ASPETTI SPECIFICI DELLA PREPARAZIONE TECNICO-TATTICA NELL TENNIS

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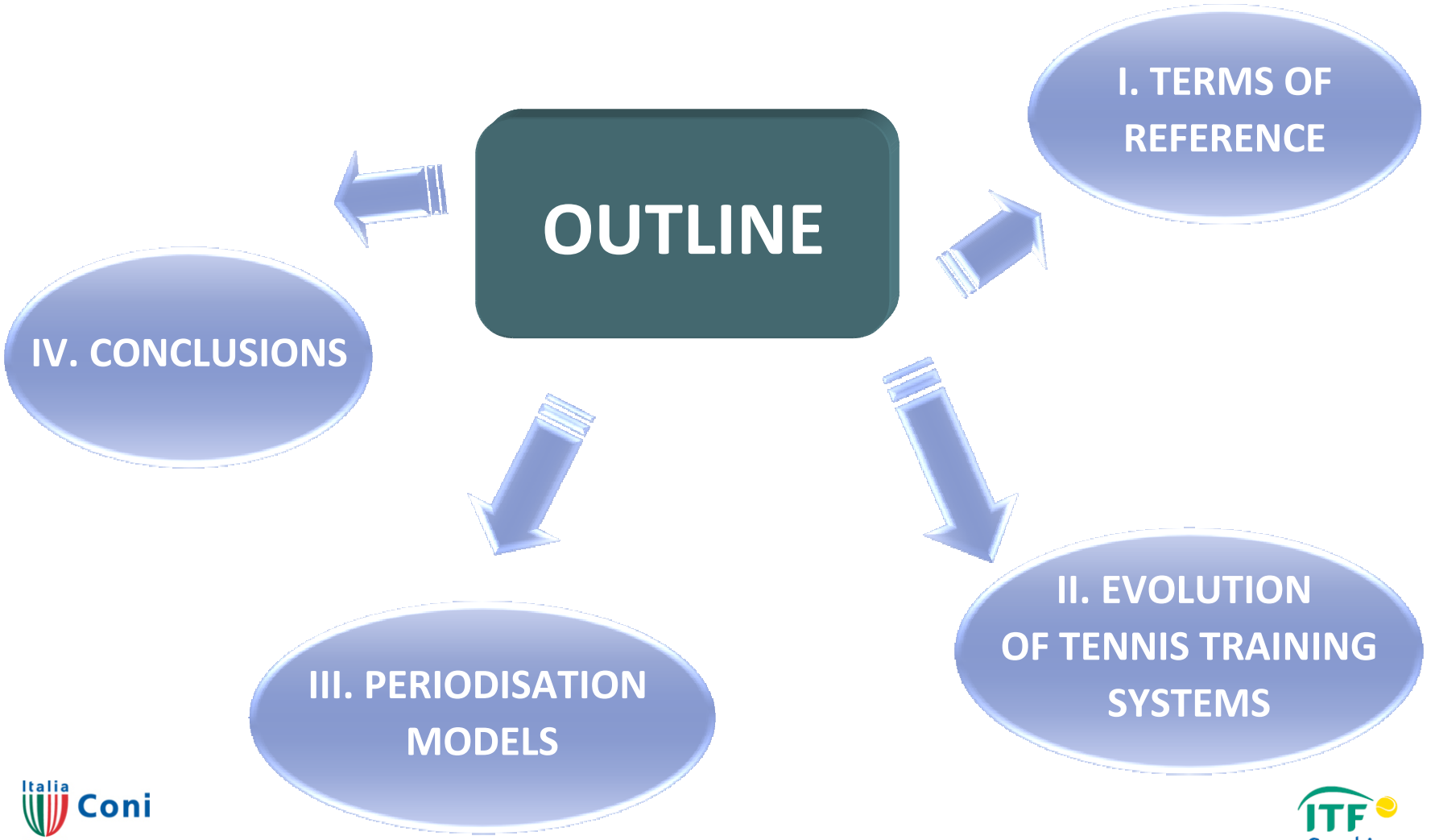
ITF Development Research Officer

SEMINARIO INTERNAZIONALE SPORT DI RACHETTA

SPECIFIC ASPECTS OF THE TECHNICAL AND TACTICAL TRAINING IN TENNIS



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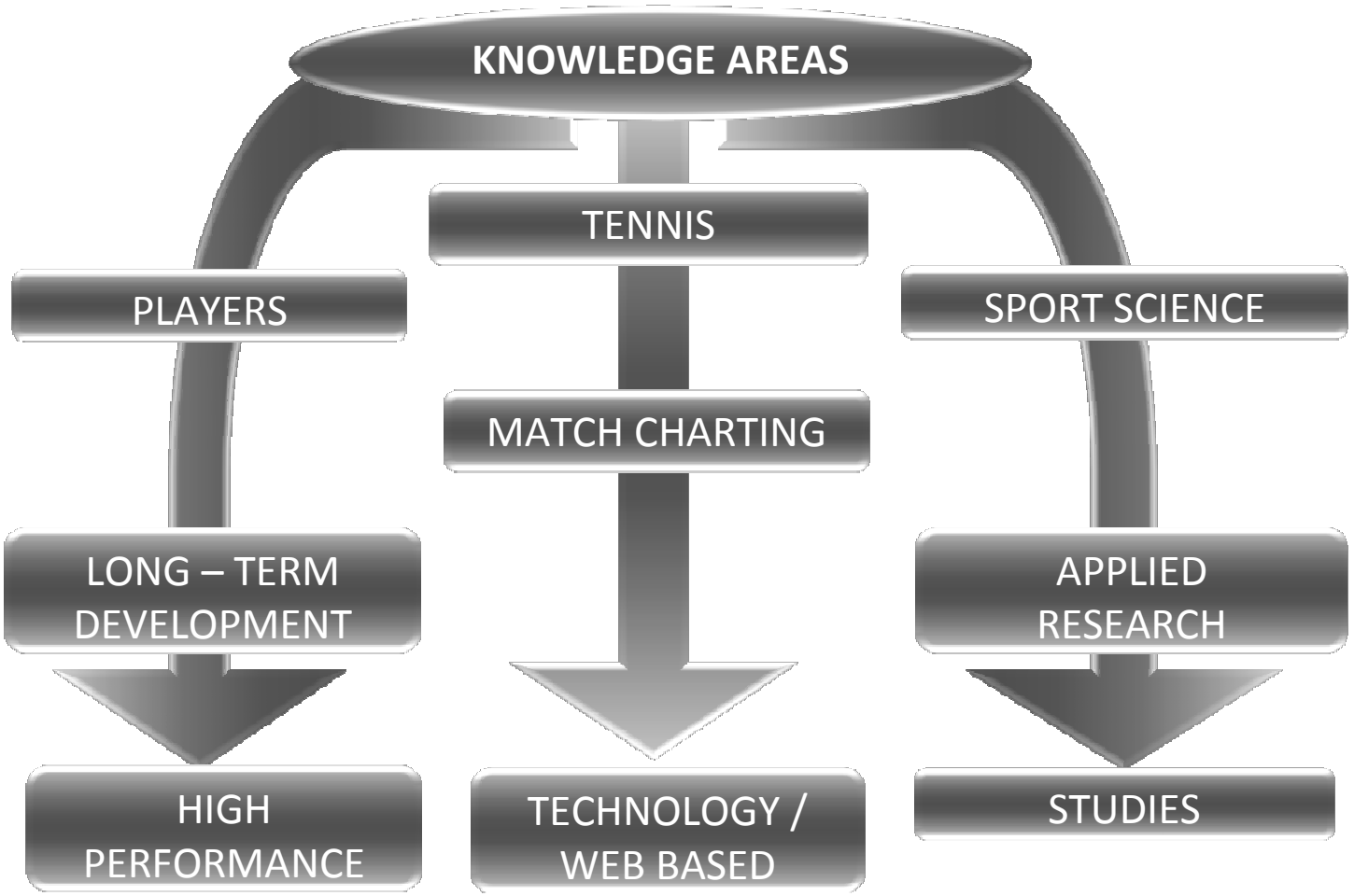
I. TERMS OF REFERENCE



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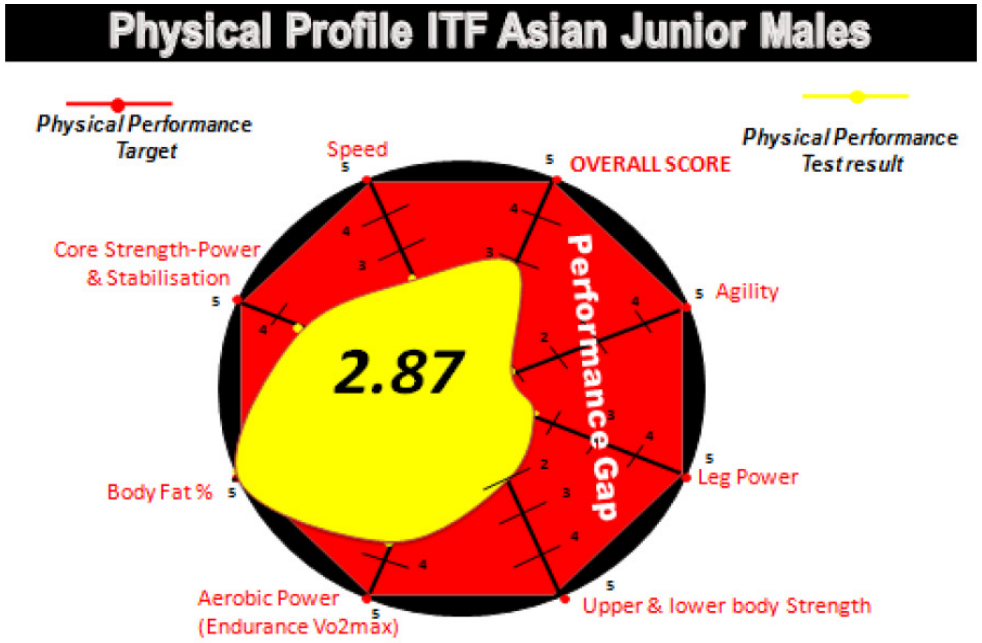
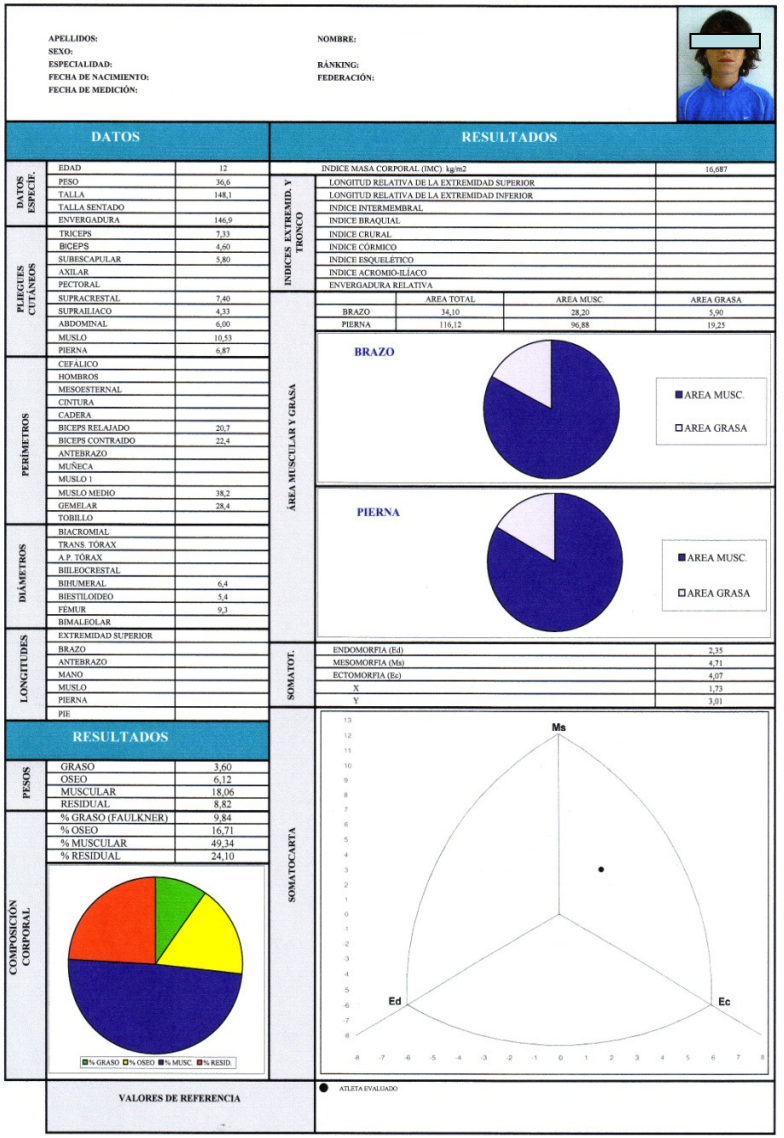
KNOWING YOUR PLAYERS





