



CHRYSAOR STUDIOS
GOLD COAST · AUSTRALIA



GOLD COAST · QUEENSLAND · AUSTRALIA

Virtual Production

Capability Guide

Animax Virtual Production Stage · Kevin Weldon AO Soundstage

LED Volume · Unreal Engine 5 · OptiTrack Camera Tracking · In-Camera VFX

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What is virtual production?

Virtual production is a filming approach in which the background is real, on set, and visible to everyone, rather than being added weeks later in post-production. Instead of putting your cast in front of a green screen and imagining the world, you put them inside it.

At the centre of the Chrysaor Studios offering is an LED volume: a large wall of ultra-high-resolution LED screens. Your chosen environment plays live on those screens. A city street at night. A desert highway. A forest at golden hour. An alien planet. Your camera shoots directly into it, and the light from the screen falls across your talent and set.

The result is captured entirely in camera, looking and feeling like a location shoot, without the cost, logistics, or weather risk of one.

The same technology now used on major Hollywood productions, global streaming series, and premium advertising campaigns is available to productions on the Gold Coast. The approach was made famous by *The Mandalorian*.

50%+

of *The Mandalorian* season one was filmed on an LED volume, with actors performing inside a 270-degree wall. Source: Industrial Light & Magic.

~300

virtual production stages worldwide in 2023, up from only three in 2019. Since then the technology has moved from rare to mainstream. Source: Epic Games.



Key terms, simply explained

LED Volume

The wall of LED screens that displays your chosen environment.

Pixel Pitch

The distance between each pixel on the LED screen. A smaller number means higher resolution, suitable for closer camera distances.

Unreal Engine 5

A real-time 3D software platform that powers the environments on the LED screen. It responds to camera movement live, on set.

OptiTrack Tracking

A precision system that tracks exactly where your camera is pointing and what lens it is using, feeding that data to UE5 so the background perspective always matches the lens in real time.

In-Camera VFX

Visual effects captured live through the camera lens rather than added in post-production. What you see is what you get.

Sim Trav

Simulated travel: filming talent inside a stationary vehicle while a moving environment plays behind them on the LED screen. Replaces the traditional process trailer or plate shoot.

Pixel Pitch Tiers

3.9mm (Standard), 2.6mm (Premium), 1.8mm (Elite). Each tier determines how close the camera and talent can be to the screen.

Two teams. One location.

Quoted and invoiced separately. Delivered as one coordinated quote.

CHRYSAOR STUDIOS

Facility hire

Provides the facility: the stage space, power, climate control, vehicle access, and the wider studio complex at 492 Scottsdale Drive, Varsity Lakes.

ANIMAX STUDIOS

VP technical services

Provides the virtual production technical services: LED volume operation, Unreal Engine environment, OptiTrack camera tracking, calibration, and on-set technical crew.



Never done this before? That is completely fine.

Book a walkthrough and we will show you how it works in person. Most of our clients are shooting on an LED volume for the first time.

Virtual production vs your current options

If you have been shooting on green or blue screen, a cyclorama, or on location, here is how LED volume production compares directly across the scenarios that matter most to a producer.

THE CHRYSAOR
APPROACH

LED Volume

A real environment, on set, captured live in camera.

COMPOSITE

Green / Blue Screen

Background added weeks later in post-production.

STUDIO BACKDROP

Cyclorama

A plain curved wall, lit on stage.

REAL WORLD

On Location

The real world, subject to weather and permits.

With an LED volume, what you see on the day is the shot you keep.

The pages that follow compare the two approaches feature by feature, then set out where green screen still earns its place, and where digital extras quietly save a budget.

Final result in camera ✓ **LED Volume.** Yes. What you see is the final shot.**GREEN / BLUE SCREEN**

No. Background added in post.

CYCLORAMA

No. Background added in post.

ON LOCATION

Yes, but controlled only by location conditions.

Realistic lighting on talent ✓ **LED Volume.** Yes. Screen light wraps the subject with accurate colour and intensity.**GREEN / BLUE SCREEN**

No. Spill must be corrected; post lighting often looks artificial.

