

Perspectives on Personalised Medicine

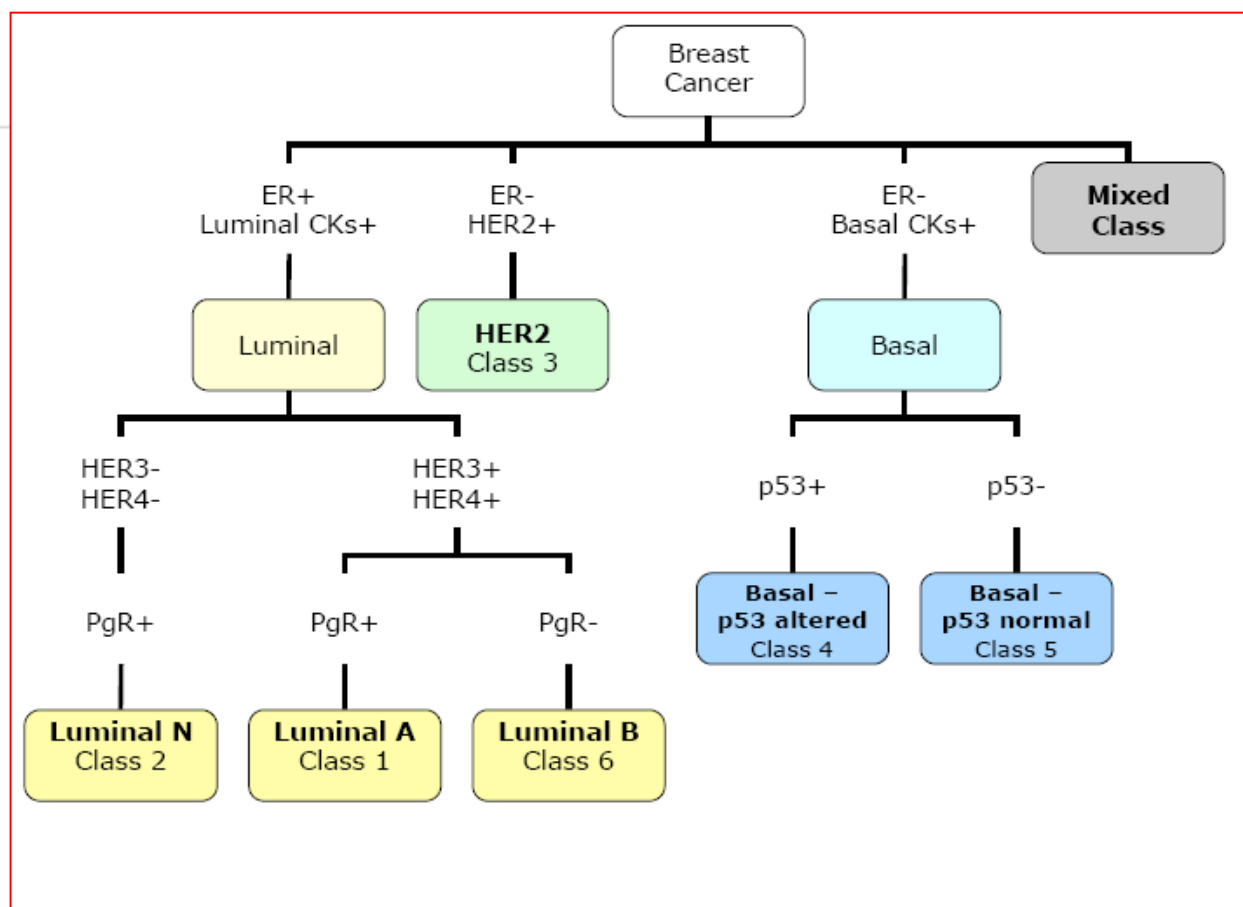
Paulo Lisboa

