

# Technology, a game changer for a level playing field in sports!?

**Prof. dr. Steven Vos**

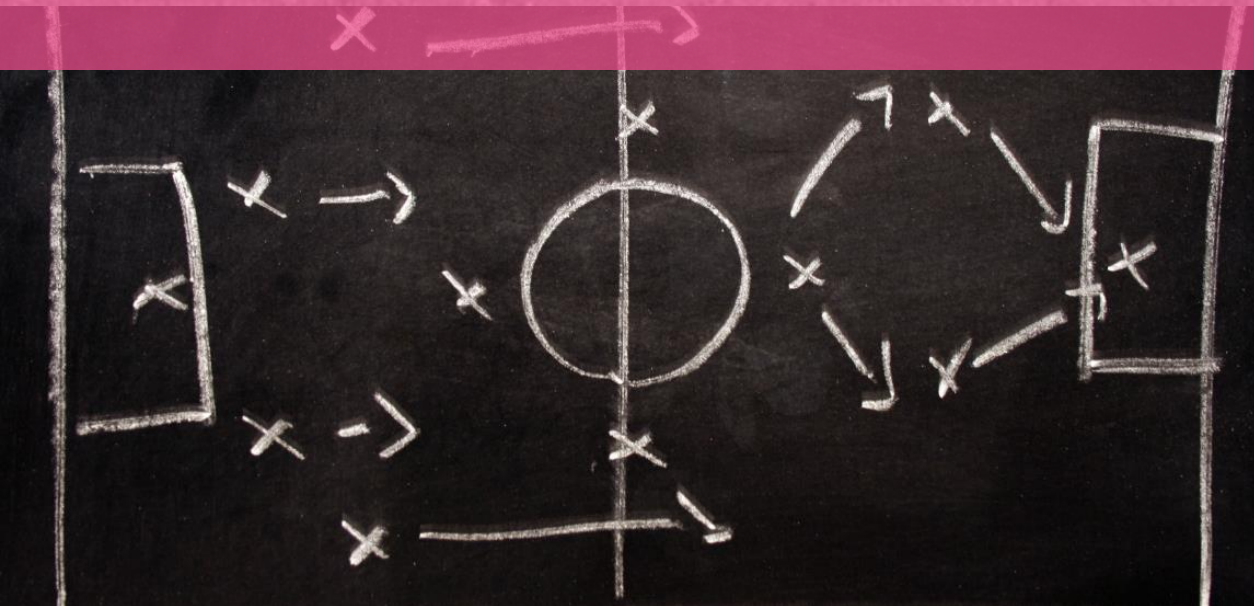
**Chair Move to Be  
Fontys University of Applied Sciences – School of Sport Studies**

**Chair Design & Analysis of Intelligent Systems for Leisure Time Sports & Vitality  
Eindhoven University of Technology – Department of Industrial Design**

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“Do we need a game changer for a level playing field in sports? And if yes, could technology be this game changer?”





