

Supply chain dynamics in the UK construction industry and their impact on energy consumption in homes

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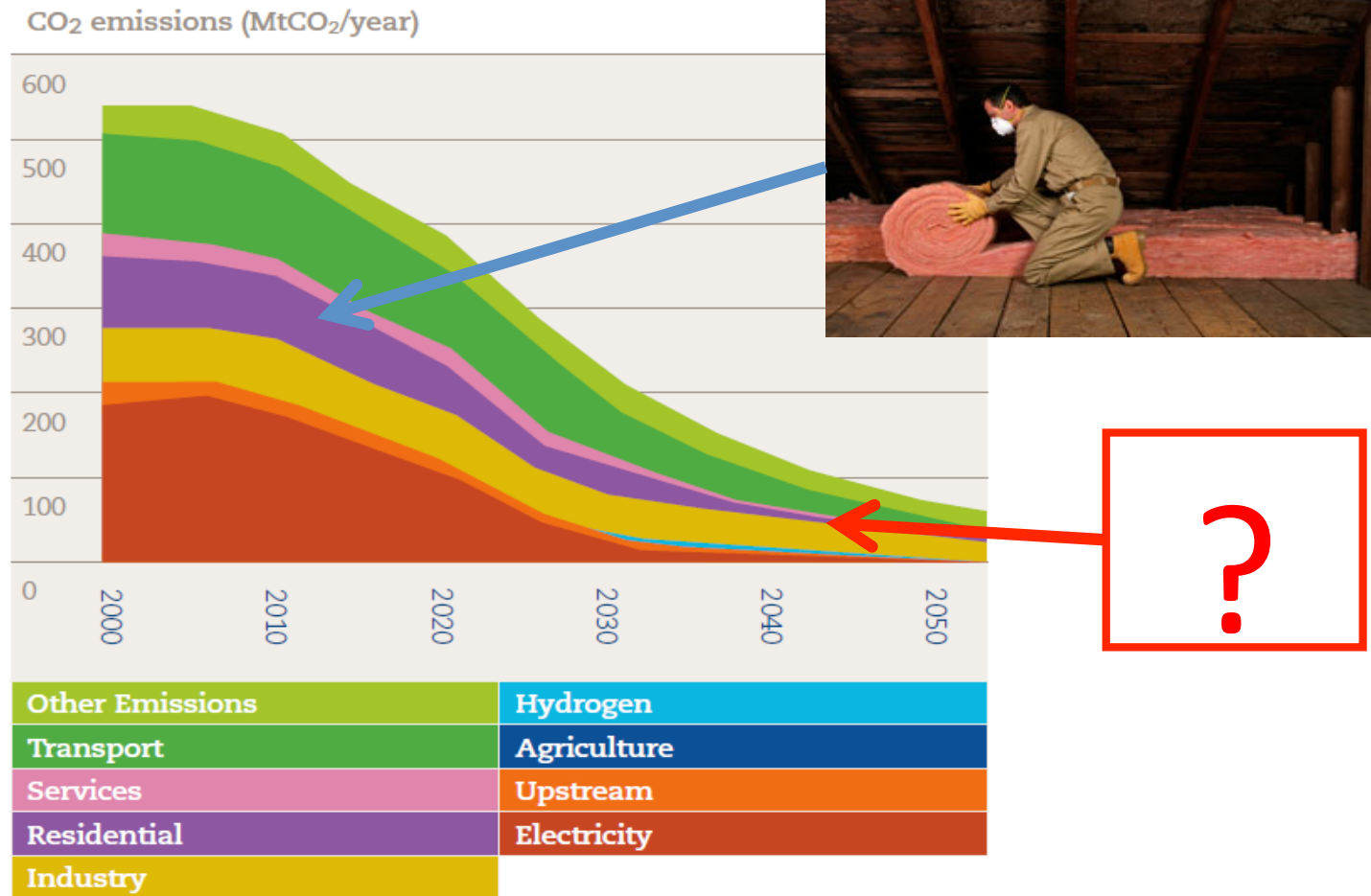
GLIDER – project snapshot

- Two University partners: Oxford and Leeds
- 410K euros over two years
- 4 people part-time (2.0 fte between us)
- Industry partners:
 - Arup
 - Construction Industry Training Board
 - Keepmoat
 - Leeds City Council
 - Saint Gobain
 - Zero Carbon Hub
- Project Advisory Group (academic & industry)

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Figure 3.1: Possible UK carbon emissions trajectory for a 90% cut by 2050 relative to 1990



Source: CCC 2010, Figure 3.6, p. 123

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The wrong end of the telescope

‘energy efficiency in buildings is not an energy industry problem; it’s a construction industry problem’



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The construction industry as incumbents

- ~25% of UK CO₂ emissions are attributed to energy in homes
- 27.5bn euros on housing repair, maintenance and improvement (2014)
- Delivered by ~50,000 small firms
- Could they do low-energy retrofits?
- If not them ... then who?

