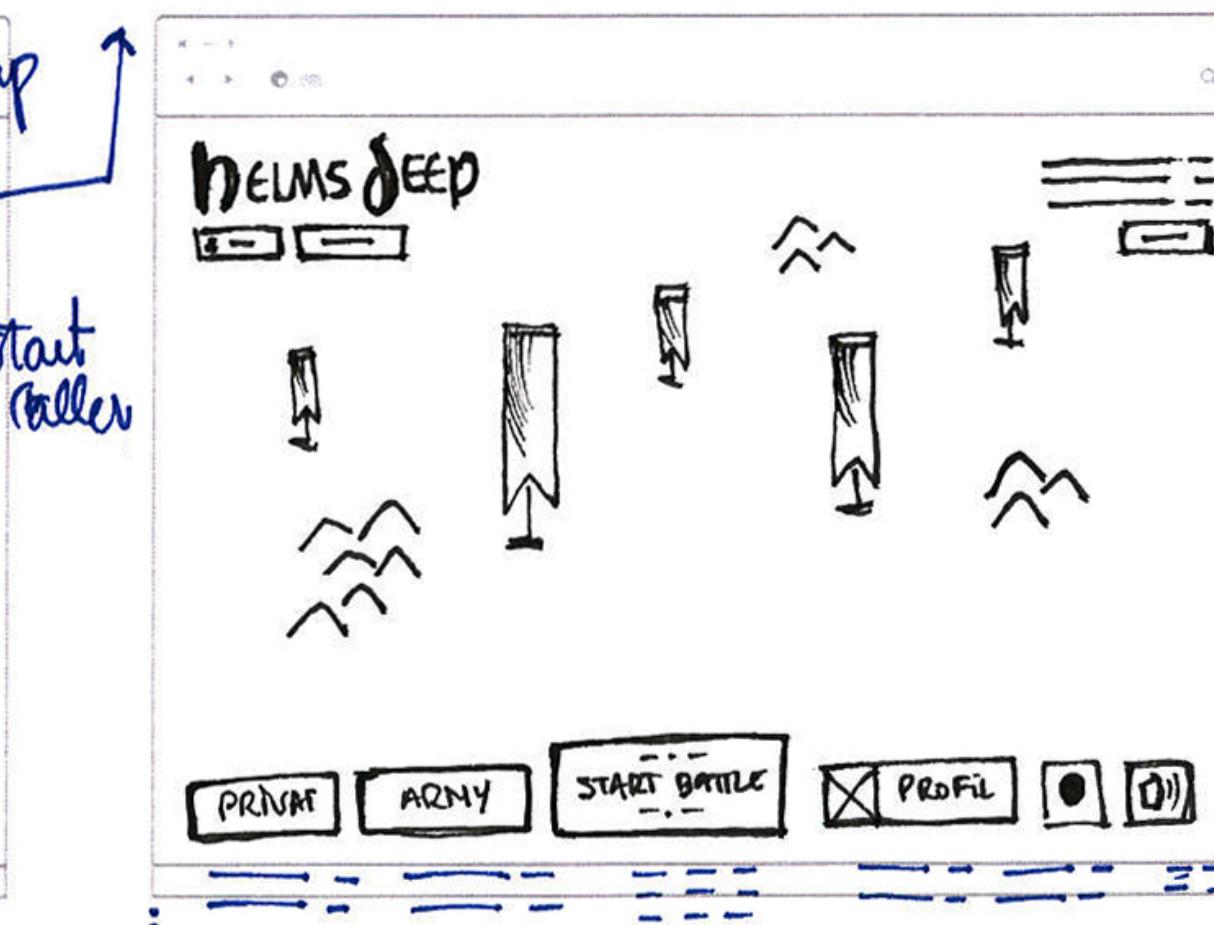
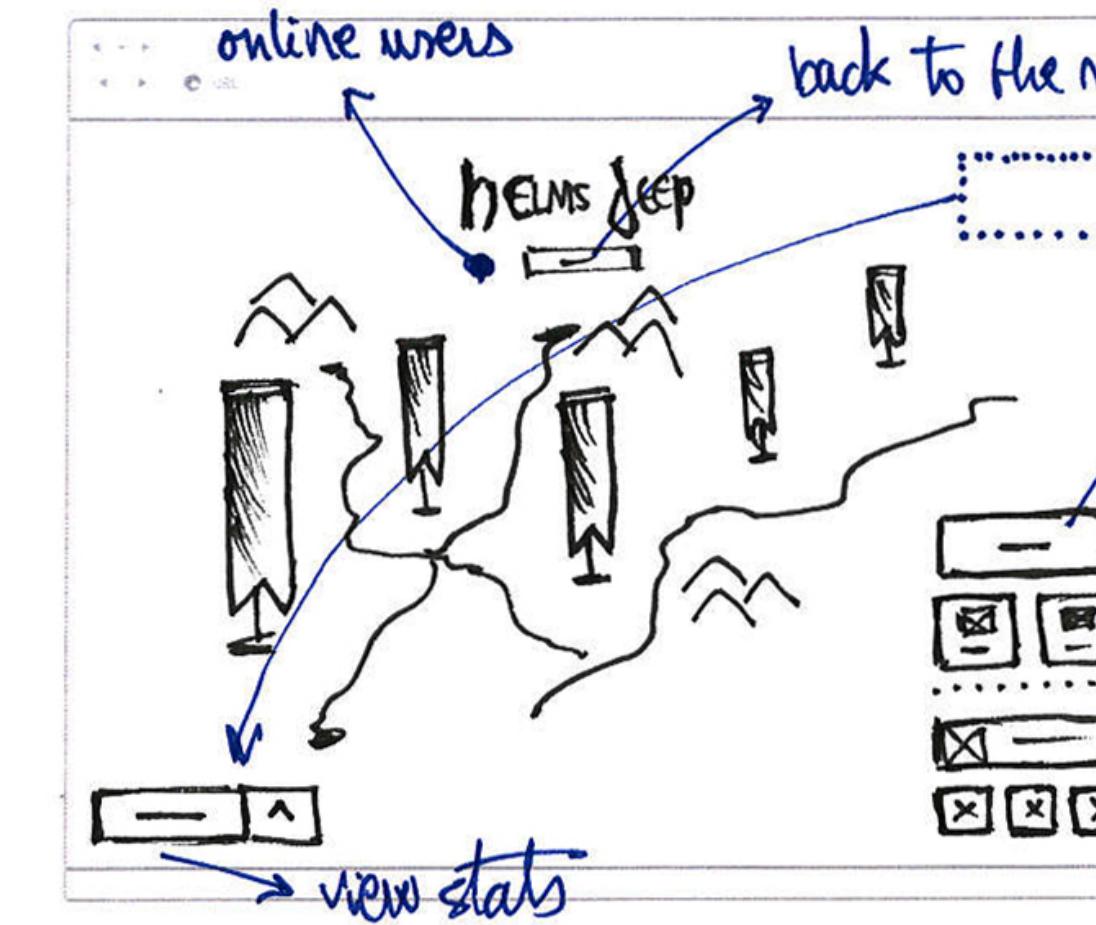


→ stats of the Battleground

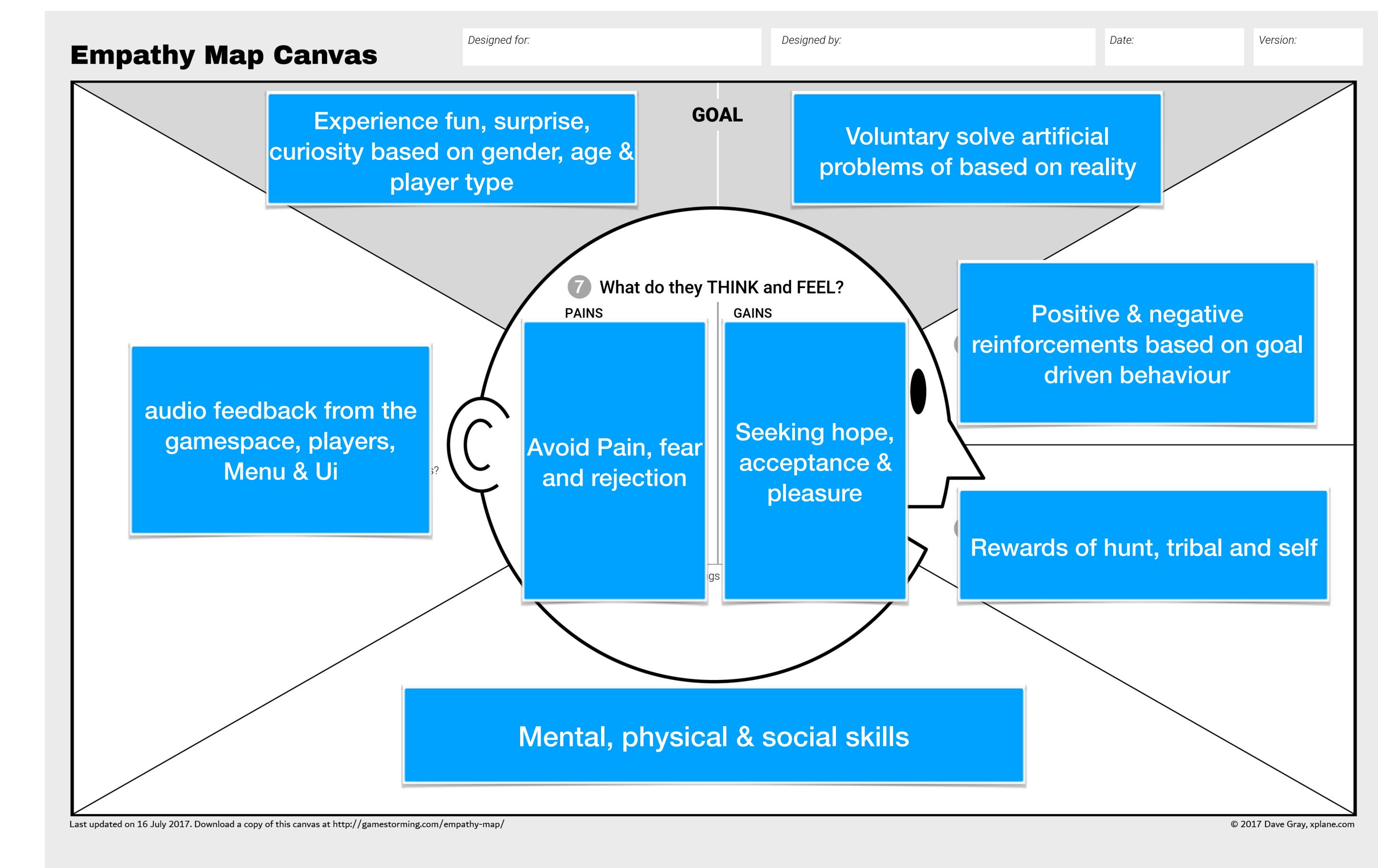
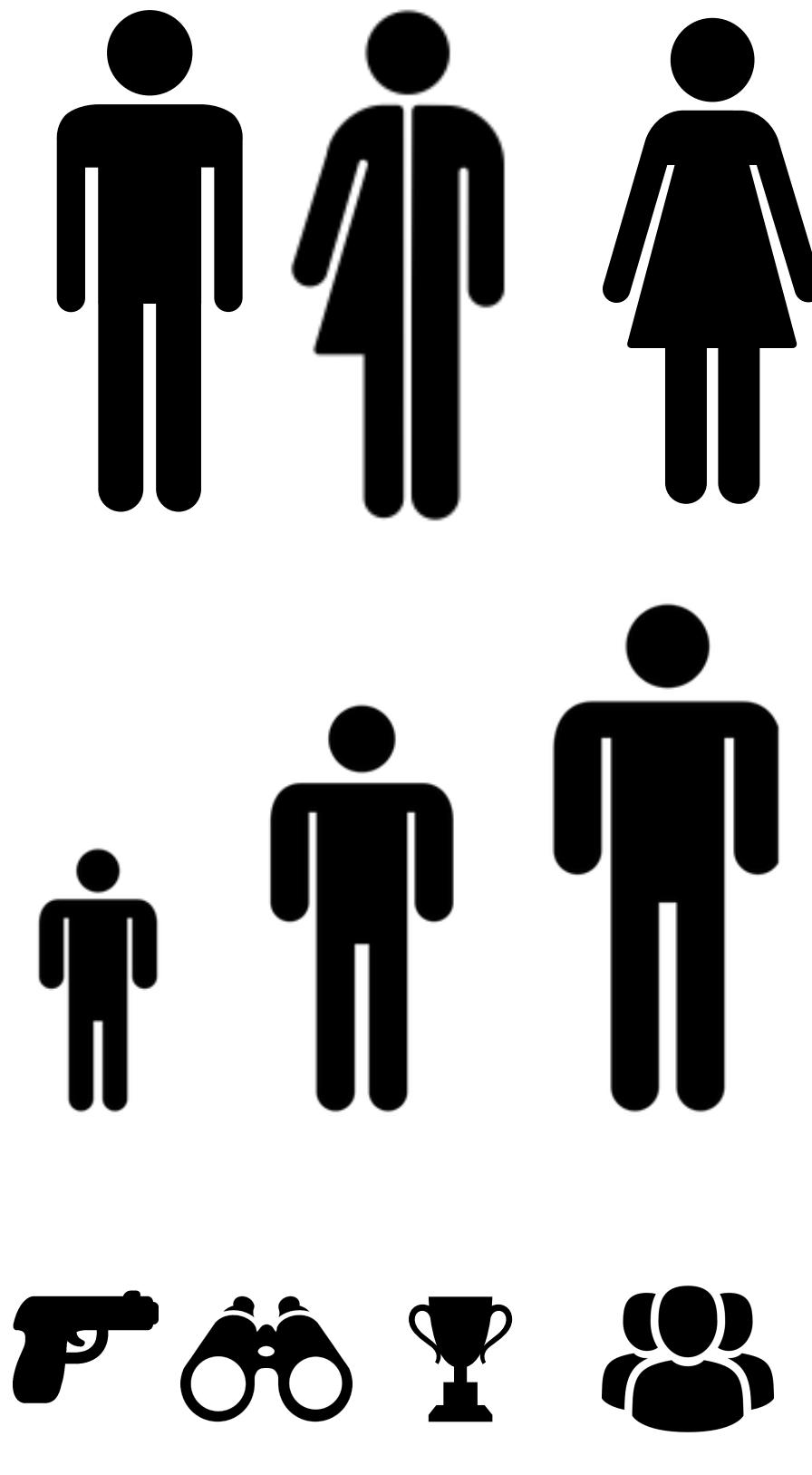


