

# Boss Beauties

Boss Beauties Global Report 2023:

## How Young People and Parents See Web3

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# A Letter from Our CEO

The last year and a half have been a wild ride as we launched Boss Beauties while I had a three-month old son. Our focus has been to truly create a world where a woman can be everything she wants, and we know that education is a key component to ensuring girls succeed.

Web3 technologies have taken off over the last several years, but “web3” is just the future of the world wide web. In a not-so-distant future, these technologies will be a part of our daily lives, much like social media’s boom years ago. We know from history that when new technologies emerge, girls get left behind. No matter what path they choose for their life and career, we want girls to be able to understand this technology and how the world is changing.

Our mission is to bring the next 1 million women and girls into web3, so they can understand how to operate in a web3 world. But in order for women to be everything they want, they must first be safe. As we think about supporting women as they navigate these new technologies, it’s important to understand how we got here and how this technology is shaping policy and regulation, the modern workforce, and how it’s going to impact the next generation.

**Lisa Mayer**  
Founder, CEO



# Executive Summary

Soon after its creation, the internet was about static and simple websites where users could mostly read content without interacting with it. Slowly, it became easier to create websites that allowed you to both read and write, making the internet more democratized. Chat forums evolved into social media platforms and messaging applications. Interaction became not only about the content, but the emotions, too.

As the semantic web evolved, a decentralized online ecosystem based on the blockchain has been taking shape. Web3 allows users access to and control of their own data and represents the next generation of the world wide web.

Digital spaces today open up a whole world of security and privacy issues, abuse, false information, and misogyny, which disempowers the next generations, and as we know from history, makes women and girls especially vulnerable.



As we move towards a world that is more interconnected, one that frees individuals to explore, allows brands to express themselves in ways not possible before, and as the online world evolves, the barriers to entry today in Web3 are access, appeal, and understanding.

This report is the first-of-its-kind, exploring how the next generation of web3 users, particularly Gen Z girls and parents, see knowledge gaps, safety concerns, and future opportunities in this space. We invested in this research because we want to build a company that's responding to what young people need around the world, while also supporting those who are helping them learn - like parents and caregivers.

We surveyed nearly 4,000 users from across the world and found that as the nature of online interactivity and collaboration moves into a virtual world, there is real excitement amongst young people about what may be possible. We also found the knowledge gaps were higher for young women and parents, who showed more trepidation about the interactions their children had online.



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# **Welcome to Web3, BB**

# Introduction

Our goal with this research is to understand the promise of web3, as seen through the eyes of young people – particularly young women – and compare it to parents and caregivers. This is important to us at Boss Beauties because as we bring the next one million women and girls into web3, understanding their knowledge and needs is fundamental to providing the right tools for them to succeed.

**Our goal with this research is to understand the promise of web3, as seen through the eyes of young people – particularly young women – & compare it to their parents & caregivers.**

We wanted to know what they thought of the most developed parts of web3, as well as its most nascent. We wanted to understand how Gen Z feels about web3 technologies, and match that to parents' perceptions and fears around it. We need to understand the gaps where Boss Beauties could help young women enter the space, and how we could do better to train parents interested in this technology, whether for themselves or so they can better understand the world their kids are growing up in.

In this study, we dive into how different ages, audiences, and countries use web3, where they see knowledge gaps, and how their interactions impact on their relationships, identity, and future perspectives. In doing so, we wanted to explore how web3 leaders, regulators and individuals could engage with, and educate, the next generation of digital natives in the best way possible.

Our survey was split into sections that would allow us to paint a full picture of how Gen Z interacts with web3, as well as how parents or caregivers feel about web3, and how much they understand. The sections were focused on education (what they understood about web3), finance (how they transacted online), privacy and security, and potential online harms and psychological impact. We then break down our findings by countries specifically.



# What do we mean by web3?

A note from our VP of Web3 Strategy, Krys Burnette

**For the purposes of this research report, we define web3 as the next evolution of the internet.**

Since web2 was introduced in the early 2010s, the internet, as we've known it so far, has centered around platforms and interoperability. Platforms such as Facebook, Google, and Amazon store all of our data, with our permission, in a centralized platforms. Almost every app or software that we use today, requires a set up that asks us to create an account using identifiable information such as our email, age, or location. Mainly, these services are free, however, our data can be used in sophisticated algorithmic software that can target ads or additional content that keeps us engaged on these platforms or falling for a Facebook ad for something we didn't know we needed - guilty! Ever click on a DIY Youtube video and suddenly you've figured out how to build an entire house? That's another example of the platform's algorithm successfully working. Similarly, interoperability has been another tenet of web2 as we were introduced to the cloud. Users sharing their data on cloud-based platforms such as Google, Apple, or Microsoft are able to quickly and easily share information and data between devices, accounts, and services.



# What do we mean by web3? *Continued...*

If you've heard about web3 in the last few years, you've likely heard it associated with cryptocurrency and NFTs (non-fungible tokens); however, web3 is not limited to just these two things. In this research report, we define web3 more generally as the next evolution of the internet, which democratizes the sharing of information and data wherein the user is the owner and creator of content. This changes the web2 model from centralized data collecting agencies, to decentralized co-ownership and co-creation where users are compensated for their time or creativity. For instance, love that limited edition dress in the store? You can also buy and wear it online, it's yours, it's limited, and only a few others can wear it too. We'd call that a digital flex. When you're done with it, you can sell it to someone else just like you can IRL (in real life). This creates a new economy for digital creators and collectors.

Part of the web3 zeitgeist includes things such as digital finance (crypto, NFTs, play-to-earn gaming), unique online personalities (avatar

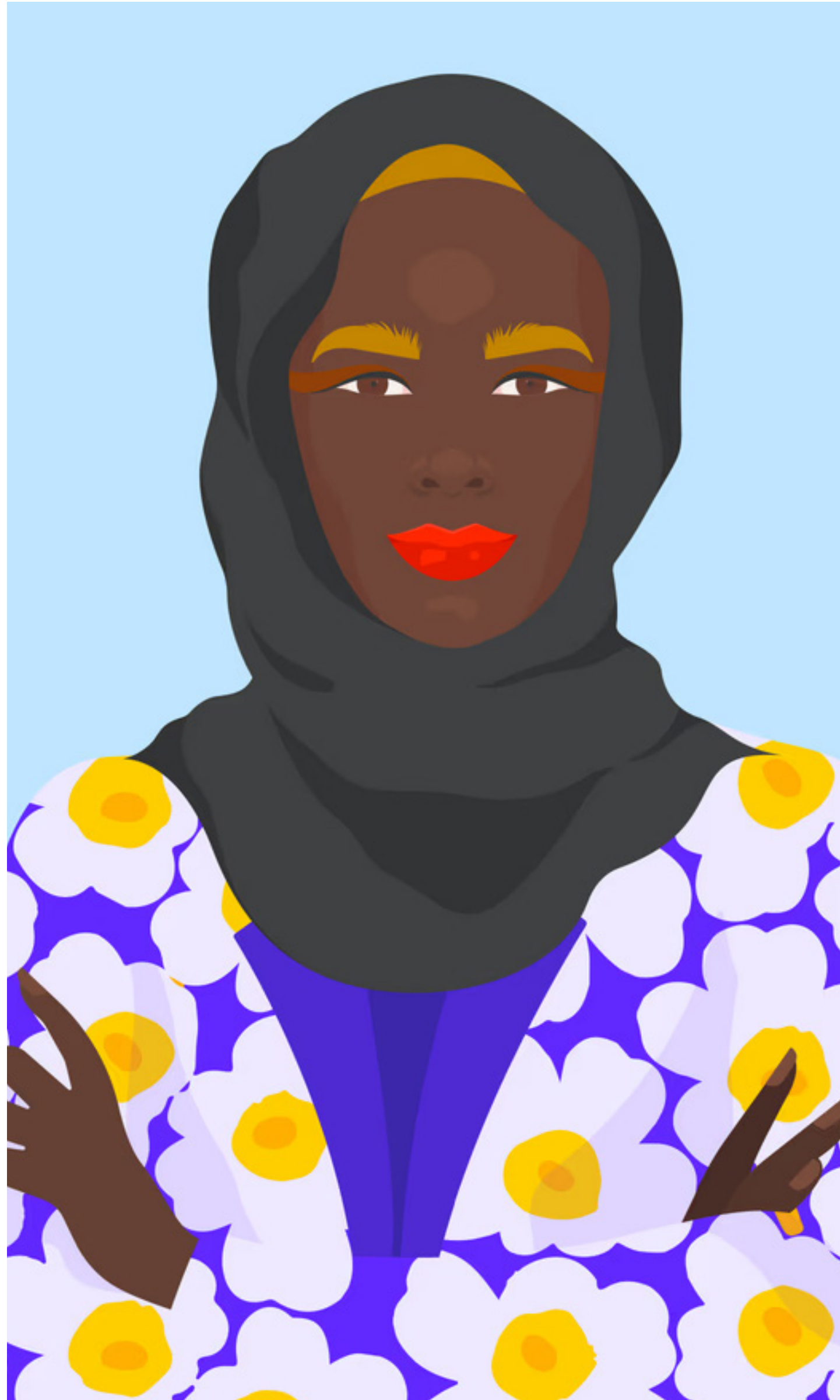


development, digital fashion or wearables), “the metaverse” (digital real estate, virtual communities, interoperable blockchains, AR/VR), and artificial intelligence as we explore its use cases across IoT (the internet of things).

Lastly, online communities in web3 tend to be centered around a shared mission or purpose (e.g. art, fashion, education) that not only creates change or drives impact online, but also extends into the real spaces throughout the world. Web3 communities are doing things such as saving the Amazonian rainforest<sup>1</sup>, improving biodiversity<sup>2</sup> in the Australian Great Barrier Reef, or preparing the next 1M women and girls in technology and leadership as part of our Boss Beauties community.

There is passion and energy in the world of web3 that goes beyond how we understand the internet to be used as it is today. I'd argue, most use cases have not yet been discovered, however, there is an opportunity to explore how we can, collectively, avoid the failures and mistakes of web2 by creating a more purpose-driven, inclusive web3 for all.





# Web3 Today

There has been some research on the adoption of NFTs around the world, as well as surveys specifically about the metaverse, but nothing focusing on young people (especially young women) and parents in web3.

Web3 in general seems more popular amongst young men, especially more developed areas of web3, like gaming.

For instance, a survey of internet users across 26 countries by British price comparison website Finder reports a pronounced gender gap between men and women in ownership of NFTs: men from the USA are 2.9x more likely to own an NFT than women, whereas British men are 2.4x more likely,<sup>3</sup> and Brazilian men 1.23x more likely. NFT ownership between men and women was also found to be more evenly matched in Nigeria, India, and Singapore.

Globally, those aged 18-34 lead the way in ownership of NFTs although in Vietnam, Ghana and Kenya, over 55 year-olds are more likely to own NFTs.

