# Standards zur Qualitätssicherung in der Markt- und Sozialforschung

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# Standards for Quality Assurance in Market and Social Research

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ASI Arbeitsgemeinschaft Sozialwissenschaftlicher Institute e.V.
BVM Berufsverband Deutscher Markt- und Sozialforscher e.V.

# **Standards for Quality Assurance** in Market and Social Research

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## I. Introduction

arket and social research are services which are carried out exclusively in accordance with accepted scientific rules. Due to the complexity of the research process, clients are not always in a position to fully assess the quality of the services they receive. They therefore have to depend to a high degree upon the expertise and competence of the research agency conducting the research project. Documented standards for the quality assurance of the individual steps in the research process can make a crucial contribution towards maintaining and improving the necessary trust that clients place in the services of market and social research agencies. This is particularly true in the international context.

The standards for quality assurance described below represent a frame of reference for agencies and clients alike, encompassing the entire research process. They document and describe the requirements towards the individual steps in the research process that are relevant to quality. The quality assurance standards described here should be regarded as being a catalogue of mandatory aims which must be achieved in order to ensure the quality of the research results. However, the manner in which these aims are achieved remains open within the framework laid down by accepted scientific principles. They should not therefore be taken as being a list of norms which have to be met in fixed ways.

Dictating norms governing every detail of the research process would contradict the pluralistic understanding of science which is a decisive prerequisite for the advancement of scientific understanding and methods. In addition it would constitute an inadmissible intervention in the activities of commercial market and social research agencies. The quality of research must be regulated by means of the "invisible hand of the market", by the appropriate supply and in particular by the corresponding demand.

Market and social research largely operate between the constraints imposed by the opposing demands of scientific quality and rapid availability of results, as well as the limits dictated by the available budget. The quality of research results therefore also depends critically on the demands and expectations of the client. Research agencies are obliged by the national and international rules of professional conduct in market and social research to conduct research in line with accep-

ted scientific principles, cost-efficient, with adequate quality and in accordance with the framework agreed upon with the client.

The following catalogue of quality assurance standards is intended to contribute towards creating a deeper understanding of quality in the research process and to express the necessity for high quality in the research results. As a form of "checklist" it allows clients to identify the underlying quality of different research proposals and to understand the resulting differences in price.

Beyond this, the catalogue of quality assurance standards is intended to form a scientific and methodological basis for the certification of market and social research agencies in accordance with ISO 9000. Only if certification of the individual steps of the research process within the agency is based on generally accepted criteria regarding content, ISO-certification can become a relevant feature of the quality of market and social research. On the other hand, the decision as to whether to obtain ISO 9000 certification remains at the discretion of the individual research agency.

The present catalogue of quality assurance standards corresponds to the present-day scientific, methodological and technical state of knowledge in market and social research, and to the legal context in which it is conducted. As scientific understanding advances, research methods and research technologies are refined, and the conditions within society change, these quality assurance standards for market and social research will change too. For this reasons, the catalogue of quality assurance standards will have to be regularly reviewed, at intervals of a number of years, and adapted and/or amended as necessary.

The quality assurance standards for market and social research do not constitute legal obligations. The legal position derives from more senior norms; in particular those resulting from statutory and contractual provisions.

# II. General Aspects of Quality Assurance

n providing their services, commercial market and social research agencies conduct scientific investigations which as a rule consist of a number of research steps. The way in which these steps are conducted, and hence the quality of the research results, must to be constantly monitored and safeguarded. This calls for a system of quality management and quality controls specific to the particular research agency. In addition, it requires staff to be trained for the scientific and methodological requirements of market and social research. Beyond this, the proper storage and security of the project and research records are also important aspects of quality assurance, as is the quaranty of confidentiality.

#### A. Quality Management/Quality Controls

#### 1. Quality Management

A quality management system is necessary in order to ensure that the quality-related requirements towards the individual steps of the research process are satisfied equally for every research project conducted. This quality management system determines and monitors the quality-related steps and precautions that are taken within the research agency. A quality management record should be drawn up, describing in detail the way in which the individual research steps are to be conducted and checked, and unambiguously defining the responsibilities in each case. This record should be regularly reviewed as to its appropriateness and current relevance. It should, in addition, be available in a condensed version that can be shown or presented to the client.

#### 2. Responsibility for Quality Assurance (Decision-Making Competence)

The responsibility for quality management and hence for safeguarding the scientific quality of the research results must ultimately lie with the director or one of the directors in charge of the research agency. Only this group of individuals is endowed with the necessary formal, legal decision-making competence and authority to issue directives, in order to bring the organisational structures within the research agency into line with the quality-related requirements of the research

process. However, the quality of market and social research can only be guaranteed by including every single member of staff into the internal system of quality management according to their particular position.

#### 3. Monitoring the Individual Research Steps

The quality management record should contain a detailed description of the specific way in which the agency conducts and monitors the individual research steps. It must be accessible and familiar to all members of staff – or at least those parts of it which are relevant to their particular duties.

#### 4. Dealing with Errors

The management of any errors that occur during the individual research steps is also part of general quality management and should be described in the quality management record. Any errors that occur must be recorded and should, in as far as possible, be rectified while the research project is still being conducted. If an error occurs repeatedly, the organisation of the relevant research procedures within the research agency must be modified appropriately, in agreement with the members of staff involved. Such modifications should also be documented.

#### 5. Handling Complaints by Clients

Should a client voice any complaints, the research agency must respond to these within a suitable period of time dependent on the kind of complaint. Complaints should first of all be addressed to the project manager in charge, or to the member of the project team who has been assigned this role. The measures taken in response to the complaint should be described to the client in suitable detail. Even if a complaint proves to be unjustified, the reasons for this should be explained to the client.

#### **B. Staff Training**

#### 1. General Basic and Additional Training

Market and social research agencies supply scientific services. The quality of the services supplied or the component services of which they are composed cannot always be fully checked by their clients. Clients therefore have to rely all the more upon the staff of the research agencies having been adequately trained for conducting scientific research projects in market and social research. This applies not only to subject matter itself but also to administrative and organisational issues within the company. Being a form of applied research, the activities of research agencies are subject to the constant progress and refinement of scientific methods and tools. This fact has to be taken into account by providing suitable further training for the staff.

# 2. Requirements towards the Level of Training (Depending on Functions / Duties)

Carrying out a research project in market and social research is a complex scientific activity requiring specific qualifications. Research agencies must ensure that those members of staff entrusted with the individual parts of the overall research process have the knowledge and experience needed in order to conduct their specific duties.

#### 3. Project-related Training Measures

When special factual or methodological knowledge is required in order to conduct a research project, which the staff involved in the project may not normally be assumed to possess, suitable project-related training courses must be conducted. They may be held within the research agency or at an external educational institution. It is also possible for the necessary training to take place, at least in part, during the briefing by the client. The need for project-related training measures may extend to all steps within the research process, including fieldwork (cf.: Section V. A. 6.).

#### 4. Internal Communication of Data Protection and Professional Laws

The research agency must see to it that all the staff involved in running the research project and in collecting and processing the data are informed about the requirements imposed by the data protection laws and the professional laws for market and social research. This duty also extends to freelance staff, in particular to interviewers.

#### 5. Documentation of Staff Training

In order to allow clients to inform themselves about the nature and scope of staff training measures, the individual measures should be documented in a suitable fashion.

### C. Storage and Security of Project and Research Records

#### 1. Labelling of Records

All records associated with a research project or created during its execution must be labelled (project number) in such a way that they can be unambiguously assigned to a particular research project. In addition, the status of the individual documents (preliminary draft, final version etc.) must be apparent from the labelling. For each research project, a project folder or a corresponding data file should be created in which the records are fully documented. This must be accessible to all the members of the project team and allow all records to be located quickly.

#### 2. Period of Storage

In order to be able to answer questions about the execution of the research project and the results even after the research project has been concluded, all the relevant documents must be stored for a minimum period of time. The recommendations issued by the ADM for Terms of Business suggest that data collection records should be kept for a period of one year and data carriers for a period of two years after presenting the report for the research project. Beyond this, unless

their is no other arrangement made with the client, it is recommended that research reports be kept in the research agency archives for as long as the client may be expected to have an interest in reviewing the research results.

