Term Paper

«Waiting for Godot» - Unity's Monetization Woes



Hand-in date:

12.12.24

Institution:

BI Norwegian Business School, Oslo University of Oslo, Department of Informatics

Examination code and name:

GRA6834 Digital & Sustainable Bus. Dev **IN4270** Digital Business Development

Program:

Master of Science in Business, Major in Strategy

Master of Informatics: Digital Economics and Leadership

Part 1: 'Waiting for Godot' - Unity's Monetization Woes	1
Background: Unity Technologies	2
Industry Overview	5
Unity's Competition	6
'Waiting for Godot' - Act I	7
'Waiting for Godot' - Act II	8
Part 2: Analysis of 'Waiting for Godot ' - Unity's Monetization Woes	14
Problem Definition	14
Criteria for alternatives	15
Potential Alternatives	16
Theory to Inform our Decision	17
Analysis	17
What Job is Unity Doing?	18
Good Money, Bad Money	18
Competitive Disruption	21
Summary of Analysis and Decision	22
Conclusion: Between A Rock and a Hard Place - Beijing and Buenos Aires.	23
Part 3: Methodology	25
Why Unity Technologies?	25
How Did We Generate The Case?	26
Conclusion	26
Part 4: Reflections	27
Striking the Right Balance: Research and Context	27
Empathy Vs. Business Reality	28
Appendix	29
Sources	37

Part 1: 'Waiting for Godot' - Unity's Monetization Woes

On September 12th, 2023, Unity Technologies CEO John Riccitiello stood by his office window, perhaps wishing for an "undo" button in real life. Unity, a game engine provider celebrated for helping developers transform creative ideas into interactive realities, had just ignited a firestorm of user outrage. Only days earlier, the company introduced a controversial policy: a "runtime fee" of \$0.20 per game installation (Sinclair, 2023).

For years, independent studios and hobbyist developers had flocked to Unity for its accessible set of development tools and clear pricing structure. Until now, developers could build their games for free and only pay subscription fees once those projects found commercial success. But the new runtime fee, with its unexpected retroactive effect, blindsided countless creators who had carefully planned their budgets. Understandably, the reaction was fierce. Few were louder than the team behind the hit game *Slay the Spire*, who released the following public statement:

"Despite the immense amount of time and effort our team has already poured into development on our new title, we will be migrating to a new engine unless the changes are completely reverted and TOS protections are put in place. We have never made a public statement before. This is how badly you f**** up" (Smith, 2023)

The backlash was quick and decisive. On forums, social media feeds, and private message groups, developers vented, joked, and plotted their escape. Many felt betrayed, and alternatives for game development like Unreal Engine and the open-source engine Godot suddenly looked more appealing than ever. As Riccitiello examined the turmoil, it was clear that Unity now faced a pressing question: How could they strike a balance between growing profits and preserving the trust of their customers?

Background: Unity Technologies

2004-2007: The Early Days (Unity 1.0)

Unity Technologies began in 2004 with a small team of developers in Denmark who initially set out to create their own video games (Peckham, 2019). Their first release, *GooBall* (2005), ran exclusively on Mac OS X and, while it didn't gain much commercial traction, it earned respect for its standout visuals and physics (Satterthwaite, 2005).

Rather than focusing on producing games, the founders saw a bigger opportunity in the tools they had crafted for internal use. At the time, most game engines were expensive and far too complex for small studios and independent creators. By offering their homegrown technology, they hoped to fill this gap and provide accessible, user-friendly software that could empower a new wave of grass-roots game developers (Agreda, 2005).

However, this pivot wasn't without obstacles. Initially, Unity ran only on Mac OS X, which significantly limited its audience. Still, the founders stayed true to their mission of democratizing game creation. They began selling licenses through a simple one-time purchase model, allowing aspiring developers, no matter their size or budget, to bring their ideas to life (Axon, 2016).

2007-2010: Cross-Platform Growth (Unity 2.0)

The introduction of the iPhone and the App Store in 2007 proved a game-changer for Unity. Sensing the huge potential of mobile gaming, the company quickly adapted its engine to support iOS, becoming one of the first to do so (Brodkin, 2013). This early move into mobile games development placed Unity at the forefront of a fast-growing market, enabling Unity-powered games to reach millions of players worldwide.

Despite this success, Unity's one-time purchase model meant the company didn't share in the financial growth of its most successful users. Still, the booming mobile market anchored Unity's user base, reinforcing its reputation as a leader in accessible, cutting-edge development tools.

In 2009, Unity took two major steps. First, it expanded beyond Apple platforms, adding Windows support and vastly increasing its pool of potential developers (Higgins, 2009). Second, at the urging of its investors at Sequoia Capital, Unity introduced a freemium pricing model. Under this new approach, developers who earned less than \$100,000 annually could use Unity for free, and only pay for a license after achieving commercial success, effectively removing the cost barriers for aspiring creators (Unity, 2009).

By 2010, Unity's focus had broadened from simply providing a game engine to offering a full ecosystem. A standout development was the launch of the Unity Asset Store (Unity, 2010). Through this marketplace, developers could buy and sell a wide range of assets like 3D models, animations and scripts, shortening production timelines and lowering costs. While some criticized the Asset Store for enabling "asset flips" (low-effort games assembled largely from purchased assets), it nonetheless became an integral part of the platform ecosystem. For many developers, it was a valuable resource that helped streamline the creative process and paved the way for more accessible game development (Sterling, 2015; J. Anderson, personal communication, October 24, 2024).

2010-2023 : Contemporary Expansion (Unity 3.0 - Unity 6)

In 2014, Unity Technologies brought in John Riccitiello, former CEO of games industry titan Electronic Arts, to steer the company into its next phase of growth (Exhibit 1). Under his leadership, Unity shifted from selling one—time licenses to offering tiered, subscription-based plans, giving developers flexible pricing options while securing a steady flow of recurring revenue (Batchelor, 2016). These subscription plans typically follow a seating-based model, where costs scale in accordance with the number of users at a given company.

Beyond subscription fees, Unity tapped into the fast-growing mobile market by launching Unity Ads, allowing developers to integrate advertising into their games. This approach opened up new revenue streams, especially since mobile ad revenue often outpaces in-app purchases (Unity, 2014; M. Thorvaldsen, personal communication, October 24, 2024).

Between 2017 and 2020, Unity went on an acquisition spree, broadening its reach far beyond the games industry (Tracxn, 2024). This included buying companies in fields such as automotive, architecture, film and virtual reality to generalize the functionalities and applicability of their 3D software. The September 2020 IPO (Unity, 2020) gave them the financial muscle to push further, culminating in high-profile deals like the \$1.62 billion acquisitions of Weta FX, famed for its movie visual effects, and a \$4.4 billion merger with IronSource, known for its mobile app monetization and user acquisition tools. This has led Unity to grow from 2,715 employees in 2019 to 7,703 by 2022 (Unity, 2024), showcasing Unity's intent to evolve from a pure game engine into a general purpose real-time 3D (RT3D) platform, serving not just game developers, but also professionals in other industries.

However, despite estimated revenues of \$1,577 billion so far in 2023, Unity still struggles to turn a profit (Exhibit 4). This challenge has persisted throughout the company's history. Luckily, Unity has seemingly been able to justify this through their growth numbers. Going from \$541 million in revenue in 2019 to \$1,39 billion in 2022 (Exhibit 2). This growth has continued over the course of 2023, but large parts of it is attributed to the merger with Iron Source (Exhibit 2), with some suggesting that revenue growth is stalling.

Industry Overview

In 2022, the video game industry generated over \$196 billion, surpassing the combined revenues of the movie and music industries (Richter, 2022). While big-name studios once dominated gaming with their large budgets and proprietary tools, the landscape has shifted dramatically. Over the past two decades, platforms like Unity have lowered entry barriers, allowing independent developers and small teams to create their own games and compete worldwide (H. Lien, personal communication, April 14, 2023; R. Olsen, personal communication, April 18, 2023). By offering features like visual scripting (a visualized/simplified form of programming) and a marketplace for ready-made assets, the Unity platform continues to streamline the creation process and free developers to focus on their ideas rather than technical hurdles (M. Thorvaldsen, personal communication, October 24, 2024).

