



Motor Learning & Decision Making

Danish Football Conference, 2020

Roger Bongaerts, Academy Director VVV-Venlo



Motor Learning & Decision Making

Program:

- VVV-Venlo Player & Curriculum
- Theoretical framework: Learning & Decision Making
- Team Function: Attacking
- Practical Application
- Q & A

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How can we develop the (VVV-Venlo) player of the future?
(on a consistent basis)

Intelligence

- Game intelligence
- Decision making/
Problem solving
(quality/ speed)
- Self regulation

Technical

- Functional
technique
- Composure



Athletisme

- Speed
- Strength
- Coordination

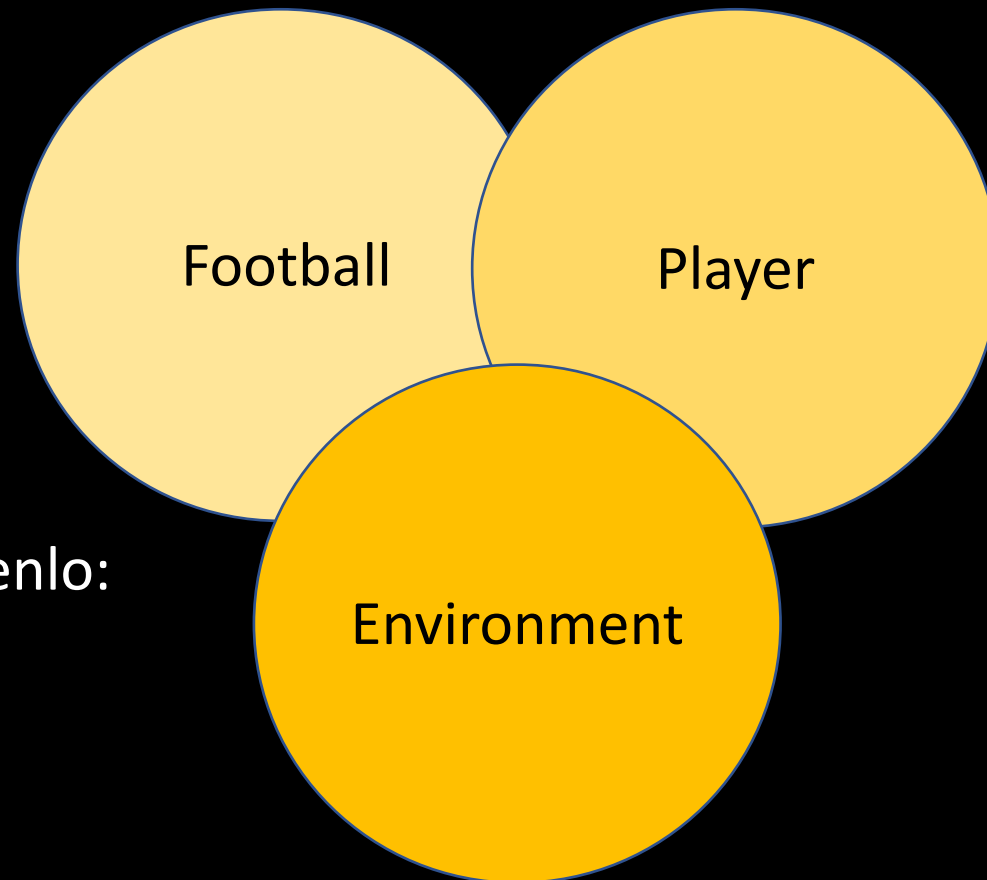
Adaptability

- Resilience
- Composure
- Competitive

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Our Curriculum



Our Vision on VVV-Venlo:

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Learning Lines

- Football
- Physical
- Socio-Emotional
- Performance



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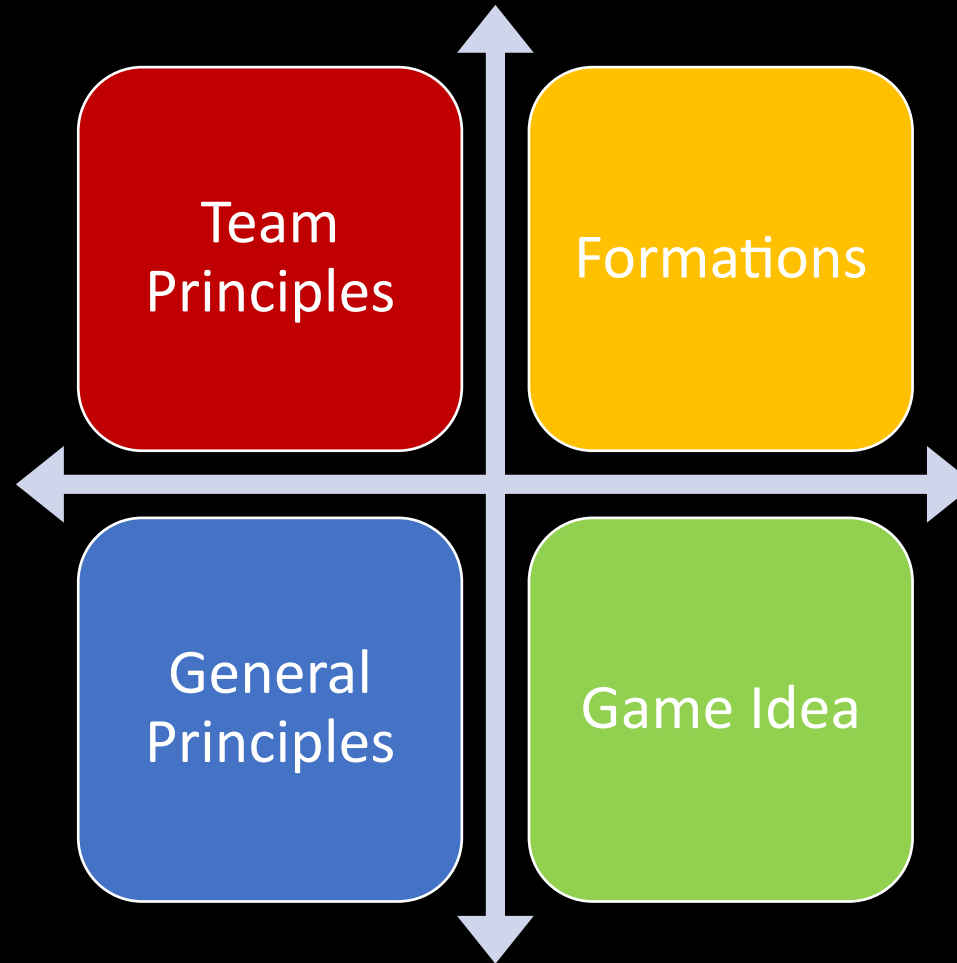
Learning Lines

	Football	Physical	Socio-Emotional	Performance
U18-U21	PERFORMANCE			
Performance Phase	Game Model → Performance	Functionality and individuality	"What do I want" Adulthood	Performing
U13-U14-U16	GROWTH			
Growth Phase	Game Model → Development	Growth	"Who am I" Identity development	Self-direction
U12	DISCOVERY			
Foundation Phase	Game Model → Basics	Athletic ability (broad)	"What am I capable of" Cognitive development	Self-regulation

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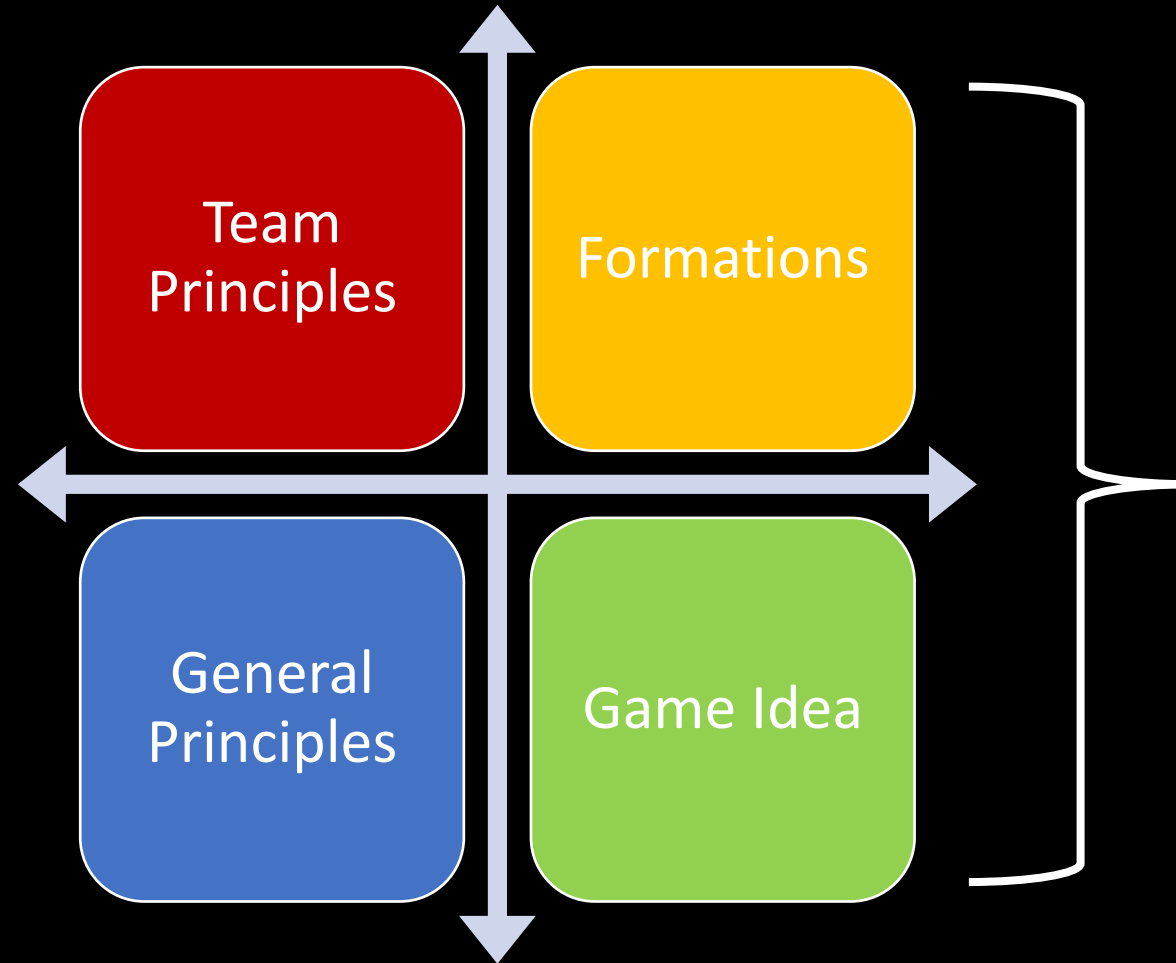
Game Model



