freeroam.goldwood.tech

FREEROAM

Free-roam VR arena platform

Business Plan & Operator Proposal to Poetics

Version 3.0 — November 2026

Goldwood Technologies — Thessaloniki

Proposal for discussion. No agreement has been signed.

Confidential — prepared for the Poetics founding team

Contents

1 Executive Overview **4**
1.1 What is proven and what is not . . . 4
1.2 Why an operator would choose FreeRoam . . . 5

2 Product Definition **6**
2.1 What FreeRoam Is . . . 6
2.2 Technical Architecture . . . 7
2.3 Arena Configurations . . . 8

3 Competitive Landscape **9**
3.1 Free-Roam VR in Greece Today . . . 9
3.2 International Operators . . . 10
3.3 Where FreeRoam Can Compete . . . 10
3.4 Indirect Competition . . . 11

4 Digital Surfaces **12**
4.1 Operator Page: `freeroam.goldwood.tech` (live) . . . 12
4.2 Guest Booking Site (after a venue is signed) . . . 13

5 Audience & Content Strategy **13**
5.1 Audience Segments . . . 13
5.2 Search & Discoverability . . . 14
5.3 Content . . . 14

6 Guest Journey & Retention **15**
6.1 End-to-End Journey . . . 15
6.2 Repeat Visits . . . 15
6.3 Feedback . . . 16

7 Business Model **16**
7.1 Who Does What . . . 16
7.2 Revenue Streams . . . 17
7.3 Pricing . . . 17
7.4 Unit Economics (Standard 100 m^2 Arena) . . . 17
7.5 Capital Expenditure . . . 18
7.6 Monthly Operating Cost . . . 18
7.7 Sensitivity to Occupancy . . . 19

8 Deployment Tiers & Installation **20**
8.1 Three Deployment Tiers . . . 20
8.2 Installation . . . 21
8.3 Content . . . 21

9 Staffing & Operations **22**
9.1 Roles . . . 22
9.2 Training . . . 22
9.3 Changeover (10 minutes) . . . 23

10 Safety & Liability **23**
10.1 Safety Built Into the Platform . . . 23
10.2 Age Policy . . . 24
10.3 Hygiene . . . 24
10.4 Insurance & Records . . . 24

11 Launch & Acquisition **25**
11.1 Before Opening (8 weeks) . . . 25
11.2 Launch Week . . . 25
11.3 Ongoing Acquisition . . . 25

12 Roadmap from November 2026 **26**
12.1 Phase 0 — Agree and Validate (Dec 2026 – Feb 2027) . . . 26
12.2 Phase 1 — Pilot Arena (Mar – Aug 2027) . . . 26
12.3 Phase 2 — Second Site (Sep 2027 – Feb 2028) . . . 27
12.4 Phase 3 — Licensing at Scale (2028+) . . . 27

13 Proposal to Poetics **27**
13.1 Why Poetics . . . 27
13.2 What Goldwood Proposes . . . 28
13.3 Decisions for the Poetics Team . . . 28

14 Risk Register **29**
14.1 Contingency Procedures . . . 30

15 Expansion Beyond Greece **30**
15.1 Language . . . 30
15.2 Payments and Tax . . . 30
15.3 Compliance . . . 31

16 KPIs & Success Metrics **31**
16.1 Phase 0 (Dec 2026 – Feb 2027) . . . 31

16.2 Pilot Operations (from opening) 32
16.3 Guests and Growth 32

17 Appendix: Technical Reference **33**
17.1 Software 33
17.2 Hardware Bill of Materials (Standard Arena) 33
17.3 Standard Arena Floor Plan 34

1. Executive Overview

FreeRoam is a free-roam VR arena platform: groups of up to ten players walk untethered through a 36–400 m^2 space while sharing one virtual world. Goldwood Technologies builds and licenses the platform (arena specification, tracking, operator software, safety middleware and commissioning). This document proposes that **Poetics** becomes the launch operator, starting with one 100 m^2 pilot arena in Thessaloniki.

The question this plan answers: *should an operator open a FreeRoam arena, and on what terms?*

Decision summary (standard 100 m^2 arena)

Upfront investment (CAPEX)	€38,000[P]
Running cost, fully loaded	€9,500 per month[P]
Revenue at full capacity	€42,900 per month[P] (15 sessions a day × 5 players × €22 net, 26 days)
Break-even occupancy	22.1 %[P]
At 40 % occupancy	€17,160 revenue, €7,660 operating profit per month
Payback at 40 %	≈5 months; ≈8 with a 3-month ramp-up at 20 %

1.1 What is proven and what is not

Proven. Poetics already runs a revenue-generating VR business: more than 5,000 VR screenings across 15+ events and 30+ setups in Greece, a 4.92/5 visitor rating and 250+ five-star Google reviews[K]. Its partners include Cosmote Telekom, Technopolis City of Athens, TEDxAUTH and the Athens International Literature Festival[K]. Poetics owns a fleet of 13 Meta Quest 3S, one Quest 3 and one Quest Pro headsets and operates them with its own software (`pods.poeticsvr.com`)[K]. Operations, guest handling and headset hygiene at volume are therefore not new to the team.

Not yet proven. No FreeRoam arena is operating, and no venue, customer or financing agreement exists. The economics in this plan are a model, not results. Three things must be measured before money is committed beyond the pilot:

1. **Tracking accuracy.** The design target is under 10 cm fused positional error from UWB plus headset inertial tracking[P]. It has not been measured against ground truth in an arena (Section 12, Phase 0).
2. **Demand.** The model's occupancy and price come from the design paper, not from bookings. The pilot's first three months exist to measure them.

3. **Venue cost.** The plan assumes €1,200 per month for space in a shared facility[A]. A real Thessaloniki quote will move break-even.

1.2 Why an operator would choose FreeRoam

Established free-roam systems cost €150,000–250,000 per venue[P], because they rely on proprietary tracking and closed software. FreeRoam uses standalone headsets, commodity UWB anchors and one on-site GPU server, which brings a standard arena to €38,000[P]. An operator gets a working arena specification, operator software usable by non-technical Game Masters after five days of training, and mandatory safety middleware (Section 10).

How to read the figures

Every number carries a source tag. [P] FreeRoam design paper, `poetics-head` commit `d348008` (1 Nov 2026), the single source for unit economics and technical specifications. [R] `PRICING_AND_ROI.md`, used only where the paper is silent. [K] Poetics' published record on `poeticsvr.com` (October 2026). [W] a dated web source, listed in Section 3. [A] an assumption that has not yet been verified; each one is listed in an amber box. Figures without a tag are calculated from tagged figures. All figures exclude VAT.

2. Product Definition

2.1 What FreeRoam Is

Free-roam VR is location-based VR in which players move untethered through a physical arena while a standalone headset renders the shared virtual world. Players see each other as avatars. Walking in the room is walking in the game; there is no joystick locomotion. Real walking is a strong driver of presence in VR (Usoh et al., 1999), which is why free-roam is the highest-spectacle format in location-based VR.



Figure 1: Concept render of a player in a free-roam session.