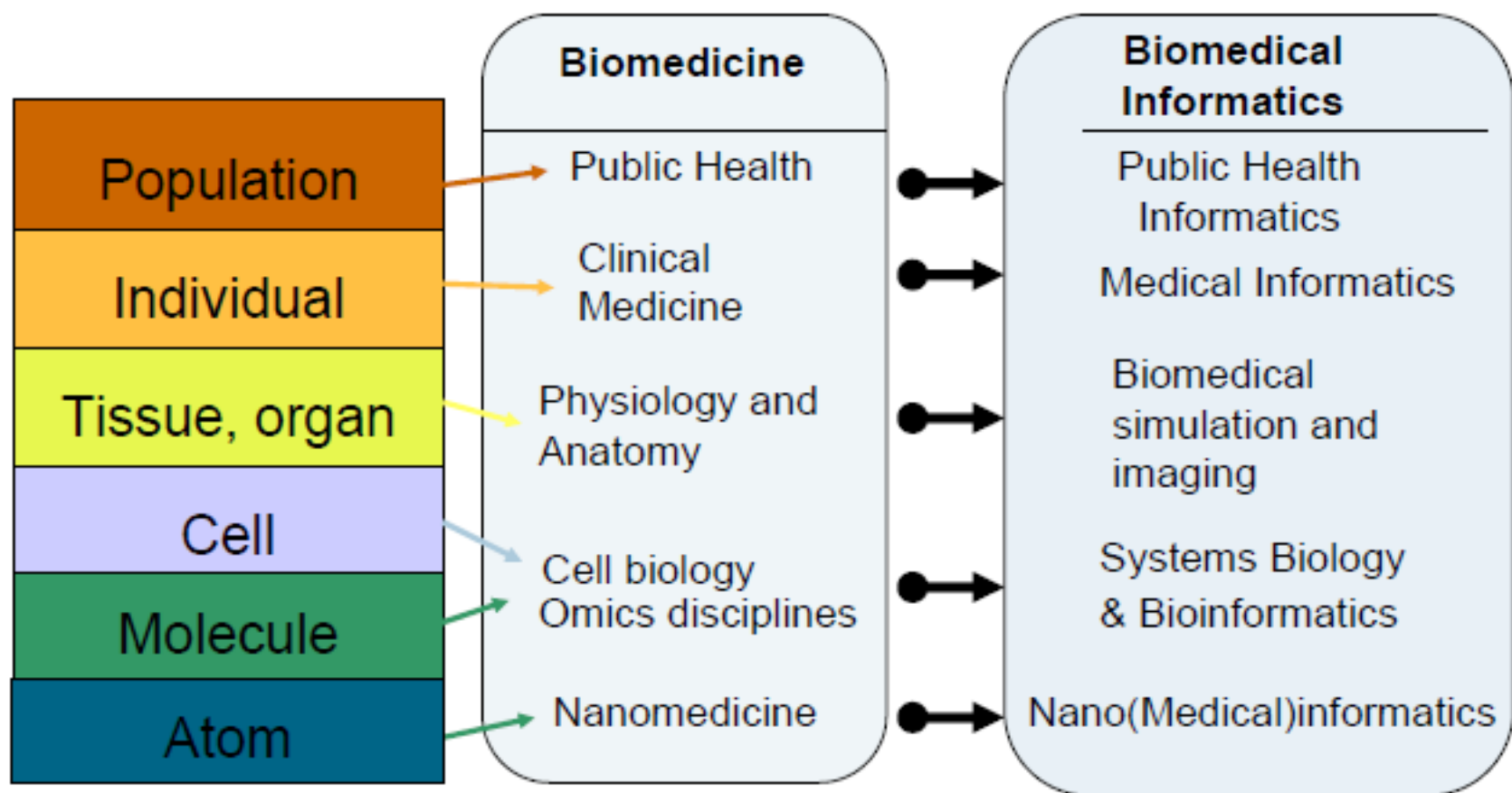


Breast cancer: Scientists hail 'milestone' genetic find

