#### **Personalized feedback**

#### Inspirun case



#### Jos Goudsmit<sup>a</sup>

Mark Janssen<sup>a</sup> & Steven Vos<sup>a,b</sup>

<sup>a</sup>Fontys University of Applied Sciences – School of Sport Studies <sup>b</sup>Eindhoven University of Technology – Department of Industrial Design Fontys Sporthogeschool

toBe

#### "It's all about creating personalized running experiences"





#### DESIGNING

### Personalized training schedules

- Individual running factors
  - Runners' profile
  - Starting level
  - Goal setting
- Personal Running workload Profile (PRP)
  - Running speed
  - Heart rate
  - Intensity level
- 20 sessions, 3 test sessions for initial PRP
- Feedback during running
  - Visual
  - Spoken
  - Sound





#### DESIGNING

### Prototype

- Wahoo TICKR X (reversed engineering API)
- INSPIRUN running app
  - Android
  - Built with Ionic framework (Javascript & AngularJS)
  - D3 (rendering vector graphics)
- Training session can only be started with active GPS signal and Bluetooth connection (HRM)
- Compliancy score is calculated

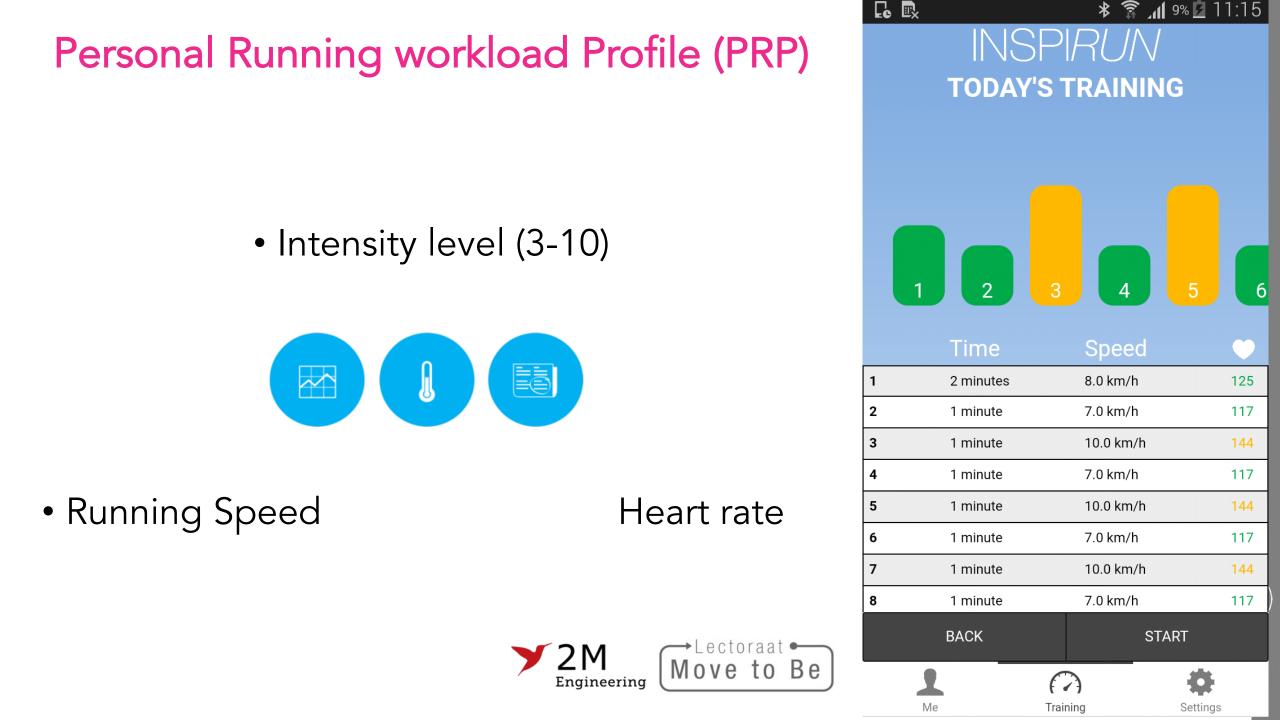


