



## Welcome to Session 18

# The nature experience: behaviour change, conservation and technology



# Keynote & Introduction

Julia Townsend, Enviro-Strategy





Behavior Design is the process and science of encouraging new habits and change by design.









# Fogg Behavior Model

$$B = MAT$$





Motivation

Ability



High

Motivation

Low

Hard

Easy

Ability





High

Motivation

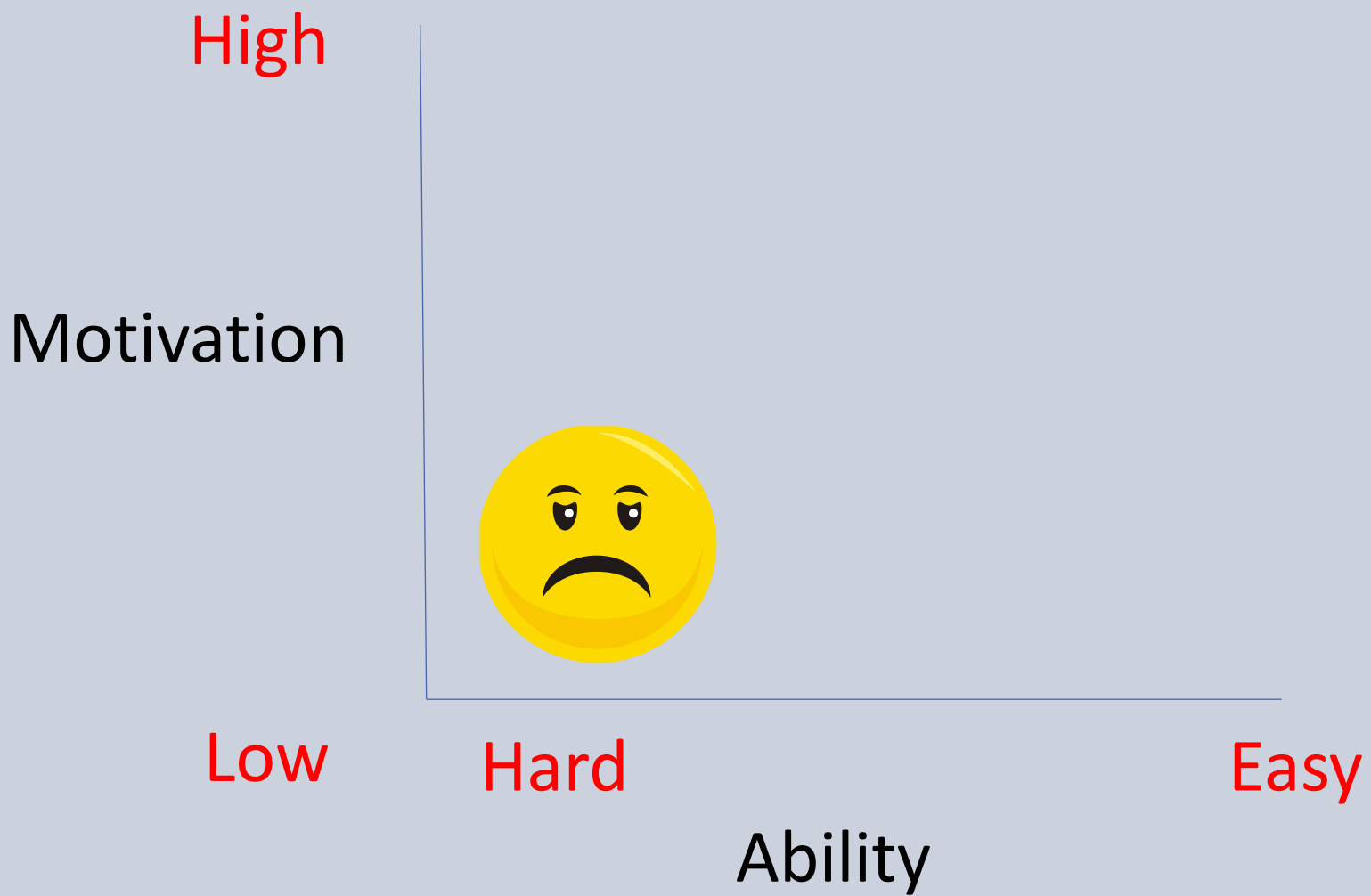
Low

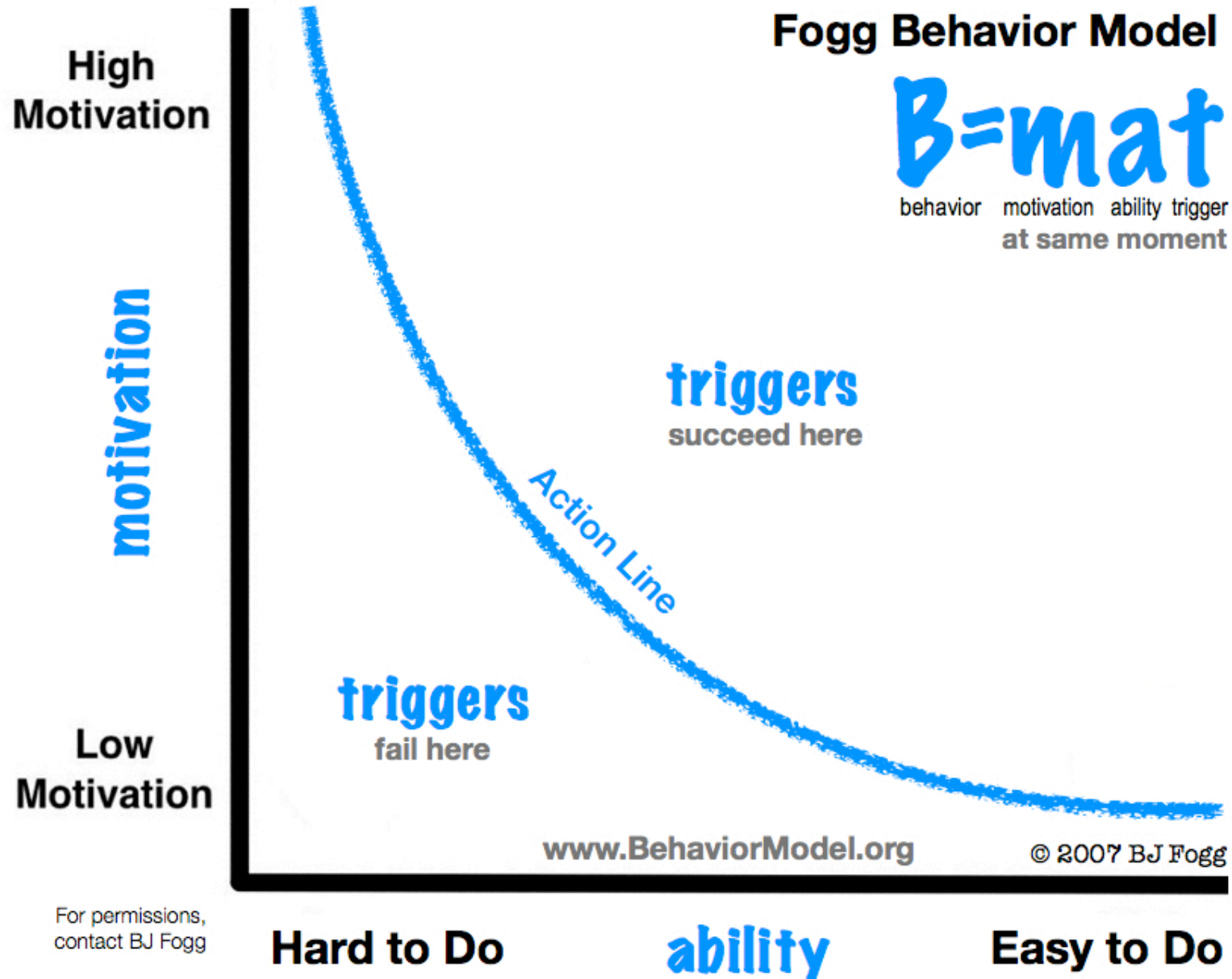
Hard

Easy

Ability







For permissions,  
contact BJ Fogg



# Fogg Behavior Grid

BehaviorGrid.org

For permission to use, contact BJ Fogg	<b>Green behavior</b> Do <u>new</u> behavior, one that is <u>unfamiliar</u>	<b>Blue behavior</b> Do <u>familiar</u> behavior	<b>Purple behavior</b> <u>Increase</u> behavior intensity or duration	<b>Gray behavior</b> <u>Decrease</u> behavior intensity or duration	<b>Black behavior</b> <u>Stop</u> doing a behavior
<b>Dot behavior</b> is done <u>one-time</u>	<b>GreenDot</b> Do new behavior one time <i>Install solar panels on house</i>	<b>BlueDot</b> Do familiar behavior one time <i>Tell a friend about eco-friendly soap</i>	<b>PurpleDot</b> Increase behavior one time <i>Plant more trees and local plants</i>	<b>GrayDot</b> Decrease behavior one time <i>Buy fewer boxes of bottled water</i>	<b>BlackDot</b> Stop doing a behavior one time <i>Turn off space heater for tonight</i>
