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at Cheltenham and Gloucester

Interdisciplinary research for ecosystems services in informal settlements?

Dr Kenny Lynch

OUTLINE

Interdisciplinary
research for ESS?

IDR for ESS in
informal settlements

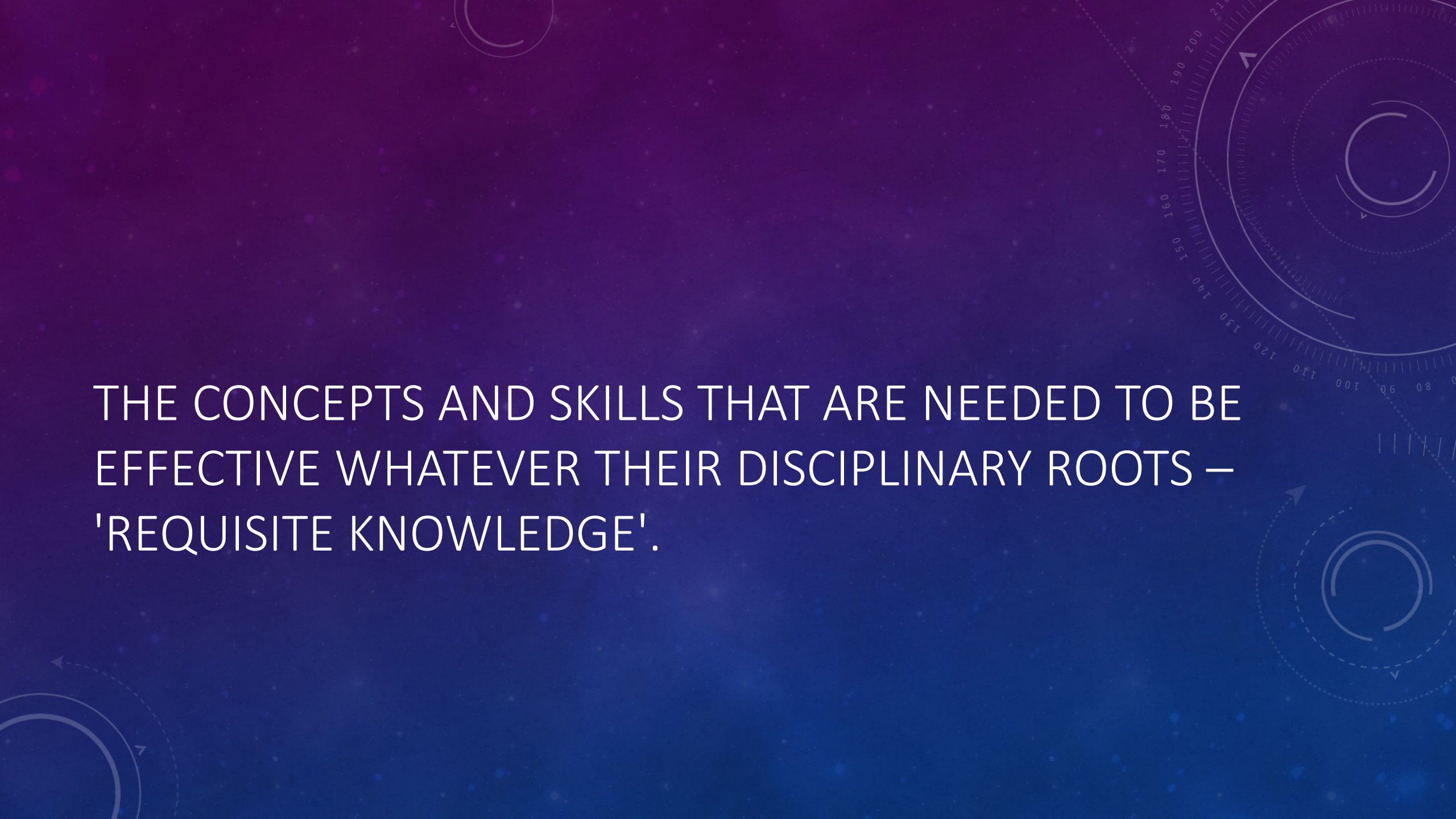
Urban agriculture in
informal settlements



RESEARCH THAT INTEGRATES INSIGHTS AND
PERSPECTIVES FROM MORE THAN ONE DISCIPLINE.

