

**Landscape** of

Sports

**2022**

Tech

PRESENTED BY

  
COMCAST  
NBCUNIVERSAL  

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**SPORTS TECH**

**SportsTech Accelerator**

Overview

**Timeline**

A look back at the milestones  
throughout the year

**Trends & Stories**

The stories that shaped the most  
remarkable year in sports

Thank you to our partners



# Welcome

**In January 2021, the sports industry drew a quick breath, looked around, and surveyed an entirely new landscape.**

The disruptions of 2020 had sidelined many plans, hopes, and dreams. The need to overcome obstacles and learn a new playbook in 2021 inspired innovation and critical changes – some for the moment, some that would last. Solutions came quickly, with teams, leagues, players, coaches, and fans using technology to get back on a steady, healthy track. Ultimately, 2021 proved the industry is resilient and resurgent. Led by unfailing heroes who refused to give up, the sports world reemerged.

With that rebirth came changes that presage the future of sports in 2022 and beyond.

With sports tech heroes in mind, we present the 2022 Comcast NBCUniversal SportsTech Landscape Report. This report analyzes the industry and the ecosystem, conducted in collaboration with Comcast NBCUniversal SportsTech, Boomtown Accelerators, and our accelerator partners. Based on comprehensive research and interviews with business experts, the report examines our eight investment categories and provides insights on opportunities and challenges going forward. Our theme is re-emergence after the daunting headwinds of 2020, followed by recovery in 2021.

As we prepare to mark the second anniversary of the Comcast NBCUniversal SportsTech Accelerator, we express gratitude for our partners, accelerator applicants, selected startups, and program alumni for their perseverance in this bold new milieu. Our legacy partners, NBC Sports, Sky Sports, GOLF, Comcast Spectacor, NASCAR, USA Swimming, US Ski and Snowboard, and USA Cycling – along with new partners WWE and PGA Tour – drive us forward with the momentum to pursue ambitious, long-term objectives.



**JENNA KURATH**  
Vice President of Startup Partnerships,  
Head of Comcast NBCU SportsTech

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**2022 Landscape  
of Sports Tech**

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Startups get unprecedented access to our industry partners.



# Accelerating Sports Forward



## 8 INVESTMENT CATEGORIES

 Media & Entertainment

 Fan/Player Engagement

 Athlete/Player Performance

 Team & Coach Success

 Venue & Event Innovation

 Fantasy Sports & Betting

 Esports

 Business of Sports

# 688M

**MEDIA IMPRESSIONS**  
(2021)

# 29

**POCS/PILOTS & COMMERCIAL DEALS**  
(2021)

APPLICATIONS FROM

# 44

**COUNTRIES**

Demand for sports technology has never been greater. Fans crave access to live sporting events and athletes. Brands and companies are taking advantage of emerging technology and platforms to tap into the action and advance sports, games, fitness, and athleticism in new ways.

Success often comes down to access—sports technology startups need access to resources and relationships with key people in the sports industry. We're building the future of sports—fueled by the technology of tomorrow—to unite the athletes and fans of today. The Comcast NBCUniversal SportsTech Accelerator has the curriculum founders need and the platform to develop their ideas while receiving valuable mentorship from expert leaders and partners. SportsTech enables startups to deploy technologies that will vastly improve the sports experience for fans, players, teams, leagues, and sports programmers.

Our partnerships enable us to identify and attract the best startups in the world that help shine a light into the innovation solutions—with exclusive access to relationships, research, and business insights to provide differentiated value. Together, we've built a foundation and a team that is united to help these extraordinary startups succeed in building solutions and helping transform the sports landscape, for good.

We would especially like to thank our executive leadership, Bill Connors of Comcast, Will McIntosh and Lora Dennis of NBCUniversal, as well as Sam Schwartz, Emily Waldorf and Danielle Cohn for their key role in selecting a very special group of startups that will bring strategic benefits to Comcast as well as to our partners.

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re-emergence: /,rēə'mərj(ə)ns/ noun (1) the process of coming into sight or prominence once more.

(Oxford dictionary)

## The Purpose

# Everybody loves the comeback kid.

**C**omeback stories are the greatest in sports. No sugar-coating it, your team is up against it. Down and out, in need of a Hail Mary, facing long odds of grabbing victory from the jaws of defeat.

Suddenly, a hero emerges, fires up the ranks, and sparks a rally.

Sports tech is like that—bringing that jolt at just the right moment, the key element you need on your team. The Comcast NBCUniversal SportsTech Accelerator aims to do just that, partnering with some of the most innovative sports tech startups from around the world. The innovation platform provides startups with a rigorous, custom curriculum, surrounding entrepreneurs with a dream team of sports industry advisors and experts who are passionately dedicated to helping them succeed and thrive. We are accelerating the next generation of technology that is changing the way the world experiences sports.

The heroes of sports tech will continue to

play an essential role in 2022 and beyond. As the world moves forward into a new normal, teams, leagues, athletes, coaches, trainers and fans are proving their true mettle—grit, perseverance, openness to new paradigms and routines. Sports tech is running right alongside them, accelerating and introducing innovations into the marketplace ahead of their time. They help provide the leverage sports and media organizations need to achieve and surpass business goals, solve problems, and secure the victory.

We present here the story of an industry in re-emergence, of resilient heroes in sports tech—heroes who keep striving until the end of the race. For who doesn't love stories about the kid who comes back to win it all?

"It's been an absolute roller coaster. Everyone's looking for answers to questions we're only just really asking now. It went from a COVID survival mode of 'Just keep us on the air, let's keep it going' to 'How long are we going to continue and maintain the processes that we put in place? What does that mean for our teams? What does it mean for our content?'" —James Clement, Director of Operations, Sky Sports.



**Startups were forced to move much faster, and they accelerated quickly and got funding and engagement more quickly than they would have. Things that would have taken three or four years to get investment or traction, they were able to do in six months or a year because of the circumstances.**

— Lora Dennis, Executive Vice President of Digital Media, NBCUniversal Local

# Executive Summary

**Sports tech played an important role in the re-emergence of the sports world in 2021. Out of necessity, many of the innovations that came forward smoothed the way for a return to normal, and aided sports organizations in their recovery. Tech innovation was key to helping sports find exciting and new ways to engage with fans, and will continue to play a role as we enter into 2022.**

Some of the biggest changes in 2021 centered on the experience of fans at live sports and events. Health and safety protocols required venues to think about fan participation in new ways and how to utilize technology to create more virtual,

touchless and frictionless interactions. As an example, ticketing is now primarily paperless and mobile, presenting fresh ground for deeper engagement between sports organizations and fans.

Sports programming is at the forefront of a changing media landscape, with the emergence of more streaming platforms. Fans are also demanding richer interactions directly with players, particularly through social media.

Wearables and trackables grow ever more sophisticated and ubiquitous as they measure how players overcome the stresses of competition and training, some of them related to athlete mental health. College athletes entered a new era in July with the removal of barriers to their profiting from their name, image and likeness (NIL).

Meanwhile, teams and coaches face fresh recruiting challenges in that new ecosystem. The sectors of fantasy sports and sports betting continue to explode even as they deal with growing pains, the technical problem of latency, and the implications of cryptocurrencies and non-fungible tokens (NFTs).

New and emerging distribution platforms and changes in the way fans consume sports, present multiple opportunities and challenges for linear media companies as well as tech upstarts.



# Major Sports & Industry Developments

# \$31b

**Revenue for sports franchises, a good proxy for the overall industry, is expected to reach \$31.4 billion** in 2021, according to data from IBIS World<sup>1</sup>. Annual growth is projected to grow at a rate of 5% from 2021-2026. After sustaining losses in 2020, every major league saw revenues grow in 2021.

# 37.5%

**Ticket sales represent 37.5% of revenues**, advertising 16.4%, broadcasting and sports programming rights 39%, according to IBIS World.<sup>2</sup>

The investment category that shows the greatest potential in 2022

## Fantasy Sports & Betting

[READ MORE >](#)

# 80%

**Fans returned to live events in 2021**, and have indicated they would keep doing so in 2022. In a Nielsen survey in September, **80% of sports fans said they'd attend a live event at an outside stadium within five months<sup>3</sup>**, but it's unclear whether that would change with the Covid-19 Omicron variant.

**Media companies** continued ramping up their use of **remote production** technology, a trend that was accelerated by Covid-19. Practices necessitated in 2020 by social distancing and barriers to travel spurred innovations in remote technology that created new efficiencies in the dissemination of sports events.

### Cryptocurrencies and non-fungible tokens (NFTs)

showed they may not just be a craze as sports organizations start to look at their potential application as collectibles and as prizes and rewards in the betting space and beyond, although there are concerns about the amount of energy consumed to trade them.

### The role of women's sports

continued to evolve as changes unfolded in the sports programming landscape. Fans of women's sports often have a **more passionate, more engaged relationship** with their favorite sports players.

