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Bridging Research and Engineering in Sport Science

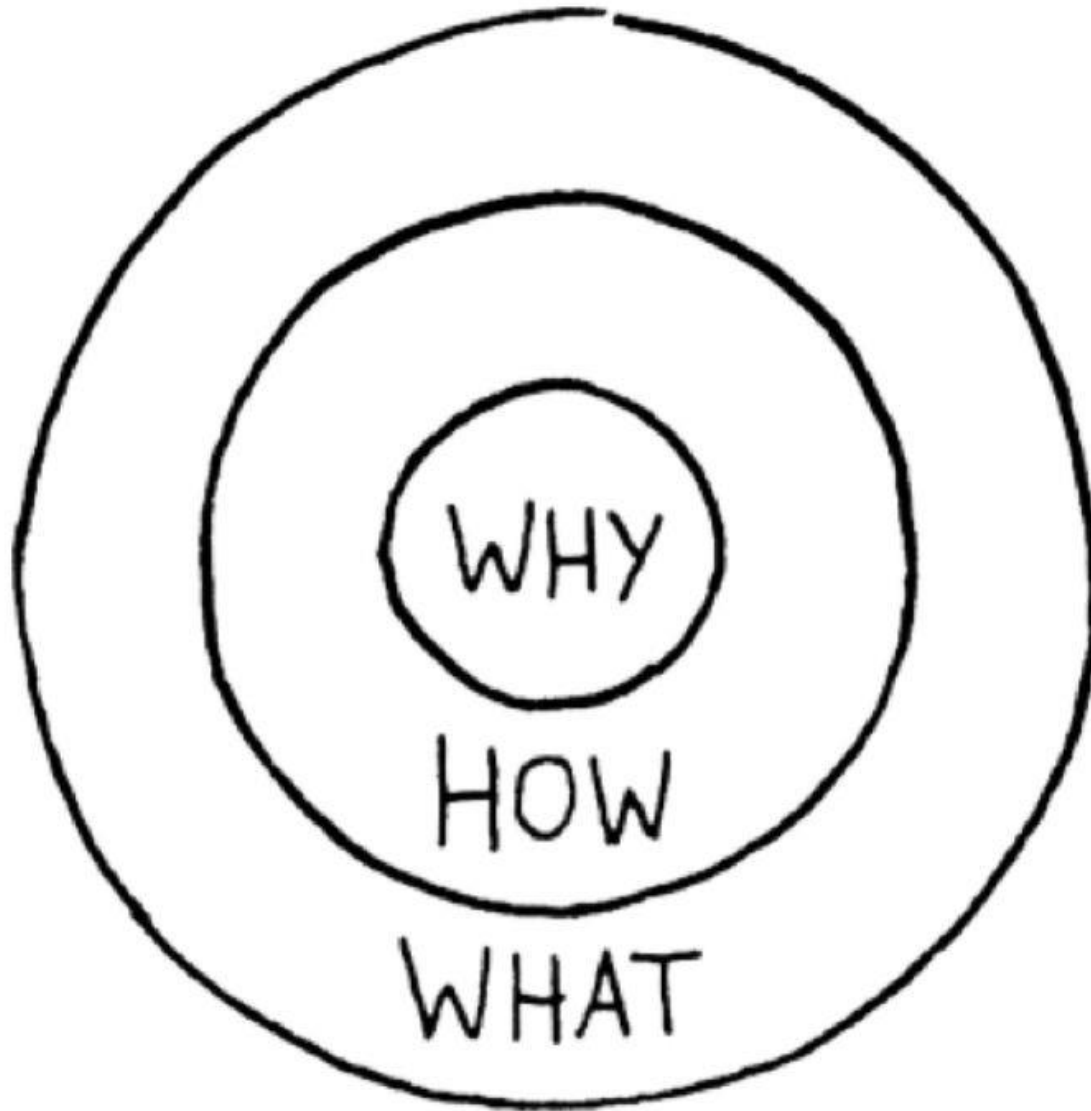
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Head of Sport Technology Unit

Deputy Head of Centre for Technology in Sport and Medicine



Bern University
of Applied Sciences





Why?

