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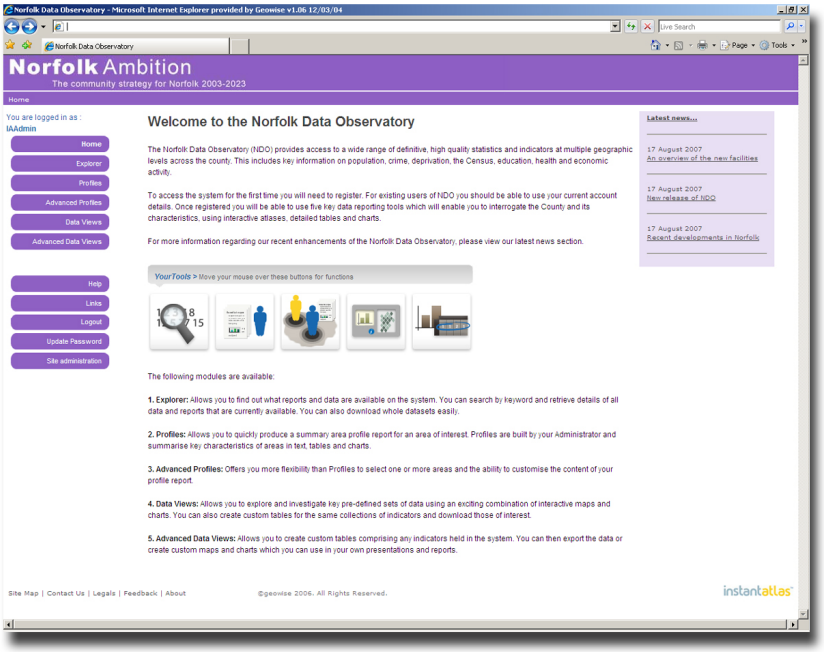


The new Norfolk Data Observatory Home Page (www.norfolkdata.net)

Can Local Intelligence Systems help monitor and inform Local Area Agreements? - Norfolk's experience

Setting the scene

What is a Local Intelligence System (LIS)? Many local authorities (LAs) and local partnerships now support web based interactive systems to store, analyse and present locally and nationally held data sets down to small area level. Their main focus is to provide an evidence base for local decision makers to target resources and services. They provide a wide range of data allowing anyone wanting to build a picture of localities and neighbourhoods within their area. Local organisations can bring together and share their own data thus enabling a wide range of indicators to be interrogated and compared across the Local Authority. This is seen as a key development for Government.

The recent Government White Paper on Strong and Prosperous Communities (published October 2006) emphasises the requirement to report to citizens and goes on to say " … *Some local authorities have developed sophisticated local information systems to collate and analyse data about their area and citizens. This can be a powerful tool for targeting activity and improving decision-making. We will look to support work in this area.".* This is further explored by a Report commissioned by the DCLG Neighbourhood Renewal Unit on the current state of LIS at a local level. Both the White Paper and the DCLG Report – *Local Information Systems*: *A review of their role, characteristics and benefits* can be found on www.communities.gov.uk

All parts of the Country now have formal agreements with the Government to deliver a set of priority outcomes and targets for their local area, their Local Area Agreement (LAA), agreed with the Strategic Partnership for the area. These are approved by Government and are required to be regularly monitored and assessed by the Government Office. Indicators and targets for a LAA are grouped together under 4 blocks, the number and detail of indicators varying considerably in different areas.

Most LAAs are managed and monitored through dedicated Performance Management Systems (PMS). These systems provide an effective framework for setting out the outcomes, targets and regular performance figures to show progress across the full LAA, as well as measuring risks associated with achieving outcomes. Though they are capable of reporting performance at more local levels, they have limited capability for modelling spatial relationships between geographies and also to represent information spatially. They are about managing the specific indicators and targets agreed in the LAA, not about the wider context data which can provide a picture of the overall environment of local intelligence

The audiences for LIS and PMS can be very different. A PMS is very often focussed on specific audiences such as managers and performance analysts. Generally LIS systems tend to appeal to a much broader audience that can include citizens, community groups, students etc, as well as data analysts, policy makers and researchers.

