

1. EXECUTIVE SUMMARY

In 2020 the HPSNZ Coaching Team completed a strategic evaluation of HP coaching across 14 podium sports. This evaluation identified the need for HPSNZ to support NSOs to enhance early stage HP coach development; Core Knowledge was born.

Core Knowledge was piloted in 2021 through both online and face to face delivery of it's primary domains; Professional Practice, Coaching Impact, Energy Systems and Body in Motion.

Feedback gained during and at the conclusion of the pilot process from a range of stakeholders provides a clear mandate for full implementation, whilst also identifying key recommendations to inform future planning:

- 1. Raise NSO coach development capability.
- 2. Ensure CK can flex and stay attuned to coaching needs.
- 3. Connect CK learning to coaching practice and performance outcomes.
- 4. Blend learning experiences in line with the principles of andragogy.
- Grow facilitation skills in order to deliver CK to a consistently high standard.

Through the CK Learning Framework and in partnership with NSO's, the combination of knowledge development and practice transfer through to 2024 will raise coach and athlete performance across the pathway. The CK delivery programme 2022 – 2024 is built upon the following assumptions:

PROGRESSIVE LEARNING EXPERIENCE:

CK is not a linear finite programme, but a progressive learning experience where knowledge and practice continuously iterate.

TARGET AUDIENCE:

Up to 560 coaches across 3 years.

NSO PARTNERSHIP ENGAGEMENT:

Partner with NSOs to actively support coach learning pre, during and post CK delivery and to build NSO coach development capability as and when required.

LOCATION:

Christchurch and Auckland / Waikato face to face delivery, with capacity to also present in a region based upon verified demand. Annual online delivery of each Domain component.

DELIVERY FORUMS / TIMING:

Both face to face and online. Scheduled to best fit the needs of NSOs and their coaches.

QUALITY ASSURANCE:

Two facilitators / 25 participants (Up to 35 online in Coaching Craft) ensure learning remains quality driven.

Quality assurance and impact assessment are crucial to assessing the extent to which the initiative is achieving its vision, purpose, and intentions. This will be actioned through formative and summative evaluations, ongoing feedback, and reflection on outcomes whereby a judgment is made on the changes reported.

To ensure the timing and relevance of delivery aligns with NSO needs, three groups (Operations/Advisory/ Quality Assurance) will be responsible for the operational effectiveness of CK. They will drive excellence, guide long term evolution, and innovate content and delivery process.

To support an effective transition into 2022, the following next steps have been identified:

By the end of 2021...

- 1. Confirmation of 2024 budget.
- Recruitment and appointment of CK staff.

By March 2022...

- 1. 2022 operational plan finalized.
- 2. 2022 delivery schedule finalised
- 3. CK curriculum refinement.
- 4. NSO partner engagement planning and agreement.

2. HP SYSTEM NEED

In 2020 the HPSNZ Coaching Team completed a strategic evaluation of HP coaching across 14 podium sports.

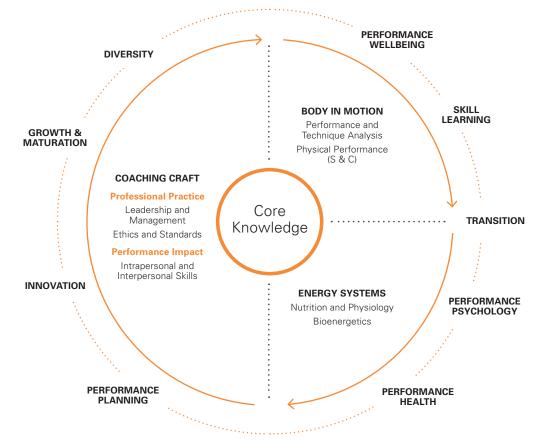
Gaps highlight the need for HPSNZ to support NSOs to enhance early stage HP coach development.

Core Knowledge is a pathway education initiative designed to lift core knowledge and critical skills early in the HP pathway. The initiative is an innovative response to inconsistent and fragmented offerings available across the wider coach development system.

The programme consists of 3 core knowledge domains (Figure 1) which are designed and delivered by leading expert facilitators. Group learning sessions are delivered to coaches from a range of sports to promote cross-code learning and connection. A multifaceted approach to learning (social construction, critical reflection, self-awareness and action learning) is used to create a highly practical and active learning experience.

NSOs encourage their coaches to learn about CK domains in an integrated way, rather than using the siloed, scientific-discipline oriented approach seen in coach education structures worldwide. The aim is to ensure that athletes gain the benefit of a holistic and integrated approach from coaches who can understand and manage the complexity of their craft.