The background features a dark blue gradient with a subtle pattern of white stars and technical diagrams. On the right side, there are several circular diagrams with concentric lines and arrows, resembling a radar or a data visualization. The text is centered in the lower half of the image.

RESEARCH THAT OPENS UP NEW SOURCES AND
METHODOLOGIES BEYOND THOSE FOUND IN A
SINGLED DISCIPLINE.

The background features a dark blue gradient with a subtle pattern of white stars and technical diagrams. On the right side, there are several circular diagrams resembling gauges or dials with numerical scales (e.g., 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210) and arrows. Some diagrams have dashed lines and solid lines, suggesting different states or components. The overall aesthetic is clean, modern, and technical.

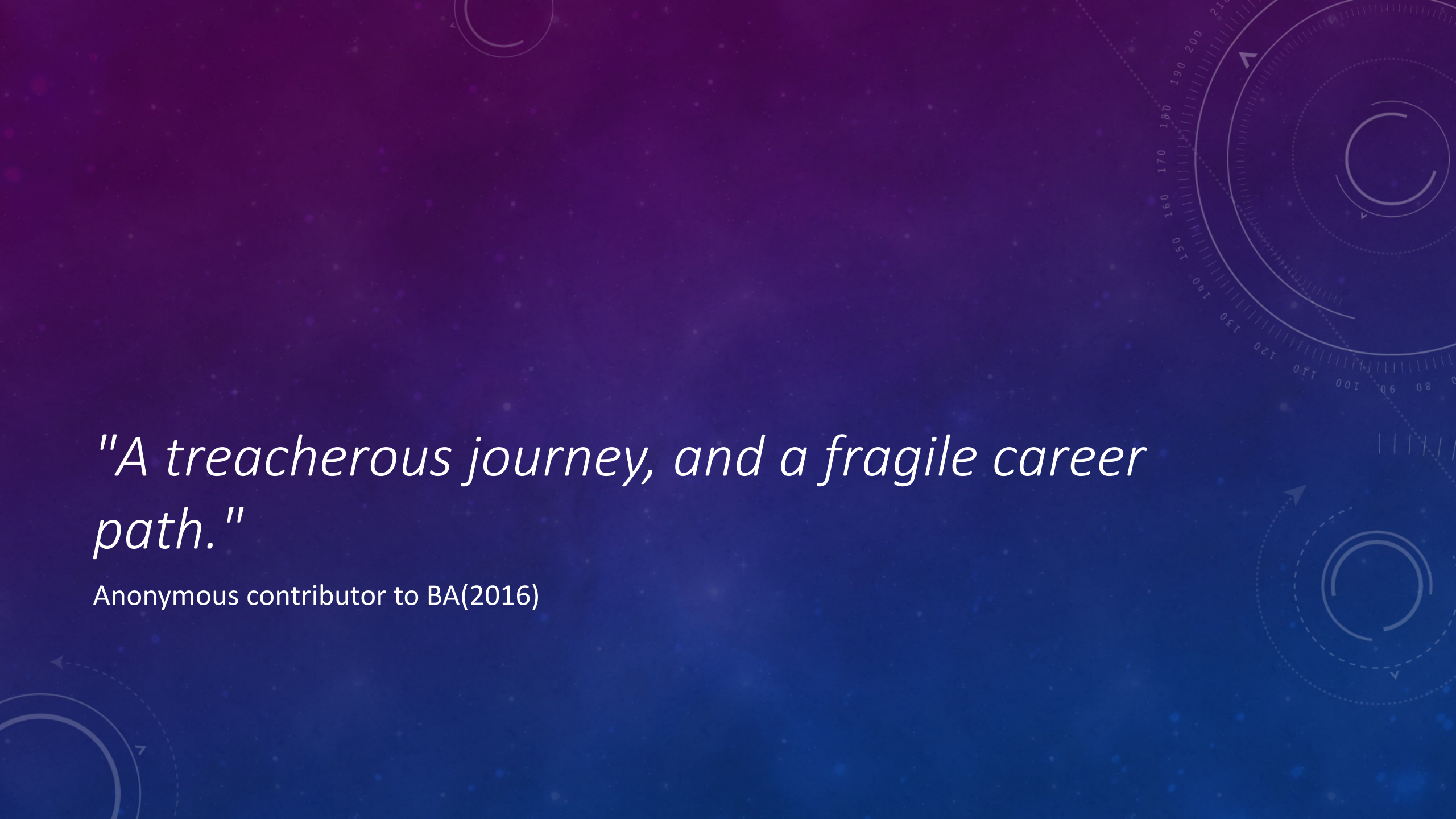
THE CONCEPTS AND SKILLS THAT ARE NEEDED TO BE
EFFECTIVE WHATEVER THEIR DISCIPLINARY ROOTS –
'REQUISITE KNOWLEDGE'.