# Game UI



<https://www.linkedin.com/in/joyan/>  
[https://www.behance.net/joy\\_an](https://www.behance.net/joy_an)

# Empathise with gamers



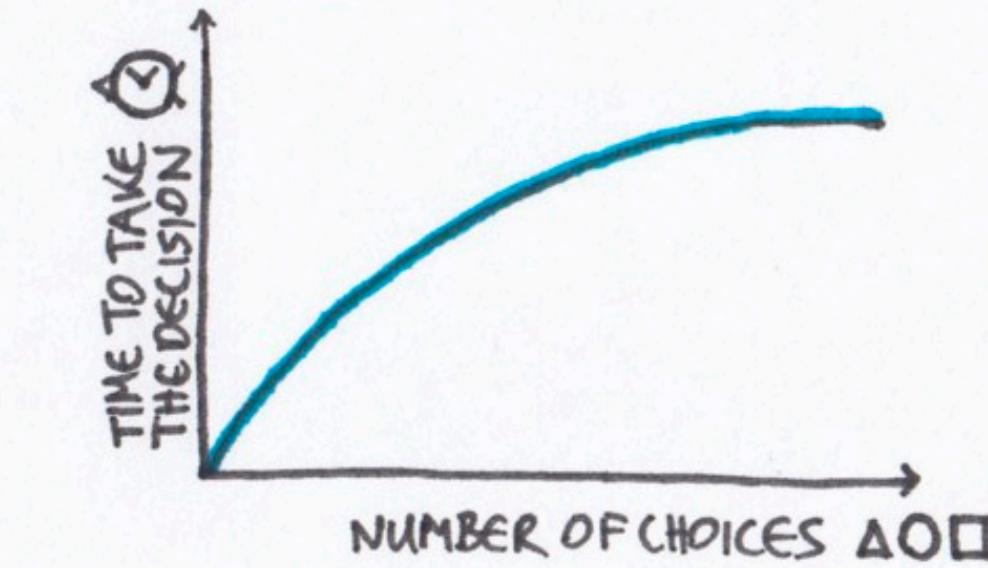
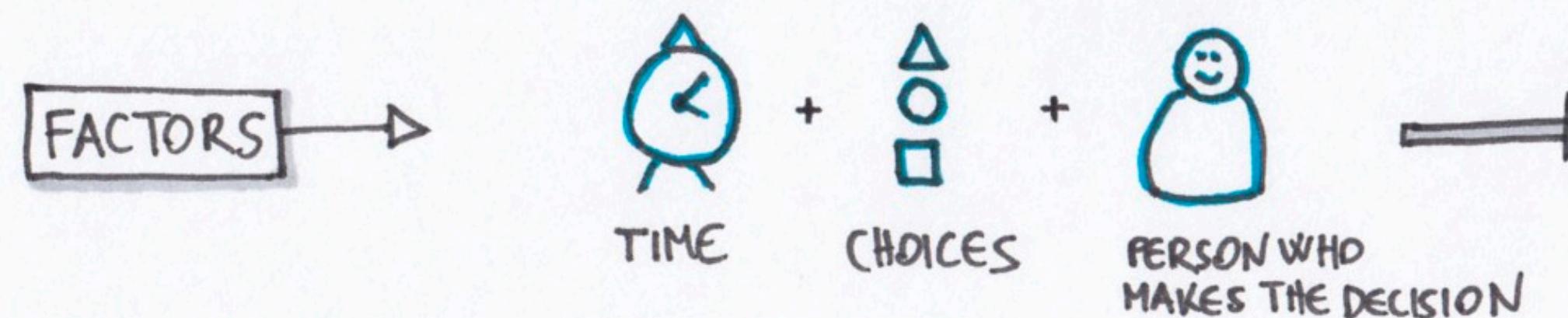
# Fitts Law

- It is faster to hit larger targets closer to you than it is to hit smaller targets further away from you

$$\text{Difficulty} = \frac{2 \times \text{Distance}}{\text{Width}}$$

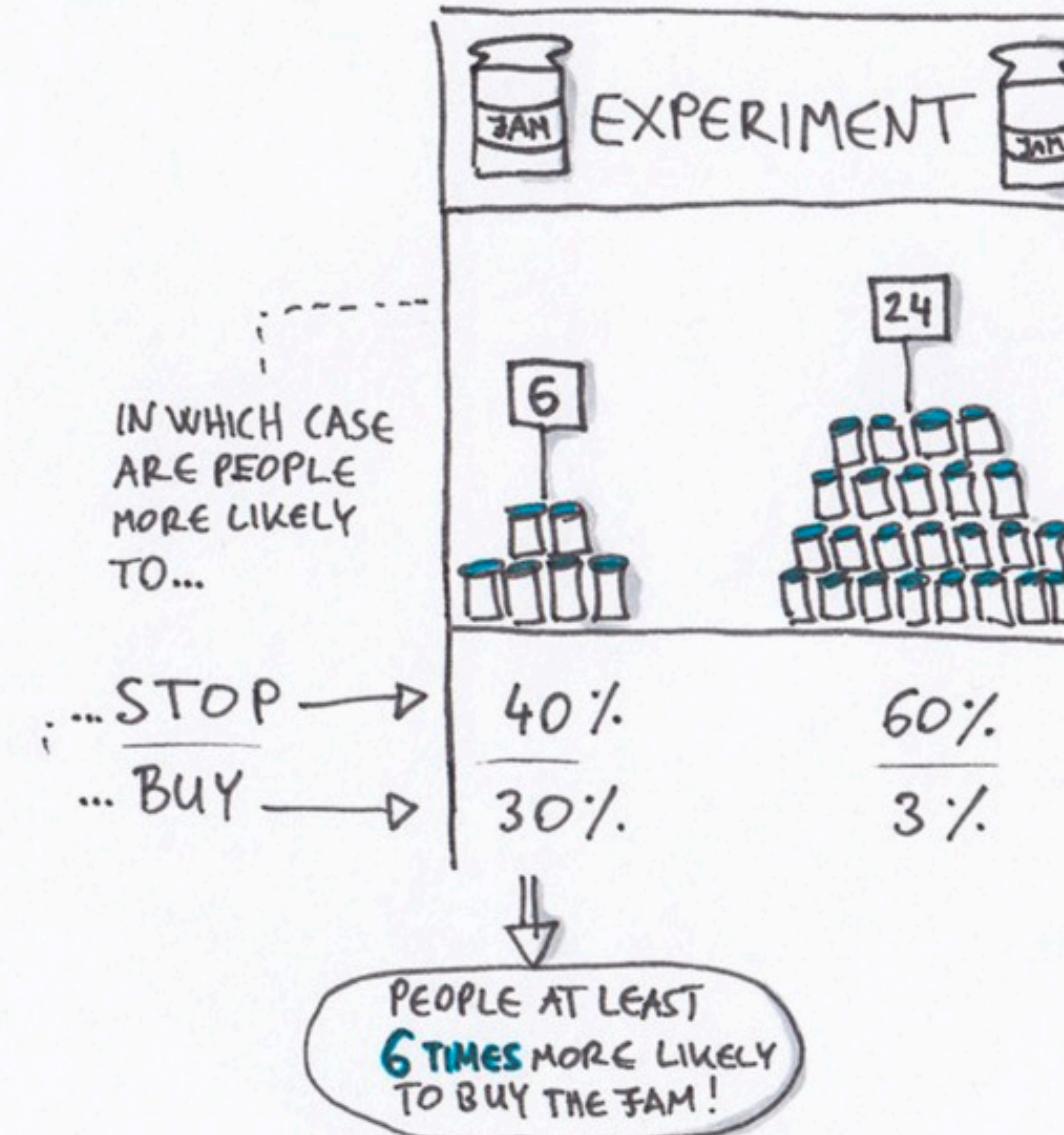
# HICK'S LAW

UX Knowledge-Base Sketch #5



GOAL: REDUCE COMPLEXITY → DON'T OVERSIMPLIFY! ← BALANCE

## THE FAMOUS JAM EXPERIMENT



## HOW TO APPLY?

USE CARD SORTING TO DEFINE CATEGORIES

DIVIDE THE PROCESS INTO MANAGEABLE CHUNKS (~ PROGRESSIVE DISCLOSURE)

CAREFULLY DESIGNED INFORMATION ARCHITECTURE IS KEY!

HIDE THE OPTIONS ONLY FOR EXPERT USERS / EDGE CASES

MAKE THE MOST IMPORTANT OPTIONS STAND OUT!

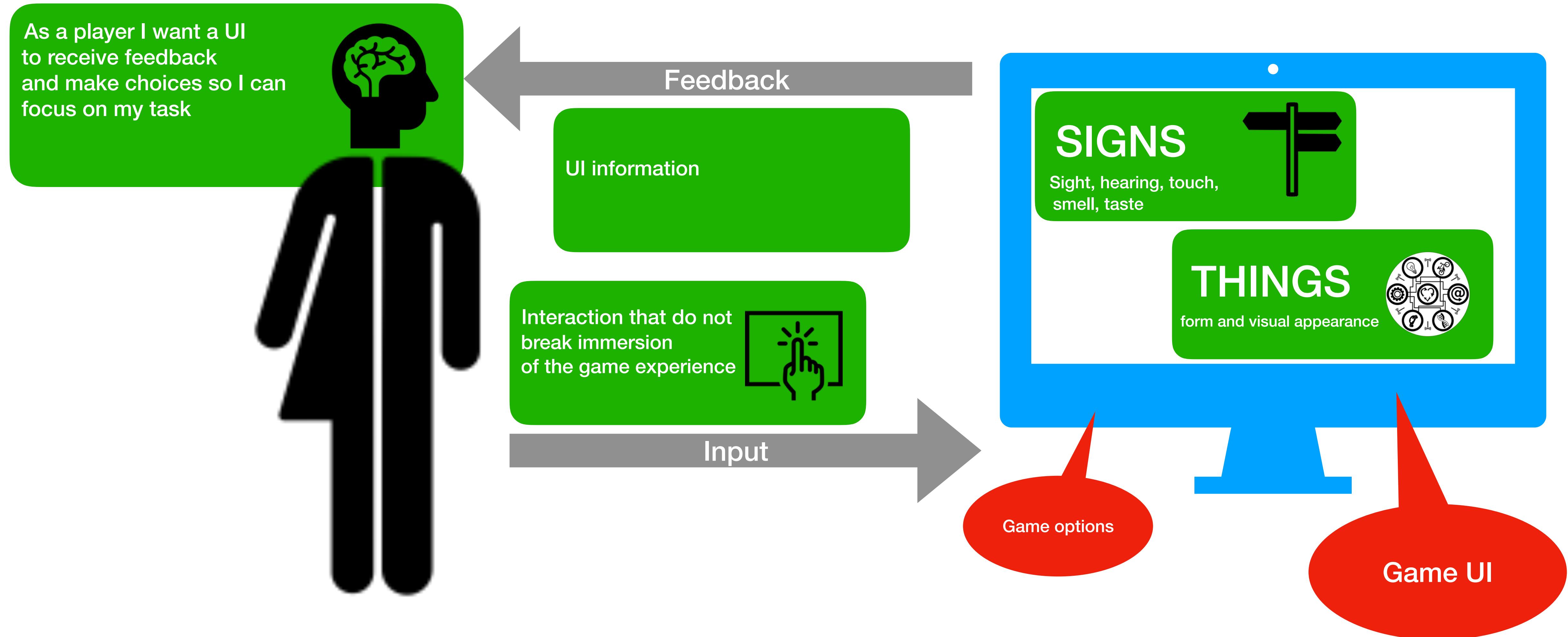
INCREASING THE NUMBER OF CHOICES WILL INCREASE THE DECISION TIME LOGARITHMICALLY.

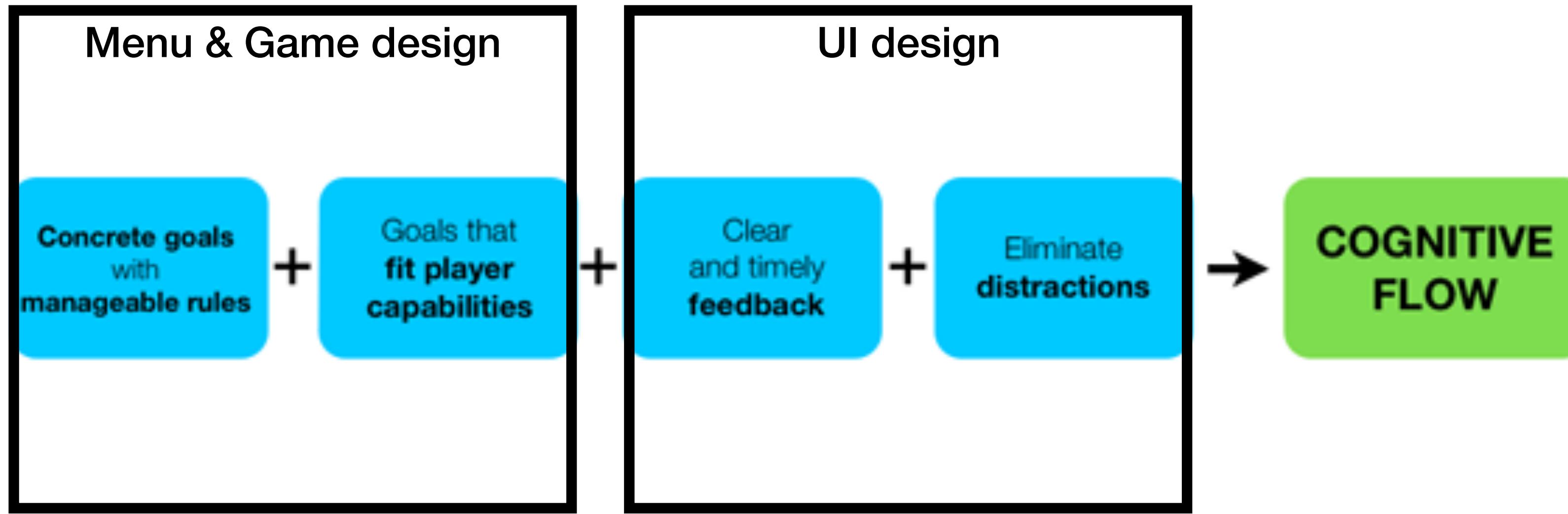
"BE CHOOSY ABOUT CHOOSING!"