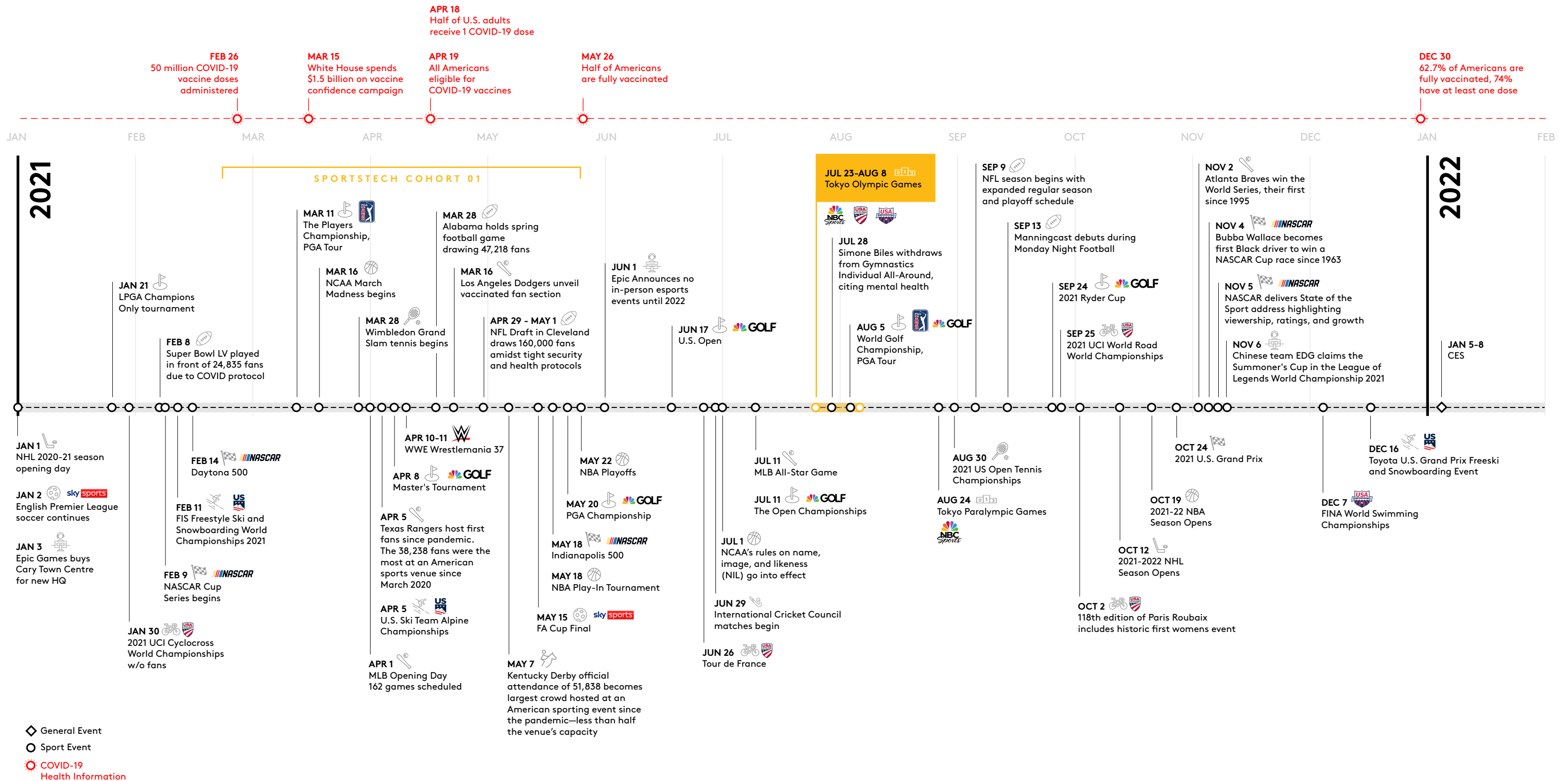
The NCAA's July 1 decision to allow **student-athletes** to benefit financially from the use of their **name, image and likeness (NIL)** will reverberate for several years.

**Athlete mental health** became a big topic of global discussion and media attention in 2021 after tennis superstar Naomi Osaka's withdrawal from the French Open and gymnast phenomenon Simone Biles' decision to voluntarily sit out several events at the Tokyo Games.

**"Mental health can make or break an athlete's season, or career. It sat too far in the background for too long, and it didn't get the attention it deserved. Rightly now it's acknowledged as something that has to be right, or maybe nothing else can be."**

— Matt Barbini, National Team Director of Performance, USA Swimming

# 2021 Timeline





# Investment Categories & Tech Trends

	1	2	3	4	5	6	7	8
	<b>Media &amp; Entertainment</b>	<b>Fan/Player Engagement</b>	<b>Athlete/Player Performance</b>	<b>Team &amp; Coach Success</b>	<b>Venue &amp; Event Innovation</b>	<b>Fantasy Sports &amp; Betting</b>	<b>Esports</b>	<b>Business of Sports</b>
								
	BROADCASTING, STREAMING, HIGHLIGHTS NEWS AND CONTENT SPONSORSHIPS ADVERTISING	FAN INTERACTION ACCESS TO ATHLETES FAN CONTENT TEAM & ATHLETE CONTENT	ACTIVITY DATA/ANALYTICS INJURY PREVENTION TRAINING AIDS ATHLETE WELLNESS	GAME/TEAM PERFORMANCE TEAM MANAGEMENT COACHING/TRAINING STATS TRACKING/ANALYSIS RECRUITMENT	SMART STADIUMS SCHEDULING TICKETING, PAYMENT SECURITY MERCHANDISING	TEAM FORMATION INTERACTION COMPETITION MANAGEMENT BETTING PAYMENT	PERFORMANCE ANALYTICS EVENT STREAMING/ MANAGEMENT INTERACTION/CONTENT BETTING PLATFORMS	DATA VISUALIZATION CYBERSECURITY ECOMMERCE MARKETING/ MANAGEMENT TOOLS BOOKING
<b>Trends</b>	Richer Content during Broadcasts/ Streaming	Richer Fan Data and Analysis	Health and Fitness monitoring and insights	Real-time Tracking of Physical Metrics	Removal of friction Points in live Experiences	NFT Collectibles as Prizes	Buildout of the metaverse	Predictive Analytics
								

Media & Entertainment

C A T E G O R Y



1

# Media & Entertainment

# Media & Entertainment



The media landscape continues to evolve, with the entry of more streaming and direct-to-consumer platforms. And the way fans consume media and entertainment is driving the evolution.

Content providers are also now distributors. Consumers are viewing content in new ways: NFL, NBA, and MLB fans aged 18-34 said they prefer watching highlights to full games, according to a study conducted for Variety<sup>4</sup>. Half of NBA fans under 35 wait until the fourth quarter to watch, the study said<sup>5</sup>. Gambling providers now offer ways for bettors to watch select games in-app.

In 2022, sports industry executives say they expect to see a narrowing gap between premium properties such as live sports and non-premium, according to a survey of sports executives conducted by PwC<sup>6</sup>. According to the survey, many content owners will seek to sign direct, private agreements with media companies, instead of following the traditional competitive bidding model for rights.

Sixty-three percent of executives polled in PwC's annual sports business outlook survey said they feel reduced exclusivity and an increased number of buyers per territory will lead to higher sports programming rights value<sup>7</sup>.

Linear media companies have their over-the-top offerings going head-to-head with streaming providers such as Netflix, Hulu, Roku – with live sports the No. 1 premium

**Changes in consumption of the sports product—the frequency, the level of engagement, the manner in which consumers get it—all those dislocations are still in play.**

— Bill Connors, President, Xfinity



product. Successes and challenges are evident in the streaming spaces, as many providers experienced slower growth in 2021.

"You have legacy players in this space... and then you clearly have newer players who are taking sports more seriously, especially as it relates to growing a streaming-oriented business," said Will McIntosh, Executive Vice President, NBC Sports Next.

Omnichannel engagement is also increasing among consumers. Ninety percent say they use another device as they watch TV, engaging in social media, fantasy sports, or gambling apps, according to a study by GlobalWebIndex<sup>8</sup>.

Sports runs level with gaming as an interest among younger fans, but about 40% of Generation Z and Millennials are willing to pay for sports content, versus 22% of Baby Boomers, according to the PwC survey<sup>9</sup>. Generation Z consumes more highlights than live, taking a "moment-based" approach to content delivery, like that of NBA League Pass or Buzzer. Boomers watch twice as much live as highlights, and tend to watch live events in their full length.

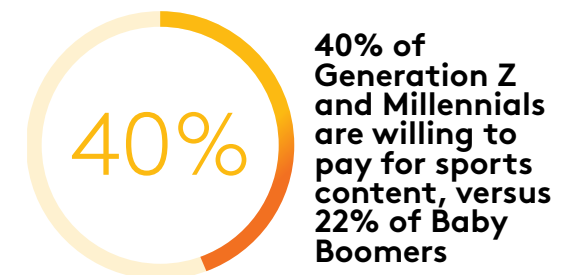
It's also clear that the landscape will need to accommodate the evolution of interest in women's sports, now that there are multiple ways for fans to consume content. Linear outlets need scale, which is why they have traditionally defaulted to male sports, according to Lora Dennis, Executive Vice President, NBCUniversal Local. "Fans of women's sports are highly engaged, much more passionate, and spend more money—and

advertisers want to be associated with that. So it's less about the scale than it is about the engagement, the passion," she said.

"The plan – accelerated out of necessity—to transition to remote production in 2020 continued in 2021 and will advance even further in 2022 and beyond," James Clement, Director of Operations for Sky Sports said. For example, Sky Production Services, with help from NEP UK, built three temporary full remote UHD production galleries, which have since been expanded, turned HDR and made permanent, three years ahead of schedule due to Covid-19. Clement said it provided a safe way to bring coverage of the English Premier League and English Football League back to TV after a 100-day pause in June 2020. "We actually concluded that we would not have been able to produce the amount of content we were asked to produce if we had stayed in the traditional model," he said. "The reality is the first day it worked under COVID, the first time we delivered Premier League live, we knew this is how we were going to stay because it worked. Why on earth would we go back?"

**You're going to see a proliferation of new entrants into the live sports rights-acquisition space because people understand that it's proven IP and it's got a built-in fan base.**

— Will McIntosh, Executive Vice President, NBC Sports Next



# Hero Spotlight



EONMEDIA

## EON Media Adding value to streamed events

With new ways to watch content, sports tech startups are finding new opportunities to bring value to broadcasters. Eon Media, which completed our SportsTech Accelerator in 2021, provides solutions that detect on-screen logos during televised sporting events and live streams. From there, media companies can generate accurate brand exposure data across an arena, athlete's jersey or gear, graphic overlays, commentator voice-over mentions, and during commercial breaks. Sponsors are used to getting actionable data from their social media campaigns, but EON's solution delivers a level of brand exposure accuracy and insight that was previously impossible during a live event. Its AI-based platform is a game-changer for broadcasters' ability to track sponsorships and brands in real time. Its reduction in streaming latency to net-zero equates to massive savings in video content processing times. The technology was used during the Tokyo Olympics with our partner USA Cycling, with more successes to come.



