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The Human Factors

In

Safety & Performance



psyfactors

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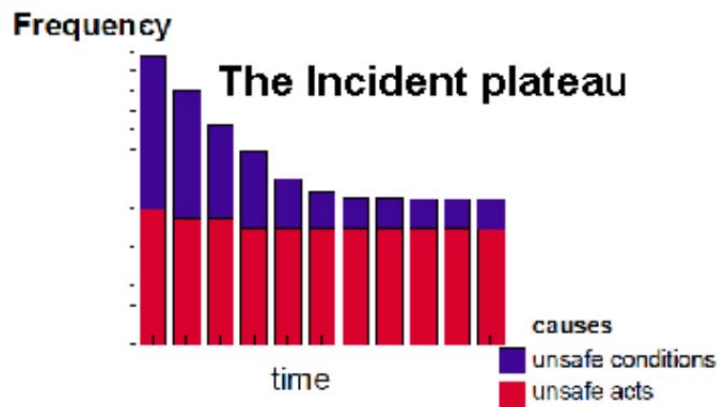


Why

they can't be like us, perfectly safe in every way!

Have you ever wondered what is keeping the **incident plateau** up?

Across all industries the ratio of systems failures to human error has reversed from what it was 25 years ago. Unsafe conditions have given way to conversations about how unsafe acts outweigh all other causes. Safety specialists will now quote that 80%+ of all incidents are due to human error. In fact they have always been there in that ratio. Like icebergs just below the surface.



A large scale survey and analysis of 54,168 persons from 1040 industrial, mining, construction and transport organisations in 2014 from the Western Australia region showed the following figures.

Capacity for	% of the 54,168 persons reporting poor capacity
Attention recovery - Resilience	24%
Mental Alertness	27%
Managing Fatigue	48%
Perception & Comprehension of risk	41%

The numbers show that on the SSA test of adequacy with respect to the four risk measures, 15.7% of the total sample of 54168 persons tested were significantly below the minimum overall safe level of functioning. Specific deficits were indicated by 24% reporting poor resilience and recovery of attention, 27% indicated a high degree of cognitive failure and low levels of mental alertness, 48% indicated poor self-regulation and management of their fatigue, further verified by 41% reporting poor performance with respect to perception of risk.

**With more than 80% of injury and error in operations due to human factors
what are you doing to reduce the risk?**



Human Factors Consultants

SSA for INDUSTRIAL ENVIRONMENTS



SSA INV (Supervisors) v3.0 test is a 120 question test of abilities and perceptions relative to the performance required of a fully functioning professional with responsibility for large scale assets. This instrument is used primarily for assessing the capacity for the management of safe behaviour at command or professional advisory level.

Whereas the SSA test typically addresses a person's non technical safety skills through their ability to see and understand external risks, maintain attention of surrounding events, function with coordinated and reasoned action and to generally remain vigilant of any human factors degrading performance, the focus of the managers and supervisors test is in achieving safety through others through understanding of human factors and effective crew resource management principles



The SSA INV (PRECISION MANUFACTURING) V1.1b test is a 120 question test of ability to perform at the level of a well-functioning and normal adolescent or adult, relative to the performance required of an operator engaged in precision biochemical, pharmaceuticals and electronics manufacturing.

This instrument is used primarily for assessing mental functioning and the capacity for sustained safe behaviour and performance where critical processes are involved.



The SSA (General Industrial) v5.0 test is a 109 question test of ability to perform at the level of a well-functioning and normal adolescent or adult, relative to the alert performance required in general manufacturing processes and machine operators.

The test is the successor to the SSA General Industrial V3.0b with improved scales and reliabilities. This instrument is used primarily for assessing mental functioning and basic capacity for recovery and maintenance of attention for safe behaviour.

SSA for TRANSPORT ENVIRONMENTS



The SSA INV (ROAD TRANSPORT) v4.0s is a 115 question test incorporating psychological state, safety competencies and attitudes to safety. Use this for assessing the probability of lapses in mindfulness, attention and general safe behaviour in normal drivers on long haul operations. The SSA transport test addresses the person's non technical safety skills through their ability to see and understand external risks, maintain and recover their attention of surrounding events, function with coordinated and reasoned action and to generally remain vigilant of any human factors degrading performance.



