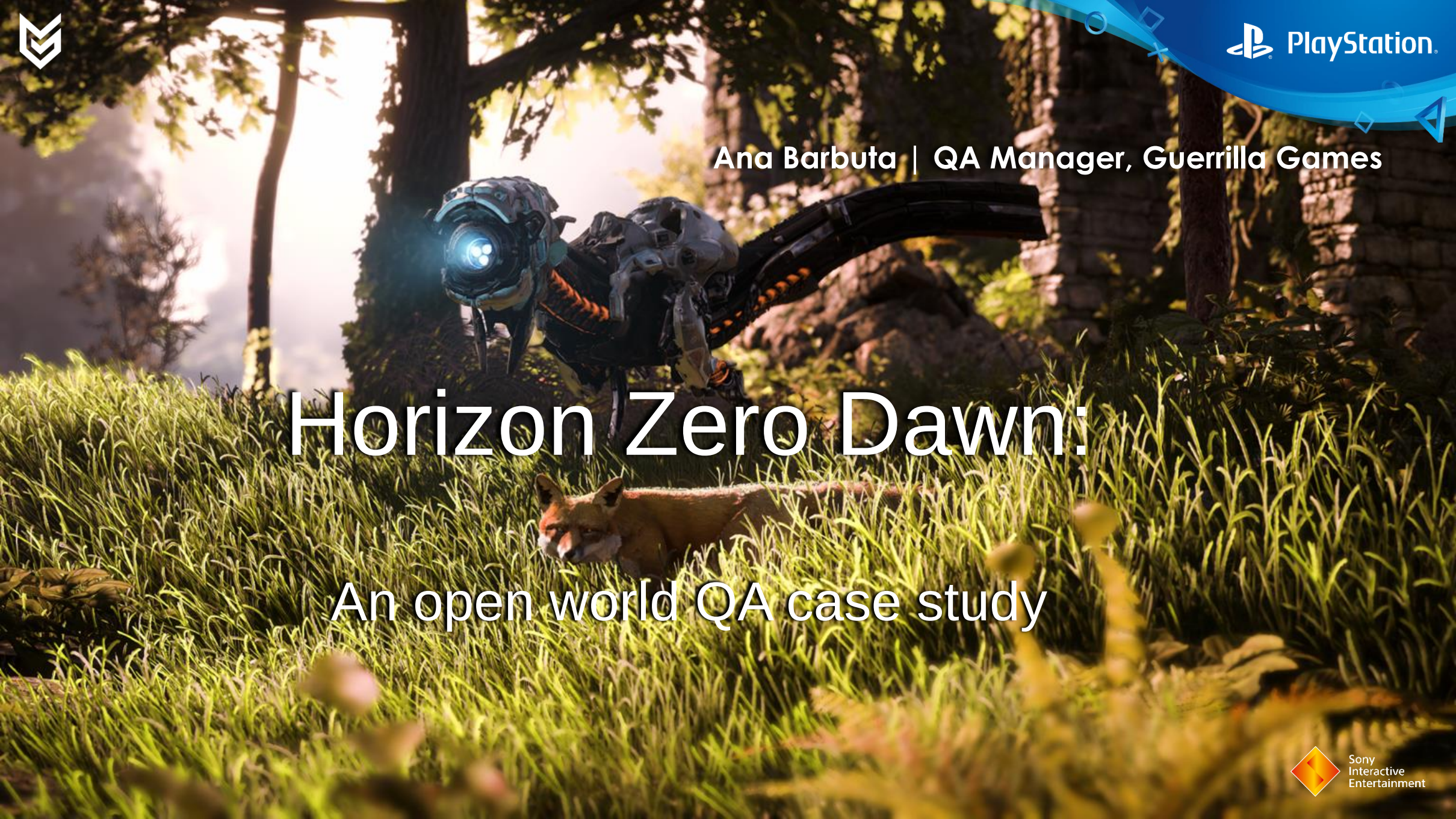


Ana Barbuta | QA Manager, Guerrilla Games

Horizon Zero Dawn:

An open world QA case study

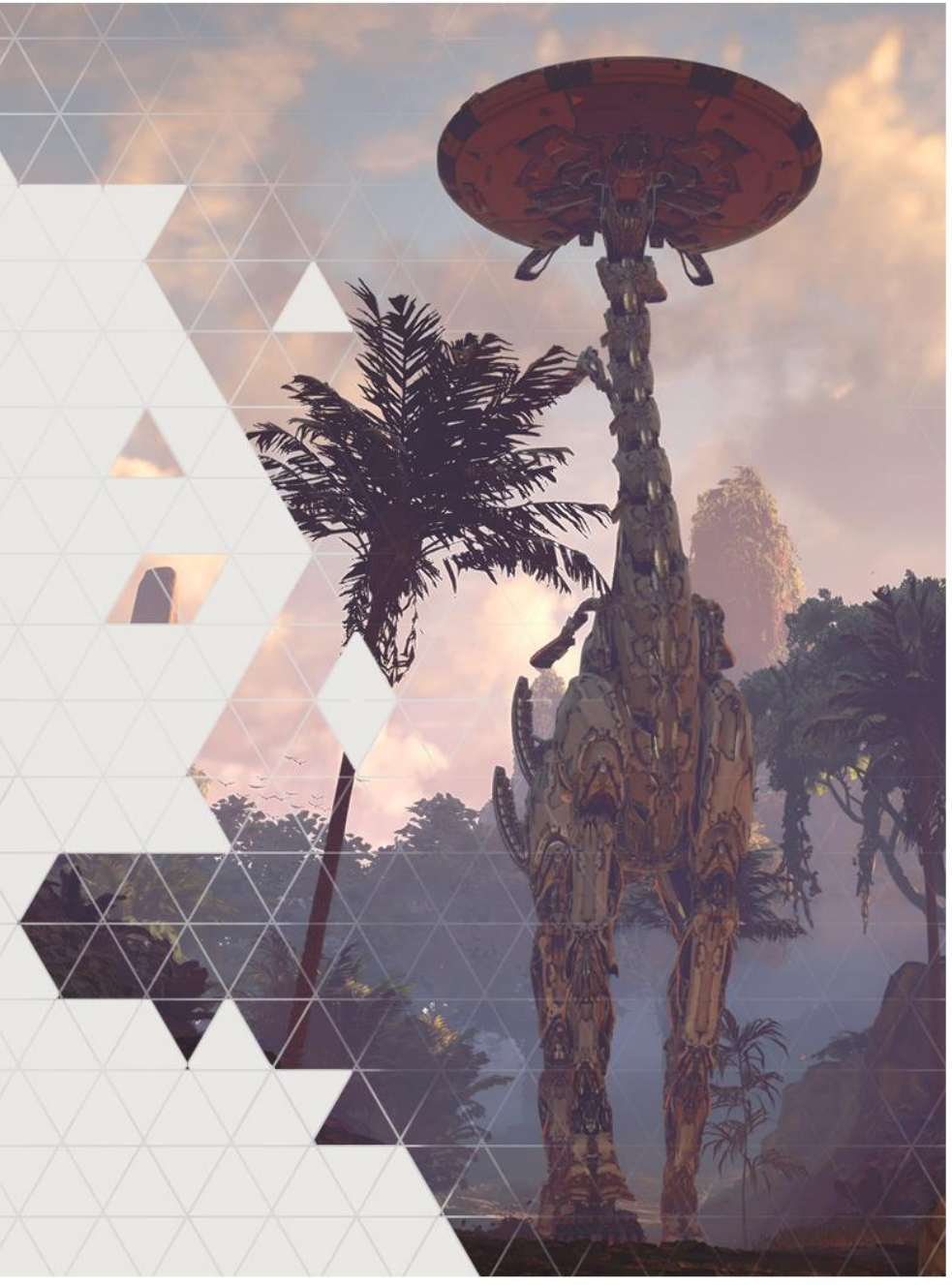
Sony Interactive Entertainment

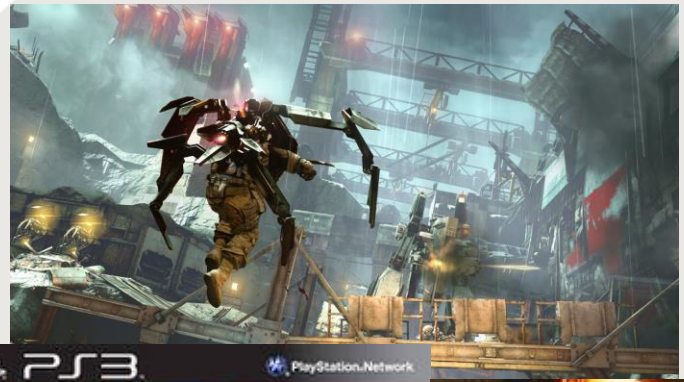
Topics

- *Intro*
- *The challenges of* **Horizon Zero Dawn**
- *Our QA ingredients*
  - *Team structure*
  - *Test strategy*
  - *Tools and automation*
- *Summary & Takeaway points*
- *Questions?*

Who we are – Guerrilla Games

- *First party Sony studio*
- *Best known for the Killzone franchise… until now*



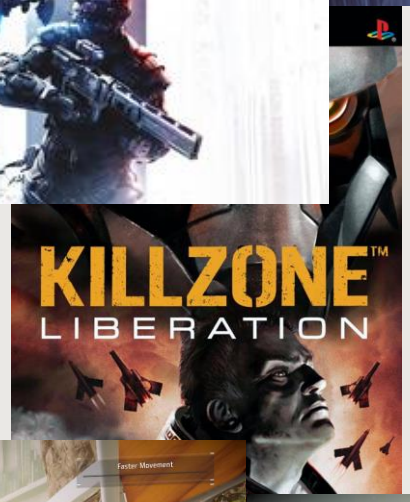


PlayStation.2
WITH NET PLAY
KILLZONE

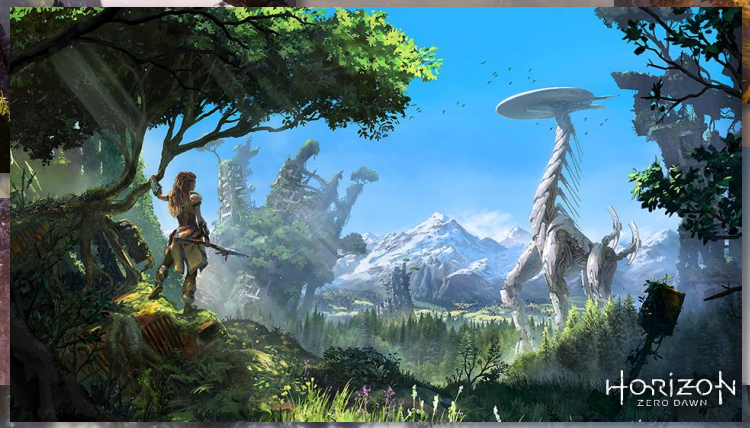
PS4
Only On PlayStation.
KILLZONE
SHADOW FALL
18

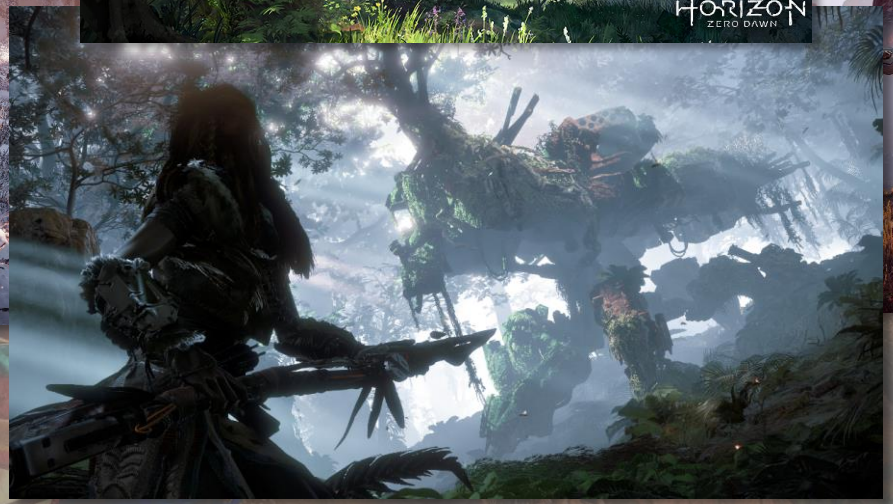
PS3
PlayStation.Network
PlayStation.Move Features
Only On PlayStation.
KILLZONE 3
18
3D

