



***Healthy Ageing* and How to Measure it**

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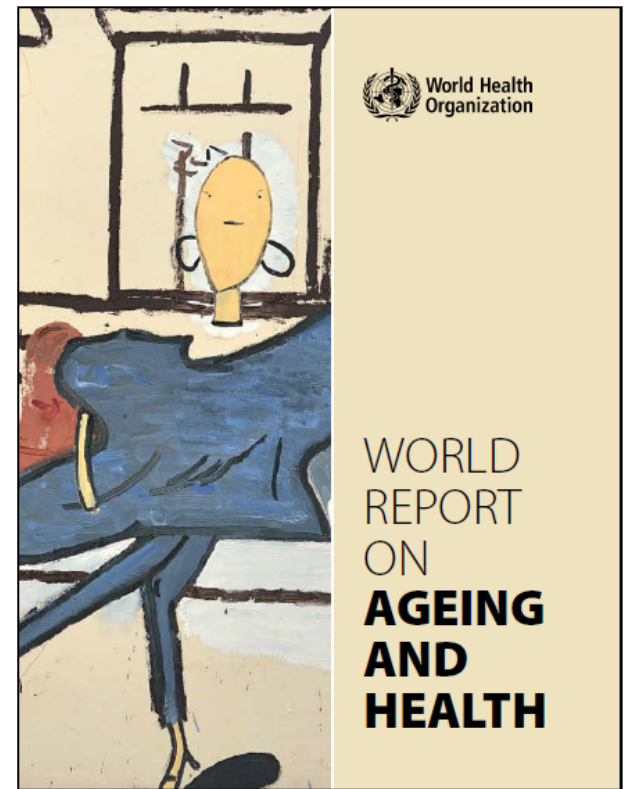
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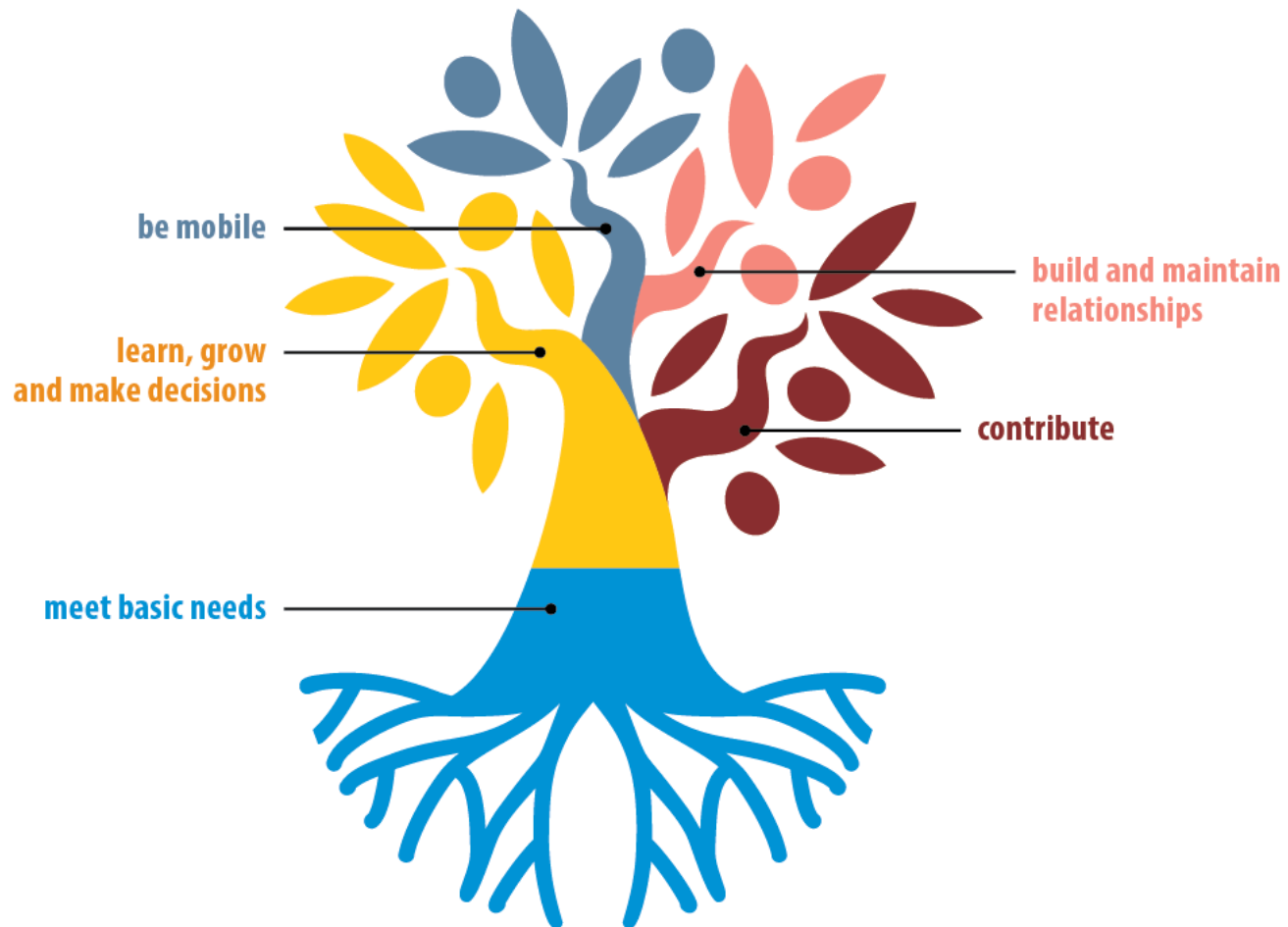
World Report on Ageing and Health

"Healthy Ageing - the process of developing and maintaining the functional ability that enables wellbeing in older age."

Link: <http://www.who.int/ageing/events/world-report-2015-launch/en/>



The things older people want



Intrinsic Capacity

All the individual level attributes that contribute to someone's ability to be and do the things they have reason to value.