The SSA Inventory (Mobile Equipment Operator) v2.0 test is a 105 question test of ability to perform at the level of a well-functioning and normal adolescent or adult, relative to the alert performance required of a mobile equipment operator and driver operating where spatial awareness and judgment are important.

This instrument is used primarily for assessing mental functioning and basic capacity for safe behaviour ultimately as an operator of more complex mobile equipment or those operating in tight confines such as forklifts, haul trucks, trains, buses, ship loaders and building cranes.



SSA Inv (Equipment Maintenance) V1.1c test is a 115 question test of ability to perform relative to that required of a technician engaged in industrial and mining maintenance and repair. This instrument is used primarily for assessing mental functioning and the capacity for sustained safe behaviour and performance with an emphasis on attention to detail. The SSA test addresses the person's non technical self-management and safety skills through their ability to see and understand external risks, maintain attention of surrounding events, function with coordinated and reasoned action.



The SSA Inventory (Public Transport) v2.1a test is a 105 question test of ability to perform at the level of a well-functioning adult, relative to the alert performance required of a transport operator and driver.

This instrument is used primarily for assessing mental functioning and basic capacity for safe behaviour ultimately as an operator/driver of trains, buses and light rail.



SSA Inv (Remote Console Operator) V5.0a test is a 100 question test of ability to perform relative to the sustained performance required of a remote console controller in traffic management and chemplant operations.

This instrument is used primarily for assessing mental functioning and basic capacity for safe behaviour and timely responsiveness where quick and accurate decision making are required to protect people and high value assets in a fast changing or critical environment.

SSA for BUILDING & CONSTRUCTION



The SSA INV (CIVIL CONSTRUCTION) V5 is a 115 question test incorporating mental state, safety competencies and preferred behaviours with respect to safety. Use this for assessing the probability of lapses in mindfulness and safe behaviour in the normal functioning of people working in operational roles in civil construction environments. The SSA test addresses the person's non technical safety skills through their ability to see and understand external risks, maintain attention of surrounding events, function with coordinated and reasoned action and to generally remain vigilant of any human factors degrading performance.



The SSA Inventory (Mobile Equipment Operator) Construction v2.0 test is a 105 question test of ability to perform at the level of a well-functioning and alert adult, relative to the alert performance required of a general mobile equipment operator or crane driver operating where spatial awareness and judgment are important.

This instrument is used primarily for assessing mental functioning and basic capacity for safe behaviour and judgement operating at altitude as an operator of complex mobile or tower lifting equipment operating in tight confines such as for hi rise building or general construction.



The SSA INV (Supervisors) v3.0pro test is a 136 question test of abilities and perceptions relative to the performance required of a fully functioning supervisor, manager or professional with responsibility for large scale assets. This instrument is used primarily for assessing the capacity for the management of safe behaviour at command or professional advisory level. Whereas the SSA test typically addresses a person's non technical safety skills through their ability to see and understand external risks, maintain attention of surrounding events, function with coordinated and reasoned action and to generally remain vigilant of any human factors degrading performance, the focus of the managers and supervisors test is in achieving safety through others through understanding of human factors and effective crew resource management principles.

SSA for HEALTHCARE ENVIRONMENTS



SSA Inv (Healthcare Supervisor) V3.0b A 136 question test of abilities and perceptions relative to the performance required of a fully functioning supervisor with responsibility for healthcare teams and assets. This instrument is used primarily for assessing the capacity for positive self-regulation and management of the safety of patients, residents and staff.

The SSA test addresses the person's non-technical and positive self-regulation skills, to ensure the ability to see and understand external risks, maintain attention of surrounding events, function with coordinated and reasoned action, to generally remain vigilant anticipating the reduction of performance in self and others due to human factors..



-**The SSA Inventory (Hospital & Medical) V5.0a** is a 120 question survey of personal skills and characteristic behaviour, measuring the potential for loss of situational awareness and compliance with mandatory protocols, through a breakdown in attention and responsiveness working in both emergency and ward environments.