Collectibles are the most popular form of NFTs with three-quarters of all sales, with Art-related NFTs following second at 9%, gaming at 4%, and Utilities at 4%.

Advertising company Wunderman Thompson found in 2021 that GenZ and Millennials were most likely to be engaged digitally, with Baby Boomers least likely to do so. Attending events online, whether movies, music concerts, business conferences or sports was much more likely amongst those that were familiar with the metaverse, than not. They found what happens in the virtual world will have IRL consequences both for brands and businesses, changing the way physical products are tested, manufactured and sold.<sup>4</sup> VICE and Razorfish in April 2022 found that the metaverse liberates young people to better explore who they are, which leads them to spending twice as much time interacting with friends in the metaverse than IRL.<sup>5</sup>

# Engaging Young Women in Web3

Online spaces in web3 are dominated by young men rather than women and that extends also to leadership roles in web3 companies.

While the majority of users in web3 today are men, there is also a lack of female representation in the founding and management teams of companies in this new technology paradigm. This is not a web3 specific problem, as women are generally underrepresented in tech, with even lower representation for women and men of color. Web2 companies are far better, but that is in part due to the potential of facing legal provision for gender diversity on corporate boards.

The lack of representation in tech could affect AI programming and technology progress. As web3 innovators seek to build safe spaces for women, there is an historic opportunity to right this imbalance and utilize the talents of a large part of the population that have not been engaged thus far.

Some reports indicate that around 40% of female gamers have experienced abuse from male gamers, with 28% experiencing sexual harassment in the form of objectifying comments and death threats.<sup>6</sup> Others complain of virtual groping taking place in the metaverse, along with sexual objectification.<sup>7</sup> A British study by mental health charity, stem4, found that nearly half of all children and young people aged 12-21 said they suffered self-esteem issues, started exercising excessively, stopped socializing completely or self-harmed because of regular bullying or trolling they experienced online due to their physical appearance. Four in ten said they are suffering mental health distress and almost one in five experienced body image issues.<sup>8</sup>

Despite this, 95% of those respondents said they were unable to quit their online habit. They were significantly more likely to turn to social media than IRL contact with family and friends to tackle negative feelings about self-worth.<sup>8</sup>



# Improving Safety Online

Some of the safeguarding mechanisms in place by internet companies to protect women and young people include parental controls, cyberbullying prevention, and digital literacy and inclusion programs.

However, this does not prevent the child from being exposed to inappropriate behavior in a multiplayer gaming universe. Leading online gaming companies have said that government regulation is needed, along with responsibility on game developers and platform leaders.<sup>9</sup>



Rather than platforms impose a centralized framework for user moderation, a decentralized approach such as community moderation on groups such as on Discord has been popular. There are recent instances of communities coming together to object to the issuance of racist NFTs for example.<sup>10</sup> A similar approach is taken to cyberbullying and online harassment, where collective community responsibility is encouraged to stop instances of exclusion for young people and minorities.<sup>11</sup>

But the inherent nature of decentralized, but locally collective, community moderation can be inconsistent and lead to instances of ‘populist moves’ within communities which may end up excluding vulnerable individuals.

There is broad acceptance across the market that digital literacy and inclusion are long-term prerequisites to promote safety. There are multiple organizations currently advocating for more inclusion in web3, such as the Web3 Foundation, which has been advocating for better hiring policies as well as more stringent regulation by companies on some of the issues mentioned above.

A large tenet of online safety is currently dependent on community behavior and internal regulations. There is, however, a need for comprehensive user experiences as well as law and regulation around cyberbullying and harassment to accommodate for possibilities that can transpire in a web3 setting. Along with this, further inclusion and awareness of safeguarding mechanisms are needed to make the web3 industry truly safe for young people.

# Emerging Threats in Web3

The threats unique to web3 include present-day issues such as the right mechanism for the governance of web3 platforms, as well as threats that are currently being discussed by policy makers primarily from a web2 lens, including issues around identity, protection of minors and conduct in virtual spaces.

Due to the commitment for decentralization in web3, there have been issues between platforms and users as to where and under what pretense certain regulations such as data collection and content moderation should take place. Different platforms have different stances on how they approach governance; many delegate (effectively, outsource) decisions to either private experts or to companies such as Coinbase and Rainbow and other specialist agencies.<sup>12</sup>

Even within firms there have been inconsistencies as to how to remain true to decentralization while also increasing trust and the reputation of crypto markets.

**For the time being, it seems like an approach to governance depends on the platform rather than an industry wide consensus.**



For the time being, it seems like an approach to governance depends on the platform rather than an industry wide consensus.

While the enhanced security blockchain-based transactions offer over alternate transactions is a key benefit of web3, it can also leave users more susceptible to hacking and malware.

For financial crimes such as this, there is no global legislative consensus on how to prosecute offenders. A global compact could be needed because due to the 'online' structure of web3, it is hard to pursue offenders operating from a different part of the world.



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# **Gen Z & Web3**

# Young people want access to more & better educational resources about web3, at school & outside

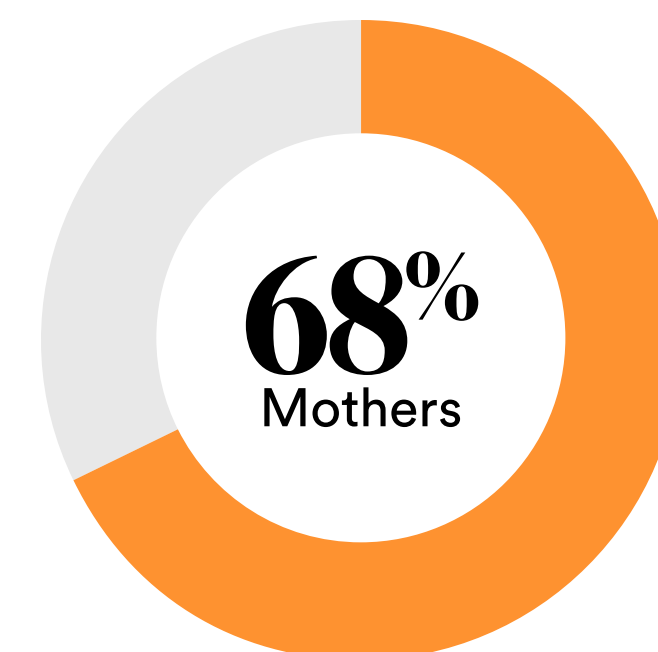
When asked if they wished their school had taught them more about web3, more than half somewhat or strongly agreed with the statement, with young women 36% more likely to give this response than young men. An even higher number said that outside of school, they wished there was more access to credible education resources about web3 such as explainer videos, with young women 55% more likely to agree.



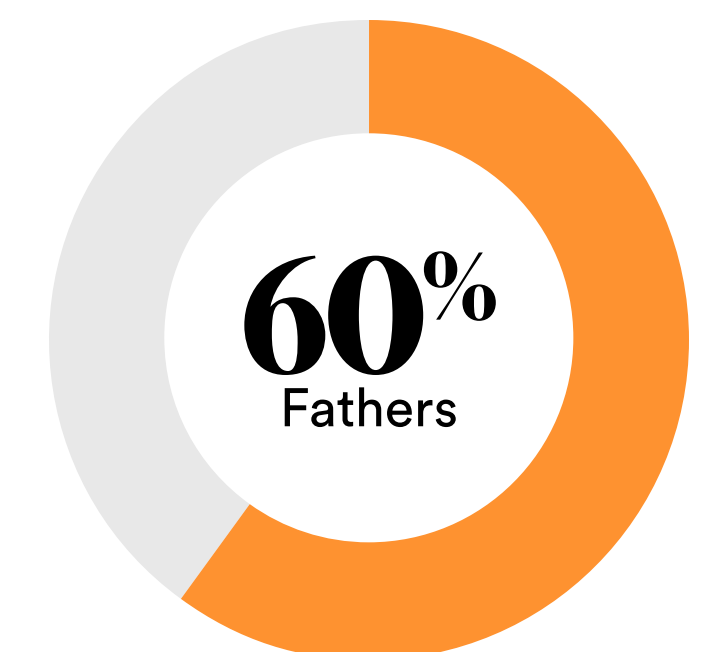
When parents and caregivers were asked a similar question about the provision of educational resources at school and outside on web3 for their children, responses were almost identical to what young people said, with a preference for more teaching about web3 in school rather than outside. Schools today teach digital literacy, but the survey showcases the need to specifically enable children to better learn about where the internet is headed.

If digitally native young people are showing a clear need for tailored and relevant educational content, this implies the need is even greater in the general population to prevent a split between the haves and have-nots of digital ambition and engagement.

Young women were twice as likely as young men to tell us that they were entirely unfamiliar with crypto wallets. In response to the statement, “I know how to open and manage a crypto wallet”, 27% of young women strongly disagreed with the statement, but only 15% of young men. Yet this gender gap reverses for young people who are somewhat familiar with crypto wallets. Expanding the set of responses by including “somewhat disagreed”, 53% of young men disagreed with that statement compared to just 38% of young women. This shows that there is a more acute need to target educational resources towards young women that are digital natives but not yet web3 natives.



**Parents who didn't know or were unsure of how to open & manage a crypto wallet.**



# Gen Z engage in web3 primarily for financial purposes, with community & self-development as the second most important reason.

Both young men and women said they were most likely to engage in web3 for financial purposes.

