



‘Radical efficiency’ through city led system innovation for sociotechnical transitions

Fred Steward

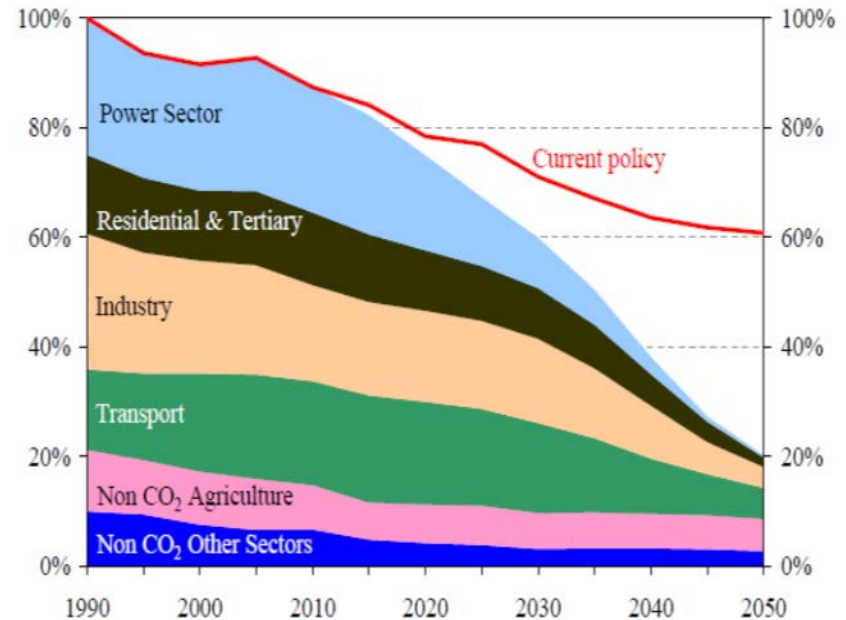
The radical emission reduction conference, London
10-11 December 2013



Context

- Ambitious targets for greenhouse gas emission reduction
- Change in end use sectors as well as in energy supply
- New policy discourse of transition

