

# KEY VALUES FOR JUNIOR TRAINING

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August 2022

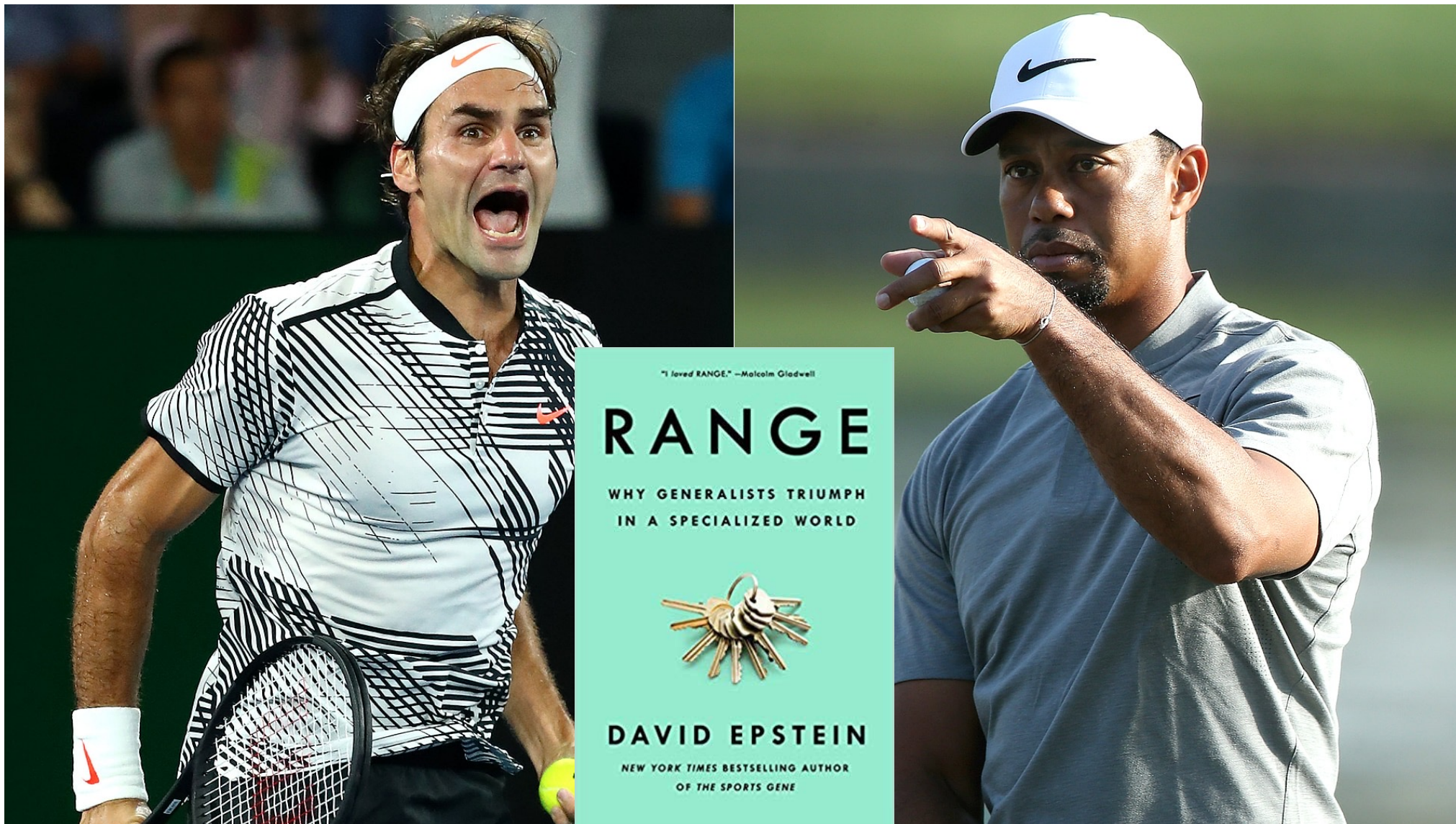


TALENT DEVELOPMENT  
SKILL- AND TECHNIQUE  
DEVELOPMENT  
(COACH) OBSERVATIONS









"I loved RANGE." —Malcolm Gladwell

# RANGE

WHY GENERALISTS TRIUMPH  
IN A SPECIALIZED WORLD

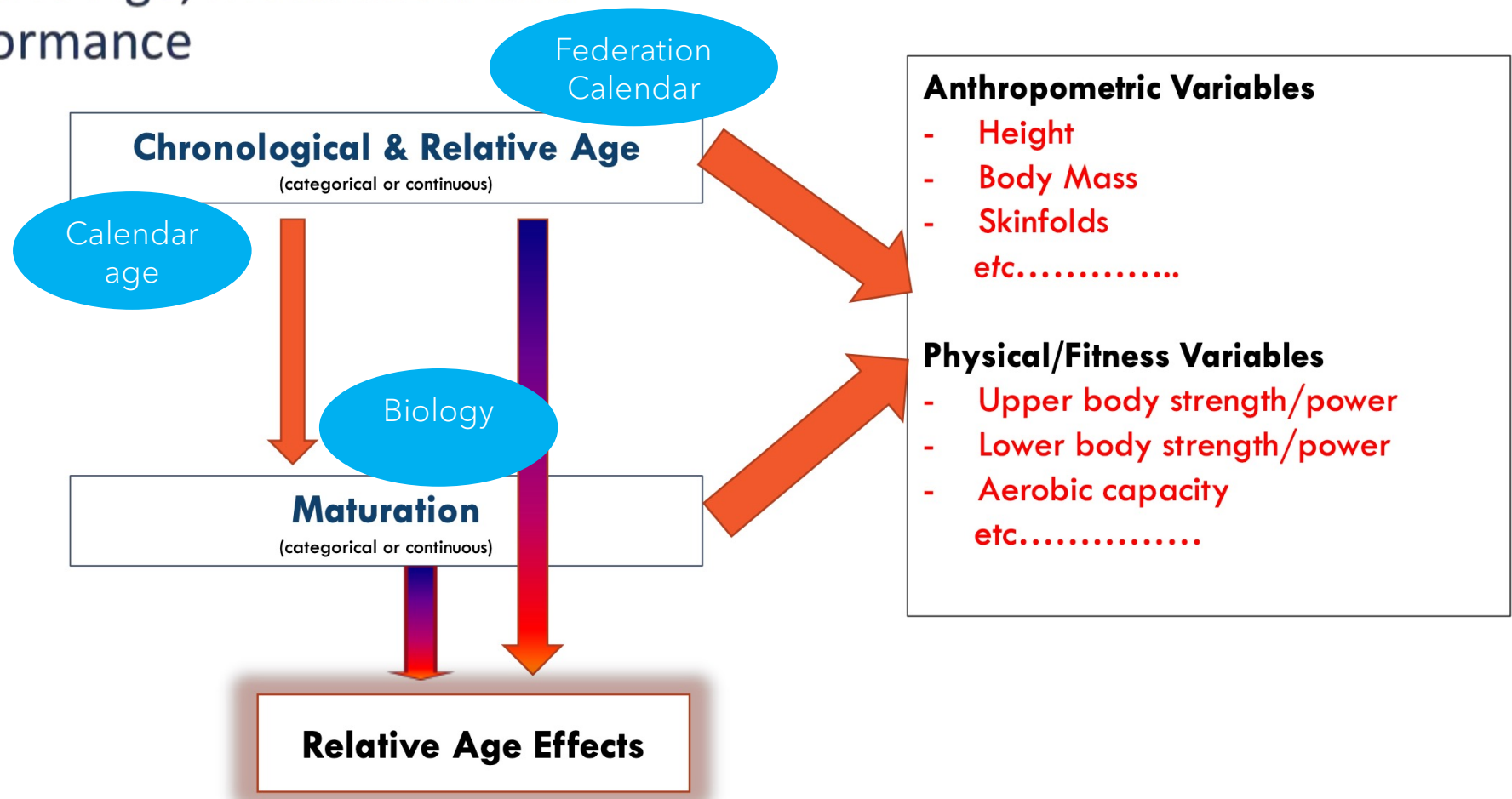


DAVID EPSTEIN

NEW YORK TIMES BESTSELLING AUTHOR  
OF THE SPORTS GENE



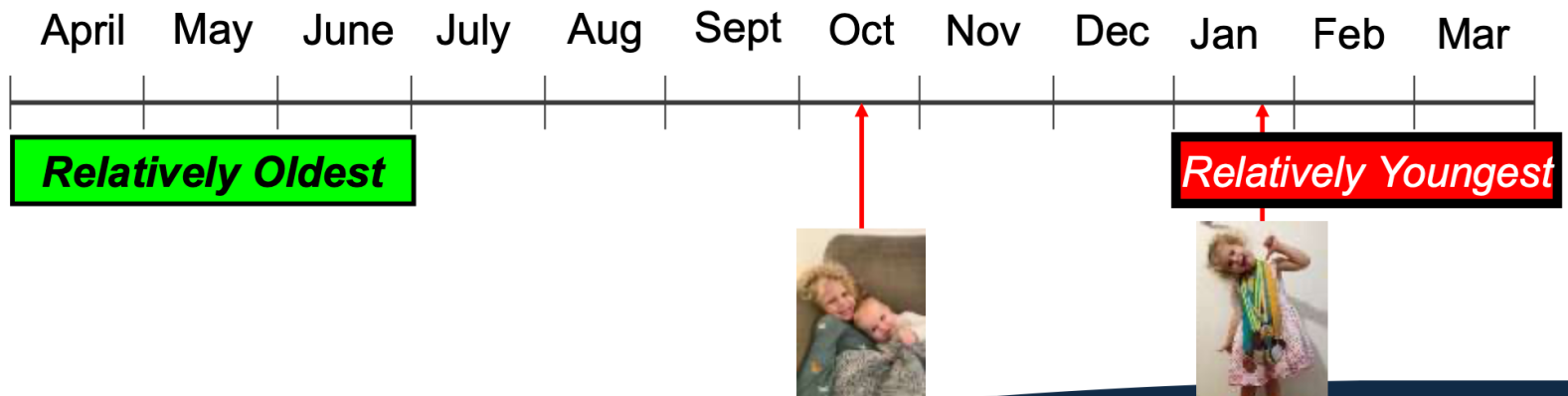
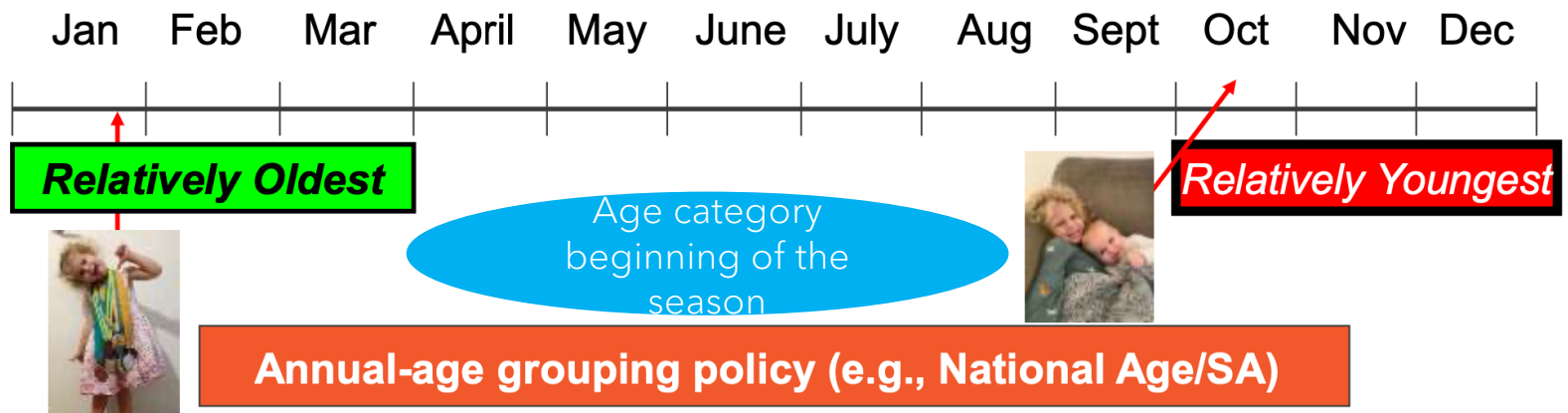
# Relative Age, Maturation and Performance



## What are Relative Age Effects (RAEs)?

Age category  
beginning of the year

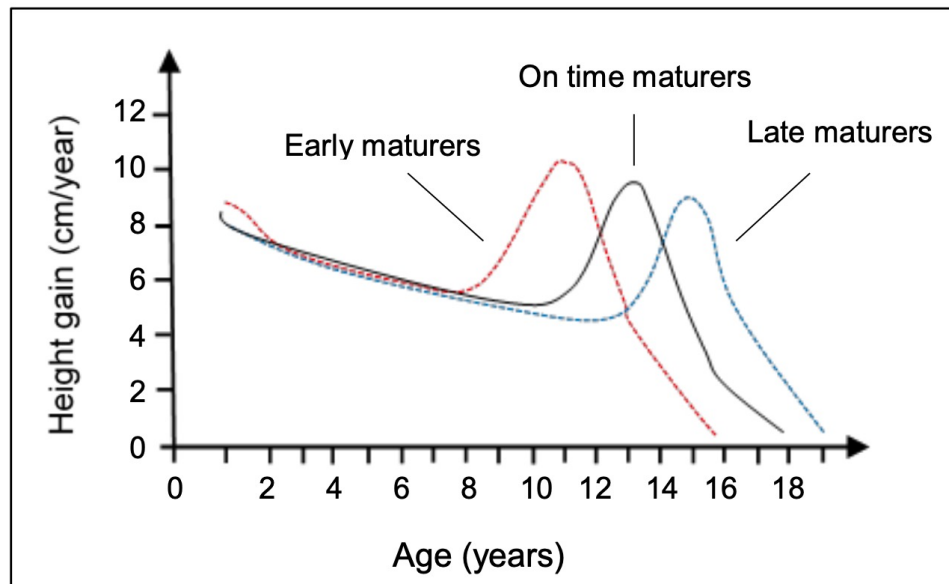