FreeRoam vs. seated VR cinema (Poetics today)

Dimension	Poetics VR cinema	FreeRoam arena
Movement	Seated swivel pod	Walk, run, crouch
Space	About 2–4 m^2 per pod	36–400 m^2 arena
Players	1 per pod, many pods	4–10 in one shared world
Tracking	Headset only	UWB anchors + headset + body trackers
Content	Curated 360° films	Interactive co-op and team games
Deployment	Pop-up, about 1 h setup[K]	Fixed installation, 2–3 weeks

2.2 Technical Architecture

The platform has four layers. Each can be replaced without redesigning the others[P].

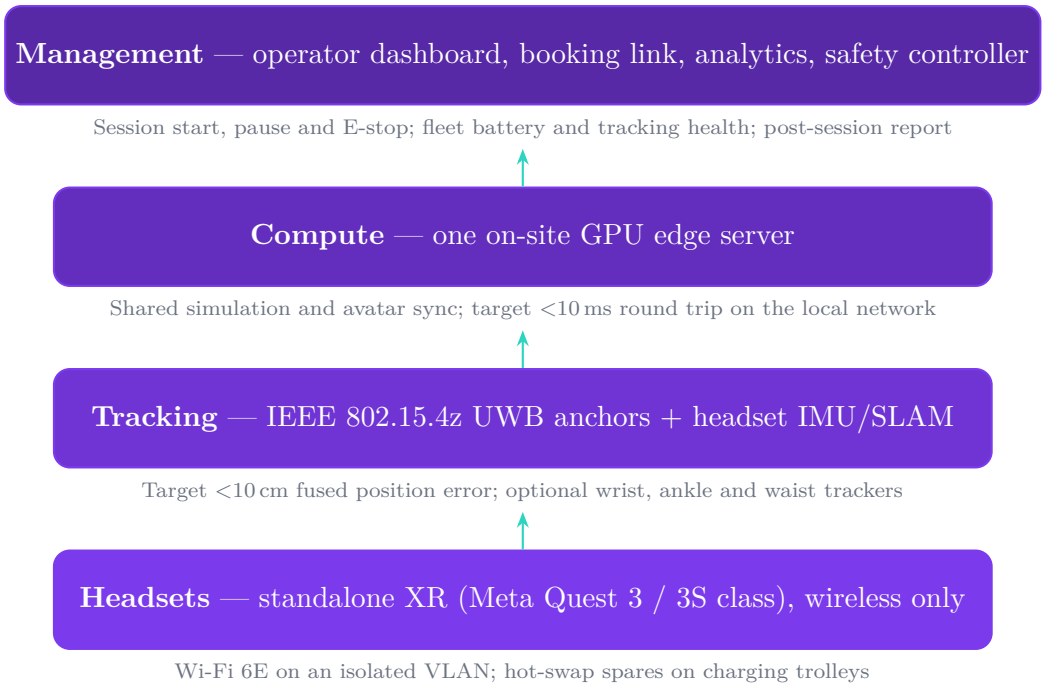


Figure 2: FreeRoam architecture[P]. Latency and accuracy figures are design targets, not field measurements.

Headsets. Standalone headsets only; no backpack PCs. This trades some visual fidelity for comfort, safety and simpler operations. The pilot uses the Meta Quest 3/3S class that Poetics already operates[K]. A purpose-built Poetics Head Pro is a separate hardware project with no prototype yet. This plan does not depend on it.

Tracking. UWB anchors (8 on the perimeter plus 4 optional ceiling anchors for 100 m^2) are fused with headset inertial and SLAM tracking in a Kalman filter. The target is under 10 cm position error at more than 100 Hz[P]. Commercial UWB vendors publish 10–30 cm (Pozyx) and up to 30 cm (Sewio), and one independent 2022 study measured 30–40 cm average dynamic error with Pozyx[W]. Reaching the target therefore depends on the sensor fusion, and must be bench-tested before the pilot build. If anchor residuals exceed 15 cm, the system alerts the Game Master and falls back to headset-only tracking[P].

Compute. One RTX 4090-class edge server runs the shared simulation in Unity 6. Live sessions never depend on the internet; it is used only before and after sessions for content and analytics[P].

Management. The operator dashboard lets a Game Master start, pause and stop sessions, monitor batteries and tracking health, and launch comfort interventions with one tap. It is designed for non-technical staff after five days of training[P].

2.3 Arena Configurations

Configuration	Size and players	CAPEX
Compact	6×6 m (36 m^2), up to 4 players	€18,500[R][A]
Standard	10×10 m (100 m^2), up to 6 players	€38,000[P]
Premium	20×20 m (400 m^2), up to 10 players	€75,000[R][A]

The standard arena is the reference design for all economics in this plan. Only its CAPEX has a line-item breakdown (Section 7.5). The compact and premium figures have no breakdown in the source and are treated as assumptions.

All configurations need at least 3 m ceiling clearance, a floor level to ±3 mm over any 2 m span with a non-reflective finish, a staging area of at least 15 m^2, and a dedicated Wi-Fi 6E access point on an isolated VLAN[P].

3. Competitive Landscape

All facts in this section were checked on 23 November 2026 unless another date is given. Sources are listed at the end of the section. Prices include VAT, as published by each venue.

3.1 Free-Roam VR in Greece Today

FreeRoam would not be the first free-roam arena in Greece or in Thessaloniki. Earlier drafts of this plan claimed it would be; that claim is withdrawn.

Venue	Format	Published price
VR Arena Thessaloniki [1]	Free-roam, 2–10 players, cable-free; next to Mediterranean Cosmos	€20 / 30 min, €30 / 60 min online
Another World Athens [2]	Free-roam, 200 m^2, 2–15 players, 60 min	€25–50 per person by group size
Retro VRcade [3]	"Free-roam VR arena", Marousi, Kallithea, Volos	€12–20 per game
The Cage, Thessaloniki [4]	VR escape rooms	not checked

The direct local competitor is VR Arena Thessaloniki. Its hardware and arena size are not published. Its online price of €20 per person for 30 minutes includes VAT. FreeRoam's model assumes €22 net per player[P], which is about €27 including 24 % VAT, roughly a third above that benchmark. Either FreeRoam's experience must justify the premium, or the price must come down. At €20 including VAT (€16.13 net) break-even rises from 22.1 % to 30.2 % occupancy. This is the largest commercial risk in the plan (Section 14).

3.2 International Operators

Operator	Footprint and model	EU price
Zero Latency	150+ venues in 30 countries (Aug 2026) [5]; licensee model; moved from backpack PCs to wireless Vive Focus 3 streaming from 2022 [6]	€20–39 per game [7]
Sandbox VR	80+ locations (2026); $108M across seed, Series A and B (a16z led A); franchising announced Jan 2026 [8]	€35–50 per session [9]
Another World	Franchise in Athens, Sofia, Belgrade, Bacău, Zagreb [2]	€25–50
The VOID	Closed in 2020; no venue found operating in 2026 [10]	—

Nearby markets already have arenas as well: Sofia (VR Sofia, Another World), Belgrade (VR Arena, Another World), Limassol (ALT.SPACE, 200 m^2, up to 10 players) and Bucharest (EVA, two 500 m^2 arenas) [11]. No Zero Latency venue was found in Greece, Cyprus, Bulgaria, Romania, Serbia or North Macedonia.

The capital cost of established systems is €150,000–250,000 per venue[P]. A published Zero Latency minimum cash requirement of $165,000 could not be confirmed on the source page [5] and is not relied on.