Issues to address

Many LAA indicators and targets are set for the whole of the Local Area (eg county, district, unitary). A great many of these indicators are, however, of a spatial nature and can be measured to varying degrees at sub-LA level. Increasingly the thrust of much LAA target setting is concerned with the reduction of inequality across an area. In order to address this and also to be able to start influencing the agreed LA wide targets, there is an imperative to start looking at these indicators at as small an area level as possible. This will also increase ownership of the priorities and targets.

A great deal of resource and energy is often put into undertaking performance data loading, data management and performance reporting, but often less into undertaking performance analysis of the business intelligence to explain what is happening, why and what can be done about it. To do this there needs to be access to a comprehensive, broad intelligence context down to small area together with the staff resource available to undertake interpretation and come forward with rational recommendations.

Having a clear and accurate picture of what is happening on the ground is vital to developing actions and targets and the systems to monitor them. Service providers need to have this picture at a local level to assess problems and design services to meet them - either individually or in partnership. Policy and Performance staff need this detailed picture in order to work with service providers to set realistic and measurable targets, and design the systems to monitor progress. Some of those targets will be about activity, but some will be about outcomes which again can best be measured at a local level. A web based LIS system is the logical complementary tool to provide this contextual dimension to the viewing of LAA indictors and the setting of targets at a local level. Both Performance Managers and Performance Analysts need to work closely together recognising that setting, monitoring and managing performance indicators at small area geographies is critical for the delivery of an LAA.

This then leaves the question of how best can a Performance Management System and a Local Intelligence System sit side by side complementing each other as an effective way of monitoring and influencing progress towards achieving the desired LAA outcomes and targets? What is the best way for data to flow between the two systems? How do we avoid situations where the Research & Intelligence Unit, managing the LIS, and the Performance Management Team, managing the PMS, end up requesting the same data twice from their local partners? These questions are currently attracting considerable attention within those authorities that want to make the most of their investments in both these areas.

This situation often presents a challenge particularly if LIS and PMS systems have developed in relative isolation, managed by different teams and with differing remits than the LAA. The situation can result in 'project islands' with internal teams investing considerable political capital in their own projects and often not wanting to dilute them or further complicate an already multi-organisational project with considerations for

system and data integration. It is increasingly important for there to be close collaborative working relationships between those managing LIS and PMS so that these two information systems can grow together collaboratively. Ideally there should be a seamless interchange of data and information between the two systems in both directions. This is technically achievable once decisions have been made as to what data is most appropriately held, manipulated and presented in each system.

Possible answers

In the new round of LAAs which will be starting from April 2008, there will be a need to demonstrate outcome delivery with a much more local perspective. Performance Management systems are well suited to do this. While some of these indicators need to be area wide, others need to be at appropriate lower levels to reflect where decisions are made and the impacts can be measured. Performance Management systems also provide flexible reporting and monitoring tools allowing often static reports and web pages to be disseminated to as wide an audience as possible. These reports could be published via an LIS System which is usually publicly accessible (very often Performance Management Systems do not have direct public access)

As a general principle, indicators of a spatial nature which can be measured at below LA level should be supplied by internal teams or external organisations at as low a level as possible (eg unit postcode or lower layer super output area (LSOA)). This ensures that they can be aggregated and displayed at small area level and also flexibly aggregated to any neighbourhood or service planning level required. A well structured LIS system is an ideal platform for supporting this. These LAA indicators, once aggregated, could then flow seamlessly to a PMS for reporting and monitoring at the appropriate local levels.

Performance Management systems are not capable of providing a wider, longer-term context which can help inform the setting of local targets and interrogation of variations across the area. Local Information Systems are well suited to providing this type of intelligence and research. An LIS will hold a broad range of small area contextual data as well LAA indicator data. The tools provided in an LIS system will usually allow interrogation and graphical presentation of indicators at multiple area levels. Very often indicator data for comparator areas that are beyond the LA are required to give broader context. These again can be very easily held and compared with local data in an LIS system

Having set up a system for information flow between local PMS & LIS systems and the data sources that inform both, it should also be possible to share that more easily with regional and central government.

Recent developments in Norfolk

In Norfolk we have been maintaining and developing a partnership based LIS, the Norfolk Data Observatory (NDO), since 1998. It has gradually developed as a shared platform to help provide the evidence base for service planning and resource targeting. It also provides a definitive and comprehensive knowledge base of Norfolk down to small area level which informs the setting and monitoring of policy.

