



**Integrated
Safety Support®**
Excellence in Fatigue Risk Management

Capacity Statement

Our Purpose:

To provide the highest quality consulting services and training materials available in the field of risk-based fatigue management

Our Experience

Our extensive experience covers:

- A wide variety of extended- and 24-hour operational settings in many industry sectors including: Aerospace, Aviation, Defence, Emergency Services, Healthcare, Maritime, Mining, Oil & Gas, Rail and Road Transport
- Assessing compliance with fatigue-related OH&S and operational safety requirements, and undertaking gap analyses against industry guidelines
- Conducting industry, government and university-level research related to fatigue-related impairment
- Developing, implementing, reviewing and auditing Fatigue Risk Management Systems
- Developing fatigue-related training programs and materials for employees/contractors, managers, supervisors and rostering personnel

Our Approach

Collaborating closely with key stakeholders, we aim to add value by reducing fatigue-related risk and the costs that come with it. We start by understanding your operations and addressing specific questions you may have, such as:

- How do we develop or improve an integrated Fatigue Risk Management System (FRMS)?
- How do we best design schedules and rosters to reduce fatigue-related risk but allow for operational flexibility?
- How can we educate our workforce to understand how to manage the risks associated with fatigue?
- How can we best identify fatigue-related risks and analyse, evaluate, treat, monitor and review them?
- How can we get our management team to understand the implications of non-compliance with respect to managing fatigue-related risk and provide formal assurance when all unacceptable risks have been addressed?
- How can we achieve "Beyond Compliance" levels of Fatigue Risk Management?

Fatigue Risk Management Systems

Our FRMS work with clients typically involves the development of appropriate Fatigue Risk Management policy, procedures and processes which are then integrated with existing Safety Management Systems. We visit operational sites to examine and discuss fatigue-related issues with employees, supervisors and managers in the working environment. Because all such systems are dynamic, we also plan for ongoing improvement and can support periodic reviews and audits to better ensure that these systems function as intended. We are aligned to ISO 31000, the International Standard for Risk Management.

"I have no hesitation in recommending Integrated Safety Support to any organisation requiring a consultancy that delivers consistently high quality outcomes in a timely manner and, importantly, on budget."

**Captain Geoff Sartori, Former Head of Safety,
The Qantas Group**

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Road Transport

Our team includes Fatigue Experts registered by the National Fatigue Authorities Panel, able to review applications for Advanced Fatigue Management (AFM) accreditation and offer guidance on improving Fatigue Risk Management Systems. We have reviewed and supported more than 95% of all the AFM applications ever made in Australia. We aim to combine our scientific knowledge of driver fatigue and work hours, with road transport operators' extensive real world experience, thereby helping them to improve their systems and gain flexibility, control and a competitive edge. We have helped several clients to improve Road Transport operational safety via projects to measure and individual sleep quality and quantity at home and work, and the impacts of work schedules on recovery sleep. We have also helped operators to implement practical fatigue management training beyond the minimum/accreditation requirements.



Aviation

In the Aviation sector we have worked with a variety of large, medium and small operators. For example, we worked with Qantas to develop and implement a comprehensive Integrated Fatigue Risk Management Program (comprising policy, procedures, processes and systems, online training for all employees and a separate training package for managers and supervisors) applicable to 23,000 safety-sensitive employees.

We have also conducted a review and enhancement of Airservices Australia's Fatigue Risk Management System expanding the system's applicability from Air Traffic Controllers, to include personnel employed in Aviation Rescue and Fire Fighting, and Technical and Asset Services (engineering). The whole program being supported by online training packages for all employees, managers and supervisors.



Rail

We have undertaken projects across Australia in a wide variety of contexts including: Country and Urban Passenger Services, Driver-Only Freight Operations, Relay Van Operations, Terminal Operations, Track Maintenance, and Train Control/Signalling. We also have extensive experience working with the development of Rail Safety Regulation reviews, audit frameworks and assurance reporting templates.

