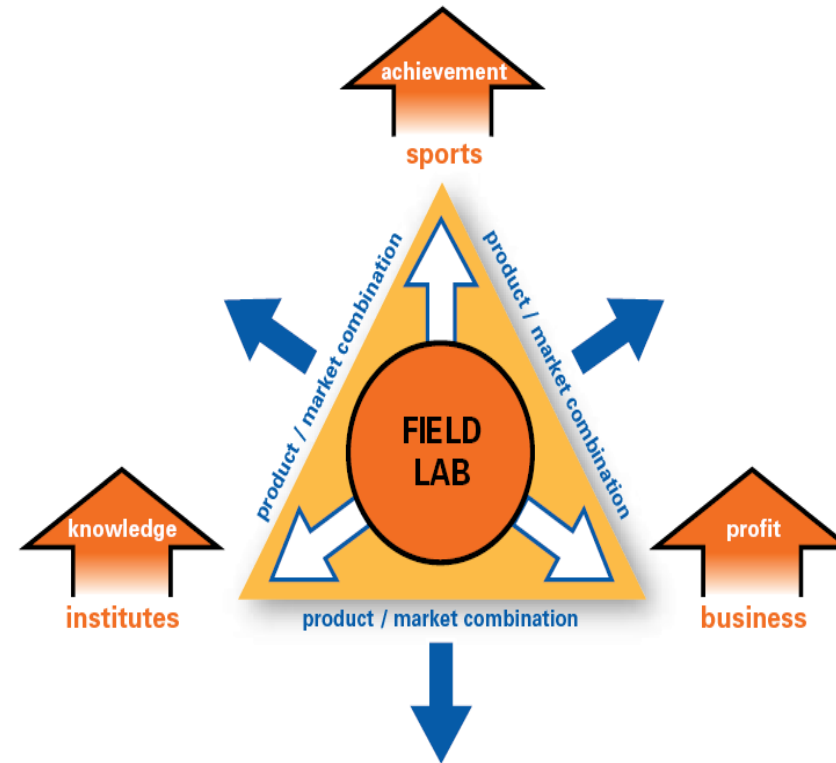




ProFit EU Fieldlabs

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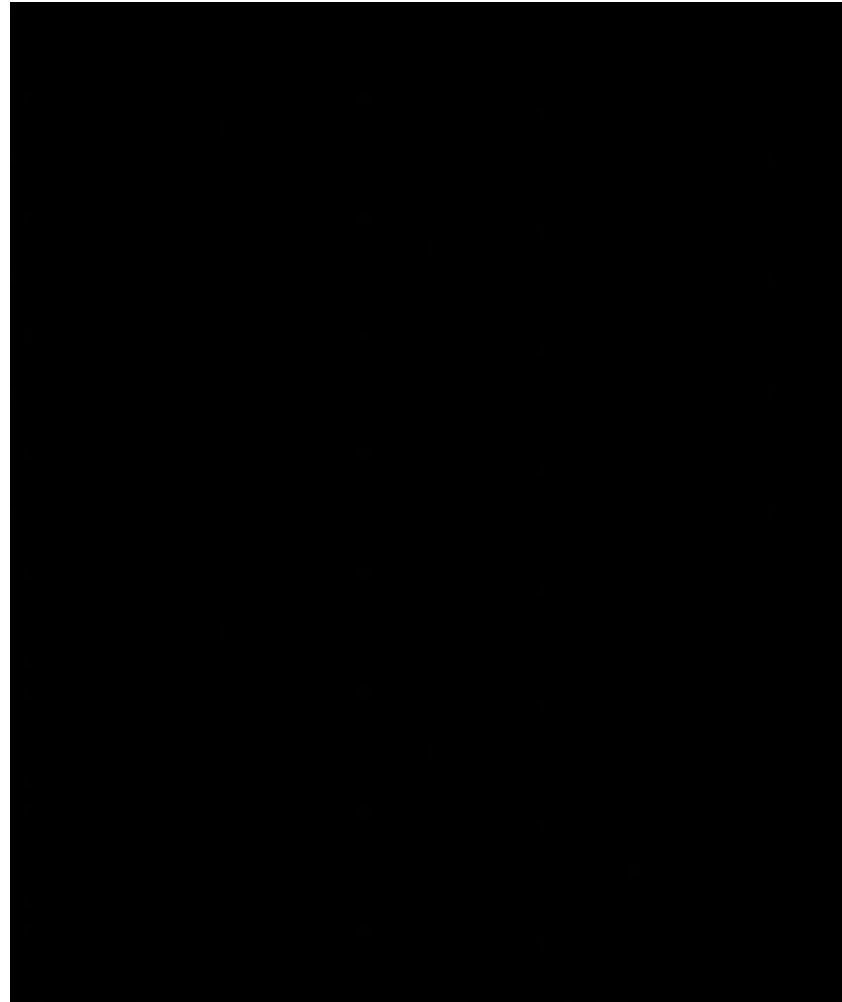
An opportunity
for international cooperation
in sports innovation

