

SINGAPORE SPORT & PERFORMANCE CONFERENCE 2022

**From Youth to Elite Sport:
Harnessing Potential and the Pursuit of Excellence**

2nd - 4th November 2022

Organised by



SINGAPORE SPORT & PERFORMANCE CONFERENCE 2022

From Youth to Elite Sport: Harnessing Potential and the Pursuit of Excellence

Performance Pathways Science Approach: Specialised Support to Prepare Athletes for the Youth-to-Senior Transition

Matthew Wylde, PhD

Head, Performance Pathways Science

National Youth Sports Institute

Multiple Pathways NOT a Pipeline

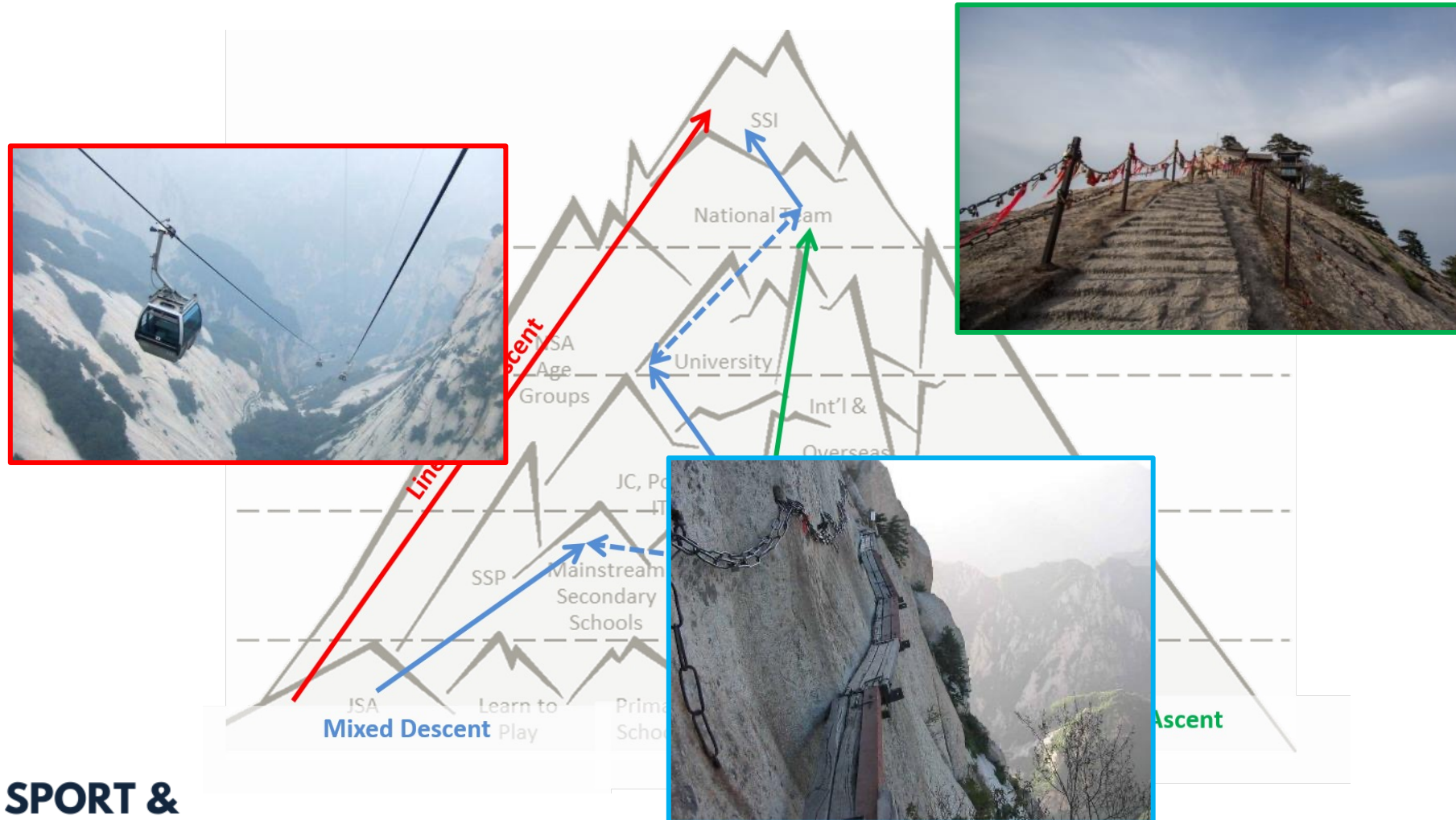


Pipeline



Pathway

Multiple Pathways NOT a Pipeline



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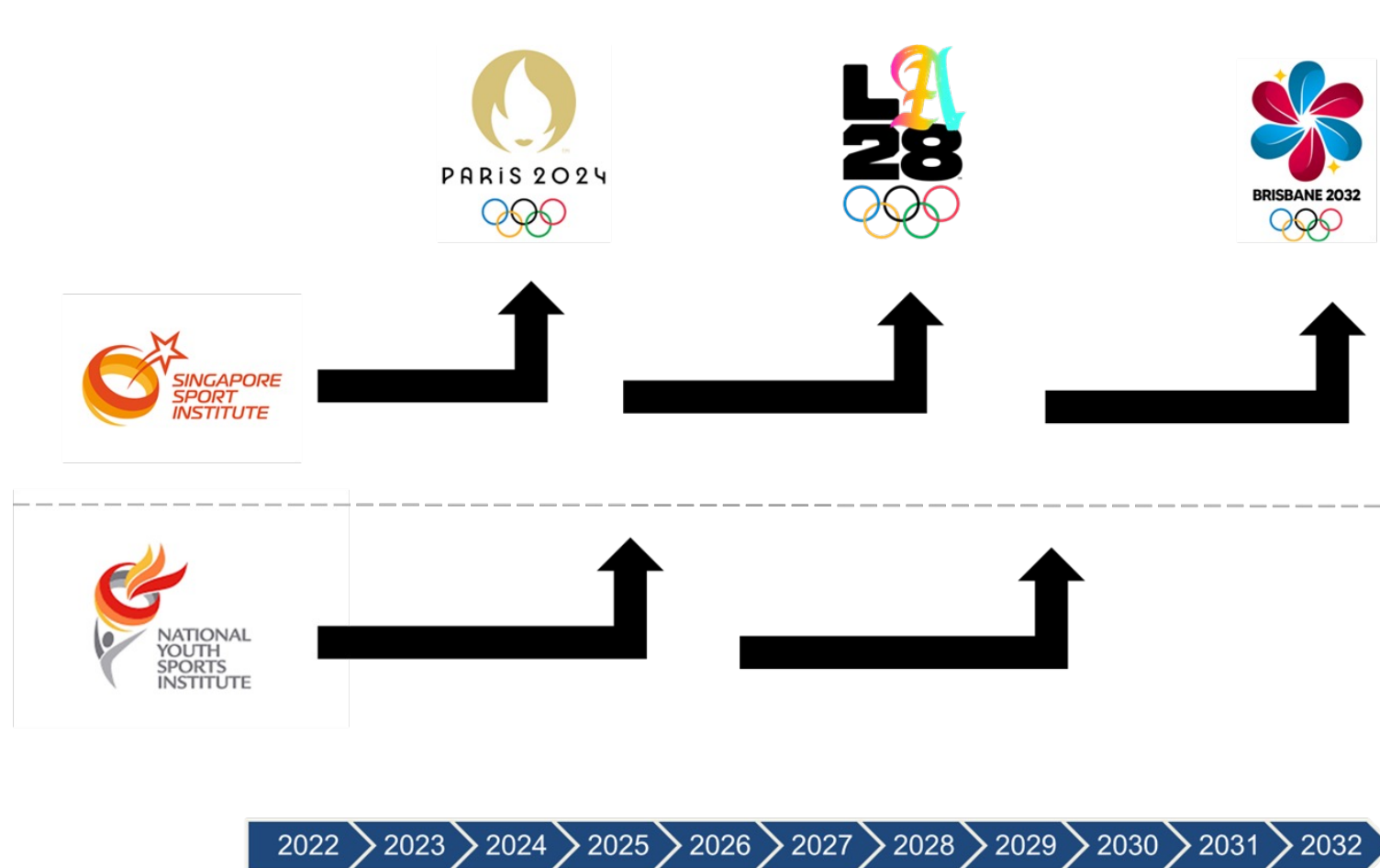
Multiple Pathways NOT a Pipeline



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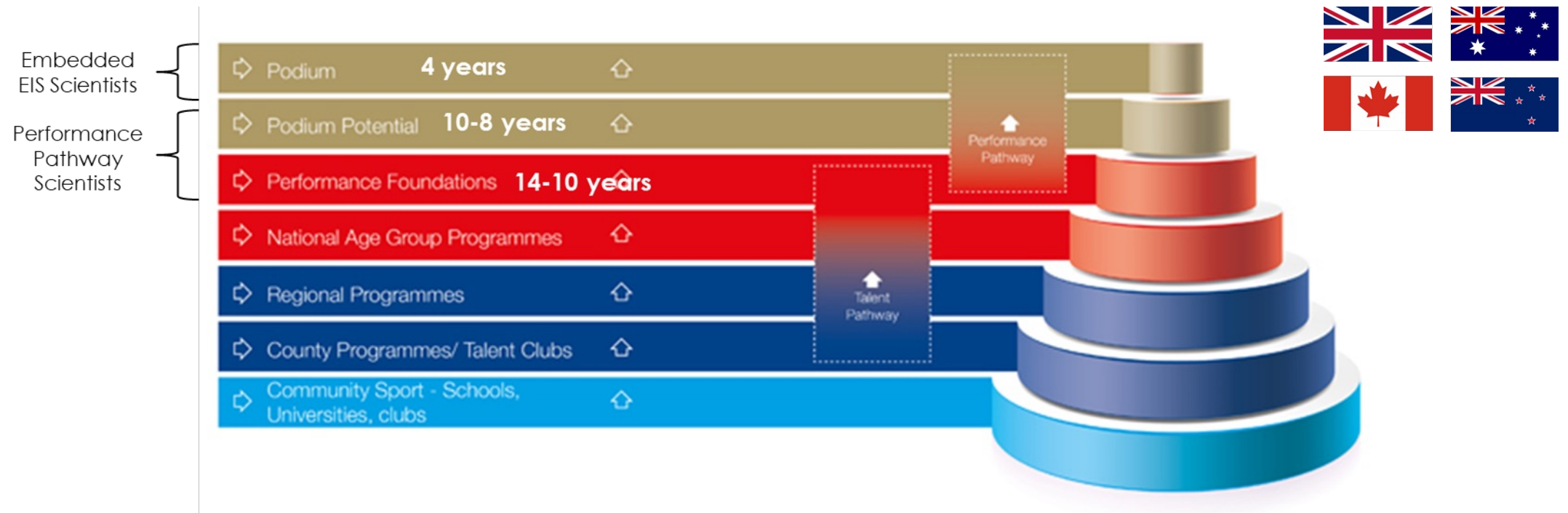
Preparing Athletes for the Youth-to-Senior Transition