3.3 Where FreeRoam Can Compete

Being first is not available. The arguments that remain are:

1. **Capital cost for third-party operators.** At €38,000 per standard arena[P], FreeRoam targets venues that cannot fund a franchise. This is the licensing argument, and it does not depend on winning Thessaloniki consumers.
2. **An existing audience.** Poetics has delivered 5,000+ screenings with a 4.92/5 rating[K]. A local arena that opens to a warm list has a lower customer-acquisition cost than a new brand.
3. **Content and curation.** Poetics licenses festival-selected immersive titles and works with Greek cultural institutions[K]. Original, locally-themed experiences are a differentiator that a generic arena does not have, but they take 4–6 months per title to produce[P].
4. **Operator software.** The safety middleware and Game Master dashboard are designed to be operable by non-technical staff[P]. This matters most for white-label venues.

3.4 Indirect Competition

Free-roam VR competes for the same group leisure budget as other activities. Thessaloniki examples: escape rooms at about €9–15 per person [12] and go-karting at about €10–23 for 10 minutes [13]. Comparable published prices for laser tag and bowling in Thessaloniki were not found. These activities are cheaper per hour, so FreeRoam must sell the experience on novelty and shared spectacle, not price.

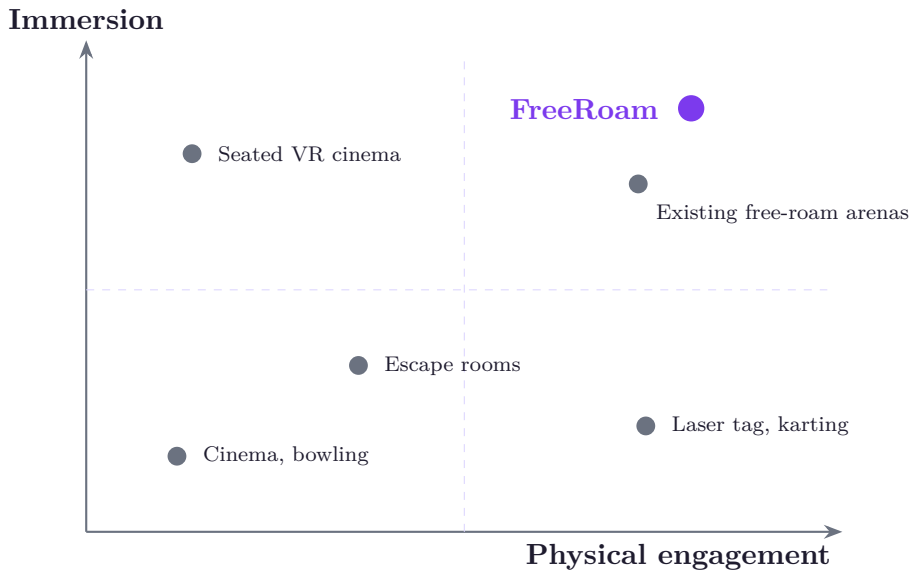


Figure 3: Positioning. FreeRoam shares the high-immersion, high-movement quadrant with existing free-roam arenas; it must differentiate on content, operations and cost, not on format.

Sources (accessed 23 Nov 2026)

[1] https://adventurepaintball.gr/timokatalogos/, https://vr-thessaloniki.gr/home/

[2] https://athens.another-world.com/

[3] https://retrovrcade.com/en

[4] The Cage Escape Rooms & VR Arena, Proxenou Koromila 34 (TripAdvisor listing)

[5] https://vr.org/articles/out-of-home-vr-growing-zero-latency-jumanji-2026 (29 Aug 2026); https://blooloop.com/zero-latency-vr-2026-report/ (24 Aug 2026); https://www.franchisedirect.com/businessopportunities/8/zero-latency-vr/expansion-video

[6] https://roadtovr.com/vr-attraction-zero-latency-ditches-backpack-pcs-in-favor-of-vive-focus-3-wireless-rendering/ (2022)

[7] Reseller and guide prices for Paris, Munich and Barcelona; no official price page found

[8] https://en.wikipedia.org/wiki/Sandbox_VR (edited 9 Nov 2026)

[9] https://sandboxvr.com/hamburg/faq, https://sandboxvr.com/de/muenchen/location

[10] https://en.wikipedia.org/wiki/The_Void_(virtual_reality)

[11] https://vr-sofia.com/en/, https://vrarena.rs/en/, https://altspace-vr.com/en, https://www.eva.gg/en-RO/locations/bucarest-ro

[12] https://www.escape-rooms.com/escapegame/thessaloniki/the-mind-trap-thessaloniki; aggregator listings

[13] https://www.unlimited-adrenaline.gr/; Racefacer and Speedpark price lists (search snippets)

4. Digital Surfaces

FreeRoam needs two different web surfaces. Only the first exists today. The second is built when a venue is signed, so that no booking page goes live before there is an arena to book.

4.1 Operator Page: `freeroam.goldwood.tech` (live)

The operator page is for venue owners, investors and the Poetics team. It contains:

- an **arena calculator**. The visitor enters their own floor area and monthly rent. The page selects the arena configuration that fits and returns CAPEX, break-even occupancy and payback, using the same model and figures as this document (Section 7);
- an occupancy slider showing monthly revenue and operating profit between 10 % and 70 %;
- a download of this plan as a PDF and an enquiry address: `hello@goldwood.tech`.

The calculator deliberately asks for the visitor's real space and rent before it shows a result. An answer computed from their own numbers is more useful than a generic brochure, and every enquiry arrives with a site description attached.

4.2 Guest Booking Site (after a venue is signed)

The consumer site is built for the first signed venue, under that venue's or Poetics' brand. Its scope is fixed by the guest journey (Section 6):

- **Booking:** date, time slot, player count and experience; digital waiver accepted before payment; Stripe checkout; no account required.
- **Check-in and fleet:** reuse Poetics Pods (`pods.poeticsvr.com`), which already handles QR ticket check-in, scheduling and headset telemetry for the cinema business[K].
- **Bilingual:** Greek and English from day one.
- **Accessibility:** WCAG AA contrast, keyboard-operable booking, 44 px touch targets, `prefers-reduced-motion` respected.

Building on Pods instead of a new stack keeps one codebase for both the cinema and arena businesses. It also means arena bookings appear in the same operator tools Poetics staff already use.

5. Audience & Content Strategy

5.1 Audience Segments

The segments below are hypotheses to test in the pilot. They are ranked by expected revenue, not by measured share, because no FreeRoam bookings exist yet[A].

Segment	Why they book	Where they find it
Friend groups (18–35)	Novelty, a shared story, content to post	Instagram, TikTok, friends
Corporate teams	A team activity that is not bowling	LinkedIn, Google, direct sales
Families with teens	A safe adventure for an occasion	Google, Maps, word of mouth
Event planners	A private venue for parties	Direct enquiries
VR enthusiasts	Access to arena-scale VR	Reddit, YouTube, Discord

Poetics' cinema audience is the cheapest first channel. Its events reached thousands of guests[K], and those guests have already paid for VR once. A launch offer sent to that audience costs little and tests whether cinema guests convert to arena guests.

Corporate teams are the second priority because they book weekday slots, which are otherwise the hardest to fill. Their decision-maker needs a reason to justify the spend:

cooperative game modes and a short post-session summary for the team lead serve that purpose.

