

Human Factors and Ergonomics Society of New Zealand (HFESNZ) Core Competencies

Competency name	Definition
Absenteeism	The practice of regularly staying away from work. Also includes presenteeism, the practice of coming to work despite illness, injury, anxiety, etc., often resulting in reduced productivity.
Abuse or Harassment	<p>Abuse includes physical assault, sexual violence, emotional abuse and controlling behaviour. It is often a pattern of ongoing behaviour but may also refer to a one-off incident. Abuse can result in physical and mental health consequences for victims, perpetrators and children who are witnesses.</p> <p>Harassment is a pattern of behaviour that is directed against another person, including specified acts (for example as defined in the Harassment Act 1997) that causes the other person to fear for their safety (or that would cause a reasonable person in the circumstances to fear for their safety). In common use this can also extend to fear for the person's health.</p>
Ageing Workforce	<p>The average age of people in the New Zealand workforce is becoming older (and more female), and will stop expanding by about 2030. This will affect the labour market as ageing will affect the size, characteristics and possibly the productivity of the New Zealand workforce.</p> <p>Issues that may affect workers include vision, hearing, mobility, speed, agility, memory and strength, anxiety due to retirement. Also ageing workers can have more sleep issues if doing rotating shift work. This will have implications in the way organisations will have to operate in the future in an environment where they can support their workers, and optimise productivity.</p>
Compliance with Legislation	Working with organisations to ensure that they are aware of and take steps to comply with relevant health and safety laws and regulations.
Contractor Safety Management	The managing of outsourced work performed for an individual company. Contractor management implements a system that pre-qualifies, manages and monitors contractors' health and safety information, insurance information, training programs and specific documents that pertain to the contractor and the owner client. This is done through a process of consultation, co-ordination and co-operation between the parties.
Data Reporting and Analysis	Collecting data and/or analysing and interpreting actual health and safety performance compared with specific objectives, targets or standards.
Design for Moving and Handling of People / Animals	A systems based design approach to reduce exposure to the risks associated with the moving and handling of people or animals. This approach includes risk assessment, facility design, equipment selection, work organisation and education.
Design of Plant and Structures	The design or redesign of plant or structures that are used (or could reasonably be expected to be used) in workplaces. 'Designers' includes all PCBUS contributing to the design process. Design must consider the lifecycle of the artefact and the health and safety of all those who interact with it at each stage including during construction, use and disposal. May include specific design for accessibility.
Design of Transportation Systems	User centred road/transport system design (often via a multidisciplinary team including human factors professionals) may incorporate: road safety/transportation research; system design recommendations and system specifications; human factors and user centred design methodology; road safety assessments; evaluation of human behaviour within the context of roading systems/transport; behavioural change programmes for transportation systems; and obtaining and analysing feedback.
Design Verification	Evaluation of whether a product, service, or system meets requirements and specifications (including compliance with regulations, requirements, specifications, or imposed conditions) and that it fulfils its intended purpose. In some circumstances design verification maybe restricted to certain persons by law or regulation e.g. cranes or pressure vessel design verification. May include specific design for disability.
Facilitation of Health and Safety by Design Processes	Facilitating or coordinating health and safety by design processes for plant, substances and structures. This will usually involve coordinating the work of diverse technical specialists (potentially from multiple PCBUs) and facilitating the design process. It doesn't include design modification for people with disabilities.
Fatality	<p>Prevention or management of a fatality at work. A fatality is the permanent death of a person (i.e. it does not include instances where a person is revived).</p> <p>Fatalities can result from senescence ('old age'), injury, or illness or chronic issues. In cases where attribution is unclear a Coronial decision stands as the official cause of death, including drawing conclusions about whether a fatality was work-related.</p>
Handheld Tools / Power Tools	<p>A hand tool is any tool that is powered by hand (e.g. wrenches, pliers, cutters, striking tools, struck or hammered tools, screwdrivers, vises, clamps, snips, saws, drills and knives)</p> <p>A power tool is a tool that is actuated by an additional power source and mechanism other than solely manual labour. Commonly power tools use electric motors, internal combustion engines, steam engines, direct burning of fuel and/or propellants, or natural power sources like wind or moving water.</p> <p>PCBUs need to manage risks related to noise, machinery safety and vibration that arise from the use of handheld or power tools.</p>
Hazard or Risk Assessment	Hazard identification, risk assessment and management: A systematic process to identify hazards and assess/quantify the likelihood, consequence/severity of harm and put in place appropriate controls.