Individual life course

Intrinsic Capacity



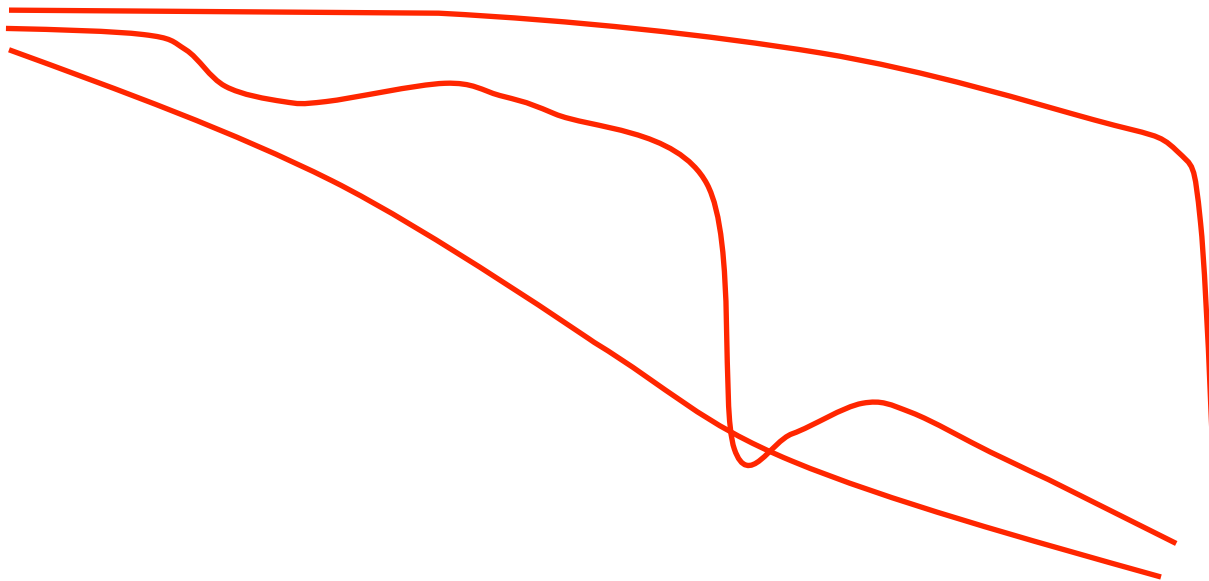
Individual life course

Intrinsic Capacity

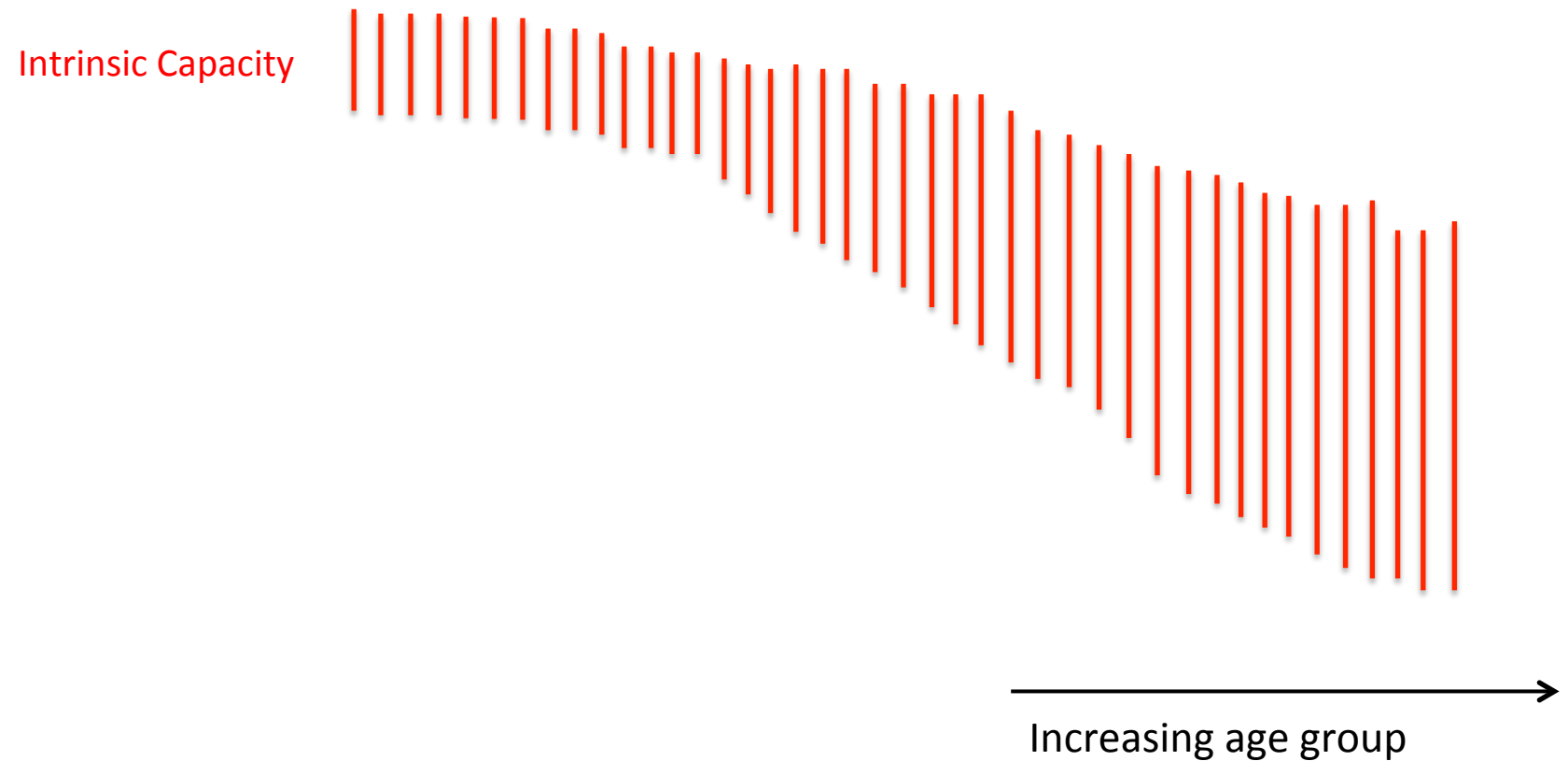


Individual life course

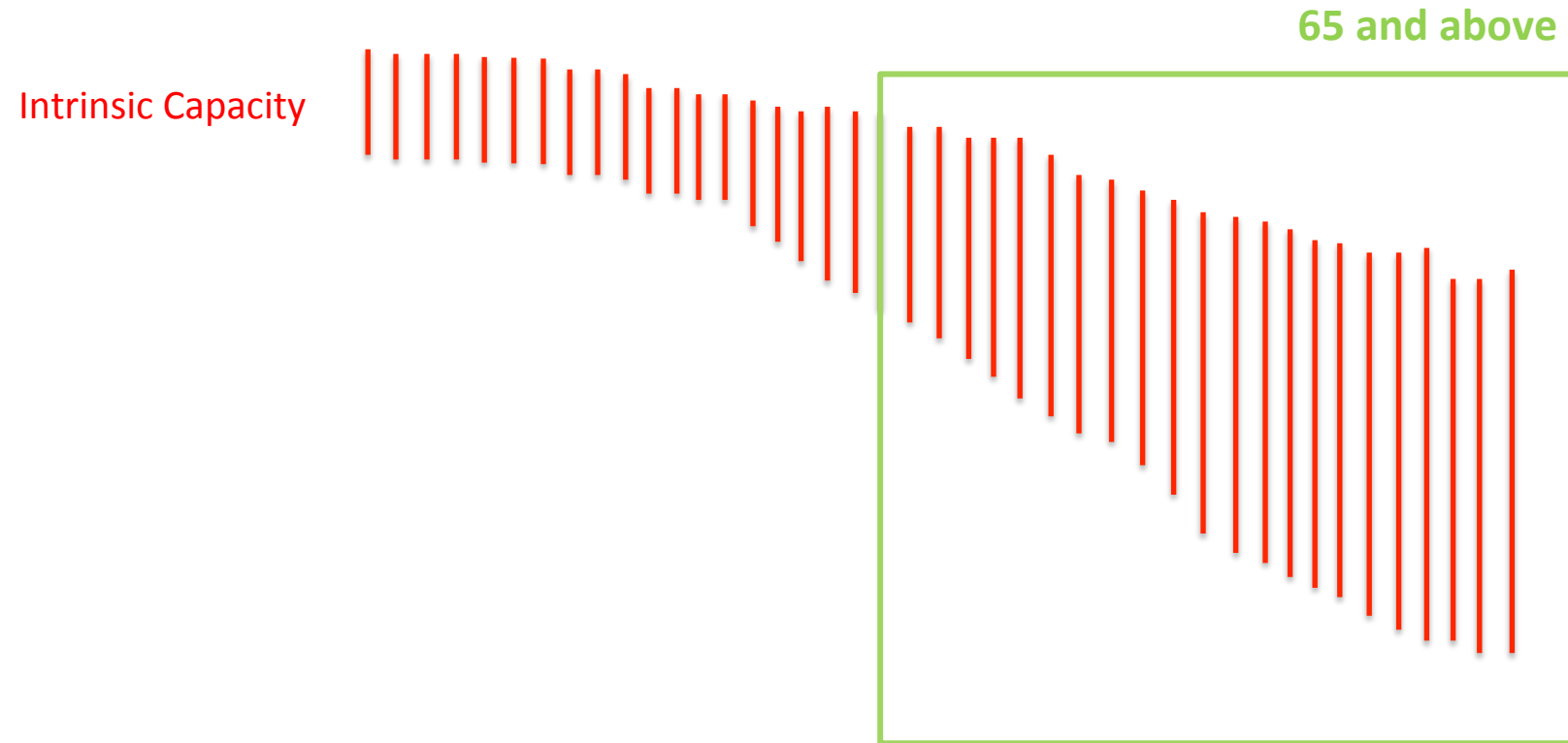
Intrinsic Capacity



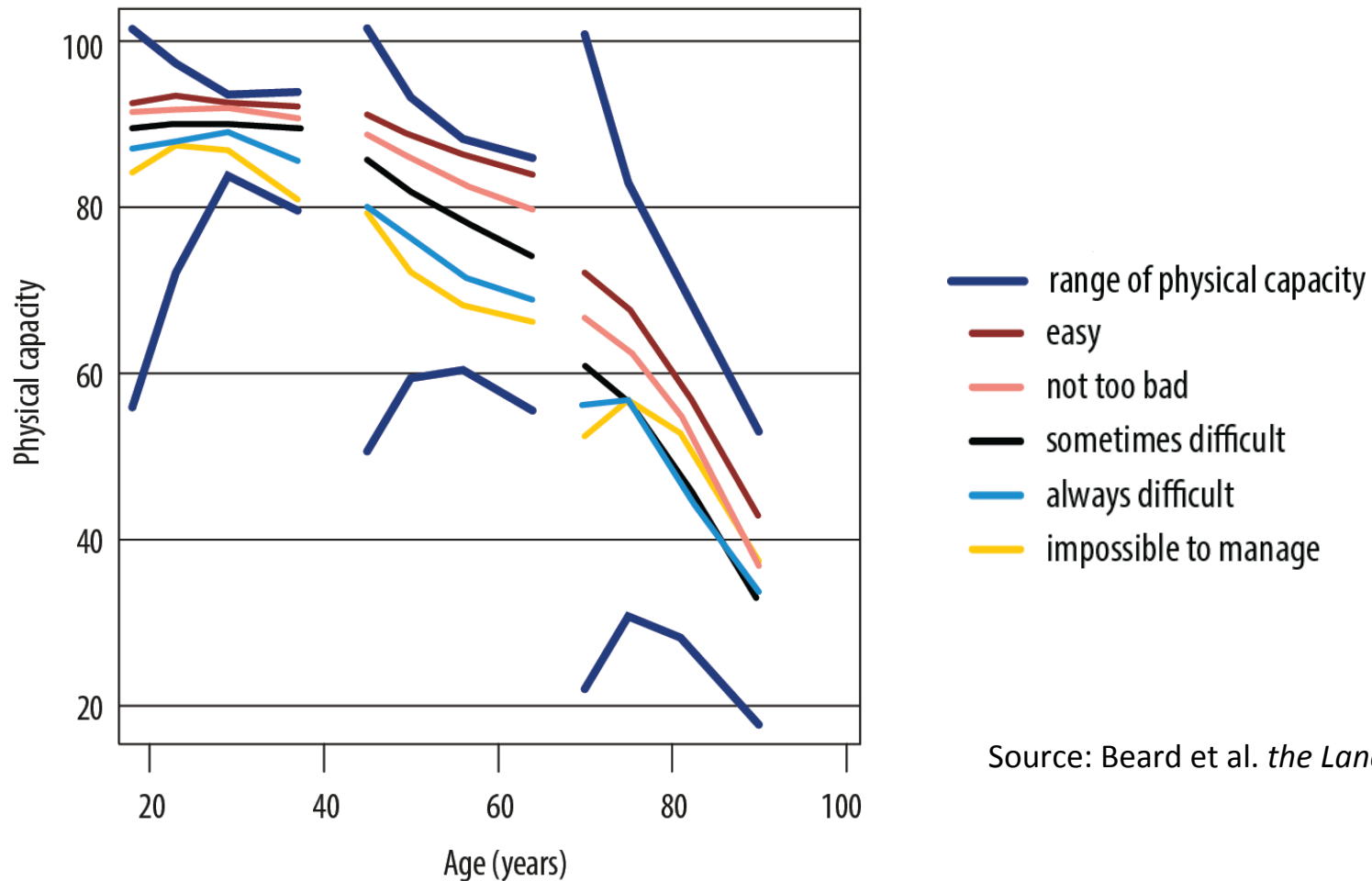
Population in the second half of life



There is no “typical” older person

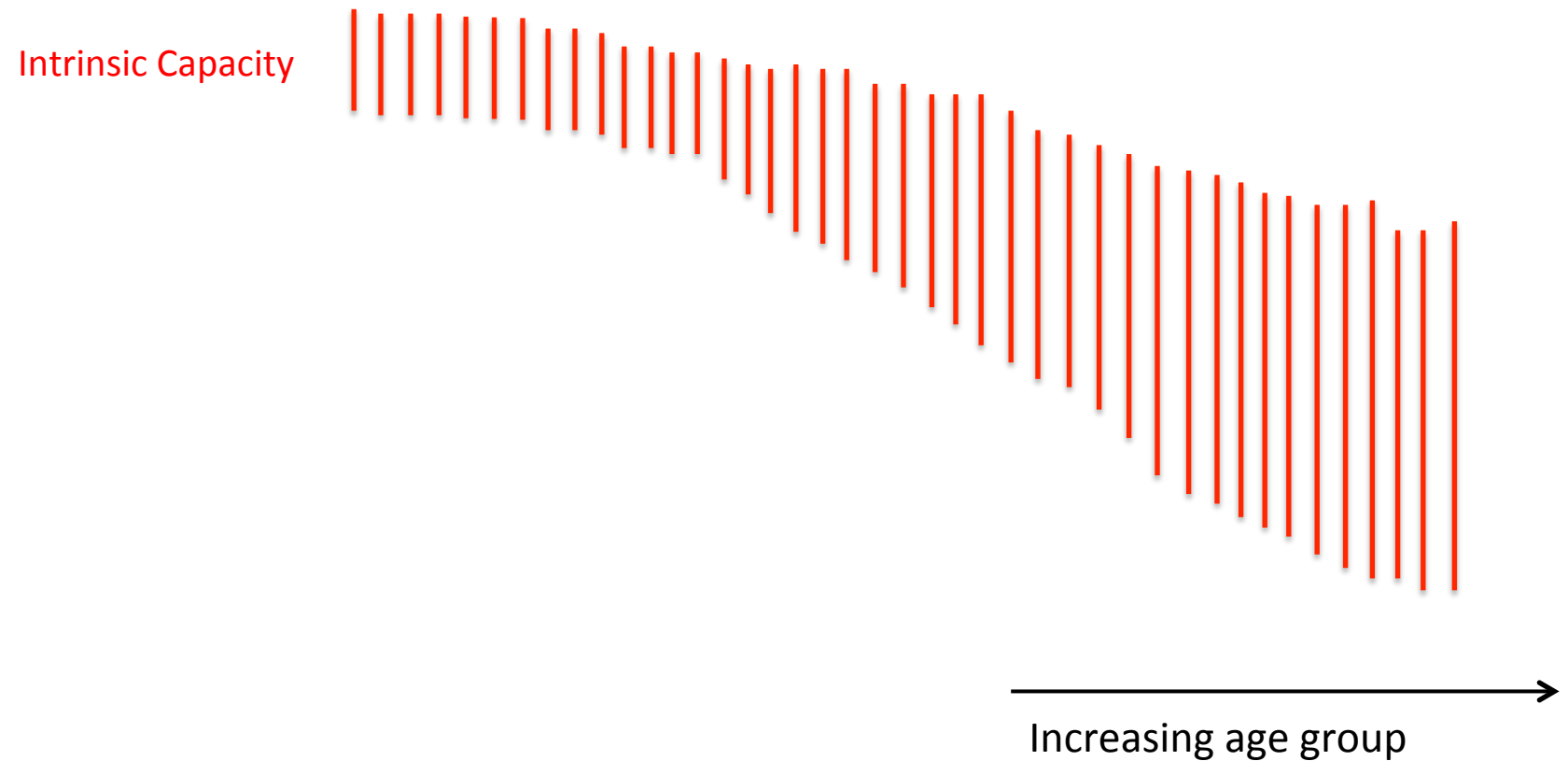