<b>Span behavior</b> has <u>duration</u> , such as 40 days	<b>GreenSpan</b> Do new behavior for a period of time <i>Carpool to work for three weeks</i>	<b>BlueSpan</b> Do familiar behavior for a period of time <i>Bike to work for two months</i>	<b>PurpleSpan</b> Increase behavior for a period of time <i>Take public bus for one month</i>	<b>GraySpan</b> Decrease behavior for a period of time <i>Take shorter showers this week</i>	<b>BlackSpan</b> Stop a behavior for a period of time <i>Don't water lawn during summer</i>
<b>Path behavior</b> is a <u>permanent change</u>	<b>GreenPath</b> Do new behavior from now on <i>Start growing own vegetables</i>	<b>BluePath</b> Do familiar behavior from now on <i>Turn off lights when leaving room</i>	<b>PurplePath</b> Increase behavior from now on <i>Purchase more local produce</i>	<b>GrayPath</b> Decrease behavior from now on <i>Eat less meat from now on</i>	<b>BlackPath</b> Stop a behavior from now on <i>Never litter again</i>

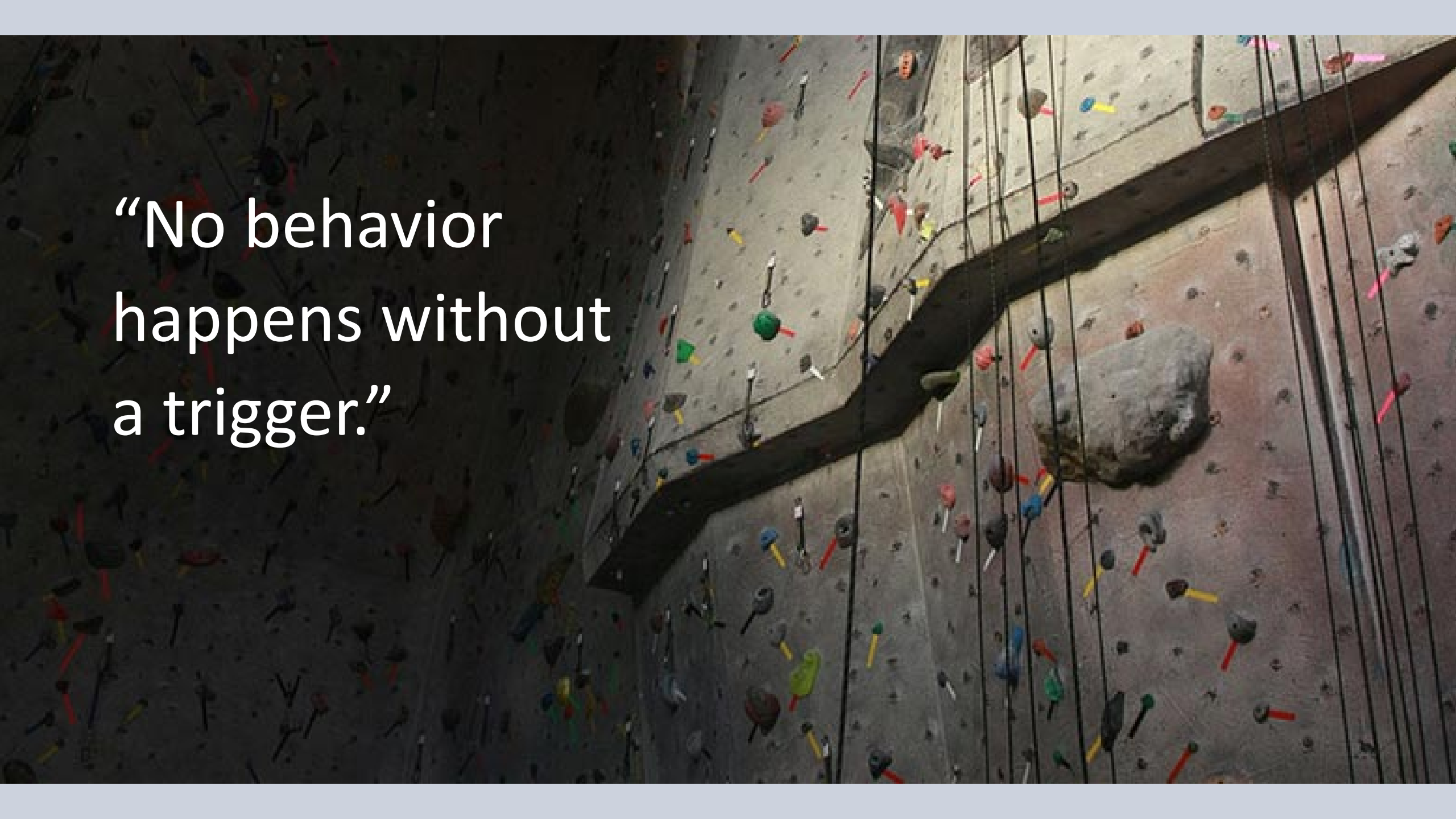


# The Importance of Triggers





“No behavior  
happens without  
a trigger.”