5.2 Search & Discoverability

Target search terms are category terms with little competition in Greek and English, for example *free roam vr thessaloniki*, *vr arena thessaloniki* (and its Greek-script form), *virtual reality team building greece*. Volume is expected to be low, so the Google Maps listing and reviews matter more than organic search. The site uses `LocalBusiness`, `Event` and `FAQPage` structured data, and `hreflang` for `el`/`en`.

5.3 Content

Three kinds of content are planned, in order of cost-effectiveness:

1. **Session recaps.** Within two hours of a session each guest receives a short highlight clip, a group photo and a referral code (€5 off for the friend, €5 credit for the referrer)[A]. This turns each group into a distribution channel at near-zero marginal cost.
2. **Category education.** Free-roam VR is unfamiliar to most guests. Short videos showing real players moving in the arena explain the product faster than text.
3. **Behind-the-technology posts.** Plain-language explainers on tracking, safety and multi-player sync, published by Goldwood and shared by Poetics. They support operator sales more than guest sales.

Market-position claims such as “first in Greece” are used only where Section 3 confirms them with a dated source.

6. Guest Journey & Retention

6.1 End-to-End Journey

A standard session is 30 minutes in the arena, followed by a 10-minute changeover[P]. The journey around it is designed for one outcome: the group leaves with something to share and a reason to come back.

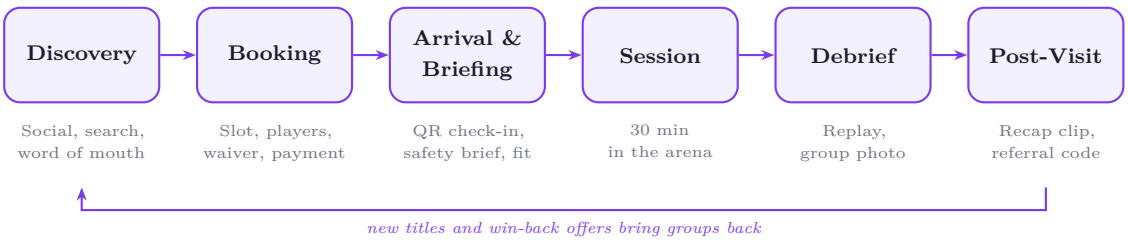


Figure 4: The guest journey as a loop: post-visit content and new titles drive repeat bookings.

Booking. Guests pick a slot, player count and experience without creating an account. The waiver is accepted before payment. The confirmation email tells them to wear closed shoes and arrive 15 minutes early.

Arrival and briefing. A Game Master scans the QR ticket, delivers a two-minute safety briefing and fits headsets and trackers[P]. Poetics already runs this check-in and fitting flow at cinema events[K].

Session. The Game Master monitors the group on the operator dashboard and can pause, give a comfort intervention to one player, or stop everyone with the E-stop (Section 10).

Debrief and post-visit. The spectator screen replays highlights while the group takes a photo. A recap clip and referral code arrive by email within two hours. A follow-up at 14 days announces new titles; a win-back offer goes out at 90 days.

6.2 Repeat Visits

Free-roam venues depend on groups returning for new titles, so the pilot tracks the 90-day rebooking rate from the first month. Multi-visit passes are tested only once there is enough data to price them:

Assumptions — passes and referral (to be tested in the pilot)

Offer	Content	Test price
3-session pass	Any experience, valid 90 days	€55
6-session pass	Plus one friend pass, valid 180 days	€99
Referral	€5 off for the friend, €5 credit for the referrer	—

6.3 Feedback

A three-question survey is offered by QR code at debrief: the standard Net Promoter question ("How likely are you to recommend…" on 0–10), a 1–5 rating, and "What would make you come back?". NPS is reported correctly as % promoters (9–10) minus % detractors (0–6), on a −100 to +100 scale. Any score of 6 or lower gets a personal follow-up within 48 hours.

7. Business Model

7.1 Who Does What

Party	Role
Goldwood Technologies	Builds and licenses the platform: arena specification, tracking and sensor fusion, operator dashboard, safety middleware, commissioning and software updates.
Operator (proposed: Poetics)	Runs the arena: staff, guests, content curation, marketing, local partnerships. Brings an existing audience and VR operations experience[K].
Venue	Provides floor space, utilities and foot traffic. May also be the operator, or share revenue.

The deployment tiers that combine these roles are in Section 8. The commercial terms between Goldwood and Poetics are not agreed. Section 13 lists them as open decisions.

7.2 Revenue Streams

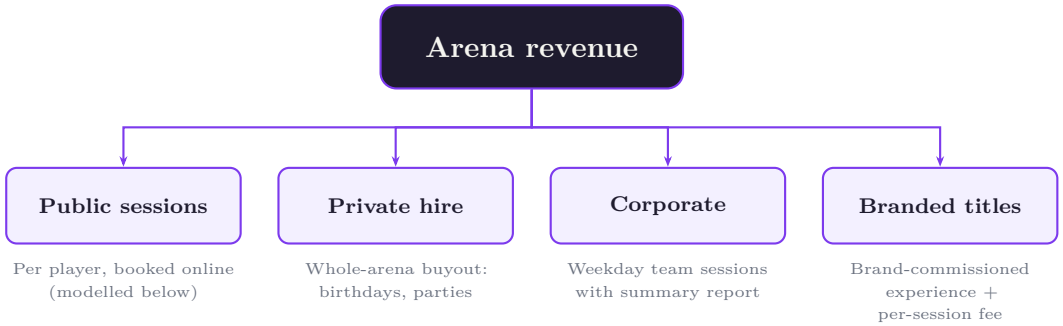


Figure 5: Arena revenue streams. Only public sessions are in the base model; the others replace public slots rather than adding capacity.

Private hire, corporate and branded sessions use the same arena hours as public sessions. They raise revenue per hour but not capacity, so the model counts public sessions only. That understates revenue if private hire sells at a premium.

7.3 Pricing

The design paper sets an indicative price of €20–45 per person and €22 average net revenue per player[P]. The SKU prices below sit inside that range and are test prices for the pilot.

SKU	Description	Test price
Group session	3–6 players, 30 min	€22–28 per person[A]
Small group	1–2 players, 30 min	€28–35 per person[A]
Extended session	Up to 6 players, 60 min	€38–45 per person[A]
Private hire	Whole arena, 2 hours	€300–500[A]
Corporate package	Briefing + 2 sessions + summary	Quoted per group

7.4 Unit Economics (Standard 100 m² Arena)

All inputs come from the design paper[P]: a 10-hour operating day, 30-minute sessions plus 10-minute changeovers, 5 players per session on average, €22 net revenue per player, 26 operating days per month.

$$\text{Sessions per day} = \frac{10\,\text{h} \times 60\,\text{min/h}}{30\,\text{min} + 10\,\text{min}} = 15$$

$$\text{Revenue at full capacity} = 15 \times 5 \times €22 \times 26 = €42{,}900 \text{ per month}$$

$$\text{Break-even occupancy} = \frac{€9{,}500}{€42{,}900} = 22.1\,\%$$

Occupancy means the share of player-slots sold at the average group size.

7.5 Capital Expenditure

Category	Items	Cost
VR hardware	6 headsets, 6 body-tracker sets, charging	€5,500
UWB tracking	8 perimeter + 4 ceiling anchors, cabling	€8,000
Compute & network	Edge server, switch, 2 Wi-Fi 6E APs	€6,500
Arena build-out	Wall padding, flooring, staging	€4,000
Operator station	Dual monitors, 75” spectator display	€3,000
Software setup	Initial provisioning and calibration suite	€2,500
Installation	Commissioning and 5-day staff training	€3,500
Contingency	≈15 %	€5,000
Total		**€38,000**

All rows[P]. If the operator reuses headsets it already owns, the hardware line falls accordingly. Poetics owns 15 headsets today[K], but they are committed to the cinema business.

