

# Mapping Inter- organisational and personal relationships

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MapISNet workshop

INTERACT 07 Rio

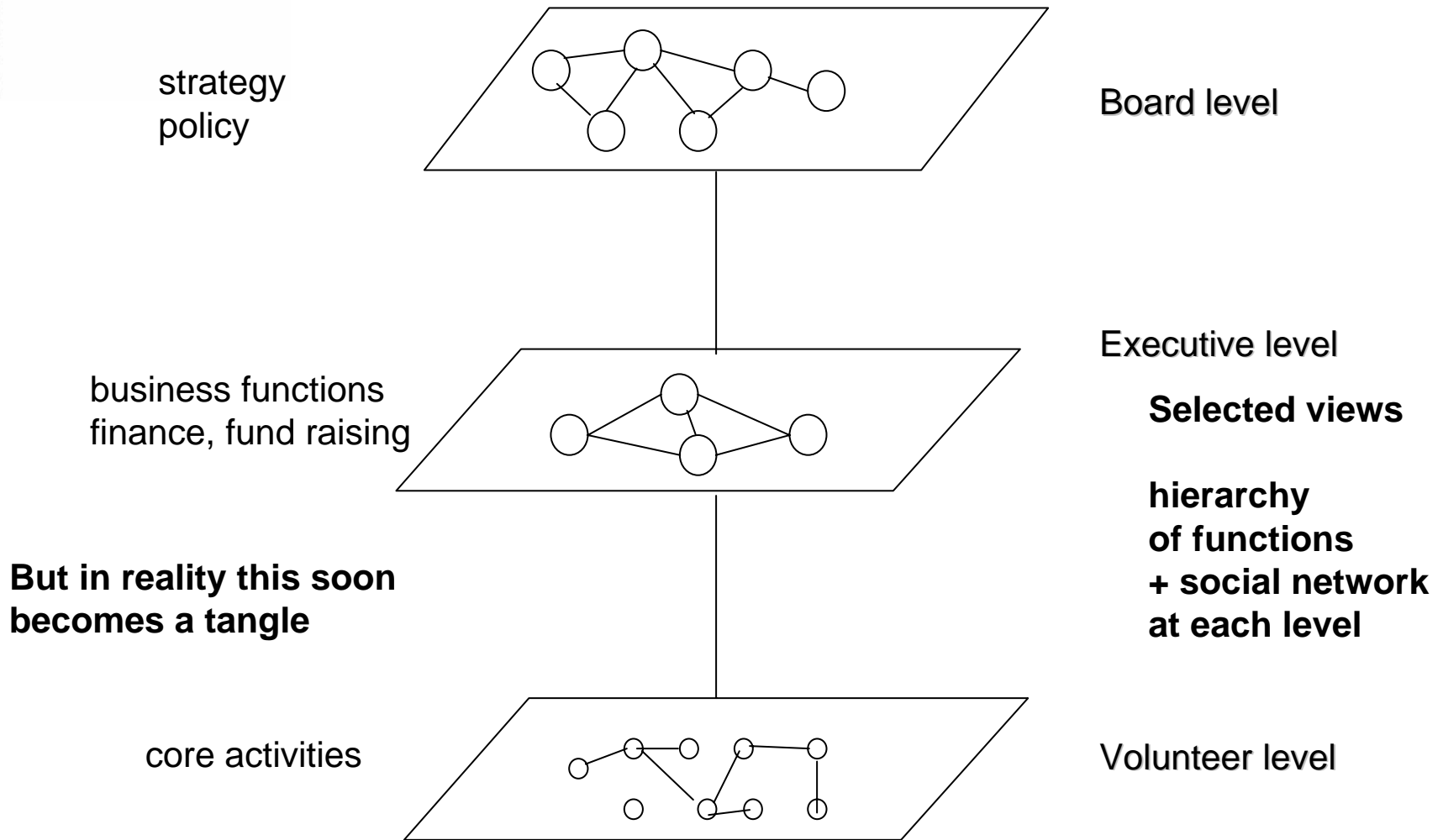
## A sub text: How do maps work ?

