Modelling the existing system

IPSO Chart –

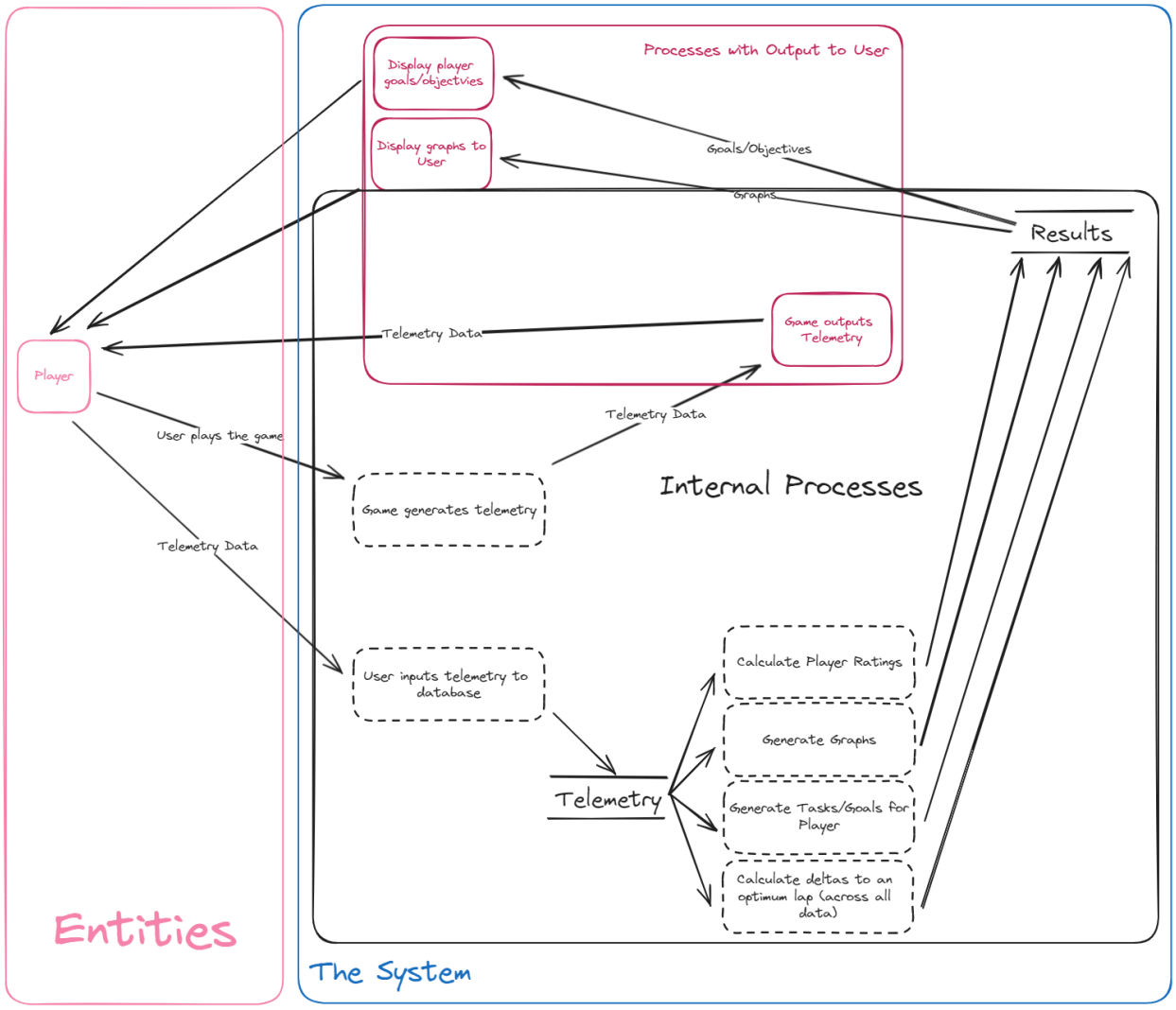
<table>
<tr>
<td>INPUT
User plays the game to generate telemetry data
User takes outputted telemetry and inputs into the system</td>
<td>PROCESSING
• Calculate time deltas from an optimal time
• Calculate overdriving/underdriving
• Generate graphs
• Calculate Driver Ratings from data (per-track + overall ratings)
• Calculate deltas between entry/exit speeds, cornering angle etc. (motion data) from an optimal lap.
• Generate specific tasks/areas to work on for the player</td>
</tr>
<tr>
<td>STORAGE
<u>Telemetry:</u>
• Motion Packets
• Session Packets
• LapData Packets
• CarSetupData Packets
• CarTelemetryData Packets
• CarStatusData Packets
• Session History Packets
• Motion Extended Packets

<u>Driver Ratings:</u>
• Consistency
• Car Control
• Track Competence
• Pace</td>
<td>OUTPUT
<u>Game:</u>
• Game outputs telemetry information from lap

<u>Graphs:</u>
• Lap Time Graphs
• Tyre Wear Graphs
• Corner-by-corner analysis

<u>Personalised Data:</u>
• Display Goals/Objectives for the player
• Display practice programmes</td>
</tr>
</table>

Data Flow Diagram –



In this data flow diagram, the player plays the game, from which the game generates telemetry from, which is then outputted back to the user. Next, the player has to take the telemetry data and manually input all of the gathered information (of which there are hundreds of values being sent per second spent on-track) into a database. In the current system, specific values are taken from the telemetry data store and complex mathematical operations are carried out which generate analysis and extrapolate insights from the telemetry data. The resultant data from these processes are then stored in a new database for results, which are then handed off to processes which

handle the outputting of graphs and goals, tips and targets & personalised tasks for the player to carry out.
Hence, this data flow diagram illustrates the high complexity of the currently implemented systems available to F1® 23 players, and the difficulty of extrapolating and analysing player performances for the purpose of improvement.