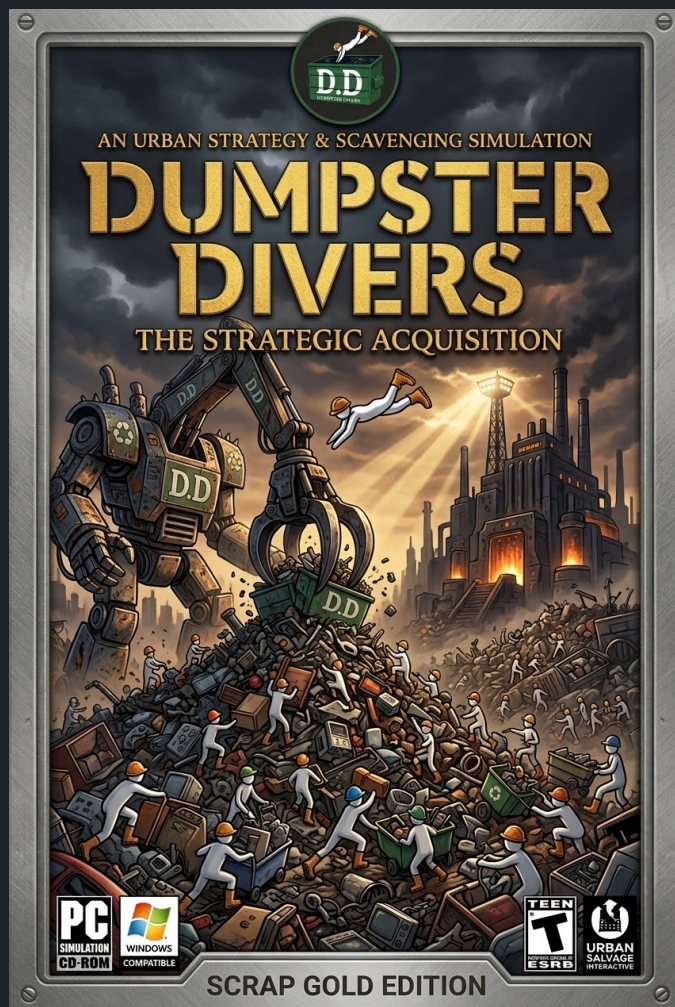


DUMPSTER DIVERS

THE STRATEGIC ACQUISITION / SCRAP GOLD EDITION



MASTER BLUEPRINT

The complete product vision: a shared war table, persistent business worlds, competitive realms and an optional bridge to real companies.

FOUNDER EDITION / SEPTEMBER 14, 2026

Prepared for Benjamin Foskey

Bootstrapped strategy. Simulation first. Connected business by choice.

Planning document. Proposed prices, budgets and forecasts are assumptions, not traction.

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Yes - as a staged platform.

Your concept is technically feasible as an evolving product. The complete version combines a game, a business-data platform, an online community and a physical display system. A small prototype is achievable with the existing code and minimal new spending; the full public world requires substantial engineering, content, operations and funding.

The north star

A player stands at a large virtual war table, zooms from the world to a city to headquarters, develops people and capabilities, competes with other companies and sees business decisions change the world. The same world works on a normal screen. Owners can optionally model their actual businesses, with explicit boundaries between facts, forecasts and game outcomes.

Genre translation

The closest design description is a persistent online business strategy world with RTS and RPG systems. World of Warcraft is an MMORPG; a MOBA is usually an arena competition. Your platform can support arena events, but the persistent company world is its organizing structure.

Scope honesty

No finite checklist can promise every possible game, industry, jurisdiction or future vendor. This is a complete planning baseline for the stated platform: every major workstream, the recommended first stack, conditional alternatives, required data, configuration, staffing and acceptance gates. Each additional industry needs its own model and integration specification.

Current status

The inspected prototype already has local simulation, rivals, upgrades, territory progression, a 3D headquarters and multiple display views. It does not yet provide a public multiplayer realm, unrelated-company isolation, verified competitive business scoring or a validated holographic installation. The prior 188 passing tests cover existing code, not these proposed systems.

Document set

This Master Blueprint defines the full destination. The revised Business Plan defines the bootstrapped commercial entry. The Connector Playbook supplies 25 provider logos and implementation status. Forecasts in the Business Plan cover only the first game and pilot. Research checked September 14, 2026; proposed specifications below are decisions to validate, not measured performance.

Make the inspirations work together.

Inspiration	Original design expression	Acceptance signal
Warhammer-sized table	One shared, legible world; edge controls; seated and standing access; expandable display profiles.	Players reach essential controls without crossing the table.
BFME 2	Distinct encampments, upgrade dependencies, scouting, rival expansion and area advantages.	Every upgrade changes a visible capability or trade-off.
Catan	Readable hex geography, scarce inputs, supply routes and clear ownership.	Players understand resources and territory without a spreadsheet.
Monopoly	Assets, rent, debt, cash reserves, acquisitions and financial consequences.	Ownership and financing reconcile to the company model.
RollerCoaster Tycoon	Satisfying placement, operations, throughput, service quality and feedback.	An operating decision visibly changes capacity or customer experience.
WoW / online world	Avatars, professions, organizations, regions, seasons and social progression.	Persistent identity survives reconnects and world maintenance.
Real businesses	Permissioned data snapshots, inspectable scenarios and optional verified leagues.	Facts have sources; competition does not expose private records.

Cohesion rule

Every feature must serve the shared world, company progression, a meaningful business decision or social competition. Use original art, terminology and mechanics. The named games are references, not licensed content or assets.

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Four modes, one identity.

