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Consumer technology and the future of online gambling

How the 5 biggest consumer tech trends will shape the internet gambling sector (2017-2020)

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Introduction

Online gambling is one of ecommerce's biggest success stories. Since 1997, when the number of gambling websites jumped from 15 to 200¹, the sector has gone from strength to strength, displaying extraordinary year-on-year growth. Now, it's estimated to be worth USD47.1 billion, with that figure tipped to reach USD59.79 billion by 2020.²

From sportsbook to poker to slots, bingo and lotteries, there is no facet of real world gambling that has not made a smooth transition to the digital world. One of the crucial factors of this success is how quickly and effectively the industry has adapted to advances in consumer technology. One obvious case in point is mobile. From having a 7% market share in 2011, mobile now accounts for 20% of the bets made online. Major bookmaker Paddy Power generated 51% of its total betting revenue through the channel in 2013.³

Gambling, then, is a sector that has been massively rewarded for embracing technological changes. The gambling operators that have taken the lion's share of the spoils have been the ones that have best predicted what changes were coming and how they would affect their players' behavior.

The question now is: what's next? What innovations in consumer technology are going to be most influential over the coming years? And, most importantly, how will they affect the way people like to bet?

1 - Frost and Sullivan:
Internet Gambling

Developments
in International
Jurisdictions

2 - Statista: Size of the
Online Gambling Market
from 2009 - 2020

3 - Poker Guru Blog:
Mobile Gambling
Forecast to be \$100
Billion Business by 2017

This paper answers those questions.

Focusing on today's five hottest consumer technology trends, it paints a clear picture of how consumer behavior in online gambling is likely to change between now and 2020, weighing up the risks and the challenges and discussing what online gambling operators can do to make the most of the situation.



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Data Science

2017 will be the year the big data floodgates open, driven by a voracious appetite for deeper contextual insights that drive customer engagement via mobile wearables and IoT.

Dane Anderson, Forrester

In 2016 the worldwide data market was worth USD23.8 billion. By the end of 2017, that figure will have hit USD43.3 billion.⁴ The constantly increasing volume of consumer data that fires from device to device is driving every industry towards deeper personalization, optimized services and more expansive social insight.

4 - IDC: Worldwide Big Data Technology and Services 2012-2016 Forecast

Given their industry runs on statistics, mathematics and probability, it is no surprise to see online gambling companies keen to utilize big data to their advantage. All the industry leaders now employ teams of big data engineers and technicians, shifting the dynamics of the sector in numerous ways.

MORE REALISTIC ODDS AND MORE ACCURATE PREDICTIONS

For a bookmaker, data analytics presents the possibility of calculating sportsbook odds with even more scientific accuracy. By crunching the numbers behind previous matches, they can deep dive into things like scoring patterns to deliver more realistic odds to their players.



Similarly, players have utilized data analytics services to inform their betting strategies. Sharkscope, for example, crawls the internet daily to collect data from poker games being played online to provide up-to-date player and tournament statistics. This massive database can help the dedicated poker player to track their and other players' progress, helping them to make better decisions at the table.

5 - [Google Blog: Google Cloud Platform Predicts the World Cup \(and so can you!\)](#)

Big data has the potential to be equally disruptive in the sportsbook scene. At the 2014 World Cup, Google made news by utilizing data analytics to predict the winners of 16 matches, getting 14 results correct.⁵ While an 87% win ratio might sound lucrative, some bookmakers were quick to point out that, in most cases, the favorite beat the underdog and that the same predictions could be made by looking at a handful of key statistics.

So, though data analytics is crucial to the future of online gambling, debate still exists about the relevance of all its applications.

THE MARKETING POTENTIAL OF BIG DATA

While big data analytics is changing the way bookmakers make odds and players place bets, it is also changing the way operators reach out to their players. Big data allows a company to personalize its service to the consumer with an extraordinary level of specification. It illustrates clearly not just how and when a player likes to bet but also their other interests and preferences, whether related to gambling or not. This allows operators to create extremely precise tailored marketing campaigns.

And it's a precision welcomed by the consumer base. A recent survey conducted by Talend found that 67% of UK gamblers would be more

loyal to a bookmaker that offered a higher level of personalized service. Revealingly, 72% said they do not feel bookmakers are doing enough to offer this personalization.⁶ This is typical of the millennial shopper – a demand for bespoke products and services and high expectations of how they will be delivered.

