

A Natural Capital Future for Parks

UNIVERSITY OF
BIRMINGHAM

LANCASTER
UNIVERSITY

UCL

UNIVERSITY OF
Southampton

EPSRC

Birmingham City Council

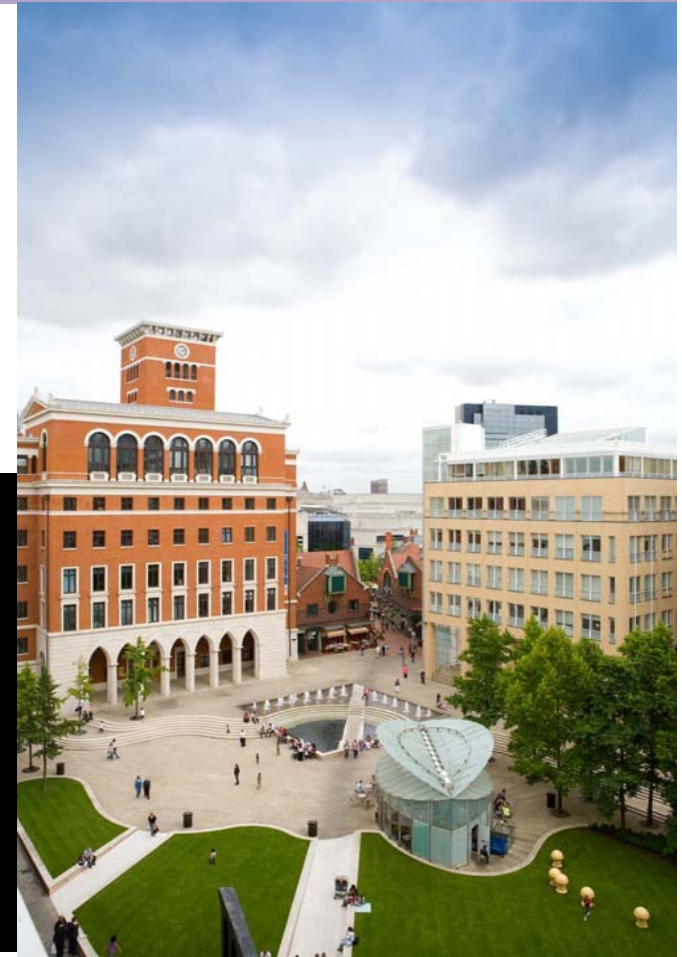
Leader- leading global green city;

Planning- (2031)
150,000 population;
51,300 new homes;

Presentation:

- New Why?
- New Evidence
- New Governance

- New Systems



Liveable Cities

Transforming the
Engineering of Cities to
deliver Societal and
Planetary Wellbeing

Significant Findings

- Municipal Planning
- Municipal Finance
- Municipal Governance



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Nick Grayson, Climate Change & Sustainability Manager,
Senior Research Fellow, University of Birmingham



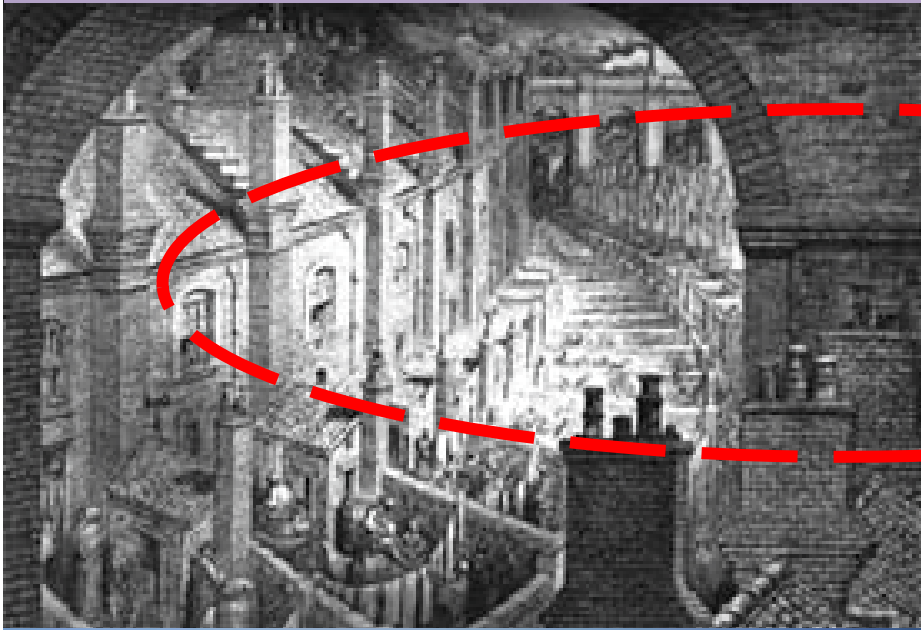
APSE Parks Seminar- 'Turning over a new leaf'- March 2018

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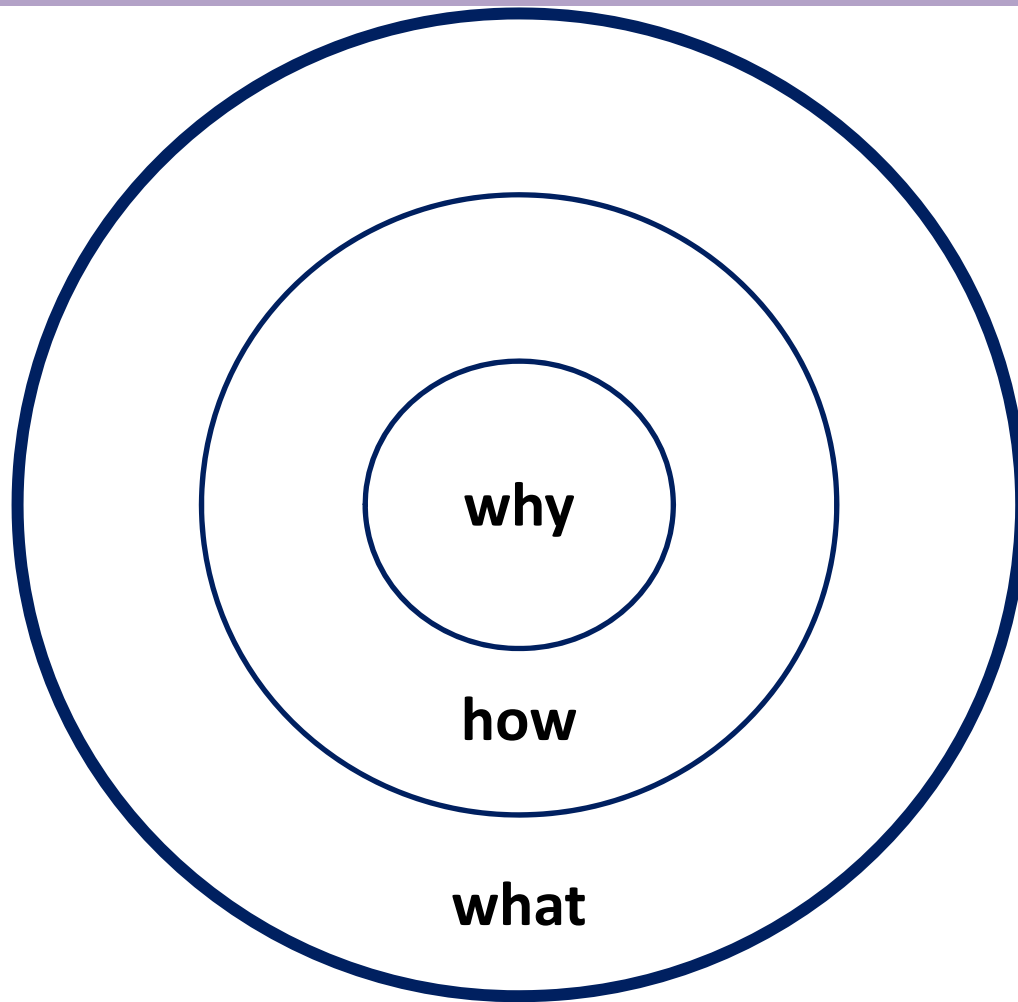