Rationale

- The world around us is changing fast.
- Challenges – Health-Societal-Economic

- How can we stay healthy?
- How can we keep vitality in our ageing population?
- How can we make our mobility more sustainable and efficient?

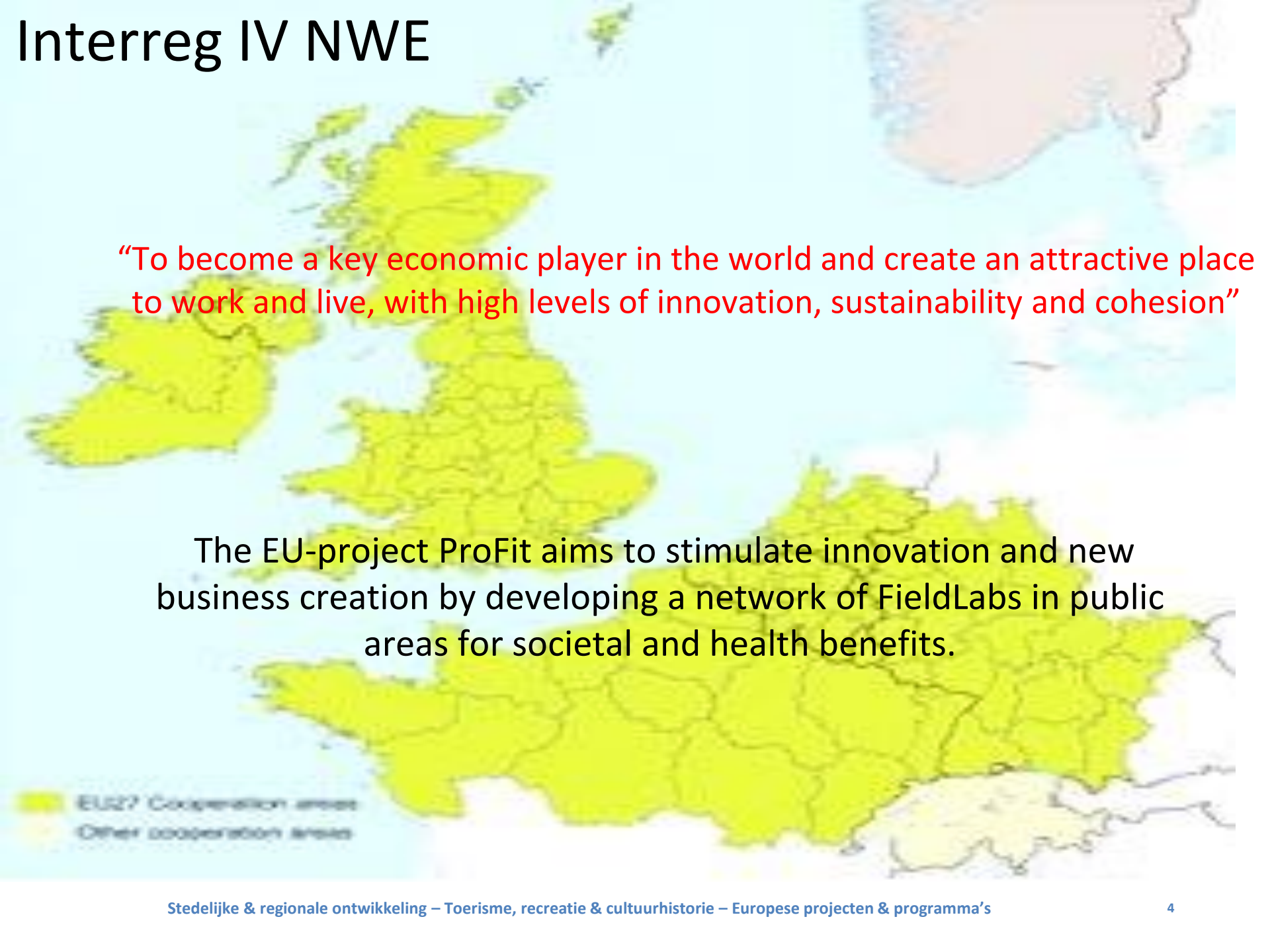
- These are the kinds of challenges that compel us to be creative and effective.