Mode	State and clock	What winning means
Practice / sandbox	Fictional money, reproducible seed, pause and accelerated time. Local save allowed.	Master a scenario, reach a campaign objective or test a strategy.
Connected company	Private dated source records; actual time. Scenarios copy the baseline and may fast-forward.	Understand a decision and improve measured operations. No game command changes the ledger.
Competitive realm	Server-owned fictional resources; shared time; ranked seasons. No imported local saves.	Earn territory, contracts or scenario points against other players.
Verified business league	Opt-in company membership, delayed authorized metrics, normalization and review.	Earn benchmark recognition within a comparable cohort.

Identity and permissions

One person may have an avatar, membership in several companies and participation in several realms. A company is not a player account. Add owner, administrator, analyst, operator and spectator permissions. Private table sessions may show financial data; public spectator mode must redact it.

Time boundary

A real bank posting does not arrive on a game tick. Show source date, last successful sync and a stale state. Never let fast-forward predict that a real customer paid. Public competition must use a server calendar and written rules for offline growth, maintenance and season resets.

Assets and rewards

A simulated acquisition transfers game assets only. Real acquisitions require independent agreements and human processes. Cosmetics and scenario access can be monetized; paying for stronger financial stats would undermine a competitive business league.

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The game systems to build.

System	Required behavior
Economic engine	Cash versus accrual; invoices, collections, bills, debt, inventory, wages, depreciation assumptions and capital expenditure. Integer money with explicit currency.
World and ownership	Hex coordinates, service reach, terrain, travel time, fog, region streaming, settlements, resource constraints and documented ownership rules.
RTS progression	Build queues, prerequisites, resource commitments, upgrades, scouting, rival AI and feedback explaining blocked actions.
Tycoon operations	Staff and fleet capacity, dispatch, production or service queues, quality, downtime, customer demand and bottlenecks.
RPG systems	Avatar, role specializations, skills, quests, reputation and company career milestones. Effects must be transparent and balanced.
Competition	Matchmaking, leagues, contracts, bids, simulated trade, anti-abuse rules, seasons and dispute handling.
Creator framework	Versioned industry packs, scenario editor, validated rules and assets, import/export; sandbox user content before public sharing.
Presentation	Table camera, accessible HUD, selection, comparison, contextual help, audio cues, localization and low-power quality settings.

One complete first loop

Start with salvage: find demand -> estimate -> allocate crew -> complete -> verify -> collect -> reinvest -> expand. Multiplayer initially uses the same fictional operating loop. Add the second industry only when shared concepts are proven rather than copied into a separate engine.

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A modular business universe.

Pack	Extra model and real sources	Release condition
Salvage / removal	Job scope, volume or weight, trips, disposal fees, crew pay and receipts. Existing job platform plus ledger.	Reconcile one operator and validate a complete campaign.
Retail / resale	SKU, inventory, purchase cost, returns, fulfillment and channel fees. Shopify OR eBay.	Inventory and cash timing agree after a return.
Logistics	Capacity, route constraints, maintenance, utilization and fuel. Fleet source plus contracts.	A route respects vehicle and duty constraints.
Manufacturing	Bills of materials, lead times, yield, work-in-progress and plant capacity. Customer ERP exports first.	Production quantities and costs conserve inputs.
Property	Property IDs, leases, vacancy, repairs, financing and taxes. Owner records and licensed local datasets.	Lease cash and debt assumptions reconcile.
Portfolio	Entity ownership, currencies, consolidation, debt and intercompany eliminations. Authorized company books.	No double-counted revenue or cross-company disclosure.

Pack contract

Each pack supplies version, units, resource definitions, production rules, valuation assumptions, connectors, fixtures, localization and art references. Pin a realm to a rules version; migrate between seasons. A new pack must pass economic conservation, persistence and permissions tests.

Game catalog

Campaign, sandbox, cooperative company, competitive season and short challenge arena are the first mode families. Expansion to other genres is possible through modules, but a single engine does not automatically recreate every game. Establish compatibility and moderation rules before third-party packs.

The virtual war table.

Surface	Role	Configuration needed
Main table	World, terrain, territories, selected assets and orders.	Display dimensions, resolution, orientation, touch calibration and scale.
Finance screen	Cash, obligations, sources, scenarios and comparison.	Company permission, privacy mode and currency/time basis.
HQ / people screen	Departments, characters, queues, upgrades and incidents.	Selected company and realm; shared event version.
World screen	Global overview, realms, alliances and regional conditions.	Interest subscriptions, geographic level and ranking visibility.
Phone / tablet	Personal controls, private details and accessibility alternative.	Short-lived pairing code, device identity, role and revoke action.

Existing foundation

The game defines full, table, markets, hq and world display profiles. Mirroring currently uses a browser BroadcastChannel. That is a same-origin browser-context facility, not an Internet multiplayer or arbitrary cross-device protocol. Keep these views and replace or supplement the transport with authenticated session synchronization.

Interaction design

Use edge-mounted and rotatable controls, a one-touch home view, pinch/drag, selectable units, visible ownership, an undoable preview for simulated builds and a clearly separate real-action review. Pair displays to a session; never let two surfaces advance the authoritative clock independently.

Visual language

Keep the cover's steel, gold, green and industrial ambition; use clear, bright terrain beneath the controls. Establish a shared asset style for low-poly buildings, heroes and vehicles. World-to-HQ transitions, lighting, selection rings and sound should communicate the same business state across every screen.

Choose a physical display path.

Option	What you actually get	Decision
Large display / touch table	Flat screen with a 3D rendered world; direct multi-touch if supported.	Preferred first physical prototype, subject to vendor approval for horizontal use.
Projection mapping	Projected surface; camera or touch overlay can track input. Shadows, brightness and calibration matter.	Viable alternate if a suitable room and mount are available.
Mixed-reality headsets	Each participant sees 3D content registered above a shared table. Requires tracking and compatible headsets.	Later prototype; test shared anchors, occlusion, comfort and input.
Glasses-free display	A vendor-specific optical display with viewing constraints. Not automatically a walk-around tabletop.	Obtain a physical demo and horizontal-use specification before buying.