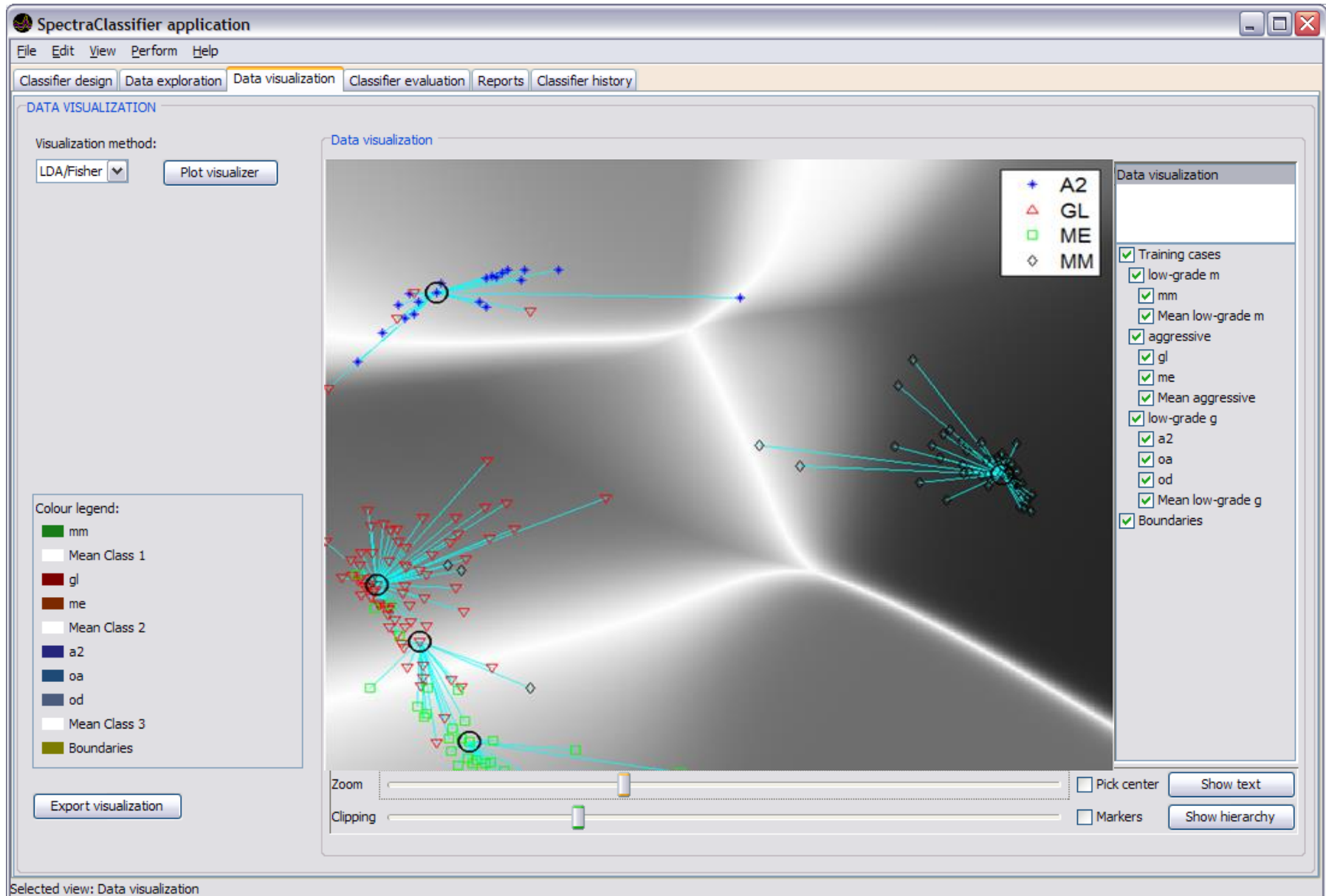
By James Gallagher
Health editor, BBC News website

