

**2019 NSCA HOCKEY
STRENGTH & CONDITIONING
CLINIC & LIVE STREAM**





Conflict of Interest Statement

I have no actual or potential conflict of interest in relation to this presentation.



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**2019 NSCA HOCKEY STRENGTH & CONDITIONING
CLINIC & LIVE STREAM**

#NSCAHockey19

Multi Directional Movement

*With Respect to the Relationship of
other Synced Training*

Anthony Morando CSCS, SCCC**

LEARNING OBJECTIVES

- + Knowing the difference between Change of Direction (COD) and Reactive Agility (RA) as it relates to drill selection.
- + Be able to explain multidirectional movement with respect to the relationship between base of support, center of mass, and the resultant angle of attack.
- + Develop a basic progression for a multidirectional movement session

WHAT DO WE THINK OF WHEN WE HEAR AGILITY?

Agility or nimbleness is the ability to change the body's position efficiently, and requires the integration of isolated movement skills using a combination of balance, coordination speed, reflexes, strength, and endurance.



1. MULTIDIRECTIONAL SPEED

THE DIFFERENCE OF ADDING A STIMULUS

DECELERATION



ACCELERATION



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CHANGE OF DIRECTION

REACTIVE AGILITY

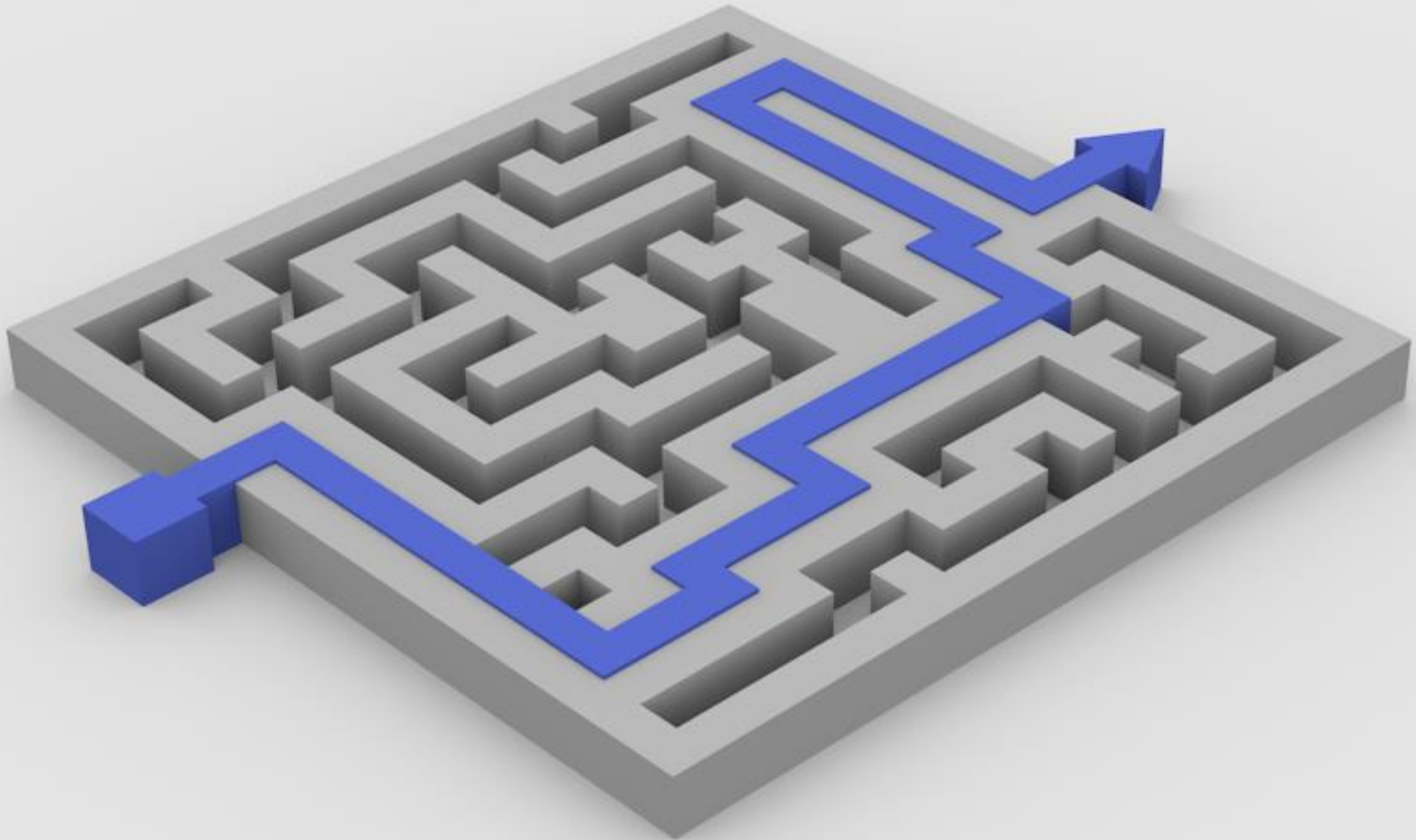


broadcast signal

def·i·ni·tion

The teacher g

of the new w



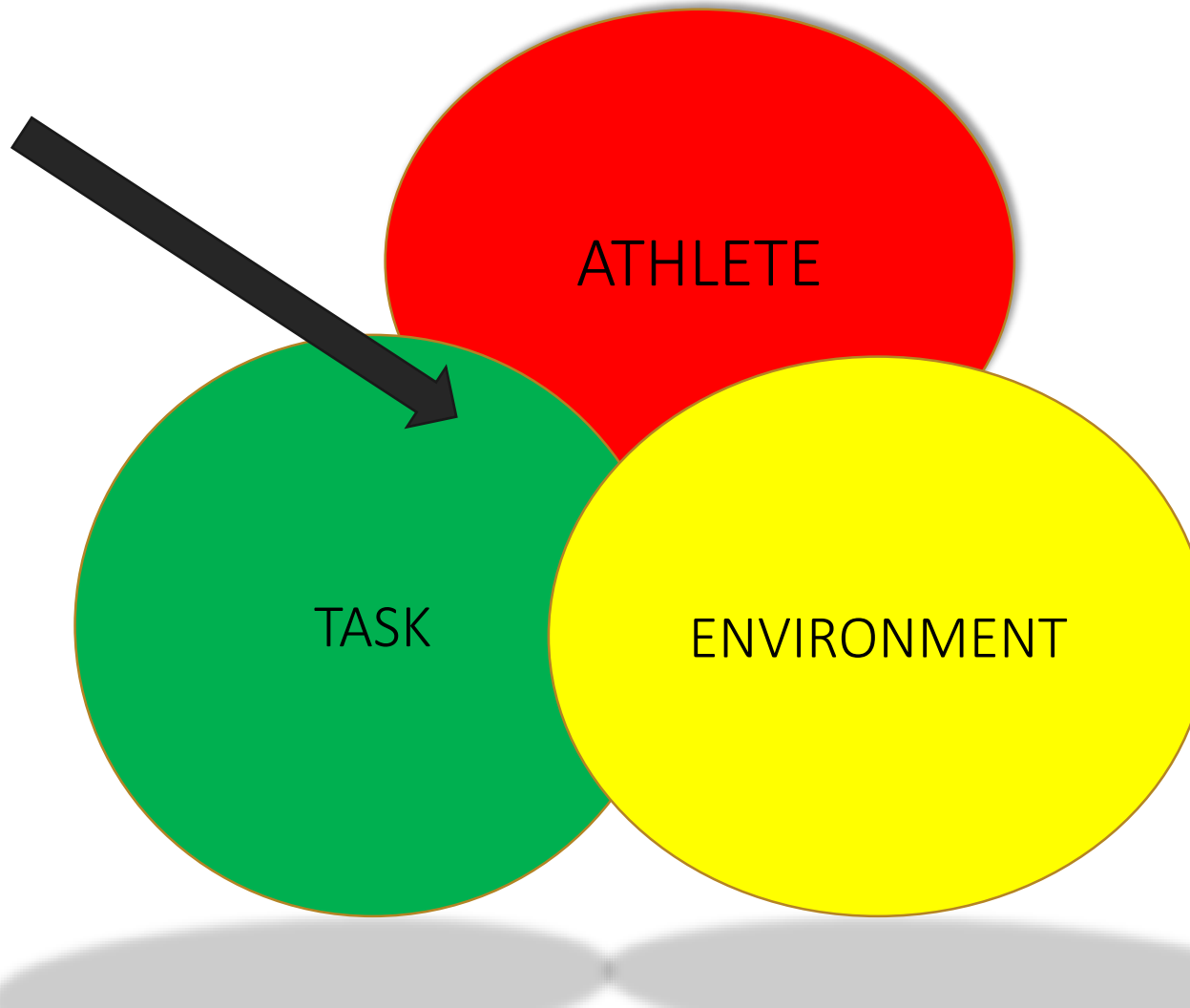
An indoor ice skating rink with a red text box overlaid on the right side. The rink is empty, with blue and red lines on the ice. The background shows the arena's seating and various signs.

CLOSED SKILLS

- Skills that do not involve decision making or response to a stimuli

RE-DEFINING AGILITY

CHANGE OF DIRECTION



WHAT IS MISSING?