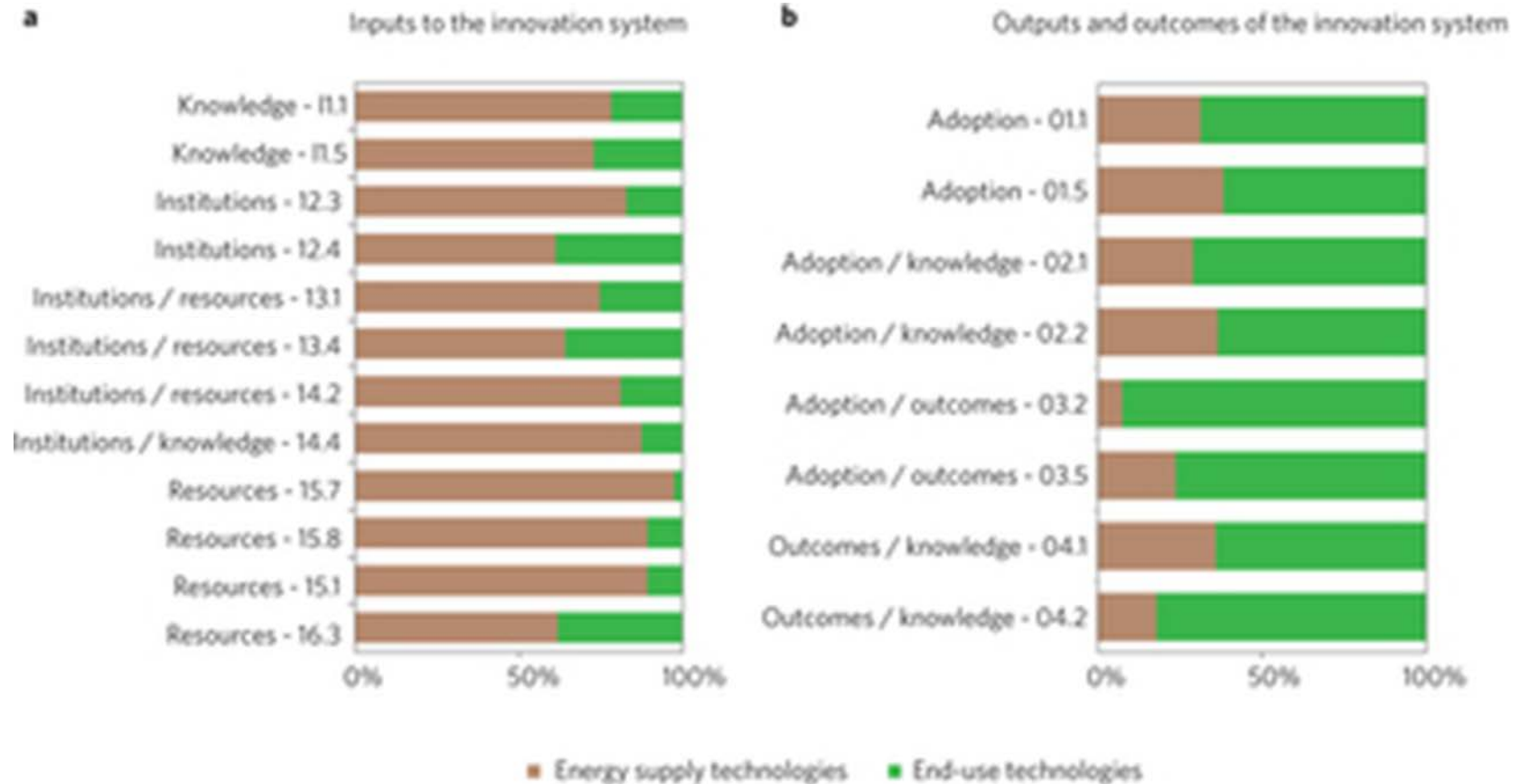
EU Roadmap for a low carbon economy 2011



Yet...supply side focus persists

Marginalization of end-use technologies in energy innovation for climate protection

Wilson et al Nature Climate Change 2,780–788(2012)



Prospects for change



- Elements of a new policy landscape emerging
- A shift in focus to end use systems
- Enables situated radical change
- New concepts of ‘efficiency’, ‘innovation’ and ‘governance’

Radical efficiency



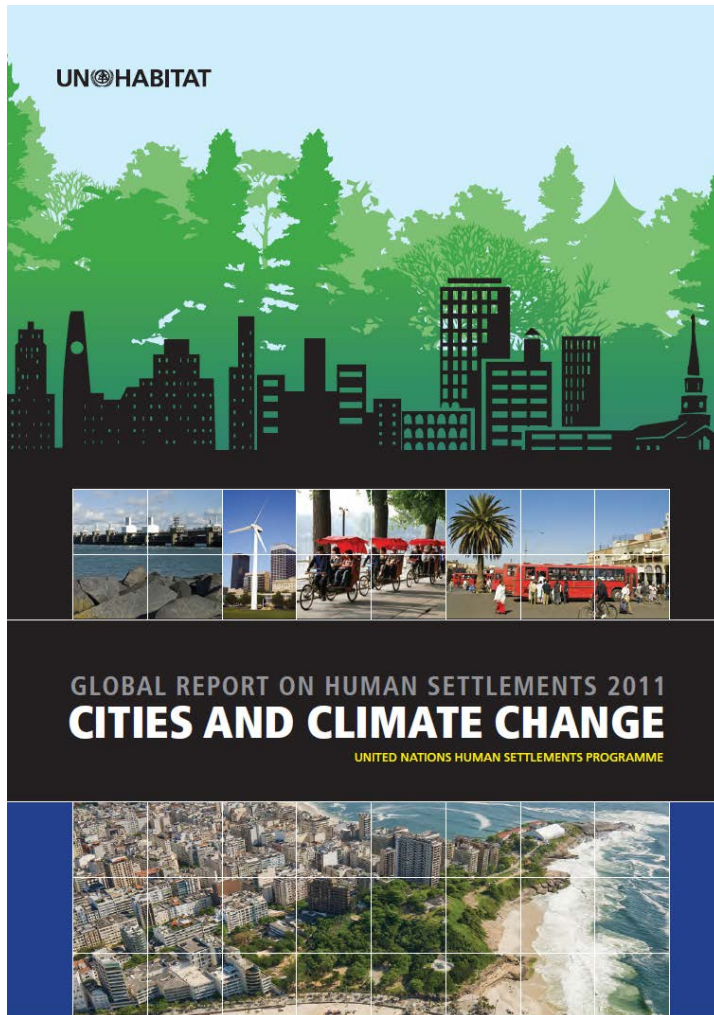
- NESTA
- Creation of new systems of different and better services
- Up to 60% improvement
- Localities as leaders of innovation
- Discontinuous rather than incremental efficiency gains