Moore's Law



2,300
Average music hall capacity



134,000
Large stadium capacity



32 Million
Population of Tokyo



1.3 Billion
Population of China





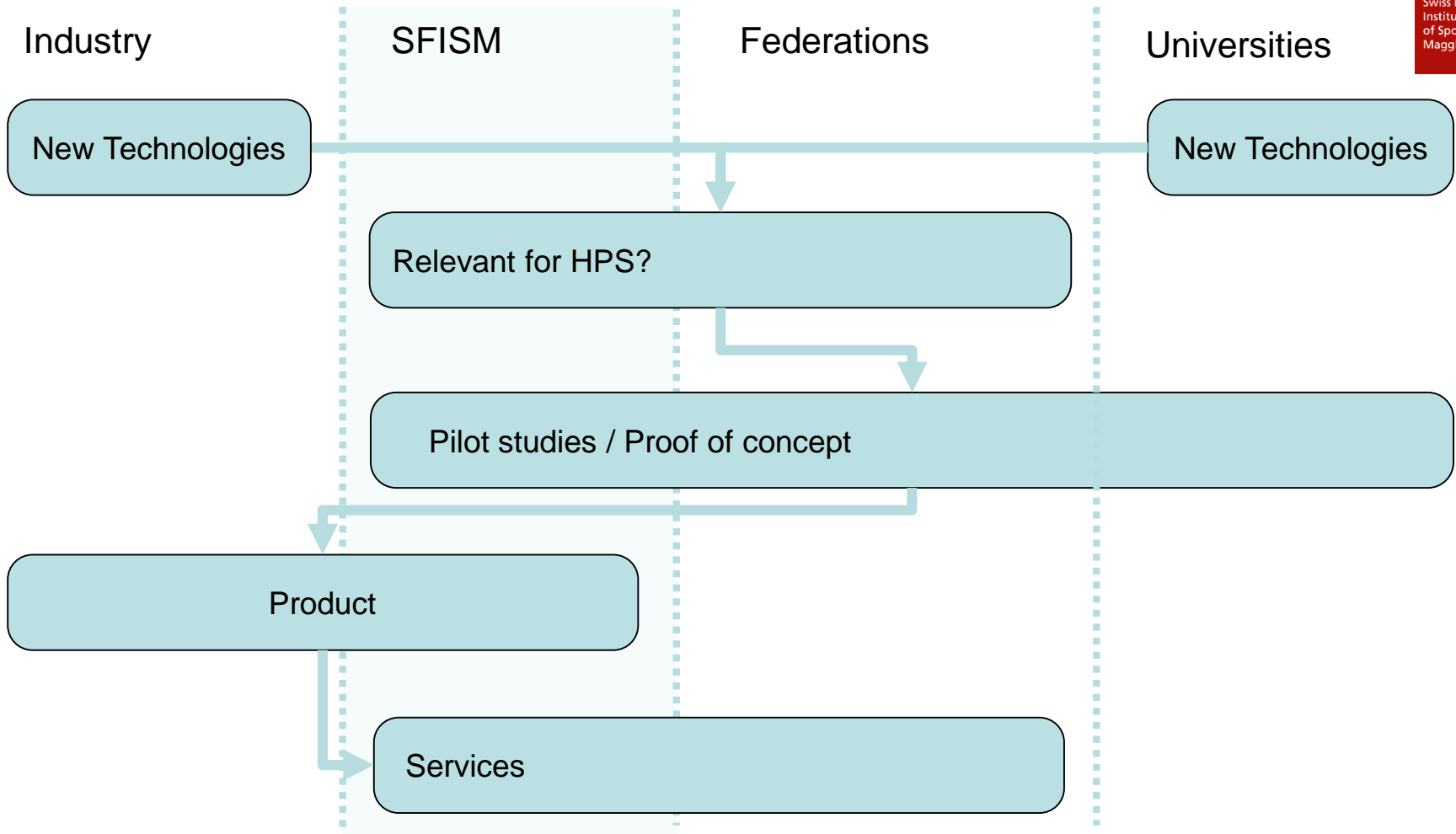
Why?

- **Opportunity:**
 - Measuring in a situation that resembles the competition training for testing and the possibility to monitor trainings.