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Performance Pathways Science



“**Anything** to do with Paris 2024* and LA 2028 from an Olympic point of view is our remit”

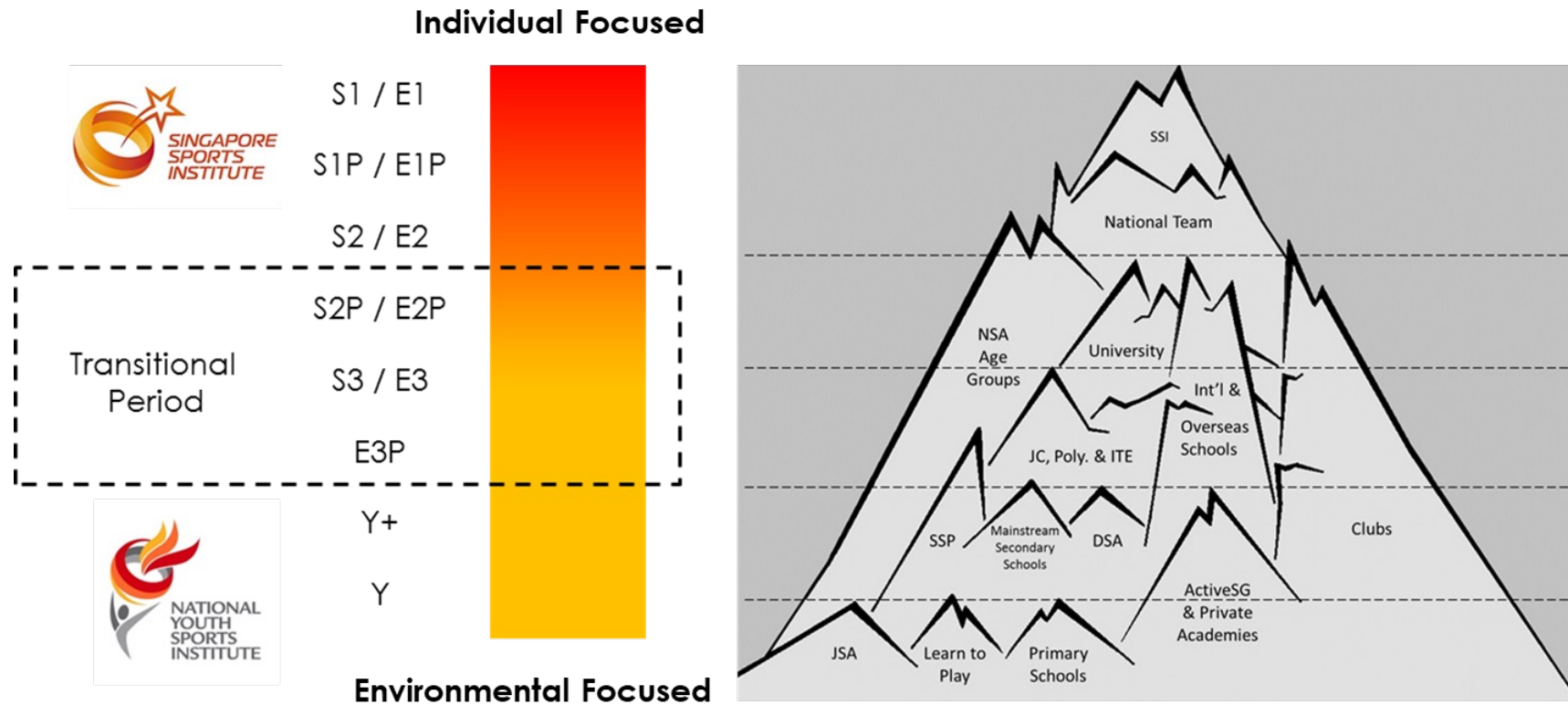
Andy Burns, Senior Performance Pathway Scientist, UK Sport

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*Recorded before Tokyo 2020

Singapore High Performance System



“Science Informed Environments” to facilitate the transition towards senior elite performance

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Holistic Ecological Approach

[HOME](#) > [News](#) > [Youth Athlete Development Conference 2018](#) > [Creating an Optimal Sporting Environment](#)