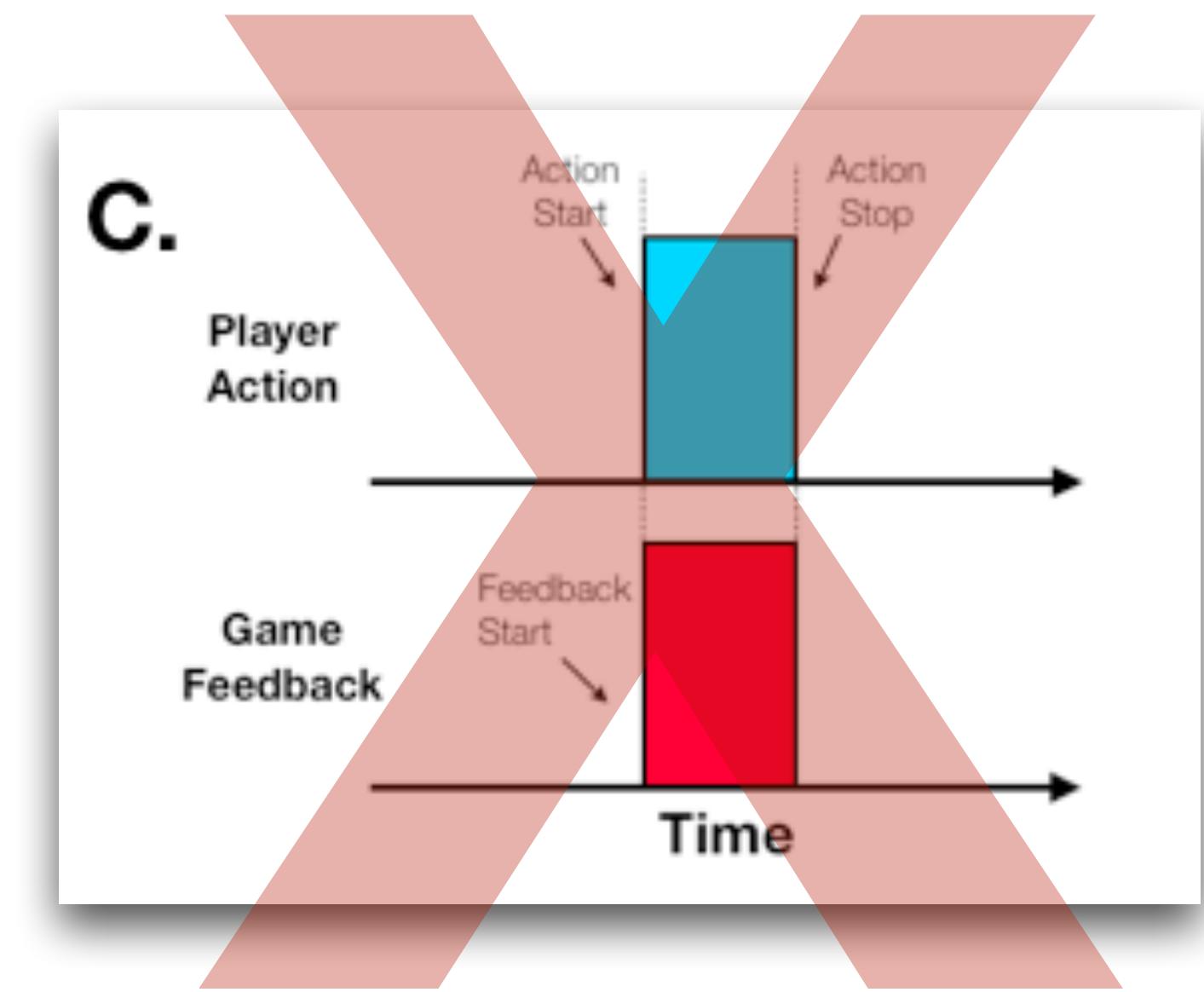
SHEENA IYENGAR

# Ideate space





# Enable FLOW in games



# Correct timing of feedback is ...

Correct answer is .....

# Game UI

- Concrete goals, manageable rules
- HUD & screen clearly direct / cue the gamer to their task
- Orientation: location of player and challenges
  - Mini-maps, compass
- Goals fit player capabilities
- Provide important information that clearly relates between the information and the task/goal



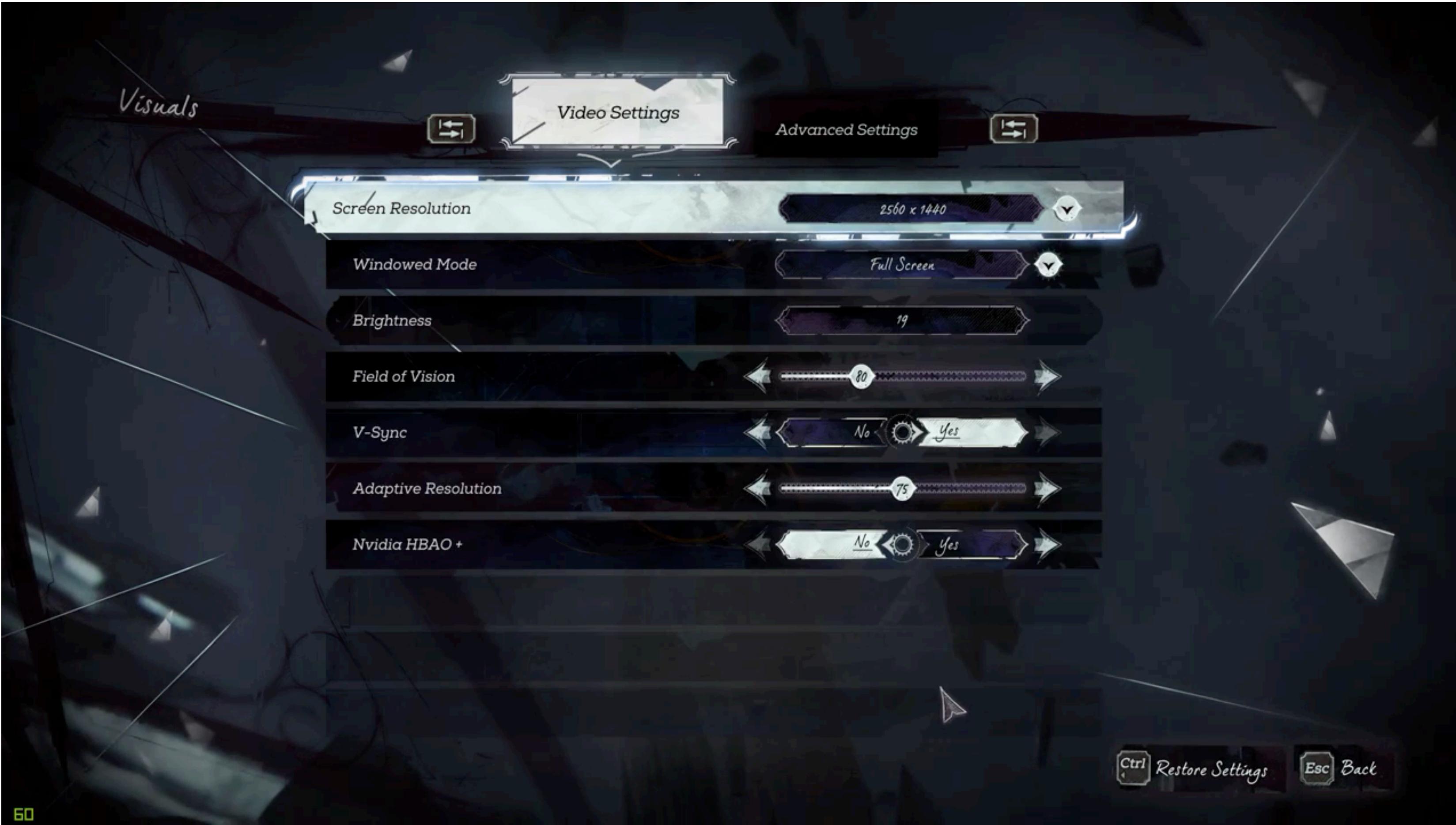
# Game UI

- Player progression towards a goal / achievement / reward
- Resources: simple & whole numbers (integer) on life, ammo etc.
- Eliminate distractions : Easy to read, no dialogs during high-stimulation times (like fighting)



# Game UI



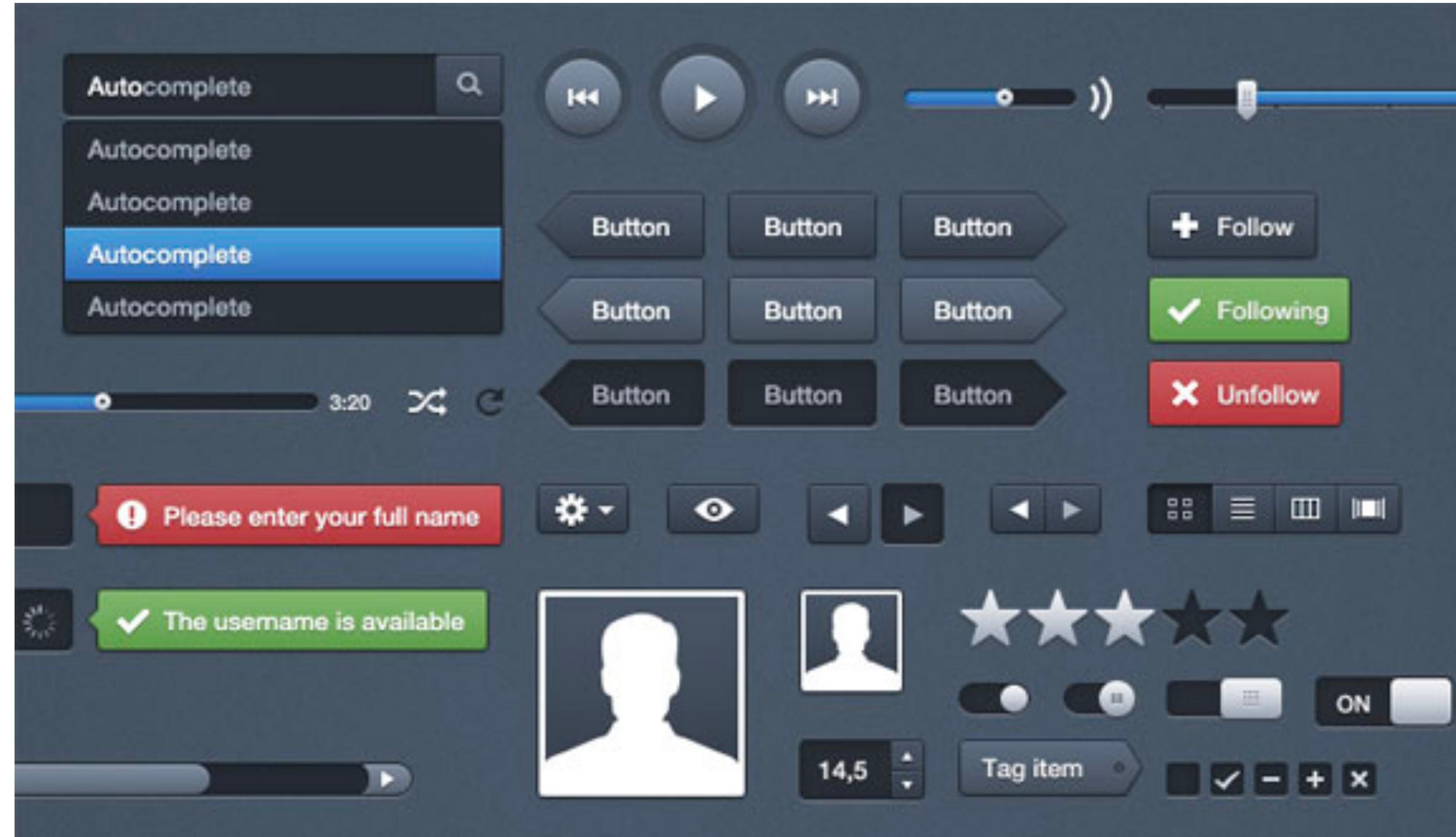


# Experience

Spot recognisable (interactive) elements !