**Hot triggers...**

can be acted  
on in the  
moment.







Triggers in your life?



**Cold triggers...cannot be acted  
on in the moment.**



WHEN IT'S TIME TO RETIRE YOUR  
OLD JEANS GRACEFULLY...

## RECYCLE YOUR OLD PAIR & SAVE ON A NEW PAIR



J.CREW x  
BLUE JEANS GO GREEN™  
#JCREWDENIM

FROM 8/21 TO 9/30, GET \$20  
TOWARD YOUR NEXT J.CREW  
DENIM PURCHASE IN STORES  
WHEN YOU BRING IN AN OLD  
PAIR OF JEANS.\* OUR FRIENDS  
AT BLUE JEANS GO GREEN™  
WILL RECYCLE THEM INTO  
ECO-FRIENDLY ULTRATOUCH™  
DENIM INSULATION FOR  
COMMUNITIES IN NEED.

FIND A STORE >

\*Offer valid on purchases of J.Crew branded jeans in J.Crew stores from August 21, 2014, through September 30, 2014, when you contribute one or more pairs of old jeans to the Blue Jeans Go Green™ denim recycling program. Contribution of old jeans and purchase of new J.Crew branded jeans must occur at the same time in order to receive discount. Offer not valid in the 769 Madison Avenue store, crewcuts stores, Ludlow Shops, the Liquor Store, J.Crew Factory stores, at jcrew.com or on phone orders. Offer cannot be applied to previous purchases and cannot be redeemed for cash or used in combination with any other offer. Offer not valid on purchases of Collection styles, Wallace & Barnes styles, Boiet



“Put hot triggers in the path of  
motivated people.”

-BJ Fogg





# Ability

Time

Money

Physical Effort

Brain Cycles

Social Deviance

Non-Routine



#1 Focus on  
behaviors







#2 Make it easy







### #3 Show the behavior you want to see

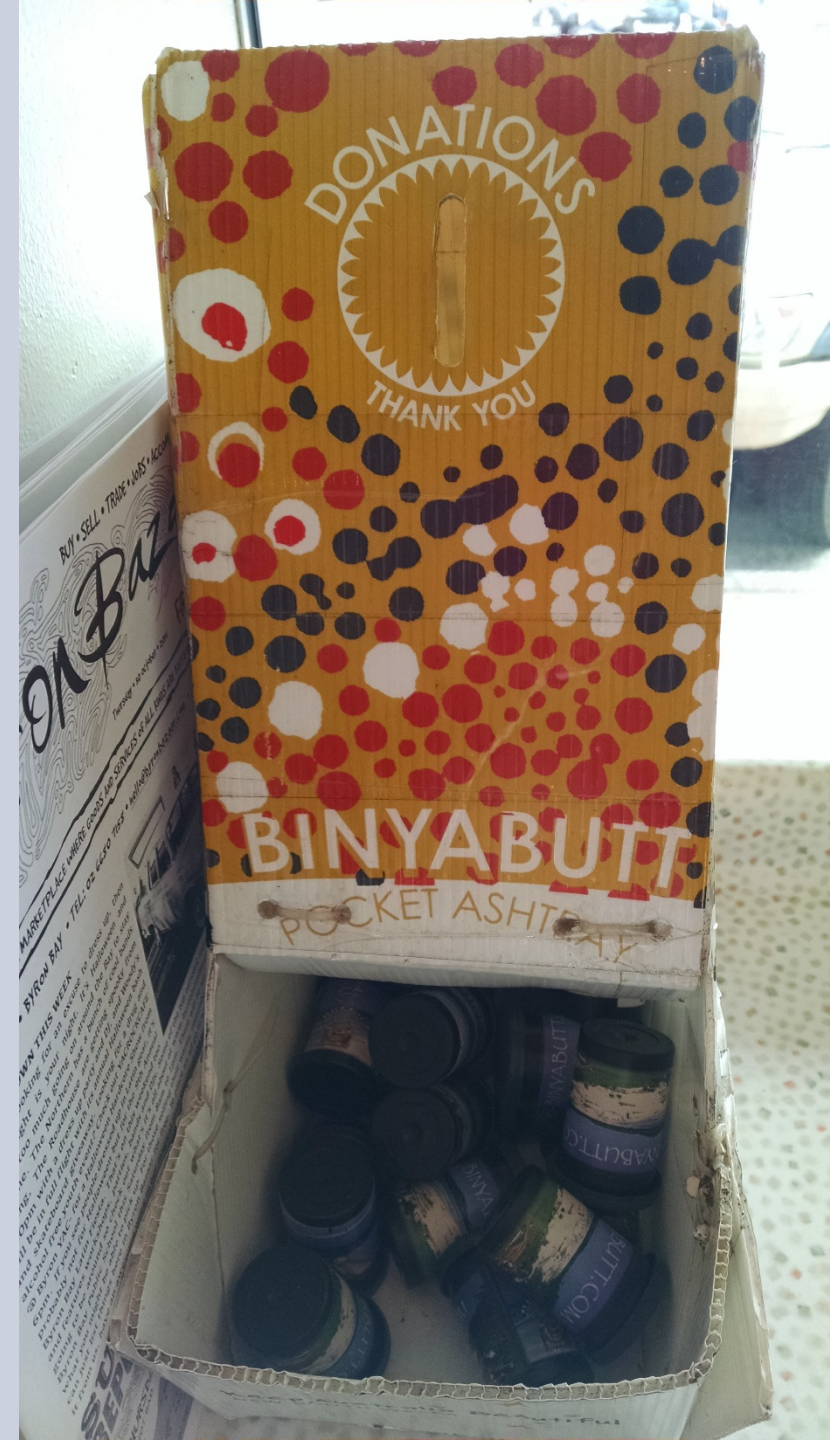


Surfrider Santa Cruz











#1 Focus on behaviors

#2 Make it easy

#3 Show the behavior you want to see

#4 Check out Tiny Habits



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#BehaviorChangeWPC  
#BehaviorDesign  
@JT0wnsend

[www.enviro-strategy.com](http://www.enviro-strategy.com)



# GROUP DISCUSSION







Disruptive technologies for  
active engagement with nature  
--a shot in the arm for health

Eileen McNeely  
Harvard School of Public Health  
Center for Health and the Global Environment



# Inactive engagement: current state of health care



<http://www.health.nsw.gov.au/eHealth/Publications/ehealth-blueprint.pdf>

# Wearable sensors – a chance to reshape our engagement with nature and our health?

- Learning about our movement in nature
- Sharing our impressions
- Understanding the impact of contact with nature on our health



[http://cdn2.mos.techradar.futurecdn.net/////art/other/Google/Project Glass/glass\\_photos4-578-80.jpg](http://cdn2.mos.techradar.futurecdn.net/////art/other/Google/Project%20Glass/glass_photos4-578-80.jpg)



