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An evaluation of local authority social network interventions for the promotion of energy-efficiency measures in the domestic sector

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Non-financial barriers
e.g. information, confidence, convenience

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| Networks interventions | Evidence for peer-influence | Modelling networks | Local authority initiatives |

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Non-financial barriers
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Important to consider social influences

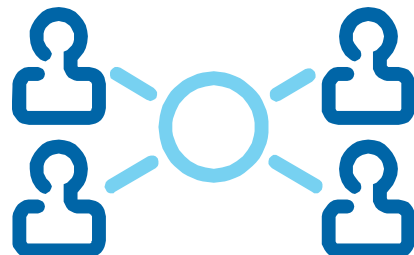| Networks interventions | Evidence for peer-influence | Modelling networks | Local authority initiatives |

Evidence for social influences not currently reflected in policy

Network interventions

- Social network interventions can be used to accelerate behaviour change

- Some parallels to health-related behaviour change interventions

Individuals	• Influential 'champions'
Segmentation	• Community groups
Induction	• Word-of-mouth
Alteration	• Modification of the network

Ref: Valente, 2012.

Evidence for peer influence

Networks
- More than 30% of people report sharing energy info with personal contacts

Adoption decision
- Seeking info from personal contacts increases likelihood of adoption by a factor of four
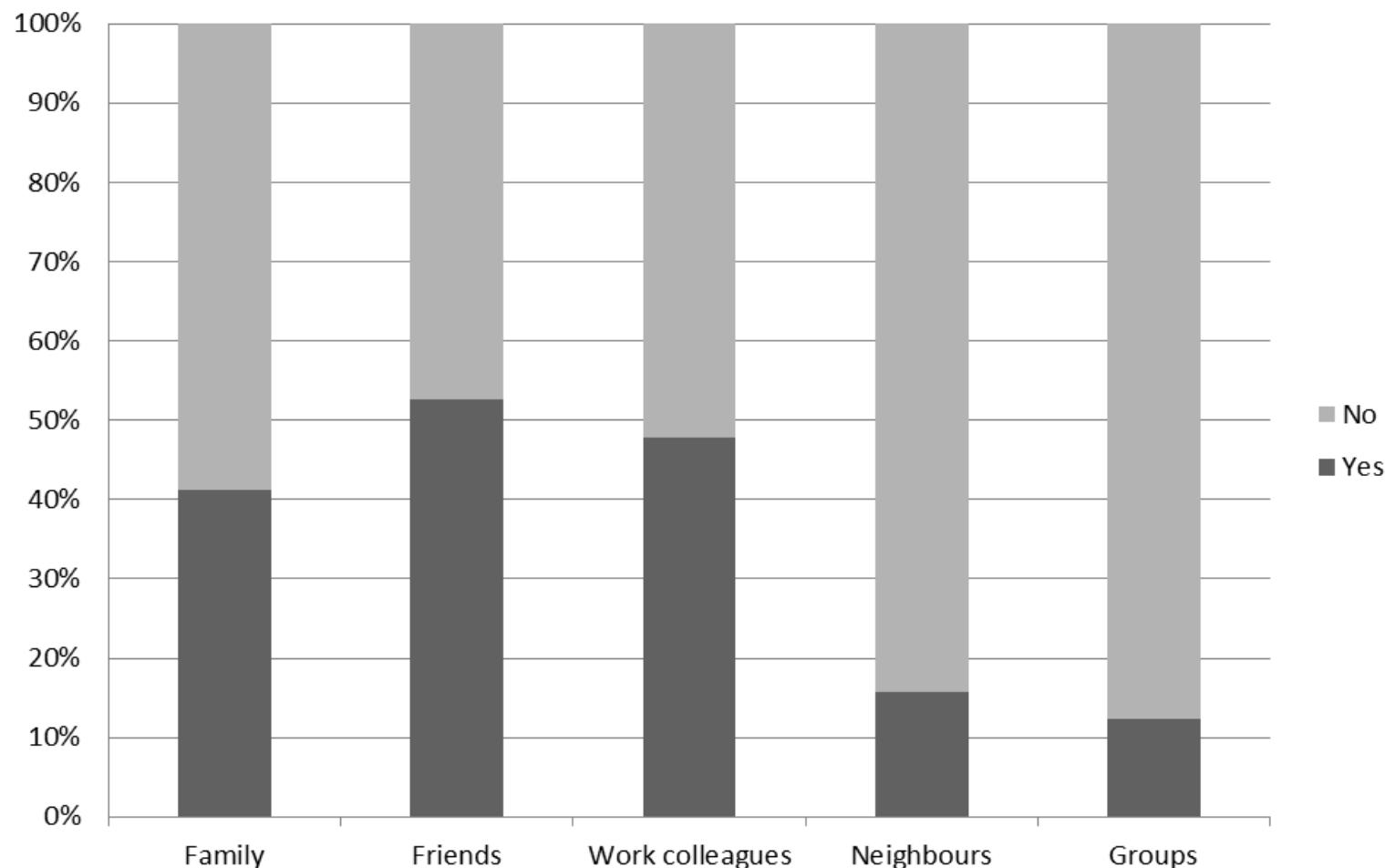
Uptake of innovations
- Additional installation of PV panels in neighbourhood increases probability of further adoption