**Annual-age grouping policy (e.g., School sport)**





## Maturity as estimated by peak height velocity (PHV)

Overview of 'early', 'average' and 'late maturity' status as reflected by accumulated height (cm per year) according to age in boys.



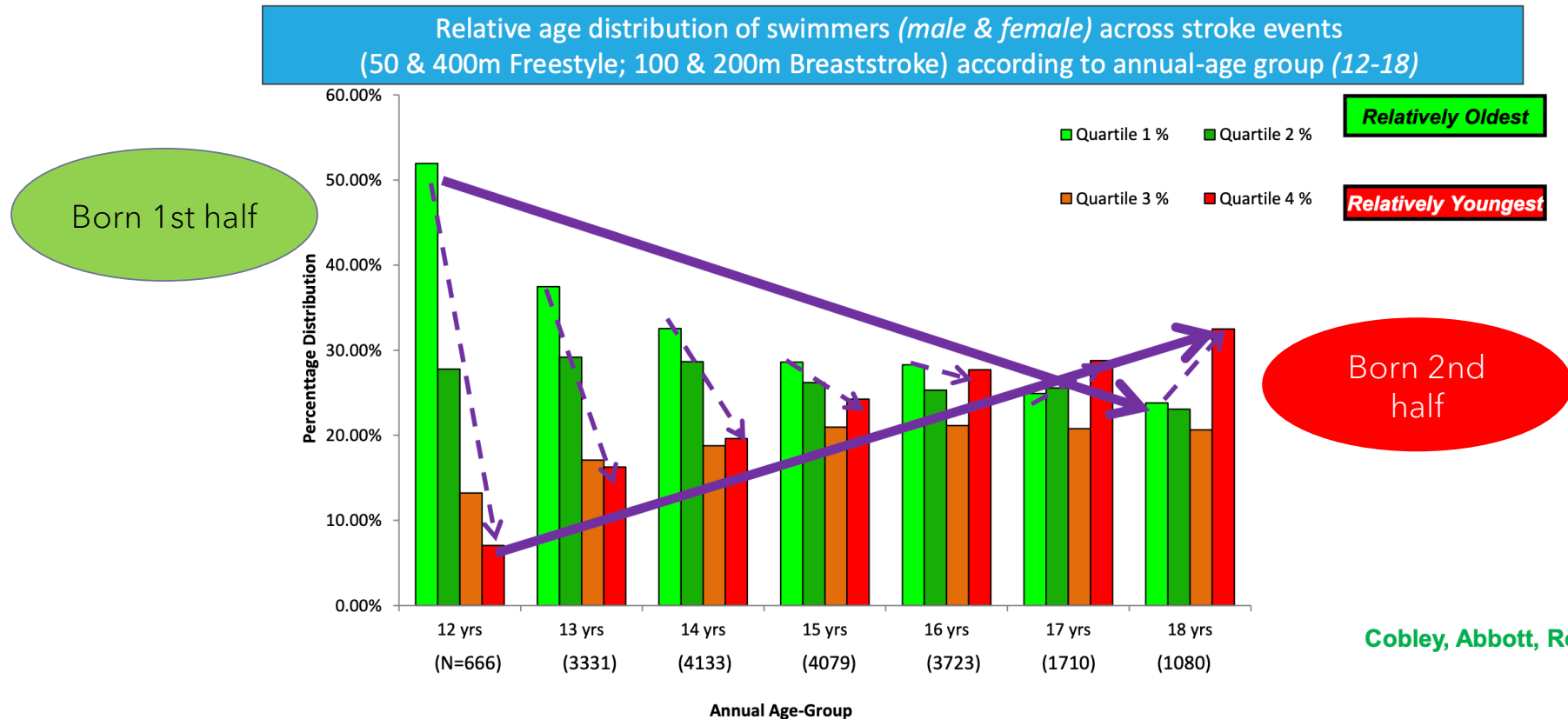
Who is the future "champion"?

What does it mean to be "champion" at age 13?



NSW 13yrs State Squad

## RAEs in Australian junior/youth national age swimming championships (2000-2014)





Science ... not  
opinions!

Key questions:

1. When or when not to train what or different?
2. What is the optimal development phase for which qualities?

Awareness of the impact of growth and bioperformance of 'growth' and (biological) age on development and performance.

