



Launching the exceptional Little Orpheus

The studio relied on Unity's tools to create what IGN calls "one of the best things to come out of Apple Arcade so far."





The challenge

Develop on a new platform while boosting team creativity and collaboration, increasing productivity, and achieving gorgeous visual effects

Platforms

Apple Arcade (iOS, tvOS, and macOS)

Team

6 engineers, 5 designers, 13 artists and animators, plus sound designers, composers, voice actors and producers

Company location

Brighton, England

The Chinese Room: A Unity case study

How do you efficiently create an “exceptional”¹ Apple Arcade game that “sets a new bar in mobile gaming”² after recently changing development platforms? U.K.-based studio [The Chinese Room](#) did just that, choosing Unity as the platform for developing [Little Orpheus](#). Inspired by classic movies like *Flash Gordon*, *Sinbad*, and *The Land that Time Forgot*, *Little Orpheus*’s blend of suspenseful black-and-white storytelling, engaging technicolor gameplay, and a film-quality score combine for rave reviews on IGN³ and other sites.

¹Dann Sullivan, [Pocket Gamer](#), accessed June 16, 2020

²Thomas Hughes, [The Sixth Axis](#), accessed June 12, 2020

³Leif Johnson, [IGN](#), accessed July 17, 2020



Re-platforming on Unity to capture a unique story

The Chinese Room, founded in 2007 by Dan Pinchbeck and Jessica Curry, is widely known for several mods to *Half-Life 2*, cult-hit *Dear Esther*, and its spiritual successor, *Everybody's Gone to the Rapture*. After being acquired by Sumo Digital in 2018, they migrated from their previous game engine to the Unity real-time 3D development platform to make *Little Orpheus*, a cinematic side-scroller.

"For any studio, selecting a game engine is a big investment. For us, it was critical that the company behind it is strong and provides great support. Unity is a very reliable platform, and they have updates almost weekly, which means it just keeps getting better," says lead programmer Louis de Wet.

The Chinese Room's existing engine had its limits with the kinds of workflow and graphics challenges they were facing. To achieve their artistic vision for *Little Orpheus*, they needed something different. Even though the idea of re-platforming under considerable artistic and launch pressures gave them pause, they quickly saw the return on their investment in Unity.

"Early in development, we realized that Unity offered the perfect solution to bring the rich world of *Little Orpheus* to life. And with Unity's rapid prototyping capabilities, we could show the Apple Arcade reviewers our ideas almost as soon as we came up with them," declares de Wet.

The results

- Cinemachine enabled them to rapidly build the story, interweaving two distinct styles, and effortlessly blend animations and transitions
- ProBuilder's modeling and level design capabilities allowed cross-functional teams to collaborate and iterate directly within the Unity Editor
- Unity's ease-of-use unlocked creativity for artists and designers to contribute and polish assets without needing to involve programmers
- Their game IP is future-proofed due to Unity's reliability, customer support, and regular feature updates

