

# Building Buy-In: Creating design tools for better player experiences at EA

Peter Vesti Frendrup - Sr. Level Designer - EA DICE  
Krista Parham - Sr. UX Researcher - EA Vancouver

**GDC**

**GAME DEVELOPERS CONFERENCE**

MARCH 18-22, 2019 | #GDC19

# Peter Vesti Frendrup

Level Design 11 years

Battlefield, Battlefront, Far Cry, Splinter Cell



# Krista Parham

UX Research 3 years

Mass Effect: Andromeda, FIFA





Quick Filters

Advanced

Core Filter

Player Tick

Team

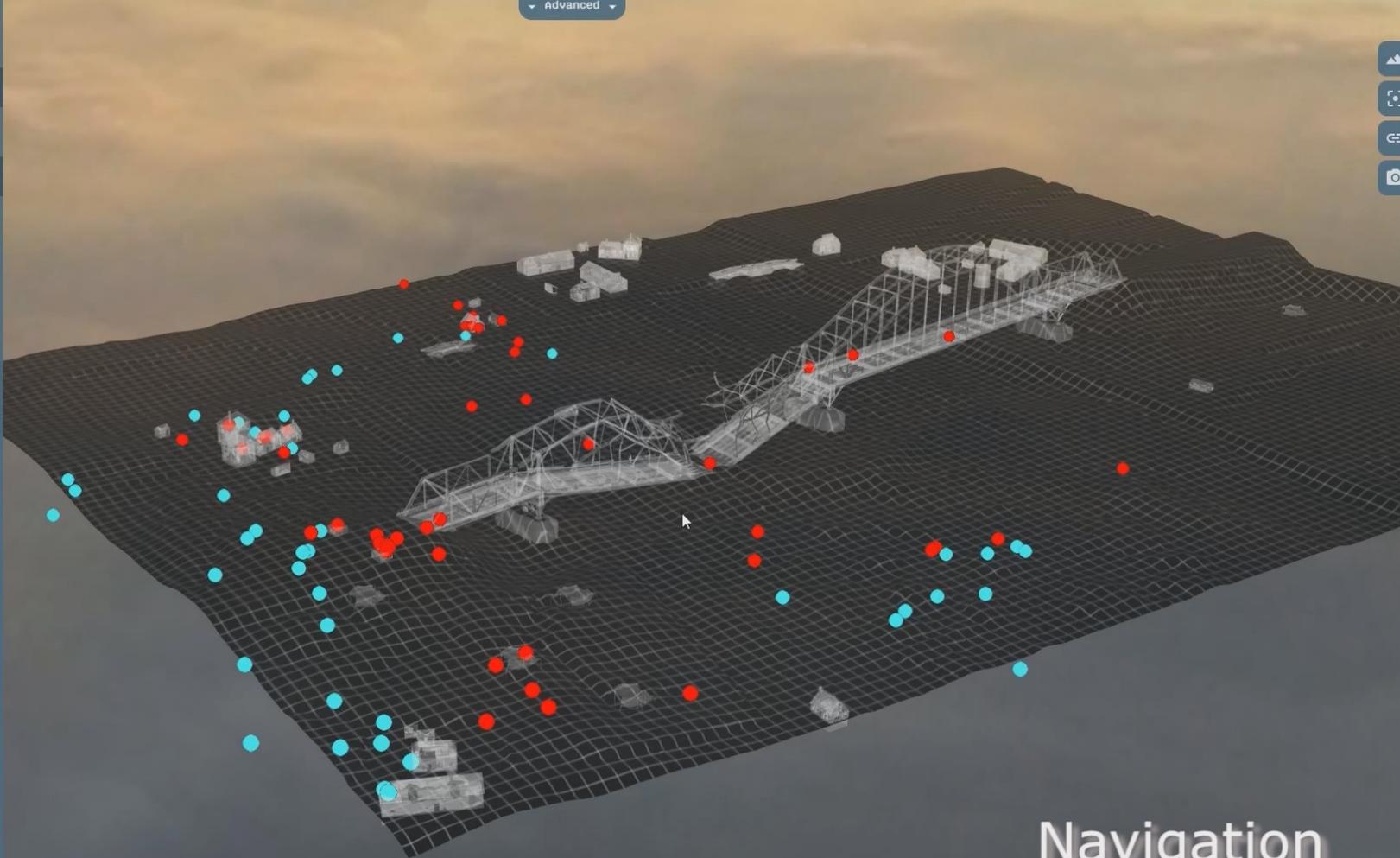
Point Heat

Multiple

94 points

1 8267

2 8463



# Navigation

Timeframe 00:29:31

00:34:49



# Key Takeaways

How to pitch your own company wide project

How telemetry viewers can help teams make better decisions about their games

The challenges involved in building this type of tool and how to overcome them

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How to pitch your own company wide project

How telemetry viewers can help teams make better decisions about their games

The challenges involved in building this type of tool and how to overcome them

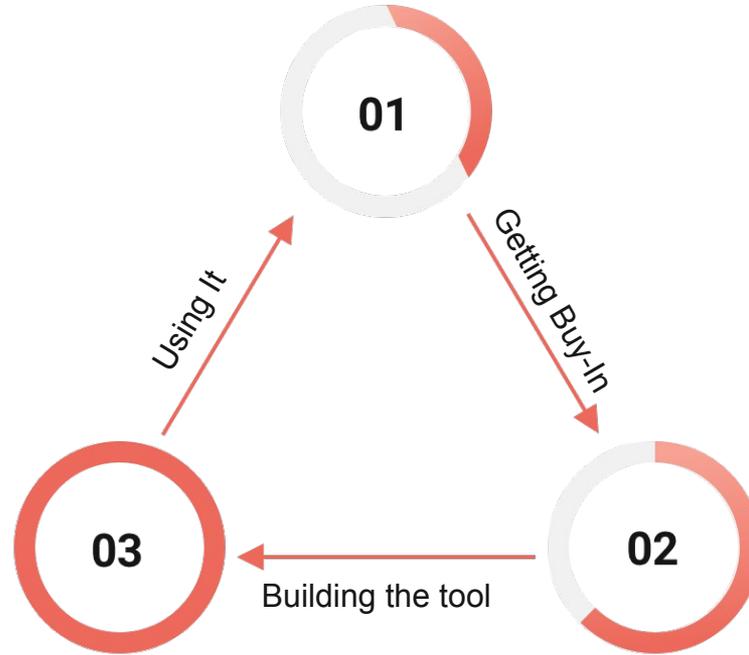
# Key Takeaways

How to pitch your own company wide project

How telemetry viewers can help teams make better decisions about their games

The challenges involved in building this type of tool and how to overcome them

# Phases of Building a Tool



# STOCKHOLM 2015

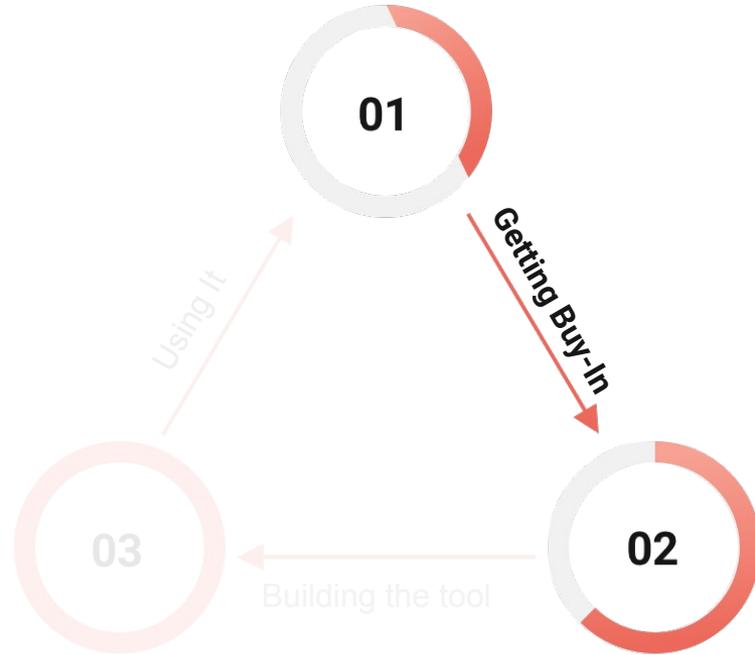
# As a level designer, I want to...

Be able to easily understand how people play a level spatially over time

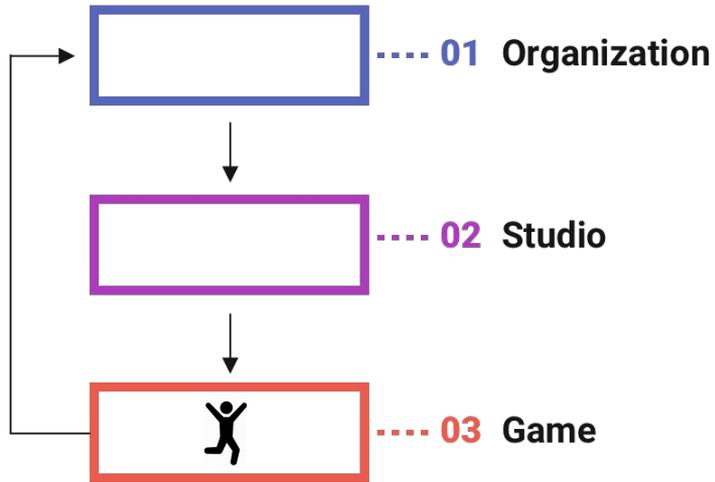
Be able to easily compare players

**Goal:** Properly understand how people play. An exploratory tool (not a binary 'problem solver')

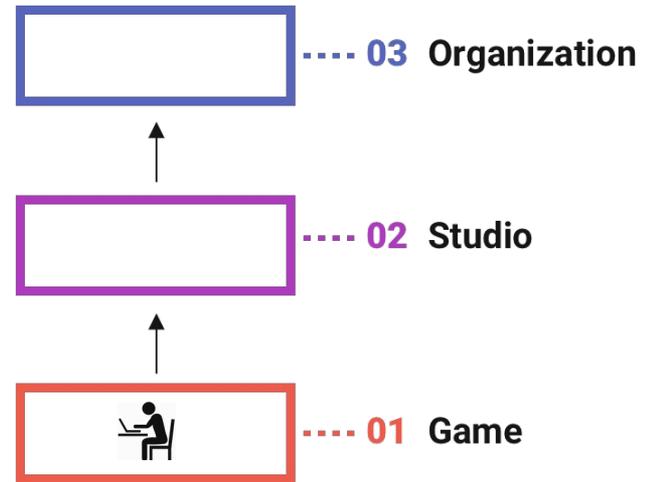
# Getting buy-in when top-down fails.



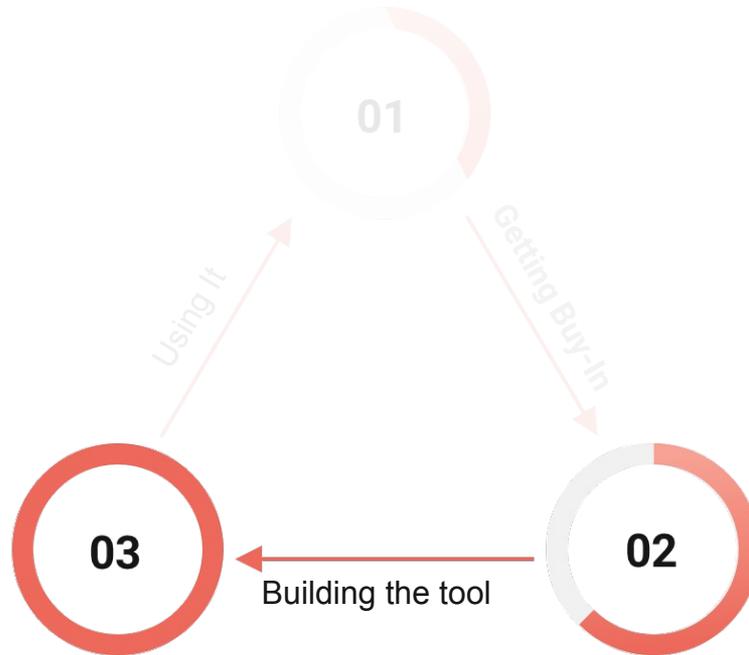
## First approach



## Second approach



# Building the tool: game-specific



## Thor Prototype Goals



### Play over time

Isolate and aggregate player activity over time



### Exploratory Tool

Explore data from different perspectives.