[eonmedia.ai](https://eonmedia.ai)

***Women's sports fans have been underserved from a linear perspective. They're more comfortable going to an OTT service, and they're more comfortable paying for it. They're more comfortable trying to find their sport tribe.***

— Crystal Fisher, Vice President, TV & Streaming, Strategy & BD, NBCUniversal Media NBC Sports

C A T E G O R Y

2

# Fan/Player Engagement



# Fan/Player Engagement

## CATEGORY 2

# Fan/Player Engagement



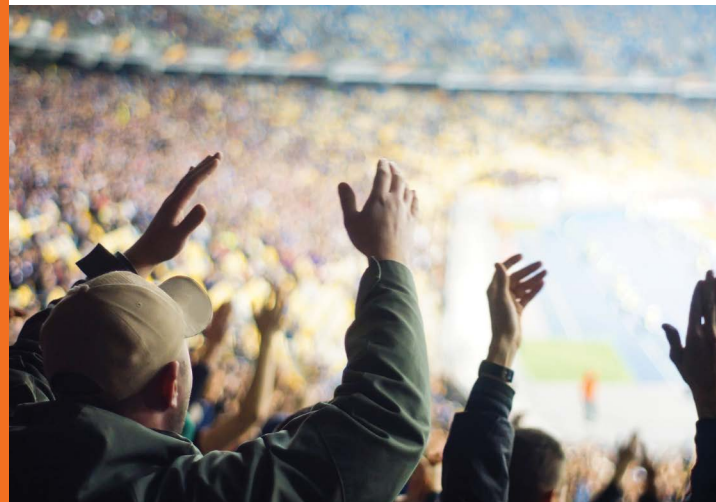
Fan engagement is the No. 1 priority of every team, league, and sports organization. At the height of COVID-19, it became necessary for teams to think of creative ways to keep fans engaged using remote access. They also have to be innovative about how to engage new fans and expand their audience base. Fans continue to look for more direct interaction with players, particularly through social and digital platforms. Combined with the rise of the “fluid fan”—those who are open to new sports, teams,

The category has significant overlaps with our other investment categories. The vast majority of fans consume sports through programming, and many of the tech improvements and innovations coming to sports arenas and venues are designed to engage fans and keep them safe. Fantasy sports, gamification and betting are fan-centric, and drive overall consumer interest in sports. Fan interest in real time player insights—including data about conditioning training, even personal health—provides even more potential for higher levels of engagement, and drives development of analytical tools in the athlete performance category.

Nearly three-fourths of the U.S. public identifies as a sports fan, and about one-fourth describes themselves as avid, which translates to higher rates of consumption, in-person attendance, and purchasing of sports-related merchandise, according to a

**We want to know data points about how fans are playing the game of golf so I can properly serve them the content that will get them to play golf more often and better. If you play better golf, you have more fun.**

— Justin Tupper, Senior Vice President, NBC Sports NEXT

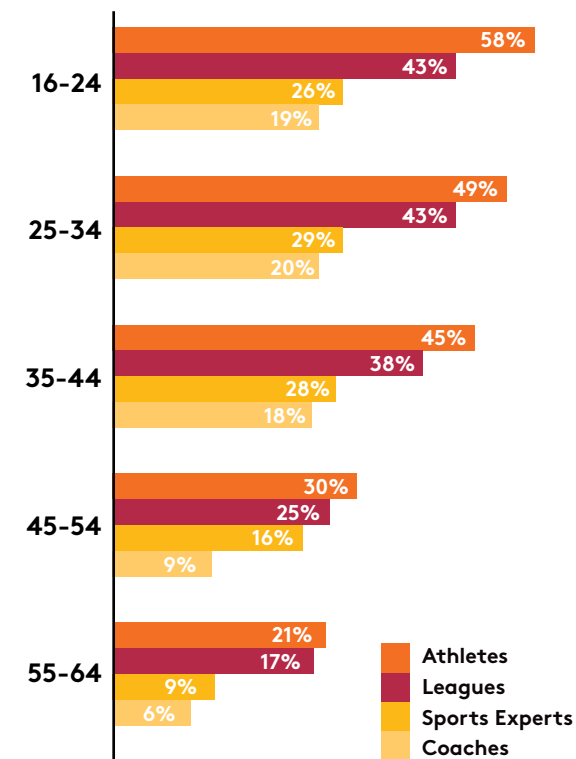


and experiences—engagement is more important now than ever before. Fan and Player engagement, which encompasses the highest percentage of startups in the Comcast NBCUniversal SportsTech Accelerator, includes audience interaction, access to athletes, and fan, team and athlete content.

June 2021 national tracking poll by Morning Consult<sup>10</sup>. More than 76% of fans say tech has a positive impact on sports -- a survey in the U.K. identified goal-line tech and photo-finish imagery as innovations they like to see, according to a survey released in August by BT Sport<sup>11</sup>.

As far as social media interaction, YouTube is the platform used by the most (52%) sports fans surveyed, with Facebook (47%) and Instagram (43%), according to the GWI Sports Playbook<sup>12</sup>.

### SPORTS FANS' SOCIAL MEDIA ENGAGEMENT % of Sports fans in each age group who follow these accounts on social media



Published: marketingcharts.com/June 2021 Data Source: GWI  
Base on a survey of 23,073 internet users ages 16-64 across 15 markets who are interested in sport or state they watch, attend or participate in sports

Startups are educating brands on how to identify their fans and how technology is changing their behavior. Using fan data is the gateway to direct-to-

**You're going to see a lot of sports teams ultimately integrating with their point-of-sale devices and the data they're collecting. You're really going to start learning your fan.**

— Rajan Mehta, Executive Vice President, Chief Product & Technology Officer, WWE

consumer commercialization for sports organizations, with 78.7% of sports executives saying fan data will deepen fan engagement and loyalty. It will also provide opportunities for targeted marketing campaigns and relationships with short-term partners and advertisers.

But the data must be used responsibly, executives say. “We gather insights on our fans. We’re entrusted with that information, and we have to turn it into ways for fans to enjoy sports more,” said Karl Pierburg, VP and CTO of AMB Sports & Entertainment. “If we’re not doing that, then we don’t have any rights to their information and we shouldn’t be using it. We need to protect it like it’s our own.”

**Creating new fan engagement opportunities allow sports organizations to collect data, but how do you approach collecting data and turning it into action?**

— Karl Pierburg, VP and CTO, AMB Sports & Entertainment

Buying, re-selling and trading in blockchain-based digital products and collectibles also helps to fuel fan interest in sports. Several startups in this category allow fans to participate in such trades through fantasy football avenues and other virtual markets.

But even as live sports returned this year, and fans came back to events, COVID-19 still cast its shadow. Due to safety protocols, fewer than 1,000 spectators were in attendance during the Opening Ceremony of the Summer Games in Tokyo, and athletes competed mostly in front of empty seats and stands. The Super Bowl was played before a crowd at 30% of full capacity, or 22,000 fans—7,500 of them health care workers who were given tickets from the NFL. Event-holders adjusted to the new normal: After holding competitions in 2021 without spectators, the X Games Aspen is inviting fans back in 2022—with proof of vaccination and a requirement that they wear masks indoors when not eating or drinking.

// **We know who our season ticket holders are, who can come to 40 games a year, but we might have one of our biggest fans who moved across the country, and what is the way for them to continue to show and engage with their fandom?**

— Sam Ebb, vice president, Business Strategy & Analytics, Philadelphia Flyers & Wells Fargo Center

# Hero Spotlight



**DIBZ**

## **Dibz—From “meh” seats to “These are AWESOME!”**

Want better seats? Dibz will get them for you. The ticketing platform is different than most in that it aims to enhance the fan experience by allowing them to upgrade their seats once they're in the stadium via text messaging. There's no middle man—no app, no visit to the ticket booth or guest services. Fans simply get up and walk to their new seat. The platform solves a problem that every stadium in the world faces as they need to turn inventory. Since graduating from our accelerator, Dibz has seen significant traction with professional and collegiate teams. The startup was in trials this Autumn with 2021 World Series champion Atlanta Braves and Penn State, according to founder Brennon D'Souza, and has signed partnerships with Ticketmaster and TDC—all of which are huge accomplishments for a startup of its size.

**dibz.com**

C A T E G O R Y



3

# Athlete/Player Performance

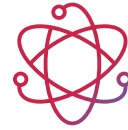
# Athlete/Player Performance





### CATEGORY 3

## Athlete/Player Performance



Ensuring that athletes and players perform at their very best is the chief focus of companies in this investment category. Startups in this sector include platforms for individual activity tracking and data analytics, training aids, health and wellness, and injury prevention as they help sports participants thrive, advance and succeed.

Health continued to take center stage in 2021 as the vaccine made it possible for more athletes to compete in-person while observing numerous new safety practices and routines.