NDO started life primarily as an interactive, largely map-based intelligence system to hold a wide range of data mostly at LSOA, ward and district level. Over the years local partners have provided data (see Table 1 for examples of current range of locally sourced data sets). This data has been available for profiling and mapping alongside other local data sourced nationally (eg 2001 Census, Indices of Deprivation 2004, various data sets at small area level from ONS NeSS and NOMIS). Commercially held data sets such as CACI Acorn life-style and household income data have been obtained at postcode level for Norfolk and displayed on the NDO alongside all the other data.

Table 1

Source	Example of data sets
Norfolk Constabulary	Crime by type
Norfolk PCT	Standardised fertility and mortality and other health indicators
Norfolk Job Centre Plus	Benefit data by type and category
Norfolk Connexions	NEET and Year 11 destinations
Norfolk LEA	Key stage 2, 3 and 4 results

In March 2006 the Norfolk Strategic Partnership and Norfolk County Council agreed with the Government an LAA which set out the outcomes, indicators and targets agreed for Norfolk during 2006 to 2009. These targets have recently been refreshed for 2007 to 2009

The Norfolk Data Observatory was brought under the umbrella of the County Strategic Partnership in 2003 and became part of a project identified within 'Norfolk Ambition' the County's Community Strategy. A recent independent feasibility study has led to development being undertaken to upgrade the current NDO site onto a more versatile and broader platform. Its key focus is to make it fit for purpose to support the monitoring and target setting of LAA indicators at small area level below the County. The Observatory will be made available through the existing Norfolk Ambition web site to re-inforce this partnership focus.

The County Council is also currently piloting a Performance Management System, InPhase Performance+, for the monitoring and performance management of the indicators and targets set out in the LAA (the majority of these having been set at County level).

A recent review of Norfolk's LAA by the Government Office for the East of England, commended the performance management and reporting of the LAA, and endorsed the view that there is *'….a need to look at data in greater detail, drill down further and understand more clearly what it is telling Norfolk.'* How will the development being undertaken on the Norfolk Data Observatory begin to address these requirements?

An overview of the new facilities on the Norfolk Data Observatory

The upgraded NDO site (www.norfolkdata.net) has been migrated to the InstantAtlas Data Server platform, a relatively low cost off-the-shelf solution for building and maintaining a LIS. This provides a number of modules giving various ways of exploring, interrogating and presenting information at multiple area levels from LSOAs to county level. The key is that all the modules operate from a single database designed to support a large number of indicators at different geographies in a completely consistent manner. Responsibility for data management can be fully devolved. Partner organisations can be given rights to regularly load their own data directly onto the system at appropriate geographic levels. Data can be loaded at very small area level and the system is then capable of aggregating this to any number of higher level geographies 'on the fly'. This results in massive savings in terms of data management time. Multiple area levels can be defined with administrative tools enabling users to interrogate data at these defined area levels. In addition users can define their own ad hoc areas for which they require data.

While allowing map based interactive searching, area building and interactive mapping of indicators it also provides access to area profile reports and other resources such as search and retrieval of reports and research articles. It thus brings together a wide range of resources and ways of interrogating data which can facilitate the building of intelligence and insight into the characteristics of local areas across the County.

There is a sophisticated search facility which allows free searching or searching by key words for associated data sets, indicators, profiles, reports etc (see fig. 1).