Still, despite the industry's impressive scale and projected continued growth, it's not easy for small studios to turn a profit. Distribution platforms like Steam and the App Store take substantial fees, and a crowded market makes it hard for new titles to stand out, unless they become rare breakout successes like *Hades* or *Minecraft* (T. Fossheim, personal communication, March 6, 2023). Competition is fierce. Games don't just fight for attention against one another, but also against other forms of entertainment. Even Netflix has noted that *Fortnite* is a bigger rival than HBO, highlighting just how competitive the modern entertainment landscape has become in the battle for attention (Fung, 2021).

Unity maintains a substantial footprint in game development, particularly in the mobile sector. As of 2023, estimates suggest that over 50% of all new mobile games are built with Unity, making it a dominant choice for mobile developers (Wijman, 2023). This is arguably a lucrative position, considering the historically strong, and potential future growth of mobile gaming, particularly in emerging economies around the world (Exhibit 3). The engine is also widely used for PC and console indie titles and is gaining some traction among virtual and augmented reality applications. However, these market segments are contested by both established and up-coming competitors.

Unity's Competition

Unreal Engine: Upscale Competition

Unity's most prominent competitor is Unreal Engine, developed by Epic Games. Unreal is known for its exceptional graphical power, making it the top choice for many large (AAA) studios and professional industries like film and architecture (M. Thorvaldsen, personal communication, October 24, 2024; Unreal Engine, 2024). Backed by the chinese media giant Tencent, Unreal uses a revenue-sharing model that waives fees for games earning under \$1 million. This approach appeals to both big-budget projects and certain mid-sized development teams. While Unity has worked to close the gap through technical updates and targeted acquisitions, Unreal still leads in high-end gaming and professional applications. Furthermore, their financial backing from Tencent gives them a near blank check for their continued development towards a technical solution that caters to professional industries and those (AAA) developers who do not create their own proprietary technology.

Godot: The Open-Source Alternative

Godot is a free and open-source engine offered under the permissive MIT license, meaning developers can contribute to its development and use the engine without paying license fees. The engine is named after the two-act absurdist play by Samuel Beckett, *Waiting for Godot*, in which the main characters wait endlessly for their circumstances to change (Encyclopaedia Britannica, 2024). The founder of Godot, Argentinian Juan Linietsky, chose the name to symbolize the engine's continuous and never ending development (Godot, 2020). Currently, the engine has a relatively small but growing community of developers, and is additionally maintained by a small team funded through donations (Godot, 2023).

Although Godot's founder, Juan Linietsky, has stated that the engine isn't meant to directly compete with Unity or Unreal (Reddit, 2023), its freedom, affordability, and flexibility have made it increasingly attractive to indie developers and small studios (M. Thorvaldsen, personal communication, October 24, 2024). Many developers and industry experts compare its potential industry impact with Blender, which has come to dominate 3D modeling with a fundamentally similar model to Godot, being both free and open-source.

'Waiting for Godot' - Act I

Unity sparked controversy in September 2023 when it announced a new revenue model: developers would pay a fee each time their Unity-built game was installed. Unity hoped this would tie its own financial success more closely to the popularity of its users' games, moving the company closer to profitability. But this approach hit small developers hard, especially those making inexpensive titles. It muddied the waters, and Unity released little to no clarifications regarding how this runtime fee will be implemented in regards to tracking downloads across distribution platforms.

The reaction was swift and furious. Developers flooded social media and online forums, denouncing the policy as a greedy money grab (Smith, 2023). Many customers pointed out that their profits were already squeezed by high platform fees from distribution platforms like Steam and the App Store, leaving little room for yet another expense. For small teams working on thin budgets, the new fee felt downright devastating. Worse still, the fact that it applied retroactively, to games that were already out in the world, seemed not only unfair, but possibly unlawful (Morris, 2023). Disillusioned developers even threatened to jump ship to rival engines like Unreal or the free and open-source Godot.

Unity's recent push into fields like automotive, architecture, and film only fueled the fire. The company's growth had moved it away from its original mission of empowering indie game makers. To many, these expansions suggested Unity now cared more about big enterprise deals than nurturing its core community (Muratori, 2023).

All this played out against the backdrop of a booming but brutal industry. Yes, gaming pulls in billions every year, but those riches are often concentrated at the top: with large publishers and platform holders. Smaller studios face fierce competition, not just from other games, but from every form of digital entertainment. In a world where attention is an increasingly scarce resource, tiny developers are seemingly left scrambling for the scraps. And now, Unity's runtime fee looms overhead.

'Waiting for Godot' - Act II

As the next board meeting approached, John knew he had to choose: retract the runtime fee, modify it, or stand firm. Each option carried serious risks.

Pulling back the fee entirely might help mend Unity's broken trust with developers, reassuring the community that built its success. But would investors lose faith? Unity needs money now more than ever, with murmurings of stunted growth circulating while the company is digesting expensive acquisitions. After all, Unity is increasingly courting more lucrative industries beyond gaming. Does preserving indie developer goodwill still matter as the company pushes into professional sectors, aiming to become a universal RT3D platform?

Adjusting the fee, perhaps by adding revenue thresholds or linking the fee to studio size, might be a middle ground. But would these changes be enough without formal protections in the Terms of Service? Without clear rules, developers might fear another fee hike down the road, and introducing strict rules now could limit our flexibility to adapt our monetization model in the future.

Sticking to the original plan would signal strength and protect short-term revenue targets. Yet, this might drive developers away over time. While many studios couldn't switch engines overnight due to existing contracts and long development cycles, as those projects wrapped up, engines like Unreal or Godot could start to look tempting.

The stakes couldn't be higher. Should John continue the push towards becoming a general purpose RT3D engine to achieve profitability, or somehow remedy their current business model to make money on their core market of indie-developers? Could these goals be combined? Is it possible for John to find a financially sustainable path moving forward, or will he find himself stuck in an endless wait for some change or solution that never arrives?

Exhibit 1: John Riccitiello

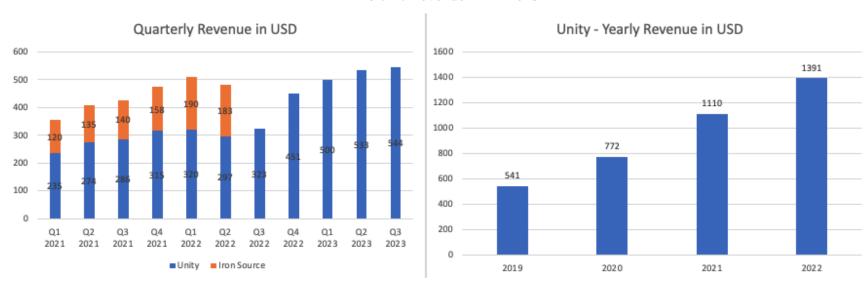


John Riccitiello served as CEO of EA from 2007 to 2013, overseeing significant expansion in the company's online gaming sector, before moving to Unity in 2014. Riccitiello is particularly known for advocating aggressive integration of monetization in game development, which has made him a controversial figure. In a 2022 interview, he is quoted in having

referred to game developers who don't consider monetization early as "some of the biggest f***ing idiots" (Le, 2022). He later apologized for the language but maintained his stance on the importance of monetization for developers (Kotaku, 2022).

