Merseyside Fire and Rescue
National Indicator Performance Setting

TO BE PRESENTED TO:

District Performance Analysts

This is an unpublished work, the Copyright in which vests in Merseyside Fire & Rescue Service. All rights reserved. The information contained herein is the property of Merseyside Fire & Rescue Service, and is supplied without liability for errors or omissions. No part may be reproduced or used except as authorised by Contract or other written permission. The Copyright and the foregoing restriction on reproduction and use extend to all media in which information may be embodied ©

KNOWLEDGE AND INFORMATION MANAGEMENT DEPARTMENT

Date work received: 07/04/2009
Date work completed: 01/07/2009

Document Control

Amendment History

Version / Issue No.	Date	Author	Remarks / Reason for Change
1.0	07/04/2009	J Fielding	
1.1	21/04/2009	J Fielding	Following comments from JLC
1.2	01/07/2009	J Fielding	Addition of Data Quality Commentary

Sign-Off List

Name	Position
John L Curtis	Director of Knowledge & Information Management
Chris Case	Director of Performance & Values

Distribution List

Name	Position	I / R
Merseyside Informed		

Related Documents

Reference No.	Title	Author	Version & Date
1	Performance Management Process, Draft Document	John L Curtis	0.1

Ownership

Has it been agreed with the client that this is a publicly owned document? Yes/No

If Yes please state URL:

If No please state reason why:

1. AGREEMENT 3

2. INTRODUCTION 4

3. METHODOLOGY 4

4. RATIONALE 6

1. Agreement

For the purpose of this report the following agreement was made between the client and the Knowledge & Information Management department.

This work was requested by John L Curtis and John Fielding and received on 07/04/2009.

The Manager[1] has approved this report/ piece of work can be undertaken by the Knowledge & Information Management Department.

If the scope of the work changes, authorisation must be again obtained and would be noted within the version control document sheet.

It was agreed that this report would be produced in draft format by 08/04/2009, and would be sent electronically to the Director of Knowledge & Information Management Department and Client for comment.

The Manager / Client agreed that their comments would be received back by 02/07/2009.

The final report, which will always be in PDF format, would be produced by 01/07/2009, subject to receiving comments.

[1] John L Curtis

2. Introduction

Every February the Business Intelligence team within the Knowledge and Information Management department of Merseyside Fire and Rescue Service begin the process of target setting for future performance for a range of National Indicators and Local Indicators.
The purpose of this document is to provide a background as to how Merseyside Fire and Rescue Service set targets for the National Indicators NI33 – Arson and NI49 – Primary Fires as well as the rationale for the process itself.

3. Data Quality

Data Quality is key to ensuring that reporting of performance data and information are as accurate as possible. Data quality is managed by the Data Management team within the Knowledge & Information Management Department.
In simple terms, to ensure data quality the Data Management team on a daily basis use reporting tools which compare the incident type to the "Stop Code."[2] If the incident type as described in IRS (fire reporting system) is different to the recorded Stop Code; then the team contact the Officer who completed the record and query as to why there is a discrepancy. Following this review either the fire report or the Stop Code is amended so that they reflect each other.

4. Methodology

The following outlines the steps which are taken in setting targets.
Step 1:
Historical data[3] is extracted from the Vision and the Incident Recording System (IRS) databases using criteria as prescribed by Communities and Local Government (CLG). This data is then filtered into the Merseyside districts using Geographical Information Systems. This enables us to correctly break down a Merseyside perspective to a district

Step 2:
Data is then filtered by fiscal year (i.e. 1st April – 31st March) this produces a table like table 1 below:

[2] Stop Code – a coding system used by MF&RS Control Room which in very simple terms describes what type incident occurred. For example a "01" is a Dwelling Fire, any code beginning with "04" is a secondary fire.
[3] Note: data used includes late Fire Report returns so will be different from previously published figures

Table 1: breakdown of NI33a Deliberate Primary Fire Performance by district and year

Year	Knowsley	Liverpool	Sefton	St Helens	Wirral
2004/05	673	2278	499	379	635
2005/06	564	1668	441	351	451
2006/07	419	1608	434	309	407
2007/08	389	1209	322	222	310
Est 08/09	308	981	253	234	315

Step 3:
With the data extracted a series of charts are created (one for each indicator per district. From here a trend line is added, with the chart displaying the trend formula and R^2 (regression) value.