Fig.1 Searching for resources

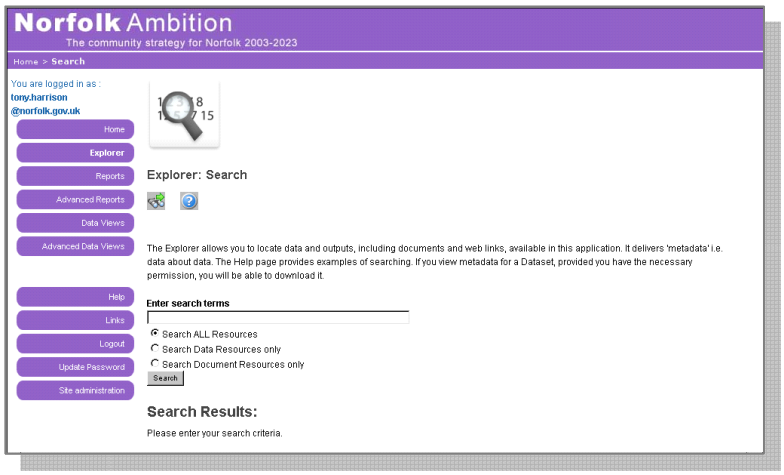
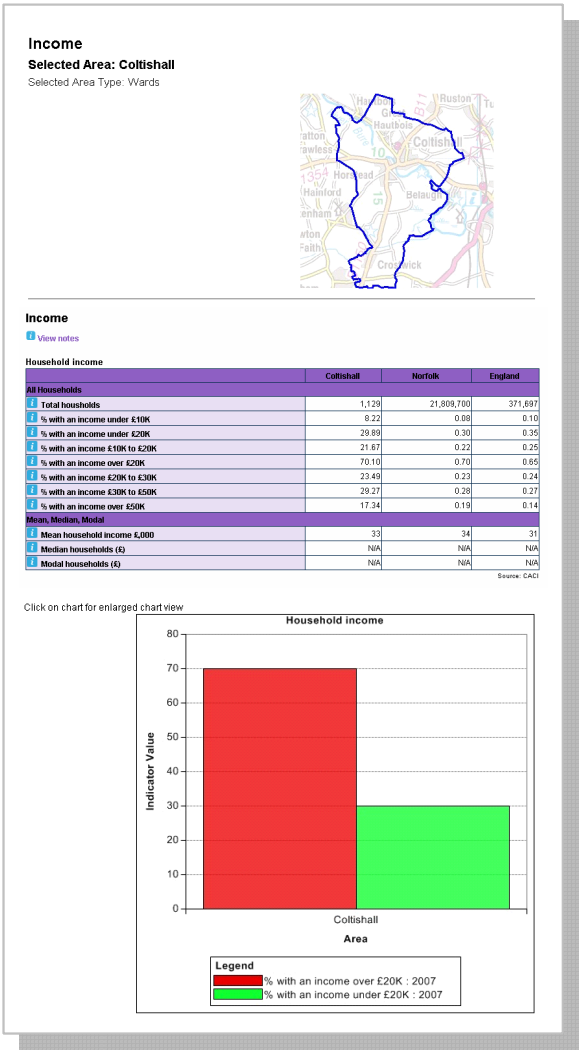


Fig.2 Building a profile for one or more areas



	Coltishall	Norfolk	England
All Households			
Total housholds	1,129	21,809,700	371,697
% with an income under £10K	8.22	0.08	0.10
% with an income under £20K	29.89	0.30	0.35
% with an income £10K to £20K	21.67	0.22	0.25
% with an income over £20K	70.10	0.70	0.65
% with an income £20K to £30K	23.49	0.23	0.24
% with an income £30K to £50K	29.27	0.28	0.27
% with an income over £50K	17.34	0.19	0.14
Mean, Median, Modal			
Mean household income £,000	33	34	31
Median households (£)	N/A	N/A	N/A
Modal households (£)	N/A	N/A	N/A

Source: CACI

Dynamically populated area profile reports containing tables, charts, graphs and maps can be built for single areas or groups of areas (chosen by the user). This begins to build a picture of localities and neighbourhoods across the County and is an ideal way to deliver this type of information to non-experts. (see fig. 2).

Custom Data Views can be built giving users the facility to interactively explore indicators for different areas simultaneously on maps, graphs, tables and bar charts. Single indicators can be explored across many areas (see Fig. 3a), Two indicators can be compared and explored across many areas (see Fig. 3b). A range of indicators can be profiled and compared area by area (see fig. 3c) - this is where data can start turning into 'intelligence' and begin to 'tell a story' .