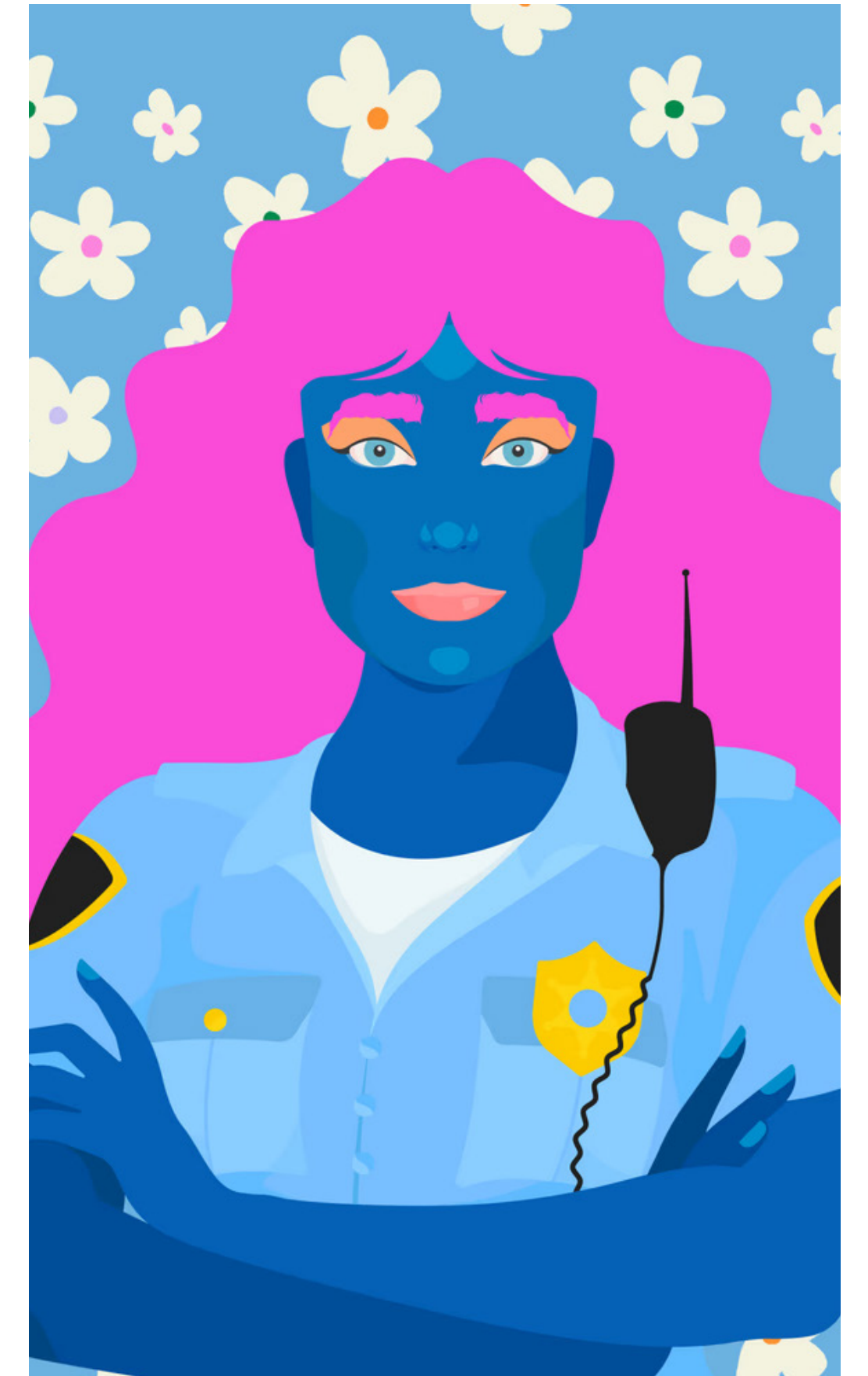
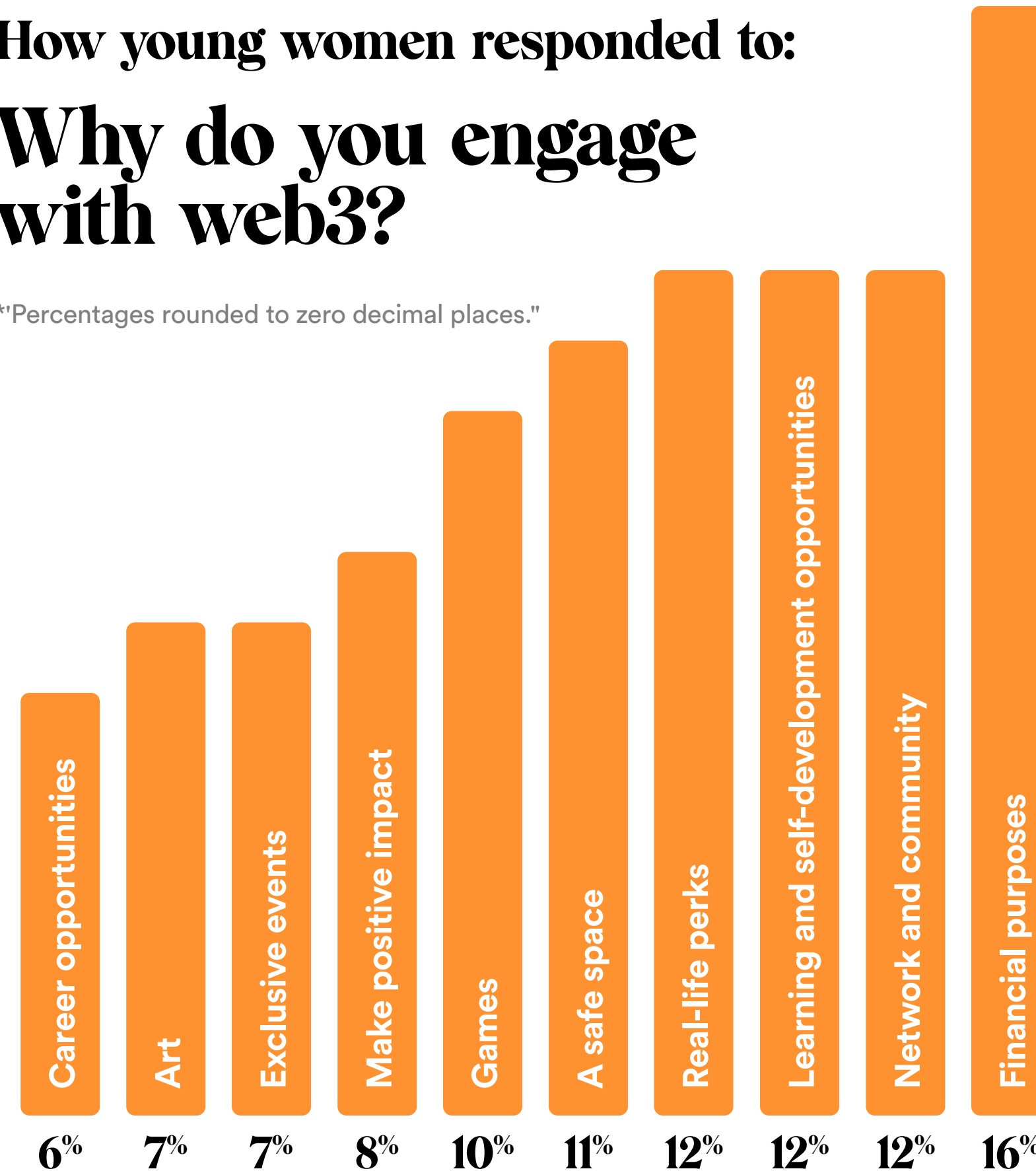
For young women, to network and belong to a community, as well as to access learning and self-development opportunities were more important reasons than for men. For the UK, almost twice as many respondents selected financial reasons, as the next best reason was “to access a safe space that supports my individuality”.

Respondents from our Portuguese-language survey for Brazil were mostly women founders in web3 communities, who selected non-financial aspects as most important for them, but rather cared more specifically about making a positive impact, networking and belonging to a community.

Given the emphasis on financial reasons, it was surprising to see career opportunities was the least popular option (5%). As the world of work continues to change, web3 is creating new career advancement and professional skill development opportunities that did not exist just a few years ago, such as “Tokenomics Designer” or “Rust Core Developer”.

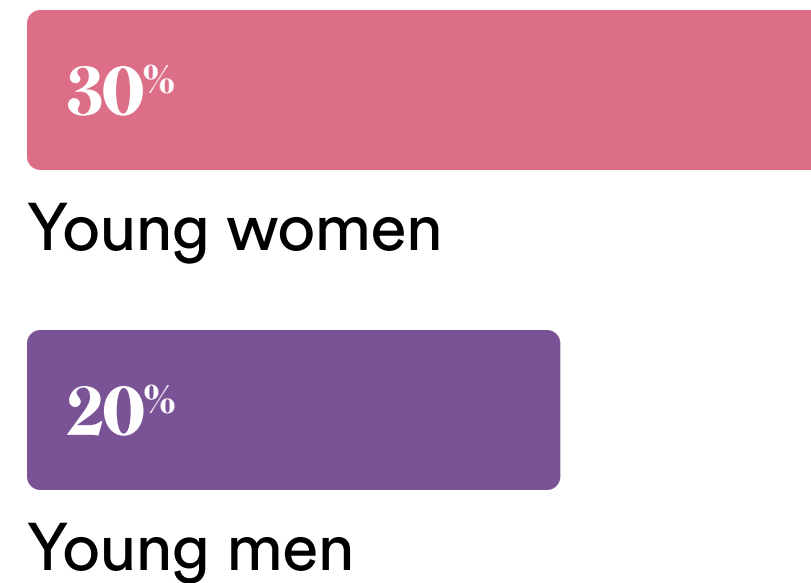
## How young women responded to: Why do you engage with web3?

\*\*Percentages rounded to zero decimal places.\*\*

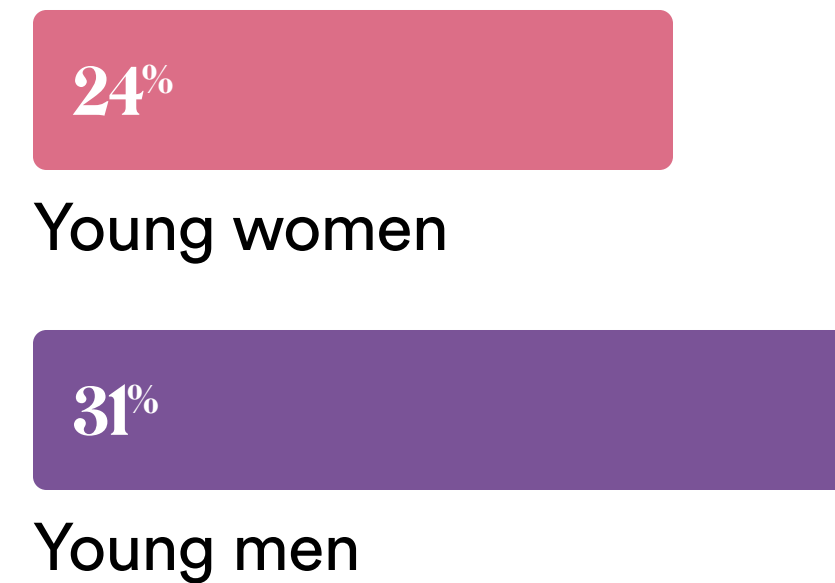


# Online gaming is the most common part of web3 today for young men to engage in, & virtual communities for women.

## Regularly use virtual communities & networking



## Heavily involved in gaming



Among the possible responses of DeFi, NFTs, online gaming, smart contracts, and virtual communities, twice as many young women (4% vs 2%) instead chose Other as a response. While this is a small minority, these responses show there is still some confusion around the definition of web3, with many respondents giving a wide range of examples that are better associated with web2, including e-commerce and online shopping, social media, accessing study materials and streaming.

The survey results highlight the opportunity to help digital natives better understand the opportunities that the evolution of the internet brings, especially in areas to which they may have been moderately exposed, but not used, such as NFTs and smart contracts. Respondents said that DeFi and NFTs were the areas they were most interested to find out more about.





# Gen Z's online personality is an extension of their IRL self & they find it easier to form relationships online

Our survey showed that young people overwhelmingly bring their IRL values and ethics with them when engaging online. This is true in every country we surveyed and applies equally across genders.