Chart 1: Incident data plotted with trend line (Liverpool)

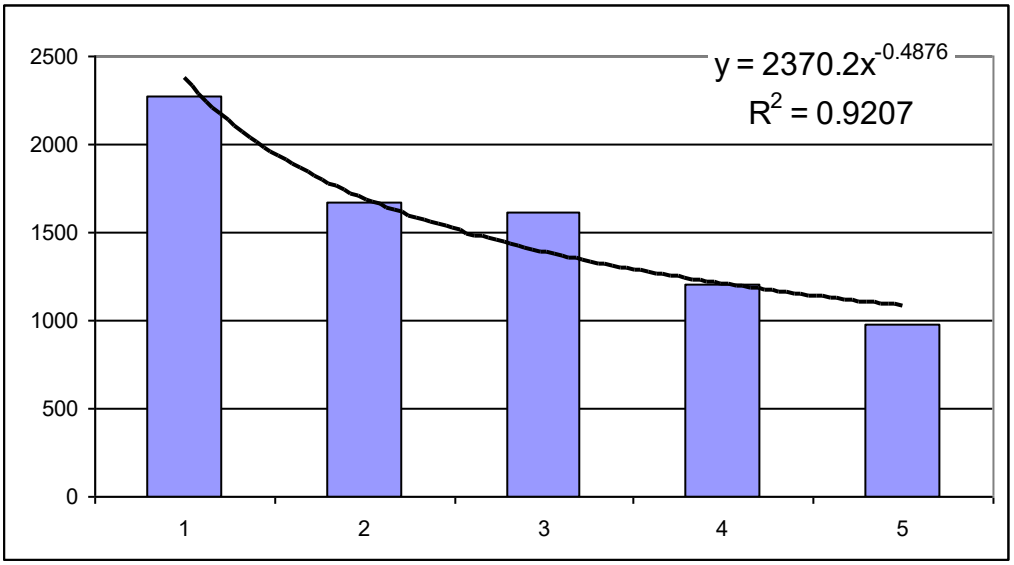


Chart 1 (above) plots Incidents within Liverpool over the past five years including the trend line (in this case a POWER trend line) and requisite formula. From here the trend formula is applied to the incident data (as in table 1) and future performance is predicted as displayed in table 2 (below).

Table 2: Application of trend formula to create future predictions

X	Year	Knowsley	Liverpool	Sefton	St Helens	Wirral
0	2004/05	673	2278	499	379	635
1	2005/06	564	1668	441	351	451
2	2006/07	419	1608	434	309	407
3	2007/08	389	1209	322	222	310
4	Est 08/09	308	981	253	234	315
5	2009/10		1081			
6	2010/11		989			
7	2011/12		918			

Target setting, judgements are based on which trend is most realistically achievable, whilst challenging enough in order to be objective. The

target setting process strives to use the SMART principle whereby the process is: Specific, Measurable, Agreed, Realistic and Time-bound.

All targets are signed off by the relevant District Management Team member who represents that district.

5. Rationale

There are several reasons as to why Merseyside Fire and Rescue Service set targets in this manner. One such reason is that it is a statistically robust method of setting targets whereby it uses a scientific approach identifying the importance of historical events, taking into consideration factors which have an influence on fire related incidents.

To elaborate further as in all aspects of life there is a whole multitude of factors which can influence the performance of a particular service and Merseyside Fire and Rescue Service is no different.

The Fire and Rescue Service always strives for excellent performance and our range of initiatives in co-operation with partners and the communities of Merseyside assist in improving our performance.

However there are other factors which must be considered which do have an impact; particularly in the last two years (Merseyside wide) the influence of the weather has had a significant impact on the number of Arson related incidents, with both the past two summers being very wet. Whilst the 2006/07 summer by contrast was hot and dry – leading to an increase in Deliberate Secondary Fires that year. Weather is just one significant factor, other factors which are more localised to the districts of Merseyside can include: Police Activity including the influence of Section 30's, the arrest and conviction of repeat offenders, urban renewal (for instance the demolition/construction of buildings and other estates) to name a few.

What all this means is that fire performance data goes through peaks and troughs. By analysing performance in a retrospective manner we attempt to form a correct balance to the target setting process. To arbitrarily set performance on a single year's worth of performance data would lead to the distinct possibility of setting an UNSMART target.