KILLZONE
MERCENARY


KILLZONE
LIBERATION

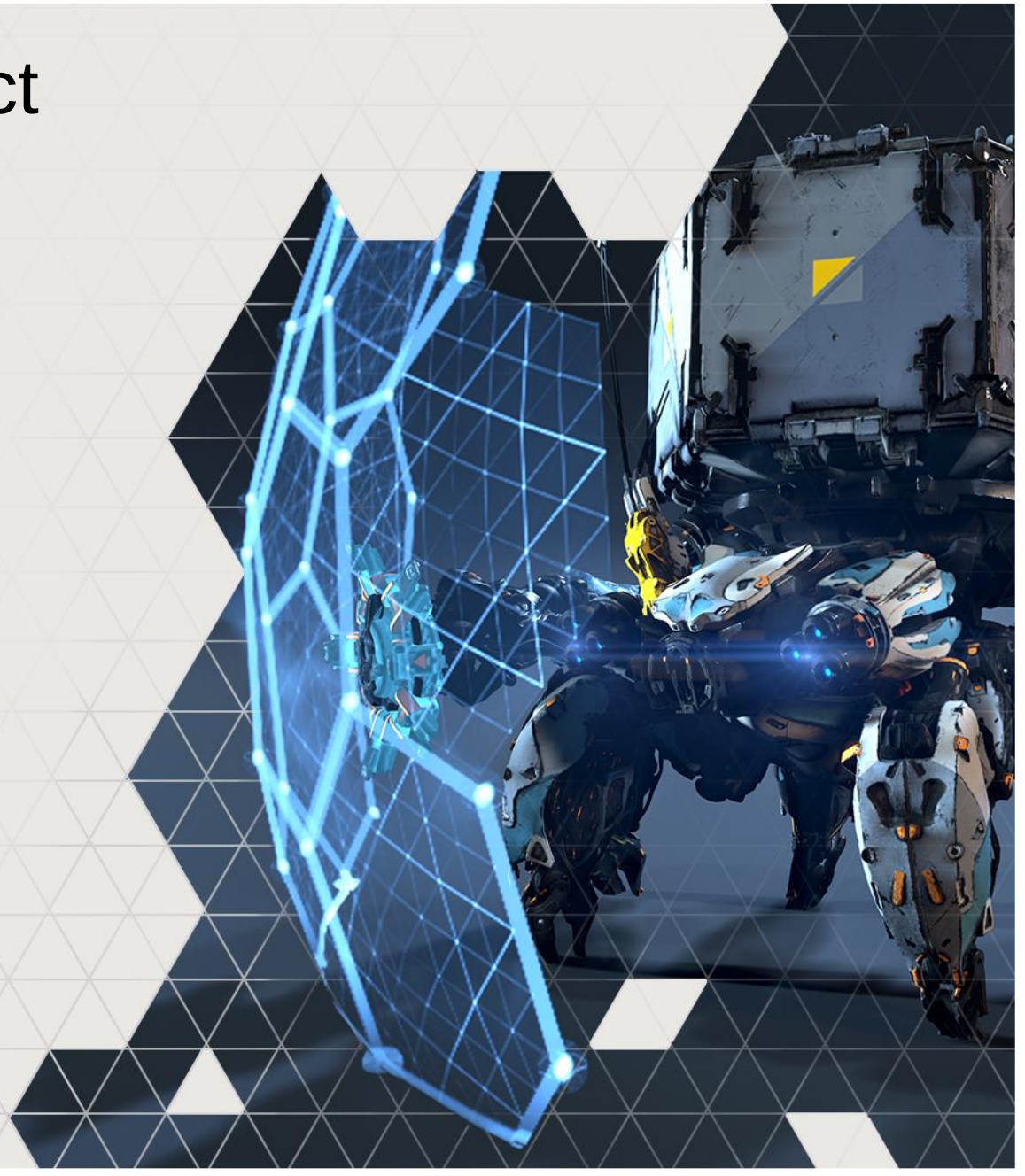
PLAYSTATION 3
KILLZONE 2
18+
SONY


HORIZON
ZERO DAWN



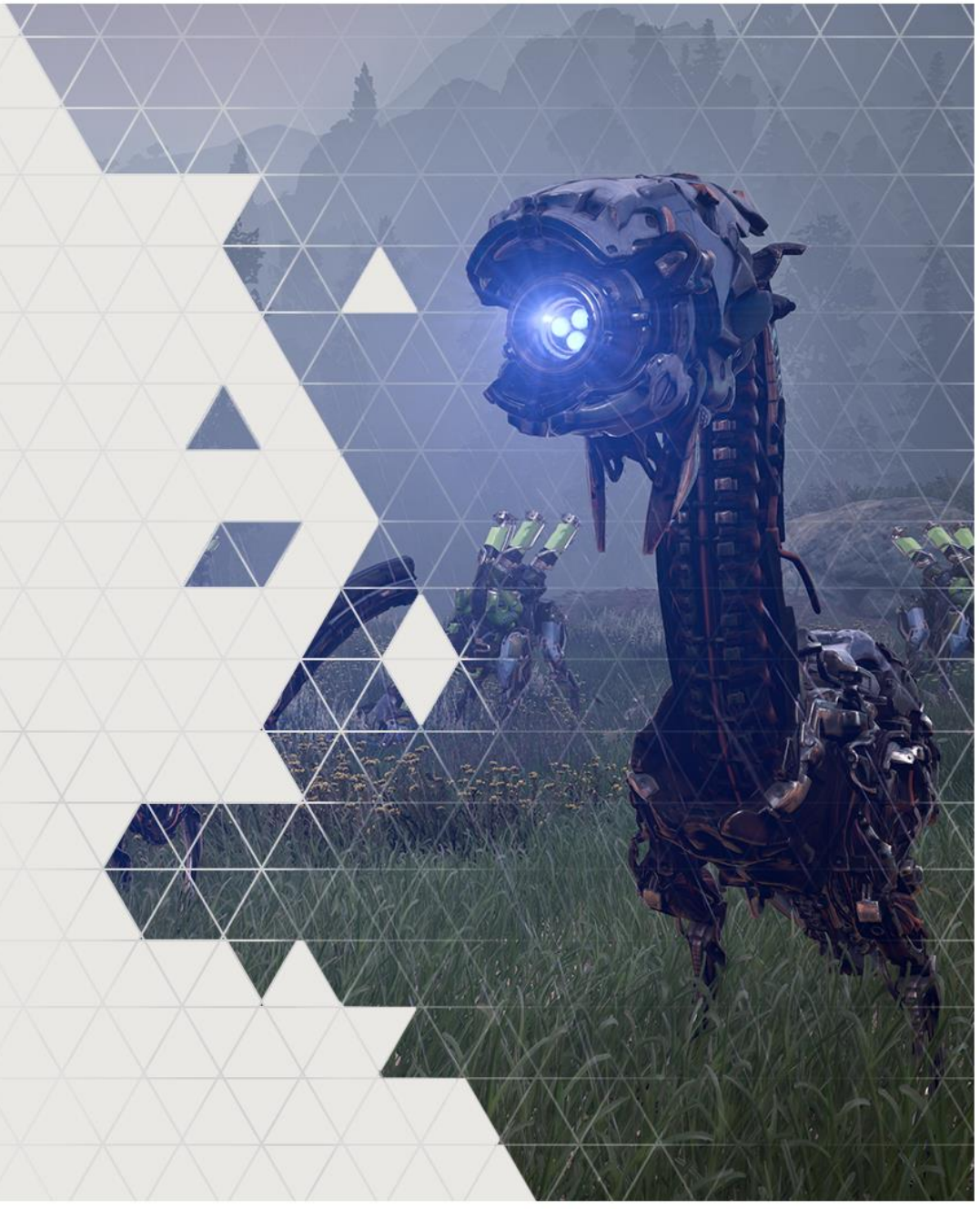
The challenge for the project

- *A lot of “firsts”*
- *High complexity*
- *Lack of tools*
- *Incompatible engine*
- *Many unknowns*
- *Lack of experience*



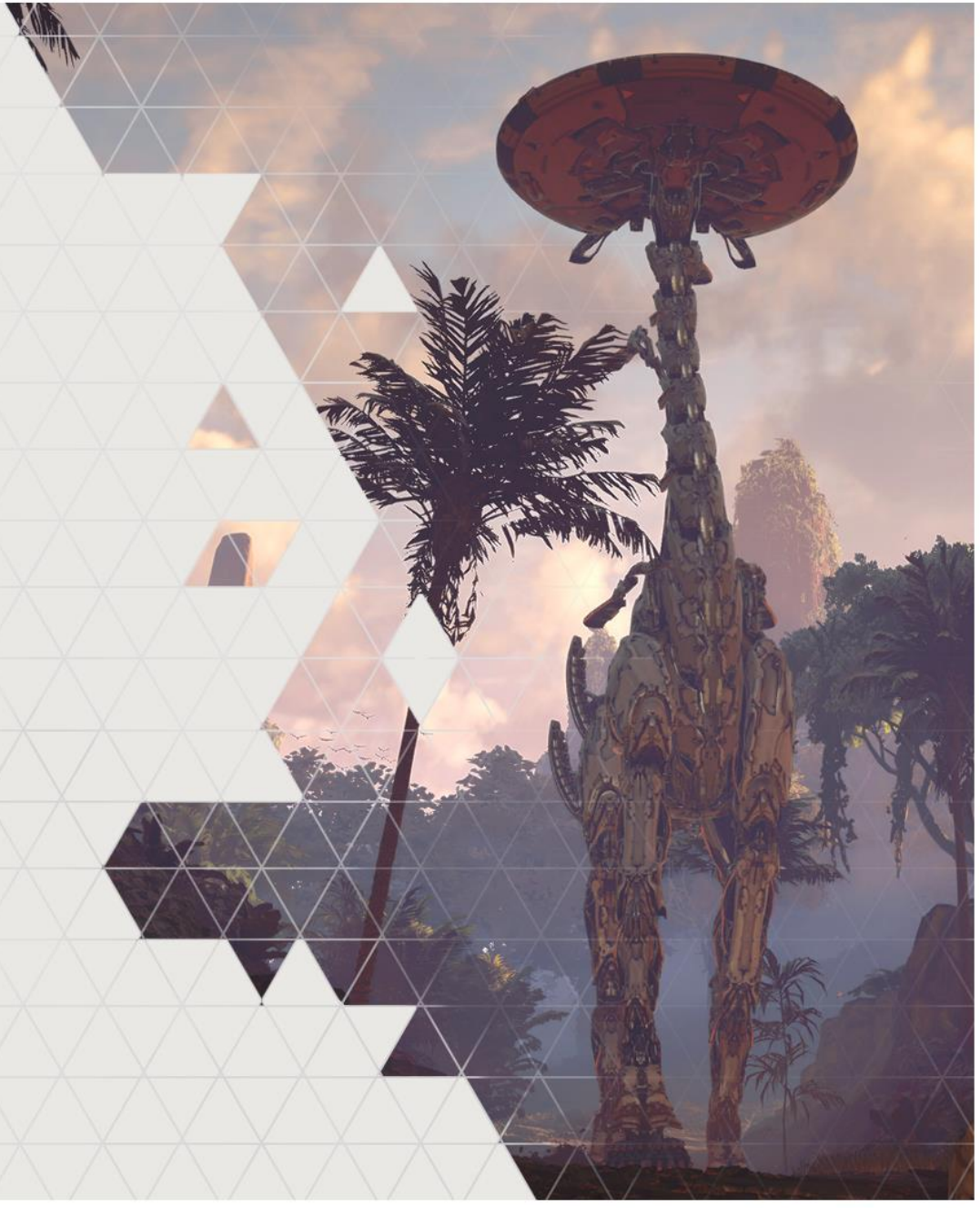
The challenge for QA

- *Scope*
- *Small test team size*
- *Unproven strategy*
- *New to open world games*