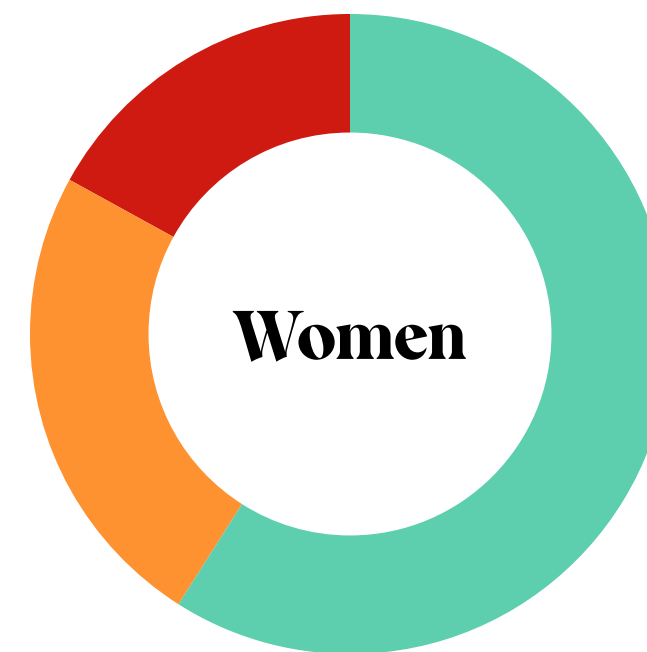
We asked several questions focused on understanding how young people form relationships online. We found that, by and large, young people found it easier to form (although not necessarily maintain) relationships online than IRL, but that they saw IRL relationships as more meaningful.

For 32% of young women and 35% of young men, their virtual identity or relationships were seen as an escape from real world issues. 41% of young women and 46% of young men said that forming relationships online was easier than IRL, but only 18% of those young women said those relationships remained easier to maintain than IRL. For young men, the figure was consistent between both answers, with 42% saying they were easier to maintain.

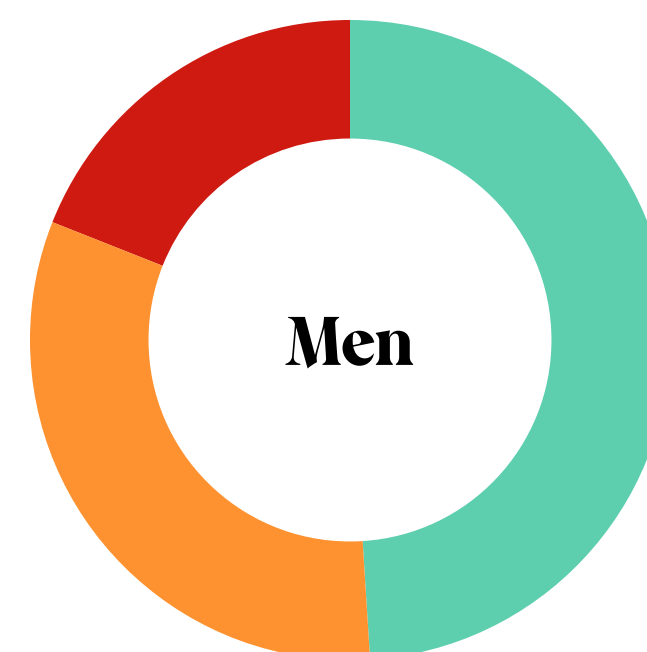
Less than a third of these respondents found those online relationships as more meaningful than those in the real world, with young women in particular stronger in their views here.

53% of young women said they valued their IRL relationships more than the virtual ones, as did 48% of young men. Only 6% of young women and 10% of young men strongly agreed with the statement “I value my virtual relationships more than my relationships IRL.”

**“When engaging online, I bring my IRL values & ethics with me”**



- somewhat/strongly agreed
- decline to answer
- somewhat/strongly disagreed





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# Parents

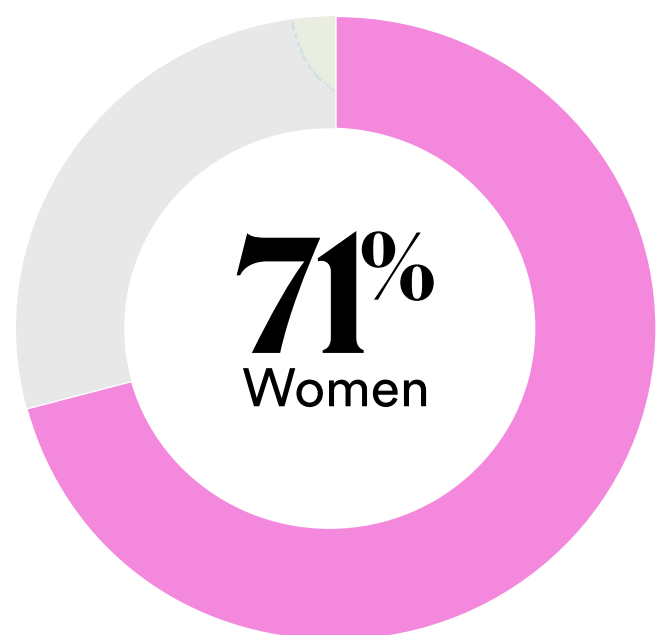
# Young people & parents agree – parents are not well equipped to help their children find out more about web3 & navigate its risks

Only 17% of young people we surveyed said that their parents were either somewhat or well equipped to teach them about web3, with these results consistent across countries.

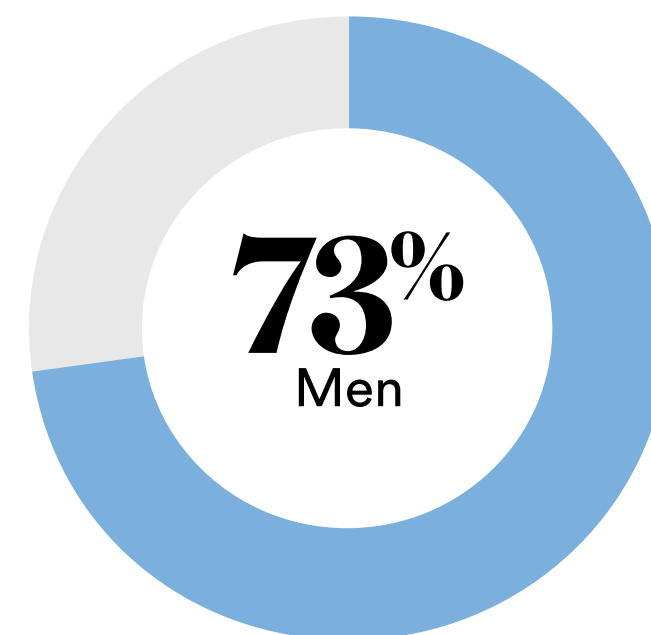
Their parents agreed, with only 23% around the world saying they felt suitably equipped to talk to their children about risks online.

We asked parents how familiar they were with the blockchain and web3 as broad terms. 67% of women and 53% of men were either unfamiliar or unsure. A quarter said they were somewhat familiar.

There was less understanding of web3 than blockchain, with 71% of women and 73% of men saying they were either unfamiliar or unsure what web3 was. Less than three in ten were somewhat or very familiar. However, parents seemed more familiar when we asked more specific questions about their children's online usage.



say they were either unfamiliar or unsure what web3 is



# Parents have a good understanding of what their children do online, but think they spend 1.5x more time in web3 spaces than they actually do

When we asked parents to respond to the broad phrase “I know what my kids are doing on web3”, the most popular response was “not sure / don’t know” for more than a third of them.

However, when we subsequently asked respondents what part of web3 they used the most, and asked parents what they thought their children most used, we got more accurate answers.

Parents correctly estimated that their children most frequently engaged in web3 for financial purposes, but were not as easily able to identify the other main reasons.

They ranked online gaming as second, which means they thought their children spent a lot more time in this activity than they actually did. This was followed by access to a safe space that supports their individuality, to network and belong to a community, and to make a positive impact.

Only 12% of mothers and 8% of fathers said they didn’t know what part of web3 their children used, and some of these parents noted in comments that they were not fully aware what web3 was.

A surprising result was that parents consistently overestimated how much time their children spent on web3. 38% of parents said their children spent at least 10 hours a week on these activities, whereas only 14% of young people actually did. In fact, 63% of young people said they spent 5 hours or less on web3 activities online.

These results were consistent between young men and women, as well as highly consistent between Brazil, Nigeria, Singapore and the UAE. In India, 81% spent less than 5 hours on web3 each week, but in the UK and US there was a much wider spread of results, with roughly equal numbers of respondents spending more time as less.

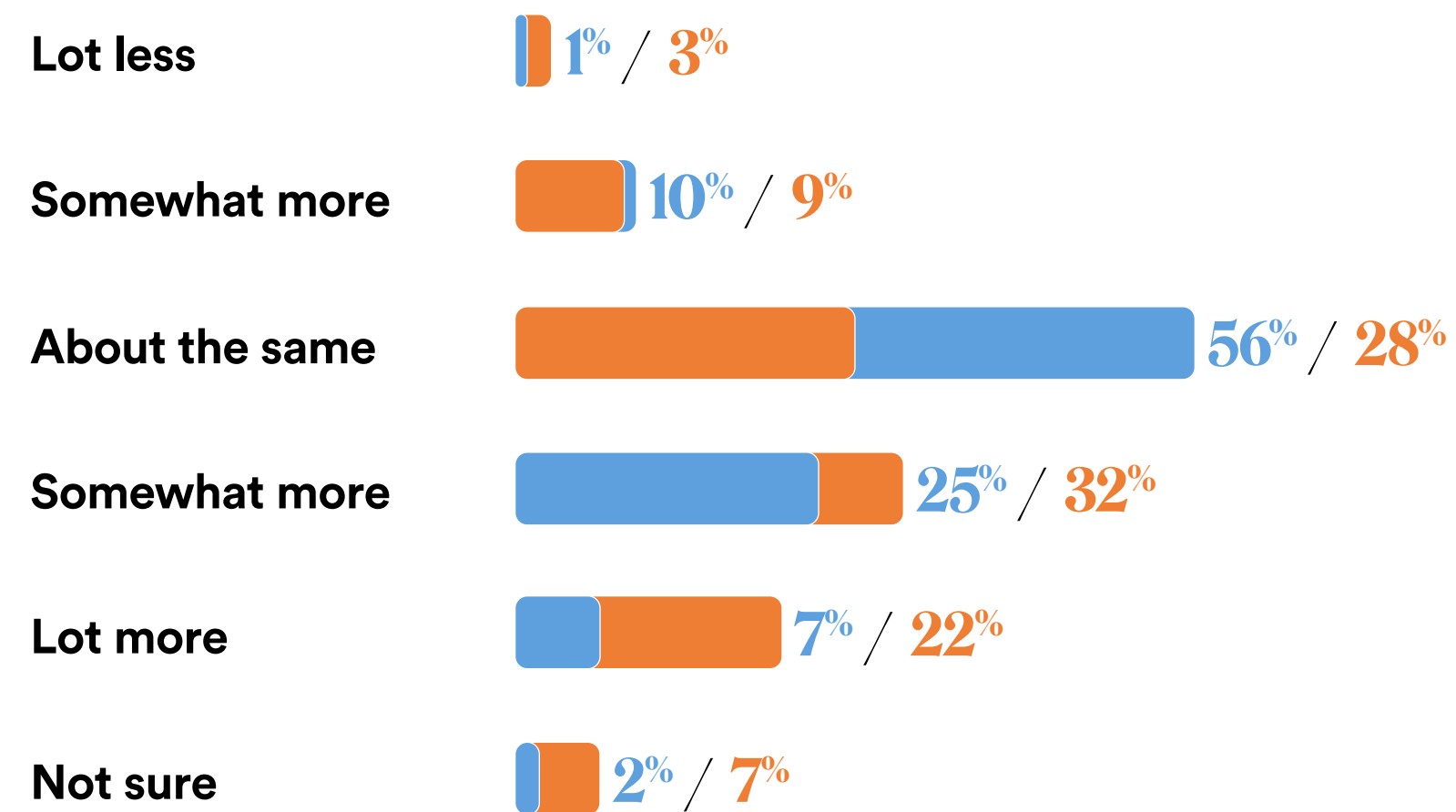
56% of parents who responded said they thought their children would spend roughly the same amount of time on web3 over the next three years, whereas only 28% of young people gave that answer. Instead, 71% more young people gave the answer “somewhat more” or a “lot more” time on web3 in the next three years compared to what their parents estimated they would.

