersed	48%	27%	+21%	▲▲▲
Learning	45%	51%	-6%	Spend time with family	47%	32%	+15%	▲▲
				Experience a story	42%	21%	+21%	▲▲▲
				Explore new places	41%	22%	+19%	▲▲
				Spend time with friends	39%	22%	+17%	▲▲
				Play games from my childhood	33%	27%	+16%	▲▲



MARCH 18-22, 2024 #GDC2024



Maura

We certainly do.

One thing we know well at AARP is that life does not happen in a straight line. When it comes to motivations to play for the 50-plus, it's important to note that life changes often affect how much time a person has to play, and health becomes a greater part of one's focus, especially brain health.

So, although the 40-50 today is not so interested in games that are about health, they are likely to follow in the footsteps of their predecessors. However, they will bring their love of different genre of games to their next phase of life, but just maybe not have as much time to play or supplement their games choices with additional types of games to meet their new goals.

We know who and what we are trying to represent. What does that look like in practice?



MARCH 18-22, 2024
SAN FRANCISCO, CA

Age-Friendly Game Design

#GDC2024

Maura

Let's tie it together into Age-Friendly Game Design, which brings us back to the key topic of this talk, and to start Bob is going to bust 3 myths that he has heard a lot.

Age-Friendly Game Design does not require
you to dumb down your games.

Age-Friendly Game Design is not
more expensive (as long as you plan for it).

Age-Friendly Game Design does not make your game
unappealing to younger audiences.

MARCH 18-22, 2024 #GDC2024

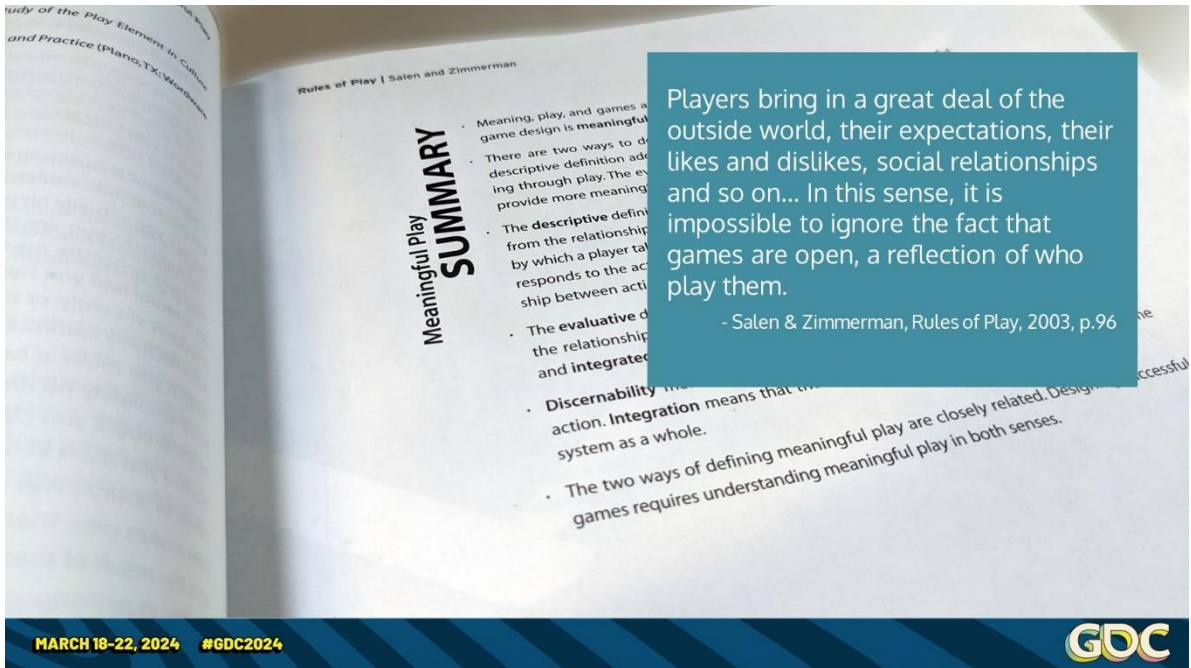


Bob

So, there are three things that need to be said before we get to the specifics. I hope I am preaching to the choir here, but if I am not then here goes:

1. Do not dumb down your game. The 50-plus gamer wants to be challenged; 74% has it as a top motivation. It is not about making your game easier or slower. That is a stereotype.
2. Age-friendly design does not have to be more expensive. It only becomes expensive if you have to do it after the fact, so plan for it and you should be all right.
3. Age-friendly design should not per definition mean that you are making a game that does not appeal to younger audiences. Back when I was a kid in Belgium all the board games were labeled from 7-77 years of age. Great games tend to be fun for all ages, so the goal of age-friendly game design is simply to make good games.