Figure 1: Core Knowledge Domains





Core Knowledge has allowed me to listen to some diverse and inspiring perspectives, see new theories or approaches and think or rethink the way I go about my coaching. Highly knowledgeable and experienced course leads combined with an open and interactive learning approach really created an enjoyable environment for me to challenge some of my current assumptions and beliefs, especially in regards cultural differences. Talking with other coaches about how to build relationships, leading change and establishing thriving environments were just some of the topics that resulted in high level conversations including coaches sharing good practices for the benefit of group learning. I am grateful to be part of this positive online Teams pilot and am looking forward to what is to come next..."

Mark Borgers

Performance Network Coach Hockey New Zealand In 2021 HPSNZ partnered with 10 NSOs to pilot the delivery of CK. The pilot purpose and objectives provided the platform for establishing an evidence base to evolve CK in consultation with NSO partners.

Table 1: Pilot Purpose & Objectives

Purpose

Test and develop pathway-specific coach education that NSOs can adopt to drive and enable quality coaching across their HP pathway.

Objectives

1. Content:

Test the relevance and specificity of CK learning content.

2. Process:

Gauge NSO, coach and facilitator feedback regarding learning methods adopted.

3. Impact:

Evaluate the impact of CK on applied coaching practice.

The pilot involved 70 coaches (60% male, 40% female) and took place during the period May – October 2021. The pilot was tested across 3 sites - Cambridge, Christchurch and on-line and involved 10 scientific disciplines supported by 18 HPSNZ staff.

Table 1 includes a summary of key themes identified across the 3 key stakeholders: NSOs, coaches and CK facilitators. 5 key recommendations have been identified which now inform future planning into 2022 and beyond:

1. NSO CAPABILITY:

Lift NSO coach development capability to support on-going coach learning and development.

2. SPORT SPECIFICITY:

Ensure that CK content and delivery approach can flex and stay attuned to sport needs.

3. PRACTICE TRANSFER:

Ensure that CK learning is strongly linked to coaching action and is positively impacting both coach and athlete performance.

4. BLENDED LEARNING:

Ensure the coach learning experience contains the required mix of activities and tasks in line with the principles of adult learning (Knowles, 1984).

5. FACILITATOR TRAINING:

Upskill facilitators to design and deliver CK content to a consistently high standard.

CORE KNOWLEDGE PILOT 2021

Table 2: Pilot Summary

	Future Implications
NSOs (10)	 Devise a NSO capability programme targeting NSO coach developers; designed to sustain on-going learning during and post Core Knowledge sessions. Ensure CK content and delivery methods remain focused on practical and sport-specific challenges experienced in the field.
Coaches (70)	3. Continue to adopt a blended learning approach so as to enable coaches to socialise new knowledge and practices. With face-to-face delivery prioritised as the preferred delivery medium across all domains.
	4. Create an on line platform for coaches to access knowledge resources, remain in contact with their peers and ensure learning engagement can continue post face-to-face delivery.
	5. Continue to use facilitators who are credible and have the HP experience to demonstrate how core knowledge has solved complex problems experienced in a performance environment.
	6. Continue to ensure that peer interaction is maximised and appropriate group size and composition suits the content. Incorporate athlete participation where valuable and relevant. This will add richness to the experiential content for coaches, while also providing a hook opportunity for 'coaching-curious' athletes.
CK Facilitators (18)	 Target key HPSNZ staff to commit to Core Knowledge over the next three years; and identify and engage talented external providers to deliver within the programme. Engage with APS senior leadership to ensure that Core Knowledge becomes a key priority for APS support early in the HP pathway. Train and develop facilitators to design and deliver content in line with adult learning principles.
	10. Explore the feasibility of developing a customised IT platform to support the following key functions: knowledge library, content playback, live webinars. Breakouts, 'whiteboard' function, 'broadcast to breakouts' function



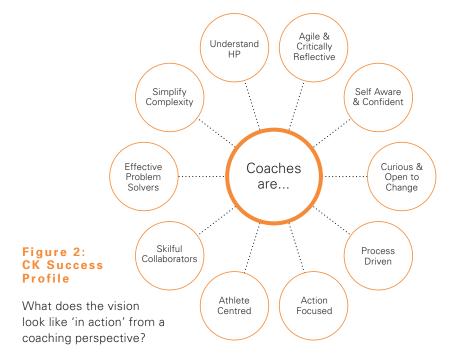
3. CORE KNOWLEDGE PURPOSE

Partner with NSOs to develop the required coaching knowledge and practice to enhance athlete performance across the pathway.