Health and Safety Advice	An opinion or recommendation about managing a business' health and/or safety risks.

Health and Safety Assessment	A health and safety assessment evaluates risk generated in the workplace or in the work process with objectives to remove, reduce and replace the source of risk with safer equipment or processes, or to lessen the risk to the health and safety of the workers This may include assessment at an organisational, business unit or site specific level.
Health and Safety Assurance	Evaluating health and safety management system effectiveness to provide confidence to management on whether the system is fit-for-purpose.
Health and Safety Benchmarking	Assessing an organisation or work group's health and safety performance against other similar work groups, organisations or industries.
Health and Safety Management Systems	Facilitating the development of a health and safety management system which includes organisational structure, planning activities, responsibilities, policy, procedures, processes and resources, for developing, implementing, reviewing and maintaining positive workplace health and safety practices.
Health and Safety Policies	Guide management in the development of a statement of intent which details their commitment to achieving the company's health and safety objectives.
Health and Safety System Performance	Measuring the effectiveness of the workplace health and safety management system.
Human Error Prevention	Human error is when something is either done/not done by a human operator, which is unintended by the operational system and can lead to safety risks. Human error prevention (human reliability assessment - HRA) does not blame the operator, but considers that actions are the product of the system via its design, environment, culture, training and other factors. HRA presumes that an error could happen to any operator.
Human Factors and Ergonomics Assessment	Analysing tasks, activities and systems to design for healthy and safe human performance in efficient and productive systems. A range of methods are used to understand cognitive, physical, social and cultural aspects of performance. This includes manual handling risk analysis; workplace, workstation and work process design; product usability; reducing human error; design of complex systems; and human/computer interaction.
Hydration	Hydration refers to the amount of water in the body. As humans are approximately 60% water and rely on being well-hydrated for optimal performance, being under-hydrated can negatively affect both work performance and health.
Individual Computer Workstation Set-up and Advice	Assessing and providing education/guidance on workstation equipment and its adjustment, and on work methods including break practices and exercise to maintain health, comfort and performance at work a.k.a 'workstation audits or assessments'.
Job Demand Analysis / Task Analysis	Evaluating task or job requirements to assess the physical, functional and/or cognitive demands on workers. This can be used as a pre-requisite for developing a physical, functional or cognitive capacity evaluation or to set baseline requirements for a task/job.
Machinery Health and Safety	Advice relating to the safe and healthy design, operation and/or maintenance of machinery.
Manual Handling	Manual handling is any activity requiring a person to interact with their environment and use any part of their muscles or skeletal system to lift, lower, push, pull, carry, throw, move, restrain or hold any animate or inanimate object.
Mental Overload / Underload	Consideration of the overall mental load of operators performing tasks. Mental workload includes expertise, memory, attention, situation awareness, and social and organisational factors as well as other internal and external factors. Work performance may be impacted by both mental overload and underload.
Mobile Plant or Machinery	Plant is machinery used in an industrial or manufacturing process. Mobile plant refers to moving vehicles and equipment, which have the potential to cause serious injury or kill someone by striking them or colliding with other vehicles or equipment.
Moving and Handling (Manual Handling) Training	Specialist advice and training in lifting and handling, including risk assessment, specific to the nature of the work and workers.
Moving and Handling of People and/or Animals Training	Specialist advice and training in handling people or animals, including risk assessment and use of equipment, specific to the nature of the work and workers.
Repetitive Tasks	Activities that require the same physical actions to be performed repeatedly may expose workers to greater injury risk than from one-off tasks due to demands placed on the muscles, other soft tissues and the skeletal system. Consideration should be given to task variation, work-rest routines, and individual strength and fitness.
Risk Management Systems	Providing advice about systems that enable the setting of priorities based on risk assessment, establishing efficient and consistent risk reduction policies, evaluating the range of risk reduction alternatives, identifying cost-effective risk reduction measures, and identifying risk mitigation and contingency measures.
Sedentary Work	Non physically-demanding work activities (usually in sitting), that do not require large range changes of position or place much cardiovascular load on the body.
Selection and Use of Lifting Equipment for Material Handling	Advice on selection and use of any appliance used for lifting or moving material, (eg lifting beams or stillages)
Selection and Use of Lifting Equipment for People Handling	Advice on selection and use of any appliance used for lifting or moving people (eg patient handling).