Actually, scratch that, the goal of age-friendly game design – just like every other game – is to design towards meaningful play.



Bob

And I do mean this in relation to the incredible work by Katie Salen and Eric Zimmerman, who defined meaningful play as the outcome of successful game design, but I also see this in the context of the 50-plus demographic with games being meaningful in relation to a long-lived life and plethora of experiences.

Which brings me to a different quote from the book that illustrates how play is shaped by the outside world. It reflects who we are.

Which extends to the meaningfulness of play, as it has different shapes and forms through various stages of our lives.

And I'd argue that when play is meaningful, good things tend to happen for you. It grounds us, connects us to the world and helps us to grow as people – and that goes well beyond whether or not playing games results in a higher test score on a standardized cognitive test.

So that is what meaningful play has meant to me for over 2 decades now, and that is where Maura as the director of AARP Games and me as a game designer and researcher found common ground.

Video Gaming as Part of Healthy Aging

- The **benefits of video game play** are **key elements of living a long life**
 - Supports relaxation
 - Relieves stress
 - Enables creativity
 - Connects social interaction
 - Provides mental challenge and stimulation
- **AARP** views including video gaming and other forms of **meaningful play** as **part of healthy aging**



MARCH 18-22, 2024 #GDC2024

GDC

Maura

Yes, the benefits of meaningful play are significant. Through much research of 50-plus gamers, from AARP's research, ESA, Northeastern University, and other organizations, it's clear that video game play is meaningful play as it provides relaxation, stress reduction, creativity, social connection, and mental stimulation.

As such, AARP recognizes video game play, and all meaningful play as part of healthy aging

And the key to achieving Meaningful Play starts with

Listen to your players

Ask ten 50-plus friends with various gaming experience to try out your game, and watch them play it.



MARCH 18-22, 2024 #GDC2024



Maura

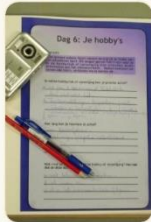
listening to your players.

So, if you have nothing in place to support the 50-plus demographic, here is the simplest tip ever: Get 10 50-plus people from outside the company and have them play your game.

It will reveal opportunities and challenges that you have not yet considered – and all it takes is just a few folks to play your game.

Isn't that what you refer to as PLAYER-centered design, Bob?

Player-Centered Design



User Analysis



Brainstorm



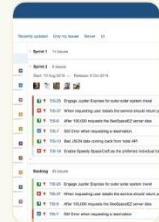
Participatory
Design



Prototype
Testing



Playtesting



Maintenance

VANDEN ABELE, V. ET AL., 2012
P-18: A player-centered, iterative, interdisciplinary and integrated framework for serious game design and development.
Communications in Computer and Information Science, Serious Games: The Challenge, 1(280), pp. 82-86

MARCH 18-22, 2024 #GDC2024



Bob

Pretty much. Of course, there are so many different approaches on player-centered design, but I agree that involving your player is the starting point for age-friendly game design.

Throughout the entire development process, from your earliest concepts to maintenance, bring in 50-plus gamers and 50-plus non-gamers and involve them and listen to them.

The slide provides an overview of how I have been doing this in my lab over the years, but there are many other ways to do this, and every studio is unique.

Thankfully

The image displays a presentation slide for the AARP "Age-Friendly Game Development" brochure. The central focus is the brochure cover, which features the AARP logo at the top, followed by the title "Age-Friendly Game Development" and the subtitle "A PRIMER FOR GAME DESIGNERS AND DEVELOPERS". The cover art includes a close-up of a hand holding a smartphone and a photograph of three elderly individuals (two men and one woman) sitting together and looking at a device. To the left of the brochure, a small graphic shows a notepad with a pen and the text "Day 6: Jeopardy's", with the label "User Analysis" below it. To the right, a small graphic shows a person in a hospital bed, with the label "Testing" below it. Further right, a screenshot of a software interface is shown with the label "Maintenance" below it. At the bottom left of the slide, there is a citation: "VANDEN ABBELE, V. ET AL., 2012. P-18: A player-centered, iterative, interdisciplinary and integrated framework for game development. In: Proceedings of the 2012 ACM SIGCHI Conference on Computer-Supported Cooperative Work and Extended Computing Systems, 2012, pp. 181-182." Below this is the text "MARCH 18-22, 2024 #GDC2024". At the bottom right, there is a QR code and the GDC (Game Developers Conference) logo.

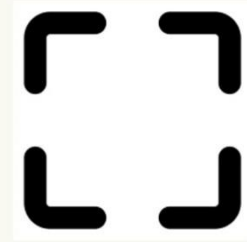
Bob

AARP has an age-friendly game development brochure that you can get with the QR code on the slide as they obviously have been working in this space for a while now.

Speaking of which, Maura, do you have some "war stories" for us?

