

# Boneanza Game Design Document

This document serves as the *definitive* blueprint for Boneanza. All development cycles, mechanics, and creative direction must align with the specifications detailed herein.



# Boneanza

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## 1. High-Concept & Core Vision

In Boneanza, four players unite to repel endless waves of skeletons within a grim, cursed castle. By mastering unique weapons and hero abilities, players must adapt to complex enemy behaviors and evolving attack patterns to descend deeper into the stronghold.

## 2. Backstory

Deep within the bowels of the accursed castle, a mysterious wanderer unearthed a relic forged in the void: a dark box that whispers the exact moment of its owner's demise.

Refusing to accept their ends, four outcasts named Alric, Veljko, Aelith, and Drogath stole the box. By peering into its depths, they gained the knowledge to cheat their destinies and collectively avoided their deaths. However, the dark spirits of the castle are enraged by this defiance of the natural order. Because the heroes refused to fulfill their fate, the spirits have unleashed twisted, skeletal counterparts of the four warriors to hunt them down and reclaim the lives that were stolen from the grave.

## 3. The Core Game Loop

- **Preparation & Strategy:** During the intermission phase, players recover resources and spend earned currency on Bone-Keys and Revive Potions to prepare for the next wave.
- **The Confrontation:** The team defends against escalating skeletal waves, utilizing tactical positioning and unique hero abilities to survive.
- **Bone-Key Progression:** After clearing the threat, the team uses their collected Bone-Keys to strategically unlock and transition into a new chamber of their choice.
- **The Lobby & Meta-Progression:** Upon death, players return to the Lobby. Here, they use the gold saved from their previous runs to purchase permanent upgrades and perks, strengthening their build to push deeper into the castle in the next round.
- **The Finale:** This cycle repeats with increasing difficulty until the party has amassed enough power to challenge the final Boss Room.

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## 4. Multiplayer Architecture

- **Lobby & Access:** The game supports cooperative sessions for up to four players via relay lobbies.
- **Team Sustainability:** A revive mechanic ensures that managing health and healing abilities is a collective responsibility to prevent a total party wipe.
- **Tactical Synergy:** Cooperation is driven by environmental play, where players lure enemies into allied traps or cover each other's optimal combat ranges.
- **Collective Growth:** Through active communication and the integration of diverse hero roles, players form a balanced frontline capable of scaling with the escalating threat.
- **Shared Resource Management:** To intensify cooperation, the team shares a collective inventory for critical items such as Bone-Keys and revive potions. This forces strategic deliberation on resource allocation: deciding who carries the key and when to commit scarce consumables for a revive.

## 5. Heroes

### *Alric:*

**Health:** +++++

**Damage:** +++++

**Speed:** ++++

**Range** ++

**Attacks:**

- **Attack: Cleaving Swing** A swift, horizontal sword strike designed to hit multiple surrounding enemies at once, ideal for crowd control.
- **Special: Vaulting Strike** A high-impact, powerful maneuver with a cooldown that launches the hero forward, dealing massive damage to any enemies in their path.

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## *Veljko:*

Health: ++++

Damage: ++

Speed: ++++

Range: ++++

Attacks:

- **Attack: Precise Shot** Fires a single, high-velocity arrow at a target with pinpoint accuracy.
- **Special: Alchemical Volley** Fires three arrows tipped with healing fluid in quick succession, allowing the hero to rapidly mend the wounds of distant teammates.

## *Aelith:*

Health: ++++

Damage: +++

Speed: +++++

Range: +++

Attacks:

- **Attack: Arcane Barrage** The hero raises their staff to channel and fire a rapid succession of magic spheres that detonate upon impact.
- **Special: Sigil of Weakening** Places a mystical trap on the ground that stuns any enemy who triggers it and temporarily reduces their defense, making them vulnerable to follow-up attacks

## *Drogath:*

Health: ++++++

Damage: +++++

Speed: ++

Range: +

Attacks:

- **Attack: Brutal Chop** A swift, vertical axe strike focused on a single target, delivering massive physical damage with high precision.
- **Special: Seismic Slam** The hero leaps into the air and strikes the ground with immense force, triggering a powerful shockwave that damages all surrounding enemies.