So, a huge opportunity exists for the forward-thinking gambling operator to claim this space, tailoring odds, creating personalized offers and targeting push notifications to individual players.

6 - Talend: Are
Bookmakers in the UK
Betting on Big Data?
Survey Says, They
Should

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Artificial Intelligence (AI)

For gambling companies, AI bridges the gap between accruing mountains of actionable information and utilizing it to deliver better experiences for the player. If consumer data is the fuel, AI is the car.

Sophisticated AI software allows for extremely accurate product personalization. It can learn what a user likes and offer them solid recommendations on how to get the most from a gambling platform. Also, high quality AI bolsters virtual communications with customers. Where, once, customer service chatbots were almost laughably recognizable, doling out obviously automated, often irrelevant responses to customer queries, today they operate at a much higher level. Using data accrued through previous interactions, they can better gauge the context of conversations, allowing them to settle queries and react to service issues faster.

So far so good: AI helps create a more engaging gambling experience for the player, which means more revenue for operators. Yet there are concerns about how AI might disrupt the online gambling experience in the near future.

AN UNBEATABLE PLAYER?

In January 2017, some of the world's leading poker professionals congregated on Pittsburgh's River Casino for a tournament called Brains Vs. AI: Upping the Ante. Over 20 days, famous players such as Jimmy Chou,

Dong Kim and Daniel McAuley pitted their skills against Libratus, an AI created by professors and students from Carnegie Mellon University.

The result? A brutal victory for AI, with Libratus crushing its human opponents across 120,000 hands of Heads Up Texas Hold'em, raking in USD1.7 million in the process.

While computers have been routinely defeating human rivals across the chess board for over a decade, doing the same at the poker table is a major leap forward, as poker strategy requires a much more 'human' decision-making process. The player uses the limited information they have available to them and draws not just on mathematical probability but also on their previous experiences and their knowledge of the opponent to make the right call.

This raises the possibility of bots being programmed to defeat human players, which would massively unsettle the online poker landscape. In sports betting, there is also the potential of artificial intelligence being used to rapidly crunch stacks and stacks of data in order to deliver better sports predictions (*see chapter one*).

While some still question how much more effective this is than traditional betting techniques, if such programs became consistently accurate and widely available, it would impact the prices and margins offered by bookmakers, drastically changing the business for both consumers and gambling operators.



IDENTIFYING PROBLEM GAMBLERS

Another possible application of AI and machine learning is in the fight against gambling addiction. BetBuddy is an AI package, recently launched as a collaboration between City University of London and a software analytics company. It analyses online gambling behavior to make accurate predictions about players that may be at risk.

Taking in several critical factors, including stake, time of play and size and regularity of deposits, BetBuddy identifies users that display potentially harmful gambling habits before they worsen into full blown addictions.

While such analysis can never be 100% certain, BetBuddy's creators claim it maintains an 87% accuracy rate in detecting these behavioral patterns.

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Internet of Things (IOT)

By 2020, 100 billion IoT devices will be in use worldwide.⁷ In this ultra-connected world, the transfer of online goods will move at a blistering pace, with a consumer base entirely comfortable with smart technology expecting a seamless round-the-clock service.

7 - IDC/Intel

8 - Casino App: Free
Mobile Casino Games
Booming

IMPROVED PLAYER INSIGHT

One of the most attractive elements of IoT for gambling operators is the further increase in the already huge number of available data collection points. With more devices passing on more information, casinos and bookmakers get even more actionable data on player preferences, user experience and popular trends.

MOBILE CONTINUES TO GROW

Offering players a more convenient, faster and simpler experience, mobile gaming has grown rapidly over the last decade. And with the number of connected devices set to increase, there is nothing to suggest a cap on the mobile boom.