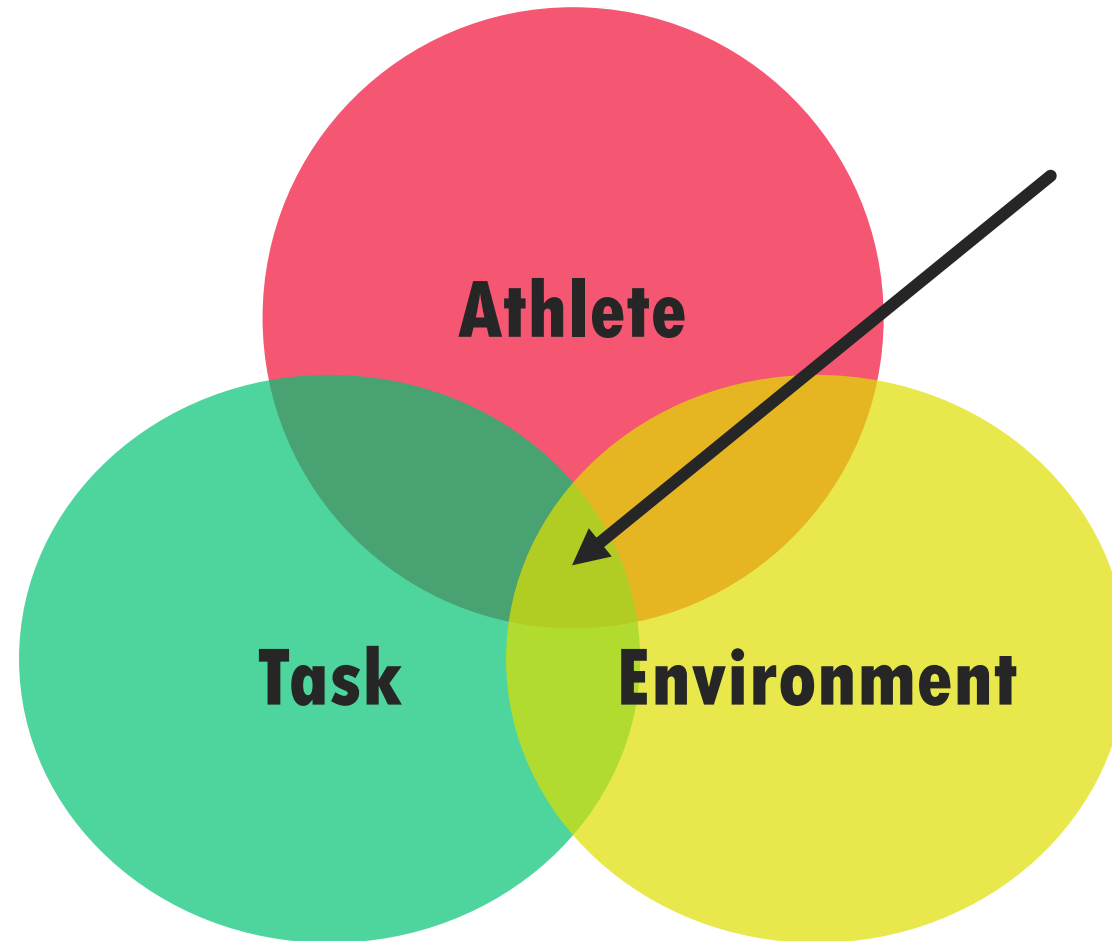
Inclusion of perceptual and decision making components

REACTION



- Open Skills
- Skills that require decision making and movements in response to a stimuli