Testing to know where the athlete is ... early, on time, late. Talent identification (overestimation and underestimation))

Increase knowledge and understanding. Coaches, athletes and parents.

Figure 1.1: Illustration of normative accumulated height (cm) according to age and sex.

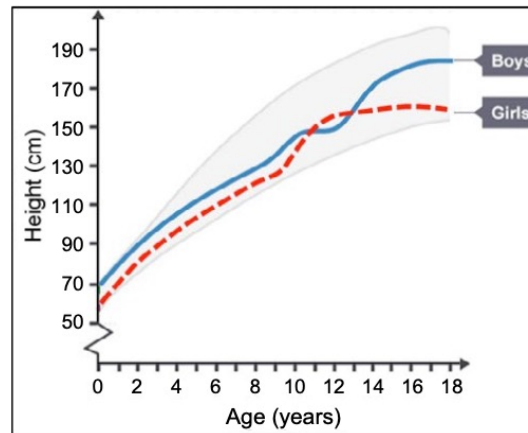
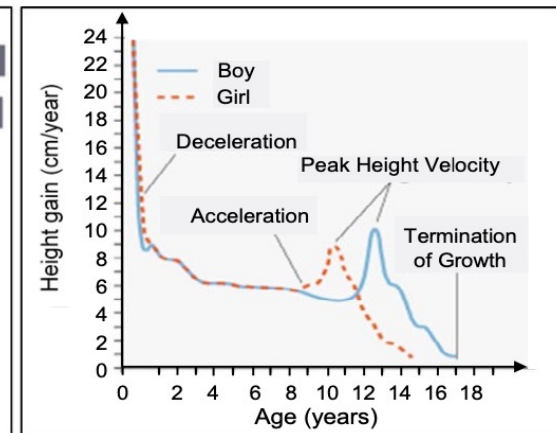


Figure 1.2: Overview of normative growth as shown by accumulated height (cm per year) according to age and sex.



**Table 8.1: A summary of key action recommendations based on resource content.**

No:	Action Recommendations
1.	<p>(a) Coaches/parents should measure growth and maturation status in swimmers (girls: 9.5-16.0 years; boys: 11.5-16+ years).</p> <p>(b) Coaches/parents should measure maturity status regularly (e.g., x3-4/year), with more frequency during growth spurts or around peak-height velocity.</p> <p>(c) Coaches/parent/swimmers should track maturity status and performance development together longitudinally over time.</p>
2.	<p>(a) Coaches should monitor training and competition loads as well as injury occurrence during ages associated with growth and maturation.</p> <p>(b) Coaches/parents should monitor fatigue, psychological-well-being, sleep disturbance appetite and signs of relative energy deficiency during growth and maturation periods.</p>
3.	<p>(a) Coaches should screen for shoulder, knee and core strength as well as flexibility.</p> <p>(b) Coaches should consider training load tempering in accordance with strength and flexibility screening, particularly around peak-growth periods to reduce injury risk.</p>
4.	<p>(a) Coaches should generally implement 'lighter' body mass-load dry-land strength and conditioning activities pre and during peak growth. The emphasis of dry-land training at this stage should be on technical skill development and injury prevention.</p> <p>(b) Coaches should target 'higher-load' progressive strength and conditioning (e.g., resistance training), post-peak height growth in 'dry-land' and 'in-water' contexts. Emphasis is on strength development with solid technical skill grounding (e.g., dry-land complex lifting in resistance training).</p>
5.	<p>Coaches should seek to ensure educational nutritional resources are available to parents/swimmers involved in intensive training/competition coinciding with growth and maturation periods.</p>
6.	<p>(a) Coaches should, during pre and during maturation stages, encourage wide-ranging exploratory skill/technique development along with stroke and activity sampling. Coaches should establish wide-ranging, variable but controllable, movement patterns in swimming technique.</p> <p>(b) Coaches should, only post-peak height velocity, consider more specialised stroke-specific training working toward more specific techniques for competitive performance.</p>
7.	<p>Coaches should focus on learning or re-affirming 'fundamental biomechanical technique' across all stages of maturation status. Anatomical and 'physiological changes due to growth and maturation necessitate periodic checks to (re)-affirm fundamental biomechanical principles in stroke efficiency.</p>
8.	<p>Coaches should, during ages associated with maturation variability, only evaluate individual performance relative to others when maturation and relative age status is considered or factored into the evaluation process.</p>



Measuring = knowing (where is the athlete in the development)

Monitoring development, possible "problems" and training (load)

Strength and agility, "less and/or different" around growth spurt

Focus on technique and injury prevention around growth spurt.  
After growth spurt, the load and complexity on land and in the water increases, progressively of course.

Nutritional advice on "growth", training and competitions.

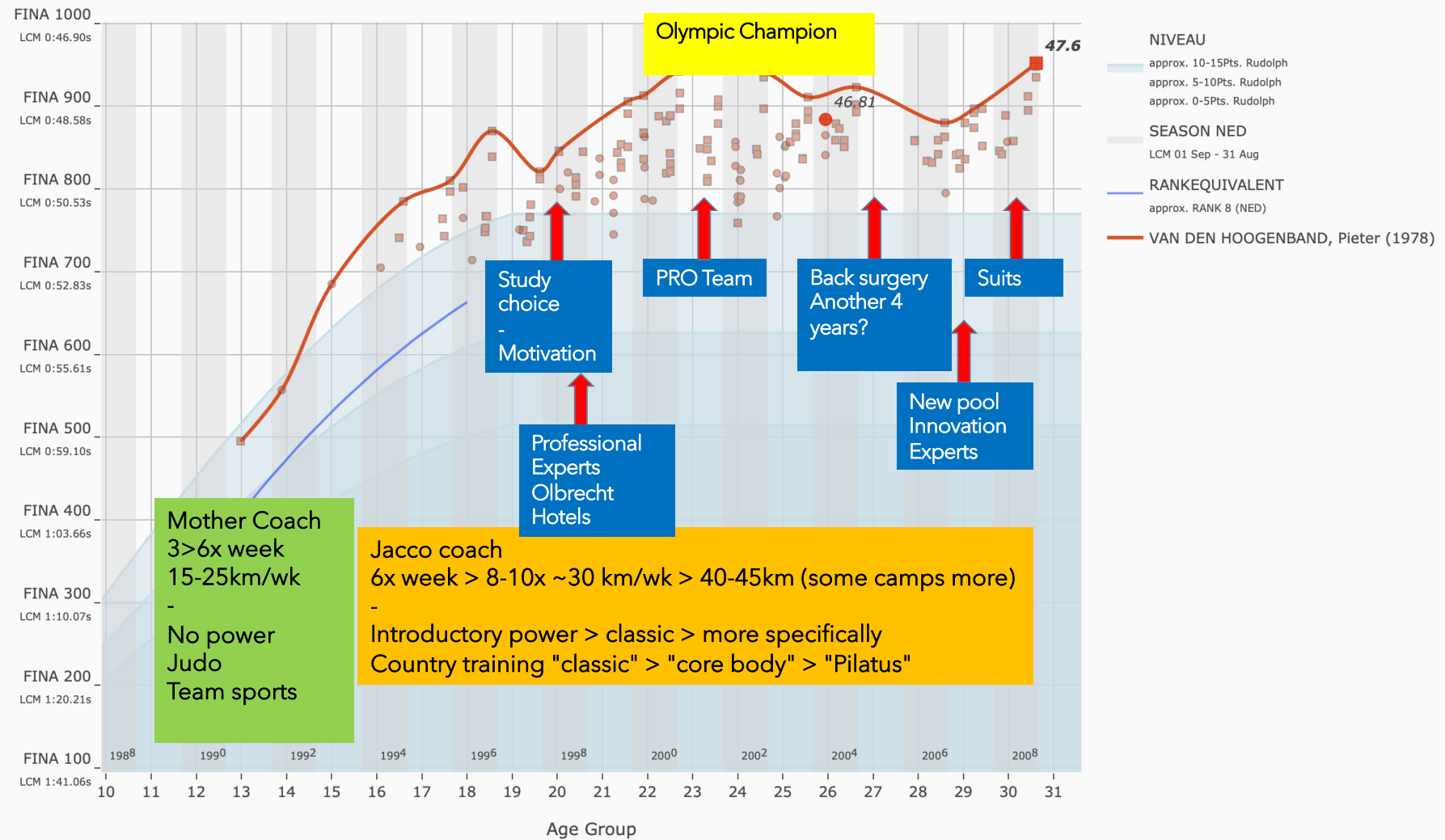
Facilitate range of motion before and during the growth spurt.

Only after previous stages increase specialization.

Technique and efficiency in all phases!

