

Health and the Material World: *Perspectives on Prevention Research*

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We know:

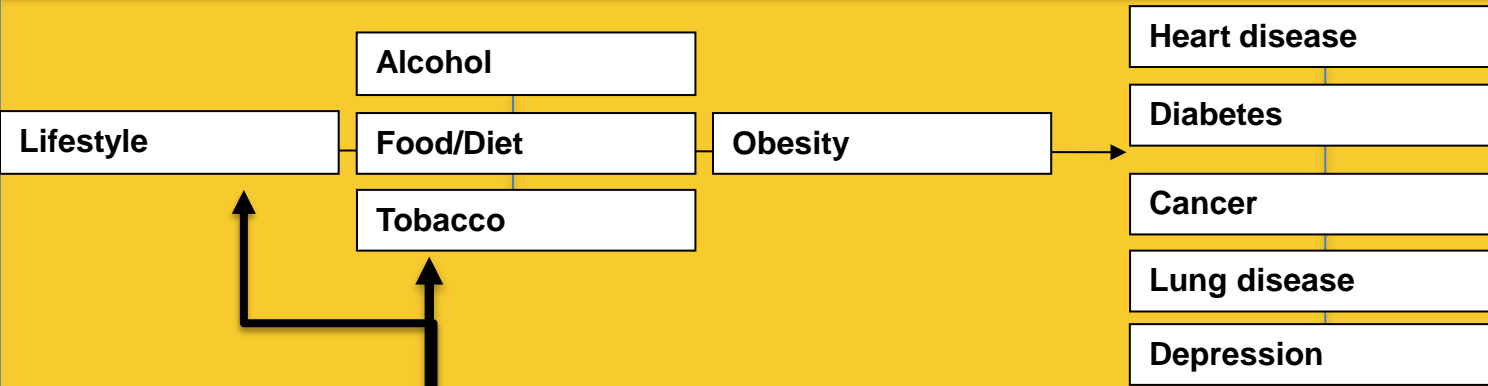


Factors in the built environment that affect our health & wellbeing

Factors	Constructs	Examples
Quality of the fabric of the physical environment	Design, construction and maintenance of buildings, the spaces between buildings and associated infrastructure	Houses requiring major repair, broken structural elements, graffiti, rubbish, vandalism, lack of recreation space, public drinking, public drug use, abandoned buildings.
Quality of the ambient environment	Lighting Noise/Acoustics Thermal quality Access to nature	Access to sunlight and windows Living near airports, neighbour noise, mould and damp. Excessive built form with no green space or no views (ie concrete jungle).
Psychological impacts of physical and ambient environment	Density Accessibility Safety and fear Way finding	Numbers of residents, crowded settings and lack of privacy or space for play inside dwellings. High-rise and numbers of floors. Crime and fear of crime as a result of urban form and lighting. Poor layout.

Health and Wellbeing

Cooper R and Boyko C, (2011) Design for Health: the relationship between Design and Non-communicable Diseases, Journal of Health Communication



Engineering, Science and Design Knowledge and Practice

Indirect

Product

Services eg public services/transport etc.

Comms eg branding advertising food, alcohol cigarettes

Place eg urban, workplace, homes

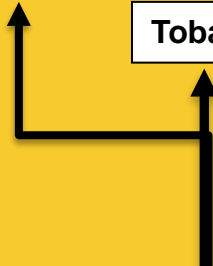
Direct

Product eg medical equipment

Services eg care pathway design

Comms eg public health or tele

Place eg hospital design



The Urban Challenges

9.3m additional urban in uk residents by 2062

in the next 15 to 20 years

30% more water

45% more energy

50 % more food

Estimates of demand require

245,000 new

homes per year

by 2050 **eight**
million aged

over 80 most will
live in cities

We do research:





**Liveable
Cities**

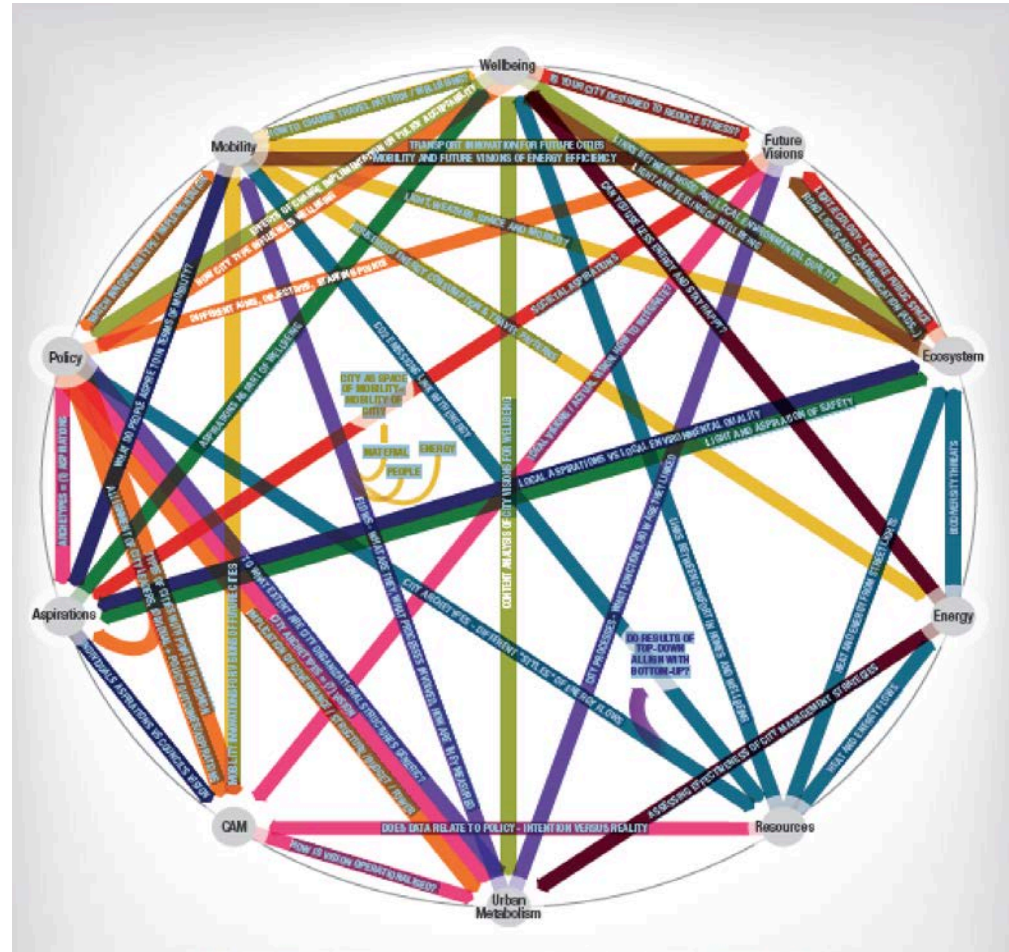
The
Little
Book of
SHARING
in the city

Christopher T. Boyle, Clare Cooper, Serena Falcini, Stephen Crane,
Nick Dunn, Rachel Cooper and the entire Liveable Cities Team

The
Little
Book of
DENSITY

A Guide to Density in Urban Environments

Rachel Cooper,
Christopher T. Boyle



The logo for 'Active Parks' features a series of seven green circles of varying sizes arranged in a curved, ascending path from left to right. Below this graphic, the words 'Active Parks' are written in a bold, black, sans-serif font.

Active Parks

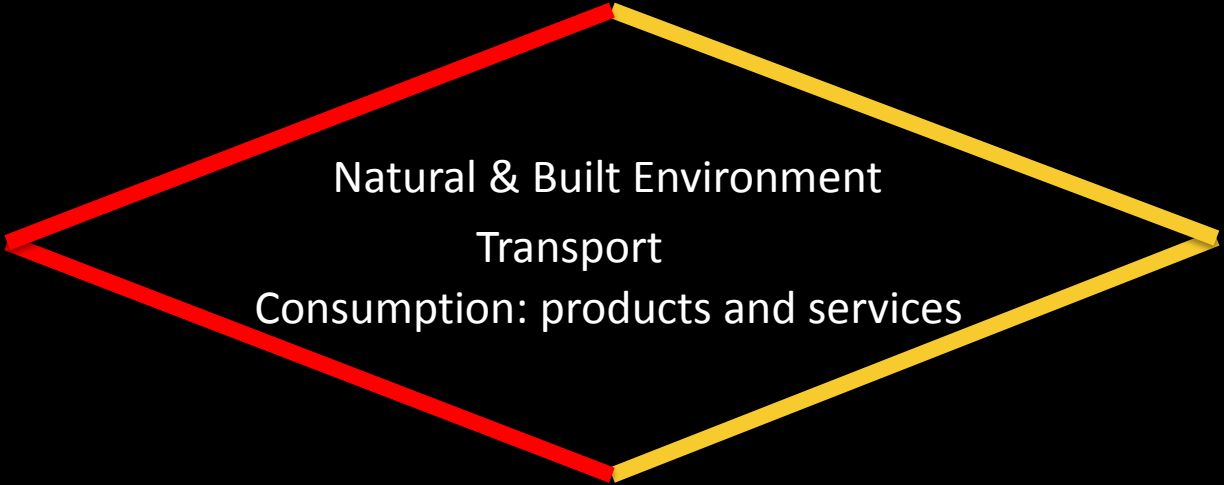
**Co-designing a Health trail in
Ryelands Park**