# Wearables allow us to learn about our movement in nature



[https://lh3.googleusercontent.com/TipSdosh4M\\_VV5vXFGIxsdbODffAlqc8nYZexJ8gHUI2ChtCZAKS\\_Vof4fHDIolPC9Jx-o40d6hW3Tzbj1ixkixCYTs9-CylruXJF4Fi6LaG0fVfmEGpJP8N](https://lh3.googleusercontent.com/TipSdosh4M_VV5vXFGIxsdbODffAlqc8nYZexJ8gHUI2ChtCZAKS_Vof4fHDIolPC9Jx-o40d6hW3Tzbj1ixkixCYTs9-CylruXJF4Fi6LaG0fVfmEGpJP8N)

Wearables offer us a record of activity for future reference and goal-setting





# Wearables provide a means to share our impressions and inspire others



[http://www.adweek.com/files/imagecache/node-detail/news\\_article/google-glasses-hed-2013\\_0.jpg](http://www.adweek.com/files/imagecache/node-detail/news_article/google-glasses-hed-2013_0.jpg)

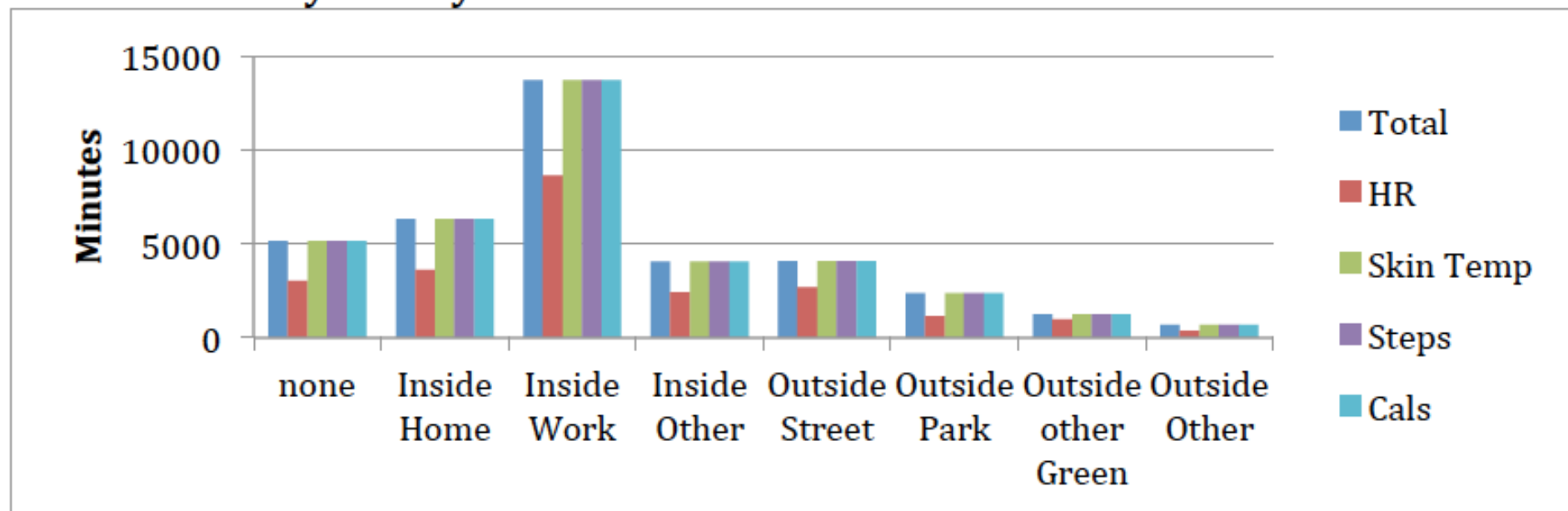
# Wearables allow us to track health indicators in real time



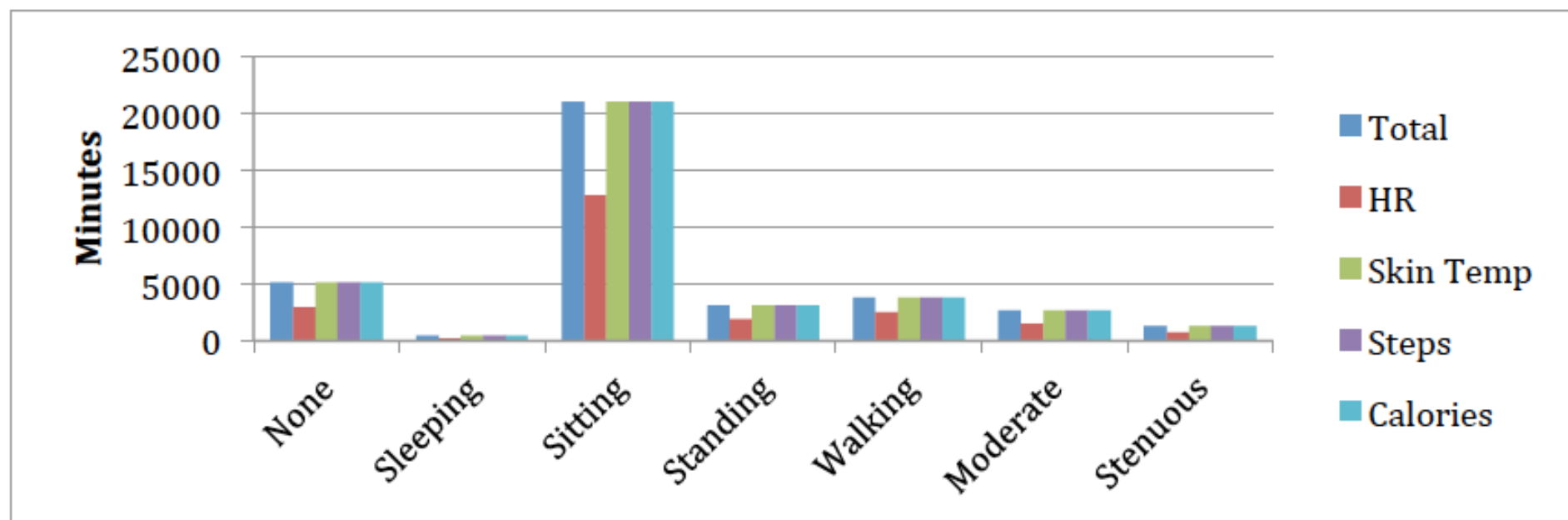
<http://www.topappsreviews.com/wp-content/uploads/2014/10/cool-technology-apple-watch-21-HD-photo.png>