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Game Model



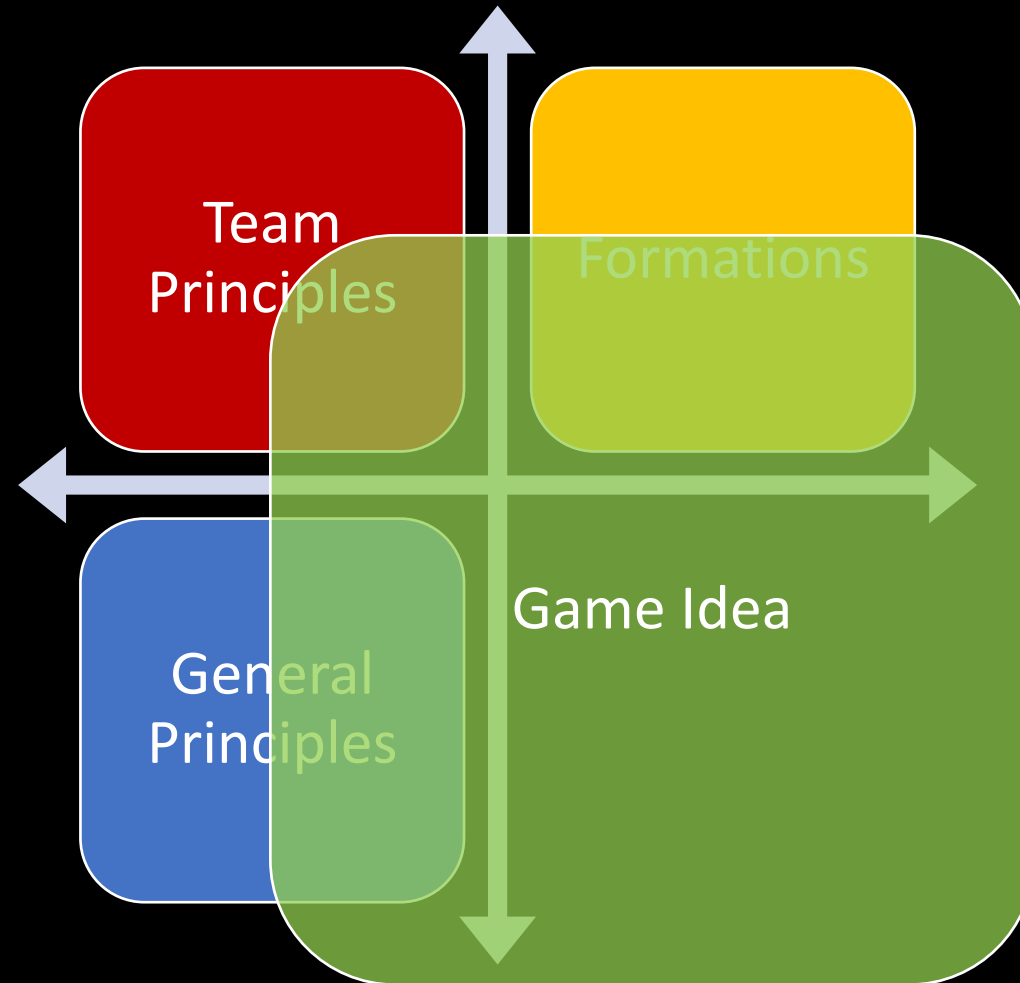
Periodization

- Ages & Stages
- Technical
- Tactical
- Conditioning
- Training/ Games
- Mental Process

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Game Model



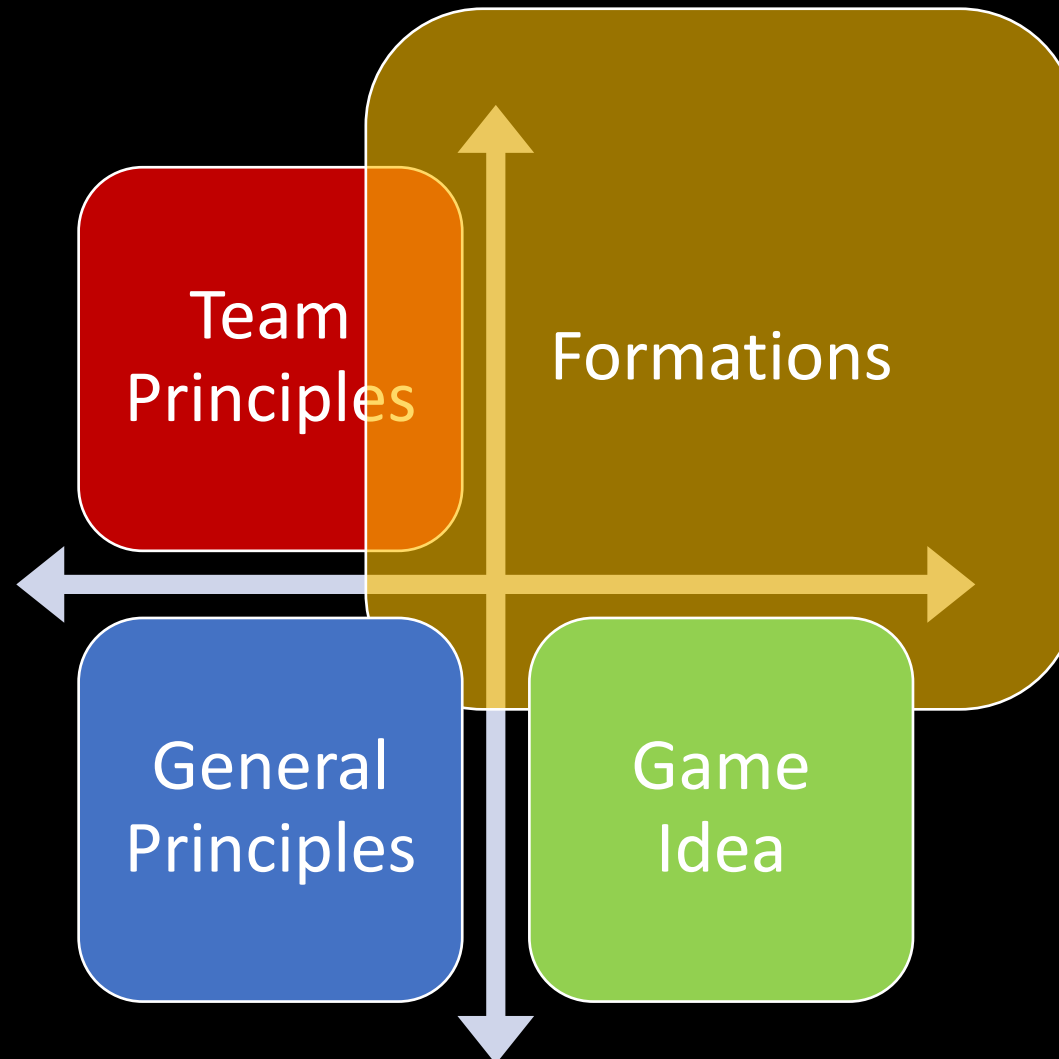
VVV-Venlo teams:

- Tactical adaptability
- Play with Passion
- Aggressive defending
- Attack with conviction and assertiveness
- Technically sound
- Quick and effective transition
- Organized and effective set-pieces
- Responsibility with freedom

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Game Model



6v6 → 1:3:1:1
1:1:3:1

8:8: → 1:2:4:1
1:3:1:3

9:9 → 1:4:3:1

11:11 → 1:3:4:3
1:4:3:3
1:5:3:2

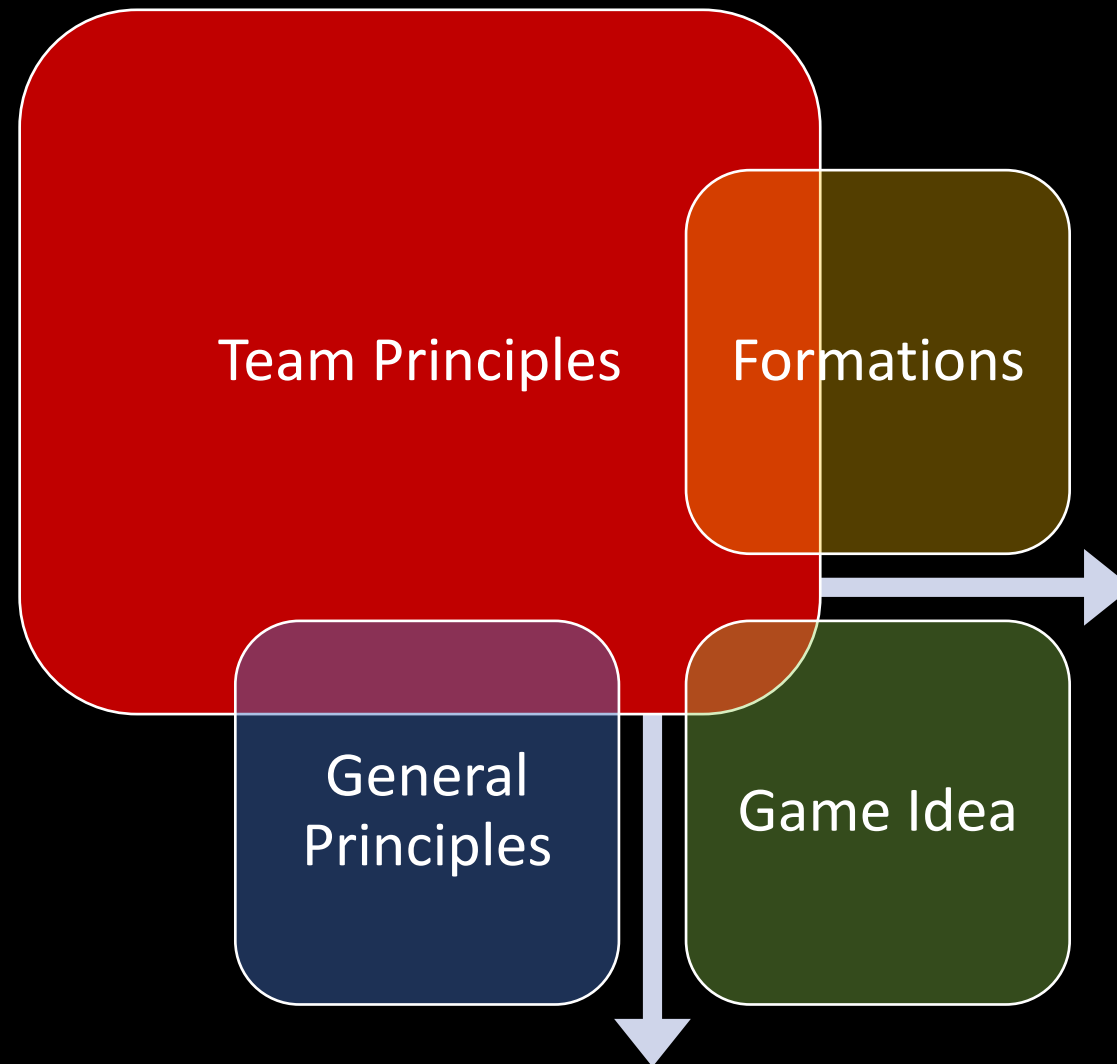
All teams independent from
1st team

Overlap U21 → 1st team

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Game Model



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Game Model

Methodology (build-up)