### InspiRun: Essential features

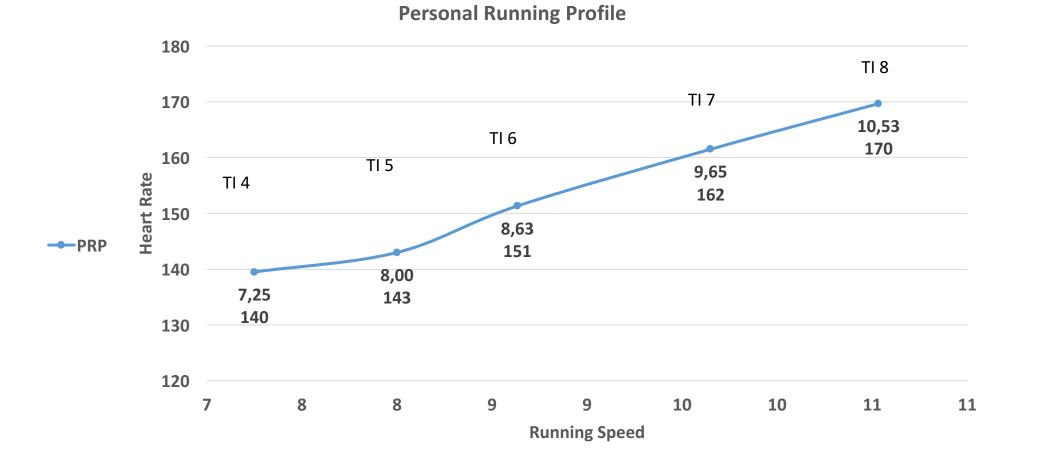
- Start or improve running in a safe, healthy and fun way
- personalized training schedules that fits runners profiles
- Constant feedback speed, location and were combined with a HRM
- Intuitive feedback on progress wile running (cf. runners profiles)
- Uses body feedback (heart rate) and environmental information (distance, location, route, time) to adjust selected training scheme for the next training session.
- Captures data which can be used for monitoring



Move to Be



#### Personal Running workload Profile (PRP)



TU/e

Move to Be

#### Personal Running workload Profile (PRP)

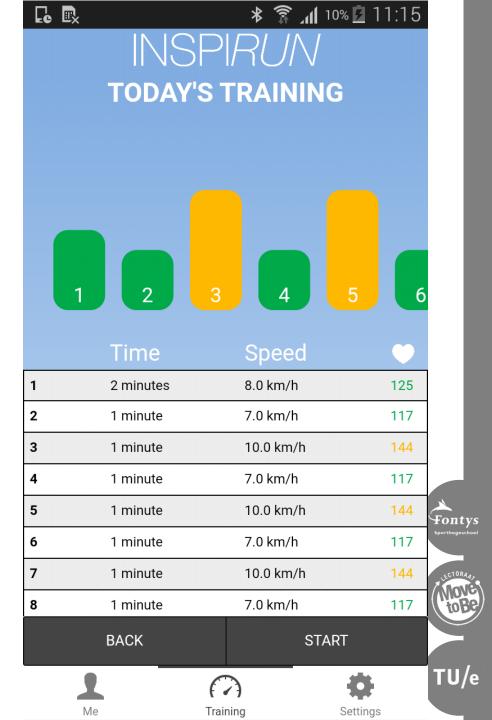
- Initial calculations:
  - TI6 from test session 1
  - TI4 from test session 2
  - TI8 from test session 3



- Adaptive respons to training:
  - TI, Speed and HR monitoring from last 6 sessions.

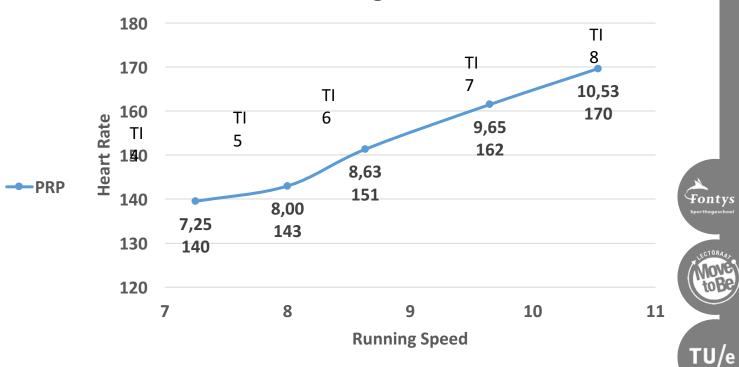
# Running Training schedule

- 20 sessions, 3 test sessions for initial PRP
- Intensity level is scheduled, running speed and heart rate are personalized through PRP