The survey is designed for hospital nursing and allied professionals where risks exist with respect to preventable infection control, misidentification and other adverse events.



The SSA (AGED CARE & DISABILITY) SCREENING INVENTORY V5.0 is an 83 question pre-interview screen for personnel engaged in aged care and disability care activities. The test comprises critical attributes, non-technical skills and behaviours essential for adequate functioning in maintaining satisfactory attention and positive response to those who are vulnerable and cannot care for themselves. The test scans for potential behaviours leading to abuse and neglect.



The SSA SSA Inv (COMMUNITY NURSING) V2.0a is a 115 question survey of personal skills and characteristic behaviour, measuring the potential for loss of situational awareness and compliance with mandatory protocols, loss of caring and concern due to overload and intolerance of others resulting in a breakdown in essential vigilance, attention and responsiveness. The survey is designed for community nursing and allied professionals where risks exist with respect to infection control, mis-identification, adverse personal or negligent events.



The SSA INV (Hospital Admin & Patient Support) v1.1a is an 85 question test of ability to maintain attention and awareness, recover from adverse events to perform at the level of a well-functioning and normal adult. Use this for assessing the capacity for safe behaviour in general utilities roles in low personal risk environments, or in workplace induction for those with little work experience or safety training.

SSA for AVIATION ENVIRONMENTS



The **SSA INV (CABIN CREW MANAGER) V2.0** is a 140 question test of abilities and perceptions relative to the performance required of a fully functioning professional cabin crew manager with responsibility for passenger management. Whilst the test addresses similar aspects to the general supervisors and manager test, this instrument emphasises the person's non-technical safety skills through their ability to see and understand external risks, maintain attention of surrounding events, function with coordinated and reasoned action and to generally remain vigilant of any system or passenger emergencies and staff human factors performance in a tight highly contained personal space.



The **SSA INV (Cabin Crew) v5.0** test is SSA AVIATION (Cabin Crew) v5.0 is an 108 question survey of the capacity to maintain presence of mind, recover rapidly from adverse events, to competently invoke emergency procedures and manage passengers whilst inflight. This instrument is used primarily for assessing mental functioning and basic capacity for recovery and maintenance of attention for safe behaviour relative to systems malfunctions or passengers issues and stresses.



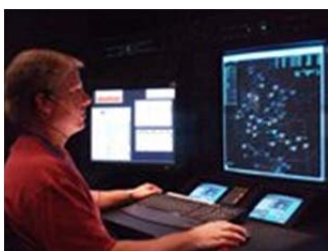
SSA Inv (Aviation Maintenance) V1.1b test is a 120 question test of ability to perform at the level of a well-functioning and normal adolescent or adult, relative to the performance required of a technician engaged in precision aviation maintenance and repair. This instrument is used primarily for assessing mental functioning and the capacity for sustained safe behaviour and performance. The SSA test addresses the person's non-technical self-management and safety skills through their ability to see and understand external risks, maintain attention of surrounding events, function with coordinated and reasoned action and to generally remain vigilant of any human factors elements degrading performance.



The **SSA AVIATION (Trainee Pilot) v4.0b** test is a 100 question test of ability to perform at the level of a well-functioning and normal pilot in training, relative to the growing performance required of a professional pilot. This instrument is used primarily for assessing mental functioning and basic capacity for safe behaviour ultimately as pilot in command with responsibility for people and high value assets. The SSA test addresses the person's non-technical safety skills through their ability to see and understand external risks, maintain attention of surrounding events, function with coordinated and reasoned action as ultimately required for professional pilots.



The **SSA INV (PROFESSIONAL PILOT - INSTRUCTOR) V2.0a** is an 162 question test of abilities and perceptions relative to the performance required of a fully functioning professional Pilot or Instructor with responsibility for large scale assets or trainee pilots under instruction. This instrument is used primarily for assessing the capacity for the management of situational awareness leading to safe behaviour at command level, in self and others. The test addresses the person's non-technical safety skills through their ability to see and understand external risks, maintain attention of surrounding events, function with coordinated and reasoned action and to generally remain vigilant of any human factors degrading performance, in addition to positive crew management skills.