Fig.3a Exploring an indicator across many areas

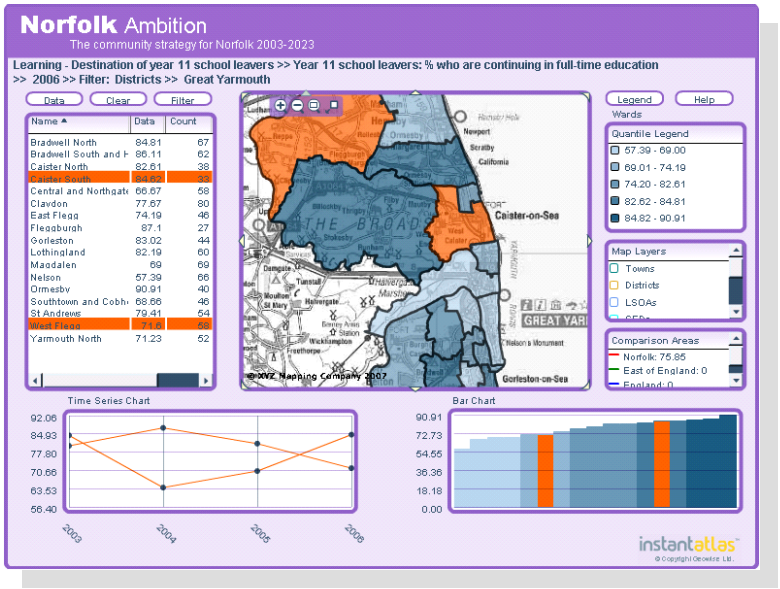


Fig.3b Comparing two indicators across many areas

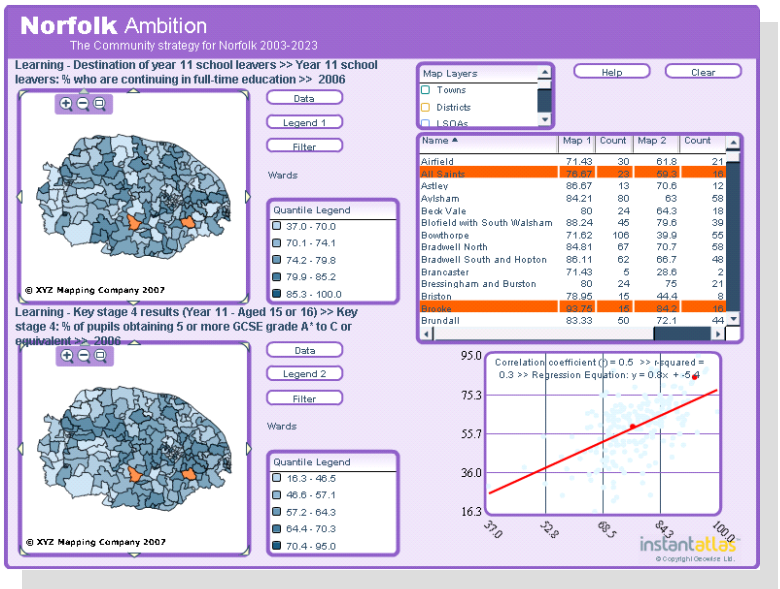
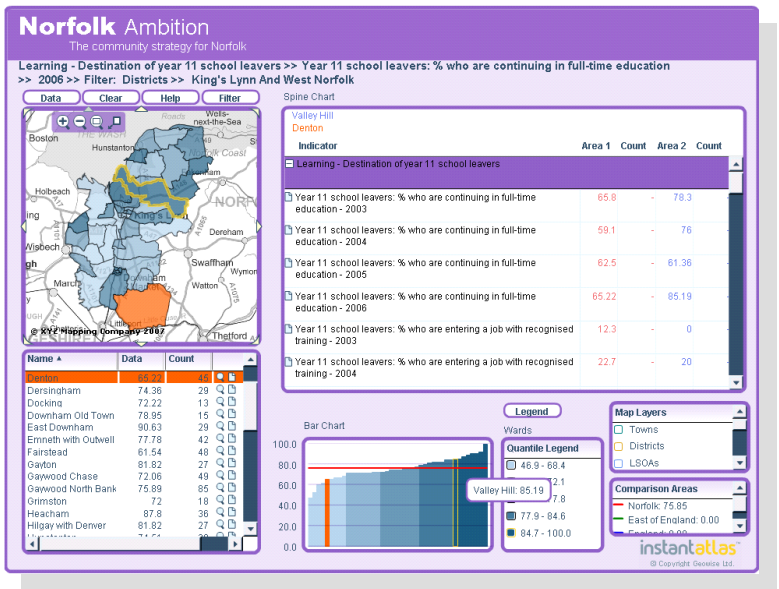


Fig.3c Dynamic profiling of a range of indicators for selected areas



Engaging with LAA indicators and targets

One of the remits for this development was to begin to address the need for engaging with and setting targets for LAA indicators below County level . The NDO team worked jointly with GeoWise to develop a new style of Data View termed the Performance Profile – NDO will be the first UK customer to implement this.