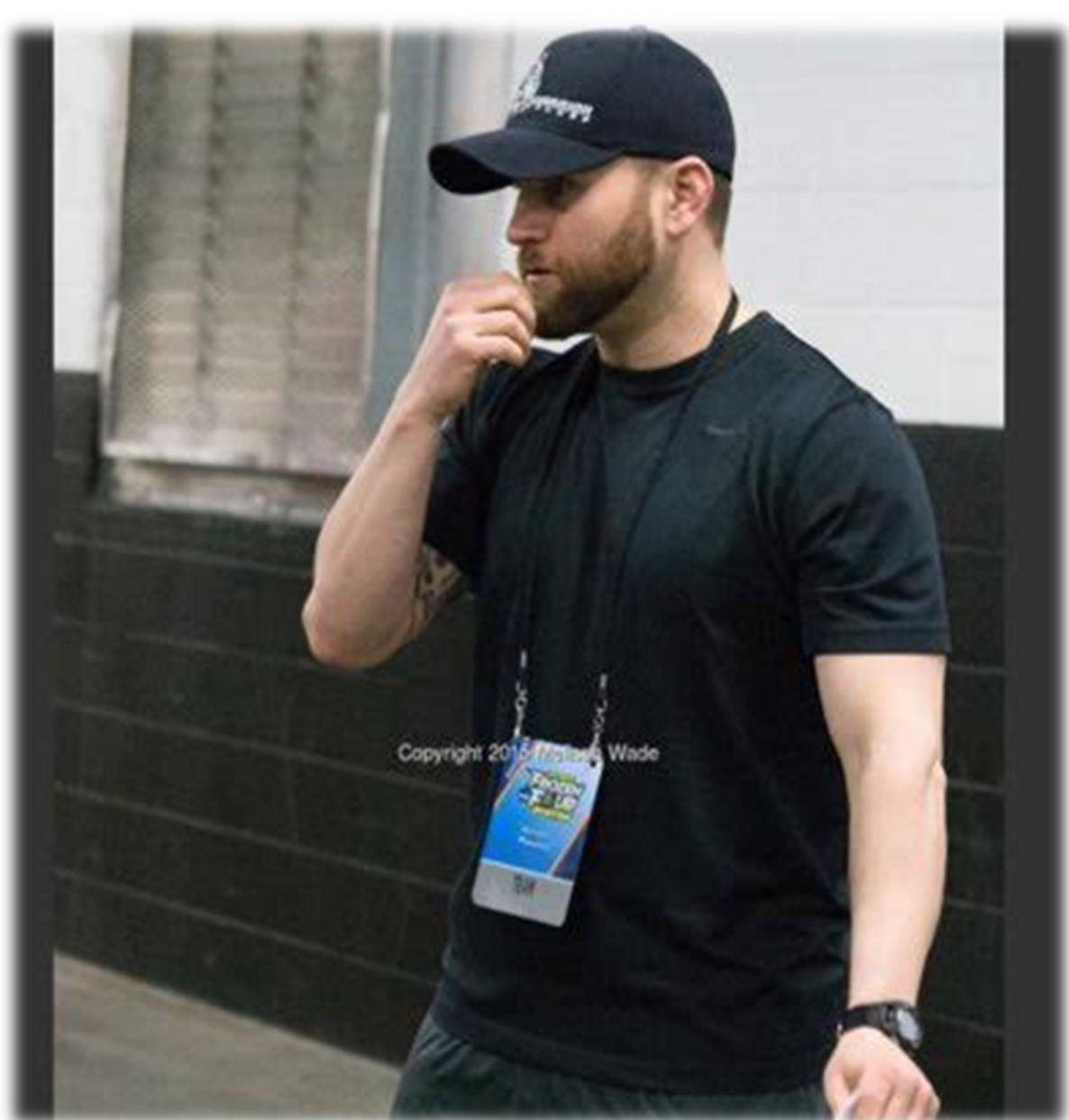
Re-Defining Agility



Reactive Agility


COMPONENTS AND DEFINITIONS

- + Center of Mass (COM) – The point within or outside the body where all mass is equidistant
- + Base of Support (BOS) – Ground contact points where the COM can reside within, in front or behind
- + Angle of Attack: A derivative of the relationship between COM and BOS – an optimal angle of hip-knee-ankle



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A dark, moody photograph of a hockey rink. In the foreground, a hockey stick and a puck are visible on