The SSA AVIATION (ATC) v4.0b test is a 100 question test of ability to perform at the level of a well-functioning and normal person, relative to the vigilant and timely performance required of a professional controller. This instrument is used primarily for assessing mental functioning and basic capacity for safe behaviour and timely responsiveness where responsibility for people and high value assets are a constant part of the role and emphasises the need for sustained attention and responsiveness to changing circumstances.



The SSA Inventory (Mobile Equipment Operator) v2.0 test is a 105 question test of ability to perform at the level of a well-functioning and normal adolescent or adult, relative to the alert performance required of a mobile equipment or driver in airfield and baggage operations.

This instrument is used primarily for assessing mental functioning and basic capacity for safe behaviour and consistency of performance as an operator of equipment and processes that require good attention and coordination skills for movement between high value assets.



The SSA Inv (AVIATION & MARITIME SECURITY) v5.0 test is a 105 question test of ability to perform at the level of a well-functioning and normal adult, relative to the performance required of a security professional.

This instrument is used primarily for assessing mental functioning and basic capacity for safe behaviour, alertness, vigilance and attention recovery skills amongst candidates applying for sensitive security position

Selection Development & Diagnostics for all industries



The SSA INV (APPRENTICE) v1.3 is a 75 question test of ability to perform safely at the level of a normal adult.

This instrument is used for assessing mental functioning and basic capacity for safe behaviour in personnel with little workplace experience or safety training such as apprentices and also for assessing functional ability of injured workers on return to work, in hazardous environs,.



The SSA INV (GRADUATES) v3.1a test is a 105 question test of ability to perform at the level of a well-functioning and normal adolescent or adult, relative to the growing performance required of a professional in training.

This instrument is used primarily for assessing mental functioning and basic capacity for safe behaviour amongst candidates with limited work experience.



The SSA INV (Admin & Utilities) v1.1a is an 85 question test of ability to maintain attention and awareness, recover from adverse events to perform at the level of a well-functioning and normal adult. Use this for assessing the capacity for safe behaviour in general utilities roles in low personal risk environments, or in workplace induction for those with little work experience or safety training.



SSA Inventory Version V5.0 (R) (remedial) is a 44 item short test focused on the key functional abilities related to the maintenance and recovery of attention, perception, judgment and responses required to exhibit and maintain situational safety awareness in the workplace.

The test is designed to be used as a 'next-day' retest instrument



The SSA Resilience Test

(SSA Extension) is a 66 item diagnostic instrument that assesses an individual's adequacy of managing stress reactions, fatigue and responsiveness relevant to the maintenance of performance and situational safety awareness in the workplace.

The results in this test include a comparison with the measure of subjective mental load.



The WORKPLACE CLIMATE SURVEY (General Industrial) (Bullying & Harassment) is a 75 item diagnostic instrument that assesses an individual's experience of destructive and dysfunctional behaviour being levelled at them. The survey addresses the reasons for breakdown in interpersonal relationships, role performance and situational safety awareness in the workplace.



The SSA INV (REHAB & RTW) V5.0a instrument is a 64 item test focused on the key behavioural and functional abilities required for safety at work.

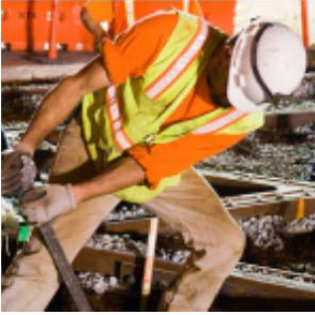
The test measures the capacity for maintenance and recovery of attention, perception, judgment and timely responsiveness required to maintain situational safety awareness in the workplace. The test has application in assessing the readiness of workers to return to work and in assessing candidates for their fitness to work in a safety critical environment.



The HFA Plus+ survey is a Human Factors Analysis and Classification model which is designed to identify the human contribution to incidents. The tool is augmented with a 'Workload' score as an aid to understanding the potential severity and likely reduction in safe performance in specific roles.