Working size assumption

Until you specify dimensions, design a 72 x 48 inch table footprint as a planning assumption, with a smaller active display and room for controls. This is not a claim about a standard Warhammer board. A 16:9 display cannot fill a 3:2 tabletop without unused area or cropping.

Current hardware reality

Looking Glass lists an 86-inch HLD at \$20,000, with a \$5,000 deposit; its page describes public-space signage. The page has conflicting shipment wording. Treat availability, horizontal suitability, viewing angles and touch support as unverified until confirmed by the vendor. It is not a complete table quotation.

Looking Glass 86-inch HLD - <https://lookingglassfactory.com/86-hld>

OpenXR platform standard - <https://www.khronos.org/openxr/>

Hardware bill of materials.

Item	Proposed specification / acceptance
Display or projector	4K target, low-latency input, suitable viewing angles; written horizontal/mounting permission and duty-cycle specification.
Input	Multi-touch controller with at least 10 simultaneous contacts as a test target; palm rejection, edge accuracy, controller fallback and accessible alternative.
Compute	Existing PC first. Upgrade only after profiling. Candidate target: 16-32 GB RAM, SSD, GPU that passes the actual table scene at chosen resolution.
Frame and protection	Load-rated frame, ventilated enclosure, service access, safe edge treatment, approved protective glass, cable strain relief and spill plan.
Network and power	Wired Ethernet where possible, reliable router, protected power, UPS sized for orderly shutdown, secure cable routing.
Companion screens	Use existing monitors; verify GPU outputs, adapters, resolution and refresh combinations.
Audio / tangible input	Speakers with volume control; optional fiducial tokens, camera or dial console only after touch works.
AR extension	Compatible headsets, shared-space calibration, sanitized accessories, charging and a non-headset path.

Acceptance before fabrication

Borrow or rent the candidate display. Run a 60-minute multi-user test under real lighting: legibility, heat, touch accuracy, cable safety, fatigue and reachable controls. Record frame timing at 4K and recovery after power/network loss. Procurement requires model-specific quotations; no exact PC/display SKU is claimed validated here.

Hardware funding allowance

Planning envelope: \$2,000-\$6,000 for a DIY table using some existing equipment; \$8,000-\$25,000+ for a professionally integrated touch setup. These are rough allowances, not researched vendor quotes, and exclude unusual fabrication, shipping and certification. Dedicated optical hardware can exceed them.

Recommended software stack.

Layer	Start with	Why / boundary
Game client	Existing TypeScript + React + Three.js	Reuse the current game and 3D art pipeline. Three.js is rendering, not a complete economy or multiplayer engine.
Application	Existing Next/vinext + Cloudflare worker	Keep customer, admin and operations surfaces. Pin tested versions; the inspected vinext dependency is a beta.
Rules engine	Shared pure TypeScript domain package	Run trusted realm logic on the server and local practice logic in the browser; common tests and rules versions.
Multiplayer	Colyseus authoritative rooms on a Node host	Best first candidate for reusing TypeScript. Custom economy, durable recovery and security still required.
Records / identity	Supabase Postgres + Auth + storage	Company memberships, facts, snapshots, audit and tokens stored with strict company boundaries.
Async processing	Cloudflare Queues + worker consumers	Provider events, refresh jobs and retries; designed for duplicate delivery and bounded spending.
Assets and edge	Cloudflare static assets; R2 if needed	Versioned art bundles and distribution. Do not put private evidence in public buckets.
Production visibility	Sentry + structured logs; PostHog selectively	Error and product feedback with sensitive-data filtering and retention controls.

Three.js - <https://threejs.org/>

Colyseus deployment - <https://docs.colyseus.io/deployment>

Cloudflare Queues - <https://developers.cloudflare.com/queues/>

Supabase isolation - <https://supabase.com/docs/guides/database/postgres/row-level-security>

Alternatives - choose, do not stack.

Technology	Use when	Cost / limitation
Godot	Native/table/XR client becomes necessary and open-source control matters.	MIT licensed; include notices. A port is engineering work.
Unity	Device SDKs or XR tooling justify a second client.	Personal eligibility currently below \$200k revenue and funds raised in the last 12 months; other plans and uses need review.
Unreal Engine	A funded high-fidelity installation needs its rendering/tooling.	Standard royalty model generally 5% above \$1m lifetime gross product revenue; other licensing categories differ.
Nakama / Heroic Cloud	Broader game-social services or a different backend ecosystem fit better.	Authoritative matches available; game logic and recovery remain your responsibility.
Cloudflare Durable Objects	Small shared table sessions or event-driven rooms fit measured limits.	WebSocket hibernation can reduce idle cost. Not a substitute for proving high-frequency realm capacity.
AWS GameLift Servers	Dedicated game-process hosting becomes useful at a funded scale.	Usage-based compute and traffic; not needed merely to host the web application.

Engine decision gate

Keep the existing browser client unless a measured performance or hardware-compatibility test fails. Prototype one difficult scene on the target hardware before approving a port. Native engines do not remove the need for integrations, economics, moderation or servers.

Godot license - <https://godotengine.org/license/>

Unity Personal - <https://unity.com/products/unity-personal>

Unreal licensing - <https://www.unrealengine.com/license>

Nakama authoritative matches - <https://heroiclabs.com/docs/nakama/concepts/multiplayer/authoritative/>

Durable Objects WebSockets - <https://developers.cloudflare.com/durable-objects/examples/websocket-hibernation-server/>

GameLift pricing - <https://aws.amazon.com/gamelift/servers/pricing/>

Servers and hosting topology.