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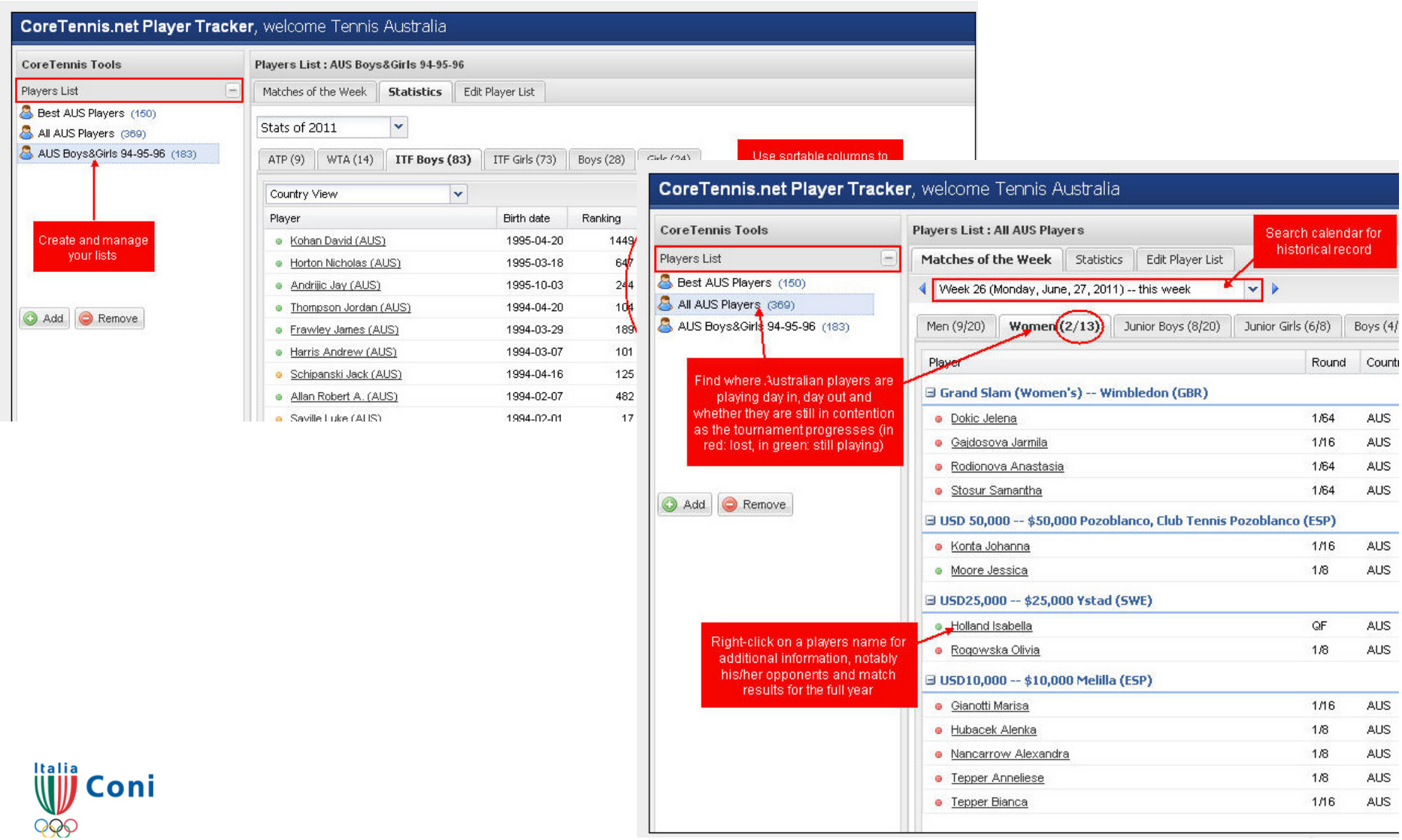
KNOWING YOUR PLAYERS



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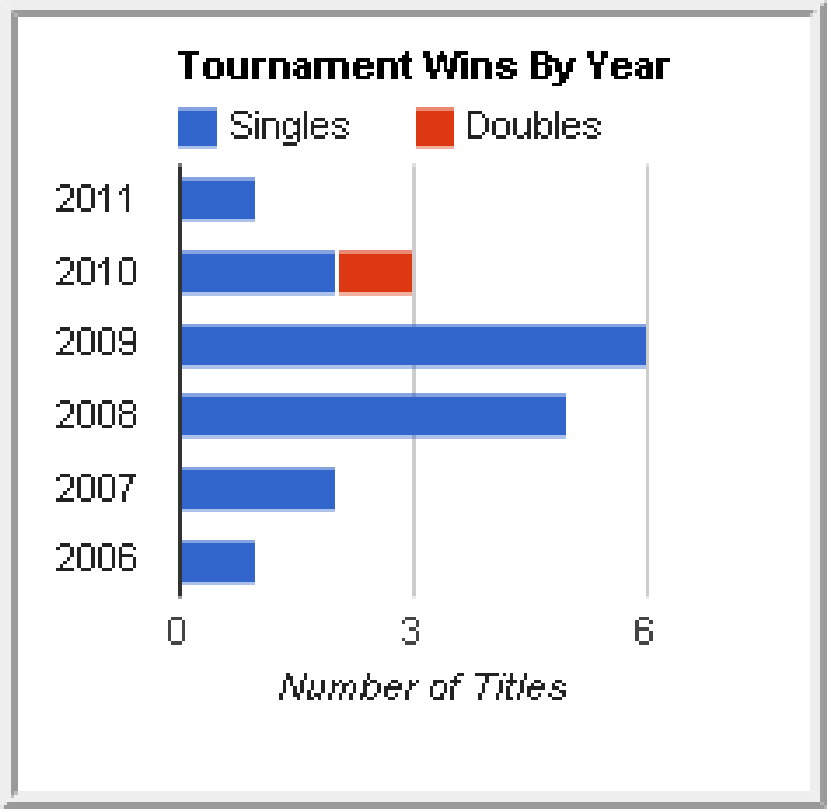
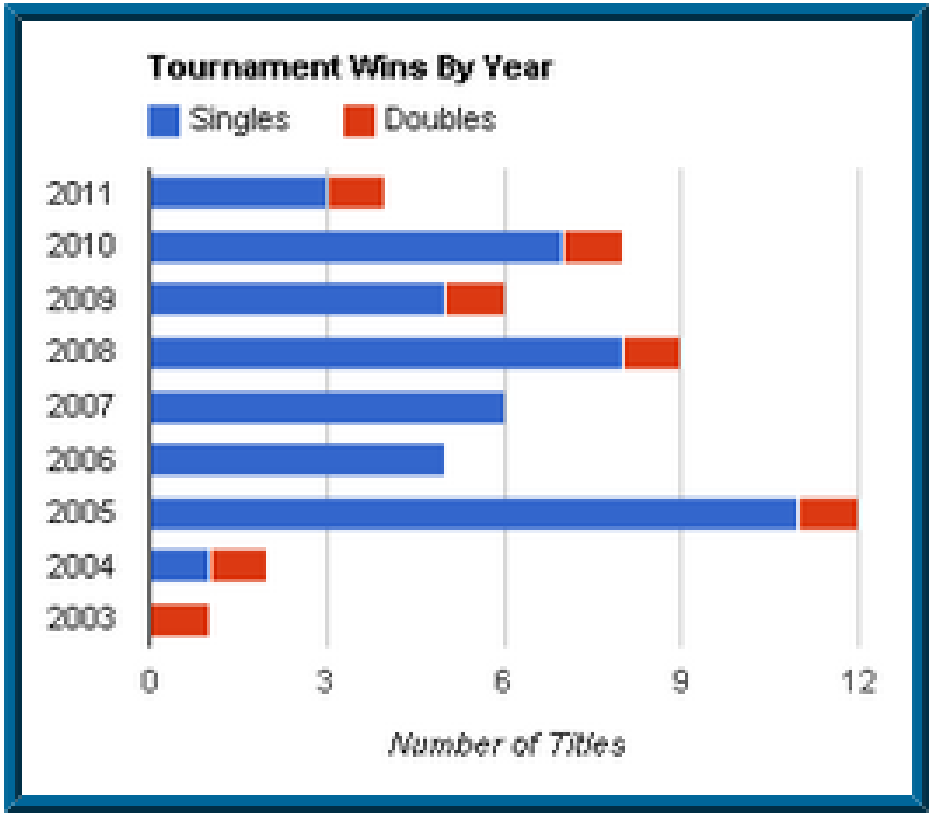
KNOWING YOUR PLAYERS

Andy Murray



Rafael Nadal



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Progressive Development of a World Class Player

(male and female)

INTRODUCTION/FOUNDATION		REFINEMENT/TRANSITIONAL		WORLD CLASS PERFORMANCE	
Phase One		**Phase Two**		**Phase Three**	
Age of Player: 6-12		*Age of Player: 10-20*		*Age of Player: 15-30*	
Years In Phase: 2-4 Years		*Years In Phase: 4-9 Years*		*Years In Phase: 8-12 Years*	
Stage I	**Stage II**	**Stage III**	**Stage IV**	**Stage V**	**Stage VI**
• Entry Level • Team Tennis • Local Tournaments • Random Training • Developmental Coach	• Sectional Tournaments • Sectional Ranking • Random/Systematic Training • Developmental/ High Performance Coach	• Nat. Tournaments and Ranking • Systematic Training • High Performance Coach • Commitment to Game • Long Term Vision • Developmental Team Leader Identified	• High National or College Ranking • World Class Junior • Transitional Pro • Satellite-Challenger • Systematic Training • High Performance/ Transitional Coach • Long Term Vision • Developmental Team Leader	• World Class Top 50-150 • Systematic Training • World Class Coach • Vision • Developmental Team Leader	• Peak Level of Performance Top 1-50 • World Class Personal Coach

Saviano (2001)

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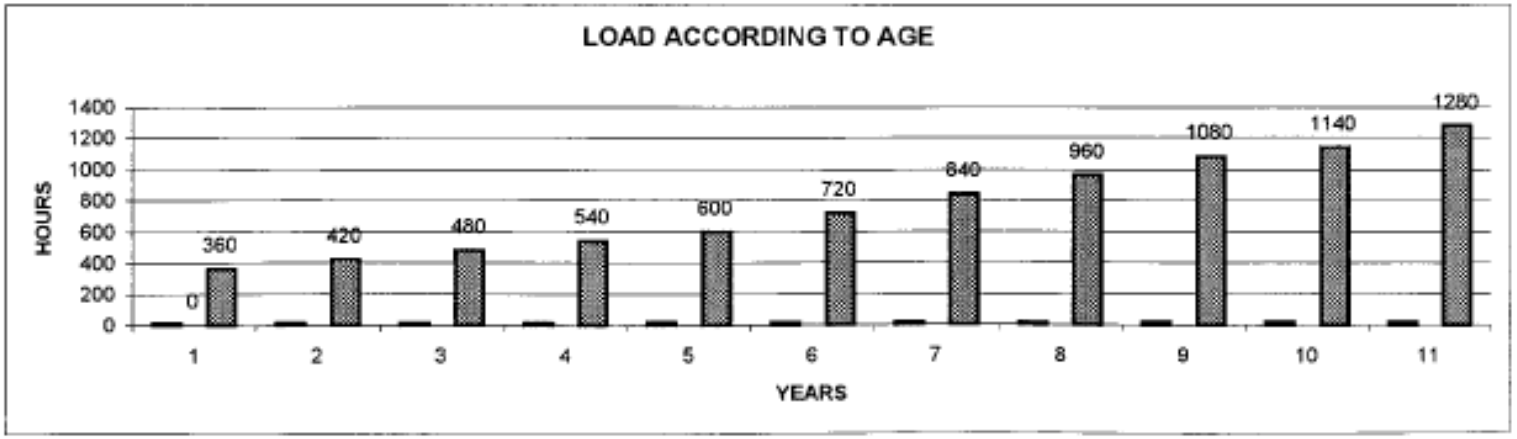
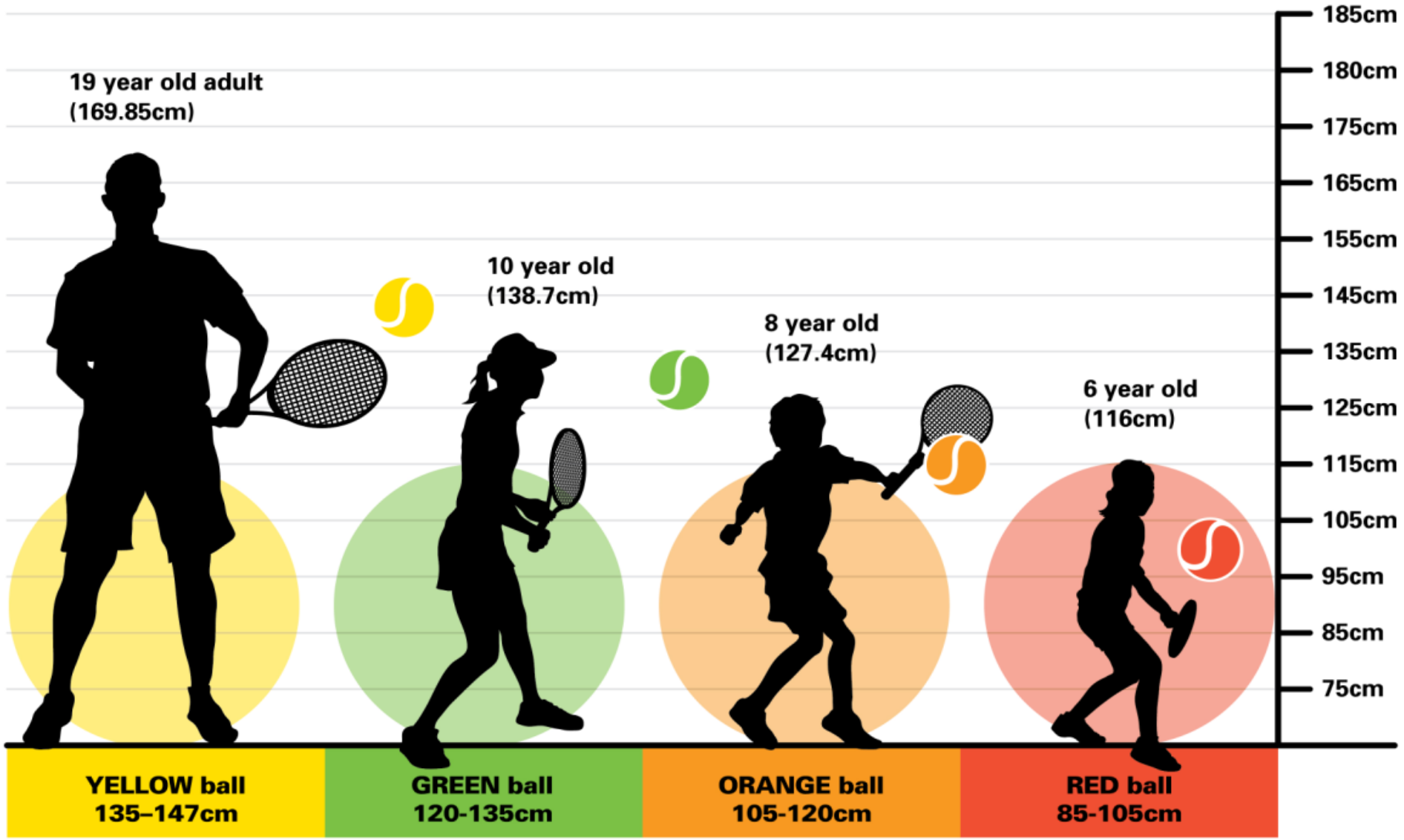
YEARS OF TRAINING		1	2	3	4	5	6	7	8	9	10	11
AGE OF THE PLAYER	MEN	10	11	12	13	14	15	16	17	18	19	20
	WOMEN	8	9	10	11	12	13	14	15	16	17	18
AGE DISTRIBUTION IN %		30	35	40	45	50	60	70	80	90	95	100
NUMBER OF HOURS		360	420	480	540	600	720	840	960	1080	1140	1280
WEEKS OF TRAINING / YEAR		44	44	44	46	46	48	48	50	50	50	50
HOURS PER WEEK IN TOTAL		8,2	9,5	11	12	13	15	17,5	19,2	21,6	22,8	24
PERCENTAGES	TENNIS	40	40	45	50	55	60	65	70	70	75	75
	PHYS. C.	60	60	55	50	45	40	35	30	30	25	25
TOTAL HOURS PER WEEK	TENNIS	3,3	3,8	5	6	7	9	11	13,2	16	17	18
	PHYS. C.	4,9	5,7	6	6	6	6	6,5	6	5,6	5,8	6
TOTAL HOURS PER YEAR		**360**	**420**	**480**	**540**	**600**	**720**	**840**	**960**	**1080**	**1140**	**1280**



Why use slower balls for 10-and-Under players?