Importance of QA'ing Features for 50-plus

- **Visual QA – test using Zoom**
 - **AARP Games' Theater Mode** didn't work initially for those using 150%+ Zoom
 - Gameplay area decreased while Ad increased
- **Devices QA – test laptops**
 - **AARP Games' mega menu on laptops** overlapped gameboard and players mistakenly clicked on nav link



MARCH 18-22, 2024 #GDC2024



Maura

We all have our stories of design oversights. At AARP, where we have 2 million players on our games each month, we're no exception. When we were implementing Theater Mode to enable full screen game play for our players, QA forgot to test with Zoom on – a popular setting with our 50plus gamers. They complained their game area had shrunk with Theater mode – the very opposite of our intent. As we looked into it, we saw for those who used Zoom at 150% and over, the game shrunk while the ads increased in size. Luckily, we fixed it.

Second, another AARP story. And this pertains to the platform on which we host our casual online games. The new wrapper we implemented didn't work on laptops very well as the mega menu encroached heavily on the game board. Players were complaining they were being taken off the site. They were right! The mega menu was so close to the game board that the players were accidentally activating a navigation link and were taken off the page. Takeaway? Test fully across all devices.

Audio Capabilities of 50-plus

- **One in 3 adults over 65 has hearing loss**
 - Because of the **gradual change in hearing**, some people are not aware of the change
 - Most often, it affects the **ability to hear high-pitched noises such as a phone ringing or beeping of a microwave** – especially for men
- **Audio QA – test hearing range of 50-plus**
 - Test for **voices with high pitches**
 - Test for **distortion at full volume**



MARCH 18-22, 2024 #GDC2024



Maura

One of the areas we make sure to test is for audio quality. This is extra important as 1 in 3 adults over 65 has hearing loss. It can happen gradually, and people are not often aware. But, most often, it affects the ability to hear high-pitched sounds such as phones ringing or even women's voices.

So, it's important to test for high-pitched voices and to check for audio distortion at high volumes.

Accessibility is essential

2-in-3

gamers over 50 have experienced an age-related health decline.

74%

of 50-plus gamers indicated that videogames **should be more inclusive with customizable features** for older adults.

46%

have noticed physical or cognitive accessibility features when gaming.



MARCH 18-22, 2024 #GDC2024



Bob

And those examples also illustrate the importance of accessibility, which AARP understood and inspired them to do a consumer study that is on its way to publication. Let's just call this the premiere of its trailer, and since its main author couldn't be here today, I'll provide some key insights for you.

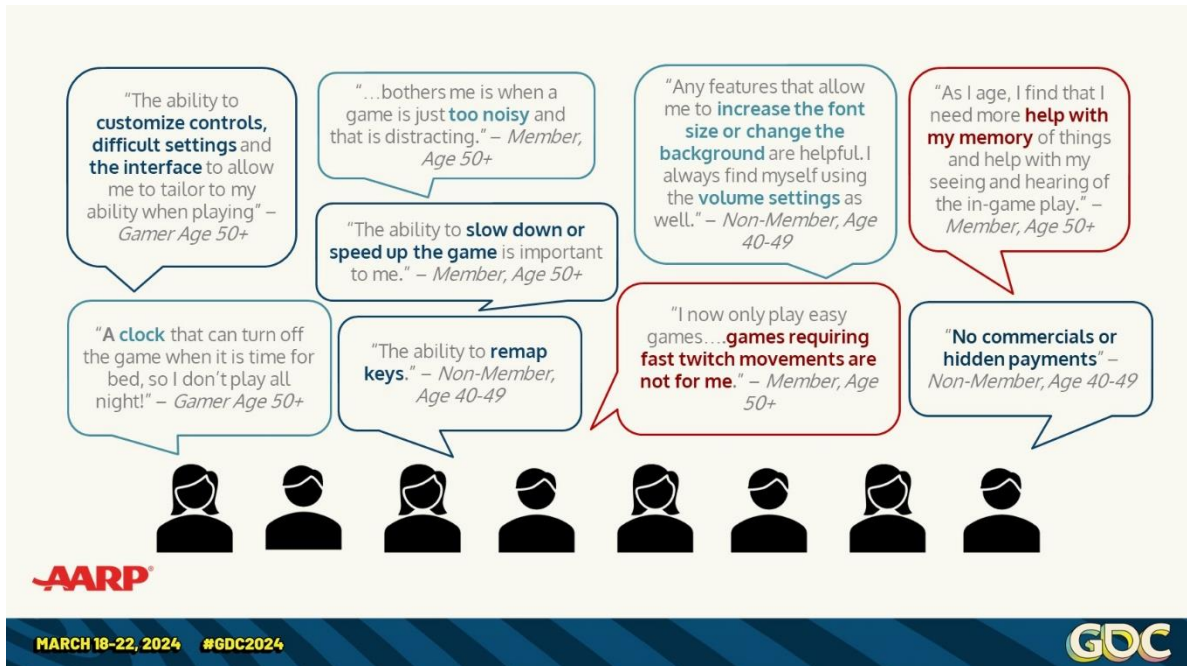
So key findings:

- 2 in 3 experience age-related health decline,
- 74% feel that we need more inclusive or customizable features in games and
- ONLY 46% have actually noticed cognitive or physical accessibility features when playing games.