#### 3. Security of Documents/Materials/Products

The research agency must ensure by means of careful handling and appropriate storage that the documents, materials and products for a research project are not damaged, destroyed or stolen. Information stored on electronic data carriers must be protected by suitable measures against being inadvertently deleted.

#### 4. Product Liability

Unless otherwise contractually agreed, the warranty and liability of the research agency are determined by the statutory regulations. The ADM's recommendations for Terms of Business suggest concrete arrangements for various potential problems.

#### 5. Data Protection and Professional Laws

Market and social research depend upon the voluntary and honest participation of as large a proportion of the people chosen for taking part in a research project as possible. In order to maintain the necessary trust in empirical research within the general population, the people taking part in a research project must be able to rely on the fact that the research agency will keep its promise of complete anonymity and will take all necessary organisational and technical precautions to protect the data collected.

One of the requirements of the data protection laws is that for face-to-face interviews and written questionnaires the address data and the response data from the interview are separated from one another immediately after arriving at the research agency, and that they are stored accordingly. The address data must be destroyed at the earliest possible time.

#### 6. Security of the Collected and Stored Data

The data that is collected and stored in connection with a research project must be protected against theft and destruction. This includes their being stored on an electronic data carrier as soon as possible, and the appropriate backup copies being made. In addition, care must be taken to ensure that only those persons have access to the stored data who need such access in order to fulfil the objectives of the research project.

#### 7. Security of the Research Results and the Report

Unless otherwise agreed, the results of a research project may, as a rule, only be made available to the client in question. The research agency must not make them available to third parties. The research agency also has to ensure that the research results and the report are protected by appropriate measures against unauthorised access while being stored in the research agency. This includes the requirement that it must not be possible for results and reports stored on electronic data carriers to be altered without authorisation.

### D. Confidentiality

#### 1. Dealing with Competing Clients

Clients must be told as soon as possible if, during the intended period of a research project, other research projects with the same objectives are to be carried out for one of the client's competitors. However, the identity of such a competitor must not be revealed in the process, nor may his anonymity be jeopardised. The research agency can only guarantee exclusiveness for certain product areas or research methods if this has been contractually agreed upon. In such cases the scope of the subject matter and the time period should be explicitly specified.

#### 2. Confidential Treatment of Information

All information supplied to the research agency by the client in order to conduct a research project must be treated in the strictest confidence. It may only be used in this context and must not be made available to third parties. Written documents and information stored on electronic data carriers belonging to the client must be destroyed or deleted as soon as the purpose of the research project allows or as agreed with the client.

#### 3. Utilisation of Experiences and Knowledge Relating to a Particular Research Project

The experiences and knowledge pertaining to a specific client, which accure within the research agency as a result of carrying out a particular research project, must not be used for research projects done for other clients. On the other hand, those experiences and knowledge which are generalisable are a part of the research agency's knowledge base. In view of a possible conflict of interest, research agency staff working in the field of conceptional project supervision and project management should therefore, where possible, not be put in charge of different research projects being carried out at the same time for competing clients.

#### **E. Using the Services of External Contractors**

#### 1. Choice of External Contractors

When selecting external suppliers (subcontractors) it must first be determined whether their staff and their facilities actually satisfy the requirements for carrying out those parts of the research contract being subcontracted in accordance with the given quality requirements.

#### 2. Contractual Agreements on Quality Assurance

External suppliers (subcontractors) should be contractually bound by the research agency conducting the research project to adhere to the given quality requirements. In this connection, suitable means of carrying out checks should also be agreed upon. When subcontracting field work, this means that either a collaboration in the same research project (cf.: Declaration for the Territory of the Federal Republic of Germany concerning the ICC/ESOMAR International Code of Marketing and Social Research Practice, Item 2.2) or else – if possible in terms of data protection laws – a commissioned collection of personal data (§ 11, BDSG) must be agreed upon, along with the consequences entailed by these, so that the subcontractor may pass on the data collected to the research agency conducting the research project in a personalised form.

#### 3. Informing the Client

If part of the research project, e.g. data collection or statistical analysis, is to be passed on to external suppliers (subcontractors), clients should already be informed of this in the context of the research proposal. At the client's request the research agency should name the individual subcontractors involved. If at the time of submitting the research proposal it is not yet clear that parts of the research project will be carried out externally, the client must be informed of this at the earliest possible time. The research agency's duty to inform the client about subcontracting parts of the research project is among other things part of the international professional rules of market and social research (c.f. ICC/ESOMAR International Code of Marketing and Social Research Practice, Rule 18).

#### 4. Briefing External Suppliers

External suppliers (subcontractors) should be briefed in a way by the research agency conducting the research project, which is putting them in a position to conduct the subcontracted parts of the research project in adherence with the given quality requirements.

#### 5. Documentation of Services Rendered

The services rendered by external suppliers (subcontractors), their selection and briefing as well as the contractual agreements must be documented appropriately towards the client in the research report.

#### 6. Co-ordination of International Studies

When co-ordinating international studies and contracting out the work to market and social research agencies in the various countries in which the research project is to be conducted, the same conditions apply, on principle, as when subcontracting certain services of a research project to external suppliers (subcontractors) in national studies.

## **III. Interaction with Clients**

o-operation with clients is characterised by a relationship of mutual trust. The aim of such co-operation lies in the joint quest for optimum solutions offering satisfactory value for money. In the interest of this goal, the research agency must undertake to submit as clear as possible a definition of its services in the proposal, to inform the client about all the research steps including potential problems that might arise, to develop a research design that is appropriate to the problem and – if included in the offer – to provide a problem-orientated interpretation of the results. The interpretation must take into account the concrete research results and also put them in a more general context, assessing them on the basis of the research agency's experiences and drawing direct or indirect comparisons with other research projects.

#### A. Project Inquiries, Requests for Research Proposals

An inquiry by a client usually involves the description of a problem or a particular research approach. In order to devise a research approach that will do justice to the problem, it is essential to have some knowledge of the questions to be answered. Only on this basis can the research agency check whether the research approach outlined by the client in his invitation to tender is in fact adequate, or whether a better approach might be put forward. This process of co-ordinating the objectives and the research approach already determines the quality of a research project.

Apart from invitations to submit research proposals, clients may also ask for pure cost quotations for clearly defined services. In this case, the client should make it clear that he is not interested in a research proposal but merely in the cost of scientific services of a clearly defined nature and scope, or whose clear definition follows from the client's previous co-operation with the research agency.

In his inquiry, the client should state during which period the research project is to be conducted, the deadline for the research proposal and his decision-making criteria for awarding the contract.

#### **B.** Response to Inquiries

If this is not already apparent from the inquiry itself, the research agency should first of all establish whether the client requires a research proposal or merely a cost quotation. As a rule it is necessary for the client and the research agency to agree upon the objectives and the methodological approach before a research proposal can be drawn up. This may be done over the phone or in a briefing. On principle, the research agency should be given the opportunity to modify and optimise the research approach proposed by the client.

In responding to inquiries, research agencies should explicitly point out if parts of the intended research project have not been adequately specified and the existing uncertainties have not been entirely resolved after closer inquiry. If the research agency is unable to meet the deadline for the research proposal or cost quotation, the client should be informed of this at the earliest possible time.

It is crucial for the scientific quality of market and social research – certainly in the intermediate and long term – that when turning down a proposal, clients should also include the reasons for their rejection. This is true all the more when clients have asked for detailed research proposals in their invitation to tender. It is important for research agencies to learn what clients regard as being the weak points in a proposed research design, in order to be able to meet those clients' quality demands when submitting future research proposals.

#### 1. Research Proposal

A research proposal should contain an adequate description of all the relevant steps of the planned research project (cf. Chapter III. C.) as well as a timetable. This includes the conducting of a pre-test – if one is intended. If special aspects of the data protection or professional laws need to be taken into account with the chosen research design, the research agency must give a detailed account of the problems and the proposed solution. The cost quotation is always a part of the research proposal.

The timetable for carrying out the research project is binding and should also show the time required for the individual research steps. Conducting the research project within a considerably shorter space of time will result in higher cost. In many cases, a research project can only be conducted on a very tight time schedule, if the client is prepared to accept a loss in quality.

