Who Will be the Netflix of Game Streaming?

(and other 2021 Game Development Trends)

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Table of Contents

The Gaming Industry Does Not Rest – Some Numbers

Let us say this again: the gaming industry does not rest.

Although the market is swamped with reports and counter reports concerning 2020 success, one thing remains undisputed: the COVID-19 pandemic increased demand as more and more users turned to gaming to unwind and relieve their time at home. Gaming was and is a suitable alternative to movies and TV. The Washington Post reports that 2020 was a record year for game-related spending. Statista presents some promising predictions on the years to come. It seems that "while there were almost two billion video gamers across the world in 2015, this figure is expected to rise to over three billion gamers by 2023". The entire video gaming market is expected to be worth over 200 billion U.S. dollars by 2023.

A Huge Demand for Time-Consuming Executions

The gaming Industry is brutal. The competition is fierce, and standards of time and quality must be met. Under these circumstances, this industry has some of the most demanding software and performance requirements out there. There's a huge demand for time-consuming executions such as code builds and graphics, for example, while meeting very strict release deadlines for multiple target platforms. It's no wonder that the gaming industry spearheading global software development trend adoption. It has to. Otherwise, you might become the next Cyberpunk.

A Cautionary Tale - The Cyberpunk Story

Not meeting quality standards under strict deadlines is not something the industry is willing to tolerate. Just look at the fiasco surroundingthe CD-projekt's much anticipated game, "Cyberpunk 2077". Soon after the game's launch, users started complaining about bugs and glitches, especially in older consoles such as Xbox one and PS4. The result? PlayStation removing the game from its marketplace, a bad reputation hit for CD-projekt accompanied by a 22% decline of CD-projekt stock and $1B in losses to its founders, as well as a new class-action lawsuit. CD-projekt is now amassing every ounce of productivity that can help it deliver these critical bug fixes to the market as soon as possible.

Game Delays are Still a Thing, so is Crunch

It's not just about quality. 2020 claimed its victims in the form of game delays, especially due to the shift to developing games from home. Ubisoft's Far Cry 6 and Rainbow Six delays are such examples. The game development giants are not the only ones that delayed games. According to a GDC survey, one-third of developers said their games were delayed by COVID-19. It seems that 2021 will also suffer the same fate, as digital trends predicts: "Game delays were a normal part of gaming in 2020. Many of the year's biggest titles had to shift release dates due to the unforeseen complications that came with work from home development. Gamers shouldn't expect that to slow down anytime soon; in fact, there's a good chance it gets much worse." This prediction seems to be on the dollar as titles such as Outriders and Riders Republic already delayed.

The notorious crunch culture rears its ugly head when game deadlines are discussed. The case of Cyberpunk 2077 is such an example. In his article "Crunch culture is far from being a losing game in 2021," Thiago Villar is not very optimistic as for the crunch culture in 2021, as he predicts it's not going anywhere. However, there has been a lot of chatter on the news condemning this culture, discussing whether or not companies using crunch culture should win Game of the Year. And from the looks of it (sorry, no numbers to back up this hunch), more and more studios are looking to leave this trend behind, searching for productivity solutions to make up for that time loss, and planning accordingly. There are studios that arm themselves with time saving technologies. Take The Coalition, for example: They managed to release two AAA games in one year using Incredibuild's unique distributed processing technology.

Adapting Development Technology to WFH Environment

Working from home challenged the industry's resilience regarding development environments. Technologies, tools and hardware that support the module of working from home were warmly embraced – VPN remote desktop workflow, cloud applications and advanced graphic accelerated hardware, to name a few. In that sense, Incredibuild's Distributed Processing Technology to speed up games' builds, tests and graphics execution was spot on, and assisted studios like Proletariat and Milestone to succeed during COVID-19 lockdown. But we'll get to how Incredibuild fits in with game development trends later.

Games Graphic's Standards are Higher than Ever

Photorealistic graphics is already a standard. Ray tracing, shading, lighting, asset creation, rendering – all of these graphic tasks take time to process. Compromising on these aspects to buy some time is something that has great consequences to the game's quality, as that quality is deeply tied to the game's success and revenues. Here, again, investing in an infrastructure that supports processing graphic tasks faster is something game developers and designers are searching for and pursuing, especially as these graphics' requirements are only increasing. Developers also invest in game engines to support their graphics needs, which brings us to our next point.

Related to graphics execution: The Incredibuild Undead labs success story: accelerating builds, lightmap baking and shaders.