So how did this survey get there?

Well, it follows the principles that we are highlighting today as it started with AARP listening to their players.

They asked them, what barriers do you face when you play games? How can the game industry help you overcome them?



Bob

And they got a lot of unique responses – these are just a handful of them. We'll show you a bigger list later.

What I think is interesting to note here is that most of them are the kind of responses that you could expect – that AARP was asking about. Accessibility barriers and accommodations:

Things such as customizable controls, ways to remove distractions, adjust the pace, change the font size, even things like memory aids were mentioned. But AARP also learned from doing this, that there are other barriers to this particular audience.

Some people mentioned that they want time management features... Can I please have a way to keep track of time so I can get to bed on time? Well, I think we have all been there. I should probably not play because it will get me in trouble the next day, right?

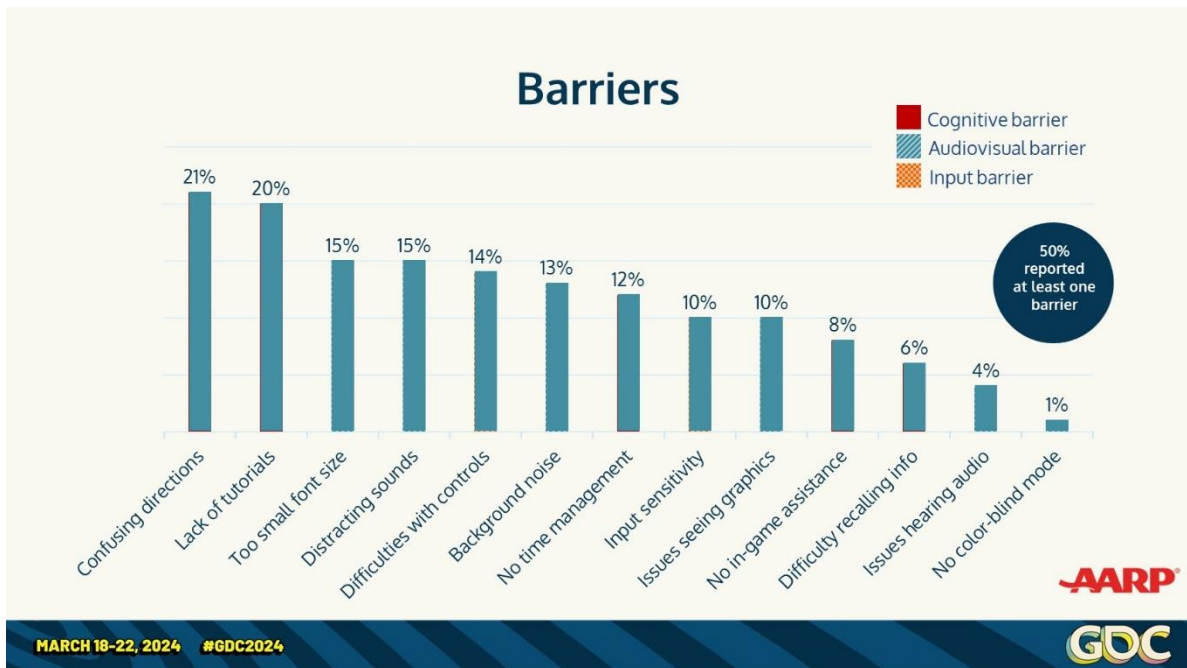
Also... and this comes from my own research... I learned that a lot of 50-plus folks worry about addiction, and this kind of feature feels like a safety net in relation to excessive play.

Next... many people – really, if this was family feud, this was the top answer – took the term barrier very literally and voiced that they want games that do not have advertisements or paywalls to unlock content.

This is actually well-known in the literature; this audience is not a big fan of modern monetization. I mean, can you blame them? Back in the days, playing spider-man in THPS was done with a cheat-code, not a credit card.

But I digress, the key point here is that while the study was meant for accessibility purposes, we are going to interpret that term quite broadly, as we want to give our participants like Ketrick the voice that they deserve today. Even if we are not going to go any further into monetization....

So, what did we learn when we zoom out a bit and look at the barriers?



Bob

There is a lot of depth on this in the upcoming report, but these were the results for the question "When playing video games, which of the following barriers have you experienced?"