Physical capacity across the life course

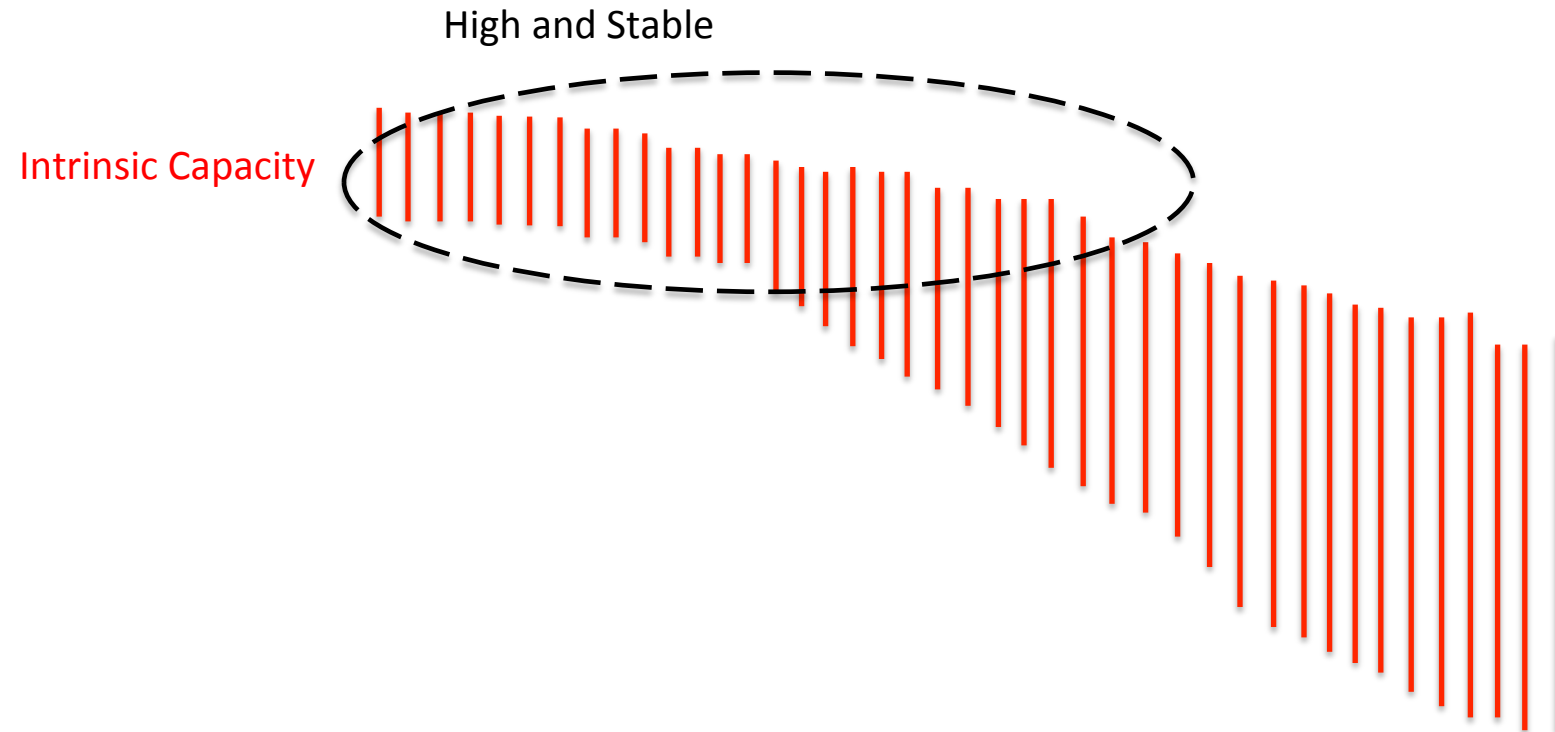


Source: Beard et al. *the Lancet* 2016

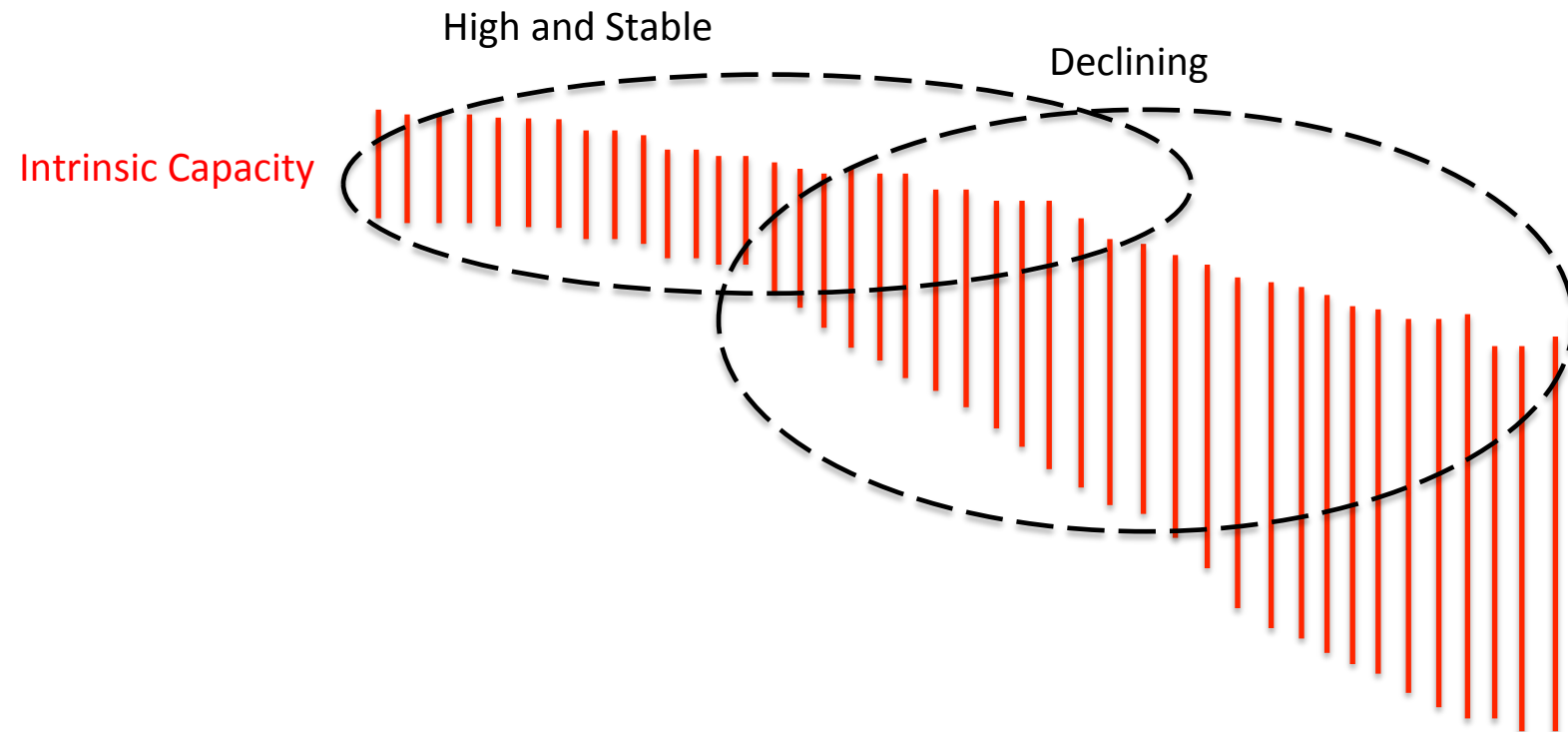
Population in the second half of life



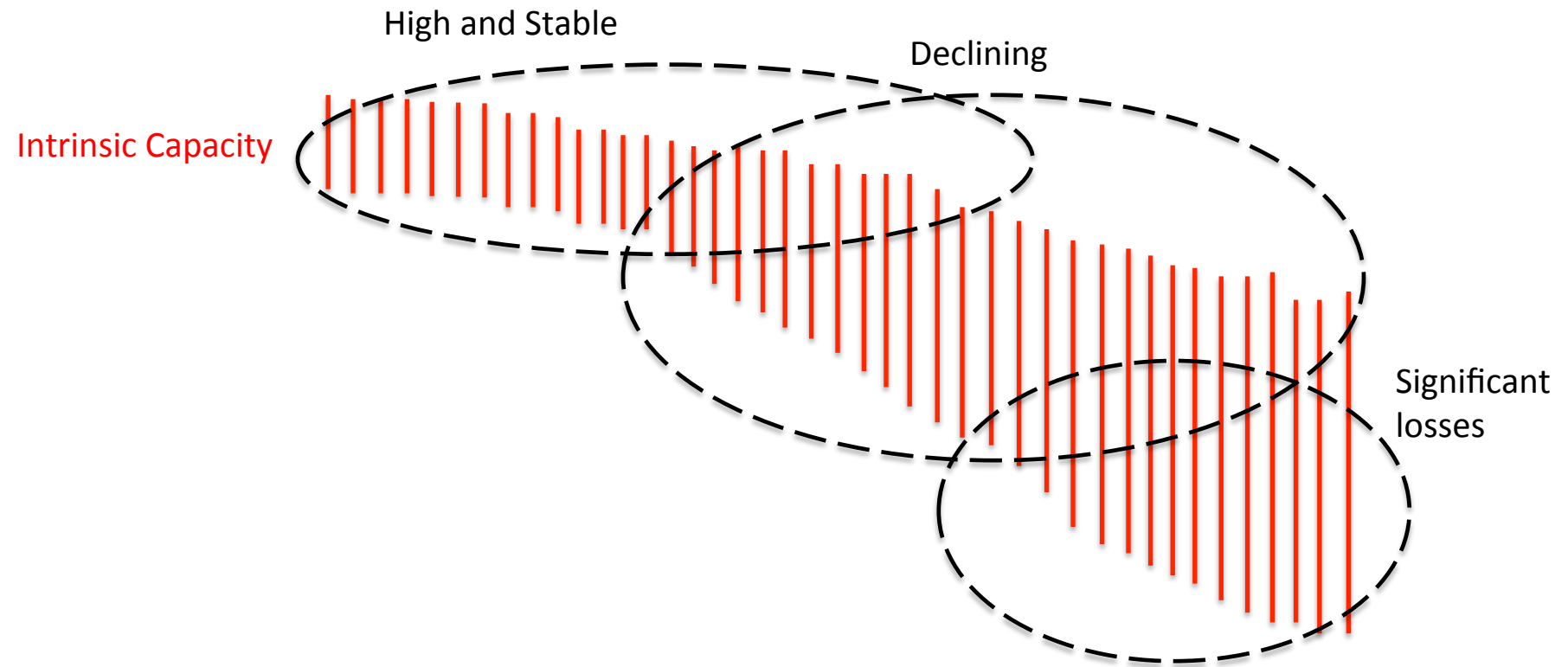
Population in the second half of life



Population in the second half of life



Population in the second half of life