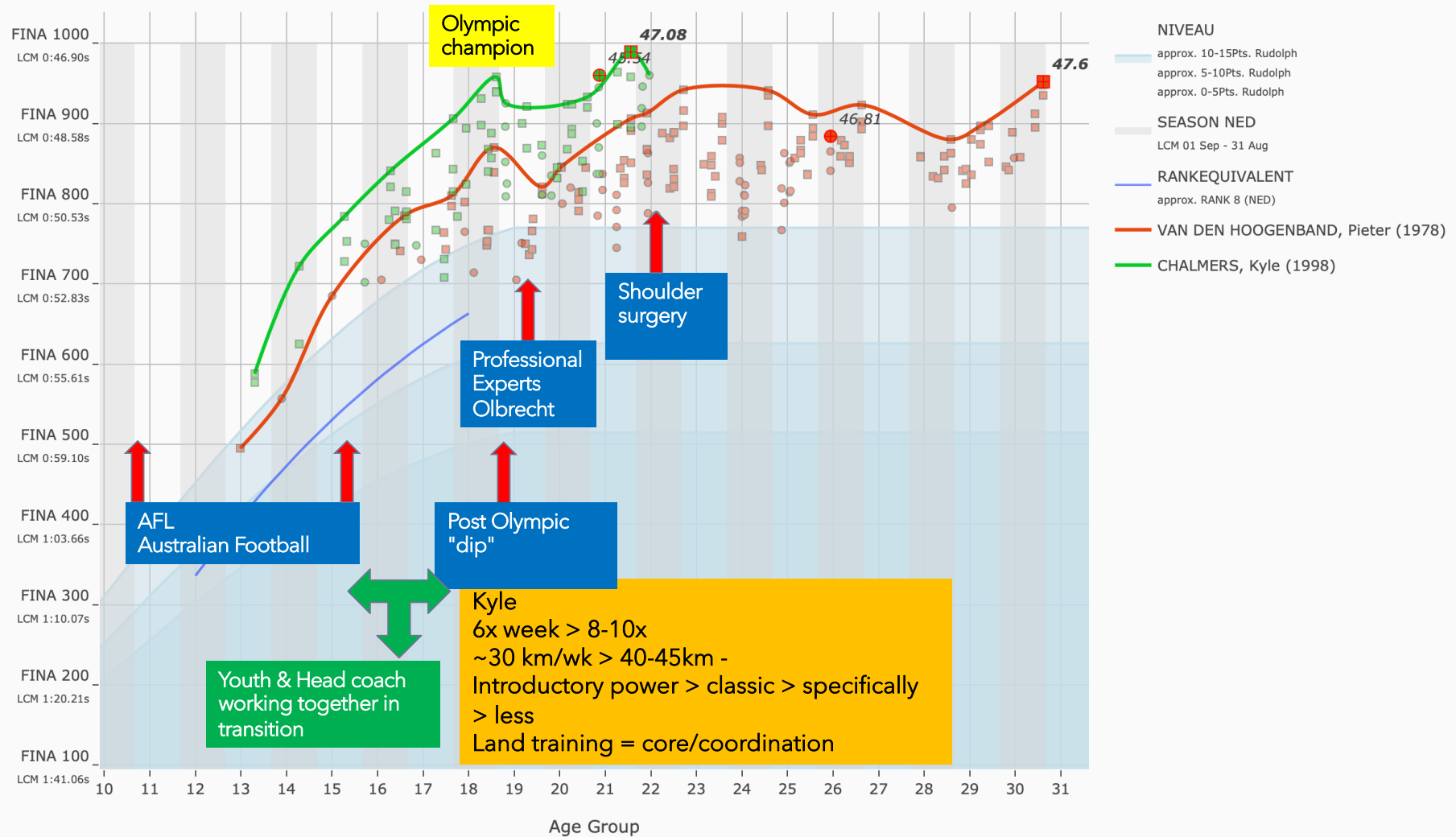
Performance should be seen in the context of biological age.

# 100m Freestyle - Course ALL (25m and 50m)

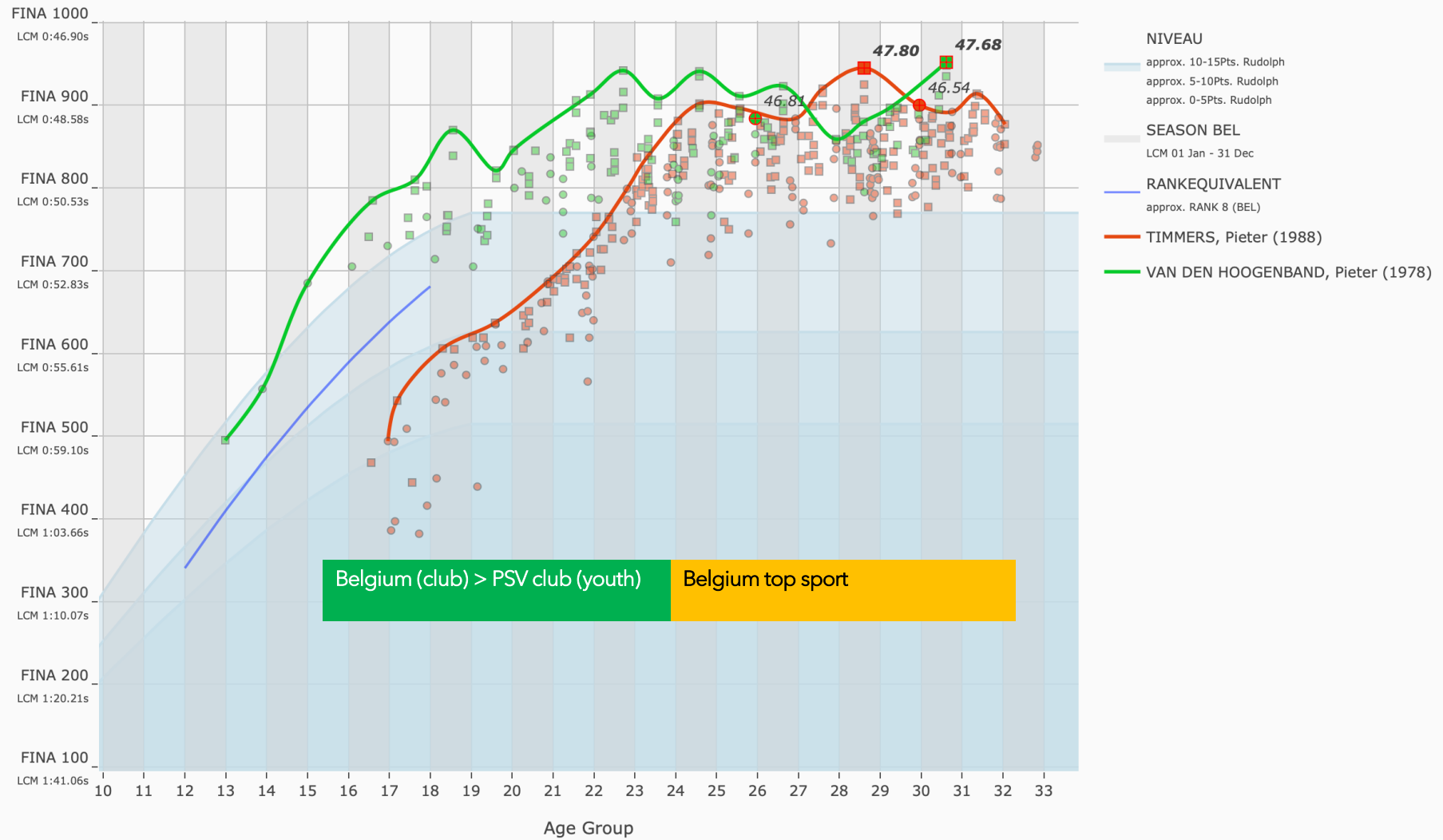




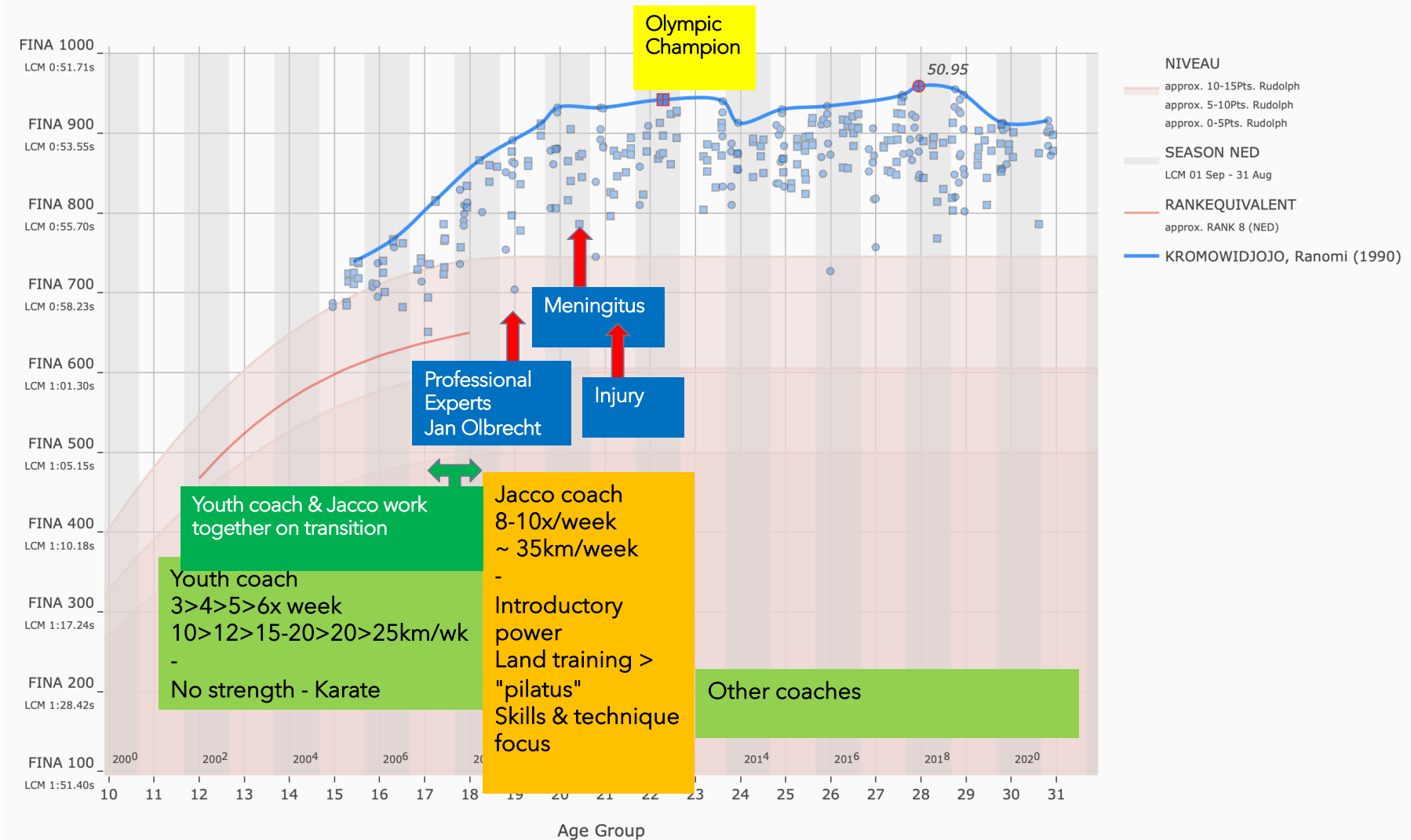
# 100m Freestyle - Course ALL (25m and 50m)