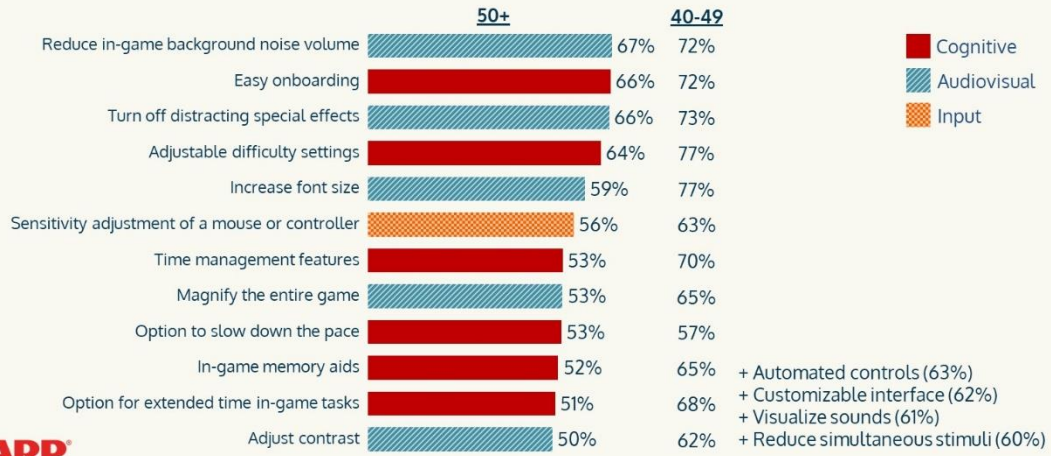
The slide shows us the findings from AARP, and I divided these up in what I would refer to as cognitive, audiovisual, and input barriers.

The bigger picture here shows that half of the participants reported at least one barrier, but when zooming in, the numbers might be slightly lower than what you would expect, but keep in mind that the vast majority of the sample is playing casual games on mobile, which reduces accessibility needs related to 3D navigation or spatial audio. I'll get to that in a minute, but I want to contextualize the results for the color-blind mode first.

Only 1% mentioning color-blind mode might look low, but 1% is still at least 524,000 people over 50 in the US alone, and this is obviously a feature that you want to see larger than just the 50+ demographic. With 10 million color-blind gamers in the US, having this implemented is a must.

Looking at the next graph

Top Accommodations



AARP

MARCH 18-22, 2024 #GDC2024

GDC

Bob

which surveyed the features that people absolutely needed to enjoy a game, the participants were pretty clear:

Accessibility accommodations are essential to enjoy the game!

However, it gets even more interesting when we look at where the hockey puck goes. Because there is a strong connection between genres and accessibility: A game with less complexity has less accommodations.

So, if we look at the 40-49 demographic where we have more Enthusiasts and Immersives, ALL the numbers go up.

In fact, we see some new ones emerging that break the 60% mark
But I have to pace myself a little here:

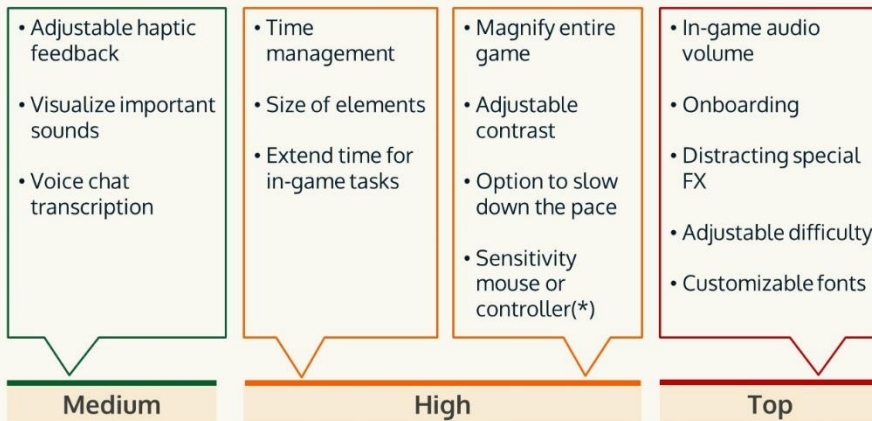
This is becoming quite an extensive list, and well... I did say earlier that age friendly design does not have to be expensive.

So... how do you manage that when you are on a budget?

Well, obviously, all accessibility features are important – I cannot stress this enough.

But if choices have to be made, according to the 50-plus gamers in the study,

Priorities, if resources are limited...



AARP

(*) For a sample with console and PC gamers, customizable controls would likely be in this spot.

MARCH 18-22, 2024 #GDC2024

GDC

Bob

This is how 50-plus gamers would recommend you prioritize, and allow them to customize in your games:

The top requests are adjusting different audio levels, better on-boarding, the ability to remove distracting effects, difficulty adjustments and customizable font sizes.