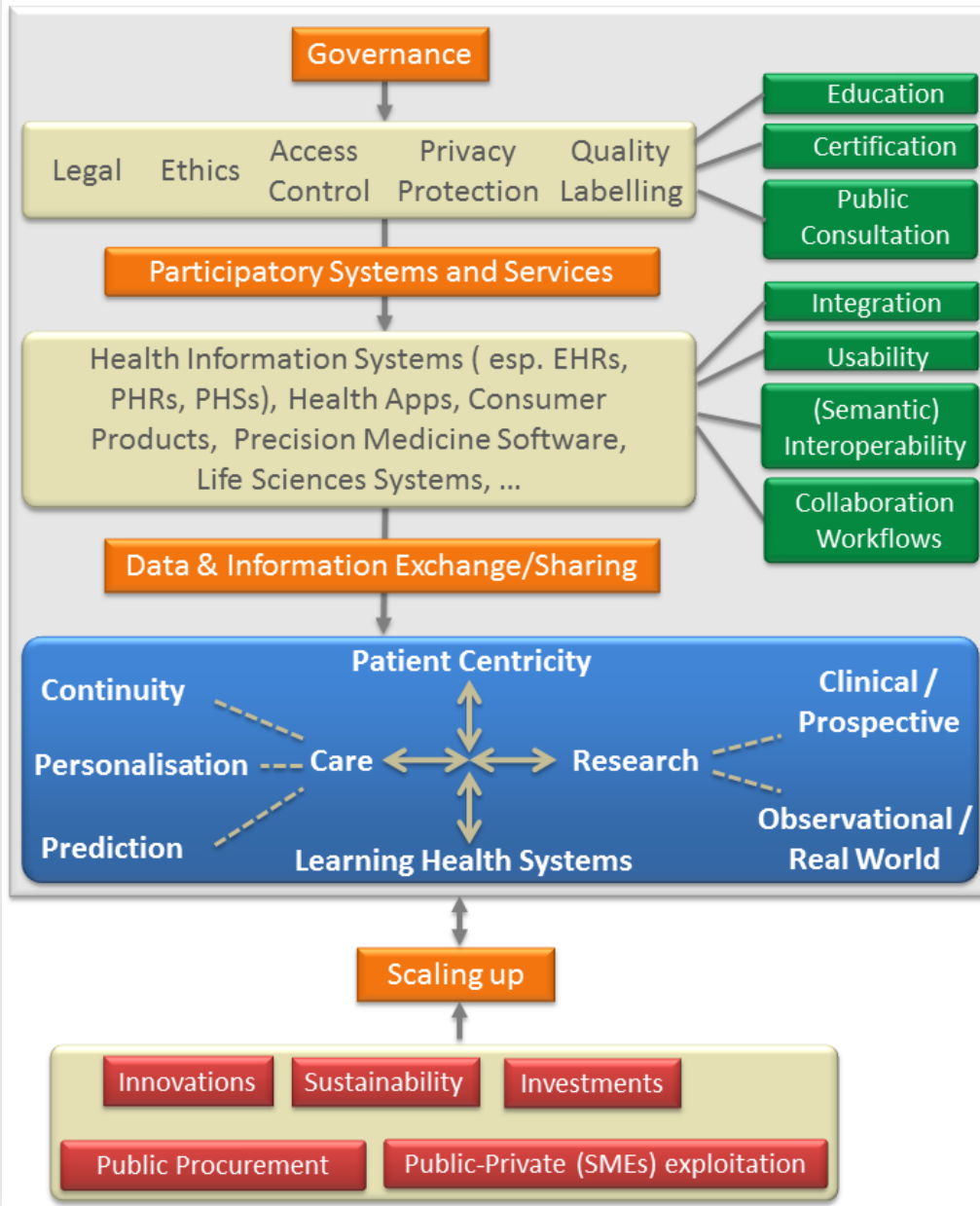
🕒 2 May 2016 | **Health**





Integration of clinical data





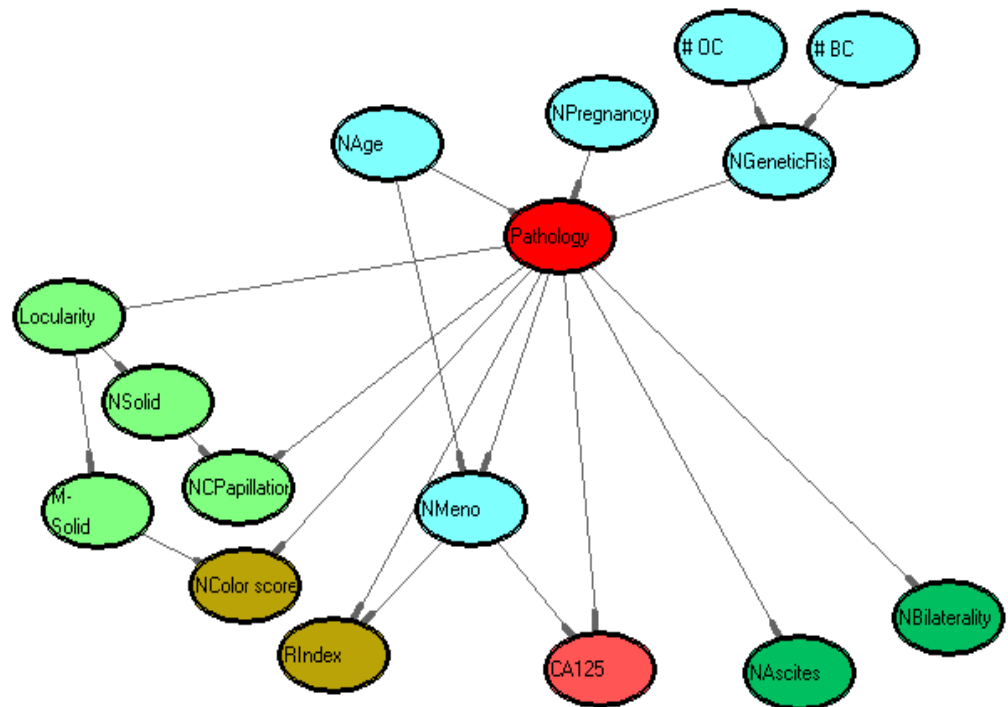
1. A paradigm shift in use of ICT from healthcare to **wellbeing**.
2. Redirect public procurements towards **integrated care solutions** favouring innovation, standards multi-SME solutions.
3. **Governance** models for European scale health data repositories including Privacy Protection, IP & Public-Private Exploitation.

Personalising medicine

e-Health, m-Health

The 4P agenda:

- Predictive
- Personalised
- Participatory
- Preventive



e-Health e.g. diabetes

“Health monitors to be installed in millions of homes”