MEA &
NATURAL
CAPITAL
2005

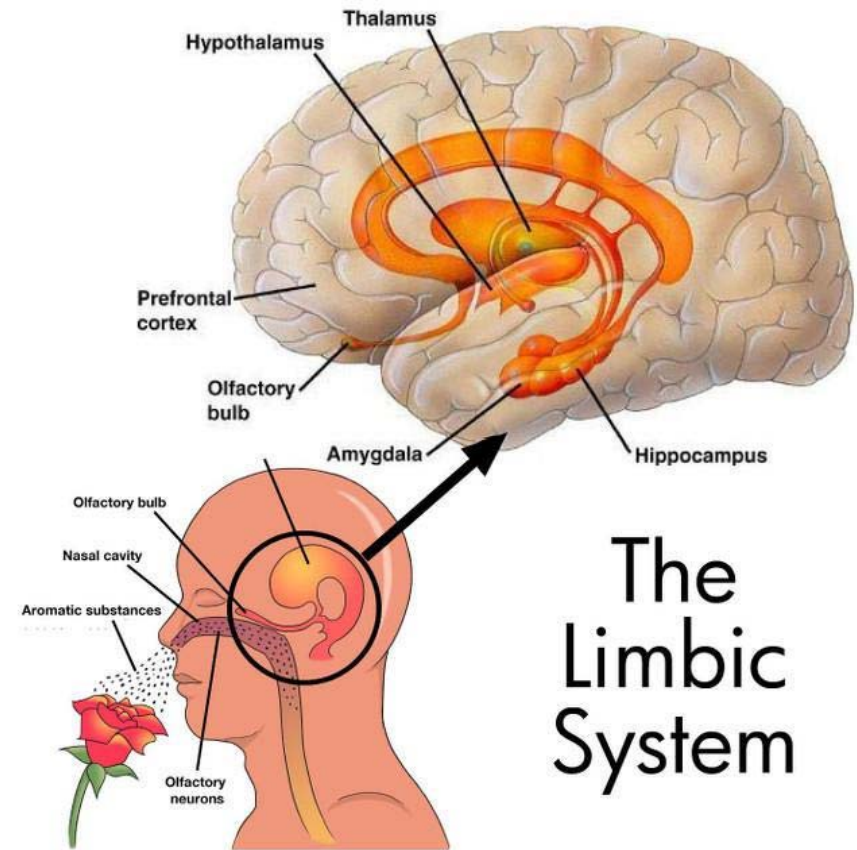
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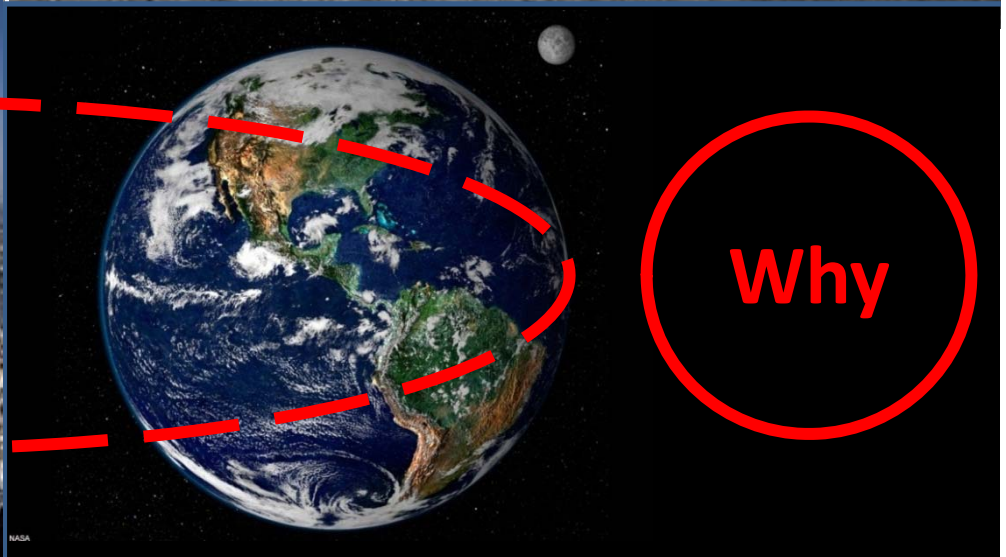
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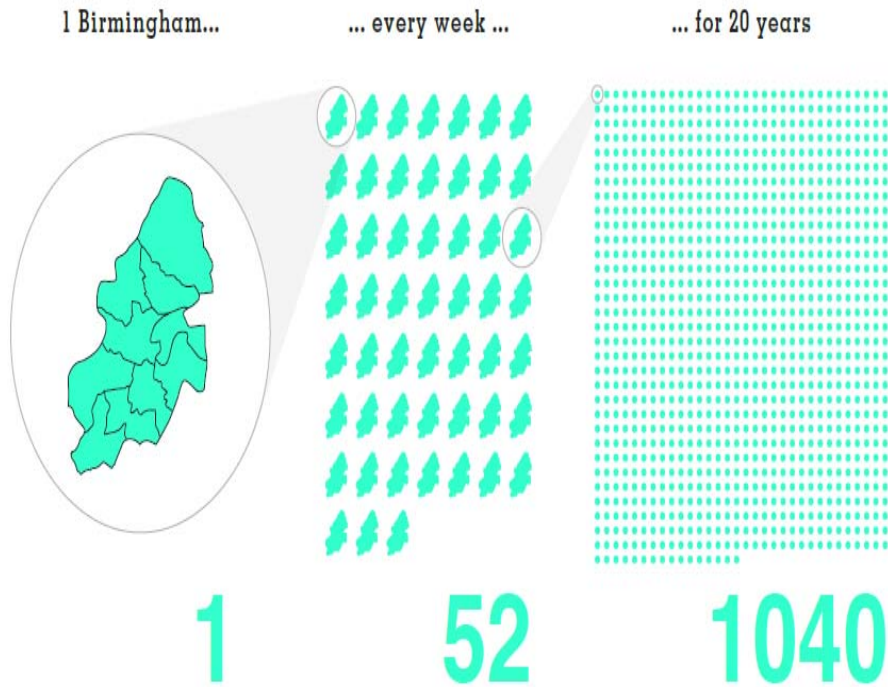
“Feeling people-who think”



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We need to build the equivalent of one Birmingham a week around the globe for the next 20 years if we are to house the growing urban populations.