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## 6. Perks & Meta-Progression

Perks are what keep players coming back. While your session level makes you stronger during a run, the real growth happens in the Lobby. This is where you invest the gold you've extracted into permanent hero upgrades. It shifts the game from "how do I survive this wave?" to "how do I build the ultimate hero?"

### The System:

- **Skill Tree:** All perks are unlocked via a non-linear skill tree.
- **Synergy over Power:** While some perks are naturally stronger, the system is designed around synergy. A combination of lesser perks can often outperform a single high-tier perk if they trigger each other effectively.
- **Loadout:** Players can equip up to 3 perks per match, allowing for specific builds ( a gold-farming build, a tank build, or a medic build).
- **Compatibility:** To keep the skill tree clean, perks that are obsolete for certain heroes are automatically hidden.

**Trigger & Action Logic:** Every perk follows a simple Trigger -> Action logic. When a specific event occurs, the perk activates its effect.

### Triggers:

- **Combat:** OnEnemyHit, OnEnemyKill, OnEnemyTrap, OnBlockDamage, OnTakeDamage, OnLastManStanding.
- **Utility:** OnPlaceTrap, OnHealTeammate, OnHealSelf, OnAbilityUse, OnDoorOpen, OnChestOpen
- **Economy:** OnMoneyIncrease, OnMoneyDecrease.
- **Wave Flow:** OnStartWave, OnClearWave.
- **Survival:** OnRevive, OnDeath, OnStaminaDepleted.

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## 7. First floor Wave Structure & Dynamic

Desired fighting time per enemy

Peasant: 10 sec

Archers: 15 sec

Mage: 15 sec

Viking: 25 sec

Wave	Difficulty	Peasants	Archers	Mages	Vikings	length	goal
1	E... ▾	4	0	0	0	40 sec	introduce peasants
2	E... ▾	6	0	0	0	60 sec	practise
3	E... ▾	6	2	0	0	90 sec	introduce archers
4	M... ▾	8	3	0	0	125 sec	practise
5	M... ▾	8	2	3	0	155 sec	introduce mages
6	H... ▾	10	3	4	0	205 sec	practise
7	H... ▾	10	2	3	2	225 sec	introduce vikings
8	H... ▾	12	2	3	2	245 sec	practise
9	M... ▾	8	1	2	1	150 sec	cool off
10	S... ▾	14	4	5	3	350 sec	Boss wave

*\*To ensure a consistent challenge regardless of party size, enemy counts are calculated on a per-player basis. For example, if the scaling factor for a specific wave is 4, a solo player would face 4 peasants, while a 3-player lobby would face a swarm of 12. This system maintains the intended difficulty and tactical pressure for any group size.*

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## 8. Enemy Bestiary

### *The Peasant (Undead Alric) :*

**Health:** +++++

**Damage:** +++

**Speed:** ++

**Personality:** Chaser

**Attacks:**

- **Lunge Dash:** A sudden burst of speed to close the gap instantly.
- **Heavy Cleave:** A powerful swing of his sword for high close-quarters damage.

### *The Archer (Undead Veljko) :*

**Health:** +++

**Damage:** +++++

**Speed:** +++

**Personality:** Lurker

**Attacks:**

- **Triple Volley:** Rapidly draws his bow to fire three arrows in quick succession.
- **Venom Flask:** Hurls a glass vial of snake venom that deals damage over time and obscures your vision.

### *The Mage (Undead Aelith) :*

**Health:** ++

**Damage:** ++

**Speed:** +++++

**Personality:** Vermin

**Attacks:**

- **Arcane Strike:** A hit-and-run maneuver, rushing in for a quick magical strike with his staff.
- **Blink & Blast:** Teleports to safety while firing a homing magic orb.