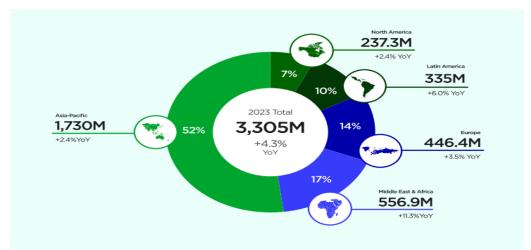
Among other notable statements, in a 2011 EA stockholder meeting, Riccitiello discussed charging players for in-game resources, suggesting that deeply engaged players might be less sensitive to additional costs. He remarked, "when you are six hours into playing *Battlefield* and you run out of ammo in your clip and we ask you for a dollar to reload, you're really not that price sensitive at that point in time" (YouTube, 2011). This is also a take of his that has landed him in hot water, as developers and gamers accuse him of not sufficiently understanding games as a creative outlet, and pushing monetization to an extent that disturbs the gaming experience. During his tenure at EA, the company was voted "Worst Company in America" in 2012 and 2013 by consumer polls conducted by The Consumerist (Tassi, 2013). While these results were heavily skewed by a vocal and active online minority, they highlighted significant dissatisfaction among certain customers during his tenure.

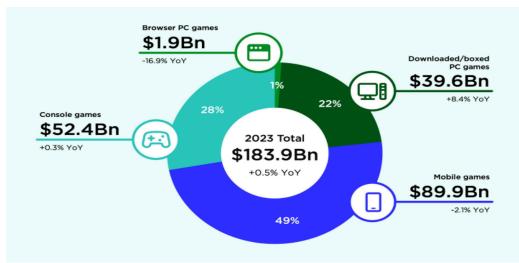
Exhibit 2: Revenue in millions



Note. Unity and Iron Source merged in Q3 2022 (Macrotrends, 2024).

Exhibit 3: Global Games Market 2023 - Newzoo Report (Wijman, 2023)





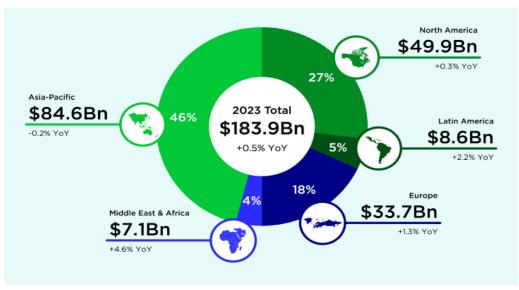


Exhibit 4: Costs 2022-2023 (Unity, 2024)

Year	2022				2023		
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Revenue	320126	297043	322884	450975	500361	533478	544210
GAAP Net Loss	-177555	-204158	-250021	-287754	-253703	-193324	-125310
Add to GAAP Loss:							
Stock-Based Compensation Expense	103427	105995	154479	173917	163028	157538	147177
Amortization of Intangible Assets	32702	43273	73229	97920	97920	98702	99220
Depreciation	8770	9505	10587	10679	11640	12606	11977
Restructuring Costs	2330	7950	7930	14130	7729	31396	24847
Acquisition Costs	1081	4357	9576	27301	0	0	0
Legal Costs	0	0	0	0	0	0	0
Interest Expense	1111	1123	2103	4035	6129	6154	6154
Other Expenses	-1320	-2085	-2125	-3613	-13615	-16013	-20840
Income Tax Expense	6224	2231	11468	17060	6205	970	5960
Adjusted EBITDA	-22811	-37648	-31772	20713	32403	98748	130976
GAAP Net Loss Margin	-55 %	-69 %	-77 %	-64 %	-51 %	-36 96	-23 %
Adjusted EBITDA Margin	7 %	-13 %	10 %	5 %	6 96	19 %	24 %

Exhibit 5 : Stock Price and Financial Overview 2020-2023 (Unity, 2024)

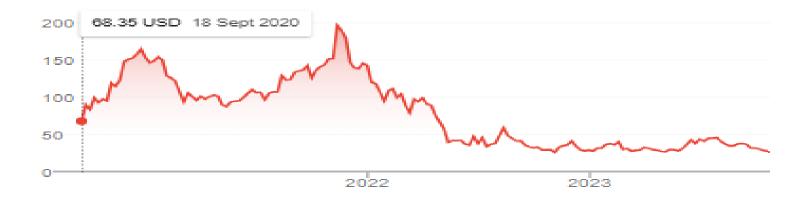
Following its IPO, Unity has experienced notable financial challenges. Despite the company's long standing role in game development, it has reported quarterly losses of approximately \$200 million. While adjusted EBITDA is positive, expenses related to acquisitions, restructuring, and stock-based compensation (25-39% of revenue) appear to have affected profitability.

Unity is responsible for powering around 69% of top mobile games, generating about 30% of revenue. High R&D and personnel costs, along with reduced retention among studios earning \$100, 000 annually, indicate difficulties in scaling profitability beyond its core user base.

Between 2019 and 2023, Unity invested \$5.3 billion in mergers & acquisitions, including Weta FX and IronSource, to diversify its product offerings and expand into sectors such as film, architecture, and automotive. However, some of these initiatives saw limited integration and returns - Weta FX related endeavors were largely discontinued by 2023, and IronSource, although contributing approximately \$200 million in quarterly revenue, faces integration challenges.

Unity's ambition to serve multiple industries as a comprehensive (RT3D) platform has introduced complexity without significant increases in profitability.

Unity stock price 18. Sept 2020 - November 2023.



Part 2: Analysis of 'Waiting for Godot ' - Unity's Monetization Woes

Problem Definition

The introduction of the runtime fee is a symptom of deeper strategic and operational challenges. At its core, the company faces a pressing need to increase revenue and manage costs to stabilize its financial trajectory. However, the runtime fee, instead of addressing these issues effectively, has alienated their core market of game developers, sparking backlash and raising concerns about the direction of the company.

This runtime fee comes across as both a clumsy attempt to secure financial sustainability - gambling goodwill for the promise of short term profits- and a clear signal of departure from its core market. While there is some rationale behind this move, such as Unity struggling to monetize small developers in an industry where revenue is increasingly concentrated at the top, the indecisiveness of its strategy has compounded their problems. Unity seems stuck between its ambitions to grow into new markets and its inability to make their current business financially sustainable. The immediate issue is the runtime fee itself. It is alienating their core audience and demands urgent attention. However, this fee is a symptom rather than the root of the problem. In our view, the most interesting challenge facing the company is the broader conflict between its growth mindset and its perceived value proposition for customers.

To summarize, the fee fails to capture value in a sustainable way. It alienates developers, leading to public backlash, a potential loss of users, and ceding unnecessary territory to competitors. The underlying causes of this monetization strategy is twofold. Firstly, Unity's aggressive strategy for growth, targeting non-gaming industries. Secondly, their transition towards a general real-time 3D software solution, as opposed to catering specifically to games development. We perceive that the company is struggling with its identity, both regarding its core value proposition and future plans for growth.

Criteria for alternatives

Before exploring potential solutions, it is essential to establish clear criteria for evaluating any proposed actions. Our proposal needs to address both the immediate issue of the runtime fee and the broader challenges surrounding Unity's future growth and value proposition. These are our criteria for assessing a proposed short-term and long-term solution.

Criteria: Short-Term Options

- 1. **Developer Trust:** Does the solution help rebuild trust with developers and prevent them from switching to competitors?
- 2. **Financial Sustainability:** Will the option stabilize revenues?
- 3. **Ease of Implementation:** Is the solution practical and feasible to implement in a timely manner?

Criteria: Long-Term Options

- 1. **Focus:** Does the solution provide a clear and sustainable strategic direction for Unity and their value proposition?
- 2. **Financial Sustainability:** Does the solution address Unity's financial challenges and establish a path to long-term financial sustainability?

Potential Alternatives

To address Unity's immediate challenges with the runtime fee and establish a sustainable strategic direction, we propose the following short-term and long-term alternatives.

Short-Term Alternatives

Retract the Fee

In the short term, Unity could choose to retract the runtime fee entirely. This bold move would demonstrate a commitment to its core market of developers, rebuilding trust and reaffirming its identity as a democratizing force in game development. However, this approach carries the risk of short-term and potentially long term financial strain, and a potential for a decline in investor confidence.

Modify the Fee

Alternatively, Unity could modify the fee by switching to a royalty based system or introducing more generous revenue caps. This compromise might help balance Unity's financial needs with fairness. Still, there is a risk that partial adjustments may not fully restore trust or adequately address the current financial situation.

