

**Neighbourhood Knowledge Management (NKM)
Briefing Paper for Be Birmingham Board 25th January 2008****Introduction**

This paper seeks to outline the benefits of using the Mayhew Associates' Neighbourhood Knowledge Management system for the Adults and Communities Directorate, other Council Directorates and local Primary Care Trusts. It highlights the current progress of the project and the future timescales for completion.

The system enables better use of locally available administrative data that are routinely collected by councils and PCTs to improve local knowledge, to aid decision making, planning and policy analysis, and to support the provision of analysis and information required by central government. This approach gives Birmingham:

- a current, robust and detailed picture of the resident population to provide a sound information baseline
- analyses of the population, down to community and neighbourhood level, that will allow service needs and requirements to be assessed
- easy and unambiguous presentation of findings to facilitate development of future operational policy and measurement of effectiveness.

Benefits of the NKM System

NKM enables local organisations or partnerships to make optimum use of their local data. The system helps authorities/partnerships to inform their planning and service projections using different population models to Office of National Statistics (ONS). NKM will enable Birmingham to:

- make most effective use of local data by joining it together
- access the information you need to improve effective crosscutting services and deliver on local area agreements
- evaluate effectiveness of policies and target resources
- develop more cohesive strategies.

The project in Birmingham will deliver 3 reports, as well as an anonymised database that can be accessed by Partner Organisation via the Adults and Communities Directorate or the PCTs. The first report will be a Community Profile for Birmingham focused on ward populations and include a current population profile. The other 2 reports will be focused on the LAA priorities of Male Life Expectancy and Infant mortality. The overall approach taken has been to:

- obtain administrative data from various organisations in the partnership
- match and geo-reference individuals and households
- create an anonymised database
- validate the population count
- develop community profiles
- analyse specific case studies (Male Life Expectancy/Infant Mortality)
- data base handover and training

- further analyses / joint working.

A unique feature of the approach is the matching and geo-referencing of data at household and individual level. This enables small-scale, flexible geographical analyses at neighbourhood level unconstrained by pre-existing administrative boundaries. Due to it using the latest administrative data it is always up to date.

Another feature of the approach is the use of risk analysis, systematic methods for organising and presenting data, multivariate modelling techniques for establishing key relationships among the data and experience in working closely with service providers.

The NKM approach is based on linked tasks that commence with creation of a basic data infrastructure for analysing the local population to any geographical area using geo-referencing techniques. These primary data sets are used to establish not only a firm demographic basis, but also to ascertain information about basic characteristics such as housing, population density, overcrowding, low-income families and deprivation.

The task involves the use of data cleaning as well as data matching techniques to ensure robust results are achieved.

The key benefits of NKM are:

- it uses sophisticated analysis, methods and techniques linking together related quality of life information to improve joined up service delivery and interventions
- data maintenance is built in as administrative data is used as the raw data source which is routinely updated
- sharp and targeted findings are extracted from the analysis tools
- data confidentiality and sensitivity is overcome by the use of a “virtual space” allowing the independence and anonymity of data sources
- it seeks to understand the relationships between different sets of data and what this tells us e.g. children needing nursery care and access and distance to registered childcare providers.

Linkages to LAA and other Council Directorates

Utilisation of this technique would assist with the key innovation – B1 within the LAA Healthier Communities and Older People block, it states:

"Current approaches to promoting healthy lifestyles and focusing services on those most in need are restricted by poor intelligence about health and care needs. There is an urgent requirement for a way of converting the data held on the health status and the wider determinants of health of communities by the LAA partners and others into intelligence that will drive commissioning decisions based on where the concentration of deprivation is greatest. The City has already demonstrated that it has the ability and desire to work together to deliver data on communities with the successful neighbourhood renewal profiles. We need to build on these foundations to construct an innovative analytical tool that will enable commissioners to consider the multidimensional aspects of health and service provision no matter where they sit."

This identifies that there is an agreed need amongst partners for further work relating to strategic needs assessment to be undertaken. The system will be used Adults and Communities, the 3 Birmingham PCTs and other council directorates to develop a Joint

Strategic Needs Assessment of Health and Wellbeing for use in future strategic planning. The dataset could also be used by the partner agencies to provide a population base for their strategic planning.

Two specific projects linked to the LAA priorities are to be undertaken by NKM once the Community Profiles have been completed. The first will look at issues around Male Expectancy whilst the other explores Infant Mortality. Members of staff from the Birmingham Health and Wellbeing Partnership have been involved in shaping these two reports.

The table below identifies some of further usages of NKM focussing on adult services, but other possible projects include teenage pregnancy, domestic violence.

<u>Examples of generic topics & techniques</u>	<u>Example of studies undertaken using techniques</u>
Strategic needs analysis and planning Service planning Health impact analysis Population estimation Community Safety Policy analysis Evaluation Critical pathway analysis Performance monitoring	Older people's services Chronic disease Intermediate care Mental health services Single older persons assessment Mortality

The approach used by NKM fits into the Corporate GIS developments, the adoption of MOSAIC as the council's social marketing tool and initiatives such as the ENCAMS work.

The NKM approach would enable improved information relating to the profile of vulnerable adults, and an area of particular interest would relate to adults at risk from falls.

Progress

The project started in May 2007. Bilateral data sharing protocol agreements were put in place between Mayhew Associates and Birmingham City Council and the three PCTs by September 2007, by which time the specification for the data to be shared had also been agreed.

All the required datasets have now been sent to Mayhew Associates for matching and processing. This process will continue through February and March 2008.

Future Timescales

The population model is due to be completed by the end of March 2008 with the Community Profile report being completed by mid April. One of the 2 LAA related projects (Male Life Expectancy and Infant Mortality) is due to be completed by mid May 2008 and the other by mid June 2008, with the corresponding reports being completed by end May and end June respectively. It has not yet been decided in which order the projects will be completed. It is also planned to present the findings to the Be Birmingham Board at some future date.

Mike Woodall
Strategy and Commissioning Analyst

Adults and Communities Directorate
Birmingham City Council
Level 4 - Louisa Ryland House
44 Newhall Street
Birmingham
B3 3PL

E-mail: Michael_j_woodall@birmingham.gov.uk

Tel: 0121 303 1360

Fax: 0121 303 3500