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The Big Game Engine Report of 2025

End of the Era of In-House Engines

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Game engines space has been changing rapidly with strong established public engines winning share from historically dominant custom game engines

Overview of the Report



Overview:

- This report explores the game engines used in games released on **Steam** over time.

Summary

- Unity, Unreal Engine and custom game engines of large AAA studios continue to dominate the game engine market.
- However, the trends have been shifting significantly over the last 10 years, especially so in the last 5.
- Unreal Engine is quickly winning share from custom engines, becoming the go to game engine for many AAA studios.
- Unity has also started to see an impact as UE5 competes with Unity over simplicity and user experience, often becoming the preferred platform even among indie developers.

Methodology

- The methodology relies on VGI's estimations and tagging of games against game engines. The final slides of the report delve more into methodology.
- We capture game engine data for over 13,000 games on Steam.



This report looks at 3 groups of game engines – from the industry leaders to smaller open-source projects

Key Game Engines Covered in the Report

Tier 1 Public Engines	Unreal Engine and Unity have been the dominant publicly available third-party game engines for a long time
Tier 2 Public Engines	Other third-party game engines have a significantly smaller market share, but are often used by indie developers
Custom In-House Game Engines	In-house engines are proprietary tools built by large developers for their specific needs

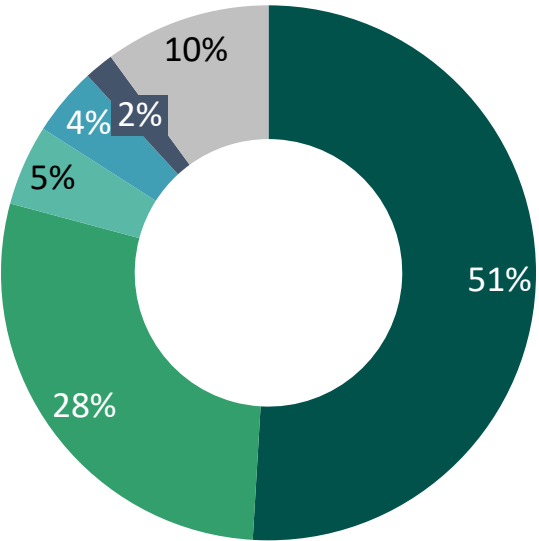


State of Game Engines

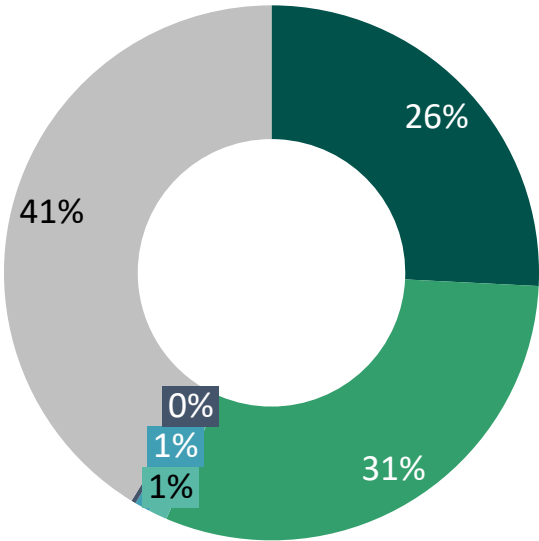
Over half of the games released in 2024 were made in Unity, but only 26% of the units sold as Unreal Engine and custom AAA engines dominate large games