# Common elements

- Buttons
  - Push
  - Radio / Toggle
- Sliders
- Lists
- Text fields
- Progress bars
- Drop down menu





# Common fate

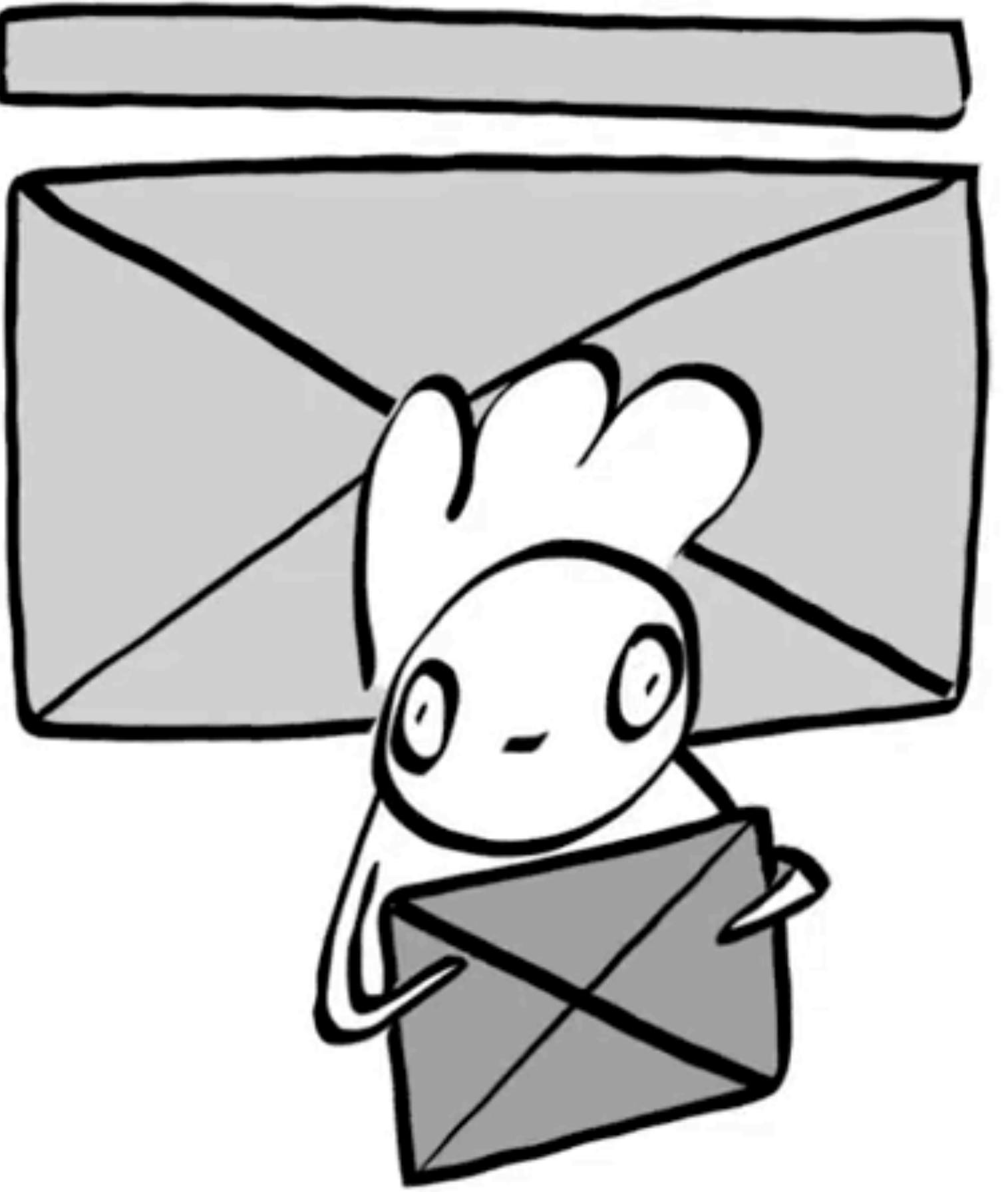
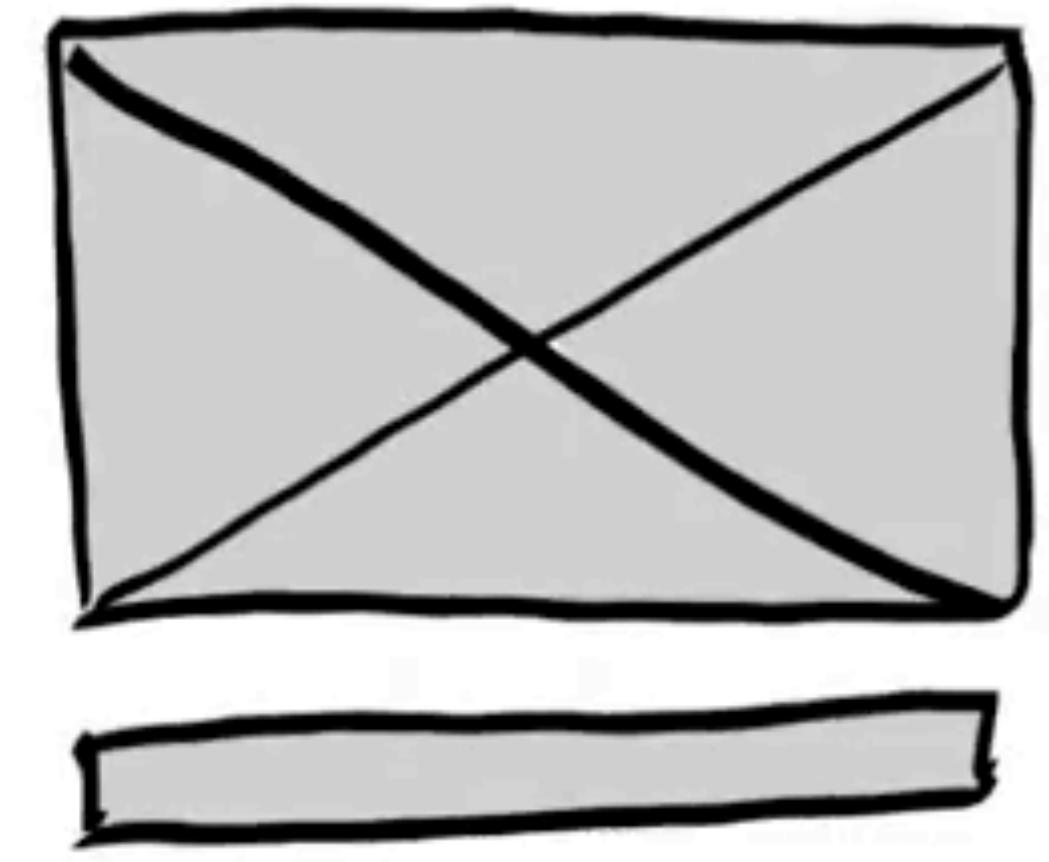
Same animation = Same group

# Analysis of doom: intro

- Doom 2016
- First person shooter
  - High speed / action based
- Player types
  - Kill enemies (killer)
  - Explore the world (explorer)
  - Find secrets (explorer /achiever)
  - Achievements (achiever)
  - Multiplayer & narrative (socializer)
- Positive reviews



Aggregate score	
Aggregator	Score
Metacritic	NS: 79/100 [125] PC: 85/100 [126] PS4: 85/100 [127] XONE: 87/100 [128]
Review scores	
Publication	Score
Destructoid	9/10 [111]
EGM	8.5/10 [112]
Game Informer	8.75/10 [113]
Game Revolution	★★★★★ [114]
GameSpot	8/10 [115]
GamesRadar+	★★★★★ [116]
Giant Bomb	★★★★★ [117]
IGN	7.1/10 [118]
PC Gamer (US)	88/100 [119]
Polygon	8.5/10 [120]
VideoGamer.com	8/10 [121]
Daily Express	★★★★★ [122]
Digital Spy	★★★★★ [123]
The Telegraph	★★★★★ [124]



# Analysis of doom: tutorial



# Analysis of doom: tutorial

- Spacial
  - Message on objects (screens)
- Non-spacial information
  - Goal
    - Progress
      - Achievements: Codex acquired
      - Updates
  - Ability & resources
    - Health
    - Spacial Pistol with non-spacial “unlimited ammo”
    - Warning: Low health
  - Orientation
    - Spacial object: door
    - Animated lights & movement