This result in itself is not surprising – given parents overestimated how much time their children spent on web3 today, it would follow that they would be more conservative with their estimates in the future.



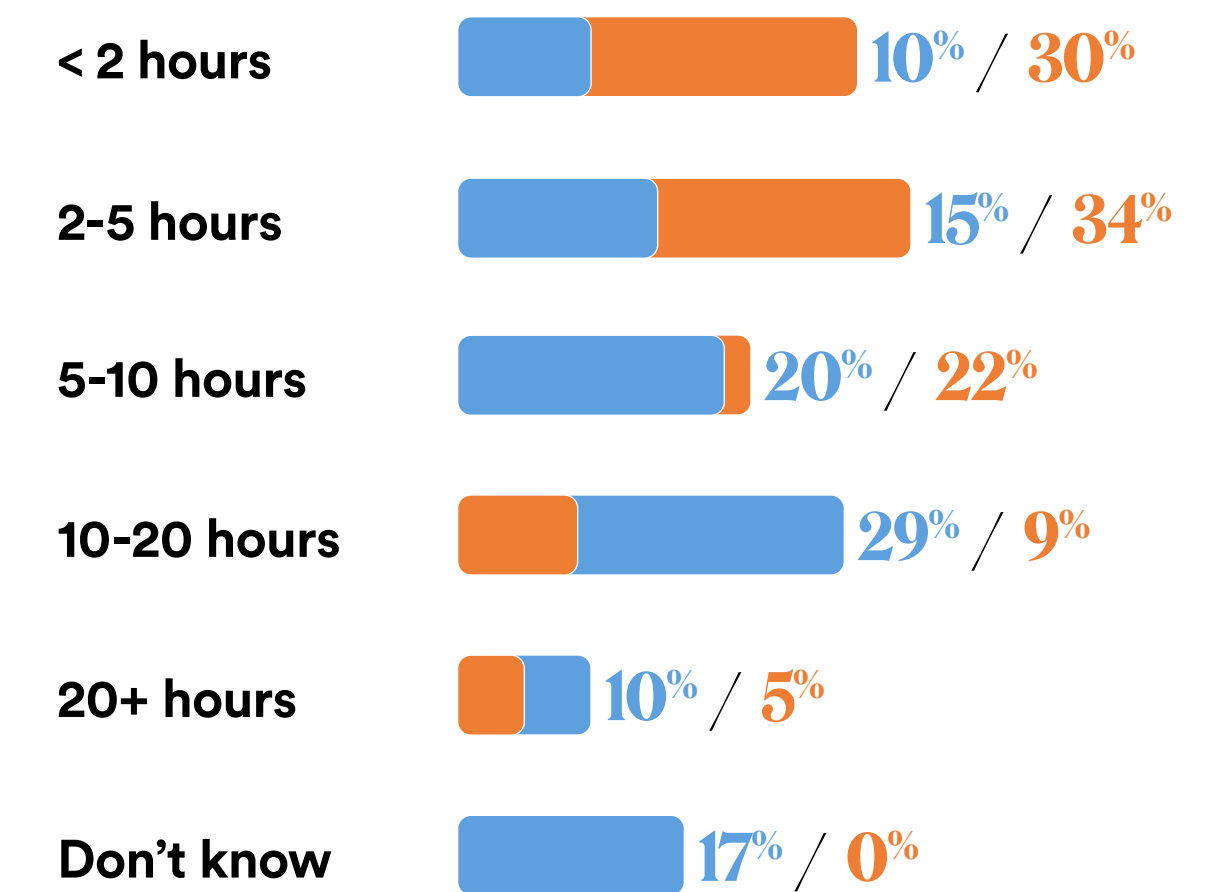
## To what extent do you think your children will spend more time in web3 in the next three years?

■ Parents  
■ Young people



## How much time do you think your kids spend on average, per week, on web3?

■ Parents  
■ Young people



# Fathers were 40% more likely than mothers to feel they were inadequately informed about risks in web3

Parents' responses about privacy and security reflected nuances that varied across countries. Fathers were 40% more likely than mothers to say they were either highly or somewhat uninformed about risks and issues specific to web3. This discrepancy between fathers and mothers and their urgency to learn more about web3 is concerning as it adds to the mental load that mothers typically bear when it comes to the safety and education of their children.

The strongest opinions came from Brazil and Nigeria. Brazilian parents were 87% likely to say they were not either highly or somewhat informed, with 73% of Nigerian parents giving the same answers. This figure fell to 63% for the US, which had the highest proportion of parents saying they were either somewhat or highly informed.

Furthermore, parents were generally unsure how safe their children were on web3 and were highly concerned about their privacy and security online. Only 8% of mothers and 13% of fathers were unconcerned about these risks online globally. Nigerian parents were most concerned, possibly because they felt uninformed about those risks.

US parents, who said they were the most informed, were the most concerned with privacy and security online – 66% said they were somewhat or strongly concerned.





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# **Market Trends**



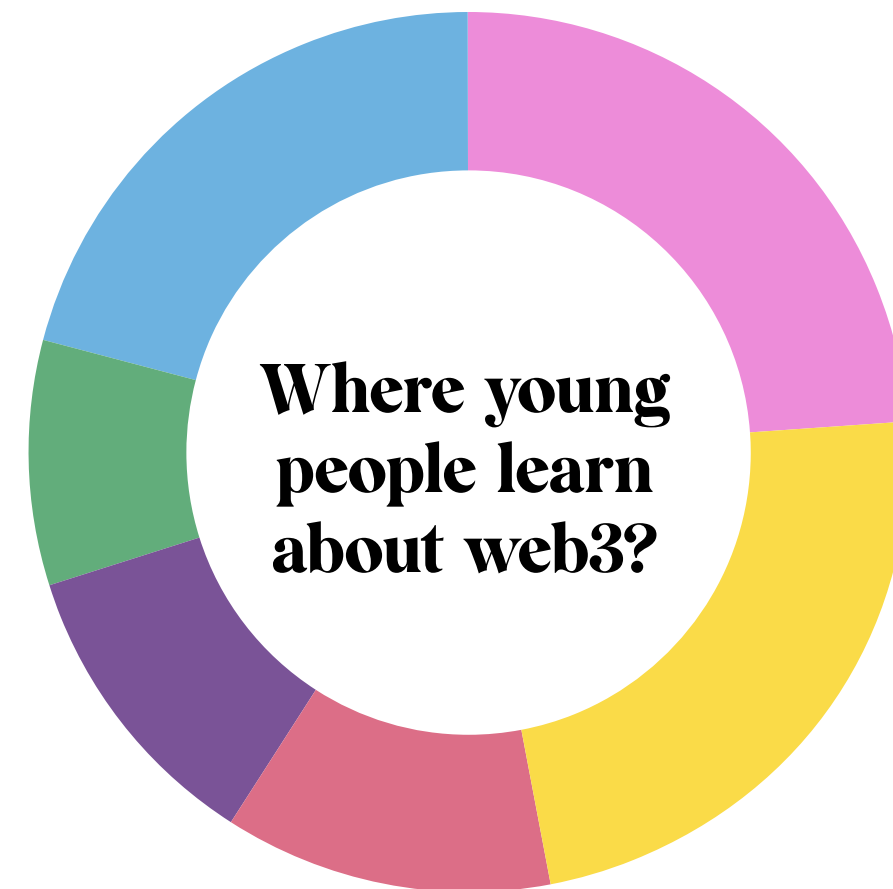
# Young men were 1.4x times more likely to access trustworthy information about web3 via online communities & mainstream media

Despite the popularity of online communities, our respondents said that was not their predominant source for finding out more about web3.

Young men were 1.4x more likely than women to access information via online communities and mainstream media.

In the UK, from the respondents that answered this question, mainstream media was the second most popular source, but in the US it ranked only as the seventh most trusted source. In the UAE and India, peers were seen as the most trusted sources, although from a small sample.

These results highlight disparities in how young people trust different sources of credible information, and present an opportunity for reliable and trusted sources of information tailored to the needs of the relevant target audience.



- Friends or work colleagues (24%)
- Online search (23%)
- Followed by social media (12%)
- Online communities (11%)
- Mainstream media (9%)
- Other (21%)





# Despite market turbulence, sentiment about NFTs & crypto is not decreasing, for now

60% of young people said they are either somewhat or highly likely to purchase NFTs, cryptocurrencies or something else within web3 over the coming year, with men slightly more likely than women to do so.