Overview of Game Engine Popularity on Steam in 2024

Number of Games Released in 2024 by Game Engine



All Units Sold in 2024 by Game Engine¹



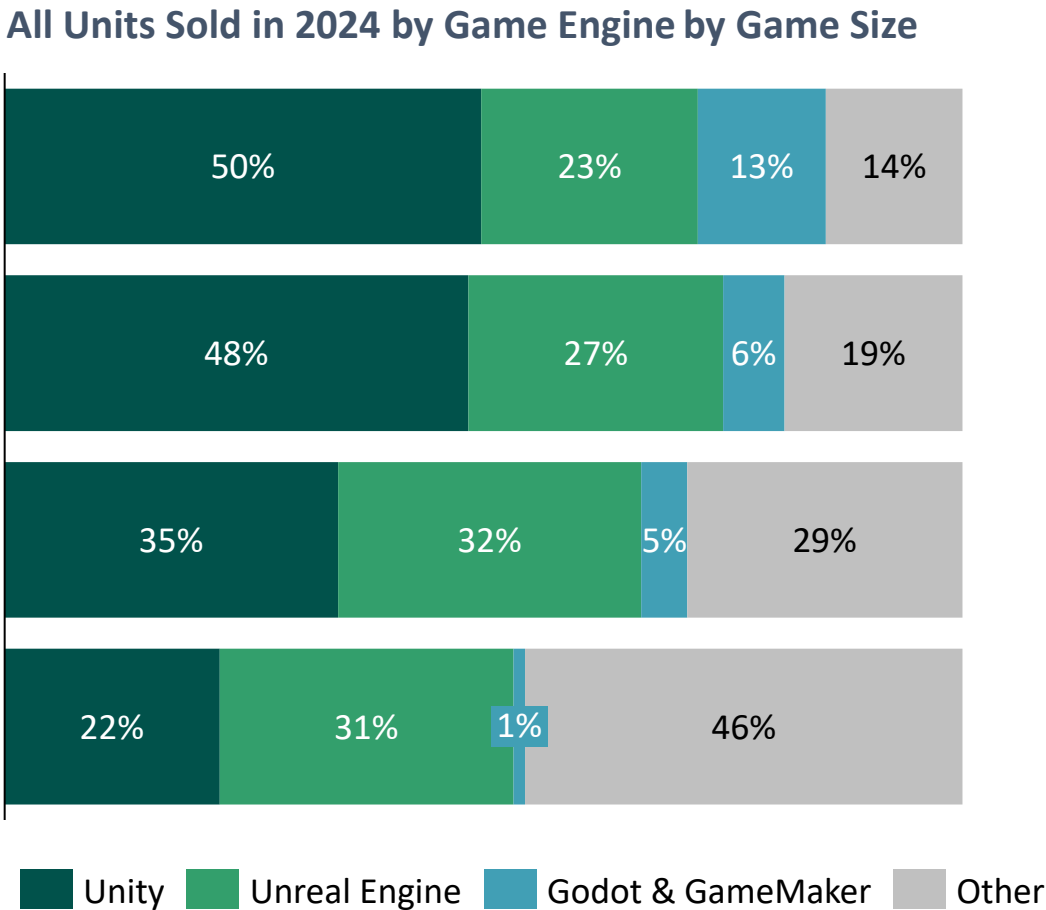
- Unity
- Unreal Engine
- Godot
- GameMaker
- Ren'Py
- Other²

Commentary:

- **Unity** is still the dominant game engine in terms of sheer volume of games being released on Steam
- However, in terms of actual units sold, both **custom in-house engines** as well as **Unreal Engine** beat Unity in 2024
- **Godot, RPG Maker, GameMaker** and other similar public engines count for just over 10% of all games released, but barely 2% of the actual units sold on Steam

Smaller games still skew heavily towards Unity while larger end of the market gets increasingly dominated by custom game engines

Game Engine Mix by Size of Games



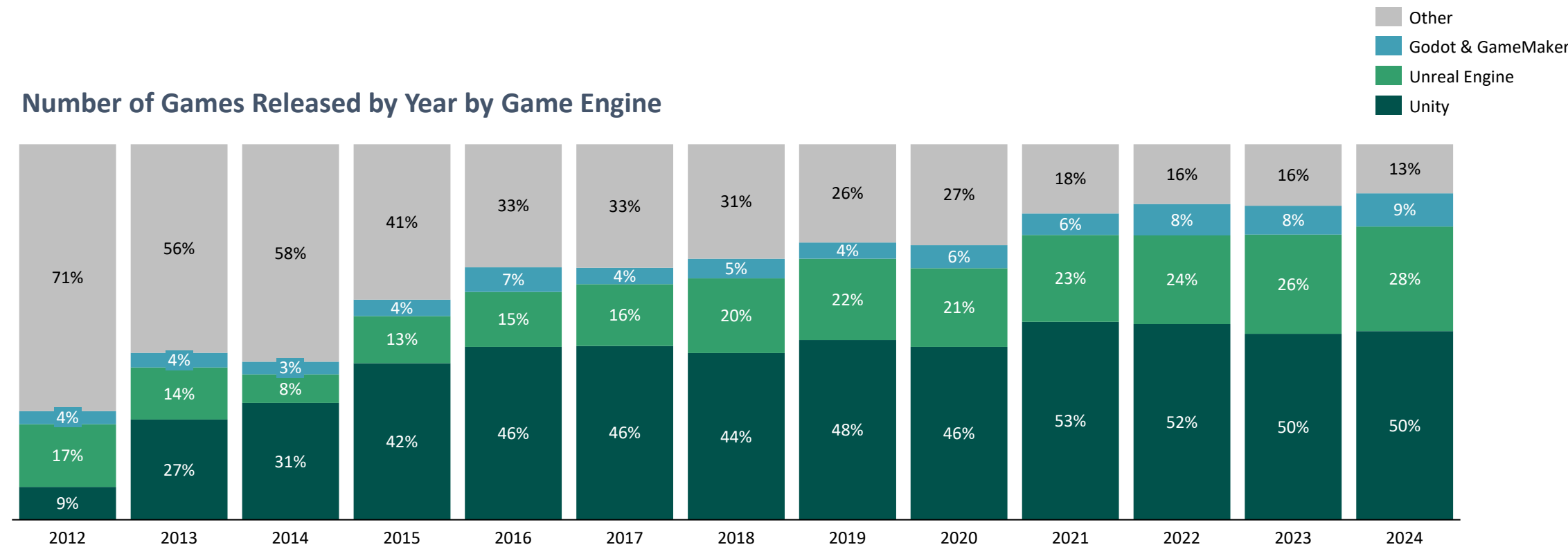
Commentary:

- Smaller games, especially indie titles, are more likely to be built in Unity. Godot and GameMaker also do relatively well in that space.
- Notably, Unity and Unreal Engine have strong presence in every size category of games.
- Larger game studios have built their internal engines for over ten years and still continue to rely on them heavily.