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4. 2024 VISION

COACHES AND ATHLETES LEARNING FASTER THAN THE SPEED OF CHANGE, POSITIVELY IMPACTING PERFORMANCE ACROSS THE PATHWAY.



5. CK MEASURES & OUTCOMES

The following is a summary of the desired outcomes and related measures designed to track the progress and success of CK.

Table 3: Desired outcomes and key measures

Targeted Impact	Desired Outcomes	Key Measures
People & System Capability	Increased HP Coach Capability	Knowledge DevelopmentPeer to Peer Knowledge SharingPractice Transfer
	Increased NSO HP Coach Development Capability	HP Coach Developer CapabilityNSO System & Process QualityQuality NSO Learning Experiences
Performance Environment	Enhanced Athlete Coach Performance Environment	Athlete Autonomy & CompetenceQuality Athlete Coach RelationshipFuture Performance Transition Readiness

6. 2024 DELIVERY OBJECTIVES

1. KNOWLEDGE DEVELOPMENT:

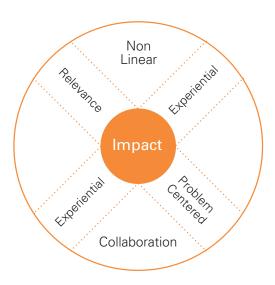
To curate and deliver relevant and high-quality learning experiences for coaches and athletes along the HPSNZ pathway.

2. PRACTICE TRANSFER:

To partner with NSOs to support and sustain quality learning and performance environments.

7. CORE KNOWLEDGE LEARNING FRAMEWORK

The CK Learning Framework outlines a set of principles that underpin the design, delivery and overall learner experience within CK.



NON-LINEAR:

The performance environment is shared, complex and always changing.

COLLABORATION:

Shared knowledge across professional boundaries leads to enhanced collaboration.

RELEVANCE:

Learning needs to be relevant to the performance reality.

PROBLEM CENTRED:

Multiple knowledge sources are required to solve complex problems.

EXPERIMENTAL & EXPERIENTIAL:

Quality learning requires a mindset that seeks innovation, embraces challenge, and ritualizes reflective practice.

IMPACT:

Learning drives demonstrable practice which impacts athlete performance.

The above framework is designed to create a common approach which ensures that the CK learning experience is deliberately connected with performance impact. The equation below demonstrates a common understanding between HPSNZ and NSO partners designed to ensure CK delivers tangible performance impact.



Whilst knowledge is initially gained through domain delivery and the associated socio-cultural learning that occurs in cross-code contexts, CK's primary measure of success lies in the degree to which coaching behaviour change can lift athlete performance outcomes.

Transferring knowledge into performance impact is critical. This is reinforced through extension activities such as Action Learning Challenges (ALC) and Quality Learning Circles (QLC).

ALC - Using the Action Learning Cycle as a framework, a coach takes an element of course content that has sparked their curiosity and structures a plan that both impacts their delivery and increases their knowledge base through ongoing self-directed learning (see Appendix 2 for an example generated from Pilot CK delivery).

These ALCs are shared with CK facilitators and NSO personnel who provide appropriate levels of challenge and support throughout the process. Learning outcomes are expected to be shared - both within the NSO coaching community and back into CK for use as potential case studies to enhance future course content.

QLC – A valuable bi-product of the co-construction methodology is the generation of small learning networks (a QLC). These arise out of common interest stimulated by curriculum content and shared participant narrative. Coaches are encouraged to shape these QLC in whatever format suits them, e.g., 4-6 coaches and or athletes meeting online once per month, with 1 coach providing a topic / resource / stimulus in advance for the circle to discuss. Over time, QLC develop into both a valuable knowledge source and a professional support mechanism for all participants.

8. CK DELIVERY PROGRAMME 2022 - 2024

The CK delivery programme 2022 – 2024 is built upon the following assumptions:

PROGRESSIVE LEARNING EXPERIENCE:

CK learning experiences are evaluated and updated in line with end-user feedback, new emerging scientific knowledge and practical challenges experienced in the daily training environment.

CK is not a linear learning programme that leads to a qualification. CK is a progressive learning experience where knowledge and practice continuously iterate to meet challenges and opportunities continuously emerging in complex performance environments.

TARGET AUDIENCE:

CK has capacity to engage over 500 end users. Here is a breakdown of the target audience:

- HP coaches on the NZ pathway coaching both pre HP and HP athletes.
- Performance coaches who intend to transition into the High-Performance space.
- Athletes at the latter stage of their career who are keen to pursue a career in coaching or athletes who have recently retired and who have transitioned into coaching.
- Athletes will be involved in the programme in several integrated ways
 including aligning with their coach in case study form for development,
 sharing information, joining appropriate sub domains delivery, being part of
 extension activity and partnering with their coach, where appropriate for
 both parties, in activities designed for them to both progress together.

