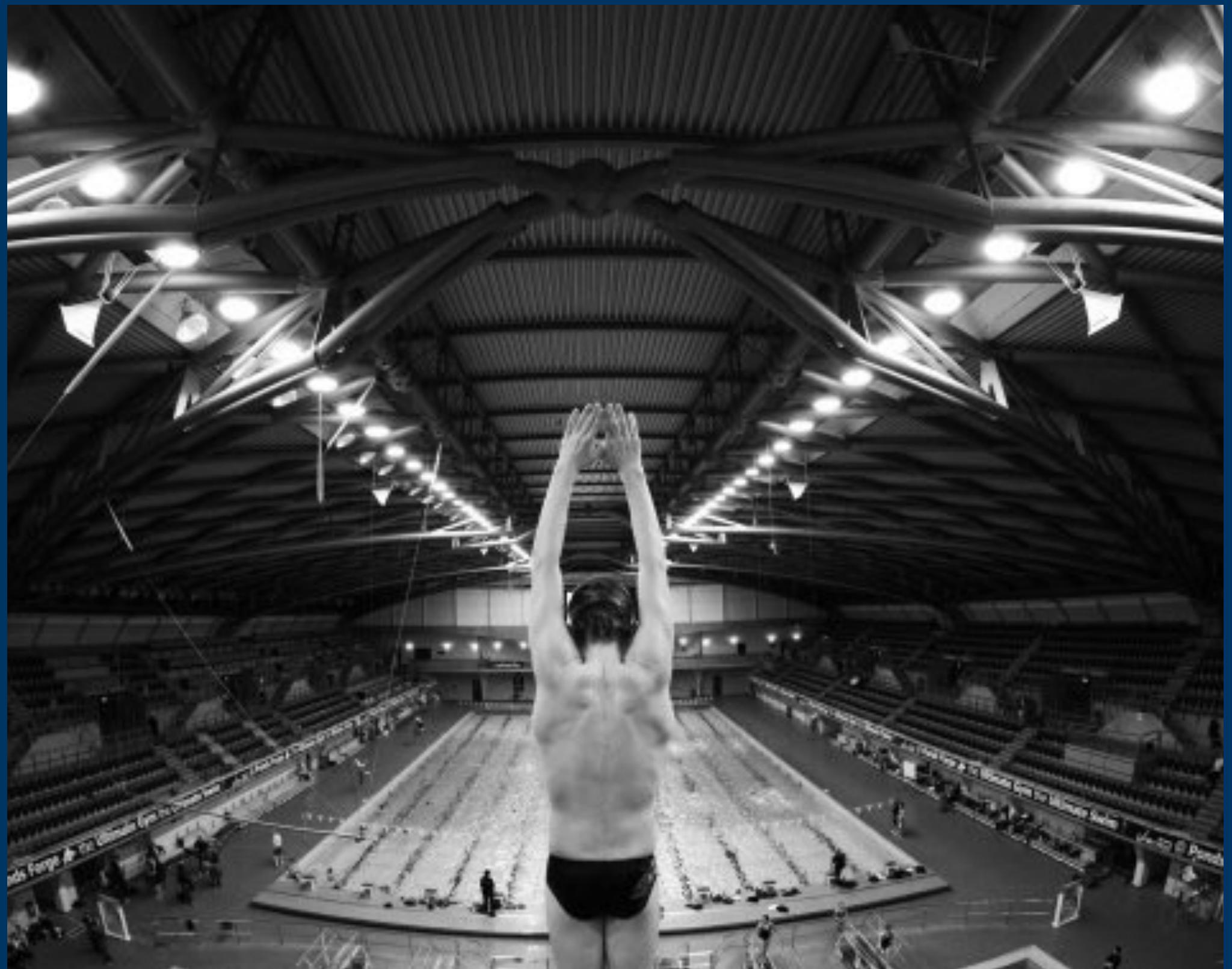


A Department of Methodology

A re-conceptualisation to integration

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Learning Objectives

Part 1

- ▶ To introduce and understand what a Department of Methodology (DoM) is...
- ▶ Provide clarity on what current issues there are within a sports organisation, with respect to integration & athlete development
- ▶ Discuss possible impact adopting a DoM could have
- ▶ Identify what practice tasks currently look like
- ▶ To understand how Ecological Dynamics shapes an operational model for practitioners

Part 2

- ▶ Identify some potential collaborations within sports organisations & solve some performance problems

PART 1...

WHAT IS A DEPARTMENT OF METHODOLOGY?

TASK - HOW MANY PRACTITIONERS ROLES CAN YOU NAME WITHIN YOUR/AN SPORTING ORGANISATION?





Who makes up the backroom team?



The Current Landscape

SPORTS PRACTITIONERS...DO THEY WORK AS ‘TEAM’?