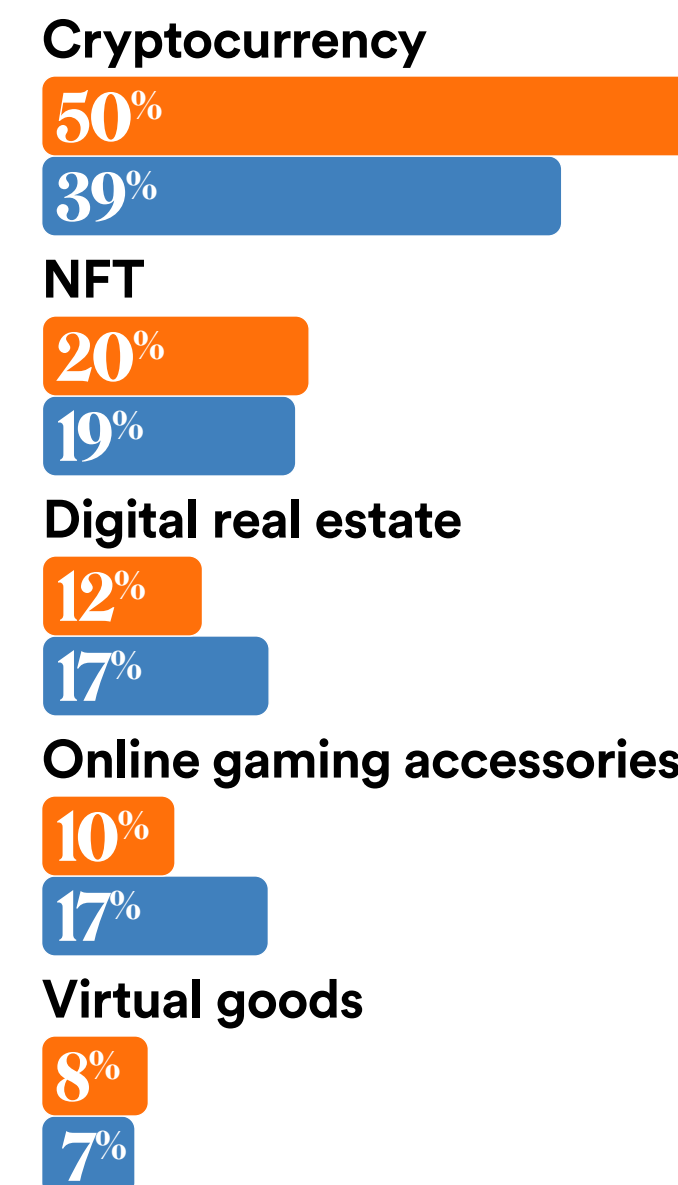
Brazil respondents were most keen, with 78% saying they were either somewhat or highly likely to purchase. That trend was consistent across other countries too, although Singaporean and UAE respondents were the most conservative. Only 52% of Singaporean respondents were likely to answer in the affirmative. In the UAE only 24% said they were somewhat or highly likely, with a further 59% saying they were somewhat unlikely to purchase. This could be due to a lack of early adoption of digital assets in the country or the lack of a developed regulatory environment.

Many of our young UAE respondents were from universities and international schools, which means we had a sample that included both Emiratis as well as international students.

Given we conducted the survey during a period of market turbulence, it was interesting to note the positivity of young people. When asked how risky they perceived web3 to be, only 17% of young people around the world said it was highly risky. Instead, 73% of respondents said it was either somewhat risky, or not risky but volatile. Women (20%) were more likely to consider it highly risky than men (14%).

## Thinking about their most recent purchase you know about, what did they buy?

- Young people
- Parents



Parents were however much more conservative with their responses, with half of parents globally saying they thought it was highly risky.

Young people from the US were the most likely to be comfortable with the risk due to their longer and deeper exposure to web3, with only 10% saying it was highly risky. Despite many young Nigerian respondents being the most bullish about making purchases in the coming year, a significant minority said such expenditure was highly risky (25%). Three-quarters of the most recent purchase made by these respondents was in cryptocurrency. Despite those purchases happening in the context of a bear market, our survey shows that Nigerians have a high risk appetite.

By contrast, Singaporean respondents were the most conservative with their assessment of risks, with 50% saying it was highly risky.

# Cryptocurrency & NFTs are the most popular digital assets to purchase today

Across our young respondents, 48% of men had made a purchase in web3 over the past year, but only 29% of women had. This includes cryptocurrency, NFTs, digital real estate, online gaming accessories, and virtual goods. By contrast, 23% of parents thought their children had bought something over the same period.

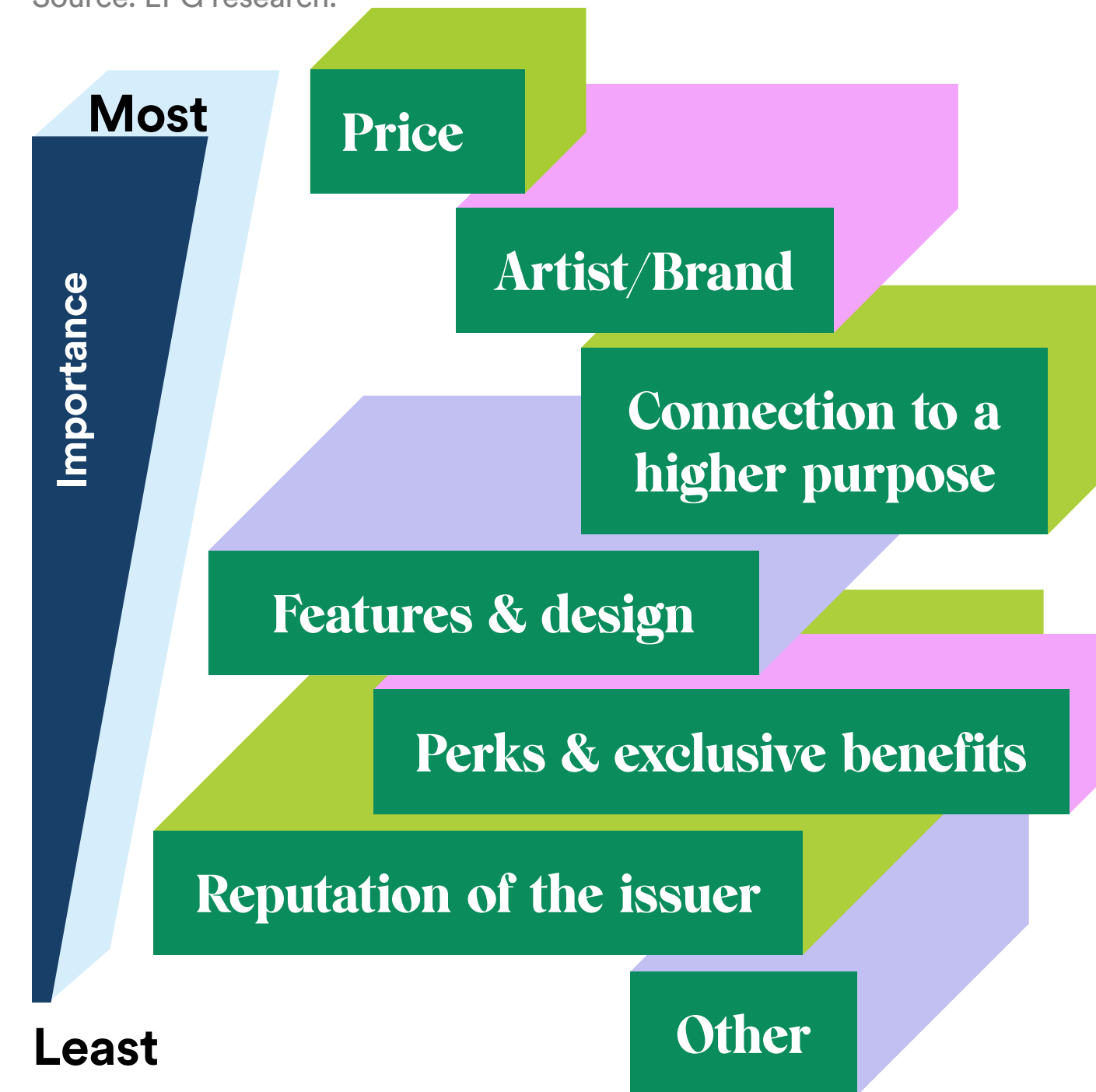
Cryptocurrency purchases by young people were the most likely (50% of respondents), followed by NFTs (20%), digital real estate (12%), online gaming accessories (10%) and virtual goods (8%). Parents globally correctly identified this ranking of interest, although they underestimated the purchases of cryptocurrency (39% of parents saying their children purchased this vs 50% of young people saying they did). Parents from the UK had the least familiarity with their children's purchases, with roughly equal answers across the board, with the most popular selection being NFTs (26%).

The US market was more broad-based in terms of its sophistication and interest in different aspects of web3, with just under half of all purchases of virtual goods by young people happening in the US. Between the US and UK, they accounted for four-fifths of all online gaming accessories purchases.

Young people from Singapore were less likely to have made any purchases, but where they did, it was a similar trend to other countries in that they preferred

## Factors both young women and men consider before purchasing an NFT.

Source: EPG research.



crypto purchases. 72% of Nigerian respondents had purchased crypto assets over the past year.

In an illustration of the ease of engaging in this market, only 14% said they found the experience of making the purchase somewhat or very difficult, with women only marginally less bullish than men. So given women find it just as easy as their male counterparts to create and complete a transaction, the reason for the lower likelihood of purchases by women over the last year must lie elsewhere.

We also found that young women spend less per transaction. 46% of these respondents spent US\$20-100 on their last transaction, whereas only 32% of young men did. By contrast, 31% of men said they spent more than US\$500 compared to only 21% of women.

When we asked parents how much they thought their children spent on their last transaction, they tended to overestimate, with 44% choosing the US\$101-500 option instead of US\$20-100, which is what young people said their most popular category of spending was.

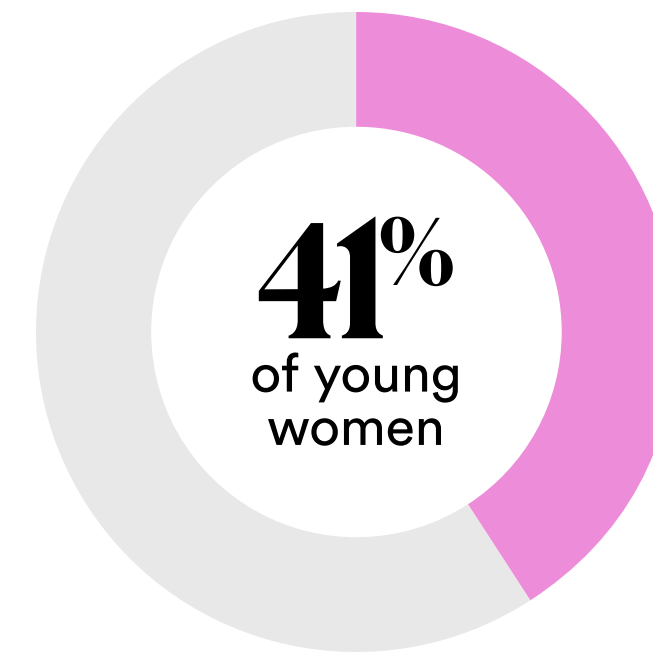
# Young people are concerned about their privacy & security online

A similar figure of around 58% of young men and women feel as, or more, confident about identifying risks on web3 as they do with IRL. Women were much more likely to be highly informed and aware of those risks, with 29% selecting this option versus 22% of men. On the other end of the spectrum, 21% of female respondents said they were highly uninformed of the risks compared to 13% of male. This points to a divergence in knowledge about web3, with early adopters and those immersed in the world more acutely aware than their peers.

