

The analysis, manipulation, and ongoing support of biomechanics in professional cycling is in constant evolution, with recent years seeing accelerated progress. Traditionally, this field was limited almost exclusively to pre-season checks to help overcome the challenges posed by new bikes and sponsor equipment. More recently this has expanded into more rigorous fine-tuning and component selection, yet there are numerous problems with the 'early season' approach, such as the lack of in-competition biomechanical data, an overreliance on lab and not real-world data, and the simple fact that the early season sees the largest changes in rider bodyweight, conditioning, and mindset- all of which undermine a holistic view of the rider and their season. Often, a 'no news is good news' position, or the absence of any injuries, is considered to be a good result, yet such oversimplification biases objective biomechanical assessment and its relationship with the rider's current and future performance. In this context, the true challenge and benefit of biomechanical assessment is in providing an ongoing continuous process, where the consultant manages reliable data from multiple sources – beginning with the dual-sided powermeter and continuous torque derived data. This is because, at its root, the optimization of biomechanics in competitive cycling seeks to maximise pedalling performance while reducing injury risk