BIBITS

DESIGN RETROSPECTIVE

A bullet hell roguelite about duality, mastery and build expression

INDIE PROJECT | GAME DESIGNER, PROGRAMMER | 2018 - 2022 | PC / MOBILE

OVERVIEW

GENRE
Action Roguelite - Twin-Stick Shooter - Bullet Hell

PERSPECTIVE
Top-down

DESIGN FOCUS
Dual form gameplay - Readable bullet hell combat - Build experimentation

TARGET EXPERIENCE
Fast-paced combat that rewards movement mastery, strategic switching and creative build crafting

PITCH
Bibots is a fast-paced bullet hell roguelite where players alternate between Tayar, a fragile explorer, and powerful temporary combat mechs called Bibots.

Every encounter revolves around balancing risk and power. Survive as Tayar to gather resources, unleash a Bibot to dominate the battlefield, then adapt your build through weapons, chips, tactical devices and passive upgrades.

Designed around the principles of duality, readable chaos and build expression, Bibots encourages players to solve every run using a different combination of tools rather than relying on a single optimal strategy.

PROJECT CONTEXT

ROLE
Game Designer / Programmer

PLATFORMS
PC - Mobile (outsourced)

DEVELOPMENT
2018 - 2022

PUBLISHING
Plugin Digital

TEAM
Small independent team

SUPPORT
Pictanovo
Regional public funding
Private publishing partner

MY CONTRIBUTIONS
- Combat design
- Systems & Gameplay Programming
- Progression Systems
- Weapon Customization
- UI Design & Programming
- Technical Design
- Visual Effects

PRODUCTION EXPERIENCE
- Designed and developed over several years
- Collaborated within small multidisciplinary team
- Adapted design to production constraints
- Worked with public funding and publishing partners

PROJECT SCALE

GAMEPLAY VARIETY

- **5** Bibots
- **10** ComposUps per Bibot
- **100** Weapons
- **60** Chips
- **90** Passive abilities
- **40** Tactical Devices

Designed to maximize experimentation and replayability.

- ### ENCOUNTER VARIETY
- **10+** Enemy archetypes
- Every enemy archetype features multiple variants
- **4** Main bosses
- **3** Mini bosses
- Procedural temple layouts with varied room types

DESIGN PILLARS

DUALITY

Two forms
Two strengths
Constant decisions

CONTROLLED CHAOS

Intense bullet hell encounters that remain readable

BUILD EXPRESSION

Meaningful choices that create unique and powerful builds

DUALITY

Bibots introduces two complementary forms: Tayar, fragile but mobile and the mech, powerful but temporary
Players constantly alternate between vulnerability and power.
The switch mechanic became the game's central strategic layer and influenced combat, progression and encounter design.

CONTROLLED CHAOS

Bullet hell games often become visually overwhelming.
Enemy patterns were designed around readability first.
Every attack must be: identifiable, avoidable and learnable
Visual clarity takes priority over spectacle.
High intensity encounters remain readable even with dozens of projectiles on screen.

BUILD EXPRESSION

Many roguelites offer statistical progression but limited playstyle transformation.
Weapons are fully customizable through Chips. Combined with Passives, Bibots and Tactical Devices, they create highly distinct builds.
Players can discover powerful synergies and radically different approaches between runs.

CORE GAMEPLAY LOOP

DESIGN GOAL

Every run should feel like solving the same problem with a different toolbox.

LOOP BREAKDOWN

Exploration

Players navigate procedurally generated temples in search of combat encounters, rewards and resources.

Exploration creates pacing between combat sequences while encouraging risk-reward decision-making.

Combat & Adaptation

Enemies and bullet patterns challenge positioning, movement and resource management.

Players must continuously adapt their playstyle according to the tools acquired during the run.

Build Crafting

Weapons, Chips, Talents and Bibots interact to create emergent synergies.

The goal is not simply to become stronger, but to discover new ways of solving encounters.

