

EUROCONTROL
Experimental Centre

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**A Synthesis of ATM Public
Perception Surveys**

EEC/SEE/2004/001



A Synthesis of ATM Public Perception Surveys



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Abstract: The surveys synthesis investigated existing surveys carried out in the period 1998-2003 for soliciting external opinion on ATM related matters. 80 organisations were approached, ranging from institutions (national & European) to aviation bodies (ANSP, Airlines, Airports) and from Research establishments to pressure groups. Only three relevant surveys were found from Transport Canada, Eurocontrol/HUM, and DFS. The synthesis shows that public awareness of ATM has rarely been addressed specifically other than for safety perception or recruitment purposes.						

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1. Introduction

This is the report on a short study commissioned by the EUROCONTROL Experimental Centre in October 2003.

The objective of the study is to identify surveys that have been carried out into the European public's perception of aviation and particularly Air Traffic Management (ATM).

2. Scope

In setting out on this study we anticipated that surveys might have been carried out by a number of bodies including European Institutions, European States, representative bodies, Universities, research institutes and governmental and commercial organisations.

We recognised that there would be different types of survey carried out by different types of organisation.

“lifestyle” surveys containing little reference to aviation and even less to ATM but investigating subjects like travel patterns and holiday preferences

specific ATM studies concerned with stakeholder or public perception of ATM services of performance measurement of the ATM system as some sort of benchmarking

customer satisfaction surveys in aviation and ATM

public perception surveys of aviation and ATM.

The time considered is the last five years i.e. 1998 – 2003 and the principal area of interest is Europe. For the sake of completeness however, the study also reports on significant surveys identified in earlier years and outside Europe.

The content of any survey in this area could include a wide variety of information relating to any or all of the following:

- Pure ATM in the conventional sense, as perceived by the public, [Air Traffic Management, Air Traffic Control]
- The issues of congestion and delays to travellers
- The environmental consequences of ATM, and of sub-optimisation of ATM
- The economic consequences of ATM efficiencies and deficiencies
- The costs of congestion and perception of airport and ATM 'links'
- Regional, National and Europe-wide impacts of ATM
- Impact on safety perceptions
- Impact on reliability

Searches were therefore carried out on a broad basis, recognising that surveys could have been carried out under a wide range of topic headings.

3. Approach

The study team adopted a phased approach:

- Discuss the requirement with the EEC client team and identify any known surveys
- Carry out an extensive web search in English, French, German, Spanish and Italian
- Carry out a further web search looking specifically at International organisations, aviation representative organisations, European Governments, Air Navigation Service Providers (ANSPs), airports, airlines, research companies and academia.
- E-mail these organisations either to request copies of material identified or to make a specific request for information
- Make telephone calls to those organisations more likely to have carried out relevant surveys
- Follow up all leads by e-mail and telephone to a conclusion.

4. Profile of Responses

A summary of the types of organisation investigated and the responses received is set out in Table 1. The surveys identified in the Table cover a range of different types, which are discussed in the paragraphs below according to the type of organisation. Most do not specifically solicit the view of the public. Surveys of particular relevance to public opinion are discussed in Section 5 below.

Table 1 Summary of Responses

Type of Organisation	No response	No surveys known	Total of Type	Surveys identified
European Institutions		2	3	4
Government / Regulators	4	8	14	2
Air Navigation Service Providers	11	8	22	3
Airport Authorities	1	3	4	
Airlines	4		4	
Representative Organisations	2	6	8	2
Pressure Groups / Watchdogs		2	4	2
Commercial Market Researchers		2	5	6
Research Laboratories	2	5	7	
Academia	2	6	9	1
TOTALS	26	42	80	20

4.1 EUROPEAN INSTITUTIONS

This group comprises the EC, ECAC and EUROCONTROL.

Neither the EC nor ECAC could identify relevant surveys.

In 1995 EUROCONTROL embarked on the EATCHIP Alignment and conducted a wide-ranging interview survey of stakeholders that established firmly their opinion of ATM.

In 1999, when preparing to establish the EATM Strategy, EUROCONTROL carried out an extensive exercise with stakeholders to establish user-requirements which is recorded in the EATCHIP User Requirements Document.

Since then EUROCONTROL has conducted a continuous survey of stakeholders' views of EATMP to monitor customer satisfaction.