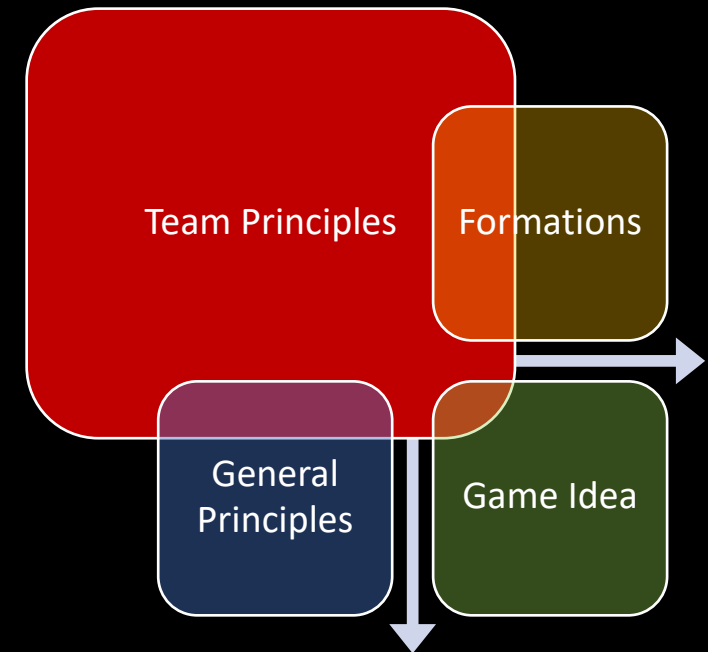
❖ Team Principles: (related to the team)

→ Attacking / Defending → always connect with transition

❖ Prerequisites (GROUP)

❖ Football Behavior (INDIVIDUAL)

❖ Skills (INDIVIDUAL)

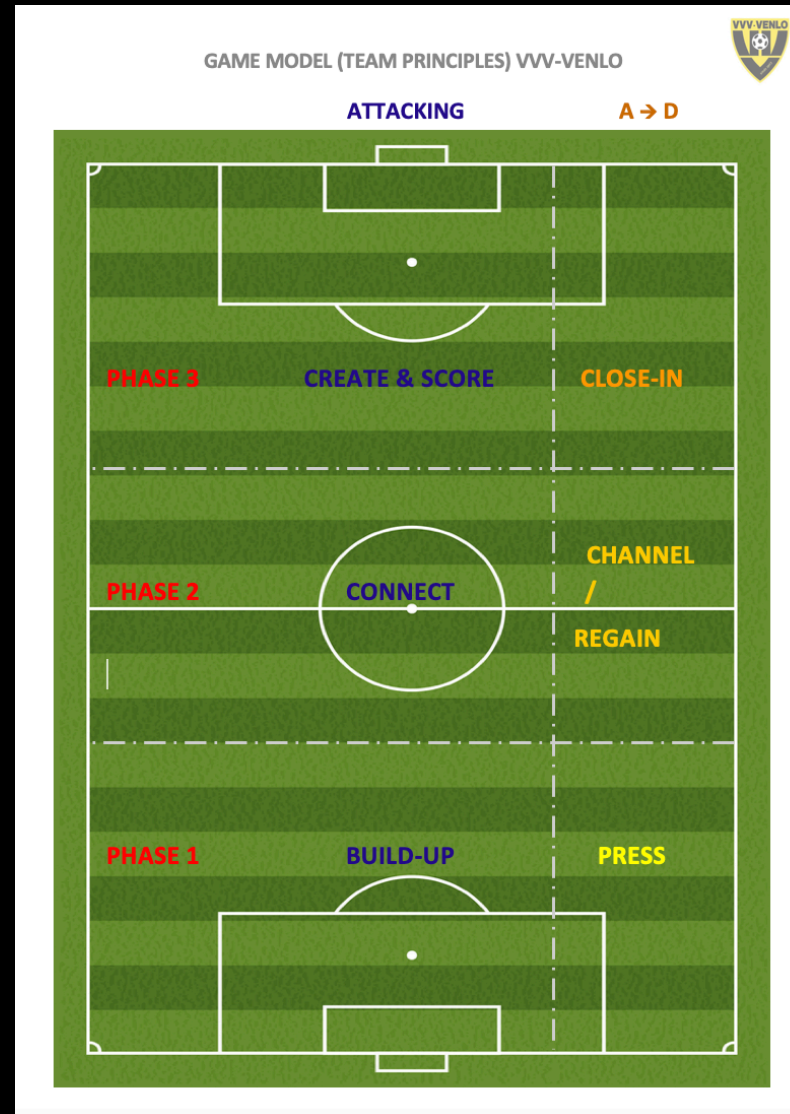


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Tactical Development

Phases and key words (= objective)



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Tactical Development

Structure for designing training (& periodisation)

Team Principle → Contra Principle → Transition Principle

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Tactical Development

Structure for designing training (& periodisation)

Team Principle → Contra Principle → Transition Principle



Planning: Cycle (2-week) → week



Training

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Motor Learning & Decision Making

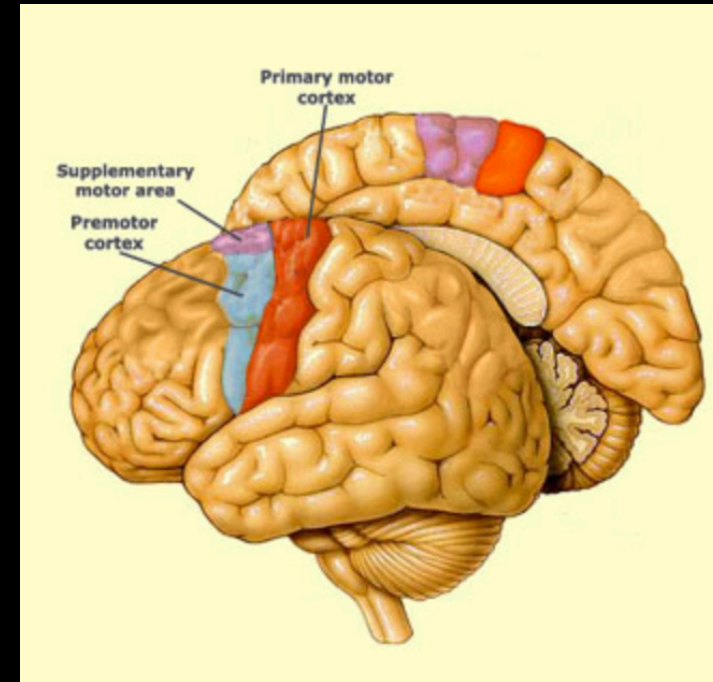
Based on our Vision, Learning Lines & Game Model

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Important questions to answer:

- ☐ How do players learn
- ☐ How do players make decisions



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How do players learn?

Motor Learning

[definition] : *A process that leads to lasting changes in motor behavior potential due to training and specific experiences with the environment (Schmidt & Lee, 2005)*

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Players learn by:

- ☐ By doing (not too much information) & observing
- ☐ In stages
- ☐ From connection
- ☐ Repeating without repeating (variation model)
- ☐ Balance between implicit and explicit
- ☐ Use of differential learning
- ☐

It is only learning when:

- Players retain and sustain the information/ knowledge / skill
- Players are able to transfer the learned to different circumstances (it's not a trick) → adaptability/ flexibility
- Players show development/ growth / change in behavior

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How do players decide:

Decision-making process / sequence:

Assessment/ Evaluation: (the weighing evaluation of the distinct options)

- Multi-behavioral assessment → implemented by ventromedial prefrontal cortex in association with the corpus striatum

Choice: (final selection of one option from the available options)

- Implemented in the prefrontal lateral cortex and parietal areas

Action: (implementation of the option in the motor unit)

- Final implementation that triggers the movement



Analysis of the process

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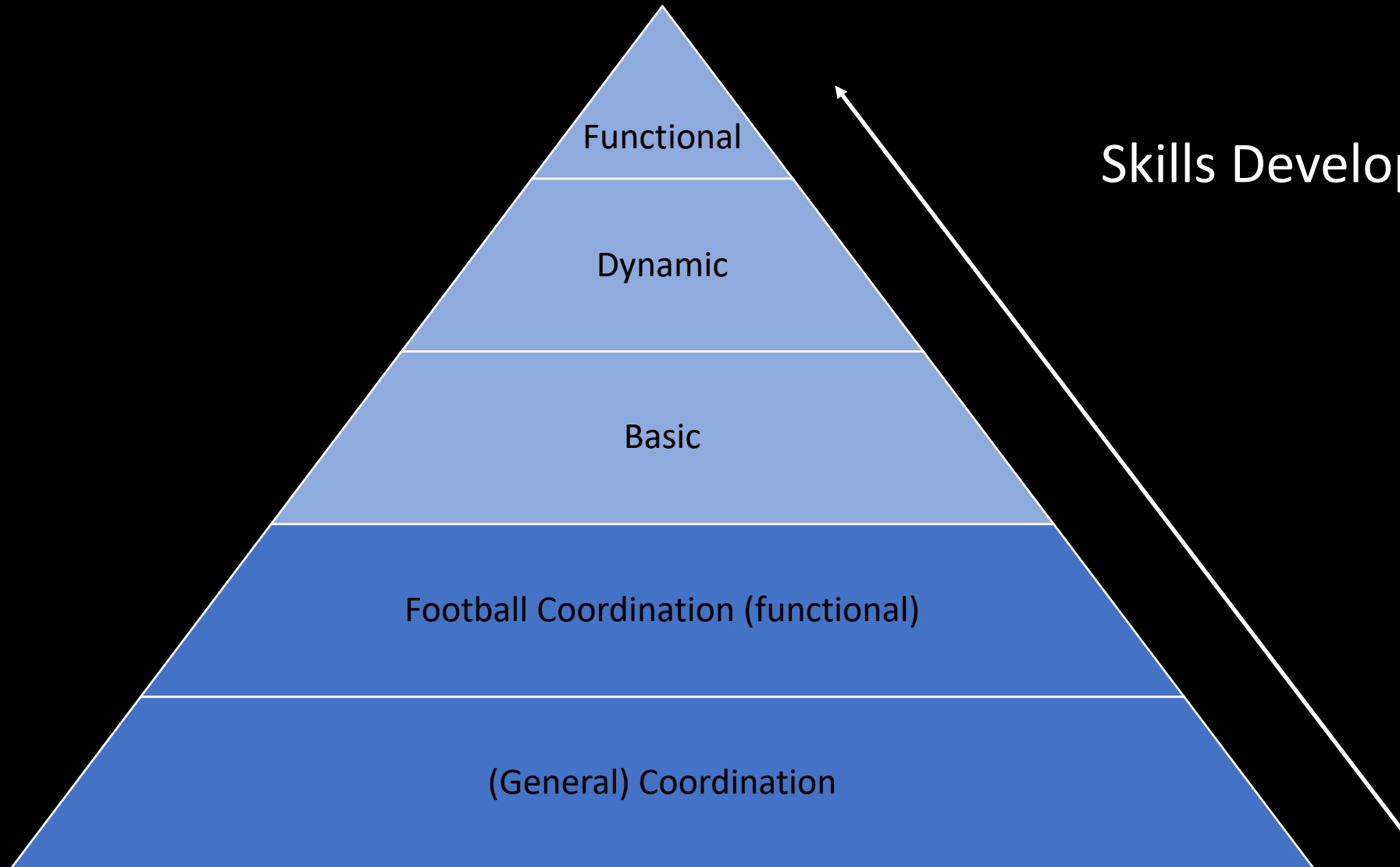
Decision-Making Development =
Skill & Tactical Development