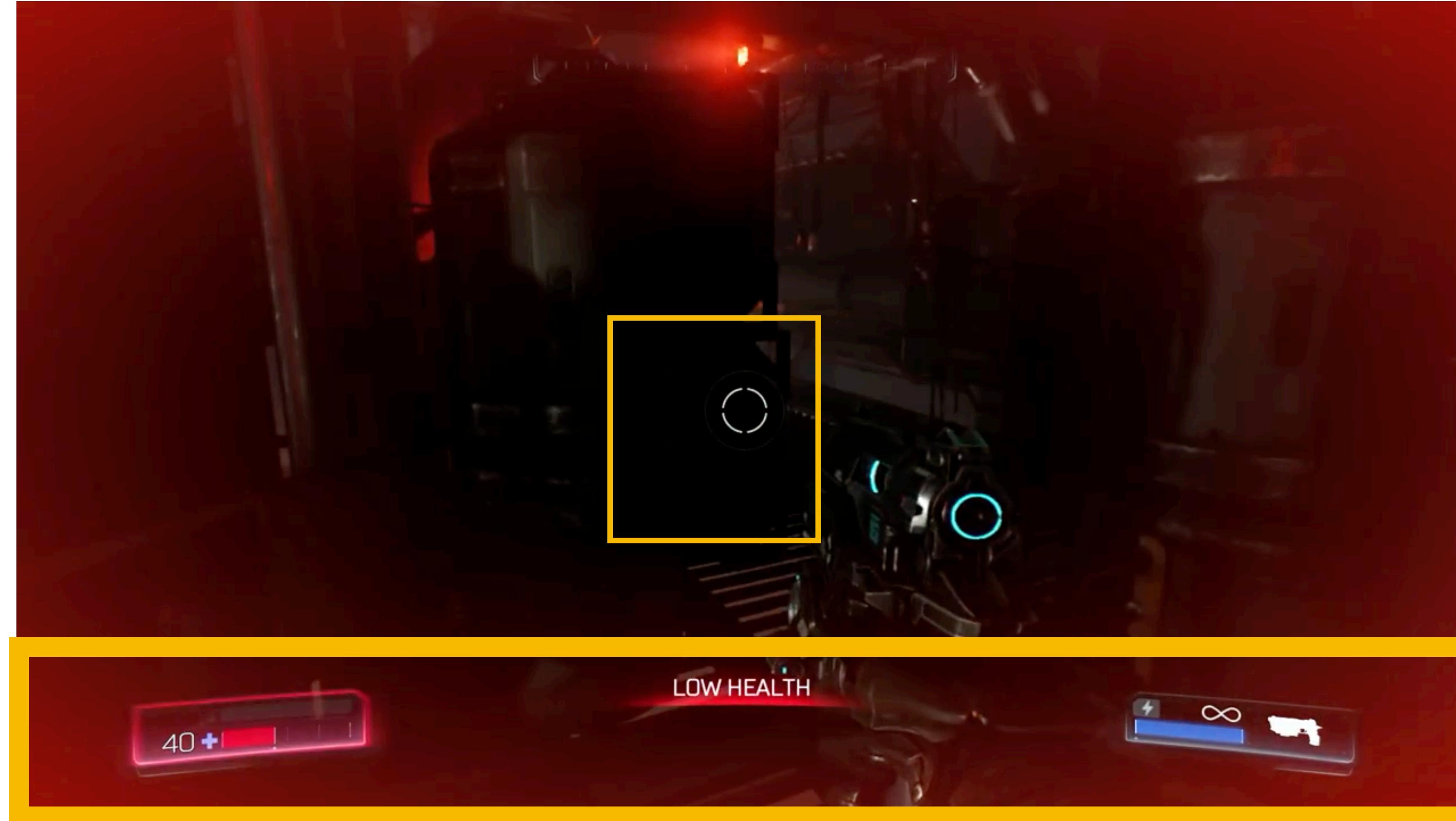


# Analysis of doom: tutorial



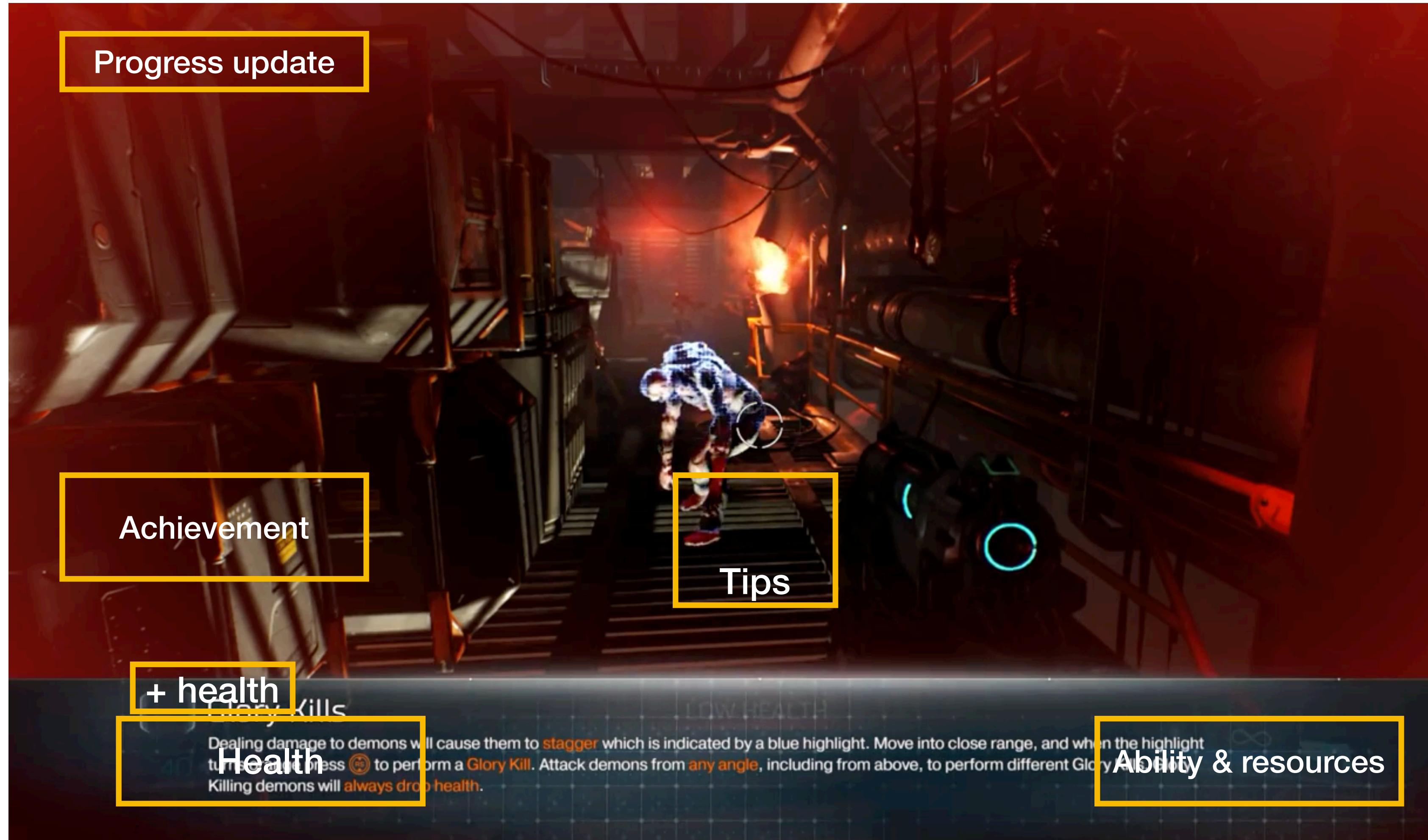
# Analysis of doom: tutorial

- POPUP tutorial information
- Highlighted object are intractable

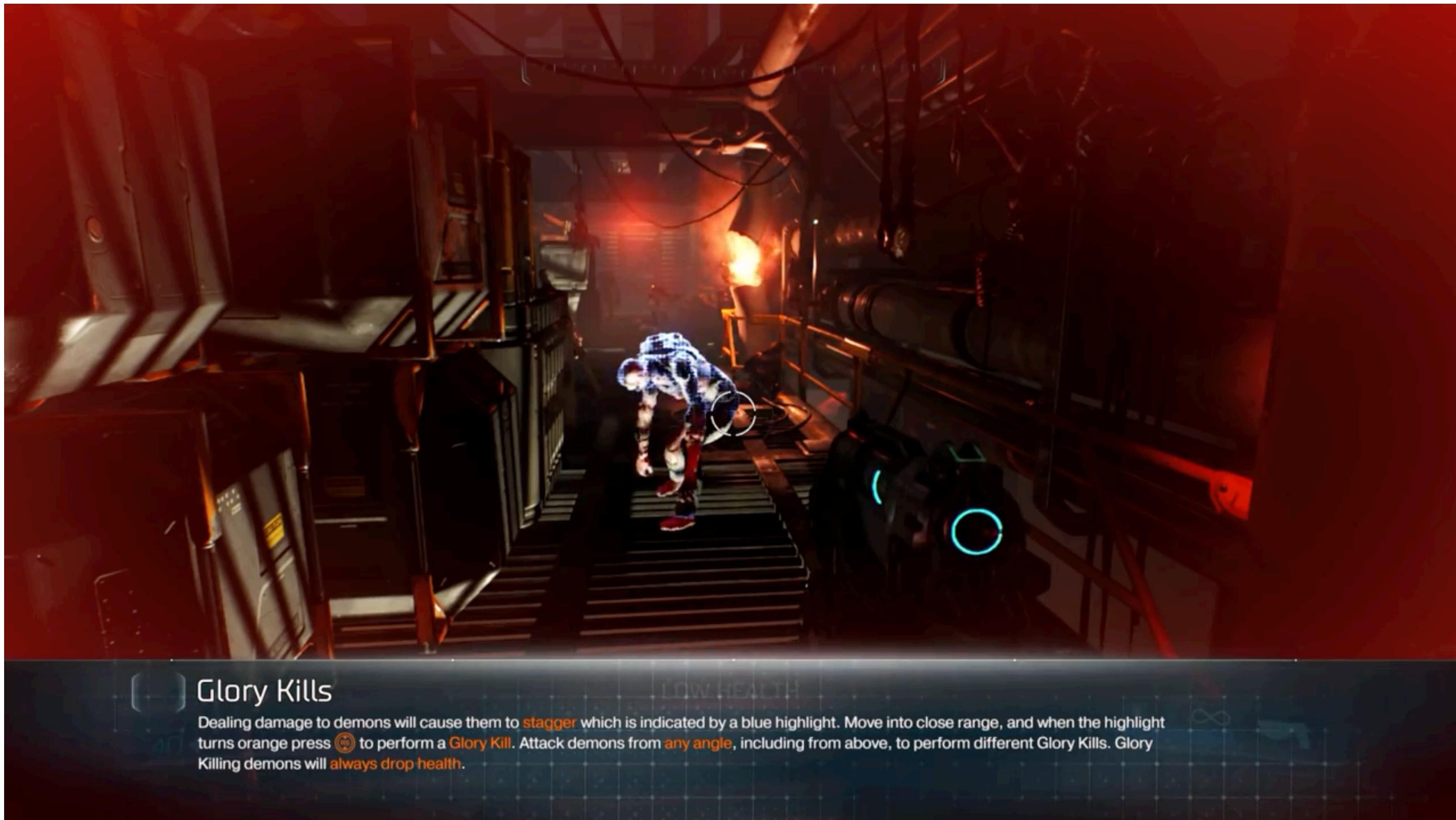


# Analysis of doom: tutorial

- Extra health points are display above blue health bar
  - Health pickups are Blue emitting “+”
- Pistol is interchangeable
- Shotgun has limited ammo (20)
- Progress update
- Tips

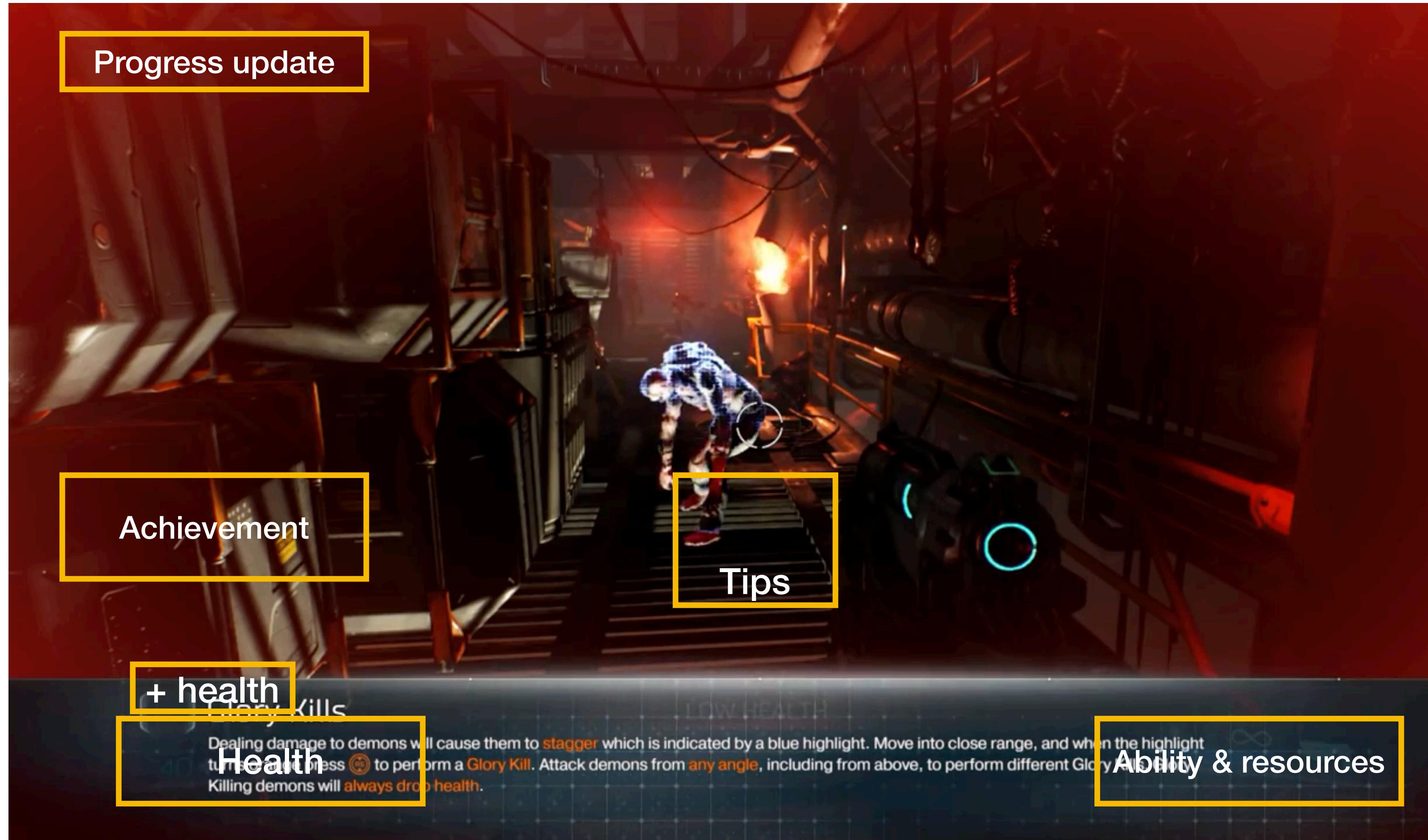


# Analysis of doom: tutorial



# Analysis of doom: tutorial

- Extra health points are display above blue health bar
  - Health pickups are Blue emitting “+”
- Pistol is interchangeable
- Shotgun has limited ammo (20)
- Progress update
- Tips



# Analysis of doom: locked area

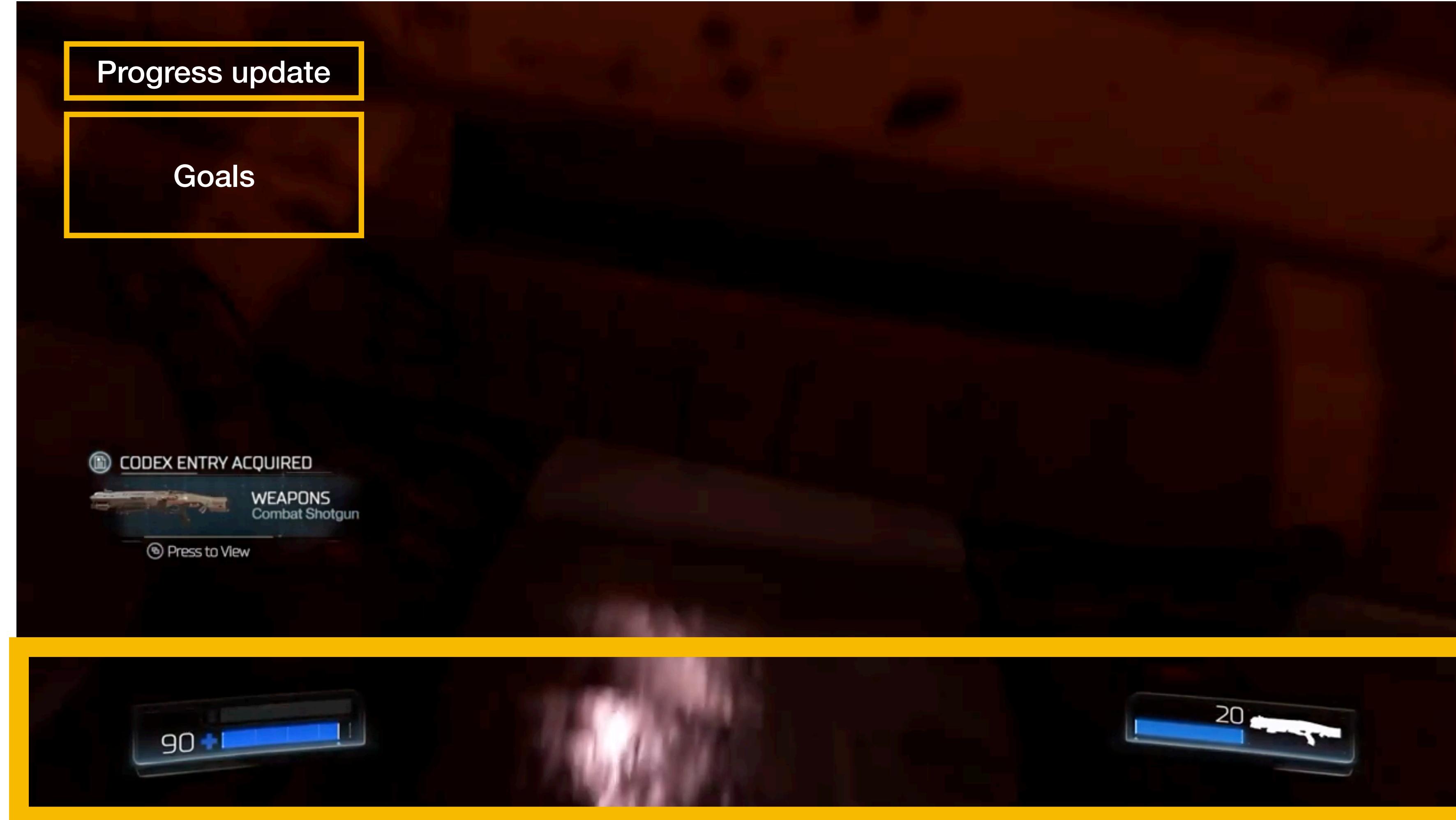


# Analysis of doom: locked area



# Analysis of doom: locked area

- Non-spatial UI
  - removed during cut-scenes
- Non-spatial goals updates
  - Short and long term
- ◇ Spacial goal indication
  - Unlock (spacial) Red door
  - “Area locked” message (spacial)



# Feedback design



# Analysis of doom: Escape



# Analysis of doom: Escape

- (non-Spatial) Low ammo warning below crosshair
- (Spatial) Green doors are accessible
- (Spatial) NPC explains new goal
  - Orientation: (spacial) blinking goal icon
  - (spacial) Elevator button are accessible