Mining and Resources

Our projects have included the examination how fatigue can be identified and treated in Fly-in Fly-out, Drive-in Drive-out and community-based operations. We have expertise in the unique aspects of fatigue management on offshore platforms, in remote exploration and mining camps in Australia and overseas, as well as for extraction, production and loading facility operations in all forms of mining.



Selected Publications

Fletcher, McCulloch, Baulk & Dawson. Countermeasures to driver fatigue: a review of public awareness campaigns and legal approaches. *Australia and New Zealand Journal of Public Health*, 2005; 29: 471-6.

Gander & Yates. Fatigue Risk Management System Helps Ensure Crew Alertness, Performance. *Flight Safety Foundation Flight Safety Digest*, August-September 2005.

Fletcher & Yates. Managing risks related to fatigue: Factors to consider for effective systems to improve safety and efficiency. *Australasian Mine Safety*, 2010; 2: 68-70.

Bohle, Di Milia, Fletcher & Rajaratnam. Introduction: aging and the multifaceted influences on adaptation to working time. *Chronobiology International*, 2008; 25(2):155-64.

Dorrian, Roach, Fletcher & Dawson. Simulated train driving: fatigue, self-awareness and cognitive disengagement. *Applied Ergonomics*, 2007; 38(2): 155-66.

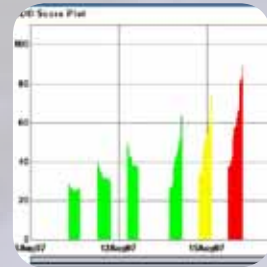
Fletcher. Staying safe in the jungles of Borneo: Five studies of fatigue and cultural issues in remote mining projects. *Industrial Health*, 2010; 48(4): 406-415.

Fletcher & Yates. Considering the 'risk' in Fatigue Risk Management: An integrated approach to managing fatigue and improving safety and efficiency. *Australasian Mine Safety*, 2009; 2(7): 79-80.

Baulk, Fletcher, Kandelaars, Dawson & Roach. A Field Study of Sleep and Fatigue in a Regular Rotating 12-hour Shift System. *Applied Ergonomics*, 2009; 40(4): 694-8.

Hours of Work, Rostering and FAID® Analysis

We help our clients to plan, design, implement and assess Rosters and Schedules – and assist in analysing and interpreting data to help manage fatigue-related risks. Our expertise in this area includes the co-development of the FAID® software program - a mathematical model that can be used to estimate work-related fatigue based on hours of work. FAID® can be used during the design and/or analysis of rosters and work schedules, to identify periods when fatigue (and consequently fatigue-related risks) may be unacceptably high. There are thousands of licensed FAID® users throughout the world, and the system can be integrated with existing rostering systems to ensure automated reporting of data.



For more information, visit <http://www.integratedsafety.com.au/rostering-and-faid.htm>

Fatigue Management Training Programs and Materials

We can enhance your training by providing scientifically-based, highly practical fatigue-related programs and materials for employees, supervisors, contractors and management. Because each workplace is different, we can work with you to provide training in the most effective way, whether it be via face-to-face and/or train-the-trainer programs, online courses, or materials such as workbooks, factsheets, posters, leaflets, or audiovisual materials on DVD and CD. We can tailor training materials for use in your general industry, your organisation or even a specific worksite, and also provide foreign language versions.



For more information, visit <http://www.integratedsafety.com.au/training.htm>

"Integrated Safety Support provides highly professional, innovative, practical and effective fatigue risk management solutions"

Dr Claire Marrison - Manager, Safety Systems Risk and Analysis, Airservices Australia

"The 'REM's Sleep: Making Your Shift Work' DVD is the best fatigue-related training DVD we have seen, and we use it regularly to support our fatigue training and awareness for drivers and managers."

Wes Pickering - Operations Director, Harris Refrigerated Transport

Activity Monitor ("Sleep Watch") Studies

We have extensive experience in field-based data collection using measures of sleep, fatigue, workload and performance. Integral to this capacity is the use of Activity Monitors (also referred to as "sleep watches"). These wrist-worn devices can record for up to 45 days, and collect objective data to measure the amount of activity over time, which is used to interpret the timing and length of sleep. This data is typically used in parallel with subjective data collected using sleep and work diaries - to enable the investigation of the effects of roster systems on sleep and fatigue. Thus "sleep watch" studies can collect high-resolution data to help provide assurance on sleep being obtained by employees, contractors or managers.