Global Strategy on Ageing and Health

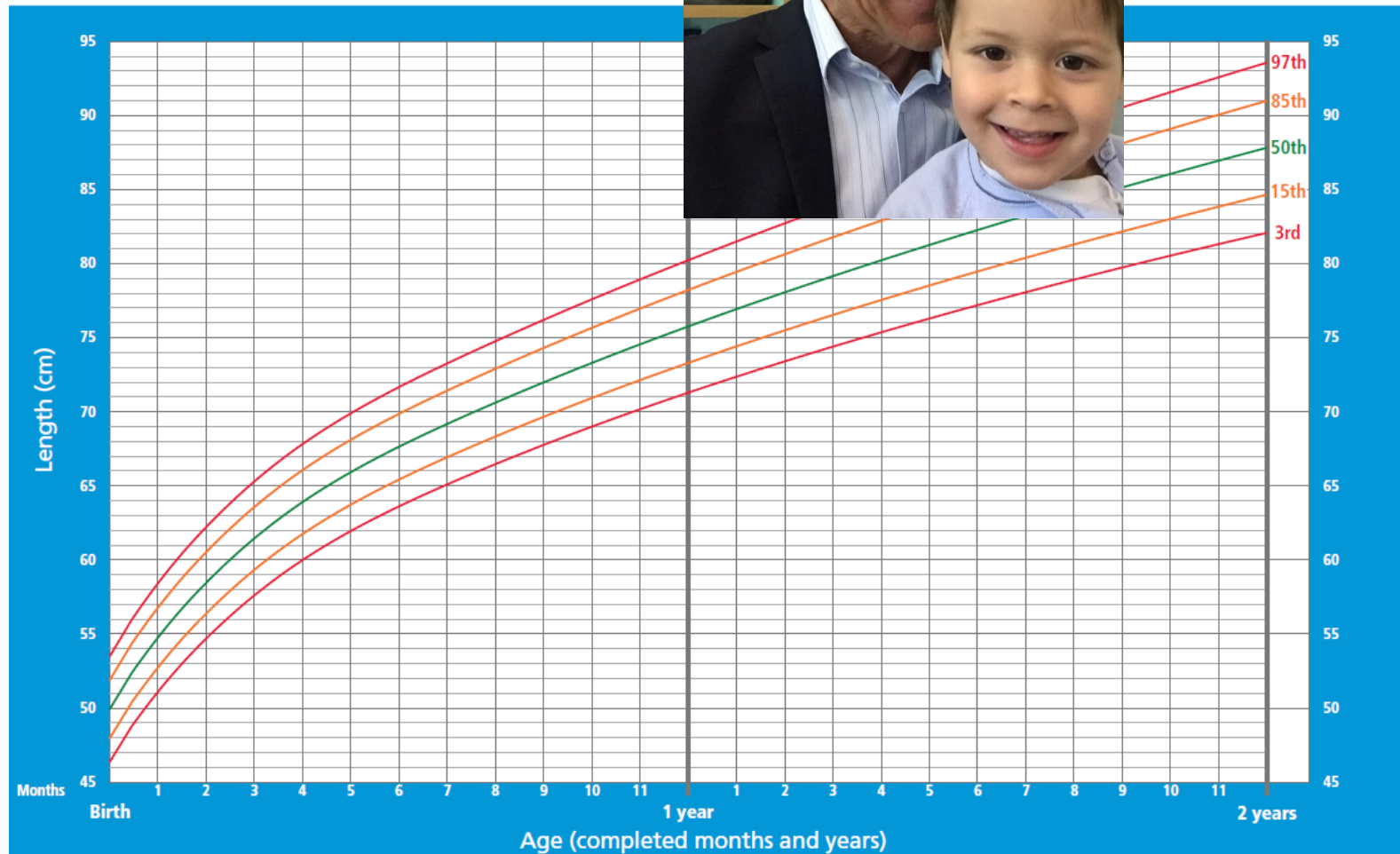
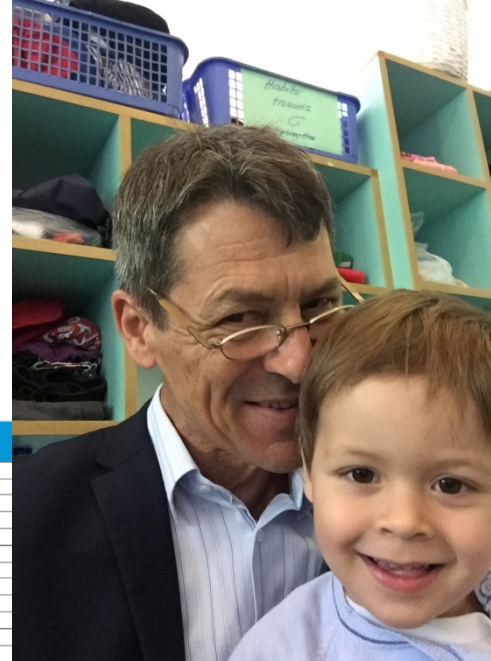
- ✓ Commitment to action on *Healthy Ageing*
- ✓ Age-friendly environments
- ✓ Health systems aligned to the needs of older populations
- ✓ Systems for long-term care
- ✓ Better measurement, monitoring and research

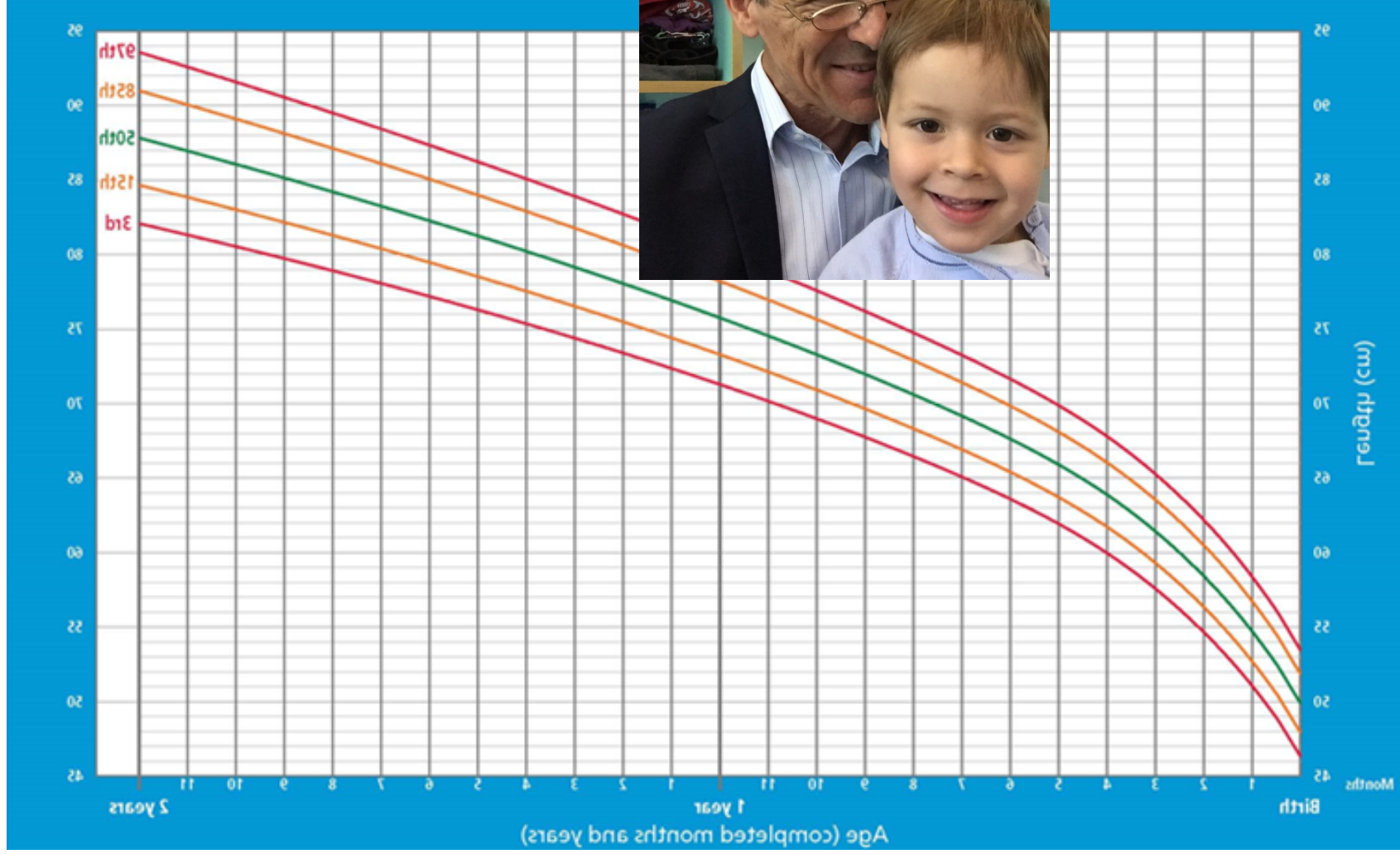
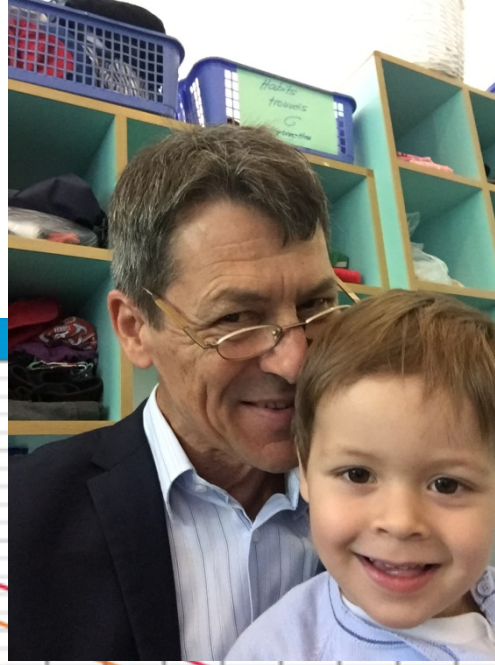
Implications for Measurement

- ✓ Heterogeneity means age-based aggregation (e.g. over 65) is highly problematic – both for policy and research
- ✓ Critical to distinguish between individual and their context – but how?
- ✓ Wearables and other IT changes mean individual level data is becoming increasingly available. New analytical approaches such as machine learning will amplify this change