CYCLORAMA

Partial. Limited to studio practicals.

ON LOCATION

Yes, but uncontrollable. Subject to sun and cloud.

Talent can see the environment ✓ **LED Volume.** Yes. Full immersion. Better, more connected performances.**GREEN / BLUE SCREEN**

No. Talent performs to a blank screen or floor marks.

CYCLORAMA

No. Blank white or colour wall.

ON LOCATION

Yes, if on location.

Reflections in glass and metal ✓ **LED Volume.** Yes. Screen light reflects accurately into glass, chrome, and polished surfaces.**GREEN / BLUE SCREEN**

Difficult. Reflections often reveal the screen, requiring cleanup.

CYCLORAMA

No. Only studio reflections.

ON LOCATION

Yes, but uncontrolled and unrepeatable.

Night shots and low-light ✓ **LED Volume.** Yes. Any time of day or night is repeatable and controllable.**GREEN / BLUE SCREEN**

Possible, but compositing is more complex in dark scenes.

CYCLORAMA

Possible with lighting. Flat result.

ON LOCATION

Logistically difficult. Permit, crew, and safety costs increase at night.

Golden hour and time of day ✓ **LED Volume.** Any time of day, any weather, on demand. Repeatable between setups.**GREEN / BLUE SCREEN**

Requires a matching plate shot at the right time. Rarely matches perfectly.

CYCLORAMA

Not achievable.

ON LOCATION

Actual golden hour is roughly 20 minutes. One attempt per day.

Continuity between setups ✓ **LED Volume.** Perfect. The environment is locked. Light and sky do not change between takes.**GREEN / BLUE SCREEN**

Plate shots may vary in light and weather from take to take.

CYCLORAMA

Studio lighting can drift.

ON LOCATION

Light, traffic, crowds, and weather all change. A post problem.

Interior with exterior view ✓ **LED Volume.** Yes. Film an interior set with a real exterior world visible through windows or doors.**GREEN / BLUE SCREEN**

Possible. Complex rotoscoping and compositing required.

CYCLORAMA

Not typically suitable.

ON LOCATION

Requires a practical location. Window views are uncontrolled.

Environment changes between setups

✓ **LED Volume.** Yes. Instantly. Change city, weather, or time of day in seconds.

GREEN / BLUE SCREEN

Post work required. Each plate shoot is separate.

CYCLORAMA

Requires a physical repaint.

ON LOCATION

Must move the entire unit to a new location.

Multi-camera setups

✓ **LED Volume.** Yes. Multiple cameras can operate simultaneously in the same space.

GREEN / BLUE SCREEN

Yes, though screen edges can appear in wide shots on one camera.

CYCLORAMA

Yes.

ON LOCATION

Yes, subject to location space.

Second unit and pickups

✓ **LED Volume.** Easy. Reload the same environment and match the shot without returning to location.

GREEN / BLUE SCREEN

Plate must be reshot or matched carefully.

CYCLORAMA

Relight and reshoot on stage.

ON LOCATION

Return to the same location, which may no longer be available.

Vehicle and prop integration

✓ **LED Volume.** Yes. Vehicles, props, and practical sets work naturally inside the volume.

GREEN / BLUE SCREEN

Possible but complex. Edges and reflections require extensive cleanup.

CYCLORAMA

Yes, but plain backgrounds only.

ON LOCATION

Yes, subject to permits and access.

Suitable for sim trav

✓ **LED Volume.** Yes. The standard global application for driving scenes.

GREEN / BLUE SCREEN

Possible. Complex compositing required.

CYCLORAMA

Not typically suitable.

ON LOCATION

Process trailer required. Expensive and complex.

Weather and location risk

✓ **LED Volume.** None. Fully controlled studio environment.

GREEN / BLUE SCREEN

None on stage. Plate shoots still require location shoots in weather.

CYCLORAMA

None.

ON LOCATION

High. Weather holds are expensive and difficult to manage.

Post-production cost

✓ **LED Volume.** Reduced significantly. VFX locked at capture.

GREEN / BLUE SCREEN

High. Compositing, rotoscoping, and colour work required.