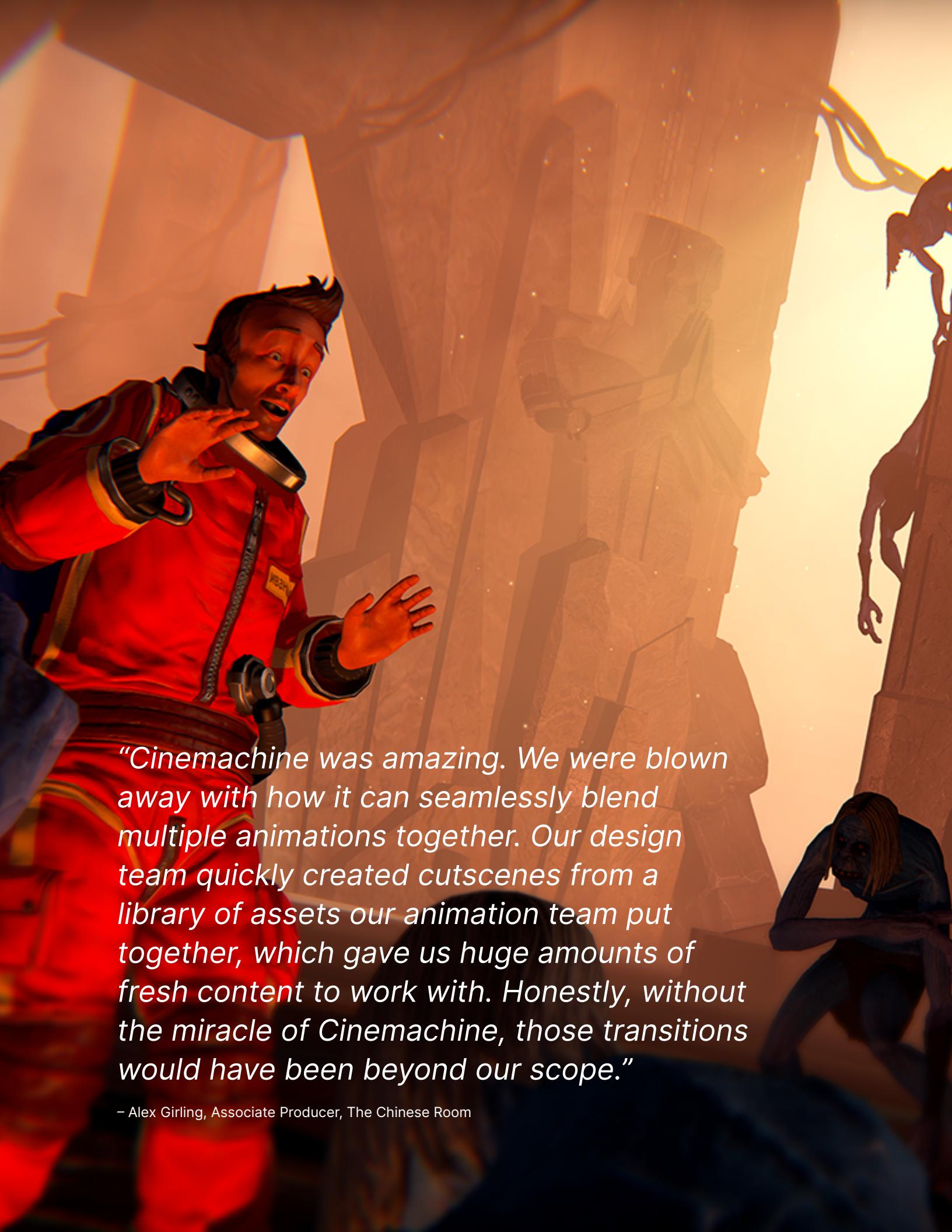
Going from B&W to technicolor seamlessly

Little Orpheus is a big story to tell – Ivan Ivanovich, a '60s-era cosmonaut, journeys through the underworld to recover a missing nuke and establish a workers' paradise. It was also a big development challenge – harness all the studio's resources to efficiently produce a visual knockout worthy of Apple Arcade.

The unique visuals of *Little Orpheus* posed significant creative challenges. Technicolor gameplay is punctuated by black-and-white storytelling scenes, where diminutive Ivan is being interrogated by a frightening Soviet general. So we fade from a claustrophobic underground room, seemingly ripped from a 1950s B-movie, to a gorgeously verdant jungle setting à la *Avatar*.