Component	Owner of state	Hosting plan
Browser / table	Presentation, input, local practice save.	Static assets behind Cloudflare; desktop GPU renders locally.
Web API	Authentication, authorization, subscriptions and business access.	Existing Cloudflare worker; separate staging and production.
Realm process	Authoritative commands, tick, roster and public simulation state.	Node/Colyseus host; start one region and one small process.
Durable database	Company records, command receipts, checkpoints, league results.	Supabase Postgres; backups and restoration procedure.
Connection workers	OAuth refresh, provider ingestion, normalization and reconciliation.	Queue consumer with scheduled refresh and dead-letter handling.
Object storage	Public art; private receipts and exports in separate policies.	Existing storage first; signed access and lifecycle limits.
Scaling coordination	Presence and room discovery when multiple processes are needed.	Colyseus-supported shared presence/driver service; configure routing and capacity.
Operations	Health checks, alerts, incident response, releases and rollback.	Logs + error monitoring + named human on-call coverage.

Recommended deployment path

Use Colyseus Cloud for the first managed multiplayer evaluation, or a quoted Linux VM if the founder can operate it. Do not try to run an ordinary long-lived Node room server inside the existing request worker. Keep provider jobs off the real-time path. Select a region after identifying pilot users and data residency requirements.

Colyseus deployment and hosting options - <https://docs.colyseus.io/deployment>

Colyseus multi-process scaling - <https://docs.colyseus.io/scalability>

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A world is not one giant server.

World partitioning

Use a global directory of realms and regions. Each live room owns a limited set of companies and entities. Subscribe clients only to nearby or selected objects. Cold regions can advance through scheduled economic events rather than full visual simulation. Define ownership transfers and cross-region trades with durable transactions.

Authoritative action path

Client sends an intent with a unique command ID -> server checks membership, state version, balance and rules -> command and result are durably recorded -> state update is broadcast. Clients never submit an authoritative balance. Reconnect obtains a checkpoint and any subsequent events. Duplicate commands must return the original result.

Proposed capacity gates

Start with 4-8 players in one room. Then test 100 concurrent connections across multiple rooms; later 1,000 across regions. These are test goals, not a claimed capacity. Define peak connected users separately from accounts, monthly active users and companies. Ten thousand registered businesses does not mean ten thousand simultaneous full-rate simulations.

Illustrative bandwidth calculation

At 100 connected users, 5 updates/second and 2 KB per user per update, payload egress is about 1 MB/second or 3.6 GB/hour before protocol overhead. At 24 hours/day for 30 days that is about 2.6 TB. Real payload size, compression, interest filtering and occupancy must be measured. Hosting cost cannot be inferred from user count alone.

Performance targets to validate

For the strategy prototype, test a 5 Hz authoritative step and up to 10 Hz state publication only if needed; render independently at 30-60 fps. Suggested acceptance: p95 same-region action acknowledgement below 250 ms and reconnect below 10 seconds. Avatar combat would need a separate latency design; these strategy settings are not a MOBA combat specification.

Business connectors: core and optional.

Capability	Named choices	When required
Hosting, identity, records	Cloudflare; Supabase	Existing foundation; production configuration and permissions must be proven.
Sell the product	Stripe; Steam for optional distribution	Checkout, entitlements, refunds and subscription lifecycle.
Accounting	QuickBooks Online OR Xero	One real-company ledger baseline. Begin with authorized CSV if needed.
Bank transactions	Plaid	Optional cash verification after ledger reconciliation; not a full accounting system.
Communication	Resend; Twilio	Email first; SMS only where the workflow and consent require it.
Scheduling and geography	Google Calendar; Google Maps	Native calendar export/directions first; API synchronization when useful.
Working data	Google Sheets	Authorized planning imports/exports; not the authoritative money store.
Photo suggestions	Anthropic	Optional estimating aid. Existing adapter is not evidence of production acceptance.

Connector implementation kit

For every provider: developer app, permitted plan, test account, authorization flow, company mapping, scoped server credentials, webhook verification, rate limits, schema, retries, revocation, audit, cost ceiling and recovery owner. A connector installed in Codex helps us work; it does not automatically embed that service in your product.

Payments distinction

Stripe subscription payments buy access to your software. Stripe Connect is a separate marketplace funds-flow project. Neither automatically makes simulated securities, acquisitions or game winnings into legal real-world transactions.

Stripe Connect - <https://docs.stripe.com/connect>

Plaid Transactions - <https://plaid.com/docs/transactions/>

Anthropic Messages - <https://platform.claude.com/docs/en/api/http/messages/create>

Business connectors: expansion map.

Capability	Named provider	Configuration / prerequisite
Sales pipeline	HubSpot	Company-level OAuth, object mapping, pipeline stages and duplicate contacts.
Contracts	Docusign	Account access, templates, signer identity, envelope events and signed-file retention.
Payroll	Gusto	Employer eligibility and payroll authorization. Import labor costs before considering execution.
Fleet	Samsara	Customer fleet access, vehicle mapping, measurement units, GPS privacy and data freshness.
Resale channels	eBay; Shopify	Store identity, inventory mapping, orders, refunds, channel fees and API scopes.
Marketing	Google Ads	Authorized accounts, attribution and spend caps. Separate observation from campaign edits.
Customer support	Zendesk	Ticket identity, permission, retention and handoff; native cases may suffice initially.
Workflow	n8n	Optional orchestration; service credentials, approved actions, replay and failure queue.
Quality and release	Sentry; PostHog; GitHub	Error capture, minimal analytics and versioned code/CI with protected secrets.

