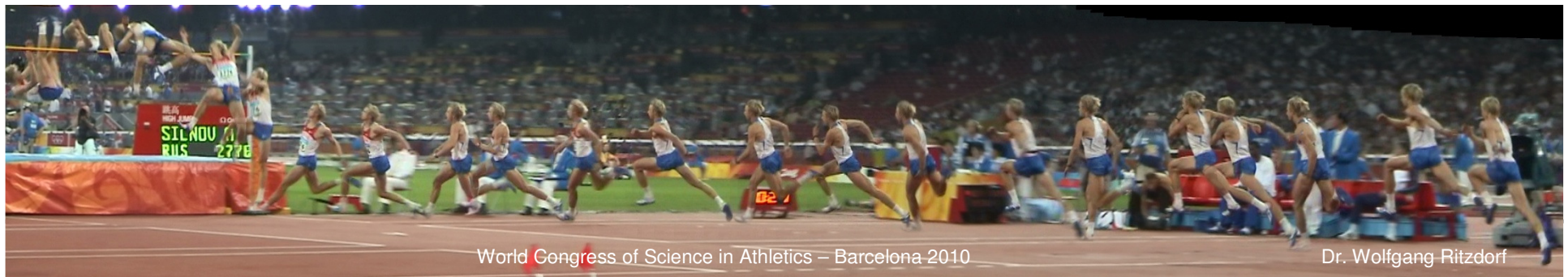


HIGH JUMP

Technique and technical training
A coaching approach



Technique

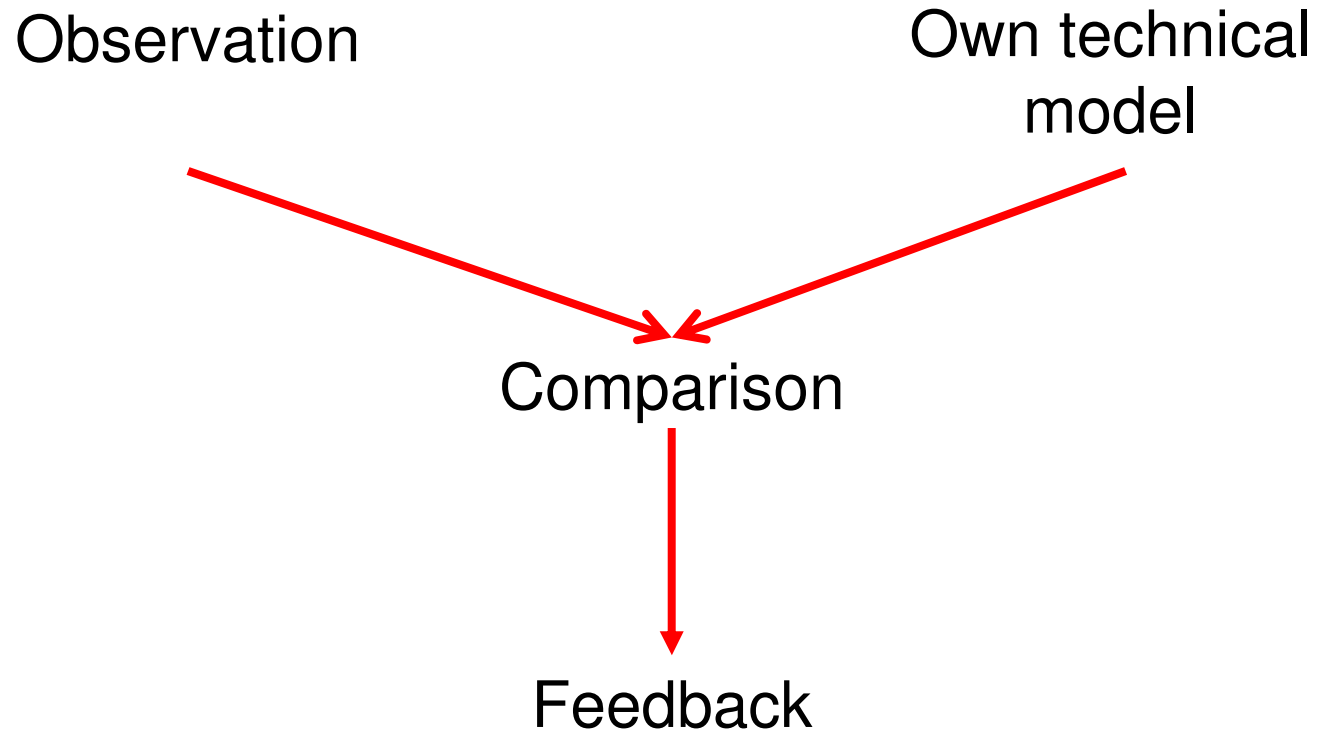


The training situation

- In technical training we permanently use messages like
 - Your last stride was **too** long
 - Your lowering was **too** deep
 - Foot plant was **too** passive
 - ...



The principal



Observation

- Movements are extremely fast
- Position of observation, “coaching zone”
- It needs a lot of experience and practice to really see what happened
- Use of technical aids like markers and video to support and verify the observation

- If the observation is incorrect the message must be wrong



Technical Model

Basic question

WHERE DOES OUR TECHNICAL MODEL COME FROM?

Besides the observation this will determine the result of the comparison



Technique

- The high jump is well analysed in biomechanical terms like times, distances, velocities, angles etc.
- Usually it's a description – not an explanation
- All these findings generate an “envelope model” of the high jump
- The variations within the envelope's borders are much wider than in other jumps
- Due to its specific characteristics (especially the medium run up speed) the high jump allows more technical variations



Technique

- Consequence: There is no singular technical model of the high jump

What to do?