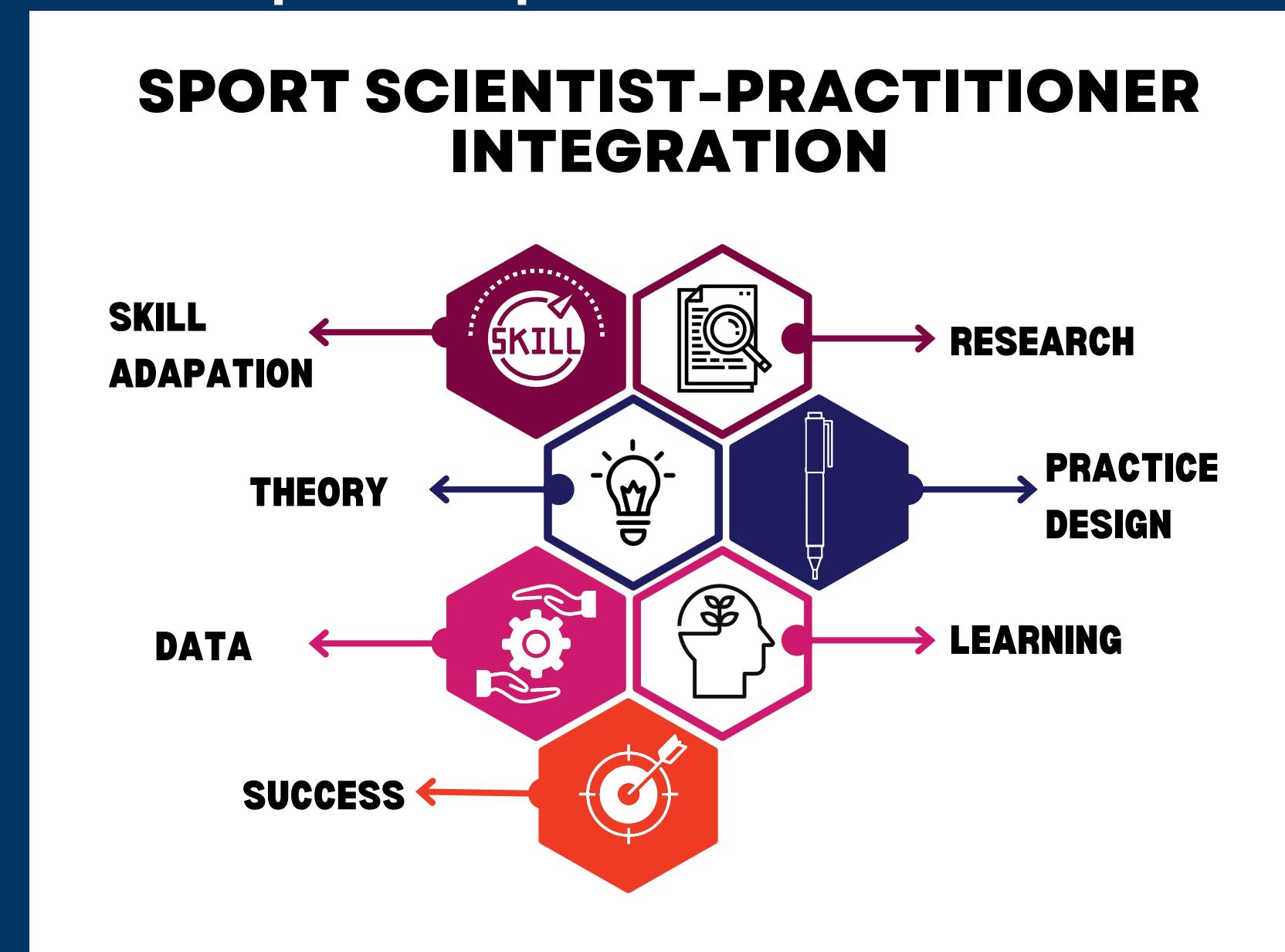
- ▶ Sports organisations employ a range of professionals to aid in athletic performance with the aim of success i.e., winning trophies, winning medals
- ▶ ‘An illusion of integration’ - *Fabian Otte 2020; 2022*



Working towards transdisciplinarity

Transitioning away from multidisciplinary teams to a transdisciplinary approach

- ▶ A transdisciplinary team seeks to alleviate issues associated with an MDT
- ▶ Transdisciplinarity requires the integration of fundamental principles and pursues the unity of knowledge beyond disciplines



A Department of Methodology

WHAT IS ONE...

- Practitioners in a department of methodology collaborate to enrich action, perception and cognition in athletes and teams
- The focus is enriching the specific performer-environment interactions in practice and training

