


**Performance
Under
Demand**

**Introducing
the
Cognitive Gym**



Executive Summary

The international “Cognitive Fitness Movement” has revolutionised thinking about the role of psychological preparation sustaining performance in “under demand” operating environments. Significant amounts of time and resources have been invested over decades to train physical and technical skills. Research evidence is now opening an opportunity for a similar investment in systematic cognitive skills training.

The Cognitive Fitness Framework (CF2) was developed through applied research conducted by the Australian Defence Organisation [1]. It has now evolved into an expert consensus informed by cutting-edge neuroscience evidence, the Delphi consensus-building methodology and extensive international practitioner experience [2].

The Delphi paradigm has produced an international transdisciplinary consensus on the psychological and neuro-cognitive drivers of performance under demand, informing the content and periodisation of cognitive fitness training. A practical application of this breakthrough research has now been implemented in the Cognitive Gym training system [3] which offers a new evidence-based solution for organisations and individuals challenged to perform effectively under pressure. This application has been developed by a team of senior experts from The College of Sport & Exercise Psychologists of the Australian Psychological Society in partnership with Defence Science & Technology Group.

Cognitive Gym is the future of mental training aimed at building readiness for real-time performance under demand, together with the resilience to sustain this performance and overall functional capacity across the lifespan. The Cognitive Gym thus offers a disruptive change to learning and development programs.

It also bridges the gap between the traditionally disconnected fields of psychological skills training and mental health interventions. Cognitive Gym works at a more granular level of subtending skills and primary capacities, compared to the traditional psychological skills training. Cognitive Gym training also reduces the risks to mental health by proactively developing cognitive skills and capacities that can be used throughout life as preventative measures, distinct from the more reactive treatment approaches.

The design of the Cognitive Gym psychological training is informed by the well-established principles and protocols of strength and conditioning training. The CF2 model brings Gold Standard principles of instructional design to cognitive training. CF2 technologies inform the protocols of the Cognitive Gym, including the periodisation of cognitive training. The Cognitive Gym employs a “sets & reps” approach to mental training that resonates with most training audiences.

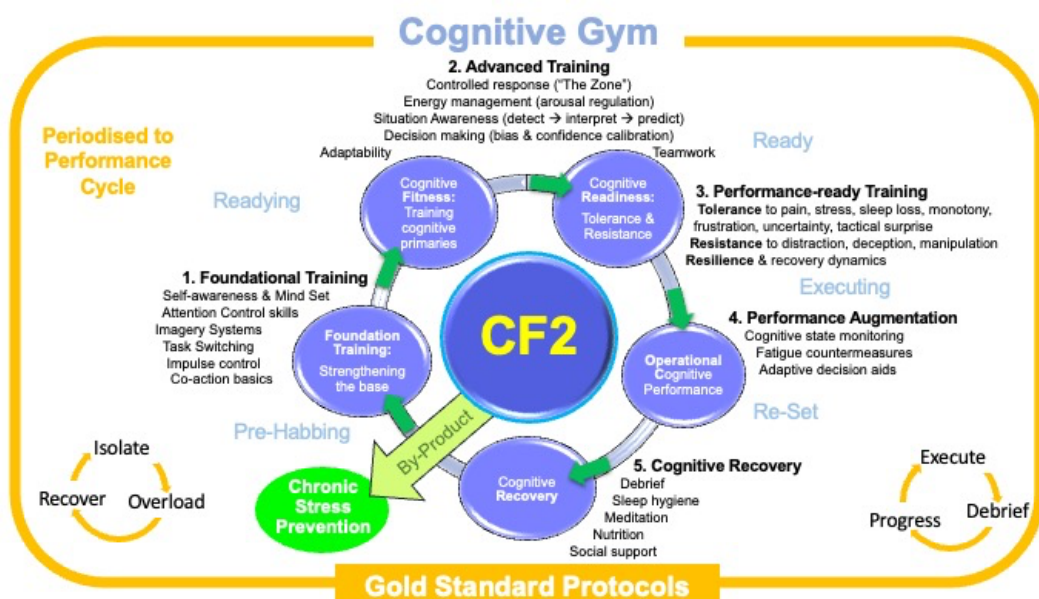
The Manual will introduce the Cognitive Gym Core training package and details its components of daily drill work, mindset education, and associated customisable digital assets. Cognitive Gym Core provides a kernel from which tailored training programs can be developed that address specific challenges faced by performers in varying industries, teams, and operating environments.

An integral part of the Cognitive Gym is assessment of training gains, including improvements in cognitive functioning. The Cognitive Gym provides a suite of optional metrics to assess the Return on Investment (ROI) of the program for your team. This Cognitive Gym Core package described in this Manual offers a starting point for a tailored Cognitive Gym solution that meets your organisation’s goals and ROI measures.