Retain the Fee

The final option is to retain the fee and extract what they can from their user base. While this strategy could stabilize Unity's financial position, it risks alienating Unity's core community of developers and ceding unnecessary ground to competitors like Godot and Unreal.

Long-Term Alternatives

Unity As a Game Engine

Unity could opt to refocus on its core offerings. By scaling back acquisitions and non-essential initiatives, reducing operational expenses and concentrating on its core game-editor and tools. Unity could attempt to stabilize its market position among indie developers and small studios. However, this approach may result in a slower growth trajectory and a weaker presence in potentially lucrative market segments.

Unity As a General Real Time 3D Engine

Unity could choose to double down on growth, aggressively expanding into industries such as film, architecture and automotive. By utilizing acquisitions and partnerships, Unity could position itself as the go-to RT3D platform. Yet, this strategy involves significant financial risk and the potential of over extending their resources in competitive markets.

Theory to Inform our Decision

In order to inform our decision and provide a framework through which we can judge our alternatives, we will use a series of theories and concepts from academic literature. We will prioritize the following academic concepts and theories in our analysis:

- 1. 'Jobs to Be Done' as described by Christensen and colleagues.
- 2. 'There is Good Money and There is Bad Money' by Christensen & Raynor.
- 3. 'Disruption Theory' by Christensen & Raynor.

Analysis

What Job is Unity Doing?

To understand Unity's challenges, particularly in light of their value proposition, it can be helpful to examine the company through the Jobs to Be Done (JTBD) framework, developed by Christensen and colleagues. Rather than just piling on new features or guessing what different customer groups might want, the JTBD framework focuses on identifying the core "job" users hire a product to do. By zeroing in on this central purpose, companies can more directly address what their customers actually want (Christensen et al., 2007).

Unity's Core Job

For most of its history, Unity thrived by doing one key job exceptionally well: helping small game developers to make games in an easy and efficient manner. By fulfilling this primary function, Unity empowered developers to focus on creativity rather than wrestling with complicated technology or high costs. This alignment made Unity the go-to tool for those who wanted to compete in a global industry, without enormous budgets.

However, Unity's recent moves, such as introducing the runtime fee and positioning itself as a general purpose 3D engine, has complicated its core identity. Arguably, the company is now trying to do multiple jobs at once: continuing to serve indie game makers, while also attracting industries like architecture, automotive, and film. This broader ambition stretches Unity's focus and risks alienating game developers who once relied on it for simple, user-friendly tools. Managing such a varied set of needs becomes more challenging in a centralized environment, such as their standardized 3D software, forcing the company to balance very different expectations and success metrics.

Filling the Gap

When a company strays from the job its customers rely on, competitors can be quick to fill the gap (Christensen et.al, 2007). As Unity broadens its scope, developers who feel it no longer meets their needs, may look elsewhere. Unity's competitive edge relies on combining relatively advanced technology with affordability. The introduction of the runtime fee undermines the cost-benefit aspect of their current value proposition. Godot provides affordability and flexibility, while Unreal offers cutting-edge visuals and technology. These alternatives remain more specialized, making it easier for them to excel at their core jobs. Historically, Unity has been able to find a sweet spot, but given its current moves and shifting priorities, it risks losing this balance and inviting competitors to markets they once firmly held.

The Risk of Misalignment

If Unity continues to chase multiple, sometimes conflicting objectives by pursuing new industries while also trying to maintain its appeal to indie game creators it may struggle to remain compelling. As Christensen et.al (2007) notes, long-term success depends on understanding the central job customers need done and aligning strategies accordingly. The question is whether Unity can navigate the complexity of becoming a general-purpose 3D engine without losing sight of what made it successful. That is, assuming Unity even wants to retain its core gaming audience. If Unity can't find that balance, it may find itself overshadowed by competitors that stick more closely to their own well-defined jobs.

Good Money, Bad Money

Unity's early success stemmed from private funding, allowing the company to prioritize growth and innovation of its game engine without immediate pressure for profitability. This period exemplified what Christensen and Raynor (2003) describe as "good money", where private investors provided the resources and patience necessary to develop disruptive innovations (pp. 235–265). Under this regime, Unity was able to expand strategically through smaller, targeted acquisitions and organic growth that complemented their technological offerings. Even during this period, however, profitability remained elusive, suggesting that the challenges Unity faced weren't solely related to funding.

The 2020 IPO arguably marked a transition in Unity's financial evolution, representing a shift from good money to "bad money" dynamics. The timing seemed opportune, coinciding with peak market interest in tech companies and metaverse initiatives. The initial market response was positive, with the stock price rising as Unity demonstrated its commitment to growth through expansion into other 3D fields. This transition period suggested that Unity might successfully balance the new pressures of public markets with its existing growth strategy (Exhibit 5).

However, the pressures of public market demands soon became evident. Unity pursued larger acquisitions, including Weta FX (\$1.62 B) and a merger with IronSource (\$4.4 B), hoping to accelerate growth and meet shareholder expectations. These aggressive moves led to rapid organizational expansion, with Unity growing from 2,715 employees in 2019 to 7,703 by 2022 (Unity, 2024). While these acquisitions added significant revenue, they also introduced substantial costs and integration challenges (Exhibit 5). The dramatic increase in workforce size likely made it more challenging to maintain cohesion and effectively integrate new technologies and teams. This pattern aligns with Chirstensen and Raynor's (2003) concept of bad money pressure, where companies prioritize short-term performance over sustainable growth (pp. 235-236). Yet, the results weren't uniformly negative - some acquisitions expanded Unity's technical capabilities and opened new market opportunities, suggesting a more complex reality than the framework might indicate.

The introduction of the controversial runtime fee best exemplifies the complexities of Unity's position. While the fee reflects legitimate needs to monetize value and satisfy investor demands for profitability, its poor execution damages relationships with core developers. This situation demonstrates how bad money pressure can drive companies toward short-term decisions at the expense of long-term relationships and growth potential. However, it also highlights the genuine challenges Unity faces in balancing developer goodwill with financial sustainability.

Arguably, Unity now operates in an environment characterized by bad money pressures but must find ways to maintain long term innovation while satisfying short-term performance demands. The company's stock performance has suffered, declining 63.16% since the IPO, reflecting both execution challenges and changing market sentiments about growth versus profitability (Exhibit

5). Yet this decline might not solely result from the transition to public markets - broader industry dynamics, integration challenges, and the inherent difficulties of balancing growth with sustainability in the game engine market all play significant roles. Furthermore, the tech bubble that emerged during the covid-pandemic is difficult to control for when analyzing their financial performance in the given time period.

While the good money/bad money framework provides valuable insights into Unity's evolution, the reality is more nuanced than a simple binary shift. Public market pressure isn't universally negative, just as private funding didn't solve fundamental profitability challenges. Some decisions driven by bad money pressure might prove valuable in the long term, while others risk undermining Unity's core value proposition. The key question facing Unity isn't simply whether it can escape bad money pressure, but how it can adapt its strategy to thrive within these constraints while maintaining its foundational mission and developer relationships.

Competitive Disruption

The Low-End

Christensen & Raynor's (2003) disruption theory provides a framework for understanding how low-end competitors gain footholds by targeting overlooked or overserved market segments with simpler, more affordable solutions (pp. 46-50; pp. 78-80). Godot exemplifies this dynamic, disrupting from the low-end by meeting the needs of budget-conscious indie developers with a completely free game engine. Furthermore, its open-source model allows for extensive modification, offering a level of flexibility and control that Unity, with its proprietary restrictions, cannot match. As Christensen & Raynor's (2003) theory predicts, Godot is building its success on a foundation of goodwill and sufficiency for low-end users. Currently, it may be seen as not sufficient for professional game development. However, as the engine continues to improve, it could encroach on higher tiers of the market, a hallmark of disruptive innovation.