Game Engine Market Share Trends

Unity has been the preferred choice by over 50% of games made on Steam since 2021, but Unreal Engine, Godot and GameMaker have gained share

Game Engine Market Share on Steam Over Time - # of Games Released

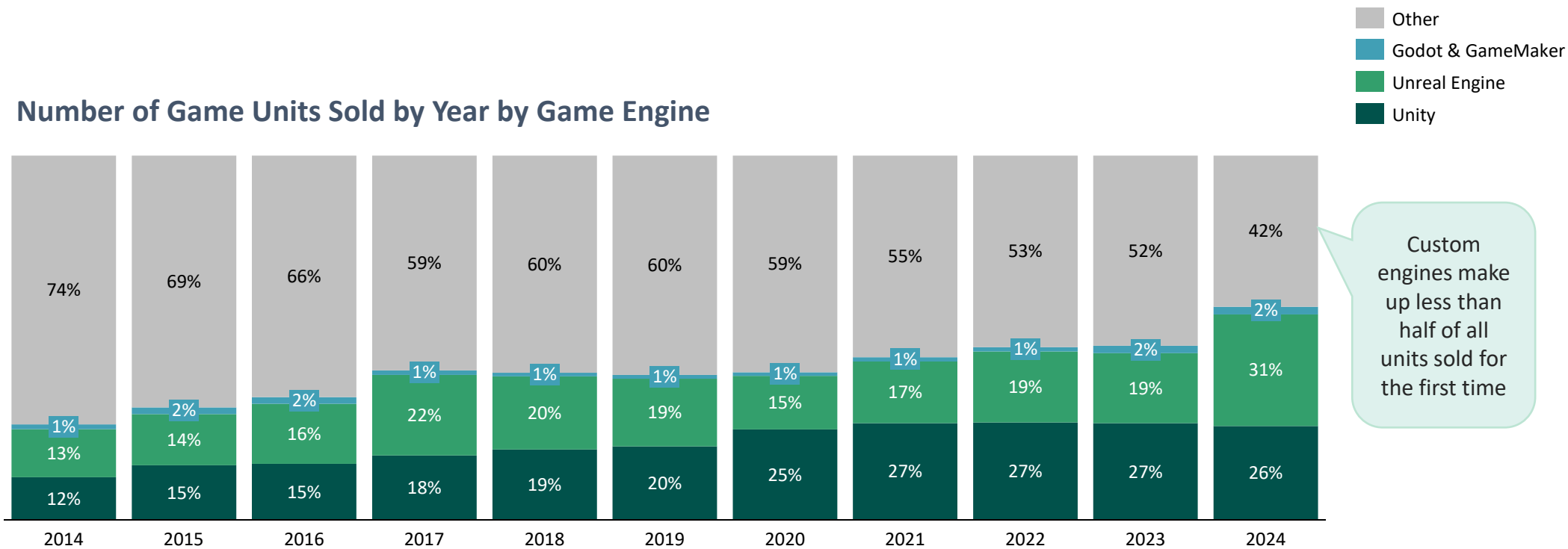


Commentary:

- Over 70% of games released in 2012 were made with custom engines – this has declined to only 13% by 2024
- Unreal Engine keeps winning market share year by year while Unity has seen a slight decline since 2021
- Godot and GameMaker have also grown in the recent years, albeit mostly among smaller games

In terms of units, custom engines still dominate, however, Unreal Engine 5 has had a very strong 2024 with more and more studios opting for UE5 instead