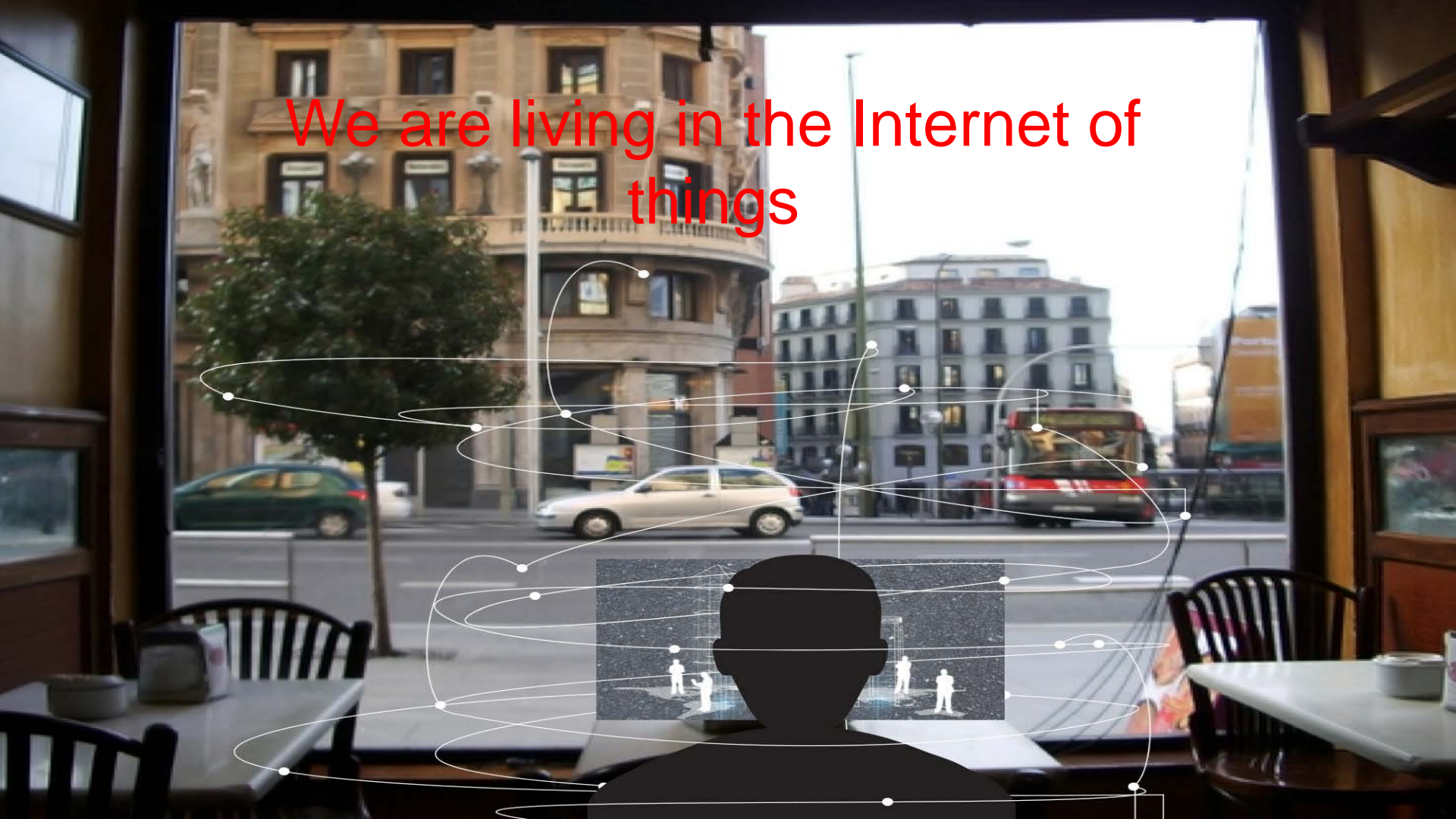
Physical

Natural & Built Environment
Transport
Consumption: products and services

Digital



We are living in the Internet of things



A grayscale, pixelated cityscape at night. The image shows a street scene with a bus stop labeled "City Centre", a traffic light, a car, a bicycle, and a pedestrian crossing sign. The background features several tall buildings. The text "Every day, we create 2.5 quintillion bytes of data" is overlaid in red in the center of the image.