- **Challenges:**
 - Validity
 - Relevance
 - Unobtrusiveness

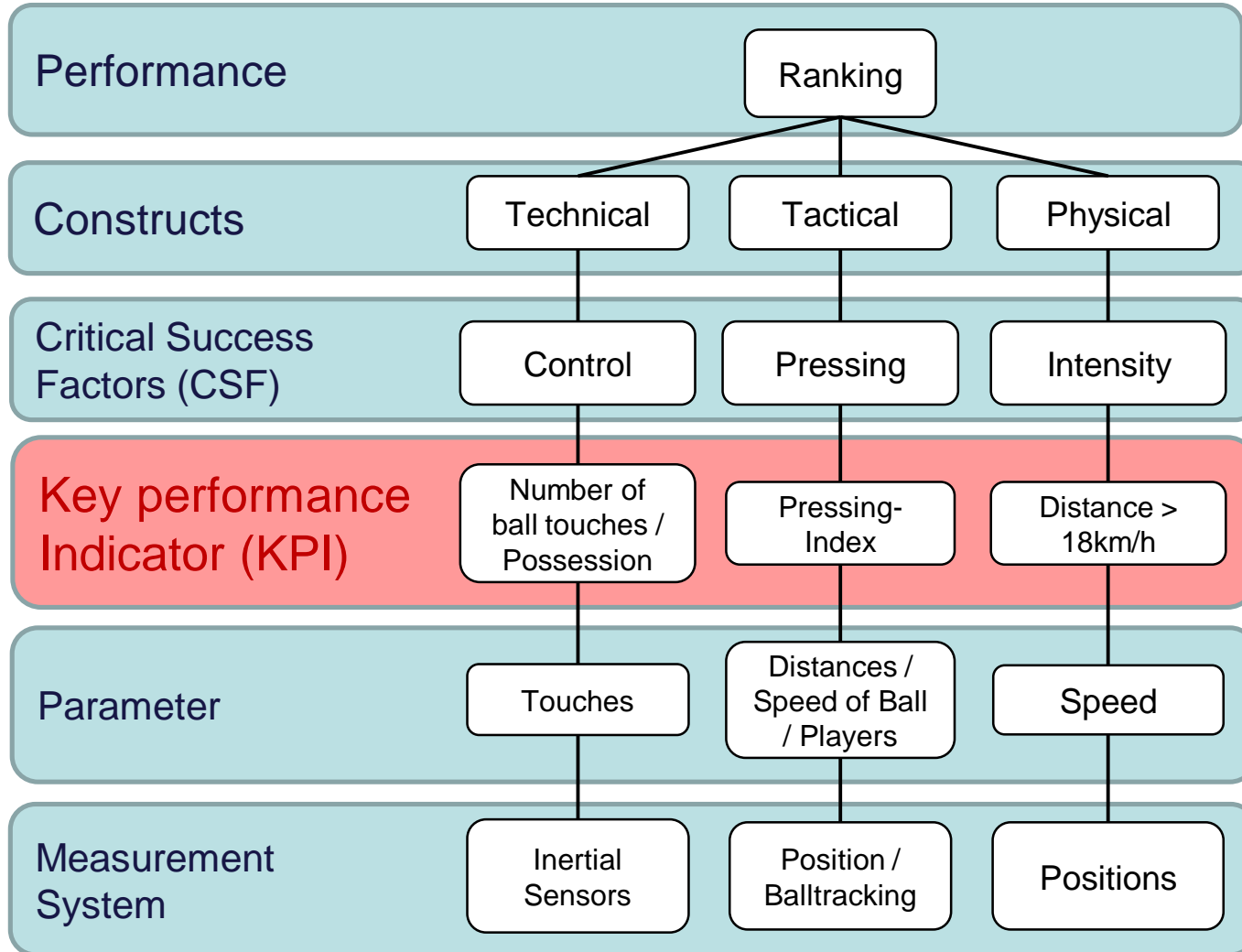


Why?