### 3D Tool

Move & navigate the map.  
Understand data spatially.



## FILTER

STANDARD 

SHOW AIM DIRECTION

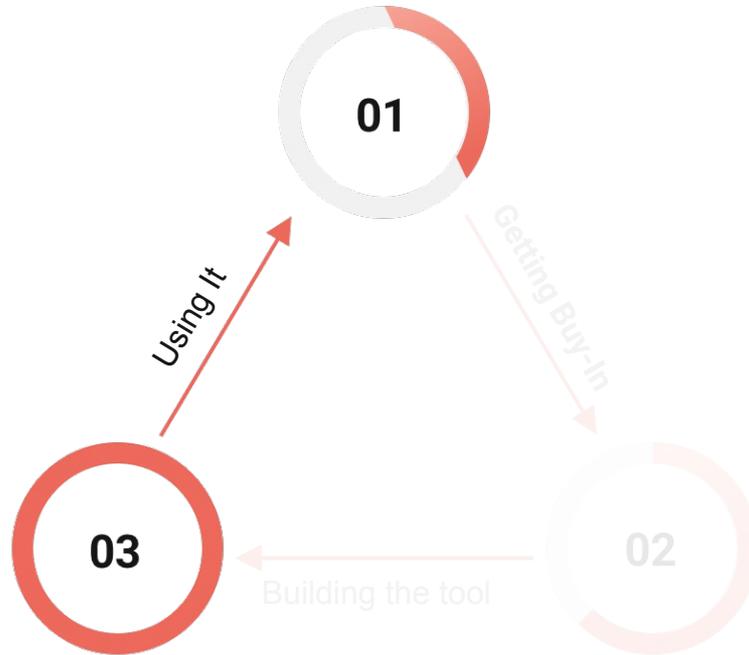


level\_started 

 **0:01:15**



# Using the tool: Battlefield 1 SP



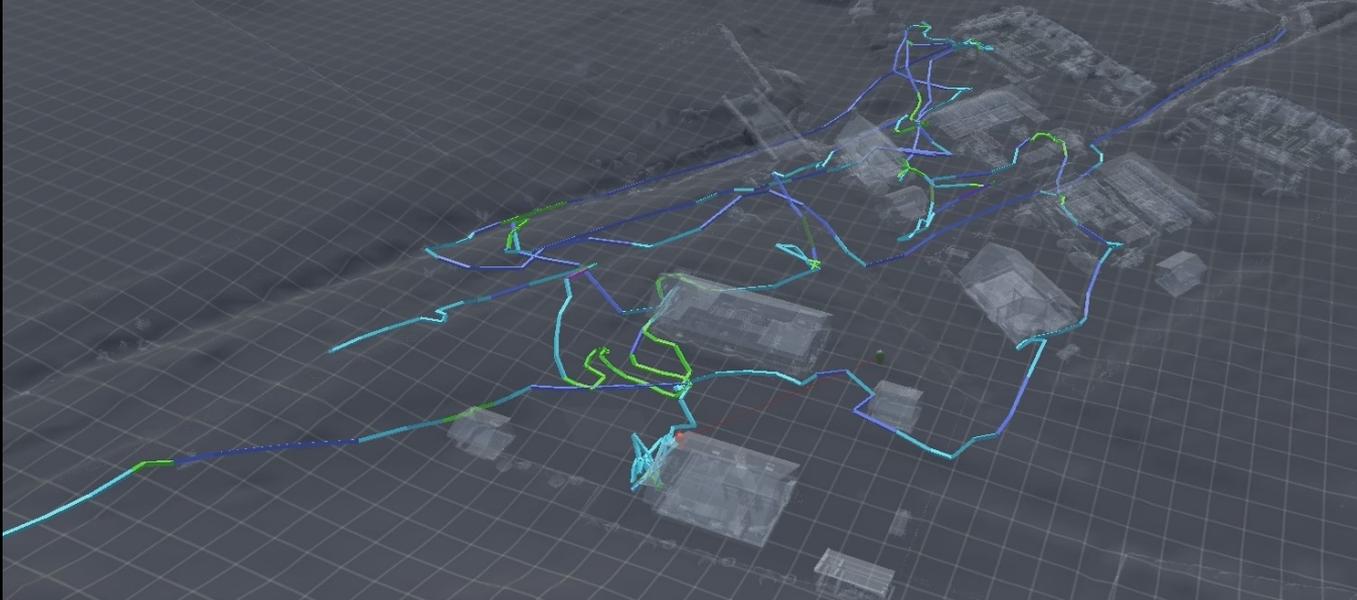


A powerful communication tool  
that **removes ambiguity.**



0:11:02

UXR 01 (PS4)



### FILTER

PERMA TRAIL

- SHOW LINE
- COLOR LINE BY PLAYER STATE
- SHOW KILLS
- SHOW DEATHS
- SHOW SPOTS
- SHOW VEHICLE HEALTH CHANGES
- SHOW OBJECTIVE UPDATES

TRAIL LENGTH

PLAYBACK SPEED

MARKERS	WALK LINE
<span style="color: blue;">■</span> Player	<span style="color: cyan;">■</span> Walking
<span style="color: green;">■</span> AI	<span style="color: blue;">■</span> Sprinting
<span style="color: red;">■</span> Player Death	<span style="color: lightgreen;">■</span> Crouching
	<span style="color: darkgreen;">■</span> Prone
	<span style="color: orange;">■</span> In Vehicle
	<span style="color: yellow;">■</span> In Air
	<span style="color: purple;">■</span> Sliding
	<span style="color: magenta;">■</span> Jumping
	<span style="color: black;">■</span> Climbing

i
←
UXR 01 (PS4)  
15322965715996359737\*
✕
→

ALIGN TO START  
 NO ALIGN
 

 ALIGN TO END



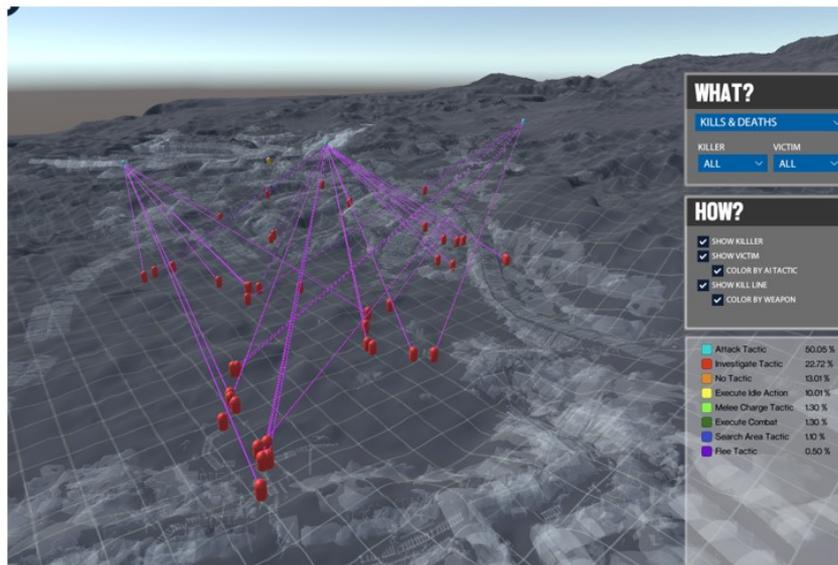
The level was frustrating in the no-mans-land section

### Observation

Unclear how to progress combined with deadly machine guns caused player to be frustrated.

### Cause

Players were unsure where they should go to avoid gunfire AND complete the mission objective.





Be aware of incorrect analysis.  
**Context Matters.**

# TELEMETRY DATA LOADED



AVERAGE		VIEW SELECTED			
UXR 01 (PC)	0:15 0	7 FUN	2 FRUSTRATION	3 CHALLENGE	<input checked="" type="checkbox"/> VIEW
UXR 02 (PC)	0:16 1	5 FUN	5 FRUSTRATION	4 CHALLENGE	<input checked="" type="checkbox"/> VIEW
UXR 03 (PC)	0:35 1	7 FUN	1 FRUSTRATION	4 CHALLENGE	<input checked="" type="checkbox"/> VIEW
UXR 04 (PC)	0:18 0	7 FUN	1 FRUSTRATION	4 CHALLENGE	<input checked="" type="checkbox"/> VIEW
UXR 05 (PC)	0:29 4	5 FUN	1 FRUSTRATION	3 CHALLENGE	<input checked="" type="checkbox"/> VIEW
UXR 06 (PC)	0:25 2	4 FUN	5 FRUSTRATION	4 CHALLENGE	<input checked="" type="checkbox"/> VIEW
UXR 07 (PC)	0:42 0	7 FUN	2 FRUSTRATION	4 CHALLENGE	<input checked="" type="checkbox"/> VIEW
UXR 08 (PC)	0:20 0	6 FUN	1 FRUSTRATION	3 CHALLENGE	<input checked="" type="checkbox"/> VIEW
UXR 09 (PC)	0:22 0	6 FUN	1 FRUSTRATION	5 CHALLENGE	<input checked="" type="checkbox"/> VIEW



SHOW OVERVIEW

SHOW DETAILS

SHOW GRAPH

SHOW TIME BREAKDOWN



It's not only about finding  
problems. **Validation is valuable.**



## SURVEY FILTER

STEALTH FUN ▼

- SHOW LINE
- SHOW CAPSULES

- USE SLIDER VIEW
- SHOW +1/-1



How fun was it to play stealthily?

1

2

3

4

5

6

7

# TELEMETRY DATA LOADED



AVERAGE		0:22				VIEW SELECTED
UXR 01 (PC)	0:15		7	2	3	<input checked="" type="checkbox"/>
VETERAN	0		FUN	FRUSTRATION	CHALLENGE	VIEW
UXR 02 (PC)	0:16		5	5	4	<input checked="" type="checkbox"/>
VETERAN	1		FUN	FRUSTRATION	CHALLENGE	VIEW
UXR 03 (PC)	0:35		7	1	4	<input checked="" type="checkbox"/>
VETERAN	1		FUN	FRUSTRATION	CHALLENGE	VIEW
UXR 04 (PC)	0:18		7	1	4	<input checked="" type="checkbox"/>
VETERAN	0		FUN	FRUSTRATION	CHALLENGE	VIEW
UXR 05 (PC)	0:29		5	1	3	<input checked="" type="checkbox"/>
VETERAN	4		FUN	FRUSTRATION	CHALLENGE	VIEW
UXR 06 (PC)	0:25		4	5	4	<input checked="" type="checkbox"/>
VETERAN	2		FUN	FRUSTRATION	CHALLENGE	VIEW
UXR 07 (PC)	0:42		7	2	4	<input checked="" type="checkbox"/>
VETERAN	0		FUN	FRUSTRATION	CHALLENGE	VIEW
UXR 08 (PC)	0:20		6	1	3	<input checked="" type="checkbox"/>
VETERAN	0		FUN	FRUSTRATION	CHALLENGE	VIEW
UXR 09 (PC)	0:22		6	1	5	<input checked="" type="checkbox"/>
VETERAN	0		FUN	FRUSTRATION	CHALLENGE	VIEW

SHOW OVERVIEW

SHOW DETAILS

SHOW GRAPH

SHOW TIME BREAKDOWN

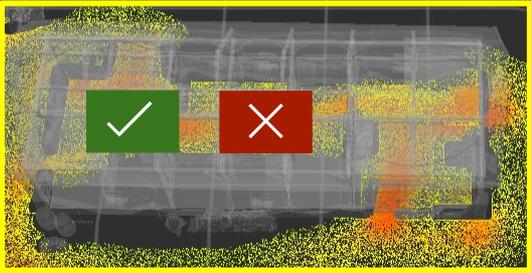


Don't be precious. Embrace player behavior.