7.6 Monthly Operating Cost

Category	Details	Monthly
Venue rent	Arena + staging, shared facility[A]	€1,200
On-floor staff	Game Masters and front-of-house rotation[A]	€3,600
Insurance	Public liability + equipment[A]	€350
Utilities	Electricity, dedicated fibre[A]	€400
Booking & tools	Booking, email, monitoring[A]	€300
Marketing	Paid social, search, content[A]	€800
Maintenance	Repairs, consumables[A]	€400
Payment fees	Card processing[A]	€450
Base venue OPEX		€7,500[P]
Software & content	Platform licence and content royalties	€2,000[P]
Fully loaded OPEX		**€9,500**[P]

The paper gives the two subtotals. The line items under the €7,500 base are this plan’s allocation and must be replaced with quotes. Rent is the most uncertain line, so the calculator on `freeroam.goldwood.tech` uses the visitor’s real rent.

7.7 Sensitivity to Occupancy

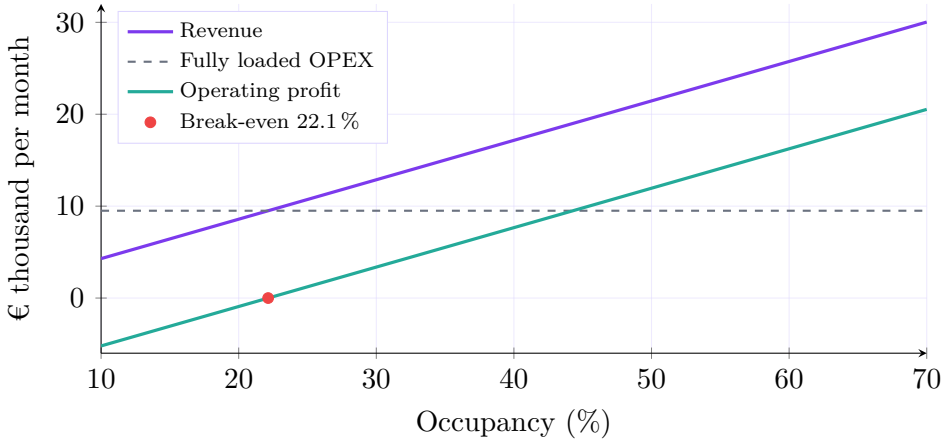


Figure 6: Monthly revenue and operating profit against occupancy (standard arena, inputs[P]).

Occupancy	Revenue / mo	Op. profit / mo	Payback
20 %	€8,580	−€920	none
30 %	€12,870	€3,370	11.3 months
40 % (base case)	€17,160	€7,660	5.0 months
55 %	€23,595	€14,095	2.7 months
70 %	€30,030	€20,530	1.9 months

At the 40 % base case the arena earns €205,920 a year against €114,000 of operating cost, an operating profit of €91,920 (44.6 % margin), before tax, depreciation and any ramp-up period. Ramp-up is real: if the first three months average 20 %, the arena loses about €2,800 over that period, and payback at 40 % thereafter moves from about 5 to about 8 months after opening ((€38,000 + €2,760) / €7,660 = 5.3 months after month 3).

Optimistic case, not used. `PRICING_AND_ROI.md` models 20 sessions per day (30 minutes including changeover), 6 players per session and €20.16 net per player. That gives €25,160 per month and a 2.42-month payback at 40 %[R]. It assumes full groups and no changeover gap, so this plan uses the paper's more conservative inputs.

Assumptions in the economics

- Occupancy, group size and net price are design-paper inputs, not booking data. The pilot replaces them with measured values within three months.
- The €7,500 base OPEX breakdown is an allocation; rent, insurance and staffing need Thessaloniki quotes.

- Compact and premium CAPEX (€18,500 and €75,000) have no line-item breakdown.
- No multi-arena or multi-year projection is given. Expansion is gated on pilot results (Section 12).

8. Deployment Tiers & Installation

8.1 Three Deployment Tiers

Every tier runs the same Goldwood platform. They differ in who pays for the arena and who runs it[P].

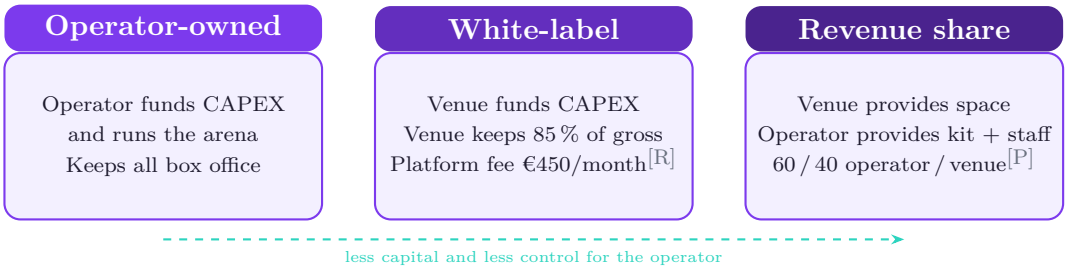


Figure 7: Deployment tiers. Revenue splits are taken from the sources; none has been agreed with a venue.

Operator-owned is the proposed model for the Thessaloniki pilot. The operator controls pricing, content and guest experience, and carries the full €38,000 CAPEX[P]. This is the tier that produces the data the other two need.

White-label is for venues that already have space and visitors: escape-room chains, trampoline parks, family entertainment centres, malls. The venue funds and runs the arena under its own brand and keeps 85 % of gross box office. Goldwood supplies the specification and hardware at cost, and charges €450 per month for software and support[R]. This is the scalable licensing tier. It is only credible once the pilot has published real occupancy figures.

Revenue share is for resorts, malls and cultural foundations that will give floor space but not capital. The operator installs and staffs the arena; gross revenue is split 60 % operator, 40 % venue[P]. The operator still carries CAPEX, so this tier needs the same funding as the operator-owned tier.

8.2 Installation

Installation takes two to three weeks from site survey to handover[A]:

1. **Survey:** ceiling height ($\geq$3 m), floor level ($\pm$3 mm over 2 m), anchor mounting points, power and network[P].
2. **Tracking:** 8 perimeter UWB anchors plus 4 optional ceiling anchors for 100 m^2, each with PoE or mains power; radio mapping and a measured accuracy check against floor markers.
3. **Network and compute:** Wi-Fi 6E access point on an isolated VLAN; edge server in a ventilated enclosure next to the operator console.
4. **Safety:** high-density foam padding on all walls and columns; physical E-stop at the console.
5. **Operator station and staging:** dashboard workstation with a view of the arena, 75” spectator screen, two charging trolleys.
6. **Training:** five days for Game Masters (Section 9).

8.3 Content

The arena opens with three titles: one cooperative adventure, one team-versus-team game and one escape-room style experience[P]. Content comes from three sources:

- **Licensed free-roam titles** from existing studios, paid per player per session. Licence terms for the launch titles are not yet negotiated[A].
- **Originals** built on the Poetics SDK and Unity 6, targeted at one every four to six months[P]. Locally-themed originals (Greek history, mythology, cities) are the clearest content differentiator against existing arenas.
- **Branded experiences** commissioned by brands or studios on 30–90 day cycles; the client pays development plus a per-session fee[P].