Creating an Optimal Sporting Environment



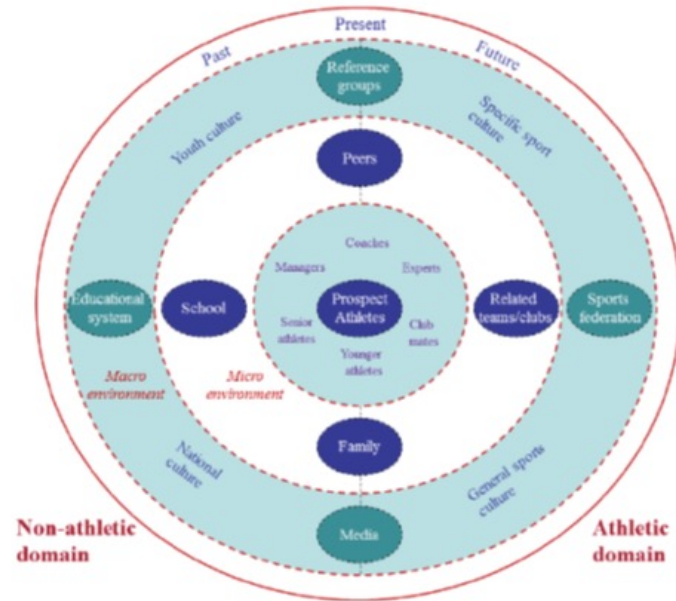
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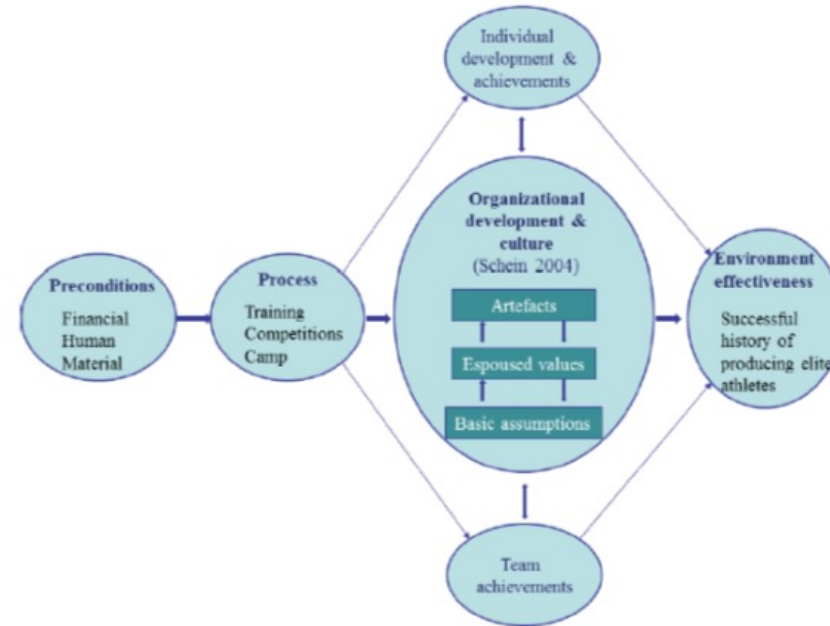
Henriksen & Shambulova. (2017). Creating Optimal Environments for Talent Development: A Holistic Ecological Approach.

Holistic Ecological Approach

Athletic Talent Development Environment (ATDE)



Environment Success Factors (ESF)



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Henriksen & Shambulova. (2017). Creating Optimal Environments for Talent Development: A Holistic Ecological Approach.

Holistic Ecological Approach

Holistic Ecological Approach

“Relating to the whole of something instead of just to its parts (the whole person)”

“The relation of living things to one another and to their physical environment”

Supporting the Athlete Journey

Level 3 – Y+ Carded Athletes

- Bespoke individualised support for a select group of Y+ carded athletes in preparation for key major youth games and championships

Level 2 – NSA Youth Teams / SSP / UTR / Selected A&Cs

- Performance Pathways Scientists embedded within the training environment to lead the systematic implementation of science informed best practices

Level 1 – All Youth Carded Athletes

- Structured three-year on-boarding process consisting of a blend of in-person workshops and online resources

Level 1: Workshops for All Youth-carded



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Level 1: Workshops for All Youth-carded

there's a *WAY!*
Workshops for All Youth-carded

What is WAY?
Essential knowledge, tools and skills for the youth athlete
2x yearly