– Average height of males and females combined (World Health Organisation, 2007)
– Rebound height specifications for ITF approved tennis balls (ITF Rules of Tennis 2011)

TennisLMS Components

- Video Analysis
- Match and Point Analysis
- Fitness Analysis
- Periodization
- Player Profile (Report Card)
- Personal Development Plan

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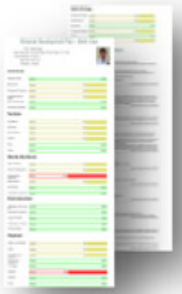
TennisLMS
developing future champions

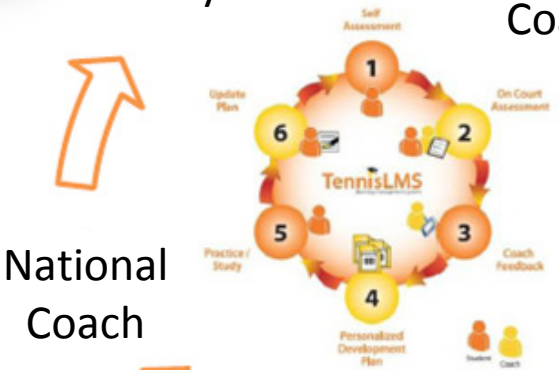
Player Report Card

Wirth one click of button, coaches can create a full summary of player's current skills, progress over time and view real time collection of all feedback.



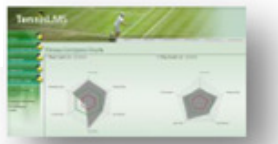
Full Transparency

By using TennisLMS platform academy and coaches provide full transparency to parents on player progress and success.



Player Video Analysis

- Simple to use, no software to install
- Can be viewed on the web, and on the phone
- Normal and slow motion modes
- Compare player's strokes over time
- Compare with professional library of strokes
- Send video and feedback to parents via email



Fitness Trainer Feedback

- Visibility to Player's Tennis Progress Report
- Visibility to Player Development Plan (PDP)
- Visibility to Players Skills and Gaps

Coach Feedback

- Collection of feedback from every coach
- Track player progress over time
- Ability to record matches, practices, strategy
- Short Term and Long Term Planning
- Periodization and Peak Performance

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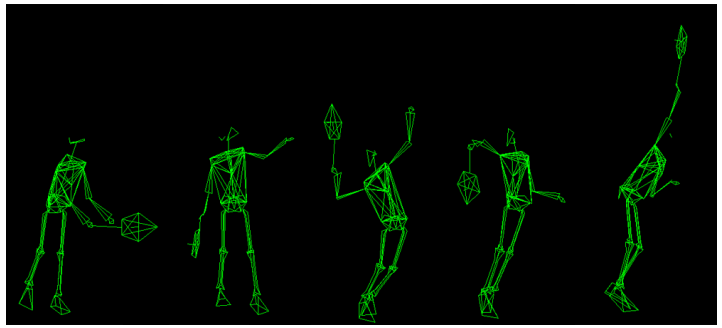
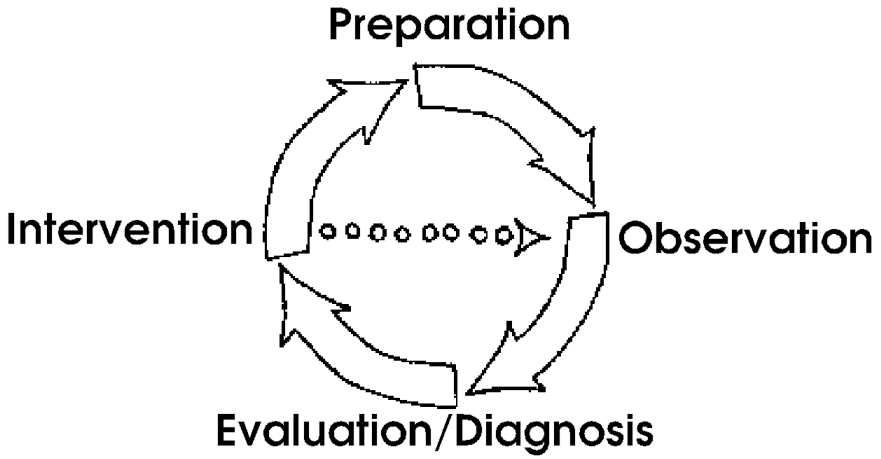
KNOWING THE GAME - TECHNICAL ANALYSIS





Knudson & Morrison (1997)

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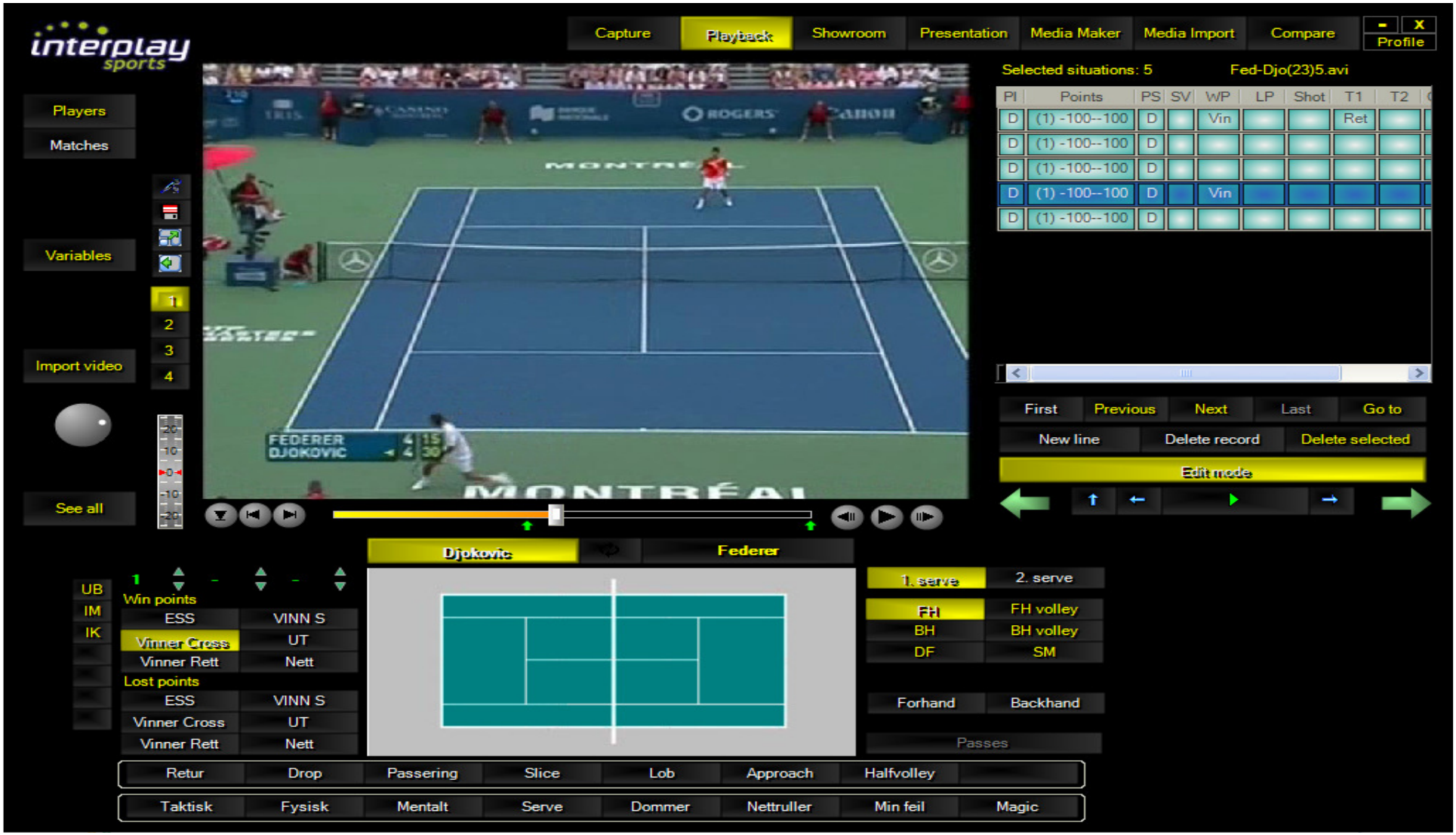
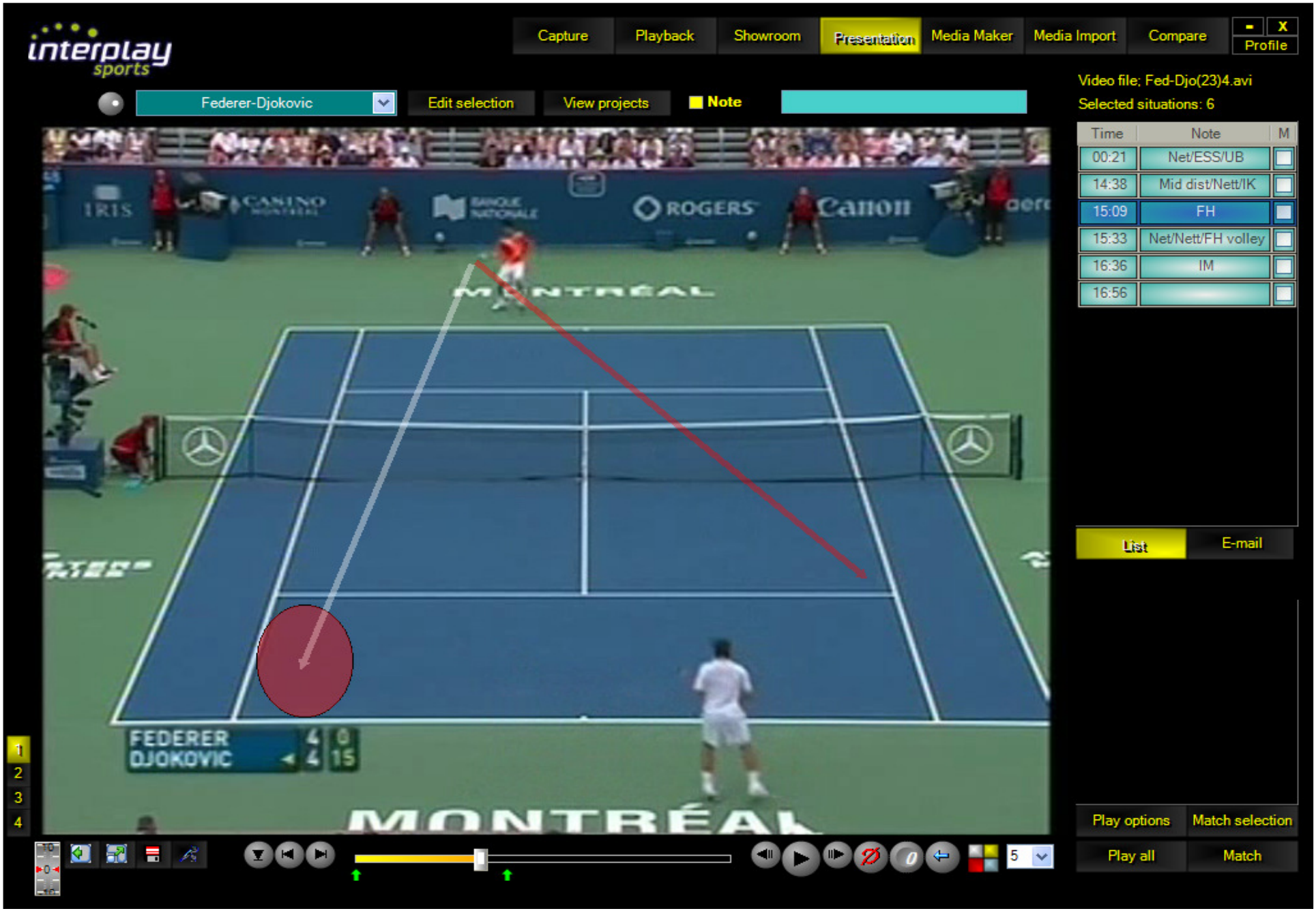
TACTICAL ANALYSIS





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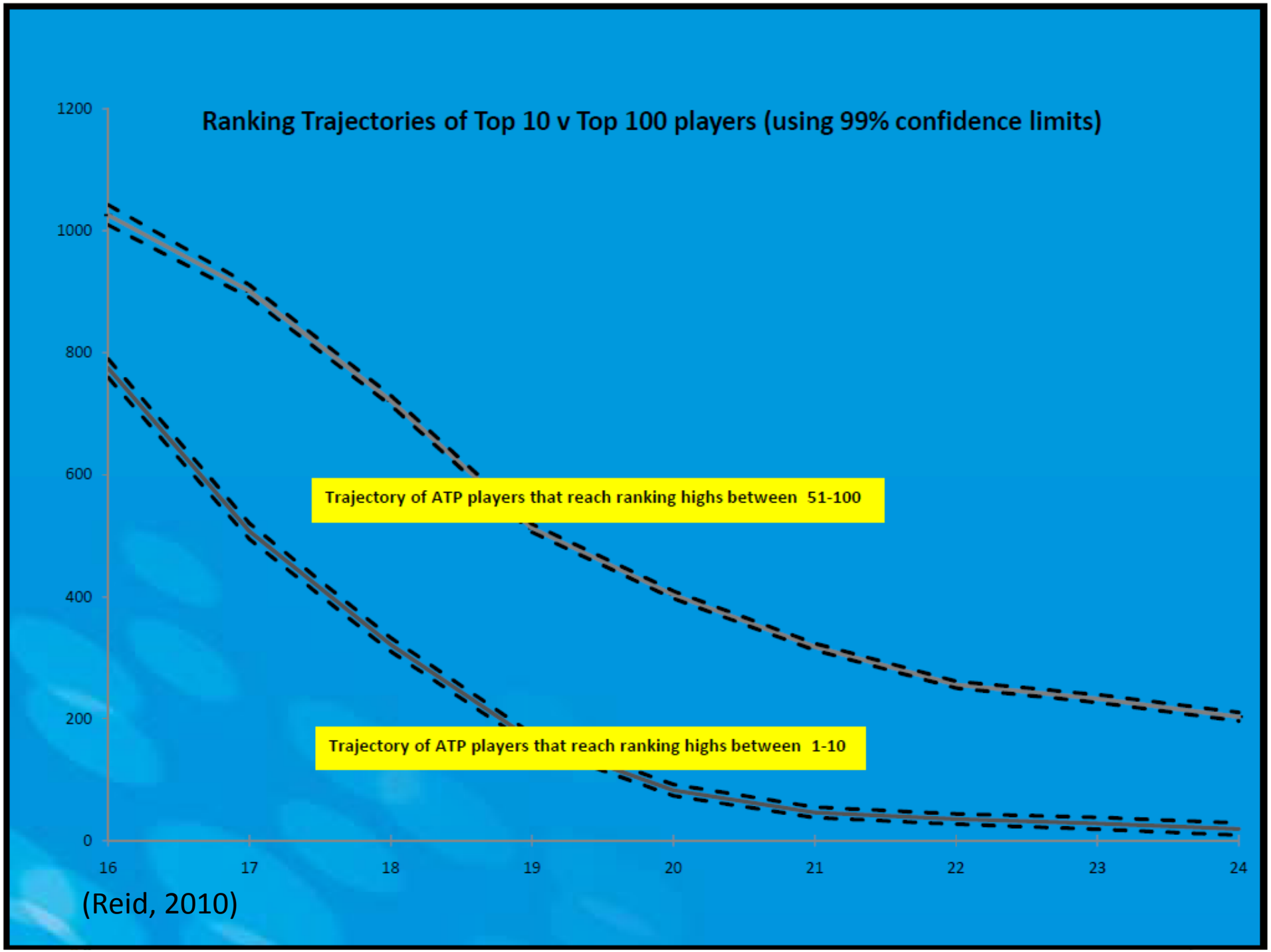

