

## Improve health, safety and performance using wearable technology

Melius Consulting recommends the Readiband™ wearable device, a wrist-activity monitor (Data analysed using Readiband Sync™) (Fatigue Science Inc., Canada). The Readiband provides **accurate, objective measures of sleep and alertness** with the ability to predict levels of fatigue and alertness for up to 17 hrs in advance thereby supporting organisations in the real-time management of fatigue risk and performance. The Readiband is used in Heavy Industry (Mining, Rail, Construction and Aviation), Military and in Elite Sports (Formula 1, Australian Rules Football, Professional Hockey, American Football, Rugby & Basketball )<sup>1</sup>

Check out how we used at Centre for Sleep Science at The University of Western Australia to help the Western Force rugby union team reduce the effects of long-distance travel and optimise their performance in Super Rugby competition <https://youtu.be/xuCyOKr3hR4> and how the Readiband supports high performance athletes at the Chicago Cubs to win the World Series <http://fatiguescience.wistia.com/medias/wp5bxj2ulk>

**The scientific validation of Readiband** has been shown to compare favourably both to in-laboratory gold standard polysomnography and other validated technologies <sup>2</sup>. They are downloaded and analysed using the automated ReadiT™ software and its proprietary algorithm.

**How to use it:** The user wears the Readiband continuously to generate personal objective measures of sleep and alertness that are synchronised with their smartphone or tablet to provide instant data and performance analytics to inform decision making, safety-critical work and risk mitigation. Leaders and Managers can see aggregated data to identify periods of risk throughout the day, over a shift period or historical data to identify trends for safety improvement.



**Readiband subscription** starts at \$1 USD a day per person.

**For more information, contact:**

Dr Ian C Dunican PhD | MBA | MMineEng | GradCert(ASc) | BA

+61 409 680 867 or email [ian.dunican@meliusconsulting.com.au](mailto:ian.dunican@meliusconsulting.com.au)

## References

1. Dunican IC, Higgins CC, Jones MJ, et al. Caffeine use in a Super Rugby game and its relationship to post-game sleep. *European journal of sport science* 2018;1-11. doi: 10.1080/17461391.2018.1433238 [published Online First: 2018/02/13]
2. Dunican IC, Murray K, Slater JA, et al. Laboratory and home comparison of wrist-activity monitors and polysomnography in middle-aged adults. *Sleep and Biological Rhythms* 2018;16(1):85-97. doi: 10.1007/s41105-017-0130-x