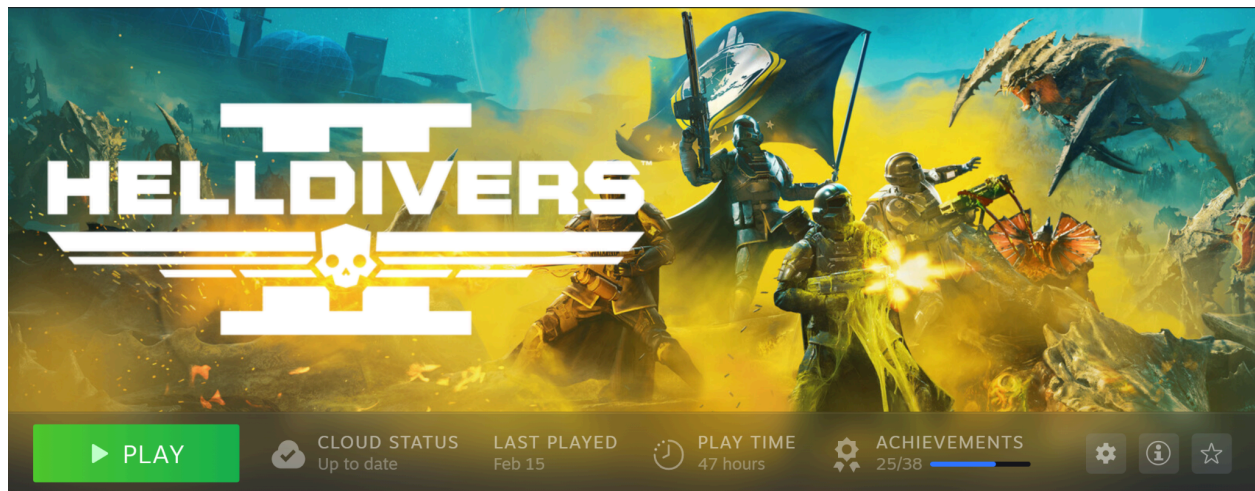


Game Loop Primer

Example Game: *Helldivers 2*



Okay. So with game design there are game loops as you know but I feel like I should break it down a bit. There are different types, the one we are trying to get to nailing is the core loop.

The other loops are progression and the meta—then the secret fourth is the player-defined loops. A loop is a deceptively easy way to define the mechanics, rules and repetitive cycles in a game. But it doesn't tell everything. For example, in ours its:

- Go in,
- Get Data and objects
- Go into another location or go back to HQ,
 - Sell to upgrade or fulfill objectives.

The progression loop is growth or advancement throughout the game.

The meta loop is the long term engagement with the game and ultimately what keeps players coming back to it.

The player-defined-loop is self explanatory—it's what the player defines as their engagement when they are interacting with the game. Which will be the goals, challenges, social interactions and other such ideas in the game.

So, it's:

- Designer defined rules and systems.
- Player defined challenges, goals, ways of interacting.
- Game enforced rules for interacting with the game.

This is the structure that creates an engaging experience when in play—or surrounded by it.

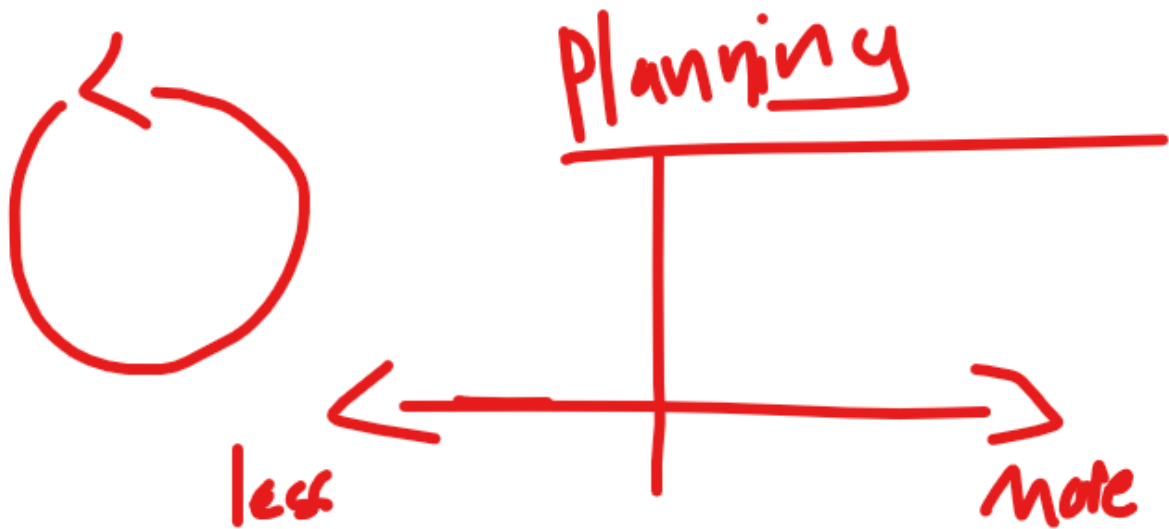
So, as a working example I'll use Helldivers 2 (since it's also a new release and probably one of the best things Sony has put out that's not an exclusive):