CYCLORAMA

Moderate. Backgrounds still require compositing.

ON LOCATION

Varies. Reshoots and travel are expensive.

The costs, and the limits, up front

DIGITAL EXTRAS VS REAL-WORLD EXTRAS

For crowd scenes or busy background environments, LED volume productions can populate the world digitally. Licensed libraries such as ActorCore provide animation-ready 3D crowd characters for a fraction of the cost of hiring, feeding, costuming, and managing background extras. They do not need overtime, hair, or makeup; they match the environment perfectly; and they can be adjusted between takes. This is one of the less obvious but very real budget advantages of virtual production.

WHEN GREEN OR BLUE SCREEN STILL MAKES SENSE

LED volume is not the right tool for every situation. Green and blue screen remain good choices for sequences requiring extreme composite complexity, for very large-scale destruction or stunt work, or when budget requires the simplest possible post-production pipeline. If you are unsure which approach suits your production, our team will give you an honest assessment.

— *We would rather point you to the right tool than sell you the wrong one.*



The Animax Virtual Production Stage

The Animax Virtual Production Stage is Queensland's only permanent, open-access LED volume. It is permanently installed inside our purpose-converted studio at Varsity Lakes, a building converted from a church into a working film production facility.

Because it is permanently installed, there is no build day and no transport cost. You can walk in and shoot. Configurations scale from 1m² for small product and showroom work up to the full 49.5m² volume for feature film and large-scale commercial production.

Permanent, open access

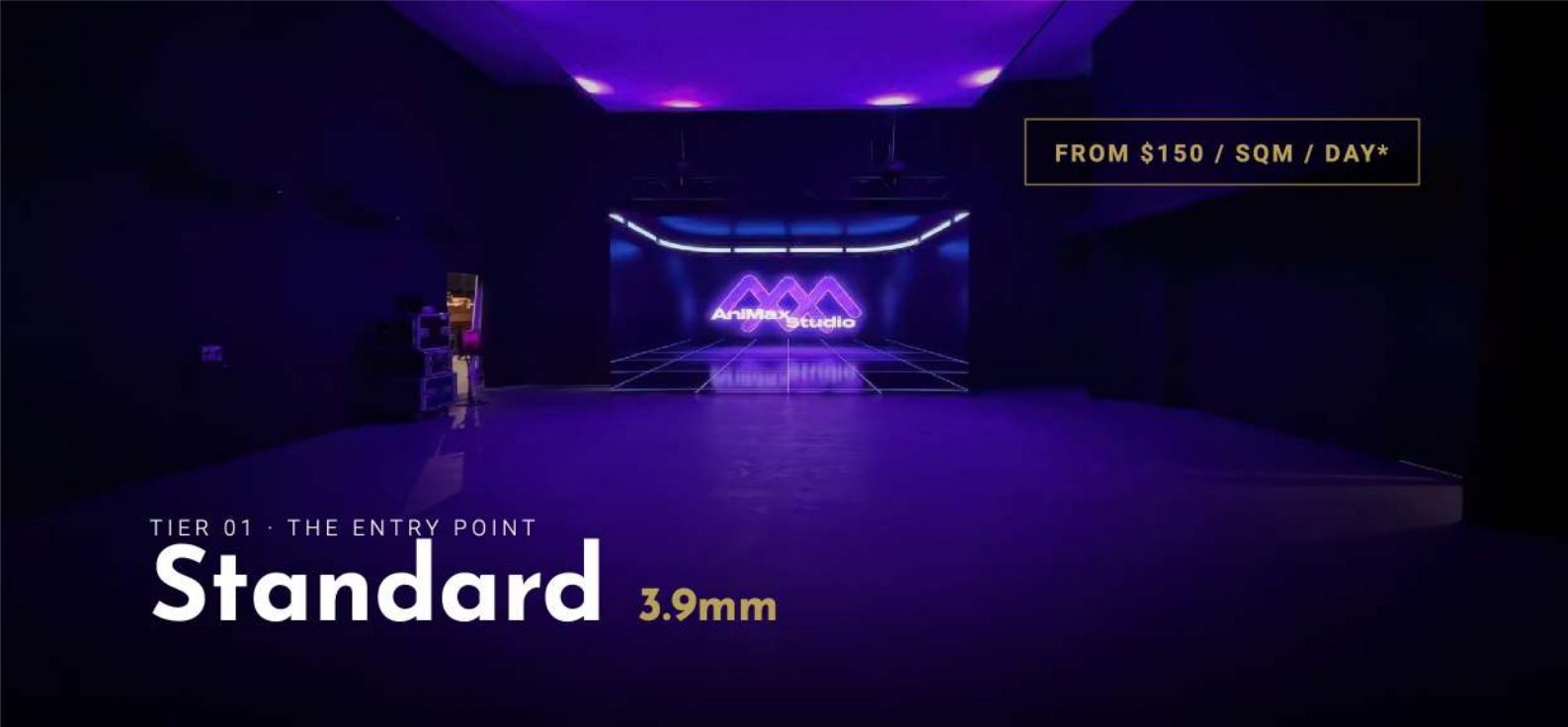
Queensland's only permanently installed, open-access LED volume.