Systems innovation

For Official Use	DSTI/STP/TIP(2012)3/REV1
Organisation de Coopération et de Développement Économiques Organisation for Economic Co-operation and Development	06-Dec-2012
DIRECTORATE FOR SCIENCE, TECHNOLOGY AND INDUSTRY COMMITTEE FOR SCIENTIFIC AND TECHNOLOGICAL POLICY	English - Or. English
Working Party on Innovation and Technology Policy	
REVISED DRAFT TERMS OF REFERENCE FOR THE TIP ACTIVITY ON SYSTEMS INNOVATION	
13-14 December 2012 OECD Conference Centre, 2 rue André Pascal, 75016 Paris	

- OECD
- climate challenge calls for new thinking on innovation policy
- sociotechnical systems
- demand side...
behavioural,
technological, policy
and business practices
among different actors

Cities as radical system innovators

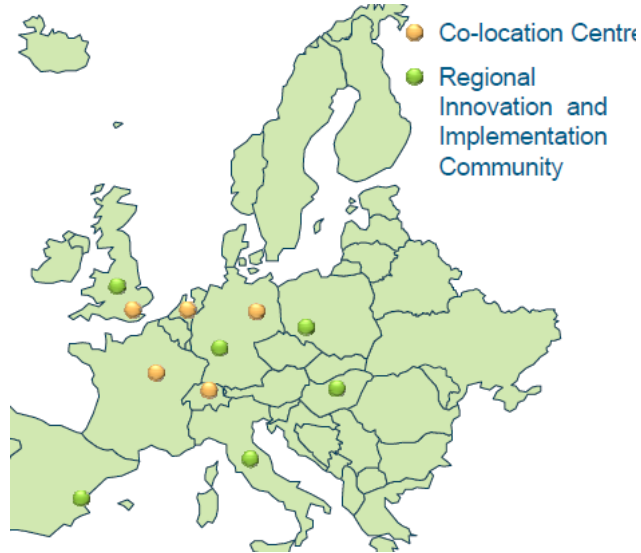


- UN
- key sectors for mitigation initiatives
- built environment
- transportation
- urban infrastructure (energy, waste, water)



- UK
- Netherlands
- Germany
- Switzerland
- France

- West Midlands
- Valencia
- Hessen
- Emilia Romagna
- Lower Silesia
- Central Hungary