**We have to give our athletes the best opportunity to win medals. And wherever that comes in technology, whether it's measurement or training or equipment, aerodynamics, we cannot miss the boat.**

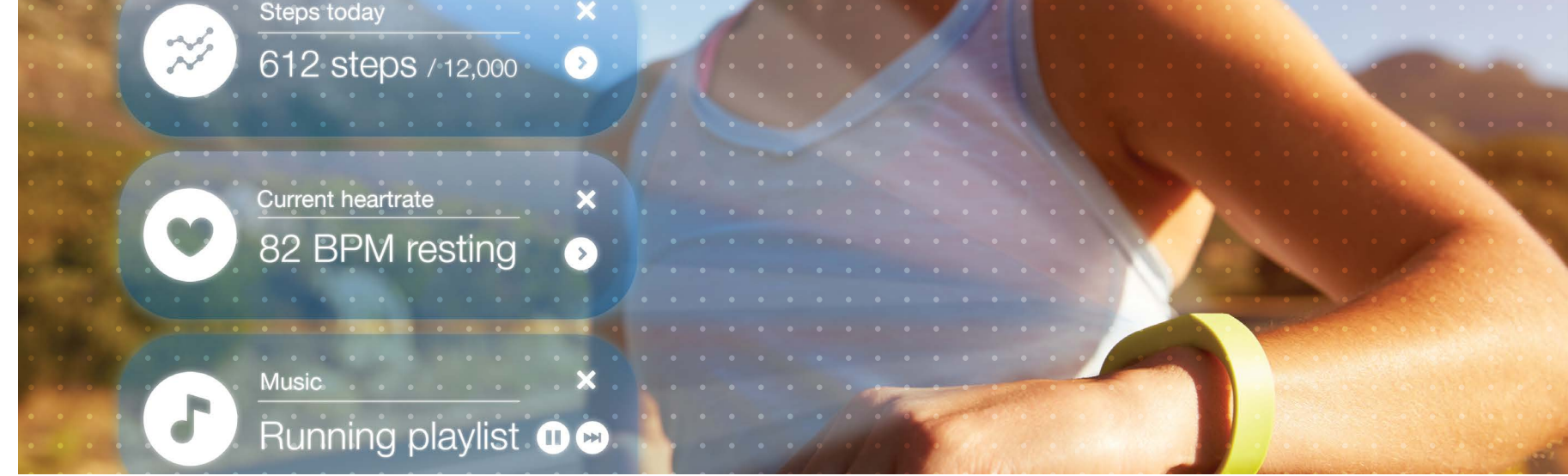
— Bouker Pool, former Chief Commercial Officer, USA Cycling

Data and analytics systems capture athlete health and fitness using technology that, increasingly, is transforming how sports and games are played around the world. Whoop announced in 2021 a \$200 million Series F funding round that valued the company at \$3.6 billion<sup>16</sup>. A screenless, unobtrusive

band, the device has two LEDs and an accelerometer that tracks biometrics such as sleep patterns, heart rate variability and respiration to provide specific measurements on an athlete's strain, recovery and optimal performance. The PGA Tour now shows players' heart rates on its broadcasts as tracked by Whoop.

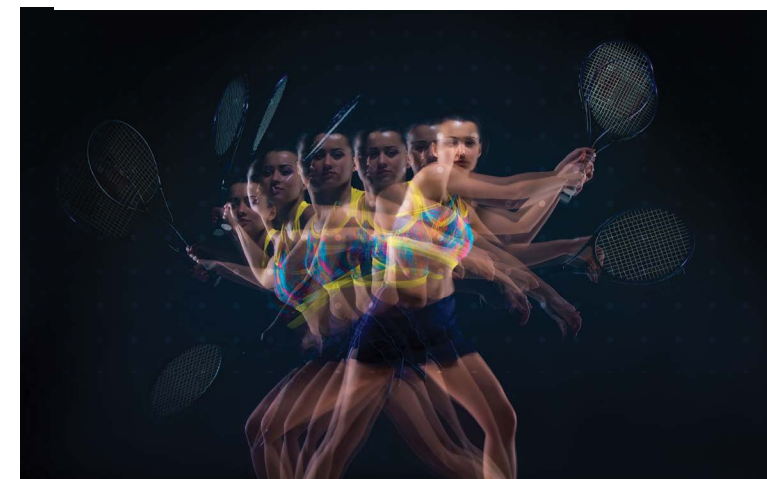
Whoop, which already has agreements with the NFL Players Association, the PGA Tour, the Ladies PGA, the Premier Lacrosse League, and the University of Tennessee, struck a multiyear deal in November with the Women's Tennis Association, making the wristband the first wearable technology approved by the association for in-match use. In addition to focusing on the health of women's athletes, the deal will allow for some biometric data to be used to highlight player performance to enhance broadcasts and social media.

Heading into 2022, coaches and players are hopeful that sports tech will provide substantive remedies for dealing with athlete mental health, not only in tracking health and performance, but in connecting participants with the help they need. "We know the emergence from COVID is not going to be easy, so we want to provide outlets, provide technology, provide anything that gives athletes comfort and keeps them healthy, mentally and physically," said Bouker Pool, former chief commercial officer at USA Cycling. Before, being able to read sports data that's tracking stress "was nice to have," he said. "Now it's an imperative."



**Our partnership with Whoop represents a pivotal moment in women's professional tennis. Whoop's cutting-edge technology serves as a new research and learning tool for WTA players.**<sup>17</sup>

— Micky Lawler, President, WTA



In mid-November, Nike announced a new "Mind Sets" program designed to help users prioritize their mental health. The goal is to get people to "move in any way that feels good for their mental well-being," the company said. Mind Sets will deliver custom movement programs and mental health content across the Nike App, Nike Run Club, and social channels.

An important insight in the athlete performance market: All of the top 10 fitness-related apps have a paid premium feature. The value proposition of a fitness social network is shared information, with extracted and contextualized data. Consumers will pay a premium for their fitness data—a Whoop membership costs \$30 per month, and after paying \$300 for an Oura ring, it costs \$6 a month for the membership. The main app for Strava, the social fitness platform that received unicorn status in late 2020, is free, providing users with an interface allowing them to track a variety of exercise-related activities such as cycling, running or hiking, while simultaneously interacting with other users. But to enjoy Strava's advanced tracking features, group comparison metrics, and other benefits, users have to pony up a \$5 per month premium subscription—Strava's main monetization

### CATEGORY 3

## Athlete/Player Performance

// **The mental health component has always been important, and it could not have been more important than it was in the last year.**

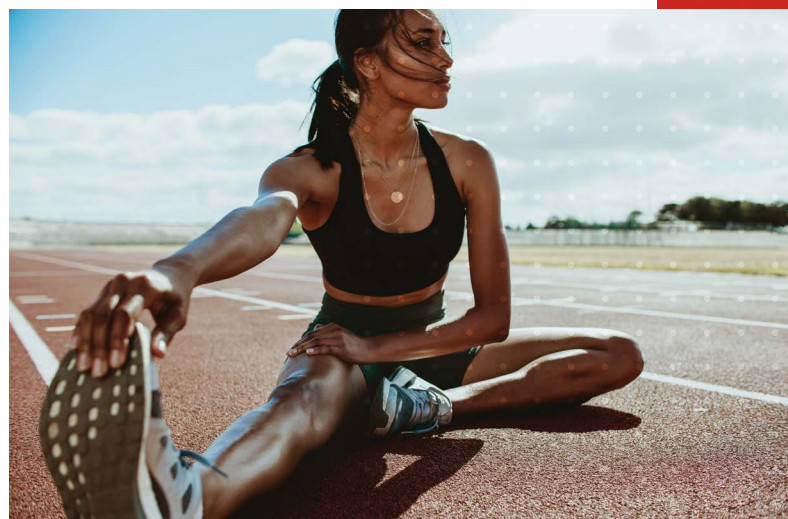
— Matt Barbini, National Team Director of Performance, USA Swimming

mechanism. The model is working: Strava has 90 million members, with another 2 million users joining every month. A majority of the competitors in the 2021 Tour de France logged their miles on Strava.

Other companies in this category provide training aids, and platforms that focus on injury prevention. Athletes risk injury every time they train, practice and compete. The U.S. Bureau of Labor Statistics estimates that athletes and sports participants suffer more than 2,000 injuries per 10,000 workers – one of only five occupations with a rate above 10%<sup>18</sup>. Nearly a third of injuries that occur in childhood are sports-related<sup>19</sup>.

Startups provide wearables that not only track performance, but monitor athlete loading to reduce injury risk. In addition

to identifying risk patterns in practice and play, such systems provide video modules and give real-time insights that act as an early warning system.



## Hero Spotlight



**Six-time LPGA Tour winner Nelly Korda wears a Whoop day and night, measuring her heart rate, strain, recovery, and sleep patterns.** During the Tokyo Olympics, on her way to a gold medal round, Korda's blood was pumping when she hit the winning putt. It also spiked when she doubled on the 7th hole to lose the outright lead and slip into a three-way tie. But those moments weren't when Korda's heart beat the strongest. It was the second she stepped onto the podium to receive the gold medal. During the final round, her heart rate peaked at 154 beats per minute, in line with her average this season of 155. While on the podium, however, it surged to 172 beats per minute, showing how much winning the gold meant to her.

C A T E G O R Y

4

# Team & Coach Success



# Team & Coach Success

## CATEGORY 4

# Team & Coach Success



As the saying goes, there's no "I" in "team." Successful teams are the core of every thriving sports organization, and keeping disparate groups of talented individuals moving in the same direction, season after season, can be challenging. Athletes who practice and train together under a common mission — guided and rallied by coaches, assistants and trainers — will grow, thrive and win.

Sports tech has an array of management solutions that can enhance and improve performance on the court, field, and pitch. This investment category focuses on team management, game performance, coaching and training, and recruiting.

# 21.3%

The global sports analytics market is projected to increase at a CAGR of 21.3% from 2021 to 2028<sup>20</sup>

As a key element in team success, practice and competition data tracking and analytics have changed the sports world. The global sports analytics market was valued in 2020 at \$885 million, a number projected to increase at a CAGR of 21.3% from 2021 to 2028<sup>20</sup>. Coaching staff in the NFL, NBA, and many other sports leagues use these advanced technologies to capture real-time data during training sessions and games, which they can then analyze to maximize the performance of their players. Insights help to improve the overall team's results.

We're also seeing an increase in team success platforms that benchmark and profile athletes to identify strengths and weaknesses. To generate that data, sports organizations are using player tracking programs. The global player tracking system market size was valued at \$2.26 billion in 2018 and is expected to grow at a CAGR of 25.4% from 2019 to 2025. The U.S. market is estimated at \$1 billion, or 29.4% of the global market<sup>21</sup>.

**Our high-end athletes, our national team athletes will dabble in new stuff and they'll check it out, but it's usually up to a coach or somebody else to integrate that into their training protocol. New ways of training, new ways of getting at their data and what their data tells them, and how all different data talks to one another.**

— Bouker Pool, former Chief Commercial Officer, USA Cycling

The premium products in the market can track and monitor the physical metrics of players in real-time. Coaches and teams are aggressively adopting these systems so they can optimize their training curriculum at the team level, in addition to tracking the performance of individual players. Two additional factors drive demand for more data analytics in sports: Fan desire for more player statistics that bring them closer to the game, and the integration of analysis into TV broadcasts and streaming.