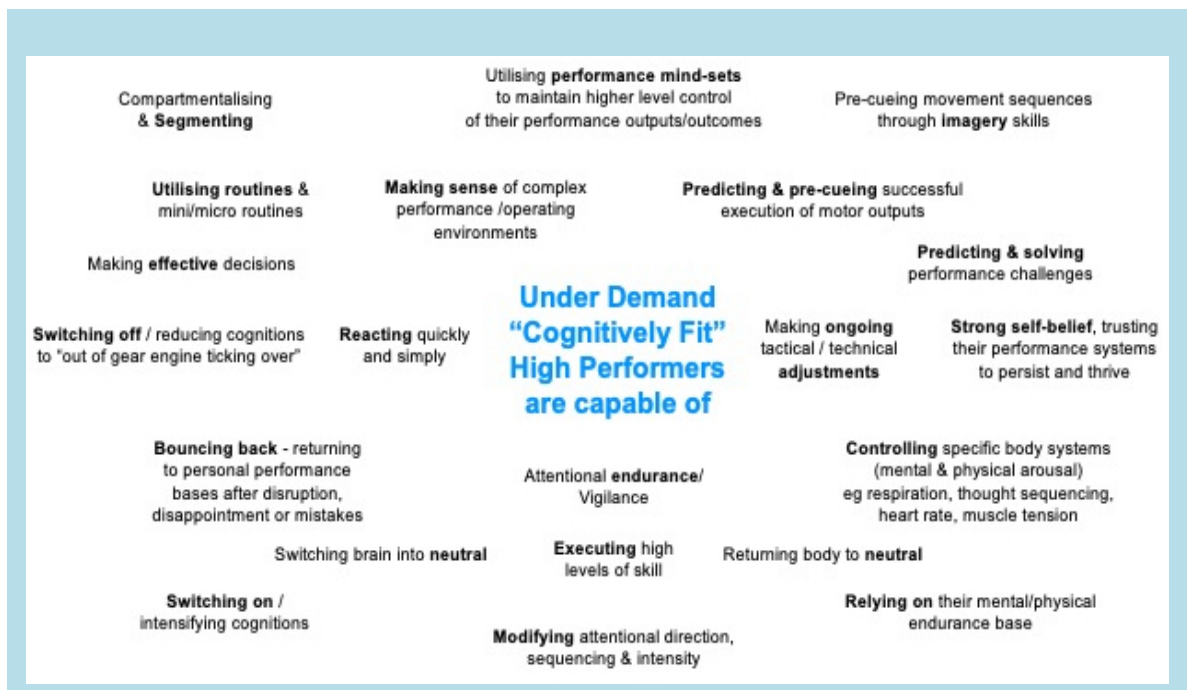
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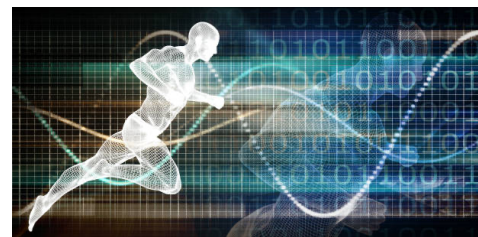


1. A Case for the Concept of Cognitive Fitness

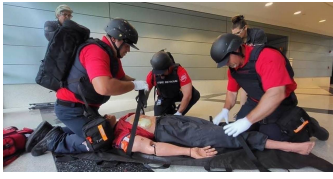
What it takes from a psychological perspective to consistently produce and sustain high-performance under pressure is remarkably common across many occupations, including sport, emergency services, policing, medicine, performing arts and the military. With increasing media coverage of the *psychological* aspects of performance in elite sport, people who work in these occupations are now aware that they need to attend to all aspects of the technical drivers of high-performance. What is still lacking, however, is a clear understanding of what the cognitive or mental skill components of the essential technical drivers are and how they can be developed.



If we make a comparison with physical fitness, the knowledge gap becomes obvious. Athletes in every sport including e-sports understand the importance of being physically fit in order to compete at the highest levels, and could if asked, describe what makes up physical fitness. This would include factors such as: **strength, power, agility, speed, flexibility, balance, and cardiovascular endurance**. This knowledge base is possible because over the years, sport scientists, exercise physiologists, and strength and conditioning coaches have identified the components of physical fitness, learned how to measure them, and developed methods to train the critical components.



Facilitating Performance Under Demand



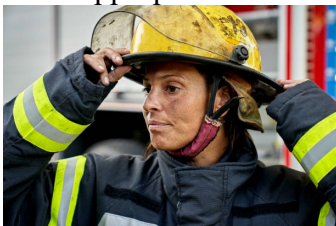
The identification and measurement steps formed a crucial pathway to the training techniques. Traditional high-performance preparation typically involves a great deal of training time devoted to technical skills and strategy development alongside elite physical preparation. Many hours are spent on the training track or ground, with much repetition and simulation under practice pressure in order to ensure that high-performance quality is maintained in the face of fatigue, internal and external pressure and distraction. These skill training protocols have been informed by the evidence from the research and literature on motor skill acquisition and learning theory.



However, even cursory observation of highly trained individuals and teams in high-performance environments will highlight performance errors occurring under fatigue, pressure and distraction conditions. The often-deployed coach/trainer response has been to return to the training environment and practice more and more repetitions and simulations in the hope that skilled execution will be more successful next time.



What is often ignored or poorly understood in these traditional high-performance settings is the importance of training “cognitive fitness” (CF) in a systematic and evidence-based way. The benefit of years of traditional training, practice and competition experience can quickly dissipate if the individual is unable to maintain composure (self-regulation), focus concentration, control thoughts and self-talk, and make appropriate and effective decisions under pressure.



Obvious threats to these processes include illness and injury, fatigue, inappropriate motivation, perceived pressure, distraction and “crooked thinking”. A more fundamental problem is that individuals have not trained these cognitive skills to the level where they can be sustained under the high-pressure environments encountered in elite sport and some occupational settings. They haven’t taken this step because coaches, trainers, and the individuals themselves have never really understood what a training program in cognitive skills might look like.