Game Engines are Becoming a Must Have

Game engines provide game developers a framework for creating video games without the need to create everything from scratch –physics, graphics, and AI – or having to partner with hundreds of separate vendors. Of course, Epic's Unreal Engine and Unity emerge as the main game engines used by developers globally. However, there are still hundreds of smaller, more vertically focused, specialized middleware game tech software companies that constantly innovate and push the boundaries of technology. Game developers looking for solutions that deliver more custom experiences turn to software vendors that focus on specific verticals.

Game engines also drive innovation for other industries. Unsurprisingly, as the game-dev eco-system with its need for speed and high rate of new technology adoption has always been a leader in driving the trends in the global software development market.

This trend is very noticeable nowadays, with Epic's Unreal Engine and Unity betting that their 3D graphics tools will shape the next generation of entertainment, automotive, ecommerce, architecture, real estate, and other industries. They have made a major investment in making these tools end-to-end solutions.

This vastly broadens the overall total addressable market for middleware software solutions in gaming, and makes these solutions more sought after by investors and acquirers across industries.

Take filming, for example. Lucas Films and Epic's Unreal Engine are reshaping the future of filming by shooting the highly popular Mandalorian series in a hangar with a 20-foot high, 270-degree semicircular LED video wall, complete with Unreal Engine sceneries that allow the cast to shoot in multiple locations in a single day (in a particular time of the day for 10 hours if necessary), or even move a mountain in the background to get a better shot, not to mention the realistic effect of shooting a moving vehicle while the background is actually part of the shot instead of being added later.

Related to software vendors: The Incredibuild InVRsion (Unreal Engine-based SaaS product for retail) success story: Saving AWS cloud costs while accelerating the performance and high-availability of their service to their customers, offering seamless cloud scalability using high-available and affordable cloud instances.

- Cost reduction per simulation – from $12 to $6 per simulation
- Availability – from 2-3 hours wait to immediate availability
- Additional performance – 16% improvement

These acceleration, high availability and cost reduction are the holy grail, a genuine win-win situation.

The Challenge of the Multitude Game Platforms

Today's games are played on a range of devices including smartphones, consoles, headsets, and PCs.
Targeting multiple platforms is essential for AAA games to reach a larger audience and increase revenues. Targeting Xbox, PlayStation, Nintendo, PC, Mobile and others puts a high toll on game development productivity, whether on build times, testing and deployment, and as more platforms emerge (AR, VR and cloud steaming, to name a few) this challenge is only growing. That is why a lot of game developers favor tools and infrastructures that provide solutions to multi-platform game development.

Speaking of new platforms, let's pause and discuss VR for a minute.

The VR Market is Still Untapped by AAA Studios

Everybody knows that VR is booming. While some suggest that the real boom is yet to come, this is one of the major trends of game development for 2021. Oculus Quest sold 705,000 headsets in 2019, representing 49% of all VR sales in 2019 and was in short supply for 2020. While headsets have evolved greatly, there have been only a handful of great VR titles. The most recent successful game in VR, Half-Life: Alyx, added nearly 1 million VR users to Steam. There is a void of high-quality VR content that is yet to be filled by AAA studios. Other industries are starting to join this emerging VR party and participate in filling that void. The Incredibuild 51WORLD success story presents such a company that uses VR for smart cities, automotive and real-estatee. Utilizing Incredibuild allowed 51WORLD to accelerate its VR builds and time to market.
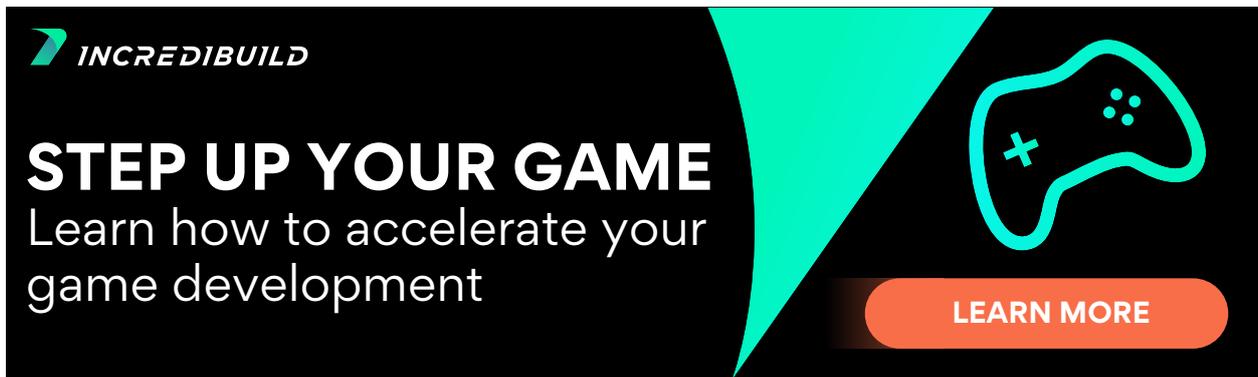
Cloud Game Streaming