#### 2. Cost Quotation

The cost quotation contains the calculated prices for the services inquired after or the services defined in the research proposal. It should also state over what period of time the calculated prices are valid. As a rule, the quotation will include a fixed price. Beyond this, attention must be drawn to any factors that might lead to a change in this fixed price. Such factors should be detailed in the quotation, and when necessary should be brought to the client's attention as soon as possible in the course of the research project.

The cost quotation should also specify the terms of payment. The calculated prices are designed to cover the expenses of the actual research project. Hence a third of the total fee should be paid when the research project is commissioned, a further third when data collection commences and the final third when the research results are delivered. However, other arrangements may seem more appropriate in the light of a particular research approach or the size of the total fee.

#### **C. Minimum Contents of Research Proposals**

#### 1. Objectives and Methodology of the Research Project

The research agency's proposal should define clearly which questions posed by the client may be answered by means of the proposed research project and which can only be answered by a follow-up research project. The quality of these answers should be described in detail. In doing so, it should be stated whether the research proposal will permit quantitative statements to be made with a certain degree of accuracy or whether the research results will be of a qualitative nature. The research approach should be chosen and described on the basis of the concrete objectives. The description of the methodology should not only outline the procedures themselves but also indicate the validity of this approach and the reliability of the research results, as well as the research agency's own experiences with this approach.

#### 2. Scope of Services

The scope of the services covers both matters of content and technical aspects. The specification of the content should include the research instruments, the analytical approaches, the method of reporting and the qualifications of the staff involved in the project. Technical aspects include the method of sampling and the size of the sample, the questionnaire to be used, approaches to analysis and the scope of analysis.

The estimated or anticipated length of the interviews and the proportion of openended questions should be stated in the offer. Since these two factors essentially determine the cost of the research proposal, they allow a client to compare the value-for-money offered by different proposals. Additional services such as the personal briefing of interviewers, procurement and/or transportation costs for products or specific analyses should be listed in detail and the corresponding costs identified separately.

#### 3. Population, Size, Drawing and Weighting of Sample (Quantitative)

The intended population and the sample should be adequately described in the research proposal. In this connection the extent and detail of the description will depend both on the methodological approach and on the client's specific demands. As regards the sample, at least the sample size, the method of drawing the sample, the recruitment or selection of respondents and any weighting procedures to be applied must be described. When stating the size of the sample, an indication should be made not only of the total number of cases but also of the extent to which the results obtained for sub-groups will be meaningful.

# 4. Definition of Target Groups, Selection and Recruitment Procedures (Psych./Qualitat.)

Psychological, qualitative studies are aimed at analysing and modelling the structures behind motivation, attitudes, and behaviour. They are therefore also used to generate hypotheses as the starting-point for further research. In this sense, representative quantitative statements are not their primary concern. Accordingly, they are as a rule based on a small number of cases. In order to be able to adequately depict the range of opinions, it is particularly important in the case of small samples to exercise great care in selecting respondents. Hence research proposals must describe the precise structure of the target group to be interviewed and – where this is necessary for methodological reasons – also the method of recruitment.

#### 5. Data Collection

The research proposal should describe the technical aspects of data collection. This is true, in particular, for the project-related briefing/training of interviewers or moderators, the deployment of interviewers and the nature and scope of checks on interviewers.

#### 6. Data Entry and Editing, Secondary Analyses

The research proposal should indicate the method of data entry. This is the case particularly when automated procedures such as optical data entry or computer-aided coding are to be used. The nature and scope of data editing should also be described. When secondary analytical sources are to be used, the nature of the sources and their validity should be cited.

#### 7. Standardised Procedures

When a research proposal involves the use of standardised procedures ("branded products"), these must be described. This description should include, in particular, methodological information about the way in which the procedures were developed and the research agency's previous experiences with this approach in the relevant product area. If the procedure to be used involves a comparison with values stored in a database, the quality of that database (number and structure of the values used for comparison) should be described.

#### 8. Reporting and Presentation of Results

The research proposal should give details of the scope of reporting. This applies to both technical and strategic aspects of content. The technical aspects of content include the individual analyses conducted, tabulation and diagrams, and the copies of the report, as well as commentaries on and presentation of the results. The strategic aspects of content primarily concern the scope of the advisory service offered by the research agency. It should be stated whether the services to be rendered are confined to the execution of the research project itself, including the development of the tools needed for this purpose; or whether in addition they include reporting in the sense of an interpretation of the research results; or whether beyond this they also encompass strategic recommendations derived from the results.

#### 9. Subcontracting Individual Research Steps

As described in detail in Sections II.E.1. – II.E.5., the research proposal must point out whether individual research steps are to be subcontracted to external agencies (subcontractors). If the research agency always subcontracts certain services to other companies, such notification can be dispensed with provided this fact is widely known in specialist circles.

#### 10. Drawing Attention to Data Protection and Professional Laws

The dictate of complete anonymisation and the strict separation of research and non-research activities are vital in order to maintain the necessary public trust in market and social research, and in order to preserve the research privileges granted by the Constitution. The data protection laws and the rules of competition also apply to the clients commissioning research projects. The research proposal should point out in a suitable form the canons of professional ethics in market and social research, which are laid down in the ICC/ESOMAR International Code of Marketing and Social Research Practice and in the various guidelines issued by the associations of German market and social research.

#### **D. Contracts with Clients**

#### 1. Awarding a Contract

As a rule, contracts are awarded in writing. A contract is awarded on the basis of the research proposal submitted by the research agency. Where the contract awarded deviates from the research agency's proposal this must be described in detail either by the client when awarding the contract or by the research agency when confirming the contract.

#### 2. Service Contract

The co-operation between the client and the research agency is governed by private law by means of a service contract to be concluded.

#### 3. Terms of Business

The ADM Arbeitskreis Deutscher Markt- und Sozialforschungsinstitute e.V. has drawn up recommendations for Terms of Business which may form the basis for the co-operation between the research agency and the client. They are available from the office of the ADM.

#### E. Documents, Materials, Products Belonging to the Client

#### 1. Handling

A research agency is obliged to handle the documents and materials made available to it carefully and in accordance with the client's instructions. It must be ensured that they are treated confidentially both inside and outside the research agency. At the client's request, the research agency should give details of the concrete measures taken to safeguard confidentiality. All documents and materials which are no longer required after the research project has been completed must be returned to the client, unless he explicitly requests otherwise.

On the other hand, the client is under an obligation to inform the research agency about the quality and the status of the documents and materials as well as about special aspects to be observed when handling the products.

#### 2. Liability in the Case of Product Tests

The client is responsible for ensuring that all the information required by law or decree and/or necessary for using the products to be tested are made available to the research agency so that they may be passed on to the persons participating in the product test.

The client is responsible for ensuring that all the necessary chemical, medical, pharmaceutical or other tests, studies and analyses of the products to be tested have been carried out. In addition he is responsible for ensuring that the products are suitable for the test and – in cases where checks were necessary and have been carried out – that these checks have given no indication that the products to be tested could cause any harm.

The client is liable for any harm caused by defects in the products to be tested. He must indemnify the research agency against all damages claimed against the research agency or its staff for such harm.

#### 3. Storage

The research agency is under an obligation to store documents and materials belonging to the client in a manner which does not permit unauthorised persons access to them. Where possible, access should be confined to such persons who are immediately involved in the research project. Products belonging to the client must be stored in accordance with their specific requirements.

#### 4. Protection

The research agency must take suitable measures in order to protect the materials and products entrusted to its care. Where materials or products are presented to the persons chosen to take part in a research project, or where these persons are to be given the opportunity to use them, the research agency must ensure that the research conditions are the same for all persons and that the products are not damaged, soiled or altered in the course of the research project in a way that might affect the results. If the research agency transports or dispatches materials or products, it must ensure that secure forms of packaging and suitable methods of transport are employed.

#### F. Assistance Given by the Client

#### 1. Deadlines / Briefing

If the research proposal does not already include a binding timetable, the client should receive a detailed schedule for the research project once the contract has been awarded, showing the deadlines for supplying all materials and documents whose design he is involved in or for whose provision he is responsible. Changes in the timetable made by the client or the research agency should be announced to the other contracting party as soon as possible and – where possible – be coordinated with each other.

For many research projects, a briefing of the research agency by the client is essential in order for the research problem to be implemented in the form of an adequate research design. In principle this kind of briefing may be necessary for each step in the research process – from the submission of the research proposal up to the presentation of the results. It may take place verbally or in writing. The need for a briefing also makes it clear that the client shares the responsibility for the quality of the research results. If the research problem does not appear to be described fully enough in the tender documents, it is up to the research agency to point out to the client the need for a briefing.