Ranking Trajectories of Top 10 v Top 100 players (using 99% confidence limits)
1200
1000
800
600
400
200
0
16
17
18
19
20
21
22
23
24
Trajectory of ATP players that reach ranking highs between 51-100
Trajectory of ATP players that reach ranking highs between 1-10

(Reid, 2010)

NAME AND FIRST NAME	DOB	VENUE	COACH	DATE / PERIOD
	1981	USA		winter 2010 2011

Ranking Rating Today	200
Ranking Rating dec 2011	100
Ranking Rating dec 2012	50
Ranking Rating dec 2013	10

TENNIS GOALS : WHAT needs to change in your game to achieve the above			score	score	
!!! These goals need to be match related !!!!	deadline	measurement / tools	before	after	evaluation / homework / comments
1 consistency on higher level via good movement	neverending	interval training with coach at net			be the fittest athlete ever
2 develop fh into a weapon	abr-2011	# fh and score ad /neutral / defen			
3 bh consistency higher	abr-2011	points on a halfcourt			playup against better oppponents as much as possible
4 serve injury and efficiency : percentage 70 %	jun-2011	use of bodyweigth for power and control???			

PROCESS GOALS : HOW will achieve tennisgoals 1,2,3,4 above >>>>>>> put in planner !!!!

			score	score	
TACTICAL (play smart)	deadline	measurement / tools	before	after	evaluation / homework / comments
all below process goals are linked to tennisgoals 1,2,3,4,..					
1 stay close	asap	no back step	2 out 10	8 out 10	every single warm up > easier on cross court rally
2,1 pace same down the line shots		basket X and hit II to zone >> hc vs fc			
2,2 80 /100	mar-2011	video (keeping the shape for 100)	out 10		
2,3 higher contact in the court (dropping too low)	mar-2011	basket feed deep > short			hi = hip or higher = jump low = below hip + staylow !!!
3 keeping same pace at higher pace opponent	ene-2011				
4 variation instead ofpace (introduce slice)		1 slice per game			keep the same toss for all first serve

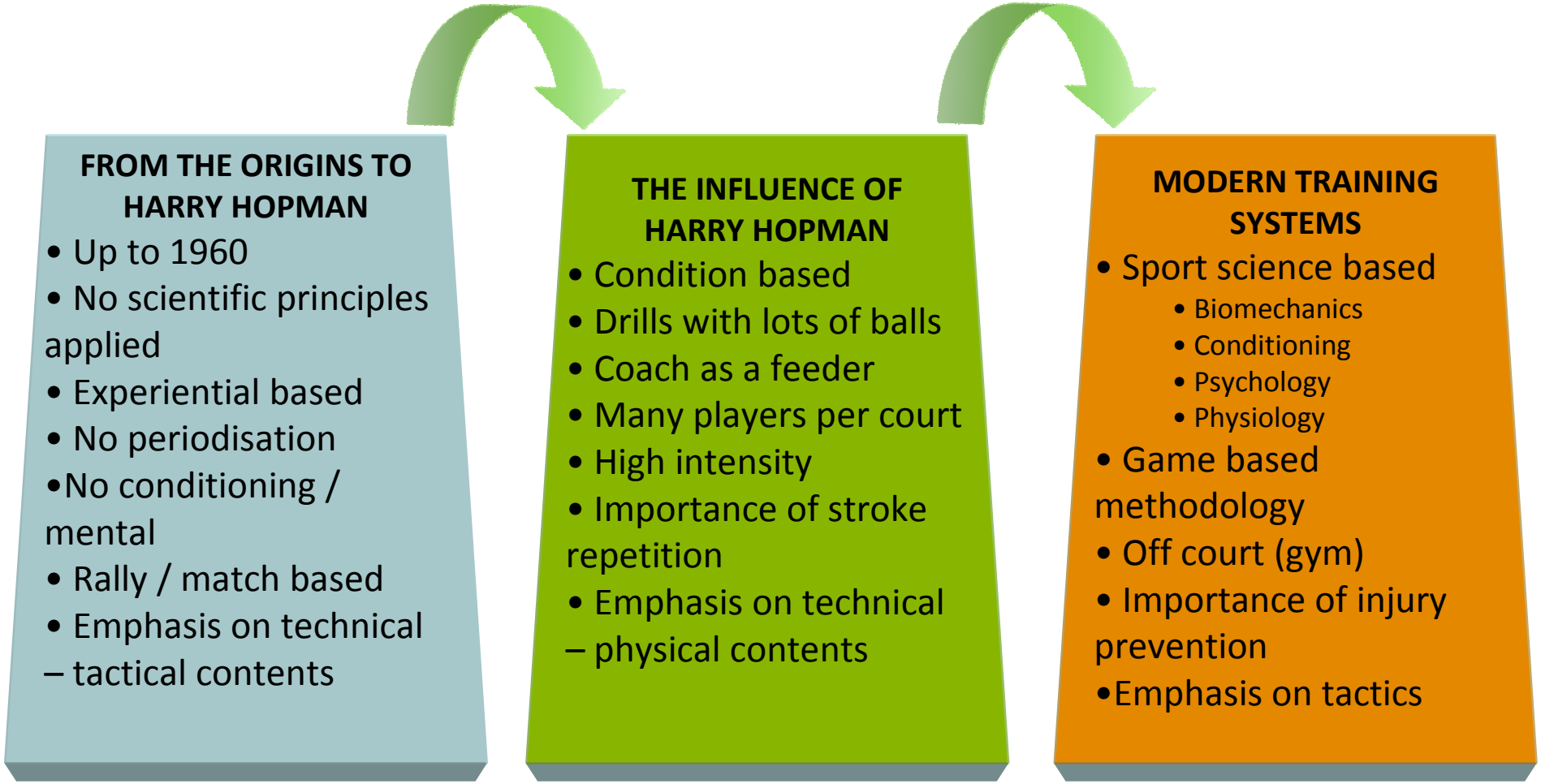
			score	score	
TECHNICAL (is a took to achieve tactical goals)	deadline	measurement / tools	before	after	evaluation / homework / comments
all below process goals are linked to tennisgoals 1,2,3,4,..					
1 open hip (load) without stepping back FH	asap	line behind baseline and hit hit			
2,1 keep rackethead bit higher up FH	dic-2010				
2,2. fire elbow first FH	dic-2010	hand feed and accelerate slow balls			
2,3 80/100 same shape FH	ongoing	with theo but also other girls			
3 racket first then hip BH		hip does start first !!			
4 foot position in relation to power and control ??? S		monfils ? Roddick ? Ulrikke ???			oivind to film
gen technique consistence different surfaces ??					
gen hitting CLEAN					

			score	score	
PHYSICAL (is your body ready for goals above??)	deadline	measurement / tools	before	after	evaluation / homework / comments
all below process goals are linked to tennisgoals 1,2,3,4,..					
1 develop on the road programme	asap	5 4 3 2 1 principle			
1 pulskluk for endurance and interval training	ongoing	intervals 40-20 or 30-30...			planning needed (in cooperation with espen) when and how much
1 rigth side lunge stronger for wide fh		core stability and strenght program			
2 stronger upperbody (not forgetting always from bottom up!!!)					
4 shoulder stabisliation ok (every day !!!)		gradually introduce serve			
gen more guidance needed		6 week evaluation and testing			

			score	score	
MENTALLY (how to be on the court)	deadline	measurement / tools	before	after	evaluation / homework / comments
all below process goals are linked to tennisgoals 1,2,3,4,..					
1 hewitt attitude (champion of the locker room)	now	every single practice = match			
3 i do not miss ! (creating feeling that you can bring back one ball extra)	abr-2010	find ritual that gets you in espinho mood			

Maes (2011)

II. EVOLUTION OF THE TENNIS TRAINING SYSTEMS



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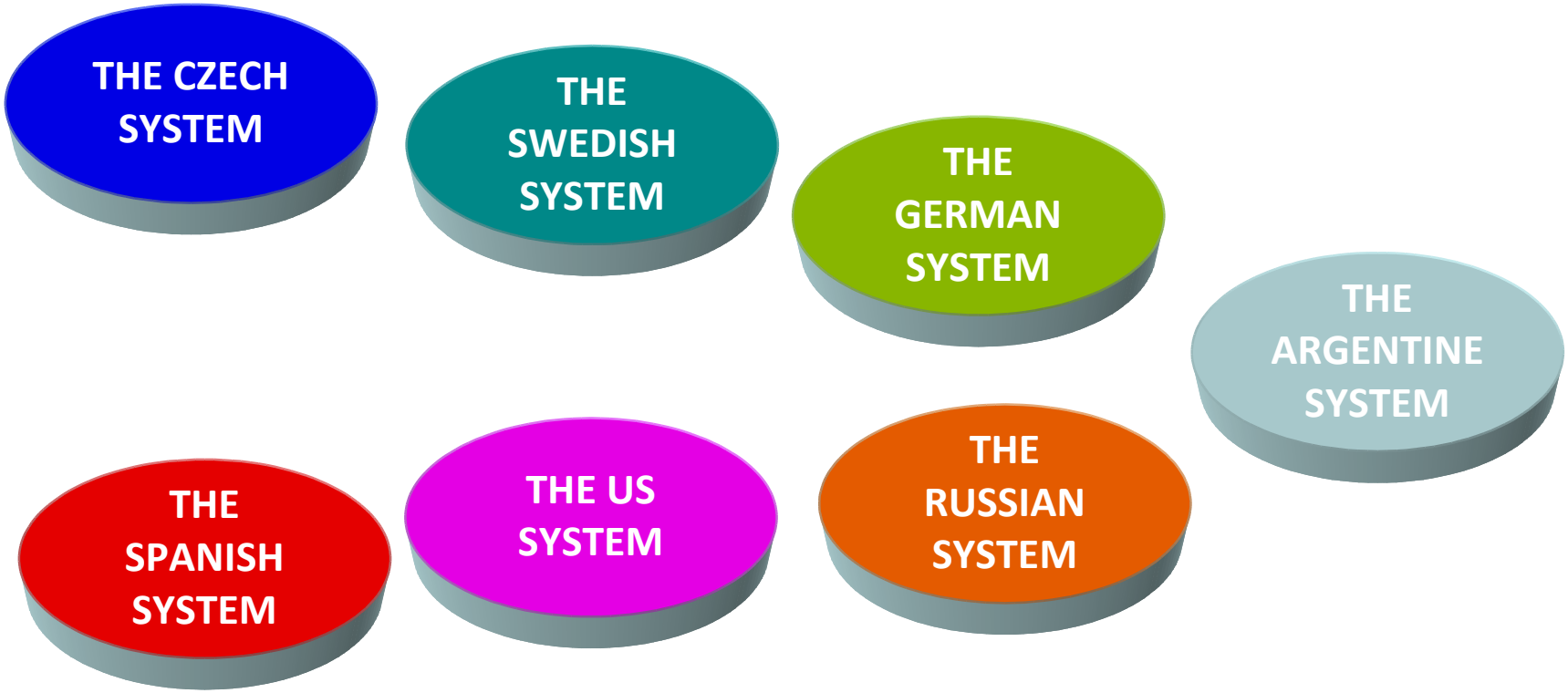
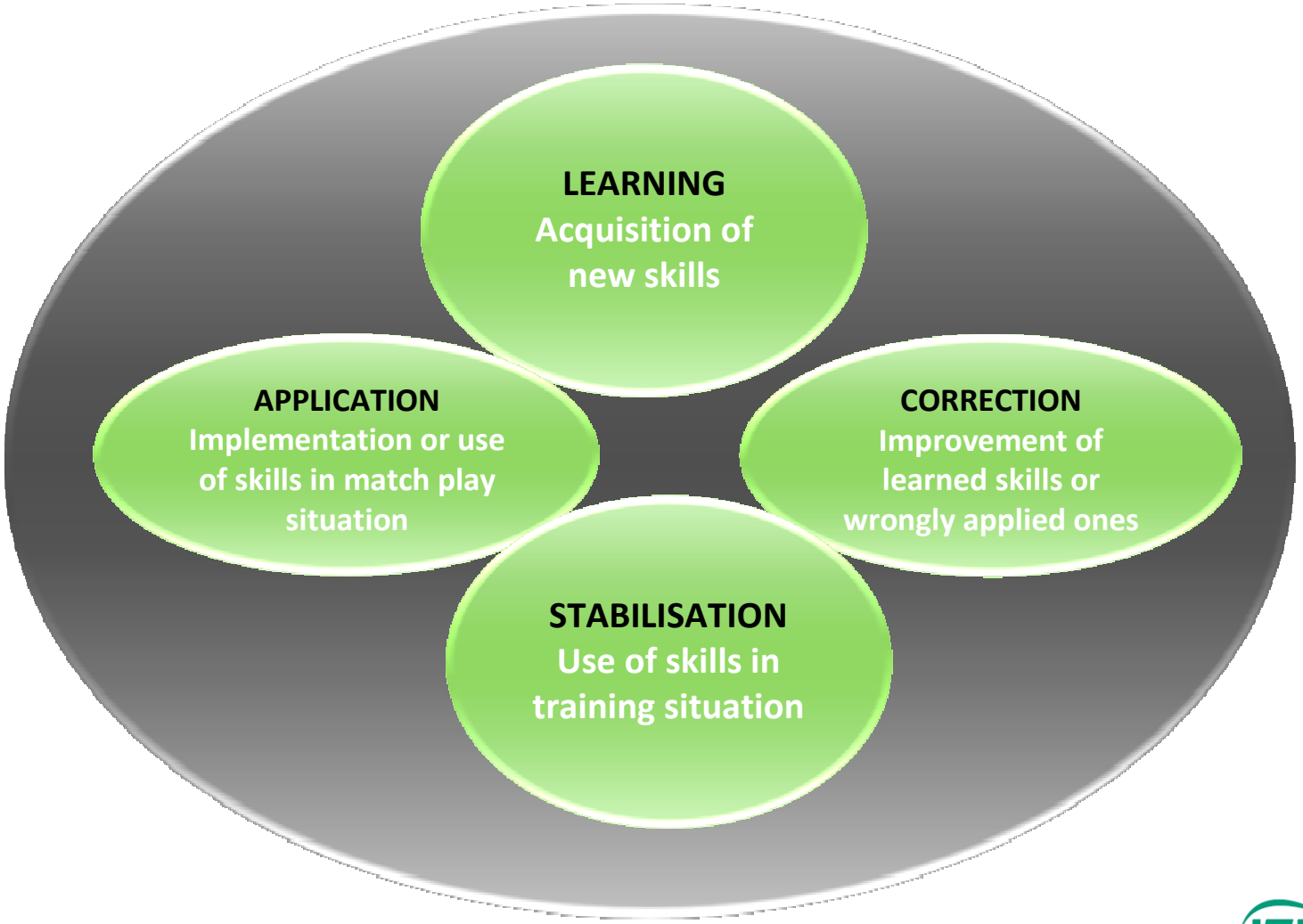
SOME TENNIS TRAINING "PHILOSOPHIES"