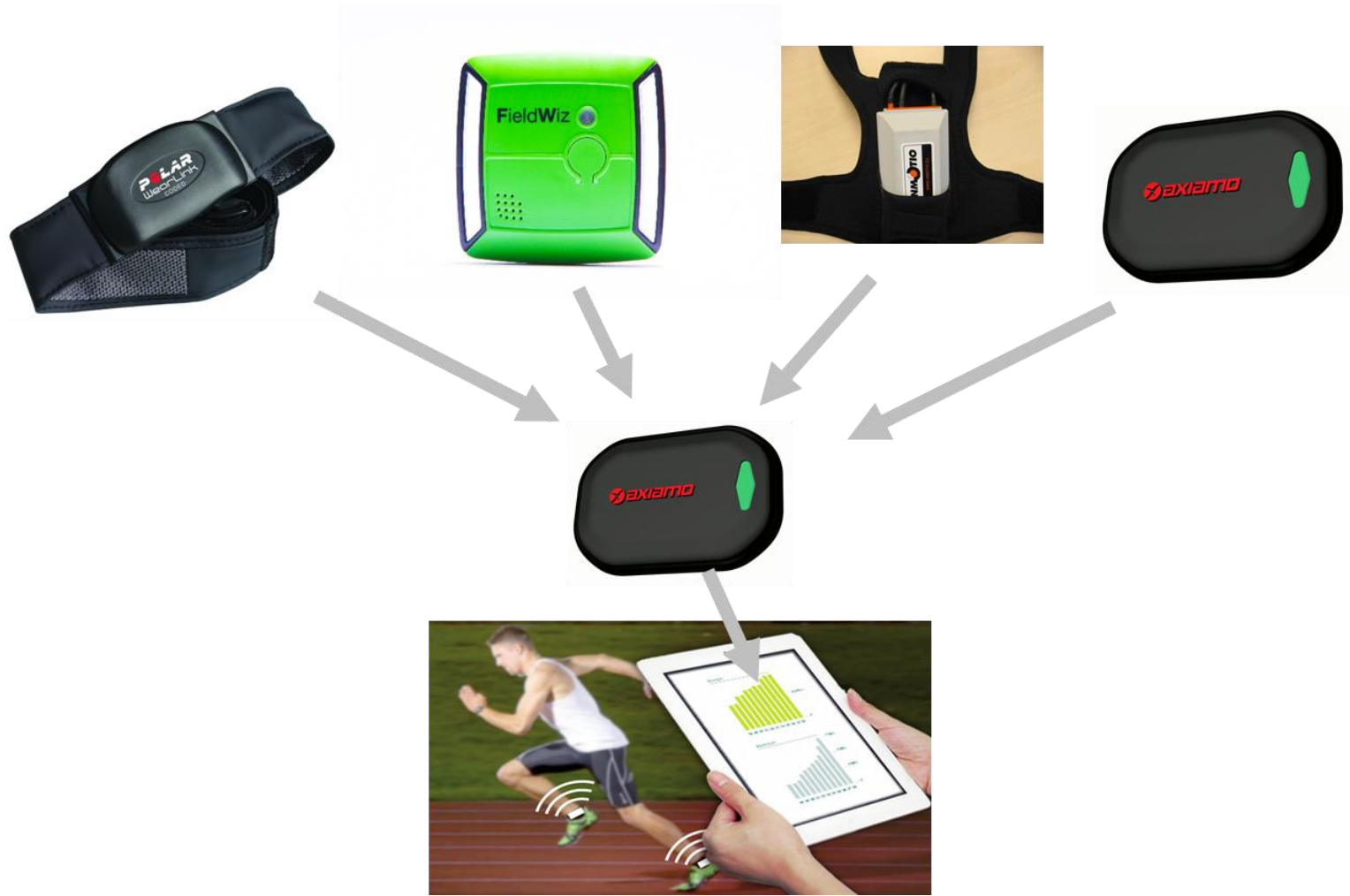


How?