#### 2. Questionnaire / Discussion Guideline

The questionnaire represents the translation of the objectives set by the client into the corresponding research questions. This calls for creativity and the necessary scientific qualifications and is one of the key tasks of the market researcher. The aim of the questionnaire is to obtain unbiased statements of opinion from respondents. For this reason, the questionnaire must conform to the current state of secure scientific knowledge. The research agency and the client must both undertake to design the questionnaire or guideline in such a way as to avoid influencing the respondents in any particular direction. The research agency must without exception refuse any such request by the client concerning questionnaire design.

In many cases, changing the wording of questions or the positioning of individual questions within the questionnaire may lead to different results. The research agency must point out to the client the influence that the wording of questions and their positioning may have on the results, and must word and position questions in agreement with the client and in a way appropriate to the problems being addressed.

If a standardised wording for questions already exists – such as in the ZAW Rahmenschema für Werbeträgeranalysen (ZAW Framework for Advertising Media Analyses) or the Demographic Standards of the ADM, ASI and Federal Statistical Office – the research agency must inform the client of this. Both sides must be aware of the possible consequences of deviating from such standards for the quality of the research results and that of their publication.

#### 3. Address Data Files

The transmission of address files by a client to the research agency conducting the research project is on principle permitted under data protection laws and is mostly done for the purposes of sampling. The Federal Data Protection Act (BDSG) requires that in doing so, clients must ensure that the address data files that are transmitted contain no addresses of persons who have objected to their address being passed on "for the purposes of advertising or market or opinion research" according to article 28, paragraph 3 BDSG. If such an objection is voiced towards the research agency after the addresses have been passed on, the research agency must delete the address from its working file and inform the client of that person's request to have his/her address removed.

The client's address files may only be up-dated and/or augmented by the research agency for the purposes of sampling. Market and social research agencies are not permitted to transmit up-dated and/or augmented address files to their clients.

#### 4. Sample / Data Collection (Participation, Checks)

Under the following circumstances the client may be permitted to observe the collection of data: The persons taking part in the research project must agree with this beforehand and their anonymity must be strictly observed. These fundamental requirements also apply if the client is to receive transcripts or recordings of group discussions or individual exploratory interviews. Clients must be informed if their observation could threaten the validity of the data collected. If they nevertheless insists on observing data collection in such cases, the observed research units can only be used for demonstration purposes and must not be included in the analyses. The requirements towards the observation of data collection by clients and towards the passing on of recordings under the data protection and professional laws, including the necessary consent, are dealt with in the various guidelines issued by the associations of German market and social research.

A client is entitled to make spot checks of the original questionnaires, or the records of group discussions or individual exploratory interviews, in the offices of the research agency. The research agency must ensure that the client will not be able to draw any conclusions about the persons taking part in the research project from the documents presented.

#### 5. Code Frame / Data Analysis

At a client's request, the research agency may draw up the code frame or the instructions for analysing the data in collaboration with him. The client is entitled to see the code frame and the instructions for data analysis at any time. The code frame should be drawn up specifically for the objectives of the project in question.

#### 6. Presentation and Interpretation of Results

As a rule, the client will be included in the presentation and interpretation of the research results. This applies not only to formal aspects, but also in terms of the way in which they are related to the research problem and in terms of the client's own capacities and possibilities. Regardless of this, the research results must not be presented or interpreted in an abbreviated or distorted form which distorts

their meaning. A clear distinction must be made between the presentation of the findings and the interpretations and conclusions based on these. Beyond this, when conclusions are drawn it must be apparent if they are based on additional information supplied by the client, beyond the research findings.

The client too is under an obligation to present the research results correctly in terms of their content. If the client's interpretation of the results is different from that of the research agency, it must be identified as the client's own interpretation.

#### **G. Supplying Electronically Stored Data to the Client**

#### 1. Data Format

Electronically stored data must be passed on to the client in the format described in the research proposal or agreed upon at a later time. The research agency must ensure that the data that are supplied do not contain any known computer viruses.

The research agency must be able to rely on the fact that the data supplied will remain unaltered or that any changes are made in agreement with the research agency.

#### 2. Description and Documentation of Data

Every electronic data carrier handed over to the client must be identified by means of a label indicating the data records it contains and – where necessary – specific technical details regarding installation. In addition, a suitable description of the data records must be supplied together with it; either in the form of a file on the electronic data carrier itself or in a suitable printed form.

#### 3. Checking for Completeness

Before being handed over to the client, electronically stored data must be checked for completeness. More specifically it must be checked whether the data records being passed on are complete in terms of the number of cases and the variables measured and whether they contain any additional information as contractually agreed.

#### 4. Electronic Transmission

When data are to be transmitted electronically – for instance via a modem or by e-mail – the research agency and the client must ensure that only authorised persons will have access to the data. If an on-line link exists between the research agency and the client, both must ensure that other data records belonging to either of the contracting partners and unrelated to the specific project between the research agency and the client cannot be accessed.

# IV. Conceptional Assistance of Research Projects / Project Management

The key role of the research agency is to translate the objectives set by the client into a research design and to monitor its adequate execution in technical respects. This alone can guarantee a sound basis for the interpretation of the results. The conceptional work of the research agency is determined by the qualifications of the staff involved in the research project, the research agency's experience in various markets and areas of research, and by the current state of scientific research. Only these three aspects together, enhanced by a sound organisation and checks on the procedures, can ensure the optimum answer to the questions posed by the client.

#### A. Developing a Research Design and Deciding upon the Sample

#### 1. Adequacy of the Methodological Approach to the Problem

A range of very different methodological approaches may be conceivable for solving a particular research problem, each of which may lead to an adequate answer to the problems submitted by the client. The decision in favour of a particular approach presupposes that the client and research agency have agreed about the type of answer. Qualitative approaches with small samples only permit statements to be made about patterns of thought, attitude, valuation, and behaviour. Statements about frequencies require a minimum sample size which depends on statistical margins of error. The size of the margins of error that are deemed acceptable depend, in turn, on the problem being investigated.

The methodological approach must be guided by the concrete problem to be solved, and based on an appropriate model or set of hypotheses. In view of the fact that market research is often used as a means of forecasting, a methodological approach should be chosen that either corresponds largely to the real situation or which allows the research results to be assessed in relation to the real situation. Many questions call for an experimental design involving different test groups and a specific order of execution. In such cases it must be ensured that all versions of the test are conducted under the same conditions.

#### 2. Size and Quality of the Sample

The size and quality of the sample are determined primarily by the problems to be addressed by the research project. For qualitative samples, special care is called for in selecting the persons taking part because of the small number of cases. The size of the sample should be chosen such that the statistical margin of error achieved both in the overall sample and in the sub-groups relevant to the analysis is acceptable for the purposes of the research project.

#### 3. Representativeness

A sample is representative if it reflects the total population realistically and adequately for the purposes of the problem at hand. For a sample to be representative it is therefore necessary that the intended overall population is to be known and defined as such. The particular sampling approach must ensure that each person or unit within the total population has, in principle, a calculable chance of being included in the sample. Subsequent weighting of the sample may be used to counteract biases in structure due to non-responses.

#### 4. Organisation of the Individual Research Steps

Individual projects are conducted by a project team headed by a project manager. The project team develops the research design, agrees upon it with the client and carries out the individual research steps. The responsibility for correctly carrying out these steps lies with the project manager – also when steps are assigned inside or outside the agency. The project team should draw up a timetable for the project in which the individual research steps are described together with the time required for each.

#### 5. Monitoring the Execution of the Research Project

The individual research steps should be monitored by specific persons within the project team who have been assigned this task. For this purpose they should on the one hand resort to the research agency's general quality management. On the other hand, an individual system of checks should be devised for each research project, as well, covering both the quality of the various research steps and the adherence to the intended timetable. The responsibility for conducting such checks lies with the project manager. They include the following steps:

- formal correctness of questionnaire
- formal correctness of questionnaire programming in the case of computeraided interviews
- correctness and completeness of interviewing documents
- adherence to selection criteria and interviewing instructions
- conducting of interviews
- quality of the data record
- correctness and completeness of instructions for data analysis
- correctness of the analyses in form and content
- correctness of the report for the client in form and content.