Facing the challenges

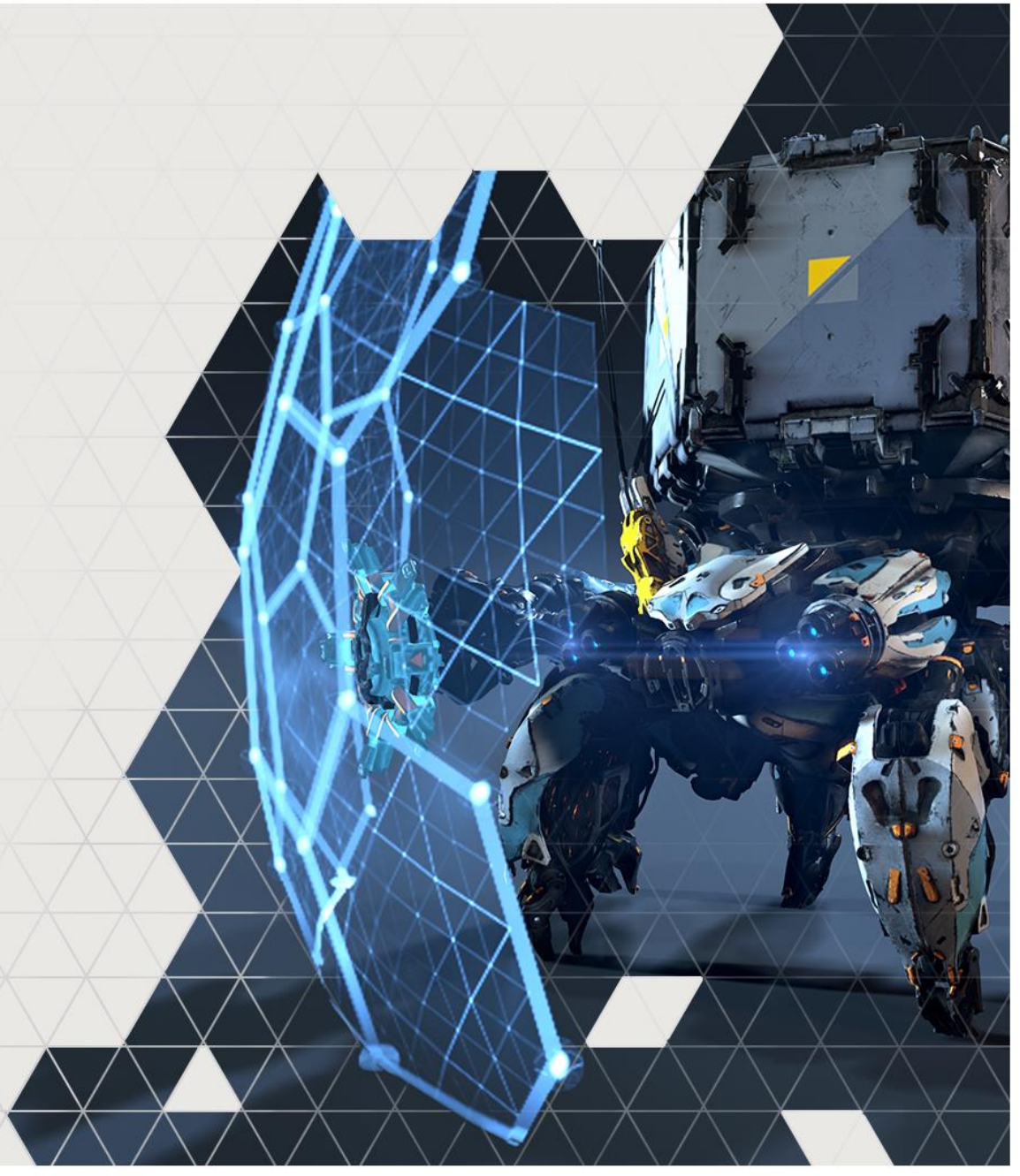
- *New QA team structure*
- *Focused test strategy*
- *Efficiency through technology*
- *Data-driven approach*