the ice. The background shows the rink's boards and a crowd of spectators, though they are out of focus. The overall lighting is low, creating a dramatic and intense atmosphere.

2. The Difference Between Amateur and Elite

Training multidirectional speed with transferability in mind



ON & OFF ICE PERFORMANCE ENHANCEMENT



Athletes in fight or flight move differently to those performing drills with no urgency

SUPPLY AND DEMAND

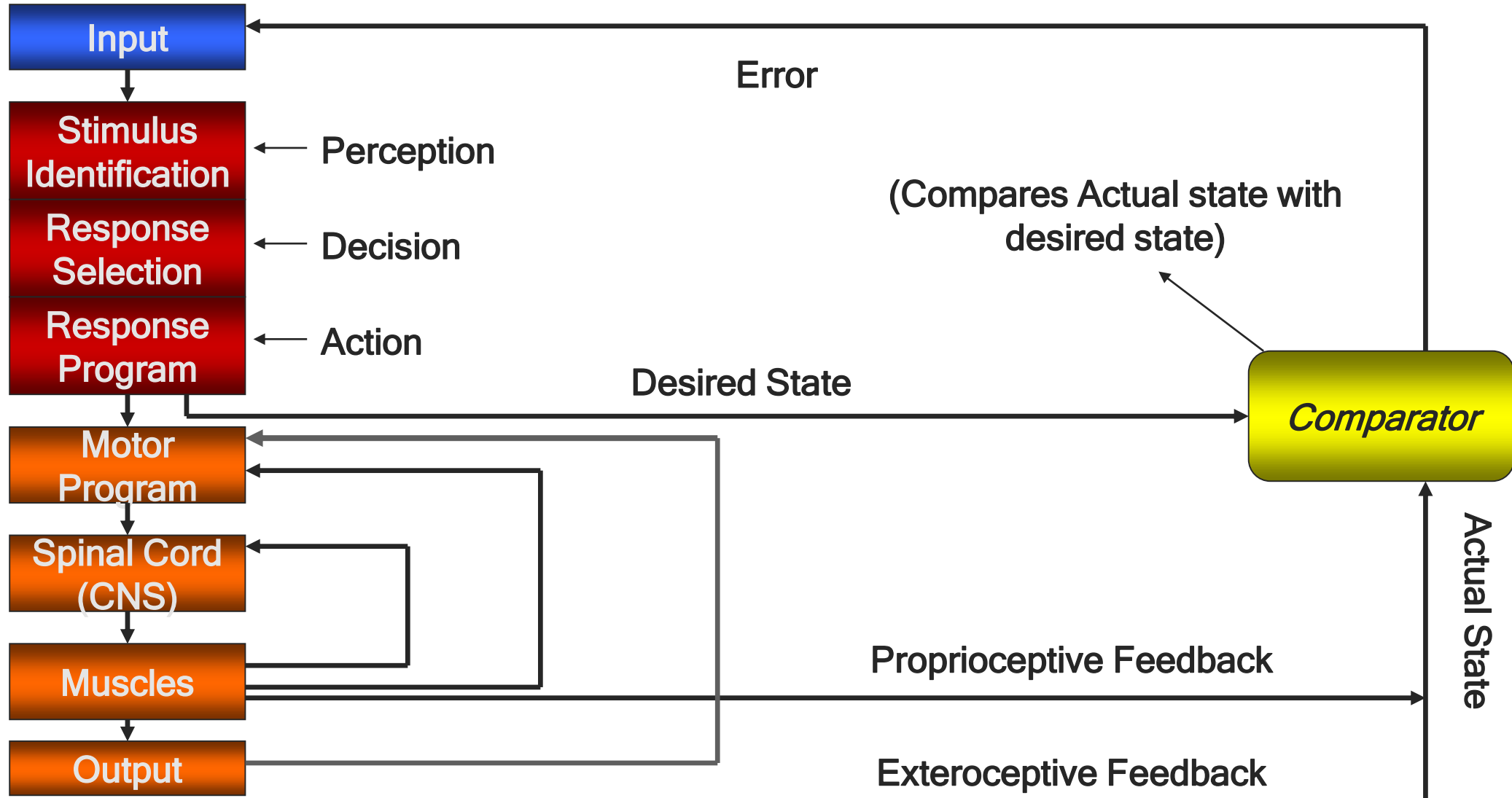
Most athletes can supply the goods when demand is low (known pattern, lack of urgency, <100% effort)