BARRIERS TO IDR

- Career
- Institutional – university or institute
- Institutional – finders or collaborators
- Policy pathways – eg ministries, civil service
- Disciplinary use of language, terminology, theory, evidence

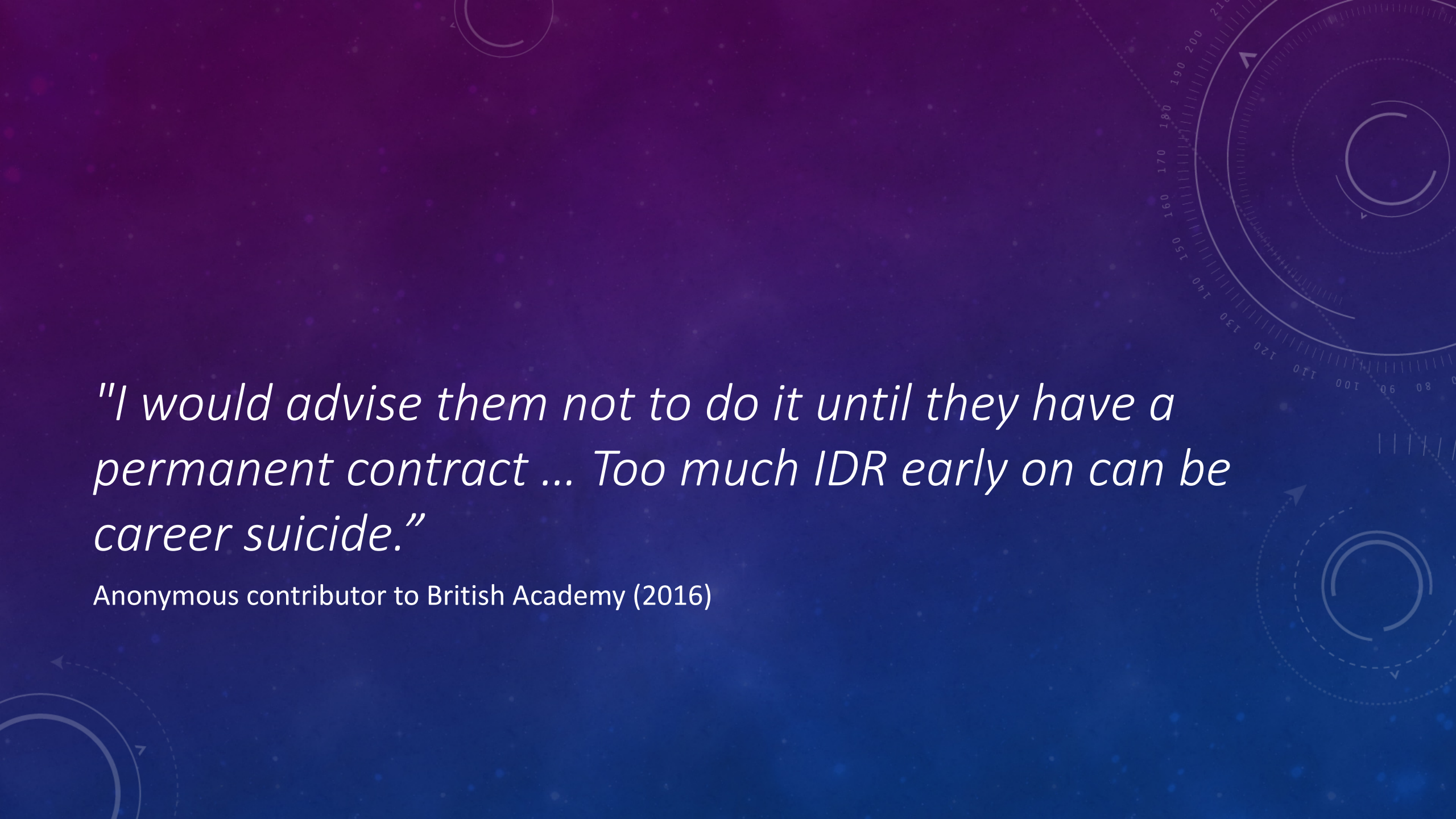
BA (2016) EARLY CAREERS RESEARCHER BARRIERS