For who?
For youth-carded athletes

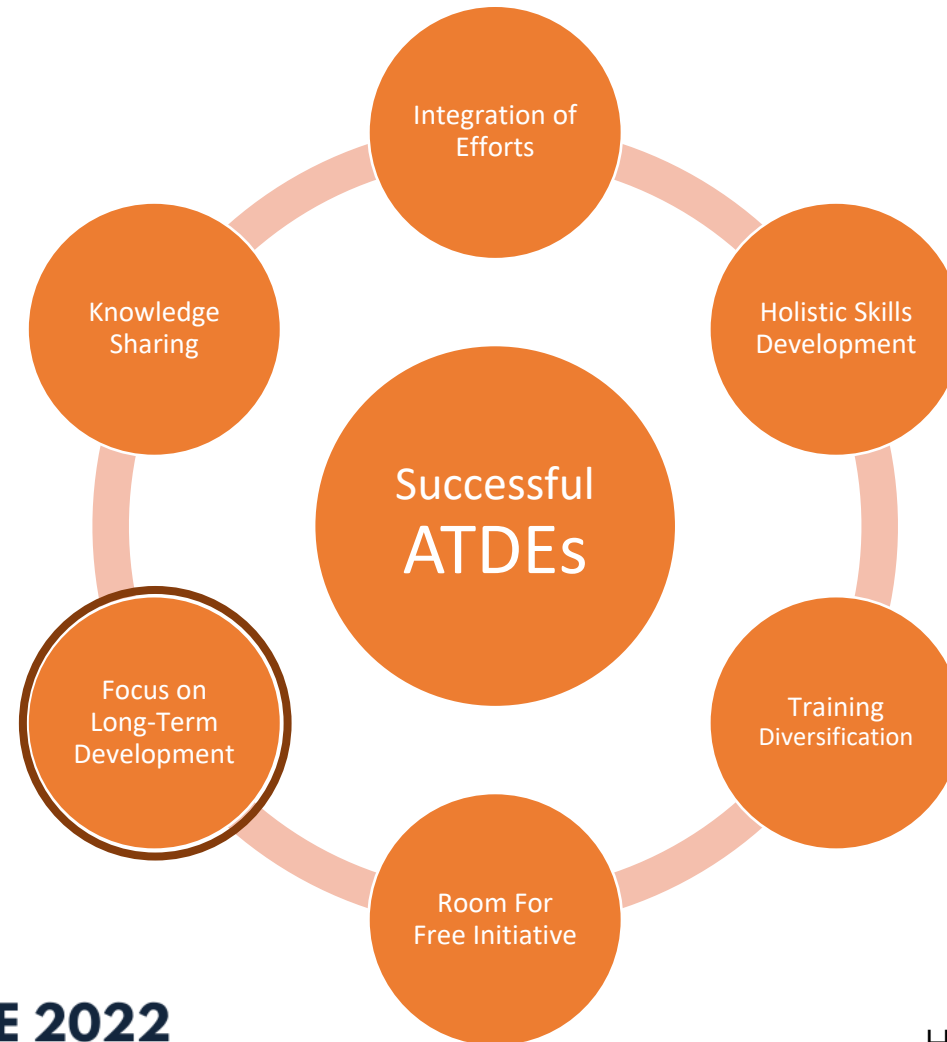
Where?
5D Stadium Singapore 39

What will be covered?
Book 1a - Adopting good habits
Book 1b - Preparing for an athlete's lifestyle
Book 2a - Understanding of well-being
Book 2b - Managing an athlete's lifestyle
Book 3a - Elite performance
Book 3b - Dual career

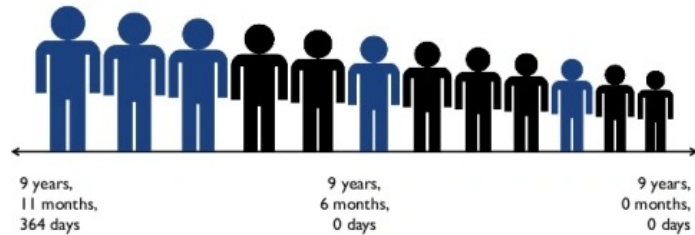
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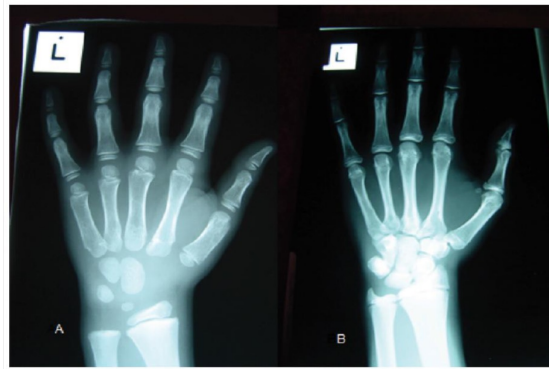
Level 2: Creating Science Informed Environments



Level 2: Creating Science Informed Environments

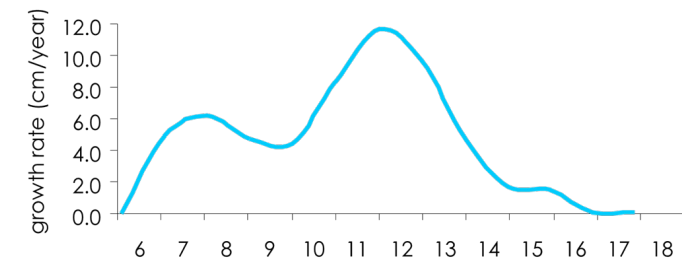


Focus on Long-Term Development



Comparison of two athletes born within 1 week of each other, but with a difference in skeletal age of 5.8 years (Athlete A: 6.3 years; Athlete B: 12.1 years)

PHYSICAL DEVELOPMENT	FMS	FMS	FMS	FMS	
	SSS	SSS	SSS	SSS	
	Mobility	Mobility			
	Agility	Agility	Agility	Agility	
	Speed	Speed	Speed	Speed	
	Power	Power	Power	Power	
	Strength	Strength	Strength	Strength	
		Hypertrophy	Hypertrophy	Hypertrophy	Hypertrophy
	Endurance & MC	Endurance & MC		Endurance & MC	



Level 3: Individualised Support



C'wealth Youth
3 gold to finish

The swimmers made
their haul of seven



Six of our athletes finished top-8 in their sport. Jaslyn Hooi came closest to medalling when she finished fourth in the women's badminton singles tournament.