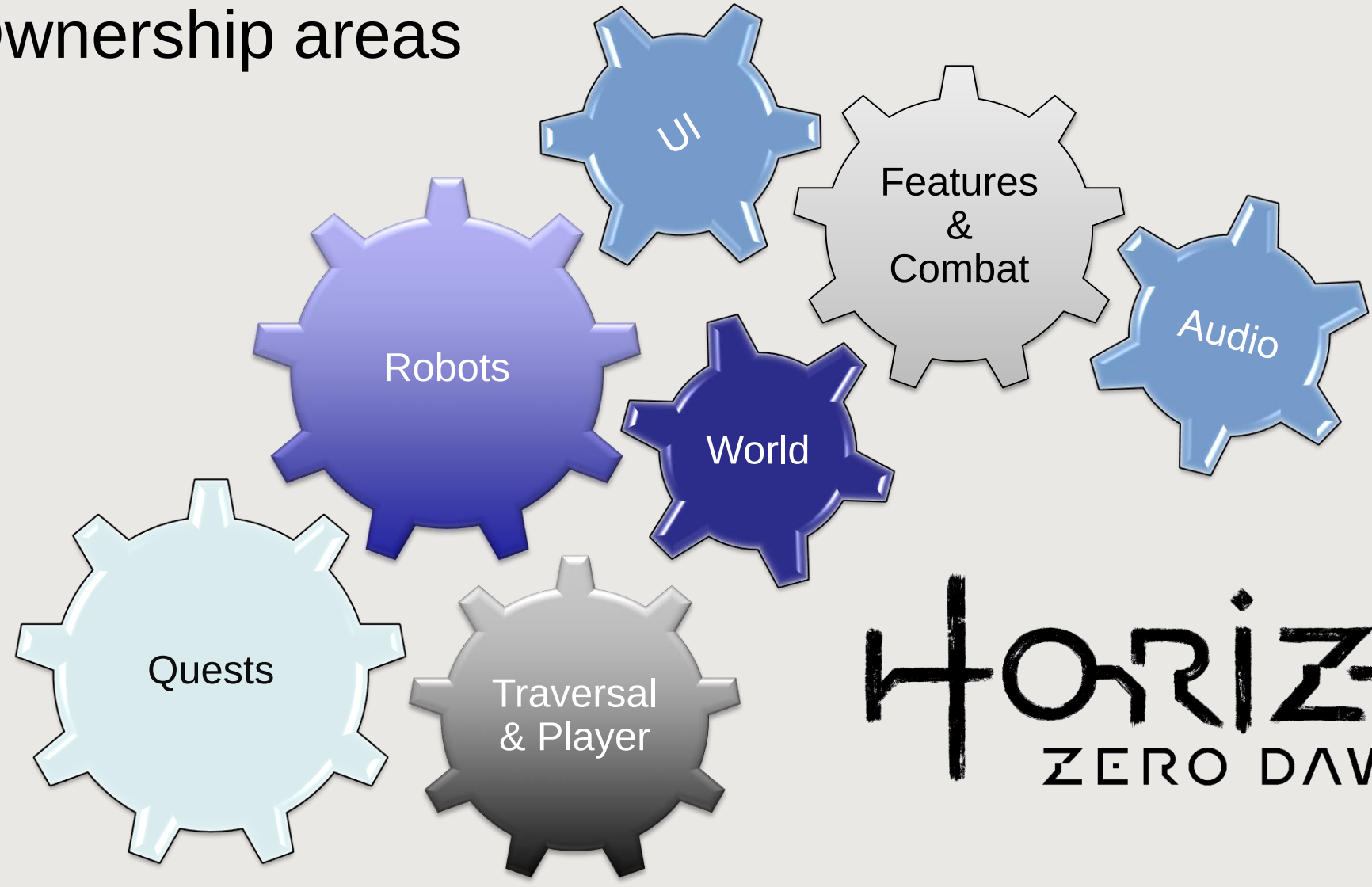
INGREDIENT #1: THE QA TEAM

QA Team

- *Early involvement*
- *Specialized*
- *Embedded*
- *Autonomy*
- *Ownership*

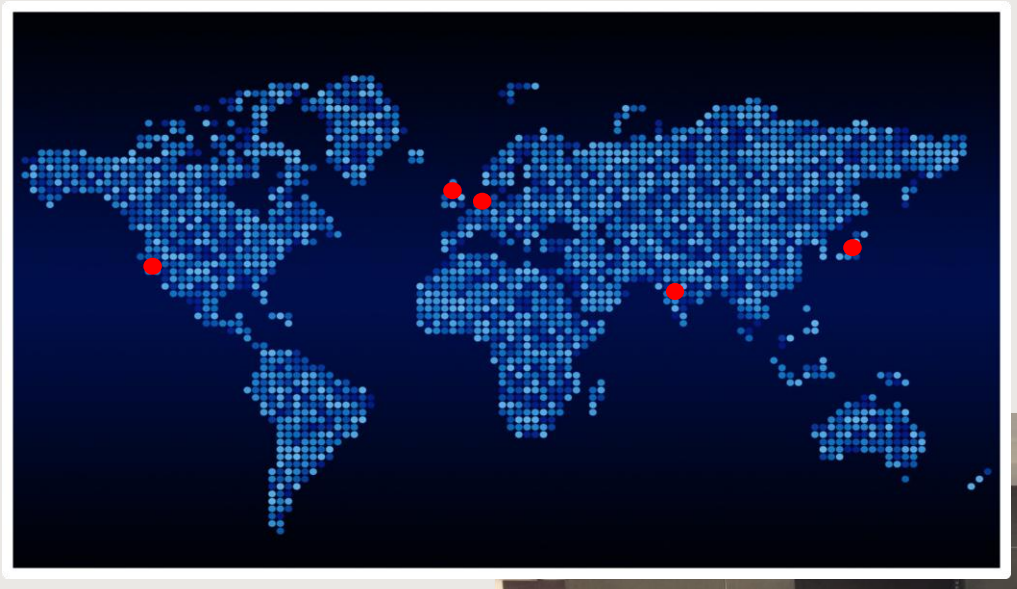


Ownership areas



HORIZON
ZERO DAWN™

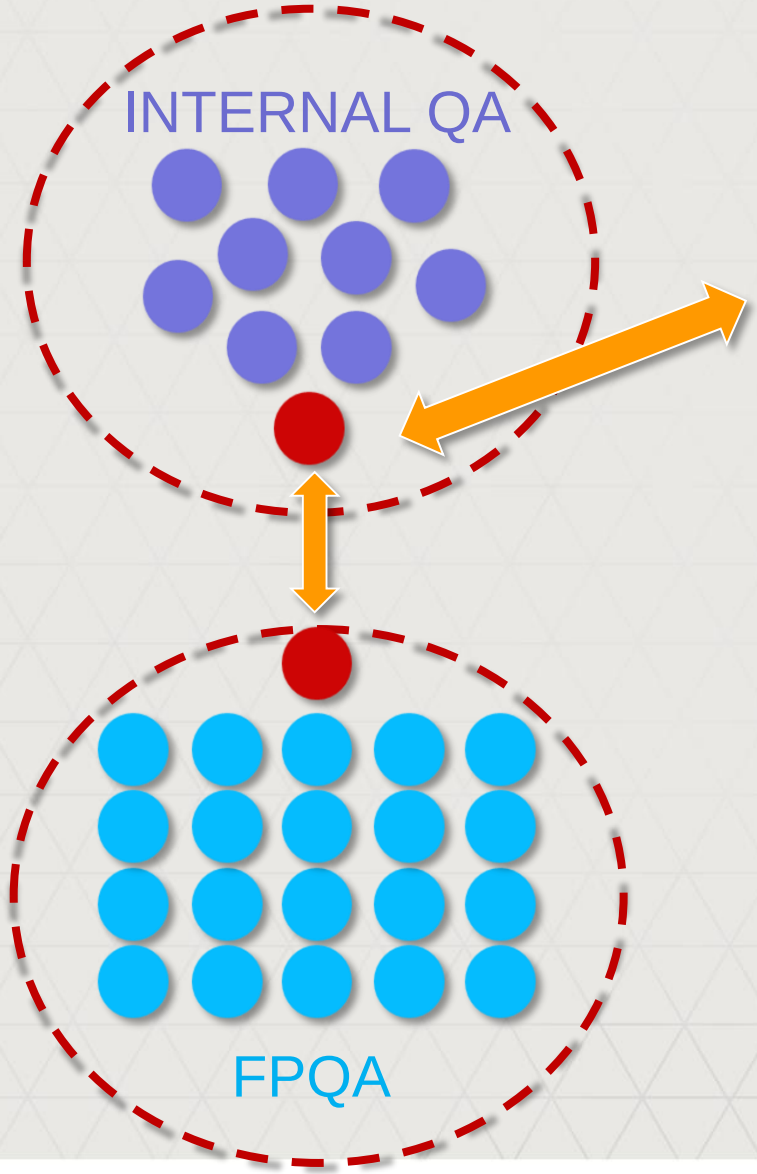
Expansion



WWS QA

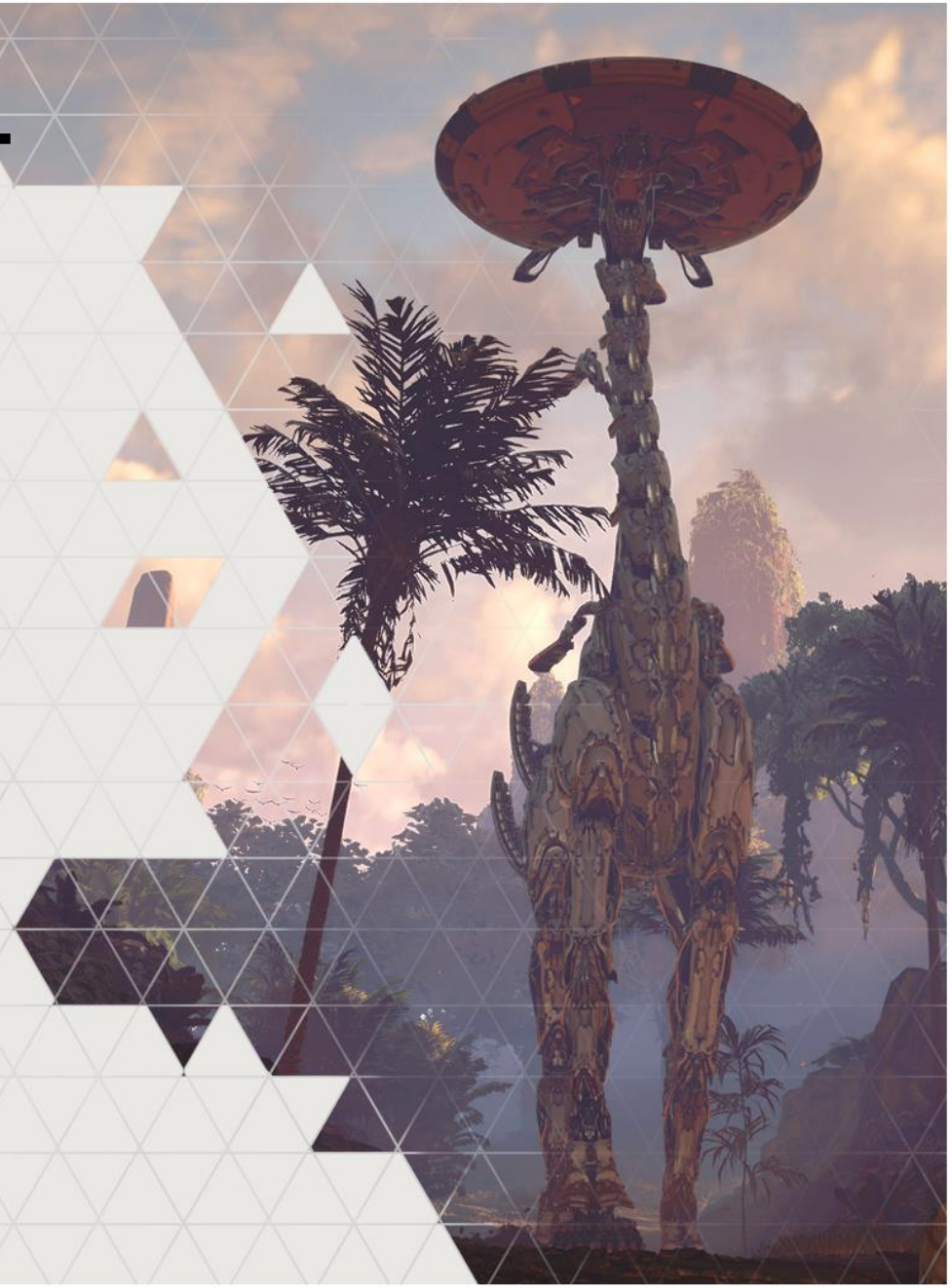
(AKA **FPQA**)

From isolated operators…

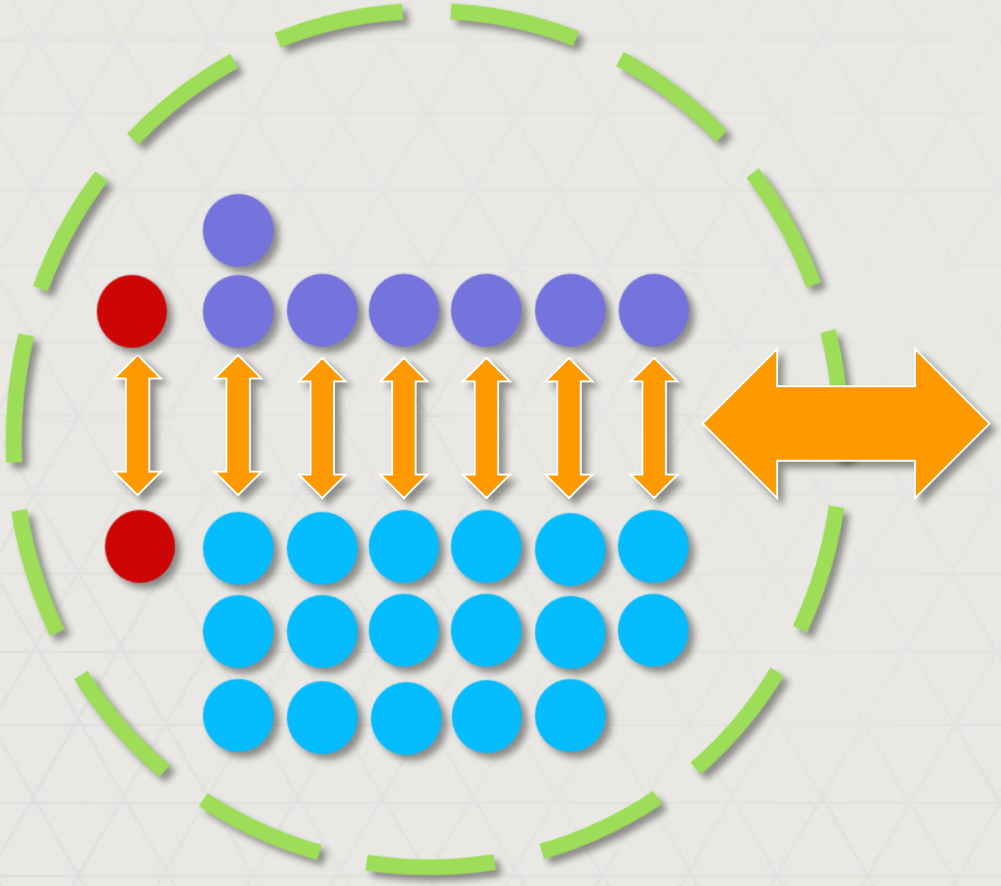


GUERRILLA

DEV



…to ‘buddies’



GUERRILLA

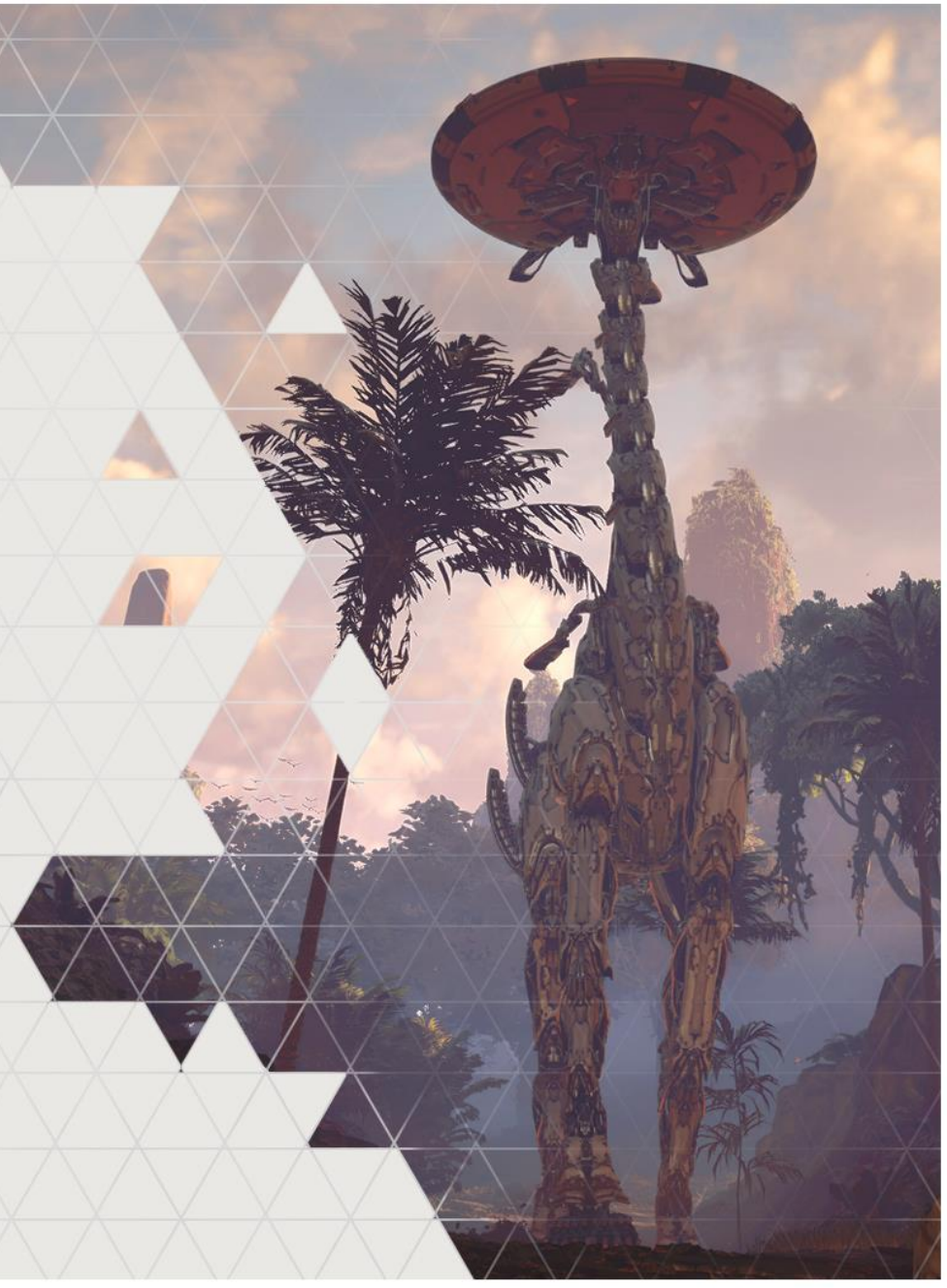
DEV

BFFs

INGREDIENT #2: TEST STRATEGY

Test Strategy Goals

- **Adaptable** *to new iterations*
- **Scalable** *with unexpected factors*
- **Relevant** *to new methodologies*
- **Efficient** *with a small team*



Test Strategy Goals

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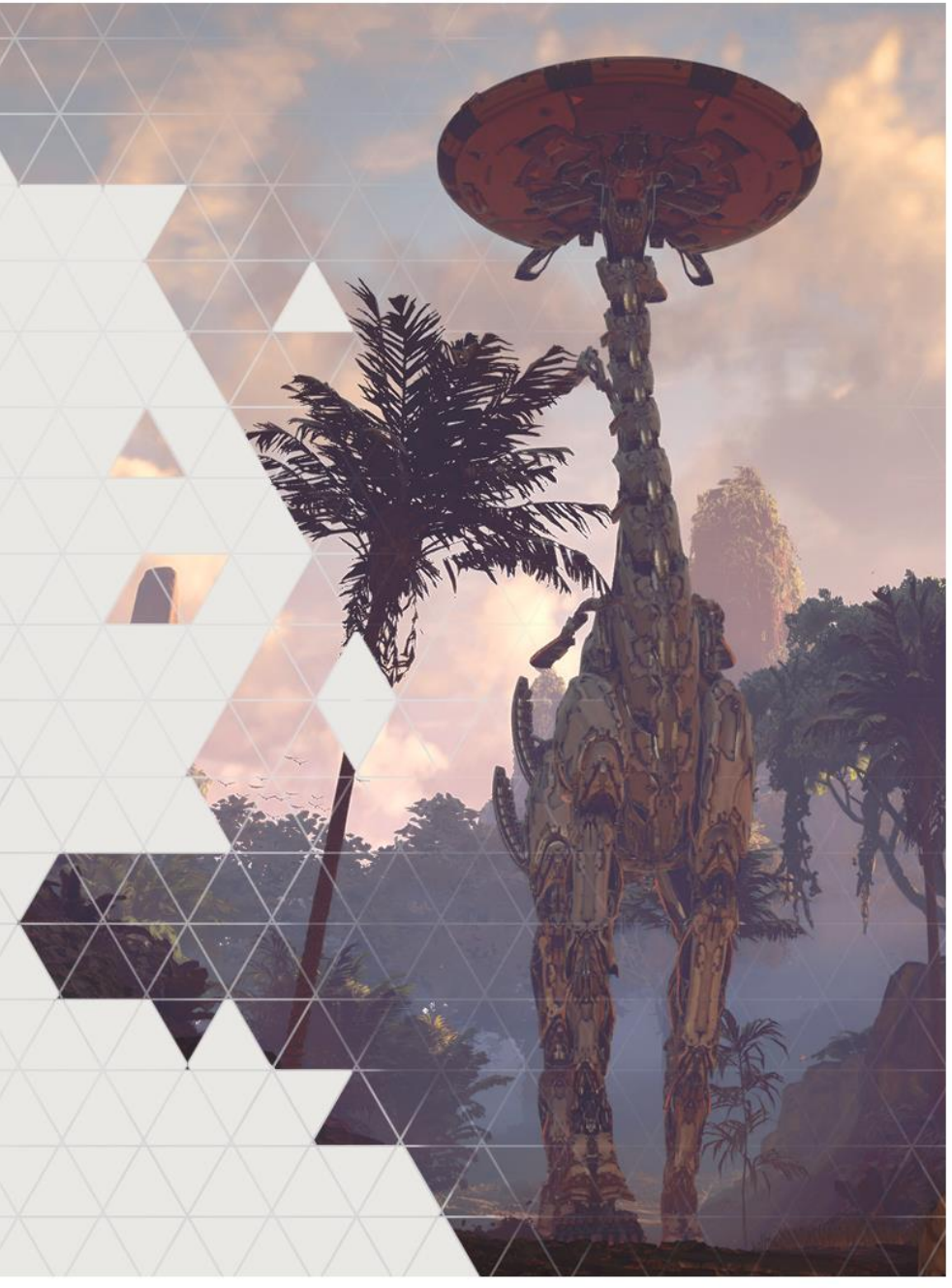