The pilot Performance Profiles have been initially designed, in terms of data content, to look at LAA indicators and targets in Norfolk at both district and ward level (data has been simulated for illustration purposes). It will be possible to build templates for various other area levels and sets of indicators.

Users will be able to explore

- the comparison of indicators at county level and their performance against target (see fig.4).
- the comparison of indicators and targets at district or ward level across the county – this will allow easy identification of poorly performing areas. Where sub County targets have yet to be defined it can help local partners with the recommendation of appropriate targets (see fig. 5).
- the comparison of how two areas are performing against each other (see fig. 6).
- the bullet graph (see Fig. 7) for selected areas to, at a glance, show
    1. whether indicators are good, acceptable or poor (in relation to all other areas)
    2. baseline values of indicators
    3. trends showing whether the indicators are going towards or away from target
    4. which indicators are problematic and where performance is satisfactory or good in relation to target
- patterns and trends in associated indicators to appreciate and understand underlying causes and appropriate actions (associated indicators can be shown alongside the LAA indicators in a performance data view.)

Fig.4 Showing a range of County indicators and targets

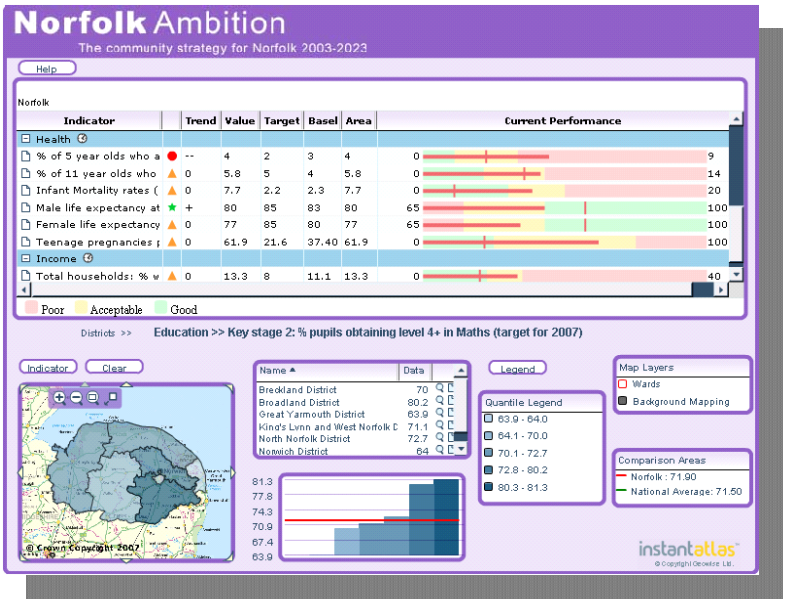


Fig.5 Exploring district indicators and targets

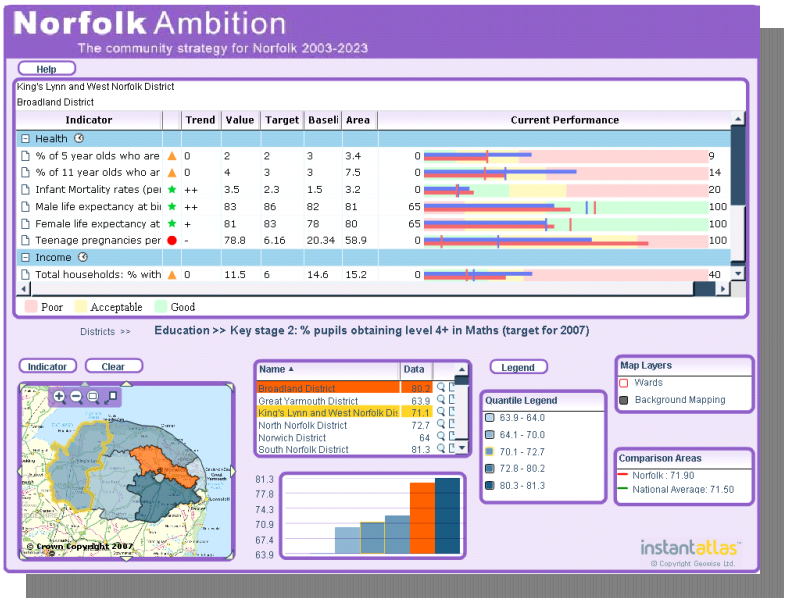


Fig.6 Comparing how one area is performing compared with other areas