- Geographical maps give spatial context for information
- Maps facilitate seeing spatial relationships – clusters, pathways, outliers, trends, (Jackendoff, Lakoff and Johnson, Bertin, Tufte)
- Maps facilitate seeing co-located relationships overlays of information on maps GIS
- Interactive maps allow us to see emergent patterns
  - by use of overlays
  - by maps of simulations and models
  - by linking maps to data retrieval systems

# My case study /interests

- Social networks and groups in various settings, how CMC effects social relationships- TESS project  
<http://www.informatics.manchester.ac.uk/research/groups/isd/projects/dtess/>
- Studies of social groups (school leavers), social clubs and communities, work groups- charities
- Combination of interviews, questionnaires and observation
- Traditional SNA analysis for clustering relationships based on interactions, message exchange frequency
- Multivariate data on peoples' attitudes, roles, group identity, and technology

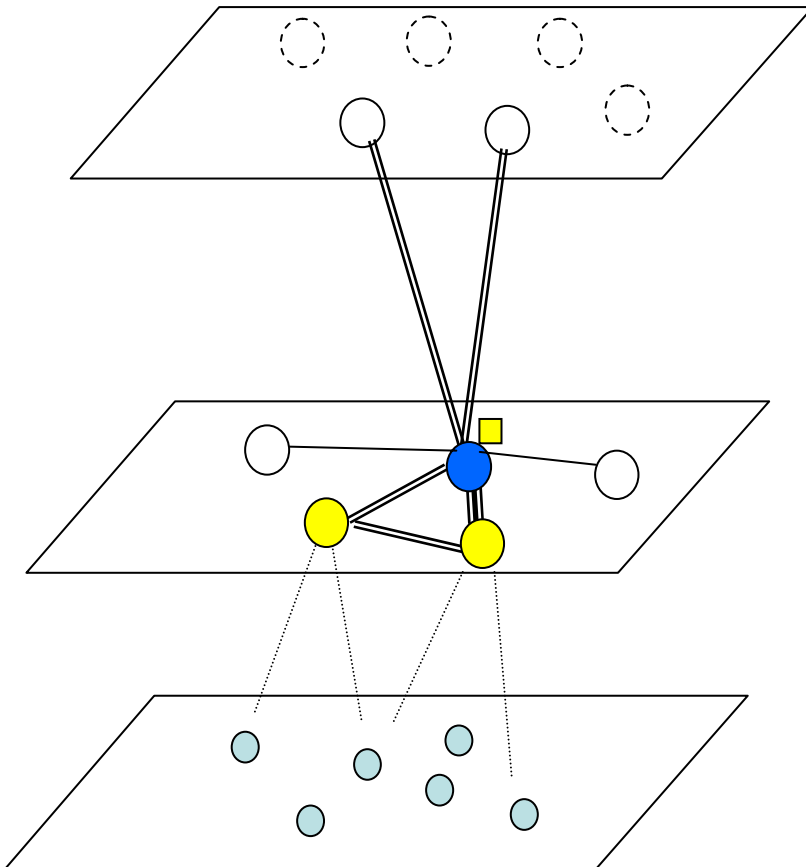
# Organisational map of typical charity






# The design problem

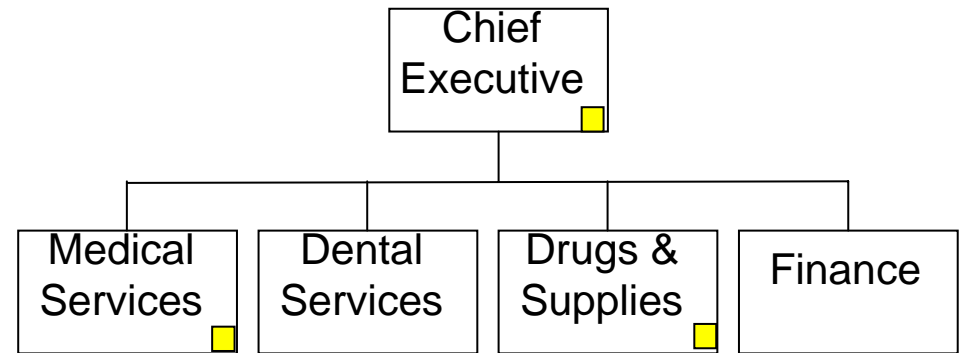
- Choosing views to partition and structure the data
- Selecting what to represent
- Deciding how much complexity is optimal before the user ‘can’t see the wood for the trees’
- Solutions
  - design filters to show different views/ sub sets of the data
  - design overlays so associations can be discovered
  - select controls to users can tune/ query the map display

