**Initial test**

Testing affective

Testing Game was suitable and worked as intended

Provides initial data that will help with analysis for example what questions or areas to focus on.

Quick and early proto type allows for early feedback so any changes can be implement without affecting the project plan see Gantt chart.

Allows for participant recruitment for later test groups.

**Test groups**

All participants were required to take a player test REF.

Balance and imbalanced were labelled game mode 1 and 2 as to not persuade participants reaction if they knew exactly what they were playing.

Because playing the previous game mode may influence the participant’s reaction, multiple test groups were created to insure valid collection of data.

**Test group 1 – 10 Participants**

Plays balance then imbalance

**Test group 2 – 10 Participants**

Plays Imbalance then balance

**Control group- 10 Participants**

This group is split in half and 5 play only the balance and 5 play only the imbalanced. As mentioned before playing the previous game mode may influence a different reaction this will give some sort of control as if the results are majorly different then it may be the case.

Control groups will seek to have similar player types as test group 1 and 2 because participant’s individual personalities will also impact the way they play the game and this will allow for a fairer comparison.

This gives a reliable baseline data that will allow for an accurate comparison of data from test group 1 and 2.

**Heat Map**

Having a heat map that shows where the Pc player spawns enemies will give a good indication if either game mode affects how they playa and this can easily be show with the use a heat map. This will be implemented in the game so that when the pc player clicks on a tile to spawn an enemy the hue of that tile will turn slightly more red each time it is clicked. When the game is finished a separate camera in the scene will save a print screen to the hard drive from a top down perspective.

**Emotional Recording**

While the game is running, the players emotional state will be recorded using a webcam and Affectiva. This creates data that can then be plotted with graphs and tables with time stamps that will allow discussion with the other data that is being collected.

### Affdex

Affdex is Affectiva’s SDK for emotion recording. Affdex is used to track the emotions of users while doing a task in this case it will be while playing the game. Using advanced facial analysis, Affdex scientifically measures emotional responses unobtrusively, cost effectively, and at scale requiring no special equipment or extra processing to run.

The key reason behind using Affectiva and not some other service is the fact that it provides a Unity plug in that can be very easily integrated into the game. Another benefit is that it presents a very in depth analysis for recorded data. Affectiva’s interactive dash board provides a clear understanding of the summary of the metric recorded. This can also be compared to their vast data base of nearly 5 million analysed faces giving a pretty accurate response to the emotions of the players in the user groups.

**VR player’s perspective recorded**

Furthermore, to correlate events from the other data that is collected the VR player’s perspective will be recorded. This allows for some exact comparisons for example the data collected from the Pcs players emotional state showed that 3 minutes in they showed signs of extreme enjoyment this method would make it possible to see how the VR player reacted in game as this time frame.