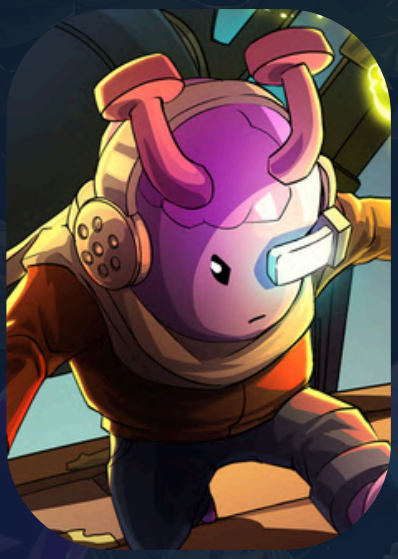
Meta Progression

Successful runs reward permanent unlocks that expand future strategic possibilities without replacing player skill.

THE SWITCH MECHANIC

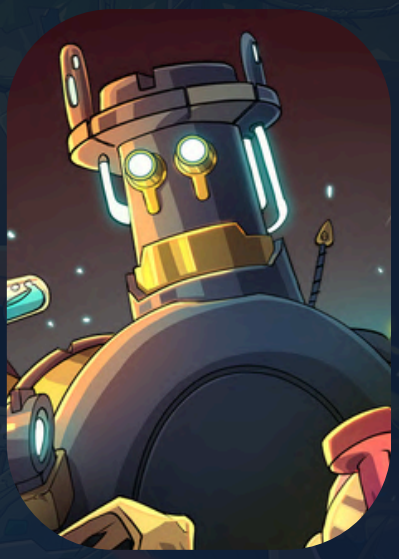
The core system that defines Bibots' combat, pacing and risk-reward structure.

TAYAR



Generate resources
Build progression
Survival

BIBOT



Spend resources
Control
Durability

DESIGN PROBLEM

Most action roguelites revolve around a single gameplay state.
As progression accumulates, players often reach a point where optimal play becomes repetitive and low-risk.

DESIGN SOLUTION

Bibots introduce two complementary combat forms.
Players alternate between:

- Tayar, the vulnerable pilot
- Bibots, durable temporary mechs

Neither form is sufficient on its own.
Mastery comes from knowing when to switch.

THE SWITCH MECHANIC

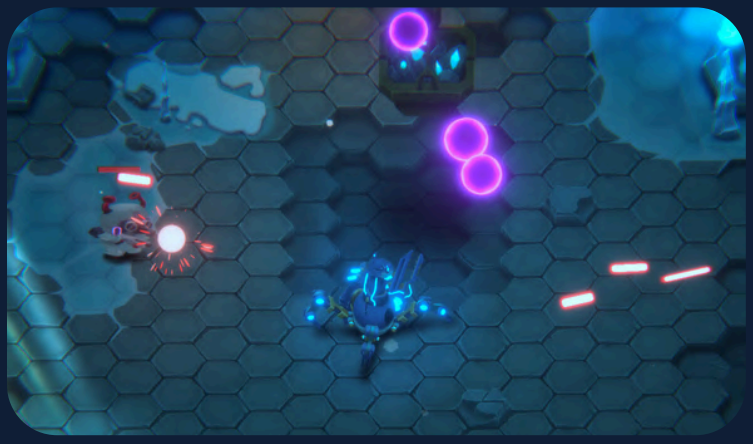
TAYAR - RISK PHASE

Characteristics

- Main playable form
- Uses customizable weapons
- Gains experience
- Builds energy for Bibot activation
- Highly vulnerable

Design Purpose
Tayar creates tension.
Every encounter is a calculated risk that gradually fuels access to greater power.

BIBOT - POWER PHASE



Characteristics

- Temporary transformation
- Increased survivability
- Unique combat abilities
- Different gameplay patterns
- Limited duration

Design Purpose
Bibots create moments of empowerment and release.
They transform accumulated tension into short bursts of dominance.

DESIGN OUTCOME

The switch mechanic creates a continuous cycle between vulnerability and empowerment.
Instead of becoming permanently stronger, players oscillate between two states, maintaining tension throughout the entire run.

COMBAT PHILOSOPHY

COMBAT PRINCIPLES

Designing readable bullet hell encounters around movement mastery.