(+ mental, physical, cognitive, emotional, socio-emotional..... processes)

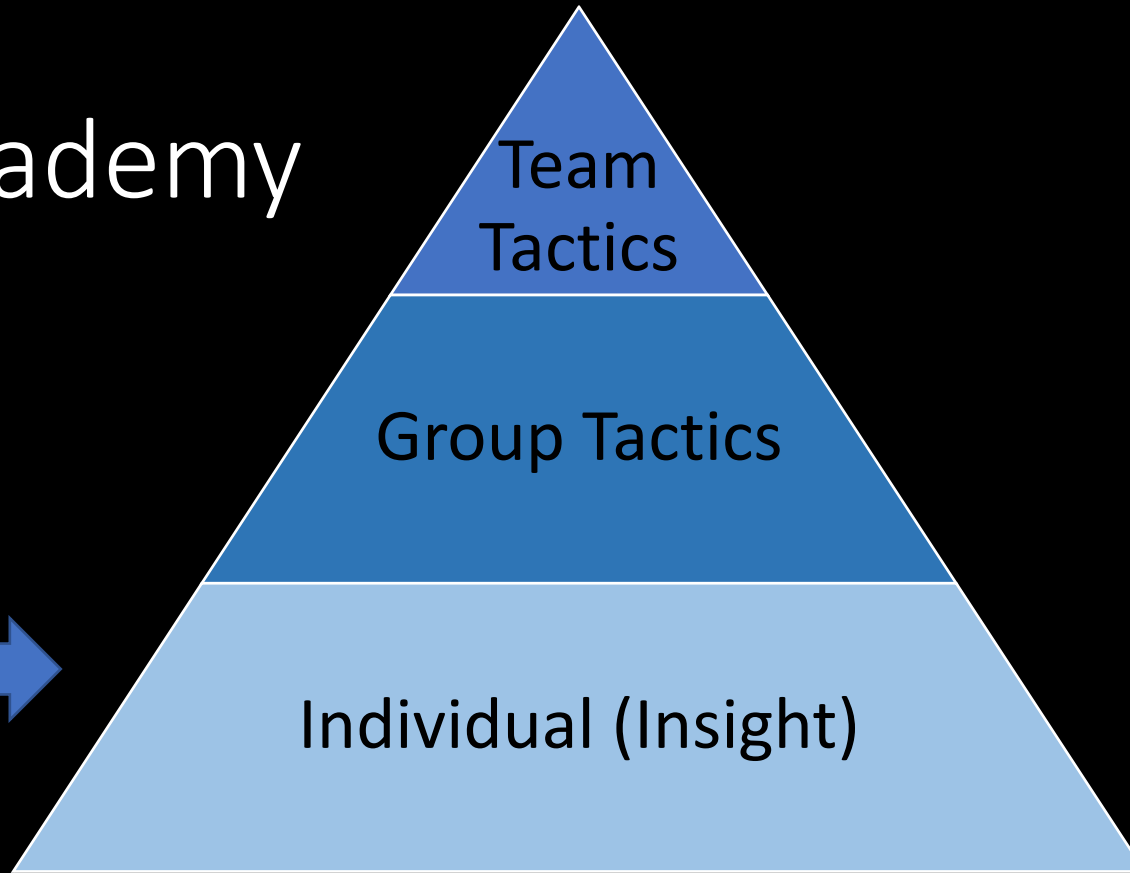
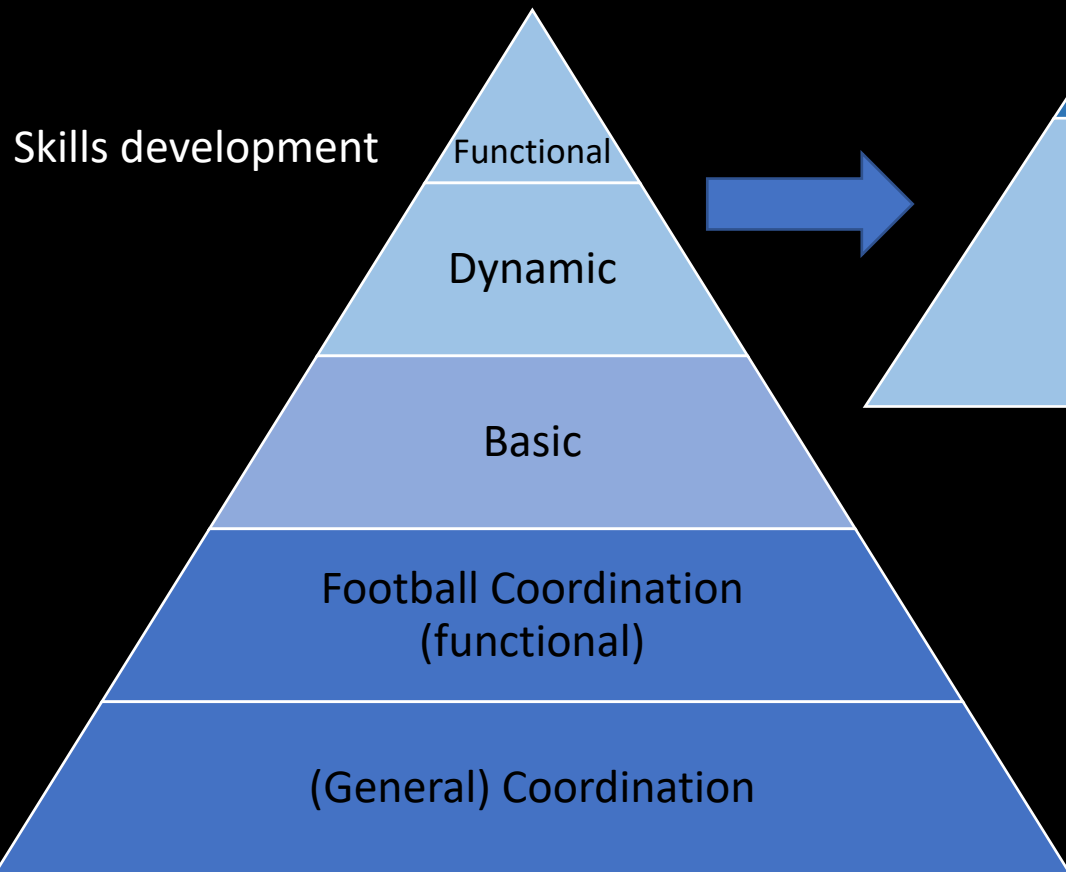
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Skills Development



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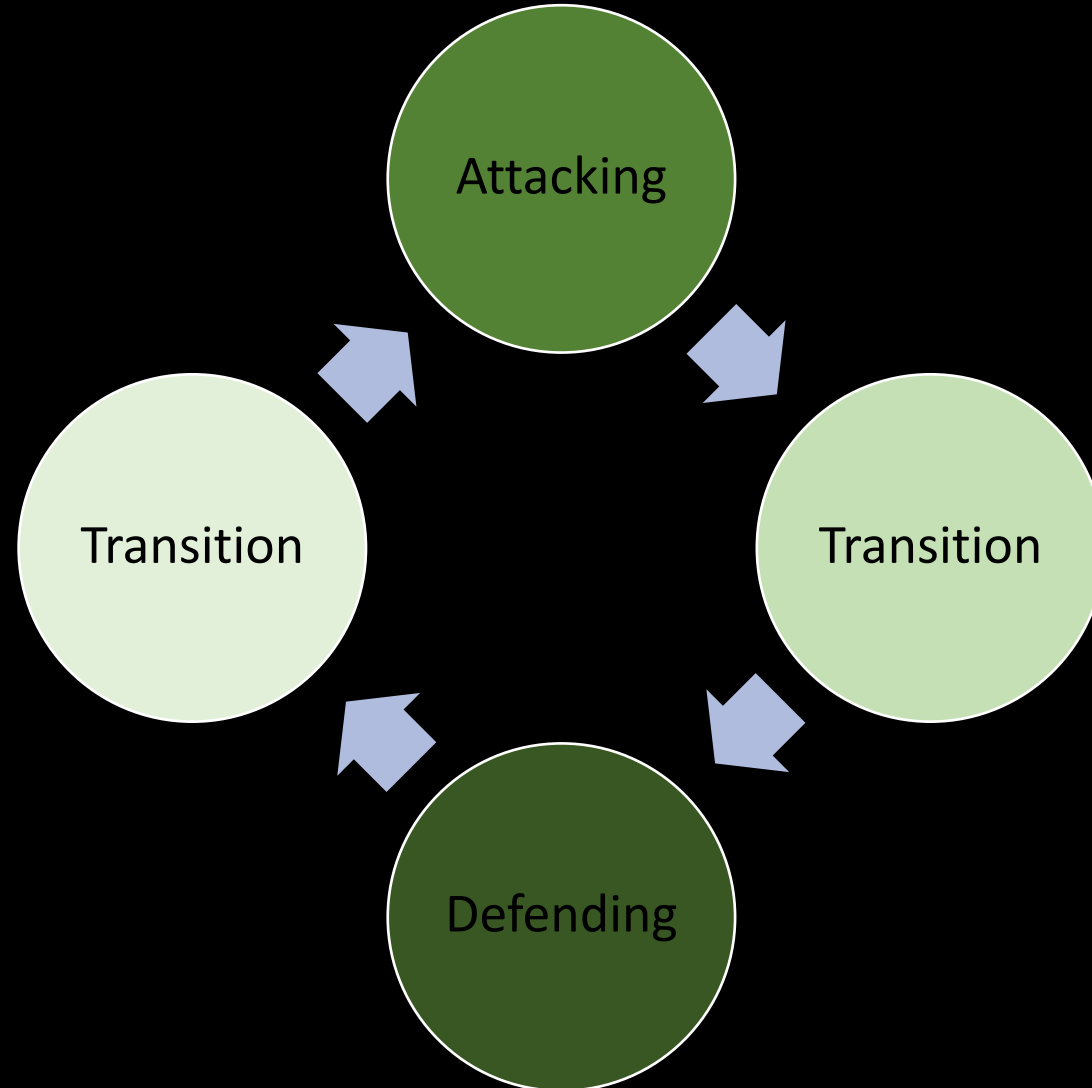