Every two years the External Stakeholder Satisfaction Survey of EATM is carried out. This survey covers all ACG and working groups and includes regulators, ANSPs, military, manufacturers, airports and airspace users. The most recent survey is currently in report stage and has not yet been published. About 800 people were invited to complete a web-based survey and the response rate was about 20%.

3 or 4 times a year there is a paper-based survey to measure the satisfaction of the ACG (about 150 members).

We understand that CFMU, CRCO, Maastricht, ERC and other Directorates also carry out Customer Satisfaction Surveys.

4.2 GOVERNMENT / REGULATORS

This group covers Government Departments and Civil Aviation Authorities and includes the FAA.

It is well known that Governments carry out surveys to provide them with national statistics of travel trends and destinations. Some of these were identified in the trawl, but did not contain anything specific to ATM. We would expect this to be a common practice across Europe.

4.3 AIR NAVIGATION SERVICE PROVIDERS

This was the largest single group and the one with the highest rate of non-responses. Because of the nature of this work we pursued a response from all organisations using e-mails and telephone calls.

We know from previous informal discussions that many ANSPs hold a continuing dialogue with their stakeholders. Two organisations identified formal surveys associated with this dialogue. These two, plus the DFS survey discussed in 5.3 below, are the 3 listed in Table 1. The others are not included on the basis that the evidence is anecdotal.

LVNL have conducted a stakeholder survey in the past but no information is available.

AENA provided a copy of the 2002 client satisfaction survey for the Directorate of Air Navigation. It covers various classifications of airports, aircraft operators and pilots and provides a perceived performance assessment overall and for parts of the service, including charges.

4.4 AIRPORT AUTHORITIES

We know from personal experience that major airports survey passengers. These surveys may cover a wide range of topics but are usually concerned with airport facilities and the travel experience and commercial opportunities within the airport.

None of the airport authorities approached identified any ATM content within their surveys. In one case (FRA) we were able to investigate the content of the airports database and found no mention of ATM or associated topics.

It is common practice for airports and public authorities to carry out consultation when changes are to be made to an airport or its operations. These are usually focussed on the local impact and often include a survey of public opinion. If the operational change concerns ATM or ATC it is likely that it will be included in the consultation and survey.

4.5 AIRLINES

Previous dealings with airlines and their representative bodies have led us to understand that the airlines see themselves as the intermediary between the public and ATM. We approached only 4 of the major airlines and received no responses. It is difficult to draw conclusions from this limited sample.

4.6 REPRESENTATIVE ORGANISATIONS

The two surveys identified were carried out by IATA. They are the annual Corporate Air Travel Survey and the Global Airport Monitor. Both are passenger surveys. Although the first identifies delays as being of concern to business travellers on both long and short-haul flights, neither has information specific to ATM.

4.7 PRESSURE GROUPS / WATCHDOGS

This group comprises ATAG, CNAC, The Air Transport Users Council (AUC) and Freedom to Fly. AUC is the UK airline traveller's consumer watchdog. They helpfully took our enquiry and sent it to the other user watchdog groups in Europe (details not disclosed).

CNAC responded with information that they collected information on delays that were split into separate types including those attributable to ANS and a copy of their latest summary report. This CNAC report represents a generic report that we would expect an organisation in each State to make. We are aware that NATS makes it in the UK and in Germany DFS, airports and airlines all publish separate figures.

AUC keeps a register of complaints and publishes an annual report. Delays are a major source of complaint but there is no mention of ATM. We found no other indication of organisations keeping a register of complaints for each State.

4.8 COMMERCIAL MARKET RESEARCHERS

Five companies responded identifying a total of 6 surveys with some aviation content. As all but one survey were available only on payment of a fee we only saw limited content. However, the most interesting were:

A Survey of Consumer Confidence in Air Travel published in June 2003 and covering UK, France and Germany

A Report on Aviation Services for the City of London¹. This interview survey was conducted as a part of the City's response to Government consultation on new London airports and provides an excellent review of public opinion on aviation, albeit specific to the City. It does not, however, address ATM.

The others were more related to the travel industry and were concerned either with travel services or destinations.

None of the commercial surveys dealt specifically with ATM.

4.9 RESEARCH LABORATORIES

The research laboratories are almost exclusively concerned with technical matters. Most responded with no knowledge of relevant surveys.