Juniper Research estimates that the mobile gambling market will have 165 million players by 2018 worldwide (up from 65 million in 2013), with revenue hitting USD100 billion.⁸

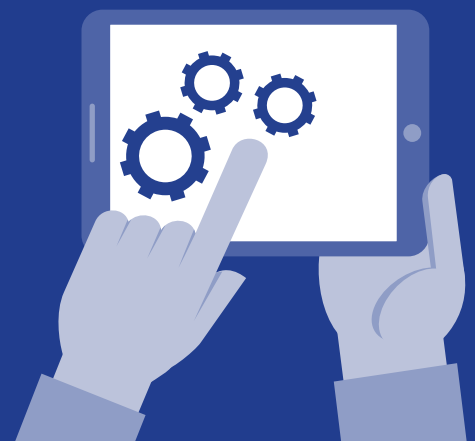


ONLINE AND OFFLINE COME TOGETHER

In traditional brick-and-mortar casinos, the chief strategy for ensuring dedicated players make regular return visits is the reward program.

IoT, however, presents a new angle. Casino operators can access their consumers via smart devices, messaging them for feedback, creating new streams of data or encouraging them to visit the virtual version of their casino. The net result is a more engaged, more connected consumer.

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Blockchain

By allowing data to be disseminated without being copied, blockchain technology is a game-changing evolution in payment security, designed for the digital-first consumer. Developed as the underlying security system for bitcoin transactions, its database has no single point of entry through which it can be accessed by hackers and so information in a blockchain is securely shared without the risk of leakage.

9 - Pricewaterhouse-
Coopers (PwC)

In the last nine months of 2016, USD1.4 billion was invested globally in blockchain startups, with merchants in every industry excited by the technology's possibilities.⁹ For online gambling operators, this offers lower costs and improved customer trust. It could also decentralize the industry and cause the biggest single disruption in the history of online gambling.

SUPERIOR PAYMENT AUTHENTICATION

By adding blockchain to the authentication process, operators can ensure tighter security, creating an extra layer with which to verify the user's identity. As it is an entirely transparent process that can be accessed by all parties, the player is given more control over how their personal information will be used, who will have access to it and how that access will be granted. Everyone involved in the process can check that the other parties are who they say they are and will pay what they've agreed to pay. Essentially, it removes the possibility of false identities and fake payment information being used to commit fraud.

INCREASED CUSTOMER TRUST

One of the most interesting potential uses for blockchain in online gambling is as a random number generator. Due to its transparency, players can easily verify how fair the process of creating a numerical result is. This can already be seen at work in bitcoin betting services such as Satoshi Dice, where verification of the bet is handled by a network of nodes. This way, a third party point of trust is no longer needed, increasing the player's trust in the integrity of the game.

While more consumer trust is, obviously, a major benefit for online gambling operators, this decentralization of online games could send the industry in some very new directions.

GAMBLING DEMOCRATIZED?

When the entertainment industry was disrupted by the internet, it had little choice but to decentralize and democratize. Suddenly, a teenager with a webcam could launch their own channel, fill it with homemade content and attract millions of viewers. Suddenly, a part-time writer could set-up their own blog site in minutes and win major mainstream attention for posting their favorite makeup tips. In such an environment, the traditional processes of television, music and publishing no longer made sense.

In the case of gambling, however, this decentralization never happened. Once the lucrateness of ecommerce became clear, the big players moved



their infrastructures online and continued operating as always.

Blockchain, however, makes the decentralization of online gambling possible. If this takes place, it will require a major shift in thinking from the major operators to stay on top.

REMOVING THE MIDDLE MAN

In June 2016, a new gambling platform called vDice went live on P2P network Ethereum. With neither an account nor a deposit, players could instantly lay bets to win bitcoin. There was no middle man – the players were playing against the code, which was hosted on the network not on any server.

Blockchain makes this possible. It allows the game's creators to leverage a Smart Contract, which is a code that works autonomously on a P2P network without interference. Thanks to blockchain, nobody can alter the code, nobody can remove the code and, effectively, nobody owns it.

This opens the door for a future where entirely secure, trustworthy online gambling games are created and posted in the same way blogs and video content are posted today. According to the makers of vDice, this future is not only inevitable but optimal. In a recent blog post they state:

With a centralized service...when you send them your digital money it is not yours anymore. You only get it back if the site operator lets you withdraw it... Our game is live and it works. You don't need to trust anyone. The game is on the blockchain. You only have to trust the blockchain. vDice never touches anyone's money. No one touches it. You send your ETH to the smart contract.