Tactical Development

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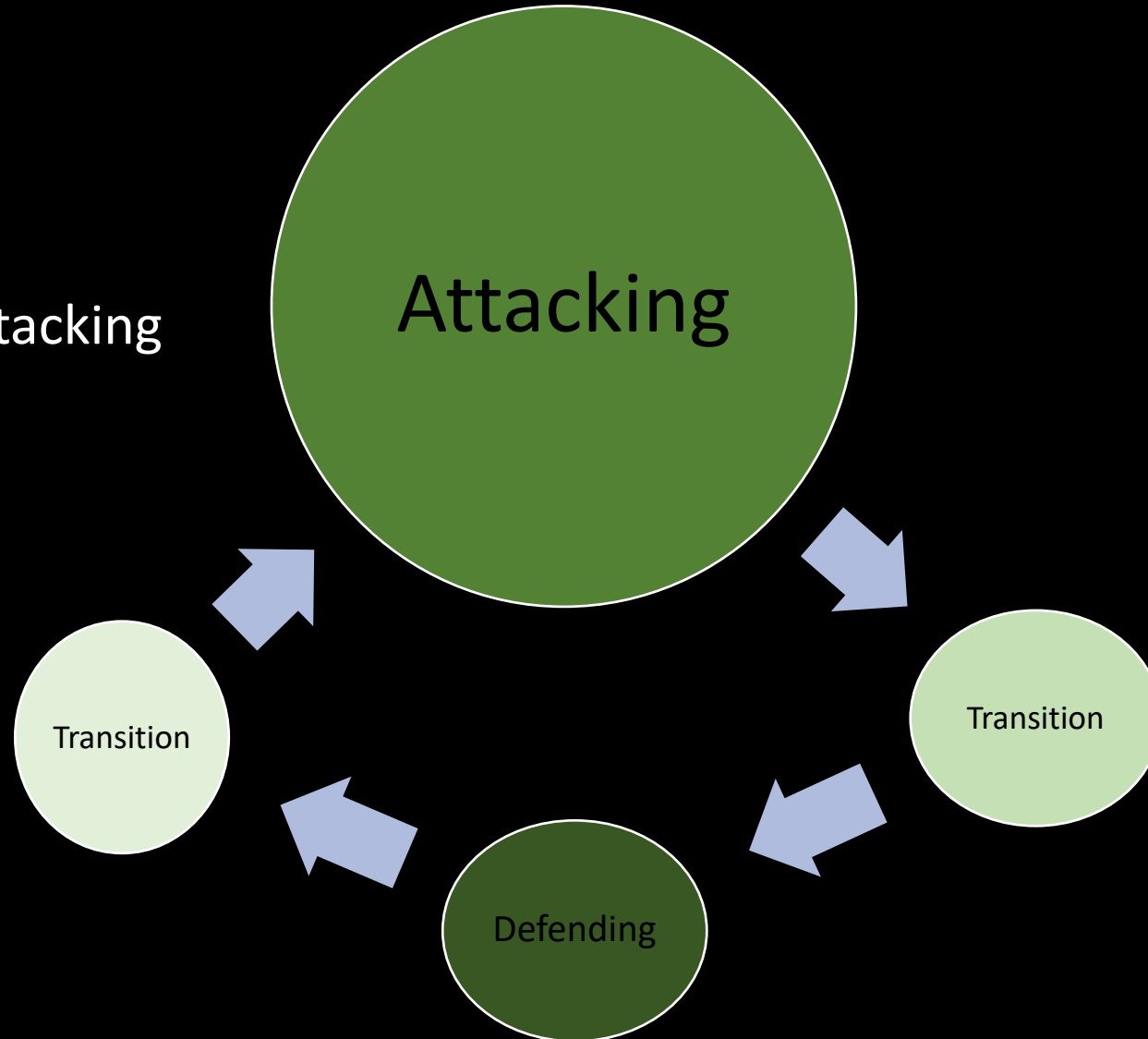
Structure



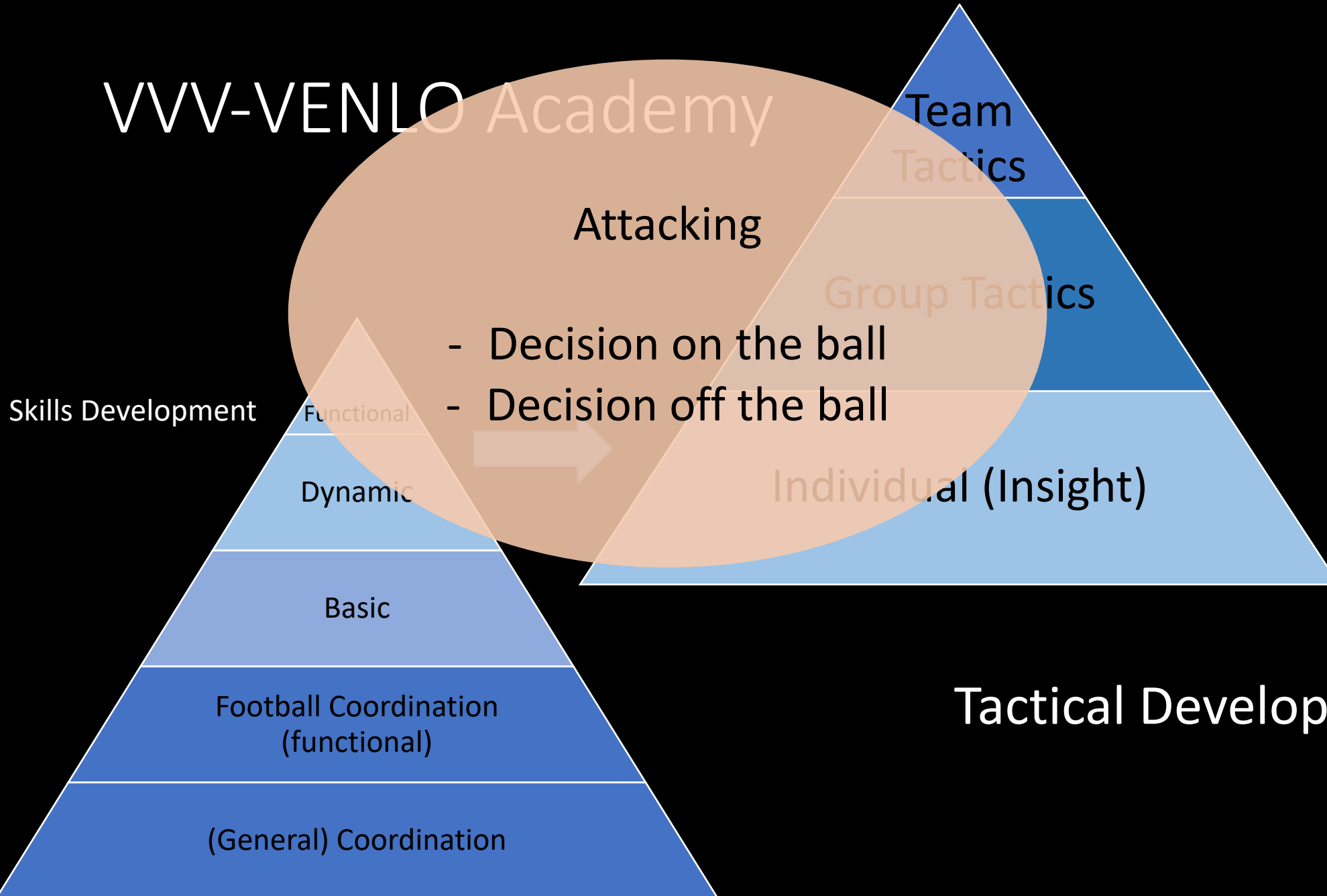
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Decision-making in Attacking



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Tactical Development

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ALL DECISIONS ARE CONTEXT DEPENDING!

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- Attacking

- Decision on the ball
- Decision off the ball

On the ball

Options:

Shoot → Pass → Dribble → Shield



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On the ball

Shoot → Can you take the shot?

Pass → Pass to teammate in scoring position

→ Pass to teammate in forward position (moving) → eliminate defenders

→ Pass to teammate in forward position (holding) → eliminate defenders

→ Pass to teammate to consolidate possession in forward position

→ Pass to teammate to consolidate possession in back position

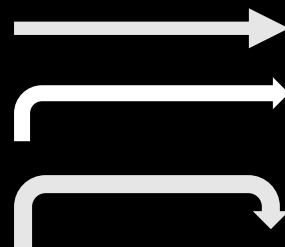
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On the ball

- Pass
- Pass to teammate in scoring position
 - Pass to teammate in forward position (moving) → eliminate defenders
 - Pass to teammate in forward position (holding) → eliminate defenders
 - Pass to teammate to consolidate possession in forward position
 - Pass to teammate to consolidate possession in back position

PASS: - Through
- Around
- Over



Recognize the options/ space

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On the ball

Shoot

Pass



Dribble

- Dribble to attack space (with speed) and/ or penetrate
- Dribble to attack 1 : 1 to create shot → cross → numerical advantage → pass
- Dribble to consolidate possession and create time/ space

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On the ball

Shoot

Pass

Dribble

Shield

- Hold ball to link up as a team
- Hold ball for supporting player
- Hold ball to create time or lure opponent



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- Attacking

- Decision on the ball
- Decision off the ball

Off the ball

Options:

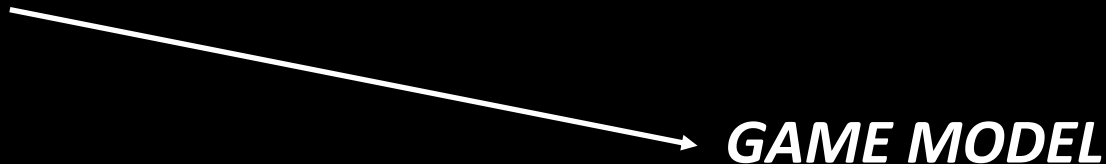
- Create time & space for teammate (on the ball)
- Create option to receive the ball
- Create/ Open passing lanes
-

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PLAYERS MAKE DECISION BASED ON THE FOLLOWING DIMENSIONS:

- **Skill (Technique)** → *application of individual functional technique (level and confidence)*
- **Tactics** → *application of insight (level) – recognition of football situations*
- **Strategy** → *plan to win the game: how do we attack/ defend/ transition/ set pieces as a team*



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ALL DECISIONS ARE CONTEXT DEPENDING!