Failed experiment #1

KILLERS

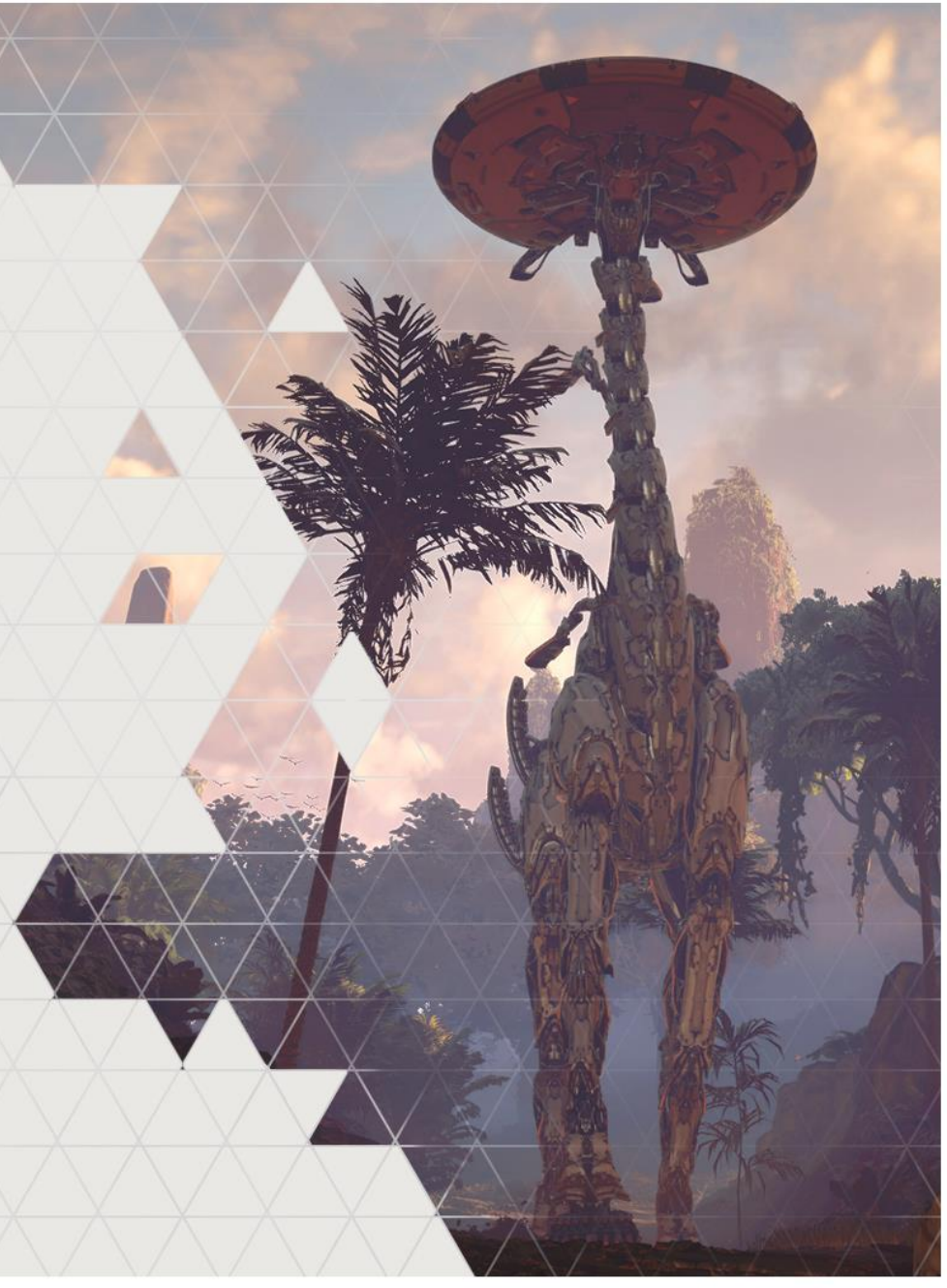
ACHIEVERS

SOCIALIZERS

EXPLORERS

Test Strategy Goals

- **Adaptable** *to new iterations*
- **Scalable** *with unexpected factors*
- **Relevant** *to new methodologies*
- **Efficient** *with a small team*



Session-based exploratory testing

Horizon DLC / HRZDLC-8590

129 of 404

Return to search

FPQA - Control Towers: Stripping shock resistance of robots.

Edit | Comment | Log work | More | Reopen | Admin | Export

Basics | Extra Info

Script Status: NA

Description

A sweep to check that when a CC robot is hit by a overridden pulse, its electric shock resistance is stripped.

This should be checked against all CC variant robots;

- Snapmaw
- Charger
- Stalker
- Scrapper
- Thunderjaw
- Rockbreaker
- Longleg
- Redeye Watcher
- Fire Bellowback
- Freeze Bellowback
- Behemoth
- Shellwalkers

CHARTER

Attachments

Drop files to attach, or browse.

CC Post Check.xlsx 29/Aug/17 4:07 PM 11 kB

CC Post Check - Completed 30/Aug/17 4:36 PM 17 kB

Resistance.png 30/Aug/17 4:41 PM 39 kB

Shock Reistance.png 30/Aug/17 4:41 PM 24 kB

RESULTS

Activity

All | Comments | Work Log | History | Activity | Transitions

James Bergin added a comment - 30/Aug/17 4:42 PM

Sweep was performed on all Daemonic variants of robot which could be affected by the Control Towers pulse. [Resistance.png + CC Post Check]

No issues were reported against it.

An additional task was added checking the reistance the Daemonic Robot have after their immunity was removed. Ensuring all Shock values are correct [Shock Reistance.png]. There is an issue and we are waiting a response form the combat team regarding this.

FOLLOW-UP

Resolved By:

Issue Creator:

Watchers: 2 Start watching this issue

Dates

Due:	28/Aug/17
Created:	29/Aug/17 4:07 PM
Updated:	16/Mar/18 10:31 AM
Resolved:	30/Aug/17 4:43 PM
Start date:	29/Aug/17
End date:	29/Aug/17

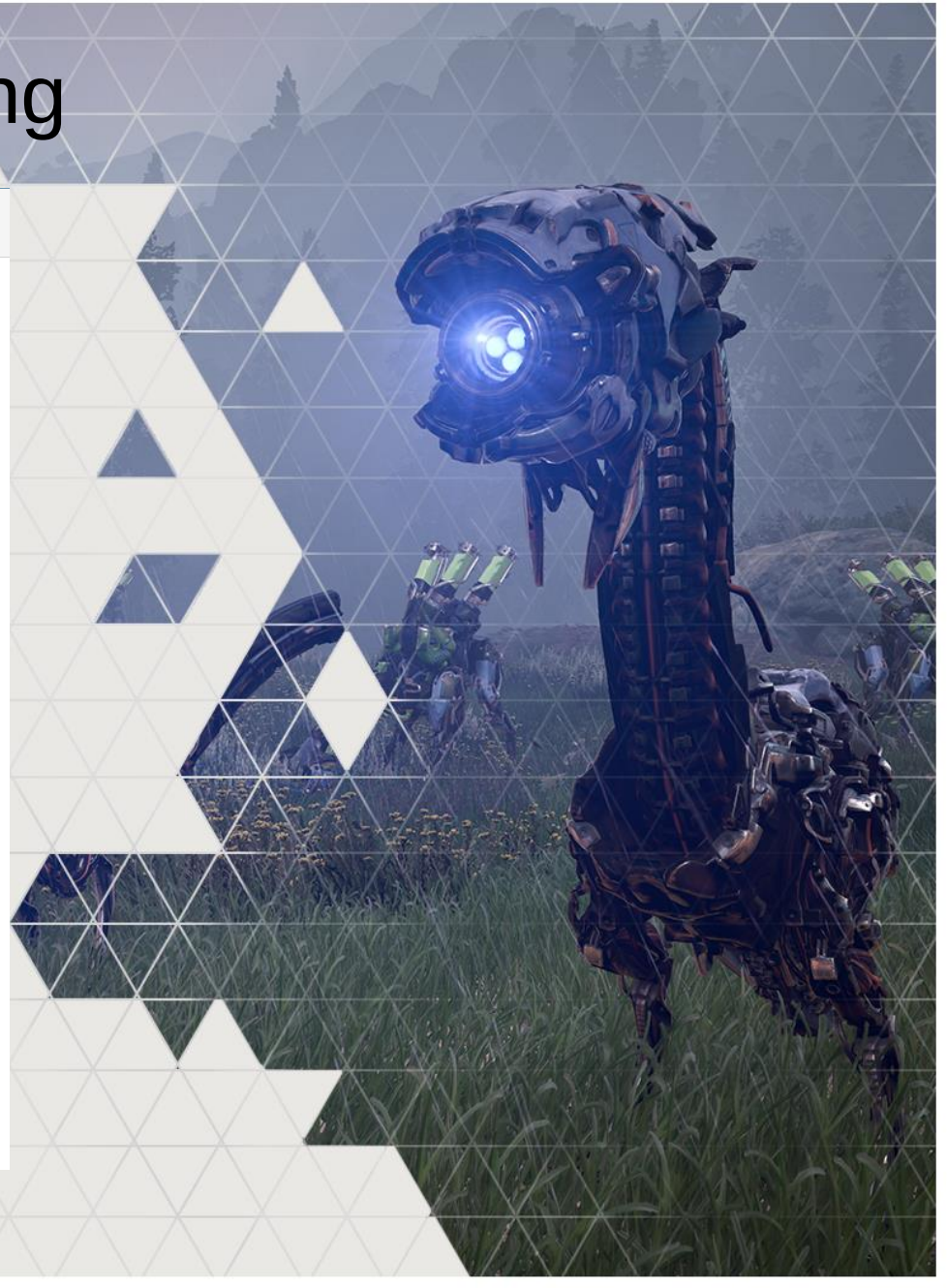
Time Tracking

Estimated:	1d
Remaining:	0m
Logged:	Not Specified

Agile

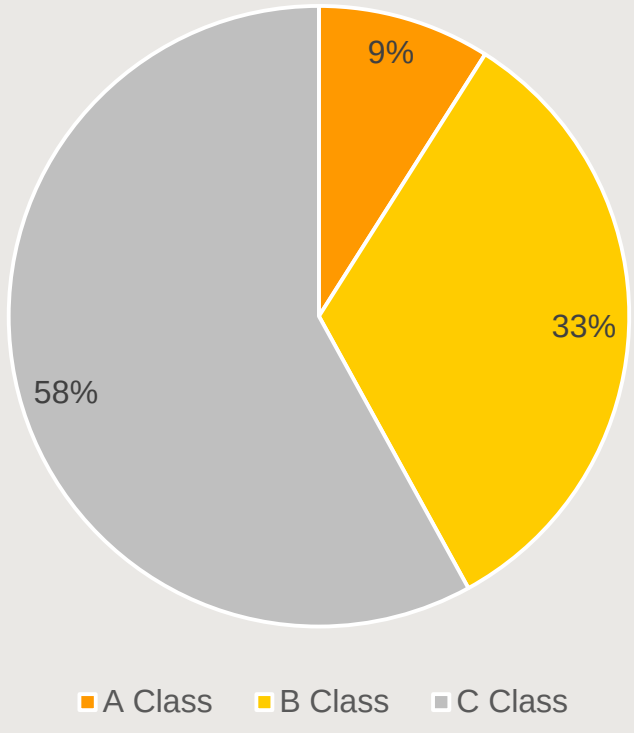
Completed Sprint: DLC Sprint 15 ended 11/Sep/17