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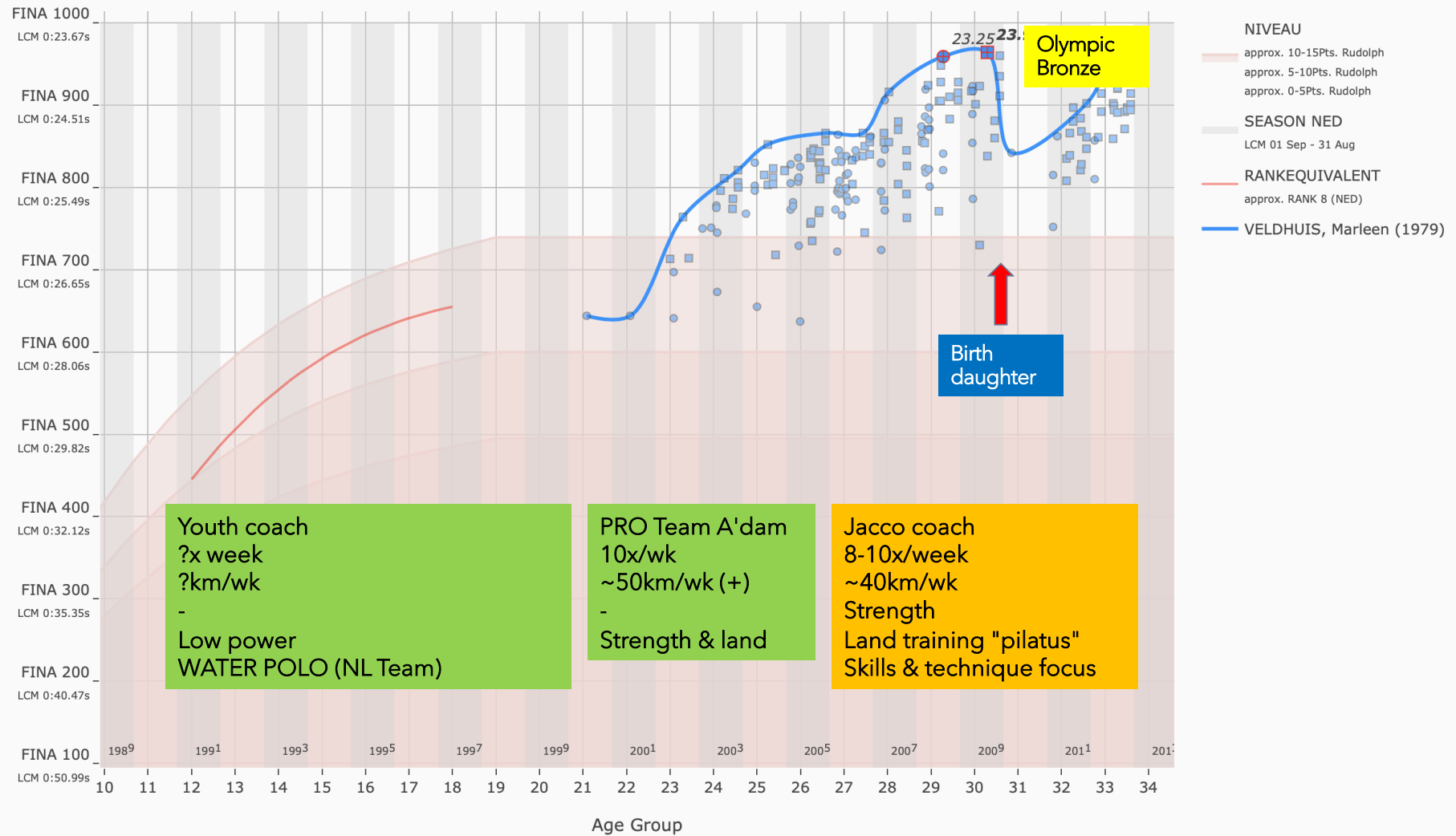


# 100m Freestyle - Course ALL (25m and 50m)





## 50m Freestyle - Course ALL (25m and 50m)



**“WE SPECIALIZE – OR WORK TOO MUCH/HARD  
– TOO EARLY RATHER THAN TOO LATE.”**



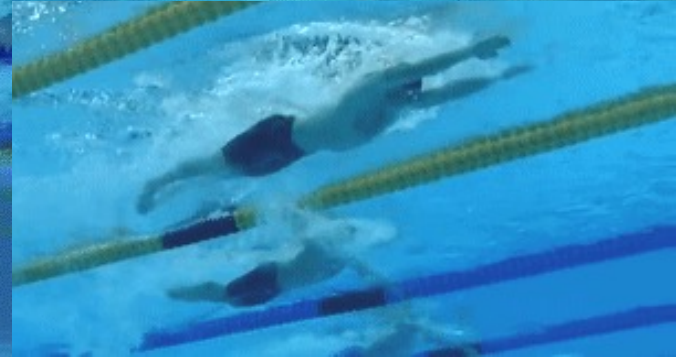
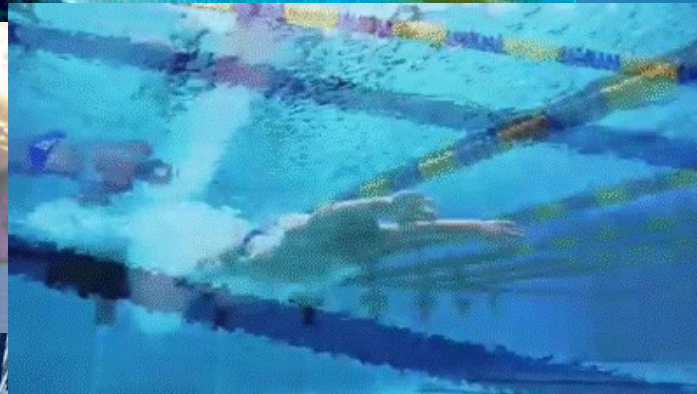
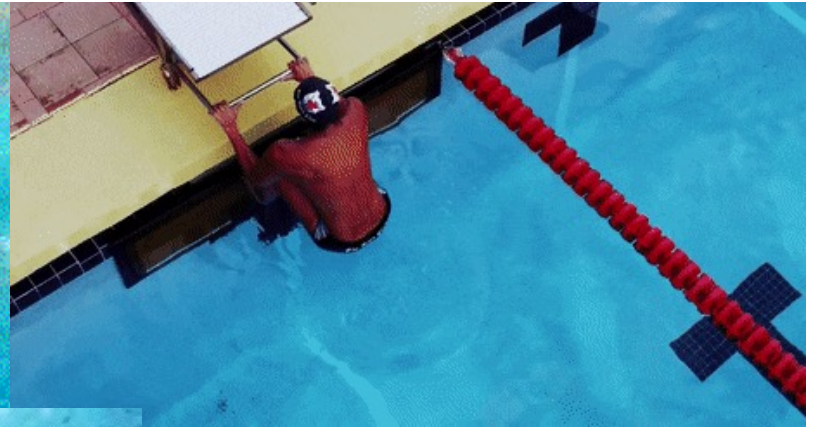
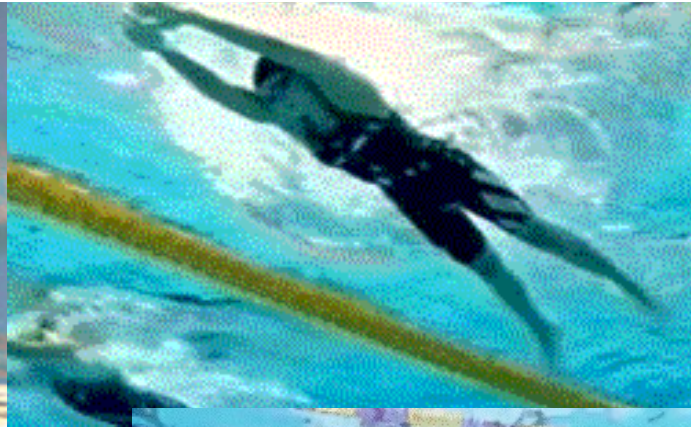
*Jaci VanHeest of the Neag School says U.S. sports focus too much on early success, yet many factors critical to athletic success don't develop until the teenage years.*



# SKILL ACQUISITION

...