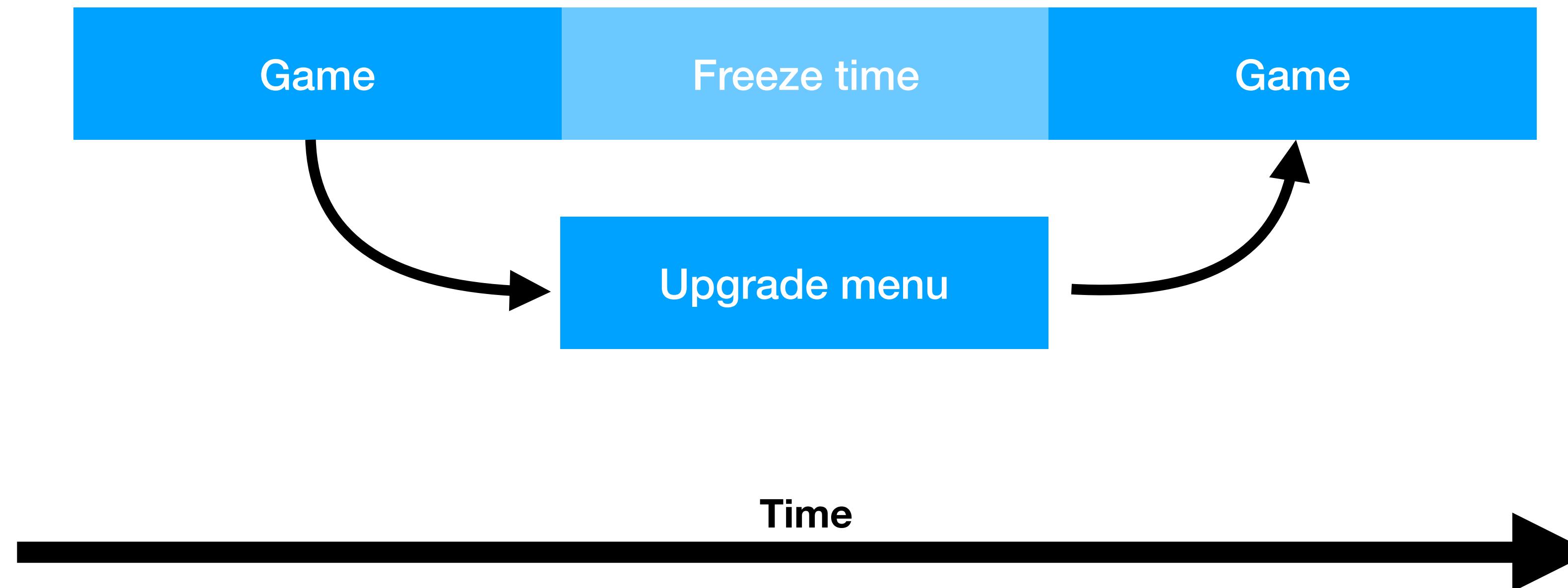


# Analysis of doom: upgrade menu

- Upgrade menu
  - Suite
  - Weapon



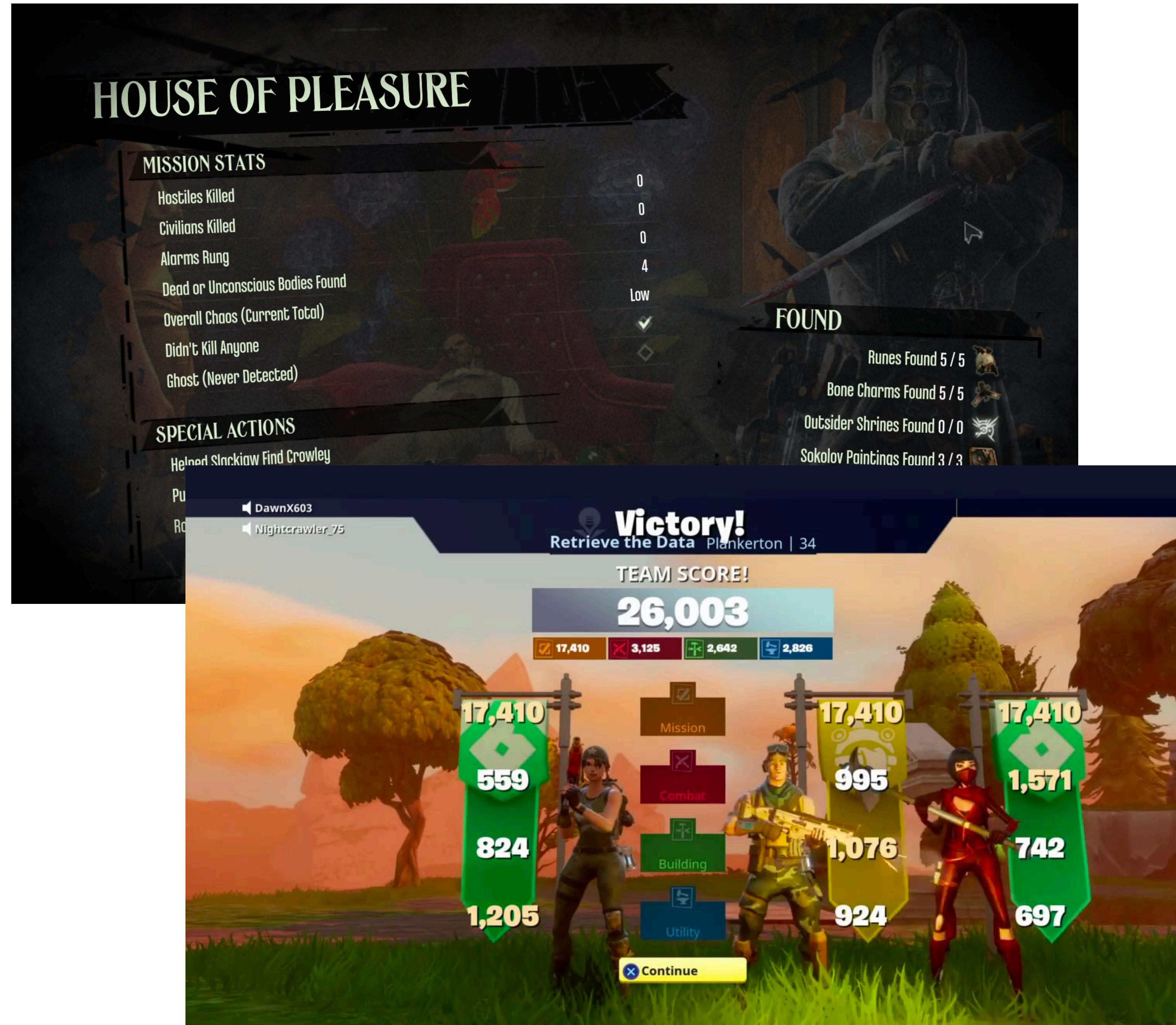
# Menu design



# Analysis of doom: results

- Resolution screen
- Results





## HOUSE OF PLEASURE

### MISSION STATS

Hostiles Killed  
Civilians Killed  
Alarms Rung  
Dead or Unconscious Bodies Found  
Overall Chaos (Current Total)  
Didn't Kill Anyone  
Ghost (Never Detected)

### SPECIAL ACTIONS

Helped Slackjaw Find Crowley

Pu  
Ro  
DawnX603  
Nightcrawler\_75

**Victory!**  
Retrieve the Data Plankerton | 34

### TEAM SCORE!

**26,003**

17,410 3,125 2,642 2,826

17,410  
559  
824  
1,205

17,410  
995  
1,076  
924

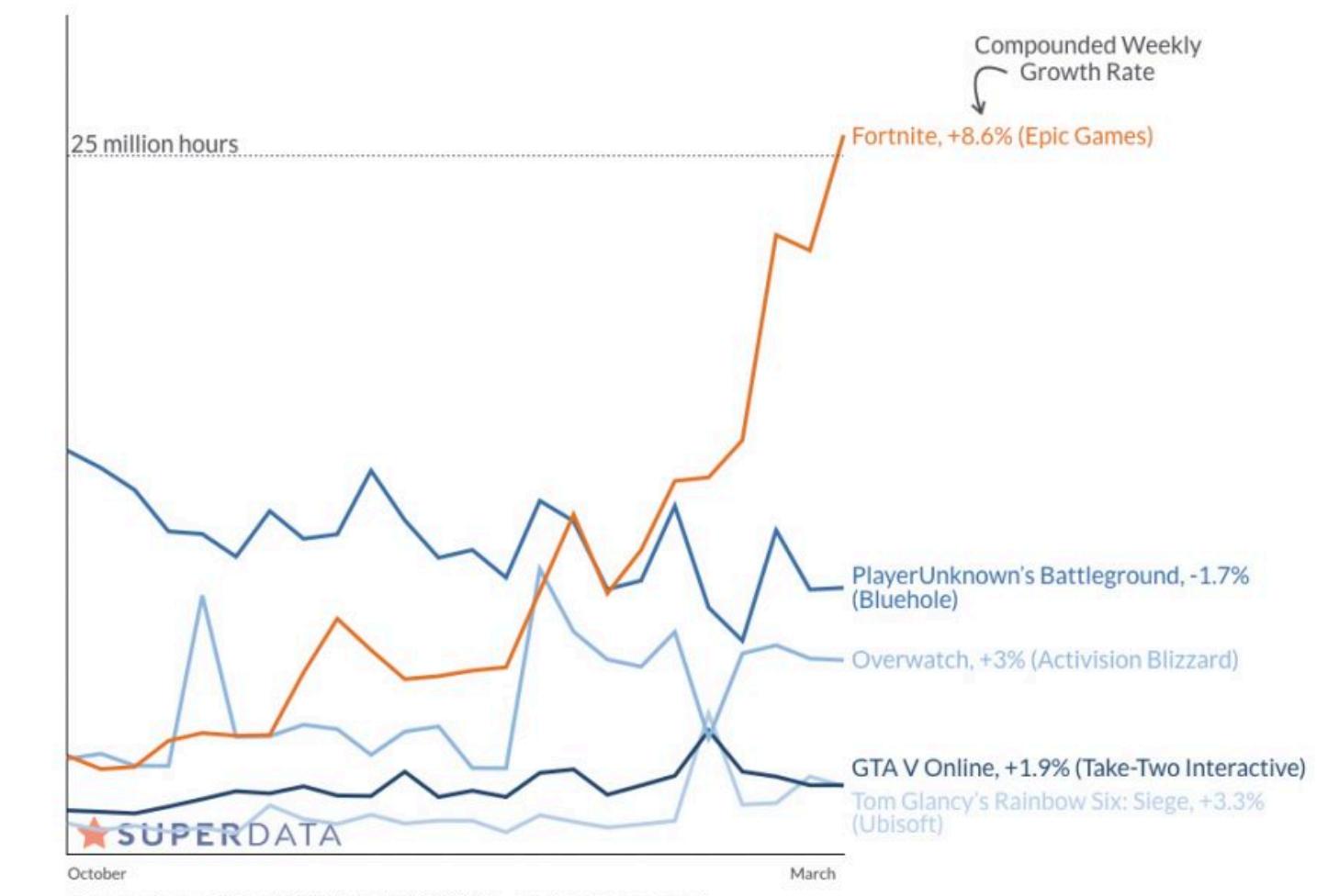
17,410  
1,571  
742  
697

Mission  
Combat  
Building  
Utility

Continue

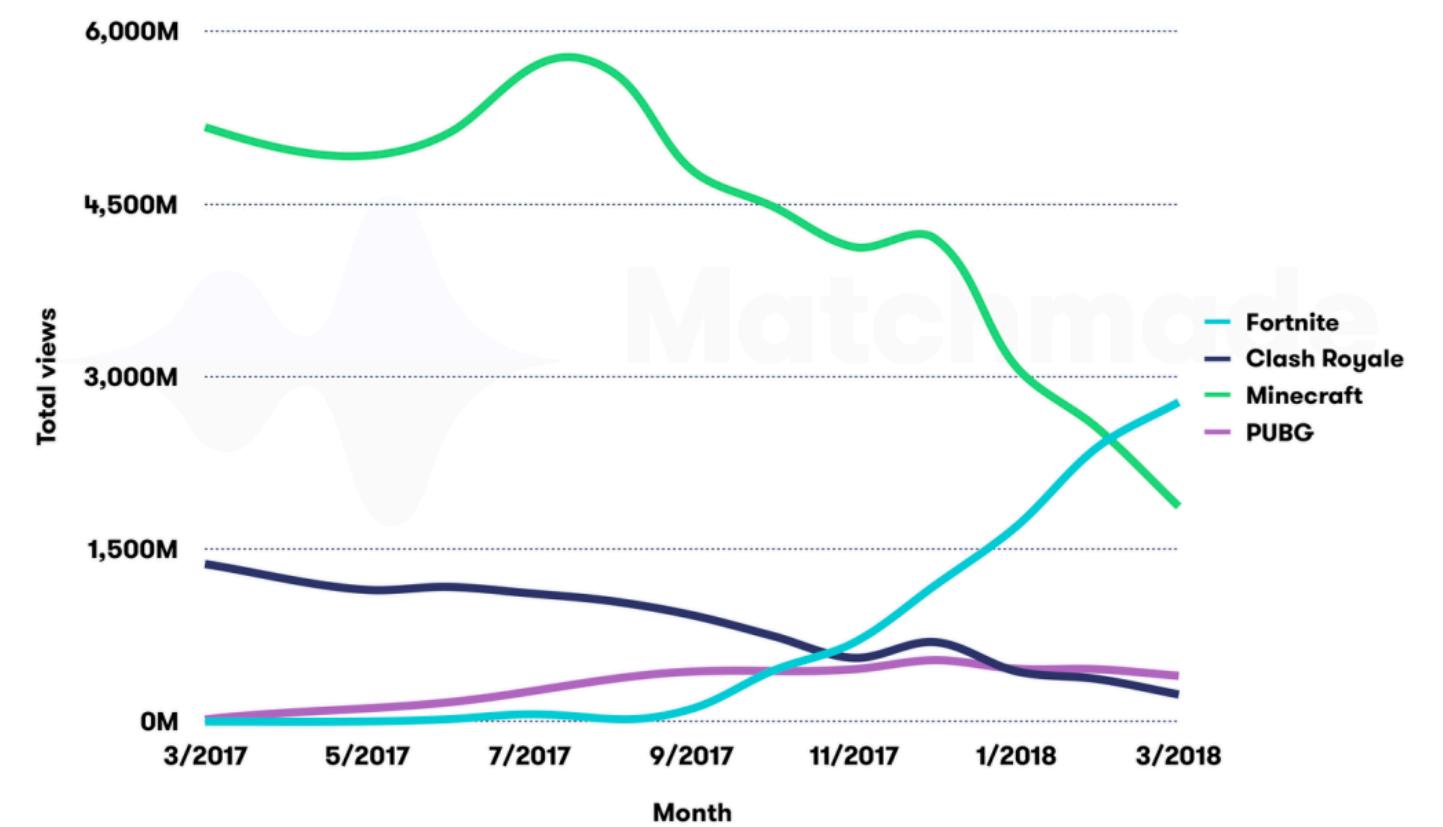
## Fortnite Bling

Six months of online viewership for selected titles  
Total weekly hours watched on Twitch