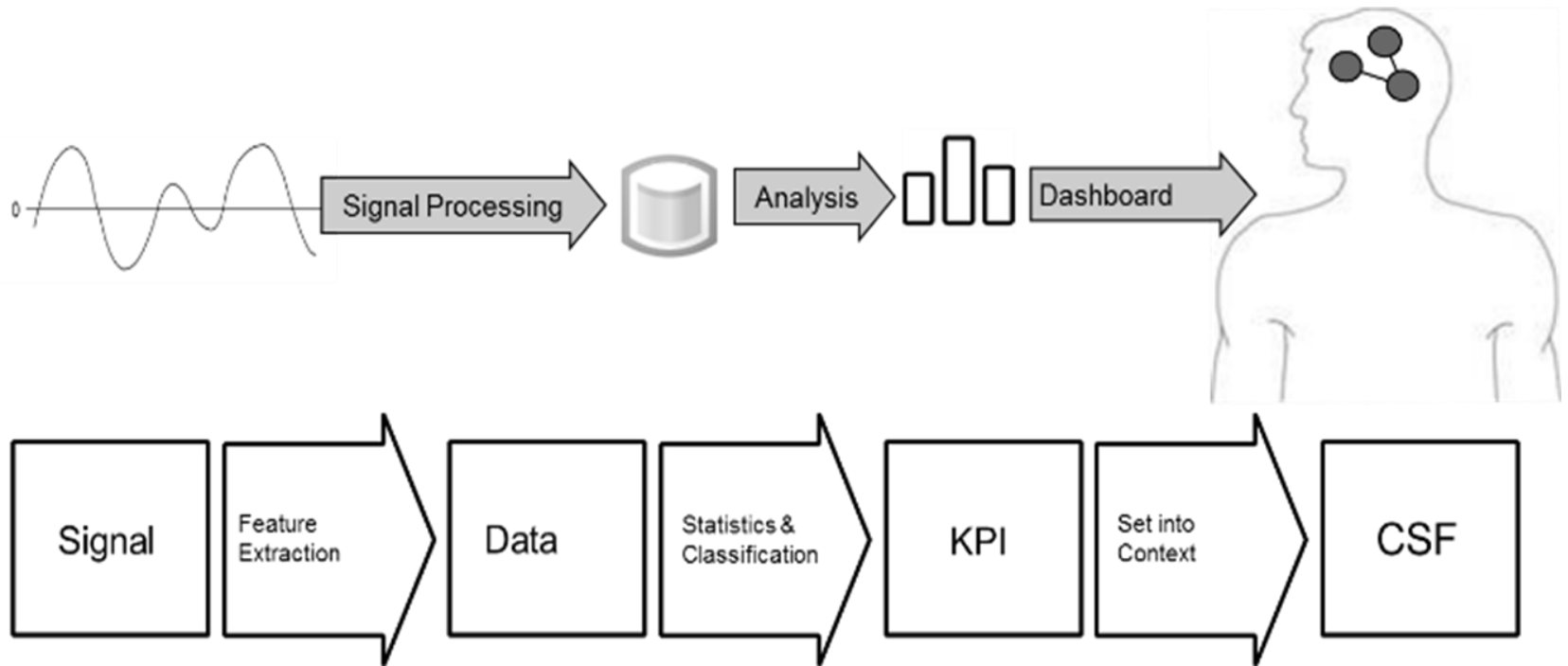
How?