Interreg IV NWE

“To become a key economic player in the world and create an attractive place to work and live, with high levels of innovation, sustainability and cohesion”

The EU-project ProFit aims to stimulate innovation and new business creation by developing a network of FieldLabs in public areas for societal and health benefits.



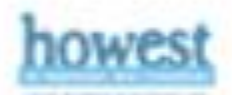
■ EU27 Cooperation areas
■ Other cooperation areas

Fieldlab
sport innovation and stimulation

ProFit



Eindhoven
leading in technology



Lead partner



Sports and Technology

Cities

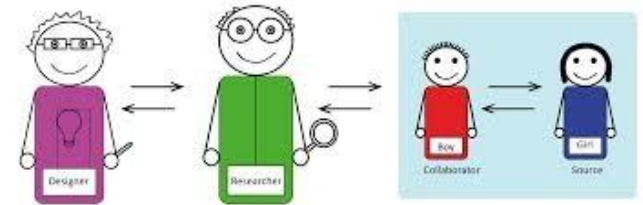


Universities



Outline of activities

Assessing user needs: In five cities, IPAQ, QOLI – Baseline, demographics for competition and impact.



Co-creation: developing products, services, prototypes, events, evaluation and feedback

Acquiring data (gamification and monitoring): movement patterns, usage patterns, Physical Activity Data

Achieve network of cities designed to move, community engagement, place management.



Location

Innovating for Health and Wellbeing



Innovating for Health and Wellbeing



Co Creation - Consultation



Product Development - Competition

Innovative
throw and catch sports
game



Cone 2020
Electronic ball trainer



OptiTrainer Running
electronic pacing system with
LED's along a track.



International Competition

Yalp Memo

Improve PA & Social Inclusion



Testing

- Usage over time compared to weather and events
- Monitoring device testing
- Observation - Parent Interaction and Physical Activity
- Product Development
- Child Led PA (impact of no instructions)

Abstract

Purpose: To objectively measure the physical activity levels (PAL) of parents at the traditional play park compared to the interactive gaming play park at the Loughshore play area, Jordanstown. Regular PA is an important component of a healthy lifestyle, with its primary role of prevention of chronic diseases and death. Disturbing trends of adult obesity within Northern Ireland (NI) have been rising over the last number of years and this is why PA is important now more than ever. **Methods:** The Performa Sport Data App was used to objectively measure the PAL of 10 male and 10 female parents for 10 minutes in both play parks. **Results:** Overall parents were more physically active in the traditional park compared to the interactive gaming park however, the intensity of PA was higher for both males and females in the interactive. **Conclusion:** Although parents spent less time in the interactive gaming play park data indicated that the level of intensity was greater, therefore being more beneficial to the parents (Taylor, Macpherson, Spears, & Weston, 2015).

Introduction

- The latest figures within NI show only 30.5% of the adult population (18-64 years) achieved the PA recommendations (Donnelly, 2011).
- Physical inactivity is a major health concern. Adults are becoming increasingly overweight, putting their health at greater risk of high blood pressure, coronary heart disease and cancer (Drenowatz, Jakicic, Blair & Hand, 2015).
- As little as 30 minutes, five days per week at a moderate intensity is the recommendation for adults to achieve the necessary health benefits (World Health Organisation, 2010).
- This lack of PA may be due to busy lifestyles, stressful jobs, or even parenthood.
- Parenthood is a major life-changing event that has the potential to affect levels of PA. One reason being due to lack of time.
- During childbearing years there is a decrease in PA and a subsequent increase in obesity (Nielsen, Wraae, Brixen, Hermann, Andersen & Hagen, 2006).
- Previous research into the relationship between parks and PAL typically concentrated on children. Evidence from these studies highlighted increased PAL (Maller, Townsend, St Leger, Henderson-Wilson, Pryor, Prosser, & Moore, 2009).
- Ulster University along with Newtownabbey Borough Council applied for funding from Europe to construct an interactive gaming play area at the Loughshore Play Area.
- A gap in the literature exists as previous studies investigated the PAL of children in parks.