Unity's recent monetization strategy, exemplified by the introduction of their runtime fee, could be argued to illustrate a classic response from incumbents: doubling down on more profitable, high-end users at the expense of their low-end base. This aligns with disruption theory in the sense that incumbents often overserve their customers, creating an opportunity for simpler

alternatives to capture those who no longer perceive value in the high-end offering (Christensen & Raynor, 2003, pp. 45-47). However, according to Christensen & Raynor (2003) abandoning low-end markets is a risky move, as they often form the company's current market foundation (p. 91). The future of Unity may depend on whether it can balance these competing priorities and learn to coexist with disruptive forces like Godot.

The High-End

Unity faces intense sustaining innovation competition at the high-end of the market (Christensen & Raynor, 2003, p. 34) from Unreal Engine, developed by Epic games. Unreal's superior technology, particularly their cutting-edge graphical capabilities, positions it as the preferred engine for big (AAA) studios and industries like film and architecture. With financial backing from Tencent, a Chinese media conglomerate with vast resources, Unreal operates with significantly fewer financial constraints than Unity. This enables Unreal to prioritize long-term innovation and market expansion over short-term profitability.

Unreal continues making significant inroads into professional industries, such as automotive and film, design-domains where Unity has struggled to gain traction. Unity's acquisition of Weta FX, intended to enhance its competitiveness in these sectors, has underperformed, underscoring its difficulty in challenging Unreal in the high-end. Christensen & Raynor (2003) discuss that engaging in direct competition in sustaining innovation markets, against entrenched players with superior resources, is often a losing battle (pp. 51-53). Unreal's financial limitations make it unlikely to displace Unreal's dominance in the high-end market. Unity's challenges are compounded by disruption from below, as Godot steadily improves its capabilities while attracting disillusioned developers from Unity's core indie market. This dual pressure leaves Unity in a tough position: they risk being squeezed out of their core market while also failing to establish a foothold in the high-end. To survive and thrive, Unity must avoid the common trap of overstretching itself by waging a war on two fronts (Christensen & Raynor, 2003, p. 91).

Summary of Analysis and Decision

We will briefly conclude our analysis using these two tables. Here we will use color coding to evaluate which plan we deem to be most fitting for Unity moving forward. Green signifies a clearly preferred option, yellow signifies a moderate or equal value, and red is a clear indicator of the option conflicting with a criteria. We will elaborate on and justify our strategic proposal in the conclusion.

Short Term Table

	Option 1: Retract	Option 2: Modify	Option 3: Retain
Financial Sustainability			
Developer Trust			
Ease of Implementation			
Decision			

By a slim margin, the preferred option for the short term is 'Option 2: Modify'

Long Term Table

	Option 1: General Real Time 3D	Option 2: Game Engine
Focus		
Financial Sustainability		
Decision		

Our slightly preferred option, for the long term is 'Option 2: Game Engine'

Our proposal is for Unity to modify the runtime fee and to focus on their current value proposition.

Conclusion: Between A Rock and a Hard Place - Beijing and Buenos Aires.

After reviewing Unity's situation, we conclude that the company should adjust its monetization strategy and refocus on their core indie market rather than overextending into professional industries. Unity has proven its value as a platform that can lower barriers to entry, streamline development for small companies, and integrate cutting-edge features like visual scripting and asset marketplaces. While it has historically struggled to profit from small games companies, we believe that with the right revenue-sharing model, Unity can align its financial success more directly with that of its users. By doing so, Unity stands a better chance of growing alongside the commercial success of the developers who rely on its engine. To clarify our position, we do believe there is enough profit potential in the \$196 billion gaming industry for Unity, provided it charges more for its services. Furthermore, given the overview of their financial situation, we recommend that Unity reduce its non-essential costs. As highlighted in our analysis, the company currently struggles to leverage its acquired resources effectively. Moderately increasing profits, while cutting medium-term growth initiatives like acquisitions, and continuing its scaling back of the workforce, is our recommendation.

A key recommendation is shifting from a fixed runtime fee to a royalty-based model. As is already proposed by the company, Unity should retain their subscription model. However, instead of additionally charging developers per installation, Unity should take a percentage of a game's revenue once it surpasses a certain threshold. This structure should be more fair; when a developer's game thrives, Unity shares in the prosperity, and when it struggles, Unity's fees remain lower. Such a model can hopefully foster goodwill, reduce strain on smaller studios, and encourage long-term partnerships built on mutual success, rather than short-term extraction. Another important consideration is avoiding undue focus on industries beyond gaming, such as automotive, architecture and film. While these areas might appear lucrative, they are dominated by well-funded competitors, such as the Unreal Engine who are backed by the chinese media giant Tencent. Engaging in a head-to-head battle with a materially superior competitor would likely dilute Unity's core strengths and distract from what the company does best. Instead, Unity should try to capitalize on its existing market and continue to push their dominance in mobile

gaming, where its technical advantages and userbase are the strongest, and the potential for growth is the biggest (Exhibit 3).

Ultimately, Unity's future hinges on where and how it chooses to compete. Faced with the daunting prospect of challenging a well-funded Chinese titan, one that holds major stakes in the industry, Unity risks being overshadowed if it tries to push too far into unfamiliar and high-stakes professional markets. By contrast, the Argentinian upstart in the open-source world, much like Blender in the realm of 3D modeling, presentes a different kind of threat. Godot may or may not become the next Blender, but only time can tell. Our proposal, at least for the short to medium term, relies on a fundamental assumption (lacking a magical crystal ball), that Godot won't be the David to our Goliath.

It's more realistic for Unity to focus on fortifying its core market, adjusting its business model, and enhancing the value it delivers to developers, rather than wagering its future on outmuscling corporate giants. By doubling down on what made it successful, supporting the little guy, Unity can perhaps maintain what it already has secured. If Godot does rise to Blender-level prominence, Unity will still have secured part of its position as the platform that balances accessibility, technical prowess, and fair revenue sharing. In a market defined by fierce competition and shifting trends, choosing the right battles may be the key to making their business financially sustainable.

In the end, Unity may find itself *Waiting for Godot*, quite literally. There is no perfect solution. Turning a historically unprofitable sector of the gaming market into a profitable one is inherently difficult. Yet, Unity already holds a substantial share in a rapidly growing industry where it cannot afford to alienate its core users in pursuit of larger, and ultimately more formidable opponents. It seems unwise for Unity to devote so much energy to expanding into unfamiliar territories when its foundation is not yet solid. Balancing a strategic focus on its core market with responsible cost management will be essential to ensure long-term sustainability. Between the daunting prospect of battling a well-funded Chinese giant and the arguably more manageable challenge posed by an emerging Argentine competitor, the pragmatic choice is to focus on Buenos Aires. By prioritizing the customers and markets that built its reputation, Unity can stabilize its core business and remain flexible in responding to whatever the future may hold.

Part 3: Methodology

Why Unity Technologies?

To quickly summarize, we chose Unity Technologies as the subject of our case study for three key reasons. First, the company's situation closely reflects central themes from our curriculum, including disruption, monetization, and managing growth. Second, Unity currently faces major strategic challenges, making it a timely and relevant example. Third, some team members have contacts in and experience with the games industry, providing additional context and insights.

How Did We Generate The Case?

Our case development process was guided by the frameworks outlined in T. Grandon Gill's *Informing with the Case Method* (2011) and Robert K. Yin's *Case Study Research: Design and Methods* (2003). These frameworks informed two primary stages of our research and writing, the discovery stage and the fine-tuning stage.

Discovery

During discovery, we aimed to pinpoint our case's focus and identify a central decision point. Although we hoped to interview Unity's executives directly, we couldn't establish contact. Instead, we conducted two interviews with industry insiders who could offer insights into Unity's market position from a customer perspective. We also drew on four previously conducted interviews related to the indie games industry. In total, our informants included:

- A technology and gaming journalist.
- Three CEOs of independent game studios.
- The program manager for game development at Høyskolen Kristiania.
- A games advisor from the Norwegian Film Institute (NFI).

To supplement this, we analyzed publicly available interviews with Unity executives, especially those featuring then-CEO John Riccitiello. Following Yin's (2003) recommendations, we used logic models combined with time-series analysis to map out how Unity's strategic decisions influence outcomes over time. Merging them into a model that better fitted our needs. This helped us identify key patterns, trends, and cause-and-effect relationships (pp. 129-135).