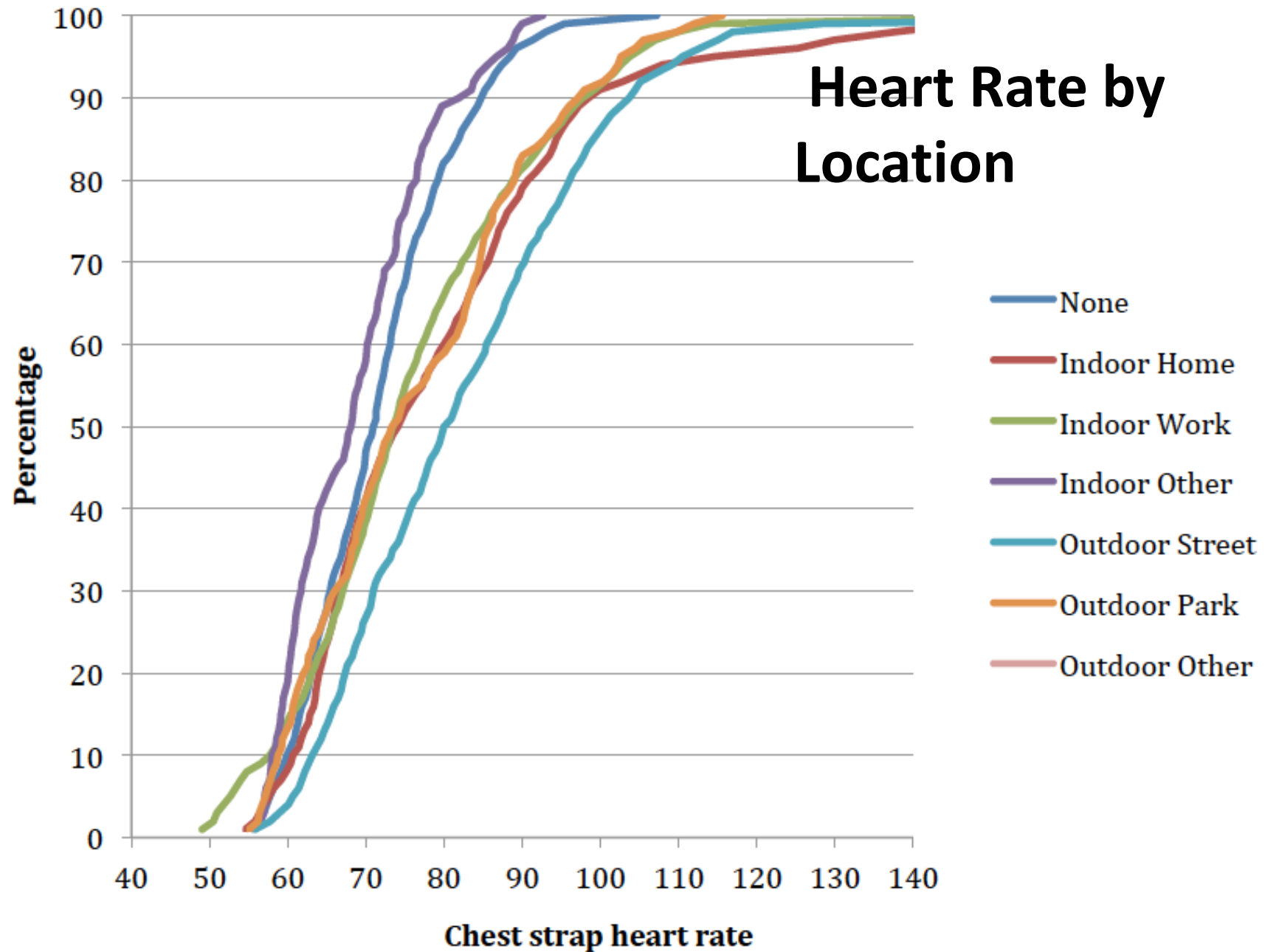
## B. Time Activity Survey – Location



## C. Time Activity Survey –Activity

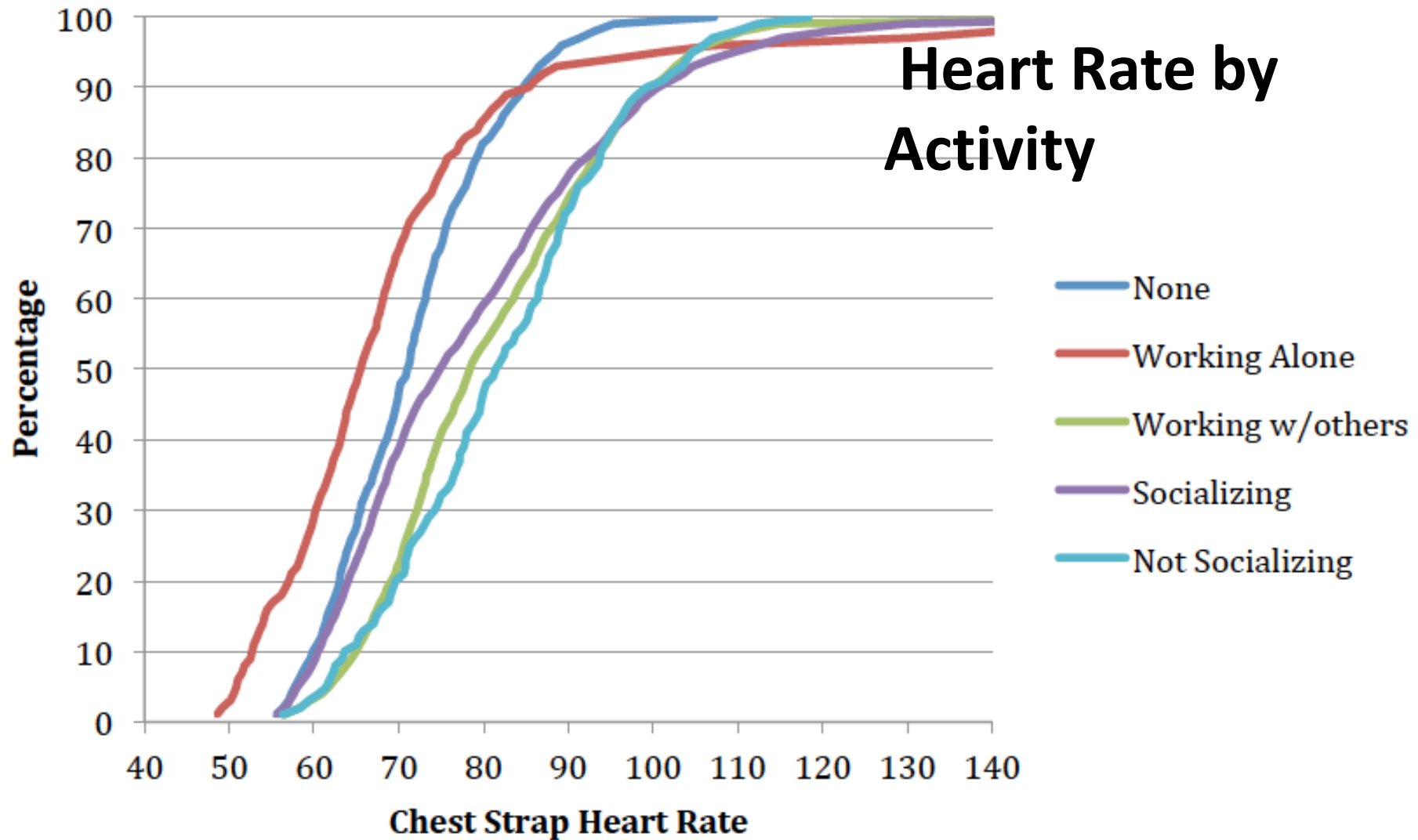


## Heart Rate by Location

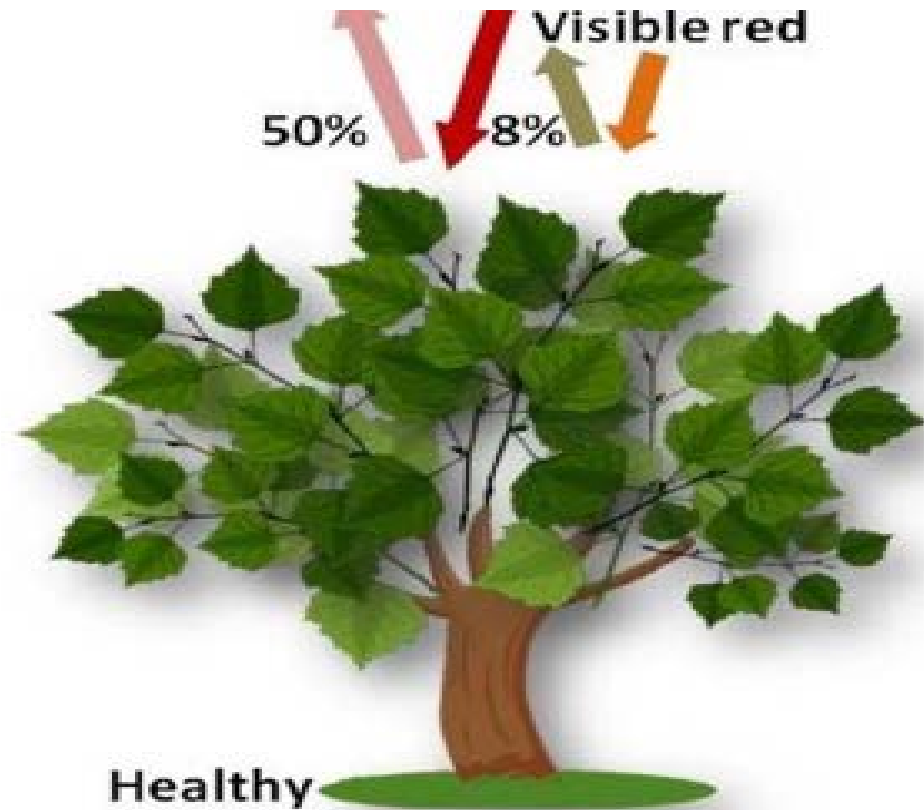




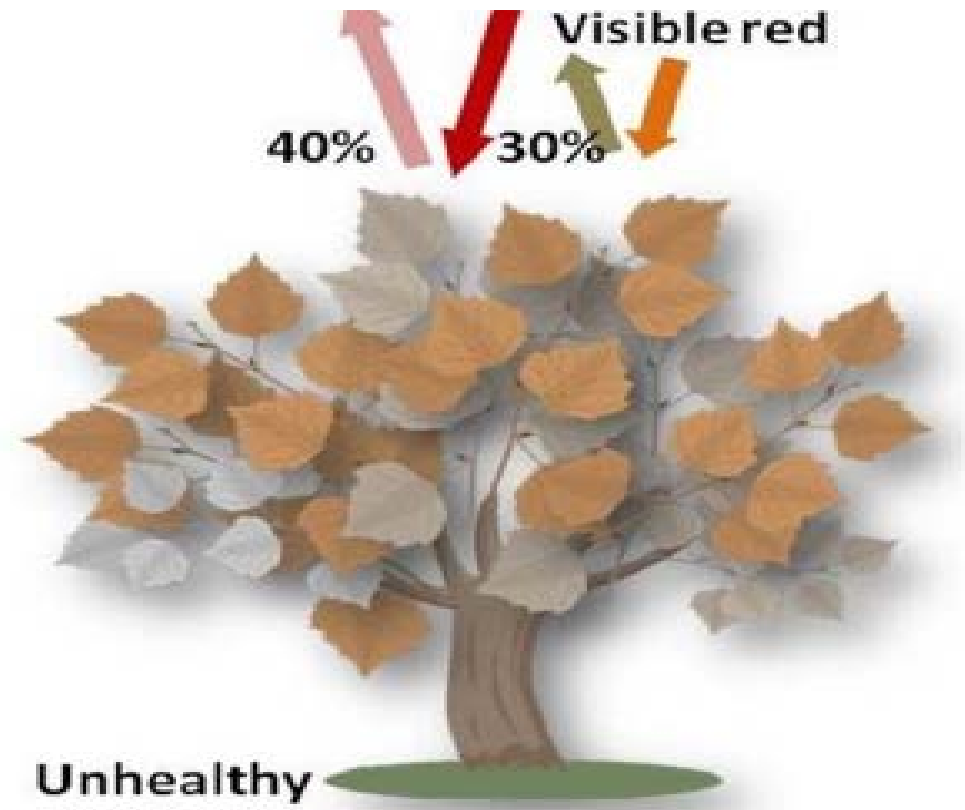
## Heart Rate by Activity



# Beyond wearables: other sensor data



$$\frac{0.50 - 0.08}{0.50 + 0.08} = 0.72$$