# Organisation map integrated with social relationships – Community Health charity

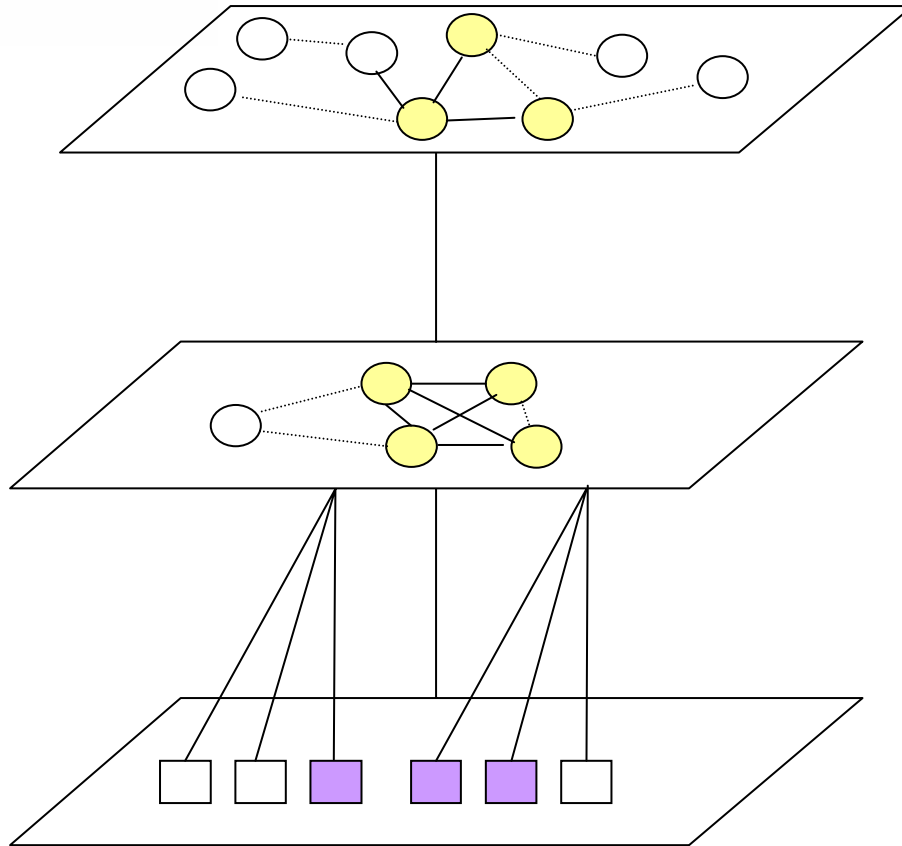


-  Chief executive
-  Strong interpersonal relationship
-  Interviewed

## Organisation Hierarchy



## Multiple Organisations, Multiple relationships (CASE integrating charity)



Board level  
Representatives of  
15 organisations

Executive level  
5 key members

15 Member organisation  
Cluster in groups  
Performance, Arts,  
Education

# Another example maps in epidemiology

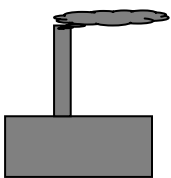
- ADVISES project developing visualisation tools for medical epidemiologists