4.10 ACADEMIA

There was a good response rate from the academic institutions and only one survey identified. This concerned the case for a high speed Madrid Barcelona train and had no specific reference to ATM.

The total lack of relevant surveys identified by academia reassured us that we were not missing relevant material, as there is usually a good academic network and much cross-referencing of papers.

¹ http://www.cityoflondon.gov.uk/business_city/research_statistics/pdf/aviation_services.pdf

5. Relevant Surveys

5.1 TRANSPORT CANADA

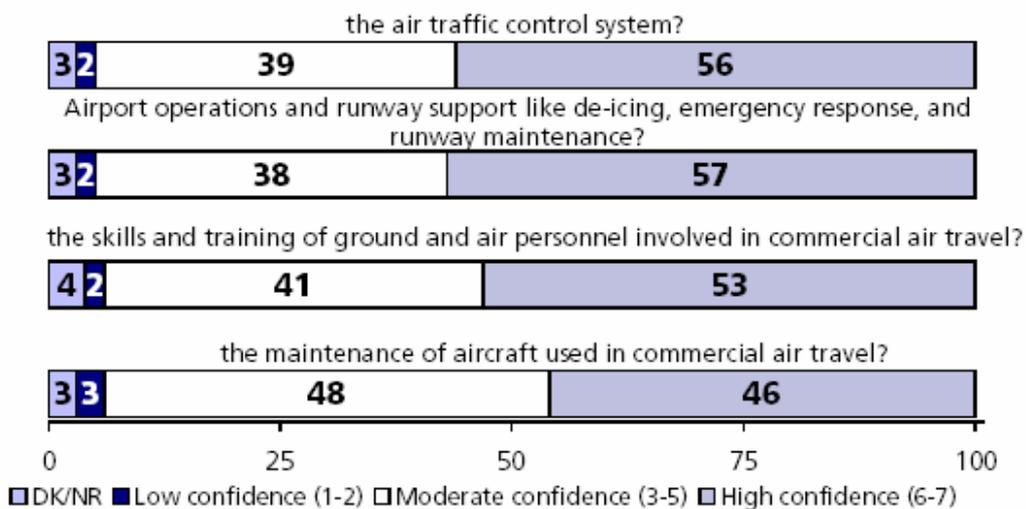
In 2002 Transport Canada inserted three sets of questions into a syndicated research study to measure the public perception of aviation safety and security in Canada. The sample size was 2510.

Figures marked 14, 15 and 17 below are copied from the final report. They demonstrate the level of public confidence in the air traffic control system and the extent to which the public expects human error to take place among the groups affecting aviation including air traffic controllers.

Figure 14

Confidence in Air Travel

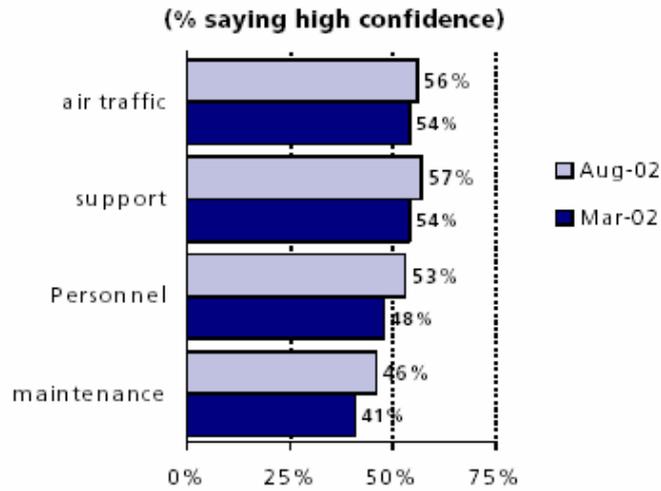
Q: Please rate your confidence in the following aspects of the air safety system using a 7 point scale where 1 is a low level of confidence, 4 is a moderate level of confidence, and 7 is a high level of confidence.