The NHL is gathering data about games and players using a new generation puck with six circles on both sides and sensors about the size of a thumb on the backs of jerseys that connect continuously with infrared cameras, collecting data about passing, puck possession, takeaways, giveaways, and more. Teams will use the data to develop their players and scout opponents, but the puck could also provide a new wave of data for gamblers to bet on.

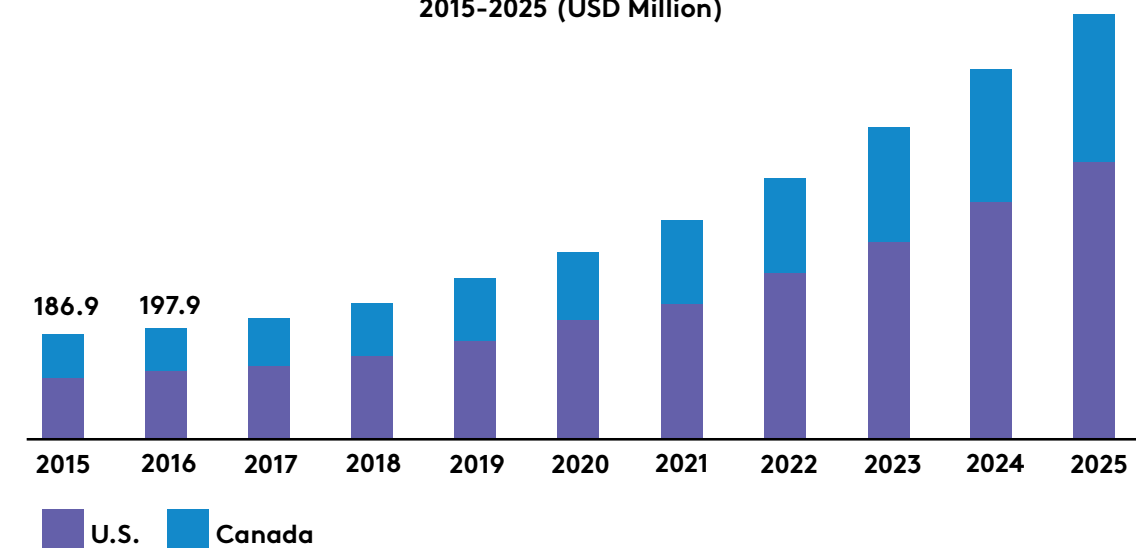
With respect to the name-image-likeness development, colleges, universities, student-athletes, and their families still need clarity about how such arrangements will work. But the situation will have implications

going forward for sports tech and providers such as EA Sports, which discontinued its popular college football video game because of lawsuits over NILs. It will also affect endorsement deals amateur athletes enter into with apparel companies and advertising on social media. Ultimately, it could mean college-athletes will likely capture a share of billions of dollars in television revenues and licensing fees.

In the near term the NCAA will continue working with Congress to get a national law to help colleges and universities, student-athletes and their families better navigate the name, image and likeness landscape, the NCAA said in June. Until that happens, the association's temporary policy that took effect in July will remain in place.

The situation makes recruiting in college sports more complicated than ever. Teams with bigger brands are going to land the top prospects. Sports tech seems to be giving the edge to players, helping them to build and monetize their brand value while remaining NIL compliant. Coaches and teams will be aided by tech solutions that provide accurate fair market value and social media scores.

NORTH AMERICA PLAYER TRACKING SYSTEM MARKET SIZE, BY COUNTRY  
2015-2025 (USD Million)

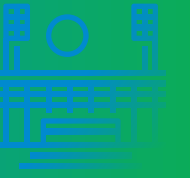


Source: www.grandviewresearch.com

C A T E G O R Y

5

# Venue & Event Innovation

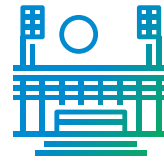


Venue & Event  
Innovation

Venue & Event Innovation Venue & Event Innovation Venue & Event Innovation Venue & Event Innovation

## CATEGORY 5

# Venue & Event Innovation



Shutdowns and fan anxiety about Covid-19 led to empty arenas and under-capacity crowds at venues throughout the world in 2020, hammering this sector harder than others. In 2021 venues and events saw a significant re-emergence as fans started to return, although audiences are still down. But venues couldn't have done it without innovative tech solutions aimed at enhancing safety and efficiency, from contactless entry and payments to enhanced digital signage. This category includes smart stadiums, scheduling, ticketing, payment security, and merchandising, and has a substantial overlap with our fan engagement investment category, given that many of the innovations at venues and events are geared to make attendees say "wow!"

Smart stadiums are leading the charge, being built with the newest technology enhancements to create an unparalleled in-person gameday experience for fans. After the global market decelerated in 2020, it grew by 4.1% in 2021, with a forecast of 4.5% growth until 2024 when it will have a market size of \$416.2 billion<sup>22</sup>. Much of the growth stems from resuming operations, but many key changes are happening in ticketing, parking, point-of-sale terminals, merchandising, food sales, and digital signage. Fans expect their devices to connect smoothly during sporting events, increasing network traffic at venues every year. In 2022, more venue owners are expected to turn to the high capacity, low latency and speed of private 5G networks to bring fans entirely new experiences.

Comcast Business and Nokia are showcasing an innovative partnership at

the Wells Fargo Center to demonstrate how private LTE and 5G networks can improve critical operations and infrastructure while also providing immersive court-side, rinkside and outdoor video experiences. The demonstration also includes video analytics to improve fans' parking experience and safety, digital signage throughout the venue, as well as mobile point-of-sale devices to allow fans to order food from the convenience of their seat<sup>23</sup>.

The shift toward cashless arenas and mobile/virtual tickets continued its upward trend. The 2021 Super Bowl was entirely cashless, and 29 out of the 30 NFL stadiums have officially gone cash-free<sup>24</sup>. After MetLife Stadium, the second largest stadium in the U.S., went fully cashless and deployed more than 1,200 point-of-sale devices throughout its arena, it saw a 30% increase in check average and an increase in tip averages. The stadium fully integrated its POS across food and beverage and retail to include suites management.

That's in line with the market: 76% of Americans say they prefer contactless payments at sports and entertainment venues, and 27% say they've never used cash to make a purchase in-venue<sup>25</sup>. Seventy-six percent are in favor of paperless ticketing, even cutting-edge, opt-in tech such as facial ticketing<sup>26</sup>. Sports tech is designed to make all the hassle elements of attending a live event frictionless.

How about "mobile-less?" The Cleveland Browns introduced Wicket's facial authentication technology with the 2021 football season to provide fans with a quick and seamless way to enter FirstEnergy Stadium. The tech correctly identifies ticket

// **When you attend live sports, you want it to be 99.99% having fun, not 50% enjoying the event and 50% all these friction points.**

— Sanjay Manandhar, CEO, Wicket

holders—it scored zero false positives—and gets them into the stadium in a touchless, streamlined process, letting fans keep their phones in their pockets. In a trial the team was able to clear the gates at the stadium 10 minutes prior to kickoff, marking the fastest ingress operation in the stadium's history.

In 2022, we see more crowd solution tech coming, including platforms that gauge wait times in lines and report when bathrooms are becoming full, sending that information to fans in their seats. For example, TendedBar is an automated bartending solution that makes the experience of getting drinks sanitary and shortens the queue for cocktails, beers and wine.

Sports venues are enhancing the fan experience, while also focusing on health and safety. Another example: In 2021, the NBA formed a partnership with Clear to provide biometric technology for COVID-19 health screening, using the Clear Health Pass Program, in all 30 NBA arenas.

Sports organizations learned a valuable lesson during Covid-19 about holding virtual events. In August 2020, WWE launched the WWE ThunderDome, welcoming more than 1,000 fans back into the arena virtually via proprietary technology provided by the Famous Group and re-creating the interactive in-arena atmosphere that has been a staple of WWE events for decades. WWE ThunderDome was a first-of-its-kind large-scale interactive live

platform which audiences had never seen or experienced before. Fans were not only able to see the action, but they were also able to experience it, becoming a part of the show and interacting live with WWE Superstars as if they were there in person. WWE ThunderDome also featured a state-of-the-art set, video boards, pyrotechnics, lasers, cutting-edge graphics and drone cameras to provide viewers with a reimagined live event spectacle.

"It was probably the largest virtual experience of this scale in sports, where we had 1,000 people at a time, streaming in live," said Rajan Mehta, executive vice president, chief product & technology officer, for WWE. "It was something we put together relatively quickly, and all in the cloud. We would not have done that if not for the pandemic."

In a move truly into the "final frontier," a UK film company is planning to open a sports arena in space in 2024. Space Entertainment Enterprise, which is



producing an upcoming Tom Cruise movie set in space, announced in January plans to launch a sports arena and entertainment studio connected to the International Space Station. The low-earth orbit project, called SEE-1, is expected to be operational by December 2024 and will feature a studio to produce and livestream films, TV and music, the company said.

C A T E G O R Y

6

# Fantasy Sports & Betting

# Fantasy Sports & Betting



## CATEGORY 6

# Fantasy Sports & Betting



Sports betting and fantasy continue to thrive, expanding on the legal front and growing in revenue. Legal sports betting burst onto the scene in a big way following the 2018 U.S. Supreme Court ruling in *Murphy v. NCAA*, and has never looked back.

Live, in-play sports gambling — as demonstrated in betting lines and ads that scroll across TV screens and mobile devices during games — has raised wagering’s accessibility and ubiquity. Major sports leagues and media companies that stayed away from gambling are now engaged in partnerships with sports betting providers. The market caps of sports betting franchises like PointsBet and DraftKings — once upstarts, now titans — are soaring amid pitched interest by investors. And now everyone is thinking about how cryptocurrencies, and the related technology of non-fungible tokens, will reshape the sports betting universe.