THE FARRELL REVIEW INTRODUCTION

9

The City 600: MGI's Cityscope identifies the world's fastest-growing megacities and middleweights

● The City 600 (600)
● Additional cities in MGI Cityscope (~1,400)



- McKinsey paper 21st century growth and wealth creation:
- http://www.mckinsey.com/insights/urbanization/urban_world;

SOURCE: McKinsey Global Institute Cityscope 1.0

20 YEAR PATTERN OF GLOBAL GROWTH
"Patient Money"



Climate Alliance

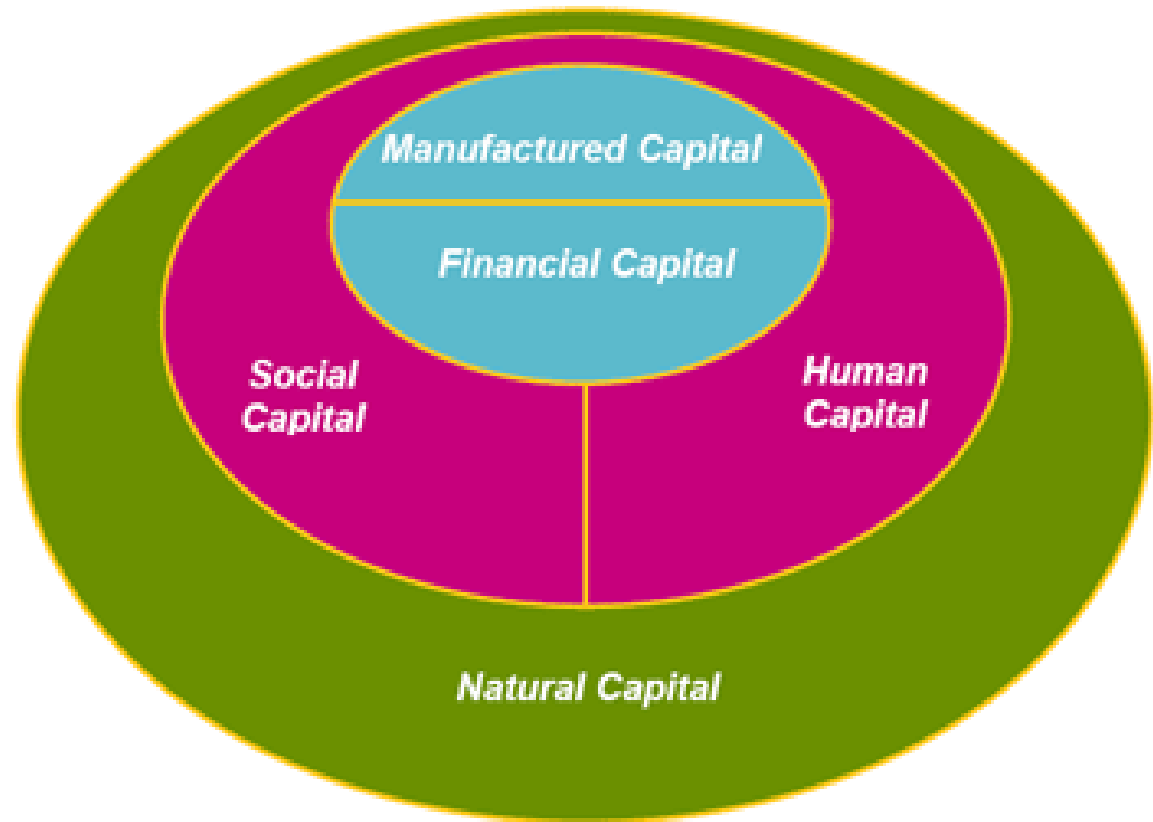
Climate Alliance represents \$21 Trillion Dollars of global investment awaiting climate proofing

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Liveable Cities- Is Governance the Sixth Capital?

Beyond GDP?
(Gross Domestic Product)



Source: Forum for the Future
(2013)

Five essential capitals for human wellbeing

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#RewireEconomy

Unhedgeable risk

How climate change sentiment impacts investment



BANK OF ENGLAND

Mark Carney

Climate change is the Tragedy of the *Horizon*.

- We don't need an army of actuaries to tell us that the catastrophic impacts of climate change will be felt beyond the traditional horizons of most actors – imposing a cost on future generations that the current generation has no direct incentive to fix.
- That means beyond:
 - - the **business cycle**;
 - - the **political cycle**; and
 - - the **horizon of technocratic authorities**, like central banks, who are bound by their mandates.
- The horizon for monetary policy extends out to 2-3 years. For financial stability it is a bit longer, but typically only to the outer boundaries of the credit cycle – about a decade.

