

DESIGN, METHODOLOGY, AND TECHNICAL
ASSISTANCE GROUPS IN GAO:
A CONCEPT PAPER

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BACKGROUND AND DEFINITION

On February 18, 1983, the Comptroller General approved various recommendations of the Task Force on Reports for improving job quality and timeliness. One of the recommendations was to

"strengthen job planning by grouping individuals with specialized skills together and locating them close to line management and job performance in the divisions, thus matching the particular skills to the divisions' jobs' needs."

This recommendation grew out of the Task Force's conclusion that the achievement of consistently excellent quality GAO work requires an explicit shift in organizational focus and emphasis. This shift would be from quality control procedures, which check job and product quality toward the end of a job, to quality assurance techniques, which "build quality in" from the outset and throughout the life of a job.

The Task Force believed that quality assurance would result, in part, from planning and executing GAO's jobs using an "integrated team" approach. The integrated team would consist of staff with the needed mix of functional, subject matter, and managerial skills and experience. Specialists would become involved as members of the integrated team to help design and execute the job; their degree of involvement would depend on the needs of a particular job.

To further the goal of integrated teams, specialists would have to be more accessible to audit/evaluation teams. As a first step in making specialists more accessible, the Task Force recommended grouping individuals with specialized skills together and locating them close to line management in the divisions. Other related steps that the Comptroller General approved include (a) establishing the systems necessary to help divisions identify and access individuals with special skills, no matter where they were assigned in GAO and (b) identifying the office's needs in core skill areas and establishing programs to enhance the functional skills of all personnel. The focus of this concept paper is on the first recommendation--grouping specialists in divisions.

Underlying Principles

OQA identified various promising ways to set up groups of specialists in divisions to provide assistance to audit/evaluation teams. And underlying these various ways were four widely agreed upon principles.

- (1) Audit/evaluation teams will produce higher quality and more timely jobs by involving the appropriate number and kinds of functional and subject matter specialists.
 - (a) These specialists will be able to assist the teams most effectively if involved in the early stages of jobs, when jobs are designed. This early involvement will strengthen the teams' ability to think through the objectives, scope, and methodologies or approaches for the job during the study formulation phase and, to the degree possible, anticipate potential problems and build in their solution from the outset.
 - (b) Throughout job implementation, these specialists will provide assistance, helping to solve problems and assure quality in data gathering and analysis and in report writing and clearance.
- (2) Specialists will be more accessible to audit/evaluation teams if they are assigned to line divisions.
- (3) Specialists will be more easily identified and more likely to be sought out for advice and used efficiently on appropriate jobs if they are centralized in an organizational unit at the division level.
- (4) In general, individual specialists in the divisions' centralized groups will be functional, not subject matter, specialists. In other words, their skills and knowledge will be in such areas as ADP, research design, quantitative methods, or economics rather than defense, health, or community development. The divisions' subject matter specialists would typically be assigned to operating groups.

DMTAGs and Design Teams

The acronym "DMTAG" represents the organizational unit in a division that houses the group of functional specialists. The letters in "DMTAG" reflect the group's(G) three most important functions--design(D), methodological(M), and technical(T) assistance(A).

"Design team" describes the integrated team discussed earlier--those members of the audit/evaluation team and other individuals (including DMTAG staff) with selected functional and subject matter skills and knowledge who come together at an early stage to formulate the design of a particular job. "Job design team" or "study design team" are other labels for the same team of individuals. Care needs to be taken to avoid using the term "design team" to describe the "DMTAG"--that group of specialists centrally located in the divisions.

FUNCTIONS TO BE PERFORMED

Job Responsibility

Overall job responsibility will reside with the associate director and the audit/evaluation team management--project directors, project managers, and evaluators in charge (EICs). The DMTAG's responsibility will be to assist the audit/evaluation team in the design and performance of jobs. The DMTAG unit will, of course, be responsible and accountable for its part of a job.

Three Primary Functions

The DMTAG's primary mode of operation will be to assign the appropriate member(s) of its group to assist and work with an audit/evaluation team during the phases of a job. The basic functions of the DMTAG should be as follows:

- o Design assistance. This involves helping the audit/evaluation team think through job objectives, scope, and methodology--what questions to ask and how to answer them. This assistance should be provided before the scoping phase is completed, but it may continue throughout a job to consider adjustments if problems are anticipated or occur.
- o Methodological assistance. In performing this function, assistance is provided to the audit/evaluation team in (a) selecting the most appropriate quantitative and qualitative methodologies and (b) developing the data collection instruments, forms, surveys, samples, and other materials to be used in job performance.
- o Technical assistance. This involves helping the audit/evaluation team execute the selected methodologies and analyze the results. Computer assistance may be an important part.

Other Possible Functions

Additional related functions that a division could assign its DMTAG unit include:

- o Training and educating division staff on research design and methodology and in new technology, particularly computers.
- o Reviewing draft products that contain technical analyses.