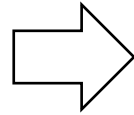
YOUTH OLYMPIC GAMES



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Level 3: Individualised Support



YOG18 Athletes at SEAG21

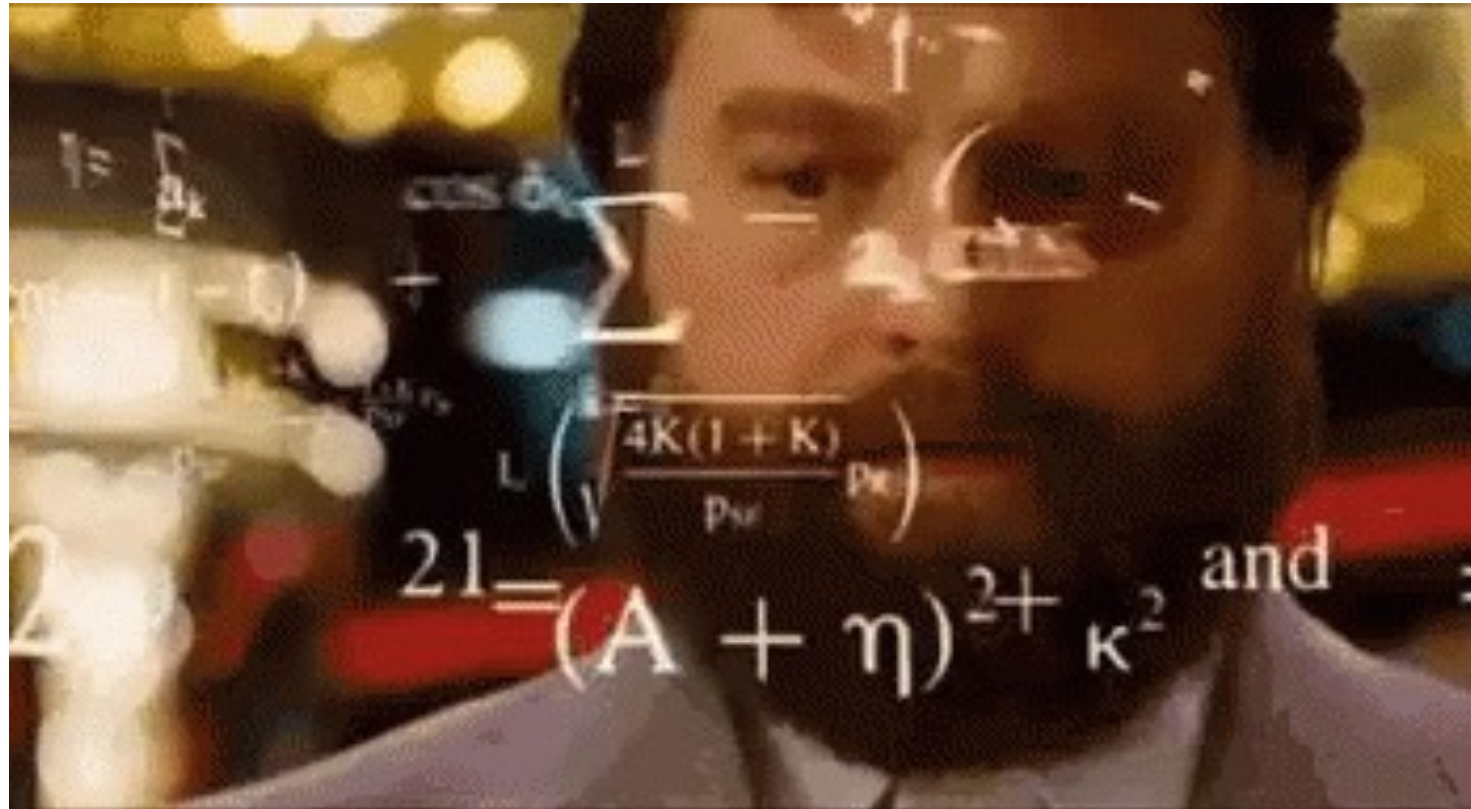
13 out of 18 had their sports featured

12 out of 13 were selected to represent
10 out of 13 represented

10 out of 10 medalled
6 out of 10 achieved gold
4 out of 10 were multi-medallists
3 out of 10 won multiple gold medals

11 event golds attained at SEAG21
23 event medals attained at SEAG21

Transdisciplinary Working



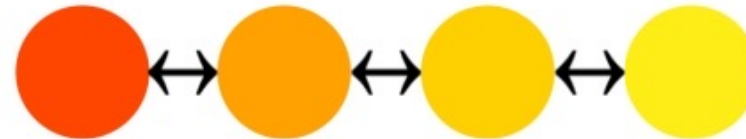
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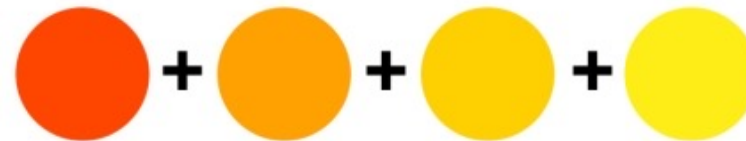
Transdisciplinary Working