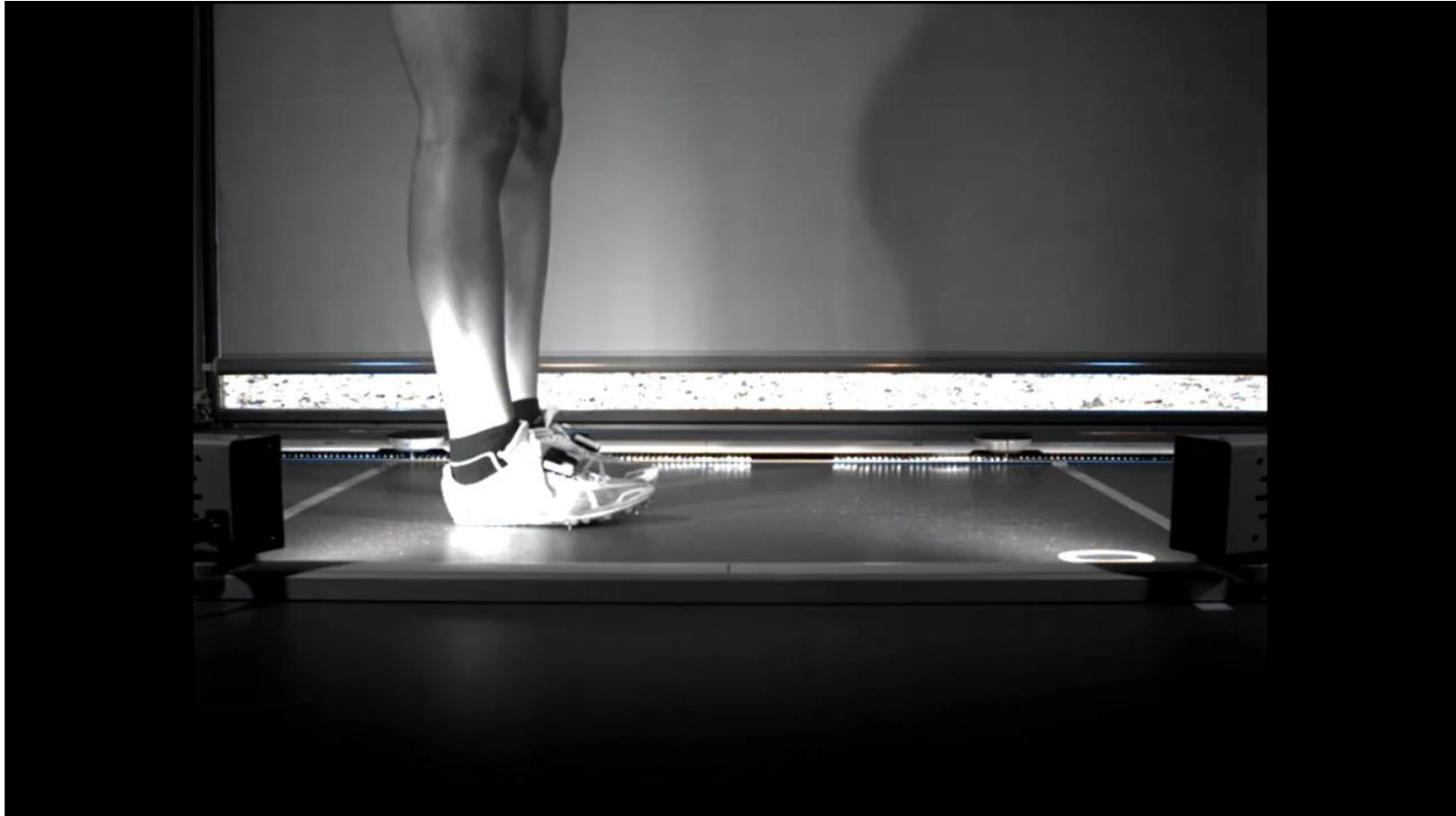


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How?







What?



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What?





What?



Turnovers and fast
transitions

5 sec to gain possession

10 sec to score



What?