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*The viking (Undead Drogath) :*

**Health:** ++++++

**Damage:** +++++

**Speed:** +

**Personality:** Brute

**Attacks:**

- **Stunning Chop:** A massive chop-attack that stuns the player
- **Whirlwind Charge:** Spins his axe violently while charging toward you like a human tornado.

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## 8.1 Personalities

### *The Chaser*

**Core Logic:** Constant pressure.

- **Idle:** Patrols his spawn position.
- **Engagement:** Always moves toward the player's position.
- **Attack:** Attacks when close enough

### *The Lurker*

**Core Logic:** Maintain distance and ambush.

- **Idle:** Stays hidden or far back.
- **Engagement:** Keeps a "Sweet Spot" distance
- **Attack:** Attacks when in the "Sweet Spot"

### *The Vermin*

**Core Logic:** High mobility hit-and-run.

- **Idle:** Knows where the player is at all times.
- **Engagement:** Erratic movement. Circles the player instead of running straight.
- **Attack pattern:** Unpredictable, picks random moments to attack

### *The Brute*

**Core Logic:** Slow, unstoppable force.

- **Idle:** Patrols his spawn position.
- **Engagement:** Heavy, slow walk toward player.
- **Attack:** Telegraphed attacks (Clear windup animations with obvious cues).

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## 9. Level Design

### Level Synopsis

The siege begins in the heart of the castle: the Council Room. As the Queen briefs your squad on the Skeleton King's invasion, the windows shatter, the enemy is already inside. After a frantic opening skirmish, the main gates are barricaded, forcing the team to fight their way through the stronghold.

Players navigate a multi-layered fortress, choosing their own path through the Armory, Courtyard, and high Towers. The gameplay shifts between tight, defensible chokepoints and chaotic, open-area brawls. Success isn't just about killing skeletons; it's about strategic positioning and resource management to keep the crown and the castle intact against an escalating undead tide.

### Success Criteria

- **Combat Flow & Scaling:** A balanced PvE environment optimized for 4-player tactical synergy.
- **Verticality:** Level design that utilizes multiple floors and climbing routes to create diverse vantage points.
- **Intuitive Onboarding:** An organic layout that introduces core mechanics through environmental cues rather than tutorials.
- **Navigational Clarity:** A logical pathing system that guides players through the castle without breaking the immersion.
- **Technical Performance:** Optimized geometry and effects to ensure a stable framerate during high-density waves.

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## 10. Economy

Players earn gold for every enemy they kill. This currency is used in two ways:

- In-game: You can spend your gold during a run to buy Revive Potions to save teammates or Bone-Keys to unlock new areas and progress further.
- Post-game: Any gold you have left after a match is added to your permanent balance. In the lobby, you can spend this on Perks to upgrade your character, making your next run a bit easier.

Players earn XP for every enemy they kill. This XP increases your Session Level, which resets to zero at the start of every new run.

- Scaling: The XP curve is balanced so players gain roughly 10 levels per floor.
- Stat Boosts: Each level up automatically upgrades your base stats, including Health, Damage, Movement Speed, Crit Damage, and Crit Chance.

This system ensures players feel a clear power spike as they descend deeper into the castle, helping them keep up with the increasing difficulty of the waves.

## 11. User Interface (UI) & HUD

The HUD is designed to keep critical information at the edges of the screen, ensuring the center remains clear for combat.

- Top Left (Player Status): Displays the player's core vitals and resources: Health, Blocking Stamina, Name, and Hero Icon. Directly below these are the counters for Money, Bone-Keys, and Revive Potions.
- Top Middle (Wave Info): Shows the current Wave Number and a counter for the Enemies Remaining in the current wave.
- Top Right (Progression): Tracks the current Session Level and XP Bar. This area also triggers a Level Popup whenever the player levels up.
- Bottom Right (Combat): Displays icons and cooldowns for the player's Attacks and Abilities.

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