NSO PARTNERSHIP ENGAGEMENT:

Both podium and aspirational sports aligned to HPSNZ 2024 investment outcomes will be invited to partner in the delivery of this initiative. Coaches will be selected by their NSO and actively supported to fulfil all related learning commitments pre, during and post CK delivery. The HPSNZ CK team will partner with HPSNZ PTLs and their NSOs to build capability as and when required to ensure coaches are appropriately supported to transfer CK learning into action in their daily training and performance environments.

LOCATION:

Christchurch and Auckland / Waikato are the 2 primary sites for delivering face to face CK learning sessions. Capacity will be set aside to deliver CK into other locations based upon verified demand. This will require collaboration with HPSNZ's Head of Performance Pathways.

DELIVERY FORUMS:

Both face to face and online forums will be utilized to ensure a blended learning approach that is adaptable and agile in meeting participant need whilst delivering key content consistent with best practice regarding adult learning principles.

TIMING:

CK sessions will be scheduled to best fit the needs of NSOs and their coaches.

QUALITY ASSURANCE:

CK sessions will be guided by 2 facilitators. Learning groups will be limited to 25 to ensure that knowledge development and sharing always remain quality driven.

CORE KNOWLEDGE 2022 MODULE DELIVERY

	Venue				
Module	Hawkes Bay	Dunedin	Christchurch	Waikato / Auckland	Online
Pro Practice 1	April 20-22		April 27-29		June 13-15
Pro Practice 2			May 4-6	May 18-20	June 28-30
Perf Impact 1			November 2-4	November 7-9	October 26-28
Perf Impact 2		April 4-6		May 23-25	November 21-23
Body in Mot 1			October 10-12	May 9-11	June 7-9
Body in Mot 2			May 30-June 1	March 30-April 1	October 3-5
Energy Syst 1			July 4-6	April 12-14	November 14-16
Energy Syst 2			June 20-22	November 28-30	October 17-19

All CK Modules delivered Face to Face in Nth Island x1 AND Sth Island x1, AND Online x1

TOTAL Face to Face Modules = 16

TOTAL Online Modules = 8

TOTAL Modules delivered = 24

Face to Face = ½ Day pm (3hrs) / Full Day (6hrs) / ½ Day am (3hrs)

Online = 10-12hrs over 3 Days

DELIVERY AND FACILITATION GUIDELINES

- Christchurch and Auckland/Waikato will have all domains delivered each year
- Domains will be delivered in other regions where there is demand and capability/capacity to host
- Domains will be delivered once per year in a 'live' online setting
- Once a Domain is started the coach is expected to complete the whole Domain
- Coaching Craft will be compulsory the Professional Practice Stream
- Endorsement from the NSO is needed to enter the programme

2022 CALENDAR FORMAT

	Workshop Date	Module	Venue	Facilitators
1	30 Mar – 1 Apr	Body in Motion 2	Waikato / Auckland	AS / PM
2	4 Apr – 6 Apr	Performance Impact 2	Dunedin	CP/GF
3	12 Apr – 14 Apr	Energy Systems 1	Waikato / Auckland	DB / CM
4	20 Apr – 22 Apr	Professional Practice 1	Hawkes Bay	CP / AM
5	27 Apr – 29 Apr	Professional Practice 1	Christchurch	CP / AM
6	4 May – 6 May	Professional Practice 2	Christchurch	CP / AM
7	9 May – 11 May	Body in Motion 1	Waikato / Auckland	AS / PM
8	18 May – 20 May	Professional Practice 2	Waikato / Auckland	CP / AM
9	23 May – 25 May	Performance Impact 2	Waikato / Auckland	CP/GF
10	30 May – 1 Jun	Body in Motion 2	Christchurch	AS / PM
11	7 Jun – 9 Jun	Body in Motion 1	Online	AS / PM
12	13 Jun – 15 Jun	Professional Practice 1	Online	CP / AM
13	20 Jun – 22 Jun	Energy Systems 2	Christchurch	DB / CM
14	28 Jun – 30 Jun	Professional Practice 2	Online	CP / AM
15	4 Jul – 6 Jul	Energy Systems 1	Christchurch	DB / CM
16	3 Oct – 5 Oct	Body in Motion 2	Online	AS / PM
17	10 Oct – 12 Oct	Body in Motion 1	Christchurch	AS / PM
18	17 Oct – 19 Oct	Energy Systems 2	Online	DB / CM
19	26 Oct – 28 Oct	Performance Impact 1	Online	CP/DF
20	2 Nov – 4 Nov	Performance Impact 1	Christchurch	CP/DF
21	7 Nov – 9 Nov	Performance Impact 1	Waikato / Auckland	CP/DF
22	14 Nov – 16 Nov	Energy Systems 1	Online	DB / CM
23	21 Nov – 23 Nov	Performance Impact 2	Online	CP/GF
24	28 Nov – 30 Nov	Energy Systems 2	Waikato / Auckland	DB / CM