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A ‘project by project’ approach

- Some people think that building renovation at scale can only be achieved through large-scale projects (whole-home; street-by-street; whole district)
- But the market potential is very small
- Potential lies in all projects – from ‘single room’ to ‘whole district’

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Repair Maintenance & Improvement



We need to understand small builders and their suppliers. Can this system deliver low-energy retrofits? How?



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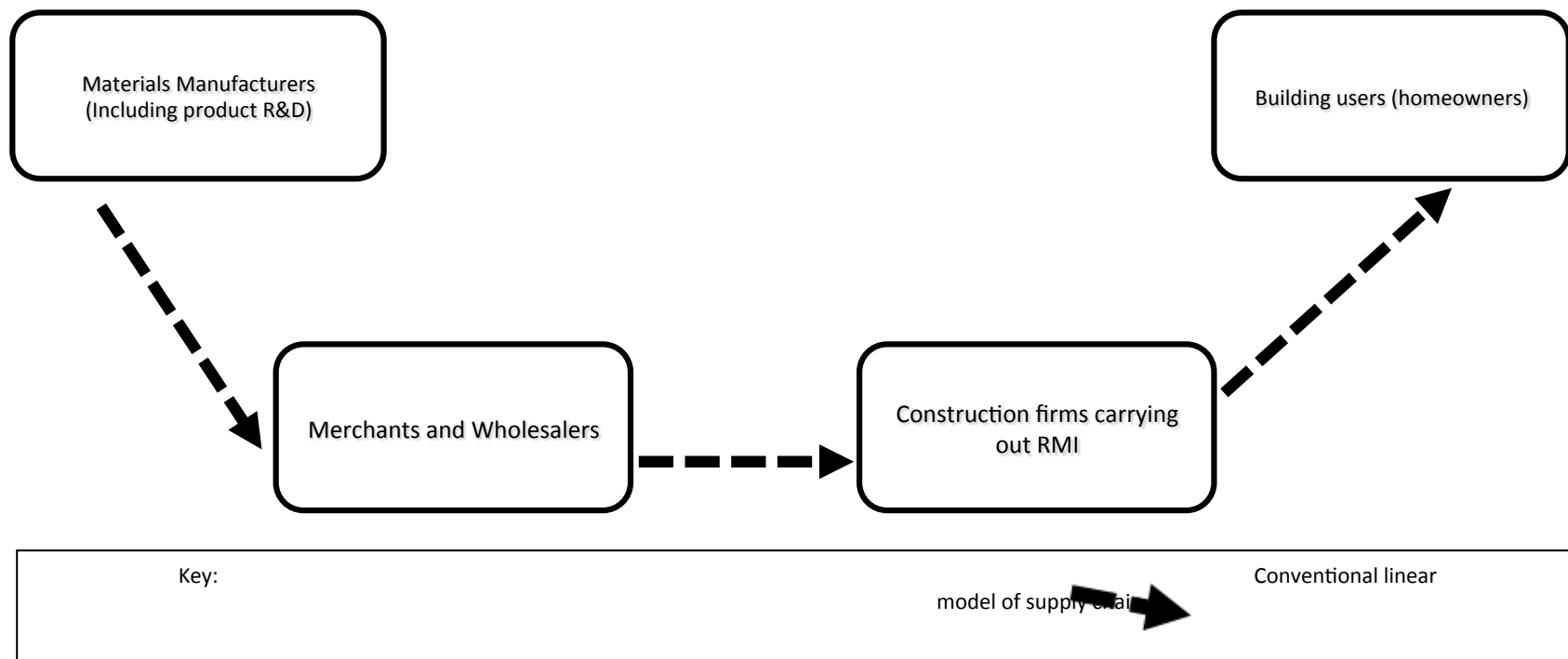
Co-evolution