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2016



COP21 · CMP11
PARIS 2015
UN CLIMATE CHANGE CONFERENCE

SUSTAINABLE DEVELOPMENT GOALS



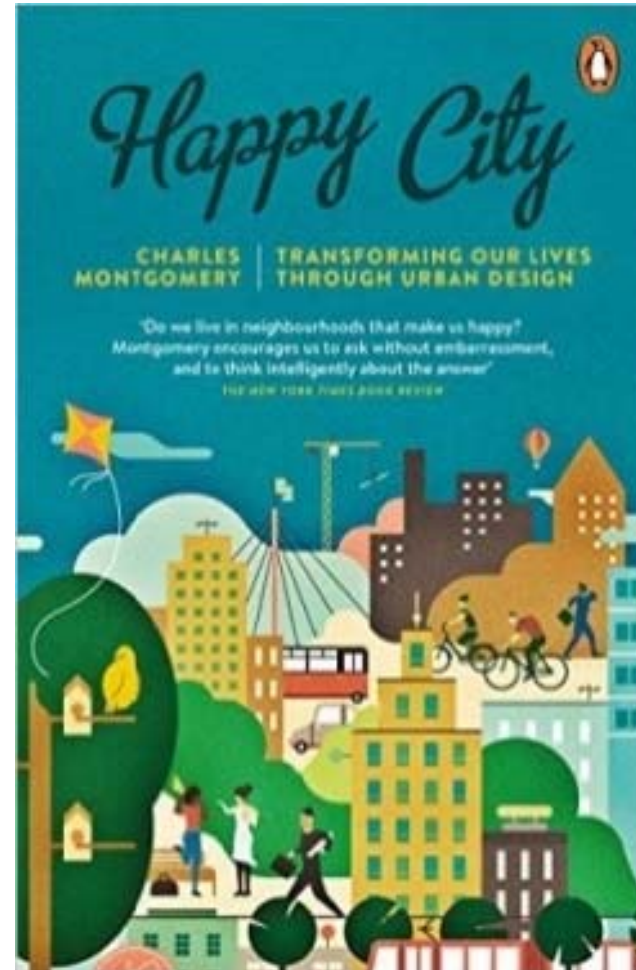
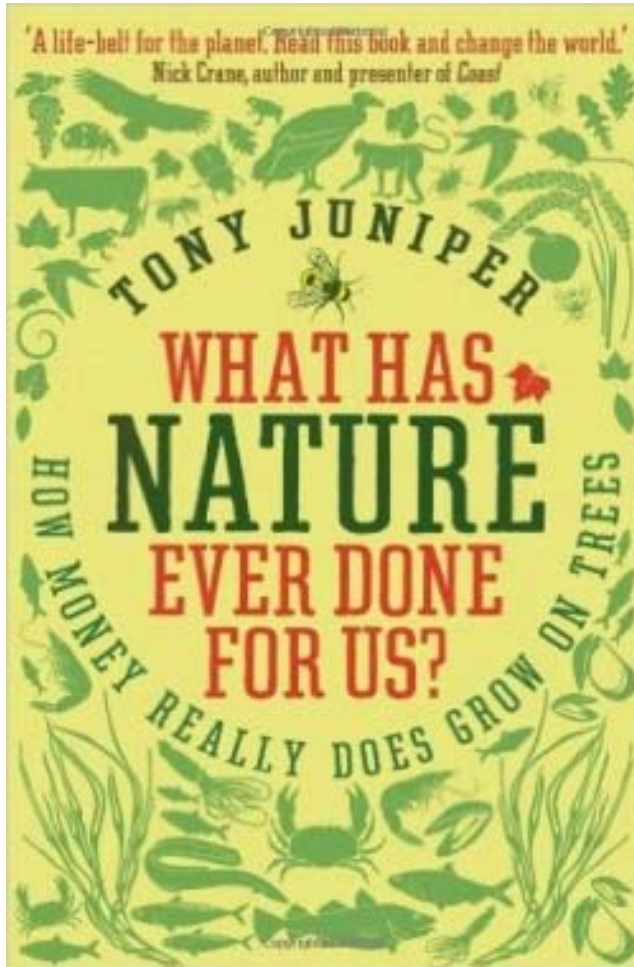
2015

PLANNING

FINANCE

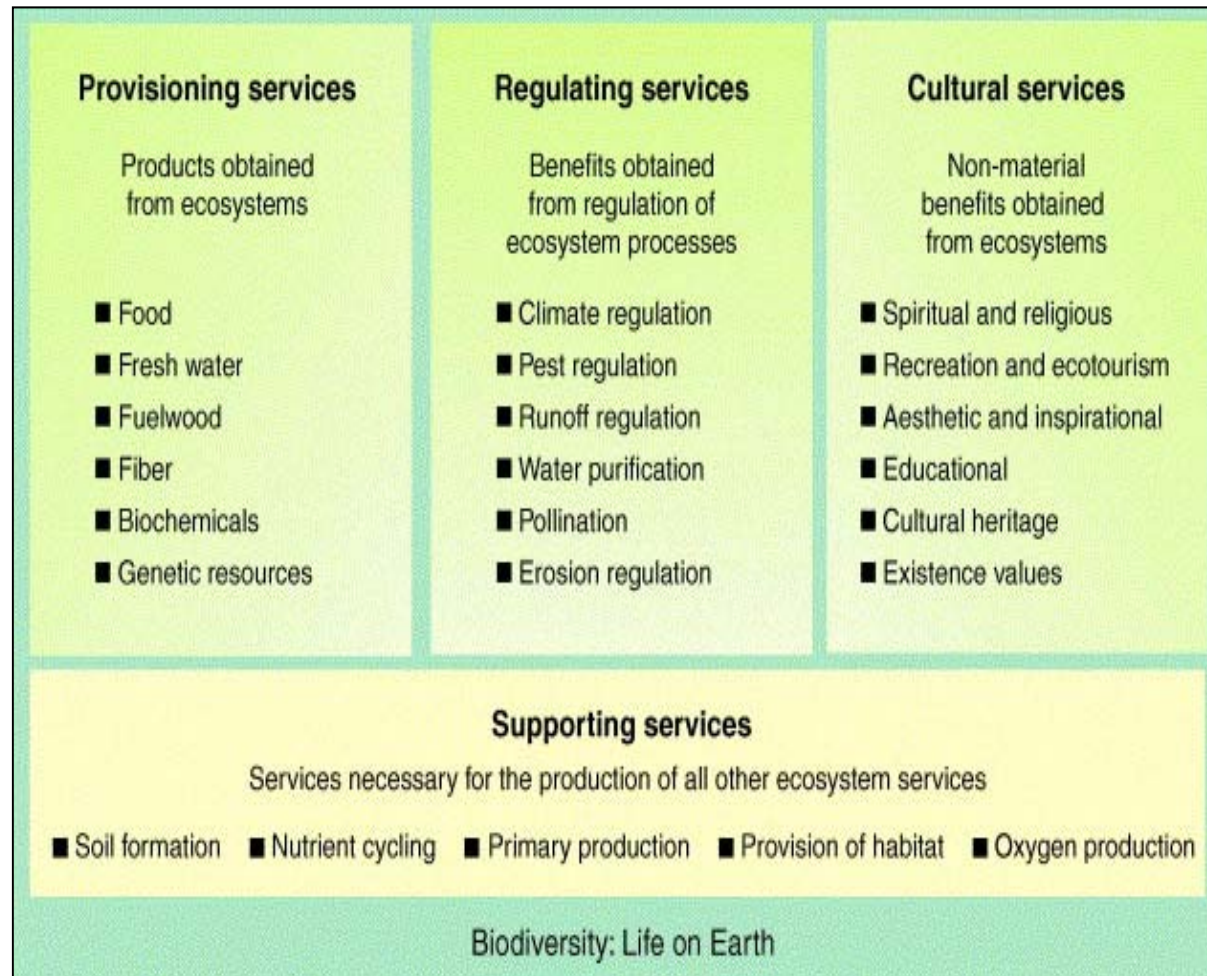
GOVERNANCE

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Definition - the benefits provided by ecosystems that contribute to making human life both possible and worth living



The Global Commission on the Economy and Climate 2014 –Stern

“Environmental trends; both globally and nationally, paint a picture of overall decline, particularly over the last 60 years.”