With cloud game streaming, a game exists entirely in cloud datacenters, eliminating the need for downloads, transforming most popular devices into a connected high-resolution game terminal and the next generation of platforms for interactive, immersive, and social entertainment. Game streaming is hoping to do for gaming what Netflix did to video consumption.
Many technology and telecom companies are steadily moving into media and entertainment. Partnerships are being forged between game publishers and the disruptors. Telecoms want in on the action – and then there are the hyperscale cloud behemoths. The prize: 2.7B gamers who would drive this massive shift and increase the target audience of AAA titles from 300M consoles and PC users to x9 that number. Since games will be streamed rather than processed by the target platform, it opens up AAA titles to stream on weaker hardware, a fact that will assist in luring these 2.7B gamers with any type of target platform – mobile devices, smart TVs, and many others.

Cloud streaming will allow cloud behemoths (Microsoft Azure, Amazon AWS, Google Cloud) to control not only the hosting infrastructure but also the entire sales funnel, making the future of gaming a huge market for future revenue stream (essentially, gaming is becoming a bigger industry than movies and music combined).

Sony, signing a partnership with Microsoft to bring the power of Azure for Sony to deliver new gaming and entertainment experiences for customers is all the proof needed to highlight the emerging drivers in the future of gaming.

As stated by Phil Spencer, Xbox boss: "When you talk about Nintendo and Sony, we have a ton of respect for them, but we see Amazon and Google as the main competitors going forward. That's not to disrespect Nintendo and Sony, but the traditional gaming companies are somewhat out of position. I guess they could try to re-create Azure, but we've invested tens of billions of dollars in cloud over the years."

Porting to these new platforms, such as Google Stadia, is essential for studios looking to address a larger target audience. Unfortunately, this adds a substantial development effort.

Related to porting and Google Stadia: The Incredibuild Red Kite success story: accelerating porting to the Stadia platform relying on an Incredibuild Google partnership.

Content consolidation

These cloud wars are fought on many fronts:

- Technological offering to entice developers to move to the cloud platform of choice, such as Google Stadia, Amazon Luna and others.
- Purchasing of content, such as the latest acquisition spree of Microsoft purchasing Zenimax/ Bethesda for $7.5B (growing from 15 to 23 game studios). This adds up to major acquisitions made in 2018 of Ninja Theory, Compulsion Games, Playground Games and Undead Labs. Although less a matter of franchised content, this positions Microsoft as the gate-keeper to decide whether or not games will show up on competitors platforms and for how much, as well as the ability to provide it for free as part of Microsoft Game Pass subscription service – which seems to be the future game consumption.

Lower Entry Barrier

Cloud streaming, game engines, new platforms and other technology advancements are good news for the game development community, as they will lower the barrier for creating and monetizing new games. Game engines such as Unity and Unreal Engine have already revolutionized the industry by allowing indie studios and single contributors to create successful games, and in that sense, the future looks even brighter: Strong market valuations, acquisitions and increase of addressable market from 2.7B gamers to 3B gamers are additional strong motivators for the emergence of new game studios and new games.

The Incredibuild Angle

All these game development trends go hand in hand with Incredibuild. Whether it's the demand for high compute power to accelerate coding (game builds) and asset creation (graphics and others), the need to shorten the release cycle to meet strict deadlines, the quality standard that requires constant polishing of graphic tasks and software bugs, the need for more frequent iterations, faster bug fixes, the work from home with its demand for infrastructure solutions to handle compute demand, the cloud gaming emergence and flora of target platforms, game engines loads, VR and so forth – Incredibuild is a solution that turbocharges game development across the board, tapping into these needs and providing all the compute power required to bring high-quality games to market in a predictable and higher pace.

Incredibuild's unique Distributed Processing technology transforms every host into a supercomputer. We put hundreds (and even thousands) of cores to work for each game developer host or build server, harvesting idle CPUs across the studio's network and the public cloud. This distribution makes things super-fast and raises the quality bar thanks to the opportunity to iterate more frequently.

Join the world top studios and turbocharge your game.

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