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PRACTICAL APPLICATION

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Developmental stages of learning & (attacking) decision-making
(skill & tactics):

(order of learning)

1. Acquisition Phase
2. Refinement Phase
3. Stabilisation Phase
4. Variation Phase

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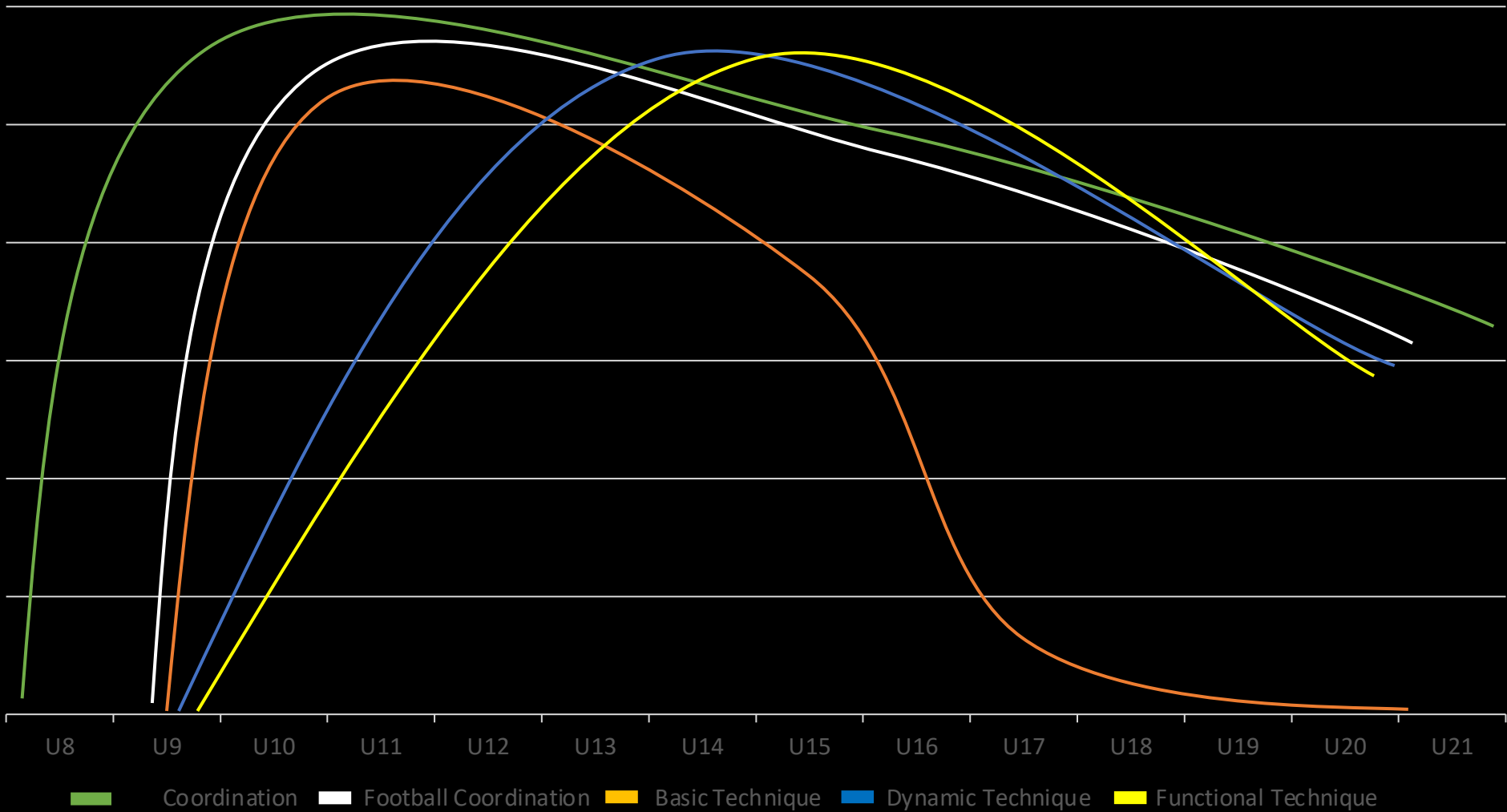
Developmental stages of learning & (attacking) decision-making (skill & tactics):

1. Acquisition Phase → execute globally – develop strong motor engrams (in memory)
2. Refinement Phase → high repetition (repeat without repeating), eliminate errors
3. Stabilisation Phase → high quality in execution
4. Variation Phase → high quality in execution, in all circumstances



Focus in training

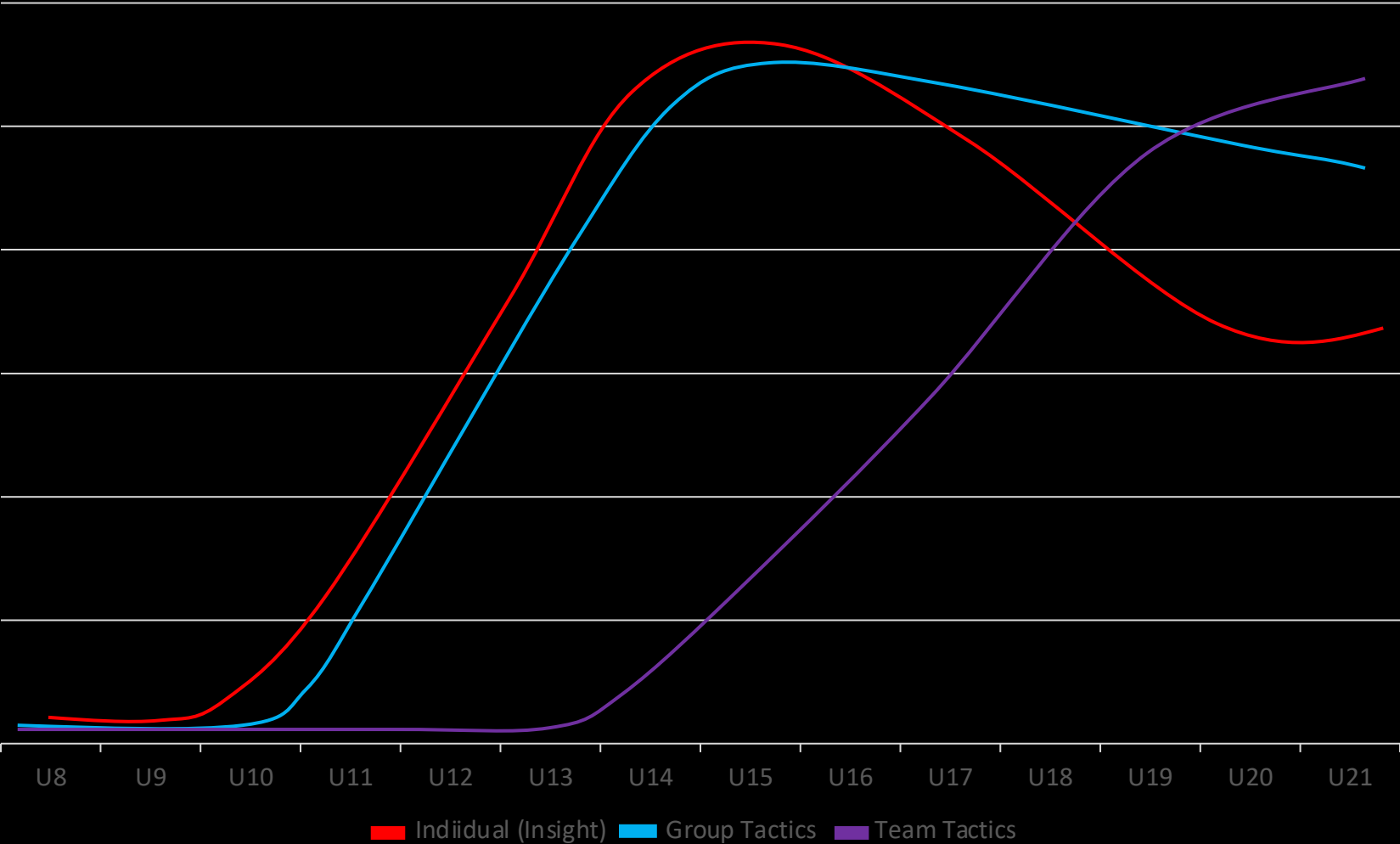
Skills Development



Periodisation Tactical (ages & stages)