The concept of Cognitive Fitness has been developed to help demystify the key psychological aspects of high-performance preparation and execution. Like the components of physical fitness, all aspects of cognitive fitness can be improved with deliberate and structured practice utilising evidence based and competition tested packages of training sequences presented as cognitive training drills.



Facilitating Performance Under Demand

These drill sequences enhance a performer's capability of remaining calm, focused and flexible under high demand conditions.

The preliminary requirements for effective cognitive training are:

- an understanding of the key components of cognitive fitness, and
- an evidence-based framework upon which to develop relevant knowledge and training drills for high-performance individuals and teams.



This document introduces cognitive fitness training for performers under demand, their coaches, trainers and stakeholders. It is the model for a bespoke manual and associated program addressing your specific cognitive training needs. The core of such a manual is focused on:

1. Establishing the concept of Cognitive Fitness (CF) as an integrated and essential component of high-performance preparation and execution
2. Providing a Cognitive Fitness Framework (CF2) that guides systematic and periodized phases for training CF
3. The components of evidence-based CF training sequences and drills designed to assist performers under demand
4. Developing the capacity to remain *calm*, *focused* and *flexible* when faced with challenges, distraction and adversity



Your Manual presents a systematic approach to the development of cognitive practice routines using the notion of a ***Cognitive Gym***.

Underpinning the Cognitive Gym are the three key pillars of an effective high-performance mindset :

1. *Self-regulation skills* to cultivate composure and calmness
2. *Attention control* knowledge and skills to stay focused on the right thing at the right time
3. *Mental agility* to be flexible and adapt to dynamic and variable performance demands

These core skill sets are underpinned by trainable cognitive primaries. This training is informed by contemporary neuroscience research.

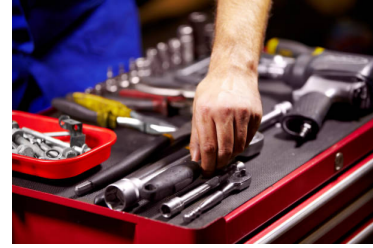


Once the specific cognitive primaries are identified, developing cognitive fitness requires investment of time and deliberate practice. Return on investment is optimised by tracking the progress of the cognitive fitness training outcomes (see section 5) and informing decisions about any required changes/adjustments to the training program.



2. The Cognitive Fitness Framework (CF2)

The Cognitive Fitness Framework (CF2) offers a systematic, evidence-based toolkit to facilitate performance under demand in business, high-performance sport, the performing arts, military, law enforcement, tests and exams, medical care teams, emergency medicine, paramedics and other first responders.



The CF2 is a framework that connects the mental health professions focused on psychological deficit and dysfunction, and the human performance field focused on improving and optimizing the psychological functioning of healthy individuals. This connection offers a realistic perspective of developing synergies between clinical and performance applications, focused on optimising human behaviour across a full spectrum of functional capacity.



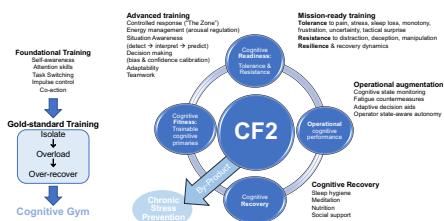
The recently established expert consensus (“Delphi”) on the core elements of CF (Albertella et al, 2022) has integrated existing knowledge on the cognitive drivers that enable performance under pressure.

This broad consensus confirms the cognitive primaries underpinning the ability to perform under demand.

The same CF elements have been linked to protective factors in mental health. For example, similar to aerobic fitness mitigating cardio-vascular risk, attentional control capacity can reduce the risk of anxiety disorders (Shi, Sharpe & Abbott, 2019; Segal et al, 2020), with a growing number of similar connections emerging for depression (Price & Duman, 2020).

The original CF2 model (Aidman, 2020) has evolved (as depicted in Fig. 2 below) to provide a clearer picture of how training in the cognitive gym can be periodised across the various phases of performance under demand:

1. *Foundational training knowledge and drills*
2. *Advanced training drills*
3. *Performance readiness/mission or campaign-ready training*
4. *Performance/operational augmentation*
5. *Cognitive recovery*



Facilitating Performance Under Demand

CF2-based training includes ‘gold standard’ protocols typically seen in strength and conditioning such as: *isolate, overload and recover*, and *execute, measure, debrief and progress*.