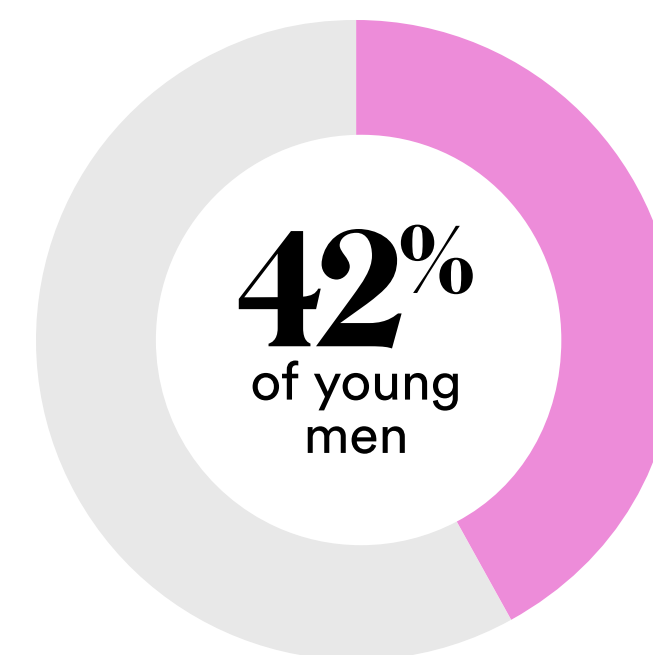
We asked several specific questions around privacy and safety online, and saw encouraging results. Respondents neither agreed nor disagreed with a generalized statement like “I feel safe in the web3 world”, but when we asked specifics, they were more forthcoming. The vast majority either somewhat or strongly agreed that they were concerned about their privacy and safety online, but 5% or less of respondents strongly agreed with statements about whether they had personally been a victim of a crypto scam, data protection and privacy scam or identity theft. US participants were marginally more likely than UK participants to do so.

However, far higher portions of young people said they knew someone who had been the victim of a crypto scam. Young men were 35% more likely than young women say they knew someone had been subject to a crypto scam online. In Singapore, 58% said they strongly agreed they know someone who had been subject to such a scam.





**said they had come  
across someone  
pretending to be  
someone else online**



## **The incidence of online harms such as body shaming & impersonation are common around the world**

Less than one in ten women said they somewhat or strongly agree with the statement “I have been subjected to abuse or harassment e.g. body shaming, misogyny”, a figure that was only slightly lower for men. However, the corresponding figure for respondents not identifying either as a man or woman was 53%, with most of those in the US.

If they come across problems in virtual communities, young people by and large say they feel comfortable raising the problem with a community manager. However, 32% of women neither agreed nor disagreed with this, which is much higher than the 25% figure for men.



# Where Do We Go From Here?

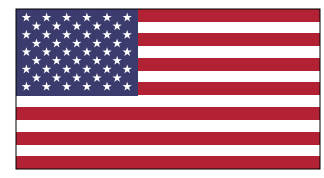
We commissioned this report with the goal of better understanding how young people, especially women, and parents see the web3 space and where the opportunities lie to support them. Through this research, what's become blatantly clear, is just how under-resourced young people are when it comes to web3 education. This is particularly concerning considering the history of technological advancements; young girls and women are often left behind. Our goal is to provide this data that can be utilized by policymakers, educators, web3 companies, and other changemakers to address these issues, better serving women and girls as we transition into the next phase of the internet.

This new stage of interconnectivity across the globe is rife with chances for success. But, if we aren't properly providing these chances, how will young people access them? This is a predicament that far too many generations have dealt with. This has to change. At Boss Beauties, we want to create a world where businesses and leaders come together and ensure that young people – especially girls – have the tools and knowledge they need to stay safe and make informed decisions as they navigate this new world. By doing so, and creating a diverse, inclusive web3 experience that's unprecedented in tech history, we can optimize the internet; the future of our world.



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# **Country Data**



# United States

**44%** of young women said it was easier forming relationships in web3 spaces than IRL.

35% of young people say they spend more time hanging out with friends online than IRL.

Nearly half (48%) of young people know how to open and manage a crypto wallet vs 42% of parents, caregivers and parental-age respondents.

Nearly two-thirds (60%) say they know more than their parents about web3, and only 18% think their parents are well equipped to teach them about web3.

## Nearly half of young people

(46%) surveyed in the US said they have come across someone pretending to be someone else online.

One third of older respondents & parents said they don't understand what web3 is and 30% have had a conversation with their children about web3.

US parents feel less informed about the risks of web3 than parents in other countries. In the US just under two-thirds (63%) of parents surveyed felt they were informed about the privacy and security risks of web3.

**43%** of young people

say they wish their school taught them more about web3 and 51% say they wish there was more access to education resources about web3 e.g. explainer videos.

Two-thirds of US parents (66%) said they were concerned about their privacy and security online.

Young people in the US seem relatively unconcerned about the risks of using web3. **Only 10%** say it is highly risky.

# United Kingdom

**32%** of parents

have had a conversation with their children about web3 and nearly two-thirds (63%) struggle to explain web3 to their children.

24% of parents say they don't understand what web3 is.

Nearly two-thirds (61%) say they know more than their parents about web3, and only 16% think their parents are well equipped to teach them about web3.

Over a third of young people (38%) know how to open and manage a crypto wallet vs 34% of parents.

**1+  
3**

of young women

women in the UK (37%) said forming relationships on web3 is easier than IRL.

A quarter (26%) say they spend more time hanging out with friends online than IRL.

**48%** of young people

say they wish their school taught them more about web3 and 54% say they wish there was more access to education resources about web3.

**43%** of young people

said they had come across someone pretending to be someone else online, and 47% said they know someone who has been the victim of a crypto scam online.

Young people are generally familiar with some aspects of web3, but the survey showed a lack of familiarity with opening a crypto wallet; in the UK just over a third (37%) were entirely unfamiliar with only 8% entirely familiar.





# Singapore

Young females from Singapore, along with those from Nigeria and India, were in the lead of countries surveyed saying their

**virtual identity or relationships were an escape from real world issues.**

Over half (55%) of young people say they spend more time hanging out with friends online than IRL.

**60%** of young people

surveyed in Singapore say they know someone who had been subject to a crypto scam online.

52% of young Singapore respondents said they were likely to make web3 purchases like NFTs or crypto in the coming year. This contrasts with countries like Brazil, where 78% said they were likely to make web3 purchases in the year ahead.

Smart contracts & decentralized autonomous organizations were the most popular parts of web3, with 19% of young people saying they wished they knew more about this.

Two-thirds (66%) of young people know what the blockchain is versus 42% of parents.

Young Singaporean respondents were the most conservative with their assessment of risks, with 50% saying it was highly risky.

Nearly two-thirds (62%) say they know more than their parents about web3, and only 17% think their parents are well equipped to teach them about web3.

**60%** of young people

say they wish their school taught them more about web3, and 67% say they wish there was more access to education resources about web3.

Over two third of young people (69%) know how to open and manage a crypto wallet, compared to 47% of parents.



# Brazil

**2/3** of young people know what the blockchain is, compared to 32% of parents.

Female founders in web3 communities, who selected non-financial aspects as the most important reasons for them to engage in web3, specifically joining to

**make a positive impact, networking & belonging to a community.**

**Three-quarters** (76%) of young people know how to open and manage a crypto wallet, versus 32% of parents.

**60%** of young people

say they wish their school taught them more about web3 while over half (55%) say they wish there was more access to education resources about web3.

Just over half (52%) say they know more than their parents about web3, and just 16% say their parents are well equipped to teach them about web3.

**87%** of parents in Brazil

say they were not informed about risks and issues related to web3.

**78%** of young people said they were either somewhat or highly likely to purchase an NFT or crypto in the coming year.

In Brazil, men are just 1.23x more likely than women to own an NFT. By contrast, men from the US are nearly three times more likely to own an NFT than women.

Young people surveyed find it increasingly easy to form relationships online, but many value IRL relationships more. Of those, **49% of Brazilian young men** said their virtual identity or relationships were an escape from real world issues, compared to **38% of young women** surveyed.



# Nigeria

**1/2**

(47%) say they spend more time hanging out with friends online than IRL.

**73% of parents** said they were not sufficiently informed about privacy and security.

## Less than half of young people

(41%) know how to open and manage a crypto wallet, but just 18% of parents do.

**Over two-thirds (68%)** say they wish their school taught them more about web3 (65% of parents agreed) and the same number say they wish there was more access to education resources about web3 (46% for parents).

**Over half (53%)** of young people know what the blockchain is, compared to 29% of parents.

**Nearly two-thirds (64%)** say they know more than their parents about web3, with just 15% saying their parents are well equipped to teach them about web3.

While incidents of online harms such as **body shaming and impersonation are common** around the world, **young people in Nigeria were the most likely (49%)** of all the countries surveyed to have come across someone pretending to be someone else online.

**Nearly three-quarters of young people (72%)** said their most recent purchase was in cryptocurrency.

Despite many young Nigerian respondents being the most bullish amongst the countries we surveyed, about making web3 purchases like NFTs and cryptocurrencies in the coming year, the survey found **a significant minority (25%) acknowledged such expenditure was highly risky.**



# India

Young people spent the least amount of time on web3 from all our surveyed countries, with the US (6.2 hours) and UK (6.1 hours) the highest, and Singapore the second-lowest after India at 5.4 hours.

**1 + 1/3** of young people  
(38%) know how to open and manage a crypto wallet, compared to just 8% of parents.

**61%** of young people  
say they wish their school taught them more about web3 and 63% say they wish there was more access to education resources about web3.

The most popular **method to access trusted information about web3 was through friends** for both young people (31%) and parents (21%), whereas online search was the most popular method in every other country we surveyed (24% globally for young people and 23% for parents).

**Around one-third of young people (37%)** know what the blockchain is.

**81% of parents** surveyed correctly guessed their children spent less than five hours on web3 each week (young people said they spent 4.1 hours a week on web3).

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# **Appendix**

# Data Privacy

With the increased adoption of blockchain technology, there has been an explosion in the number of virtual communities seeking to explore aspects of blockchain, ubiquitous connectivity, and the semantic and spatial web. This has led to a discussion around the adequacy of existing online safety laws and if they can remain relevant in a web3 world. For example, is the existing data usage by centralized entities today good enough, and how does it need to evolve for the web3 world?