Additional providers by industry

Do not choose an ERP, property-management, insurance, lending, shipping or tax provider until a pilot customer identifies its system and jurisdiction. Support a documented CSV contract as the first bridge. Each additional provider receives the same integration kit and approval/eligibility check; no vendor can supply every business fact.

Trading and investor accounts

Alpaca, IBKR or crypto connectors are not required for a business strategy world. Market observations and paper scenarios can be a later pack. Real brokerage execution, custody, pooled capital or cash-prize competitions would create a separate product and compliance workstream. No trading provider is recommended for the minimal launch.

Public world data and its limits.

Source	Game use	Configuration and freshness
US Census API	Population, income and business density context.	Dataset year, geography and variables; update on official releases. Estimates are not current customer demand.
BLS API	Labor and inflation context.	Series IDs, seasonal adjustment, units and publication date. Respect registered/unregistered limits.
EIA API	Fuel and energy assumptions.	API key, series, geography and period. Local pump prices may differ.
FRED API	Interest rates and macro scenarios.	API key, series, vintage/date and source-specific reuse terms.
NWS API	US forecasts and weather alerts.	Identifying User-Agent, location grid, caching and expiry. Not a global weather provider.
SEC EDGAR APIs	Public-company filings and comparables.	CIK/entity matching, identifying User-Agent and fair-access limits. No private-company books.
OSM data + MapLibre	Geographic base and map presentation.	Attribution, licensed tile host or self-hosted tiles; public OSM tile service is not bulk/offline infrastructure.

Conditional map service

Google Maps routes or Mapbox can supply selected location services. Check display, attribution, caching and redistribution terms before moving provider content onto a stylized game board. A fictional map needs no external tile service. Real territories require a documented link between hexes and geography.

Census datasets - <https://www.census.gov/data/developers/data-sets.html>

BLS API - <https://www.bls.gov/developers/>

EIA data - <https://www.eia.gov/opendata/>

FRED API - <https://fred.stlouisfed.org/docs/api/fred/>

Ground truth before game statistics.

Data domain	Minimum fields	Authority
Company	Legal entity ID, membership, base currency, timezone, industry and accounting basis.	Owner-authorized company configuration.
Financial	Accounts, invoices, bills, payments, refunds, transfers, cash and liabilities.	Ledger plus bank reconciliation; not AI text.
Operations	Job/contract, customer pseudonym, timestamps, crew, asset, cost, status and evidence.	Customer operating system and dated receipts.
Assets / people	Capacity, availability, maintenance, loaded labor cost and role.	Authorized asset and workforce records.
Market	Region, statistic, period, unit, methodology and license.	Named public/licensed source; never inferred competitor profits.
Local requirements	Disposal fees, permits, insurance, taxes and operating constraints.	Dated facility documents, relevant authorities and qualified review.
Scenario	Baseline snapshot ID, changed assumptions, model version, seed and horizon.	Separate simulation record, never source-ledger mutation.

Canonical event contract

Store company_id, source, external_id, revision, occurred_at, fetched_at, currency, amount_minor, unit, status, provenance and license/consent reference. Preserve original evidence in restricted storage. Track correction and deletion events. Never sum mixed currencies or count a bank transfer as revenue.

Freshness contract

Proposed refresh targets: operational jobs on events or every 5-15 minutes; accounting daily initially; bank records as provider updates permit; public indicators on release. These are product targets, not provider guarantees. Display unknown/stale instead of guessing. A current fetch timestamp does not make an old observation current.

NWS API - <https://www.weather.gov/documentation/services-web-api>

SEC APIs - <https://www.sec.gov/search-filings/edgar-application-programming-interfaces>

OSM tile policy - <https://operations.osmfoundation.org/policies/tiles/>

Configuration checklist.

Area	Values and records to establish
Environments	Separate development, staging and production origins, credentials, databases, buckets and webhook endpoints.
Identity	Company memberships, owner invitations, recovery, privileged MFA, session expiry and short-lived display pairing.
Authorization	Row-level company policies, server checks, public DTO allowlist, spectator redaction and cross-company denial tests.
Provider access	Client IDs, encrypted secrets, redirect allowlist, consent scopes, provider account ID, sandbox mode and key rotation.
Sync	Initial date range, pagination, cursor, mapping version, retry budget, stale threshold and reconciliation report.
Real actions	Disabled by default for new integrations. Named reviewer, amount and recipient confirmation, server limits, idempotency and audit.
Realm	Rules version, seed, region, capacity, step frequency, snapshot schedule, reconnect window and season calendar.
Operations	Budget alerts, capacity limits, backup schedule, retention policy, on-call contacts and rollback procedure.

Read-only nuance

Some provider authorization scopes permit more than reading. Enforce a server-side read-only adapter allowlist for the pilot and choose the narrowest current provider scopes. Do not claim that an OAuth login alone prevents writes. Keep privileged keys out of browser code, local game saves and public configuration files.

Existing deployment warning

The inspected staging configuration includes operational feature flags and delivery controls. Their names alone do not prove safe defaults or live readiness. This blueprint does not change those settings. Test the actual enabled behavior and server authorization before any customer pilot.

Xero scopes - <https://developer.xero.com/documentation/guides/oauth2/scopes/>

Google Routes policies - <https://developers.google.com/maps/documentation/routes/policies>

Fair competition between real firms.

Recommended league design

Use private records and opt-in verified metrics. Compare like businesses by sector, scale, geography, reporting basis and time period. Score improvement, reliability or efficiency using disclosed formulas rather than raw revenue. Mark data completeness and verification status. Equal-start fictional seasons remain available to everyone.

Verification pipeline

Company authorizes source -> records reconcile -> selected metrics are calculated server-side -> delay and cohort rules apply -> owner previews publication -> score is signed/versioned -> dispute and correction process remains available. Missing data should mean unranked or provisional, not automatic failure.