Game Engine Market Share on Steam Over Time - # of Units Sold



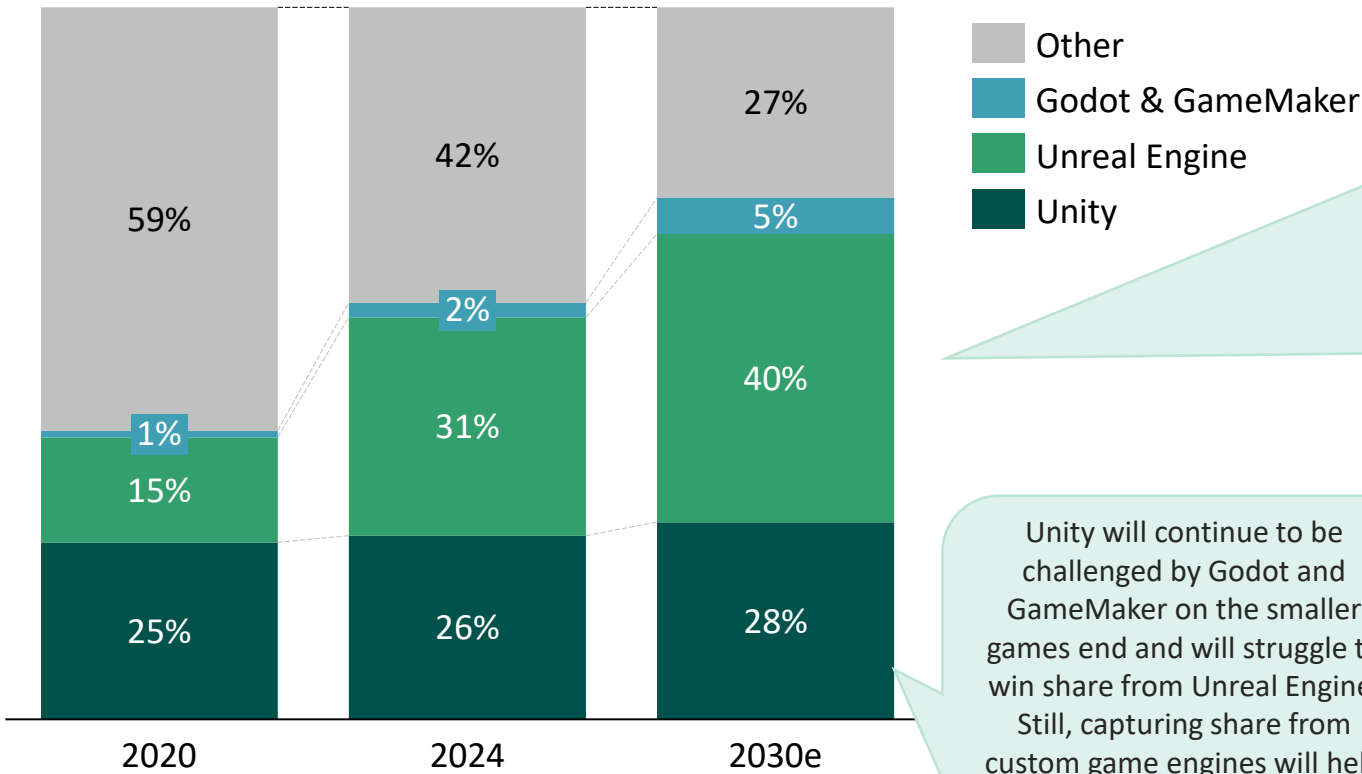
Commentary:

- Custom game engines have been losing share year by year, with less than half of the units sold in 2024 coming from custom engines
- Unity and Unreal Engine had almost equal market shares up to Covid; Unity saw a big jump in 2020, but hasn't grown significantly since
- Unreal Engine lost share in 2020 as major Unreal projects were delayed during Covid and teams were preparing for UE5 to launch
- Ever since UE5, Unreal Engine has won back its lost share, culminating in a very strong 2024 (some of the biggest games of that year were built in Unreal Engine, such as Black Myth: Wukong)

VGI estimates that custom engines will continue to be swapped for Unreal Engine while Unity struggles to capture additional share

Game Engine Market Shares on Steam, 2020, 2024 and Estimated 2030

Game Engine Share on Steam, by Units Sold



- Other
- Godot & GameMaker
- Unreal Engine
- Unity

Unity will continue to be challenged by Godot and GameMaker on the smaller games end and will struggle to win share from Unreal Engine. Still, capturing share from custom game engines will help Unity retain its position

Many studios have announced moving from custom engines to UE for some of their games in the recent years and we expect that trend to continue



It does not always make sense to switch away from an in-house game engine, but there are many cases where a third-party engine can be beneficial

Rationales for and Against Moving Away From Custom Engines

+ Positives of a Public Engine

- **Immediate start** – For a new studio, being able to start on “day one” rather than having to build your own engine is a huge advantage
- **Known quality** – Engines like UE with Nanite and Lumen are proven quality in terms of performance and graphical fidelity unlike a new in-house engine
- **No in-house maintenance** – Much cheaper than maintaining a custom engine of a similar quality
- **Talent pool & training** – Access to talent from other companies who already know how to use a version of the engine. Public engines also have a tonne of documentation and training materials that don’t always exist for in-house engines