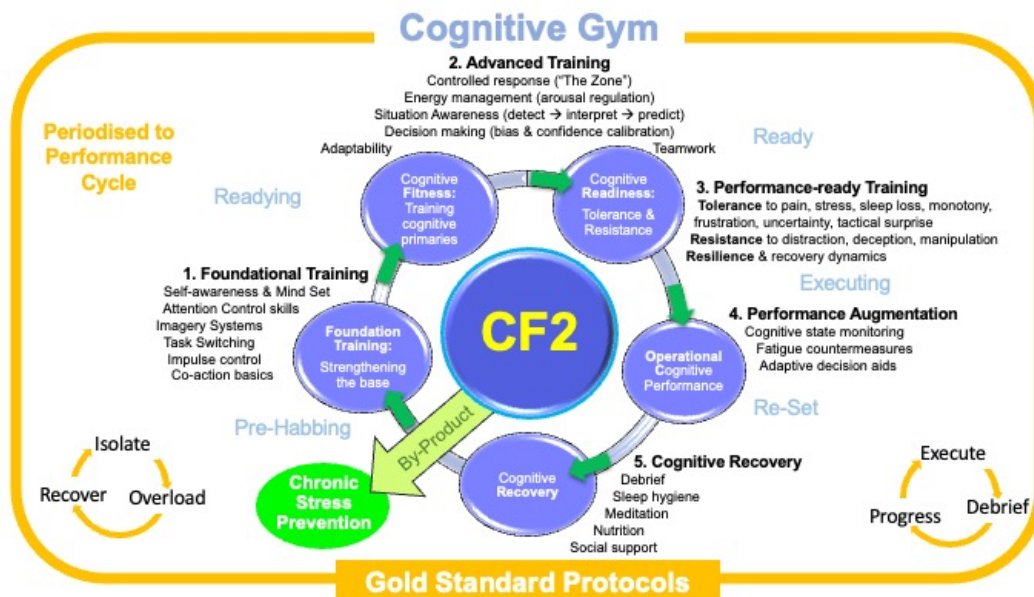


Figure 2 – 2nd generation of the CF2 model

A major feature of the model is the transition through stages. Training candidates can enter the phases of the model at any point of their preparation and performance cycle. The multiple entry points are a significant feature of the training model.

Moving from foundation training on the left, it progresses through advanced training, mission-ready training, operational augmentation, then on to a recovery phase. The original version of the model was produced for a military population.

This version has been adapted for other performance under demand populations. A soldier, for example, would think about preparing for a “mission” rather than a “performance”, “performance augmentation” in military terminology would be “operational augmentation”. These are surface features that can easily be modified to suit specific populations. The point is that not only is there is a gradual build-up of skills in CF2, there is also a development of particular skills for particular situations.

In the same way that the body has different muscle groups which require different exercises, different mental exercises improve different aspects of the mind. Some mental exercises improve focus, some help to reduce stress and anxiety, some can sharpen self-discipline and increase motivation, and some aid recovery.

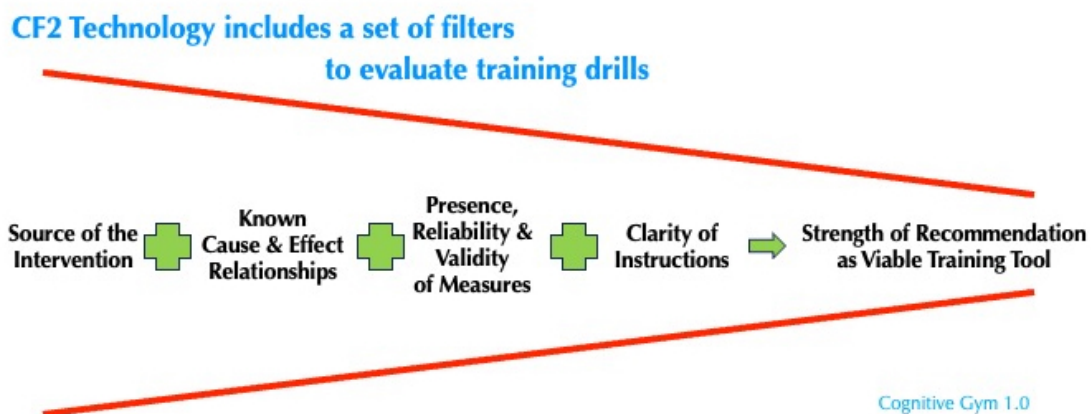


3. The Cognitive Gym Core (a CF2-informed Training Program)

The Cognitive Gym Core showcases a generic standard practice routine of 10 drills that require 30 minutes of daily training. These drills are supported by a website including briefing videos, topical discussions and relevant reading materials.

The routine in the Cognitive Gym Core was developed by a group of internationally renowned sport psychology practitioners and researchers.

The Cognitive Gym is informed by CF2 Technology, including a unique set of filters to ascertain whether the specific drill or training exercise meets sufficient standards for inclusion in Cognitive Gym Training Programs.



Source of the Proposed Drill/training Exercise
from 'Pop' psychology through traditional practice to empirical/applied research

Cause and Effect Relationship
from no known relationship through anecdotal cause and effect knowledge to established and sound research tradition

Reliability and Validity of Measures
from no or difficult measurement through measures accepted by performers as relevant and face valid to multifaceted measurement systems reliable and valid across a range of performance settings

Clarity of Instructions
from no instructions through basic instructions that allow the user to develop/adapt strategies to well-developed instructions that link in with overall project mindset, attention and imagery briefings

Strength of Recommendation
from rejected as not meeting filter criteria and standards through bare minimum meeting of criteria and standards to achieving highly recommended new levels of criteria standards



Facilitating Performance Under Demand

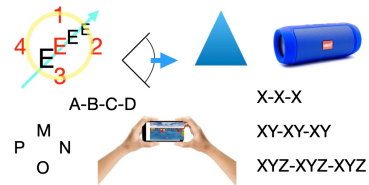
Cognitive Gym Core blends essential educational briefing and support materials with a generic set of drills sequenced into a standard practice routine. The training routine is designed to help individuals challenged to operate effectively in “performance under demand” environments. The drills help individuals exercise and develop their primary cognitive capacities and performance-focused cognitive skills.