Refs: Valente, 2012; Bale et al., 2011; Southwell et al., 2012; McMichael & Shipworth, 2013; Bollinger & Gillingham ,2012

Evidence for peer influence

Responses to the question 'Do you currently talk to any of the following people about energy use and/or saving money on energy?' from 1,068 households in Leeds (valid percentage, excluding missing values 3–7 %).

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Model for diffusion of innovations on a social network

- Adoption if utility is above threshold (θ_i)

- Households obeys certain rules (based on probabilities determined from the survey) regarding their threshold for technology uptake

- Households can be influenced by 'neighbours' in their network of energy influences

Utility = Personal   + Social benefit   +   Social benefit
            benefit   from peers   from wider population

Ref: McCullen, 2012.
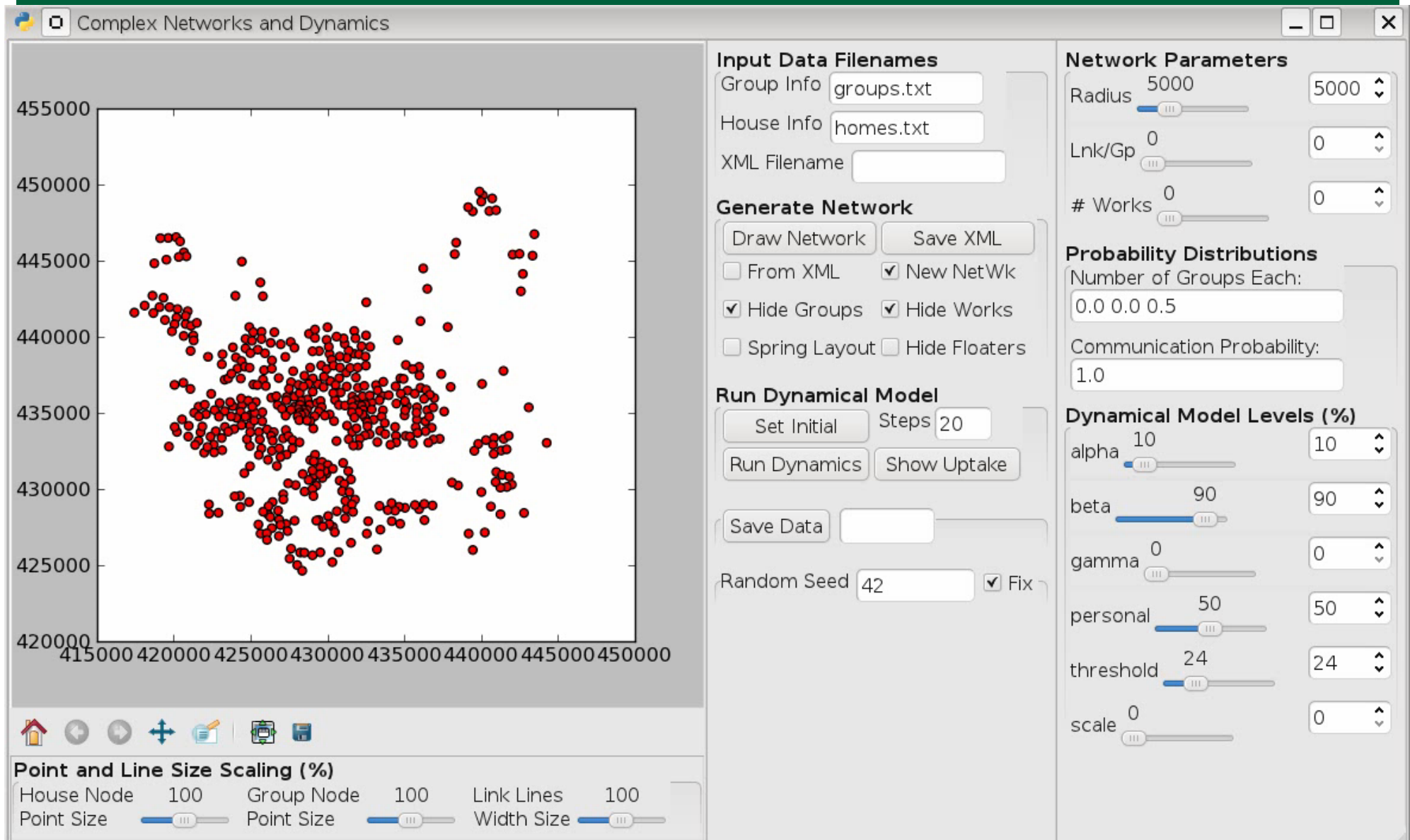
Network model

Network modelling results

Factors that affect uptake:

- Threshold values

- Network

  - Size

  - Clustering

  - Number of connections

- Archetypes

  - Personal preferences

What is the role for local authorities?

- Local government have key role to play in uptake of energy-efficiency measures

Governing by authority
- Regulation
- Planning

Governing by provision
- Services
- Energy efficiency measures

Governing through enabling
- Facilitating partnerships
- Advice and campaigns

Self-governing
- Efficient self-management
- Council estates upgrades

What is the role for local authorities?

- Local government have key role to play in uptake of energy-efficiency measures

- Trusted, independent and informed source of information

- Strong connections with communities

Governing by authority	• Regulation • Planning
Governing by provision	• Services • Energy efficiency measures
Governing through enabling	• Facilitating partnerships • Advice and campaigns
Self-governing	• Efficient self-management • Council estates upgrades

Modelling scenarios

- Use of model to investigate local authority interventions

  e.g. Seeding, recommend- a- friend referrals

- Shown validity of use of network modelling to inform policy