#### B. Questionnaires/Discussion Guidelines/Observation Schedules

#### 1. Implementation of the Research Design

The research design is usually implemented in the form of a questionnaire or guideline. It should be assumed that client's questions will always need to be translated into research questions. This is one of the specific services offered by market and social researchers. The research questions must correspond to the respondents' understanding and way of thinking. When addressing new questions it is advisable to first conduct a pilot study in order to establish the relevant aspects of the problem and to draw up a set of hypotheses for the actual research project.

#### 2. Conception and Design of the Questionnaire

The content and structure of the questionnaire can affect the epistemological value of the research findings. For this reason the possible effects of the wording and the sequence of individual questions on the research results must be taken into account when implementing the research design.

#### 3. Standardised Wording of Questions (Demographics, Media Research)

When collecting information on sociodemographics and especially in the field of media research, proven standardised wordings for questions already exist. These should be used by preference in order to improve the comparability of the results of different research projects and hence the possibility of accumulating knowledge.

In addition to this, many research agencies have standardised the wording of questions for specific areas of research and these have proven their merit in numerous research projects. This makes it possible to compare different research projects. As a rule, the results used for such comparisons are available in the form of databases. When questions are altered, the results may not be used for the purposes of comparison via databases.

#### 4. Checks on the Questionnaire (Pre-test)

When the questions used in a questionnaire do not already use proven or even standardised wordings, a pre-test should be conducted with the questionnaire. It is advisable to conduct a pre-test with a small number of cases and average interviewers and respondents from the target group in question. The pre-test is on the one hand meant to check the comprehensibility of the wording of the questions in terms of the research problem, and on the other hand the management of the questionnaire by the interviewer. Pre-tests may be conducted in the form of a field study with a subsequent analysis of the patterns of responses, or as an observation of the actual interviews by members of the project team.

# Translation of Questionnaires / Discussion Guidelines / Observation Schedules

The translation of questionnaires poses problems even when familiar languages are involved. This is particularly true of research projects that are going to be conducted in several countries. As a matter of principle, the questionnaire should first be translated by a person who speaks the language into which the questionnaire is being translated as a mother tongue, and who should ideally have had experience with the wording of questionnaires. The translation should then be checked by a person who speaks the language from which the questionnaire is being translated as a mother tongue. Only by using two people who speak one of the two languages as their mother tongue and who are very familiar with the other language, can the translation of the questionnaire be guaranteed to be faithful in terms of meaning. A pre-test of the translated questionnaire is strongly recommended.

#### **C. Training Moderators (Qualitative Studies)**

It is essential for the moderators of group discussions, explorative interviews or interviews with experts to be briefed in the specific topic area. The objective is not so much to make the moderator himself into an expert, but to give him an adequate understanding in order to allow him in particular to understand the comments made by the participants of the research project in terms of their content and to assess them correctly. In some cases it has proved successful to provide the moderator with an expert assistant to whom to turn in the course of the study with factual questions that may arise. The expert assistant himself should not actively intervene in the discussion.

#### D. Determining the Concept for Analysis

#### 1. Distinction between Quantitative and Psychological/ Qualitative Statements

The distinction between quantitative and psychological/qualitative statements is difficult since it cannot simply be reduced to the issue of the number of cases. Psychological/qualitative statements are taken to be analyses of individual patterns of thought, opinion, attitude, assessment or behaviour. A statement about the frequency and distribution of such patterns within a given population is not possible on the basis of psychological/qualitative studies, or else only to a first approximation. Psychological/qualitative statements primarily serve the purpose of generating hypotheses which can then be checked by means of quantitative research projects.

Quantitative statements are taken to be descriptions and analyses of the frequency and distribution of certain features and their interconnection. Quantitative statements require a certain minimum number of cases depending on the accepted statistical margin of error for the sample. In this context the sample must be clearly related to a defined total population and be an adequate representation of this total population.

#### 2. Concepts for Quantitative Analyses

Concepts for quantitative analyses range from simple tabulations to complex multivariate analyses. They are essentially concerned with revealing the interconnections between different variables. As a rule these interconnections are not causal but statistical in nature. The analysis of the connections between variables must be guided by the search for connections that permit an interpretation of their content.

Opinions expressed by respondents should not be viewed as objective facts but must be seen in connection with other comments or taking into account other data. The data from interviews are therefore subjective remarks. Interpreting them with respect to the objective facts of the situation is one of the fundamental tasks of market and social researchers.

Quantitative market research often resorts to experimental designs. It should be ensured that all the test objects used in such an experimental design are tested under the same conditions. The differences found must on principle be checked as to their significance and be interpreted by the research agency on this basis.

#### 3. Concepts for the Analysis of Psychological/Qualitative Studies

Psychological/qualitative studies are as a rule processed with the method of content analysis – to some extent combined with numerical statements. This process focuses much more on the individual person than on the individual response. The analysis and interpretation of the results must be based on a scientific theory allowing the classification of that which is said. It may for instance be based on approaches deriving from cognitive psychology or different schools of depth psychology. The client must be told the theoretical basis of the research project.

The results of psychological/qualitative studies cannot be analysed and interpreted on the basis of "common sense". Psychological/qualitative research is marked by intensive interaction between the respondents and the interviewer. For this reason the concepts for analysing qualitative studies can only be developed by staff who have been appropriately trained to do so.

The process of interviewing must be kept strictly separate from that of analysis. An interpretation must only be carried out on the basis of the data collected and not at the time of collecting that data. This procedure allows the interpretation to be checked intersubjectively since other researchers are also in a position to analyse and interpret the data collected.

#### E. Deciding upon the Requirements towards Data Collection

#### 1. Ensuring the Quality of the Sample Offered

The quality of a sample is defined first of all via the selection of locations or points for data collection. The approach used in drawing the sample and the adherence to the chosen locations or points for data collection should be documented. If samples are to be used that have already been drawn in advance, the adherence to the given sample points should be monitored. Beyond this, the quality of a sample is determined by the adherence to the selection criteria or quota. Furthermore the quality of random samples is defined by the response rate achieved. In addition, for certain research projects it may be critical to stick to the time period during which the field work is to be conducted.

The quality of the sample must be checked by the project team on the basis of the information from the deployment of interviewers and the checks on returned questionnaires. The various aspects of quality should be included in these checks. This is true both for field work conducted by the research agency itself and for subcontracted fieldwork. Checks on the quality of the sample must be conducted continuously throughout the entire phase of data collection. Only by so doing can countermeasures be taken in plenty of time should unfavourable developments become apparent.

#### 2. Documentation of Results (Quantitative)

The quality of the field work in implementing the sampling frame is documented by the field record. This must be handed over to the client at his request. The field record contains the number of locations for data collection used and processed, the number of interviewers used and the response record or quota fulfilment. The response record gives a detailed picture of the nature of the non-responses (not available, refusal etc.).

#### 3. Documentation of Qualitative Studies

In qualitative studies, the quality of the sample is determined by the method of recruitment and by checks on the prescribed quota. These should be reconfirmed at the beginning of the interview. If discrepancies arise, the interview should be terminated or reassigned to the corresponding quota group. With group discussions too, the adherence to the quota should be checked at the beginning of or during the discussion. The adherence to the quotas should be recorded in the final report.

#### F. Deciding upon the Requirements towards Data Processing

#### 1. Ensuring the Expected Quality

The project manager is responsible for the quality of data processing. This does not affect his possibilities for delegating duties. The project manager must ensure that the coding of the open-ended questions is checked, data entry is performed without errors and that the analysis and tabulation is formally correct. It is advisable to lay down and introduce standardised quality controls for this purpose.

#### 2. Documentation

The quality of data processing is made comprehensible by means of a detailed documentation of the various steps involved. This applies to the code frame and the coding instructions, the checks on and editing of the data records, and the instructions for analysis and tabulation.

#### **G. Presentation and Interpretation of the Results**

#### 1. Completeness of Presentation

The results obtained through interviews or observations must be described in full. In concrete terms this means that all the units studied and all the questions studied must be included in the presentation of results. A deliberately incomplete presentation, for instance with a view to suppressing conflicting individual results, would be in violation of the ethical standards of science and research.

