

3.3 Concept Evaluation

Table 3.5: Concept Requirement Fulfilment Analysis

Target	Proposed Solution	Level of Success
FER 1	BLE Communication with Device Running Zwift Application	Pass
FER 2	Roller Trainers Allow for Wider Range of Wheel Diameters	Pass
FER 3	Speed Sensors Implemented on Rollers	Pass
PER 1	Rollers Allow for Adjustable Wheelbase Lengths	Pass
PER 2	Rollers Do Not Require Heavy Bicycle Mounting Components	Pass
PER 3	Rollers Do Not Limit the Operating Speed	Pass
PER 4	Rollers Function Independent of Bicycle Wheel Diameter	Pass
PER 5	Rollers Function Independent of Bicycle Wheel Diameter	Pass
PER 6	Eddy Current Brake Applied to Rear Roller	Pass

From the evaluation in Table 3.5, the concept would achieve the functional and performance requirements that were formulated in Section 3.1. The development of the subsequent sections of the concept into a demonstration model is detailed in the sections to follow.