Walk in and shoot

No build day, no transport cost. The volume is ready when you arrive.

1m² to 49.5m²

Scale the screen to exactly what your shot requires.



FROM \$150 / SQM / DAY*

TIER 01 · THE ENTRY POINT

Standard 3.9mm

The accessible entry point to LED volume production. Proven, commercial, and ready for most production applications.

IDEAL FOR

- Music videos with wide-to-mid talent separation
- Sim trav: exterior road, freeway, rural (wide lens)
- Corporate video with soft-focus location backdrops
- Broadcast interview and talent backgrounds
- Property and lifestyle advertising
- Social content and vertical format production
- Soft-focus abstract colour fields

INCLUDES

- Pre-rendered or looped environment playback
- Standard Animax technical setup and crew support
- Access to the Animax environment library



TIER 02 · REAL-TIME ON SET

Premium 2.6mm

Higher resolution for closer camera work. Can add Unreal Engine 5 real-time rendering for a live, responsive environment on set.

IDEAL FOR

- TVCs requiring environmental realism at mid distance
- Automotive product launches: street, road, freeway
- Sim trav with driver or passenger POV (mid-to-wide)
- Music videos with active camera movement
- Branded content and narrative production
- Documentary reconstruction
- Interiors with exterior views through windows
- Night and time-of-day controlled scenes

INCLUDES

- UE5 real-time playback with live camera response (when specified)
- Basic parallax and camera matching for moving shots
- On-set Unreal Engine operator
- Standard Animax technical crew support
- Environment library plus custom consultation



Cinema-grade resolution for close-proximity work. Full In-Camera VFX pipeline with Unreal Engine 5 and OptiTrack tracked camera integration.

IDEAL FOR

- Feature film and high-end streaming
- Close-proximity ICVFX: talent within one metre of screen
- Automotive interiors: driver POV, tight close-ups
- Fashion and beauty with foreground integration
- Photorealistic environments in close frame
- High-end branded and cinematic advertising
- Any shot with the screen in foreground or mid-ground
- Accurate glass, chrome, and surface reflections

INCLUDES

- Full In-Camera VFX (ICVFX) pipeline
- UE5 real-time rendering with OptiTrack tracked camera
- Parallax-accurate compositing and live response
- On-set UE operator and full Animax technical team
- Environment customisation pre-production consultation
- DMX integration with practical lighting
- Priority access to custom environment development

* VP technical services only, separate from studio facility hire. See the indicative pricing guide overleaf.

What it costs, roughly

Indicative day rates across the three quality tiers and three common screen sizes, so you can estimate a budget before you call. A smaller pixel pitch means a finer image and lets the camera work closer to the screen, at a higher rate.

