UAV Motor Schema testing

Starting with testing through Visual Studio proved to be a difficult problem. Development of a framework needs to be established prior so the Unity environment is simulated. Given this I resorted to testing the simulation through extensive runs, log statements, and public parameter limits for behaviors. This should provide at a minimum a verification and validation test. Further testing of functions prior to real-world implementation is also suggested. Debug.Log statements included in "BlockCrowd2.cs" code. A majority of debugging statements were commented out for runs so the console wasn't overwhelmed with output and changing behavior logs could be seen.
It's additionally important to note that for the simulation runs all 3 crowds start with random directions and random velocities headed towards the goal line.
Additionally a good portion of our scalable variables have been made public so we could change them and establish the most appropriate values for an accurate response.

Results:

- 300+ runs of simulation provided 2 failures to block all 3 randomized crowds, when 2 approached at the exact same distance and speed, UAV choose 1 to block letting other through. Choice was made in order of listing in vector. The second failure had 2 crowds moving at approximately the same distance and speed but both located on either side of the hall, while the third crowd is just ahead of them in the middle, so by the time the third crowd moves back past the first two, the UAV tries to get over to one side, fails, then tries for the other and fails again. This specific scenario seems to be very unique and is unlikely to be repeated as it was only seen once, but it still should be noted.
- Elimination of all but black crowd discovered initialization issues based on red crowd, this has since been changed to the black crowd which is always present. Perhaps this should be changed for actual implementation to a data point received from Hoyuko sensor.
- The strength of wall avoid and crowd avoid need to not overpower each other by too much (more than double possibly) or the p-field created when the crowd pushes the UAV into the wall can possibly cause the UAV to contact the wall. Suggest an abort to stop the UAV if this occurs.