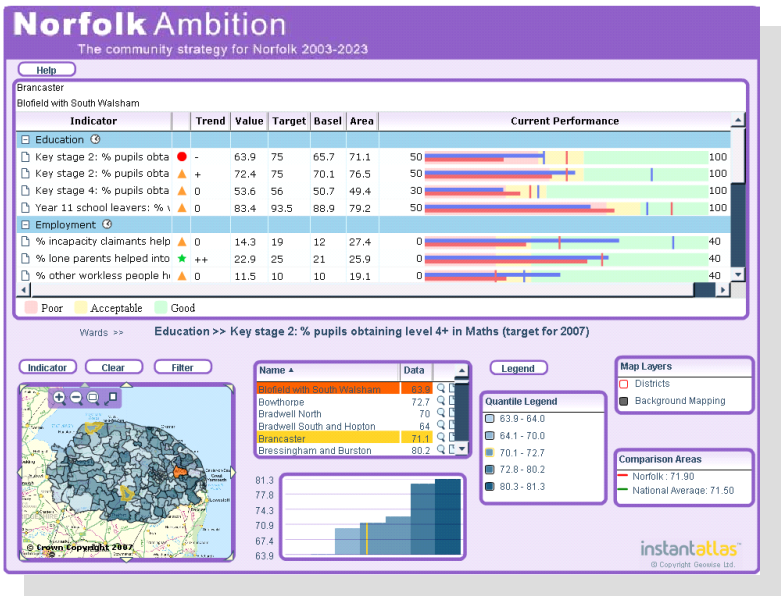
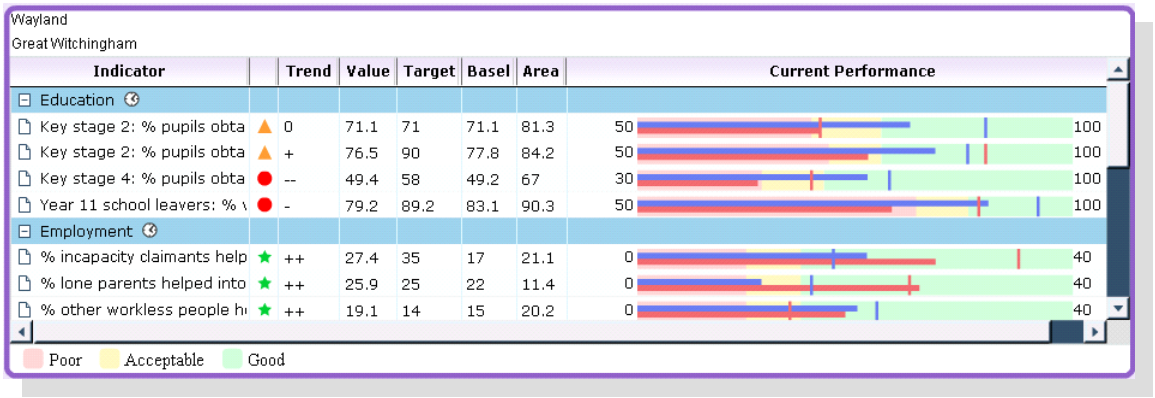


Fig.7 At a glance measures of performance



This is an exciting development. It will offer service providers and a wider LIS audience an excellent tool for drilling down within the County to monitor indicators and assess inequality across Norfolk. It will help to support more devolved target setting and provide the wider, contextual evidence base, down to small area level, needed for monitoring the impact of policy and supporting resource targeting to achieve the desired LAA outcomes and targets.

It has been agreed that the NDO will provide access to the high level performance management reports produced by, InPhase Performance+. This will ensure they reach a wide audience. Maximising efficiencies in terms of data flows is still under discussion although it is clear that some form of semi- or fully-automated process is needed to exchange data between both systems. It is already clear that the process of sourcing data at small geographic level from Strategic Partners will be of paramount importance.

The newly upgraded version of NDO will provide a versatile LIS platform that can sit alongside the County Strategic Partnership's investment to date in the County Council's PMS. These two systems are complementary and together will be able to provide the breadth of information and intelligence needed to support Norfolk's LAA.

The views expressed in this article are those of the author and do not necessarily reflect those of Norfolk County Council or Norfolk Strategic Partnership.

For more information on InstantAtlas Data Server go to www.instantatlas.com.