Great athletes can supply the goods when demand is high (random, reactive, 100% effort, urgency)



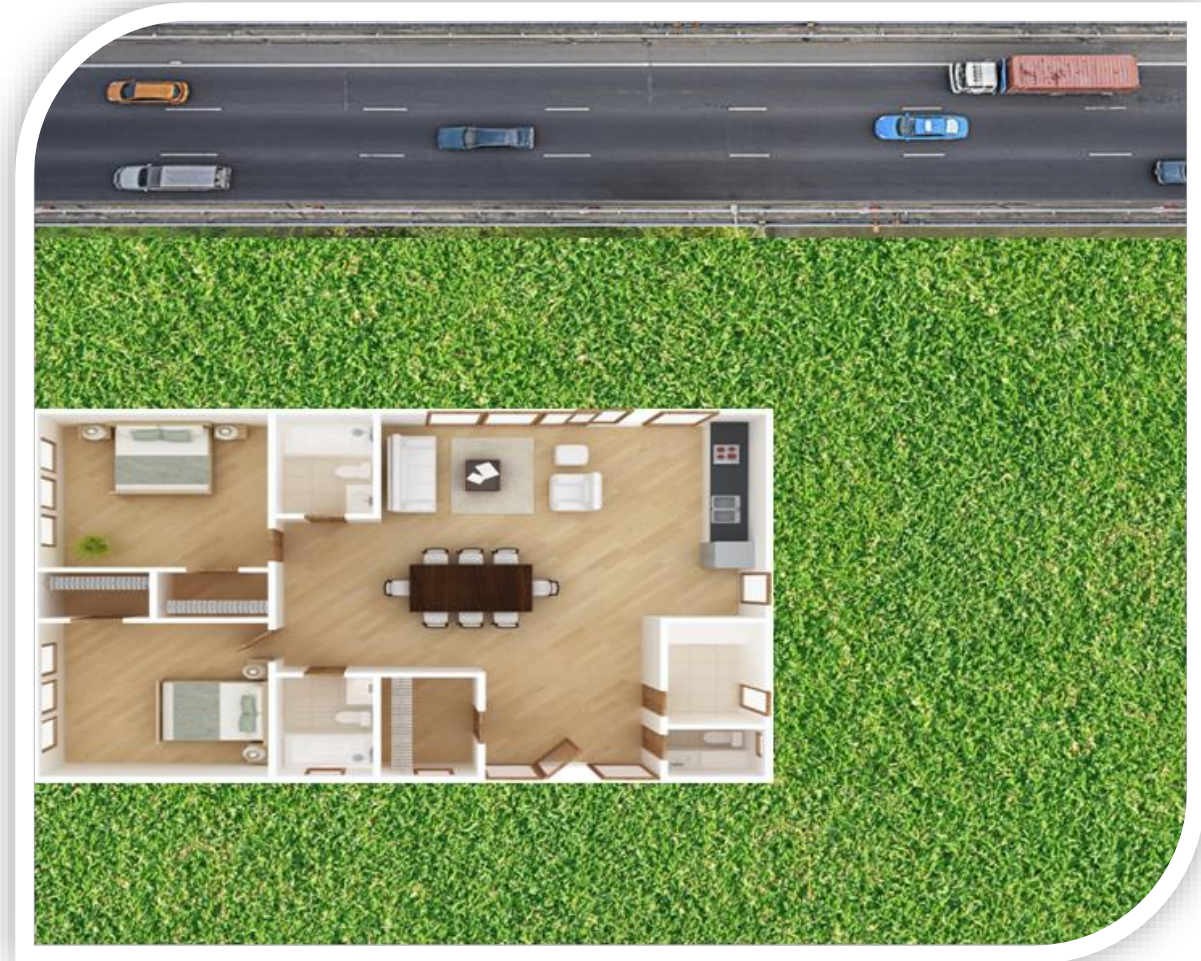
MODEL FOR MOTOR PERFORMANCE





REPOSITIONING

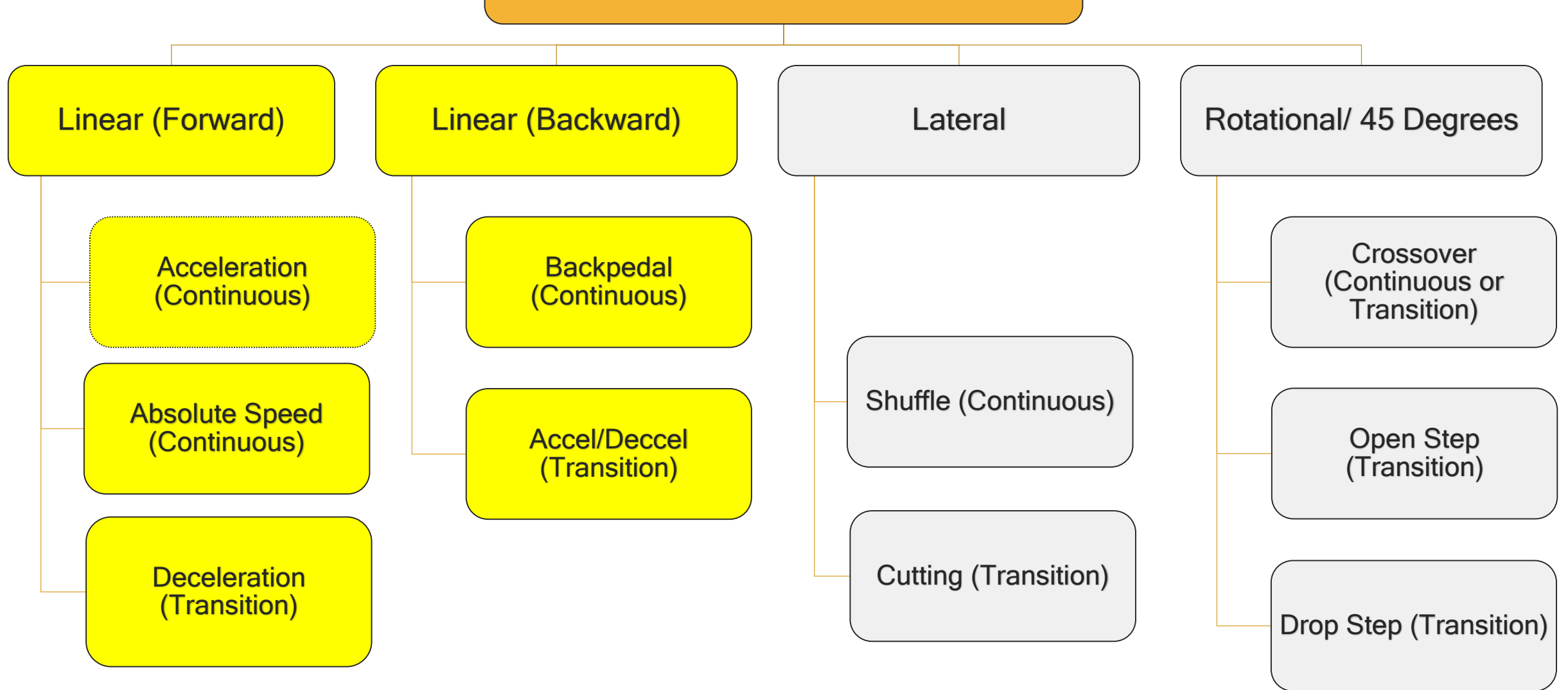
- + Backyard Principle
- + Teaching the athlete to do the right things from the wrong positions
- + Must get the body back in a position which allows for high magnitude of force in the desired direction





POSTURE ALTERS
PATTERN

Multidirectional Speed



WHOLE – PART - WHOLE

- +Provide the conceptual whole first – let the athlete see the complete skill being targeted
- +Break the skill down to its component parts
- +Bring all parts back together and execute the skill as a whole

“The more we focus our conditioning programs on true movement integrity, in addition to the standard fare of strength and power development, the more successful our athletes will be.”

A dark, moody photograph of a hockey rink. In the foreground, a hockey stick and a puck are visible on the ice. The background shows the rink's boards and a player in a dark jersey. The overall lighting is low, creating a dramatic and intense atmosphere.