Fine-Tuning

During fine-tuning, we focused on improving the clarity, credibility, and overall effectiveness of the case. We drew on Espen Andersen's article on *How to Write a Teaching Case* (2014) for guidance on structure and narrative. We also sought additional data, including shareholder meeting reports and publicly available company records post-IPO, to provide deeper insights into Unity's financial performance and strategic direction.

Throughout this process, we followed Yin's (2003) emphasis on data triangulation, incorporating multiple sources to strengthen the case's validity (pp. 97-99). We also added graphs, tables, and other visual aids to clarify key points, following Gill's (2011) advice on using visuals to improve understanding (pp. 238-241). Our writing evolved alongside our research, reflecting Yin's (2003) concept of an emergent design, where analysis and narrative shape each other as the case takes form (pp. 20-24; pp. 127-131).

Conclusion

Our methodology, inspired by Yin (2003) and informed by Gill (2011), relied on data triangulation, logic models, time-series analysis, and an iterative refinement process. By remaining flexible, consulting multiple data sources, and continuously improving our narrative and structure, we aimed to produce a case on Unity Technologies that is both insightful and accessible.

Part 4: Reflections

Striking the Right Balance: Research and Context

Unity's recent struggles have attracted widespread coverage from journalists, industry experts, and developers, providing an abundance of publicly available information. Yet, having so many sources meant we needed to do more than just repeat well-known critiques. We aimed to add value by applying academic frameworks, conducting new interviews, and approaching the issue from the developers' perspective.

Our main focus was on Unity's challenges following its 2020 IPO. Although the controversial runtime fee has been thoroughly debated, we tried to look deeper to understand Unity's underlying challenges and historically shifting industry position. This involved examining emerging open-source competitors and familiarizing ourselves with the broader 3D engine landscape. While this comprehensive view risked scope creep, we embraced the complexity of the topic, knowing that it would make for a richer case. Even so, finding a clear, pain-free solution for Unity proved too much.

We also recognize that our analysis has its limitations. In telling a coherent story, we inevitably simplified a more complex reality. For example, we actively framed the problem as a choice between becoming an all-purpose 3D engine and remaining a game-focused platform. In truth, a centralized solution serving all kinds of developers might be possible, but navigating that space is inherently challenging. Furthermore, publicly available figures did not always allow for precise market segmentation across industries. Unity's own earnings reports also blend revenue streams from different segments, making it difficult to pinpoint exactly where their income comes from. In short, we strived to capture the essence of Unity's predicament without losing sight of the complexities involved. While we believe our analysis offers valuable insights, we acknowledge the trade-offs made and the gaps that remain.

Empathy Vs. Business Reality

From the beginning, we tried to understand Unity's situation by stepping into the shoes of its main customers, indie game developers, many of whom struggle in an intensely competitive and crowded market. At the same time, we tried to acknowledge the pressures Unity faced from shareholders, leadership and their competition at large. It's easy to cast John Riccitiello, Unity's former CEO, as the villain of our case. Yet, this was not our intention, he is simply someone who is forced to confront the truth: Unity's original business model was not profitable, and the company needed to find ways to tap into-end user activities and game sales to secure a financially sustainable future.

While Riccitiello's attempts at monetization may have been poorly executed toward the end of his tenure, he was not wrong about the underlying problem. Unity needed a larger piece of the industry's revenue to achieve profitability. The real challenge lay in making this shift without alienating the very developers that fueled its initial success. Perhaps if Unity had taken decisive action years earlier, it might have reached a more stable financial position by now, avoiding the predictable backlash triggered by actions like the runtime fee, and giving ground to competitors.

This brings us to a difficult conclusion. Our own recommendations, like introducing a more nuanced revenue-sharing model, could be seen as contributing to what some call "enshittification", a scenario where customers pay more, for less or the same. It's an uncomfortable thought. We sympathize with developers who might feel squeezed, yet the business reality is that Unity must find ways to become sustainably profitable. This is considering that their current model and scaling with end-user subscriptions does not work. Balancing empathy for the community with the hard truths of running a business is no simple task, and this project has forced us to reflect on the tension between these perspectives.

Appendix

Appendix 1: Interview Summary - Hanne Lien: Head of Game Design (14.04.2023)

Background

Hanne Lien is the program manager for the Bachelor's in Game Design at Høyskolen Kristiania. She started Norway's first game design program at Sunnhordland Folk High School in 2010. Hanne has also worked as a Community Manager for PlayStation Norway and later at Funcom, Norway's largest game development company.

- The gaming industry will continue expanding over the next 5–10 years, driven largely by increased smartphone accessibility.
- High-end gaming, such as PC gaming, is also growing but at a slower pace.
- AR and VR remain in early stages of adoption, with limited appeal to mainstream gaming audiences.
- Streaming platforms entering game distribution and interactive movie experiences (e.g., Netflix's *Bandersnatch*) present both opportunities and challenges for game companies. These developments could complement traditional games or emerge as substitutes.
- Small game studios face difficulties in balancing effective monetization strategies without harming the player experience:
 - Aggressive monetization can alienate players if not handled carefully.
 - Monetization approaches vary by platform; for instance:
 - Freemium mobile games allow more room for aggressive strategies.
 - Premium console and PC games require a more subtle approach.
- Market saturation will intensify, making it harder for smaller companies to stand out.
- Success will increasingly depend on leveraging social media dynamics effectively while operating on limited resources.

Appendix 2: Interview Summary - Magnus Tellefsen: Video Game Advisor (11.04.2023)

Background

- Games advisor for The Norwegian Film Institute (NFI).
 - NFI is a public institution responsible for subsidizing game development in Norway and promoting the Norwegian games industry.
 - Magnus is responsible for allocating public money to promising game development projects in Norway.

- The Norwegian Industry will remain relatively small to our Scandinavian counterparts, particularly Sweden, for the short to medium term.
- In international terms, private backing is increasing. Private investors are providing more funds to indie productions as opposed to pure AAA projects.
- It is uncertain how international conflicts such as the war in Ukraine will impact the demand for entertainment.
- The future growth of the national games industry will rely on the outcome of the Norwegian government's games strategy.
- Most successful indie companies relative to their cost structures tend to be mobile gaming companies.
- We see increasing backlash among customers for dlc-monetization. Though, it is difficult to quantify how this would impact, or if it currently impacts games sales.
- We expect larger releases from the Norwegian industry, pushing for recurring revenue generation and monetization solutions. Particularly, from Funcom and their anticipated release of *Dune: Awakening*.

Appendix 3: Interview Summary - Rune Fjeld Olsen: Game Journalist (18.04.2023)

Background

- Videogames journalist for LevelUp and NRK.
 - Predominantly writes individual game reviews as well as stories regarding new developments in the industry.

- Increasing trend of buying digital assets in video games. This is exemplified in video games like *Counter-Strike* or *Fortnite* with the popularity of skins.
- Indie games are increasing in popularity, but the most "played" games are concentrated in a relatively small pool of AAA games (with few exceptions, e.g *Minecraft*).
- The most popular games in the industry are in some cases games that were released almost 10 years ago (e.g *Fortnite and Minecraft*). Singular titles continue to dominate screen time.
- The battle-pass is becoming an industry standard for the games-as-a-service model, preferred to loot-boxes or normal skin monetization.
- Digital asset monetization is coming under EU scrutiny.
- FIFA was forced to change their digital currency sales due to legal pressure, following claims of gambling being aimed towards kids through their pack-opening system.
- VR games are becoming more viable as a medium, as exemplified by the success of *Half-Life Alyx*. However, VR headsets themselves are still far from affordable and this will hinder the market cap for VR games.

Appendix 4: Interview Summary - Tobias Fossheim: CEO of Krillbite Studio (6.03.2023)

Background

- CEO of Krillbite Studio
 - o 10 Person game development studio located in Oslo.
 - Makes games for PC, consoles and mobile.