{Base: All Canadians, n=2510}

Figure 15
Comparing Confidence in Elements of Air Travel

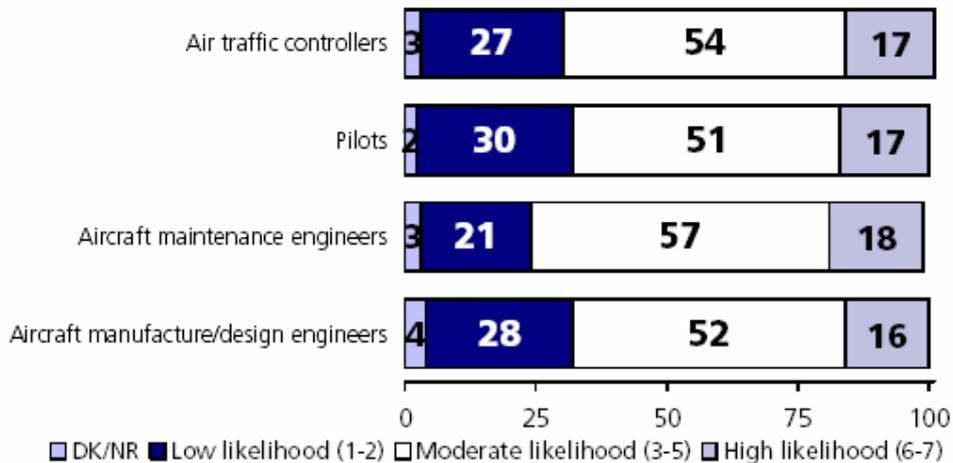
Q: Please rate your confidence in the following aspects of the air safety system using a 7 point scale where 1 is a low level of confidence, 4 is a moderate level of confidence, and 7 is a high level of confidence.



{Base: All Canadians, March n=2509; August n=2510}

Figure 17
Human Error

Q: In a recent study, Canadians told us the biggest risk factor associated with flight safety is human error. Please rate the extent to which human error is likely to take place among the following groups using a 7-point scale where 1 is not at all likely and 7 is an extremely likely.



{Base: All Canadians, n=2510}

5.2 HUM

In November 2002 EUROCONTROL HUM reported on project work entitled Marketing and Communication of the ATCO Job - Phase I – Study.²

It is based on a questionnaire survey carried out in sixteen ANSPs designed to provide an analysis of future ATCO profiles with a view to identifying a common or generic ATCO career marketing strategy and concept.

It is specifically aimed at identifying the ANSP's evaluation of the ATCO job and the conditions in which it is carried out. For instance, it contains a comparative evaluation of the medical and educational requirements, training and failure rates with that of an airline or military pilot or a telecom or computer engineer.

Phase 2 of the work was carried out in 2001 and the report was released in 2003³. It reports on questionnaires completed by 1912 ATCO applicants in 6 ANSPs. The report provides information (*inter alia*) on how applicants learn about the ATCO job, what influences their choice, what job perceptions they have, what working conditions are important to them, what are their perceived images of the job and what alternative jobs they consider. This report also segments the applicant position into different target groups and analyses their possible corresponding communication messages.

Although the survey sample included only prospective ATCOs, and therefore a group that is not representative of the general public, it gives a scientific and complete evaluation of the role of the ATCO as perceived by people who are still members of the general public. It may therefore be considered to be valuable input to evaluating any public perception of ATM.

²[http://www.eurocontrol.int/humanfactors/docs/M21%20\(HRS-MSP-002-REP-02\)%20Released.pdf](http://www.eurocontrol.int/humanfactors/docs/M21%20(HRS-MSP-002-REP-02)%20Released.pdf)

³ <http://www.eurocontrol.int/humanfactors/docs/M24-HRS-MSP-002-REP-03withsig.pdf>

5.3 DFS IMAGE ANALYSIS

In its May 2003 edition the DFS in-house magazine, "transmission", provided the results of a survey carried out in summer 2002. The purpose was to carry out an image analysis investigating topics of interest such as:

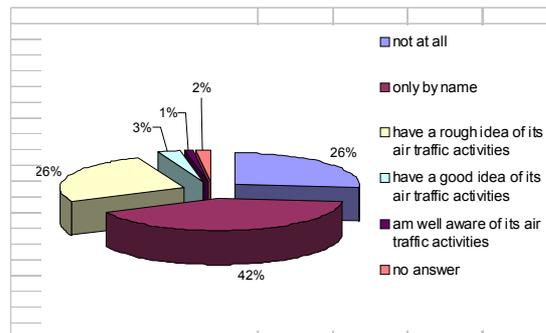
How well known is DFS, what is its role and what is your perception of it?
What does the general public know about the ATCO role and the characteristics of the ATCO job?