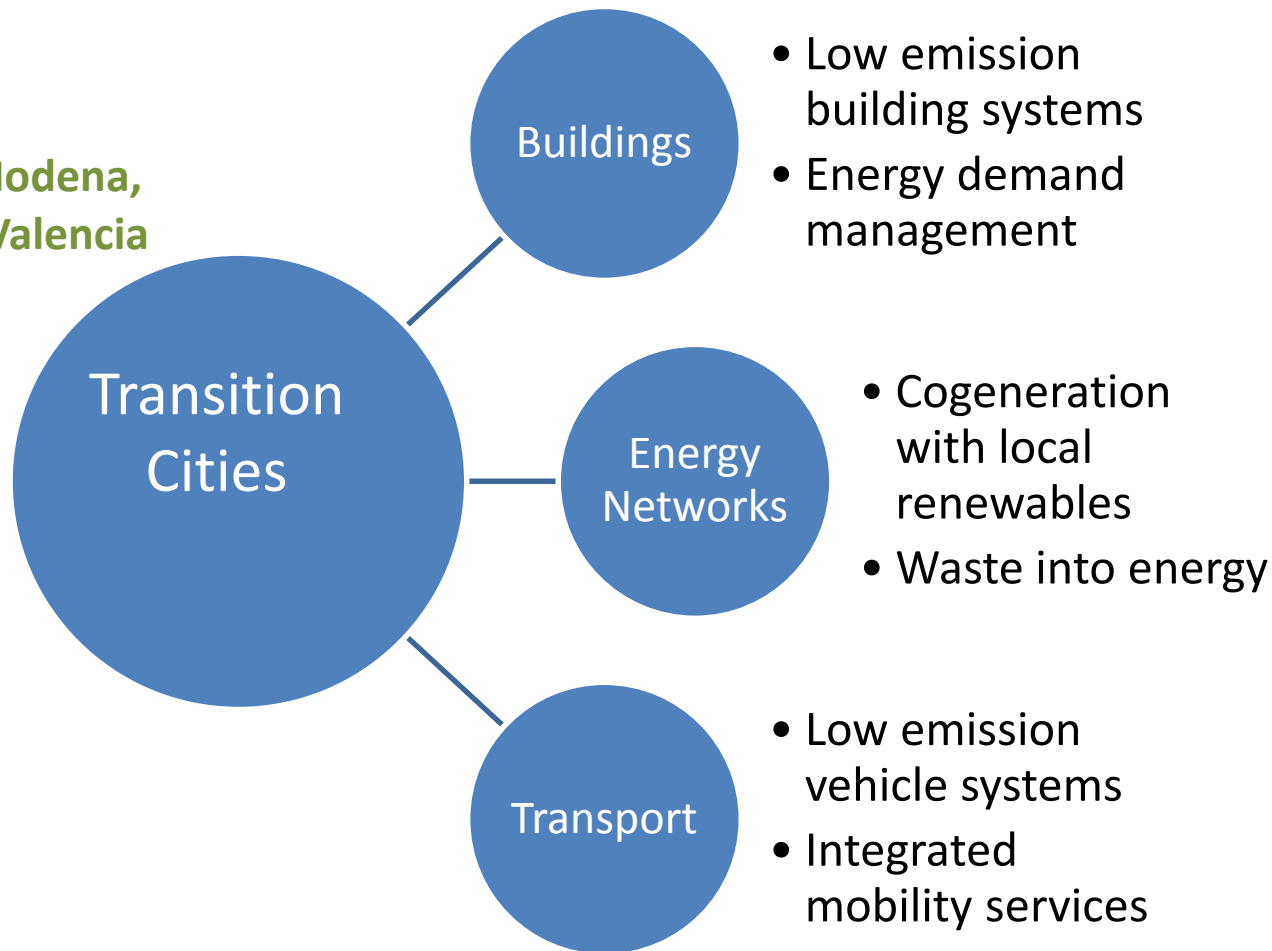
- To play a leading role in the transformation of regional innovation policy and practice in Europe on climate change'