View on Board

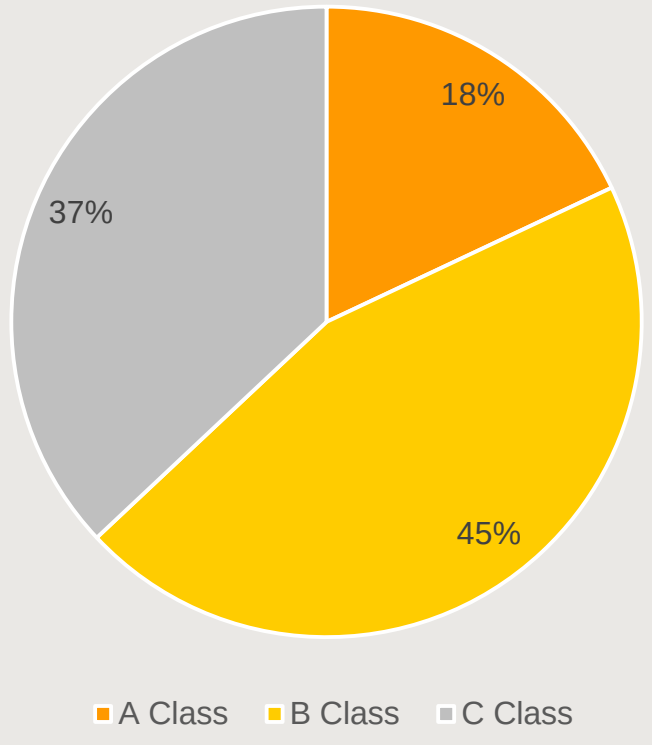


Testing what matters

KILLZONE® SHADOW FALL

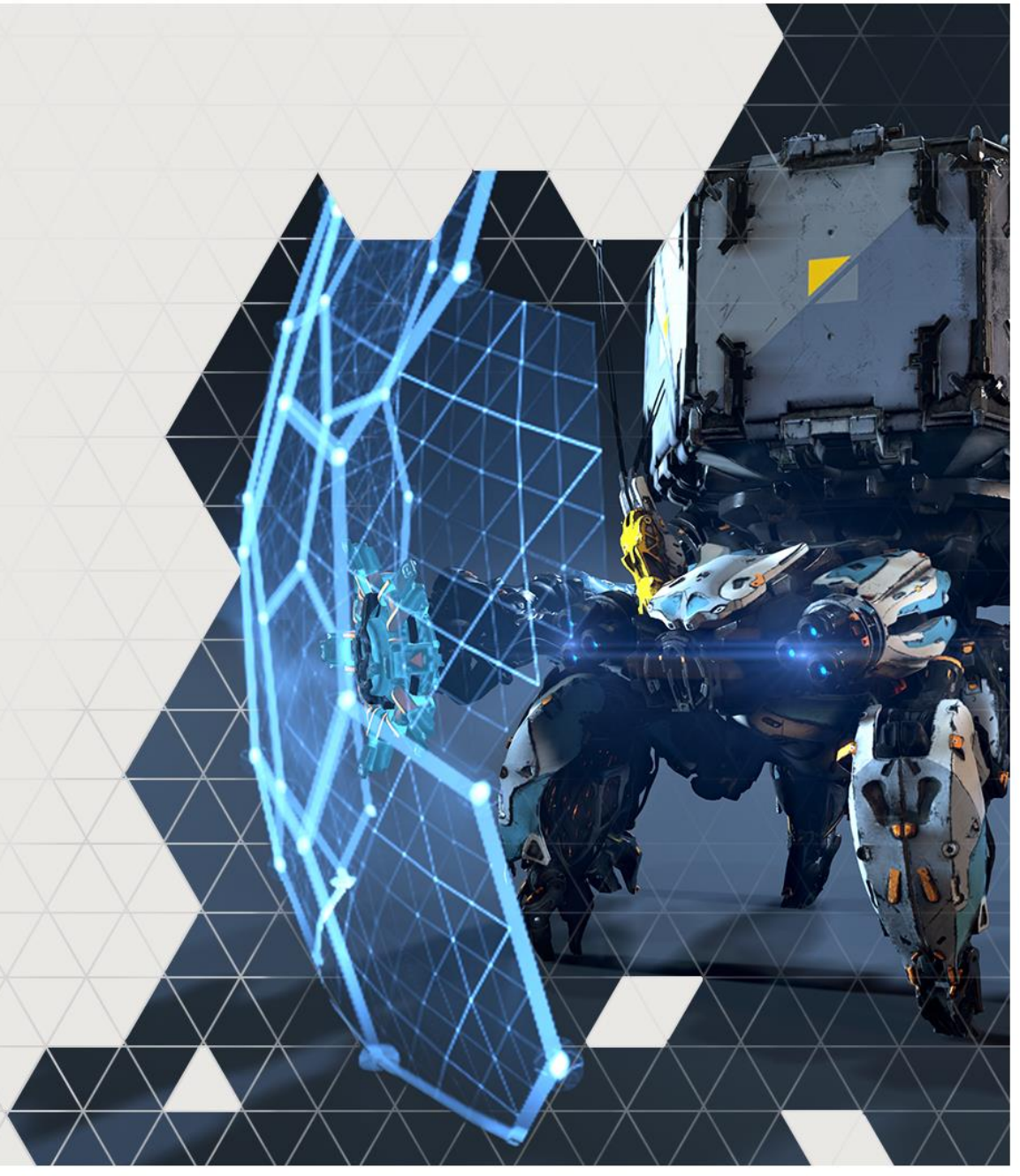


HORIZON ZERO DAWN™



Not just testing

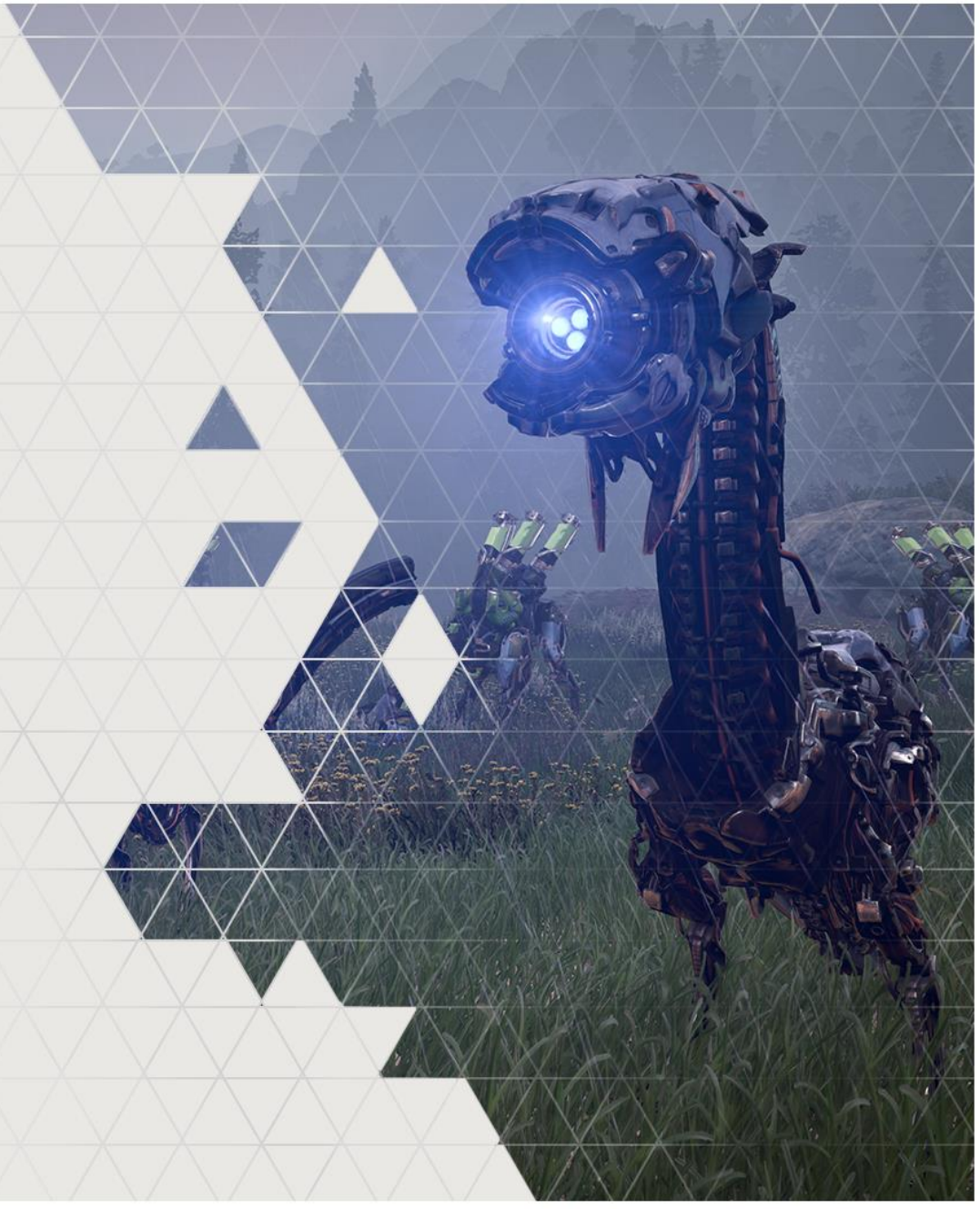
- *QA as playtesters*
- *Qualitative feedback*
- *Competitor research*
- *QA reviews*
- *Seeker Team*