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IUCN 2016
Article 63
\$200-300bn
1%

NATIONAL &
INTERNATIONAL SCALE

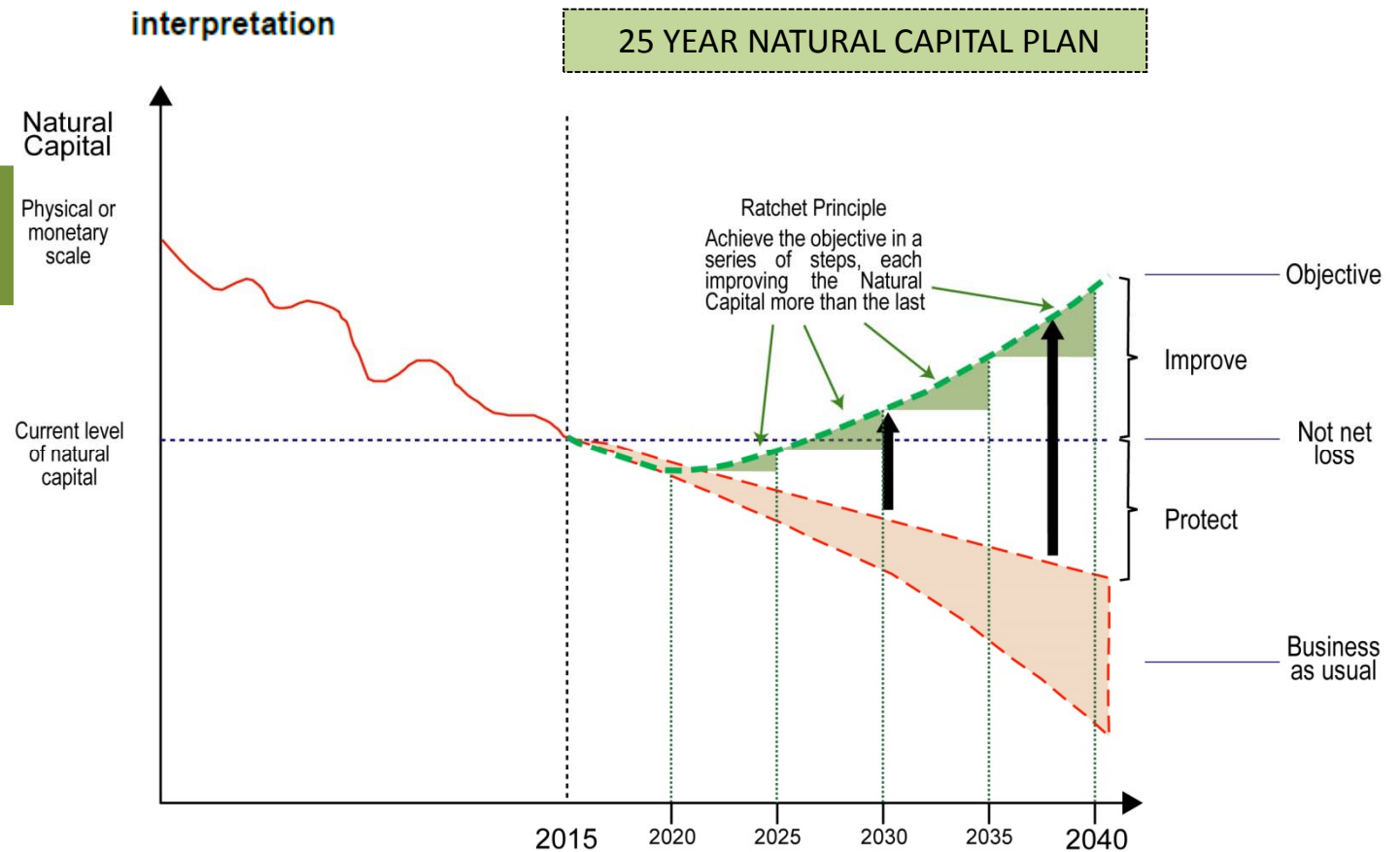


A Green Future: Our 25 Year Plan to
Improve the Environment



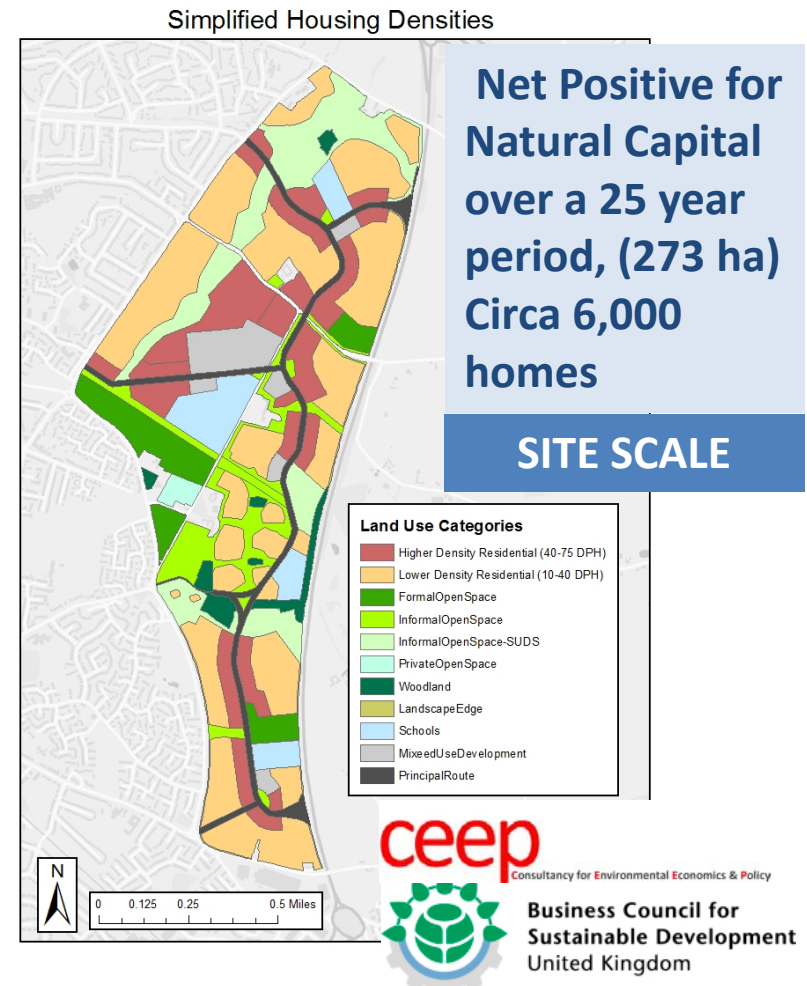
Natural Capital can be **defined** as the world's stocks of **natural** assets which include geology, soil, air, water and all living things. It is from this **Natural Capital** that humans derive a wide range of services, often called ecosystem services, which make human life possible. (Natural Capital Committee Third Report 2015)

Figure 1: Protecting and improving natural capital over a generation – a stylised interpretation