I am not going to call them all out, but for the second category, I want to point out that the sensitivity of mouse or controllers would likely be replaced by having customizable controls when considering the 40-50 demographic. Anyway, as I mentioned earlier, try to move beyond just this list as all accessibility features are equally important, but this gives you a starting point if you have to make tough choices.

Now, moving away from the latest AARP Research, I want to bring up a design point that my own lab is currently working on and that emphasizes a different side of age-friendly game design.

While it is important to reduce barriers, it is essential for any AgeTech-related project to design towards the strengths of the target demographic, not just the weaknesses.

Design towards Strengths

- What does this mean to you?
- What games do gamers get better at as they age?



MARCH 18-22, 2024 #GDC2024



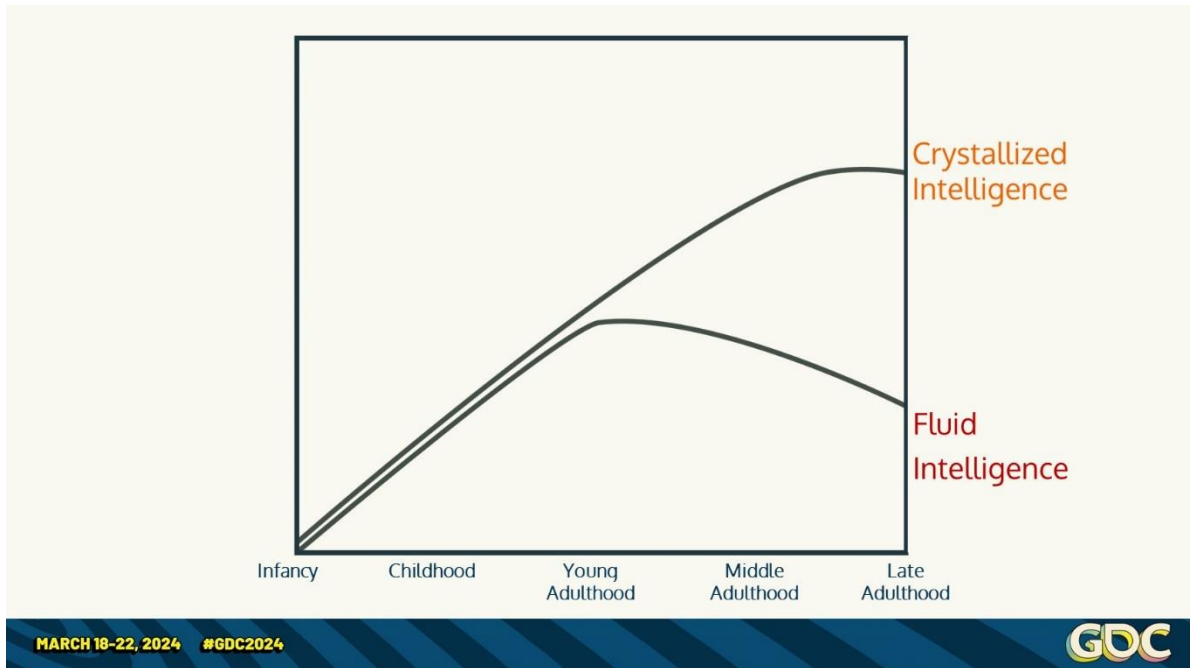
Bob

And I feel that that is often missed in relation to this group.

So, think about what you heard so far in this talk, and ask yourself, what do you think is a game that does this well?

Are there games that gamers get better at as they age?

We often hear 50plus gamers say they can't play the shooter games because they are not as fast as they once were. What can we do about that? Well, if you have seen me talk before, this brings us to



Bob

Crystallized and fluid intelligence.

When people think about games, they often think about games that are designed around the skills that peak in our twenties.

Cognitive psychologists call those fluid intelligence. Things like reaction speeds, memory, perception, etc.

And yes, younger generations are better at these. It is why Esports players are typically old teenagers.

However, there is another kind of intelligence: crystallized intelligence, and this encompasses everything that requires experience, such as vocabulary, knowledge, etc.

And these peak later in life.

So, what do crystallized intelligence-based games look like?

Maura has some great examples from AARP Games.



Maura

AARP has developed games for the 50-plus incorporating their motivations. First, Right Again! Trivia is a game that ties to relevant topics for this audience, including sports for which we developed a separate version of the game.

Second, Throwback Thursday capitalizes on the popularity of crossword puzzles and nostalgia, and it is a puzzle that relies on one's crystallized intelligence. Listening to music is important for brain health, and our third example AARP's SongTheme helps players do that with its song-matching activity and peer recommendations. SongTheme also taps into one's own personal music library that they have accumulated over their life.

Now, these AARP games specifically cater to this audience, but Bob has some examples from outside AARP.

syn·on·y·my

[n] the study or discrimination of synonyms

[n] a list or collection of synonyms often defined and discriminated from each other

[n] similarity in appearance or character or nature between persons or things



Bob

Well, there is Wordle of course, but there are plenty of games that are less traditional.