Strategies and methods used to improve the performance of the player

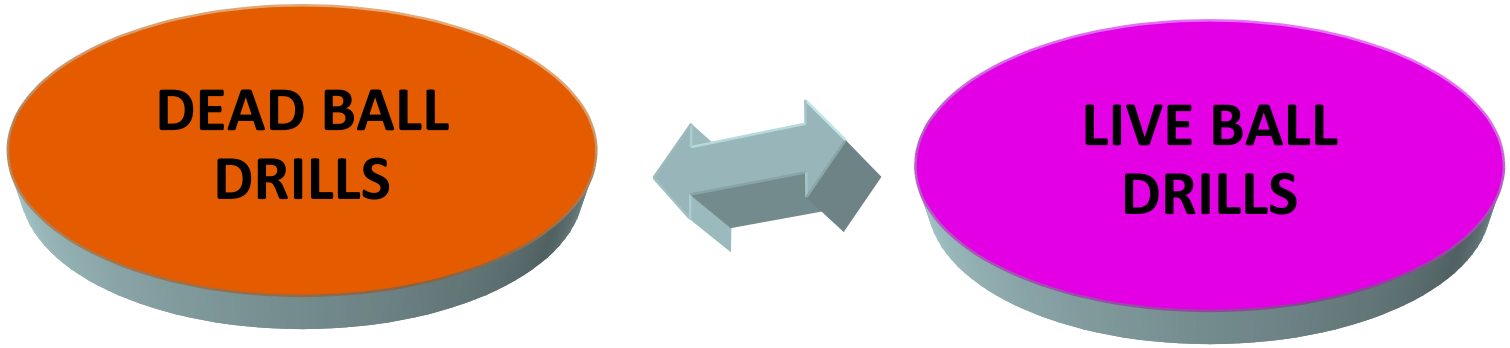
Schonborn (1998)

BASIC GOALS OF THE TENNIS TRAINING



Crespo et al. (2001)

TENNIS TRAINING SYSTEMS



- The coach or a player puts the ball in play
- Basket
- Rally for consistency → targets
- Less decision making
- Less closer to match situation

- Points → Attack / Defense
- Practice matches
- More decision making → conditions / rules
- Closer to the match situation

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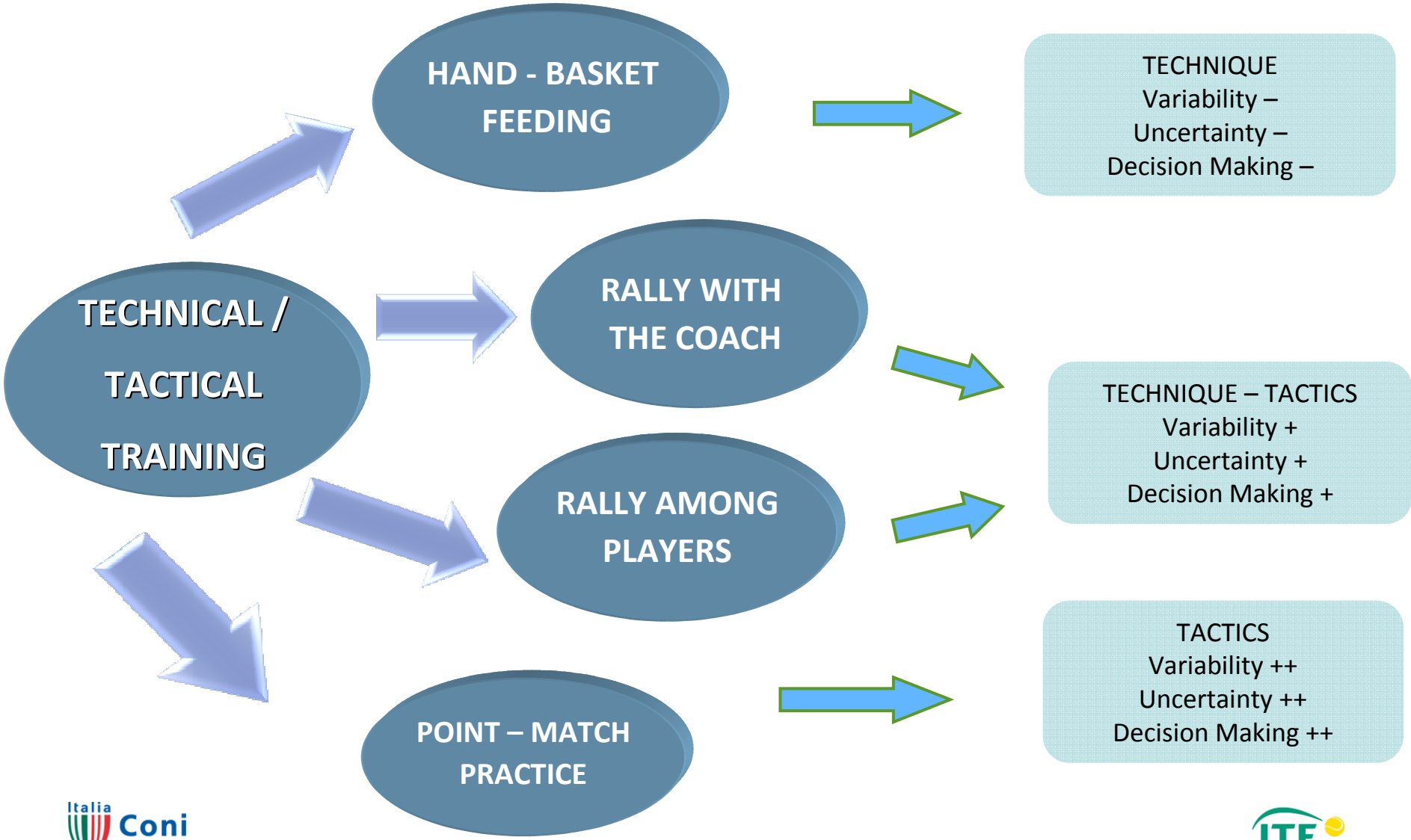
TENNIS TRAINING SYSTEMS



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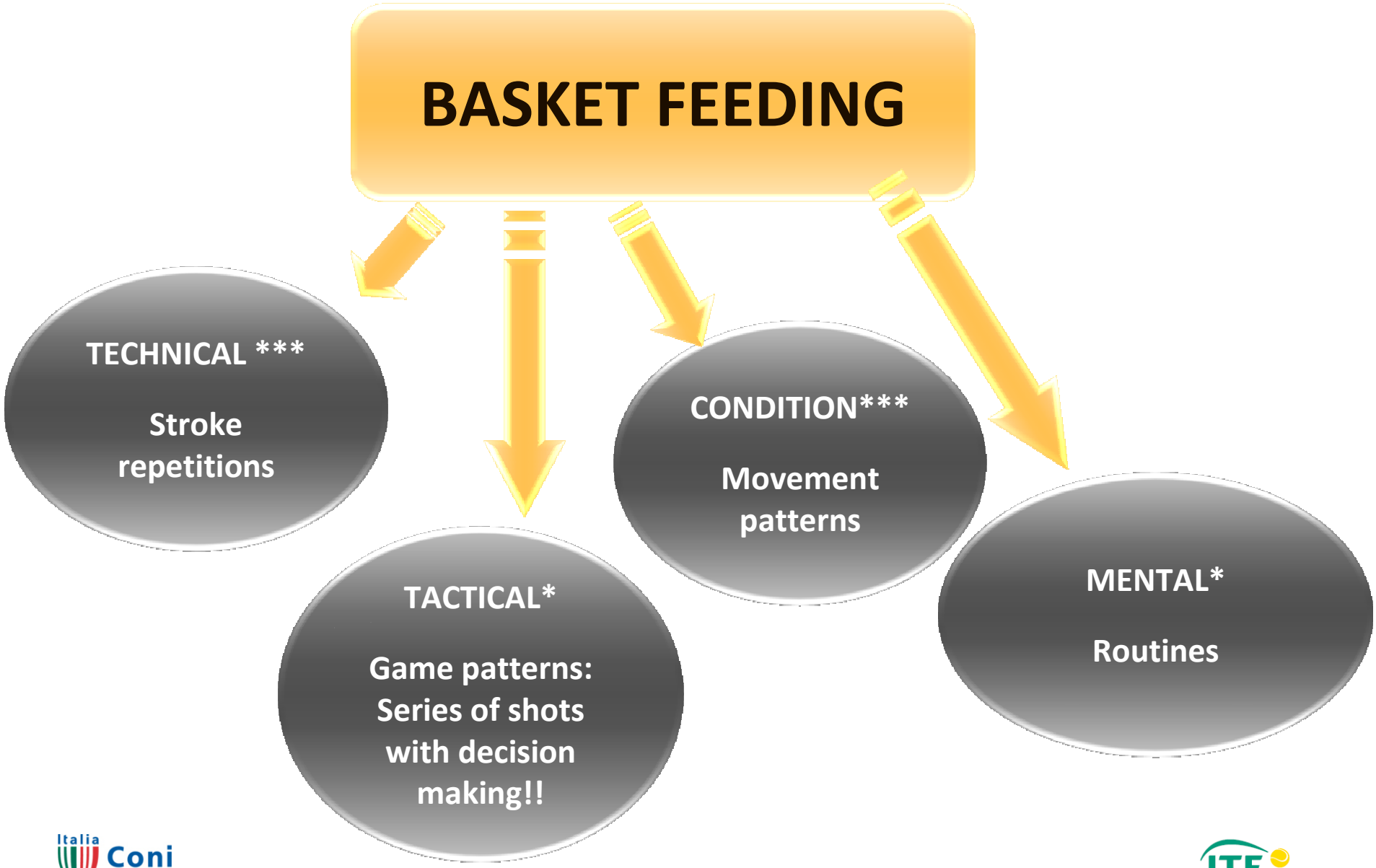
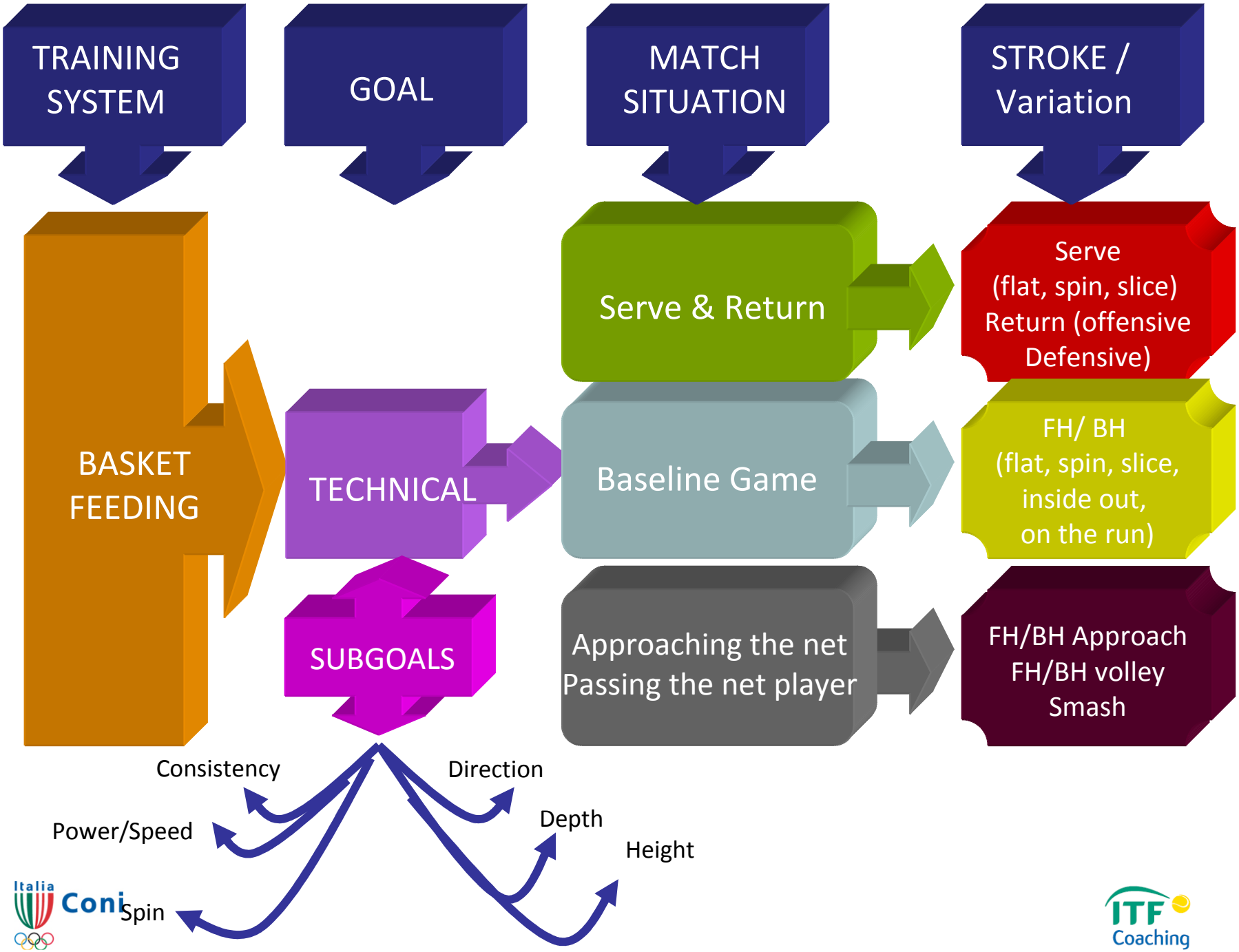