*THE SCIENCE OF  
"LEARNING"*.



PEOPLE HAVE DIFFERENT  
LEARNING STYLES.  
APPLY VERBAL, VISUAL AND  
TACTICAL METHODS. USE  
EXPLICIT AND IMPLICIT  
STRATEGIES.

ABOVE ALL... BE CREATIVE.

LET YOUR ATHLETE DECIDE  
WHICH CUES AND STYLE(S)  
WORK BEST FOR THEM.

ASK (MORE) QUESTIONS  
INSTEAD OF GIVING  
INSTRUCTIONS.







# Learn

What do you do the most?



# Unlearn

Stop with "bad training habits".

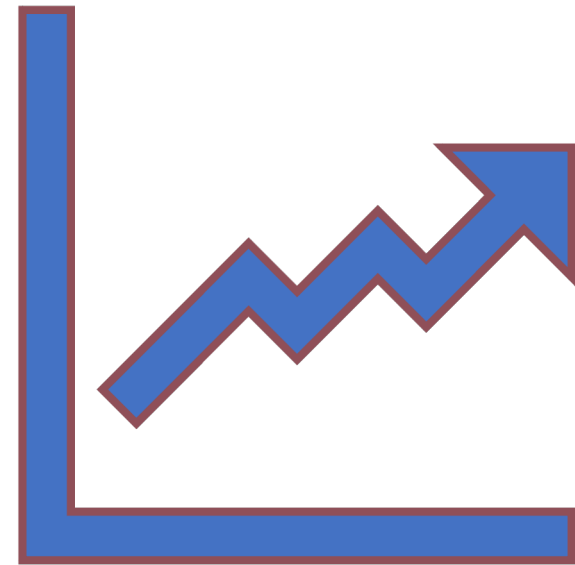


# Relearn

Start with "good training habits"



IT'S NOT ABOUT  
DOING MORE,  
IT'S ABOUT DOING  
MORE BETTER.



## EXAMPLE

**Problem in freestyle:** elbow "drops"

**Solution :** drills, video-feedback, sculling, etc.

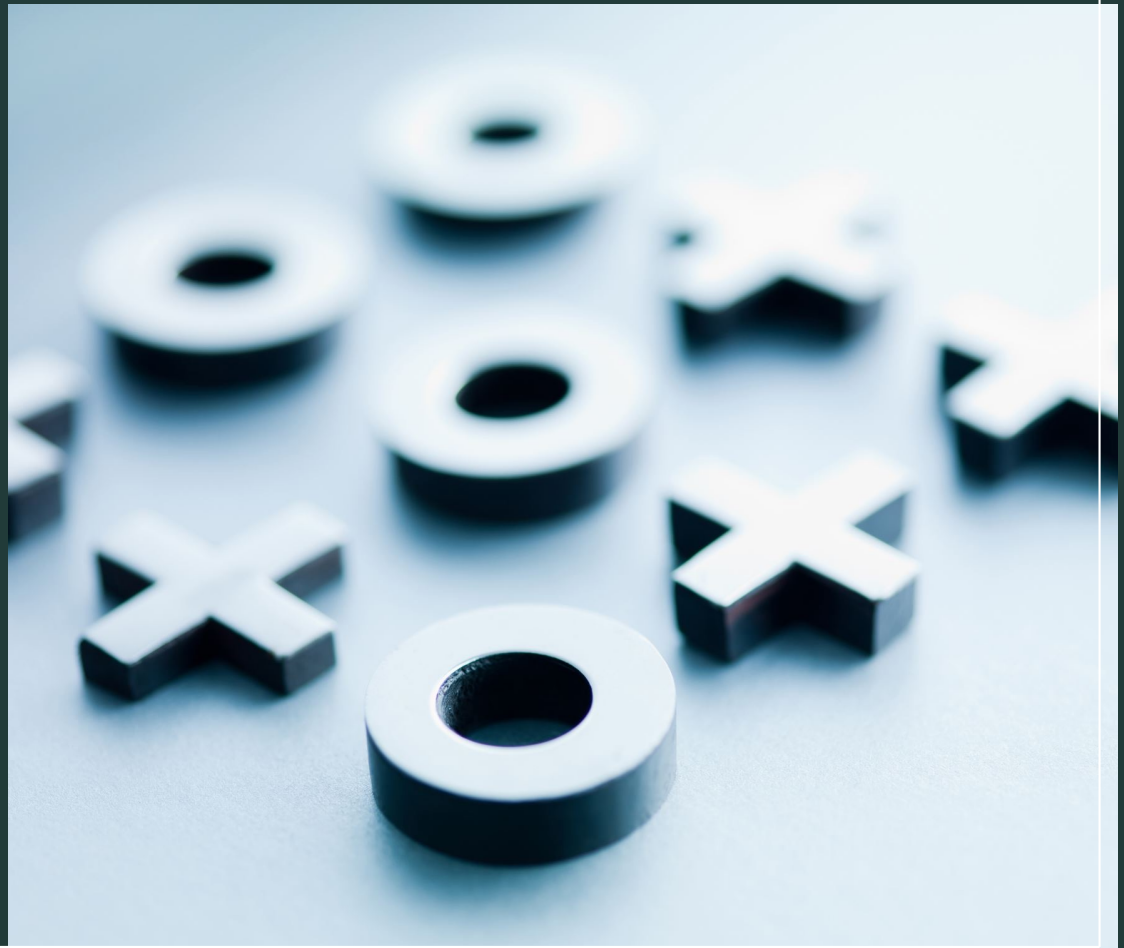
**No crawl sets at this stage but:**

- Backstroke sets (aerobic)
- sprint butterfly stroke
- some more land cardio (if necessary)



## EXAMPLE

- Problem feet too low in crawl/back turning point hollow back in push off
- Solution drills: hip stretching (earlier), foot placement, video feedback
- Do not make crawl/back turning points in this phase
- Instead: "fall-back" turning points with sometimes a turning point "with attention"



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Skill or technique improvement  
requires planning, just like any other  
training...

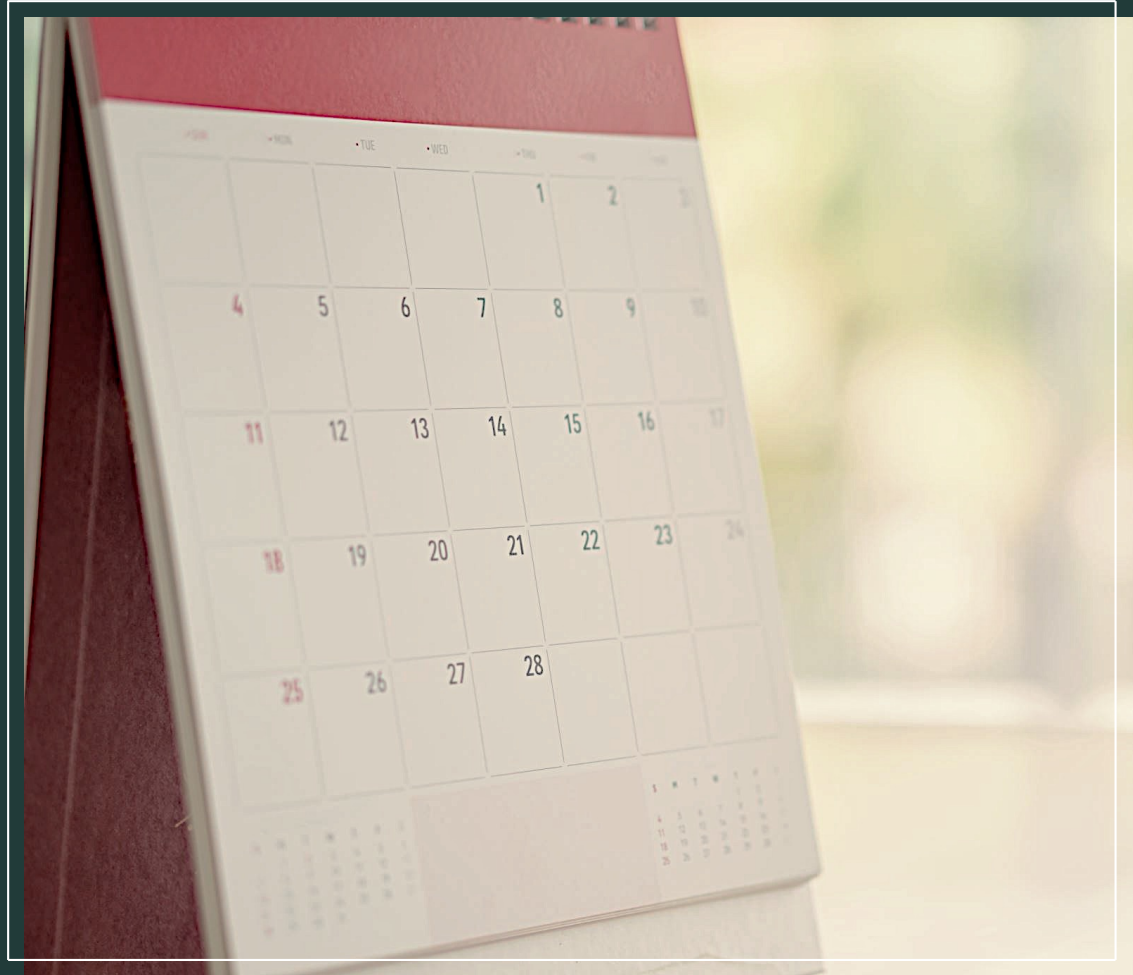
There is a (right) time for:

Change / improvement

Train... and (on)learning

Test... and know

Trust





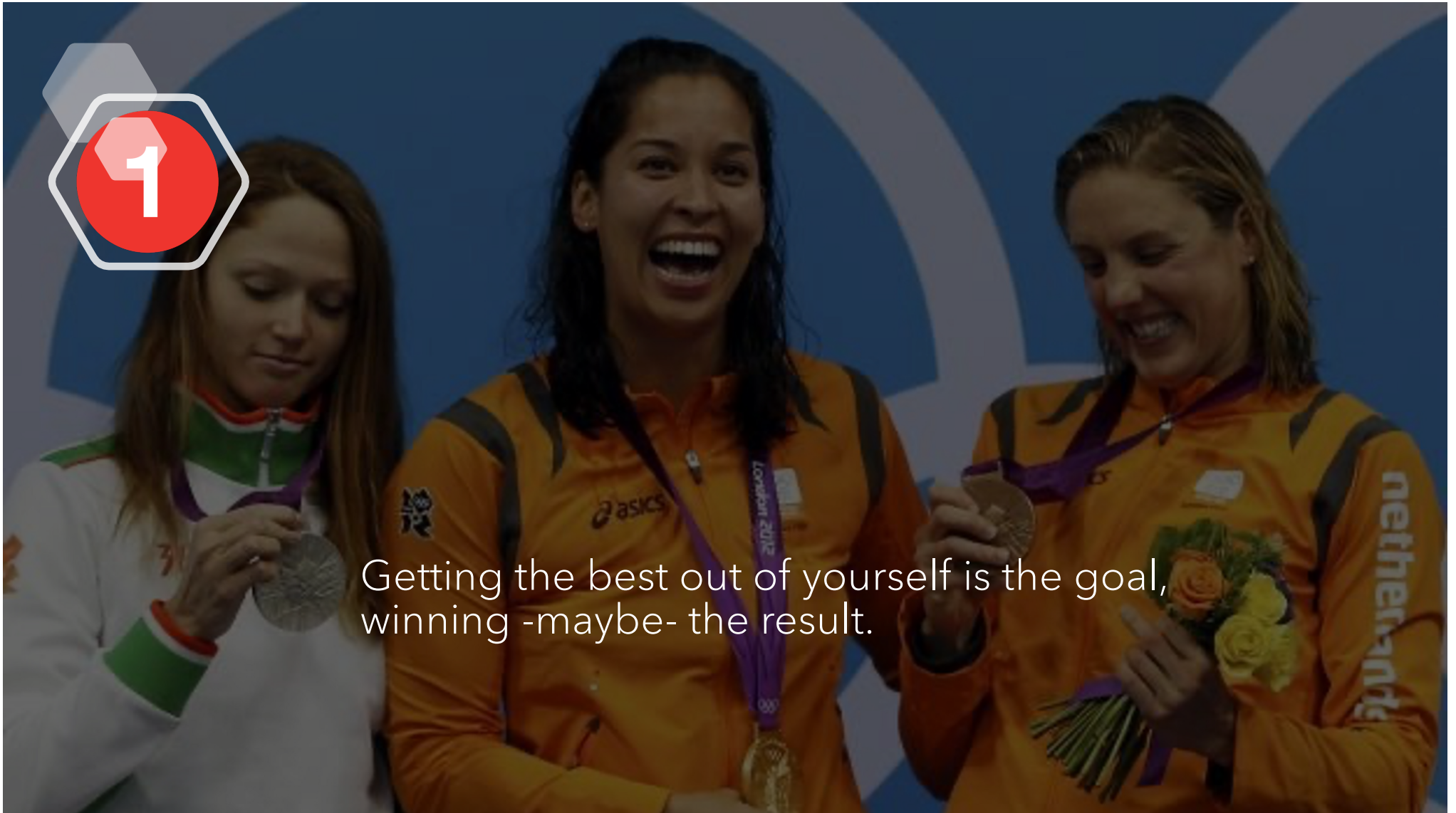


The background of the slide is a dark blue to black gradient, filled with a dense field of small, bright white and light blue particles. These particles appear to be floating or moving, creating a sense of depth and energy. Some particles are larger and more distinct, while others are tiny specks. The overall effect is reminiscent of a starry night sky or a microscopic view of a dynamic system.

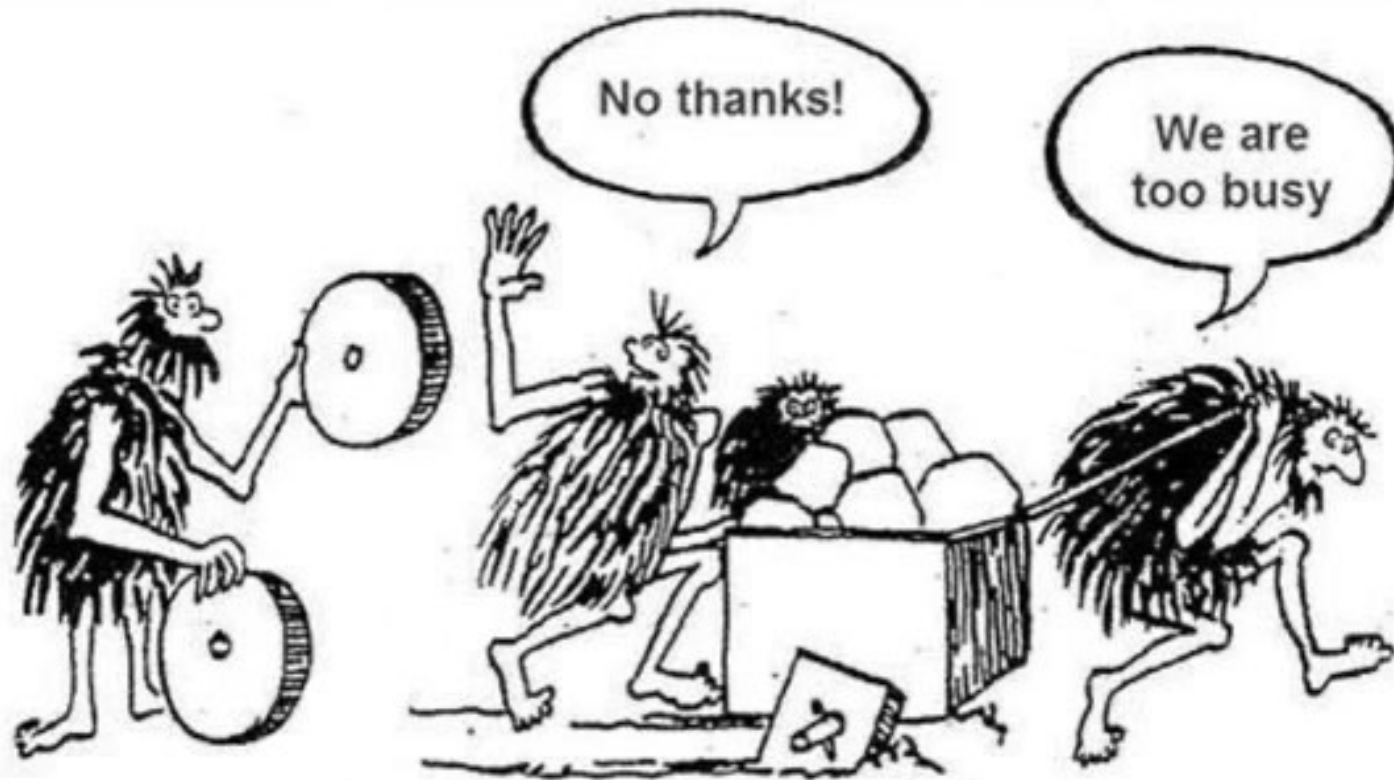
A few more  
(coach)  
Observations.



Getting the best out of yourself is the goal,  
winning -maybe- the result.