For more information, visit <http://www.integratedsafety.com.au/sleepwatch.htm>

SleepRisk Solutions: Streamlining the Management of Sleep Disorders for Industry

Integrated Safety Support is also associated with SleepRisk Solutions, the first national service provider set up to help manage the risks of untreated sleep disorders within industry. SleepRisk Solutions offer confidential services and workings with a network of clinical providers to drastically reduce typical referral and waiting time. Their aim is always to take identified individuals from diagnosis to treatment in less than a week. The highest risk sleep disorders are tackled and treated first, and ongoing support and compliance monitoring is provided for employees, contractors and management. More information is available at www.sleeprisk.com.au.



Our Consulting Team

Integrated Safety Support comprises an experienced team of professionals who have highly-regarded expertise and extensive knowledge in the effective management of fatigue-related risk.



Adam Fletcher, PhD, MAICD (Executive Director) is recognised globally as a specialist in the management of fatigue-related risk. He has extensive experience developing, implementing and auditing fatigue management systems, and has been awarded a research PhD for investigating the measurement and prediction of fatigue in 24-hour work environments. His consulting focus is on whole-of-system projects, often involving complex, remote and high-consequence operations.

Richard Yates, FRAeS, MILT (Executive Director) spent over 20 years in the Royal Air Force as a navigator and senior operations manager, following which he held executive positions in civil aviation regulatory bodies in Europe and Australia. Since becoming a consultant in late-2001, Richard's focus has been on safety regulation and management, with an emphasis since 2004 on the development and implementation of the policy, procedures and processes that comprise an effective FRMS and the integration of such mechanisms into existing safety systems.



Paula Mitchell, PhD, MAPS (Senior Consultant) is a registered psychologist with over 20 years experience in research, clinical practice and corporate consultancy, specialising in sleep, fatigue and shiftwork. Paula's consultancy work has included the development and delivery of training programs on sleep, fatigue risk management, and driver fatigue risk management, in both 24-hour and daytime operations. She has also conducted risk assessments and assisted in the development of policies and procedures to improve shift operations and maximize shiftwork adjustment.

Scott Baxendale (Senior Consultant) has an operational background having served for 30 years as an aircraft maintenance engineer. Scott managed teams of engineers in 24/7 environments and has led substantially-sized engineering projects within Australia, Europe and the US. Scott is mostly involved in engineering, process and other industrial safety projects., where he adds substantial value through the addition of practical, operationally focussed solutions.



Our Clients

Our diverse client portfolio includes:

Action Rescue
Helicopters ActewAGL
AirServices Australia
Avinet
Balco Australia
BHP Billiton
BIS Industrial Logistics
BP Australia
BP Coal
Bunker Freight Lines
Corporate Aircraft
Charter
Exxon Mobil / Esso

Hamersley Iron
Harris Refrigerated
Hydro Tasmania
Incitec Pivot
Jetstar Airways
Kaltim Prima Coal
Linfox
MetroTrains
MitchellCorp Australia
National Transport
Commission
NatRoad
NRMA Careflight

Origin Energy
Pacific National
PAMA Indonesia
The Qantas Group
Queensland Ambulance
Queensland Rail
QR National
RailCorp
Rio Tinto
Royal Flying Doctor
Service
Rocky's Own Transport

SA Ambulance Service
Simon National Carriers
Skycity Adelaide Casino
South Spur Rail
Thiess
TransGrid
Victorian Department
of Sustainability and
Environment
Victorian Taxi Directorate

Contact

Please contact us to discuss your current or potential fatigue management requirements. To help determine the best person to communicate with you, we ask that you send us a brief email detailing how we may be able to help. For all general enquiries please email info@integratedsafety.com.au and for all training-related enquiries, contact training@integratedsafety.com.au.



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