INGREDIENT #3: TOOLS AND TECH

Tools – In Engine

- *Debug views*
- *Debug tools*



Examples of debug views and

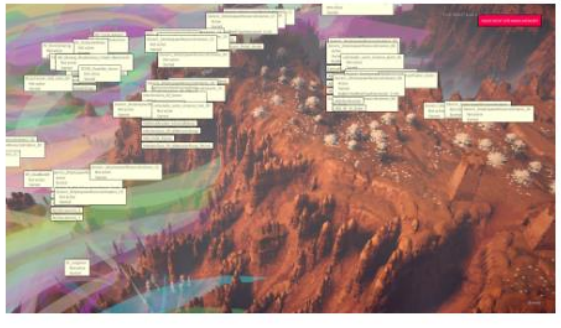
External Tools

- *Interactive bug map*
- *DecimaEd (game editor)*
- *Game analytics*

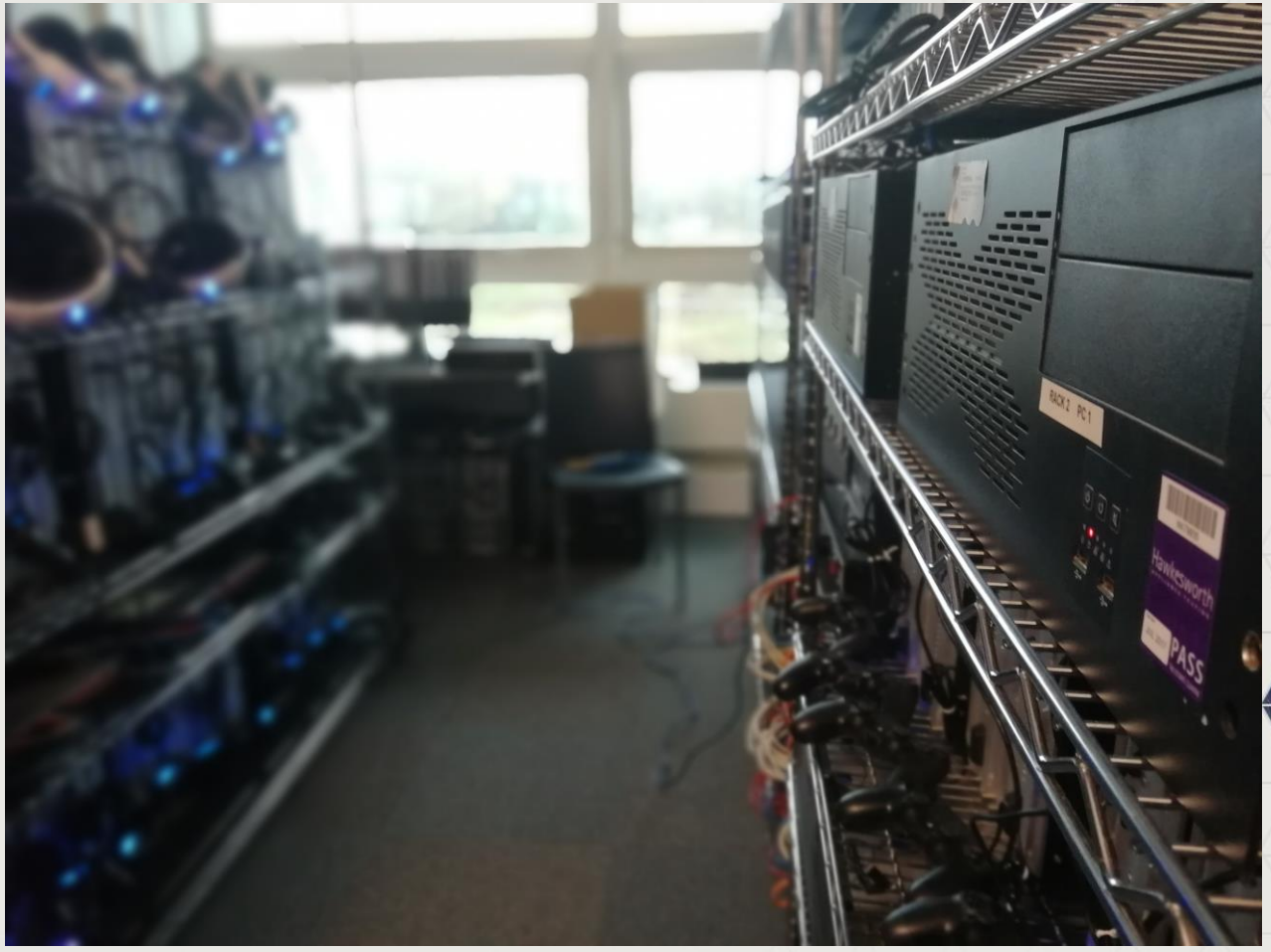
Interactive bug map

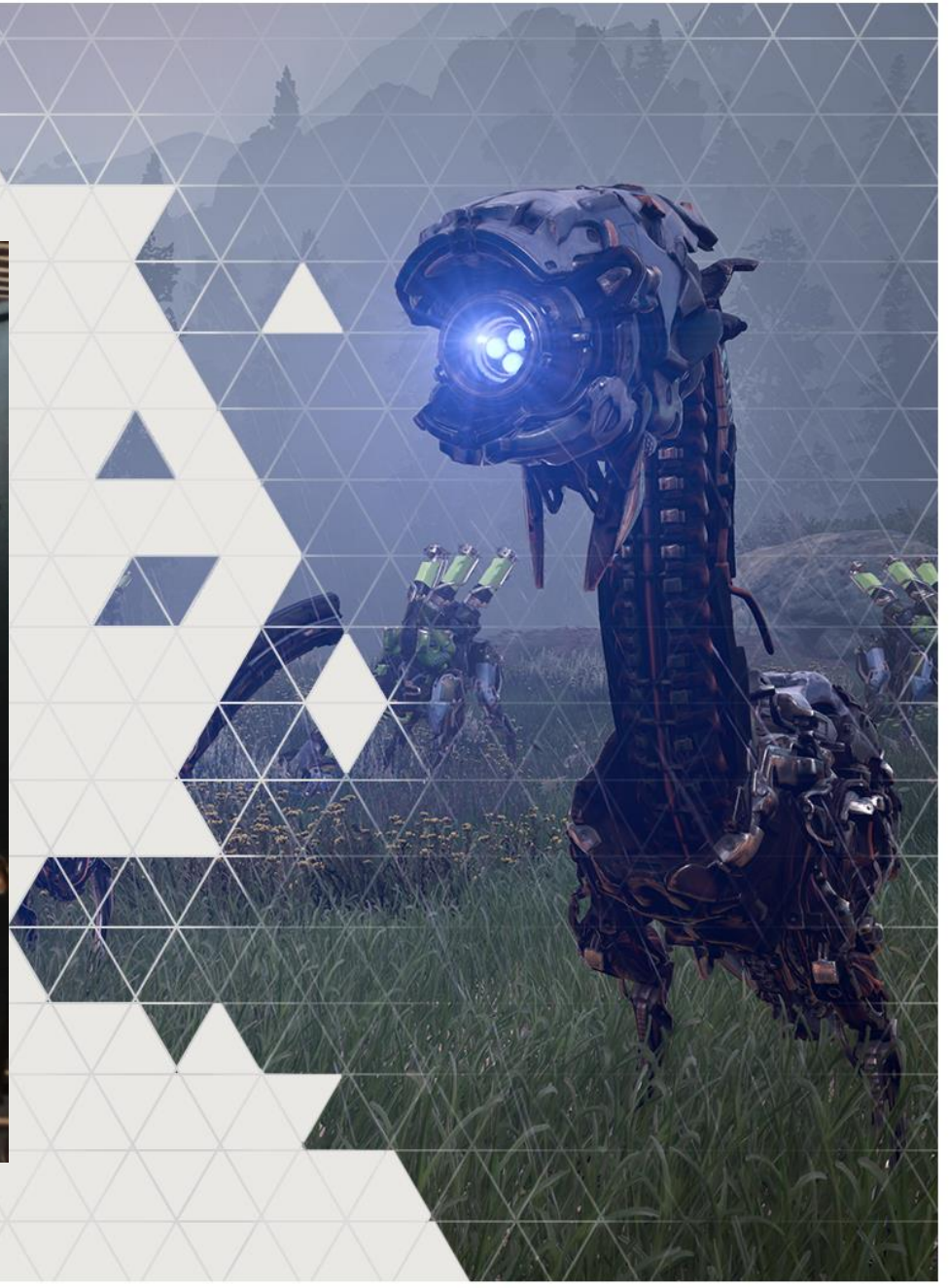
Charter No.	Charter	Reasoning/Justification	Priority	Investment Time	Date Created	Date Last Run	Creator	Ran By	Results
01	Test the area in grid -3, -3. Look to interact with any content in the game world. **World Content:** • **Stalker Fixed Encounter** • **Campfire** • **Mechanical Flower 27**	Multiple Playthrough breadcrumbing data has shown that users are not travelling to this area on the map. We want to identify points of interest and ensure there is sufficient reasoning to visit these areas. 	Med	2Hour	30/08/16	05/09/2016	M.Shields	R.Venier	Map is out of date, Mechanical Flower 27 spawn located at (--1010.17, -1187.24, 209.84) on grid -2, -3. Region geometry does not impede accessibility. Area is populated by numerous random encounters and is also a location placed along main quest progression for MQ11 F ~~HRZ-13451~~ CLOSED

› Tests

Charter No.	Charter	Reasoning/Justification	Priority	Investment Time	Date Created	Date Last Run	Creator	Ran By	Results
02	Test the area in grid -3,0. Look to interact with any content in the game world. **World Content:** • **Banuk Artifact 5** • **Corrupted Encounter 08** • **Mechanical Flower 18**	Multiple Playthrough breadcrumbing data has shown that users are not travelling to this area on the map. We want to identify points of interest and ensure there is sufficient reasoning to visit these areas. 	Med	1Hour	30/08/16	06/09/2016	M.Shields	R.Venier	 There is content within this area, however the lack of detection range with the compass or lack of detection at all in the case of collectibles means a user is likely to miss this content in the world. F ~~HRZ-13982~~ CLOSED F ~~HRZ-14016~~ CLOSED

Test Automation



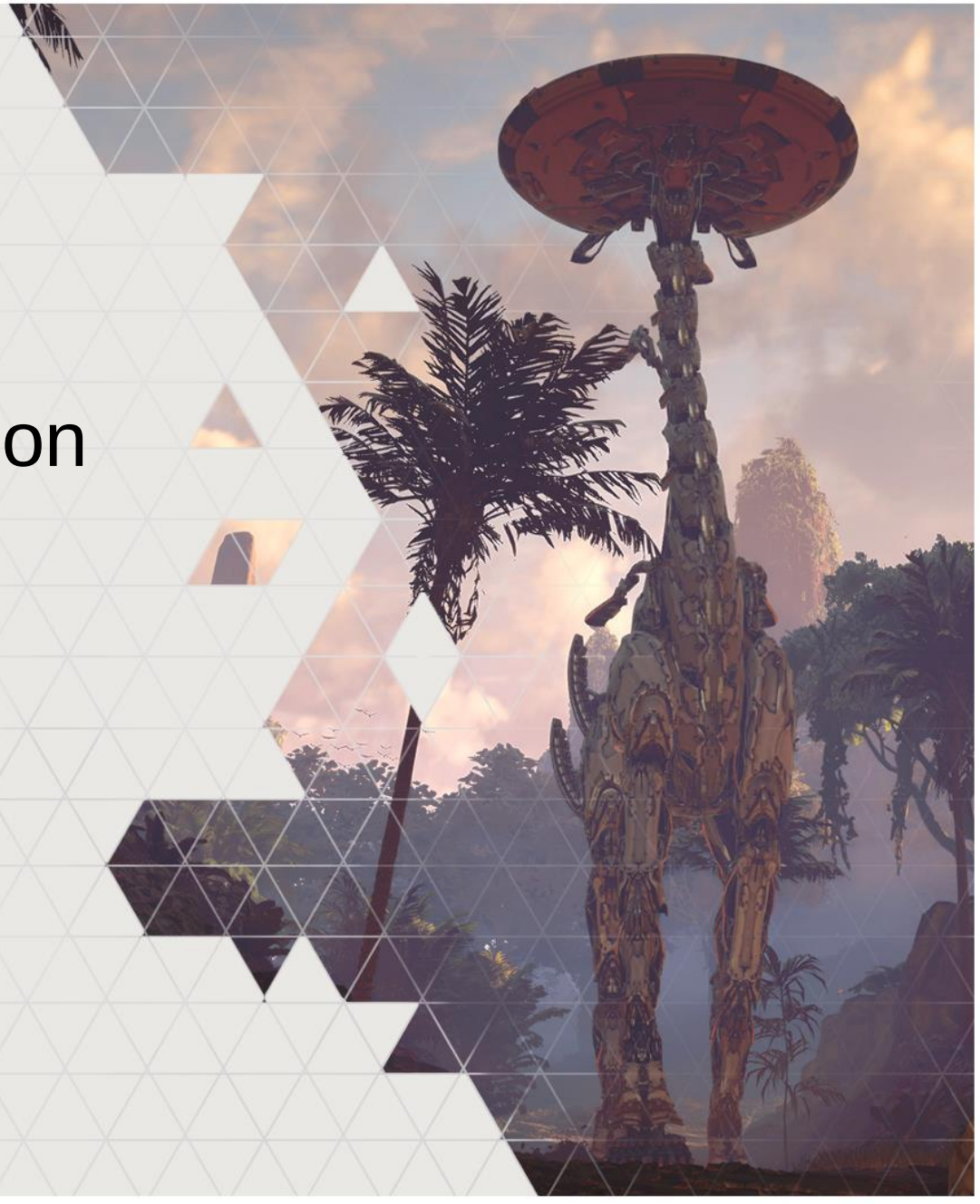


Apollo – Autonomous Automated Autobots

TAKEAWAY
POINTS

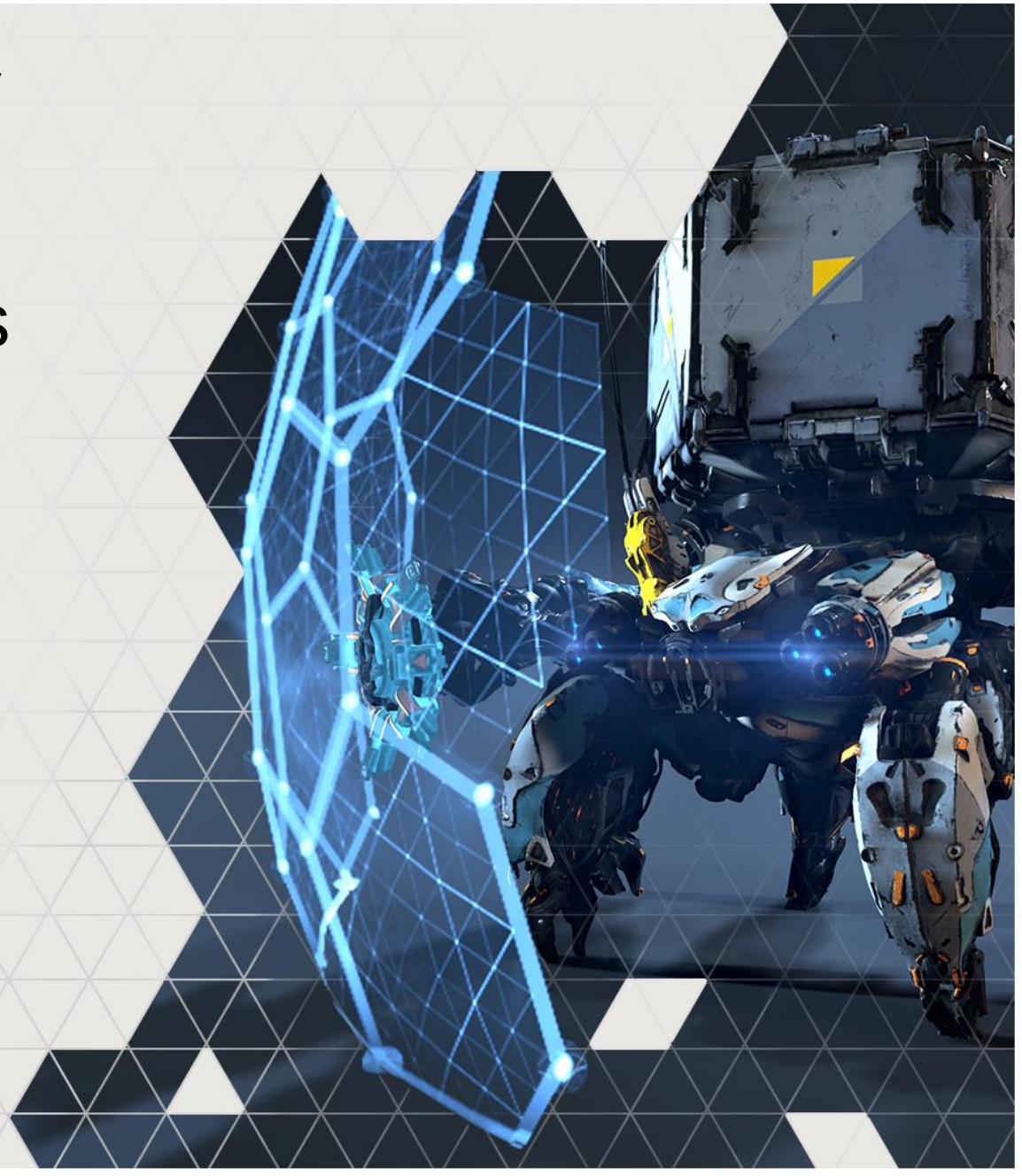
Nurturing The Test Team

- Trust
- Communication & Collaboration
- Empowerment & Ownership
- Learning & Growth