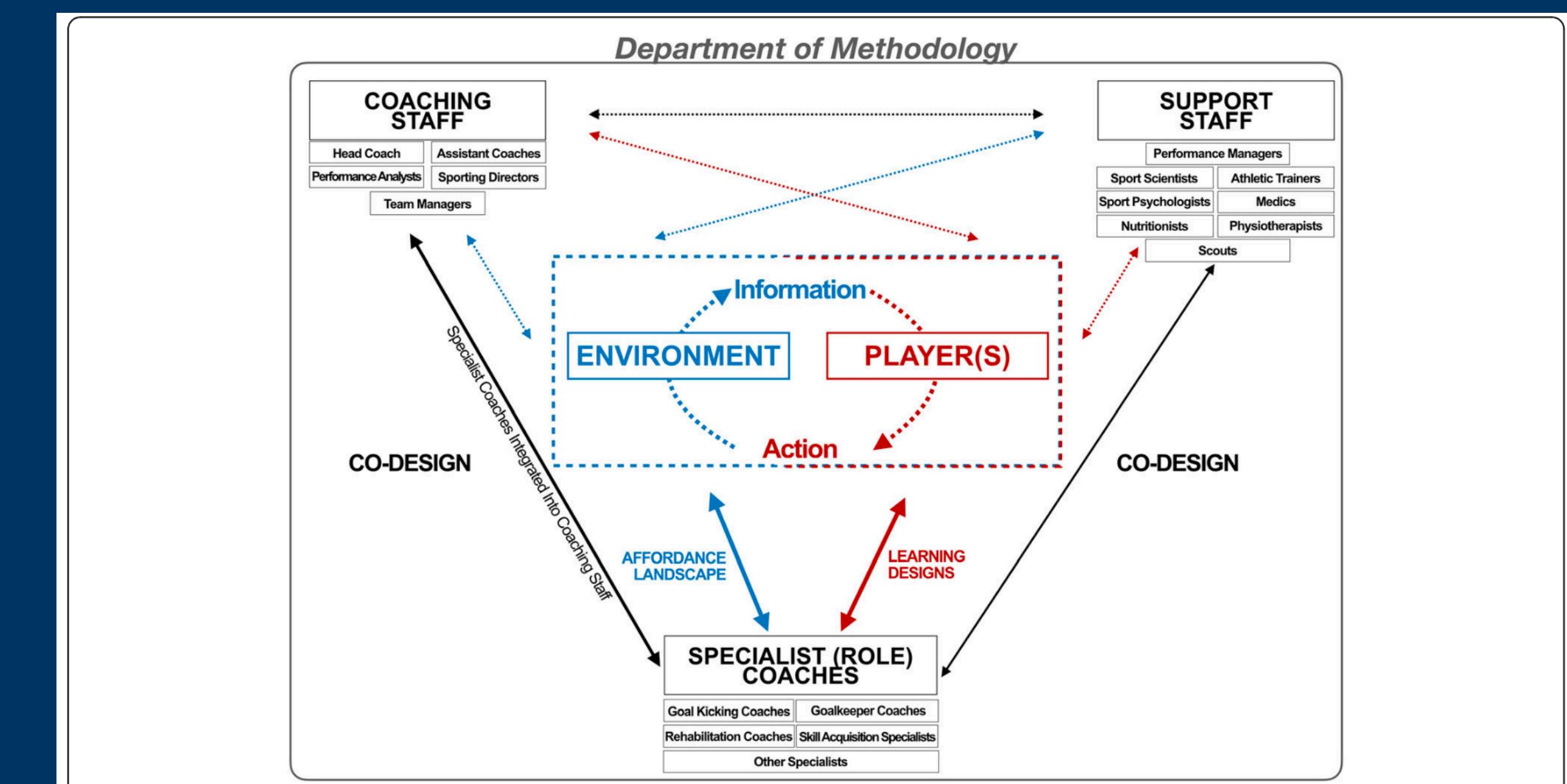


Fig. 1 A Department of Methodology model integrating the work of specialist (role) coaches, professional coaching staff members and support staff in order to co-design adaptable learning environments

A Comparison of two approaches

Table 2 Training or synergizing? Contrast of methodological principles

Approach	Training (traditional)	Synergizing (complex systems)
Programs	Fixed training programs	Contextually sensitive methodological criteria
Performers	Executers	Co-designers of the process
Periodization	Fixed, decontextualized	Contextually sensitive
Conditioning, skill acquisition, motor abilities training	Prescription-based	Based on nested dependence and circular causality of constraints
Training unit	Performers and their components Players (team sports)	Performer-environment system Team (team sports)
Short-term training plan	Based on stereotyped performance solutions and movement templates	Based on exploration of representative performance contexts
Training tasks	Non-representative (through task decomposition)	High level of representativeness (through task simplification) and beyond
Training exercises criteria	Right/wrong	Contextually (un)functional
Evaluation	Fragmented	Holistic
Role of the coach	Prescribing solutions	Co-discovering with the performer