Privacy and competitive information

Do not stream a rival's customers, current prices, bids, planned expansions, bank balance or worker details to opponents. Use a strict public-stat allowlist and independent review before business-league launch. Aggregation and delay reduce some risks but are not automatic legal safe harbors.

Anti-cheat and abuse

Prevent edited local saves, replayed commands, duplicate companies, fabricated invoices, collusive game trades, smurf accounts and coordinated harassment. Keep private source evidence available to authorized reviewers. Include reports, appeals, moderator tools, sanctions and a written correction policy.

Legal product gate

Real competitor coordination can create antitrust issues, particularly around prices, bids, territories or employment. Obtain jurisdiction-specific review of league mechanics and publication rules. Also define privacy terms, data-processing contracts, consumer/refund terms and age access. Actual securities, custody and cash prizes need a separate qualified review if later proposed.

FTC price-fixing guidance - <https://www.ftc.gov/advice-guidance/competition-guidance/guide-antitrust-laws/dealings-competitors/price-fixing>

FTC sensitive information in deal discussions -

<https://www.ftc.gov/enforcement/competition-matters/2018/03/avoiding-antitrust-pitfalls-during-pre-merger-negotiations-due-diligence>

Skills and tools the project needs.

Discipline	Deliverable / tools	Who provides it
Game direction and economy	Rules, progression, balance, scenario calibration and playtests.	Benjamin owns vision; AI assists; experienced systems designer when funded.
Client / technical art	TypeScript, React, Three.js, shaders, asset optimization, Blender and glTF pipeline.	AI-assisted development plus artist/technical artist.
Multiplayer / backend	Authority, room lifecycle, transactions, reconnect, migrations, capacity and observability.	Experienced backend/network engineer for public scale.
Data engineering / accounting	OAuth, schemas, reconciliation, cash/accrual and company consolidation.	Developer plus operator/bookkeeper or accountant validation.
UX / accessibility	Table reach, touch, typography, input alternatives, tutorials and user research.	Designer and observed sessions with actual users.
QA / security / operations	Unit/integration/browser tests, load testing, isolation review, restore drills and incident response.	AI assists automation; specialists review critical launch gates.
XR / hardware	Shared spatial coordinates, tracking, interaction, frame construction and thermal/electrical integration.	XR developer and AV/hardware integrator when this phase is funded.
Business / community	Interviews, sales, support, moderation, legal/privacy/IP and commercial partnerships.	Benjamin plus paid professional review and later community staff.

Supporting software

Use GitHub for version control and CI, an issue tracker, Blender for art, Figma or a documented design system, existing Node tests plus browser tests, and a load-test harness such as k6 after its current setup is checked. Keep an asset/license register, model assumption register and incident runbook. Avoid buying overlapping suites.

AI assistance

AI can draft, implement, test and research with review. It does not replace customer interviews, professional sign-off, hardware assembly or staffed 24-hour service. Codex skills and plugins assist our workflow; runtime game systems still require code, credentials, testing and accountable operators.

Cost model: separate software from labor.

Stage	Planning cash allowance	What it excludes
Existing browser prototype	\$0-\$100/month incremental tools	Founder time, hardware, custom art and paid professional review.
Small connected / multiplayer pilot	\$100-\$500/month infrastructure	Paid development, major data licenses, high message volume and 24/7 support.
Public beta infrastructure	\$500-\$5,000+/month	Depends on measured concurrency, traffic, storage and geography; not a guaranteed capacity tier.
Physical table prototype	\$2,000-\$6,000 rough one-time allowance	Existing equipment assumed; custom optics, freight and professional fabrication may exceed this.
Funded product team	4 people x \$12k loaded/month x 9 months = \$432k	Illustrative arithmetic, not a staffing quote; add contingency and non-labor costs.
Broader public world	8 people x \$15k loaded/month x 18 months = \$2.16m	Illustrative scenario before hardware, major content, infrastructure and contingency.

Verified price anchors

Cloudflare Workers paid pricing starts at \$5/month; Supabase Pro starts at \$25/month, with usage and project/compute considerations. These are starting anchors, not the full platform bill. Game-server hosting, provider approvals, tax, SMS, data and customer support add cost. Requote before purchase.

How to estimate the actual bill

Monthly cost = web and identity + database/backup + room compute + network egress + storage + sync calls + messaging + AI + monitoring + support labor. Maintain caps by company and feature. Load-test to measure concurrent users per process and bytes per second before projecting public scale.

Cloudflare pricing - <https://developers.cloudflare.com/workers/platform/pricing/>

Supabase pricing - <https://supabase.com/pricing>

GameLift cost factors - <https://aws.amazon.com/gamelift/servers/pricing/>

Build order and proof gates.

Stage	Concrete deliverable	Exit test
0. Lock the contract	Mode boundaries, first industry, art bible and target table profile.	Founder confirms the intended experience; assumptions logged.
1. Complete one loop	Polished salvage campaign on screen and table layout.	Five observed sessions; player understands decisions and consequences.
2. Shared table	Authenticated pairing across two physical devices.	One authority, revoke device, reconnect and privacy checks.
3. Small multiplayer	4-8 players, fictional money, server-owned state and one Strategy Room exercise.	Reject tampering; recover after restart without duplicated assets.
4. Connected pilot	One company, one ledger source, one useful decision.	Owner reconciles totals; forecast is separate from actuals.
5. Paid beta	Entitlements, refunds, support, telemetry and capacity limits.	Purchase/cancellation and restore tests; retention evidence.
6. Verified league	Comparable cohorts, approved public metrics, disputes and moderation.	Consent, privacy and qualified competition review passed.
7. Broader world / hardware	Additional industries, regions, content pipeline and funded table/AR installation.	Measured load, operational staffing and hardware acceptance.