2





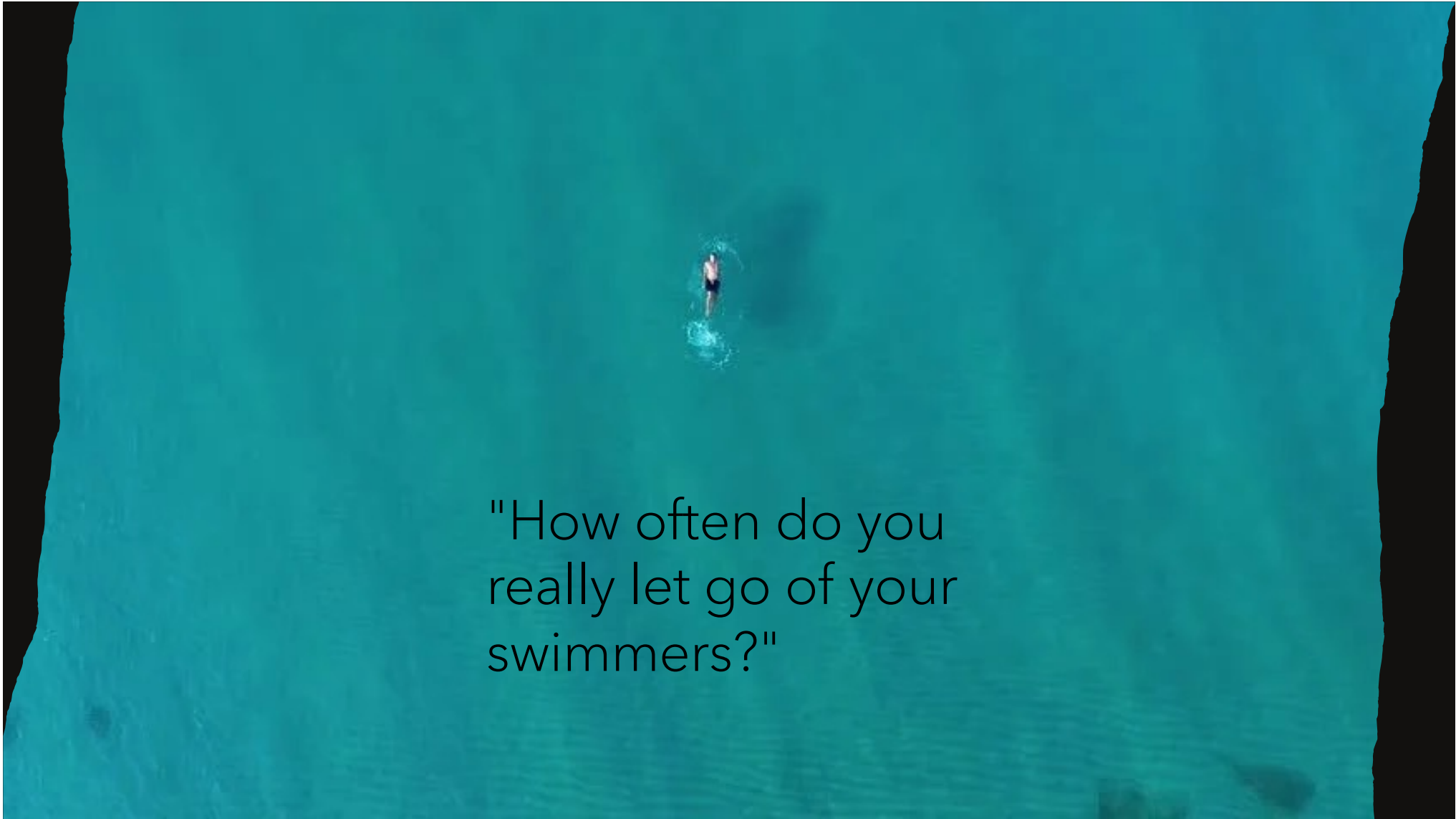


You've got to avoid overcoaching.  
You've got to avoid talking too  
much. You've got to avoid showing  
players that you're the boss every  
time. You don't have to do that.  
They know you're in charge.

— *Red Auerbach* —

AZ QUOTES

3

An aerial photograph of a person swimming in clear, turquoise water. The person is a small figure in the center of the frame, creating a small splash. The water's color is a vibrant teal, and the overall scene is framed by a dark, irregular border on the left and right sides.

"How often do you  
really let go of your  
swimmers?"

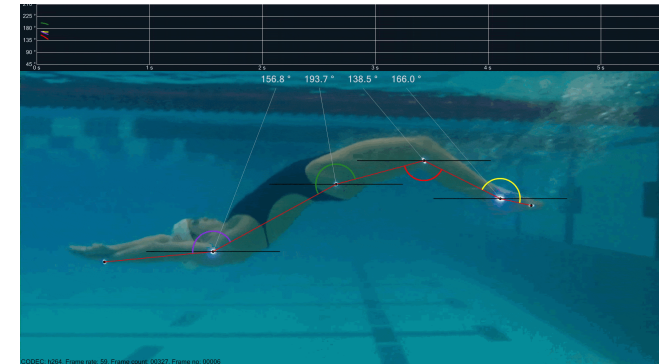
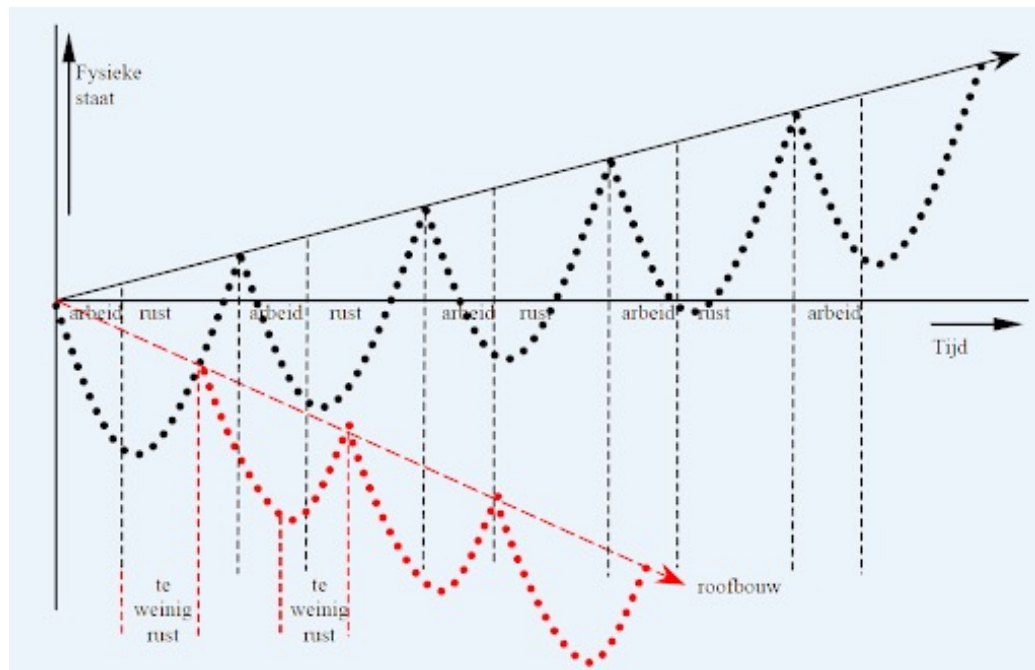


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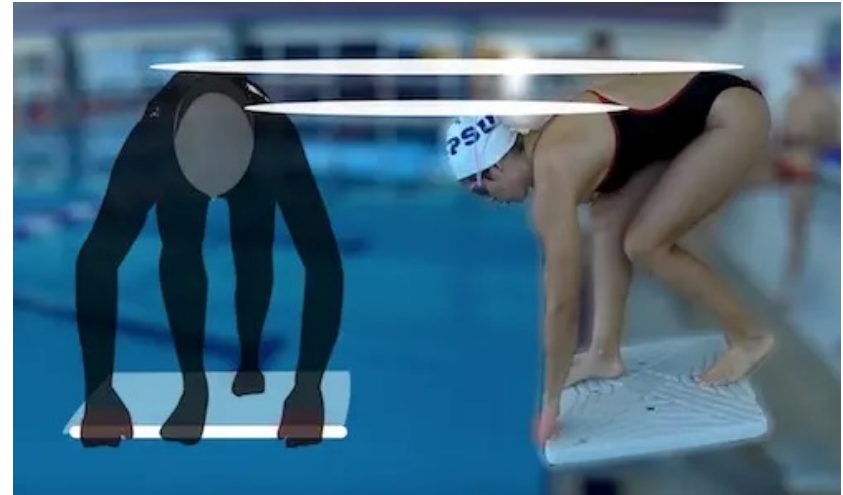


Measure when you CAN measure results.

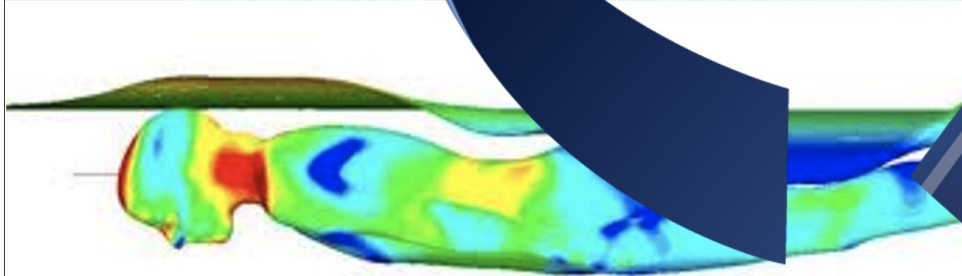


# ALTITUDE-TRAINING CAMP OR TECHNIQUE CAMP?

6







7

communicate, manage, interpersonal, behavior, cultivate, skill, go, con, cultu  
**PEOPLE  
SKILLS**



8