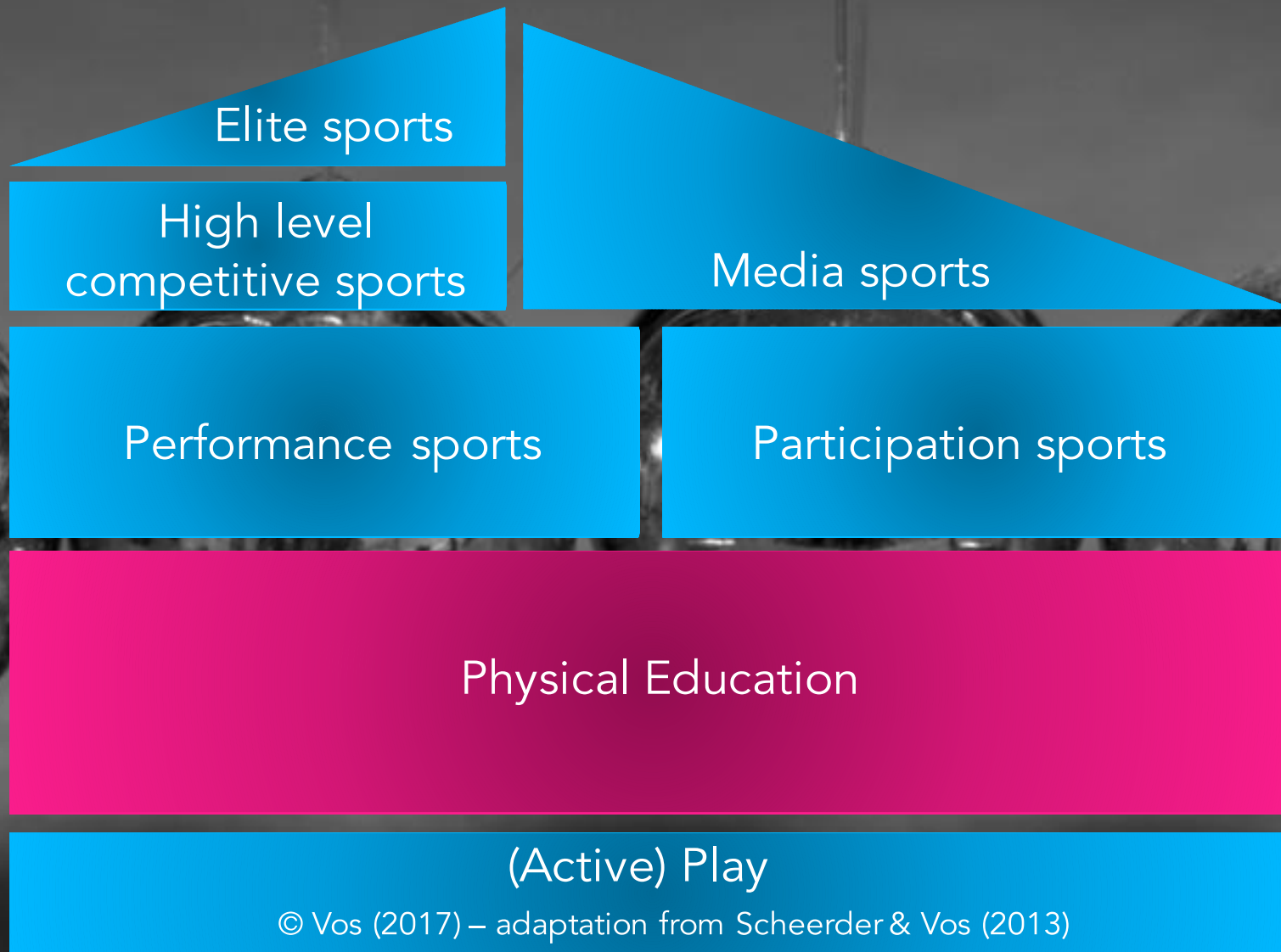
STEVEN SPIELBERG PRESENTS

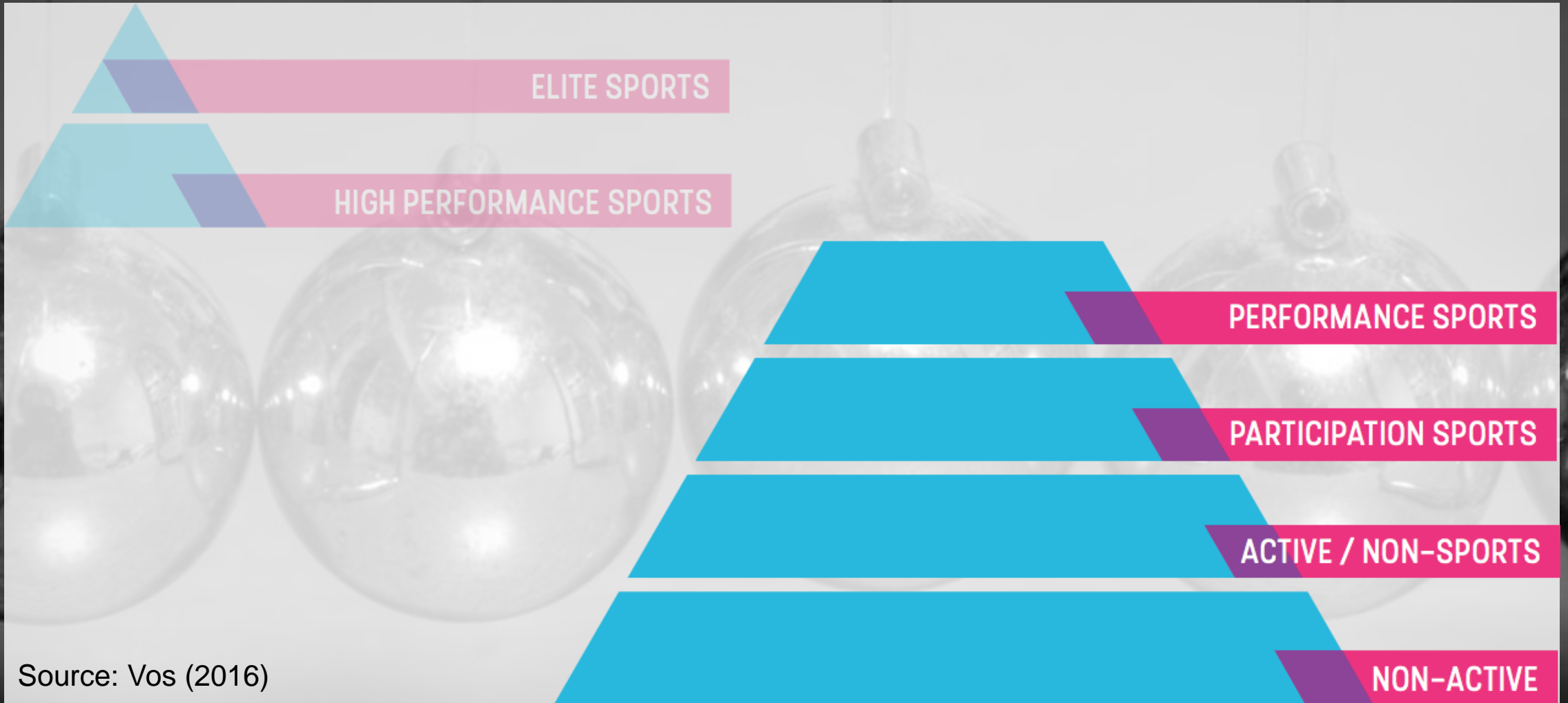
“Technology as a game changer or game-changing technologies?”

PG

# Church model - stages of a sports active life

(Scheerder & Vos, 2013)





Source: Vos (2016)



**Traditional Sports**

**'Unorganized' Sports**

**eSports**

1950      1960      1970      1980      1990      2000      2010      2017

means to an end

Traditional Sports

'Unorganized' Sports

eSports

for sake of itself

Traditional Sports

'Unorganized' Sports

eSports

“Yes, but what about issues such as institutionalization, governance, transparency, fair play, social stratification, privacy, ...”