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What the Coach wants to see

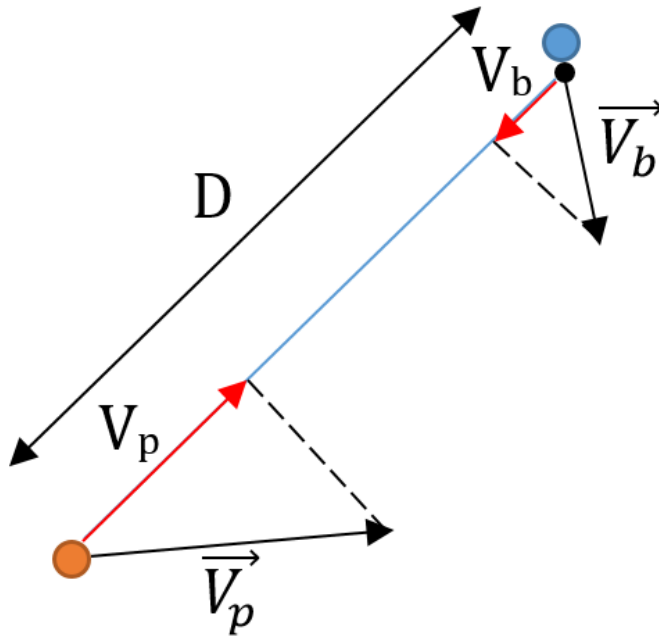
Press hard

Verticalize directly

Run fast



Define it



$$PI = \sum_i PI_i$$

$$PI_i = \frac{V_p + V_b}{D}$$

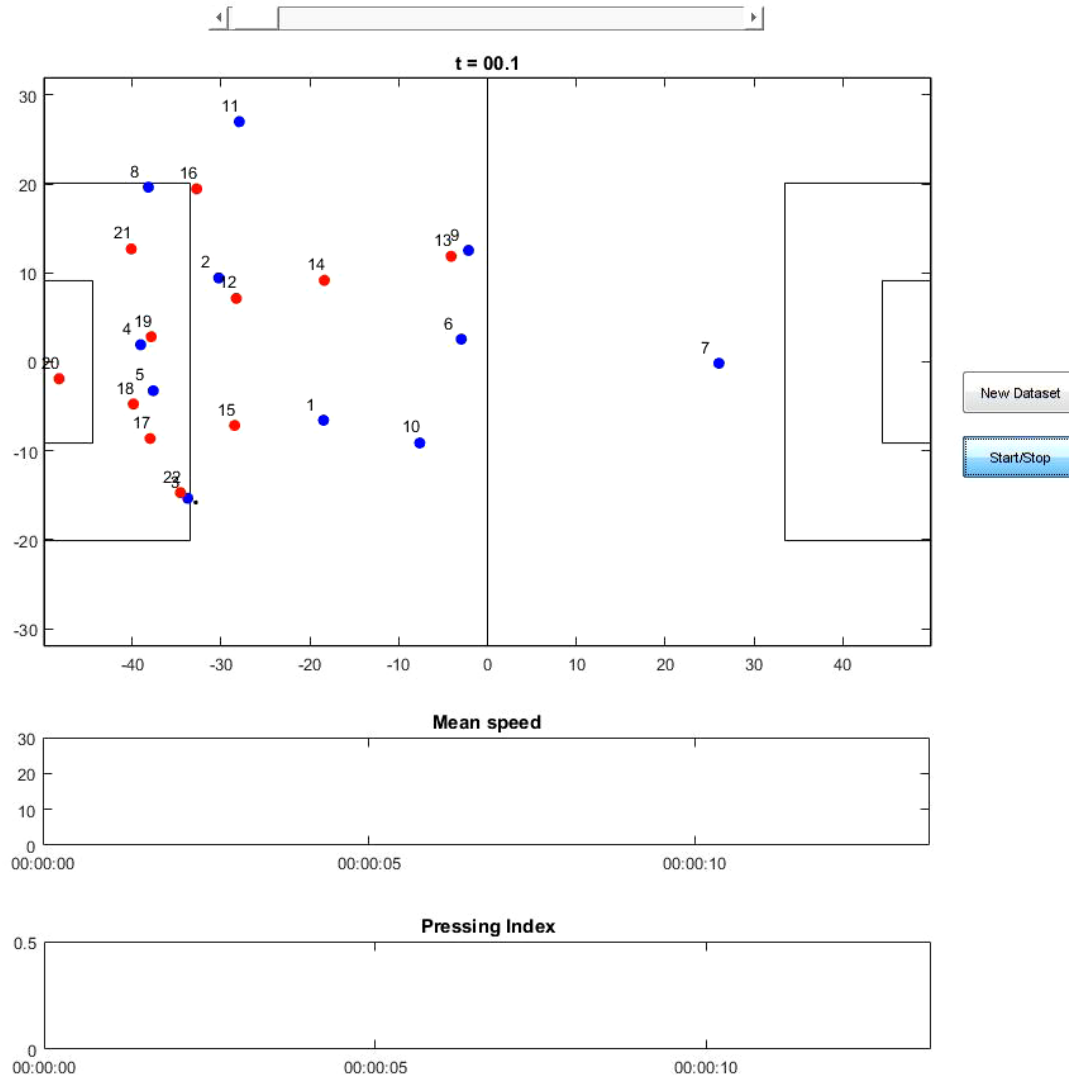
D : Distance player-ball

V_p : Player's speed in direction of the ball

V_b : Ball's speed in direction of the player



Measure It





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Thank you for your attention