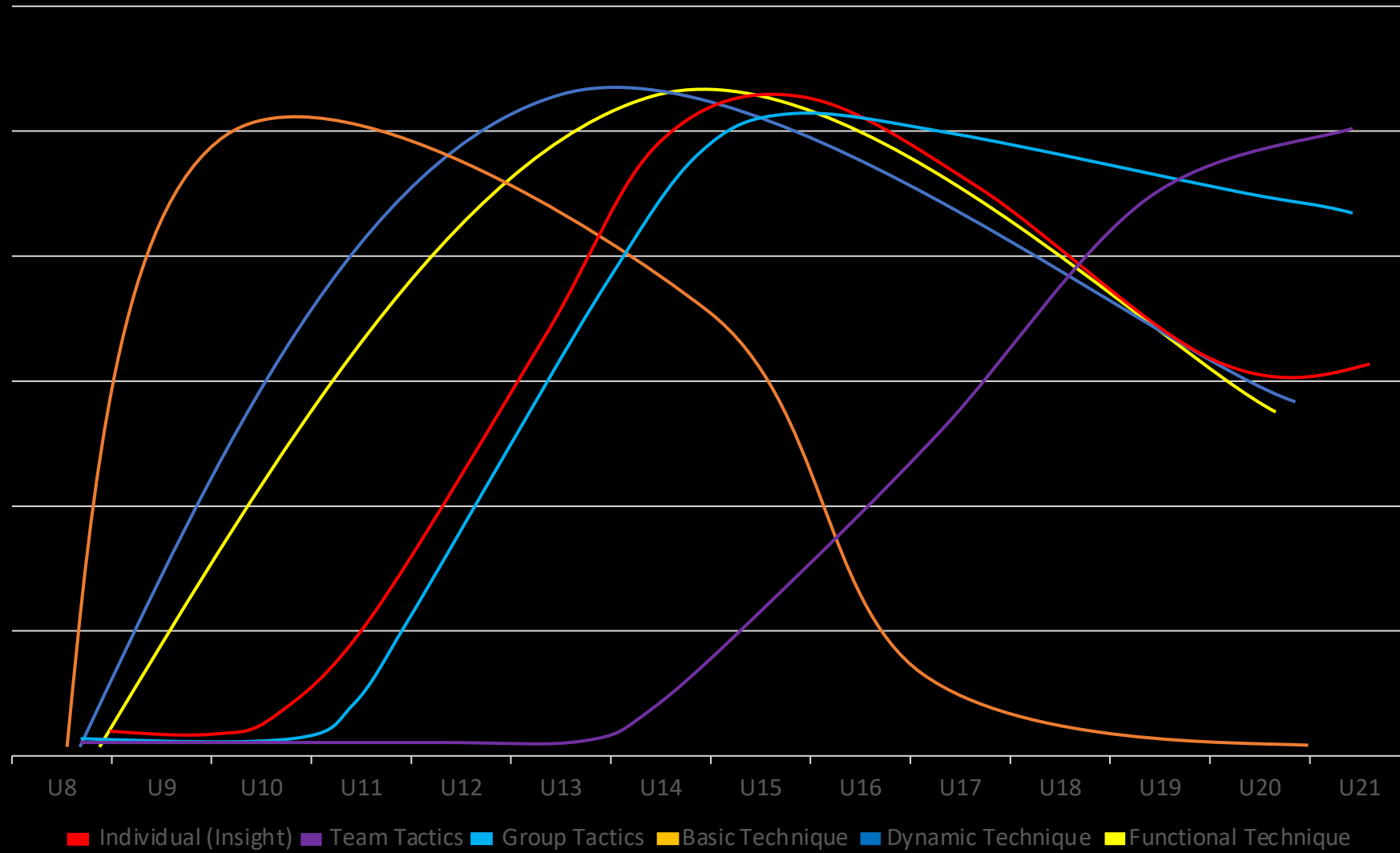
Focus in training

Tactical Development



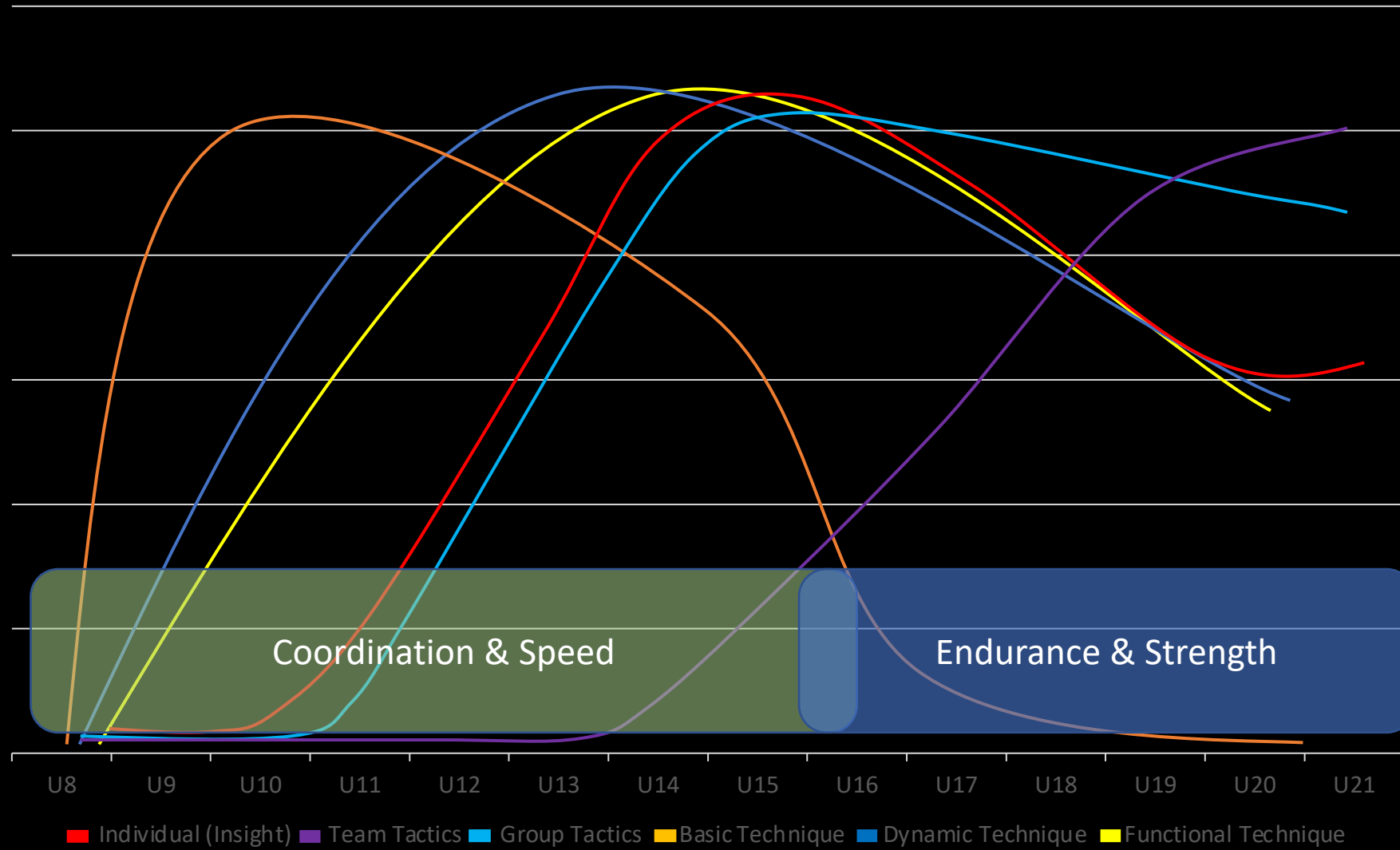


Developmental concept

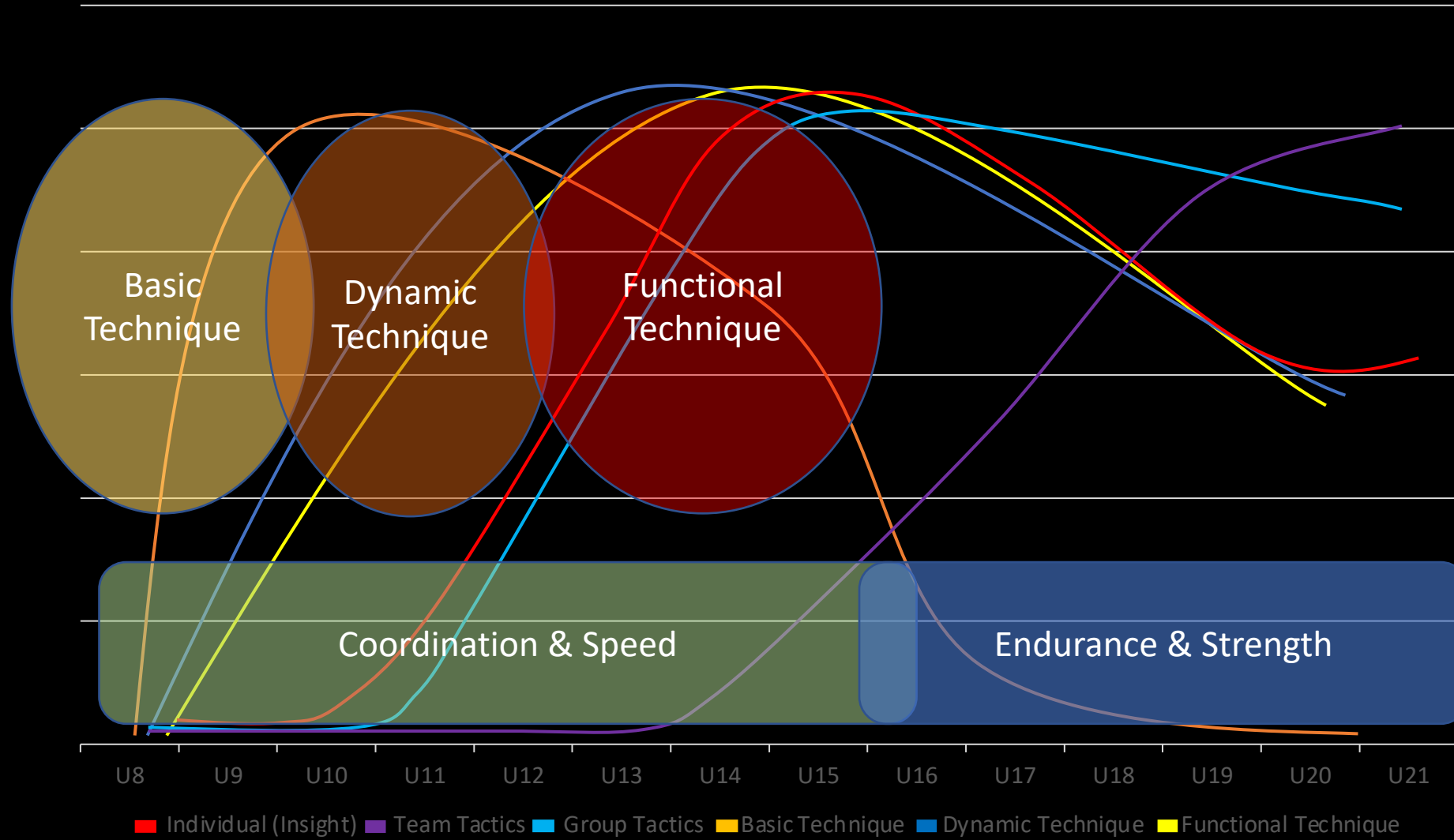


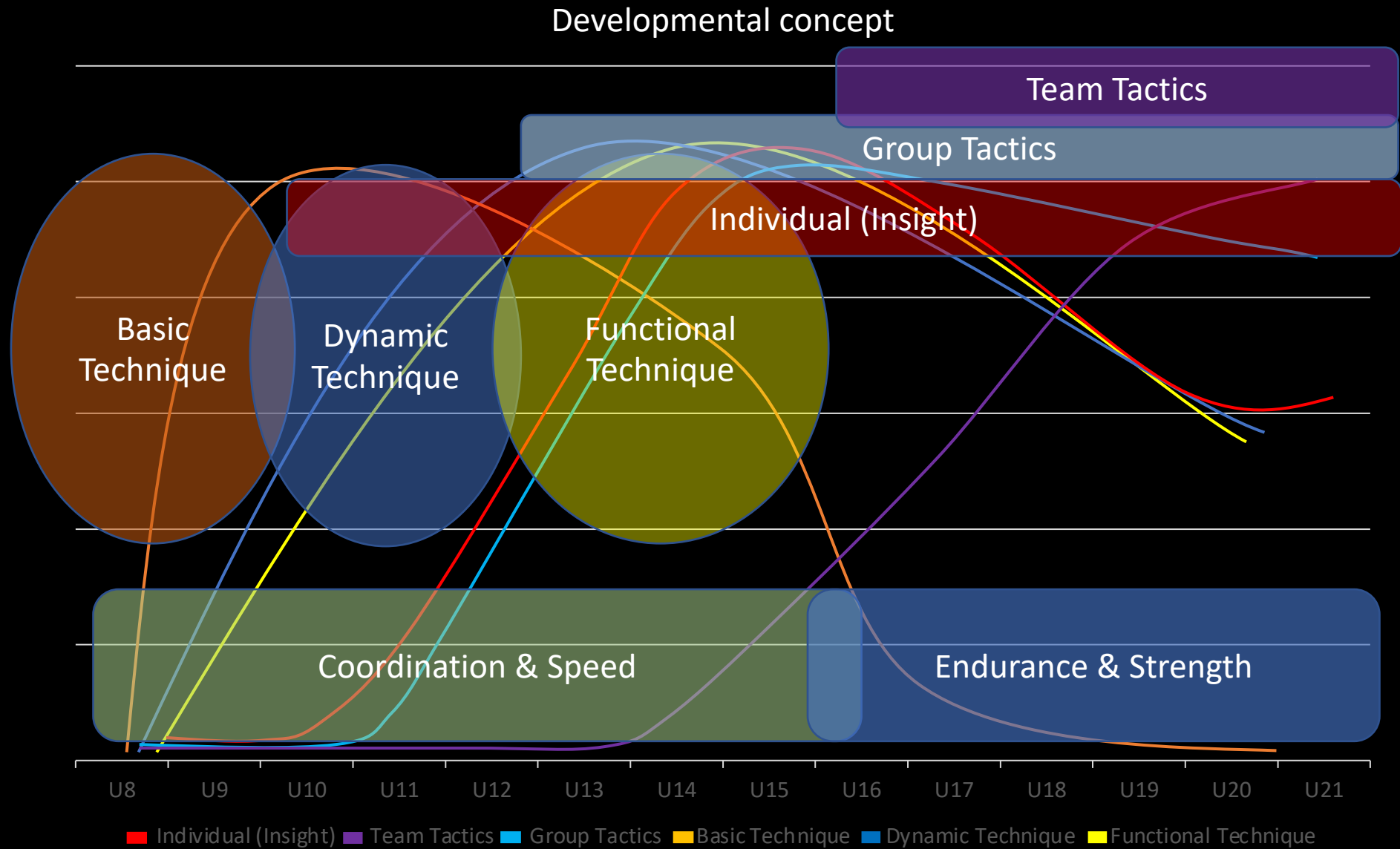


Developmental concept



Developmental concept



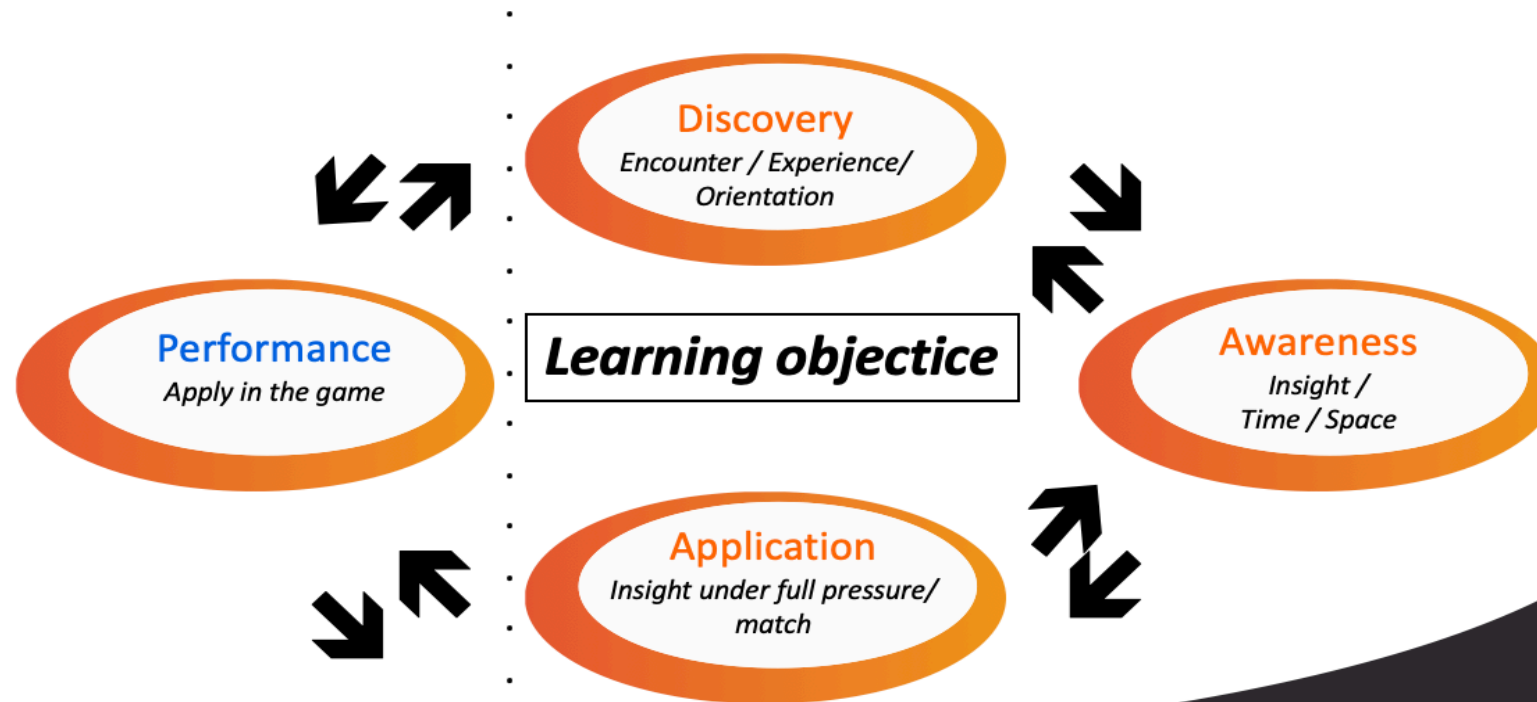


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Learning Cycle = structure for learning
planning for training
transfer/ retention within training
transfer/ retention from training → game

TSM Learning Cycle ©



GAME

TRAINING

IT'S ALL IN THE GAME

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Learning Objective

Attacking: Play through (around, over) the first pressure of the opponent by playing to the (operational) spaces. (where do we create time/ space)

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Learning Objective = Teamprinciple

Attacking: Play through (around, over) the first pressure of the opponent by playing to the (operational) spaces. (where do we create time/ space)

Contra principle = deny depth by pressure (trigger) to win back ball (defending)

Transition principle = after losing ball, immediate pressure to win ball or force back

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❖ Prerequisites

- create and exploit numerical advantage
- dynamic change of position
- open passing lanes
- supporting player

❖ Football Behavior

- pass through opponents
- depth before width (awareness, vision, movement without ball)
- Diagonal passing

❖ Skills

- Passing
- one touch / 1st touch
- Dribble

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Discovery Phase: passing/ receiving in 2 teams/ 4 squares → rules

Awareness Phase: postional play 4 v 2 + 2 (3 areas)

Application Phase: 7 v7 (6 v 6 plus gk's)