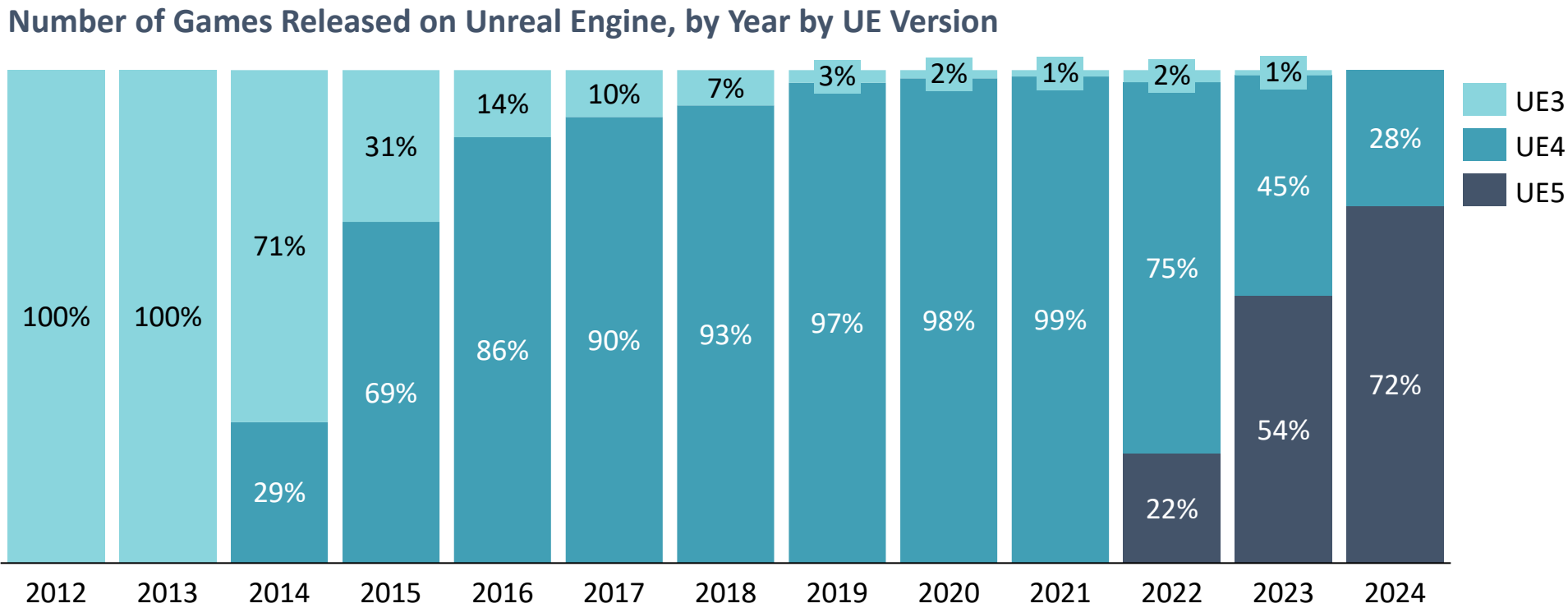
- Negatives of a Public Engine

- **Price increases** – Market dominance allows a few engines to dictate pricing
- **Customization requirement** – Many projects still require heavy modifications, limiting workload reduction
- **Cost of moving engines** – Studios with existing legacy engines and tenured employees require significant time investment to switch
- **Tailor-made** – Custom engines designed for a particular subgenre can allow creation of completely unique approaches, giving them an edge
- **Lack of control** – Reliance on another company and their roadmap for building out features

Deep Dive – Unreal Engine

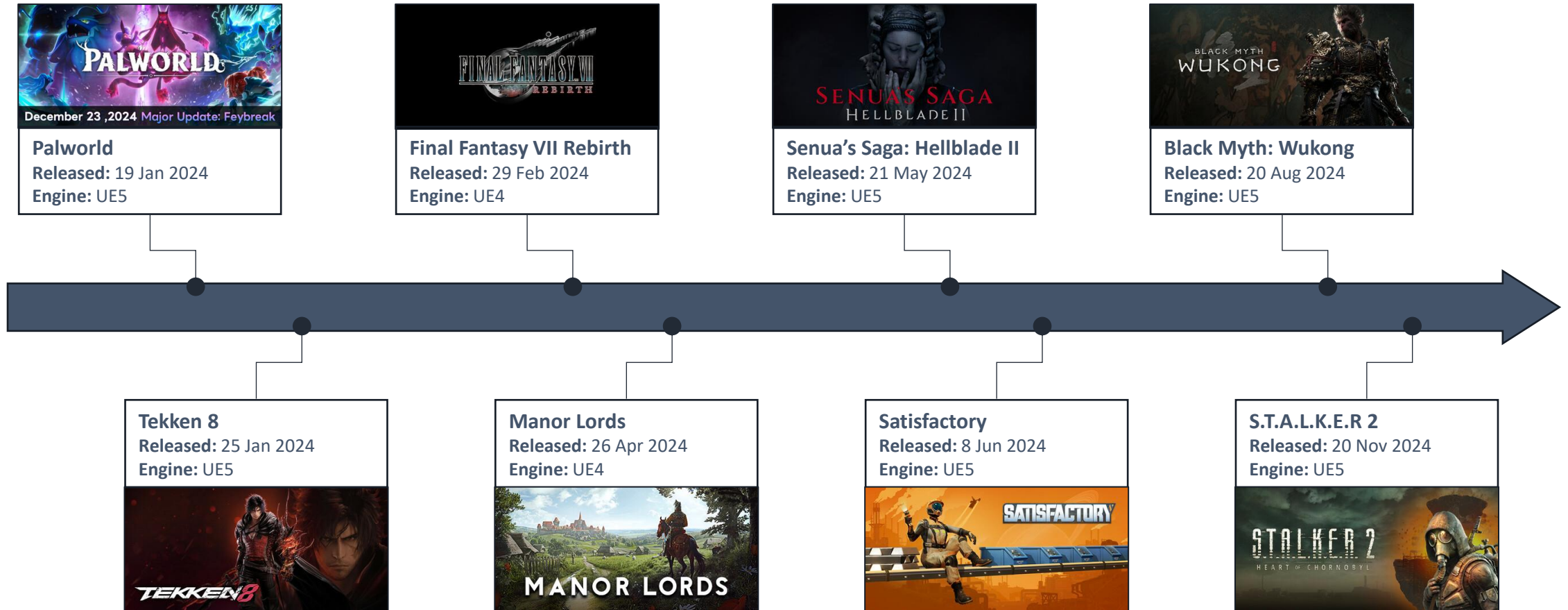
New Unreal Engine version takes 3-4 years to feed through to game launches;
UE5 is now maturing, having made up 72% of all UE projects in 2024