#### 2. Appropriateness of the Interpretation

The appropriate interpretation of results is one of the key components of empirical research. Here appropriate is to mean that the interpretation pertains to the research problem and is supported by the empirical findings. Interpretations which do not satisfy these conditions are not part of empirical research. They constitute personal views and opinions which should be clearly identified as such in the context of a research project.

An interpretation must always be guided by research findings which are scientifically and methodologically secure. Differences which are not significant or qualitative results that are only based on individual mentions cannot be interpreted as being meaningful. They must be identified as being statements of trends or as not being empirically secure.

#### 3. Documentation (Report, Tables of Results, Oral Presentation)

The research results should be presented to the client – and if desired interpreted – in the form already described in the research proposal or agreed at a later time. The report about the research project must contain the necessary basic information allowing the reader to recognise the scientific quality of the way the research project was conducted and the possibilities and limitations of the interpretability of the results. In the case of survey research the minimum details to be provided are:

- name of the client who commissioned the research project
- name of the research agency conducting the research project
- objectives of the research project
- target group for the research project
- number of persons interviewed (sample size)
- statistical margin of error for the results (confidence interval)
- period of research
- method of sampling used
- method of data collection used (face-to-face, self-completion, telephone interviews)
- response rate (in the case of random samples)
- number of interviewers used
- method and results of checks on interviewers.
- the questionnaire
- weighting procedures used

In as far as possible these details should also be provided when the findings are not based on survey research but on other methods of obtaining information.

The tables of results should contain the complete presentation of the research project's findings, distinguished according to the agreed properties of the persons included in the research project. In order to be able to interpret the distributions of responses appropriately in terms of their content, it is necessary to supply information about the number or the proportion of respondents who replied "don't know" or gave "no answer".

The research results should be presented either in the form of absolute figures or relative values. When relative values are quoted, it must be possible to deduce the absolute figures directly from these. For this reason, the base must always be included when percentages are quoted. If the data have been weighted, the results of the research project should, if the client so requests, be presented both in a weighted and an unweighted form and/or – if the client is receiving a data record – the weighting factors should be included in the data record.

The oral presentation of the research results should be conducted by persons who are on the one hand familiar with the subject matter of the research project and on the other hand also with the way in which the research project was carried out by the research agency. This is to ensure that the client's questions regarding both content and method can be satisfactory answered.

#### 4. Publication

Research agencies are on principle allowed to publish research results for scientific or other purposes if they have conducted the research project for their own interest, or if such publication has been contractually agreed with the client commissioning the research project or the latter has consented to such publication. When publishing research results the presentation of the findings must be clearly distinguished from their interpretation. When interpreting findings, the accepted scientific and methodological criteria must be observed. In particular, the statistical margins of error must be taken into account. Interpretations and recommendations are a part of applied empirical research in so far as they are supported by the research findings. Interpretations and recommendations that are not supported by research findings, on the other hand, are not part of empirical research but constitute personal views and convictions.

The described duties when publishing research results also apply to the respective clients. Research agencies must therefore point out these obligations to the client and possibly exert their influence by means of appropriate agreements to ensure that they are observed. The responsibility for the publication of research results normally lies with the publisher. However research agencies are obliged within the law to take suitable measures to put right incorrect or clearly misleading representations and interpretations of research results if they hear about the publication.

## V. Data Collection

odern market and social research uses a wide range of different methods in order to collect data. Quality standards for data collection cannot describe all these procedures in detail. The quality standards described below concentrate primarily on personal (face-to-face) interviews in the homes of respondents and on computer-aided versions of the face-to-face interview (CAPI) and the telephone interview (CATI). Where appropriate, they also apply to self-completion interviews.

The quality standards for data collection concentrate on the central areas of recruiting and training of interviewers, appraisal of interviewers over the course of time, sampling design and the project-related deployment of interviewers, monitoring and assessing interviewers' performance as well as validating the results for specific projects.

#### A. Recruitment and Training of Interviewers

#### 1. Recruitment

When recruiting interviewers care must be taken that only the applications of those persons are considered who satisfy the range of demands imposed by the job of an interviewer. Applications by people for whom information exists giving reason to believe that they will not conduct the interviews assigned to them correctly must be treated with the utmost caution.

#### 2. Interviewer Manual

The research agency must provide all interviewers with an interviewer manual. This should contain the necessary instructions for all areas of their activity as an interviewer which are also included in their training.

#### 3. Basic Training

Every newly recruited interviewer must undergo a basic training course. This applies even if the interviewer has already gained suitable experience with other research agencies. The basic training of the interviewers must cover all areas of their activity. They may only be deployed as interviewers when the success of their basic training has been established by means of trial interviews.

#### 4. Training for CAPI and CATI

For interviewers who are to be employed in the field of CAPI or CATI, a specific training course is necessary in addition to their basic training, in which the specific requirements associated with each of these methods of data collection are taught. Here too, they may only be deployed as an interviewer once the success of the additional training has been established by means of trial interviews.

#### 5. Training for Psychological/Qualitative Studies

In view of the special features of psychological/qualitative studies (group discussions; explorative interviews; non-directive, narrative interviews; participatory observation) a specific aptitude and training of the interviewers and/or moderators employed is essential. As a rule, people holding a degree in psychology and staff specifically trained and supervised by such psychologists in the corresponding techniques of data collection will meet the necessary requirements.

#### 6. Deployment and Research Project-related Training

If the methodological requirements which will be made of the interviewers in conducting a research project go beyond the scope of the skills taught in the basic training programme, a research project-related training programme must be carried out which takes these into account. A deployment-related training programme must be conducted when interviewers are to be used for specific interviewing tasks (e.g. interviewing foreign citizens or respondents from the social elite).

#### 7. Individual Retraining

If it becomes apparent that an interviewer is unintentionally failing to conduct his duties or certain parts of his duties correctly, an individual retraining programme must be carried out in order to be able to continue using him.

#### 8. Training Documentation

The research agency must ensure by means of appropriate training documentation that a client may – if he so wishes – inform himself about the nature and scope of interviewer training.

#### 9. Interviewer Identity Card

Interviewers should be fitted out by the research agency for whom they are working with an interviewer identity card including a photograph which reveals their identity and the identity of the research agency. They are required to carry this identity card with them while working as an interviewer and to present it to respondents if these express any doubts.

#### 10. Supervisors / Head Interviewers

The organisation of fieldwork and the use of supervisors and head interviewers differs considerably between individual research agencies as well as between different methods of data collection. If supervisors and head interviewers are used, they should have extensive experience with the task of interviewing, their work in this field should be above average in quality and they must in addition display the ability to instruct and motivate interviewers and to check the quality of their work. Every interviewer must know which supervisor/head interviewer is responsible for him if any questions should arise.

#### **B. Monitoring Interviewers**

Monitoring interviewers is meant to ensure that there is no significant distortion of the research findings as a result of interviews being conducted incorrectly – whether intentionally or unintentionally. The procedure used for monitoring the interviewers should be chosen with this aim in mind. Checks on interviewers should therefore be conducted continuously and independently of the needs of individual clients. The method and frequency of the checks should be documented so that clients can get some idea of the interviewer checks conducted by that research agency. Beyond the specific routine checks by a research agency, it is of course also possible to arrange for additional interviewer checks with individual clients.

#### 1. Method and Frequency of Checks on Personal Interviews

The work of interviewers in surveys carried out by means of personal (face-to-face) interviews should be routinely checked both at the level of the respondents themselves and via the data collected. This applies equally to "paper-and-pencil" interviews and to CAPI interviews. When conducting such checks, flaws in the quality and reliability of interviewers must be identified and rectified. In so far as it is possible and reasonable to do so, the following criteria for monitoring interviewers also apply to qualitative individual interviews.

Routine checks may be organised either on the basis of individual interviewers or, alternatively, on the basis of individual research projects. In both cases, additional checks should be carried out if there are any doubts about the quality or reliability of individual interviewers, or if such doubts arise when coding and entering the data from questionnaires. The results of the checks should also be documented with specific reference to the interviewer.

Routine checks on the basis of individual interviewers should be conducted proportionately to the frequency of their deployment. Newly recruited interviewers, those having attended retraining programmes and interviewers working full-time should be checked more often, interviewers who are not used so often should be checked at least once every six months. The checks should include all the interviews of an individual research project conducted by the interviewers in question. The procedure adopted must ensure that within a period of one year at least ten percent of all the interviews conducted are checked.