- Need to secure firm disciplinary theoretical & methodological foundation in one or more disciplines.
- Need to secure relevant publications and research experience.
- Need to find a disciplinary 'home'.
- IDR can take longer.
- Easier to pursue discipline-focused publication plan (while developing teaching [UK PGCert.], passing probation
- Need to meet needs of national research evaluation.
- Conservative discipline-focused peer review (publication, bidding)

The background features a dark blue gradient with a pattern of small white stars. Overlaid on this are several technical diagrams: a circular gauge with numerical markings (100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210) and arrows, and other circular elements with dashed lines and arrows, suggesting a complex system or process.


"A treacherous journey, and a fragile career path."

Anonymous contributor to BA(2016)

The background is a dark blue gradient with a starry space pattern. On the right side, there are several technical diagrams, including a large circular scale with numbers from 80 to 210 and arrows, and other smaller circular diagrams with arrows. The text is centered in the lower half of the image.

"I would advise them not to do it until they have a permanent contract ... Too much IDR early on can be career suicide."

Anonymous contributor to British Academy (2016)

The background features a dark blue gradient with a field of small white dots. Overlaid on this are several circular patterns: a large dotted circle with a solid inner circle and a dashed arrow pointing clockwise; a smaller solid circle with a dashed arrow pointing clockwise; and a circular scale with numerical markings from 80 to 210 and a dashed arrow pointing clockwise.

"To be honest: don't ...there is still a culture where Prof X with expertise is worth more than someone who can do a bigger picture."

University of Nottingham, contributed to BA (2016)

MOTIVATION TO IDR

- Intrinsic – promotes deeper understanding, intellectually stimulating, opportunities & possibilities of cracking 'wicked problems'
- Extrinsic – deeper understanding, balance for weaknesses of single discipline, complex problems demand complex solutions.
- UK REF 2014 impact case studies submitted: 60% drew on IDR.

BARRY & BORN(2013) TYPOLOGY

- **Integrative-synthesis**; combining insights from different pre-existing disciplines.
- **Subordination-service mode**; 1 or more disciplines occupy a service mode to other discipline(s).
- **Agonists can-antagonistic**; transcends disciplines it draws from and critiques in order to create a new interdisciplinarity.

ROUTES TO SUCCESS

- Publishing in recognised disciplinary journals
- Building social-academic networks – information, reputation building, partnerships, invitations
- Securing funding

IDR – IT MAY NOT BE WHAT IT SEEMS ...

- Research evaluation eg research funded by BBSRC assessed by 22 of 36 sub-panels of the UK REF 2014; ESRC all 36.
- UKRCs large % of IDR proposals to specific calls, but up to 60% funding through responsive mode.

KEY SKILLS OF IDR RESEARCHERS

- Methodological expertise & flexibility.
- Language learning & translating.
- Synthesising.
- Collaborating – team working.
- Convening.
- Engaging to diverse (academic/non-academic) audiences.

CRITERIA FOR IDR (BRITISH ACADEMY, 2016)?

- Sum of whole greater than parts?
- Inclusive leadership structure?
- Resources planned for dialogue, co-learning, integration?
- How do the disciplines benefit, transform?
- Disciplinary 'hospitality'?
- Different scales and communication been recognised?
- Coherence of approach to data?
- Necessary experience and training?

The background is a dark blue gradient with a field of small white dots. Faint, semi-transparent circular diagrams are scattered across the image. One prominent diagram in the upper right quadrant features concentric circles, a dashed outer ring, and a scale from 0 to 210. Other diagrams include dashed circles with arrows and solid circles with partial lines.

THINKING ABOUT INFORMAL SETTLEMENTS ...

CAREFUL ...