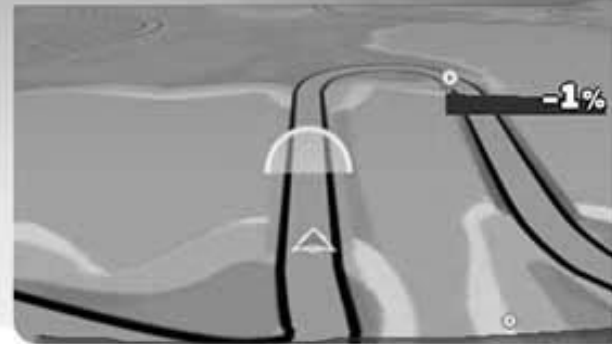
20 MPH 3.4 MI 159 FT 11:58 ET

16

ride at 100w for 2 min at 85rpm

8 sec

99 w 148 84



### WOW Anaerobic 15

Finish in 43:08

- ★ 5min @ 100w
- ★ 2 x 10sec 395w
- ★ 2min @ 100w
- ★ 1min @ 215w

### 2min@100w

- 5min @ 180w
  - 3min @ 100w
  - 4 x 15sec 300w
  - 3min @ 100w
  - 4 x 15sec 300w
  - 3min @ 100w
  - 10min @ 165w
  - 5min @ 100w
- ▲100%▼ ★ 4/13

Traditional Sports

'Unorganized' Sports

eSports

### 4th/16 Zwift Group Workout: ...

⊖ ⊞	D. Gons	-0:00	1.4 w/kg	3.4 MI
⊖ ⊞	s.otsuka	-0:00	2.7 w/kg	3.4 MI
⊖ ⊞	M. Smith	+0:00	1.7 w/kg	3.4 MI
⊖ ⊞	B. Stevens	+0:00	1.4 w/kg	3.4 MI
⊖ ⊞	R. Mattis	+0:00	1.6 w/kg	3.4 MI
⊖ ⊞	A. Tsuji	+0:00	1.8 w/kg	3.4 MI
⊖ ⊞	N. Kusumoto (BZ)	+0:00	2.1 w/kg	3.4 MI
⊖ ⊞	D. Howe	+0:00	1.7 w/kg	3.4 MI
⊖ ⊞	S. Barger	+0:00	2.0 w/kg	3.4 MI
⊖ ⊞	S. Martinez	+0:00	1.4 w/kg	3.4 MI
⊖ ⊞	S. Coddwomple	+0:00	0.9 w/kg	3.4 MI
⊖ ⊞	L. Bhateja (Spectrum)	+0:00	2.0 w/kg	3.4 MI
⊖ ⊞	D. Ivanov	+0:00	0.3 w/kg	3.4 MI