Readability

Every attack must be:

- visible
- identifiable
- learnable

Even during high intensity encounters.

Movement is Survival

Damage avoidance is primarily skill-based.
The player is expected to survive through:

- positioning
- pattern recognition
- dash timing rather than tanking damage.

Tension Through Resource Management

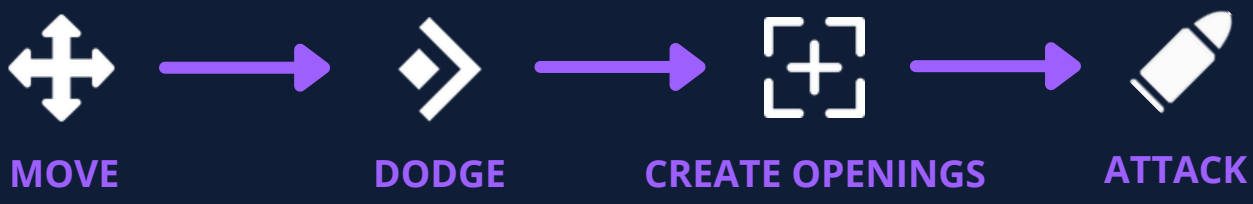
Players constantly decide how to spend energy.

- Summon a Bibot
- Generate shields
- Save resources for later encounters or passive bonuses

COMBAT SYSTEM

MOVEMENT

Top-down movement built around precision and positioning.
The invulnerability dash is the player's primary defensive tool, rewarding timing and pattern recognition rather than damage mitigation.



WEAPONS

Primary combat tool

Multiple weapon archetypes offer different approaches to combat.
Weapons are extensively customized through Chips, allowing players to modify behaviors rather than simply increasing statistics.
Each weapon becomes the foundation of a unique build.

TACTICAL DEVICES

Situational utility abilities

Cooldown-based tools designed to solve specific combat situations.
Not only increasing raw damage, Tactical Devices provide defensive options, crowd control and battlefield manipulation.
Examples include shields, decoys, mines or deployable lasers

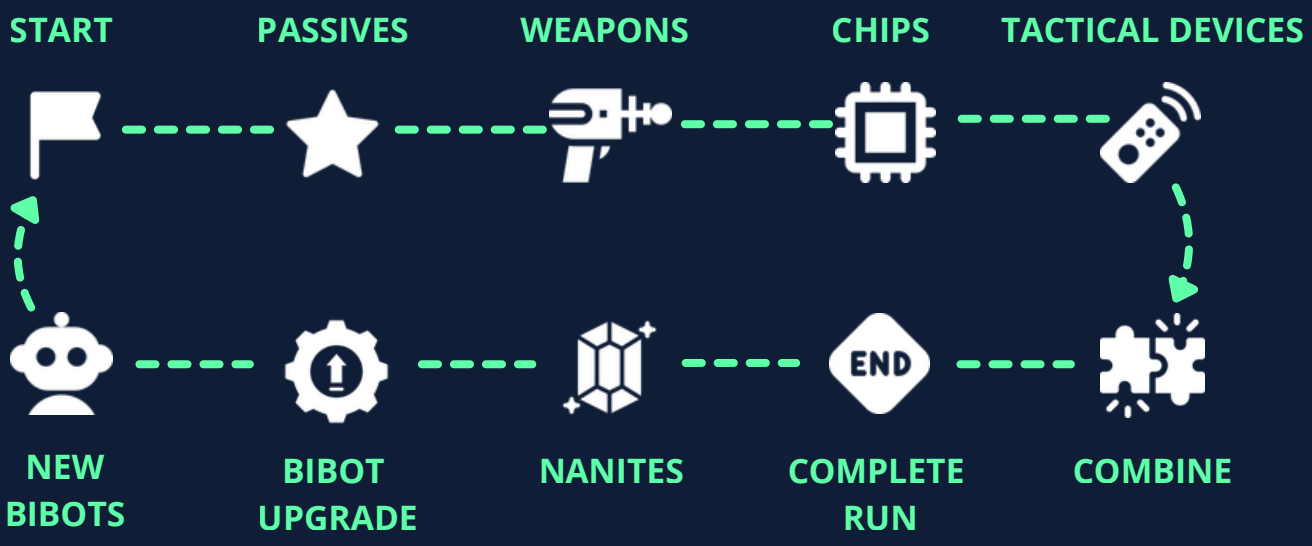
BIBOTS

Temporary combat transformation

Bibots create short moments of empowerment that break the natural rhythm of combat without permanently removing tension.
Choosing when to deploy a Bibot is as important as choosing which one to bring.