4 areas

1:2:3:1 -- 1:2:3:1
off-side

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Exercises with high decision-making opportunities:

- ✓ Link to Game Model
- ✓ Team-functions: A + D + T
- ✓ Competition / Pressure
- ✓ High Intensity
- ✓ Dynamic
- ✓ Challenges (TSM Variation model ©)

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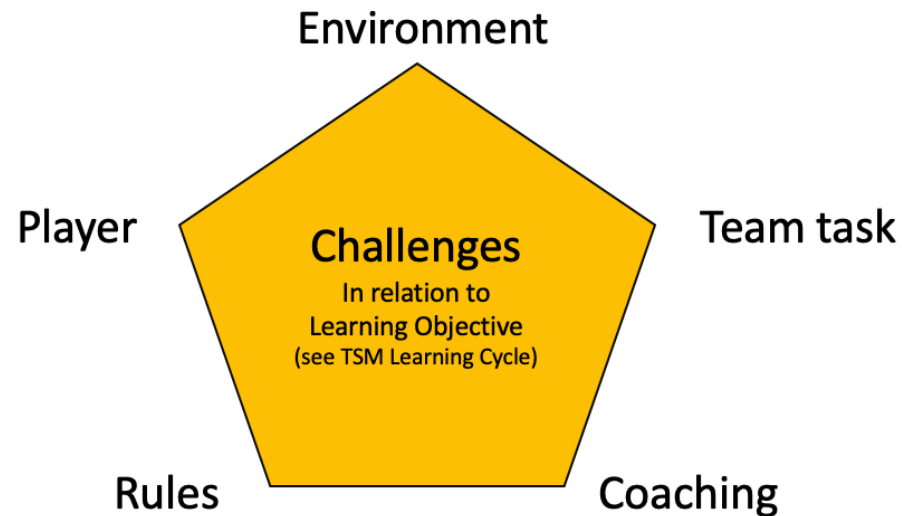


Exercises with high decision-making opportunities:

TSM Variation model.©



for training and game





Note

- *To strengthen to ability of decision-making in the player we should make the object of the training decision-making in the sense of the content but also in a pedagogical and didactic sense*

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VVV-VENLO Academy - Discovery Phase



VVV-VENLO Academy - Awareness Phase



VVV-VENLO Academy - Awareness Phase



VVV-VENLO Academy - Awareness Phase



VVV-VENLO Academy - Awareness Phase



VVV-VENLO Academy - Application Phase



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Transfer the learned skills from training → game

- ✓ Decisions on/ off the ball
- ✓ Through / Around / Over
 - ✓ Recognise situations
- ✓ Within the game model of VVV-Venlo

Performance Phase → Game

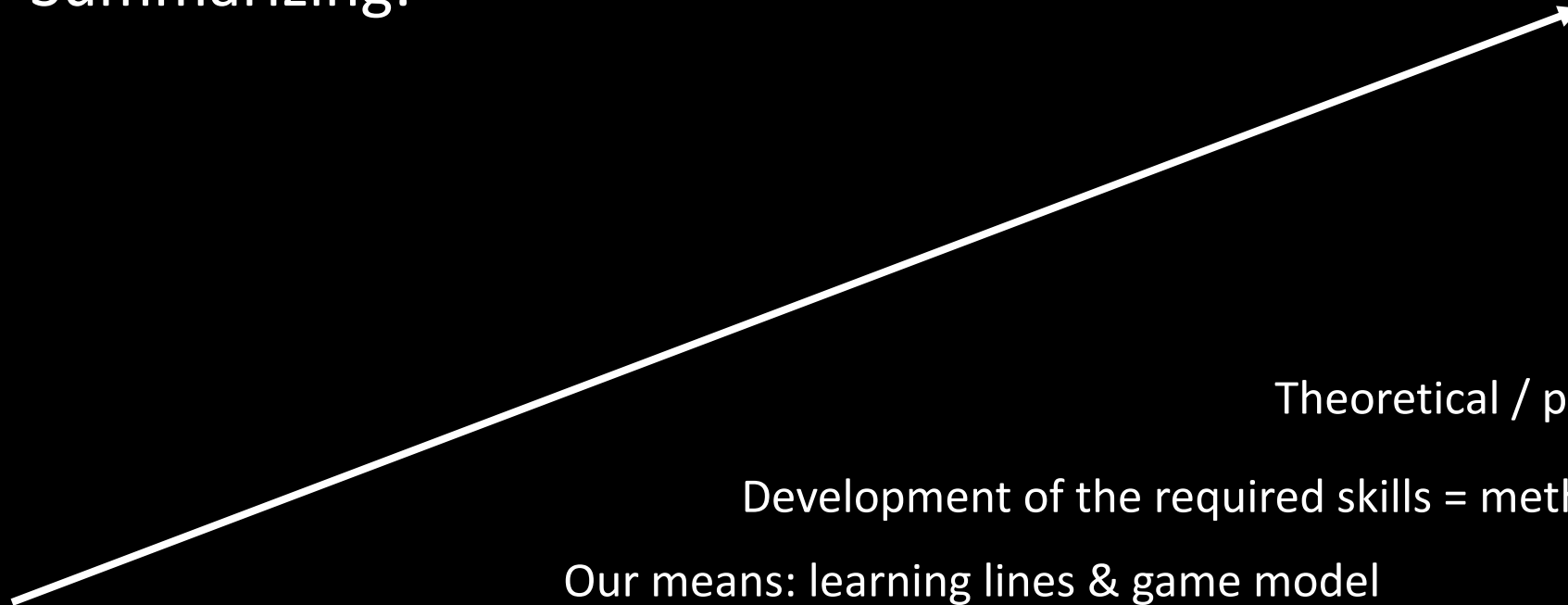


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Summarizing:



Opportunities
Patience

Quality coaching

Practical application

Theoretical / pedagogical framework

Development of the required skills = methodology

Our means: learning lines & game model

Our Vision: player / football / environment

(VVV-Venlo) Players in professional football



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Q & A

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Thank You

@rogerbongaerts

@vvvvenlojeugd