Figure 1. Traditional Play Park



Figure 2. Interactive Play Park

Methods

- 10 females and 10 males were randomly selected.
- Inclusion criteria - participants had to be 18 years of age or older and had to be the parents of the children they were with during the time of data collection.
- Written consent and a questionnaire was completed prior to the observation
- An observational tool was designed using the App "Performa Sport Data" (Turley, 2008) (Fig 3).
- Activities included walking, running, pushing, pulling, standing and sitting.
- Participants were observed from a distance one at a time for 10 minutes in each play park. Activity duration and intensity levels were recorded.
- Data was analyzed using the Statistical Package SPSS. The significance between two variables were conducted using a Paired Samples T-Test. Confidence limits $P < 0.05$ was measured as significant. Descriptive statistics and percentages from the questionnaires were used to summarise the data.



Figure 3. Shows two screen shots from Performa Sport Data App.

Results

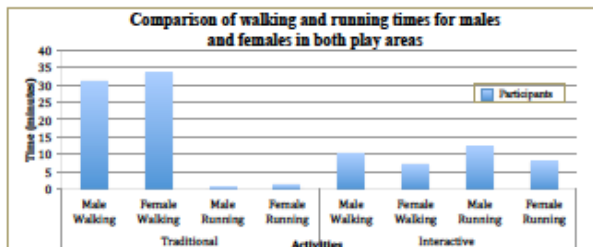


Figure 4. Total time spent in minutes engaged in walking and running for both the traditional and interactive play park.

- Participants were more physically active (67minutes 15 seconds) in the traditional play park compared to the interactive play park (38minutes 15 seconds).
- In the traditional play park all parents stayed for the full 10 minutes.
- Only 30% of parents stayed for the full 10 minutes in the interactive play park possibly obscuring the results.
- Females were more physically active than males in the traditional play park. Males were more physically active than females in the interactive play park.
- Mothers spent more time running in the tradition play park (1minutes 30 seconds) compared to (55 seconds) of males. (Fig 5)
- Males spent (12.15 minutes) running in the Interactive compared to (8 minutes) of females at a higher intensity level. (Fig 5)
- 45% of the participants had a dog present and found 40% of these had a higher PAL.

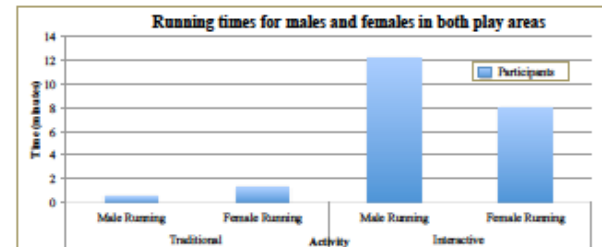


Figure 5. Total walking times in minutes for both play areas for male and female.

Conclusion

- Evidence of adult obesity is on the rise and it is important now, more than ever that adults engage in physical activity at any possible opportunity they have.
- Play parks provide an ideal location for parents and children to be physically active together.
- It can be concluded that parents do engage in PA at both play parks. PAL varies for males and females within both parks and is dependent on the number of children present, their age and the individual themselves.
- This is one of the first studies to 1) objectively measured the PAL of parents at a play park 2) compare the PAL of parents in a traditional play park compared to an interactive play park.

Recommendations for Further Research

- Controlled study into the PAL of adults using heart rate monitors and/or accelerometers.
- Larger sample size over a longer period of time.
- Understanding seasonal factors that affect play park usage throughout the year.
- Ensure there is no park benches placed near the interactive gaming park as this encourages people to sit and watch, rather than take part.