9. Staffing & Operations

9.1 Roles

The OPEX model pays for on-floor staff only. Technical support and management come from Goldwood and the operator's existing team. That split is an assumption and must be agreed (Section 13).

Role	Responsibilities	Paid by	Load
Game Master	Briefing, fitting, live monitoring, debrief	Arena OPEX	2 rotating
Front-of-house	Check-in, upsell, hygiene changeover	Arena OPEX	Part-time
Technical support	Remote monitoring, updates, on-site fixes	Goldwood platform	On call
Operations lead	Scheduling, partners, P&L	Operator	Part-time
Marketing	Social, ads, partnerships	Operator	Part-time

Assumption — staff cost

On-floor staff are budgeted at €3,600 per month (Section 7): two Game Masters on rotating part-time shifts plus a part-time front-of-house rotation. One Game Master and one front-of-house person are on the floor per shift, two Game Masters at peaks. The operations lead and marketing are not costed in the arena model. If the operator must hire them, add their cost to the €9,500 OPEX and recompute break-even.

9.2 Training

Game Masters complete five days of training before running sessions alone[P]:

1–2. **Platform:** dashboard, session lifecycle, content switching, monitoring tracking and battery health.

3. **Equipment:** headset and tracker fitting, anchor health checks, battery hot-swap.

4. **Safety:** E-stop and recovery, motion-sickness signs and response, first aid, evacuation with headsets on.

5. **Guest experience:** the briefing script, handling difficult situations, accessibility, upselling passes and private hire.

Monthly drills cover emergency procedures. The quarterly review uses mystery guests.

9.3 Changeover (10 minutes)

The changeover between sessions is a checklist in the dashboard; the next session cannot launch until every step is confirmed:

- clean lenses; swap or sanitise face cushions in the UV-C cabinet; wipe trackers;
- hot-swap any headset below 40 % battery;
- walk the floor for debris; check padding;
- archive the session, load and verify the next experience.

Poetics already sanitises and turns around headsets at volume in its cinema business[K]. The pilot should reuse those procedures rather than write new ones.

10. Safety & Liability

10.1 Safety Built Into the Platform

Four safety systems are mandatory middleware: no session can launch unless all four are active[P].

System	Behaviour
Boundary warning	Virtual grid appears when a tracked head or hand comes within 0.8 m of a wall or column; full passthrough warning at 0.3 m[P]
Player proximity	Haptic pulse and translucent marker when two players come within 1 m at speed; 1.5 m in competitive titles[P]
Emergency stop	Physical button and one-tap control: every headset fades to a well-lit “Please stand still” screen in Greek and English, house lights come on, audio mutes[P]
Comfort mode	Per-player pause to passthrough, reduced speed, fixed horizon and vignetting[P]

These thresholds are design values. They depend on tracking accuracy (Section 12, Phase 0), and must be tested with real players moving at speed before the pilot opens. If measured tracking error is larger than designed, the warning distances increase accordingly.

The floor must be level to ±3 mm over 2 m, with all cables overhead or in conduit and no loose objects in the play area[P]. Every changeover includes a floor walk.

10.2 Age Policy

Assumption — age policy (confirm with insurer and headset manufacturer guidance)

Under 10	Not admitted
10–13	Parental consent and an adult on site
14–17	Parental consent
18+	Digital waiver at booking

The competing Thessaloniki arena admits players from 8 years old[W]. Matching it widens the family market, but only if the insurer accepts it and headset fit allows it.

10.3 Hygiene

Magnetic or replaceable face cushions are changed every session and sanitised in a UV-C cabinet. Trackers are wiped between sessions, and hygiene masks are available on request. Compliance with the changeover checklist is a tracked KPI (target 100 %).

10.4 Insurance & Records

Assumption — insurance

Public liability of at least €2,000,000 per incident plus all-risk equipment cover with business interruption, budgeted at €350 per month. No quote has been obtained. A quote from a leisure insurer is a Phase 0 task.

Every guest accepts a digital waiver before payment, covering assumption of risk, photo and video consent, and GDPR processing. Every E-stop, collision, motion-sickness episode and equipment failure is logged in the dashboard with time and resolution. The incident log is reviewed monthly and kept for the insurer.

11. Launch & Acquisition

The launch has one job: fill the first three months enough to measure real demand. Thessaloniki already has a free-roam arena, so the message cannot be novelty of the format. It has to be the experience: titles, Game Masters and the Poetics name.

11.1 Before Opening (8 weeks)

- **Warm list first.** Invite past Poetics cinema guests and partners to an early-access list with a launch price. This is the cheapest channel available and also tests cinema-to-arena conversion.
- **Creator previews.** Ten to fifteen Thessaloniki and Athens creators (gaming, lifestyle, tech) get preview sessions four weeks out, with unscripted reaction content.
- **Press.** Greek tech and city media. The story is a Thessaloniki team building its own arena platform and original content, not "first in Greece".
- **Venue co-marketing.** The host venue's social channels, newsletter and signage; hotel concierges and tourism listings where the venue is tourist-facing.

11.2 Launch Week

An invite-only opening session for press, creators and partners. A launch discount on the first bookings creates early reviews and photos[A]. Three posts a day for the week across Instagram, TikTok and Facebook: setup, staff, guest reactions.

11.3 Ongoing Acquisition

Channel	Use	Monthly
Google Ads	Search on category and team-building terms	€300
Meta Ads	Video to 18–35 in Thessaloniki	€350
TikTok Ads	Boost the best guest clips	€150
Google Maps	Profile and review requests	€0
Partnerships	Hotel concierge commission per booking	Variable

The €800 total is the marketing line in the OPEX model[A]. Spend is reallocated monthly by cost per booking. Recurring hooks keep the arena in local media after launch: seasonal titles (Halloween, Christmas), school-holiday programmes and corporate packages in the September–November low season.

12. Roadmap from November 2026

The roadmap is gated: each phase starts only when the previous phase meets its criteria. Dates are targets from November 2026, not commitments.

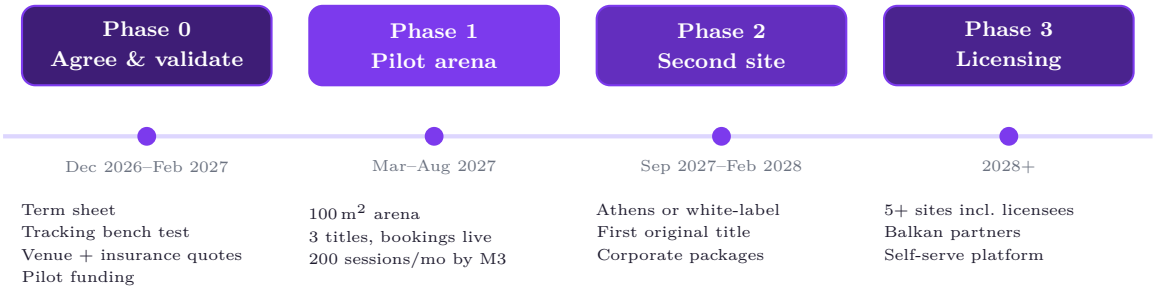


Figure 8: Gated roadmap. A phase starts only when the previous phase has met its criteria.