<http://www.informatics.manchester.ac.uk/research/groups/isd/projects/advises/>

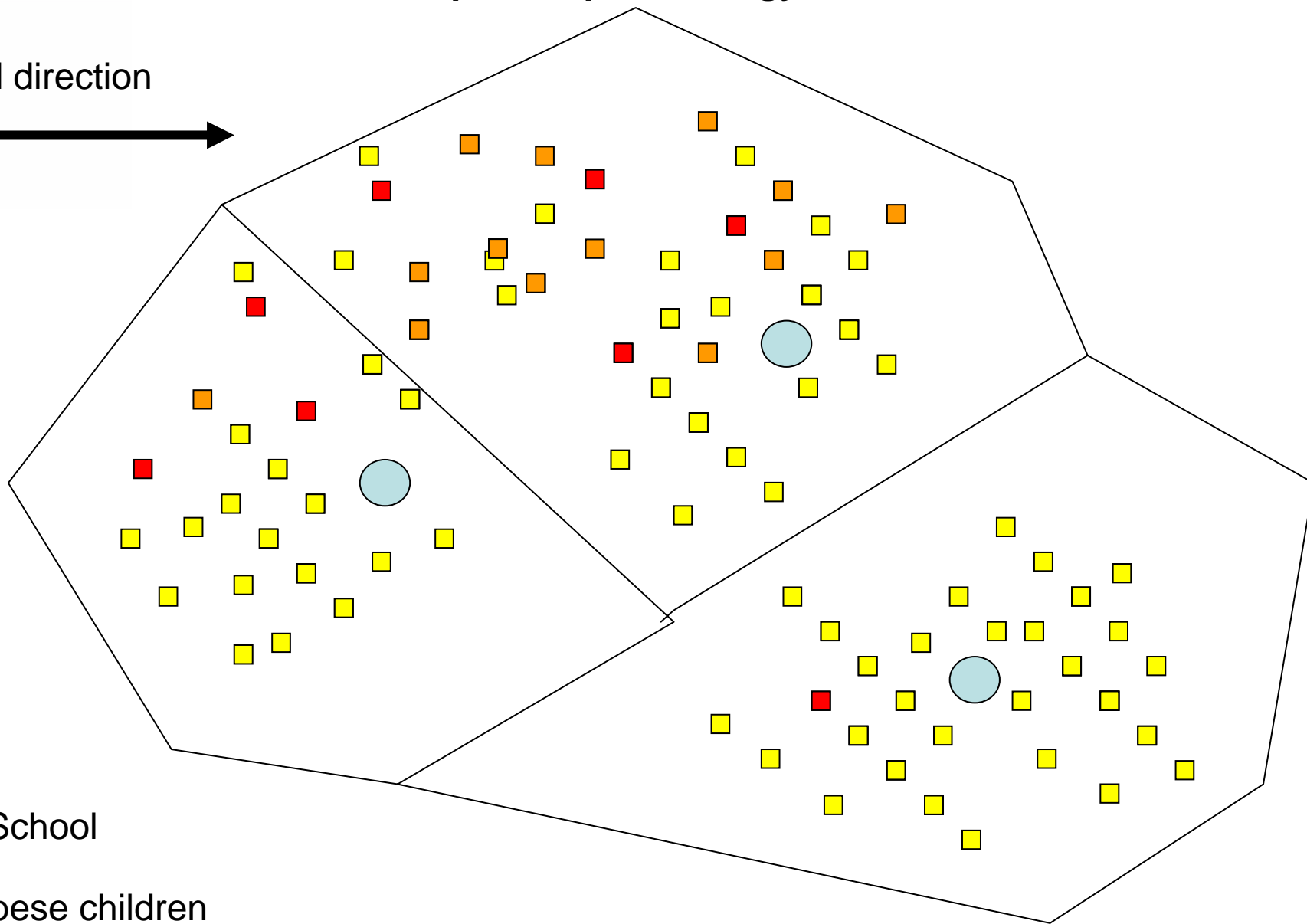
- Research questions geared to map displays, overlays, and query controls
- Overlay of different geographical information supports hypothesis exploration
- Interactive querying show emergent patterns
- User configuration editors to select information/map features and attach to controls.