Timeline

There is no committed launch date. At roughly 15 founder hours/week, the first iteration should be measured in completed experiments, not promises of an MMO deadline. A small multiplayer product is a months-long undertaking; a broad polished world is a multi-year possibility depending on scope and staffing. These are planning judgments, not delivery estimates.

Acceptance before each launch.

Area	Evidence required
Economy	No created/lost money from duplicate commands; balanced source mappings; deterministic replay; refunds and negative cash cases.
Network	Disconnect/reconnect, dropped/reordered messages, restart, version mismatch, stale command, bot abuse and overload tests.
Isolation	Company A cannot read or act on B through APIs, storage, WebSockets, exports, search, logs or spectator views.
Connectors	Authorize, refresh, revoke, stale data, rate limit, duplicate webhook, corrected/deleted records, reconciliation and recovery.
Payments	Test checkout, entitlement, refund, failed renewal, cancellation and duplicate/out-of-order webhook handling.
Table / accessibility	Mouse, keyboard, touch, readable scale, focus, reduced motion, non-color signals, multiple orientations and privacy.
Operations	Backup restore, rollback, secret rotation, incident drill, budget alarms and designated support coverage.
Content / rights	Original assets or valid licenses, rating/platform claims, published scope, clear terms and truthful marketing.

Launch targets to ratify

Set target device/frame time, peak connections, action latency, acceptable recovery time and data-loss tolerance before testing. Suggested pilot recovery target: restore service within four hours and source snapshots within one day; acknowledged real actions require durable receipts so a replay cannot execute twice. These are unproven targets, not current SLAs.

Timeliness process

Every integration record needs owner, official URL, checked_at, API version, pricing basis, release/deprecation watch and next review date. Review before procurement, before release and monthly while active. This document is a dated snapshot; no automatic monitoring service has been enabled.

Cohesion audit and immediate work.

Original requirement	Current foundation	Next concrete gap
War table and screen toggles	Display profiles and local browser mirroring.	Authenticated cross-device sessions; actual touch-table test.
Upgrades and encampments	Capabilities, HQ, rivals and regional ladder.	Unified visual/interaction standard and observed balance tests.
Real business tycoon	Simulation plus operations API and provider adapters.	Reconciled baseline, scenario copies and company isolation.
Persistent online world	Local saved campaign and display views.	Server authority, realm storage, sessions and social systems.
Real firms competing	Concept and private connected surface.	League rules, verified metrics, privacy, moderation and legal review.
Many games / industries	Salvage rules and existing services workflow.	Shared pack schema, scenario editor and a validated second pack.
Holographic experience	3D rendered HQ and cover/vision art.	Hardware selection, compatibility prototype and physical acceptance.

The next useful build and exercise

An authenticated two-device war-table session is the smallest experiment that advances your distinctive vision. It should share one fictional company, keep the same selected territory and show one state version on both screens. Use the second-service-area exercise specified below to test the table with human participants, then implement the 4-8 player realm contract and first accounting import. Do not purchase holographic hardware or connect every vendor before those proofs.

What remains a founder choice

Exact table dimensions and optical experience; preferred competition/publication model; weekly time and cash ceiling; first real-company pilot and geography. Until answered, this blueprint assumes a US salvage pilot, a large display/touch-table prototype, optional AR later and private company data with opt-in leagues. These assumptions are not approvals to buy or publish.

AI workflow skills and their role.

Available skill family	Use in this project	Boundary
design:design-system / design-critique	Shared art rules, map hierarchy, component consistency and screen reviews.	A design review is not proof of user comprehension.
design:accessibility-review / user-research	Input alternatives, contrast, focus, touch and observed interviews.	Test real people and target devices.
engineering:system-design / architecture	Realm boundaries, data contracts, scaling decisions and trade-offs.	Implementation and load evidence still required.
engineering:testing-strategy / code-review	Economy, network, connector and isolation checks.	A passing unit suite does not certify production security.
engineering:debug / incident-response	Reproduction, diagnosis, recovery and runbooks.	Public service needs accountable human coverage.
browser:control-in-app-browser	Inspect and exercise the running interface.	Local browser checks do not test the physical table.
pdf:pdf / spreadsheets:Spreadsheets	Planning documents, models, requirements and visual verification.	Financial inputs and assumptions need owner validation.
imagegen / brand-voice skills	Original visual concepts and consistent written identity.	Track rights and manually review final production assets.
operations:risk-assessment / vendor-review	Procurement decisions, dependencies, costs and operating risks.	Professional hardware or legal review remains separate.

How to use the list

These are available assistance workflows, not mandatory paid runtime dependencies and not claims that every listed skill was invoked. Add specialist game-economy, networking, reconciliation and XR guidance to the project as the corresponding systems are built. Maintain a source and test-evidence register with every AI-generated change.

Business wargaming as a design method.

Source synthesis

The user-supplied Business war games article introduces commercial move/countermove exercises, stakeholder role-play, negotiation rehearsal and differing views of the war metaphor. We adopt those useful ideas without importing the article's broad claims of methodological superiority or prediction accuracy. The framework below is an original product specification, not a reproduction of a proprietary workshop.

Choose the method for the question

McKinsey's practitioner guidance emphasizes a defined decision, representable stakeholders and a manageable range of uncertainty. For Dumpster Divers, use a facilitated strategy exercise when reactions matter, an ordinary operating model for a capacity calculation, and exploratory scenarios when uncertainty cannot be bounded. A shared world does not make every business problem a competition.