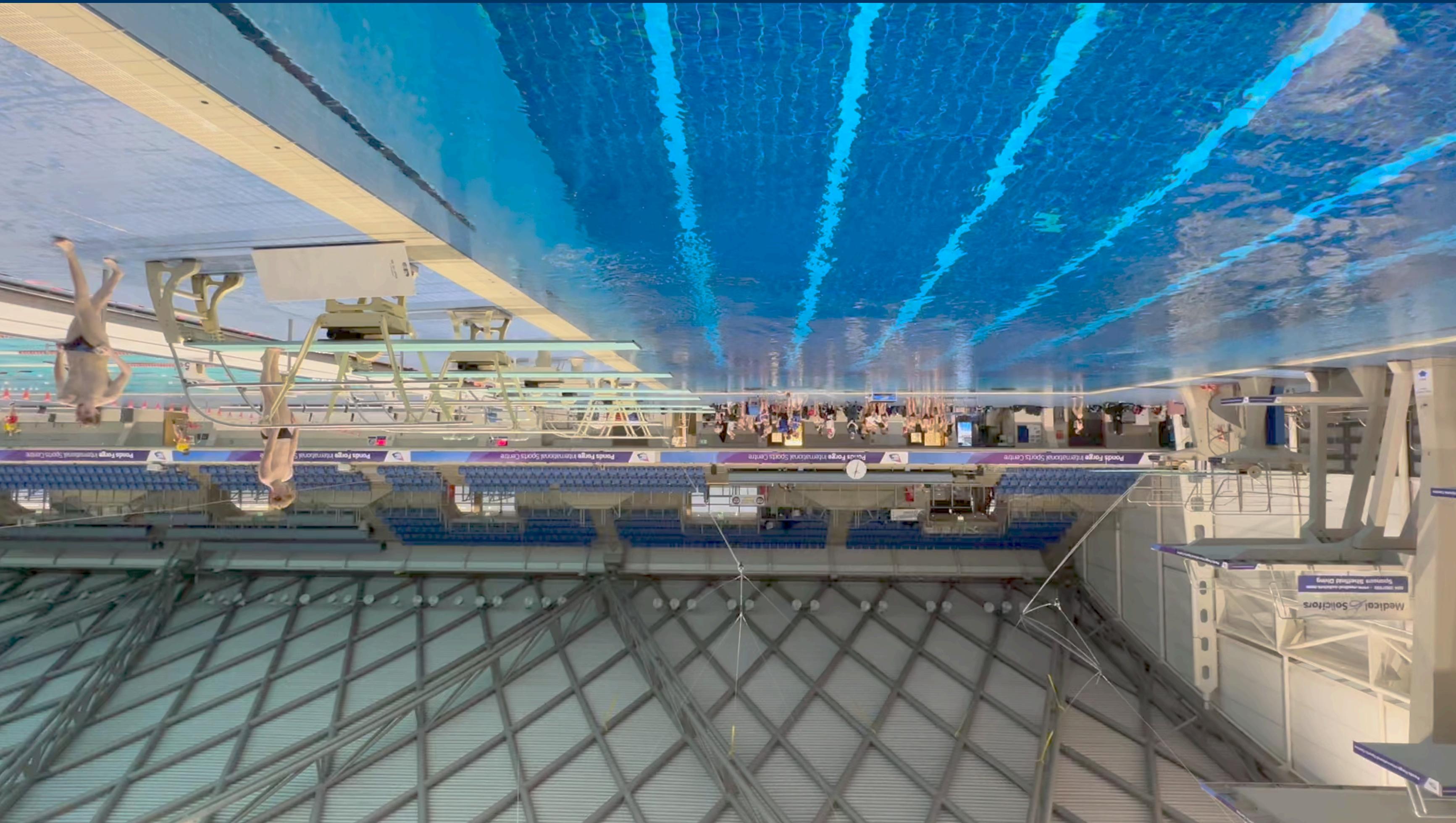
The Agility Ladder

Viewing the task differently



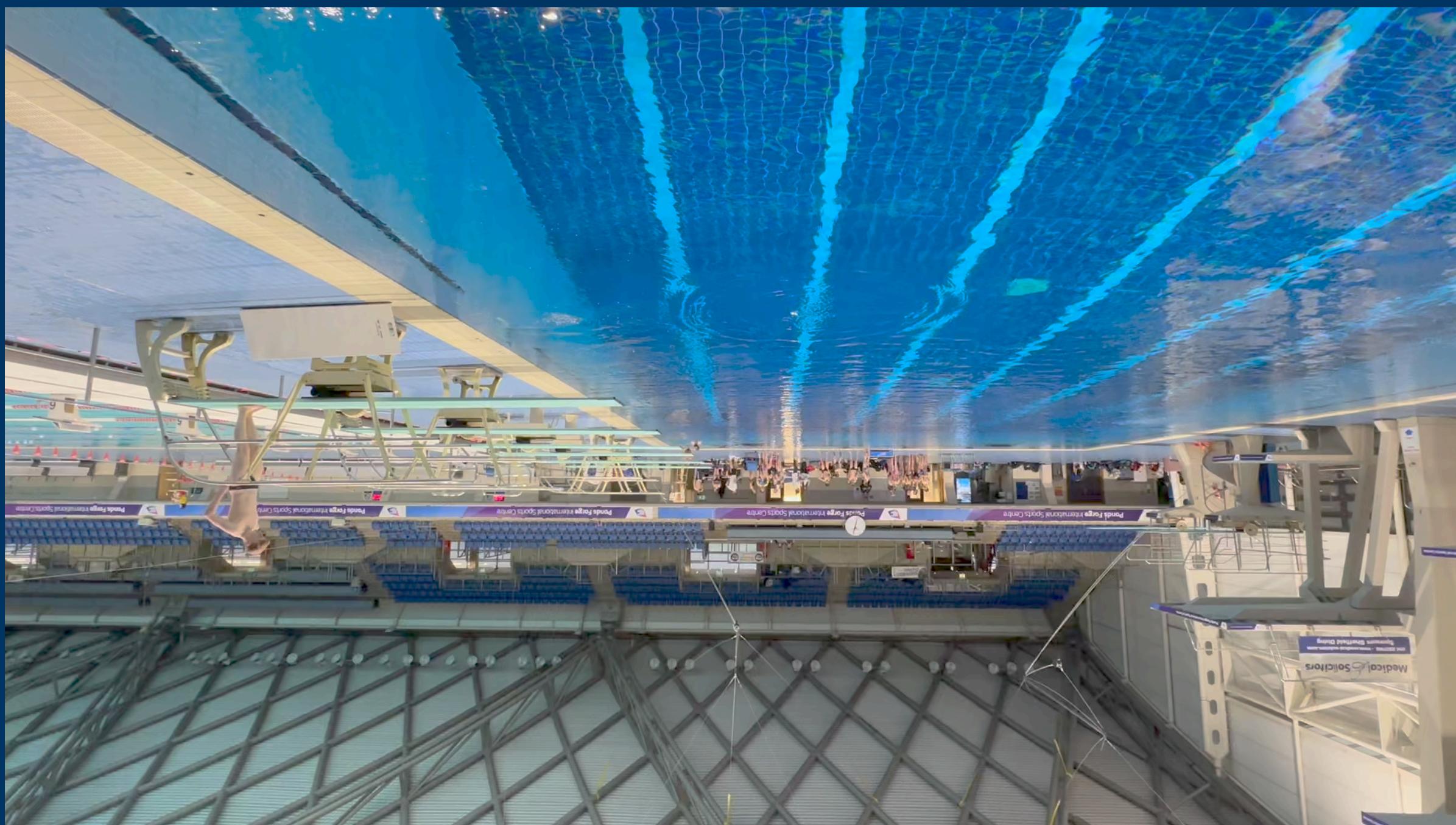
Practical Examples from my sport

Divers going too far out



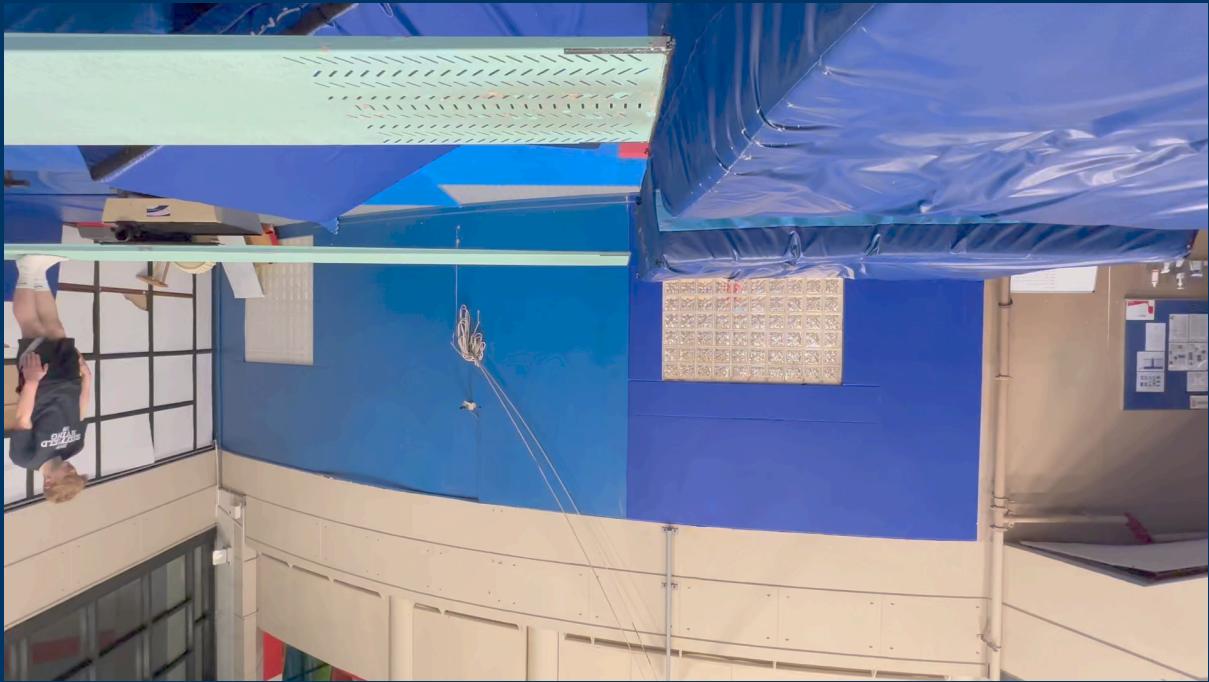