Sports betting is now legal in 29 states plus the District of Columbia. Four additional states have legalized it but not yet put into operation<sup>27</sup>. There are 41 states that have a daily fantasy operator<sup>28</sup>. Morgan Stanley projects that 38 states will have legalized and launched sports betting by 2023<sup>29</sup>.

### AMOUNT LEGALLY WAGERED ON SPORTS



Source: American Gaming Association

Through July, \$27 billion had been legally wagered on sports in the U.S. in 2021, according to the American Gaming Association. That compares with \$21.51 billion bet overall on sports with regulated operators in 2020, and \$13.07 billion in 2019, the AGA said<sup>30</sup>. Sports betting revenue in the U.S. is expected to reach \$8 billion by 2025<sup>31</sup>.

More sports bettors are gaming on their mobile devices every year, making up as much as 90% of betting handle in markets with both options. Mobile betting was responsible for roughly 80% of all wagers in New Jersey,

// **When you're not on the list of sports on a sports betting site, are you still a sport?**

— Michele Fisher, Vice President of Sports Information Services (U.K.)

Nevada, Pennsylvania, Illinois, Indiana, Colorado, Iowa, and West Virginia<sup>32</sup>. Sports betting and gambling deals are expected to generate roughly \$270 million in revenue for the NFL<sup>33</sup>. The football league and its teams have signed 52 data-sharing and marketing partnerships with sportsbook operators since 2018, according to the AGA.

There are still hurdles to a true bet-and-watch integration, such as latency that makes many live bet types difficult to sync, given that streamed content appears about 5 to 7 seconds after the broadcast. The latency problem must be solved in order to allow



Percent of bets in New Jersey that were placed on mobile devices

for robust in-play betting. But before it is solved, wagering is “still a massive opportunity,” said Connors. “You just build the betting infrastructure around the technology,” he said. “You might not be able to do a pass-or-run bet on every single play, but at the beginning of each drive, you can guess the number of plays in a drive.”

As more states legalize sports betting, the marketplace is cluttered with betting options, said Craig Neeb, Executive Vice President & Chief Development Officer at NASCAR. “It’s critical for us in the coming year to work with our partners on marketing our sport and creating unique and compelling bet types,” he said. “This will help us gain awareness amongst casual sports fans and drive them to watch or attend our races.”

Fantasy sports continued to grow in 2021. The industry had \$7.88 billion in revenue in 2020 and is projected to grow to \$8.37 billion in revenue in 2021, according to IBISWorld. The industry is expected to observe annual growth of 3.8% from 2020-2025, to reach \$9.4 billion in 2025<sup>34</sup>.

// **There'll be technical innovations in terms of better user experiences ... especially when you think about betting and gaming, the marriage of betting to live sports**

— Will McIntosh, Executive Vice President, NBC Sports Next



While fantasy is not strictly a form of betting, the two sectors are closely linked. Nearly 4 in 10 sports fans who play fantasy sports say that betting adds excitement to sports events, and over quarter of fantasy players actively bet on live sports<sup>35</sup>. And there’s no question that fans who have money riding on an outcome or who have fantasy players in a game are more engaged, more attuned consumers of sports.

Betting will be the next evolution of what fantasy has done for sports—deliver more attentive fans who bring the potential for greater revenue opportunities. NBC is very excited about online sportsbooks and its partnership with PointsBet, said McIntosh. “We know that a benefit of it is more people consuming more sports, which will drive value for us in a variety of ways.”

The sports betting and fantasy landscapes are set to converge with NFTs—gaming providers are offering NFT collectibles as prizes, and there are platforms that allow fans to trade fantasy stocks of their favorite athletes on the blockchain. Asset values are determined by the real-life performance of the underlying sports icons. TradeStars, one such company, allows users to monetize the appreciation of these sporting digital assets by selling them to other participants on the platform.



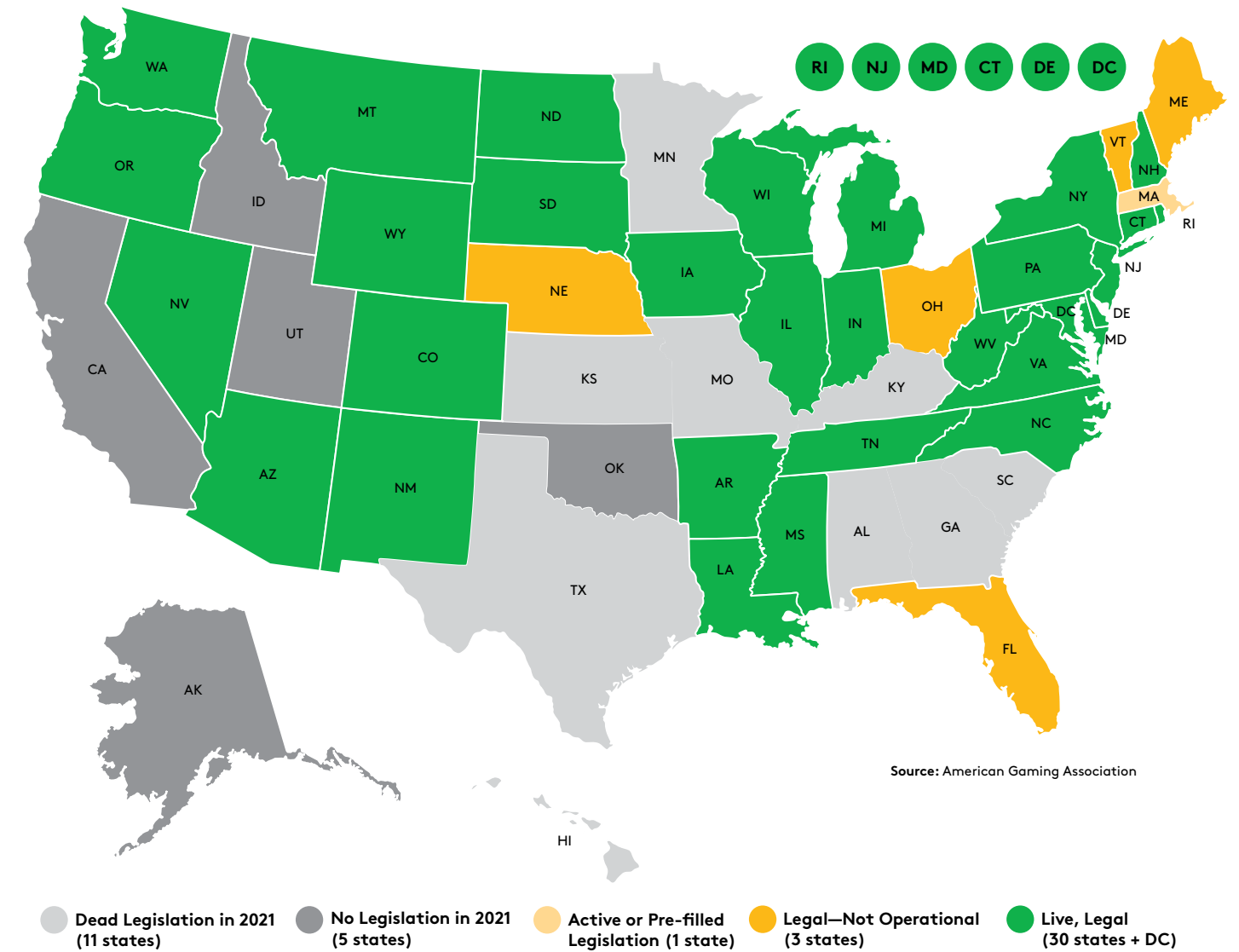
# Hero Spotlight



The coming year will be pivotal for NASCAR as it continues to ride positive momentum from 2021.

A key initiative will be the launch of the NextGEN car, which will be more relevant with the addition of enhanced technology. "We expect throughout the year to leverage the technology to bring new and exciting data and video to the fans," says Craig Neeb, Executive Vice President & Chief Development Officer at NASCAR. "With the SportsTech Accelerator we hope to find startups with innovative technology to help us exploit what is coming from the car." Video capture by the car could be used for streaming solutions, while data generated from it could be used for sports betting, he said. "It's exciting to have the partnership with SportsTech to uncover the startups who can provide these types of creative opportunities," he said.

## STATES WITH LEGALIZED SPORTS BETTING



## SPORTS FAN INTEREST IN SPORTS BETTING

FAN BASE	% INTERESTED IN SPORTS BETTING	INDEX VX. ALL SPORTS FANS
NHL	62%	112
NCAA Basketball	59%	107
NBA	57%	104
NCAA Football	55%	99
MLB	52%	95
NFL	48%	87

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## CATEGORY 7

# Esports



**\$1B** Estimated esports revenues in 2021, a 14.7% increase over 2020

The massive esports industry in 2021 continued to see a meteoric increase in investment. Stuck at home during lockdowns, many new entrants ventured into the realm of esports, became fans, and kept on playing and spectating after the return of traditional sports and the easing of COVID-19 restrictions. Media outlets, brands, and global investors -- including private equity -- are paying attention. And since investment is distributed throughout the esports ecosystem among organizations, tournament operators, and digital broadcasters, the universe of industry winners is expanding.

Pop culture powers the explosion of interest and investment in the sector, championed by such celebrities as Michael Jordan, Drake and DJ Marshmello. The social component of live streaming and gaming is also a giant influence, with platforms like Twitch and YouTube giving fans a direct connection to players and teams. FaZe Clan and other esports organizations are moving aggressively into merchandising, giving their brands an even higher profile.

The industry had revenue of \$947.1 million globally in 2020 and was on track to post revenues over \$1 billion in 2021, an increase of 14.7% year-over-year, according to a report by Newzoo, a leading source for games and esports analytics and market

research. Revenues could rise to nearly \$1.6 billion by 2024, the report said<sup>36</sup>.