- Receives funding from NFI, approximately 75% of budget funding for newer titles.
 - The Norwegian games industry is reliant on public funding for the foreseeable future.
 - Krillbite is part of the norwegian "underskog", name signifying growing norwegian indie companies.
 - Only a few companies in Norway have private backers (e.g *Red Thread Studios* and *Funcom*).
- Reliance on few commercial successes (Mosaic and Among the Sleep).
 - Among the Sleep is a horror game from 2014, has generated approximately \$931,399 dollars in net revenue.
 - Experienced virality due to content creation on YouTube and social media being highly geared towards horror games at the time of release.
- Provides stock options for employees.
- Struggles to recruit senior programmers.
 - In Norway, the games industry cannot offer competitive wages relative to industries like energy or finance.
 - Being unable to hire senior staff is dually problematic since we also end up lacking mentors for new-hires.
- Motivated by games as an art form.
 - Commercial success is not necessarily the main motivation. However, there is a challenging balancing act between having a financially sustainable company and following our creative passions.

Appendix 5: Interview Summary - Marius Thorvaldsen : CEO of BreachVR (24.10.2024)

Background

- CEO of BreachVR
 - 50 man game development studio located in Trondheim.
 - Large company in a Norwegian industry context.
 - Sells both video games for the private market and for public actors (serious games).

- Factors for considering your tech-stack:
 - Cost-benefit is very important of course.
 - Unity, Adobe etc is frequently used but is being challenged by open-source and license free alternatives (Godot, Blender).
 - Professional tools remain better at a lot, but it is difficult to predict how quickly these tools will be more viable alternatives.
 - Choosing the right tool for the right job:
 - Public customers sometimes have formal requirements.
 - Private consumer market is more liberal.
 - Our stack is very diverse, requires employees to be comfortable with more than just one framework (e.g C# in Unity and Unreal Engine, or Godot Script in Godot).
- The viability of open-source:
 - Godot is currently only used for internal experimental projects. However, we are aware of Godot becoming more relevant for larger parts of our development process.
 - Godot was recently recognized by *Cesium* (open-source project that models the globe in real-time 3D), and they are integrating an open-source plugin to the software allowing for integration. This is meant to expand on the range of possibilities for developers in gaming, simulations and education who may be interested in using Godot.
 - When industry actors like Cesium recognize Godot, then that is a strong stamp of approval.
 - Blender is our primary solution for 3D modelling. In the future, we will try to eliminate
 any for-profit software for our 3D modelling efforts due to a general decision regarding
 cost-benefit.

- The impact of the runtime fee:
 - Strategic changes from engine providers impact us greatly.
 - We are a company of 50 people (relatively big in Norway), therefore we have to continually reassess our licensing costs and general economic situation.
 - The impact of the "runtime fee" (which they have partially reversed) has had a huge impact, as we use Unity for both gaming and non gaming projects, where they still demand increasingly expensive licensing costs (they do have threshold for some indie-actors, but we are becoming too big for these to be relevant for us).
- It's great that there is competition between industry actors.
 - The clumsy missteps of Unity is making us and others consider Unreal more actively.
 - We use both, but we are also very positive to open-source solutions that are challenging the more established actors of the industry.
- Do I believe in Unity's ability to pivot to a general real time 3D environment?
 - No, judging their current actions I am not confident in their ability to pursue new markets while maintaining relevance in the space of specialized game engines.
 - Barring their dominance in mobile gaming, they should not be so confident as to keep market shares in console and PC gaming.
- Do we use IronSource or Unity Ads?
 - No, not relevant for our portfolio of products.
 - We sell premium games that tend to have a one-time purchase model.
 - These tools are valuable, but particularly cater to mobile gaming. Ad services are not commonplace in markets like console or PC gaming.

Appendix 6: Interview Summary - Joshua Anderson : CEO of OffAxisStudio (24.10.2024)

Background

- CEO OffAxisStudio
 - o 10 man game development studio from Australia
 - o Creates games, digital assets (Asset Marketplace) and game dev tools (plugins).

- The viability of Unity for selling digital assets (Scripts, models):
 - Unity generates the most interest in our products (both from a whitelisting and purchasing standpoint).
 - The difference is significant, though our product's presence there is much larger and more thorough which skews the data.
 - Aside from differences in quantity of offerings, the difference also comes down to the game engine market share leaning heavily in the favour of Unity.
 - The shift in mobile gaming also has an impact on this (Unity has superior mobile support, and the general low poly style nature of our models fit the market well).
- Who invests in our products (digital assets):
 - o Diverse range of customers, large developers buying them for prototyping
 - Smaller teams and single developer studios for development.
 - Hobbyists create experiences for fun or education without commercial application.
 - Our data shows that we have our strongest base in the indie world, and our models end up being released through customers' games on platforms like Steam, Mobile (Android and IOS) and Nintendo Switch.
 - Also experienced customers that invest in 'Metaverse' and blockchain developers looking
 to add libraries of assets to their platforms for their users to customize and use in their
 editors as well as for generative visuals. We are very careful with these sorts of ventures,
 and it is very contentious (uncharted waters).
- The ability of Unity to maintain an attractive platform:
 - There is no denying the ease and comfort of using both Unreal Engine (Marketplace & Engine) and Unity (Asset Store & Engine).
 - The market for digital assets has waxed and waned over the decade.
 - We are positive in regards to their ability to maintain an attractive ecosystem for digital asset sales.

- Unity has a slight edge in its attractiveness relative to Unreal, due to its user base and ease of use, but that isn't to say it hasn't had issues. In fairness, the same can be said for Unreal as well.
- Unity maintains a strong presence of hobbyists and novice users compared to other platforms, due to its market share and the ease of entry provided by the engine, C# as a language and its relatively mature asset platform/library.
- Great boon for sales, but demands the engine to be very user friendly continually.
- We are also in the business of selling certain game dev tools, and as such, we sometimes can capitalize on the shortcomings of individual functionalities for the Unity engine not working properly or in an easy manner (e.g recent case of Unity render pipelines and shader conversion tool being confusing. We launched an alternative small solution that programmatically converts and re-imports shaders that use our asset packs, removing the human error element and any editor changes. A great opportunity to value add from a platform usability challenge).

• Other insights:

- o Itchi..io and GameDev Market are upstarts catering to more niche developers.
- Experimental sales campaigns, and opportunities to get involved in projects and campaigns in the independent development community.
- Developers looking to publish not only assets, but entire game dev tools on big platforms, it can be difficult to manage huge, complex tools (such as our upcoming World Edit tool) across a year, or years of development time as well as over its lifetime as a product.
- Unity is constantly improving on what versions of the editor users are developing on.
- Finally, Unity provides better support on the engine side for the creation of custom toolchains that both interface with and run inside of the engine to assist in the creative workflow of asset creation and in general this support only gets better with time. This is rather recent, but we welcome it as they seek to bring more third parties into their ecosystem in providing value added extensions.

Sources

- Agreda, V. (2005, October 4). An interview with Unity's David Helgason. *Engadget*.

 https://www.engadget.com/2005-10-04-an-interview-with-unity-ceo.html?guccounter=1

 &guce_referrer=aHR0cHM6Ly9lbi53aWtpcGVkaWEub3JnLw&guce_referrer_sig=AQ

 AAAEZ3NBzvJHnGfNS4Ll1RMht3r9UNu-BZetTr6jYclW8sVhh6MO3ey-2yVvFyGlau

 SykL8QVfE8l3cggCst4LEL4ASHOpsxvh-FywYi2oLwLvNXwMV0vr2SFDUFA7bYLC

 nXDwLH-zYNqtgrr2Ldba9MW56tykoxt67WwHLG2Lw- 3
- Anderson, J. (2024, October 24). Personal Communication, Joshua Anderson, CEO of Off-Axis Studios [Video Call].
- Axon, S. (2016, September 27). Unity at 10: For better—Or worse—Game development has never been easier. *ARS Technica*.

 https://arstechnica.com/gaming/2016/09/unity-at-10-for-better-or-worse-game-developme nt-has-never-been-easier/
- Batchelor, J. (2016, September 14). Unity dropping major updates in favour of date-based model.