Cool stuff up here

...but people loved to go into this building

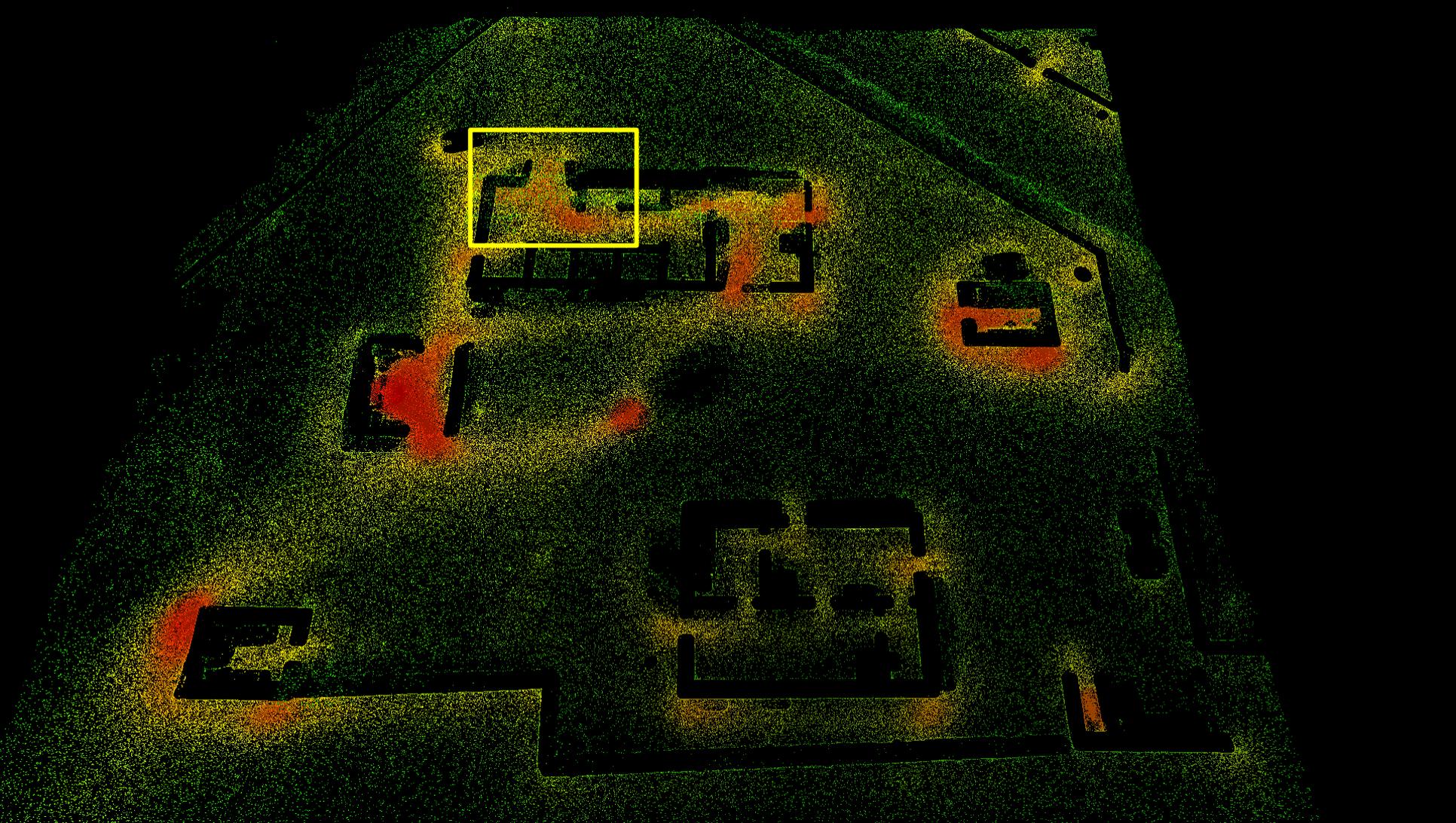
Truck



...no matter what

PLAYER COMING FROM THIS DIRECTION

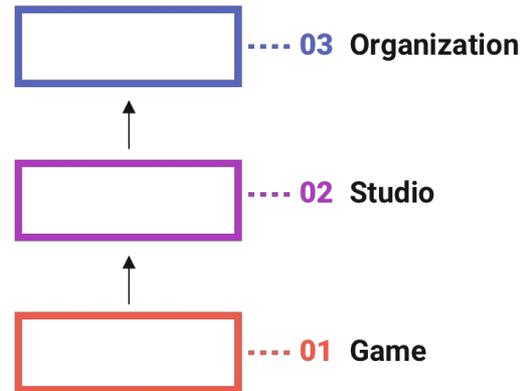




# Getting Buy-in: Success of bottom-up

Interest spreads if people can see the value.

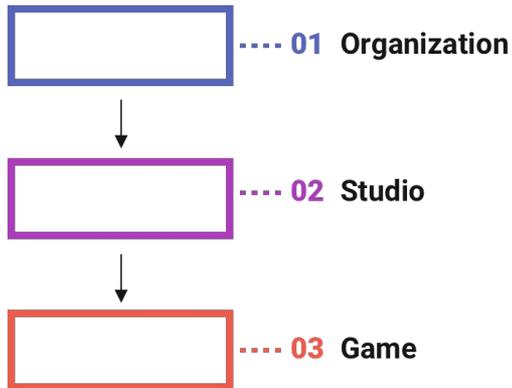
Battlefield 1 MP & Star Wars Battlefront II now also wanted 3D Telemetry.



# CROSS-STUDIO COLLABORATION

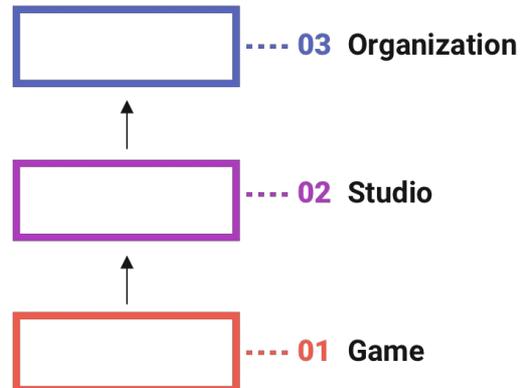
## EA Vancouver

Get top-down buy-in for company wide solution.



## EA DICE

Generalize viewer & get it online.  
Rebrand to THOR.



## Web Thor Goals



### Access Anywhere

From any computer via the web.



### Robust

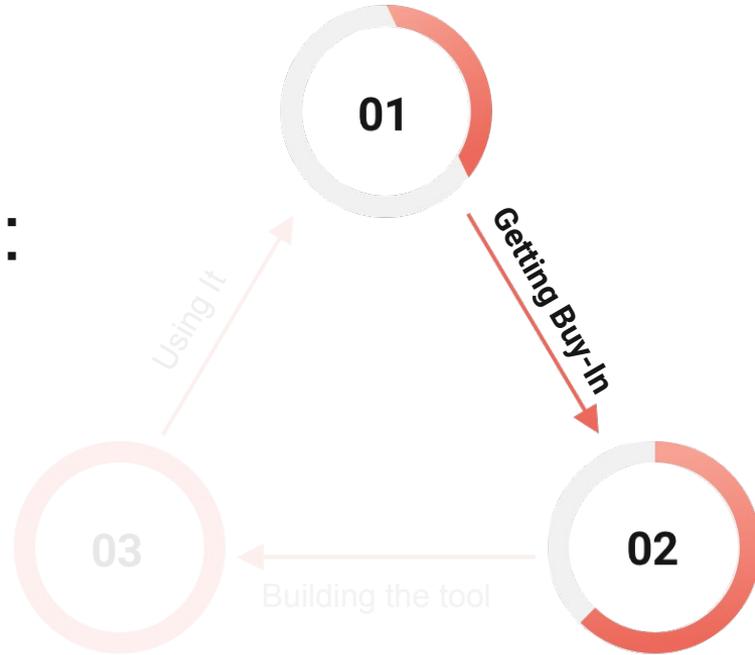
Integrate with other EA tools.



### Continuous Support

From a dedicated team keeping the tool online.

# Getting Buy-in Part 2: Top-down Thor



# Reason for Thor 1: Make **Data Human**





Context matters. **Faces mean  
empathy.**

Zara Ghufran  
1 8 8 2 - 1 9 1 8



PARTICIPANT 718

13:59:23



## Reason for Thor 2: Get Data In Early

Incentivises telemetry implementation

Align product goals with business goals

Main Concern: **But who would use it?**

A: Peter

# Main Concern: **But who would use it?**

A: Specific use cases - no hypotheticals

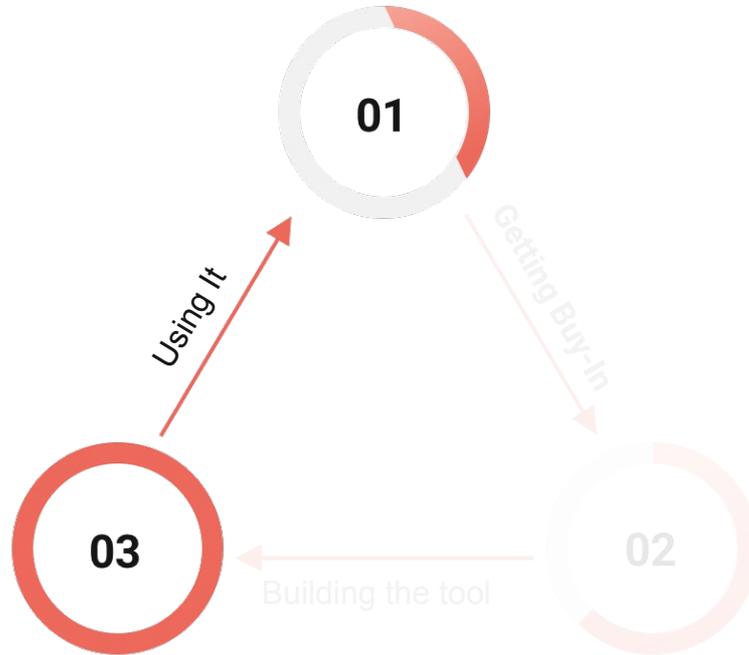
Telling a clear, actionable story using the tool.