Acknowledgements

I would like to thank everyone that took time to participate in this study. My thanks also to Prof Eric Wallace and Kyle Ferguson from The Ulster University for their continual support throughout the study.

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Monitoring

FieldLabs facilitate real time provision of quantitative and qualitative data on user experiences within the public play area.

Data is generated by fixed and mobile monitoring systems capturing information on users' movement and interaction with the equipment and each other.

Monitoring software developed to allow user feedback.



Resources

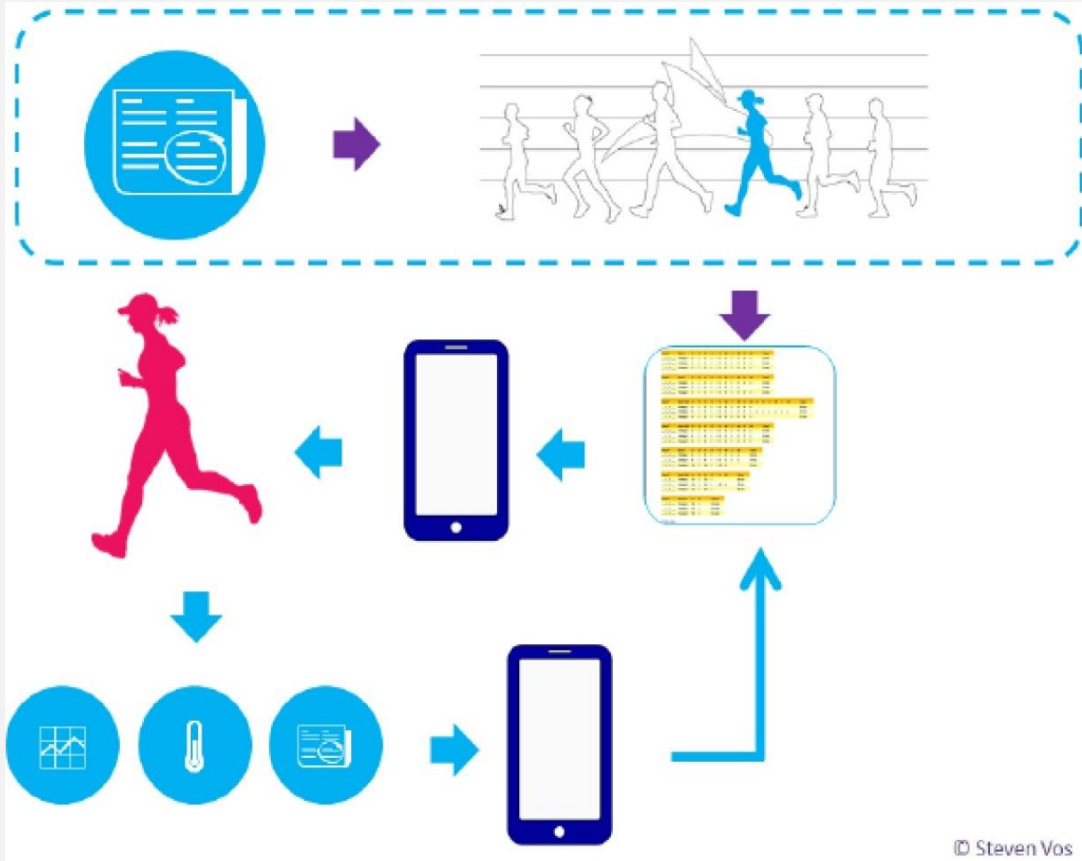


- Ipad
- Performa Sports App
- Observation template
- Validated questionnaires
- Bioharness, Fitbit and Mobile phone;
- People counter post
- Yelp Memo data recorder
- Polar Team App



Running High Tech Project

Fontys – Mobile data pillars categorisation



- App with profile builder
- Assigned profile group
- Personal training schedule
- Targeted offers
- Cameras and pillars placed on course
- Connection feedback to app
- All user data stored for individual and group comparison
- City collaborations

© Steven Vos



Outputs

- Innovations to help people move
- New products on the market
- Return on investment measures
- Evidence of 'what works'
- Evidence of impact on people's lives
- Research Papers and Conferences
- Further Collaborations – Vital Cities

The city designed to move



Thank You

Questions