VP technical services · Animax Studios

INDICATIVE · EX GST · PER PRODUCTION DAY

SCREEN SIZE	STANDARD 3.9MM	PREMIUM 2.6MM	ELITE 1.8MM
Small 6m × 3.5m · 21 sqm	from \$3,150	from \$4,620	from \$6,720
Medium 9m × 5m · 45 sqm	from \$6,750	from \$9,900	from \$14,400
Large 15m × 6m · 90 sqm	from \$13,500	from \$19,800	from \$28,800

Rate basis: \$150 / \$220 / \$320 per sqm per day. Small and Medium screens fit the permanent Animax stage (up to 49.5 sqm). Large configurations are a custom build on the Kevin Weldon AO Soundstage.

Facility hire & indicative all-up · Chrysaor Studios

COMPONENT	SMALL / MEDIUM ANIMAX STAGE	LARGE WELDON STAGE
Facility hire (Chrysaor)	from \$3,000 / day	from \$3,800 / day
Indicative all-up (VP + facility)	\$6,150 – \$17,400 / day	\$17,300 – \$32,600 / day

Pricing disclaimer. All figures are indicative, exclude GST, and are provided as a starting point for budget planning only. Rates cover a single production day at the screen areas and pixel pitches shown; finer pixel pitch (1.8mm Elite) delivers higher resolution for closer camera work at a higher rate. VP technical services (Animax Studios) and facility hire (Chrysaor Studios) are quoted and invoiced separately; you receive a single coordinated quote. Prices exclude custom environment development, camera or lens package hire, additional lighting, and additional crew. Large and custom Weldon Stage configurations, including screen size, pixel pitch availability, and panel supply, are confirmed at consultation. Final pricing is only possible following a consultation and brief or script review.

Kevin Weldon AO Soundstage

For productions that need more than the Animax stage can provide, the Kevin Weldon AO Soundstage is available for bespoke, large-scale, and Hollywood-grade virtual production configurations. At 325m² of clear stage floor with a 7m ceiling height, it accommodates significantly larger LED volume configurations, practical set extensions alongside a virtual production wall, and complex multi-unit setups that require both physical scale and digital environment. The stage is semi-trailer and B-double capable, with direct vehicle access to the floor.

Stage floor area	325m ² main stage (13m × 25m), plus 39m ² mezzanine and 35m ² loading bay	Climate control	Fully air-conditioned to 18°C
Total footprint	400m ² across the complete stage complex	Acoustic treatment	Full acoustic treatment and sound dampening throughout
Ceiling height	7m to the truss grid	LED volume	Bespoke custom configurations. Size and pixel pitch determined at consultation.
Power	4 × 32A 3-phase outlets plus single-phase 20A	Pricing	Facility hire from \$3,800/day. VP technical services quoted by Animax Studios on the custom configuration.
Loading	Semi-trailer and B-double capable. 6m roller door, direct vehicle access to floor.		

CUSTOM LED VOLUME CONFIGURATIONS

Unlike the permanently installed Animax stage, the Weldon Stage accepts custom LED volume installations sized specifically for your production. If your project needs a wider wall, a different aspect ratio, a ceiling element, or a configuration beyond 49.5m², the Weldon Stage is the starting point. Contact us and we will work with Animax Studios to specify the right configuration for your brief.

What can you shoot here?



01

Music videos

The volume removes the single biggest constraint on music video production: location. Set your artist in a rain-soaked city at 3am, inside a moving vehicle on a coastal highway, or surrounded by abstract colour that pulses with the music. Change the world between setups in minutes.

Standard handles wide and mid backgrounds. Premium adds real-time UE5 response. Elite supports tight close-up performance.

02

Television commercials

TVC clients choose the volume because it removes location risk from the schedule entirely. Your brand environment is consistent, controllable, and available on demand, regardless of season, weather, or permit availability.

Premium is the standard starting point for TVCs. Elite handles beauty close-ups and product foreground shots where the screen enters frame.



03

Simulated travel

Sim trav is the most common global application for the technology. Talent sits in a stationary vehicle while a moving environment plays behind them, lit naturally by the screen. No post compositing. No process trailer. No plate-matching pass.

Standard suits wide exterior environments at distance. Premium adds real-time parallax. Elite handles tight through-windscreen close-ups.