The briefing focuses on developing a “high-performance mindset” and on enhancing understanding and control of attentional flexibility. The Cognitive Gym Core recommends 2 hours of instructor-led learning (web based briefing), followed by 3 weeks of 30-minute daily training (web based).



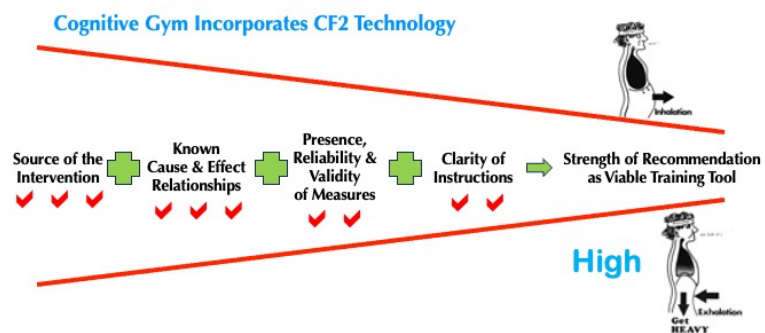
The drills are the building blocks of the Cognitive Gym. Drills are selected from an archive of individual certified training exercises. Drill sequences reflect the target training outcomes. Individual drills present training components arranged as loops, sequences, spirals, or other training systems.

For example, the “Centering Breath” that Nideffer recommends in his Attentional Control programs is used in several of the Cognitive Gym-informed drills. This inclusion clearly



earns its place when assessed via the drill filters:

- Extensive usage across range of performance under demand environments
- industry acknowledged cause & effect relationships
- good ecological validity (user acceptance)
- clear, simple instructions



An archive of ready-to-incorporate drills has been developed. These drills have been certified by the CF2 Filters. Subsets of this archive are assembled into standard and bespoke practice routines to achieve targeted training outcomes.



Facilitating Performance Under Demand

The drills selected for Cognitive Gym Core train cognitive primaries underpinning calm, focused, and flexible skill sets. Examples of the CF2 Certified Drills used in the Cognitive Gym Core sequence include:

..... transition between breathing out and starting to take the next breath in as smooth as possible, and then slow down the next inhalation. Complete... in a row focusing on taking a long pause between breaths & not rushing into the next breath.....

Rapid focus shift, including sequence patterns
Feelisation Sequence
Attentional Spirals
Return to Neutral Posture
Don't be in a hurry to breathe
Self-regulation amid distraction
Centre of gravity control via cognitive sequences

..... improve control over tension levels in specific muscle groups that potentially adversely affect centre of gravity and flowing performance

Multi Station Attentional Spiral

- Finish Training & Move On
- Imagines Pre-start Routine
- Audio Graphic Equaliser
- Centering Breath
- Atletistic Posture
- Neutral Posture with 30 secs no-chalking
- Coordinating Lip Modification
- 5 x 2 stage skill loop (feet)
- Walking with Metronome / Music
- Imagines / Feel "ball-ops" in next training
- 2 Biggest Achievements last 7 days

Neutral Posture – narrow internal sequence with repeating loops followed by broad internal awareness – build a neutral posture by following a sequence of internal shifts.....

overload drill – narrow external endurance with narrow/broad internal distractions - watch the sweep second hand, and refrain from conscious thought for various periods of time from 5 secs to 60 secs - drill highlights the natural tendency to chain thoughts to distractions

The archive of Certified Drills facilitates the design of custom-made drill sequences similar to the Cognitive Gym Core.

These bespoke drill sequences can be integrated into existing training practices, and improve training budget ROI.

These specific drill sequences become significant assets in an organisation's human development and support infrastructure.



4. Developing a Positive High-performance Mindset

Cognitive Gym users receive a briefing using web-based videos and supporting documents addressing three fundamental knowledge areas:

- Mindset
- Attention
- Imagery

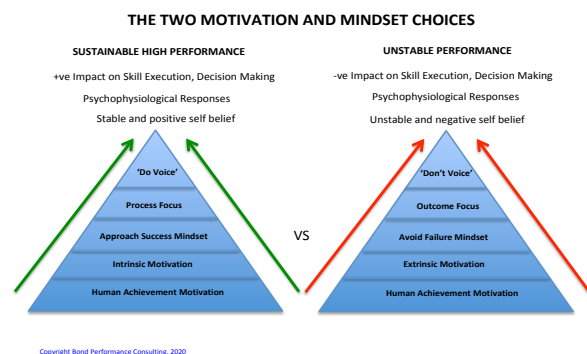
The briefing ensures that all participants begin their Cognitive Gym training program with the same fundamental knowledge of established psychological performance concepts.



The **Mindset** briefing is focused on four fundamental performance concepts:

1. **Motivation** – the relationship between intrinsic and extrinsic motivation and performance under pressure
2. **Approach Mindset** – the relationship between an approach success mindset, an avoid failure mindset and performance under pressure
3. **Performance Focus** – the relationship between a focus on trained process execution, a focus on outcomes and consequences and performance under pressure
4. **Thought and Inner Voice Control** – the relationship between positive “do” thoughts and self-statements, negative “don’t” thoughts and self-statements and performance under pressure

The **Attention Control** briefing video and supporting document introduces participants to Bob Nideffer’s model of attention.



Robert Nideffer is the leading thinker and world authority on how to train “attentional flexibility”. His “enhanced performance systems” are used extensively around the world to underpin strategic and skill execution in under demand environments. The Cognitive Gym utilises Nideffer’s technology [Ref 11].