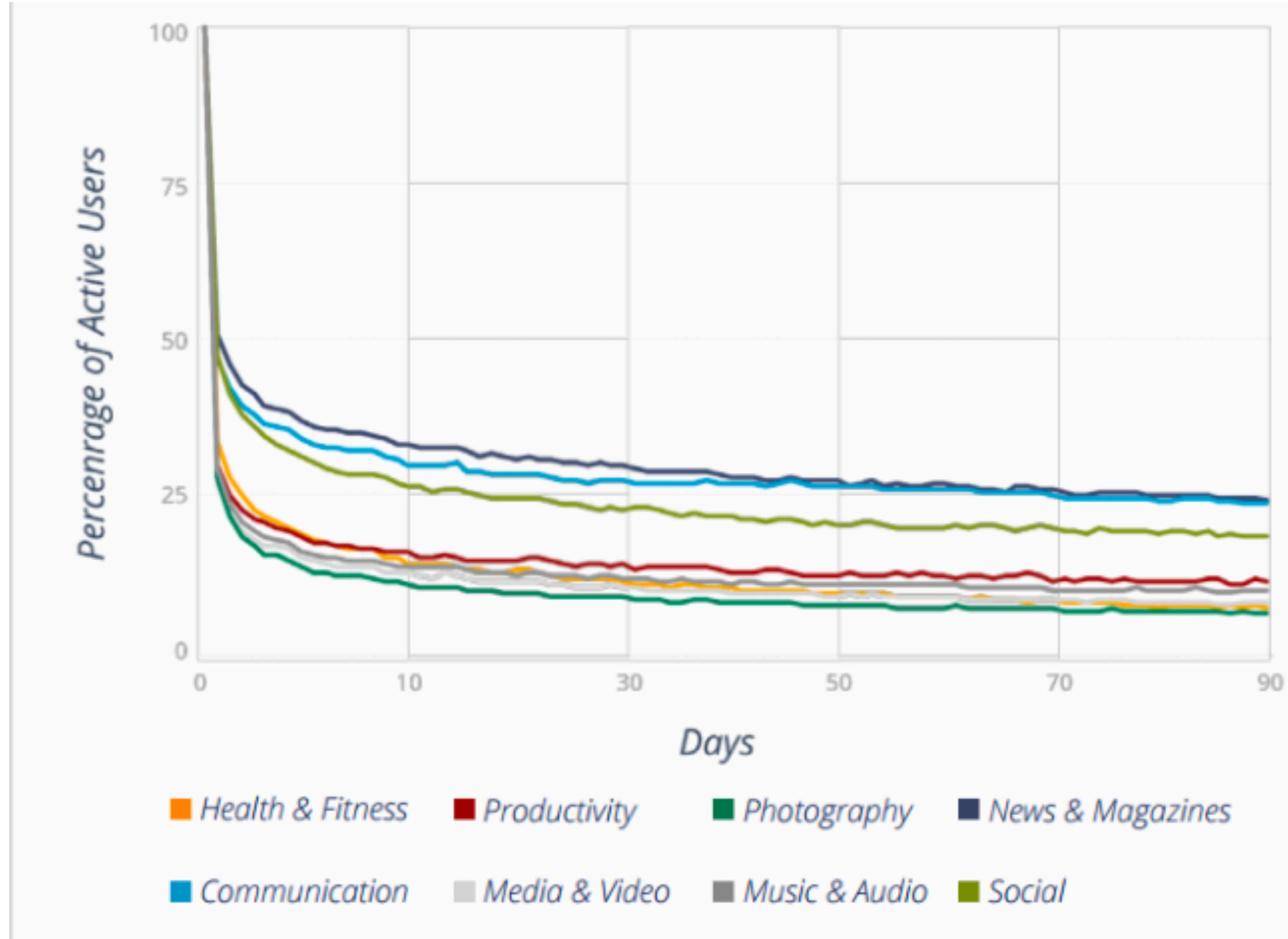


Source: SuperData ARENA (beta) © 2018. All rights reserved.

### YouTube Viewership Over Past 12 Months: Minecraft, Fortnite, Clash Royale and PUBG



Matchmode



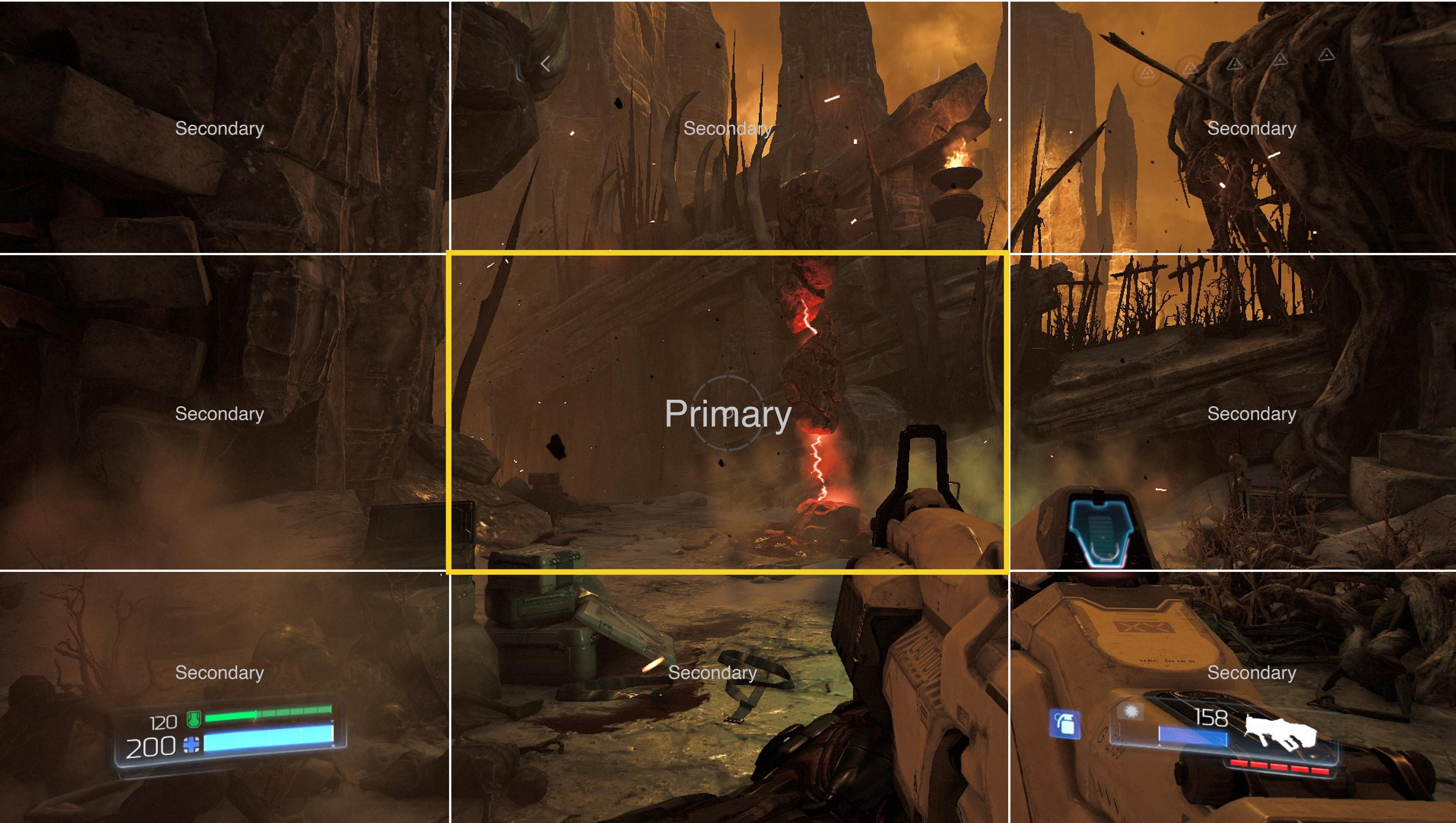
# Mobile market retention

Now back to doom !



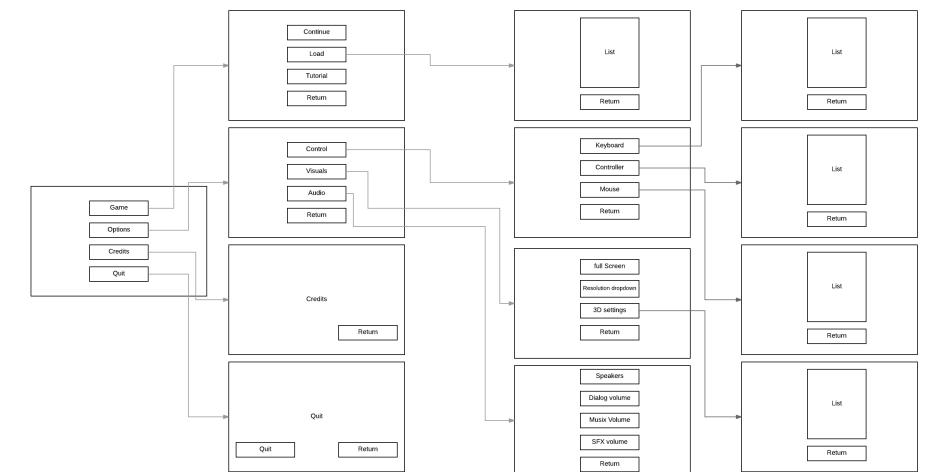
# UI of doom

- Goals & achievements:  
Clearly direct / cue the gamer to their task
- Orientation: location of player and challenges using location icons
- Abilities: Weapons as game object & UI element
- Resources: simple & whole numbers (integer) and bars on life, ammo etc.
  - Shapes (bars, icons) are faster than words
  - Easy to read, no dialogs during high-stimulation times





Game      Options      Credits      Quit



Setup of Goal / task introduction:  
goal , achievements and rewards for different  
player types



Complete **Missions** to gain immediate rewards, and **defense bonuses** at the Extraction Point. If you **fail** a mission, you **lose the reward** and keep playing.

Explore the Open World to find **loot**, or unlock **outposts** for powerful weapons, skill points or crafting ingredients.

You have **30 min** to reach the extraction point. Complete any activities or **Karma events** to gain a time bonus. If you die, you start back at the beginning.

Confrontation:  
Gameplay Level/Challenge

HUD      Pause

Goal  
Goal: short & long term, reinforcements / achievements

Orientation  
Orientation: navigation maps, hints, controls, graphics

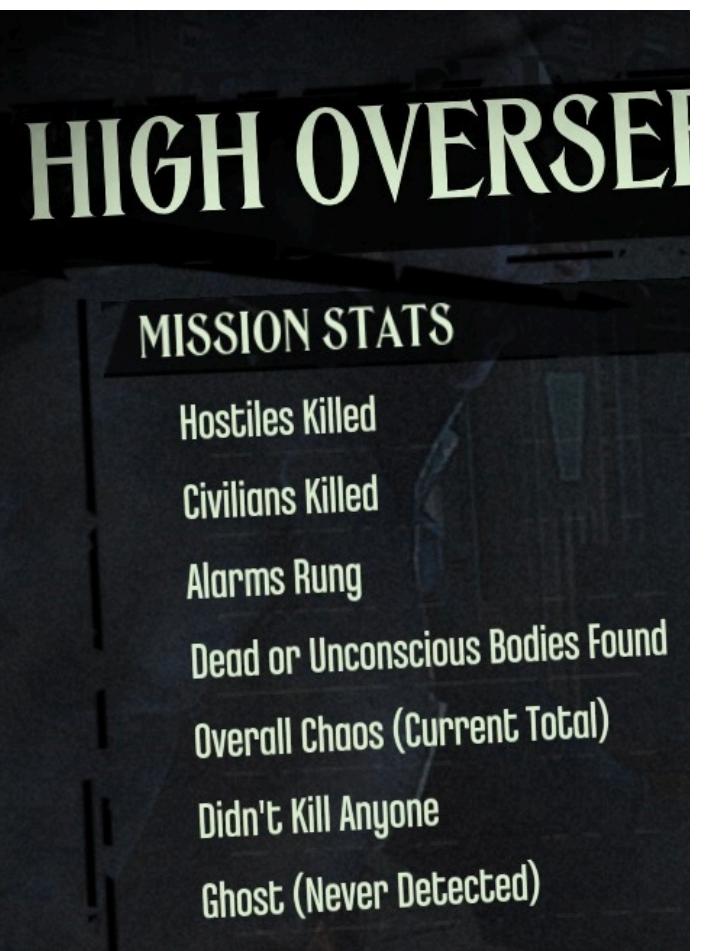
Abilities  
Abilities: weapons and abilities upgrades and selection