- Strategy 1: Look for the key elements
- Strategy 2: Start with the athlete not with the model



Strategy 1: KEY ELEMENTS (Selection)



takeoff

- Full body extension at toe off
- Arching the body over the bar

Excursion: Penultimate Stride

- Finally it's the take off that counts

But

- It's the penultimate stride that forms the presuppositions for an effective take off
 - Deepest CM position is during amortisation of last but one stride and not during take off
 - At entire sole contact shin of support leg is vertical
 - At entire sole contact knees are almost parallel



Key elements

- In technical training we must be very strict with the key elements
- We should allow a lot of variation outside the key elements

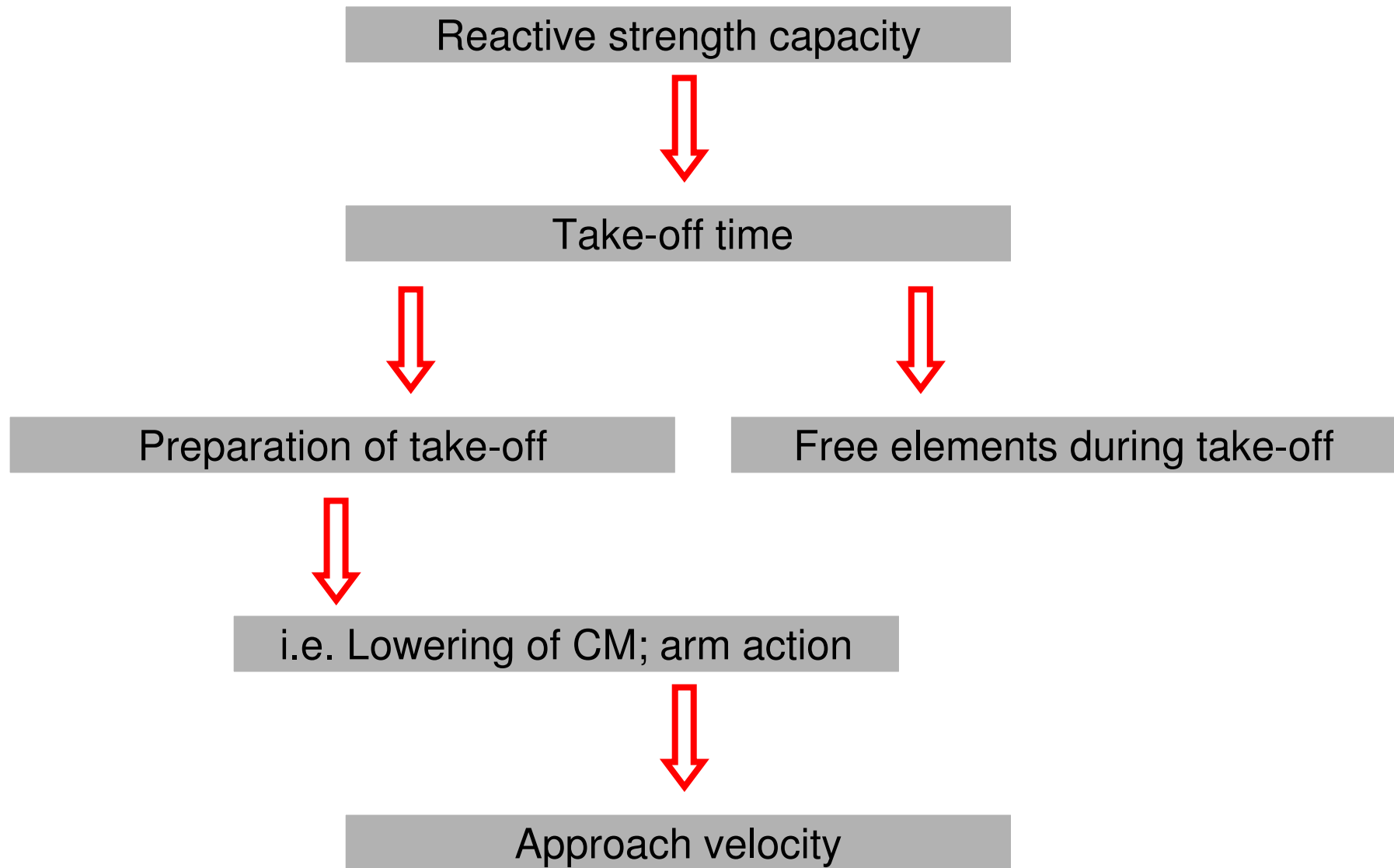


Strategy 2: Start with the athlete

- Coaches experience shows that neuro-muscular time patterns are most difficult to modify
- Reactive strength can be developed but not basically changed
- Unlike the other jumps the high jump allows a bigger variation in reactive strength capability



Order of influence



Training



General Training Philosophy

1 The 5% rule

Performance levels should never drop down by more than 5% under the mean level. A 2.20m high jumper should be able to clear 2.10m at all times of the year.

2 Training is quality-based

Just doing something or just counting numbers of repetitions is not effective. It's quality that counts and the nervous system must always be activated to achieve further improvement.



Training

4 major guidelines

1 General qualities

Proper running mechanics and strength/power of the entire (!) body are basic presuppositions for effective jumping. We spend a lot of time and use competence from other sports to develop these qualities.



Training

4 major guidelines

2 Specific qualities

Reactive strength is the most important physical quality. Both maximizing output and minimizing time are essential and major part of training throughout the year.



Training

4 major guidelines

3 **Training is drill-based**

Using dozens of specific drills in technical training allows much more repetitions and more specific work than always jumping over the bar. Developing specific movement pattern away from the mat and then transferring it seems to be a more appropriate way.



Training

4 major guidelines

4 **Technical training**

The number of jumps from short approach is extremely limited. The risk of changing the neuromuscular patterns is too high.