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Development Impact Score		
Total for 71.5 Ha of Assessed Land-use Changes		
Ecosystem Service	Adjusted Scores	Unadj. Scores
1. Harvested Products	-359.1	-359.1
2. Biodiversity	+55.7	+55.7
3. Aesthetic Values	-7.7	-7.7
4. Recreation	+72.3	+72.3
5. Water Quality Regulation	+1.9	+1.9
6. Flood Risk Regulation	+1.1	-0.7
7. Air Quality Regulation	+22.6	+22.6
8. Local Climate Regulation	-1.6	-1.6
9. Global Climate Regulation	-57.8	-57.8
10. Soil Contamination	+0.0	+0.0
Development Impact Score	-27.3	-27.4



November 2015

Planning for Sustainable Land-Use: The Natural Capital Planning Tool (NCPT) Project

[A new planning tool that directly links the delivery requirements of the National Planning Policy Framework with the aspirational values in the Natural Environment White Paper]



LC- NERC NATIONAL TRAIL-
University Of Birmingham Lead

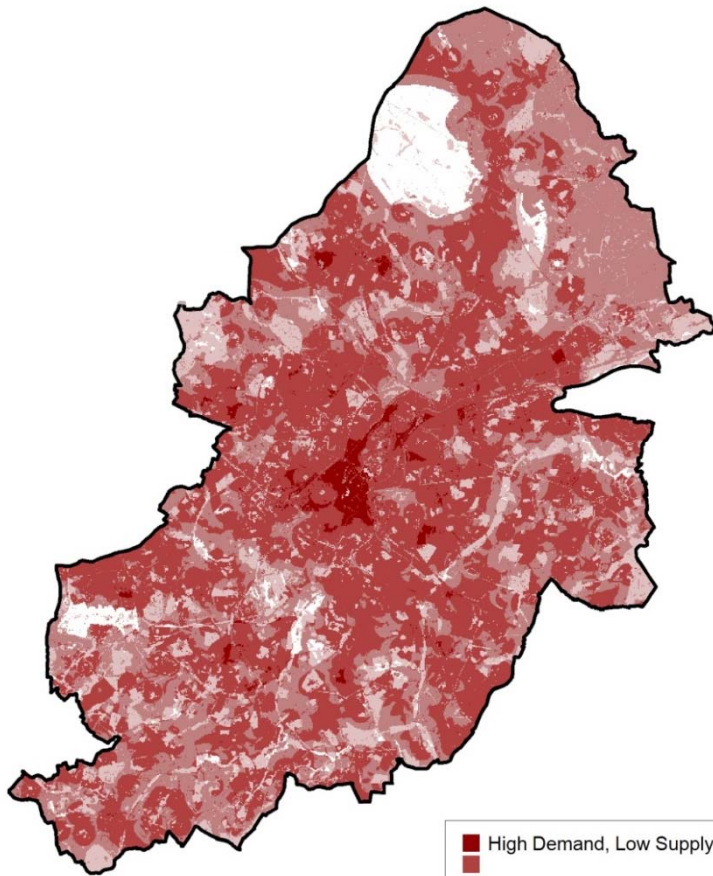


APSE Parks Seminar- 'Turning over a new leaf'- March 2018

New Evidence

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The Multi-layered Challenge map for Birmingham



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March 2013 Birmingham City Council

Biodiversity
Education
Recreation
Local Climate
Flood Risk
Aesthetic & mobility

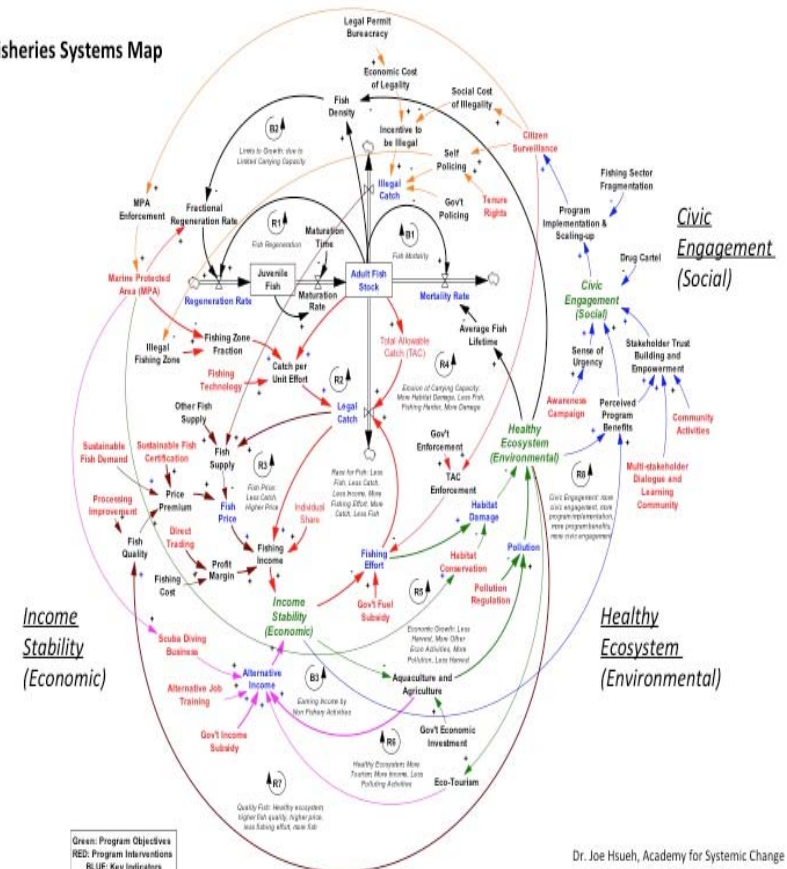
Systems approach-

Who are the main beneficiaries?

Their motives?