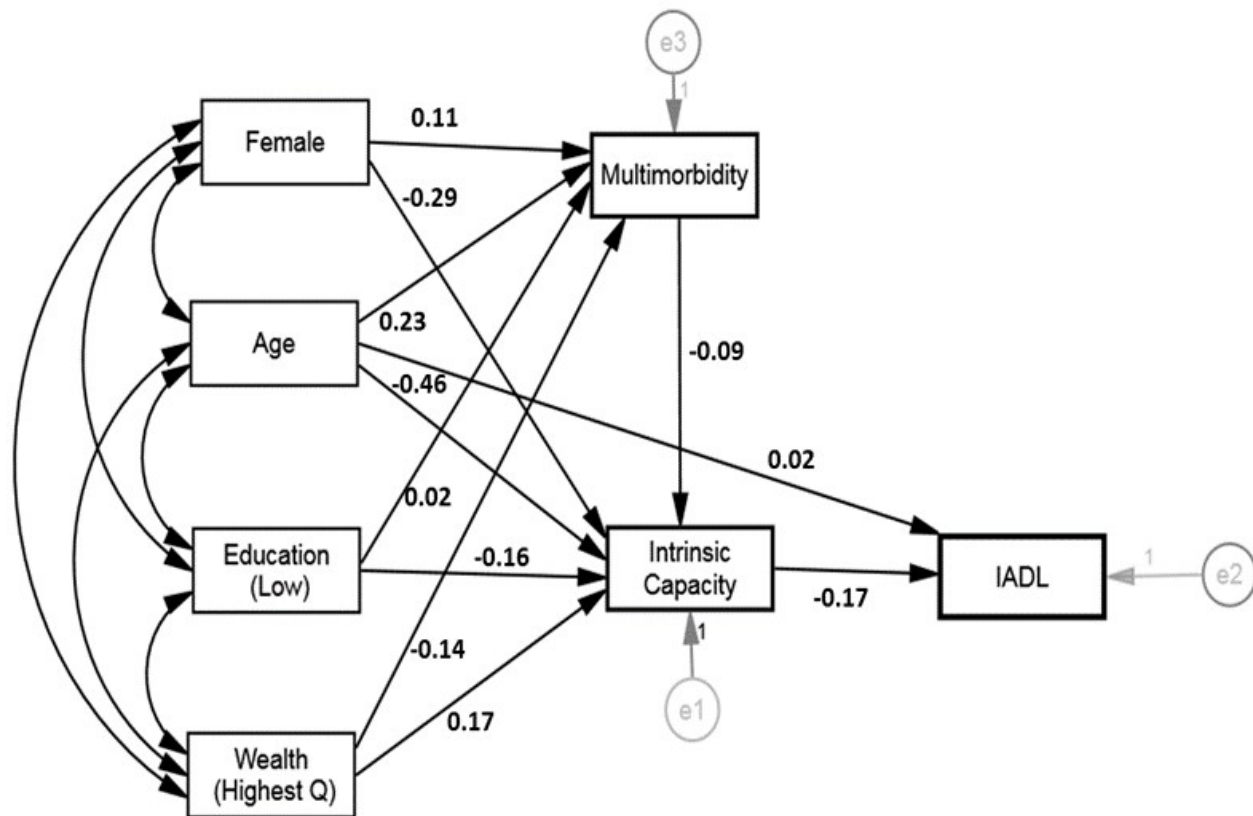
Length-for-age BOYS

Birth to 2 years (percentiles)





Predictive value of Intrinsic Capacity



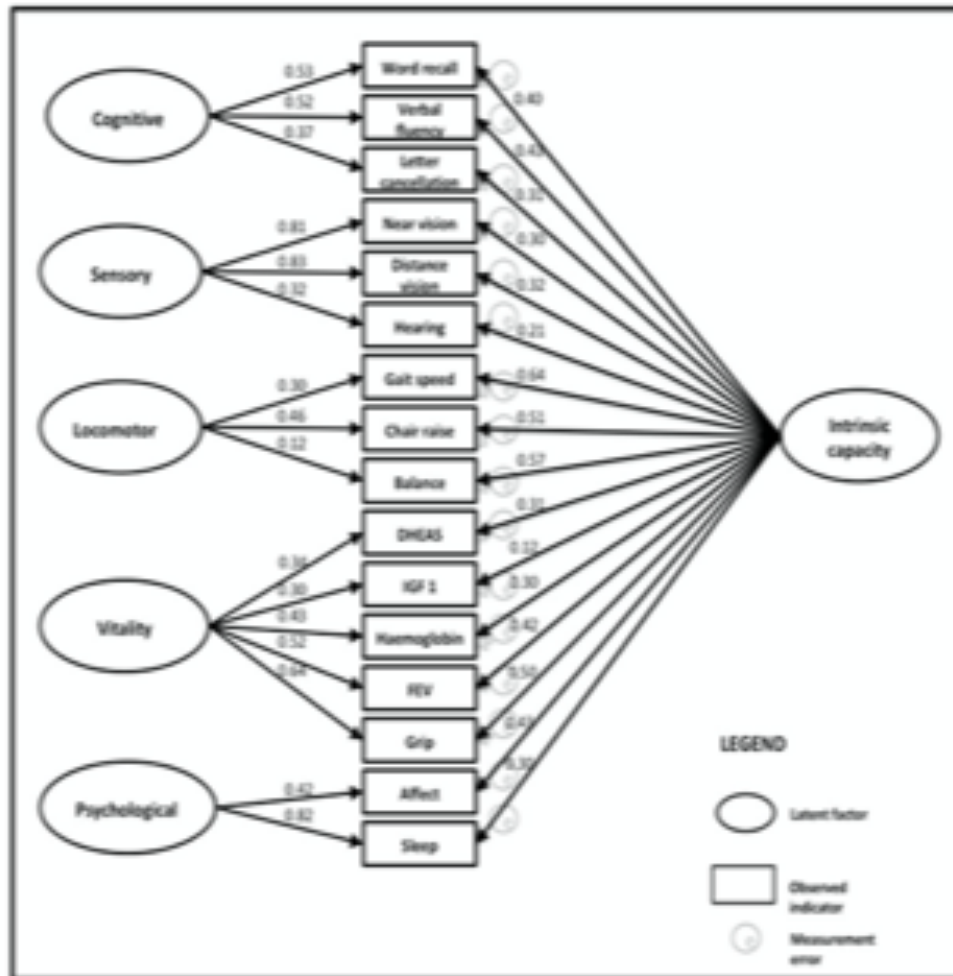
Source: Beard et al BMJ Open 2020



Measuring Intrinsic Capacity

All the individual level attributes that contribute to someone's ability to be and do the things they have reason to value – but how do you measure it?

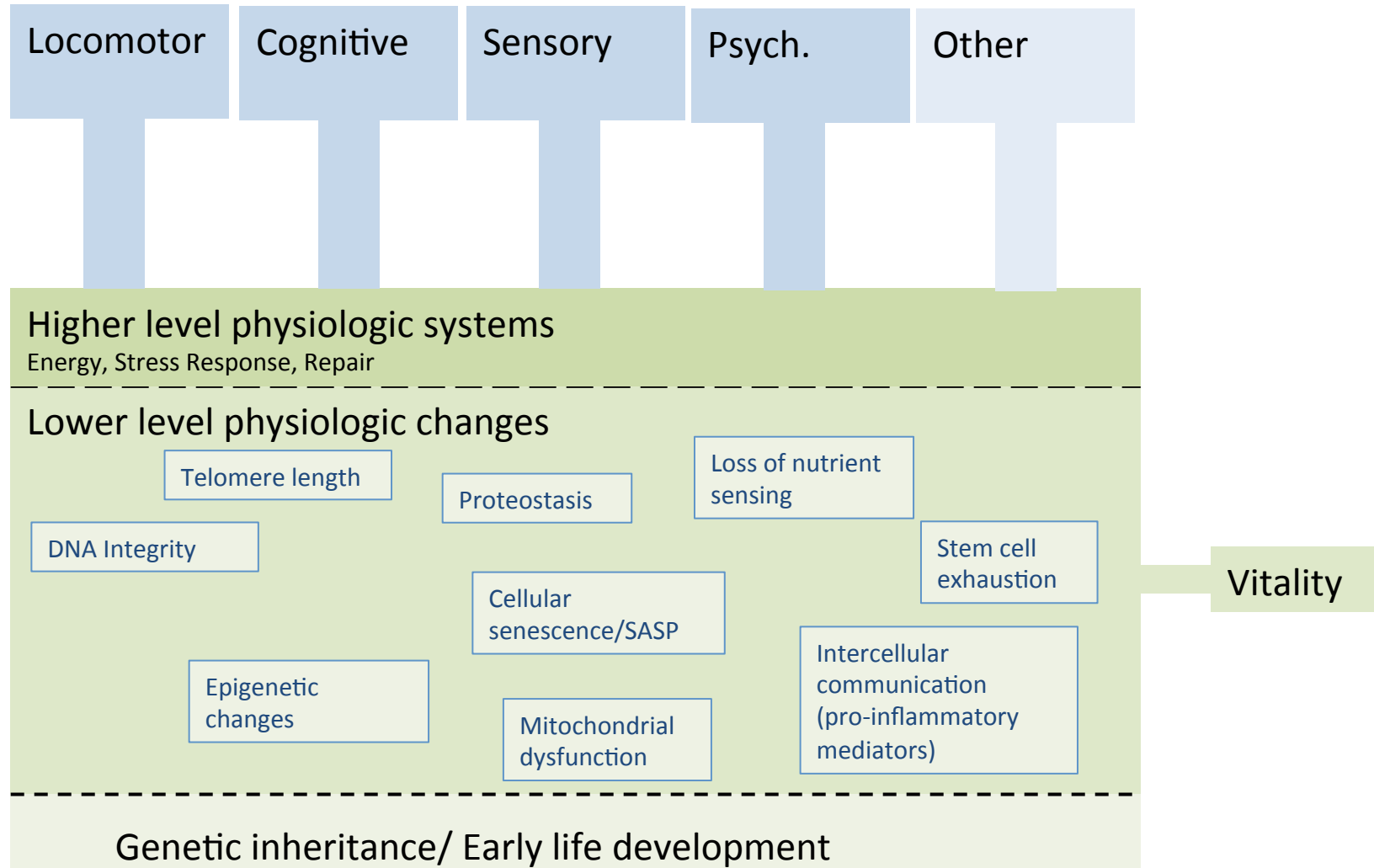
Factor Analysis of Intrinsic Capacity in ELSA