Routine checks on the basis of individual research projects must include all the studies conducted. In this case at least ten percent of the interviews must be checked for each research project. This can be achieved either by including all the interviewers and some of the interviews conducted by each, or using only some of the interviewers but all of their interviews. When there are doubts about the quality or reliability of an interviewer, further checks must always be carried out on the basis of all the interviews conducted by that interviewer.

Checks on interviewers at the level of the respondents themselves can either be done in writing (control letters or cards), by phone or in person (by the "head interviewer"). If initial written checks do not produce satisfactory returns, further checks must be carried out – preferably by phone or in person. Checks on interviewers should be conducted at such a time that they have ideally been largely completed by the time that data are passed on to the client. Where possible, flaws in quality or reliability that are revealed in the course of the checks should be rectified before the research report or the data records are handed over to the client.

#### 2. Monitoring Telephone Interviews

Monitoring telephone interviews which are conducted with the aid of a computer from a central telephone studio can be performed much more easily and efficiently than monitoring non-computerised telephone and face-to-face interviews. The supervisor has to be in the telephone studio at all times and can comprehensively monitor the work of individual interviewers both by observing them and by listening in to interviews as they are conducted. In the case of CATI interviews, the quality of the data collection for a specific project can be improved by taking immediate measures.

#### 3. Consequences of the Results of Checks

When the results of the checks are problematic, the interviewer concerned should be invited to help clarify the situation by submitting a written statement. If the deficiencies in quality are unintentional, the interviewer should undergo retraining. When substantial deficiencies in quality cannot be rectified through subsequent measures, the interviews concerned must be removed from the study. When there is evidence of forgery, all interviews by the interviewer concerned must be eliminated. The interviewer concerned must not be allowed to conduct any further interviews.

#### C. Implementation of Sampling Frames/ Deployment of Interviewers

#### 1. Determining the Selection Procedure

Research projects that allow projections to be made are, as a rule, based on random sampling or quota sampling methods. With both procedures – especially the random sampling method – a range of subvariants are used depending on the research objective, the availability of addresses and the specific experiences of the research agency. For quality assurance and control purposes it is vital that the interviewers employed are familiar with the specific techniques of the selection procedure, have already had sufficient experience with them and have at their disposal written instructions on the correct way of carrying out the procedure.

#### 2. Determining Locations for Interviews and Sample Points

Interviewers are given the location for the interviews by the research institute and where appropriate the part of town (in the case of quota sampling) or the sample point (in the case of random sampling). Within these constraints a certain number of interviews are to be conducted or a certain number of private households are to be contacted. Care should be taken here that the number of interviews that could be conducted under ideal conditions does not exceed a certain critical size, in order to minimise distortion caused by the geographical selection unit ("cluster effect"). This critical size should be set at a maximum of fifteen interviews per geographical selection unit.

#### 3. Recruitment of Special Target Groups

When interviewing special target groups (e.g. elites, foreign citizens) particularly strict standards must be applied in terms of the qualifications of the interviewers employed. Beyond this it must be ensured that the recruitment of the respondents is carried out correctly, either by means of detailed instructions or – where possible – by providing concrete names and addresses.

#### **D. Field Management/Checks on Returns**

#### 1. Adherence to Sampling Conditions

Each interviewer must receive the sampling conditions in writing. The fulfilment of these conditions must be checked and documented by the research agency for each interviewer and for each research project.

#### 2. Follow-up Deployment

If an interviewer achieves distinctly fewer interviews at a certain sample point or in a certain geographical selection unit, and if there is cause for concern that this deviation from the required figure could affect the research results, then this part of the overall sample should be optimised using other interviewers in this selection unit, proceeding according to the same instructions or using those addresses not utilised. This is however conditional to the plans for the project having allowed enough time for such measures and these measures having been agreed upon with the client. When respondents have explicitly declared that they do not wish to take part in a specific research project, it is not permissible to contact them again – even by means of a different interviewer.

#### 3. Dealing with Total Absence

Sometimes it is unavoidable that an interviewer is unable to operate at a certain sample point or within a certain geographical selection unit at short notice (e.g. because of illness). In such cases it must be ensured that another interviewer takes over this task as soon as possible.

#### **E. Checking Questionnaires**

A manual check on questionnaires received by the research agency according to a variety of quality aspects is a necessary part of the checks on interviewers' work, since it allows incorrectly conducted interviews to be discovered which are not noticed on account of checks among the respondents alone. The checks on questionnaires should preferably be done before the data from the questionnaire is entered. For each research project, all questionnaires of at least five percent of the interviewers should be checked. In addition, coding and data entry of the questionnaires should be used as implicit quality controls. When the results of the checks are problematic, the procedure described in Section V.B.3. in connection with interviewer checks should be adopted. The results of the checks should be documented for the client.

In the case of computer-aided interviews, the "questionnaires" cannot be checked manually. Hence the corresponding checks should be done with the aid of suitable software. In doing so, the following criteria – formal correctness, completeness, plausibility – should also be covered.

#### 1. Formal Correctness

When conducting manual checks, questionnaires should be checked to see whether they have been completed correctly in terms of formal aspects. In particular the correct use of any filters and the observance of the interviewer instructions in the questionnaires should be checked.

#### 2. Completeness

The questionnaires received should be checked for completeness. In doing so it should be seen whether any questions have not been answered without the corresponding refusal having been noted. In addition it should be checked whether there are any patterns of refusals apparent in the individual questionnaires of a particular interviewer. The completeness checks should also include open-ended questions.

#### 3. Plausibility

The answers in individual questionnaires should, as far as possible, be checked for plausibility, i.e. formal contradictions in the responses, using combinations of different questions. Plausibility checks also include the search for similarities in the answers and patterns of answers that are specific to a particular interviewer.

#### F. Checks on/Validation of the Data Collected

#### 1. Execution

The necessary measures for checking face-to-face interviews have already been described in Section V.B.1. With computer-aided telephone interviews conducted from central telephone studios, additional spot-checks on individual interviews must be conducted on top of the constant monitoring and the checks implicit in the software. The same is true of computer-aided face-to-face interviews.

#### 2. Selection of Target Individuals

This quality criterion is emphasised particularly here because this is an area where errors can most easily be made, whether deliberately or by accident – especially in the case of non-computerised face-to-face interviews. This is why deviations from the prescribed procedure for selecting target individuals must be documented individually for interviewers and research projects.

# 3. Treatment and Consequences of Contradictions, Errors and Faults Detected

The corresponding measures depend on the degree to which the rules have been violated:

- When errors are caused by carelessness or uncertainty about certain procedures retraining is necessary. Subsequent work submitted by the interviewer should be checked particularly carefully. If similar errors continue to occur and additional retraining is not successful, then the interviewer in question should not be assigned any more jobs.
- When systematic deviations from the requirements are observed for which it cannot be ruled out that the violation of the rules was intentional, the situation should be brought to the interviewer's attention and the interviewer should receive additional training. If in the course of the discussions the suspicion is substantiated that the violation of the rules was intentional, the interviewer should not be assigned further work. If it emerges in the course of the investigations that the interviews were forged, they must be removed from the data record.
- When there is evidence that interviews have been forged, or that rules have been grossly and repeatedly violated, the interviewer must not be assigned any further work. The interviews submitted by him must be removed from the data record or records concerned.

## **VI. Data Processing**

ubstantial changes have taken place also in the field of data processing, particularly over the past few years, making it difficult to lay down generally applicable quality standards for the individual steps. The pluralisation in the methods of data collection already noted in the previous chapter has led to an increasing differentiation of procedural techniques in the field of data processing too. For instance, for the purposes of coding and data editing computer-aided interviews must be treated differently to conventional personal interviews conducted with paper and pencil.

The corporate structures within market and social research agencies have also changed substantially in the field of data processing. There is a marked trend towards decentralised data processing. Central mainframe computers are only rarely used or only for specific purposes. Often the project manager himself is responsible for the final stages of data processing – i.e. tabulation and diagrammatic representation of the research results and other forms of reporting. This places higher demands on the intra-corporate procedures for data processing.