+3 more in group

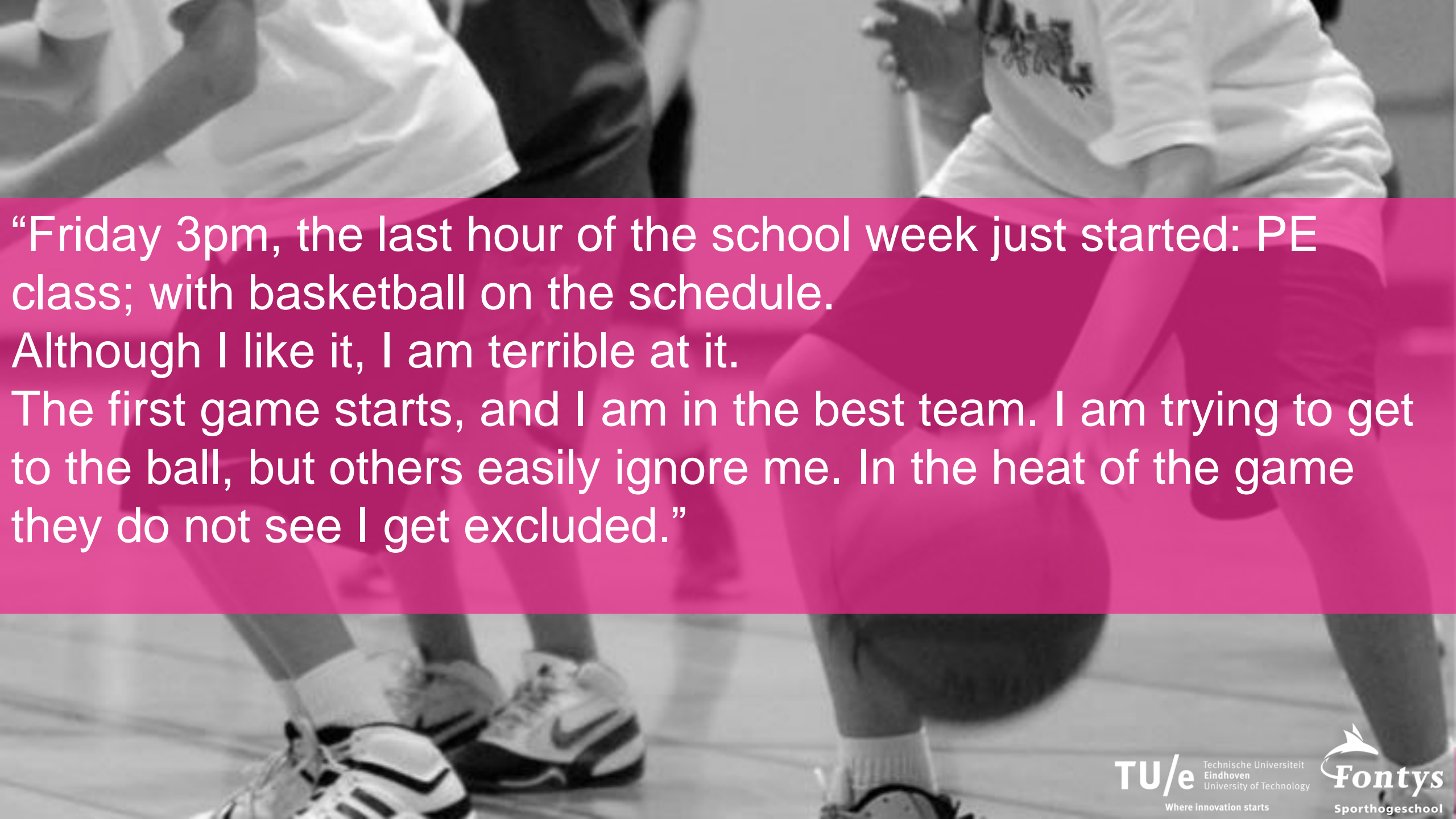
B. Stevens

KICKR

BICICLETTA

S. B. 2m R. Mat 2m B. Stevens 0m

A. Tsuji



“Friday 3pm, the last hour of the school week just started: PE class; with basketball on the schedule. Although I like it, I am terrible at it. The first game starts, and I am in the best team. I am trying to get to the ball, but others easily ignore me. In the heat of the game they do not see I get excluded.”



## “Balanced engagement in mixed level sports through a wearable team coach”

Bogers, S.J.A., Megens, C.J.P.G. & Vos, S.B. (2017). Design for balanced engagement in mixed level sports teams. CHI 2017, 994-1002, Denver, Colorado New York: ACM.



“By visualising information that was previously hidden we appealed to a feeling of social responsibility within a team – creating more awareness on balanced engagement”

Bogers, S.J.A., Megens, C.J.P.G. & Vos, S.B. (2017). Design for balanced engagement in mixed level sports teams. CHI 2017, 994-1002, Denver, Colorado New York: ACM.



## AYMÉE

a bra that encourages (ex-) breast cancer patients to be **physically active** by stimulating the wearer to feel more **proud, feminine** and **beautiful**


“Designing for sports active lifestyles in vulnerable groups requires different approaches.”

Menheere, D., Megens, C., van der Spek, E. & Vos, S. (in review). Encouraging physical activity and self-enhancement in women with breast cancer through a smart bra. *Design Research society*.

# “Creating social safety and connection, physical activity and coaching through adaptive technology”

Vos et al. (2017) Developing and implementing a 1.8k interactive and smart running path in an urban area. In press.





**“ I’m convinced that technology has unique assets to become a game changer for a level playing field in sports. However, we are not there yet. We need to cross borders and embrace the values of sports (in society). In the end we just want to play the game.”**



*“Just an idea, but you could have a look at it from a different perspective. Have an inspiring evening”*

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