Resources  
Resources: manage, buy/sell, upgrade

Compact information

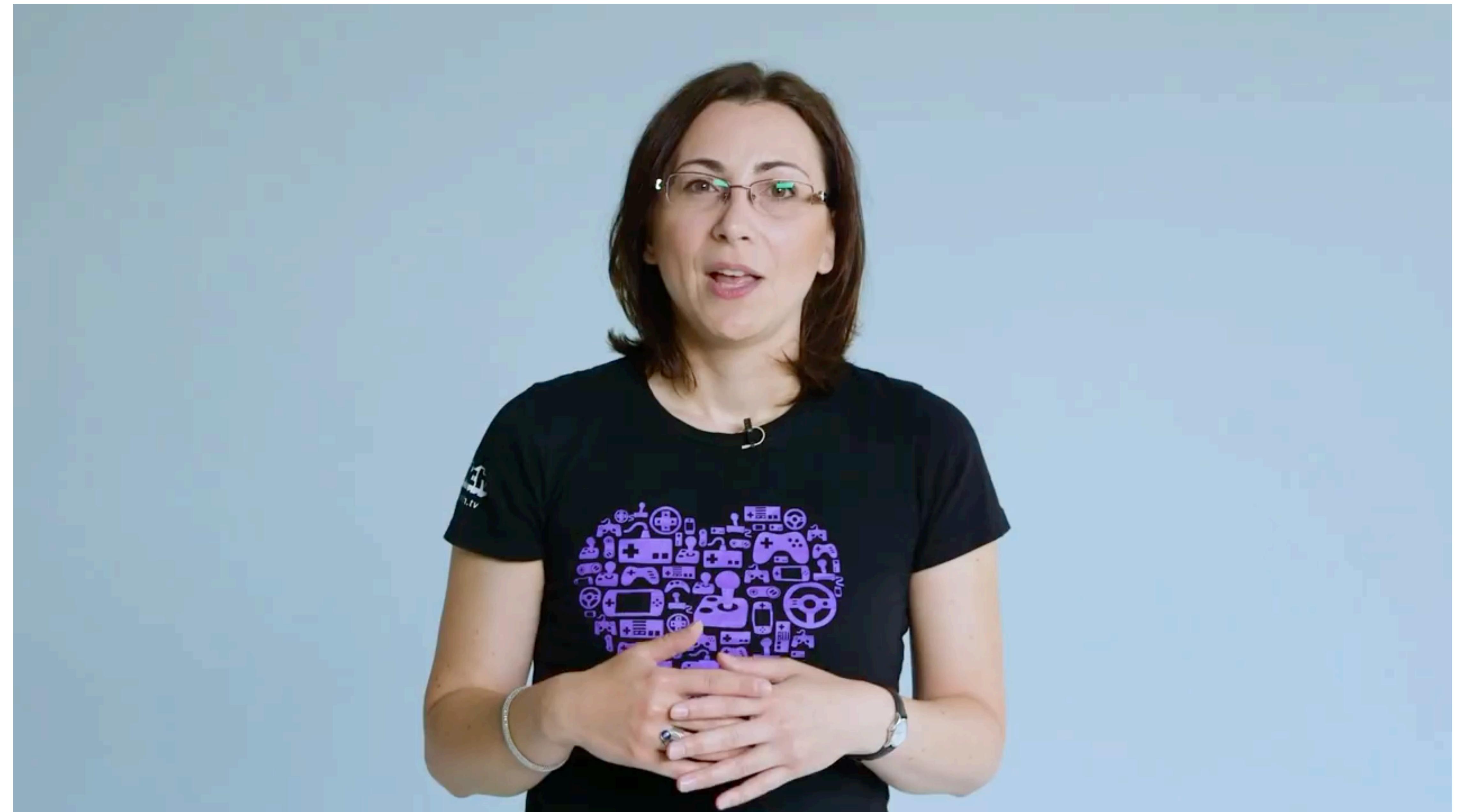
Detailed information

Resolution:  
Performance & promotion



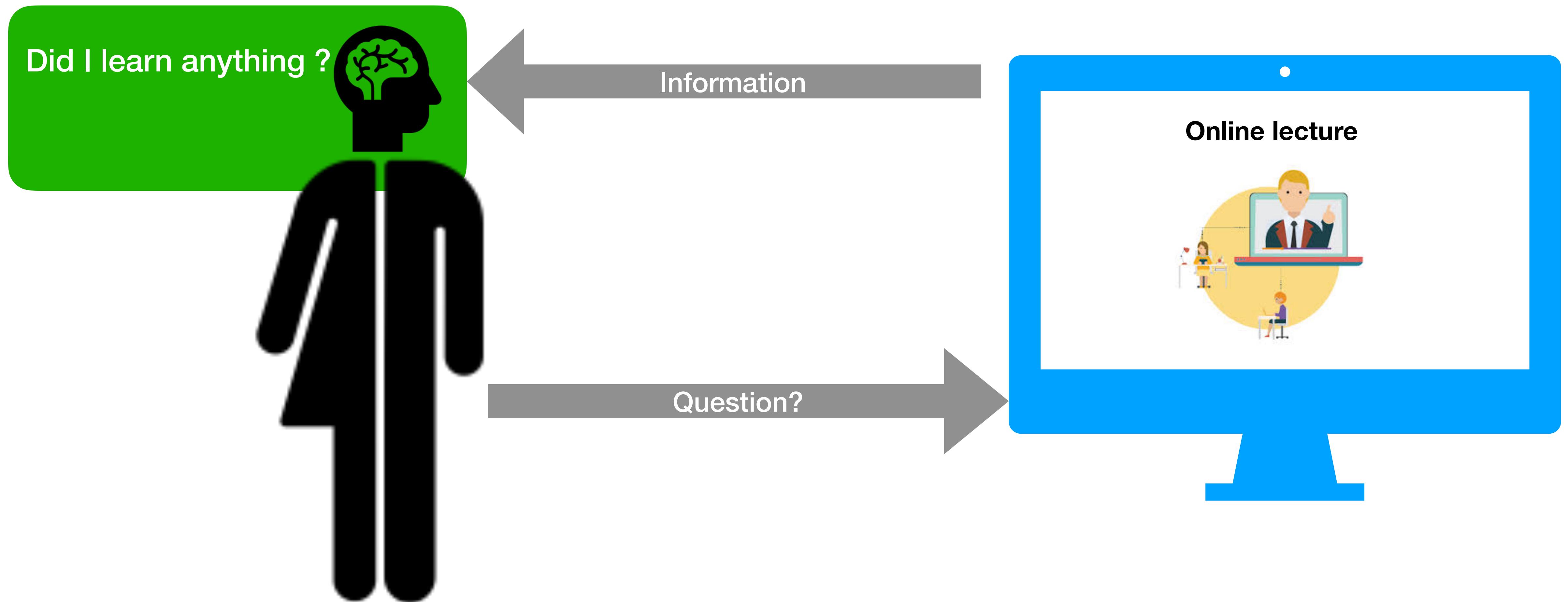
# Design Canvas

## Menu & UI for games

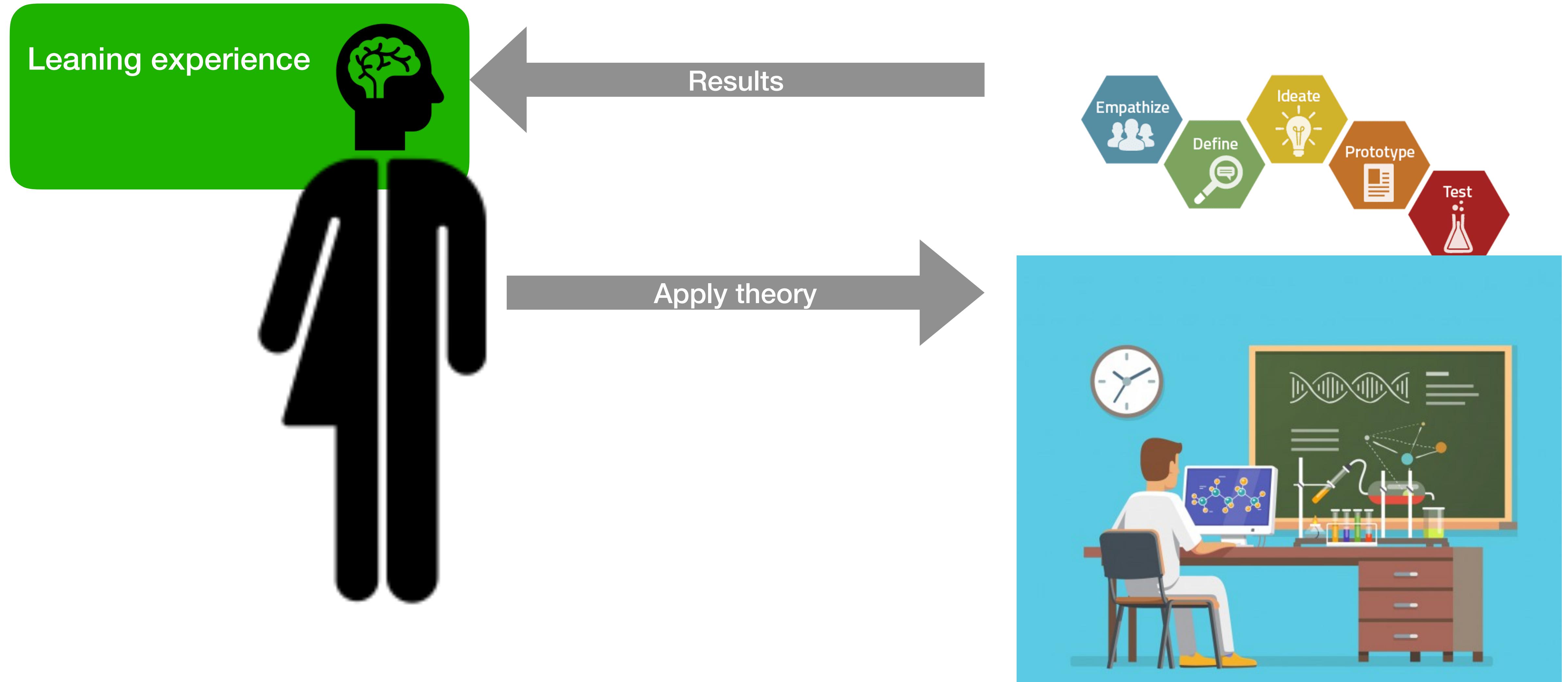


[https://www.youtube.com/watch?v=4DE\\_4HUX94E](https://www.youtube.com/watch?v=4DE_4HUX94E)

# The End



# Lab



# Lab 4

Checkpoints	<b>Design requirements (implemented as spacial or non-spacial (overlay?) item, popup, introduction and resolution screen etc.</b>
Goal	<i>Describe design updates/improvements for information on users short- &amp; long-term goals, reinforcements / achievements</i>
Orientation	<i>Describe design updates/improvements for information: navigation/maps/goals, interaction hints</i>
Abilities	<i>Describe design updates/improvements for items (weapons, shields etc) and abilities upgrades / selection</i>
Resources	<i>Describe design updates/improvements for resources (points, ammo, health) information and option to manage, buy/sell, upgrade etc.</i>
Hicks	<i>Describe design updates/improvements for onscreen UI options are using clear task(s) / categories</i>
Fitts	<i>Describe design updates/improvements for important elements and “Easy to reach” interactive UI elements</i>
Gestalt	<i>Describe gestalt design updates/improvements for Figure/ground, Proximity, Similarity, Symmetry</i>





# Lab 4: 30 minutes

- 3. User Interface Design
  - 3.1 Substantiation of re-design
    - Select a game with UI problems: A old project or any released / commercial game
    - Describe in your own words what design decisions you have made. Use visuals (before and after) to support this.

# Lab 4: 60 minutes

- 3.2 Theoretical substantiation of re-design
  - Describe goal, Orientation, information, Abilities, Resources, hicks, Fitts fixes
  - Build prototype (use wireframes, placeholders, existing assets etc)
    - (Change the **narrative** to complement your selected UI)
    - UI explains current objective (long term: **reach exit**, current objective: **destroy monster**)
    - UI shows progression (distance or amount of objectives completed & to do)
    - UI shows orientation (where are you in the world, how to reach your objective)
    - UI shows weapons/ability with resources (no ammo?) and useful alternative weapon / ability (axe?)
    - User Interaction
      - select correct ability / resource to complete objective (**gun has no ammo left, exchange gun with the axe**)
      - Ability / resource is selectable on the UI or inventory menu
- 3.3 Optional: UI/UX substantiation of re-design with different theoretical model(s) of your choice

# Lab 4: 60 minutes

- 4.1 Test plan
  - Use the tables below to prepare your usability test (copy paste tables more if necessary).
    - Goal/Output:
      - Explain current objective (long term: reach exit, current objective: destroy monster)
      - progression (distance or amount of objectives completed & to do)
      - orientation (where are you in the world, how to reach your objective)
      - select correct ability / resource to complete objective (no ammo left, exchange gun with the axe)
    - Describe Input, Assumptions, Steps, Success criteria, Notes
  - 4.2 Method
    - Test with a minimum of two different participants. Briefly describe how you tested the above-mentioned goals. Which method did you use? For example, did you use screen recording tools? What was your role during the test? What instructions did you give the user? Did you do an interview afterwards?
    - Use remote testing and online survey during the online lab!
    - Ask your lab teacher for a private session with 2 or more students for peer to peer testing

# Lab 4: 30 minutes

- 4.3 Test Results:
  - Present the results of the test here. Please note, this does not mean that you are drawing any conclusions here. In addition, you could also add photos of the test.
- 4.4 Conclusion and analyses
  - Question the reliability of the data by, for example, describing whether the test went as you expected. Were there (external) factors that may have influenced the reliability? Were you able to measure what you wanted to measure in order to conclude anything at all? (validity). So, what can you conclude based on the results?
- 4.5 Optional: Theoretical clarification
  - Based on the theory of the lectures, can you substantiate why the user still encountered certain obstacles?
  - Goal, Orientation, information, Abilities, Resources, hicks, Fitts
- 5. Recommendations
  - What recommendations would you give for improving the UI/UX based on the test results? Can you substantiate your recommendations based on what you think are good UI/UX examples (screenshots) from other websites (or optionally your own sketches)?

# The end of our lab