BASKET FEEDING
TECHNICAL ***
Stroke repetitions
TACTICAL*
Game patterns: Series of shots with decision making!!
CONDITION***
Movement patterns
MENTAL*
Routines


TRAINING SYSTEM
GOAL
MATCH SITUATION
STROKE / Variation
BASKET FEEDING
TECHNICAL
SUBGOALS
Serve & Return
Baseline Game
Approaching the net
Passing the net player
Serve
(flat, spin, slice)
Return (offensive
Defensive)
FH/ BH
(flat, spin, slice,
inside out,
on the run)
FH/BH Approach
FH/BH volley
Smash
Consistency
Direction
Power/Speed
Depth
Height
Spin

TRADITIONAL TEACHING METHODOLOGY

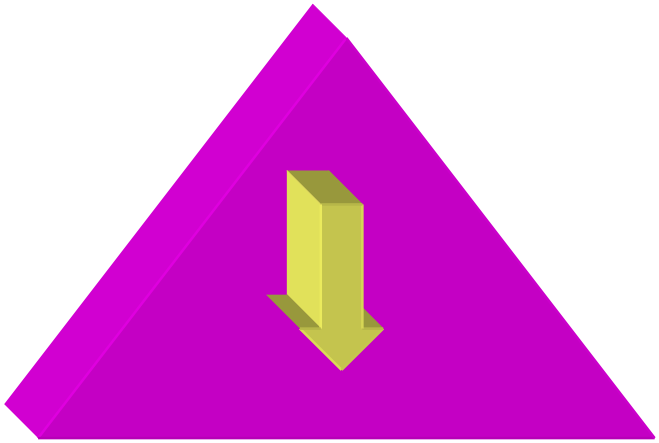
TECHNIQUE

TACTICS

PLAYING THE GAME

- Technique Is the priority
- Tactics are taught when the player was able to master the technique
- Matches are played when players were able to rally consistently

CLOSED SITUATION



USE ONLY OF ANALYTIC METHODS FOR ALL PLAYERS

OPEN SITUATION

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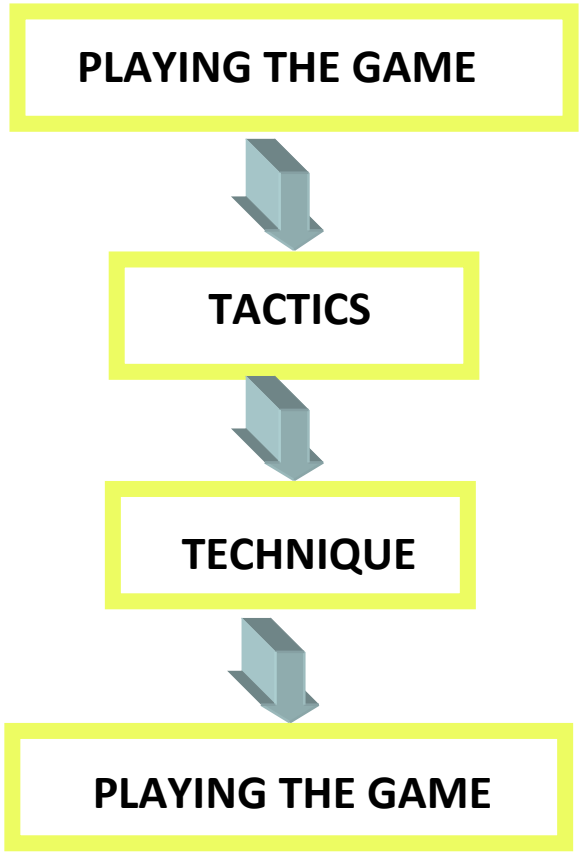
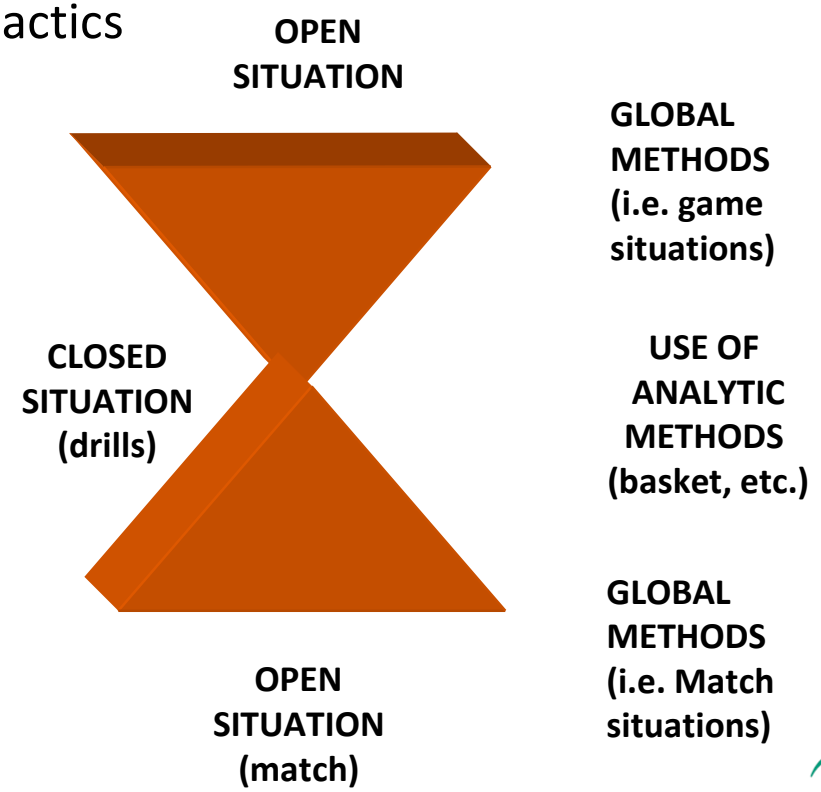
MODERN TEACHING METHODOLOGY



- The priority is THE GAME (GBA)
- Tactics should be understood (WHAT)
- Technique should be mastered (HOW)
- Matches are the basis of training
- Technique is taught to better implement tactics



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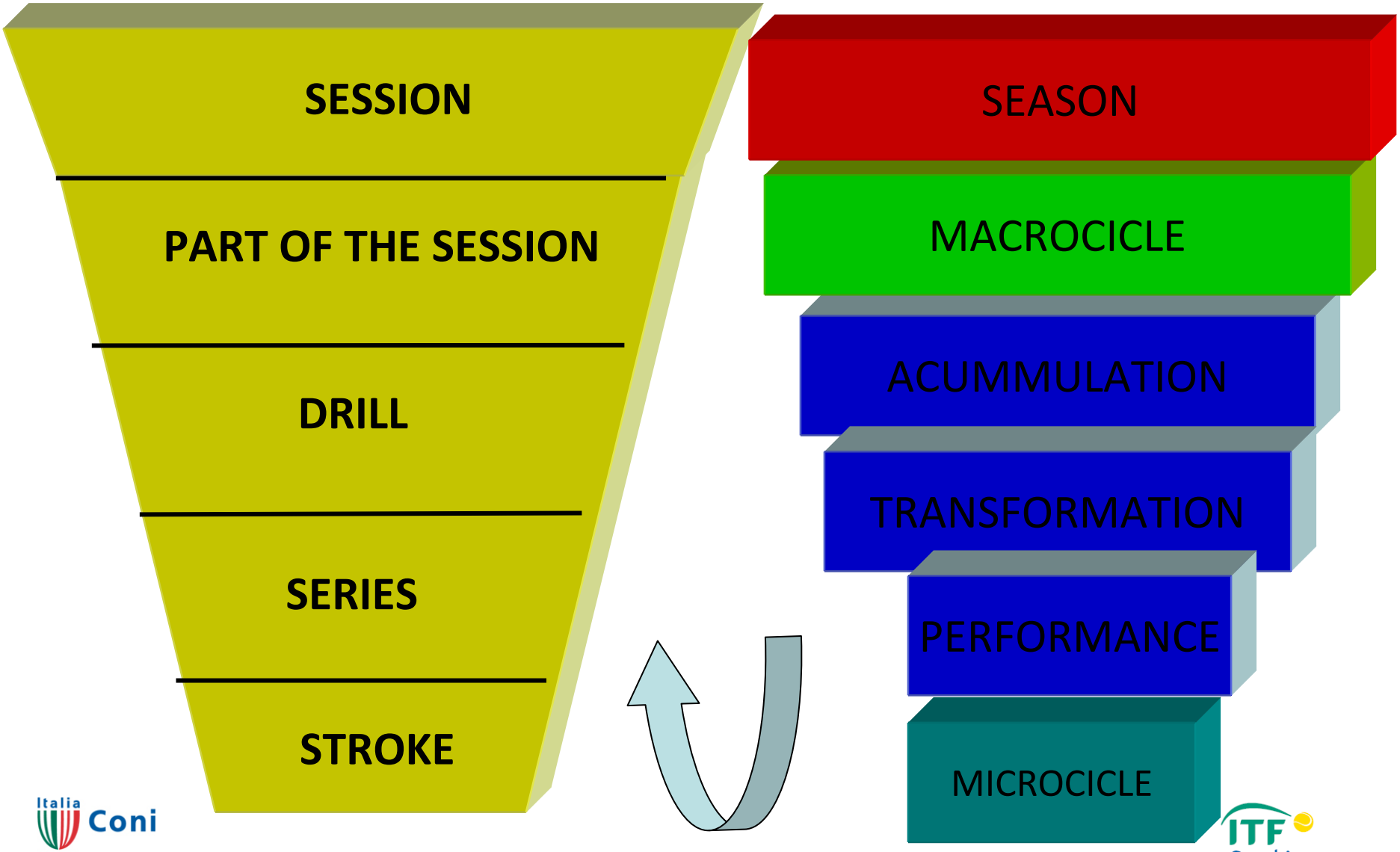
III. FUNDAMENTALS OF PERIODISATION



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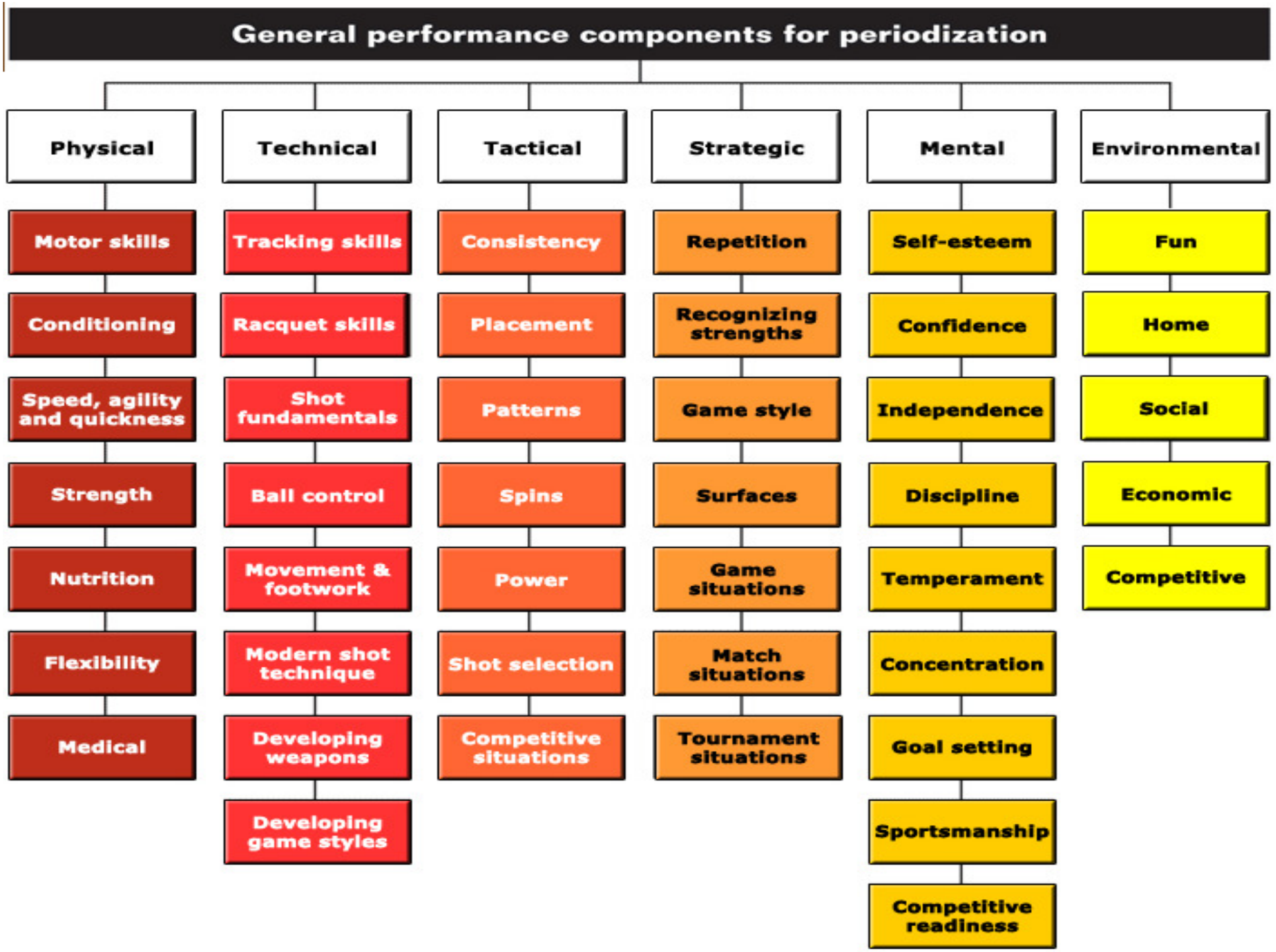
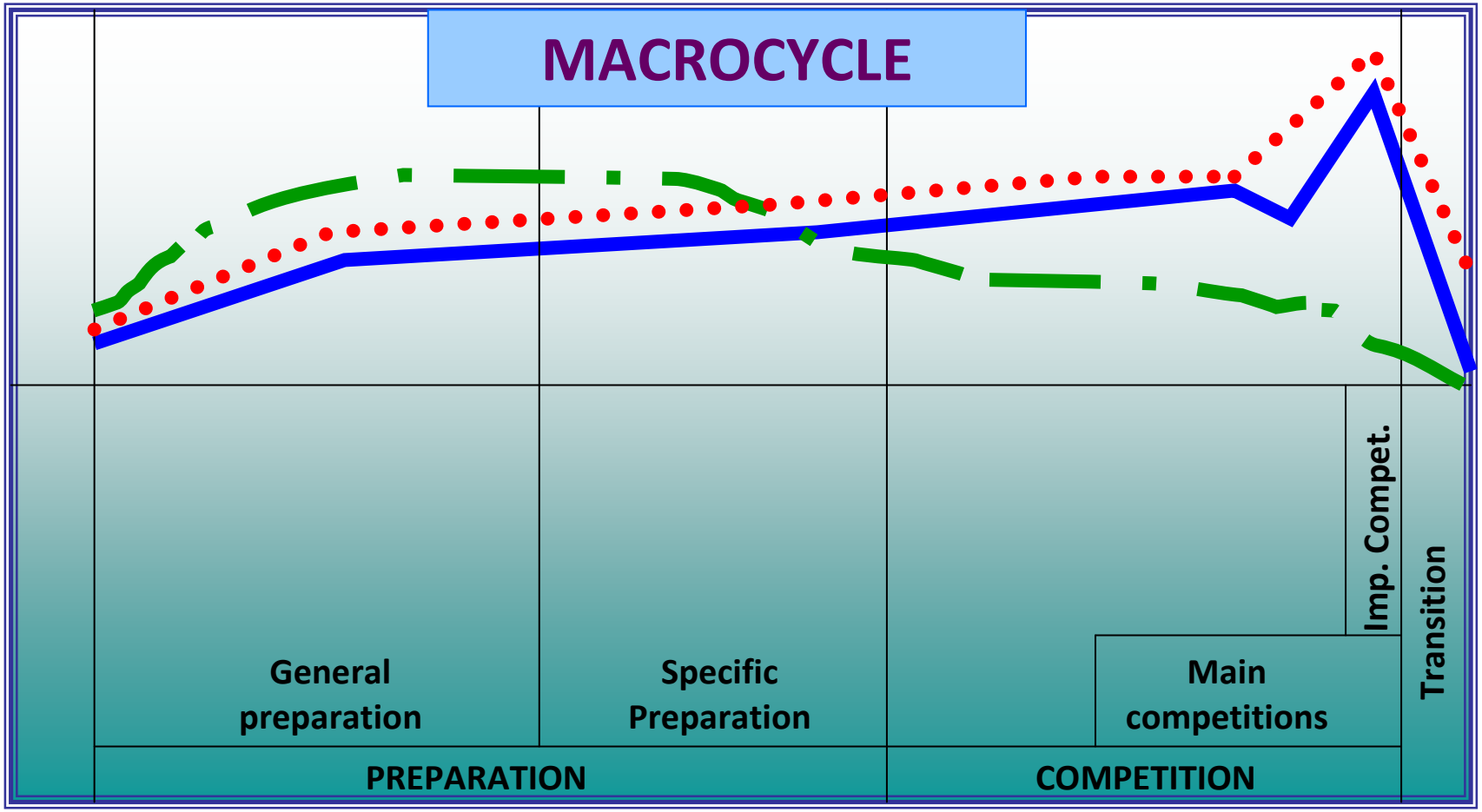