Trans-Disciplinary - Higher Level Synthesis



Inter-Disciplinary - Interactive



Multi-Disciplinary - Additive

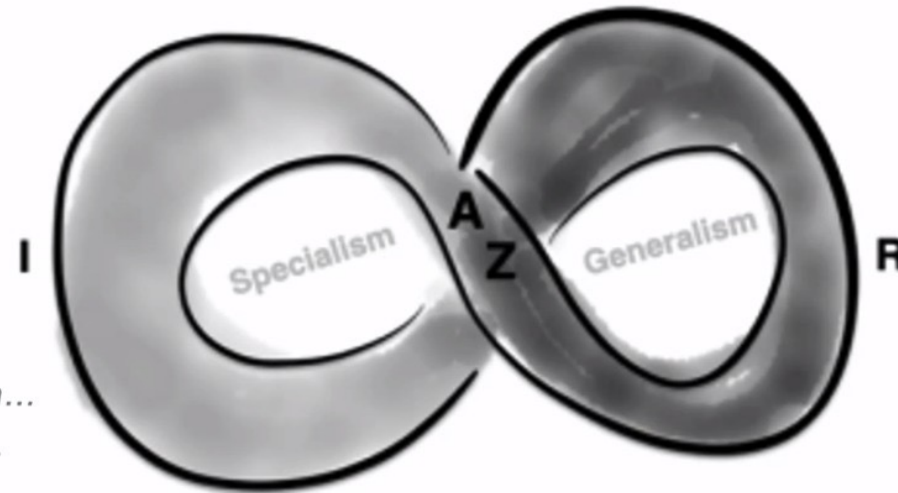


Disciplinary - Silos

Transdisciplinary Working

Competencies & Skills...Performance Pathway Scientists...the Neo-Generalist...

- Physiology...
- Perf Analysis...
- Coaching...
- Developmental psychology...
- Athletic Conditioning...
- Skill Acquisition, teaching & Learning...
- Applied research...
- Disability sport...



- Change agents...
- Community builders...
- Facilitators...
- [executive] coaches...
- Critical thinkers...
- Influencers...
- Relationship builders...
- Project Managers...

A curiosity about the field of developing young people and maximising potential





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John Alder - Lessons from the UK: An Overview of Pathways from Junior Sport Participation to High-Performance Sports. Youth Athlete Development Conference 2021

Transdisciplinary Working

	GENERALIST	SPECIALIST
	<p>Can bring diversity of thought</p> <p>Can bring fresh ideas to old problems</p> <p>Less lines of communication</p>	<p>Has deep knowledge to solve complex problems</p> <p>Can quickly solve problems in specific areas</p> <p>Can easily implement systematic approaches</p>
	<p>May not have enough specific knowledge to add value to the key problems</p> <p>May take longer to solve specialised problems and it implement systematic processes</p>	<p>May give less weight to thoughts of others</p> <p>May only approach problems one way</p> <p>More lines of communication</p>