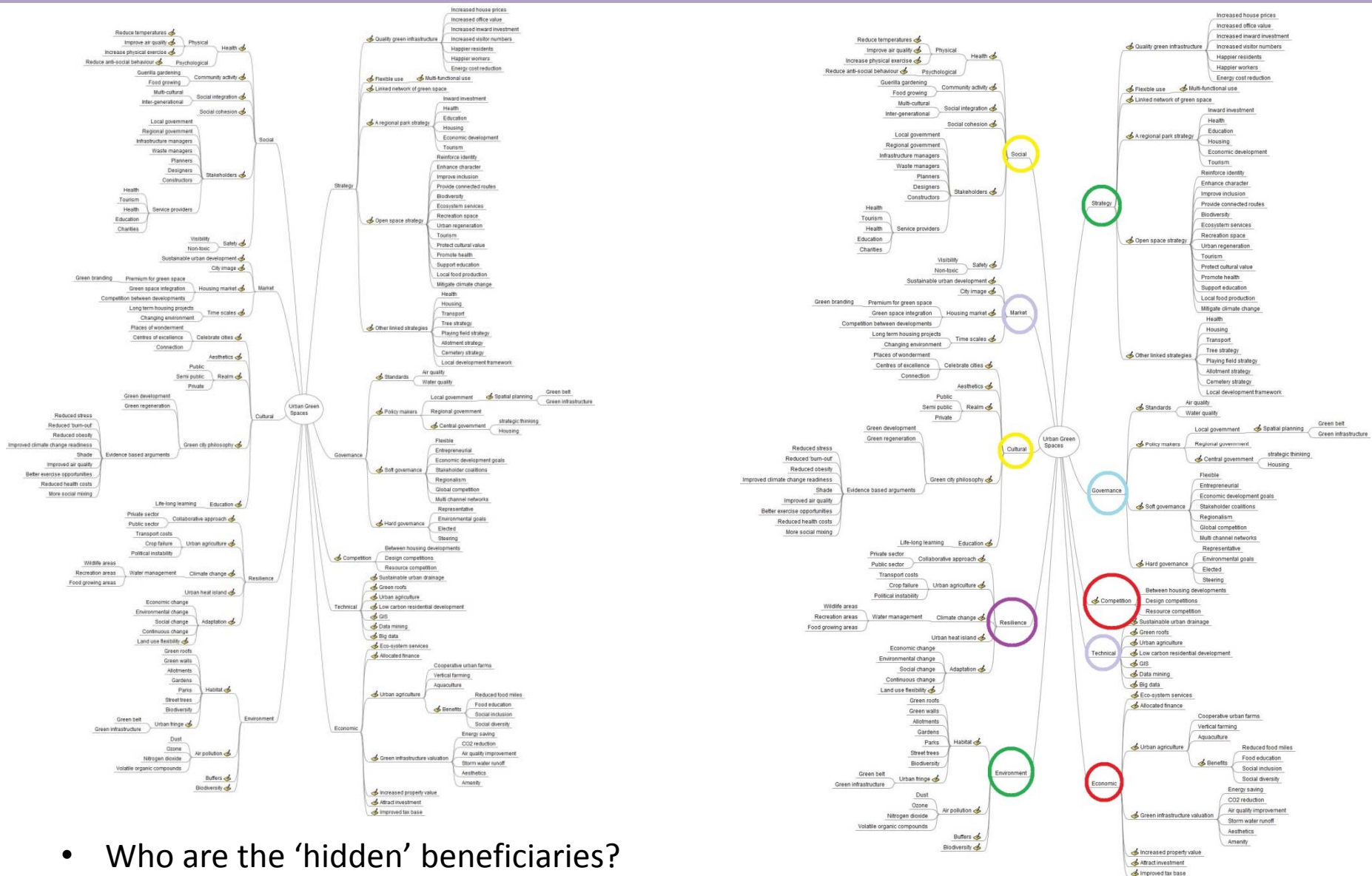
A new map of engagement

Fisheries Systems Map



Dr. Joe Hsueh, Academy for Systemic Change

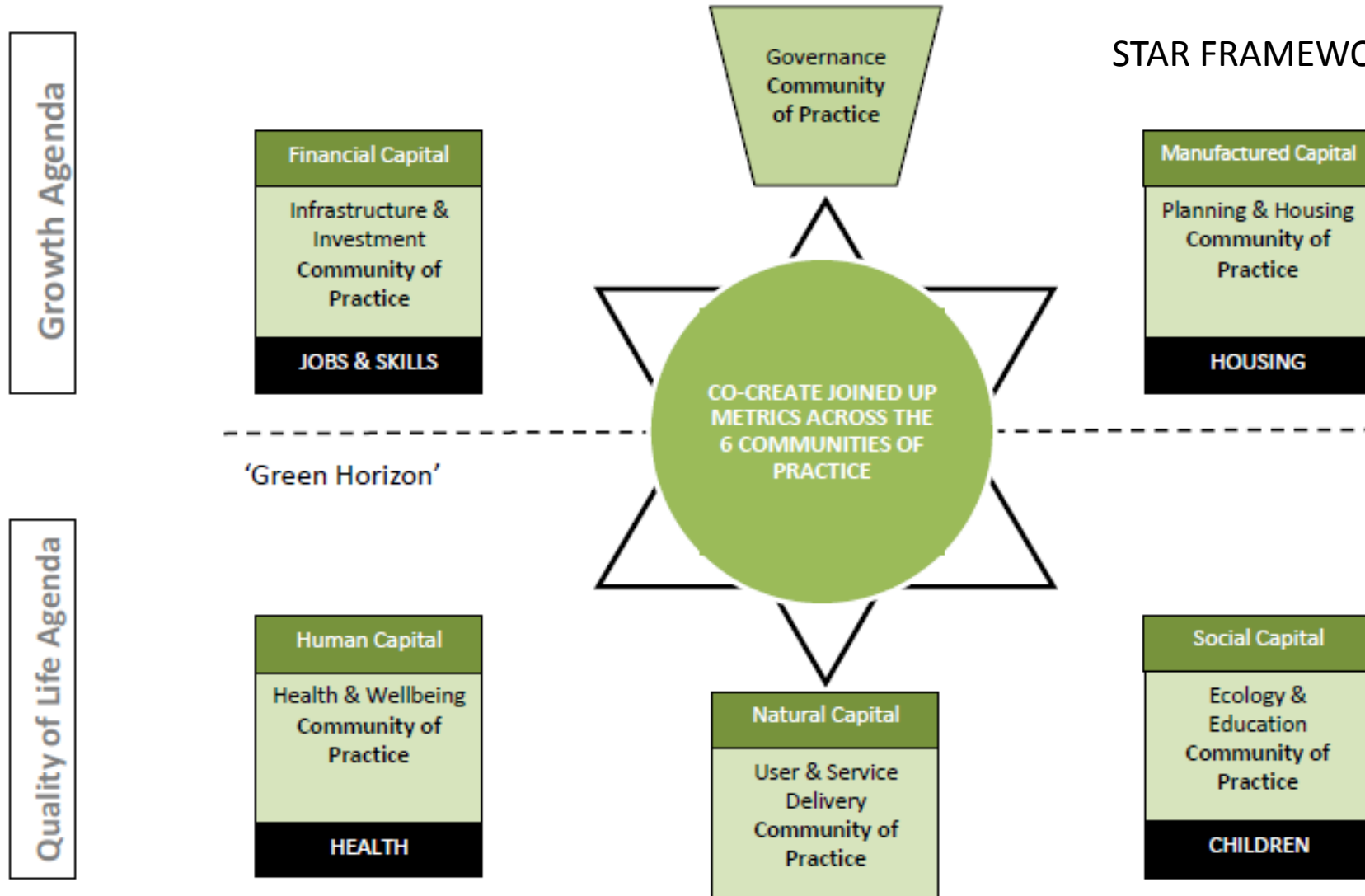
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- Who are the 'hidden' beneficiaries?