Synonymy for one – a game that involved Richard Dawkins – where you get a starting word and an end word, and you have to get from the former to the latter in as little steps as possible by picking synonyms. It is really clever, and it is entirely based on your past experiences.

Or my favorite example...



Bob

The Secret World. This is an MMORPG with your typical quests, except... many of its quests involve puzzles that require prior knowledge and experience. For instance, in the screenshot, players are asked to decode incoming data and I am sure many of the developers in the room would never have an issue figuring this out.

The game even offers its own fake version of the internet for younger players to look things up, but many of these puzzles are second nature to 50plus players.

But that is just one strength, there are others.

Design towards Strengths

- Excel at **Crystallized Intelligence**
- Better at **Introspection** and **Reminiscing**
- High levels of **Altruism** and **Emotional Maturity**
- Less but **Deeper Social Connections**



MARCH 18-22, 2024 #GDC2024



Bob

What about 50plus players being better at introspection and reminiscing?

There are many mindfulness and meditative games on the market, some that are exactly what you would expect, others that are quite different, like SoundSelf which create psychedelic imagery using your own voice.

Brukel is an indie game that I designed with my 92-year grandmother, in which she reminisces about her World War 2 memories. Listen to your audience, right?

Next, 50plus players have been associated with higher emotional maturity or altruism. Games do that really well too.

For altruism, look at how citizen science games do it.

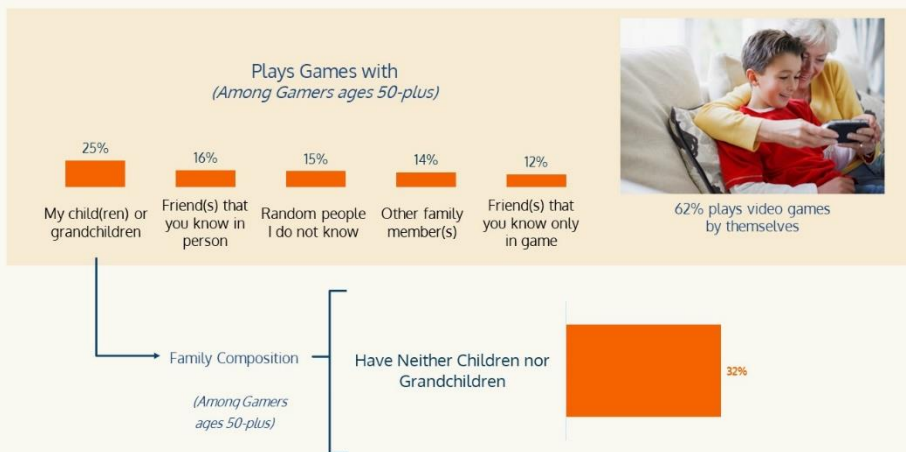
For example, Fold-It is a puzzle game that has led to numerous crowdsourced scientific breakthroughs, and that also has higher numbers of 50plus players.

For emotional maturity, there are so many beautiful, thought-provoking games that deal with extremely meaningful and personal themes; I just went with The Last of Us 2 as this is very relatable for non-game developers due to the TV show, but at GDC I am preaching to the choir here. We all know many games that allow for complicated moral choices and that have incredibly well-written narratives.

Finally, the research shows that 50plus adults are more selective in their social connections. There are so many options here, but what about It Takes Two, a game about parents that are trying to make a failing relationship work for their daughter.

Or Bounden, a mobile game in which you and another person just dance.

And that brings us to the benefits of intergenerational play, of course, which is a great starting point for age-friendly game design.