3. The Application

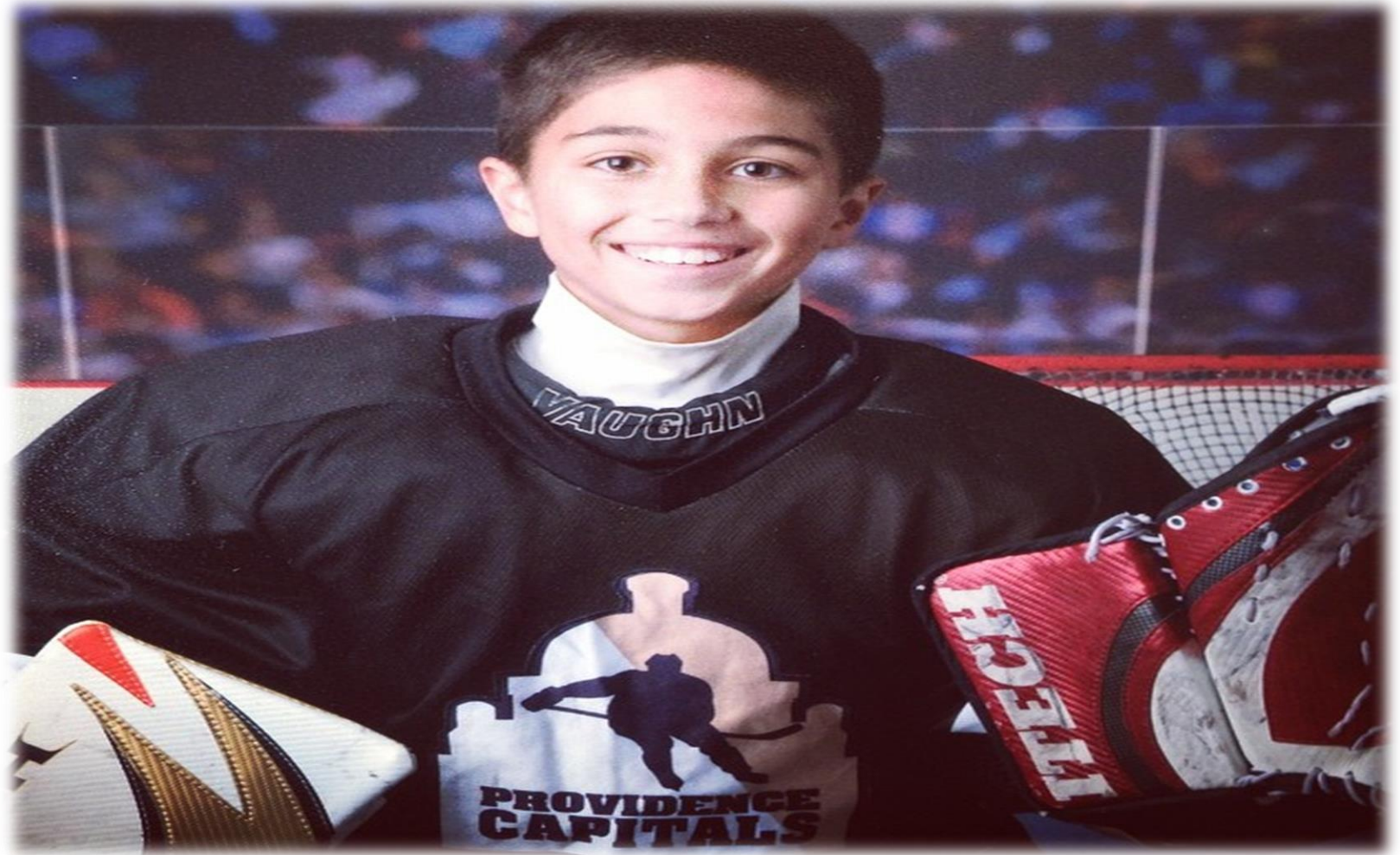
Differentiating Between Players

D KILLS



SYNC YOUR COMPONENTS

- + Pillar Prep
- + Movement Prep
- + Neural Response
- + MB/ Plyometric
- + Lifting Session
- + ESD



THE “END-GAME”