Deaths cut by 45% & Emergency Admissions cut by 21%

Greater independence for patients

NHS to spend £750m → save £1.2b over 5 years

Vulnerable Persons



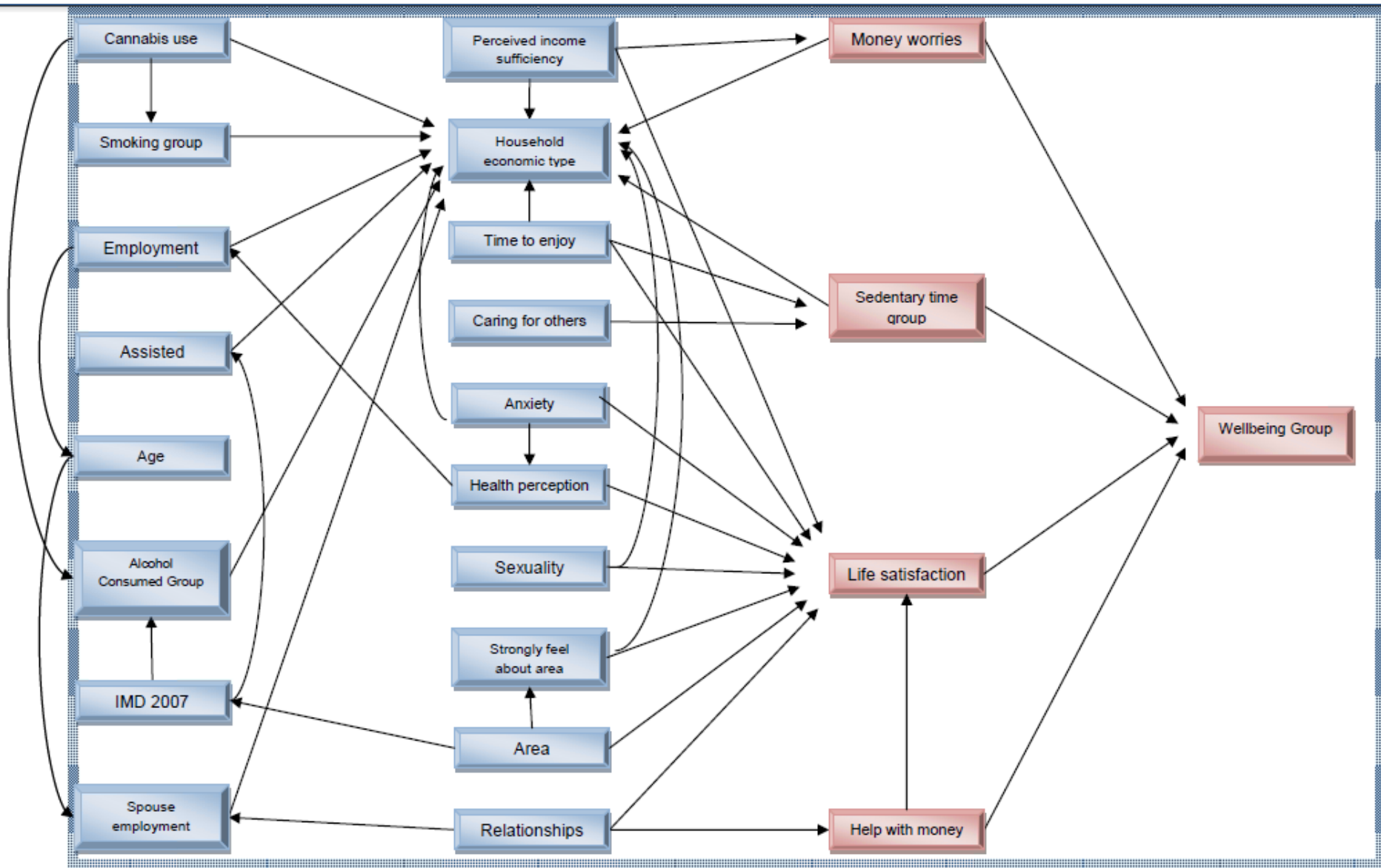
Inequality of
access

Real-life context
of care and
disease