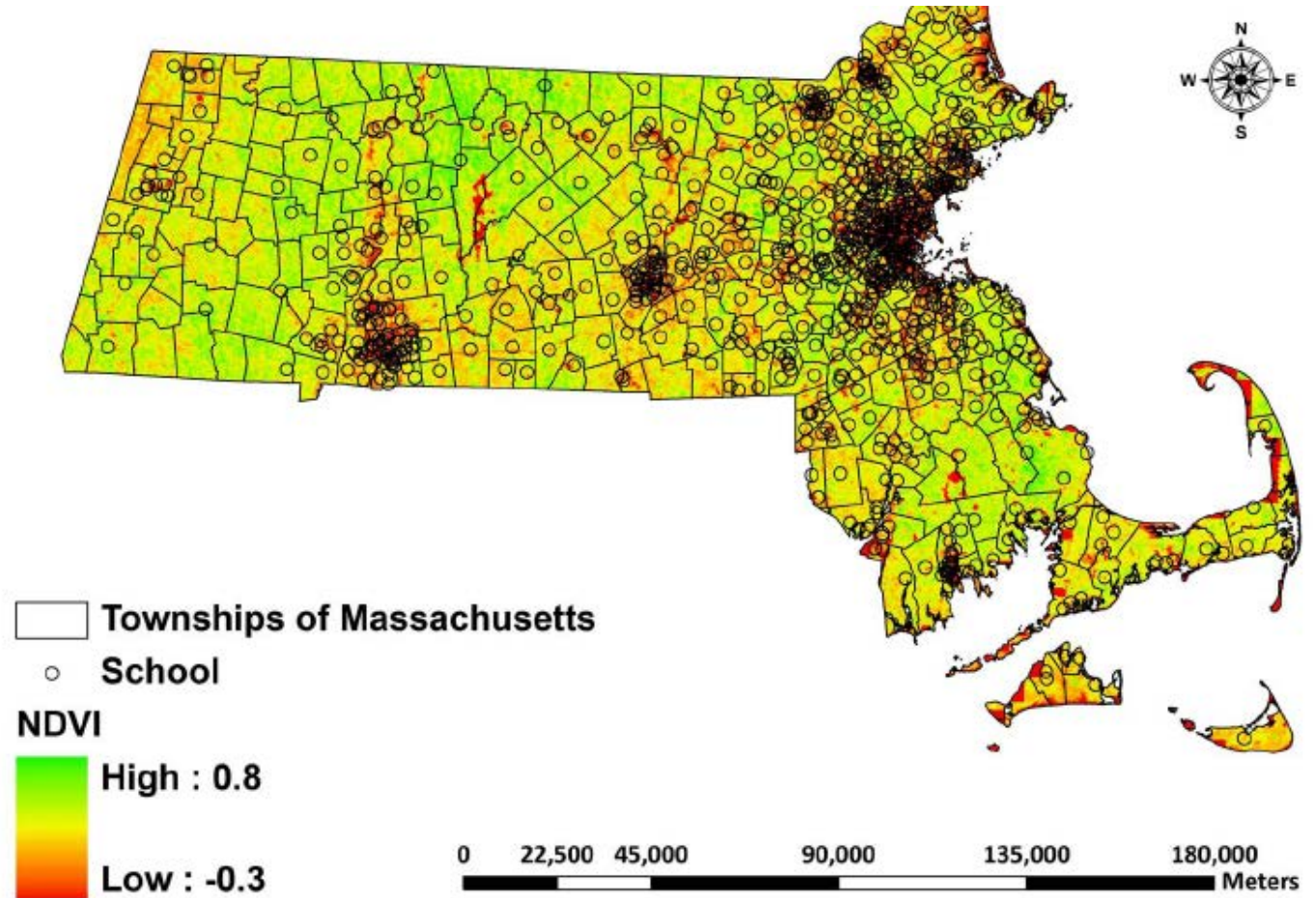
$$\frac{0.4 - 0.3}{0.4 + 0.3} = 0.14$$



# Linking Student Performance in Massachusetts Elementary Schools with the “Greenness” of School Surroundings Using Remote Sensing

Wu C-D, McNeely E, Cedeño-Laurent JG, Pan W-C, Adamkiewicz G, et al. (2014) PLoS ONE 9(10): e108548. doi: 10.1371/journal.pone.0108548