Practical Examples from my sport

Divers going too far out - Constraints Based Approach



Practical Examples from my sport

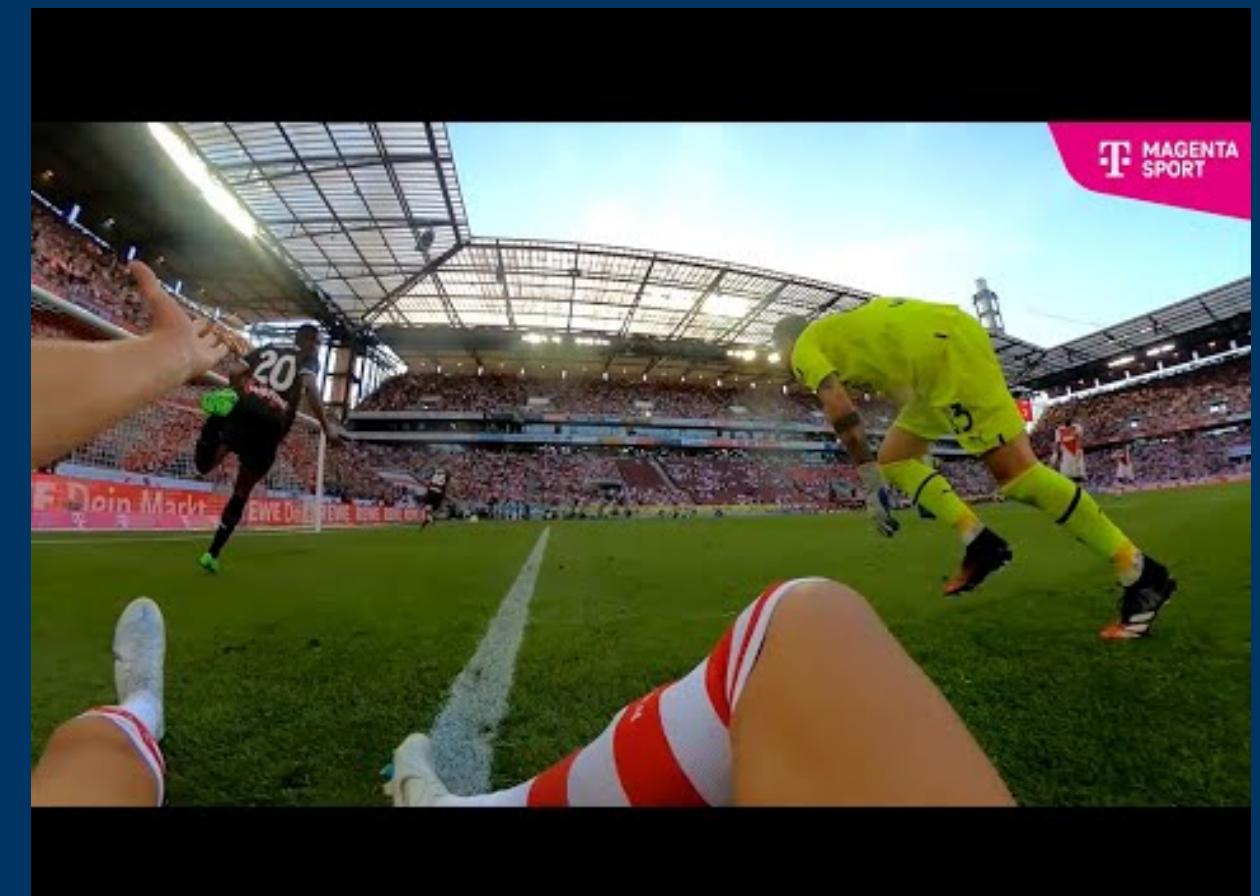
Divers going too far out - Traditional Based Approach