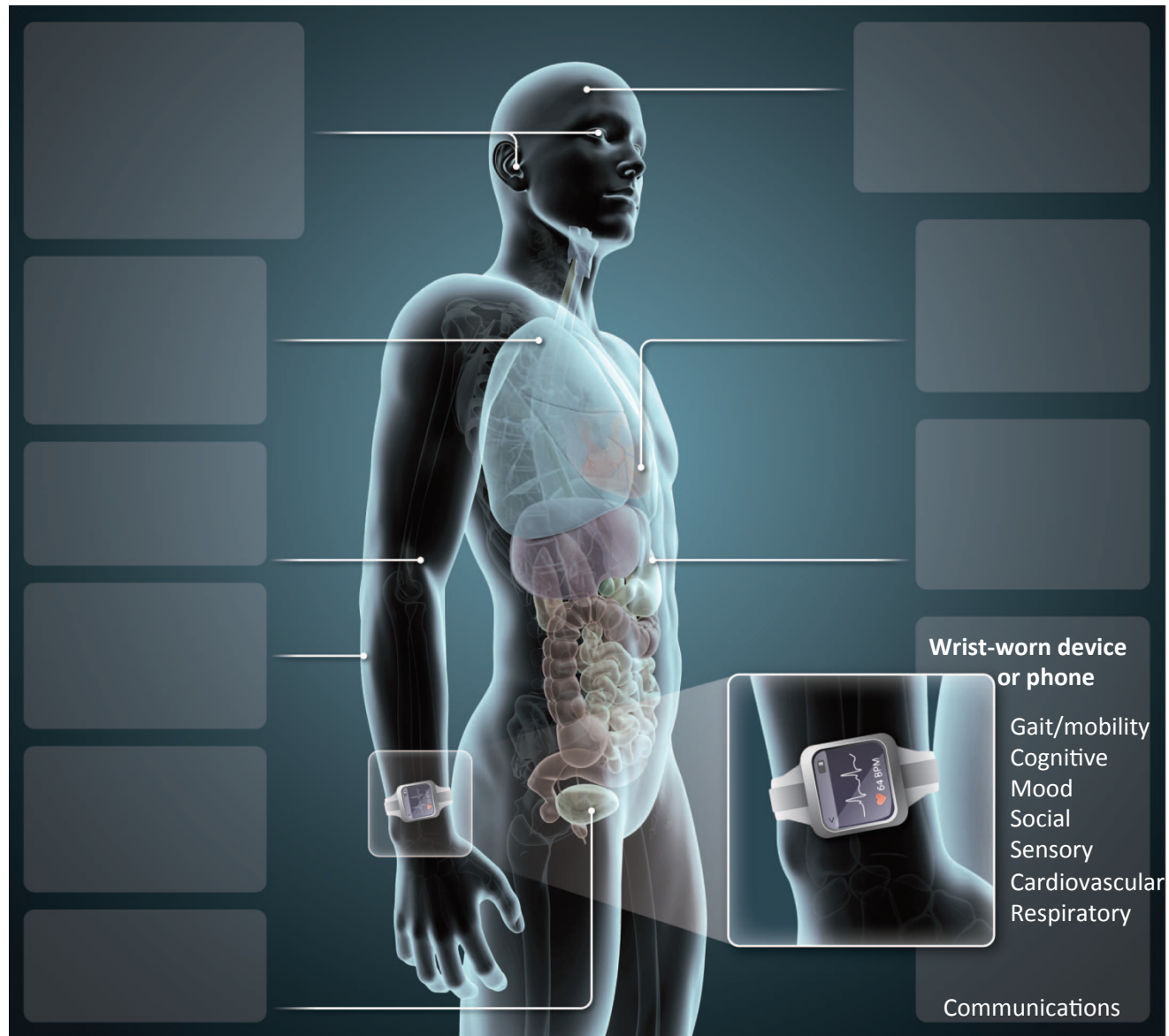
Source: Beard et al BMJ Open 2020

Measuring Intrinsic Capacity

Source: Beard et al BMJ Open 2020



New ways to measure what we are doing

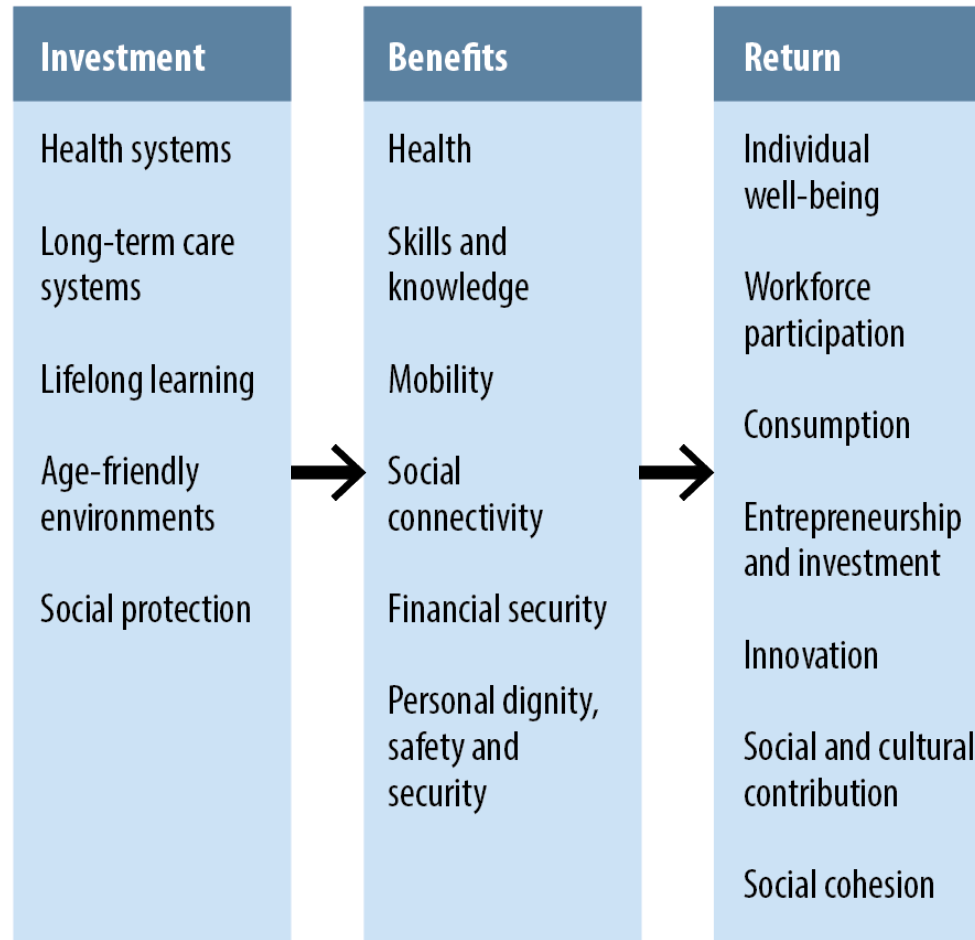




Measuring Intrinsic Capacity – so what?

- Better clinical care
- Earlier identification of change
- Identify early determinants of trajectory
- Clinical and research outcome
- Comparing impact of interventions
- Stratifying clinical trials
- Better understanding of population trends

Rethinking economic analysis 1: cost to investment





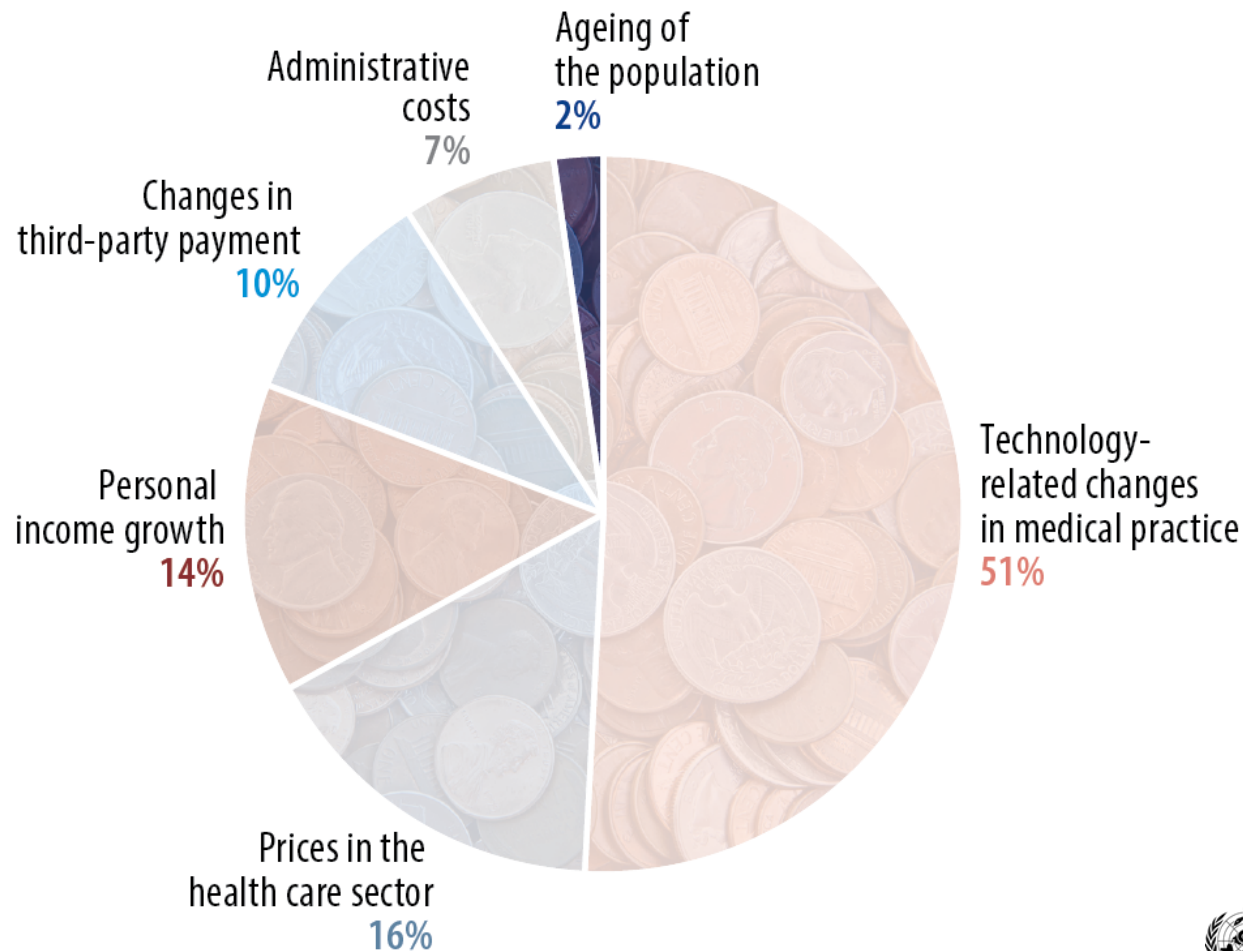
Rethinking economic analysis 2: measure costs AND contributions