The survey tested prompted and unprompted awareness, the degree of understanding of the roles and the emotional perception.

The survey was carried out by sending questionnaires to 2,625 households from a statistical national sample of 25,000. There was an 82% response rate. In parallel to the public survey DFS carried out an internal survey in their training area, the results of which are not publicly available and therefore are not reported here. There are plans for a further survey in 2004 addressing environmental questions.

Awareness of the DFS (supported)

Are you aware of the DFS?



N=2115

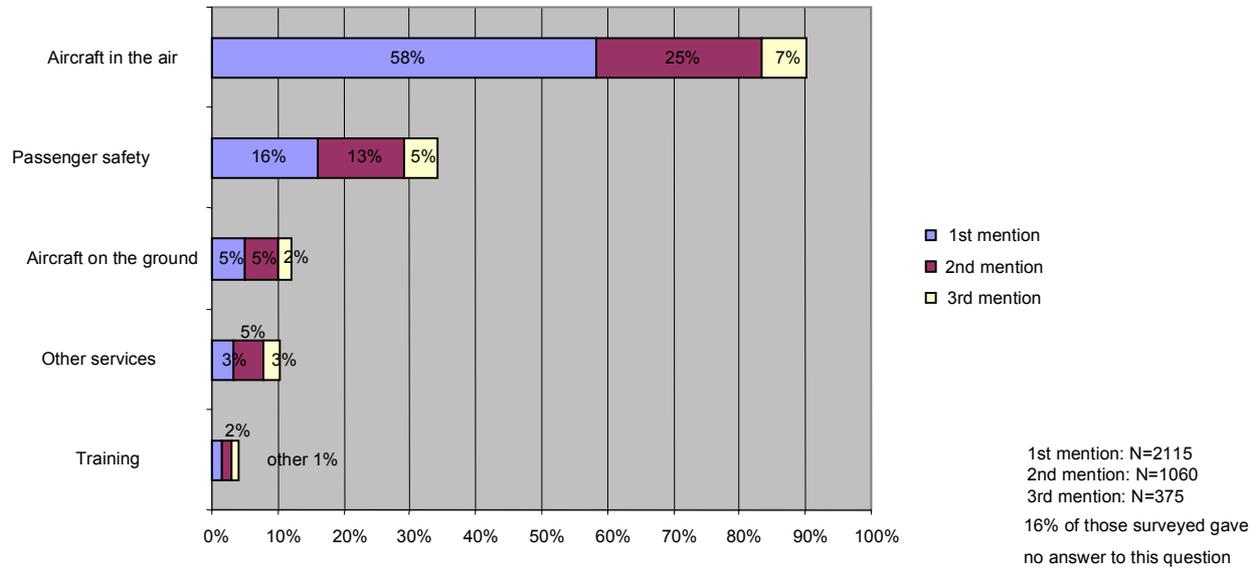
1

The approach to the survey is demonstrated in the diagram above. It tests the unprompted awareness of DFS, with 53% of respondents knowing the role of DFS in ATC to different extents and 42% knowing only the name.

Awareness of the DFS's activities

What are the DFS's activities?

- unsupported survey -



2



The second diagram shows the understanding of the roles of DFS with the positive responses declining from en-route ATC through passenger safety and controlling ground movements down to training.

Further question sets tested knowledge of the more detailed roles of DFS and of the controller.

The overall summary slide is reproduced below. This table indicates that 47% of respondents know the role of both DFS and ATCOs and 1.5% know them well. 30% know the role of only one of them.

Level of awareness: Level of awareness (LA) of the DFS and knowledge about ATCOs (simplified)

			DFS LA rating				Total
			0	1	2	3	
Level of awareness of work of ATCOs	0	% of total	0.20%	1.60%	2.40%		4.10%
	1	% of total	0.40%	10.20%	17.00%	0.30%	27.90%
	2	% of total	1.10%	13.30%	46.50%	2.20%	63.10%
	3	% of total	0.10%	0.60%	2.70%	1.50%	4.90%
	Total	Number		38	543	1450	84

- 47% are well aware of both the work of ATCOs and the DFS Average position
- 1.5% have a thorough knowledge of both the work of ATCOs and the DFS Extremely good position
- 10% are aware of neither the work of ATCOs nor of the DFS Extremely bad position
- 5% have a good to thorough awareness of both the work of ATCOs and the DFS
- 13% are aware of the work of ATCOS but not of the DFS Polar level of awareness
- 17% are not aware of the work of ATCOS but are aware of the DFS

6. Conclusions

6.1 COMPLETENESS

Our investigations led us to 81 organisations, mostly within Europe and the FAA and Transport Canada in North America. The response rate at 68% was high, particularly as non-respondents, of the total sample, were 14% ANSPs, and 18% others.