Key Concepts

ATHLETE-ENVIRONMENT MUTUALITY

- ▶ Affordances - Opportunities for action (Gibson 1979)
- ▶ “We perceive to perceive in order to move, but we also move in order to perceive (Gibson 1979, p.229)



Key Concepts

COMPLEX ADAPTIVE SYSTEM - AN INTEGRATED UNIT

'Context is important'

- As you saw above, context is important, transdisciplinary teams can more effectively support athletes to perceive specifying information sources to select affordances available to regulate appropriate actions as dynamic performance contexts change

Key Concepts

ATHLETES AS NON-LINEAR DYNAMICAL SYSTEMS

Non-proportionality & non-linearity

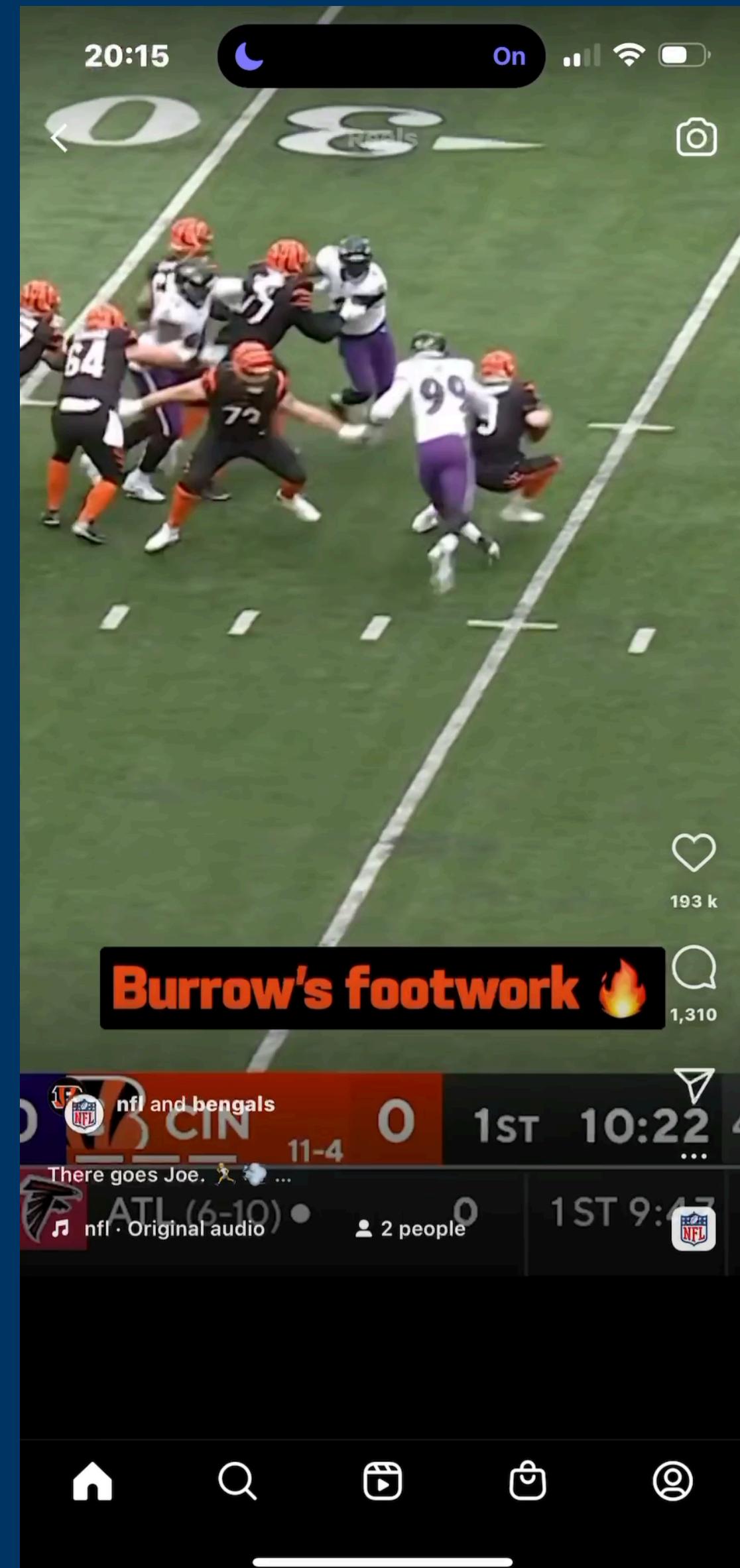
- ▶ Non-proportionality refers to hours spent in learning environment doesn't lead to identical leaps of improvement. Rapid jumps in learning can emerge from small periods of practice
- ▶ Non-linearity - there is a misconception learners acquire functional movements at a steady state