... change in inter-dependent systems
where influences are multiple and
reciprocal

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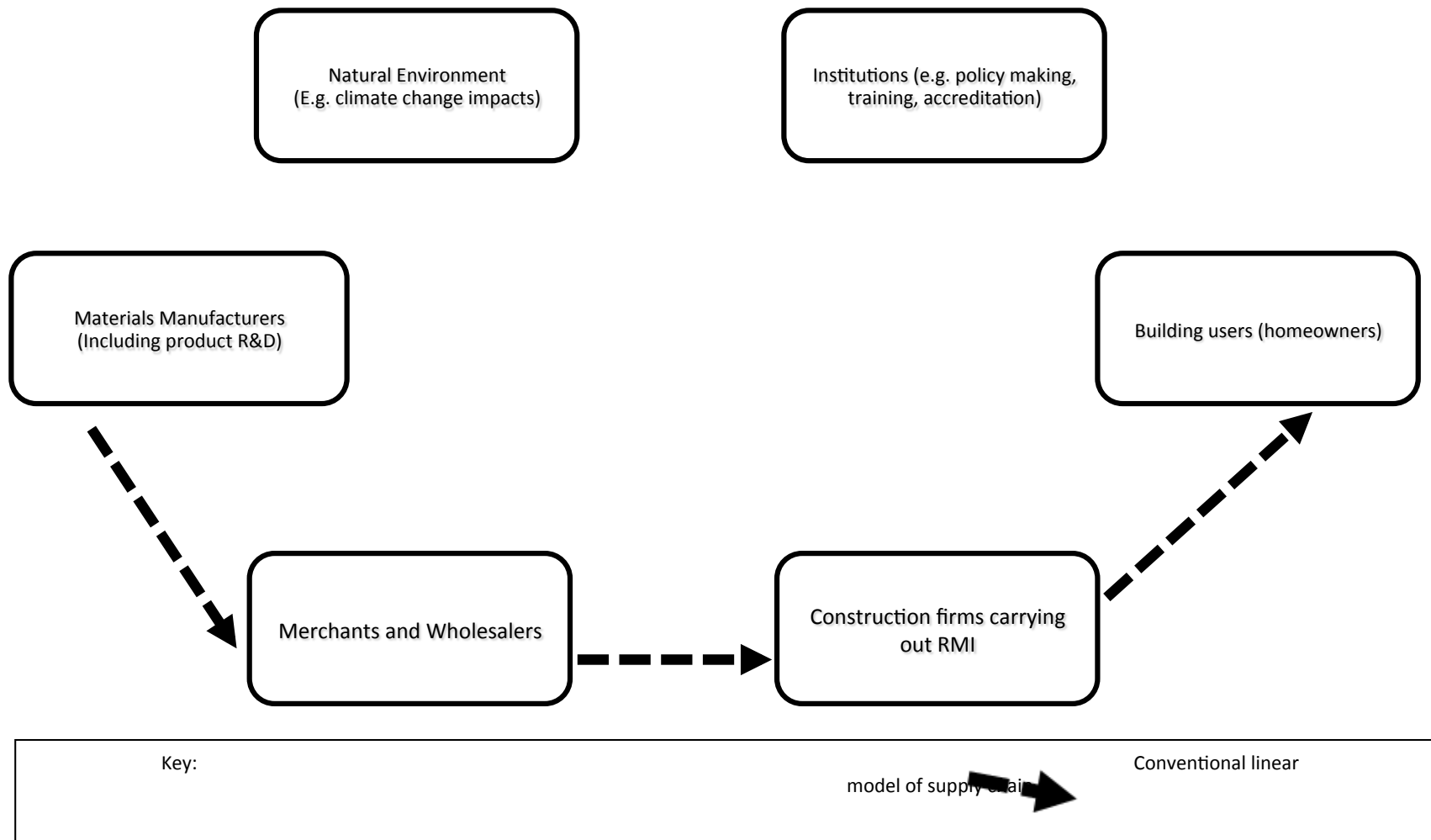