- o Contributing to strategic/issue area planning and unit work planning by bringing to bear the DMTAG's technical expertise and broad perspective on the division's work.
- o Advising division management on proposed assignments.
- o Maintaining and administering a list of subject matter and functional consultants both within and outside GAO who can be available to audit/evaluation teams. (This includes identifying the need for and arranging the use of specialists from GAO's technical divisions and offices.)
- o Reviewing and referencing computer-generated data.
- o Performing special studies and evaluations if the required expertise does not reside elsewhere.
- o Managing data bases and technical information inventories.

STRUCTURE OF THE DMTAG AND ITS RELATIONSHIP TO OTHER GAO UNITS

Location in the Division

The DMTAG should be a single unit or organizational entity in the office of the division director. From this position, the DMTAG will be able to provide the full range of design, methodological, and technical assistance throughout a job. It will also have high visibility and prestige and be located where its resources can be allocated among jobs according to the division's priorities.

Number of Staff in the DMTAG Unit

The DMTAG's size should be sufficient to form a "critical mass." If too small, the staff will be spread too thin and will not be able to perform the assigned functions and provide needed levels of assistance throughout jobs.

The size of the DMTAG staff should be increased gradually over time as division needs are demonstrated. Based on probable DMTAG functions, the recommendations of division managers, and experience to date, the ratio of DMTAG staff members to other staff members on jobs in a division should range from 1:10 to 1:15. For example, in a 400-person division with 280 audit/evaluators performing jobs, there might be, in the long run, as many as 19 to 28 staff members assigned to the DMTAG. It is important to note that since DMTAG staff should be billing a substantial percentage of their time to the division's finite job codes, they will be performing line, not overhead, functions.

Relationship between Division DMTAGs and IMTEC, PEMD, and OCE

The Information Management and Technology Division, Program Evaluation and Methodology Division (previously Institute for Program Evaluation), and Office of the Chief Economist have functional specialists with skills and knowledge in computers, design and methodology, economics, and other areas, and in many cases, the DMTAG specialists will also have such expertise. DMTAGs will offer a full range of specialized assistance on most jobs. IMTEC, PEMD, and OCE will be called on, however, when the evaluator-in-charge--either directly or through the DMTAG--must look to IMTEC, PEMD, or OCE for expert assistance because the specialized skill is not in the DMTAG or because a higher level of expertise is needed. For example, an EIC may draw on PEMD's actuaries or bring in IMTEC's computer technical assistance group, which is expert in certain computer applications. Also, when the DMTAG is overloaded during peak periods, the EIC must look for alternatives. Specialists in PEMD will provide a back-up capability whenever possible, given existing workloads. OCE will assist in obtaining additional economic skills from within or outside GAO. In any case, the DMTAG will have an ongoing responsibility for helping assure that needed assistance is provided.

IMTEC, PEMD, and OCE will be involved in personnel issues affecting functional specialists in division DMTAGs. The DMTAGs will seek their advice and assistance in identifying and recruiting qualified candidates and in judging technical qualifications. PEMD will continue its present function of hiring specialists in design and methodology, training them in GAO's processes, and then providing opportunities for those in PEMD interested in transferring to program divisions to do so.

As partners in GAO's functional specialist network, specialists in DMTAGs, IMTEC, PEMD, OCE, and regional TAGs should draw on each others' skills and knowledge. In addition to job-by-job interactions, two activities will help develop the network. One is the annual meeting of GAO's functional specialists, and the other is the development of mechanisms for professional interchange.

Relationship between Division DMTAGs and Regional Office TAGs

Regional office technical assistance groups have and will continue to perform functions in job design, methodology, data collection, data analysis, and other vital areas. Regional EICs, particularly when looking for methodological or technical assistance, see the regional TAGs as important, accessible resources. Historically, the regional TAGs have emphasized technical assistance functions such as computer-assisted auditing techniques, but many regions have widened the range of their TAGs' capabilities and others intend to follow suit. Contributing to this trend is the increased involvement of regional offices in strategic/issue areas where they have front end goals.

A DMTAG, however, will have a different role. First, the DMTAG will be directly accountable to the programming, report-approving division. Already in some divisions, job design teams are required to include representation from the DMTAG unit, thus making the DMTAG directly accountable to the division directorate. Second, the range and depth of the DMTAG's design and methodological expertise will not be mirrored in the regional offices for the foreseeable future. As a result, a DMTAG will tend to have a greater involvement in design and methodology assistance than a regional TAG.

Still, DMTAGs and regional TAGs will have some overlapping functions and, on particular jobs, joint responsibilities. Drawing on each others' skills and knowledge, they will need effective collaboration and coordination to avoid duplication and to provide the best possible assistance to the audit/evaluation teams. Continued use and expansion of the network of specialists in DMTAGs, regional TAGs, IMTEC, PEMD, and OCE will further these objectives. Annual meetings of these specialists will be important to building this network.

STAFFING CONSIDERATIONS

Providing assistance to audit/evaluation teams requires staff with a good mix of technical and interpersonal skills.

Criteria for Selecting DMTAG Director

Ideally, the DMTAG director should have

- o the technical ability to provide design, methodological, or technical assistance and supervise others who provide skills he/she does not have;
- o highly effective interpersonal skills;
- o strong managerial and communication skills;
- o GAO experience in doing jobs; and
- o strong academic or recognized professional credentials.