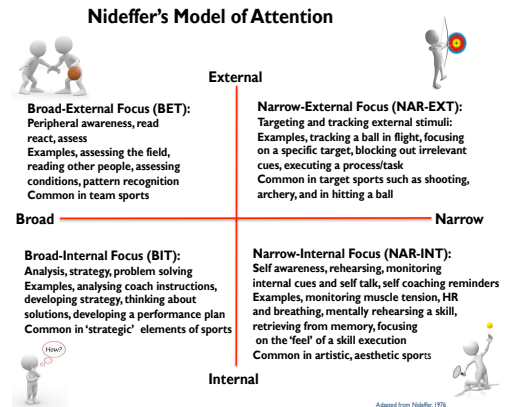
Facilitating Performance Under Demand

The model distinguishes four types of attention required in performance under demand settings and quality skill execution:

1. *Broad-External* (peripheral, read/react attention)
2. *Broad-Internal* (self-regulation, analysis/problem solving attention)
3. *Narrow-External* (targeting/focused attention)
4. *Narrow-Internal* (self-talk/coaching attention)

Nideffer asserts that individuals each have their own attentional style characterised by the relative 'strengths' and 'weaknesses' of each of the four attentional styles and scores on four associated attentional 'overload' scales.

Based on an individual's scores the model predicts in which areas of high-performance the athlete will excel, and those in which there will be significant attentional/focus challenges. The Nideffer model also predicts what types of attentional errors are likely to occur in performance under demand situations based on the athlete's attentional style.



With a positive mindset, self-belief and composure a performer is able to match the attentional demands of the performance situation (rapid shifts across all four types of focus) without a great deal of conscious effort. Hence we see elite performers in all walks of life who seem effortless when producing high level execution of physical, technical and cognitive skills.



'Overloads' under Critical Performance Pressure



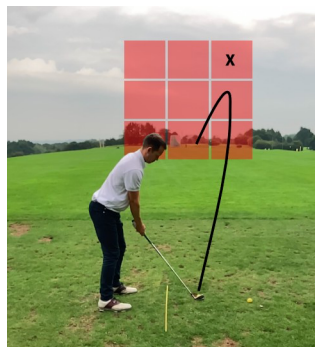
The converse occurs when a performer perceives high stress/threat and allows a negative mindset and fragile self-belief to undermine composure and attentional focus, leading to substandard performance outcomes.



Facilitating Performance Under Demand

The *Imagery* briefing introduces the importance of positive images preceding, during and after performance under demand.

Imagery research provides the additional evidence base for recommending that elite performers continue to develop this aspect of their cognitive skill package. This section of the briefing shares a number of elite athlete case studies on the effective use of imagery to support the applied experience and evidence base. Imagery training principles are proposed, including the use of pre-imagery relaxation sequences, high arousal imagery training, the use of “Inside-Out” and “Outside-In” perspectives, length, frequency and location of imagery sessions, along with the inclusion of guidelines for developing a range of self-use imagery scripts.



Also included are guidelines and scripts for practising basic imagery skills. There are basic progressive relaxation, Centering practice, “favourite place” imagery and re-energising scripts for participants to use. Advanced imagery training is focused on use in both closed and open skill execution situations and on and off-field applications.

The briefing includes recommendations for the use of performance venue context imagery training as a means to prepare for action in both more and less-familiar venues.

There is a section on specific technical skill imagery training, rectifying imagined skill execution errors, energy (arousal) management, performance-readiness, and error recovery in-the-field imagery.

5. Return on Investment Metrics for Your Cognitive Gym

Return on Investment is crucial to all planning in supporting performances under demand. An integral part of the Cognitive Gym is assessment of training gains in cognitive functioning. The Cognitive Gym provides a suite of optional metrics to assess the value of this cognitive training for your people or team.

- Performance related metrics
- Performer and Coach/Trainer rating systems
- Wearables / drill metrics
- CogMission / BrainPack

Organisational Performance Metrics

A bespoke Cognitive Gym includes ROI measures that are most relevant to the organisation’s goals.

Every organisation has existing performance metrics, be they statistics or digital video-based analysis. These can be used to measure the far transfer of cognitive skills.



Facilitating Performance Under Demand

The Cognitive Gym team can assist your organisation in aligning performance changes over time on Cognitive Fitness drills and knowledge with your selected organisational performance metrics.

A frequently-voiced objection to performance aids like the Cognitive Gym that seek to improve performance on complex cognitive tasks by isolating and training components of those tasks is that the training does not transfer to real life situations. Performance improves on the components themselves but not on the overall task (known as “*far transfer*”). A variant of this objection is that when sub-skills are trained, there may be evidence of transfer to similar sub-skills but not to the overall task, a phenomenon known as “*near transfer*”. Neither of these situations is acceptable. The training is not effective if it does not lead to both near (related sub-skills) and far (overall task) transfer. The Cognitive Gym addresses both aspects of skill transfer.

Performer and Coach ratings.

Separate coach and athlete rating scales estimate the effect of the drills on athletic performance and thus gain some appreciation of the all-important *far transfer*.



Cognitive Gym Performer-Assessment Tools include a set of self-rating items assessing the individual’s perception of their typical cognitive performance over a specified time frame. The set of rating scales covers the skills trained in the Cognitive Gym.