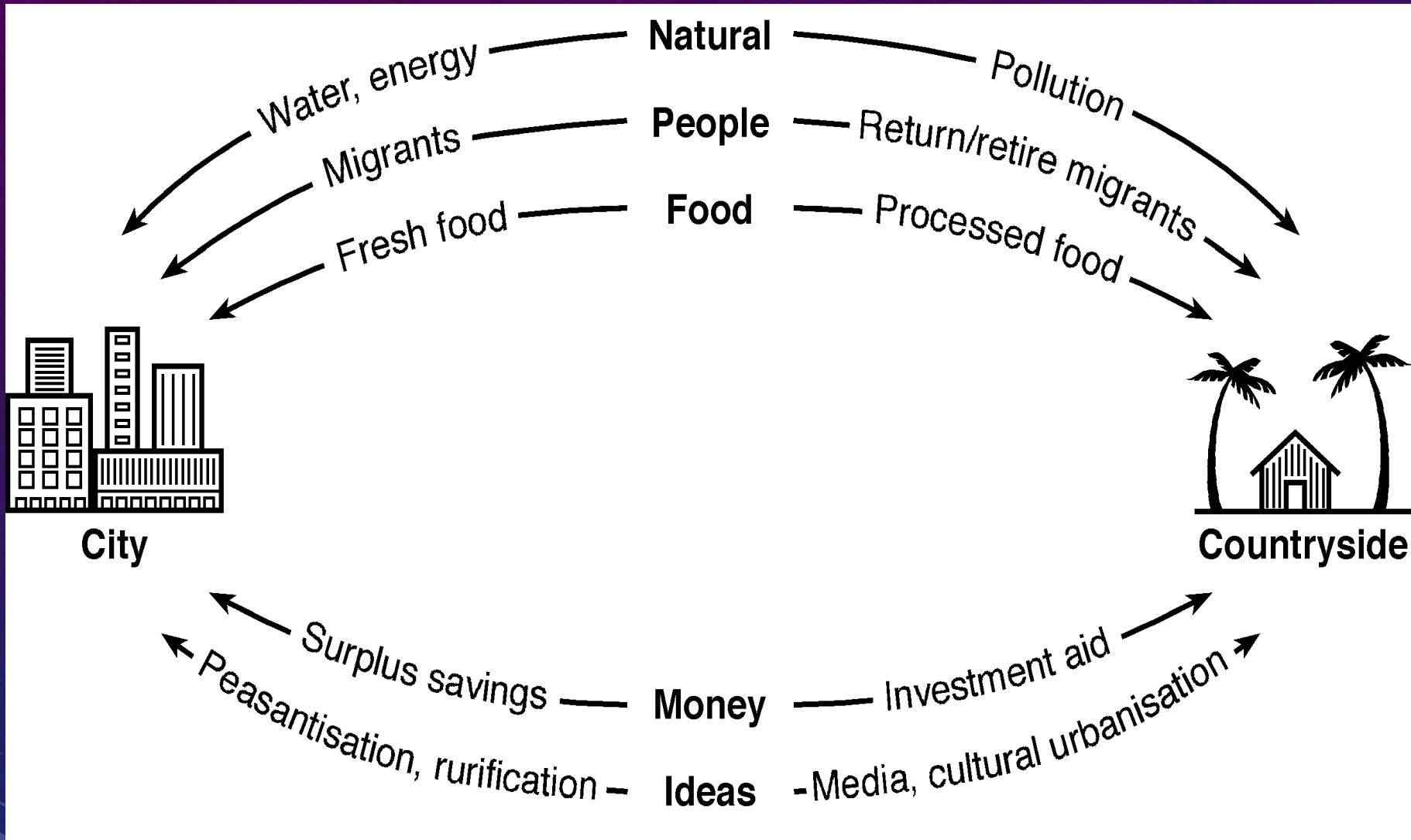
- What do we mean by ‘informal settlement’?



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Flows between city & countryside (Lynch, 2004)



‘They are not “Informal Settlements”—they are habitats made by people.’

Lorena Zárate, Mexico City.

April 26, 2016

WHY ARE INFORMAL SETTLEMENTS IMPORTANT?

- Often the majority of urban dwellers living in informal settlements.
- They are growing and 'densifying'.
- Poorer people often more reliant on ESS for livelihoods (5 capitals).
- Dwellers already limited access to ESS.
- Populations most vulnerable to shocks or LT changes.