04

Interiors with exterior views

Film interior sets with a real, controlled exterior world visible through windows or glass doors. Instead of blacking out windows and compositing later, the exterior plays on the volume and is captured in camera. Light falls naturally across the set; window frames, glazing, and reflections all behave correctly.



05

Soft-focus & abstract

Not every production needs a photorealistic location. Sometimes you need a clean colour field, a soft atmospheric suggestion, or a beautifully abstracted space that complements a performance without competing with it. Standard handles soft-focus and bokeh at far lower cost than a composited green screen equivalent, and the light still wraps your talent naturally.

See it in action

These examples show how different production types have been shot on the Animax Volume. Client names are omitted; contact us to arrange a private demonstration screening.

01 Automotive product launch campaign

PREMIUM · 2.6MM

A national digital launch campaign for a new vehicle required a photorealistic road environment for hero product shots, without the logistics or budget of a multi-location shoot. The production configured an urban street and open-road environment in UE5 at Premium tier. Hero and detail shots were captured across a single production day, the environment adjusted between setups without any physical reconfiguration. All footage was delivered ready for editorial without a compositing pass.

02 Music video in an impossible environment

STANDARD · 3.9MM

A band required a high-energy visual environment for a performance capture that would have been impossible on location and prohibitively expensive in traditional VFX. The production used the Animax Volume at Standard tier, with a dynamic graphic environment providing both the backdrop and the primary light source for the performance. The shoot was completed in a single day; the delivered footage required no additional compositing or VFX beyond a standard colour grade.

03 Simulated travel, interior car shoot

PREMIUM · 2.6MM

A production requiring extended dialogue scenes inside a moving vehicle used the Animax Volume at Premium tier to eliminate the cost and complexity of a process trailer. A freeway and urban environment was configured in UE5, with the vehicle positioned in front of the screen for driver and passenger POV. Natural ambient light from the passing environment lit the talent inside. Tight close-ups, two-shots, and over-the-shoulder angles were captured in a single studio day, delivered compositor-free and cut directly into the edit.

Chrysaor Studios, Varsity Lakes

Chrysaor Studios is a purpose-converted production facility at Varsity Lakes on the Gold Coast, converted from a church into a working film and virtual production complex. It is Australia's first social enterprise film studio.

ANIMAX VP STAGE · STUDIO 1

Address	492 Scottsdale Drive, Varsity Lakes, Gold Coast QLD 4227
Stage floor	150m ² (10m × 15m)
Ceiling	5.5m to floating roof
LED volume	49.5m ² Unilumin URMIII. Standard (3.9mm), Premium (2.6mm), Elite (1.8mm).
Brightness	3,500 nits
Real-time engine	Unreal Engine 5 (UE5)
Camera tracking	OptiTrack precision camera tracking
Configurations	From 1m ² up to the full 49.5m ²
Power	2 × 32A 3-phase outlets
Loading	6m roller door (4m wide), direct truck and vehicle access
Climate	Fully air-conditioned (5 split system A/C units)
Connectivity	2 Gbps Fibre NBN broadband

KEVIN WELDON AO SOUNDSTAGE · STUDIO 2

Stage floor	325m ² main stage (13m × 25m)
Mezzanine	39m ² (13m × 3m)
Loading bay	35m ² (5m × 7m)
Total footprint	400m ²
Ceiling	7m to truss grid
Power	4 × 32A 3-phase outlets
Loading	Semi-trailer and B-double capable. 6m roller door, direct vehicle access.
Floor	Cut and sealed concrete, matte grey, camera-ready
Climate	Fully air-conditioned to 18°C
LED volume for VP	Custom configuration. Quoted on application.

BOTH STAGES

Support facilities & crew base

Production offices	154.5m ² crew base: executive office, director / DOP office, private office, conference room, open plan (20+ desks), kitchen, bathroom
Connectivity	2 Gbps Fibre NBN broadband
Parking	22 dedicated spaces, or semi-trailer plus 6-truck configuration
Airport	15 minutes from Gold Coast Airport (OOL)
Public transport	5 minutes from Varsity Lakes Station

TWO BOOKING COMPONENTS, CLEARLY SEPARATED

Facility hire · Chrysaor Studios Pty Ltd

Covers the stage floor, power, air conditioning, loading bay, and parking.