9. QUALITY ASSURANCE & IMPACT ASSESSMENT

These two processes are crucial to assessing the extent to which the Initiative is achieving its vision, purpose, and intentions. The Pilot Programme using formative and summative evaluation methodologies produced evidence for quality. Feedback from participants (reported earlier) and quoted feedback affirm that conclusion.

1. Quality will be assessed by:

- Formative Evaluation: assessment made during a domain or theme by obtaining feedback from participants, stakeholders, presenters, and independent observers
- b. Summative Evaluation: assessment made at the conclusion of the participant's CK learning journey. i.e., on completion of a Domain. Feedback sought from the coach, the NSO and the coaches' athletes.
- c. On-Going Feedback: Feedback loops that allow for programme modification, content, and delivery adaptation, and that include evidence of application of knowledge (confirmed or gained) to performance practice.

- Impact assessment involves evaluation of outcomes whereby a judgment is made on the changes reported. This is made through:
- a. self-assessment.
- b. peer observation.
- c. NSO reports.
- d. independent observer review.
- e. NSO records of success.
- f. Time is a crucial feature in outcome evaluation, and assessment will be conducted in the short term and over a longer period (as agreed by the NSO).

Questions to be addressed are:

- What knowledge has the coach/athlete gained?
- What impact has the participant had on the practice of their peers?
- Has the coach improved practice immediately / in the short term?
- Are changes in coaching practice sustained over a longer period (6-24 months)?
- Is the sport enjoying greater success compared with a base year?

To retain its place as a leading coach and athlete initiative supporting coaches on the recognized pathway, it is crucial that evidence is collected and processed to show programme quality and effectiveness.

10. CK OPERATING SYSTEM

A proposed operating system to realize the vision, purpose and objectives relating to CK. It is proposed an annual operating system involving 3 groups is used to drive operational effectiveness.

The CK Manager plays a key role in mobilizing and connecting the identified groups to fulfil their specific purpose.

To ensure the timing and relevance of CK delivery is aligned with NSO needs, it is proposed that an annual operating rhythm is established. This provides a guiding process to integrate NSO partners to the ongoing delivery of CK. This operating rhythm needs to integrate with HPSNZ's performance partnership operating model to ensure seamless connection.

CORE

Domain	Coaching Craft		Energy Systems		The Body in Motion	
Sub Domains	Professional Practice	Performance Impact	Nutrition	Physiology	PTA	Physical Performance
Leader	Craig Philpott BA, PDipTch, Facilitation Team	PGDipEdLead	Dane Baker NZRD	Caroline MacManus PhD	Paul McAlpine PhD	Adam Story PhD
Overview	Professional Practice Develop an understanding of the coaches' professional role within the context of high-performance sport, including areas of leadership, management, ethics, and legal responsibilities. Performance Impact Develop an understanding of the art of coaching and its influence on performance outcomes, with a particular focus on intrapersonal, interpersonal, and teaching and learning skills.		Performance Nutrition Develop an understanding of the key pillars of nutrition, which can positively influence performance, health and training adaptation.	Physiology Develop an understanding of the energy systems and their application for session design and programme planning for performance.	Performance & Technique Analysis Develop an understanding of the physics and biomechanics that govern sporting technique, as well as common methods of performance measurement within the sporting environment.	Physical Performance Develop an understanding of the principles of physical performance as well as the knowledge and skill to integrate S&C programs into the overall training and competition plans for athletes and teams.

Applied Learning Extension			
Action Learning Challenges	Quality Learning Circles		

Integrated	Warrick Wood	Performance Psychology		
Themes	Bruce Hamilton, Ben Park	Performance Health		
	Integrated	Growth & Maturation		
Integrated Performance Planning		Performance Planning		
	Chris Arthur	Transition		
		Performance Wellbeing		
Raylene Bates Diversity		Diversity		
	Graeme Robson	Skill Learning		
	Simon Briscoe	Innovation		

CK CONTENT SUMMARY DECEMBER 2021

Summary for NSO understanding of the scope intended in the Core Knowledge Initiative. There are 9 themes integrated into the domains some of which are noted in this table. They include Performance Psychology, Planning & Health; Innovation Transition, Growth and Maturation, Wellbeing, this is a cross discipline, cross sport programme based on the principles of adult learning. The integration work is on-going.