MARCH 18-22, 2024 #GDC2024

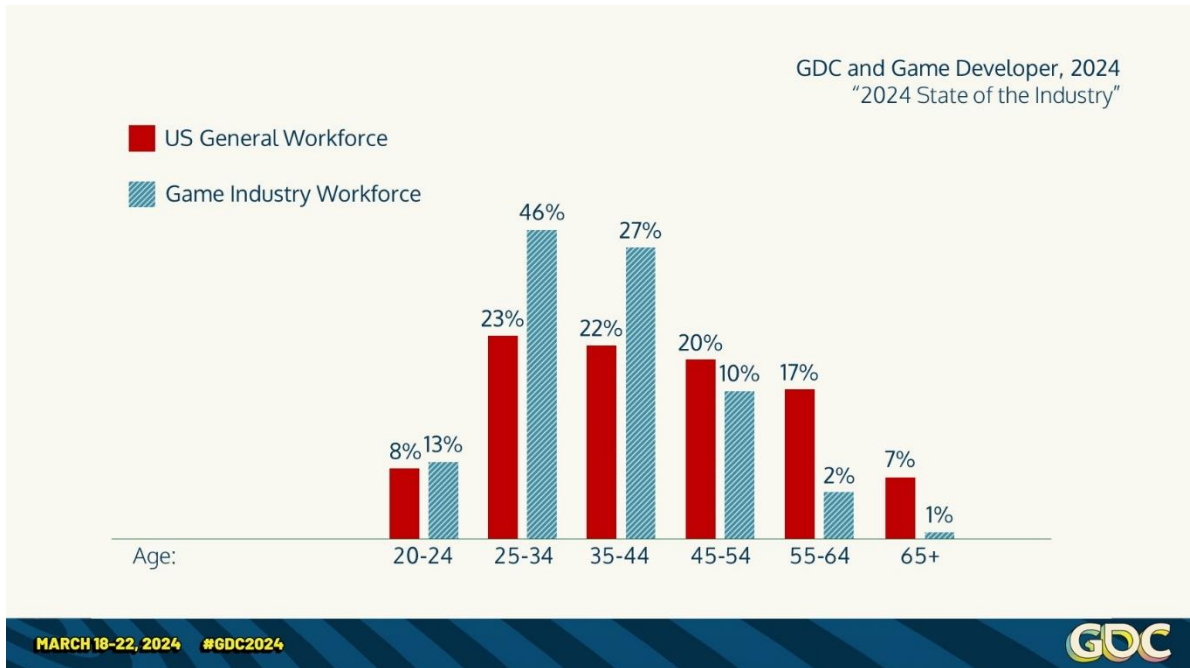


Maura:

Our gamers don't play multi-player games as much as the younger audiences. However, it is a growing trend. And, as Bob pointed out, a key strength of this audience is that when they trust, they trust deeply.

So, it's no surprise that those that do like to play with others, 25% play with children and grandchildren, the other categories are around 15%. So intergenerational play with children and grandchildren is your goal as a designer.

And that brings us to one final note:



Maura:

Do you know the saying, 'Look at yourself first'?

This is what the US workforce currently looks like the three segments representing 25- to 54-year-olds are the largest contributors.

And this is what the game industry looks like. The video gaming industry over-indexes for the 25-44-year-olds and lacks representation in the 50+ segments.

We could use some more representation through the video gaming companies. If the 50-plus gamer is going to be able to see that games are designed with them in mind, the industry needs to include the age group in their organizations.

FREE Digital Workshop on Age-Friendly Game Design



Northeastern University
Games for Life

- **AARP** and **Northeastern University** are here to help you design for the 50-plus
- Initial **FREE virtual design workshop** will be held on Wednesday, May 15th
- If you are interested in getting notified of the date, please **email** AARPGames@aarp.org.

MARCH 18-22, 2024 #GDC2024



Maura

We hope these research findings and direction has been helpful and that you have a stronger sense of how to make your games age-friendly for the 50-plus. However, if you would like more assistance, AARP will be holding a FREE Workshop on May 15th, with Bob to help provide direct feedback. Space is limited so make sure to sign-up by sending me an email to AARPGames@aarp.org.

The Age-Friendly Checklist

- ☐ Representation starts in the workforce
- ☐ Plan for accessibility early
- ☐ Bring in 50-plus players to play your games
- ☐ Use player-centered design methods throughout
- ☐ Think Dabblers, Mainstreamers, Indulgers, Enthusiasts & Immersives
- ☐ Design towards strengths
- ☐ Provide non-stereotypical aging characters
- ☐ Meaningful Play instead of designing down
- ☐ Age-friendly imagery and language in communication
- ☐ Accessibility accommodations for input, cognition and audiovisuals
- ☐ Join the **AARP** digital workshops

Here's that age-friendly game development brochure again =>



MARCH 18-22, 2024 #GDC2024



Bob And that brings us to our wrap-up slide.

This is of course just a starting point and some of these items will need to be revisited as new generations grow into the 50-plus demographic, but we hope that you will take these to heart. And that is the end of our..

Maura: One second, Bob, I think you are forgetting something.

Bob: Oh, right... (Click reveals Join the AARP digital workshops)

Maura: And that is the end of our presentation.



MARCH 18-22, 2024
SAN FRANCISCO, CA

Ask us anything

Maura White – mawwhite@aarpp.org

Brittne Kakulla – bkakulla@aarpp.org

Bob De Schutter – b.deschutter@northeastern.edu



Northeastern University
Games for Life

#GDC2024

Maura

We also wanted to give a quick shoutout to Dr. Brittne Kakulla who is the author of the amazing AARP accessibility research that Bob summarized for you, but who unfortunately was not able to attend today.

Bob

And aside from my colleagues at Northeastern, I wanted to recognize the support of the Department of Emerging Technology in Design and Business and the College of Education, Health, and Society of Miami University as that is where a significant amount of my insights came to be.

And with that, we built in time for Q and A, so do you have any questions for us?