12.1 Phase 0 — Agree and Validate (Dec 2026 – Feb 2027)

Nothing is built until these are done:

1. **Term sheet** between Goldwood and Poetics: who funds pilot CAPEX, the platform fee, IP ownership of the platform and of original content (Section 13).
2. **Tracking bench test.** Eight UWB anchors in a test space, fused with headset tracking, measured against floor markers at walking and running speed. Pass: under 10 cm median error and under 20 cm worst case[A]. If it fails, the safety distances increase and the arena may need optical or headset-only tracking.
3. **Site and quotes.** Shortlist three Thessaloniki sites and get rent, insurance and fit-out quotes. Replace the assumptions in Section 7 and recompute break-even.
4. **Content.** Sign licences for three launch titles.
5. **Competitor visit.** Play a session at VR Arena Thessaloniki to benchmark hardware, content and service against our offer.

12.2 Phase 1 — Pilot Arena (Mar – Aug 2027)

Build, train and open a 100 m² operator-owned arena with three titles and online booking. The target is 200 booked sessions per month by the third month[P].

Gate to Phase 2: 40 % occupancy for two consecutive months; NPS above +60 on the standard −100 to +100 scale[P]; fewer than 4 equipment failures per 100 sessions[P]; positive operating profit after fully loaded OPEX.

12.3 Phase 2 — Second Site (Sep 2027 – Feb 2028)

A second arena in Athens, or the first white-label licensee, whichever the pilot data supports. The first original title launches, and corporate packages are sold actively. White-label sales use the pilot's published occupancy figures.

Gate to Phase 3: two sites each meeting the Phase 1 gate; at least one site not operated by Poetics.

12.4 Phase 3 — Licensing at Scale (2028+)

Five or more sites including licensees, partners in Bulgaria, Serbia and Romania (all of which already have arenas, Section 3), and self-serve onboarding for qualified operators. Purpose-built Poetics Head Pro hardware is considered only if that separate project produces a tested prototype.

13. Proposal to Poetics

13.1 Why Poetics

Poetics has what a new arena lacks most: an audience that has already paid for VR, a brand known to Greek cultural partners, trained operators, and working check-in and fleet software. Its record to date: 5,000+ screenings across 15+ events and 30+ setups, 4.92/5 visitor rating, 250+ five-star reviews, Cannes Immersive Market Curators Network (2026), and partners including Cosmote Telekom and Technopolis City of Athens[K]. FreeRoam adds a permanent, interactive format next to Poetics' pop-up cinema business.

```
poeticsvr.com    Poetics brand, editorial and venue enquiries
↪ lbvr.poeticsvr.com    Pop-up VR cinema packages (from €490)[K]
↪ pods.poeticsvr.com    Venue operations: scheduling, QR check-in, fleet[K]
goldwood.tech    Goldwood Technologies
↪ freeroam.goldwood.tech    FreeRoam operator page and arena calculator
```

Guest booking for a Poetics-operated arena would live in the Poetics domain and run on Pods (Section 6). The Goldwood page serves operators and investors.

13.2 What Goldwood Proposes

- Goldwood delivers the FreeRoam platform for the pilot: arena specification, tracking and fusion, operator dashboard, safety middleware, commissioning and Game Master training.
- Poetics operates the Thessaloniki pilot as an operator-owned arena (Section 8) and leads content curation and marketing.
- Both parties use the pilot data to decide on a second site and on white-label licensing.

13.3 Decisions for the Poetics Team

None of the following is agreed. They are the agenda for a first meeting.

Open terms

1. **Pilot funding.** Who funds the €38,000 CAPEX: Poetics, Goldwood, a venue partner or a mix.
2. **Platform fee.** The share of the €2,000 monthly software-and-content line[P] that goes to Goldwood as a platform licence, and the share that goes to content royalties.
3. **Intellectual property.** Ownership of the platform software, of original titles, and of the FreeRoam name. The design paper presents FreeRoam as a Poetics product line[P]; this proposal positions the platform under Goldwood. Both readings must be reconciled in writing.
4. **Brand on the arena.** The guest-facing name of the pilot (“Poetics FreeRoam”, a venue brand, or other).
5. **Staffing.** Whether Poetics staffs Game Masters from its cinema operators, and who provides the operations lead.

14. Risk Register

Risks are ordered by likelihood times impact.

Risk	What happens	Level	Mitigation
Local price pressure	An existing Thessaloniki arena sells 30 min at €20 incl. VAT; at that price break-even rises to 30.2 %	High	Compete on titles and service; test price in Phase 1; corporate and private hire at higher yield
Demand unproven	Occupancy and group size are model inputs, not data	High	Gated roadmap; Phase 1 measures both before any second site
Terms not agreed	Goldwood and Poetics disagree on funding, fees or IP	Medium	Term sheet in Phase 0 before any spend
Tracking accuracy	Fused UWB error above the 10 cm target; vendor figures are 10–30 cm	Medium	Bench test in Phase 0; larger safety distances; headset-only fallback
Venue cost	Real rent well above the €1,200 assumption	Medium	Three quotes in Phase 0; revenue-share tier
Content licences	Launch titles unavailable or costly	Medium	Sign three licences in Phase 0; originals from Phase 2
Headset failure	Unit fails mid-session	Medium	Two hot spares charged; swap in under 90 s
Player injury	Collision or fall	Low	Mandatory safety middleware, padding, E-stop, insurance, incident log
Network outage	Wi-Fi or LAN drops mid-session	Low	Local-only sessions; second access point
Data breach	Guest personal or payment data exposed	Low	Stripe handles card data; GDPR processing agreements; encrypted storage

14.1 Contingency Procedures

Headset failure. The Game Master pauses the session, swaps in a charged spare and the player rejoins at their last position; target under 90 seconds.

Tracking degradation. When UWB residuals exceed 15 cm the dashboard alerts the Game Master and the headset falls back to its own tracking[P]. Recalibration takes place between sessions.

Software updates. Updates install in a fixed weekly maintenance window, are verified on a test headset first, and can be rolled back in one step.

Personal data. Card data never touches operator servers. Deletion requests are completed within 72 hours.

15. Expansion Beyond Greece

Expansion is a Phase 3 question (Section 12) and depends on pilot results. Every target market already has free-roam arenas (Section 3), so expansion is a licensing play: selling the platform to local operators, not opening company arenas abroad.

15.1 Language

Touchpoint	Greece (Phases 1–2)	Licensees (Phase 3)
Booking and email	Greek + English	Licensee's language + English
Safety briefing	Spoken in Greek or English	Local language, with subtitled briefing video
In-game interface	English	English; local subtitles where titles support them
E-stop screen	Greek + English[P]	Local language + English
Operator dashboard	English	English

15.2 Payments and Tax

Prices are shown including VAT (24 % in Greece). Stripe handles payment and Stripe Tax handles EU VAT. Bulgaria, Serbia and Romania are outside the euro area, so licensees there set local prices and collect revenue directly. Goldwood bills its platform fee in euros.

15.3 Compliance

GDPR applies everywhere in the EU and requires processing agreements with every processor, deletion on request, and consent management. Hardware needs CE marking. VR arenas may be classed as amusement, cinema or general entertainment depending on the country, so each new market gets a local health-and-safety check six months before launch.