Key Concepts

REPRESENTATIVE LEARNING DESIGN

Representative learning design (Egon Brunswick 1955)

- ▶ Representative learning design emphasises the importance of skill transfer between practice environment and performance environment. Informational constraints sampled from competition are carefully designed into practice and training to support learning

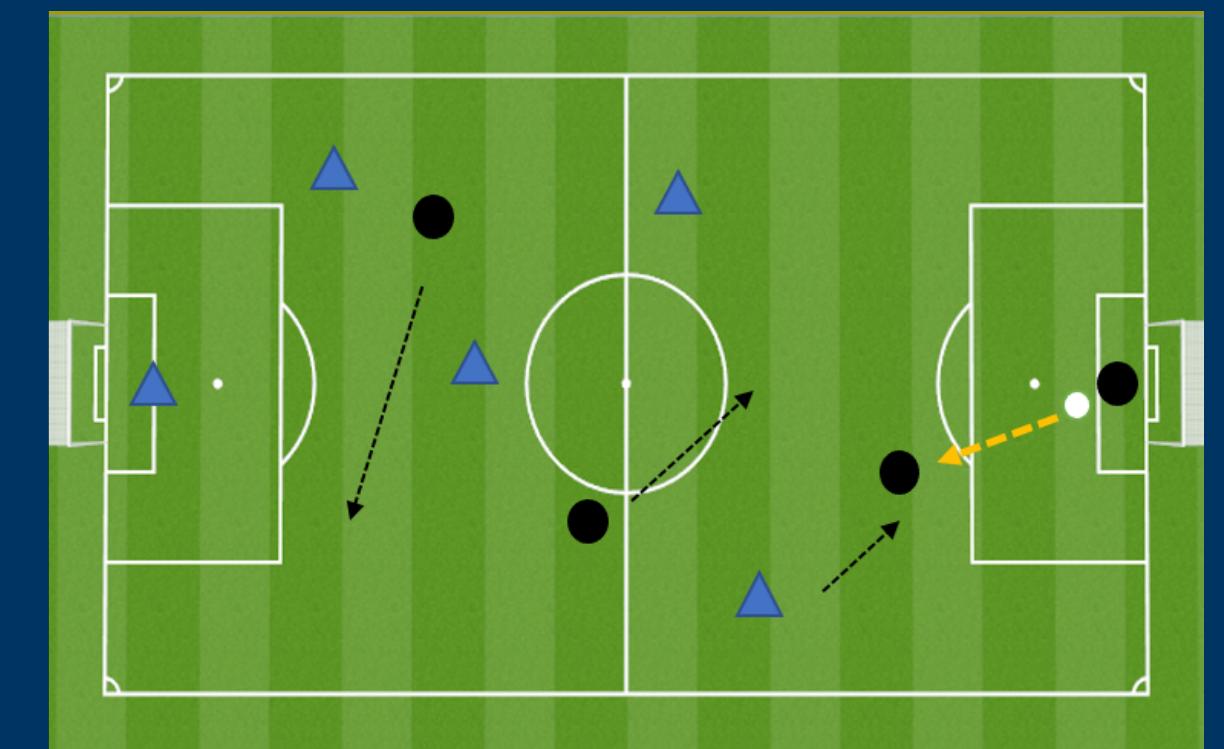
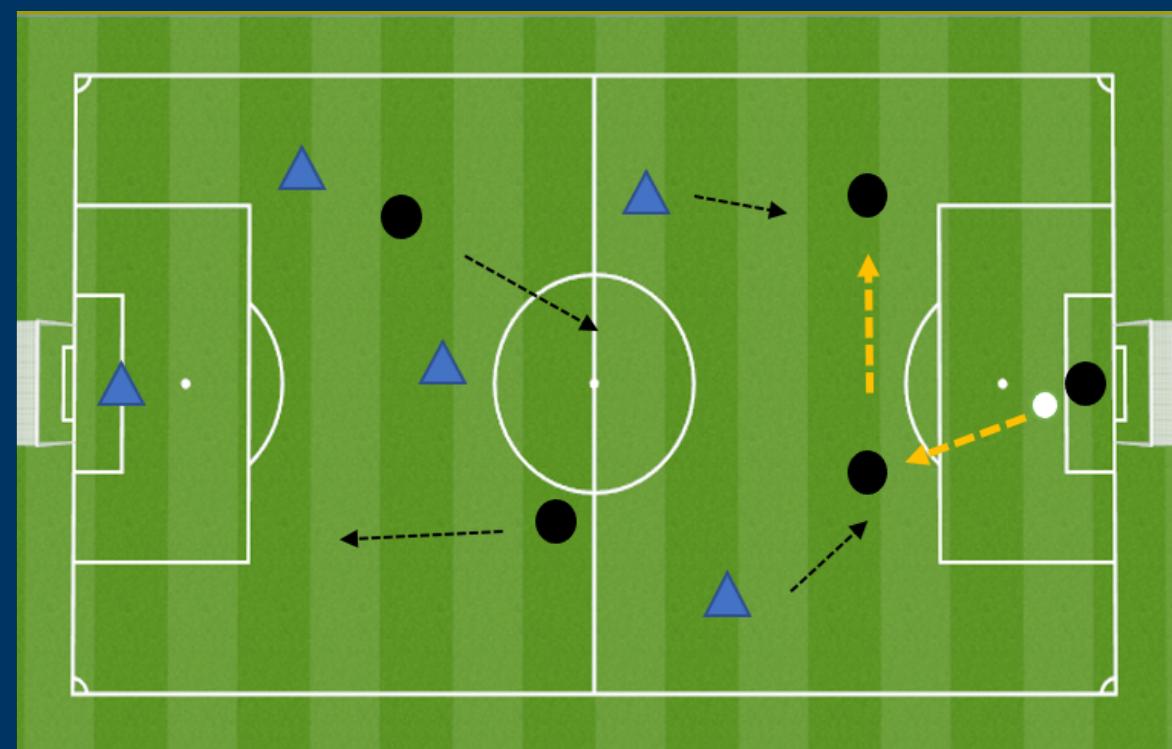
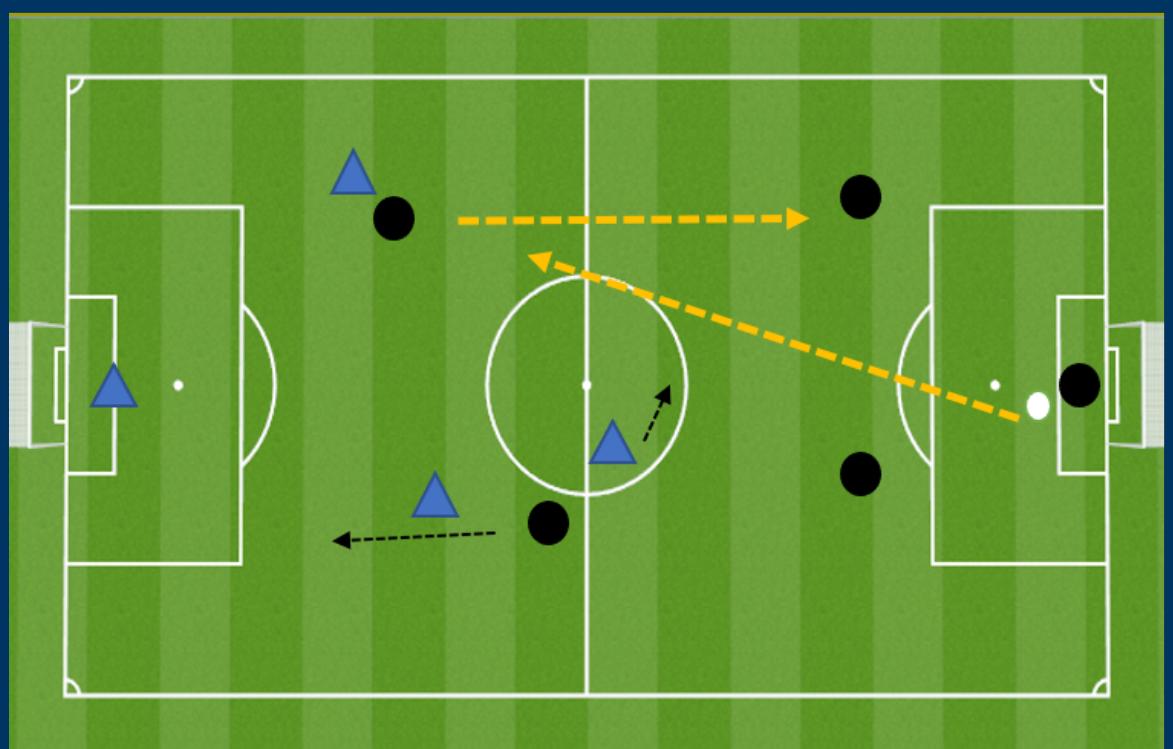


Key Concepts

REPETITION WITHOUT REPETITION

Repetition without repetition (Bernstein 1967, p234)

- Framed around manipulating variability to enhance adaptability and increase or decrease (in)stability
- As practitioners we want to encourage learners to 'explore, exploit and discover'
- To facilitate *repetition without repetition* we want learners to repeat the same task goal/solution (solving a performance problem) but in a variety of different ways. We achieve this through constraints manipulation



PART 2...

YOU ARE THE DoM, LETS SOLVE SOME PROBLEMS



Performance Problems

USING A DoM, SOLVE THESE PERFORMANCE PROBLEMS

- Problem 1 - Football - Some players in the team need to improve their ball control
- Problem 2 - Gymnastics - Player is feeling worried about back somersault on beam as keeps losing balance and falling off
- Problem 3 - American Football - QB is sacked too much
- Problem 4 - Hockey - Forward is failing to score fast passes across the box
- Problem 5 - Basketball - Decision making when to pass or dribble
- Problem 6 - Diving - Diver find it hard to land upside down



What was this session for

Aim was to...

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Part 2

- Solve some performance problems

