

# KEEPING PEOPLE CENTRE STAGE

At COHFE, we recognise that the productivity of people is integral to economic success. Optimising system performance without compromising worker wellbeing is something we all aim to achieve.

As part of Crown Research Institute Scion, COHFE is New Zealand's leading and largest ergonomics research group. COHFE staff are internationally recognised as specialists in the areas of assessment, reduction and prevention of work-place risk, and the optimisation of people-oriented work systems.

“ It is necessary to understand the reality of work in order to change it. ”

– Alain Wisner, French pioneer of ergonomics 1923-2007



## WEARABLE DATA RECORDERS

Knowing exactly how people work and the hazards they face is extremely important in demanding occupations like tree falling and fire fighting. COHFE has developed a wearable system that includes video cameras, GPS tracking and a heart rate monitor which enables scientists to know where someone is, what they are doing and how the task is affecting their heart rate. By linking this information for the first time, researchers can form a detailed picture of an individual's workload, and their physical response to it.

## MUSCULOSKELETAL DISORDERS

For the past 15 years, musculoskeletal disorders have been the most prevalent and expensive injuries incurred in both the meat and seafood processing industries. COHFE researchers have identified the risk factors for musculoskeletal disorders and worked with industry to develop interventions to prevent them. The study was jointly funded by the Health Research Council, ACC, and the Department of Labour.



# COHFE SERVICES

*Staff productivity and wellbeing are closely linked - improvements in one area lead to improvements in another*

COHFE provides the expertise needed to make improvements across your organisation resulting in a more sustainable and effective workforce.

By assessing and evaluating work systems, we assist our clients to develop, implement and evaluate tailor-made solutions that optimise the way people interact with their work systems.

For almost 10 years, COHFE has provided high-quality ergonomics research, teaching and consultancy services across a wide range of industries including agriculture, meat processing, wood processing, forestry, construction and manufacturing.

COHFE's consultancy services are based on sound technical knowledge gained through years of research and hands-on experience. We can conduct small-scale assessments through to larger-scale input into the design and implementation of new systems.

“ COHFE provides the expertise needed to make improvements across your organisation resulting in a more effective workforce and sustainable work system. ”

## IMPROVING RISK AWARENESS AND FACILITATING CHANGE IN SAWMILLS

Identifying risk factors that can lead to musculoskeletal disorders in sawmilling workers, and interventions to address them, is an area of focus for COHFE scientist David Tappin.

Improvements have been achieved through industry workshops and mill-based consultation to assist people in resolving risks in their own workplaces. Viewed as highly successful by ACC and the industry, these workshops show how researchers can bring expert knowledge and deliver it directly to workers, in a format they can understand.



## COHFE EXPERTISE

COHFE specialises in conducting on-site research with people in their actual work environment rather than simulated laboratory studies.

This approach, when used in conjunction with epidemiological methods, provides solutions with face-validity and immediate relevance to industry.

### Our expertise includes:

- Work system analysis, design and evaluation
- Equipment design, usability and safety
- Consumer product assessment, design and evaluation
- Task/job safety analysis
- Physical/mental workload analysis
- Injury database management/injury epidemiology
- Inclusive design for people with disabilities
- Survey design and analysis
- Safety culture evaluation and design
- Accident analyses and intervention management

## ABOUT ERGONOMICS AND HUMAN FACTORS

Ergonomics and human factors are both terms that refer to the study of people and how they fit with all elements of the systems they interact with, both at work and at home. Ergonomics and human factors applies theory, principles, data and methods to maximise individual wellbeing and overall system performance.



## IMPROVING QUAD BIKE SAFETY IN NEW ZEALAND



COHFE scientist Dr Dave Moore is New Zealand's leading specialist on quad bike safety. His ground breaking PhD research was the first substantive study into quad bike accidents, a problem that now costs ACC \$8 million annually and leads to, on average, seven fatalities every year.

By interviewing farm workers, Dave identified more than 100 innovations where quad bike safety can be improved through modification, training, regulation or reorganisation of farm work and management. These recommendations have been incorporated into safety guidelines issued by ACC and the Agricultural Health and Safety Council.

## OUR TEAM



**Liz Ashby** - Liz has a 10-year background in physiotherapy and retrained as an ergonomist at Loughborough University in 1996. She then worked with an ergonomics consultancy in the UK before joining COHFE in 1999. Liz has worked on a variety of projects including musculoskeletal disorders in forestry, research into manual handling code of practice, dehydration and machine ergonomics.



**Dr Sophie Hide** - Sophie has worked as a consultant, educator and researcher in ergonomics. She has a Masters degree in Work Design and Ergonomics and in 2003, gained a PhD from Loughborough University, studying accident causation in the UK construction sector. Formerly an Occupational Health Nurse Sophie has combined experience of more than 18 years working in the field of occupational health and safety, and ergonomics.



**Dr Dave Moore** - Dave was a founding Director of South Pacific Ergonomics SPE, gaining extensive ergonomics research and consultancy skills across a range of industries. In 2007, he completed a PhD on all-terrain vehicle design and he currently chairs the International Ergonomics Association Technical Committee on the Primary Industries. Dave completed the Massey University Postgraduate Diploma in Ergonomics and also taught on Massey University's Ergonomics Programme.



**Richard Parker** - Richard has worked in human factors and ergonomics research since 1991. He holds a Masters degree in Ergonomics from Massey University and is currently completing a PhD. Richard's main areas of interest include uses of advanced technology to reduce injury and improve performance, task analysis, injury epidemiology and physical and organisational factors which influence injury and performance.



**David Tappin** - David gained an MSc in Ergonomics from Loughborough University and is currently completing a PhD through Massey University. David established ergonomics consultancy SPE with Dave Moore in 1993, before joining COHFE in 2000. He taught on Massey University's ergonomics programme from 1996-2005 and his most recent research was into musculoskeletal disorder prevention, and participative design in the meat and timber processing industries.

## CONTACT

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