The inclusion of the differentially assessed workload measure assists in dimensioning the human variable in an investigation process or as the target for training and prevention efforts. The HFA Plus+ is a comprehensive human error framework for rapid risk analysis through 12 major categories of role related human failure and limitations in safety performance and compares with the Reason model of latent and precursor attributes and the HFACS taxonomy of errors and violations by Weigmann and Shappell

SSA for MINING ENVIRONMENTS



The SSA INVENTORY (MINING) v4.1b is a 115 question test incorporating mental state, safety competencies and preferred behaviours with respect to safety. Used for assessing the probability of lapses in mindfulness and safe behaviour in the normal functioning of people working in operational roles in mining and refining environments.

The SSA test addresses the person's non-technical safety skills through their ability to see and understand external risks, maintain attention of surrounding events, function with coordinated and reasoned action and to generally remain vigilant of any personal factors degrading own performance.



The SSA Inventory (Mobile Equipment Operator Mining) v2.1a test is a 105 question test of ability to perform at the level of a well-functioning and normal adolescent or adult, relative to the alert performance required of a haul truck and crane driver in mining operations. This instrument is used primarily for assessing mental functioning and basic capacity for safe behaviour ultimately as an operator of more complex mobile equipment such as forklifts, haul trucks, trains, buses, ship loaders and building cranes.



SSA Inv (Equipment Maintenance) V1.1c test is a 115 question test of ability to perform relative to that required of a technician engaged in industrial and mining maintenance and repair. This instrument is used primarily for assessing mental functioning and the capacity for sustained safe behaviour and performance with an emphasis on attention to detail.

The SSA test addresses the person's non technical self-management and safety skills through their ability to see and understand external risks, maintain attention of surrounding events, function with coordinated and reasoned action.



FIFO Survey a test for stability of tenure and behaviour in remote locations.

The SSA (FIFO) test is a version of the SSA Mining V4.1 test. The FIFO extension is an 85 item diagnostic instrument that assesses an individual's commitment and adequacy of managing the stress of prolonged absence from family and the difficulty of managing crisis from long distance as a fly in – fly out worker. The arduousness of constant shift work, boredom and accumulation of fatigue.



The SSA INV (Supervisors) v3.0 test is a 120 question test of abilities and perceptions relative to the performance required of a fully functioning supervisor, manager or professional with responsibility for large scale assets.

This instrument is used primarily for assessing the capacity for the management of safe behaviour at command or professional advisory level. The SSA test addresses a person's non technical safety skills through their ability to see and understand external risks, maintain attention of surrounding events, function with coordinated and reasoned action and to generally remain vigilant of any human factors degrading performance. The focus of the supervisors test is in achieving safety through others through understanding of human factors and effective team resource management principles.

SSA

Report options

Reports on individuals and groups

Short reports	Summary of results, graphical comparison against criteria, strengths and weaknesses, test or survey structure. Suitable for advisory purposes.
Full Reports	Extended results including summary, graphical comparison against criteria, strengths and weaknesses, assisted interview guide with prompts and key behaviours, full scale performance results, test or survey structure.
Training needs	Summary key training needs, graphical comparison of results against benchmark, sample and population means. Results narrative and advisory.
Group reports	Aggregated results showing description and result comparison against sample, population and benchmark criteria.
Ranked tables	Group table of ranked raw scores and index showing percentage achieved criteria for each scale.

Analytics Reports on test/survey administration

Group statistics tables	Full descriptive stats including means, deviations, error, and item performance by time.
Graphical results	Line graph of result against criteria, Graph of Z scores all scales.
Comparison of groups	Comparison of selected groups on selected criteria on line graph of results
Correlations of results	Table of inter-correlations showing results probability and certainty.

Pricing by report set:

- Standard Set: includes – The test, Short report, Ranked comparison tables, Verification certificate.
- Recruiter Set: includes the standard options plus the Full interviewing report, Training needs.
- Administrators' Set: performance report includes Group narrative reports, Full graphical and tabular analysis outputs with correlation tables.