Evolution of Unreal Engine Versions



Some of the largest games of last year were built on Unreal Engine, including a few of the surprise Indie hits

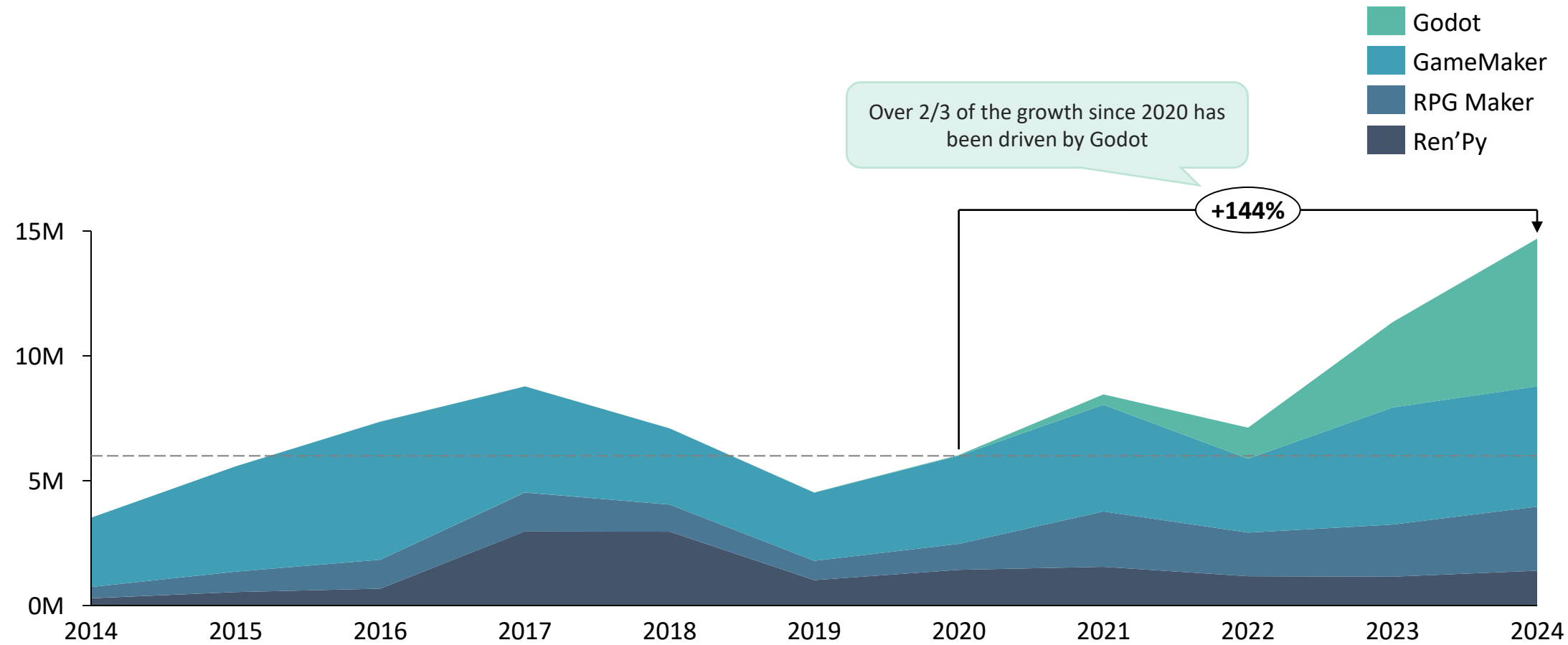
Adoption of Unreal Engine on Steam & Console



Deep Dive – Smaller Public Engines

Godot has been the only smaller game engine that has seen significant growth over the last years (though still remaining very small VS larger incumbents)