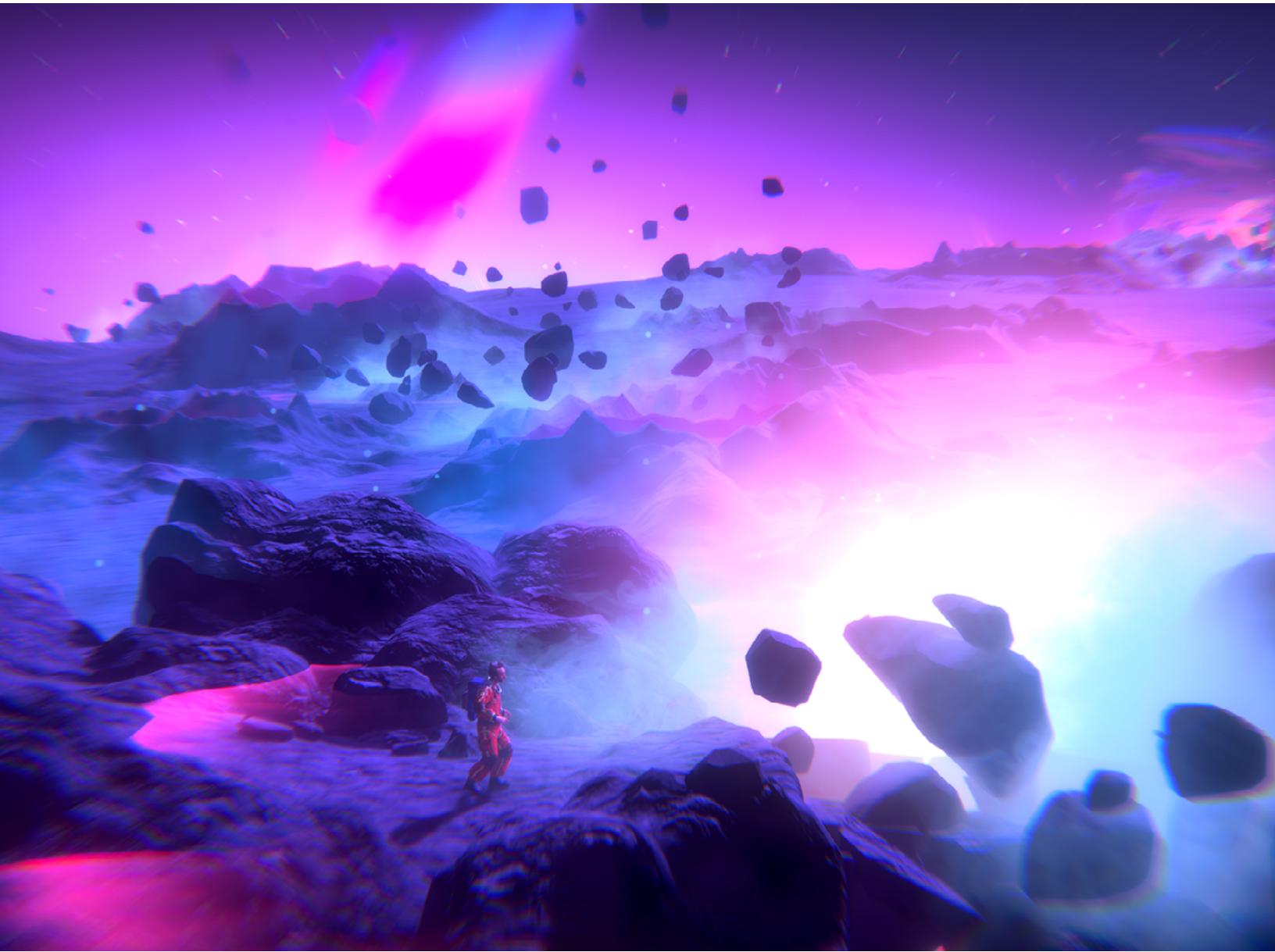
To achieve fluid yet subtle effects like this, The Chinese Room turned to Unity's artist tools. [Cinemachine](#), Unity's dynamic camera system, became a key tool in their storytelling arsenal, letting them efficiently create cutscenes, easily blend animations, and find perfect transitions that otherwise would have been out of reach.





"Cinemachine was amazing. We were blown away with how it can seamlessly blend multiple animations together. Our design team quickly created cutscenes from a library of assets our animation team put together, which gave us huge amounts of fresh content to work with. Honestly, without the miracle of Cinemachine, those transitions would have been beyond our scope."

– Alex Girling, Associate Producer, The Chinese Room



They also found the easy fluidity between working in [Timeline](#) and Cinemachine impressive, as it fueled creativity and simplified the feedback loop. “There were so many things the designers and artists could do without having to get a programmer involved,” says associate producer Alex Girling. Timeline and Cinemachine also enabled the team to do rapid iterations, such as creating early gameplay samples for the Apple Arcade team or for end-of-week studio review cuts.