The European Union's General Data Protection Regulation (GDPR) is the global benchmark in data protection laws today. It seeks to protect the privacy of individuals and ensure that personal data is processed according to "data protection principles." Citizens are now more aware of their rights of access, rectification, right to be forgotten and porting their data.<sup>13</sup>

But GDPR was built for a web2 world, and may not do enough to protect "digital sovereignty" in the future.<sup>14</sup> Users are informed of their rights on each website they visit by cookie popups and consent forms, but it diminishes the user experience to read dense legal documentation.

Web3 would give users more control over their own data due to the decentralized nature of the platform. As of today, there is concern whether crypto asset providers can even meet GDPR requirements in the first place, with challenges such as "data erasure" and "data controller identification" being cited as obstacles to compliance.<sup>15</sup> Data, and its place in web3, are still theoretical arguments with no clear resolution yet.

Data protection is codified as a fundamental right in the EU, whereas cultural differences with other parts of the world mean privacy protections are patchier. For example, the US does not have one comprehensive data privacy law that applies to all kinds of data and companies. State laws such as the California Consumer Privacy Act (CCPA) and the new California Privacy Rights Act (CPRA) have emerged to provide stronger protection of personal data within their jurisdiction, which together bring closer alignment with GDPR.

Other countries have tried to introduce the use of data protection legislation, including India, whose December 2021 Personal Data Protection (PDP) Bill sought to broaden the scope beyond GDPR to include "overall data protection" and non-personal data, guided by its identification of data as an - "asset of national importance". The government sought to retain strict data localisation requirements with an objective to protect national security interests, privacy and generating employment, but significant revisions are expected in the coming months.



# Financial Harms

According to the European Central Bank (ECB), global legislation on crypto-assets has been patchy, and where regulation is present it is slow to ratify, with implementation lagging further behind. The EU's comprehensive regulatory package the Markets in Crypto-Assets Regulation (MICA) is likely to be the global benchmark for such regulation.

Of our target countries, the US, UAE, and Singapore currently have some regulation around cryptocurrency, with Brazil's regulation still being discussed in the legislature. The UK and India are currently deliberating potential regulation while formally also considering introducing their own digital currencies backed by their respective central banks. Nigeria, however, currently has contradictory regulation that has been cited as an obstacle by crypto exchanges to operating in the country.

The ECB recently published a blog berating the crypto market, making it the most forthright of the global regulators in highlighting the risks of crypto. The ECB particularly focused on one cryptocurrency, Bitcoin, saying its value did not have a fundamental underlying value, but that big investors have strong incentives to keep the euphoria going.

# Survey Methodology

Our aim when designing studies is to put forward the approach that is most fit for purpose. In this instance, we took a mixed-mode approach of email outreach, outreach through social media communities, social media advertising, panel surveys and in-person in collaboration with student groups and industry events.

In general, internet surveys may suffer from biases arising from differences between the parts of the population that are online and have a higher propensity to respond, and those that are not. Since our survey was about engagement online, this bias was not relevant.

Our survey was specifically designed to be aimed at 16-24 year old young women, as well as parents. Amongst the parental population, we loosely targeted those with children at least ten years old, as those were the children most likely to be either already active online or due to be, in the coming years. However, specific targeting in this manner was not consistently possible globally because the median mother (father) of a ten-year-old in the US would be 30 (30.9) years old according to the US Census Bureau<sup>16 17</sup> and similar in the UK at 30.7 (33.7) for the UK<sup>18</sup>, but 27.3 in Brazil<sup>19</sup> and 22.3 for Nigeria.<sup>20</sup>

Where we recruited panel participants from verified online panels widely used by academics, we manually screened who did not pass attention checks, and for every recruitment, we made participants go through fluency and bot checks.





# Survey Respondents

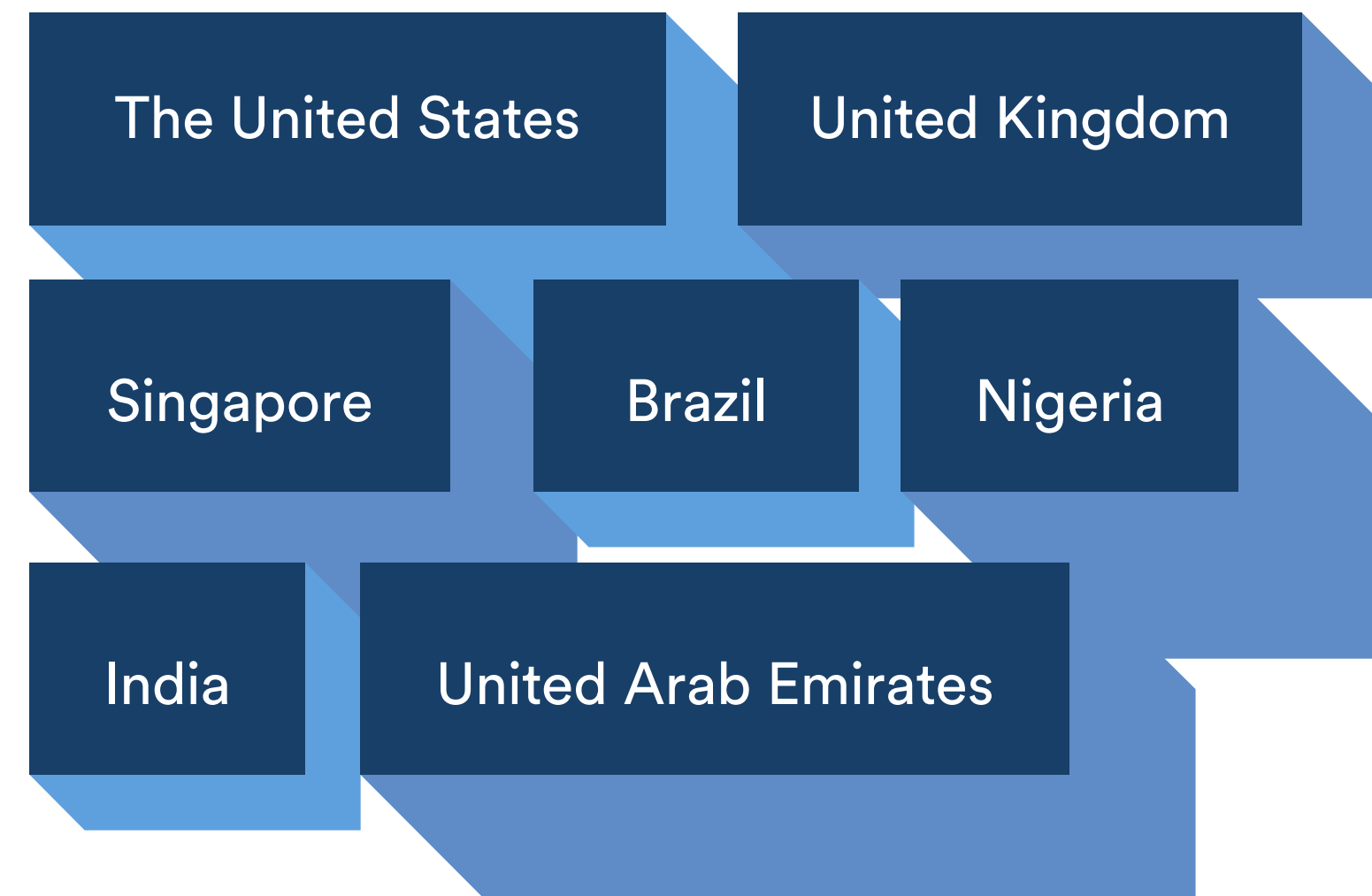
This survey represents responses from ~1,000 individuals from each of the US and UK, with nearly 2,000 from the rest of the world, including our other target countries. 64% of our respondents were women, 50% were 24 years old or younger, and over 1,000 respondents were parents or caregivers.

64% of our respondents were women



50% were 24 years old or younger

Our survey was disseminated in English and Portuguese, through online communities, universities, email marketing and other channels. To get a well-rounded set of results from around the world, we chose six countries which are at different stages of their web3 adoption: the US, UK, UAE, India, Singapore, Nigeria and Brazil. The US is home to some of the largest web3 companies in the world today, as well as a world leader in web3 adoption. The US is home to the largest web3 companies in the world today, as



well as the world leader in web3 adoption. The UK has a similar market to the US, where nearly one in ten people own or have owned an NFT. The UAE aspires to be a regional leader in web3 regulation. While Singapore has taken a strict approach to regulating the market, it is a regional hub for usage. India has the potential to be the largest market for web3 adoption in Asia outside of China, whereas Nigeria and Brazil are the most important markets in their respective continents.

For this survey we targeted two main profiles of respondents: young people, especially women aged 16-24 years old (often referred to as “Gen Z” in the report) and parents.

Many of the young women we surveyed would typically be already engaged in some aspect of web3, perhaps be part of at least one existing web3 community, or part of at least one open or closed web2 communities (e.g. Facebook, Clubhouse, Discord, Twitter, TikTok) that talk about web3 related topics. They would therefore be digital natives, likely have more friends online than in real life (IRL) and are more likely than the average person to have already purchased NFTs, virtual assets or other items in web3. However, this varied across the world, and it did not necessarily follow that young people engaged in online communities today would always be knowledgeable about opportunities in web3.

The parents and primary caregivers we targeted would likely be at least 40 years old, not necessarily digital natives, and likely concerned about online risks for their children.

Earlier surveys that focus on the gaming, metaverse or crypto markets have tended to attract respondents already engaged in the ecosystem, for example users that have created accounts or submitted email addresses for gaming activities in the past. We steered clear of this approach, because but that would not yield the desired results for our survey. We were most interested in identifying knowledge gaps that would help us understand how the next generation of digital natives could be involved in web3 in the most enriching and rewarding manner possible.

### Our outreach included:

- School and university networks across the world
- A well-established network of aspiring women web3 leaders in Brazil
- Online communities on Discord, Reddit, Facebook and elsewhere
- Parent networks on WhatsApp
- Professional networks of women in technology-focused leadership roles

Our survey received 3,869 responses over a period of five weeks in November and December 2022, of which 64% were women], 35% men and 1% identifying as other. Our respondents were evenly split between students (36%), those that had finished studying and were now in the world of work (32%) and parents or caregivers (29%). Half our sample were young people aged 24 years old and under and 12% were 46 years old or older.



28%

**United States of America**

Responses: 1093



23%

**United Kindom**

Responses: 871



18%

**Nigeria**

Responses: 684



11%

**Singapore**

Responses: 413



9%

**Brazil**

Responses: 354



6%

**India**

Responses: 223



2%

**United Arab Emirates**

Responses: 87



4%

**Rest of the world**

Responses: 144

**Total**

**Responses: 3869**

\*Research conducted November - December 2022

Source: EPG research.

# Endnotes

- 1 <https://nemus.earth/>
- 2 <https://www.thecoralsnft.io/>
- 3 [Finder. Report. Accessed 4 December 2022.](#)
- 4 [Wunderman Thompson, Into the Metaverse, August 2021](#)
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