A study of this nature always raises the question of whether we have identified all the surveys that have been carried out. We are reassured by the great number of organisations who provided a negative response to say that they are not aware of any relevant survey. These include the major representative organisations, industry and unions, who we would expect to know of relevant work.

6.2 THE PATTERN OF RESPONSE

The picture appearing from this work is a logical picture of which organisations do conduct surveys in aviation and the type of survey they conduct.

We expect individual airports and airlines to carry out their own customer satisfaction surveys on a continuous basis. Many of us experience them on a day-to-day basis. We do not experience public surveys from ANSPs and it is not therefore surprising that only one has been identified.

It is a fact that the aviation industry is a collection of individual service providers who are concerned with their own performance. These service providers may be commercial private organisations, public organisations, or sometimes somewhere in between. Sometimes they consider their performance relative to other, similar, service providers.

There are, however, few, if any, institutions that record the performance of the whole industry. Consequently we do not usually expect to find specific questions about the overall performance of aviation within public surveys.

As far as airports and aircraft operators are concerned, there is no organisation that is responsible for the overall performance of their sector. In this respect ATM is unique. The PRC is concerned with measuring overall performance and EUROCONTROL is becoming increasingly responsible, from a programme point of view, for ensuring that future performance is achieved.

We can identify which of the items in the list in Section 2 have been discovered in this review. A comparison is made in Table 2.

Table 2 Types of Information Identified

Potential subject matter of survey	Findings of this work
Pure ATM in the conventional sense, as perceived by the public, of Air Traffic Management	DFS survey and specific work carried out by HUM and ANSPs to investigate the perceived characteristics of ATCOs. AENA client satisfaction survey and others not specifically identified.
The issues of congestion and delays to travellers	City of London survey of business users. Partial reference in the IATA surveys.
The environmental consequences of ATM, and of sub-optimisation of ATM	None identified
The economic consequences of ATM efficiencies and deficiencies	None identified
The costs of congestion and perception of airport and ATM 'links'	None identified
Regional, National and Europe-wide impacts of ATM	None identified
Impact on safety perceptions	Transport Canada survey
Impact on reliability	None identified

The fact that no survey was identified covering many areas does not mean that their importance is not recognised. Much work is carried out by the PRU to measure performance in all of these areas. It may be interpreted to mean that the aviation industry is only concerned with measuring the opinion of their customers concerning the specific service that they are providing. For the reasons set out above, few organisations are concerned with measuring overall public opinion.

6.3 THE RELEVANT SURVEYS

Clearly the DFS survey on image and the perceived attributes of ATCOs is relevant to the topic of this study. The survey has been structured in such a way that it allows continuing evaluation of the topic and therefore the tracking of any changes over a period of time.

A wide range of questions was asked including, we understand, questions on the age, occupation, income, location, and social classes of the respondents. Such questions are essential for identifying any pattern of responses within the population. The importance of this information depends on the purpose to which the survey results will be put. If it is desired to provide information to the public in order to enhance their understanding of ATM it is necessary to understand who to target and how best to make the distribution.

The Transport Canada and the HUM/ANSPs recruitment surveys are interesting in their own right but specific to a purpose. They do not provide an overall impression of public opinion on ATM.

6.4 OTHER INTERESTING FACTORS

Two interesting questions arise:

Is there a systematic effort across Europe to maintain a register of complaints relating to aviation and ATM in particular?

What information is made available to the public?

For the latter, we know that the PRC Reports are available on the web site. The collection of evidence on how much other information is made available to the public was outside the scope of this short study. Clearly public opinion is informed by accurate information and a lack of it will not help the perception of the industry. Identifying how much information is available, from whom and through which medium would be an integral part of any future information strategy.