Tools touch more teams than  
planned. **Buy-in is continuous.**

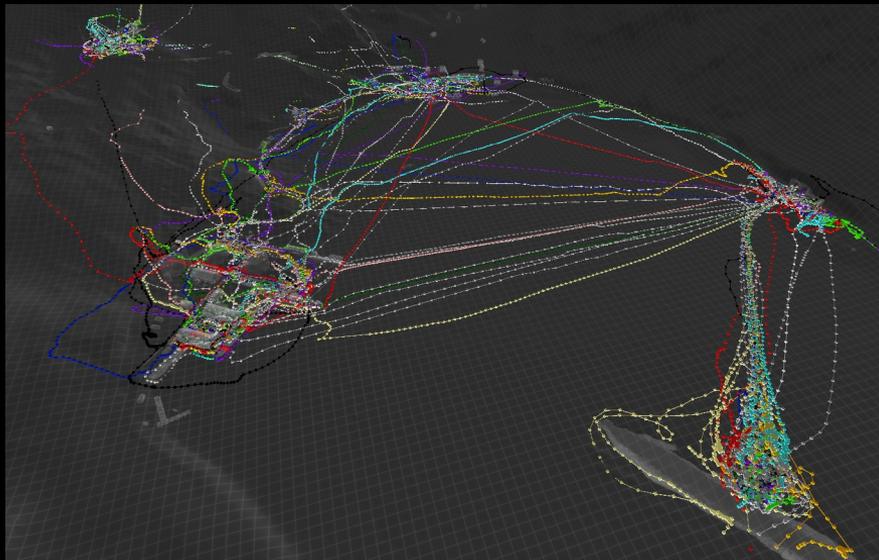
# MEANWHILE, IN SWEDEN

# Using the tool: Multiplayer versus Single Player



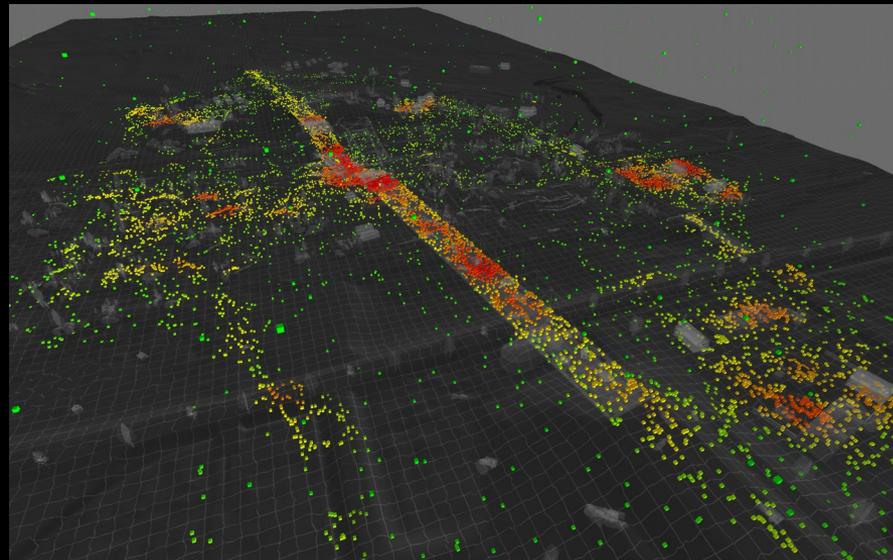


Different lenses for different  
modes. **One size does not fit all.**



## Single Player

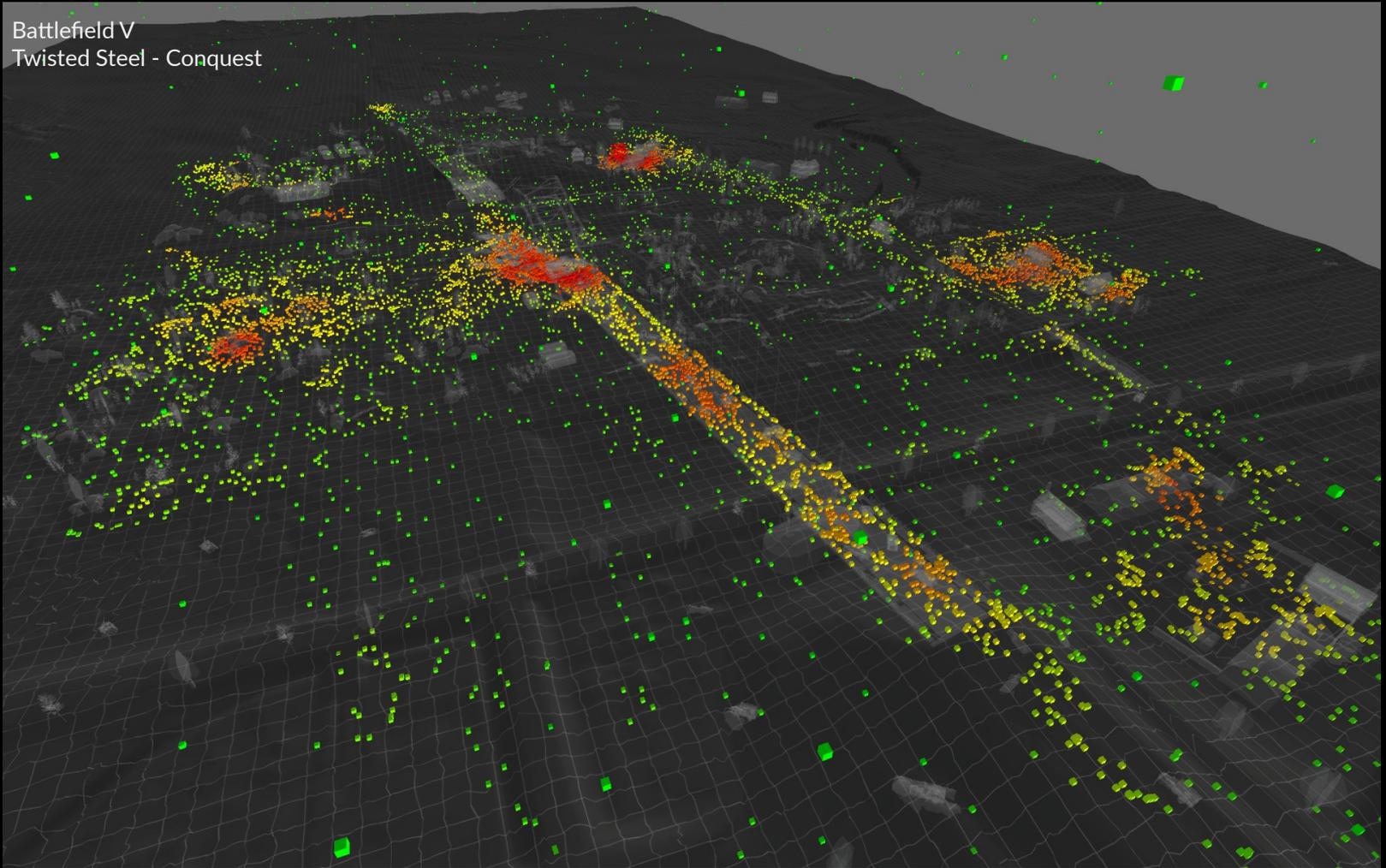
Individual player paths shown at the same time.



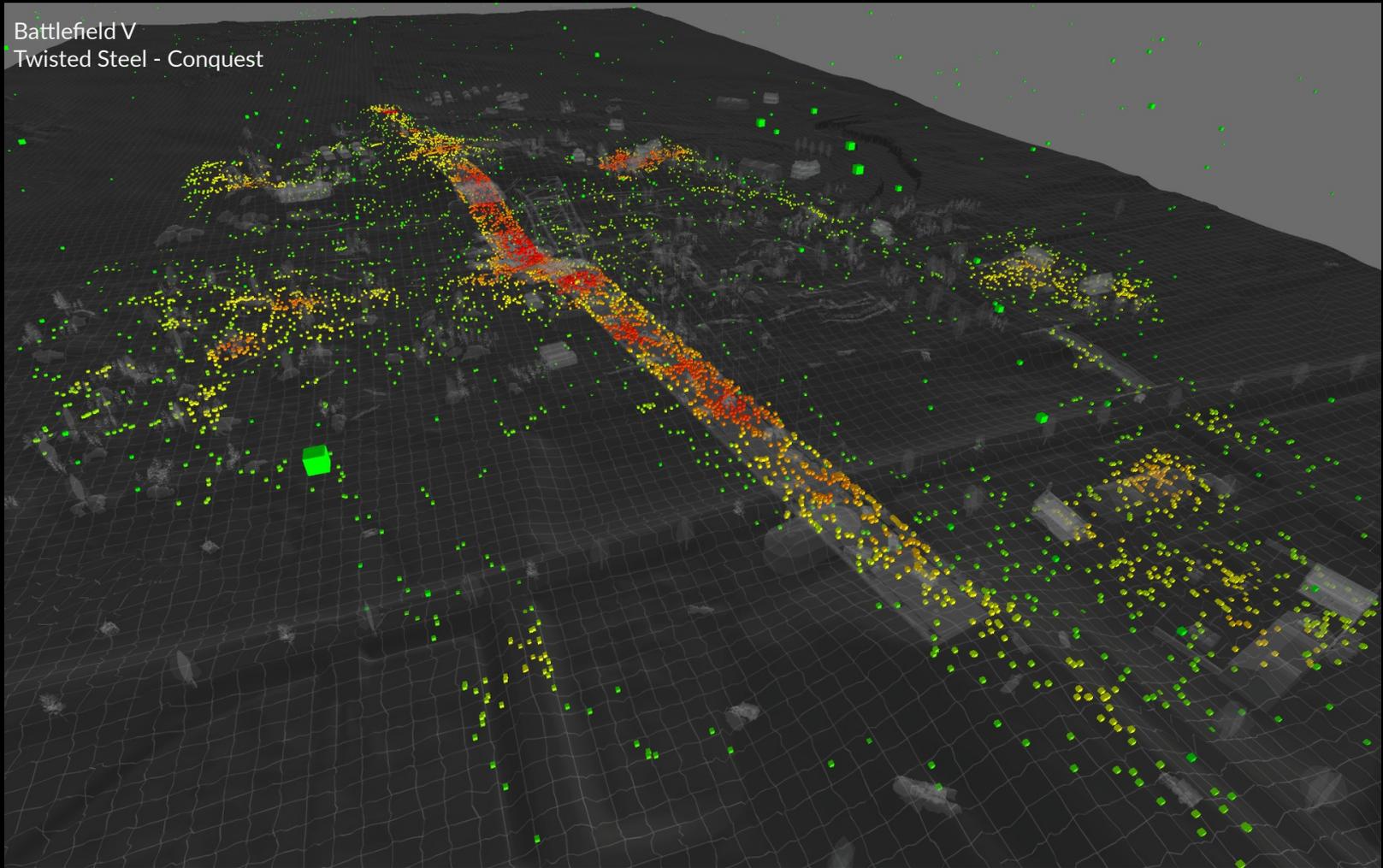
## Multiplayer

Individual matches (player positions colored by heat)