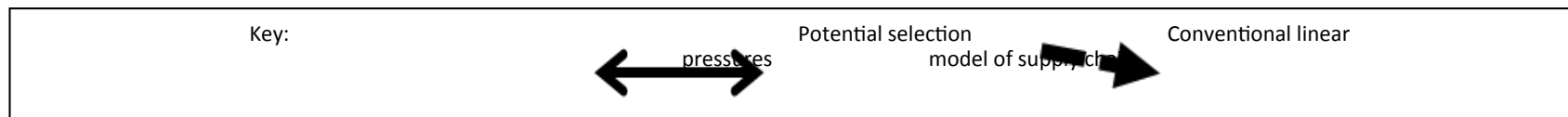
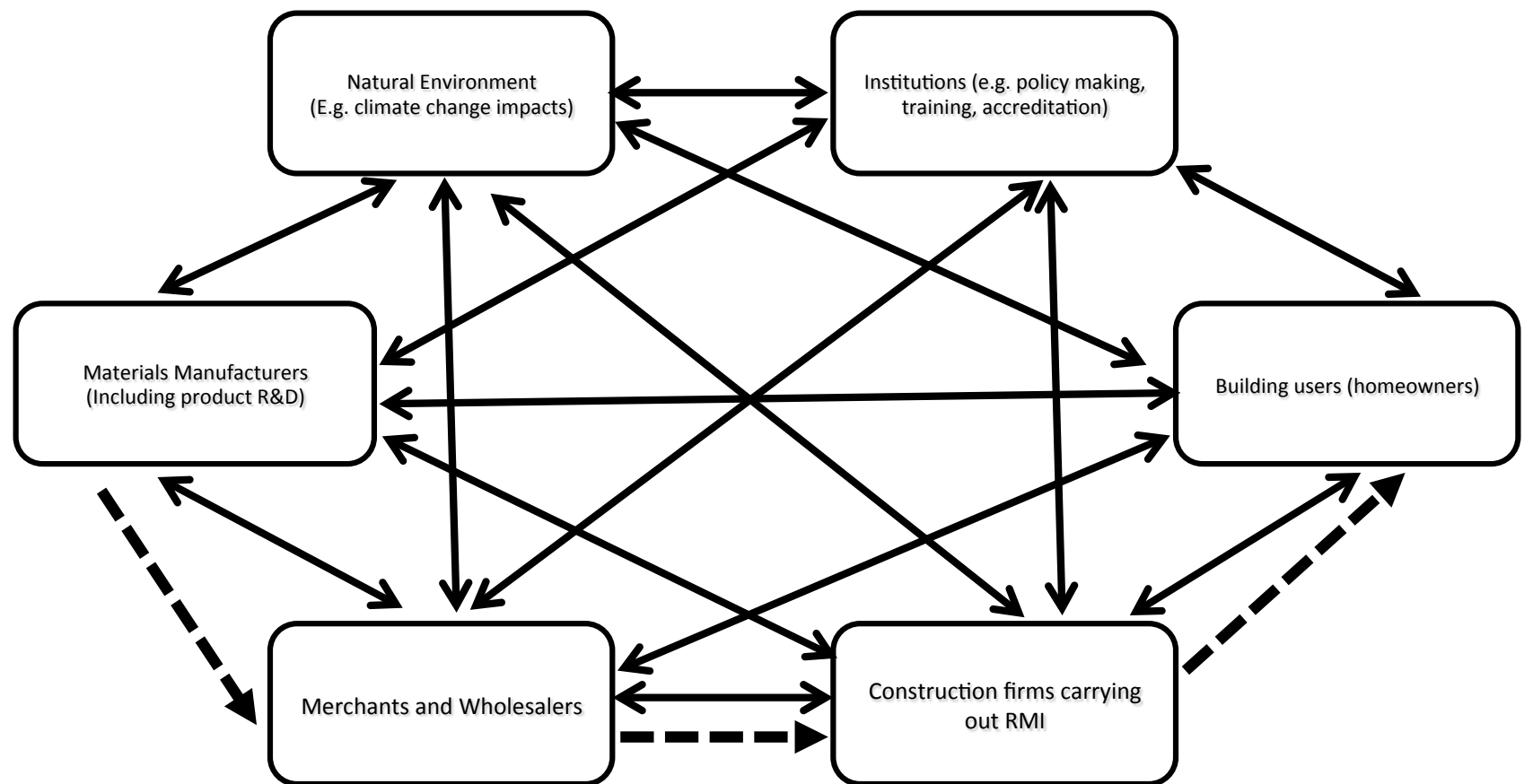
From linearity to co-evolution ...