Every day, we create 2.5 quintillion
bytes of data



EPSRC

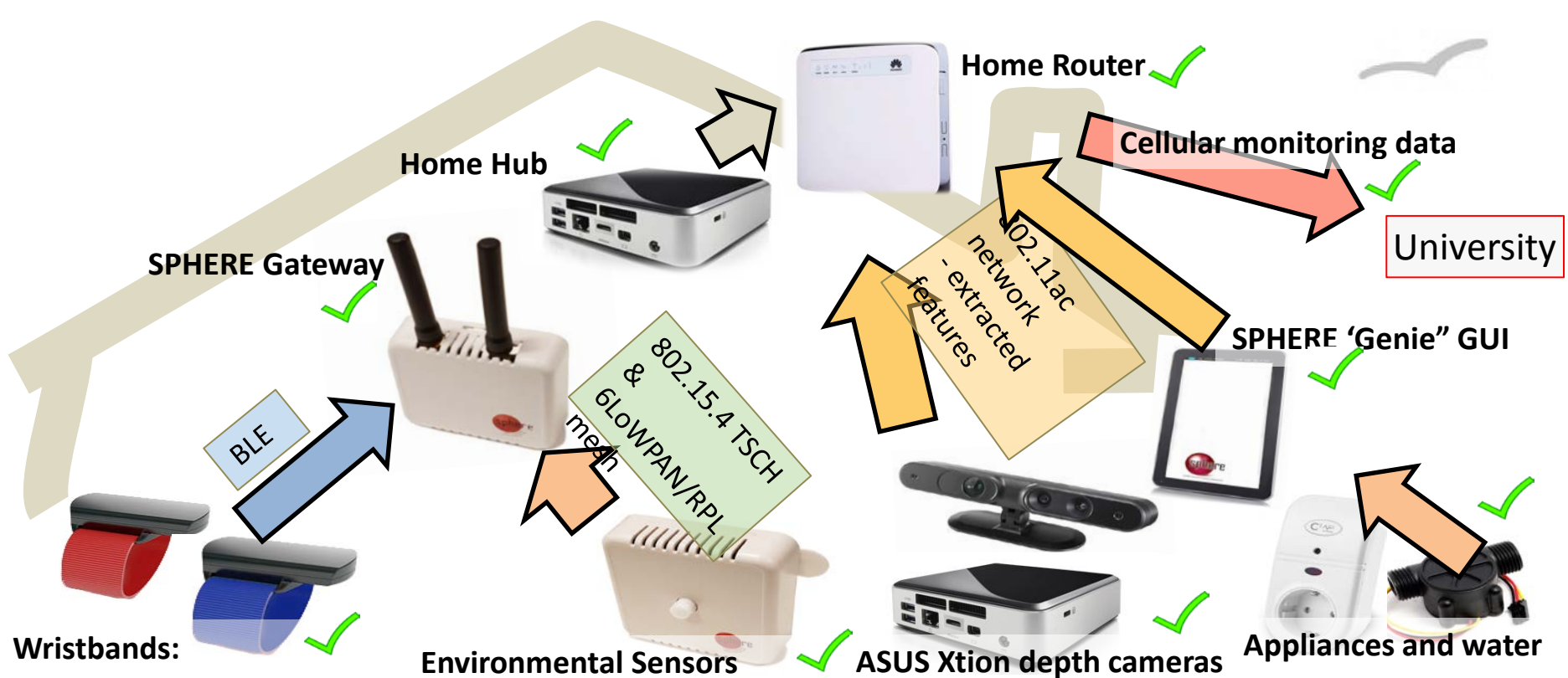
Engineering and Physical Sciences
Research Council



irc-sphere.ac.uk

12M from EPSRC 2013-2018.

Director Prof Ian Craddock, Bristol.



- Procurement / Manufacturing ✓
- Consenting / Installation process ✓
- Metadata capture on homes and participants ✓
- Ethics ✓

A fabulous opportunity to bring all disciplines together to work at Scale a true collaboration of communities:

- Architecture, Engineering, Design Environmental Science, Computing, Maths, Analytics, Complexity Science, Behavioural Science, etc. etc.
- health care and NHS; public health; planning and design; politicians and policy makers; developers and land owners; Local government; charities; large and small companies.
- Interventions through co-design or mediated design

Thank You