Slips, Trips and Falls	Slips are loss of traction events (usually with the feet); trips are when a step is disrupted by contact with an object. Both slips and trips may result in a fall, though falls may also occur for other reasons. Falls are when a loss of balance or other event occurs, causing the body to fall due to gravity onto a lower surface.
Using / Operating Machinery	The use and operation of powered tools, machines or vehicles, that may be remote (operator does not sit in the cab/vehicle or hold the tool/machine) or directly controlled (operator is in the immediate vicinity of the tool/vehicle/machine).
Violence in the Workplace	The provision of advice in the management of workplace risks associated with people who use, or threaten to use, violence, including use of weapons or firearms, intimidation, violent assaults, demanding with menaces and robbery in a workplace. e.g. Assault/robbery, armed offenders. Also see Bullying, and Abuse or Harassment.

Wellbeing and Work-life Balance	<p>Wellbeing, welfare or wellness is a general term for the condition of an individual or group, for example their social, economic, psychological, spiritual or medical state. A high level of wellbeing means in some sense the individual or group's condition is positive, while low wellbeing is associated with negative happenings.</p> <p>Work-life balance is a concept including proper prioritizing between "work" (career and ambition) and "lifestyle" (health, pleasure, leisure, family and spiritual development/meditation).</p>
Wellness	Wellness is the optimal state of health of individuals and groups. There are two focal concerns: the realisation of the fullest potential of an individual physically, psychologically, socially, spiritually and economically, and the fulfilment of one's role expectations in the family, community, place of worship, workplace and other settings.
Worker Engagement, Participation and Representation	Working with organisations to help them involve their workers in workplace health and safety.
Worker Performance	Human performance is dynamic, a combination of physical and mental functions upon which external and internal influences may impact. Mental workload includes the notions of expertise, memory, attention, situation awareness, and social and organisational factors, whilst physical workload includes the loads handled, distance travelled, speed of performance and many other factors. Human performance is often defined in terms of efficiency, capability and limitations, but may be measured in many ways.
Working in and Around Vehicles	Driver-vehicle-pedestrian interactions form a complex system with many causal factors that can contribute to accidents. The human factors that require consideration include both <i>physiological</i> - the nervous system, vision, hearing, stability sensations, other senses (e.g. haptic, touch and smell) and <i>modifiers</i> (e.g. fatigue, drugs) as well as <i>psychological</i> factors - such as perception, expectations, motivation, intelligence, learning/experience, emotion, maturity, conditioning and habits. Human Factors considerations need to be assessed in conjunction with vehicle and environment factors as these impact on human performance.
Workplace and Equipment Design	The design of workplaces or work equipment to optimise health and safety and productivity.
Workplace Assessments - General	A scoping assessment to identify when to bring in a specialist.
Workplace Assessments - Specialist	An in-depth assessment of worker, work tasks, techniques, workload, equipment and environment. The scope and nature of a workplace assessment can vary considerably depending on the needs of the business.
Workplace Assessments - Specialist - Lighting	The provision of specialist advice regarding lighting, and/or the measurement of lighting to ascertain the quantity and quality of light to fulfil three functions: ensure the safety of people, facilitate the performance of the visual tasks and aid the creation of the appropriate visual environment. A full light survey can identify defects in the lighting system and the potential for short or long term health problems.
Workplace Assessments - Specialist - Temperature / Thermal Environment	The provision of specialist advice regarding work environment temperature, and/or the measurement of the impact of working in hot and cold environments where exposure to extreme heat or cold can result in illness, injury and, in extreme cases, death. This can include measurements for heat stress/strain or cold stressors.
Workplace Design	The designing of workplace physical environments, work processes, work methods, and tools/equipment/plant to maximise productivity and reduce injury and health risks. (See "Work system design" for more complex requirements).
Workstation Assessment	An in-depth assessment of the immediate area accessed by a worker when performing a specific task or job cycle.
Work Related Vehicle Accidents	Driver-vehicle-pedestrian interactions form a complex system with many causal factors that can contribute to accidents. The human factors that require consideration include both <i>physiological</i> - the nervous system, vision, hearing, stability sensations, other senses (e.g. haptic, touch and smell) and <i>modifiers</i> (e.g. fatigue, drugs) as well as <i>psychological</i> factors - such as perception, expectations, motivation, intelligence, learning/experience, emotion, maturity, conditioning and habits. Human Factors considerations need to be assessed in conjunction with vehicle and environment factors as these impact on human performance.