### Personalized feedback

- According to Personal Running Profile
- Actual monitoring of heartrate



Personal Running Profile

## Feedback during running

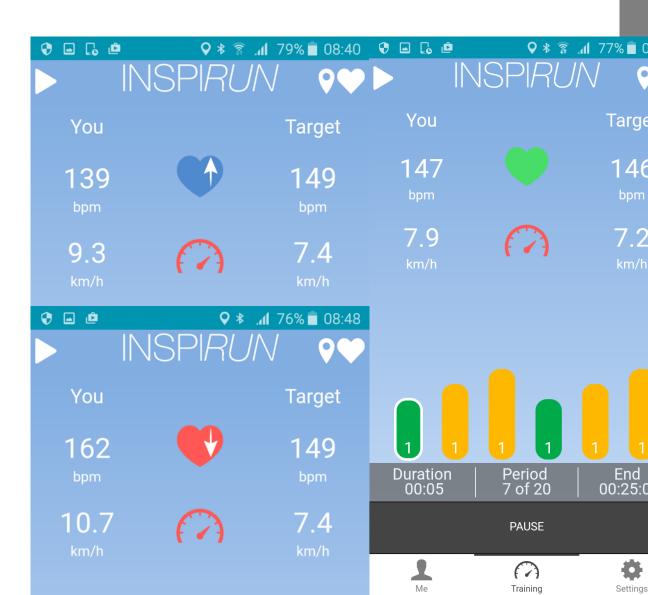
• Running speed and heartrate

()))

- Visual

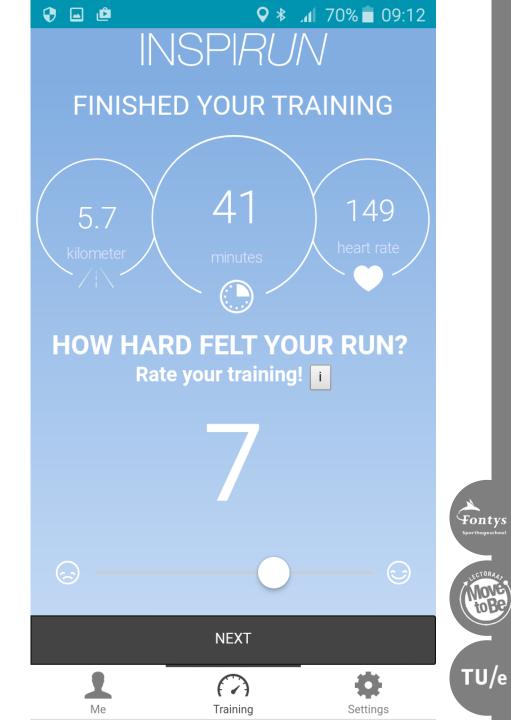
- Beep I Beep II

- Spoken instructions
  - 'Speed up a little...'
  - 'Slow down...'



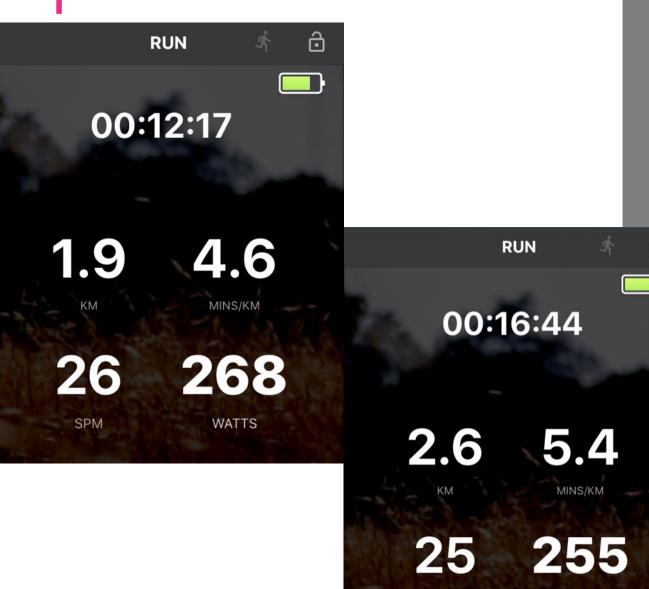
### Feedback after sessions

- Summary of the run
  - Distance
  - Minutes
  - Avg heart rate
  - Avg speed
- Compliancy score
  - Speed
  - Heartrate