The frequent recaps helped them see the story unfolding, ensuring that the *Little Orpheus* game builds were always on track. “Every Friday we’d go over what we’d done, see all the updates, and check out the art director’s new lighting and special effects,” de Wet recounts. “There were some serious ‘oh wow’ moments as we saw everything coming together beautifully.”

Putting together Ivan's exciting underground world

For eye-catching backdrops to Ivan's odyssey in the subterranean world, The Chinese Room created striking details throughout the *Little Orpheus* story. There are vast jungle canopies rustling in the wind, insects the size of dogs, glowing toadstools and flowers, and dinosaurs stomping across the primordial landscape. For these visual effects, the team leveraged a number of tools like the [Vertex Shader](#) and the Amplify Shader Editor, a node-based shader tool available from the [Asset Store](#).

And they're ever mindful about user experience no matter what platform players are on. "If you have a great game with great shading and lighting, you want to make sure it plays perfectly on a wide range of devices," adds de Wet. "We found the [GPU Lightmapper](#) very efficient tool for that, especially considering the scale of the game. In particular, it made it much quicker to iterate versions for low-end devices."

As well as the standard animation pipeline, the studio leveraged the [Blend Trees](#) feature, which smoothly combines multiple animations. This optimized transitions such as when Ivan begins swimming underwater. To add polish to non-playing characters as well as Ivan's movements, the team made extensive use of [Animation Rigging](#), which enables real-time inverse kinematics (IKs).

"The Animation Rigging system allowed us to have Ivan effortlessly interact with various objects in the game world, like pulling ancient levers in long-forgotten cities and rotating winches while battling a ferocious snowstorm. Animation Rigging makes all of these interactions look natural, no matter where Ivan is in the game," says Girling.





Getting the whole team in the game

The *Little Orpheus* art director (AD) was responsible for all the lighting – from assessing a scene and establishing base lighting through rendering and final image output. Weighing on just one person, this load could have been a significant workflow bottleneck. Yet even though some junior staff had little production experience, there were no issues.

"They picked up Unity right away, such as preprocessing scenes so the AD could jump in, do his thing, and keep production on track," according to lead artist Ben Matthews. "Unity's intuitive interface saved us a huge amount of time."

It also enhanced workflows by letting artists and designers work end-to-end in the same Editor. Before Unity, their artists would first grey-box scenes in Maya or another third-party tool. Using Unity's integrated **ProBuilder** for modeling and levels, the studio designers blocked everything out and then let their artists complete whatever the level needed and return it to the AD.

"When you're juggling levels with maybe 60 blocks, each with 3-4 playable scenes, keeping the workflow within the Unity Editor makes things much, much easier," says Matthews.



One of the “grandest adventures” on mobile

Ivan’s journey – and even his nail-biting interrogation – is extraordinarily entertaining, as reflected by *Little Orpheus*’s overwhelming industry and player acclaim. As one reviewer put it, “This is a journey that has to be seen to be believed, and is probably one of the grandest adventures you can experience on a mobile phone.”⁴

And unlike the enterprising Ivan, who at one point hides in a dinosaur egg to avoid a ferocious T. rex, this studio’s not hiding its talents at all. Instead, they’ve birthed a unique story that’s landed *Little Orpheus* on several top Apple Arcade lists, affirming the studio’s choice of platform, showcasing its mastery of Unity features, and acknowledging its creative achievements.

So how does The Chinese Room sum up its first game-development and launch experience with the new platform? According to de Wet, “It’s been a real pleasure using Unity!”

⁴Thomas Hughes, [The Sixth Axis](#), accessed June 12, 2020

Want to learn more?

At Unity, we empower the most innovative game creators to produce high-caliber games faster than ever. We help your studio achieve new levels of artistic productivity and creativity – from concept to commercialization. [You can learn more about our solutions here.](#)

For more information about building world-class games, check out [these resources](#) or [chat with an expert](#).



unity.com