The loop of Helldivers 2?



This is the literal core gameplay loop for Helldivers 2; all you do is pick a mission, select a landing site and go in, then extract. The mission doesn't need to be completed but extract unlocks a hell of a lot faster when the main objective is completed.

Another loop Helldivers 2 is based more around planning but this is more of a player defined loop and is based around which difficulty that the player selects. The biggest one here the the growth and meta loop—these two drive the player defined loop.



The higher the difficulty, more planning might be required but the lower the difficulty the less planning that is required. That is because of the rules of the game itself that isn't directly stated but can be felt:

Helldivers are pressed for time. The longer they are in a mission, the more the enemies numbers are—missions range from 40-min to < 10 minutes.

Helldivers must complete their mission. Completing missions rewards the meta loop which is that Super Earth must protect or invade other planets based on the last weeks previous stats aggregated. Completing missions is also the progression loop.

So, in higher difficulties, while the time given is always static based on mission—the Helldivers completing the mission is what's stressed the most and becomes more at stake. Failure happens if the helldivers don't complete their main objective, which is the reason why they picked the mission. A mission is still complete if all the helldivers die but the main objective is completed—they just get xp and war bonds (currency).

Player defined loops are:

1. Exploration of the map within' the time zone.
2. Completing optional objectives if there is time.
3. Looking for needed resources that the squad needs (resources are shared, if one player picks it up and extracts with it, everyone else has it)
4. Continuing progress for in-game events on the meta level. (Defend missions are also available if a planet that Super Earth holds is under attack.)
5. Getting sweet resources to unlock and prance around with cosmetics.

Then, the higher the difficulty, there is an addition of difficulty modifiers, the "Operations" have more objectives but the rewards are more—so, literal: high risk, high reward. There is also a stealth component to this game—which players usually just go guns blazing but I've solo extracted with extremely little time life and no revives because I paid attention to this 'hidden' aspect of the game. Active engagements (firefights) with bugs and robots cost time.

Everything mentioned is an expansion of the core loop or an optional engagement.

The main antagonist is time.

The secondary and immediate threats (antagonists) are the enemies.

The resources are: ammo, material, stratagem, and currency.

The "Pick Mission" part of the Core loop:

- The player selects what faction they are fighting (bugs or machines).
- The player picks an operation.
- The player selects their difficulty—
- Based on the difficulty and enemies, they select their stratagems.

In the "Land" part of the Core loop:

- Stratagems used are on a cooldown timer until used again.
- Ammo and time are expended, as the player explores for material and currency.
- Players, **can try**, to complete the optional and main objective(s).
- Players can **try** to extract with their precious materials (called samples in-game).

The “Extract” part of the Core loop:

- Either by completing the main mission, or by failing to complete the main mission in time, extract is called.
- Extract is to be ‘quiet’ or ‘loud’ / basically meaning waves of enemies to fight until the evacuation ship arrives.
- When the first timer goes down and extraction is available...
 - The players can no longer use stratagems.
- If the first timer is still active and the extract is available:
 - The players can still use stratagems.
- The player with the materials who gets into the extract ship, ensures the materials are successfully collected for all players.

Afterwards, the player-defined loop is also a part of the progression loop. Which is socializing, strategizing / planning for the next mission in the op / or operation, then spending the collected currency for emotes, weapons, more stratagems or upgrades.

All of this makes for a really intense game, where fighting robots feels like Terminator Salvation set in Vietnam and fighting bugs feels like Starship Troopers with more napalm, lasers and explosions.

These three things which are a series of interlinking systems and mechanics are what makes the core loop of Helldivers 2. From there it makes it easier and with some flexibility figure out what is:

- Short-Term Engagement
 - Meta events
- Long-Term Engagement
 - Player progression
 - Expansion / Reduction of the two fighting fronts based on Meta Events.
- Possible Future Engagement
 - New fighting front.
 - Mech piloting.
 - New progression