Locally-themed originals are also the strongest content argument abroad. A Greek mythology title sells to tourists in Greece; a licensee in another country would commission its own.

16. KPIs & Success Metrics

KPIs start now, before an arena exists. The Phase 0 metrics decide whether the pilot proceeds. The pilot metrics replace the model's assumptions with measured values.

16.1 Phase 0 (Dec 2026 – Feb 2027)

Metric	Target	Due
Term sheet signed by Goldwood and Poetics	Yes	Jan 2027
Fused tracking error, median / worst case	<10 cm / <20 cm[A]	Feb 2027
Site quotes received	3 sites	Feb 2027
Recomputed break-even with real rent and insurance	$\leq 30\,\%$	Feb 2027
Launch titles licensed	3	Feb 2027
Operator enquiries via `freeroam.goldwood.tech`	Tracked, no target	Monthly

16.2 Pilot Operations (from opening)

Metric	Target	Review
Occupancy (player-slots sold / available)	≥40 % by month 4	Weekly
Sessions booked per month	≥200 by month 3[P]	Monthly
Average players per session	≥5[P]	Weekly
Net revenue per session	≥€110 (5 × €22)[P]	Weekly
Monthly revenue	≥€17,160 at 40 %	Monthly
Equipment failures per 100 sessions	<4[P]	Monthly
Changeover time	≤10 min[P]	Weekly

16.3 Guests and Growth

Metric	Target	Review
NPS (−100 to +100)	>+60[P]	Monthly
Google rating	≥4.7[A]	Monthly
Rebooking within 90 days	Measure; target set after month 3	Monthly
Share of bookings from Poetics' existing audience	Measure	Monthly
Motion-sickness events per 100 sessions	≤3[A]	Monthly
Marketing cost per booking	Measure; must stay below one session's net revenue	Monthly

Where the plan has no basis for a number, the target is "measure". Inventing a customer-lifetime-value target before the first booking would add a figure without adding information. All KPIs feed one operator dashboard and a monthly one-page report to the Goldwood and Poetics teams: P&L, KPI table against target, and next month's bookings.

17. Appendix: Technical Reference

17.1 Software

Component	Stack
Arena runtime	Unity 6 LTS; XR Interaction Toolkit for headset abstraction; Normcore or Photon Fusion 2 per title[P]
Operator layer	Poetics Operator SDK: session lifecycle, content switching, monitoring[P]; Prometheus + Grafana telemetry[P]
Booking & check-in	Poetics Pods (`pods.poeticsvr.com`): React, Supabase, Stripe, QR check-in[K]
Operator page	`freeroam.goldwood.tech`: static page with client-side calculator, no tracking cookies

Network budget per player is 76 bytes of avatar state per tick at 60 Hz, or 4.56 KB/s of payload per player[P]. That is small compared with Wi-Fi 6E capacity, before protocol overhead and fan-out.

17.2 Hardware Bill of Materials (Standard Arena)

Item	Specification	Qty
Headsets	Meta Quest 3S class, standalone (EU retail €360 for 128 GB, Apr 2026)[W]	6 + 2 spare
Body trackers	IMU trackers for wrists, ankles, waist	6 sets
UWB anchors	IEEE 802.15.4z, PoE	8 + 4 ceiling
Edge server	RTX 4090 class GPU, 64 GB RAM, 10 GbE	1
Wi-Fi 6E access points	Isolated VLAN	2
Switch	2.5 GbE managed	1
Operator console	Dual-monitor workstation	1
Spectator screen	75” 4K	1
Charging trolleys	Headset and tracker charging	2
Wall padding	High-density foam, ≥50 mm	Full perimeter

The CAPEX table (Section 7.5) budgets six headsets[P]. At April 2026 prices two spares add about €720 (Quest 3S, 128 GB), which fits inside the contingency line.

17.3 Standard Arena Floor Plan

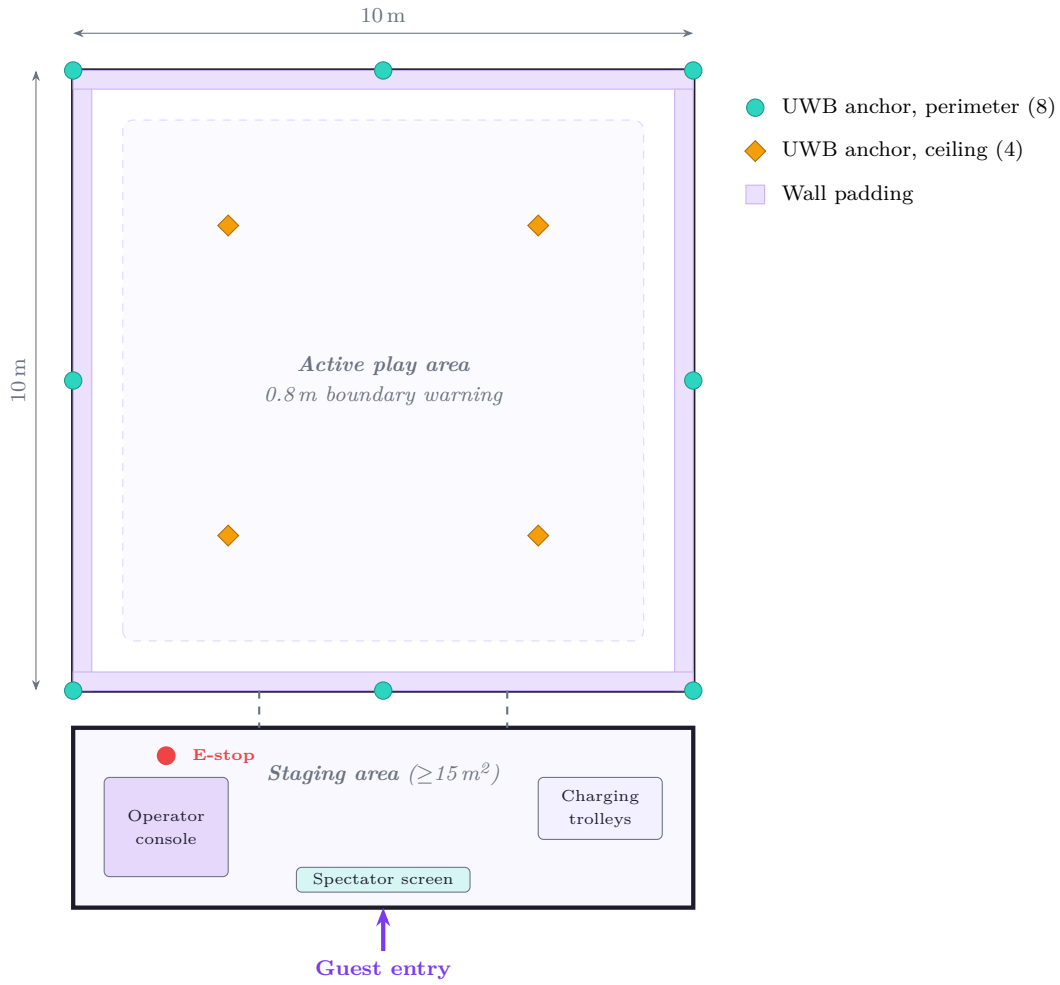


Figure 9: Standard 100 m² arena: 8 perimeter and 4 ceiling UWB anchors[P], padded walls, staging area with console, E-stop, spectator screen and charging.