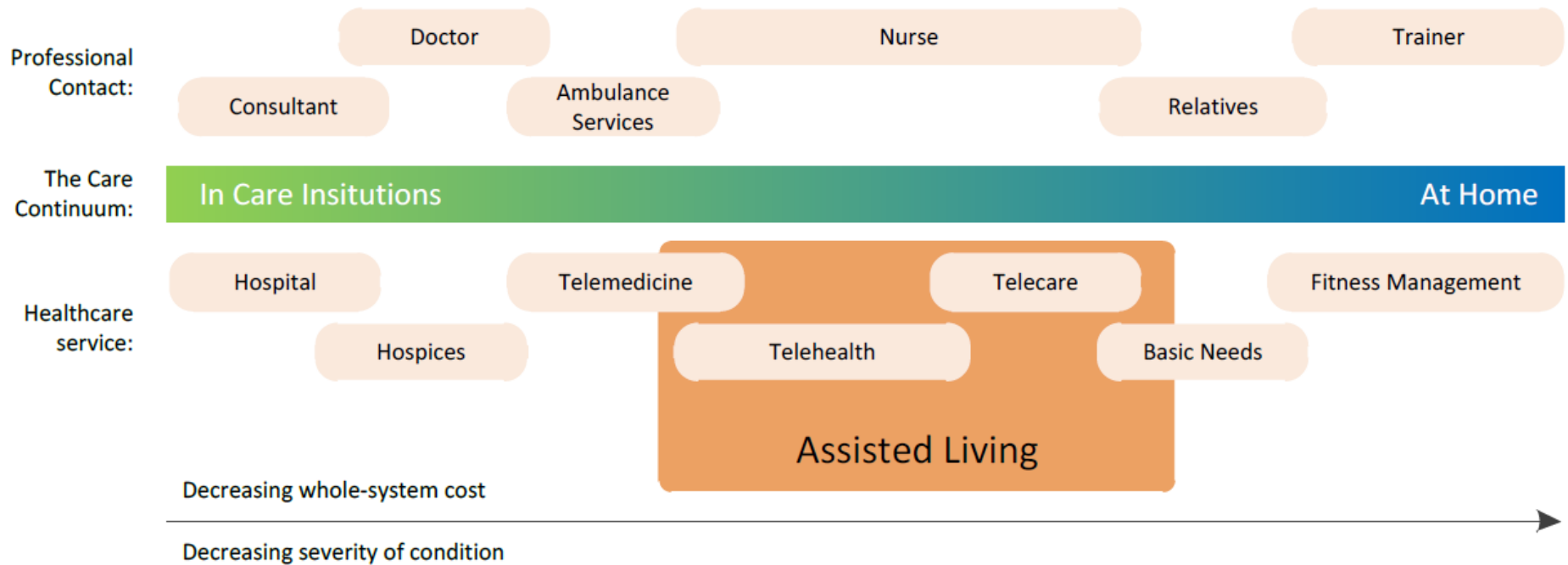
Early
interception of
chronic disease

Measuring
behaviour

Mental health

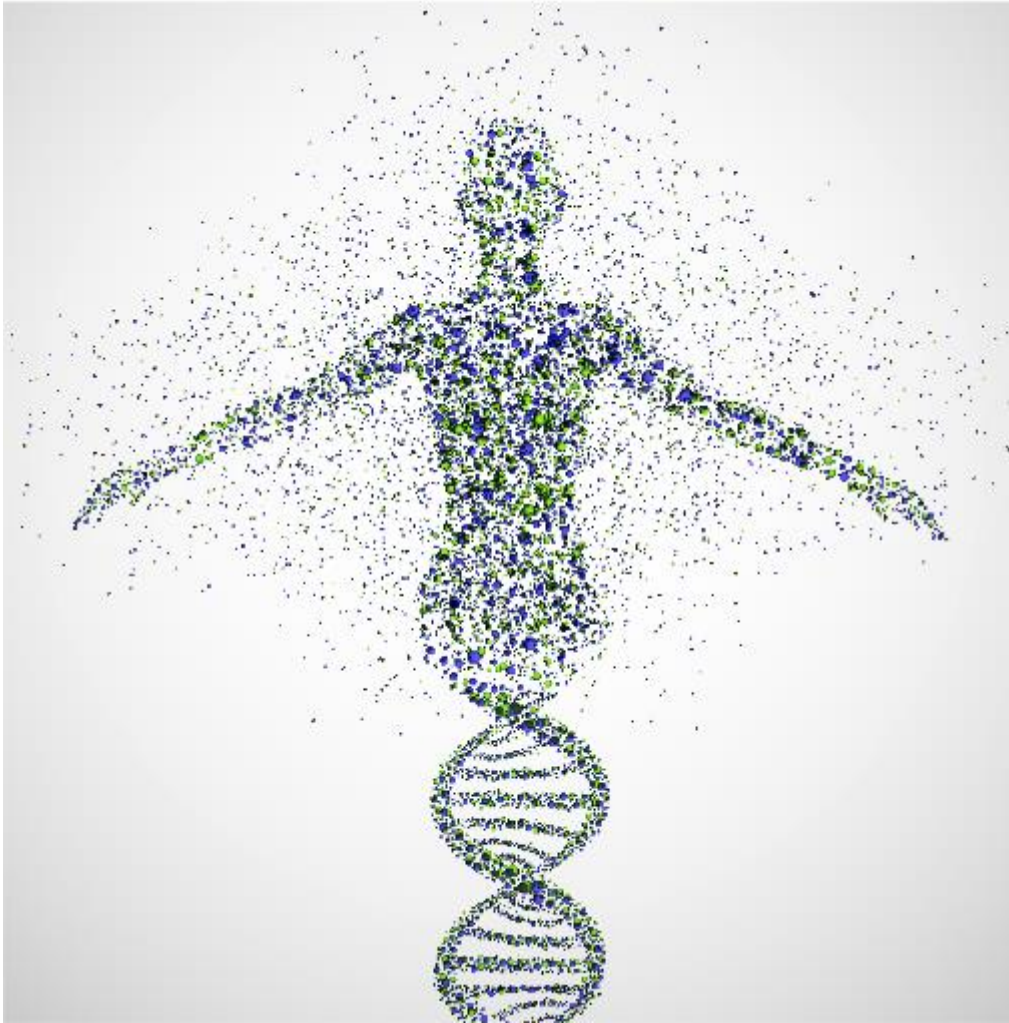


Health continuum



ARUP in Smart City Market: Opportunities for the UK, BIS, October 2013.