Exercise	Question it helps explore	Proposed implementation
Market rehearsal	What could happen if we open a branch?	Company, rival, customer and supplier roles; constrained decisions; multiple rounds.
Negotiation rehearsal	Which terms could make a deal workable?	Separate role briefs, alternatives, reservation limits, concession log and debrief.
Strategy comparison	Which approach survives several plausible reactions?	Versioned baselines, alternative rival policies, consistent seeds and sensitivity results.
Team alignment	Do departments understand the same trade-offs?	Finance, dispatch, care and growth propose actions against one shared company state.

What the war metaphor means here

Use the cover's command-table atmosphere for attention and clarity. Reward customer value, resilience, sound cash management and credible decisions. Cooperation and negotiated agreements can be successful outcomes. Eliminating a real competitor is not the platform's universal objective.

User-supplied overview - https://en.wikipedia.org/wiki/Business_war_games

Practitioner design guidance - <https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/playing-war-games-to-win>

The Strategy Room workflow.

Stage	Table experience	Record produced
1. Frame	Choose the decision, horizon, constraints and success criteria.	Exercise charter and baseline snapshot ID.
2. Brief	Assign company, competitor, customer and relevant third-party roles.	Role-specific evidence, incentives and known unknowns.
3. Commit	Each team privately submits an action and rationale.	Timestamped move, budget commitment and expected reaction.
4. Respond	Reveal permitted information; teams respond from their assigned perspective.	Countermove, assumptions and referenced evidence.
5. Resolve	Rules calculate modeled effects; facilitator records discretionary rulings separately.	State change with calculated / judged / uncertain labels.
6. Challenge	Inspect an adverse event or alternative response; branch the same baseline.	Comparable scenario branch and changed assumptions.
7. Debrief	Compare intended and observed effects; identify blind spots and disagreements.	Decision log, confidence changes and unresolved questions.
8. Act and revisit	Export a proposed plan with owner, trigger and review date.	Human-reviewed action plan; no automatic live execution.

New software requirements

Add exercise_id, purpose, baseline_id, role, visibility, round, move_id, rules_version, seed, evidence_refs, facilitator_ruling and debrief_id. Authoritative rooms enforce phases and private submissions. Shared displays show only permitted information; role dossiers stay on personal devices. Log changes to a ruling, and keep the original result available.

AI role boundary

AI may draft a rival hypothesis or summarize a debrief, using the same restricted briefing available to that role. It must not see another team's sealed move or present invented competitor intentions as facts. Humans can replace AI roles. Start with transparent scripted policies so the basic exercise works without paid model calls.

First exercise and acceptance tests.

Proposed exercise: a second service area

Decision: expand a fictional salvage company into a neighboring area or strengthen its current operation. Use a 60-minute workshop target: 10 minutes to brief, three 10-minute decision rounds and 20 minutes to debrief. These durations are our test design. Roles: company, rival, customer group and facilitator representing a disposal supplier when needed.

Scenario inputs

Use one versioned fictional baseline with disclosed cash, capacity, travel, disposal and service assumptions. Round one tests the expansion commitment. Round two introduces a prewritten capacity or disposal-cost disruption. Round three allows revision or negotiation. A rival may improve service rather than cut price. Record why the scenario is plausible; do not assign probabilities without evidence.

Outputs and scoring

Compare reserve adequacy, contribution margin, completion reliability, customer outcomes and reversibility. Keep competitive game points separate from business evaluation. Export: preferred action, downside case, assumptions that would invalidate it, signals to monitor, accountable owner and next review date. Include a no-expansion baseline and at least one contrary result.

Test	Acceptance evidence
Privacy	A role cannot fetch another role's private brief or sealed move through any client/API path.
Reproducibility	Same baseline, rules, seed and committed moves reproduce calculated effects.
Human judgment	Facilitator decisions are attributed and distinguishable from model calculations.
Learning	Participants identify an assumption changed by another role and explain their final choice.
Real-data boundary	Copied real-company scenarios cannot overwrite records or send external actions.

Evidence limits

Green's 2005 study compared forecasting methods across eight conflict situations and found stronger results for simulated interaction in that sample. This supports testing role-play; it does not validate our game, an AI rival, every industry or any promised return. Our pilot should compare decisions and explanations before and after the exercise.

Green (2005), published study abstract - <https://www.sciencedirect.com/science/article/abs/pii/S0169207005000348>

Source register and confidence.

Evidence levels

Existing: inspected source code and prior local checks. Verified reference: current official documentation opened or found during this review. Proposed: architecture, budgets, timing, limits and acceptance targets designed for this project. Unverified: provider production eligibility, customer credentials, actual load capacity and hardware suitability.

Internal sources

Original user Game Design prompt; supplied cover, multi-monitor image and five-page War Room PDF; business app worker/configuration and operations documentation; game simulation, screens, browser mirroring, package manifests and connector catalog. No private bank/customer dataset was fetched. The existing app remains a prototype foundation, not a completed implementation of this blueprint.

Colyseus scaling - <https://docs.colyseus.io/scalability>

Nakama server authority - <https://heroiclabs.com/docs/nakama/concepts/multiplayer/authoritative/>

MapLibre GL JS - <https://maplibre.org/projects/gl-js/>

Mapbox pricing / service selection - <https://www.mapbox.com/pricing>

Google Maps policies - <https://developers.google.com/maps/documentation/routes/policies>

Blender - <https://www.blender.org/about/>

OpenXR - <https://www.khronos.org/openxr/>

Looking Glass hardware - <https://lookingglassfactory.com/86-hld>

Use of the references

Official links beside relevant sections support product capabilities and specific price anchors. Design recommendations and cost scenarios are our planning judgments. Provider and engine brand names identify options, not partnerships. Recheck eligibility and terms when selecting a specific production configuration.