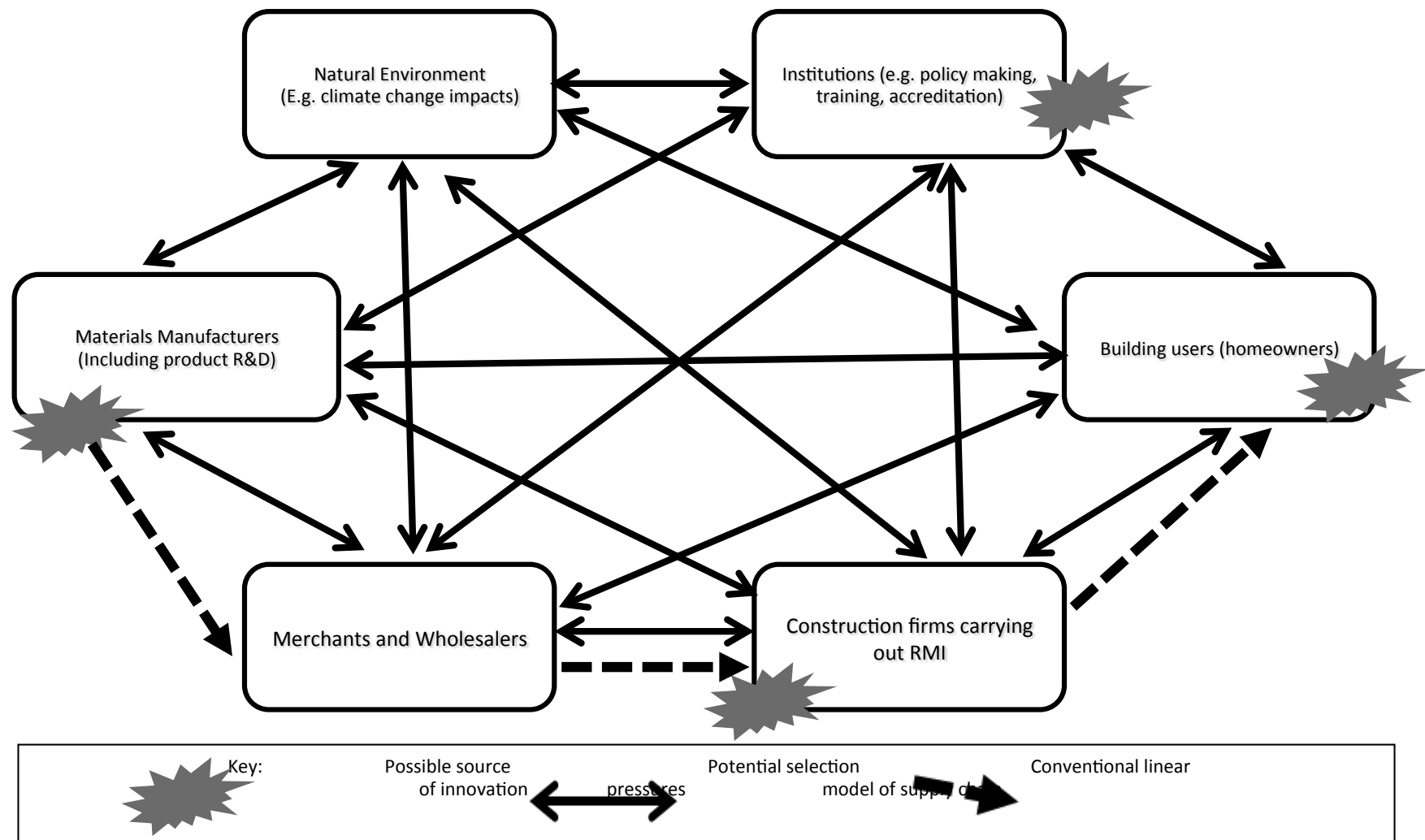


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Opportunities for policy & industry

- Move from product offerings to product-service offerings
- De-risk new products for small firms
- Present and offer innovation in ways which align with microenterprise priorities
- Align merchants' decision making on product selection and energy efficient renovation

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Thank you!

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Your reactions?
Related projects?
If the construction industry
can't do it, then who can?

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UKERC