 Games Industry.Biz.

 https://www.gamesindustry.biz/unity-dropping-major-updates-in-favour-of-date-based-model
- Brodkin, J. (2013, June 3). How Unity3D Became a Game-Development Beast. *Dice*. https://www.dice.com/career-advice/how-unity3d-become-a-game-development-beast
- Carey, D., Dumaine, B., & Useem, M. (with Rubenstein, D. M.). (2018). *Go Long: Why Long-Term Thinking Is Your Best Short-Term Strategy*. University of Pennsylvania Press. https://doi.org/10.9783/9781613630891
- Christensen, C. M., Raynor, M. E., & Anthony, S. D. (2003). *The Innovator's Solution, with a New Foreword: Creating and Sustaining Successful Growth*. Harvard Business Review Press.

- Christensen, C. M., Scott D. Anthony, Gerald Berstell, & Denise Nitterhouse. (2007). Finding the Right Job For Your Product. *MIT Sloan Management Review*.

 https://www.dropbox.com/scl/fi/f2okm84air7zk70szdj5u/Christensen-FindingtheRightJob ForYourProduct.pdf?rlkey=0vhn4l13n4mbvhg5tkaga971m&e=1&dl=0
- Encyclopaedia Britannica. (2024, October 25). *Waiting for Godot*. https://www.britannica.com/topic/Waiting-for-Godot
- Espen Andersen. (2014, August 12). *How to write a teaching case*. https://appliedabstractions.com/2014/12/08/how-to-write-a-teaching-case/
- Fossheim, T. (2023, March 6). Introduksjon til Krillbite [Digital samtale].
- Fung, B. (2021, January 16). Netflix: Fortnite is a bigger rival than HBO. *Washington Post*. https://www.washingtonpost.com/technology/2019/01/18/netflix-fortnite-is-bigger-rival-than-hbo/
- Godot. (2020, August). Why the engine named as godot, any reason?

 https://forum.godotengine.org/t/why-the-engine-named-as-godot-any-reason/15107/2
- Godot. (2023, July 11). *Godot Funding Breakdown & Hiring Process*. https://godotengine.org/article/funding-breakdown-and-hiring-process/
- Higgins, T. (2009, March 19). Unity 2.5 for Mac and Windows now available! *Unity*. https://unity.com/blog/technology/unity-25-for-mac-and-windows-now-available
- Le, K. T. (2022, July 13). John Riccitiello: Devs who shun monetisation are "pure, brilliant" and "fucking idiots." *Pocket Gamer.Biz*.
 - https://www.pocketgamer.biz/unity-ironsource-john-riccitiello-marc-whitten-merger/
- Lien, H. (2023, April 14). *Utdanning og spillbransjen* [Fysisk møte].
- Morris, I. (2023, September 21). Unity's Runtime Fee: Is it even legal? *Pocket Gamer:Biz*. https://www.pocketgamer.biz/unitys-runtime-fee-is-it-even-legal/
- Muratori, C. (2023, September 14). *Game Development Post-Unity*. https://www.computerenhance.com/p/game-development-post-unity

- Olsen, R. (2023, April 18). *Media og spillbransjen* [Personal communication].
- Peckham, E. C. (2019, October 17). How Unity built the world's most popular game engine. *Tech Crunch*.
 - https://techcrunch.com/2019/10/17/how-unity-built-the-worlds-most-popular-game-engine/
- Plant, L. (2023, September 13). Why Unity's New Install Fees Are Spurring Massive Backlash

 Among Game Developers. *IGN*.

 https://www.ign.com/articles/why-unitys-new-install-fees-are-spurring-massive-backlash

https://www.ign.com/articles/why-unitys-new-install-fees-are-spurring-massive-backlash-among-game-developers

- Reddit. (2023, November). Juan Linietsky seems to think Godot is not competing with Unreal or Unity.
 - https://www.reddit.com/r/godot/comments/14wr357/juan_linietsky_seems_to_think_godot_is_not/
- Richter, F. (2022, December 12). Are You Not Entertained? *Statista*.

 https://www.statista.com/chart/22392/global-revenue-of-selected-entertainment-industry-sectors
- Robert K. Yin. (2003). Case Study Research: Design and Methods (3rd ed.). Sage Publications.
- Satterthwaite, M. (2005, April 21). GooBall. *Inside Mac Games*.

 https://web.archive.org/web/20051101152026/http://www.insidemacgames.com/reviews/view.php?ID=575&Page=1
- Sinclair, B. (2023, September 12). Unity adding a fee for each time a game is installed. *Games Industry.Biz*.
 - https://www.gamesindustry.biz/unity-adding-a-fee-for-each-time-a-game-is-installed
- Smith, E. (2023, September 14). Slay The Spire devs say Unity "f****d up" in first-ever statement. *PC GamesN*. https://www.pcgamesn.com/slay-the-spire/unity

- Sterling, J. (Director). (2015). *The Asset Flip (The Jimquisition)* [Video recording]. https://www.youtube.com/watch?v=5svAoQ7D38k&t=1s
- T. Grandon Gill. (2011). *Informing with the Case Method*. Informing Science Press.
- Tassi, P. (2013, April 18). EA Voted Worst Company in America, Again. Forbes.
 https://www.forbes.com/sites/insertcoin/2013/04/09/ea-voted-worst-company-in-america-again/
- Tellefsen, M. (2023, April 11). Spillbransjen og NFIs rolle [Digital samtale].
- Thorvaldsen, M. (2024, October 24). Personal Communication [Video Call].
- Tracxn. (2024, October 4). Acquisitions by Unity. *List of Unity's Acquisitions*.

 https://tracxn.com/d/acquisitions/acquisitions-by-unity/__TOyT42sZN91e0D-HscIz28Kt
 7EdLuANDrXMbaEwOCXw#news
- Unity. (2009, October 26). Sequoia Capital Invests in Unity. *Unity Newsroom*. https://unity.com/news/sequoia-capital-invests-unity
- Unity. (2010, November 10). Unity Technologies Launches 3rd Party Marketplace "Unity Asset Store." *Unity Newsroom*.

 https://unity.com/news/unity-technologies-launches-3rd-party-marketplace-unity-asset-st ore
- Unity. (2014). Unity Ads SDK changelog. *Unity Documentation*. https://docs.unity.com/ads/en-us/manual/Changelog
- Unity. (2020, September 17). Unity Announces Pricing of Initial Public Offering.
 https://investors.unity.com/news/news-details/2020/Unity-Announces-Pricing-of-Initial-Public-Offering/default.aspx
- Unity. (2024). *Quarterly Results*. Unity Investors.

 https://investors.unity.com/financials/quarterly-results/default.aspx
- Unreal Engine. (2024). *Licensing*. https://www.unrealengine.com/en-US/license

Walker, I. (2022, July 14). Unity CEO Calls Mobile Devs Who Don't Prioritize Monetization 'Fucking Idiots.' *Kotaku*.

https://kotaku.com/unity-john-riccitiello-monetization-mobile-ironsource-1849179898 Wijman, T. (2023). *Global Games Market Report*. Newzoo.

https://resources.newzoo.com/hubfs/Reports/Games/2023_Newzoo_Free_Global_Games _Market_Report.pdf?utm_campaign=2023-08-GMRF-GGMR%202023%20free%20repo rt&utm_medium=email&_hsenc=p2ANqtz--UZAHCERLEymfsFUS2rxSCQeoqRnYTN Qt0T1XyjTJhZL4JLJ6doli-_xTg0vrwlroEo28F_Ho8-Xkegc_IsGGA2TwJ4g&_hsmi=26 9284764&utm_content=269284764&utm_source=hs_automation

- YouTube (Director). (2011). EA CEO John Riccitiello On Gaming Microtransactions [Video recording]. https://www.youtube.com/watch?v=ZR6-u8OIJTE
- Macrotrends. (2024). *Unity Software—4 Year Stock Price History* | *U*.

 https://www.macrotrends.net/stocks/charts/U/unity-software/stock-price-history#google_vignette