General performance components for periodization
Physical
Motor skills
Conditioning
Speed, agility and quickness
Strength
Nutrition
Flexibility
Medical
Technical
Tracking skills
Racquet skills
Shot fundamentals
Ball control
Movement & footwork
Modern shot technique
Developing weapons
Developing game styles
Tactical
Consistency
Placement
Patterns
Spins
Power
Shot selection
Competitive situations
Strategic
Repetition
Recognizing strengths
Game style
Surfaces
Game situations
Match situations
Tournament situations
Mental
Self-esteem
Confidence
Independence
Discipline
Temperament
Concentration
Goal setting
Sportsmanship
Competitive readiness
Environmental
Fun
Home
Social
Economic
Competitive

CLASSIC PERIODISATION STRUCTURE



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Year: _____

Annual Plan

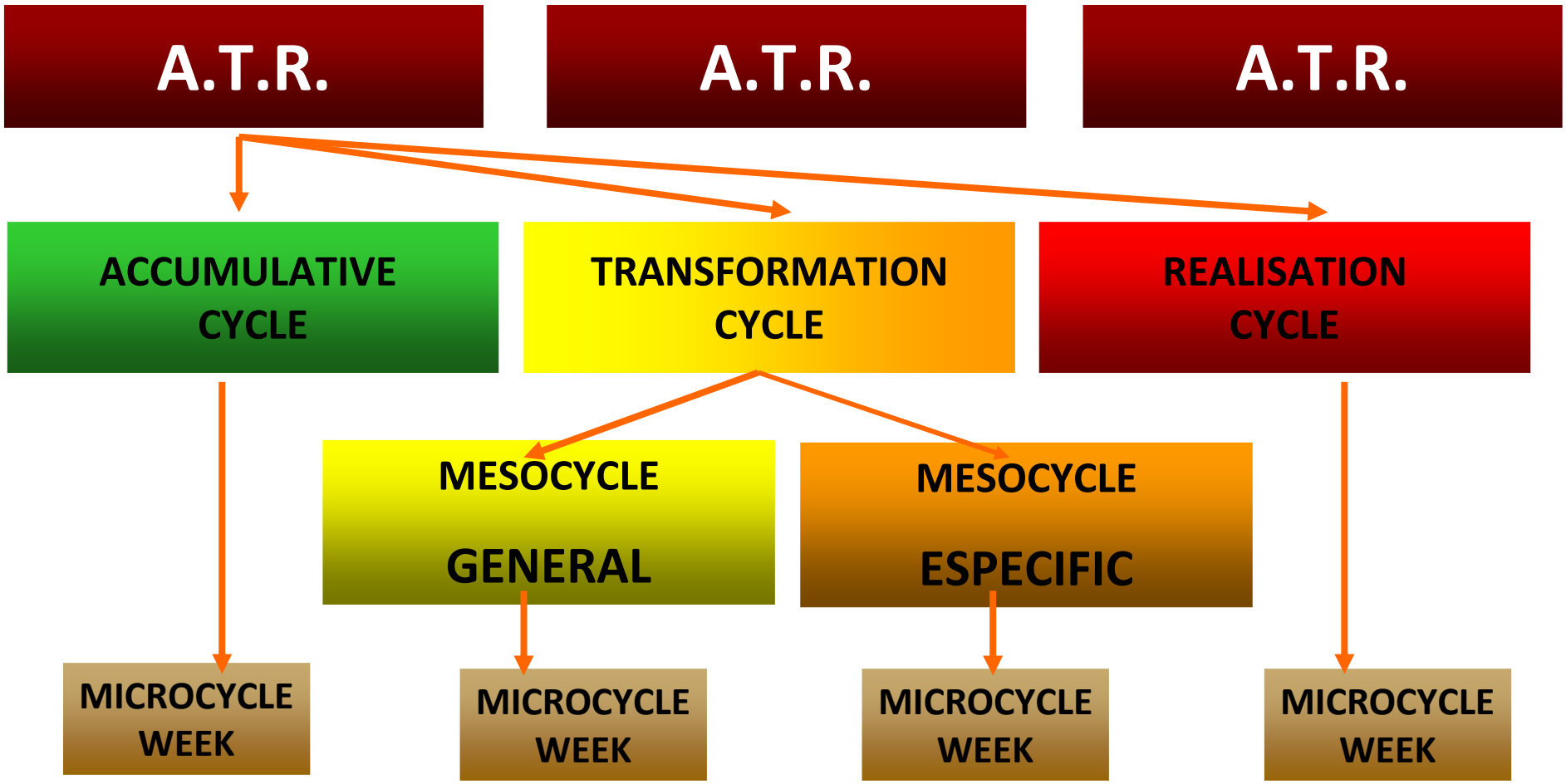
Player Name: _____
Coach Name: _____

Months		October					November				December				January					February			
Monday		1	8	15	22	29	5	12	19	26	5	12	19	26	2	9	16	23	30	7	14	21	28
Testing/Medical Screening															Test								
Non-tennis events: school, holidays												Exam		Hols.								Exam	
Tournament and Location													Christmas to.										
Peak Performance Index	5																						
	4												■								■	■	■
	3										■	■					■	■	■	■			
	2				■	■	■	■	■	■				■	■	■							
	1	■	■	■																			
Training Phase		General Preparation						Specific P.			Pre-competition			Com.	Tra	General Preparat.			Specific P.		Pre-competition		
Court Surface																							
Number of Matches																							
Physical	Endurance (A/AE) Flexibility Strength/Power Speed/Agility Co-ordination Cross Training	Develop aerobic base and adequate strength endurance qualities. Cross Training to play a significant role. Flexibility should be improved and coordination training can be a feature						Introduce more dynamic training efforts Improve co-ordination and flexibility			Maintain aerobic condition and continue to develop speed qualities. Specificity, intensity will be high, volume low			Maintenance	Recovery	Improvements in strength, flexibility, aerobic condition and co-ordination. Cross Trg. important			Training emphasis to be shifted to improve dynamicity and AE endurance		Speed, agility and power qualities to be developed. Different recovery modes to be included		
Tactical	Game Styles Game situations Shot Selection Doubles	Review of the matches played the previous year Tactical evaluation and assessment of the player						Tactical use of variety in GS			Practice of general and specific gamestyles			Tactical plan	Game Styles	Learning of basic game situations			Anticipation and percentage play		Shot selection, doubles formations and specific doubles strategies		
Technical	Basic Strokes Special Strokes Situational Strokes Movement/Footwork	Review and correction of basic, special and sintuational strokes						Learning of groundstrokes seldom used			Practice of winning strokes			Use of best shots	Net Games	Learning of net game seldom used Power in strokes			Power in ground strokes		Friendly singles and doubles matches		
Mental	Motivation Concentration Emotional Control Self-confidence	Motivation in practice Review of past results						Concentration routines on and off court			Self-confidence and emotional control drills			Routines	Emotional control	Motivation in practice			Concents routines on and off court		Self-conficence and emotional control drills		
Microcycle		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Months		October					November				December				January					February			

Plan de Entrenamiento Equipo Mayores Masculino 2006

Períodos	Preparatorio																		Competitivo												Tránsito	
Etapas	General												Especial						Pre-Competitiva										Competitiva			
Meses	Enero Febrero						Febrero Marzo						Marzo Abril Mayo						Mayo Junio						Junio Julio				Julio		Agosto	
Mesociclos	1						2						3						4						5				6		7	
Tipo	Básico Desarrollador						Estabilizador						Desarrollador Especial						Especial Competitivo						Precompetitivo				Competitivo		Tránsito	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Microciclos	2	9	16	23	30	6	13	20	26	6	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26	3	10	17	24	31	9
	7	14	21	28	4	11	18	25	4	12	18	26	2	9	16	23	30	7	14	21	28	4	11	18	25	2	9	16	23	30	8	13
Actividades																																
Test Físico	x						x						x												x							
Test téc-tác	x																	x			x	x		x			x					
Pmédicas	x		x				x						x												x							
C.Preparatoria					x	x				x	x	x			Olim. Nac.			x	x	x	x	x		Copa Davis		x	x		Juegos Centro americanos			
Comp. Fundamental																													X	X		
V. Prep. F. Gral	2,775'/ 1.080 rep						2,640'/ 1.080 rep						2280' / 1040 rep						1890' / 800 rep						1400' / 640 rep				660'			
Resistencia	345'						390'						570'						330'						240'				120'			
Fuerza	540'						540'						630'						180'						120'				60'			
Saltos Piométricos	1,080 rep						1080 rep						1040 rep						800 rep						640 rep							
Velocidad	270'						270'						540'						300'						320'				120'			
Flexibilidad	1 080'						1080'						1080'						1080'						720'				360'			
Dep. Auxiliar	540'						360'																									
Volumen T. PTT	7590'						7650'						8610'						6630'						5670'				1980'			
Profundidad y Cons.GF	1980'						1560'						1980'						600'						720'							
GF y aprox.	540'						360'						720'						180'						720'							
volea y remate	720'						720'						660'						360'						480'							
saque y devol.	1020'						870'						570'						270'						**510'**							
juego de doble	1260'						1710'						2160'						2160'						1260'				720'			
Dobles mixtos	270'						180'						360'												360'				540'			
Juegos de Singles	1800'						2250'						2160'						3060'						1620'				720'			
Volumen total	9465'						10290'						10890'						8520'						7070'				2640'			
Intensidad	3						3-4						4-5						5						5				5			
Volumen	5						5						5						4						4				4			