- BUT need data and validation case studies

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Example: Individuals

Local energy champions

Trusted individuals act as advisors.

- *Energy Champions* – Bath & North East Somerset Council, UK

Improvements: Use of network data to indentify those that are most likley to be opinion leaders. Requires info on network and what type of individual is influential in this context.

Example: Induction

Referral elements in programmes

Recommend-a-friend schemes for energy audit and retrofit programmes.

- *Wrap up Leeds* – Leeds City Council, UK
- *EnergySmart* – Boulder County Council, USA

Improvements: Use of household segmentation data to identify and target households that are likely to encourage others in the network to act.

Insights from evidence and modelling

- Make things visible.

- Increase word-of-mouth induction effect by using recommend-a-friend incentives.

- Use trusted messengers.

- Consider those who can't adopt but may be influential connections in the network.

Social influences in policy

- No explicit mention on EU Energy Efficiency Directive or UK Energy Efficiency Strategy.

- Social influence could be critical to success of policies such as the Green Deal.

- Likely that local authorities will have key role in delivery of Green Deal and can use leverage trust.

- Need for formal evaluation of initiative and data collection.

Summary

- Network interventions are being used in other areas to promote behaviour change.

- Mounting evidence to show that peer influence is important in individual energy decision-making.

- Modelling can be used to compare interventions to identify those that promote adoption of EE innovations.

- Some anecdotal evidence of use of social networks in LA-led initiatives -> an area for further work.

- Little mention of social influence in EU and UK policy.

Discussion

- Are there good examples where LAs have actively used network interventions?

- Gaps in data. Are there other studies on social networks operating for energy issues?

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