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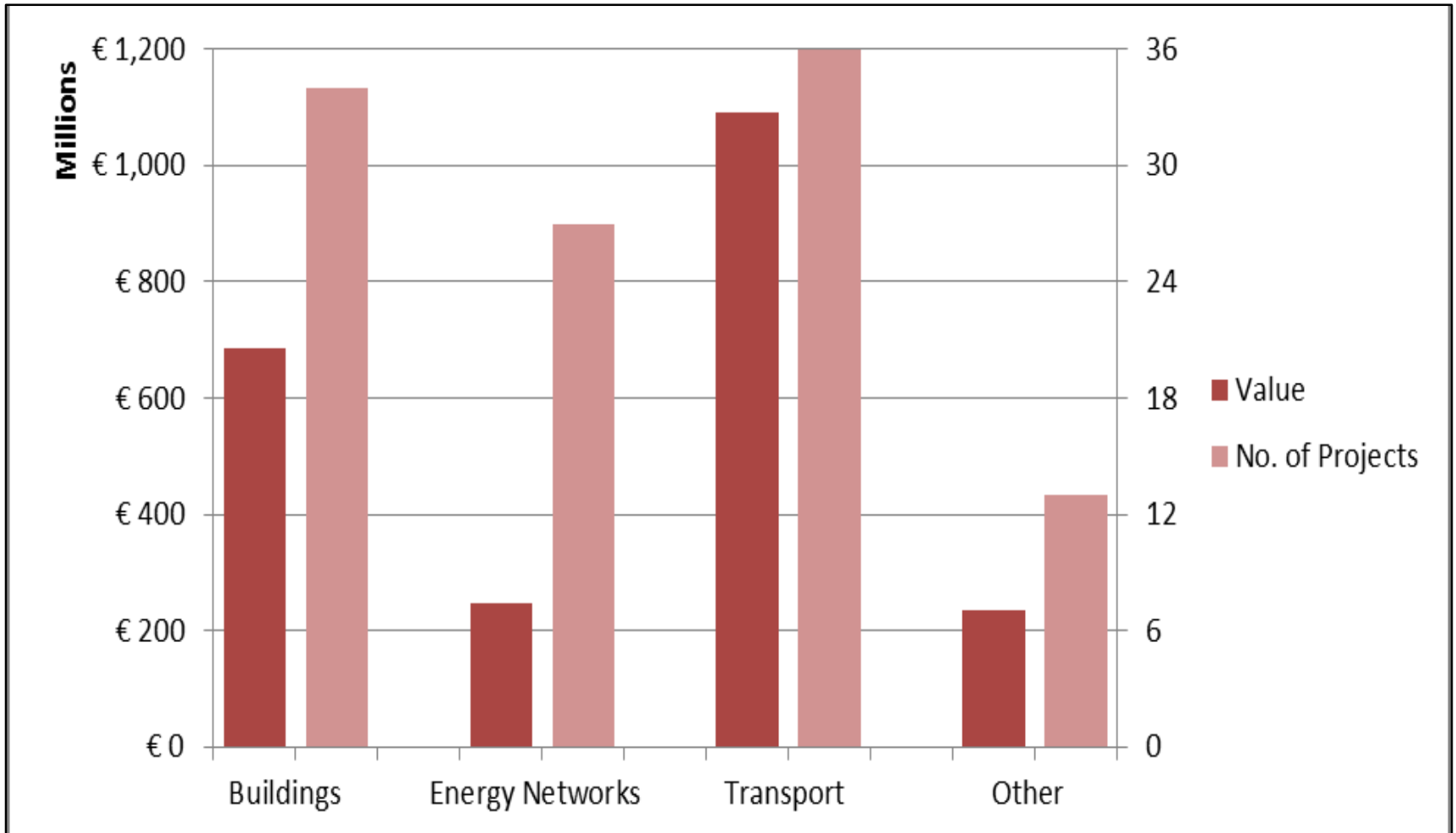
(Ritter, Nature Climate Change, 2010)

Transition Cities

Birmingham
Frankfurt
Wroclaw
Budapest,
Bologna/Modena,
Castellon/Valencia



110 active low carbon projects >€2 billion



Making transitions happen



- an extensive but fragmented portfolio of low carbon innovation projects in the partner cities
- real prospects for radical efficiency in key sociotechnical systems
- low emission building systems
- integrated mobility services
- need transition capabilities of ‘network building’ and ‘path creation’