Energy Systems					
Nutrition Physiology					
Year 1 Modules Year 2 Modules Year 3 Modules					
Energy Fundamentals	Athlete Health	Competing			
Carbohydrate – Periodisation	Immunity in sports Nutrition	Competing in the heat/cold? Effects of heat on physical capacity			
Physiology Carbohydrate- periodisation	Identifying Non functionally over-reaching (NFOR) and Overtraining Syndrome (OTS) in Athletes	Nutrition: Competing in the heat/cold			
Energy System fundamentals	Nutrition Immunity in sports Nutrition	Effects of heat and cold on physical capacity			
Fundamentals of Recovery (protein)	Physiology identifying non-functionality, overreaching (NFOR) and over training syndrome (OTS) in athletes	Nutrition Altitude training/ competition			
Annual planning periodisation	Return to plan for the injured athlete	Effects of altitude on physical capacity			
Energy availability- REDS-s	Identifying LEA, overtraining	Travel nutrition, flying, logistics			
Hydration/performance scenarios	Performance scenarios: Athlete case studies				
Sleep	Mindfulness	Performance Scenarios planning for event			
Recovery & Balance	Breathing	Self-concept and Self Esteem			
		Managing Arousal			

CK CONTENT SUMMARY DECEMBER 2021

Body in Motion					
Performance Technique Analysis & Strength and Conditioning					
Year 1 Modules	Year 2 Modules	Year 3 Modules			
1 Training Theory and Basic Periodisation	1 Advanced training theory and periodisation	1 Priming for Performance			
2 Intro to the Physics of movement	2 Advanced strength development	2 Recovery methods			
3 Strength development	3 Power Development	3 Current Trends in strength development			
4 The basis of Motion-Sport Biomechanics	4 Fuelling for performance and recovery	4 current trends in Power Development			
5 Power Development	5 Psychology of pain and injury rehabilitation	5 Case Study examples			
Brain & Behaviour coaching with the Brain in mind: Personalising and extending your mental skills model	6 Athlete Assessments	Supporting Athletes to Perform			
7 Special populations (Paralympic and youth athletes)	7 mental skills	Flow State			
8 Warm-up and cool downs, flexibility and mobility work	8 Athlete monitoring data bases				
9 Mental Health awareness – skills and knowledge to support the. mental health for athletes and support teams	Developing Athlete Self Efficacy				
10 Performance and Techniques Analysis – Quantification of training	Psychology of Injury				
11 Mental Skills					
12,13,14 Contemporary Skill Learning					
Anxiety					
Resilience					

CK CONTENT SUMMARY DECEMBER 2021

Coach Craft					
Professional Practice					
Year 1 Modules	Year 2 Modules	Year 3 Modules			
Leadership	Legal	Performance planning (2)			
Legal	Leadership	Growth and maturation (1)			
Coach wellbeing	Performance planning (1)	Performance Psychology (2)			
Performance Psychology	Performance Health (1)	Leadership			
Reflective Practice	Reflective practice	Ethics			
Performance and mental Health	Coach & Athlete Identity	Reflective Practice			
Philosophy and Purpose	Leading a support team	Personality			
	Performance Impact				
Year 1 Modules	Year 2 Modules	Year 3 Modules			
Intra/Interpersonal skills	Skill learning (1)	Skill learning (2)			
Mana Tu (strength to stand)	Innovation (2)	Transition and Wellbeing (2)			
Mana Ake (strength to rise)	Transition in wellbeing (1)	Leadership Innovation			
Mana Maori (strength of life force)	Leadership/Innovation	Diversity			
Mana Atua (strength) of spirit)	Reflective Practice	Reflective Practice			
Innovation (1)					
Reflective Practice					

FACILITATOR BIOGRAPHIES

The facilitators responsible for developing content and sharing their knowledge with coaches are:

Paul McAlpine, PhD

Manager, Performance & Technique Analysis, HPSNZ

Paul has been with High Performance Sport New Zealand since 2013. During this time, he has provided impactful technique and performance analysis support to athletes and coaches within Snow Sports NZ (until 2018) and Canoe Racing NZ (ongoing). Paul's expertise span biomechanics, competition and competitor analysis, data management and visualisation tools, and data-lead strategy development (competition and campaign strategy). Paul currently manages the HPSNZ Performance and Technique Analysis team whilst juggling the daily support needs of the Elite CRNZ team members.