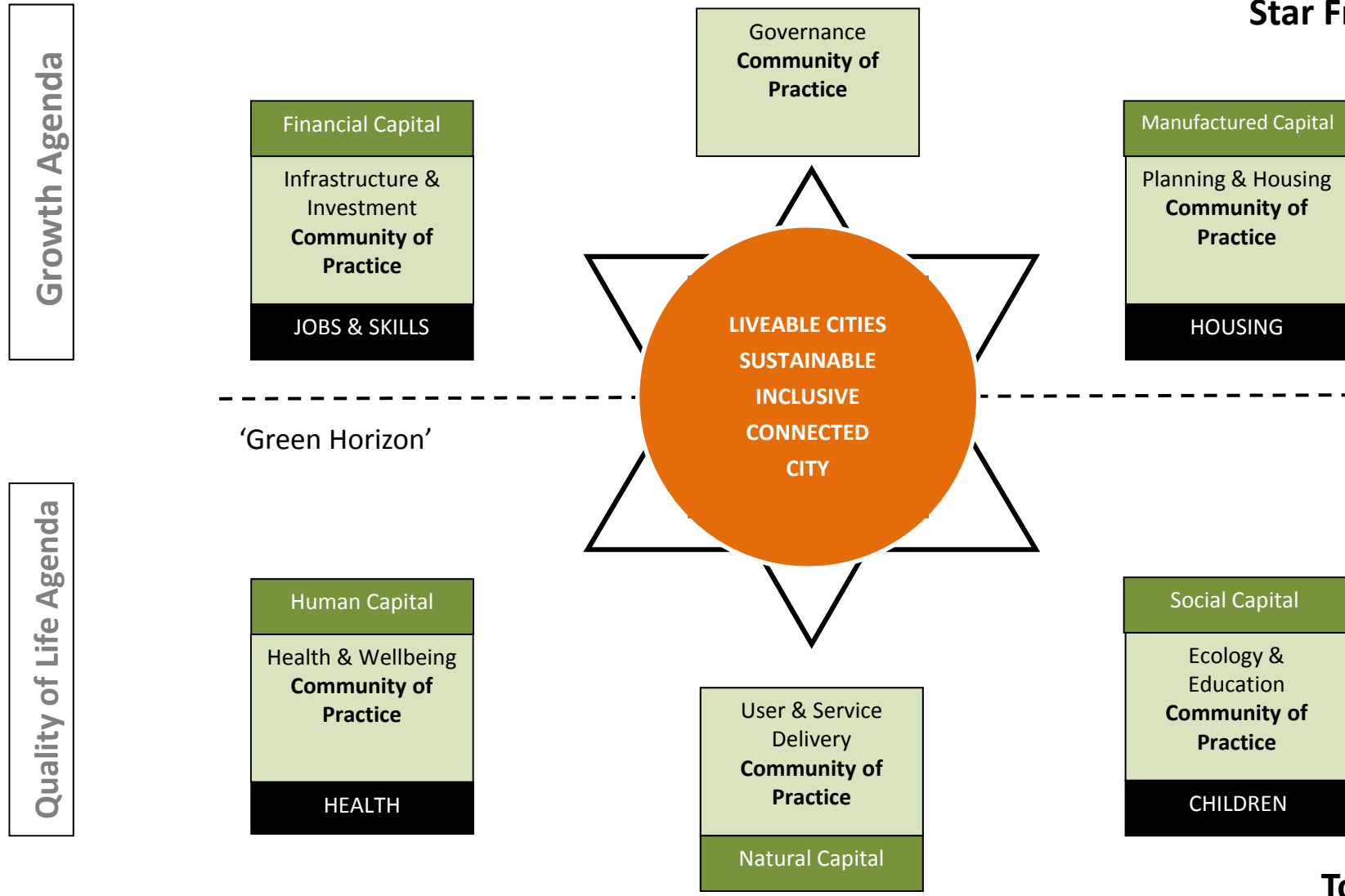
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STAR FRAMEWORK



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Star Framework



Total Place

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National Development & Security



*The Ecological Civilization
of the 21st Century*

“Clear waters and lush mountains are
gold and silver.

We will not trade them for gold or silver.”

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200 M people being paid to restore natural capital



Co-Developing Urban InVEST

SUSTAINABLE LIVABLE CITIES



Starting with:

Beijing

Dalian

Shenzhen

Shanghai

InV
integrated
environme



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Gross Ecosystem Product

NEW SYSTEM OF GREEN FINANCE



GEP – the total value of ecosystem goods and services supplied annually

natural
capital
PROJECT

- China State Council, March 2014

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Biophilic Cities - Cities that achieve a deep affinity with nature



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Questions & Answers?

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<http://www.birmingham.gov.uk/greencommission>

<http://www.birmingham.gov.uk/greenlivingspaces>

<http://www.birmingham.gov.uk/plan2031>

http://birminghamclimate.com/ie_index2.html

<http://www.wbcds.org/home.aspx>

<http://uknea.unep-wcmc.org/>

http://www.local.gov.uk/health/-/journal_content/56/10180/3510483/ARTICLE

<http://www.bmj.com/content/348/bmj.g2407>

<http://www.intelligenthealth.co.uk/team/dr-william-bird/>

http://www.landscapeinstitute.co.uk/PDF/Contribute/PublicHealthandLandscape_CreatingHealthyPlaces_FINAL.pdf

<http://www.cell.com/trends/endocrinology-metabolism//retrieve/pii/S1043276007000690?cc=y>

<http://www.theguardian.com/cities/2014/apr/03/birmingham-san-francisco-oslo-global-green-biophilic-cities-club>

<https://www.naturalcapitalcommittee.org/>

<http://www.westmidlandscombinedauthority.org.uk/>

<http://www.overshootday.org/>

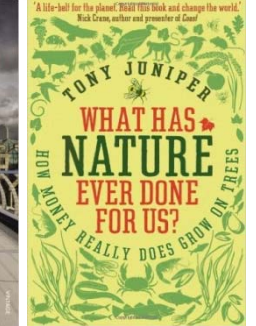
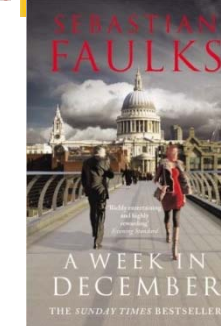
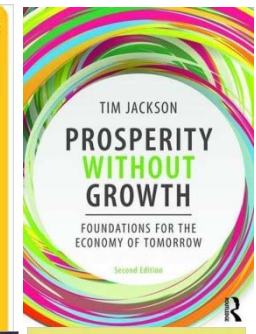
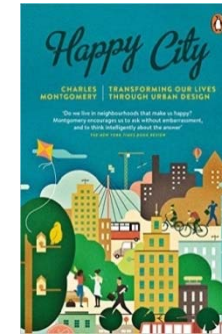
http://www.mckinsey.com/insights/urbanization/urban_world

<http://liveablecities.org.uk/>

<http://biophiliccities.org/>

<http://www.farrellreview.co.uk/>

<http://www.un.org/apps/news/story.asp?NewsID=48773#.VrnAcVLctjo>



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