“Degradation of ecosystem services hits the poor disproportionately. It is also sometimes the principal factor causing poverty.”

Mayers et al, 2009

“the dynamic relationship between poverty, ecosystem services and pollution that sees vulnerable and poor urban dwellers suffer disproportionately from environmental impacts.”

UN Habitat, 2015

ECOSYSTEMS DISSERVICES?

- Fear of attack by criminals or animals.
- Mental health impacts of living in hazardous environment.
- Pest & zoonotic disease hazard.
- Environmental risks – landslips, floods.



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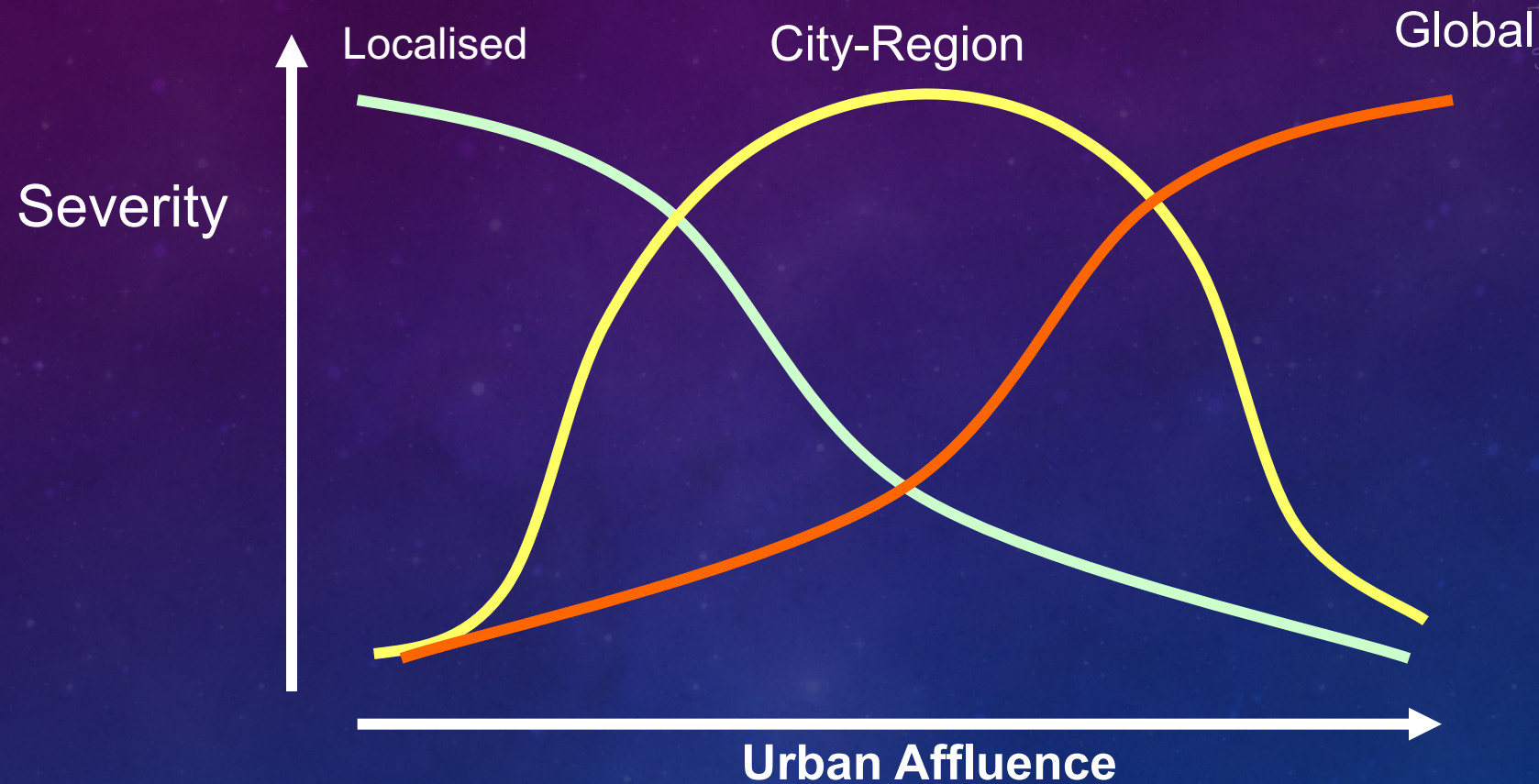
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Urban Environmental Burdens & Spatial Scales