Manual coding is becoming less and less common and is often confined to the coding of open-ended questions. Increasingly, questionnaires are read automatically using optical scanners. In the case of computer-aided interviews, a data record is immediately created and stored on an electronic data carrier. The use of multivariate methods of analysis based on more and more powerful software packages is constantly increasing. The multitude of presentation techniques available leads to different forms of presentation of the research findings.

Developing standards that take into account all the possibilities available here would go far beyond the scope of a catalogue of standards for quality assurance in market and social research. Nevertheless, there are certain basic rules for the field of data processing too, which at least apply to most of the procedures commonly used today.

#### **A. Devising Coding Instructions**

#### 1. Closed Questions

With closed questions, coding is generally already defined before fieldwork begins. If the interviews are conduced with the aid of computers, the coding is part of the programming software. This aspect of programmes, in particular, should be tested accordingly before fieldwork commences.

For coding, a distinction must be made between the two answer categories "don't know" and "no answer". The default category "other" must not lead to any distortions in the distribution of responses.

#### 2. Open-ended Questions

With open-ended questions, the answers occurring in a sufficiently large number of questionnaires should first be listed. The necessary number of questionnaires is determined by the proportion of respondents expected to respond to the particular question. The code frame should then be developed on the basis of this list. The responsibility for the content of the categories in a code frame lies with the project manager in charge. If in the course of coding it becomes necessary to modify or change a code frame, the questionnaires that have already been coded must be recoded.

#### **B. Conducting and Checking Coding**

#### 1. Briefing Coding Staff

Coding staff must be briefed by the project manager or some other person who is thoroughly acquainted with the design and objectives of the research project.

#### 2. Checking Coding

The person in charge of briefing the coding staff should check at least five percent of the coding.

#### 3. Dealing with Mistakes

Erroneous coding must be corrected. If the number of errors made accumulates, all or some of the coding staff must be briefed once again, and the questionnaires affected must be recoded.

#### C. Conducting and Checking Data Entry

#### 1. Manual Data Entry

Suitable checks must be conducted to try to ensure that the data transferred to an automatically readable data carrier agree as closely as possible with the data contained in the questionnaires. For this purpose, at least ten percent of the questionnaires entered should be checked and any errors found should be corrected. When checking manual data entry, all operators should be included. When an above average number of data are found to be incorrect, all the questionnaires whose data has been entered by the data entry operator in question must be checked.

#### 2. Automated Data Entry

When entering data automatically, those questionnaires which cannot be read easily or at all for technical reasons must be picked out and entered manually. In addition it must be ensured that when data is entered by automatic means, manifestly illogical formal details are recognised as such. In such cases, the data must be corrected manually. Automatically entered data must be spot-checked for correctness, whereby particular emphasis should be placed on the correct entry of numerical values, since these are difficult or impossible to check by means of plausibility tests.

#### **D. Editing Raw Data**

Even when data are coded and entered with great care, it cannot be ruled out that the data may still contain errors. Here it is necessary to distinguish between formal, logical errors (e.g. filter errors or multiple responses when only a single response is permitted) and inconsistent or implausible results.

#### 1. Formal, Logical Errors

As a rule, formal logical errors may be eliminated using a suitable editing programme. The project manager must be informed about the programme and the type of data correction performed by it. It is his responsibility to instruct any changes to be made to the editing programme in accordance with contentual aspects.

#### 2. Inconsistent or Implausible Results

When inconsistent or implausible results occur, the project manager should first be informed. He will decide how to proceed with these cases. To sort out the problem it is usually advisable to refer back to the original data, i.e. the individual questionnaires.

#### 3. Documentation

Both the raw data and the edited data should be stored. Changes that were made by the editing programme employed should be documented in detail.

#### **E. Weighting Data**

#### 1. Procedures Used

Quota samples are in most cases samples of individuals. If the required quota characteristics and their combinations have been obeyed, there is no need for any correction by means of weighting the results – apart from a possible weighting dictated by the sample design itself.

Random samples, too, are mostly intended to represent a total population of persons or households. Since there is no central register of individuals in Germany, and sampling at the Residents' Registration Offices is extremely complicated, most random samples are drawn in several stages. First of all, the households are chosen, followed by the selection of the individuals. This means that people belonging to the underlying population have different probabilities of being selected, depending on the size of the household in which they live.

A multi-stage sampling method makes it necessary to perform an appropriate weighting of the results. In the first stage, the design-related bias is corrected and the sample of households is converted into a sample of individuals. After this, in a second stage, the structural bias of the sample caused particularly by non-responses is corrected. Only after the second stage of the weighting procedure is a representative sample of individuals available that can be used for projections.

When samples of households are required, the first stage in the weighting procedure is, of course, unnecessary. In these cases the correction of any structural bias in the second stage of weighting is done using the known distribution of a number of household characteristics. In order to determine the necessary weighting factors, it is normally possible – for both samples of individuals and for samples of households – to resort to the data from official statistics or to structural data from other generally recognised research projects.

## **VII. Advising Clients**

#### 2. Documentation

The structural data of the sample should be documented in both their weighted and unweighted forms. In particular it must be apparent from this how the weighting affects the structure of the sample. The weighting procedure used must be described adequately, including mention of the weighting variables.

#### F. Analysis and Presentation of Data

Research results can be passed on to clients in very different forms – depending on what arrangements have been agreed upon. The following typical forms may be distinguished:

- The client receives an edited and usually also weighted data record on an automatically readable data carrier. In addition he receives a method report containing the essential project-related details of data collection and data processing.
- The client receives an uncommented table of results and a method report.
- The client receives a report in which the results of the research project are interpreted, including diagrams and tables, as well as a method report.
- The client receives an interpretative report which also contains recommendations based on the results of the research project, as well as a method report.
- The results of the research project are presented to the client in person and the resulting recommendations are discussed with him.

These various typical forms of supplying the results of a research project to clients can be combined with each other. In all cases care should be taken that the client and the research agency conducting the research project agree about the form of analysis and presentation of the results already at the time of commissioning a research project.

arket and social research agencies provide a scientific advisory service.

Accordingly, the collection and processing of the data and the presentation and interpretation of the findings are equally important when conducting research projects. They constitute individual steps in the overall research procedure within the research agencies which, being applied research, must adhere strictly to the problem raised by a particular client.

The specific experience of the research agency, the qualifications of its staff and the use of research methods appropriate to the problem in hand are crucial for the quality of the advice given to the client.

#### A. Specific Experience of the Research Agency

Apart from the general expertise of a market and social research agency, its specific experience in a particular field of research are also important to the quality of the advice given to a client. It is crucial for the research agency to have a suitable knowledge of the market and/or experience with this type of research project in order to be able to give an interpretation of the research results that is adequate in terms of the problem under investigation, and even more so in order to be able to deduce the appropriate measures to be taken and strategies to be adopted as a result.

The extent to which a research project is able to contribute towards solving a particular research problem will be considerably enhanced if the research results are not analysed and interpreted in isolation, but can be seen in a larger context. In terms of the quality of the advice given to a client, it is therefore important that the research agency should be able to refer back to a number of other research projects for the purposes of comparison or to access the corresponding databases, in addition to the actual research results. The prerequisite for this is that these research projects have been appropriately documented in order to ensure that the research results can indeed be compared with one another.

#### **B. Staff Qualifications**

The activities of market and social research agencies as a scientific advisory service call for the corresponding qualifications in the staff involved in the research tasks. As a rule, this requires an academic training. Appropriate training must ensure that the members of staff entrusted with the individual steps of the research process have the necessary knowledge and experience required for their tasks. This applies both in terms of the subject matter and methods, and in terms of corporate organisational aspects.

As a form of applied research, the activities of market and social research agencies are directly affected by the advances in scientific understanding and the continuing refinement of scientific methods and tools. For the quality of the advice given, it is crucial that this fact is taken into account by means of appropriate ongoing staff training. In addition project-related training programmes must be conducted if a research project demands knowledge of specific facts or methods, in order to ensure that the staff has the necessary qualifications.

### C. Research Methods Appropriate to the Problem under Investigation

For most problems studied in market and social research there is not just one appropriate research design, but usually several which are functionally equivalent. For the success of a research project it is decisive that the research agency should translate the problem presented by the client into a suitable research design and execute this in line with accepted scientific and methodological principles. Ultimately the quality of the activities of research agencies as a scientific advisory service is determined by the extent to which the research findings contribute to solving the problem presented by the client.