For example, a set of performer-rating items using a 1 – 7 scale would include:

1 Agitated/Flustered/Distracted Maybe even tense	2	3 Coping/Challenged Possibly physically nervous	4	5	6 Calm/Controlled/Focused Composed/“just right”	7
1 Stuck in my head / worried about consequences, slow to adapt	2	3 Being cautious, feeling the pressure, challenged to stay process focussed	4	5	6 Task / process focussed / believing in my skills / plan, able to stay in the moment	7
1 Distracted by potential Outcomes, and by confused “crooked” thinking	2	3 Challenged to consistently think straight and focus on executing my skills and processes	4	5	6 Enjoying the strategic challenge of executing my skills under pressure, clear and concise thinking	7

To ascertain the extent of cognitive training gains that have transferred to the operational environment or performance arena (ie, far transfer), performers should be assessed by their coaches/trainers. Such rating targets include the performer’s composure in performance under demand training or operational environments.



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For example, a set of coach/trainer rating scales using a 1-4 scale would include:

1 Focused	2 Can focus	3 Distracted	4 Easily distracted
1 Flowing	2 Smooth	3 Stumbling	4 Balking
1 Rigid	2 Gets stuck	3 Flexible	4 Fully adaptive
1 Bounces back (from errors, setbacks)	2 Can recover	3 Needs help to recover	4 Unable to recover

All of the drills include appropriate specific metrics (e.g., errors, time taken, strings of correct responses). Programs that include wearables (eg Whoop) can be integrated into the drill metrics.

Wearables and Cognitive Training Drill Metrics

These progressive performance metrics are a **near transfer** indication of improvement in performances on the Cognitive Gym training drills. There are numerous psychophysiological indicators that can be measured in situ using today's most updated wearables such as (Whoop and Hexoskin). Depending upon the selection of cognitive training drills there are many that measure ongoing progress. These can be fed back post-drill to the trainee and are recorded in order to track individual and group progress over time.

Standardised Neurocognitive Assessment

A unique feature of the Cognitive Gym is the option to incorporate standardised neurocognitive assessment tools. These recently validated, peer-reviewed and internationally published tools are now available to use in performance under demand training environments.

Typically the online game approach to cognitive training fails in producing far transfer. Recent work driven by the Australian Defence Science & Technology group has seen the development of CogMission and Brain Pack. These measure the expert-endorsed elements of the CF2, such as attention switching, working memory and cognitive control and flexibility. These assessment systems are available to Cognitive Gym users.

Testing protocols in these batteries are based on gamified dynamic scenarios containing trials from several standard tasks, all requiring a swift and accurate response to dynamic events on-screen. This makes them time-efficient (compared to standard cognitive batteries) and very engaging (which improves the user uptake).

Any effective roll out of your Cognitive Gym should include an appropriate battery of Return on Investment Metrics.



6. Train the Trainer

Cognitive Gym training initiatives start with external trainers from the Cognitive Gym Foundation Team coming into your organisation to deliver systematic programs and grow to working with you to integrate Cognitive Gym principles and protocols into your existing training systems. These initiatives provide your people with a new set of “service potentials” that will significantly enhance traditional support and training programs.



Mature Cognitive Gym rollouts include planning for scale. Organisations considering wide scale systematic adoption of Cognitive Gym training protocols may benefit from including a “Train the Trainer” program to upskill their existing in-house training resources.

Scaleability issues can be partially addressed with online communication systems for standardised information-based training.

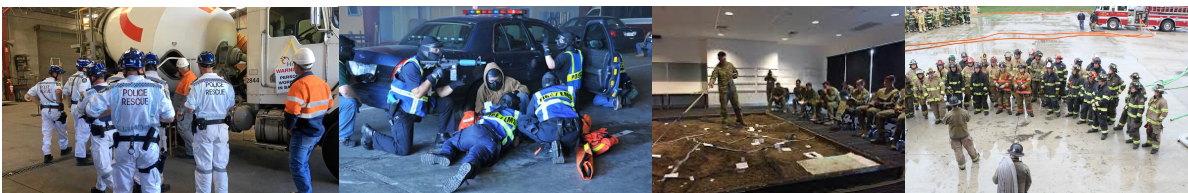


Mature Cognitive Gym programs blend Cognitive Fitness drills into existing training agendas and protocols.



When the Cognitive Gym protocols are integrated into existing simulation programs, upskilling programs for your training staff become a very cost-effective option.

Integrated Cognitive Gym programs combine the CF2 Technologies with your domain or organisation-specific knowledge and training protocols. Future change and transformation initiatives in CF2 applications meet your own training initiatives better via accredited in-house Cognitive Gym Trainers.



Where to from here?

For more information, go to www.cf2foundation.com (please note that site membership is by invitation with access via password)

Register your interest in starting your cognitive gym program via the “Contact Us” page of the CF2 Foundation website. Our CF2 experts will meet with you to discuss your organisational needs and outline the requirements for rolling out a Cognitive Gym program, including accreditation, briefings and training drills.