# Maps for epidemiology

Wind direction



Factory



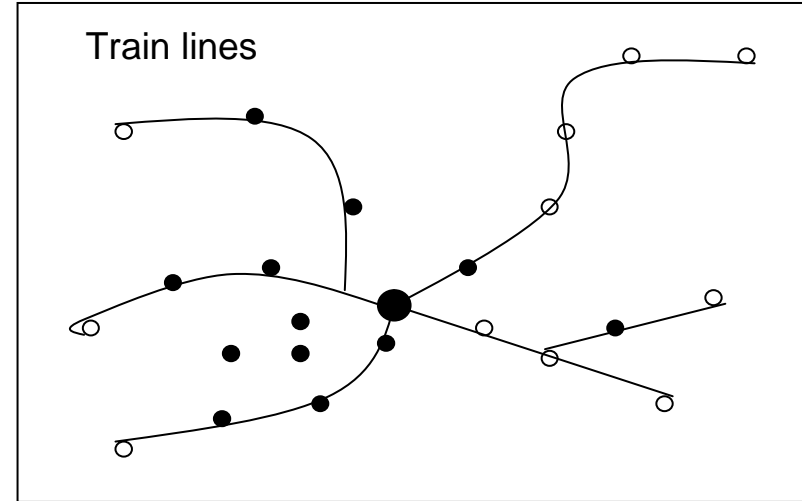
● School

■ Obese children

■ Asthmatic children

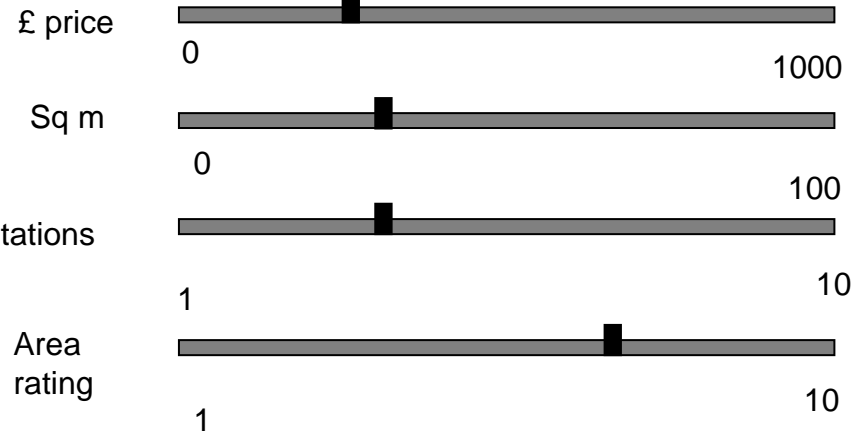
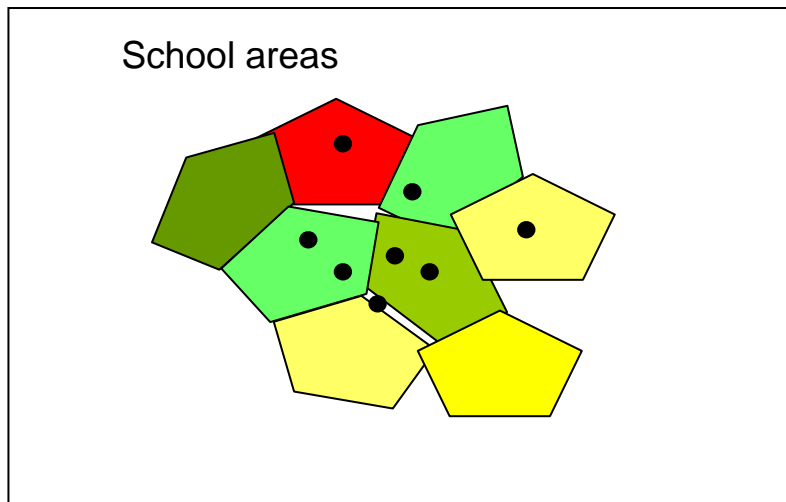
■ Obese and asthmatic

# Interactive Multiview displays



Slider controls-

Qurey- Find houses < 200K with at least 25 sq m



# Design of IS Maps

## some conclusions

- Need to define research questions or functions/user facilities
- Partition complex data sets into views, layers, overlays
- Match questions/facilities to views and overlays
- Add query controls for questions- emergent exploration of spatial databases
- Design overlays for map based exploration
- Combine views and overlays to explore associations, trends, & differences