Prior to his role at HPSNZ, Paul was employed by the South Australian Sports Institute as a bio mechanist where, over a 2-year period, he gained valuable experience servicing a broad range of sports including rowing, swimming, cycling, water polo, sprint kayak, field hockey, indoor volleyball.

Prior to moving full time into HP sport, Paul spent several years within the University of Auckland 3D biomechanics lab, gaining his PhD and working on various projects centred mainly around injury prevention and sports equipment design.

Adam Storey, PhD

Lead Strength and Conditioning Specialist, Emirates Team New Zealand and Canoe Racing NZ

Adam's specialist background in the areas of strength and power development has enabled him to work with multiple World and Olympic champions, within professional and international rugby union, and sailing environments.

In addition, Adam was the Head Coach for the NZ weightlifting team at the 2010 and 2014 Commonwealth Games and the 2012 and 2016 Olympic Games. Adam has a strong academic and applied background in the disciplines of exercise physiology and strength and conditioning, and he is a Senior Research Fellow at AUT University's Sports Performance Research Institute in New Zealand.

Adam holds a BSc (Honours) and a PhD in Sport & Exercise Science from The University of Auckland.

Dane Baker, NZRD

Performance Dietician

Dane is a New Zealand registered dietitian who has worked extensively with New Zealand's leading athletes and sporting organisations over the past 10 years.

He has worked as a sports nutrition specialist at ASPETAR, a world-leading FIFA sports medicine facility, then on return to New Zealand worked with the Chiefs, where he was part of their back to back titles, and is currently with the Blues super rugby team. He has been part of setting up an innovative research program with Otago and Waikato Universities, which drives many innovative nutrition and sports medicine interventions. He has also worked extensively with High Performance Sport New Zealand where he was a Senior Performance Nutritionist from 2010-2020. He was the lead nutritionist for the All Blacks and Black Ferns 7's Team and previously NZ Men's Hockey Team, NZ Swimming (2010-2018) and the Football Ferns.

Dane was the NZOC support team
Dietitian for the Rio Olympics (2016) and
the Gold Coast Commonwealth Games
(2018). He holds a BSc in Human Nutrition
as well as Postgraduate Diplomas in
Dietetics and Sports Nutrition. He is a
passionate golfer, surfer and a developing
fisherman when he does not have his
hands full looking after his young family.

Caroline MacManus

Senior Performance Scientist, HPSNZ

Caroline is currently working as a senior performance scientist with High Performance Sport New Zealand. She leads the performance science team with rowing based at Karapiro. She moved to New Zealand in 2017 after 17 years in the Irish system, most recently the Sport Ireland Institute. She has a well demonstrated track record of success in being part of teams which have produced multiple European, World, Olympic and Paralympic medal winners.

Caroline has her primary sports science degree from Nottingham Trent University and completed a postgraduate degree in sport and exercise at The University of Sydney. She also holds a degree in Physiotherapy from The University of Limerick.

FACILITATOR BIOGRAPHIES

Craig Philpott

High Performance Coach Developer, NZ Rugby and HPSNZ Core Knowledge

Craig Philpott has 30+ years' experience as a professional rugby player and as a coach. He has coached at all levels of the game from Under-13 to Super Rugby, in various roles from Head Coach to Analyst.

Craig was Head Coach of the Hawkes Bay Magpies 2012-17, making 3 NPC finals and winning the Ranfurly Shield twice in that time. He was also Head Coach of the NZ U20s 2017-19, winning the World Championship in 2017. Craig has been a finalist in the NZ Rugby Coach of the Year.

Craig is a trained secondary school teacher who has fulfilled roles as a classroom teacher, Head of Department and Dean. He was Assistant Principal at Christchurch Boys' High School from 2004-11. Craig has a Post Graduate Diploma in Educational leadership from the University of Canterbury. He is a graduate of the HPSNZ Coach Accelerator Programme, and currently he is a High Performance Coach Developer for NZ Rugby.

Alex MacKenzie

High Performance Coaching Consultant BPhEd, BA, MA, PhD

HPSNZ Coach Accelerator Programme Developer and Leader 2008-18

Highlanders and Hurricanes Professional Development Manager 2001-07

Mental Skills Consultant to highperformance athletes & teams 1992-2019

Otago University Sport Psychology Lecturer / Senior Lecturer 1992-2001

NZ Rugby High Performance Coach Developer

Alex's passion for coach development has continued to grow over more than 30 years in the profession.