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Cognitive Gym Development Team

Mr Jeffrey Bond OAM, FAPS, FCSEP

Bond Performance Consulting



Jeff Bond is one of the pioneers of Australian Sport Psychology. He was the first individual in Australia to combine Physical Education, Psychology and Sport Psychology tertiary qualifications to become registered in Australia as a Sport Psychologist. His 45-year career as a sport psychologist included 22 years as Head of Sport Psychology at the Australian Institute of Sport. During that period he was accredited as a sport psychologist at 9 Summer and Winter Olympic Games, multiple World Championships and Commonwealth Games. For over 4 decades Jeff has worked with many Olympic and professional sports. He is an AHPRA-registered psychologist and endorsed as a Sport and Exercise Psychologist. Jeff was awarded Fellowship of the Australian Psychological Society in 2000 and received the APS Award of Distinction in 2003 in recognition of the importance and significance of his contribution to the field of Sport Psychology. In 2008 Jeff was awarded an Order of Australia Medal for his contribution to Australian Sport Psychology. In 2021 he was awarded the inaugural APS Psychology in the Public Service Award on the basis of his 40+ years working as a psychologist in various public service organisations. He was a founding member and former Chair and Executive member of various Australian professional sport psychology organisations and more recently a corporate consultant. Jeff has provided corporate training programs alongside KPMG Australia and the Lane4 Management Group. Jeff is a member of the International Development Group, and is a Member of the CF2 Foundation Management Group. Jeff is recognised internationally for his expertise in the development of high-performance mindsets, and for his work alongside Robert Nideffer in developing training systems to improve the cognitive flexibility of performers under demand.

John Crampton FAPS, FCSEP

Performance Enhancement Systems

John Crampton has been very influential in the development of the international Applied Sport Psychology industry. He was privileged to be a member of the medical support team for the Australian Olympic Teams at the Barcelona & Sydney Olympic Games, and has worked with athletes, coaches and programs preparing for Olympic and World Championship competition over 9 Summer and 5 Winter Olympiads. His career whilst based on the mental preparation of athletes and coaches, has also ranged across the application of contemporary technologies in sport, and the development of operational systems within governmental agencies, the Australian Defence Forces, industry member groups, professional teams, touring groups, associations, and groups providing services to elite sport.



Crampton is a Fellow of the Australian Psychological Society, a recognition of long term achievements and contributions to the profession. He is an AHPRA Registered Psychologist, with an Endorsement in Sport & Exercise Psychology. He assisted the NSW Minister for Sport in the establishment of the NSW Institute of Sport. Crampton devised and managed the internationally acclaimed interdisciplinary "Athlete Management Services" group at the NSW Institute of Sport for the Sydney Olympiad. Crampton was an AIS Staff Member & Consultant from 1983 through 2008. He has worked with over 50 sports at the national junior or senior team level, and works extensively with state, national and international sporting organisations from limited brief training programs to extensive long term organisational consultancies. John Crampton is highly respected for his work in reviewing, structuring, resourcing and developing High-performance Programs. Crampton is the Convenor of the International Development Group, is a Consultant to the R&A, and is a Member of the Management Team, CF2 Foundation



Emeritus Professor Gerard J Fogarty (PhD) FAPS FCSEP



Gerard (Gerry) Fogarty is a former academic whose career included many years as the Head of the Psychology School at the University of Southern Queensland. Other appointments at the University included Director of the Office of Research and Pro-Vice-Chancellor (Research). Outside the University, he has been involved in the Australian Defence Force, serving as an officer in the Australian Army Reserves (rank Lieutenant Colonel), then in the Special Reserves of the Royal Australian Air Force (rank Wing Commander), and currently as a Defence Contractor. He is a Fellow of the Australian Psychological Society, a former chairperson of its Division of Research and Teaching, and a founding member of its College of Sport & Exercise Psychology. His research interests cluster around the construct of cognition; how it can be developed, how it can be assessed, and how it can be applied in practical situations, especially those where high-performance is required but where personal risk is also involved. He is the author of 145 peer-reviewed books, book chapters, and journal articles as well as over 100 confidential research reports for the Department of Defence. It was these research interests that led to his long-term association with the Australian Defence Force and other safety-critical organisations. His interest in sport was triggered by his days as a player, coach, and consultant, primarily in tennis and golf. In recent years, the prospect of working with a group of like-minded psychologists and the opportunity of finding another outlet for his various skills and interests saw him join the Cognitive Fitness Foundation team.

Dr Leonard Zaichkowsky PhD

Leonard Zaichkowsky, a professor, researcher, and consultant for almost four decades at Boston University (School of Education and School of Medicine), pioneered sports psychology by bringing cognitive neuroscience and sports performance together as an interdisciplinary science. His academic textbooks and over 100 peer reviewed research publications emphasized the importance of an athlete's remarkable brain in anticipating and acting on opportunities during competition. He has consulted with teams in the NBA, NHL, NFL, MLB, Australian Rules Football, the Spanish men's national soccer team, Field Hockey Canada, and Olympic sports organizations around the world. Beyond sport, Professor Zaichkowsky has consulted with the U.S. Military Special Forces, Duke University Department of Surgery, Stanford University Surgery and High-performance. Len is a former president and a fellow of the Association for Applied Sport Psychology, a member of the editorial board of the *Journal of Applied Sport Psychology*, and currently section editor on psychology for the *International Journal of Health, Sport and Science*. Over his extensive career Len has received numerous awards, most notably, "Distinguished Alumni Award (University of Alberta, 2006)", "Distinguished Service to the Profession (American Psychological Association, 2016)", and in 2023, Len was one of the inaugural recipients of the "Hall of Fame Award" by the International Society of Sport Psychology. Today, Len promotes the concept of "Cognitive Fitness" internationally via his writing, conference presentations, podcasts, entrepreneurial activities, and interviews with major media outlets.