Time to move on from the
“old age dependency ratio”

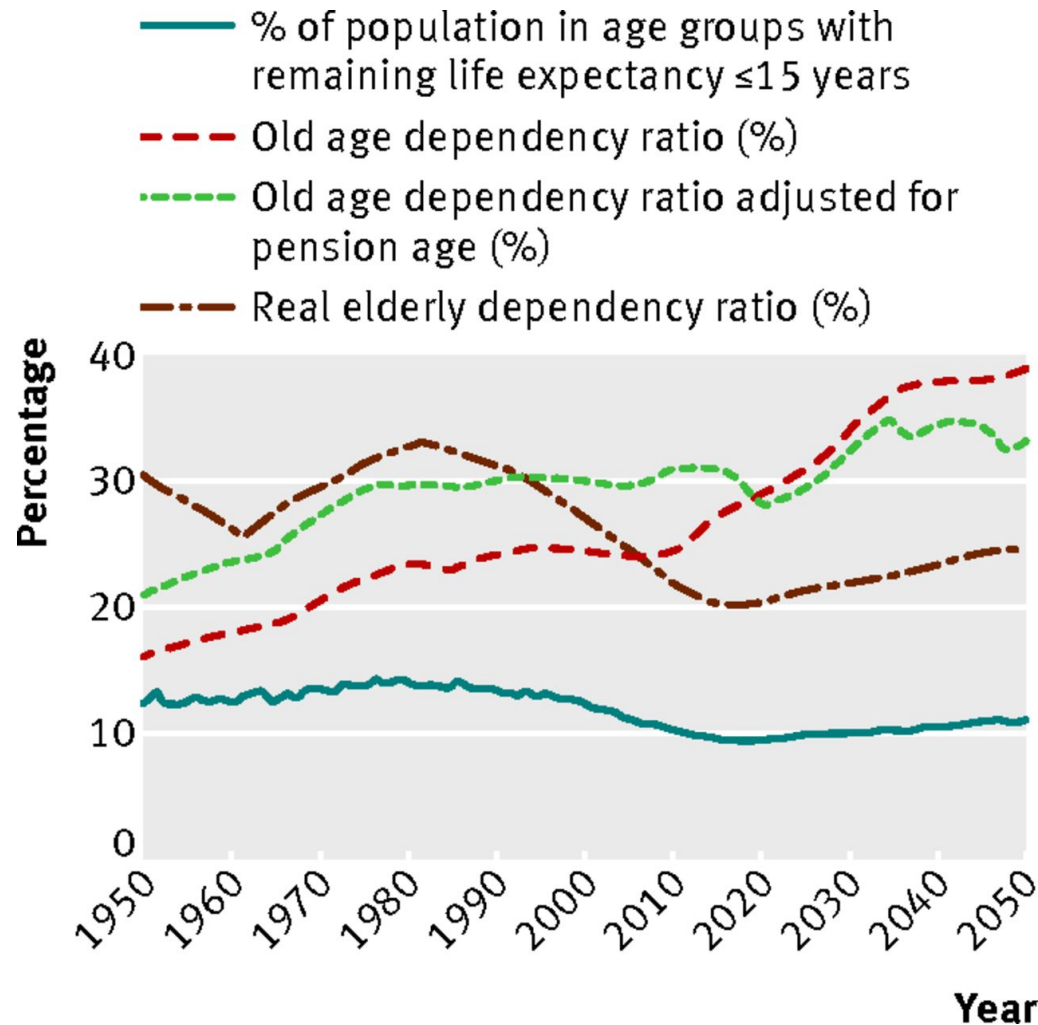


Rethinking economic analysis 3: health care costs

Factors influencing growth in health care expenditure in the United States 1940 to 1990



UK "Dependency" Projections

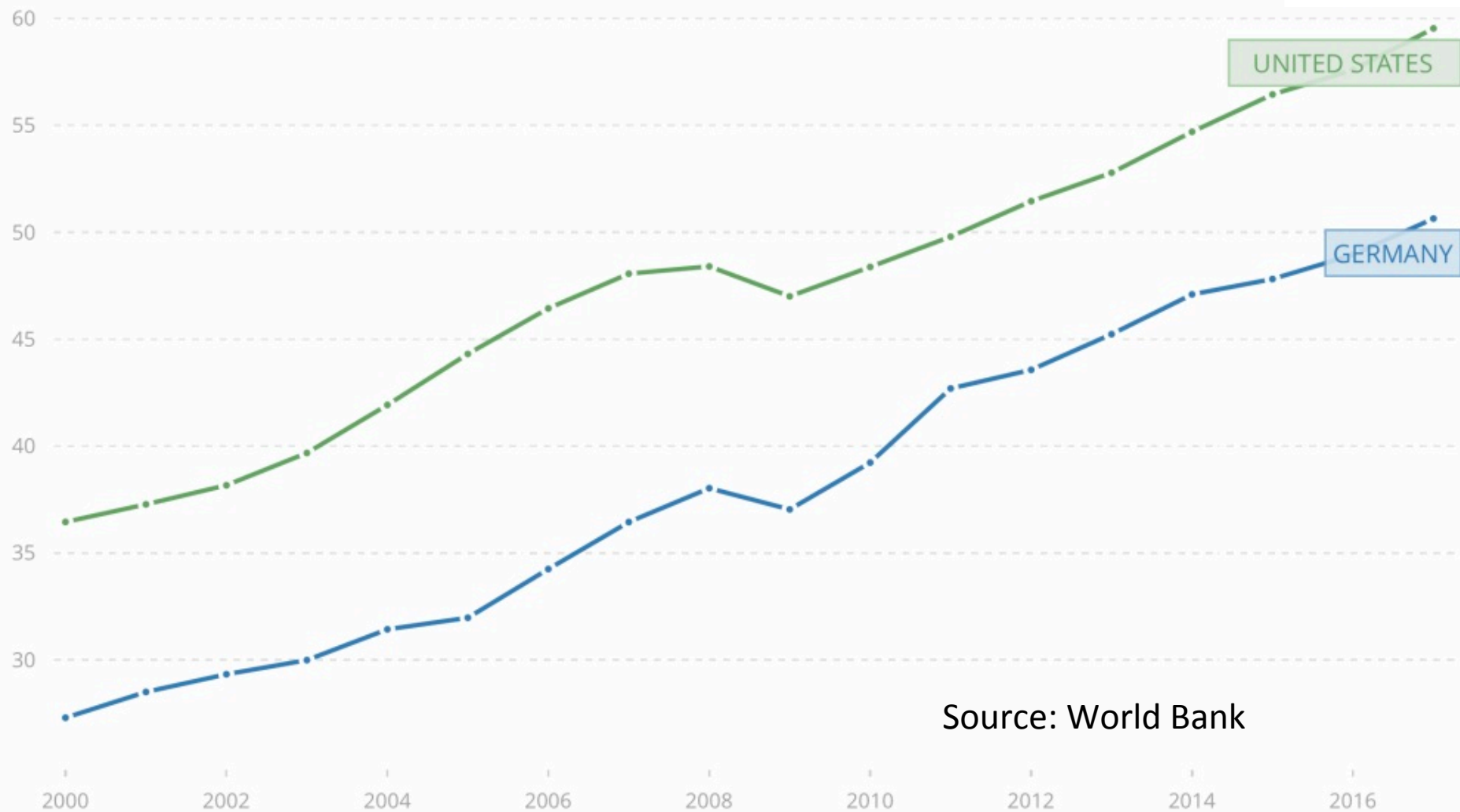


Source: Spijker and MacInnes, 2013


GDP Per Capita PPP 2000-Present

data.worldbank.org

Thousand



Source: World Bank



<http://www.who.int/ageing/events/world-report-2015-launch/en/>

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Mortality at different ages for low, middle and high income countries

Source: Beard et al. *the Lancet* 2015