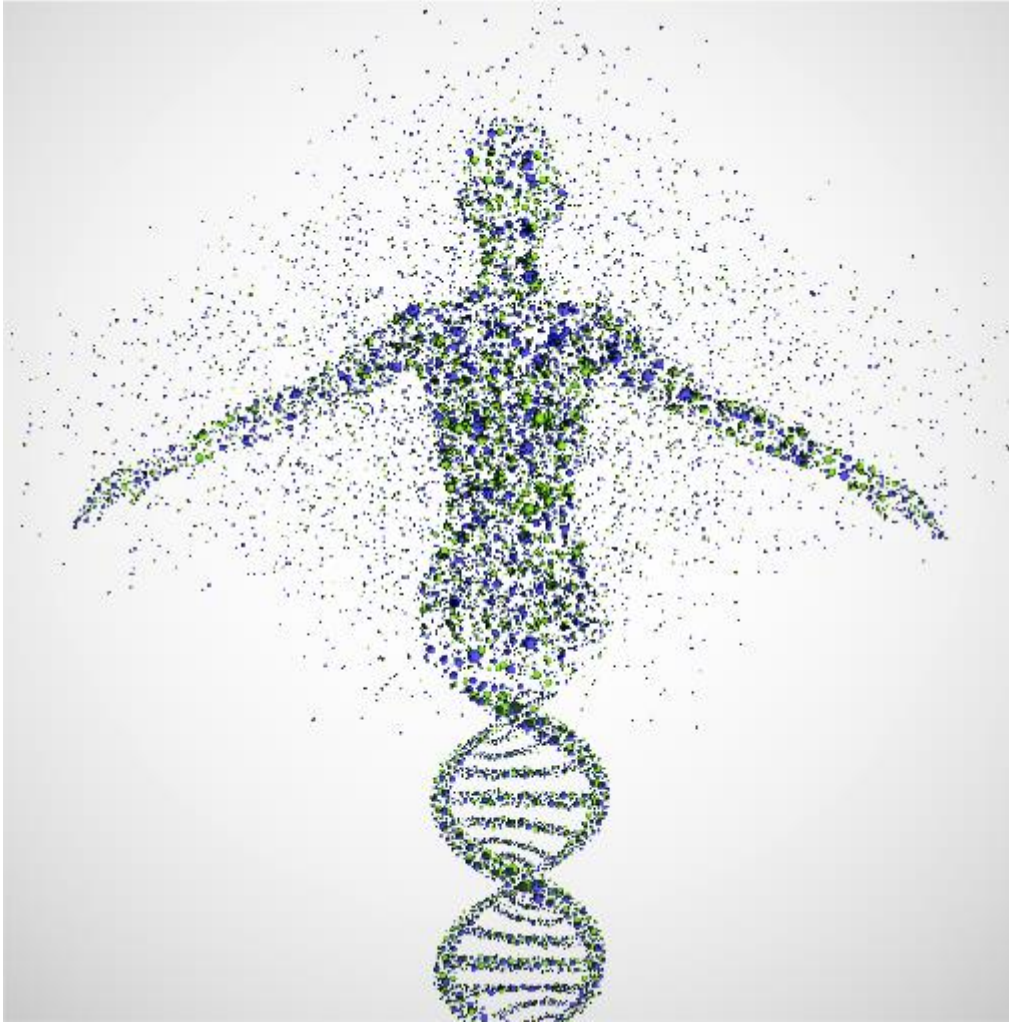
Big Data



New trends and disruptive innovations

1. **Health care** is an emerging megatrend (10 % GDP).
2. Technological development is the enabler: **more data at less cost**.
3. Miniaturization of sensor/detector technology → **health status monitoring & behaviour modelling** → m-health.

Big Data



Omics

Clinical data

PROMS

Care in the community

Public health profiles

-Hospital Episodes

Instrumented home

Social media

Wearable devices

IoT

How do we relate people & data ?

@ individual level

- propensity → detection → onset of acute episodes
- right information → right person → right time
- health passport

@ population level

- lifestyle pathways to wellbeing: motivation
- monitoring effect of commissioned interventions
- medical house



Sure it is hard to find good answers for difficult questions,
but more difficult is to find good questions.