Transdisciplinary Working

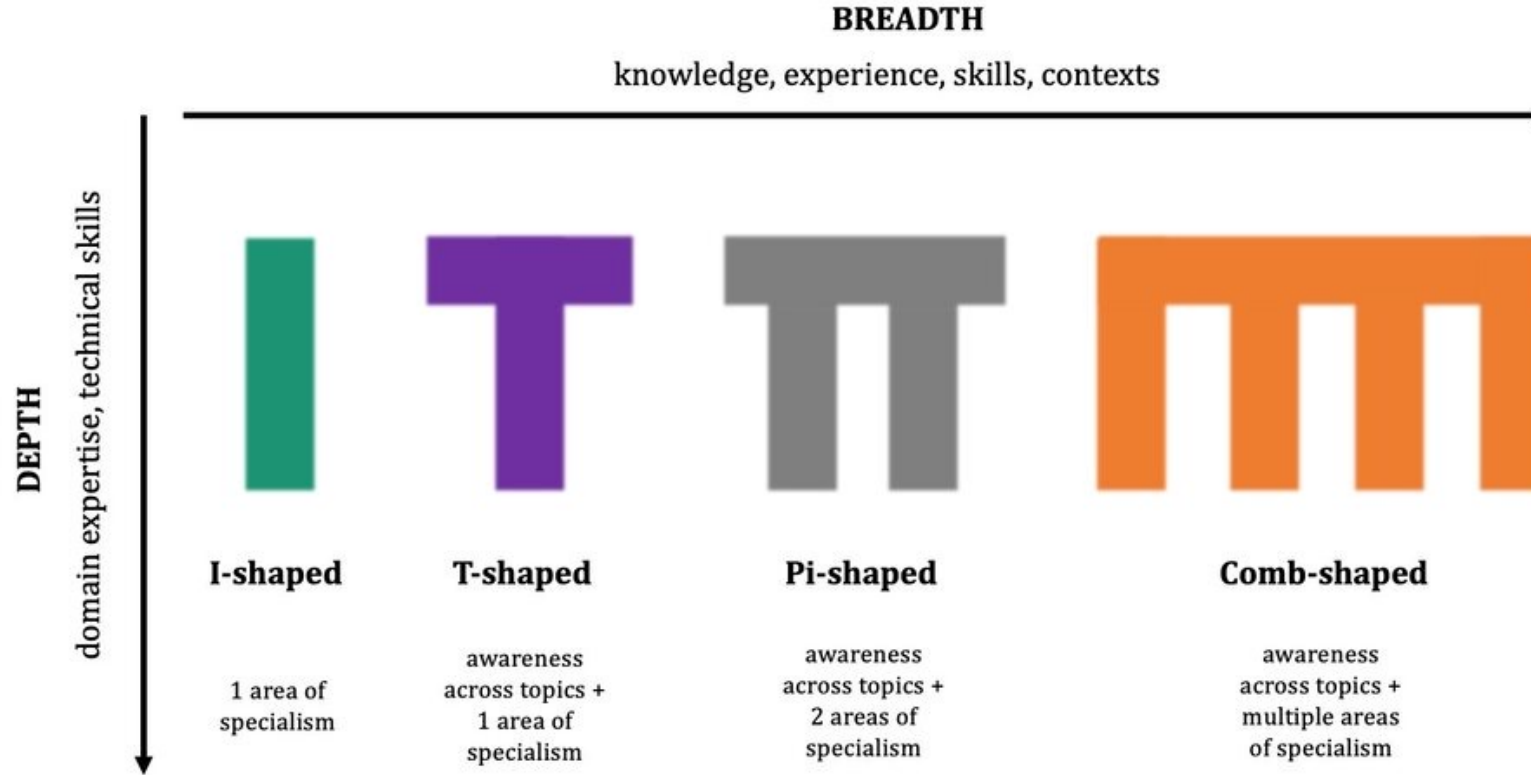
GENERALIST-SPECIALISTS



<p>Can bring diversity of thought</p> <p>Can bring fresh ideas to old problems</p> <p>Less lines of communication</p>	<p>Has deep knowledge to solve complex problems</p> <p>Can quickly solve problems in specific areas</p> <p>Can easily implement systematic approaches</p>
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Transdisciplinary Working



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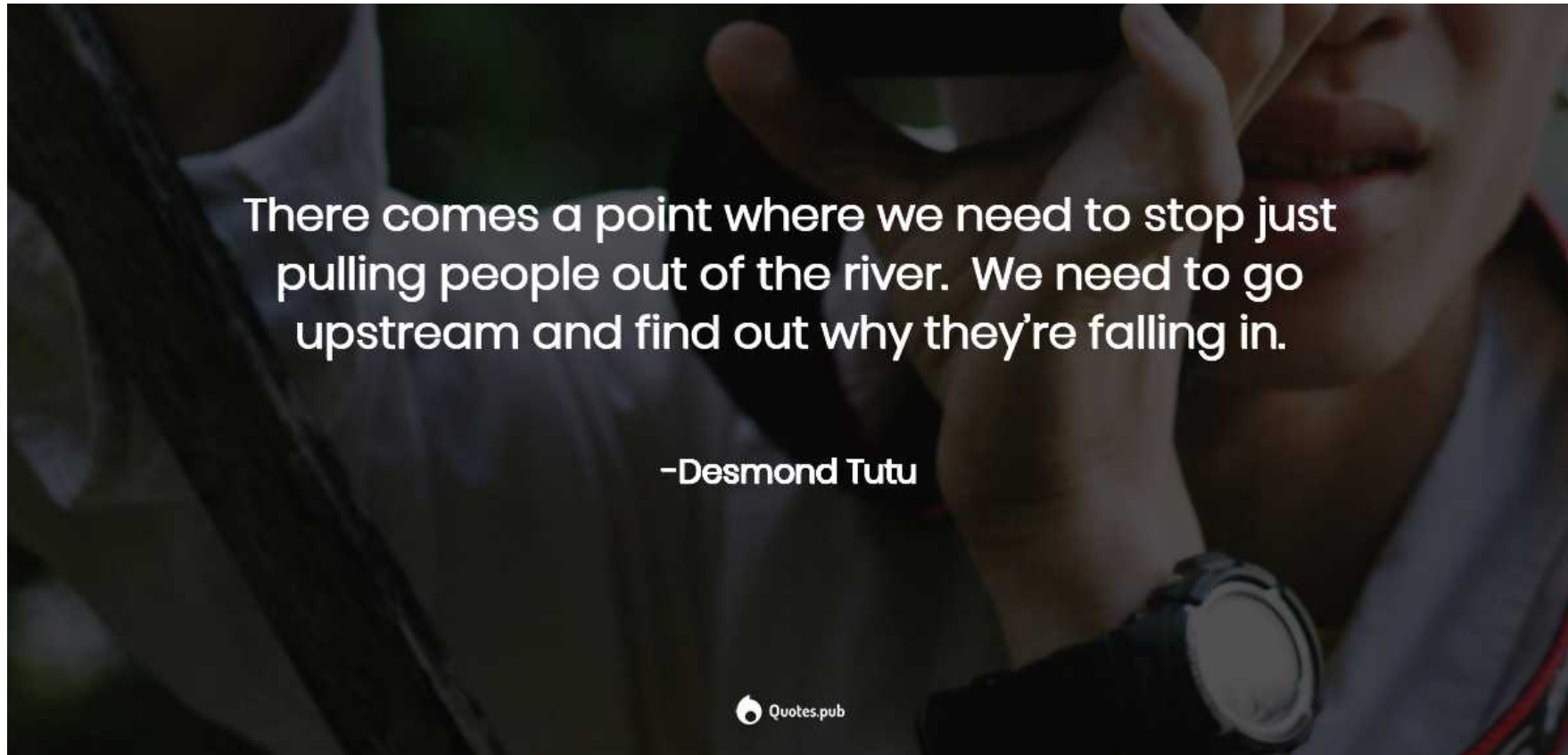
"Lessons From 2020: Future-Proofing Skill Sets For Uncertain Times". Informed Practitioner in Sport, Nov 2020

Transdisciplinary Working



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Take Home Message



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Take Home Message



Poor Fundamental
Movements

Overuse
Injuries

Mental Health
Issues

Inability to Perform
Under Pressure

Disordered
Eating

Under
Performance



Thank You!

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