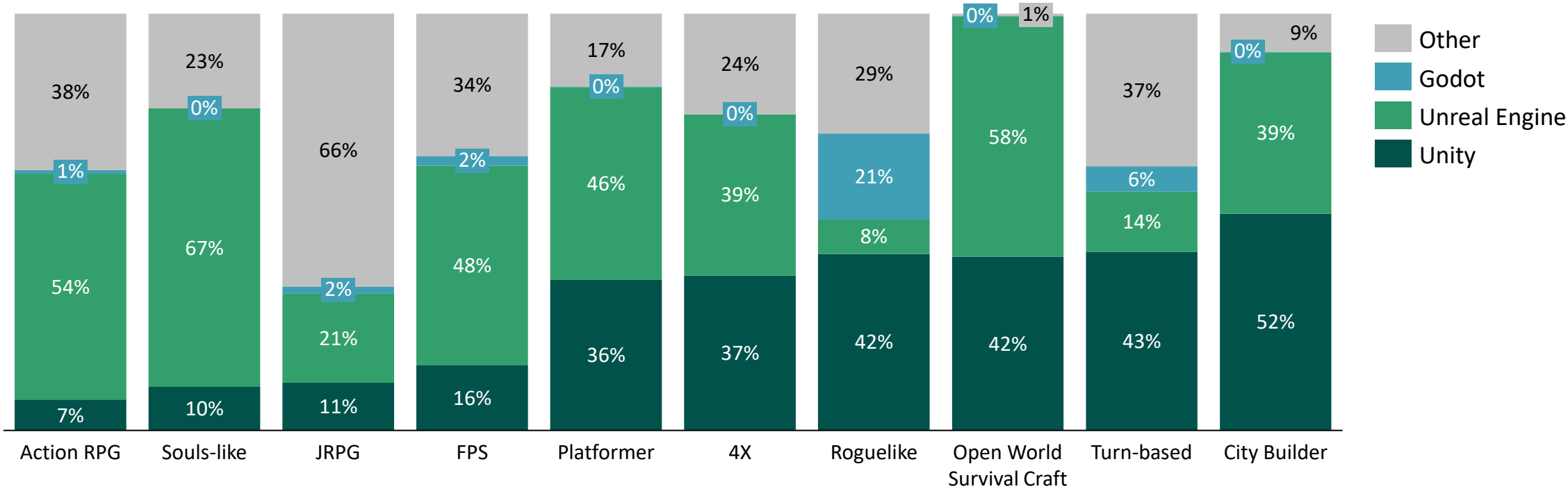
Small Public Game Engine Growth Over Time



Game Engines Popularity by Genre

Game Engine mix varies widely by sub-genre – high graphics requirement games skew UE while strategy & sim skews Unity

Game Engine Mix by Sub-Genre of Games – Units Sold in 2024



Learn More With VGI

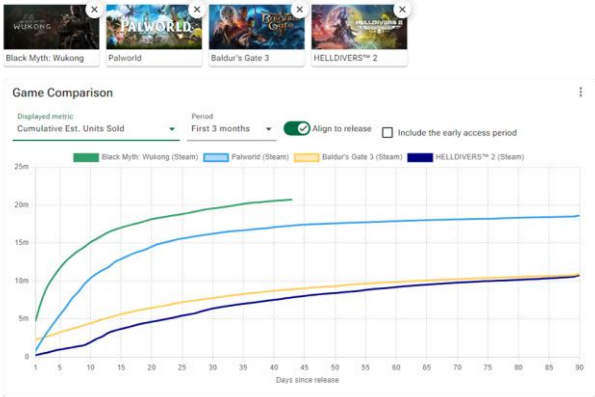
This report created using only the data from the Video Game Insights.

Visit the platform to dig into more details!