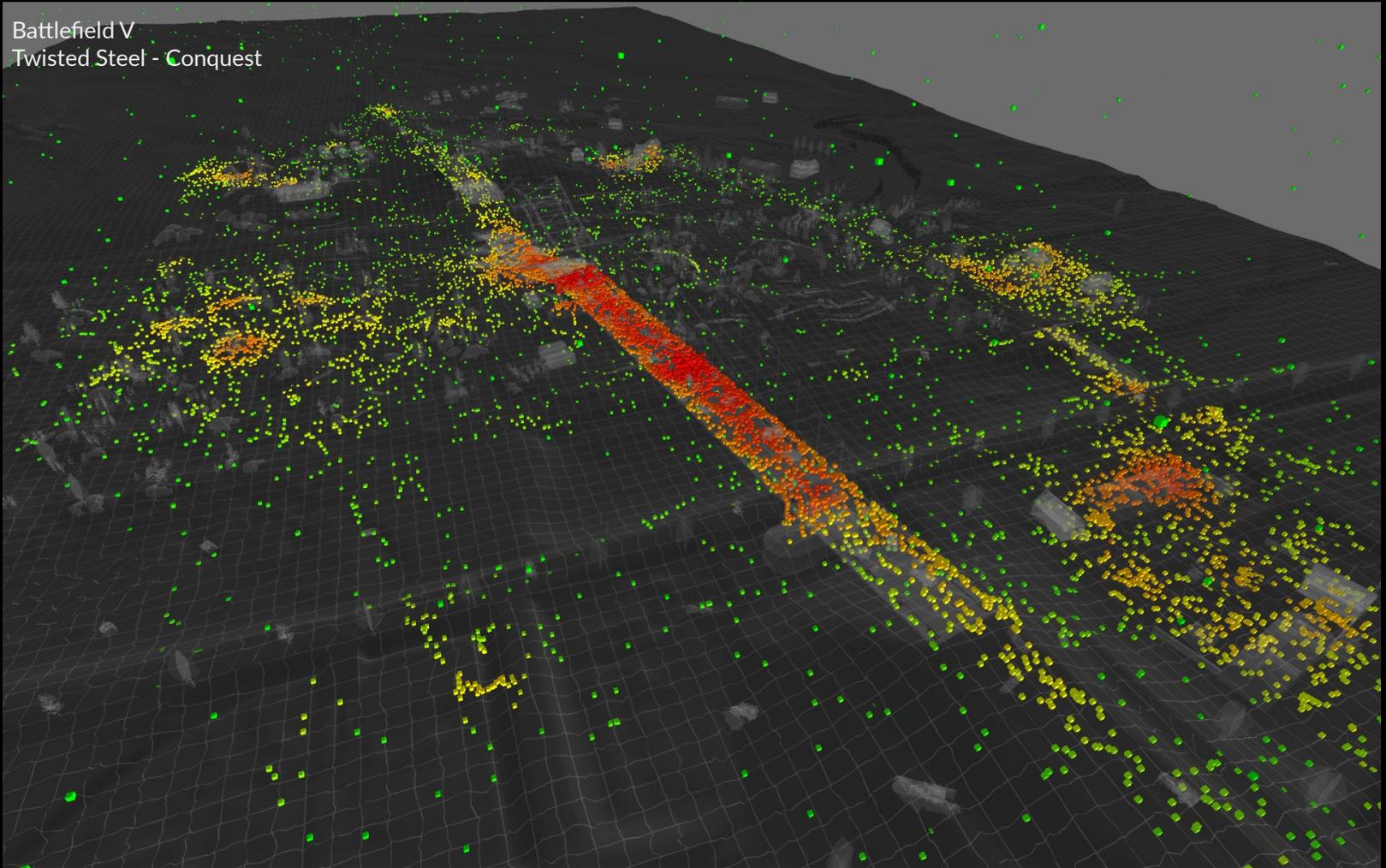
Battlefield V  
Twisted Steel - Conquest



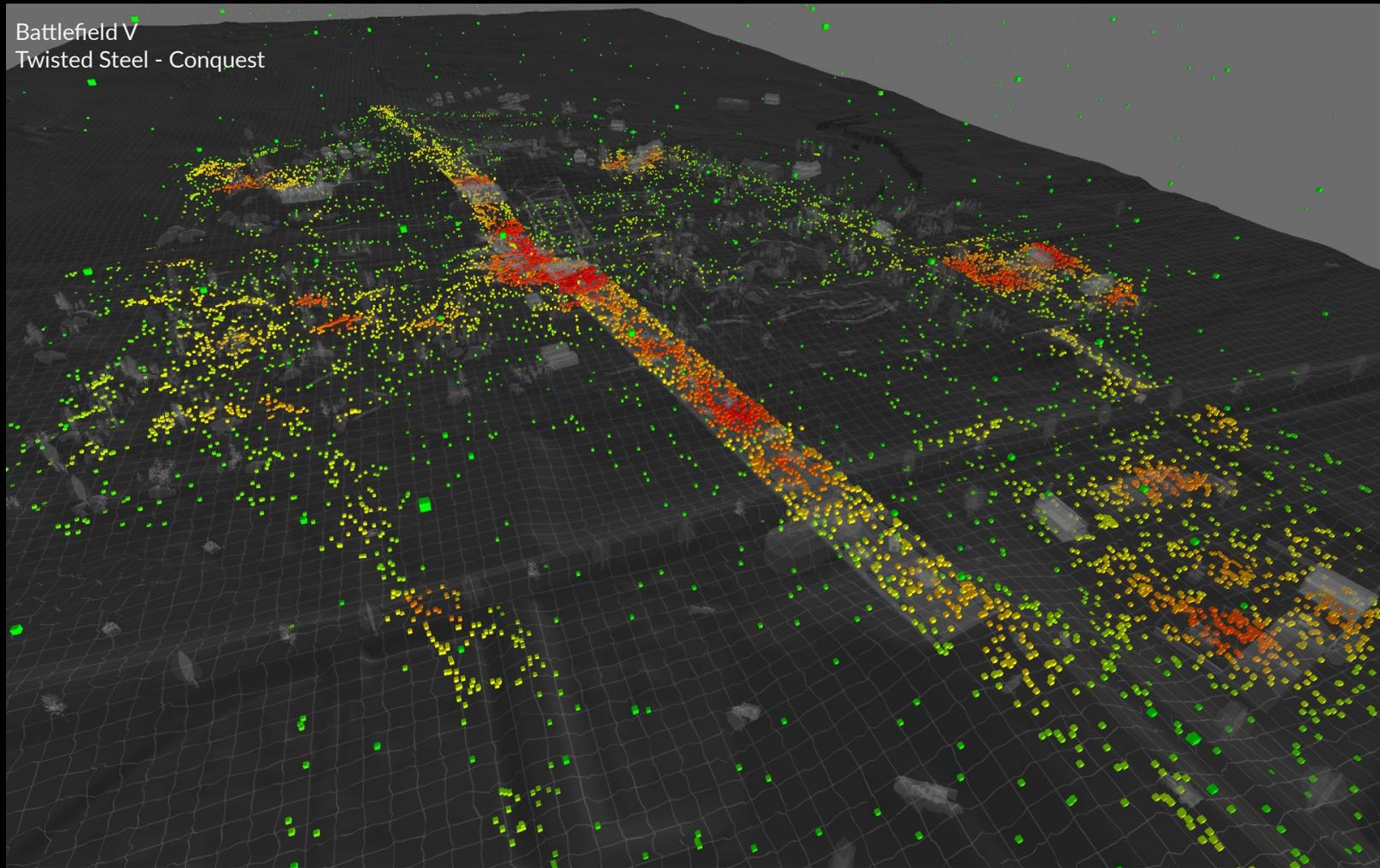
Battlefield V  
Twisted Steel - Conquest