Given that this individual will be the primary contact for and representative of the DMTAG, the director should be sensitive and responsive to the needs and practical priorities of the auditors/evaluators. The DMTAG director's position should be graded GS-15 or higher.

Skills and Knowledge of DMTAG Staff

Divisions will, of course, have their own particular needs for specialized skills and knowledge, which will be reflected in the skills of the DMTAG staff. Core functional skills and knowledge required in the DMTAG for the effective performance of each division's work should at a minimum include

- o program evaluation/research design, including qualitative and quantitative methods;
- o applied statistics, including sampling and quantitative methods;
- o applied economics;
- o applied operations research and systems analysis;
- o data collection methods and instrumentation development (such as data collection instruments and questionnaires); and
- o computer use for data retrieval and analysis and data base management.

When design teams come together to formulate the design of a particular job, the participation of subject matter specialists will help assure that the job addresses the "right" questions. It is clear that knowing the relevant subject matter will help DMTAG staff be more useful to audit/evaluation teams. So whenever possible, DMTAG personnel should possess or develop some subject area expertise to complement their functional skills. It is not intended, however, that the subject matter expertise possessed by associate directors and operating group staff be replicated or necessarily located in the DMTAG.

Recruiting and Training

The DMTAG staff should be recruited from within and outside GAO. Experience in providing design, methodological, and technical assistance to GAO audit/evaluation teams is an advantage.

Separate from the training function that the DMTAG may perform to upgrade the skills of division staff, internal training for the DMTAG members may facilitate their effectiveness. Courses in oral communication and effective working relations can supplement on-the-job training. External training will be important to upgrade technical skills and knowledge and provide opportunities for growth. Because of the specialized and technical nature of the work, above-average amounts of training may be necessary.

Staff Rotation between DMTAG and Operating Groups and Other Units

In addition to having permanently dedicated DMTAG staff, divisions should consider rotating auditors/evaluators from their operating groups to the DMTAG. These rotations, which should be for specific periods of time, would give auditors/evaluators an opportunity to enhance their existing skills as well as learn new technical skills. Career ladder staff with job management potential would be good candidates.

DMTAG staff might rotate to the operating groups. For a year or two, such a rotation could enable DMTAG staff members to manage or devote themselves full time to jobs. New DMTAG staff might be assigned for a short period to an operating group to become familiar with GAO operations and auditor/evaluator perspectives.

It may also be useful for the DMTAGs to formalize a rotation program with technical divisions and offices and with regional offices. Skill transfer and enhancement would be objectives of such rotations.

OPERATING PROCEDURES

Divisions will, of course, put into place operating procedures that reflect their organization, management style, priorities, DMTAG functions, and past practices. Discussed below are some common issues that division operating procedures may address.

Possible Requirements for DMTAG Involvement

Divisions may require that audit/evaluation teams involve the DMTAG during the job design process--in other words, include it as part of the design team. Alternative operating procedures--some of which are already being used--for involving the DMTAG include

- o fully voluntary - the audit/evaluation teams choose whether to involve the DMTAG.
- o criteria based - the audit/evaluation teams must involve the DMTAG if the job meets certain criteria established by the division (such as job complexity, number of staff days, or intent to draw generalizable conclusions).
- o fully required - all audit/evaluation teams must involve the DMTAG during the job design process.

The level of DMTAG involvement during job implementation will obviously depend on the skills and knowledge needed to implement the job design, as identified during job design and planning. It is essential, however, that DMTAG staff be available during job design and throughout the assignment.

Assignment of DMTAG Staff to Jobs

The DMTAG director or senior DMTAG staff member will typically match up the needs of an audit/evaluation team with the DMTAG staff members who have the appropriate skills and experience for that job. As a job progresses, the skills required will vary, so different DMTAG members may become more or less involved in the job. For example, a research design specialist may participate heavily as part of the design team thinking through the job's objectives, scope, and methodology. However, as the job is implemented, this specialist's involvement may become minor. Or, in another case, a DMTAG questionnaire specialist's involvement in the design phase may be quite limited but will increase substantially as the job progresses into implementation. And while a data analyst may advise on questionnaire development, this specialist's main involvement will generally come once the questionnaires are returned to GAO.

Discussion of Alternative Approaches

When an audit/evaluation team and the DMTAG favor different approaches to a job, divisions may establish procedures for discussing and resolving the divergent viewpoints. From the project director to associate director to division director levels, alternatives may be reviewed. Quality assurance will be the purpose of such discussions, and airing differences does not have to be seen as making for "winners and losers."

Recording DMTAG Assistance

A record of the DMTAG's activities could serve various purposes: (a) to provide management information, such as assuring that the DMTAG was involved during the design phase, (b) to evaluate and monitor DMTAG use, performance, and effectiveness, (c) to determine the DMTAG's staffing and other resource needs, and (d) to provide useful information for those seeking and receiving assistance from the DMTAG.

Evaluating and monitoring the DMTAGs is an implementation issue that is still being developed. The information needs of various levels of management and the DMTAGs will be identified, and the feasibility, costs, and benefits of gathering additional data will be determined before any procedures are recommended.