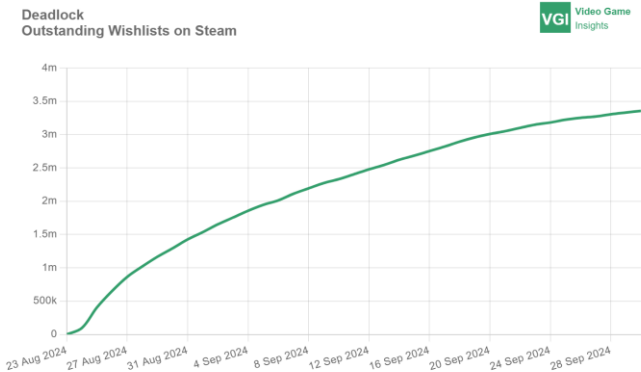
What VGI Can Offer

Explore What We Can do For You

Compare Metrics Across Games













Analyse Wishlists



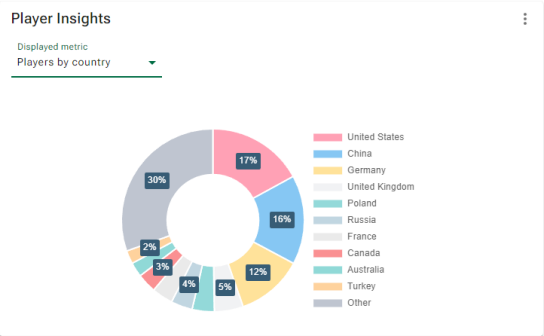
Look at Overlapping Players

Player Overlap

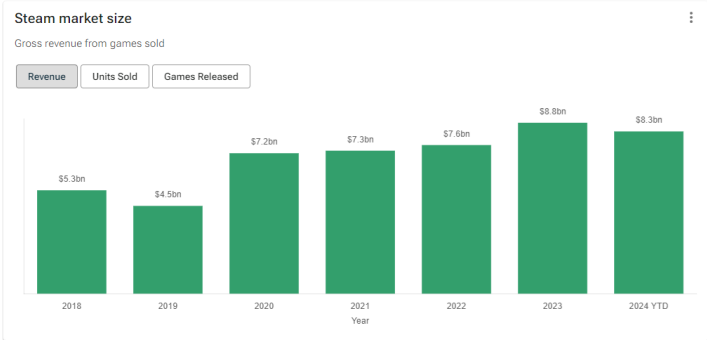
Search by name

Overview				LTD Units Sold Overlap				
#	Logo	Name	First released	Genres	Overlap	Overlap %	Overlap Index	Median Playtime
1		Lords of the Fallen	Oct 13, 2023	Action, Adventure, RPG	436k	3.1%	9.8	200h
2		Lies of P	Sep 18, 2023	Action, Adventure, RPG	694k	5%	9.7	185.2h
3		Thymesia	Aug 18, 2022	Action	225k	1.6%	9.2	206.6h
4		Wo Long: Fallen Dynasty	Mar 3, 2023	Action, Adventure, RPG	430k	3.1%	9.2	169.6h
5		Returnal™	Feb 15, 2023	Action	193k	1.4%	8.6	133.4h
6		ARMORED CORE™ VI FINE	Aug 24, 2023	Action	910k	6.5%	8.6	167.9h
7		FINAL FANTASY XVI	Sep 17, 2024	Action, RPG	179k	1.3%	8.4	107h
8		Lunatic	Mar 15, 2022	Indie, RPG	146k	1%	8.3	176.6h
9		Another Crab's Treasure	Apr 25, 2024	Action, Adventure, Indie	227k	1.6%	8.2	147.2h
10		DARK SOULS™: REMASTERED	May 23, 2018	Action	2.3m	16.2%	8.1	167.7h

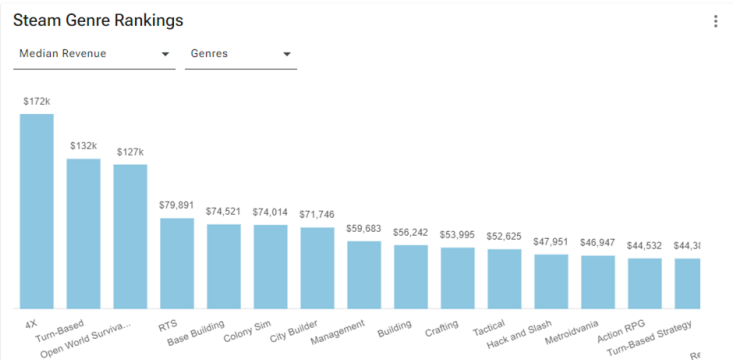
Understand the Audience



Assess Market Trends



Deep Dive Into Genres



Video game industry market data, competitive intelligence and player insights at your fingertips

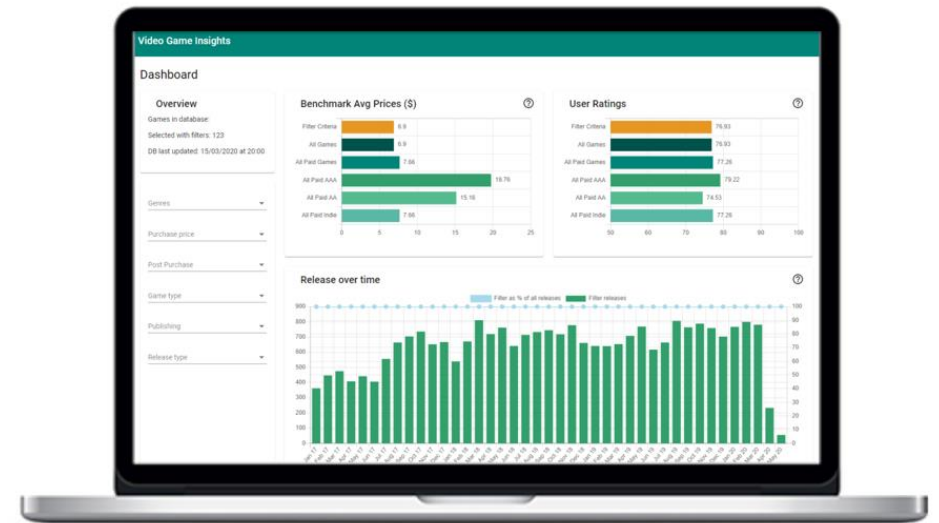
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Appendix

Definitions and methodology

Glossary

Terms	Definitions
AA/AAA games	Large budget games developed by massive teams and companies. AAA game budgets are typically over \$100M to develop
CAGR	Compound annual growth rate
CCU	Concurrent users – active players in-game
FtP	Free to play games
Full Game Revenue	Revenue from the direct sale of a game, excluding any DLC and MTX revenues
IAP	In-app purchases
Indie games	Games developed by independent studios. This covers a large range of studios from 1 person hobby projects to larger studios of a few hundred employees, but budgets still fall far short of the AAA game levels
MTX	Microtransactions
Unit Sales Estimate	Using different estimation methods, including an algorithm based on our internal database of actual sales and the Boxleiter method to get from Steam review numbers to estimated sales. Detailed overview of the method is highlighted in the section below
Revenue Estimate	Estimated units sold multiplied by the price at the time. This is gross revenue, including the Steam cut, but adjusted for local currencies, returned products and discounts

More information:

Definitions: <https://vginsights.com/about>

Methodology: <https://vginsights.com/insights/article/steam-sales-estimation-methodology-and-accuracy>

Email: Support@vginsights.com

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Legal Stuff. We'll Keep It Brief

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