The smart contract processes the bet. The code is open to everyone. Anyone can read it. Everyone can see. It does exactly what it should do. It's on the blockchain. So no one can mess around with it. No one can cheat.¹⁰

10 - vDice Blog: Why We Need Blockchain Gambling



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Virtual Reality (VR)

VR is perhaps the buzziest thing in online gambling today. With major developers like Microgaming and NetEnt investing heavily in this channel and VR casinos like SlotsMillion offering full, immersive experiences, many see it as the next industry-defining trend.

Juniper estimates VR wagers will rise a staggering 800% between now and 2021, with an increasing number of 'high rollers' keen to use the technology. The same study suggests that these bets will total USD520 million, a huge increase on the USD58.5 million worth of bets made through the channel in 2016.¹¹

But how likely is VR to truly reshape the landscape, in the manner of mobile and live dealer gaming?

CAPTURING THE MILLENNIAL MARKET

Millennials, meaning those who reached adulthood around the year 2000, now make up 50% of the global workforce. Digital natives who are entirely comfortable with all forms of consumer tech, they are an obvious target for online gambling companies as they enter their prime spending years. And, with the UK Gambling Commission recently estimating that the number of 18-34 year olds participating in gambling at around 18% (up from 10% in 2008), millennial interest in the sector is growing.¹²

11 - CNBC: Virtual Reality Gambling Expected to Grow 800% by 2021 Driven by 'High Rollers'
12 - UK Gambling Commission



Millennial buyers have a preference for immersive experiences over products. They enjoy games of skill rather than games of pure luck and they are curious about new technologies. Of the 171 million people forecast to be using VR by 2018¹³, the vast majority will be from this demographic.

All of this suggests that, if virtual casinos are to become the next big thing then it will be the millennial players that make it so. Furthermore, virtual casinos may be the novelty that solidifies millennial enthusiasm for online gambling.

In a recent roundtable discussion on Gambling Insider, Rose Chen, Overseas Marketing Director with Beijing Leke VR Technology, confirmed this idea saying:

People who grow up with video games will be the players who join these VR casinos first and will accept this technology better than someone who has never played a video game. It looks like the natural progression for these people to enter virtual casinos. The gambling industry must continually look for ways to expand their target customer base and virtual reality is one of the most innovative and exciting methods to do this.¹⁴

In the same discussion, ALEA CEO Alexandre Tomic expanded:

When the mobile platform became widely used, it caused a new generation of consumers to enter the gambling industry; people who perhaps would not have traditionally played via desktop or visited a land-based casino. This process will be magnified with VR, simply because it can offer a gaming experience so immersive it is unlike any other channel.¹⁵

13 - Statista: Number of Active Virtual Reality Users Worldwide from 2014-2018

14/15 - Gambling Insider: Is 2017 the Year of Virtual Reality Gaming

THE RIGHT MOMENT?

While the rise in mobile gambling was powered by every member of the target demographic already owning a smartphone, this is not yet the case with VR headsets. For this reason, some pundits are urging caution, saying that while VR is the future of the industry, that future may not come to pass for a few more years.

However, the basic level VR headset needed to play most VR games is a relatively cheap piece of equipment and the big investors in VR are taking action to get them in consumers' hands. Samsung, for example, are now giving away a free Gear VR headset and gift pack with every Galaxy S7 and S7 Edge.

With more and more videos, games and experiences being made for the VR channel and more retailers opening VR stores, headset adoption rates are certain to increase. As that happens, the number of players keen for a VR gambling experience will quickly grow. Like so much in the gambling sector, it will be the operators that adapt to the technological changes quickest and most decisively that reap the biggest rewards.



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Key Takeaways

- The online gambling sector has been consistently rewarded for embracing changes in consumer technology.
- Data analytics offers bookmakers more realistic odds, offers players potentially more accurate tips and strategic advice and offers online gambling companies the opportunity to create highly targeted marketing campaigns and personalized offers.
- Artificial intelligence could see the creation of poker bots capable of defeating any human player, massively disrupting the online casino sector.
- More wearable tech and smart technology will create more consumer data collection points, further stimulate the mobile gambling boom and make converging online and offline operations far easier.
- Blockchain will improve customer trust in both payment security and the integrity of the online games they play.
- At the same time, blockchain's decentralization and democratization of online gambling could massively shift the way people bet online and take power away from the major operators.
- Virtual Reality is an exciting new channel for gambling, with an increasingly high rate of headset adoption and more major operators developing immersive games and experiences for this platform.

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