VP technical services · Animax Studios

Covers the LED screen configuration, Unreal Engine operation, OptiTrack camera tracking, environment build, and on-set technical crew.

You will receive a single coordinated quote that clearly explains both components.

Frequently asked questions

Q Do I need any prior virtual production experience to book?

No. Most of our clients are shooting on an LED volume for the first time. Our team guides you from the initial consultation through to the production day. We recommend a discovery call before booking so we can understand your project and advise on the right screen tier and configuration.

Q Can I use my own camera and lens package?

Yes. The Animax Volume is camera-agnostic and works with all major professional cinema and broadcast camera systems. If you are shooting at Elite tier with close proximity to the screen, lens selection does affect the visual result. Bring your camera package to a Showroom Demo session to evaluate this before your production day.

Q What environments are available?

Animax has an environment library covering common production needs: exterior road and freeway, urban street (day and night), coastal, rural, interior locations, abstract and colour-field environments, and more. For a custom-built environment, our team provides a pre-production consultation and environment development service, quoted separately.

Q Can I use stock environments and asset libraries?

Yes. Ready-made 3D environments and assets are available through platforms including Fab (Epic Games), KitBash3D, Poly Haven, and others. Some are free, some are licensed. Our Animax technical team can advise on what will work well on the volume and help prepare assets for your shoot.

Q How far in advance do I need to book?

For standard productions we recommend a minimum of two weeks to allow for consultation, environment selection or build, and technical preparation. For custom UE5 environments, allow four to six weeks. For the 1m² Showroom Demo, we can often accommodate bookings within a few days, subject to availability.

Q Can vehicles be brought onto the stage for sim trav shoots?

Yes. The Animax stage has a 6m roller door (4m wide) and direct access to the stage floor, suitable for standard passenger vehicles, SUVs, and light commercial vehicles. The Kevin Weldon AO Soundstage can accommodate larger vehicles and full vehicle-plus-set configurations. Vehicle size and configuration are confirmed at the pre-production consultation.

Q What is the minimum screen area I can hire?

There is no strict technical minimum, but most practical setups start from around 4m² for background work and 2m² for tight product or portrait configurations. The 1m² Showroom Demo is the smallest available configuration, designed for testing and evaluation rather than full production days.

Q What does the quoted price actually include?

The per-sqm VP technical services rate covers the LED screen configuration, the Unreal Engine 5 pipeline (at Premium and Elite tier), OptiTrack camera tracking (at Elite tier), the on-set Animax technical team, access to the environment library, and standard technical support for the day. It does not include custom environment development, camera package hire, additional lighting, or additional crew. Facility hire is quoted separately by Chrysaor Studios.

Q What is the all-up cost for a typical production day?

This varies based on your screen area, tier, environment complexity, and facility requirements. As a guide, a mid-scale TVC using 15m² of Premium tier screen plus studio facility hire would be in the range of \$6,000 to \$8,500 for the day before additional services. See the Indicative Pricing Guide for worked examples. Confirmed pricing is only possible after a consultation and brief review.

Q Is Chrysaor Studios available for interstate and international productions?

Yes. The Gold Coast is 15 minutes from Gold Coast Airport, with direct flights from all major Australian cities and a growing number of international routes. The facility has truck access, production offices, crew base, and on-site parking to support visiting productions. Chrysaor Studios can assist with local crew and supplier referrals.



THE RIGHT WAY TO START IS A CONVERSATION

Book a consultation

Tell us about your production and we will tell you exactly what stage, tier, screen size, and configuration will get you the result you need, at a price that works for your budget.

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ONLINE

chrysaor.com.au · animax-studios.com

STUDIO

492 Scottsdale Drive, Varsity Lakes, Gold Coast QLD 4227

Chrysaor Studios is Australia's first social enterprise film studio. The Animax Virtual Production Stage is operated by Animax Studios in partnership with Chrysaor Studios. Home of the Gold Coast Virtual Production Showcase.