Proximity to  
“greenness”



# The promise of sensor data to affect behavior

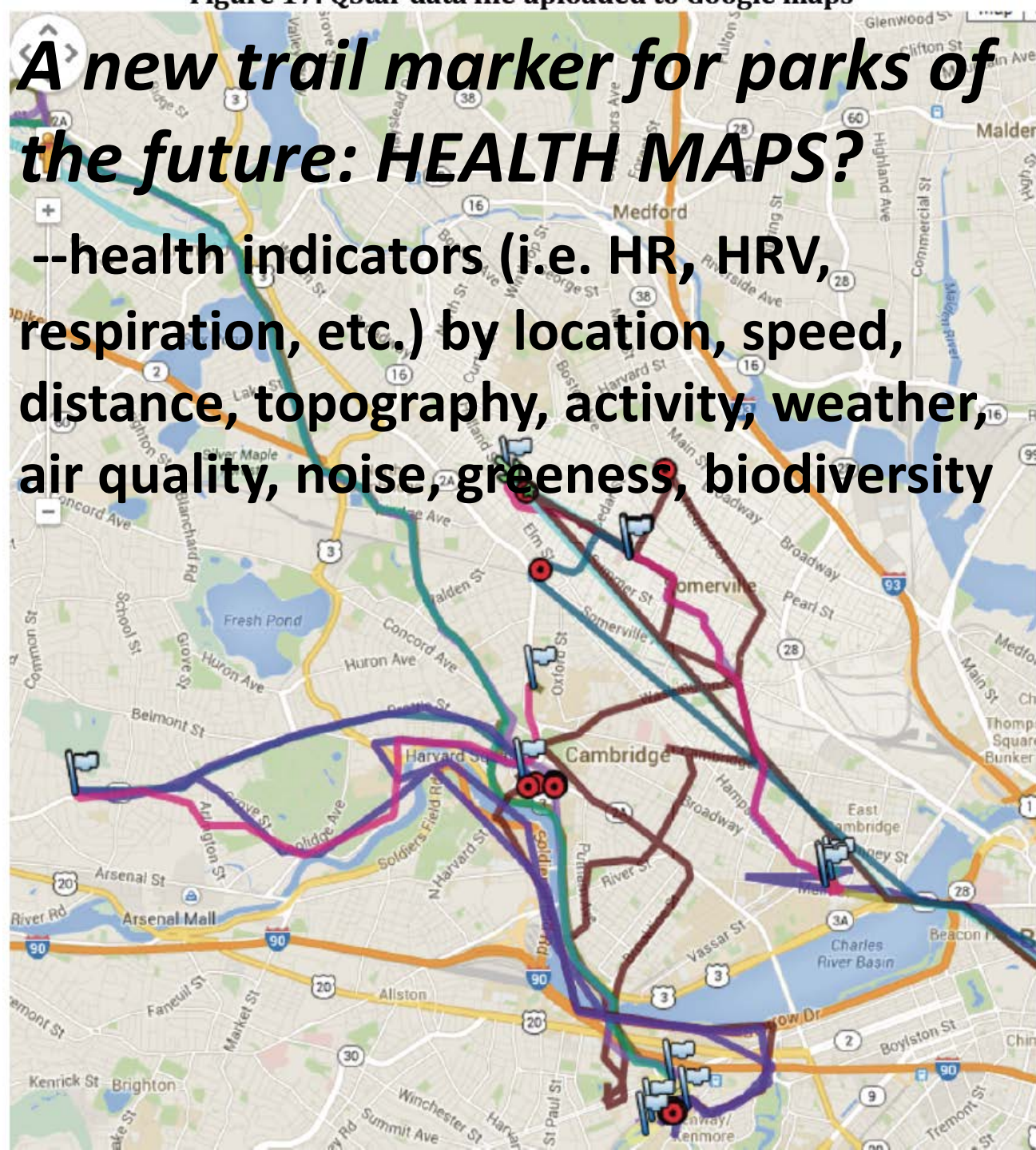
Engagement with your environment

Feedback--“coaching” healthy behaviors

Conservation/stewardship









# Healthy Habits:

The Case of Copenhagen's People-First City





First, I want to ask  
you...