ATR PERIODISATION MODEL



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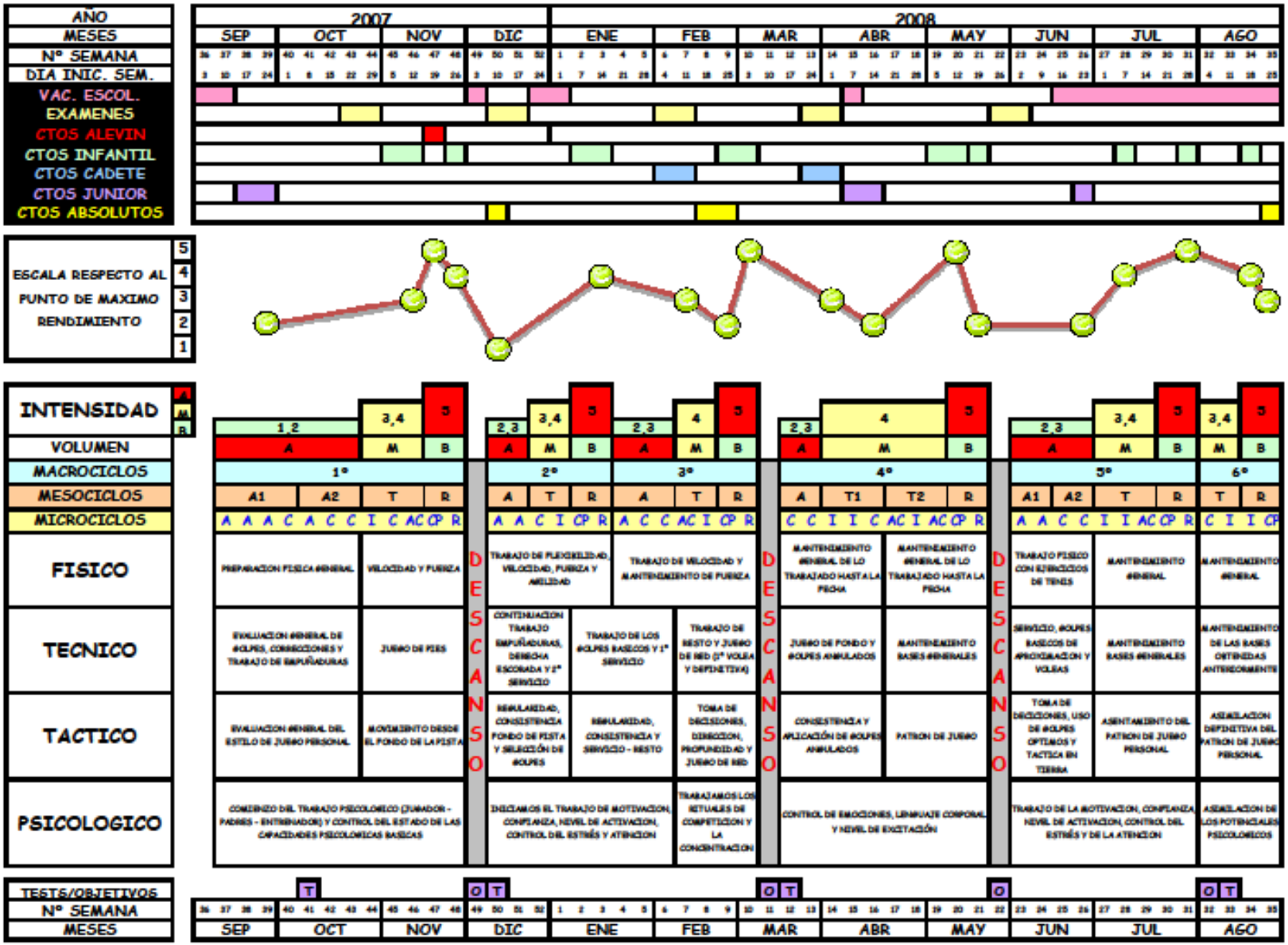
VOLUME AND INTENSITIES ACCORDING TO THE TRAINING CYCLE

ACCUMULA – GENERAL – ESPECIFIC – REALISAT.

	%VOL	INT	VOL	INT	VOL	INT	VOL	INT
PHYS WUP	8	-	8	-	8	-	8	-
TECH WUP	15	-	13	-	10	-	15	-
RALLY FIX	32	1-2	20	3-4	8	4-5	10	5
RALLY MOV	6	1-2	20	3-4	20	4-5	20	5
BASKET	20	1-2	20	3-4	10	5	5	5
SERV-RET	9	-	9	-	9	-	9	-
GAMES	10	-	10	-	7	-	12	-
MATCHES	0	-	0	-	28	-	21	-

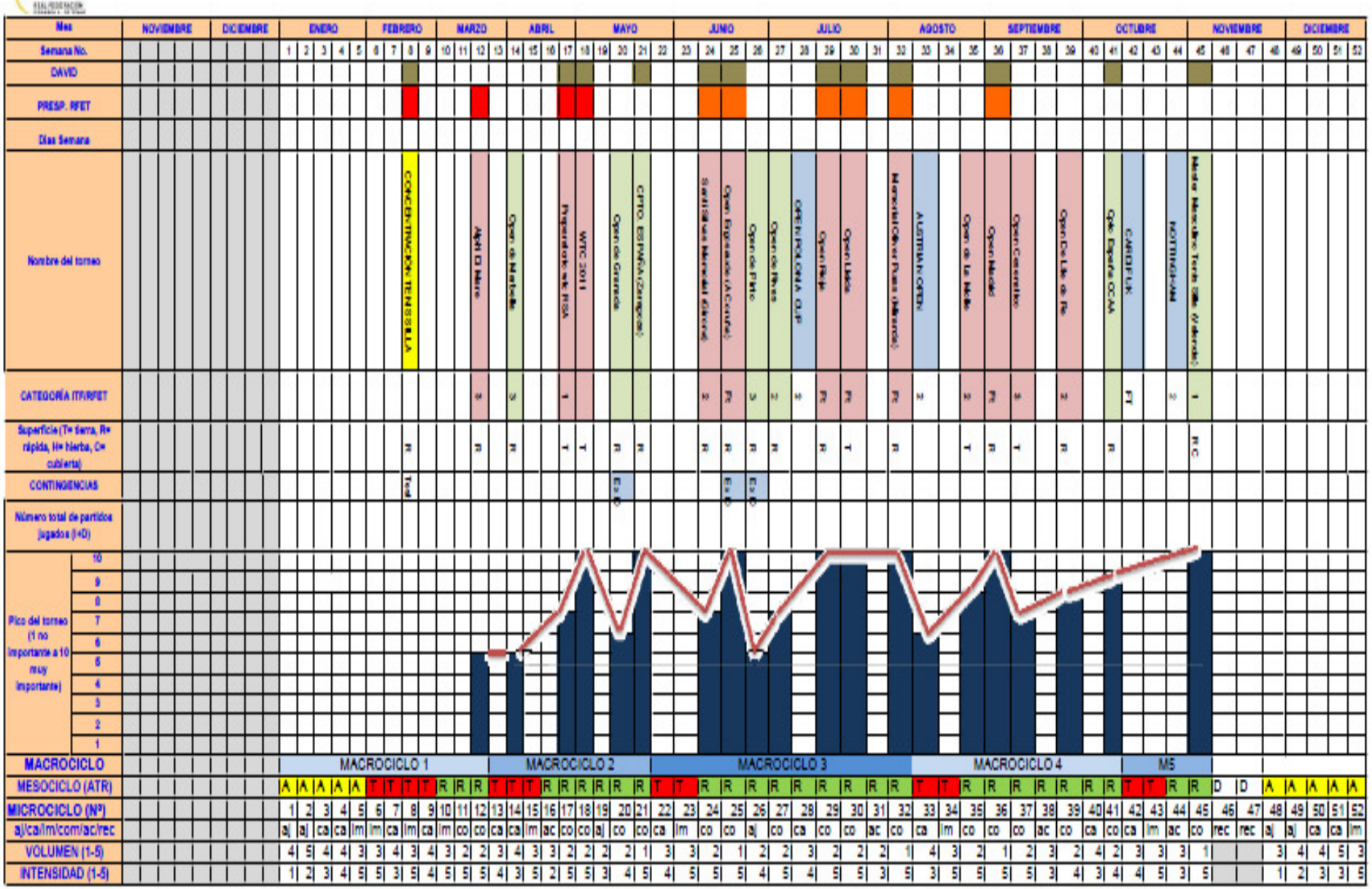
Porta (2008)



(Sanzol, A. 2010)

Nombre del Jugador:

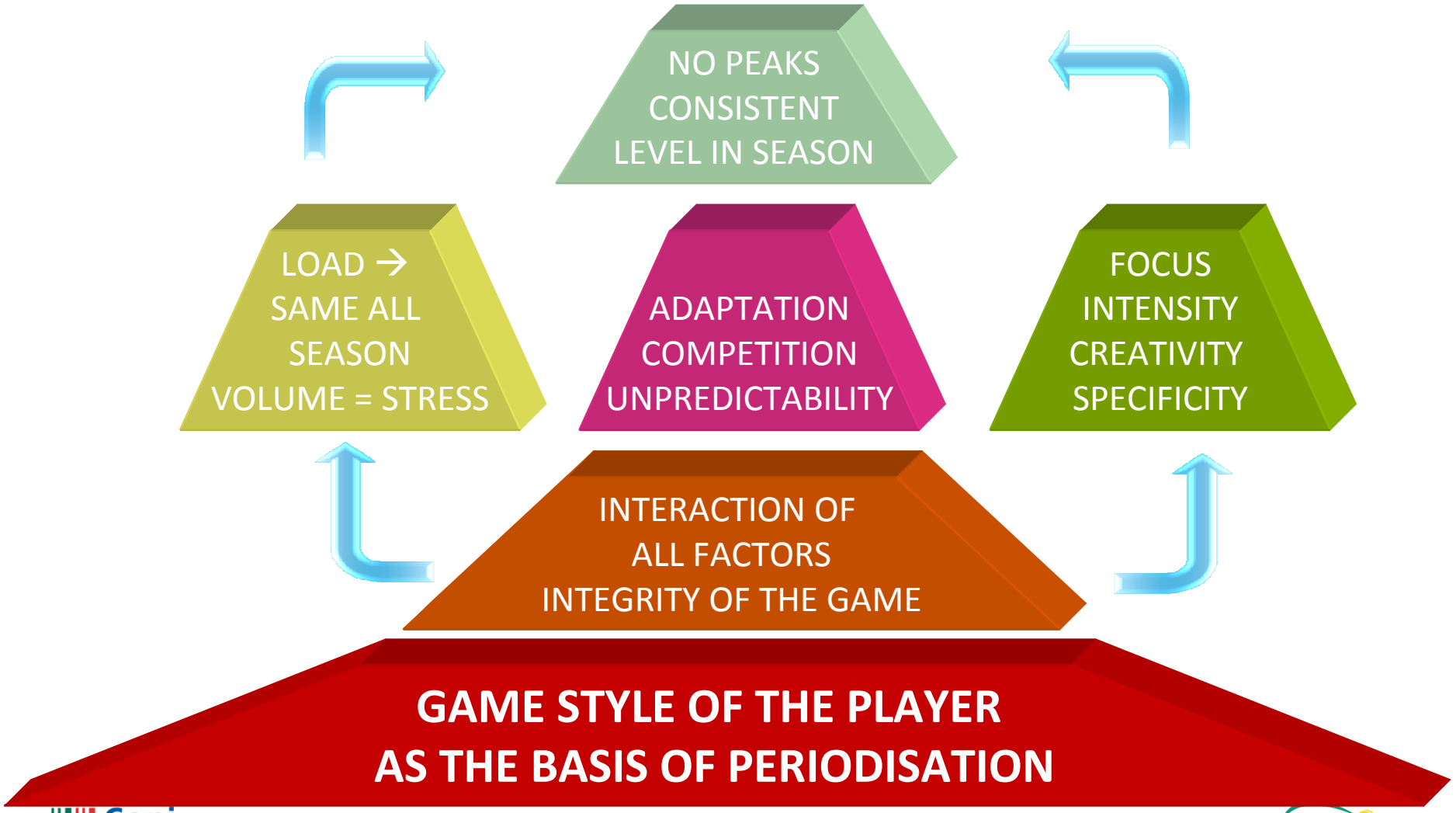
Plan Anual Año:



NAME AND FIRST NAME														from			OZ OPEN				to	INDIAN WELLS				
DATE	20/01	21/01	22/01	23/01	24/01	25/01	26/01	27/01	28/01	29/01	30/01	31/01	01/02	02/02	03/02	04/02	05/02	06/02	07/02	08/02	09/02	10/02	11/02	12/02		
SESSION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AVG	
TENNIS VOLUME 1,2,3	3	3	3	2	2	2		3	3	3	2	2		1	1	2	2	2	3	3	3	2	1		2,3	
TENNIS INTENSITY 1,2,3	2	2	1	1	3	3		2	2	1	3	3		2	2	2	3	1	1	2	2	3	3		2,1	
FITNESS VOLUME 1,2,3																									#¡DIV/0!	
FITNESS INTENSITY 1,2,3																									#¡DIV/0!	
SESSION	8	8	8	7	8	9		5	7	7	7	7		8	8	7	3	7	9	9	9	8	9		7,5	
PLAYER FIT SCORE 1-10	5	5	4	3	5	6		7	7	7	8	4		9	6	8	9	6	7	8	9	5	8		6,5	
COACH TENNIS SCORE 1-10																									#¡DIV/0!	
COACH FIT SCORE 1-10																									#¡DIV/0!	
SPECIFIC GOALS																									CNT	MIN
TACTICAL (play smart)																									45	1025
							x						x													
FH BH stay close						20	x	30	30	30	30	30	x	30	30	30	30	30	30	30	30	30	30	30	17	500
FH pace same down the line shots	30				20		x		30				x												3	80
FH 80 /100		20					x			20			x	20											3	60
FH higher contact in the court (dropping too low)							x						x			15		15		15		15			4	60
BH same pace at higher pace		20		20		20	x		20		20		x		20		20		20		20				9	180
S variation instead of pace (introduce slice)						10	x	10		15		15	x	15		20		20		20		20			9	145
TECHNICAL (tool to achieve tactics)							x																		36	600
FH open hip (load) without stepping back	30	10		10		10	x		10		10		x												6	80
FH keep rackethead bit higher up		10		10			x		10		10		x												4	40
FH fire elbow first	15	15	15	15			x						x												4	60
FH 80/100 same shape	20						x						x	20		20		20		20		20			6	120
BH racket first then hip		15		15		15	x	15					x												4	60
S foot position in relation to power and control ?	20	20	20	20	20		x		20		20		x		20		20		20		20		20		12	240
GEN technique consistence different surfaces ??							x						x												0	0
PHYSICAL (is your body ready ??							x																		47	505
							x						x													
develop on the road programme							x						x												0	0
pulskluk for endurance and interval training			45			45	x			45			x	30			30		15		15				7	225
FH rigth side lunge stronger for wide fh	5		5		5		x	5		5		5	x	5		5									8	40
S AND FH stronger upperbody	15		15		15		x	15		15		15	x	15		15									8	120
S shoulder stabisliation ok (every day !!!!)	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	24	120
MENTALLY (how to be on the court)							x																		0	0
hewitt attitude (champion of the locker room)							x						x												0	0
i do not miss !							x						x												0	0

Maes (2011)

TACTICAL PERIODISATION APPLIED TO TENNIS



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IV. CONCLUSIONS

COMPLEX – INTEGRATED – COMBINED

- Inter/Multi disciplinary
- Work all contents
- Technically based training is obsolete
- Variability
- Adaptation
- Control of training load (internal & external)
- Work : rest ratios
- Driven by competition and results

INFLUENCE OF RESEARCH

- Crucial to be updated
- Review the new trends from research
- Adapt them to daily practice
- Tennis – specific results
- Need for more research → lots unknown
- Technology more affordable and user friendly

IMPORTANCE OF EXPERIENCE

- Players and top coaches views
- Intuition is crucial
- Relevance of tactics and game understanding
- Creativity
- Vision of the future of the game

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