Battlefield V  
Twisted Steel - Conquest

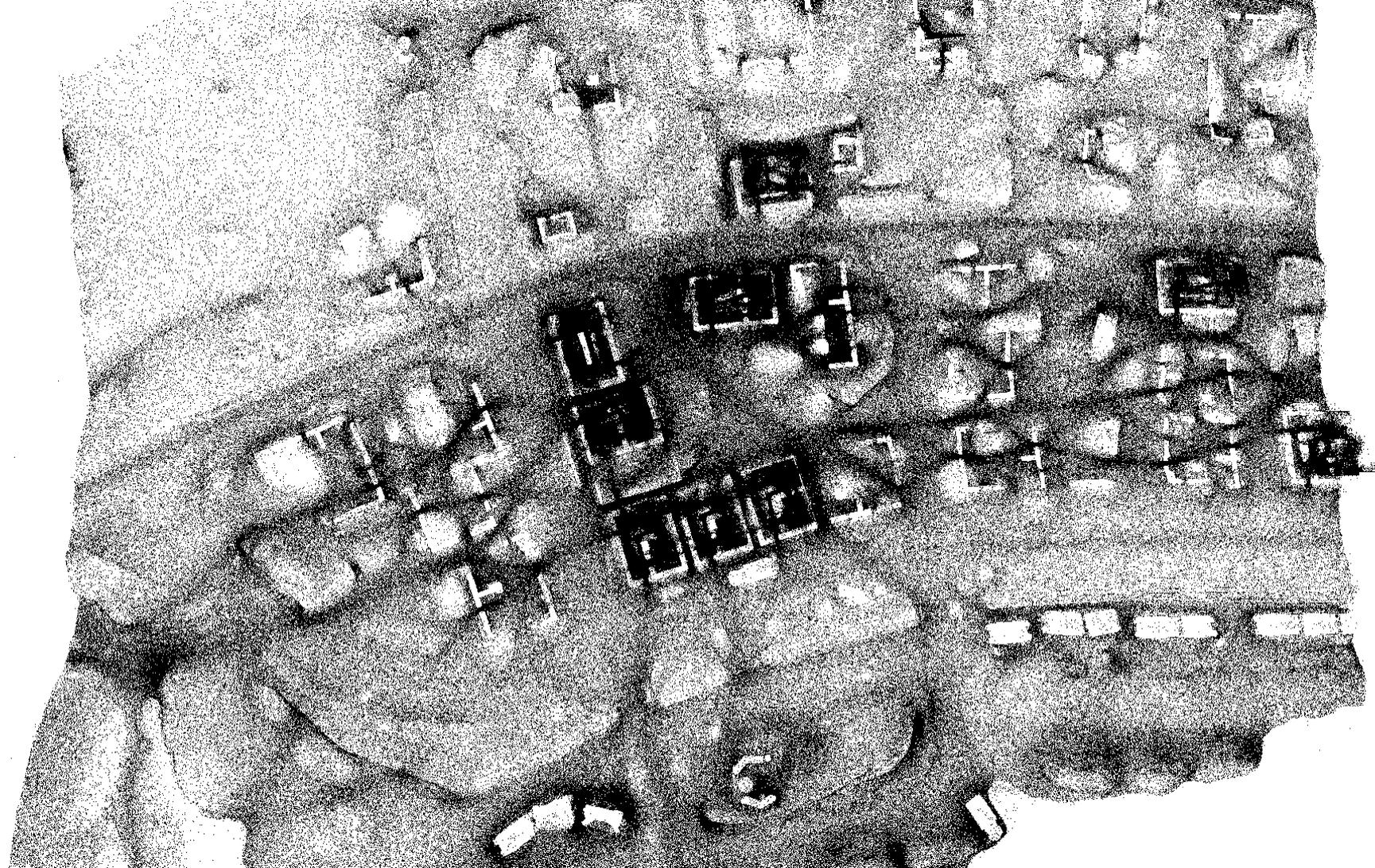


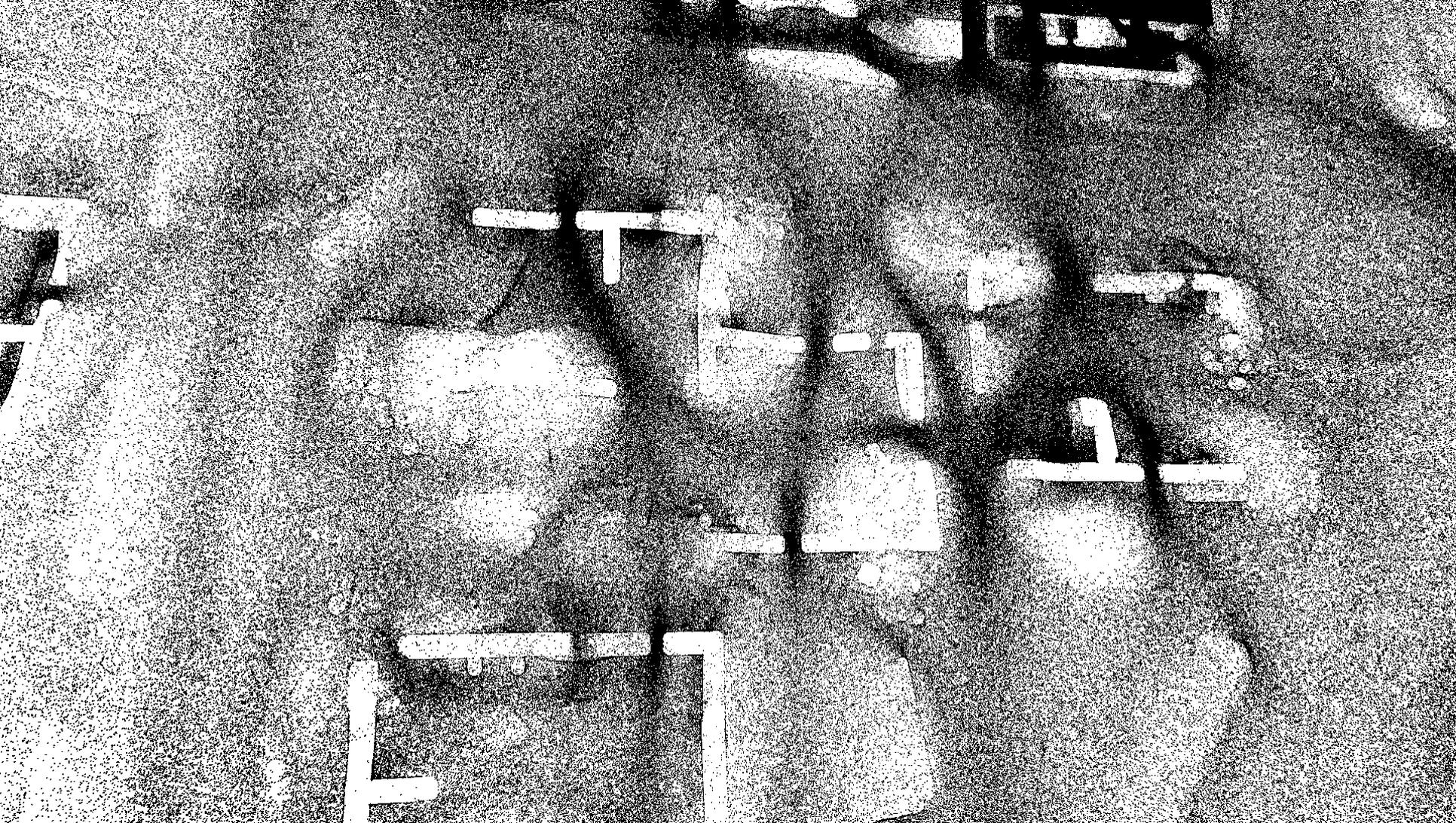
Battlefield V  
Twisted Steel - Conquest

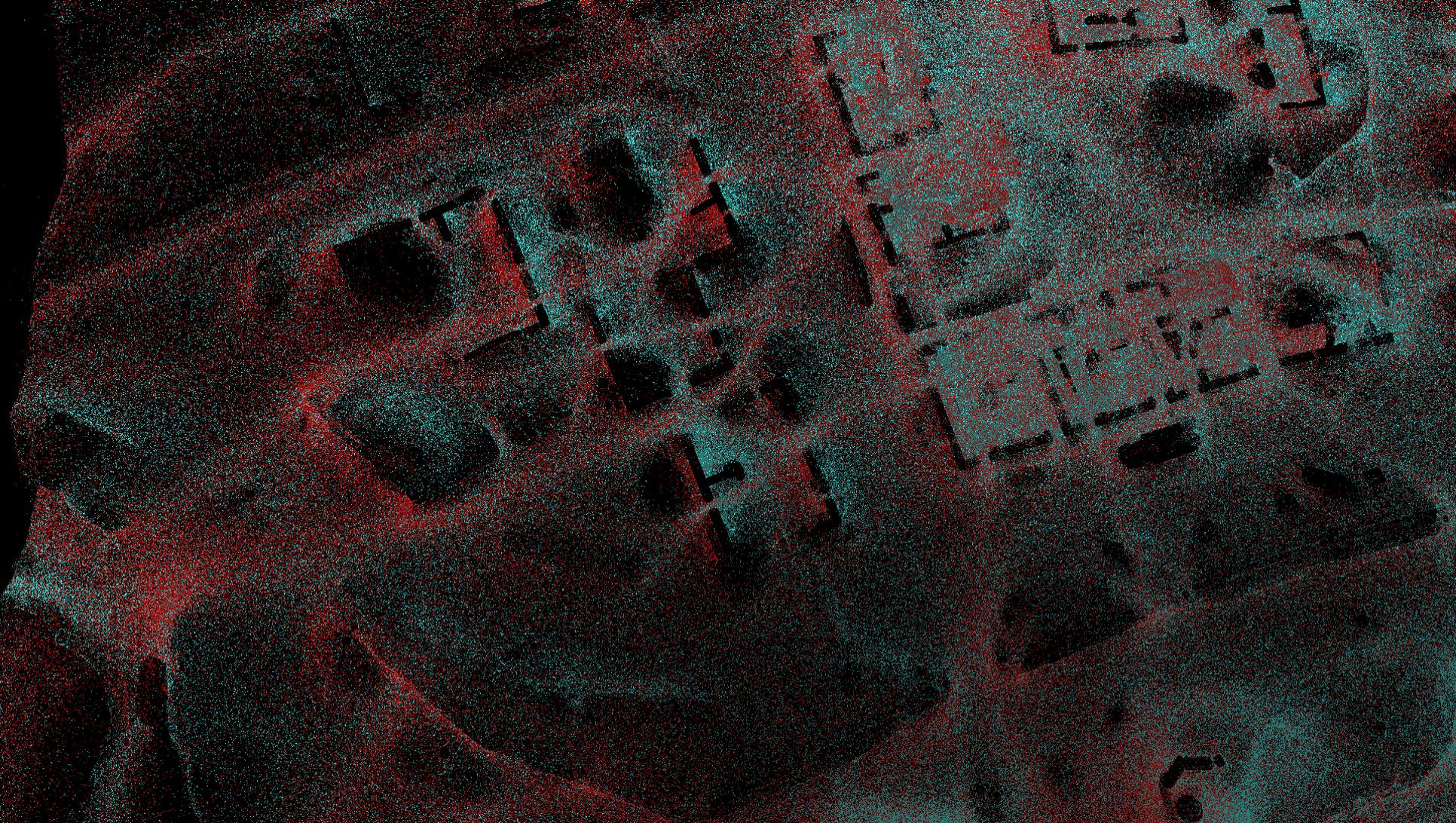




Explore new visualizations. Player  
Paths by **Quantity**.

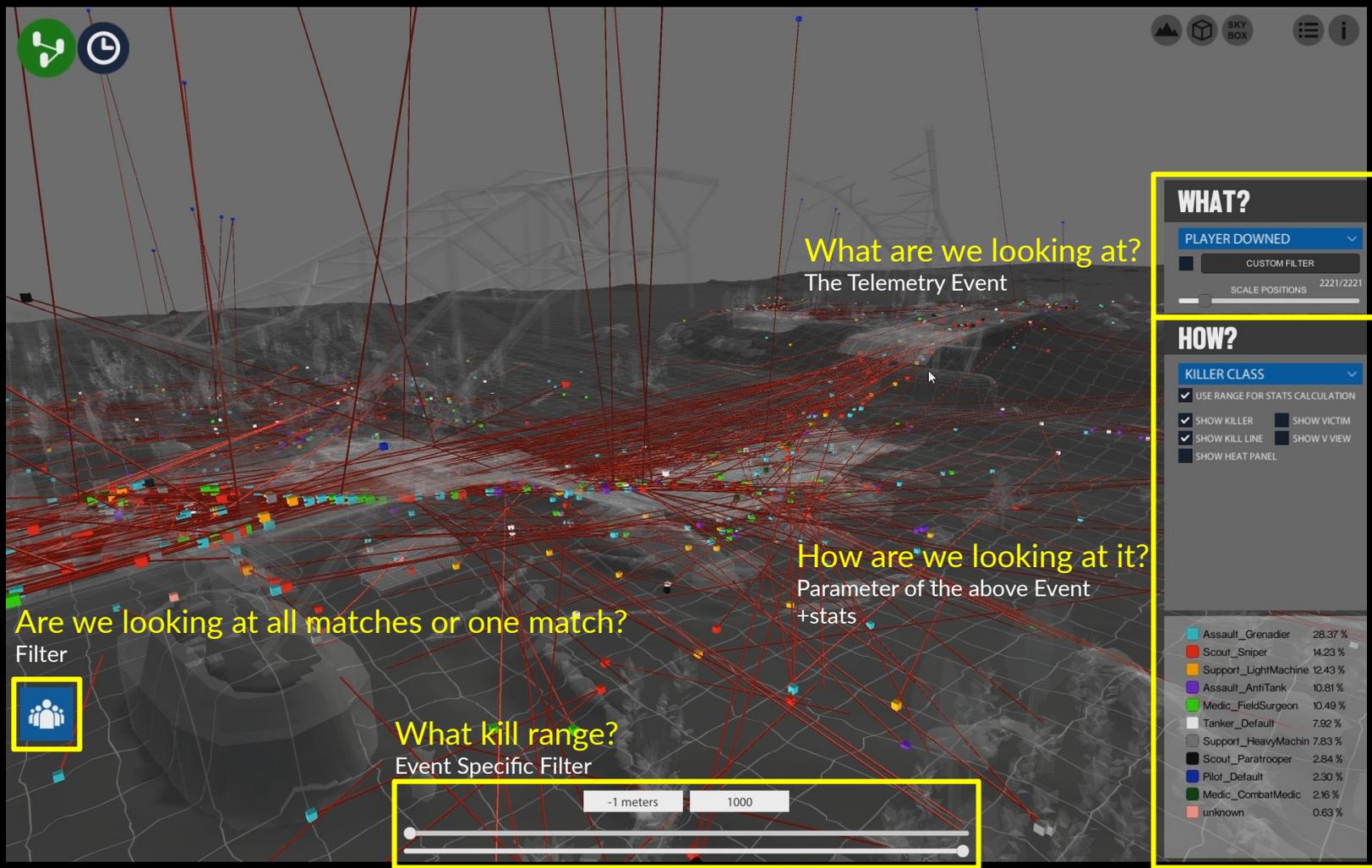








Provide options. Facilitate  
**Data Exploration.**



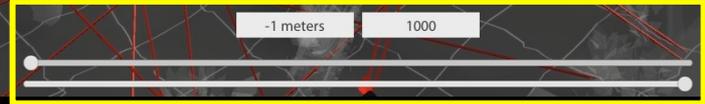
What are we looking at?  
The Telemetry Event