	Local	City-Region	Global
Air	Indoor air pollution	Ambient pollution and acid rain	Contribution to CO ₂ emissions
Water	Access to water	Pollution of local water	Aggregate H ₂ O consumption
Waste	Unsafe waste handling	Unsafe/ destructive waste disposal	Aggregate waste generation

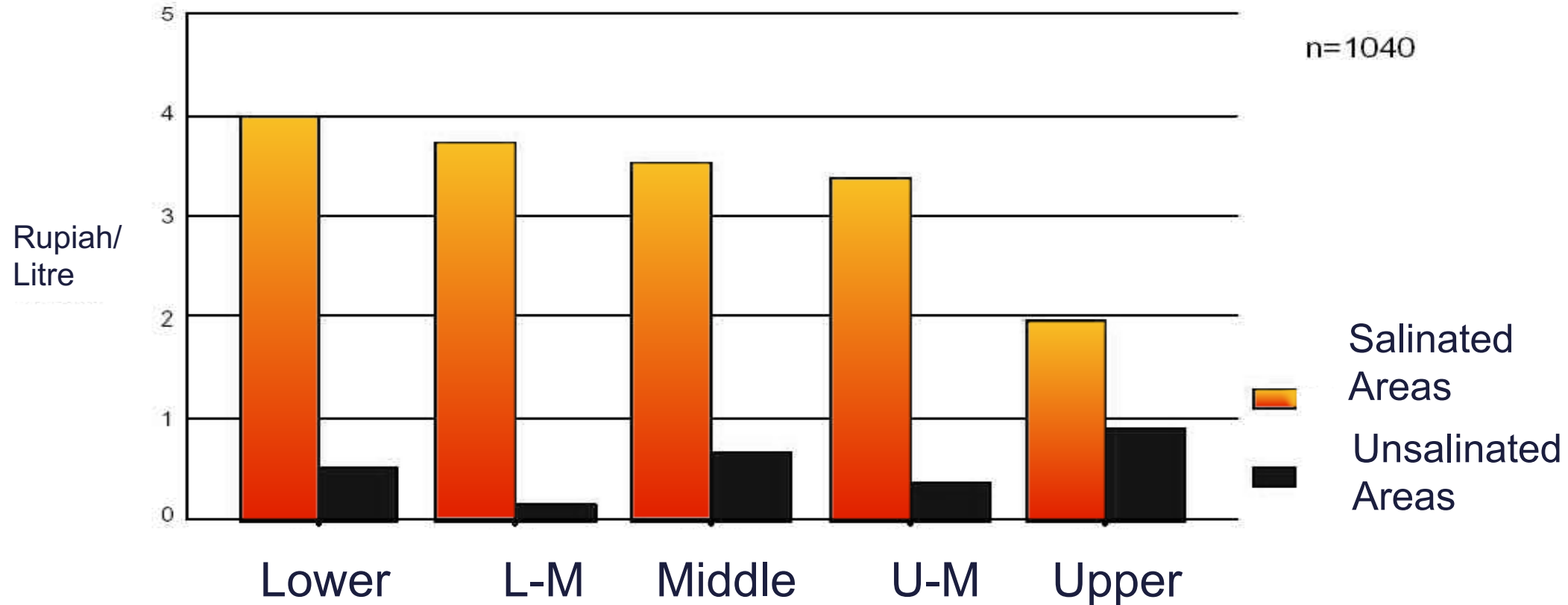
Source Adapted from McGranahan & Satterthwaite, 2000

Affluence and Urban Environmental Burden



Source: Adapted from McGranahan & Satterthwaite, 2000

Price of drinking water in Jakarta, Indonesia by geographical features and wealth quintiles



Kjellen & McGranahan, 1997

High income

Low

Middle

Medium

Low

High density

‘Managing to provide sufficient ecosystem services and fewer dis-services will no doubt require **multidisciplinary, collaborative, policy-relevant and context-sensitive research.**

Knowledge from such research would be useful towards **intervention in informal settlements across the heterogeneous urban contexts** in developing countries.’

Adegun, 2014

CONCLUSIONS

- ???