Worldwide, the global live streaming audience for esports was 747 million in 2021, a growth rate of 12.7% growth over the prior year. That's slightly higher than the audience for streaming of conventional live sports events (728.8 million). Esports audience growth is projected to grow at a CAGR of 9.7% from 2019-2024 to reach 942.9 million in 2024. According to Nielsen's 2021 Esports Fan Insights Report, 87% of fans viewed a live stream esports event over the past year, up 17 percentage points from 2019. Prize money is part of the allure: Total esports payouts in 2021 was \$101.8 million as of October 15<sup>37</sup>.

Asia-Pacific, North America and Europe are the top three esports markets, with sponsorship and ad revenues the biggest drivers of revenue growth. North America is set to hit \$300 million in esports revenue in 2021, with digital ad revenues in the U.S. projected to grow by 15% in 2021, reaching \$225.8 million (compared to \$196.3 million in 2020). Nielsen Sports Analysis projects esports sponsorship revenue to grow to \$842 million by 2025<sup>38</sup>.

For 2022, industry analysts say it will be important to consider the esports investment opportunity as incorporating gaming, media, pop culture, and commerce — as a diverse

range of entertainment virtues, and a market stretching beyond competitions alone.

A fusion of sorts began to happen in 2021 with sports betting and esports teams. Online bookmakers began offering odds on esports tournaments like League of Legends, Counterstrike, Fortnite, Dota 2, and other remote tournaments where prize money was at stake.

Whatever is to come, it's clear the rise of esports has a different trajectory than traditional sports, with a young, hipper, flightier, more online, less locally-loyal audience. Esports tracks with the viewing habits of Millennials and Gen Z, while traditional sports skew as much as 30 years older.



C A T E G O R Y



# Business of Sports

# Business of Sports

## CATEGORY 8

# Business of Sports



**T**he nearly \$400 billion global sports industry is a diverse ecosystem of athletics, fitness, entertainment, media, and leisure.

It depends heavily on programming partnerships, advertising revenue, investors, and retail branding. And it's tied, in the end, to the physical and mental well-being of talented athletes -- competing on fields and in arenas where injury and defeat are possible, if not common, outcomes.

A chief goal of this category is to leave the business of running a sports organization to management software, giving the team or league more time and energy to focus on winning where it really counts—the field of play.

Sports also depend on data -- loads of it. Data usability and credibility are critical, given that running a sports enterprise can be a complicated and tricky business. In this category we consider the landscape for data visualization, cybersecurity, ecommerce, marketing and management tools, and events booking.

The size of the global market for sports management software is expected to grow to \$12.53 billion by 2026, a CAGR of 14.82% over its 2020 value of \$5.43 billion, research showed<sup>39</sup>. Meanwhile, the global sports analytics market was valued at \$2.2 billion

# \$12.53B

**The global sports management software market is expected to reach \$12.53 billion by 2026, a growth rate of nearly 15% annually**

in 2020 with an expected 21.8% CAGR from 2021 to 2028 to reach over \$10 billion in 2028, according to Emergen Research<sup>40</sup>.

Companies in this space include Sport Alliance, which aims to increase people's access to sports by digitizing the fitness industry. The company provides a cloud-based platform that can map all relevant business processes from independent gyms to international chains, with features ranging from studio management, financial services, supply chain logistics, and booking and training.

Another example in this sub-sector is MarketPryce, a platform for athlete marketing which raised \$3 million in a seed funding round this year. It enables athletes to handle the marketing on their own, discovering new brands and applying to opportunities in simple steps, closing marketing deals easily and quickly.

Businesses have to keep up their guard against cyberattacks, and the sports world has not been spared. Frequently major sporting events are targets of cybercrime, often from fake websites involved in ticket-selling scams. Cybercriminals in 2020 hacked the social media accounts of 15 NFL teams and attempted to steal World Series Tickets from the Washington Nationals during the 2019 MLB playoffs. Sportsbooks and gaming giants have had their source code and game data stolen.

There's a tremendous amount of valuable short form content being created to develop skills, knowledge and attitudes towards participation in sport, yet the accessibility to all of those resources continues to be

fragmented, said Brett MacKinnon, senior vice president and general manager, youth and recreational sports at NBC Sports Next. "This results in a less than optimal consumer experience and unnecessary barriers to learning about and playing the sports we might grow to love," he said. Sports business leaders and tech providers have a great opportunity to serve as the conduit, "improving this experience while helping increase sports participation in 2022 and beyond," he said.

Booking platforms also sit in this investment category, with platforms designed to put the

power of ticketing into the hands of the sports team or league. Companies in this space provide cloud-based facility management software to handle registration, scheduling, and payments. They're designed to make it easier for stadiums, arenas, and other sports venues to take bookings, display availability, and accept inquiries. Managing relationships with fans is also a key part of the business, "with more sophisticated ways for us to track their engagement and meet their demands using technology," said Sam Ebb, vice president, Business Strategy & Analytics, Philadelphia Flyers & Wells Fargo Center.

## Hero Spotlight

# nVENUE

real-time sports analytics

### nVenue — What Comes Next

nVenue, a predictive analytics startup that completed our SportsTech Accelerator in 2021, got to see its technology play out in real-time during a Major League Baseball game. NBC Sports tapped nVenue to do a live trial of its predictive analysis feeds on-air during a game between the Chicago White Sox and Oakland A's. The technology flowed from nVenue servers, directly into production trucks, to fans watching from home and elsewhere. Announcers ended up using nVenue content for four full games, plugging the company's brand and the quality of its predictions and insights — material and knowledge for diehard fans. nVenue is now showcasing its tech to a slew of national and regional broadcasters.

[nvenue.com](https://nvenue.com)



# Here it comes ... the Metaverse

*Psst. It's already here.*

**Imagine a world where users sit around a virtual meeting table with remote colleagues, then dash over to a virtual Starbucks to meet a friend located in another city.**

Where users play games, attend concerts, send texts, stream live sports, and try on new outfits as digital avatars in virtual dressing rooms. It's the metaverse, a virtual world that blends aspects of digital technologies such as games (like Fortnite, Minecraft and Roblox), email, virtual and augmented reality, social media, cryptocurrencies and live-streaming of events. It's a bit of a work in progress, but investors and big social media companies are paying attention. And it has the potential to radically change the sports fan experience.

Tim Sweeney, CEO of Epic Games, describes the metaverse as a potential "multi-trillion-dollar part of the world economy" — except that, like the internet, no one company would own it. The first to plant the flag of 1 billion metaverse users will win stage one of the race, becoming "the presumed leader in setting the standards," Sweeney said<sup>41</sup>.

Racing against EPIC to build virtual environments are companies like Microsoft, Roblox, and Facebook. Roblox is partnering with Nike to create a virtual playspace called Nikeland, with buildings, basketball courts, fields and arenas for Roblox users to compete in games such as tag, dodgeball and "the floor is lava." Users can dress their avatars in Nike gear in a digital showroom, which will include new product drops. In-game avatars will jump and run, powered by accelerometers in user's mobile phones, with rewards for real-life movement. Nike will add games around global sporting events — a soccer app during the World Cup and a flag football game during the Super Bowl.

Microsoft's initial metaverse buildout will focus on workplace environments, but it's planning to move into games. Facebook in October introduced Meta, bringing together the social network's apps and technologies under a new company brand. It also announced plans to hire up to 10,000 workers in Europe to build a metaverse that will combine virtual and augmented reality technologies in a new online realm, CNN reported. The goal is to create a space similar to an immersive game platform where users walk around

as digital avatars, interacting with one another in real time. Facebook assured that the metaverse -- like the internet -- won't be owned by any one company.

"You could be watching the same sporting contest as your next-door neighbor, but if yours is more in a metaverse where you are fully immersed, you will go beyond," said Xfinity President Bill Connors. "It'll be a better experience overall than your neighbor, yet you are watching the same thing. That's the goal of both content providers and technologists — how do you extend engagement? How do you then make that engagement different than just the traditional version?"

The youthful skew of participants in esports means it will play a prominent

role in the buildout of the metaverse and as entertainment tries to become everything. If the goal of the metaverse is to create a virtual world that has everything you could ever want, esports has already given us alternative realities. Fortnite, which started out as a battle royale, now hosts movie festivals and concerts and has become one of the most popular hangouts for teenagers to meet and party, virtually. League of Legends, which has spun off comic books and has its own Netflix series, created three virtual bands users can stream on Spotify. The bands have "performed" via AR and holograms while decked out in Louis Vuitton at the annual League of Legends World Championship, an esports event with tens of millions of viewers and professional players around the world.

**You could be watching the same sporting contest as your next-door neighbor, but if yours is more in a metaverse where you are fully immersed, you will go beyond,**

— Bill Connors, President, Xfinity

# What the NFT?

**Great. First it was blockchain, then Ethereum, and now NFTs, just another thing for me to pretend I understand.**

NFTs, or non-fungible tokens, have erupted onto the scene in a big way, but are they a flash in the pan, just another way to make a quick cash grab? Investors are dropping billions after billions into them. Pictures of cats and apes sell for millions, even though they appear to be made with little effort or imagination. Twitter CEO Jack Dorsey put an autographed NFT of his first Tweet up for sale. And now we see a corner of the sports world, NBA Top Shot, roll out an officially-licensed marketplace for digital collectibles. It's an active forum for trading virtual basketball cards—images and video clips of popular players in big “moments” from recent seasons.

**So how do NFTs work? And what's their application in sports?**

NFTs are unique items—collectibles in the digital realm—the ownership of which is recorded on a blockchain, a type of digital ledger. They're non-fungible, which means that unlike cryptocurrencies, where every token is of equal value and can be swapped for any other, NFTs have unique qualities which prevent them from being interchangeable. In that way, they're like trading cards or original art, valuable precisely because they are one-of-a-kind.

Many NFTs are bought, sold and traded at auctions. The blockchain prevents pirating and copying: The ledger can't be forged, since it sits on thousands of computers around the world. Additionally, when a block is filled on the chain, it's set in stone and becomes part of the timeline. That means

each NFT has an exact, unique timestamp. Captured images of moments, digital art, and other unique products can be swapped and traded as NFTs—or held in anticipation of increasing in value.