How are we looking at it?  
Parameter of the above Event  
+stats

Are we looking at all matches or one match?  
Filter



What kill range?  
Event Specific Filter



### WHAT?

PLAYER DOWNED

CUSTOM FILTER

SCALE POSITIONS 2221/2221

### HOW?

KILLER CLASS

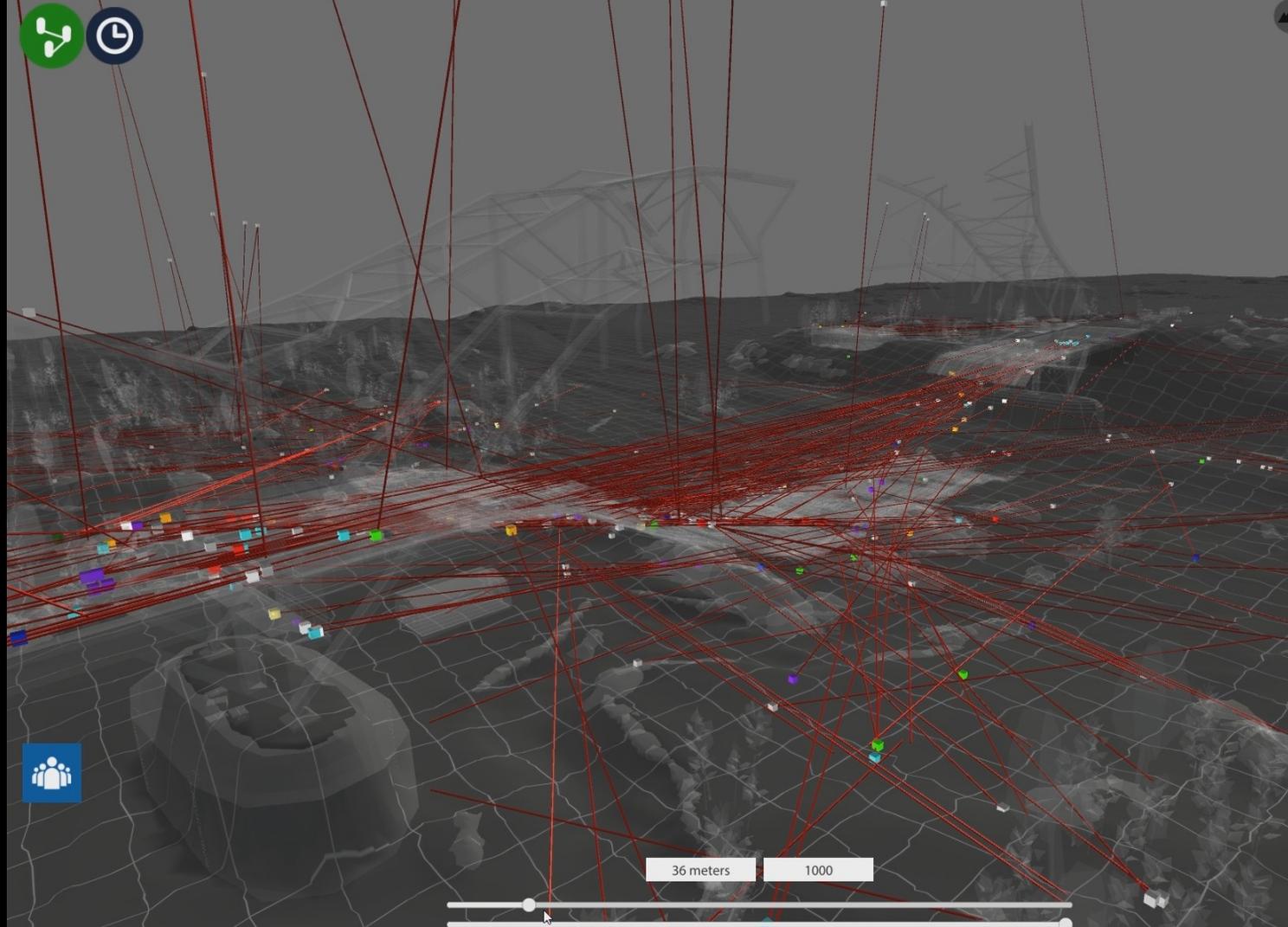
USE RANGE FOR STATS CALCULATION

SHOW KILLER  SHOW VICTIM

SHOW KILL LINE  SHOW V VIEW

SHOW HEAT PANEL

Assault_Grenadier	28.37 %
Scout_Sniper	14.23 %
Support_LightMachine	12.43 %
Assault_AntiTank	10.81 %
Medic_FieldSurgeon	10.49 %
Tanker_Default	7.92 %
Support_HeavyMachin	7.83 %
Scout_Paratrooper	2.84 %
Pilot_Default	2.30 %
Medic_CombatMedic	2.16 %
unknown	0.63 %



# WHAT?

PLAYER DOWNED

CUSTOM FILTER

SCALE POSITIONS 2221/2221

# HOW?

KILLER WEAPON

- USE RANGE FOR STATS CALCULATION
- SHOW KILLER  SHOW VICTIM
- SHOW KILL LINE  SHOW V VIEW
- SHOW HEAT PANEL



36 meters 1000



U_Ross	7.36 %
U_MAS44	6.73 %
U_Gewehr9530	5.79 %
U_LeeEnfieldNo4	5.48 %
U_Gustloff	5.32 %
U_KragJorgensen	4.85 %
U_ZH29	4.69 %
U_Ribeyrolles	3.13 %
U_STG44	2.82 %
U_MauserSL1916	2.82 %
U_LewisMG	2.50 %
U_BREN	2.50 %
[ 74 Additional ]	46.01 %

# Designing Thor: Like designing an emergent game

It's all about exploration

Do not assume that you (tool dev) know all specific use cases

Facilitate, don't dictate

| You succeeded when your tool is being used in ways you didn't imagine

# Creating the tool: Designing for general use



The Dream meets Reality.

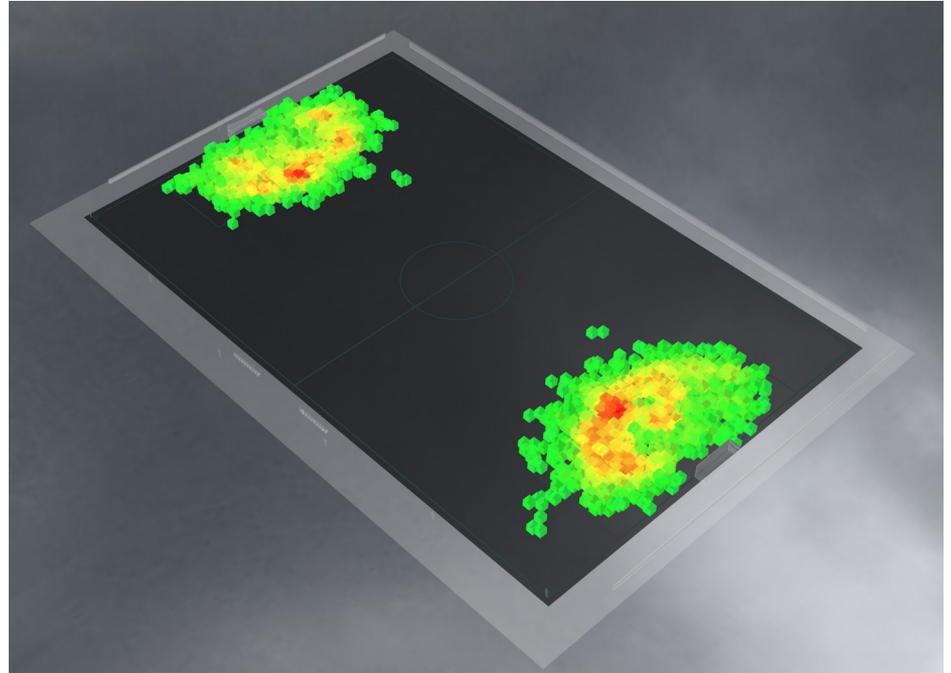


Technical Requirements

Data Agnostic  
Plug and Play  
New Tech Stack = Need to start fresh

# Data Agnostic

Putting dots on a map independent of what the dots mean





Tech framework **determines**  
**function.**

Quick Filters

Advanced

Core Filter

Events

All Events

Point Heat

Multiple

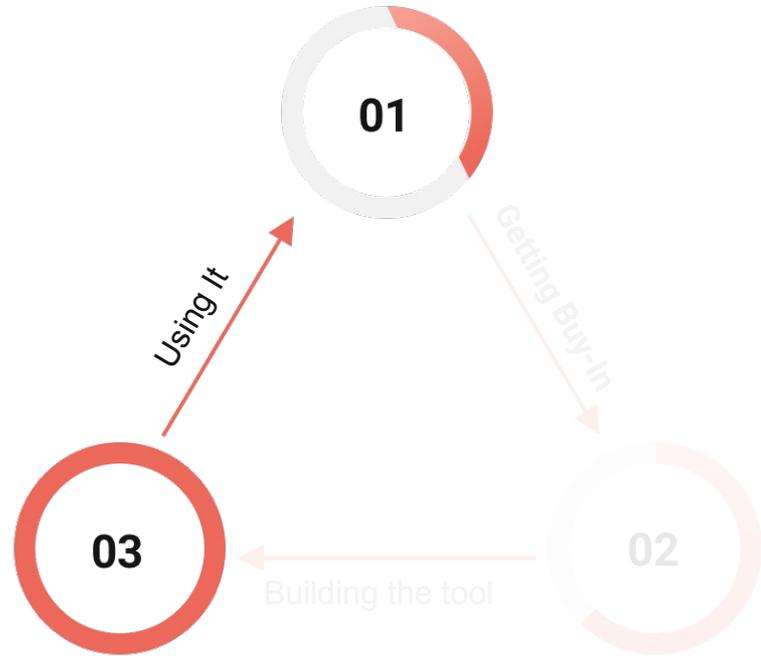
14743 points

player\_tick 14560

veh\_destruction 183



# Using it company-wide: Roll it out with game teams



# Introducing Thor: **The easy part**

Relating the tool to their game

# Developer Question: What do I have to do?

Planning for end-to-end service

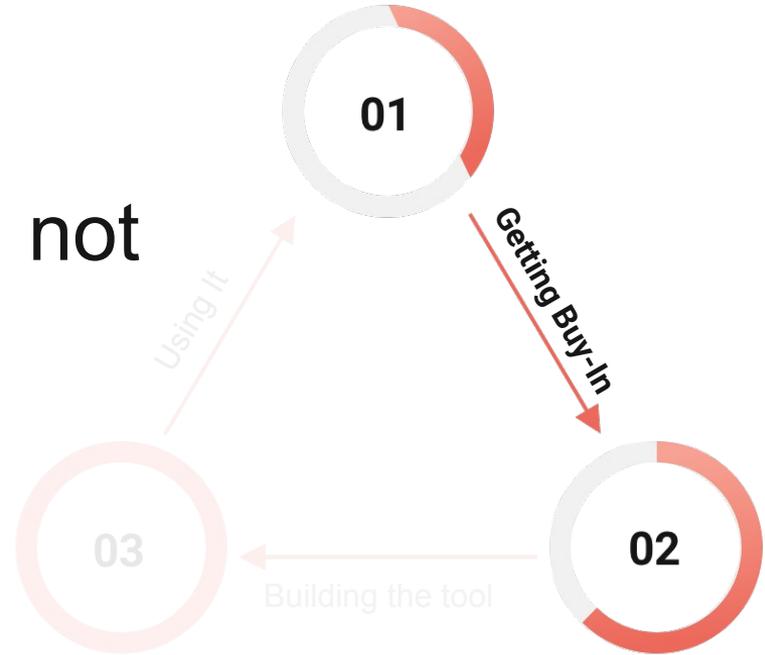
Empowering users to help themselves

# Data variability more widespread than expected

No one had implemented telemetry with a viewer in mind - until now



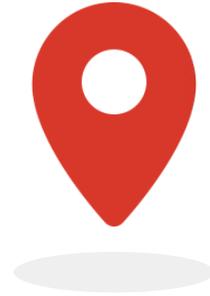
# Getting Buy-in: Ongoing, not binary process