# Now





1962





# Jan Gehl

Urban Design Maestro

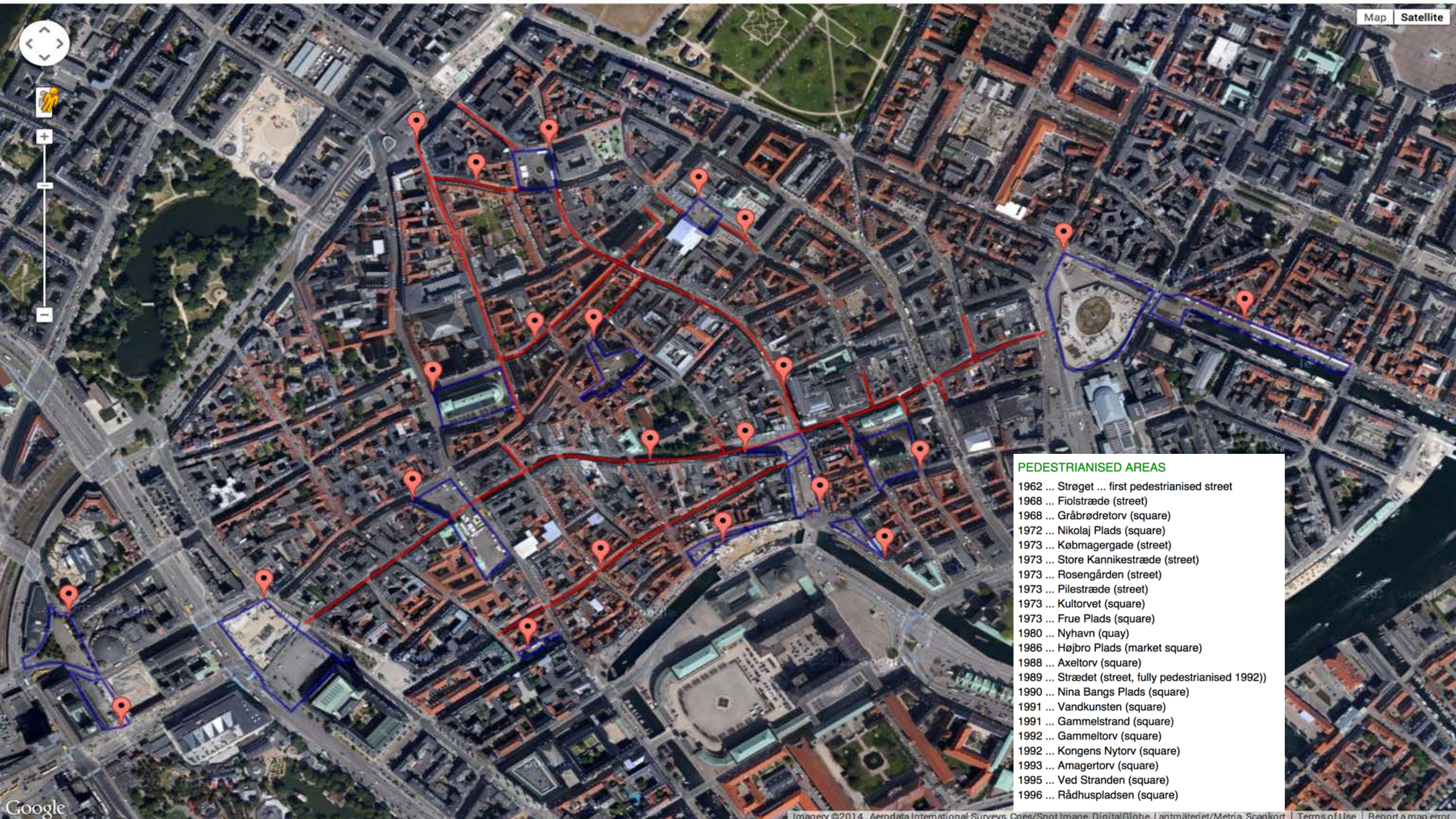


Jan Gehl starts observing  
and documenting how  
people use the new Strøget

“What attracts people to stop and linger and look, will invariably be other people.”

- Jan Gehl





### PEDESTRIANISED AREAS

- 1962 ... Strøget ... first pedestrianised street
- 1968 ... Fiolstræde (street)
- 1968 ... Gråbrødretorv (square)
- 1972 ... Nikolaj Plads (square)
- 1973 ... Købmagergade (street)
- 1973 ... Store Kannikestræde (street)
- 1973 ... Rosengården (street)
- 1973 ... Pilestræde (street)
- 1973 ... Kultorget (square)
- 1973 ... Frue Plads (square)
- 1980 ... Nyhavn (quay)
- 1986 ... Højbro Plads (market square)
- 1988 ... Axelstorv (square)
- 1989 ... Strædet (street, fully pedestrianised 1992)
- 1990 ... Nina Bangs Plads (square)
- 1991 ... Vandkunsten (square)
- 1991 ... Gammelstrand (square)
- 1992 ... Gammeltorv (square)
- 1992 ... Kongens Nytorv (square)
- 1993 ... Amagertorv (square)
- 1995 ... Ved Stranden (square)
- 1996 ... Rådhuspladsen (square)



1962-1988

2-3% less car parks every  
year



1968-1995

3x walkers on public  
streets

Now  
5000 outdoor cafe seats,  
used even during winter



Residents increasingly  
preferred cycling over driving



Now: 37% travel by bike



“This process of continual measuring, evaluating and creating new targets has embedded the values of a *people first city at every level.*”

- Gehl Architects

# Pre 2009

# New York





Pre 2009

New  
York

2009-



Melbourne

1990:  
50 outdoor on-street cafes



Melbourne

2013:  
600+ outdoor on-street cafes

Healthy (and unhealthy)  
habits can be designed!



# Thanks!

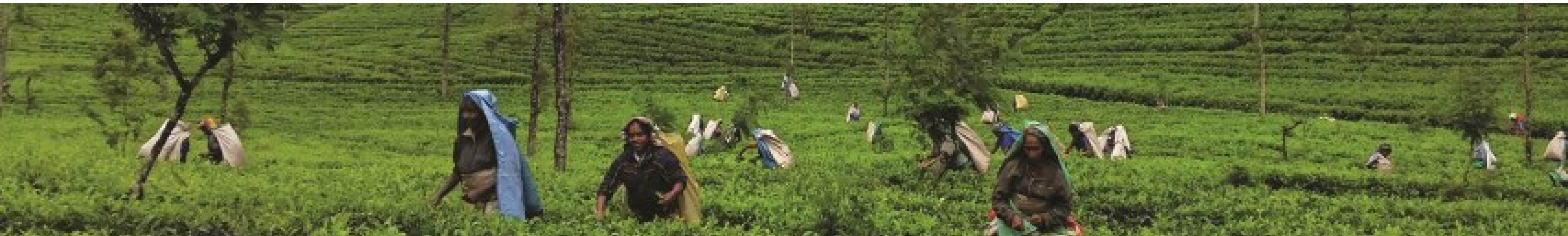
@tsungxu



## *Stay connected*

For more information on the *Healthy Parks Healthy People* approach visit [www.hphpcentral.com](http://www.hphpcentral.com)

Contribute to the Promise of Sydney at [www.worldparkscongress.org/about/promise\\_of\\_sydney](http://www.worldparkscongress.org/about/promise_of_sydney)





## *Coming up in Stream 3*

**Hall 3B1 Home Room, 3.30pm-5pm**

**Session 11:** Global environmental and health policy: a nexus for change

**Charley Room, 3.30-5pm**

**Session 15:** Volunteering in nature benefits humans and ecosystems

**Hordern Room, 3.30-5pm**

**Session 19:** The transformational power of nature-based experiences