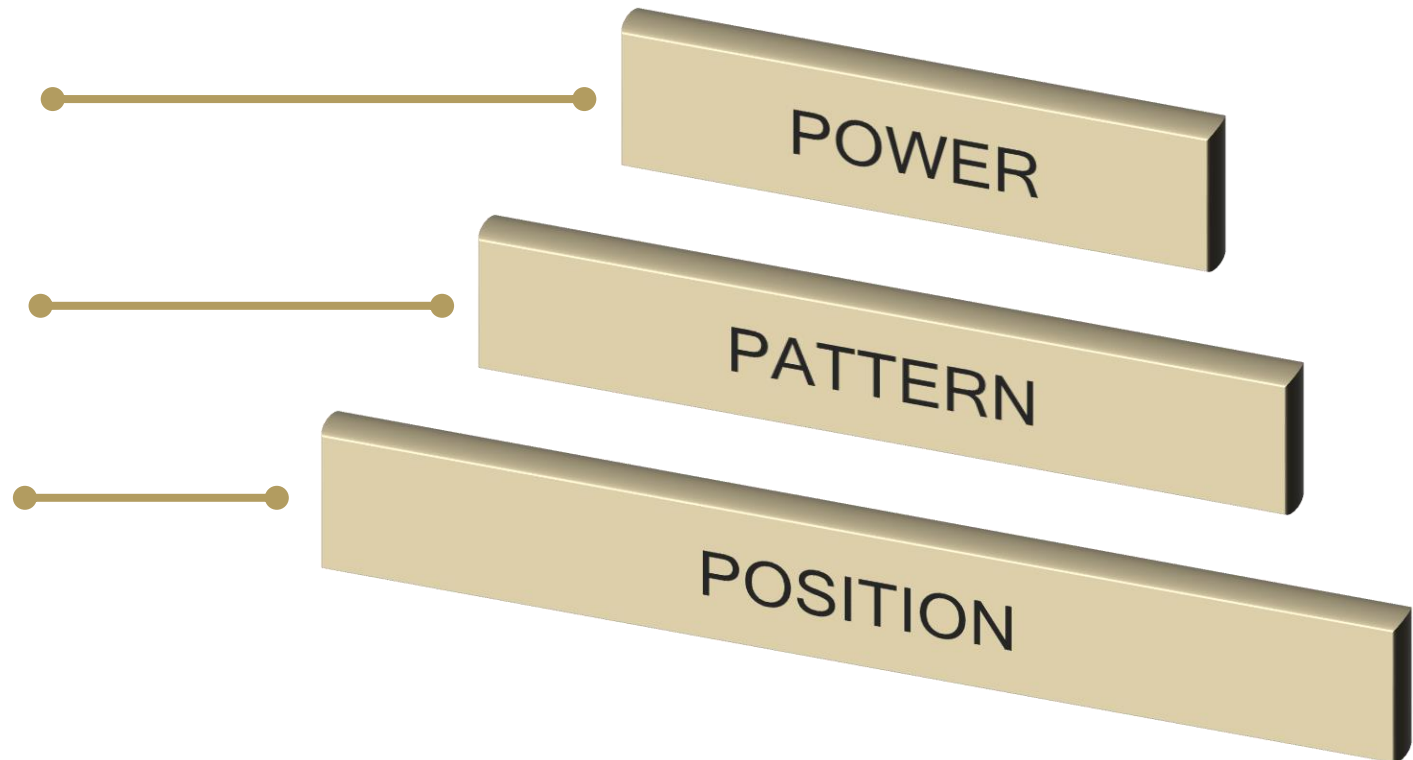
Understanding that skill proficiency must first be taught, the final goal of a training program is reactive agility and training all the components which impact this

PERFORMANCE PYRAMID

*PLYO/MED BALL
MOVEMENT SKILLS - PRE
STRENGTH/ POWER SPECIFIC*

MOVEMENT PREP/ INTEGRATION

MOBILITY MATRIX/ PILLAR PREP



HIGHER vs. LOWER PERFORMER



TECHNICAL

PRE
PROGRAMMED

RANDOM

PROGRAMMING MODEL - SHUFFLE

| | LEVEL 1 Weeks 1-2 | LEVEL 2 Weeks 3-4 | LEVEL 3 Weeks 5-6 |
|------------------|--|----------------------------|----------------------------------|
| RANDOM | SINGLE STIMULUS | FILTERING MULTIPLE STIMULI | COMBINED TASKS W/ 1-3 STIMULI |
| PRE - PROGRAMMED | SKILL REHEARSAL | RESISTED SHUFFLE | RESISTED TO ASSISTED SHUFFLE |
| TECHNICAL | WALL DRILLS | RESISTED WALL DRILLS | RESISTED PUSH TO BASE |
| PREP DRILLS | PATTERNING EXTENSION - (MOBILITY / STABILITY) | LATERAL MARCH AND SKIP | OUTSIDE LEG LATERAL PLYOS |

PROGRAMMING MODEL - CROSSOVER

| | LEVEL 1 Weeks 1-2 | LEVEL 2 Weeks 3-4 | LEVEL 3 Weeks 5-6 |
|------------------|---|----------------------------|----------------------------------|
| RANDOM | SINGLE STIMULUS | FILTERING MULTIPLE STIMULI | COMBINED TASKS W/ 1-3 STIMULI |
| PRE - PROGRAMMED | SKILL REHEARSAL | RESISTED CROSSOVER | CROSSOVER TO ACCEL |
| TECHNICAL | WALL DRILLS | RESISTED WALL DRILLS | RESISTED CROSSOVER |
| PREP DRILLS | PATTERNING ROTATION - (MOBILITY / STABILITY) | KNEE DRIVE CARIOCA | INSIDE LEG LATERAL PLYOS |



THANK YOU!

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