PLAYER PROGRESSION

Building long-term mastery through layered progression systems.



IN-RUN PROGRESSION

Passives

Temporary run modifiers obtained through level-ups. Influence combat style.

CHIPS

Equipped directly on weapons. Modify projectile behaviour and weapon identity.
Examples: Explosive Shell, Homing Bullet, Bounce Coating...

TACTICAL DEVICES

Utility tools that complement the player's build. Cooldown-based and limited use

META PROGRESSION

ComposUps

Permanent Bibot upgrades equipped between runs
Allow specialization of different Bibots

NEW BIBOTS

Unlock additional combat forms with unique roles and playstyles

ENCOUNTER DESIGN

Designing encounters around readability, complementary behaviors and player decision making.

READABILITY FIRST

Every enemy should communicate its role before becoming a threat

- Distinct silhouettes
- Clear attack telegraphs
- Recognizable projectile patterns
- Immediate visual feedback

Players should understand what is attacking them before deciding how to react

COMBAT ROLES

Enemies are designed around complementary battlefield roles rather than individual complexity

- Chasers - apply constant pressure
- Snipers - punish poor positioning
- Area denial - restrict movement
- Turrets - create safe and unsafe zones
- Tank & Supports - create priority between targets

The difficulty emerges from interactions and combinations of enemies

ENCOUNTER COMPOSITION

Encounters evolve by combining complementary behaviour. Each new enemy should introduce a new gameplay decision and combination possibilities rather than simply increasing damage output

DESIGN OUTCOME

Combat remains readable despite high projectile density.
Players learn enemy behaviours over time, gradually shifting their focus from survival to optimization and mastery.

DESIGN CHALLENGES

KEEPING BULLET HELL READABLE

Problem

As encounters became more intense, visual clarity quickly deteriorated.
Players struggled to identify threats and make informed decisions.

Solution

Enemy attacks were designed around clear telegraphs, distinct projectile identities and complementary behaviours rather than excessive projectile counts.

Result

Combat remained readable while preserving intensity.

PREVENTING DOMINANT STRATEGIES

Problem

Permanent power progression naturally encouraged repetitive gameplay.
Players gravitated toward a single optimal solution.

Solution

The Switch Mechanic forces players to alternate between vulnerability and empowerment.
No form is sufficient on its own.

Result

Optimal play became dynamic instead of repetitive.

CREATING MEANINGFUL BUILD DIVERSITY

Problem

Increasing statistics rarely changes how players think.
Different builds often ended up feeling identical.

Solution

Customization focused on behavioural changes through Chips, Tactical Devices and Bibots rather than numerical upgrades.

Result

Runs encourage experimentation instead of optimization alone.

KEY LEARNINGS

PRODUCTION

Working within constraints

Every design decision must balance ambition, production time and technical feasibility. Learning to prioritize became as important as creating new ideas.

Iteration drives quality

The strongest systems emerged through continuous playtesting and refinement rather than their initial implementation.

Collaboration shapes design

Working with a multidisciplinary team, external funding and publishing partners highlighted the importance of communication and production planning.

DESIGN

Strong pillars guide decisions

A clear design vision made it easier to evaluate features and maintain consistency throughout development.

Depth comes from interactions

The most memorable mechanics were those influencing multiple systems simultaneously rather than existing as isolated features.

Meaningful decisions

Interesting gameplay doesn't come from adding more mechanics, but from giving players meaningful choices with clear trade-offs.


THANK YOU FOR READING