Covid-19 played a big role in fueling trade in NFT—in 2020, while investors and sports fans were stuck at home, the NFT marketplace quadrupled to \$250 million<sup>42</sup>. But, is this a bubble that could burst? A form of money laundering, with all kinds of potential for evildoing? There are also major concerns about the impact of NFTs on the environment. Storing NFTs on digital registries generates the same amount of annual carbon emissions as most small countries. While it's true that the NFTs being traded and sold today could lose all their value, even become “digital trash,” the marketplace is vibrant—for now.

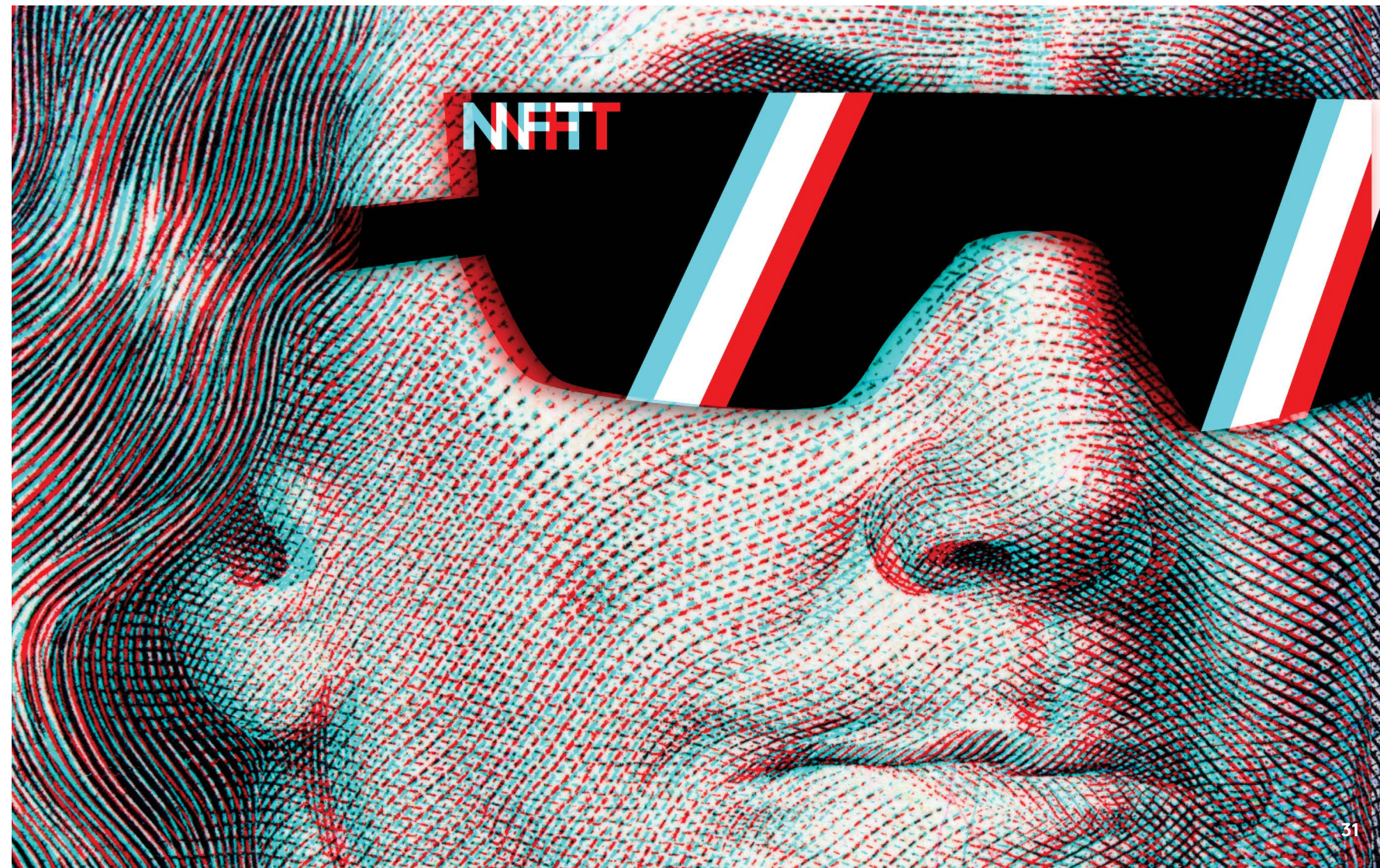
- The broader NFT marketplace is projected to expand to \$75 billion by 2025, from about \$14 billion today, the investment bank Jefferies recently reported<sup>43</sup>. Much of the growth is driven by the boom in sports NFT products.
- Dapper Labs, developer of NBA Top Shot, saw its annual sales nearly double to \$700 million in 2020 from \$361 million the previous year. In October it reached a two-year partnership with Boardroom, the sports business media network co-founded by Kevin Durant, to create video content and moments for Top Shot's NFT marketplace.
- Remember when you'd keep a ticket stub in your wallet to prove you attended a game? The NFL started attaching digital tokens to tickets to commemorate certain games of the

2021 season, the first one the November 7 meeting between the Cardinals and the 49ers, the second the Lions-Bears matchup on Thanksgiving Day.

As a marker for the ground the cryptocurrency industry is laying for sports, Crypto.com announced in November a 20-year name rights deal with the Staples Center in Los Angeles, home of the Lakers, Clippers, the WNBA's Sparks, and the NHL's Kings. Believed to be worth \$700 million, it's the largest naming rights agreement in sports history. The Singapore-based Crypto.com

has been very active in the sports world lately, announcing a five-year global partnership in June with Formula 1 and a 10-year branding deal with UFC in July. Competitor FTX agreed to a 19-year, \$135 million naming rights deal for the Miami Heat's arena in March.

Looking to the future, we'll see more startups provide platforms that help users earn and collect NFT as rewards and facilitate their digital sports collections. And NFTs increasingly are going to be used as prizes and rewards in sports betting.



# SportsTech at CES 2022

In early January, Comcast NBCUniversal SportsTech Accelerator had a high profile at the Consumer Electronics Show in Las Vegas, the annual showcase of new and exciting tech.

Although the 2022 show saw lighter-than-typical crowds because of Covid-19, the accelerator's presence at the event gave sports business partners and



Kurath, Head of Comcast NBC Universal SportsTech. She called it a "great opportunity to source innovative start-ups and to encourage them to apply" to the program. "This is the epicenter of new, cool, and innovative things that are coming onto the scene," she said.

The SportsTech booth highlighted the program and its startups with an homage to the games and sports we all enjoy. Guests could play cornhole or stretch their legs on a set of bleachers while rubbing elbows with other sports tech startups. They also competed against one another in the booth's signature feature, an iRacing simulator that gave drivers a full-bore visual, auditory, and haptic experience on virtual NASCAR tracks such as the speedways in Las Vegas and Atlanta.

Throughout the three-day conference, Comcast SportsTech and Boomtown Accelerators connected partners and

2021 cohort alumni an opportunity to interact with one another while meeting with accelerator prospects – as well as potential investors—to imagine the future of sports.

CES was a strong forum for the accelerator and its partner consortium to "get in front of the founders," said Jenna



investors with graduates of the 2021 program, including EON Media, GlobalM, and Dibz.

"It's been really important for us to meet in-person with both the team from Comcast SportsTech and the partners who are here in Las Vegas, not only the partners we've been working with but the new members of the consortium," said Lance Newhart, CEO of Global M.



Brennon D'Souza, founder and CEO of Dibz, said he was grateful for SportsTech's continued advocacy and networking at CES and beyond.

"Being a part of Comcast NBCUniversal SportsTech Accelerator has been amazing for our business," said Brennon D'Souza, founder and CEO of Dibz, another 2021 alumnus of the program. "It provided us with a network and the reach to do things we weren't able to do prior to getting into the program. They are so well connected in the sports world."

Coming to CES added a feeling of reality to his experience in the program, he said.

"It's been a Zoom meeting world for the last year, but it's been so great to be here and meet with the partners and talk with the other members of my cohort," he said. "We're now working with several teams and leagues, some of the biggest names in sports. So it's just mind-blowing being here."

Ashish Agrawal, founder and CEO of EON Media, which won a CES Innovation Award for its Extract product, described the show as a "really amazing experience," the result of a strong collaboration with the Comcast SportsTech team.



Key representatives of the partner consortium, including NBC Sports Next and Comcast Spectacor, participated in a CES panel session focusing on entrepreneurial thinking and future developments in sports tech.



# Final Thoughts

**As the sports world looks ahead into 2022 and beyond, the Comcast NBCUniversal SportsTech Accelerator endeavors to support the startups that will continue to drive the recovery of and bring new and exciting innovations to the industry. It's clear the one constant is change. Given the milieu today, sports organizations know they must evolve and transform in order to meet the challenges that lie ahead.**

Some consolidation and convergence will occur across categories, to the benefit of athletes, players, teams and leagues, our partners told us. "As we emerge, we're going to see consolidation," said Pool. "We'll see some of those very vertical and focused technologies coming together to paint a bigger picture, a more holistic picture of the overall athlete and the overall health and balance of lifestyle. We have to look that far down the road to see what trends in training and technology are coming about that are going to define the next generation of athlete."

We relish the challenge, and the opportunity. Over the last two years we have seen the truth of the saying, "Necessity is the mother of invention." Innovation, by contrast, is fueled by creativity, hard work, and the desire to bring solutions to problems. Ultimately, our startups strive to make the sports world better than before. Together, we are building the future of sports by bringing tomorrow's technology to the athletes and fans of today. We are guided by our brand pillars – passion for sports organizations, athletes and fans; creativity that drives innovation; relationships with industry partners to help startups get in the game; and resiliency that demands grit and powers success. In the last year our startups and partners have shown that resiliency, and we move forward now, renewed. As before, we'll reach in 2022 to fulfill the promise of sport, the true spirit of competition—with the desire to improve, succeed, and thrive.



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