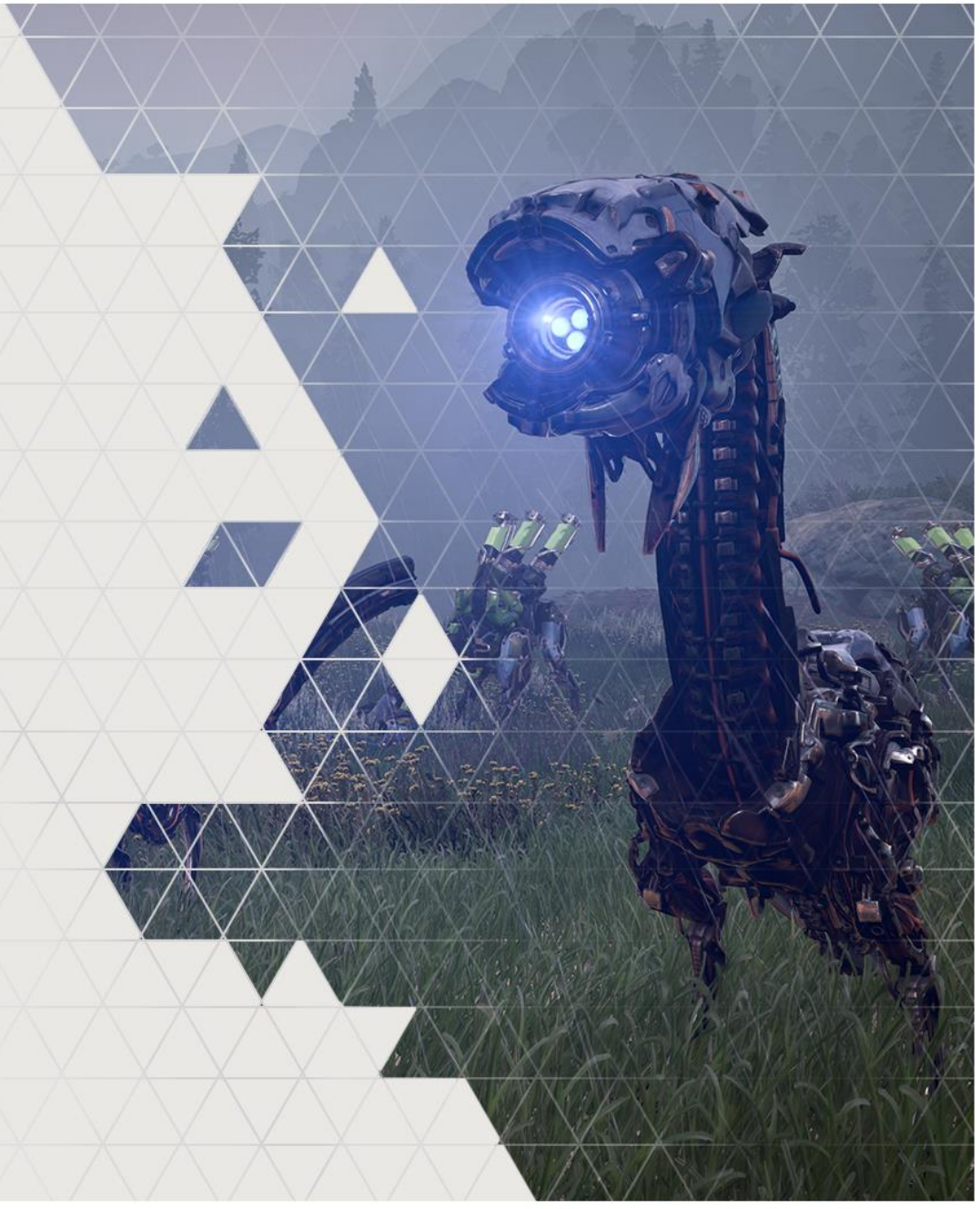
Developing A Test Strategy

- Efficiency – process & tools
- Focus:
  - Risk
  - Changes
  - Weak points
- Evolve & Improve



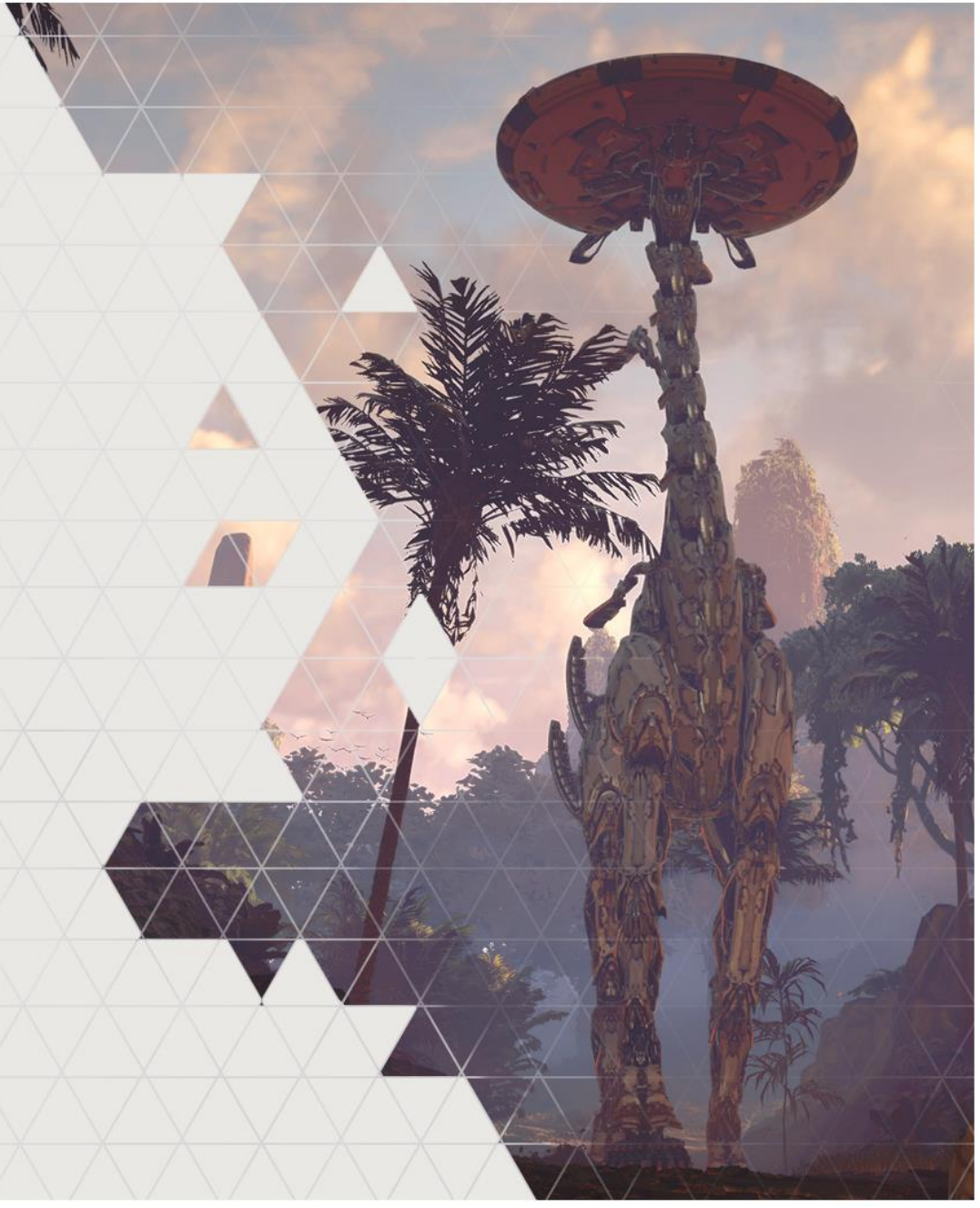
Using Tools & Technology

- Increase understanding
- Informative for developers
- Testing efficiency
- Data-driven



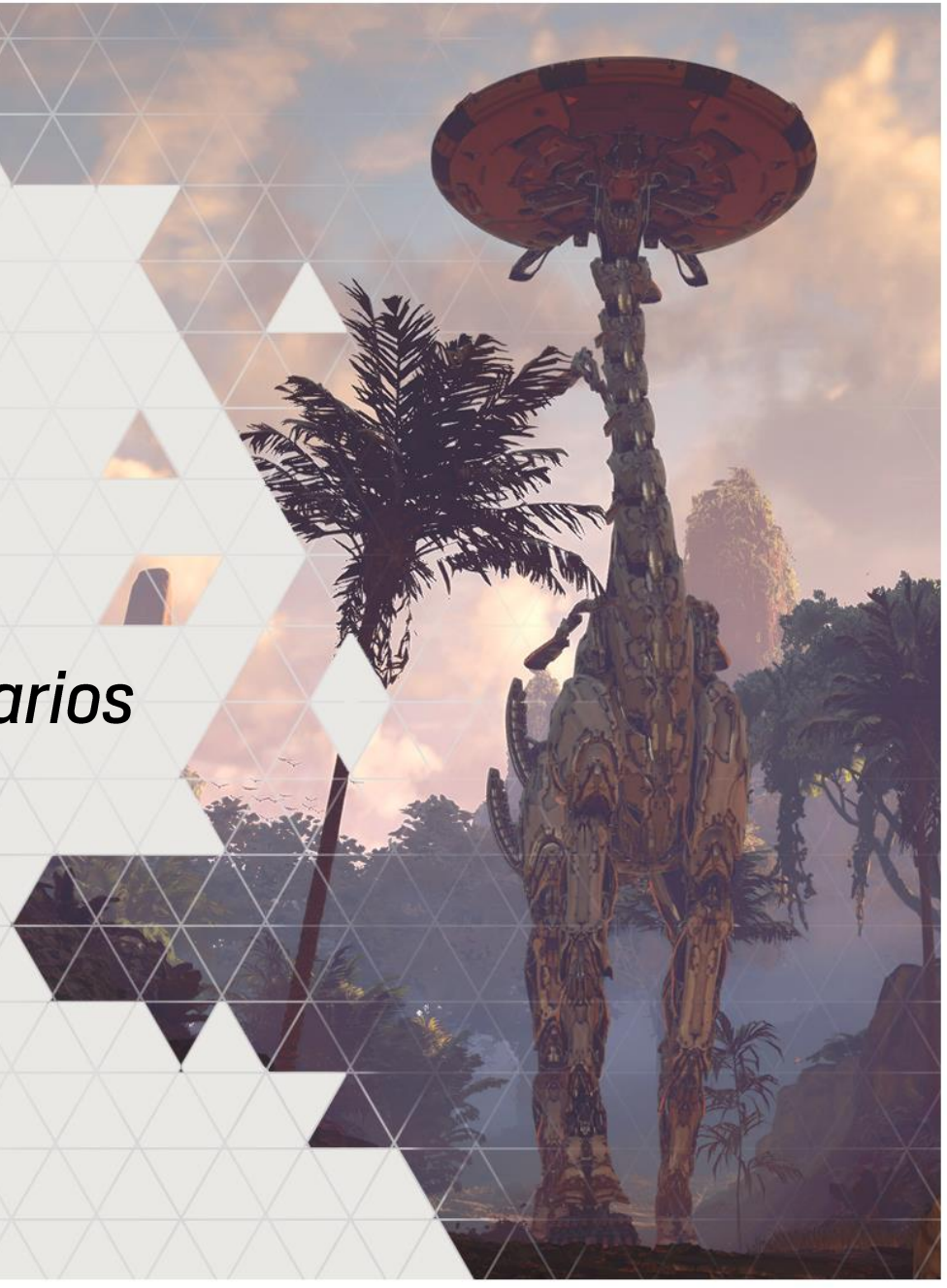
Potential downsides

- Siloing
- False positives
- Recruitment challenges
- Training needs



Trophy Unlocked!

- *45 hours of play time (average)*
- *57 quests*
- *~500 unique combat encounters*
  - *Spawning almost 1500 combat scenarios*
- *44 unique enemies*
- *10 hours of cinematic sequences*
- *Over 480 000 words of dialogue*



We succeeded by building a culture of **collaboration** *and* **open communication**, *in which we focused on* **efficiency**, **expertise** *and* **flexibility**.

QUESTIONS?

ana.barbuta@guerrilla-games.com