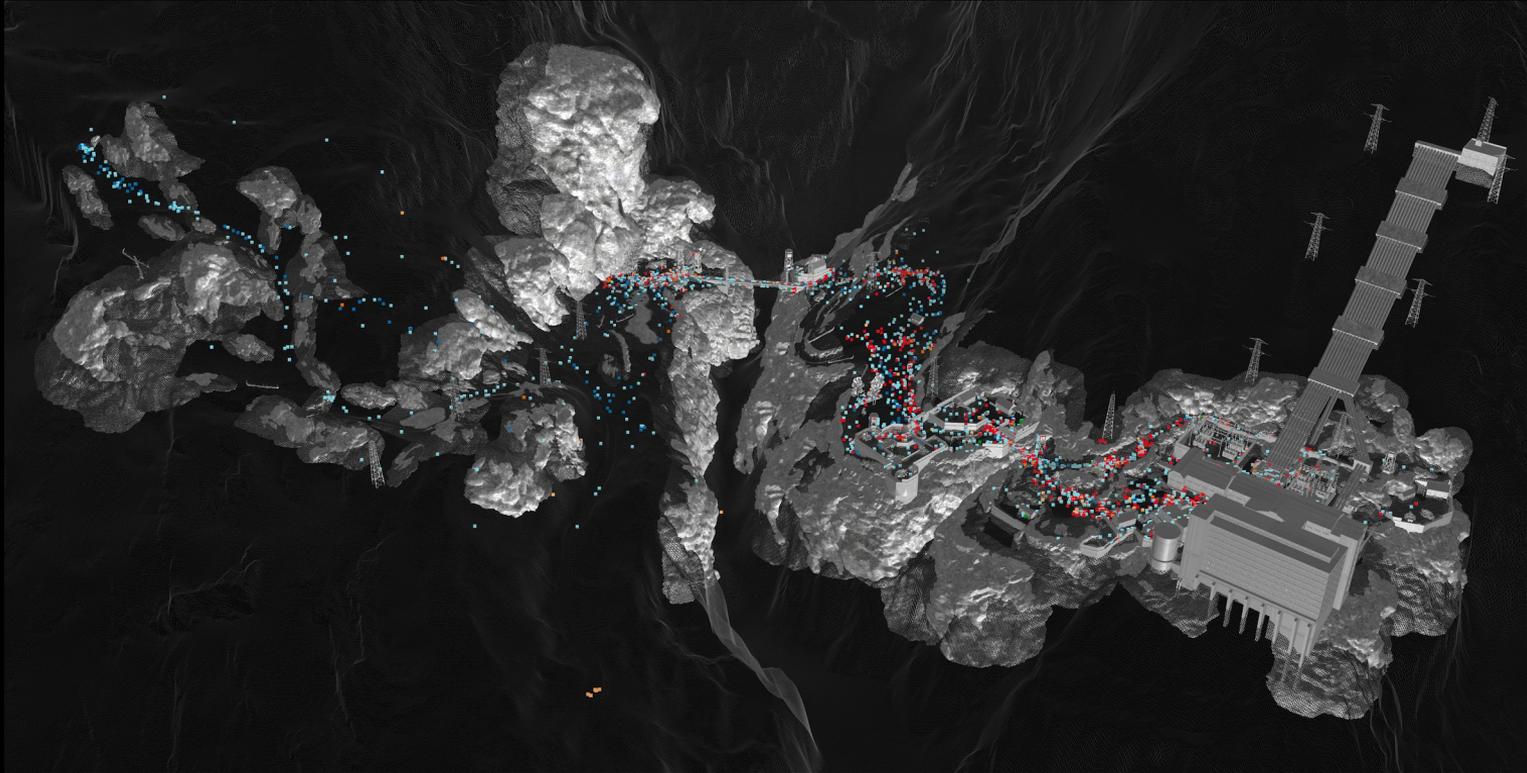


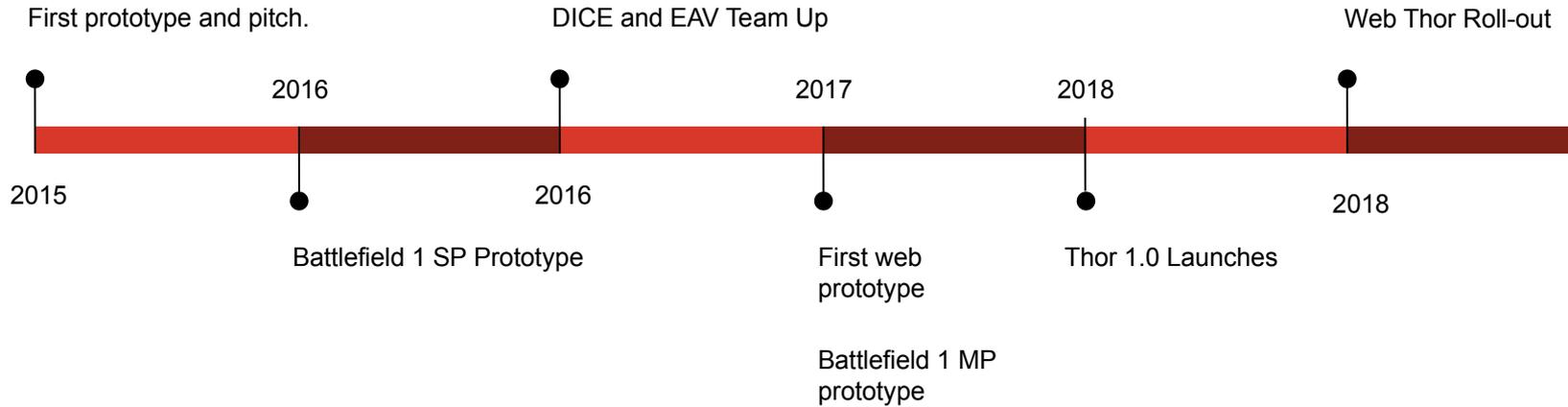


Tools **shape** processes.

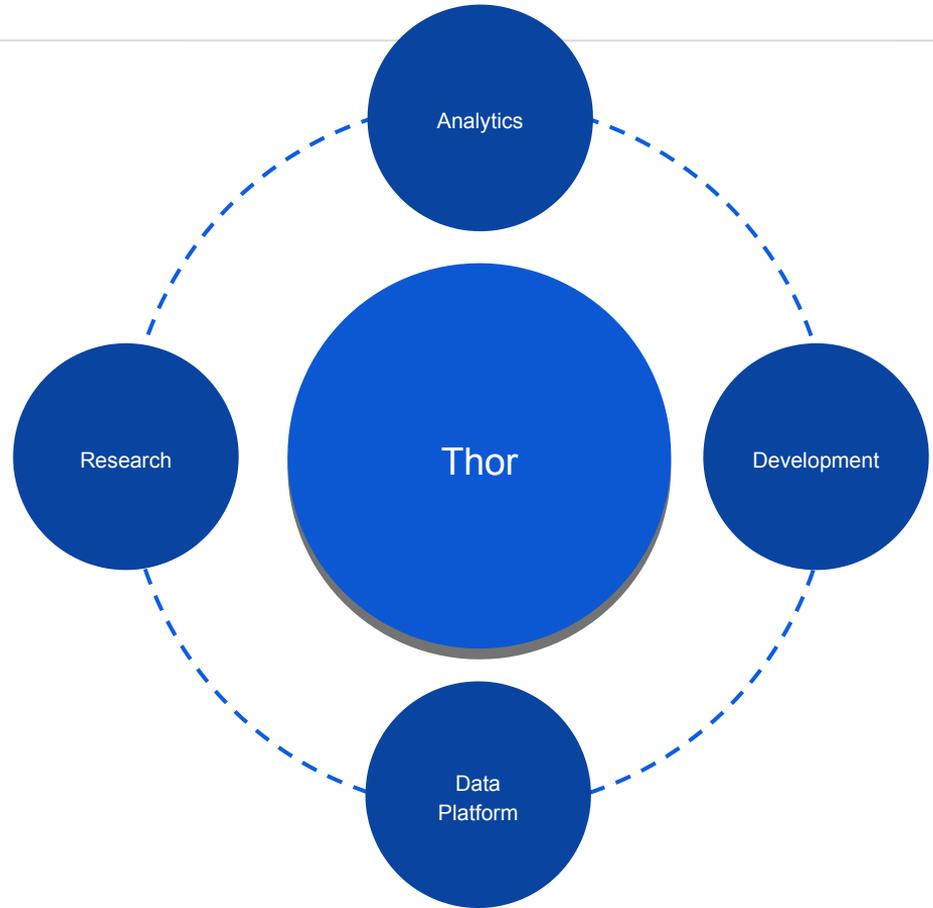
And here we are





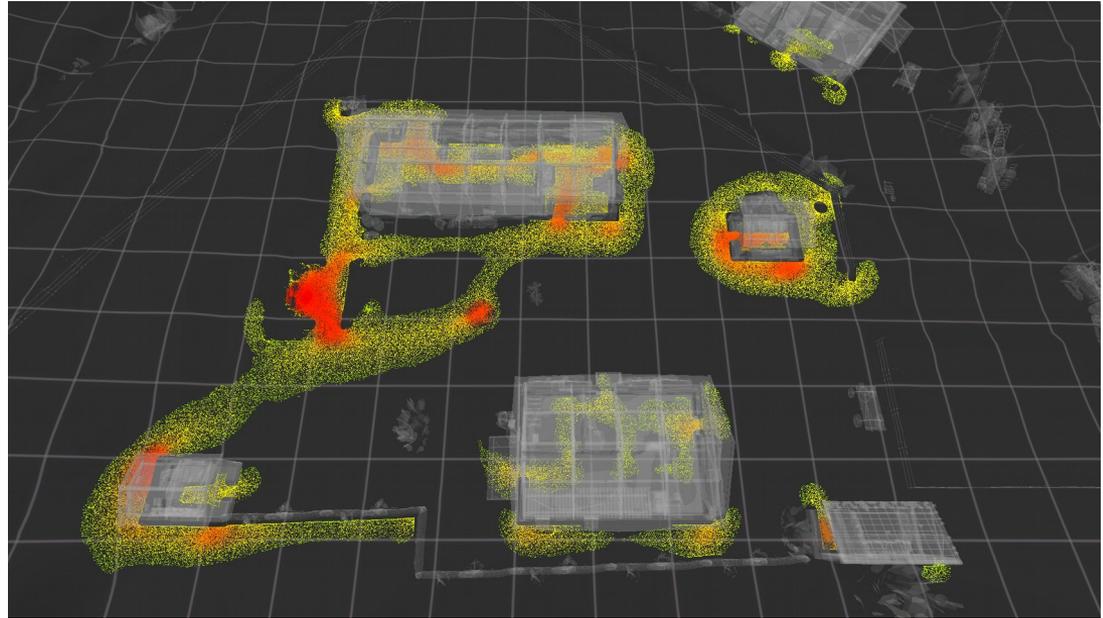


Tools bring  
teams together



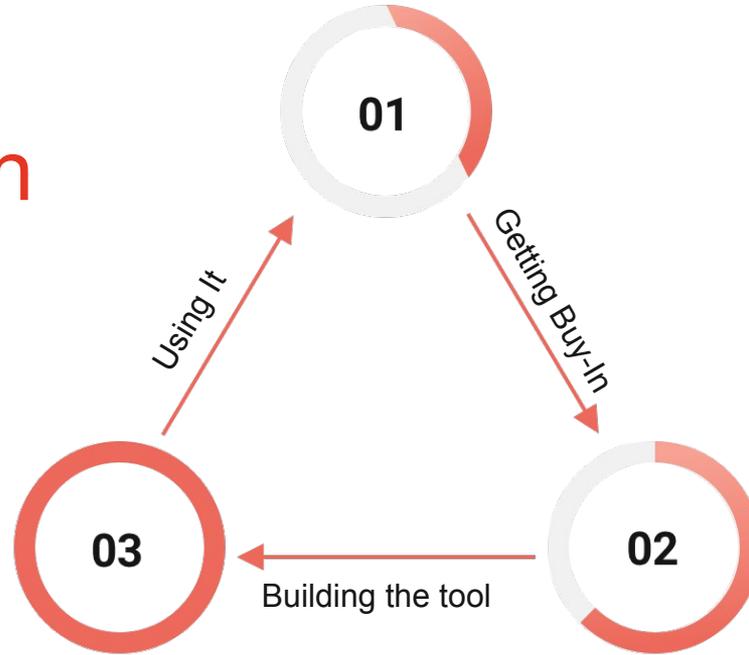
# There is value in seeing **how** players play

Data in development lets  
us improve gameplay a  
little bit at a time



# Building and Buy-in go together

Repeat the process to keep growing



# Getting Buy-in

Know your use case - and prove it

Put everyone on the same team

Buy-in is cyclical

# Special Thanks

Ian Livingston, Anthony Charles, Pratham Parikh, Namra Tayyab, Tahrira Tasmin, Ishneet Kaur, Farah Ali, Johan Dorell, Cameron Westlake, Rikard Nyquist, Reinhold Radick

Peter Vesti Frendrup  
@petervesti

Krista Parham  
@kpearham