Debbie Fuller

High Performance Coaching Consultant

DipTch, MPP, Silver Fern #103

Ngaa Rauru / Ngaruahine te iwi

Silver Ferns Assistant Coach 2018-21 - Current World Champions

Fast 5 Netball NZ Head Coach 2018 - World Champions

Northern Mystics Head Coach 2009-16

Human Resource Management 2006-13

HPSNZ Coach Accelerator Alumni

Deborah brings a rich knowledge base to performance development, having represented her country with huge success on the world stage as both an athlete and a coach.

FACILITATOR BIOGRAPHIES

Glenn Fyall

Senior Lecturer, University of Canterbury School of Health Sciences

Glenn Fyall is a senior lecturer at the University of Canterbury. His teaching and research interests focus on coach education and physical education specialising in pedagogy, curriculum and policy. Glenn is an experienced researcher, teacher and coach educator with a demonstrated history of working with a variety of people, organisations and institutions. Skilled in Coaching, Coach Development, Mentoring, Education, Training, Communication and Operational Reviews.

Glenn holds a Master of Education (Canterbury), Bachelor of Physical Education (Otago), Post Graduate Diploma of Teaching & Learning (Canterbury) and is currently completing his PhD at the University of Queensland. His thesis is titled 'The organisational learning culture and cultural learning of high performance coaches in the crusaders super rugby franchise'.

Glenn has 'hands-on' coaching experience in rugby, having coached Shirley BHS 1st XV, New Brighton Colts and Premiers, University of Canterbury Premiers, Canterbury Metro U20, and Canterbury U19 (Trainer)

Glenn is a genuinely passionate teacher, researcher, coach and coach developer who enjoys assisting people to improve themselves through their involvement in sport.

Matt Ingram

Senior Performance and Technique Analyst, HPSNZ

As a Performance Scientist Matt has over 18 years' experience working extensively in high performance sport in New Zealand. Within HPSNZ and wider NSO networks Matt has a strong reputation for evidenced based, coach/athlete first. results driven service delivery in a wide range of athlete performance support areas (performance & technique analysis, coach support, physiology, and S&C). A recent career highlight was coaching Sophie Pascoe to 4 medals at the Tokyo Paralympic Games. With coach Roly Crichton unable to travel due to illness, it was hugely gratifying to be selected and support Sophie through the highs and lows of Tokyo 2020. Matt has worked extremely closely with both Sophie and Roly over 4 Paralympic cycles. Through his work with Paralympics NZ and Athletics NZ, Matt is proud to have supported all 7 of the Tokyo 2020 Paralympic medallists.

Matt has been with full time with HPSNZ since 2018, before that he worked as Senior Sport Scientist for UC Sport, University of Canterbury. During his 15+ years at UC he supported a wide range of sports/athletes across the talent pathway (regional to world champion). These sports included rugby, swimming, track and field, cycling, triathlon, field hockey, football, basketball, netball, shooting, and bowls.

Matt's current key sports he works with are and Athletics (PTA Lead) and Swimming (Para and able bodied). Matt holds a Masters in Physical Education (Biomechanics) from School of Physical Education, University of Otago.

Dr Rebecca Cooke

PhD, MSc (dist), BSc, BPhEd NSNZ Registered Nutritionist

I am Southerner who has lived most of my life in Otago and Southland. I completed my Bachelors degrees in Physical Education and Science (Human Nutrition) at Otago University followed by an MSc in Sports Nutrition. I enjoy a challenge, or maybe it was a moment of madness, but a few years ago I decided to undertake further postgraduate study part-time and graduated with a PhD in Human Nutrition in 2017. The majority of my work life (20 years) has been teaching in the sports nutrition and human nutrition undergraduate and postgraduate programmes at the University of Otago and working as a sports nutritionist in private practice. During my time in Dunedin I worked as a sports nutrition provider for Otago rugby, the Highlanders, Otago cricket, and the New Zealand Academy of Sport. For the past 4 years I have been contracted to High Performance Sport New Zealand as a Performance Nutritionist and work with elite athletes from a wide range of sports based in the Canterbury region. I am heading into my 5th season as the Tactix Netball Team Nutritionist and hold another contract to deliver performance nutrition services to athlete scholars at Lincoln University.

Eight years ago my husband and I moved the family (our now 16 year old daughter and 14 year old son) to Christchurch to help with the rebuild. We are proud parents and both enjoy coaching and managing various sports teams that the kids are involved in including cricket, tennis, netball, basketball, rugby and volleyball. I play netball in the winter and enjoy a social game of tennis and golf but am currently recovering from an ACL reconstruction after an injury in my last game of netball for the season. As a family we enjoy taking our bikes and exploring different parts of the South Island, walking our 4 year old chocolate labrador and getting out and about in Christchurch.



HIGH PERFORMANCE SPORT NEW ZEALAND

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