### Other Feedback examples Stryd Running





1000

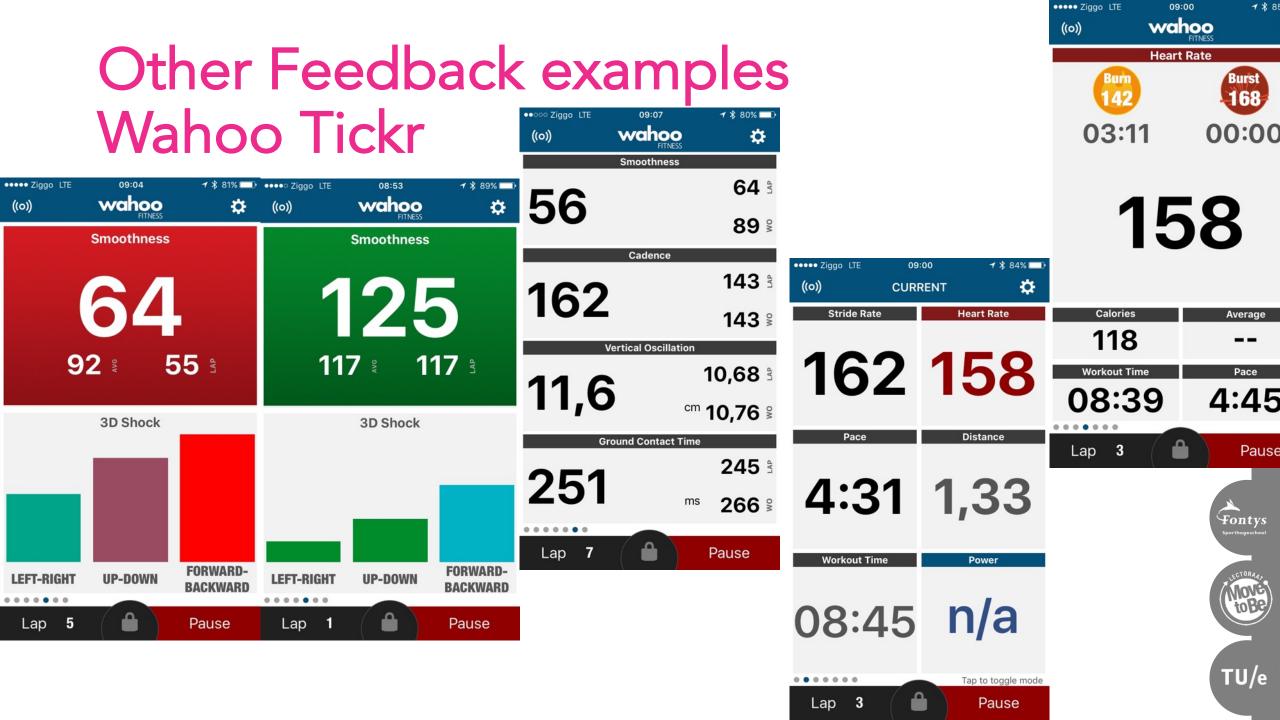
SPM

WATTS

### Other Feedback examples Garmin Run







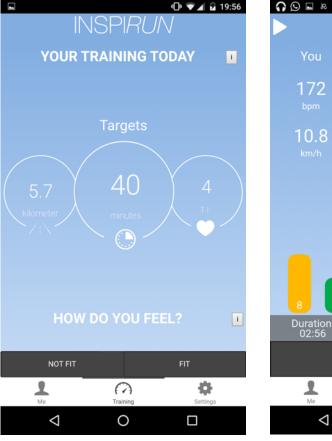
### Thank you for your attention!



j.goudsmit@fontys.nl @JosGoudsmit

mark.janssen@fontys.nl

@MA\_Janssen





TU/e

toBe

0.00 %

0.00 %

0.00 %

0.00 %

0.00 %

0.00 %

\$

Settings

	bpm 7.0 km/h	1 2	3 4	5 6	<ul> <li>♀</li> <li>♀</li> <li>♀</li> <li>You</li> <li>1 7 0</li> </ul>			
		Time	Speed	•	172 <sub>bpm</sub>	3 2	1 7	2 7
		2 minutes	8.0 km/h 7.0 km/h	125 117	10.8 km/h	Speed	<u> </u>	Compliance
		1 minute	10.0 km/h	117		7 4.7 km/h	156	0.00 %
		1 minute	7.0 km/h	117		<b>8</b> 11.5 km/h	177	0.00 %
		1 minute	10.0 km/h	144		9 4.7 km/h	155	0.00 %
		1 minute	7.0 km/h	117		<b>10</b> 13.5 km/h	179	0.00 %
2 10	2 10	1 minute	10.0 km/h	144		11         5.0 km/h           12         9.0 km/h	178	0.00 %
Period	End	1 minute	7.0 km/h	117		BACK	103	NEXT
5 of 10	End 00:28:35	BACK	STA	RT		BACK		_
PAUSE		1	$\bigcirc$	•		Me	Training	Settings
		Me	Training	Settings		$\triangleleft$	0	
$\bigcirc$	•				8 2			
Training	Settings				Duration 02:56	Period 6 of 12 PAUSE	Move	to Be

#### Contact

j.goudsmit@fontys.nl @JosGoudsmit

- Partera