

R&D evaluation activities

The point of departure in the audit was requirements for evaluation activities from the perspective of parliamentary and administrative accountability. Accountability means actors' responsibility to decision-makers for achieving the objectives that have been set for them. In fulfilling this responsibility the state's accounting procedure forms a key forum, with the information base being built on the budget, the report on the final accounts and evaluations of activities at different levels.

Together with other information and foresight activities, evaluations are generally meant to produce the core information on the basis of which the state administration decides on its activities, strategies and the allocation of resources to different functions and actors. The significance of evaluations is emphasized by the fact that they also reveal a new kind of steering ideology: evaluations have largely replaced the direct issuing of standards and budget steering. Evaluations have shifted attention from ensuring activities in advance through standards and budgeting to assessing the success of activities after the fact. As a result of this shift, evaluation activities have expanded and diversified and have been institutionalized. The challenge of verifying individual evaluations' costs, quality and effectiveness has also expanded and become more complex. Both nationally and internationally the challenge is increasingly to clarify expanding evaluation terminology and to ensure the manageability and effectiveness of evaluations in constantly changing circumstances.

Spending on research and development activities in the 2007 budget totalled 1.73 billion euros. This consisted mainly of appropriations to the Finnish Funding Agency for Technology and Innovation, the Academy of Finland, state research institutions and universities. The significance of evaluation activities for the state economy is based on its key role in planning and monitoring the

state economy and in this case the considerable volume of R&D activities.

The costs of evaluation activities are difficult to calculate because they are split into numerous forms and projects, and cost information is often included in outlays for expert services, for example. The true costs of evaluation activities are not limited to evaluation projects' and units' budgets, which at most form a few percent of an organization's operational expenses. A considerable part of costs is formed by different organizational and institutional side costs, which result from the input of persons participating in planning and conducting activities and handling results in different levels of administration, among other things.

The strengthening and institutionalization of evaluations' position means that the demand for evaluation information has quantitatively grown and qualitatively changed. A key conclusion of the audit is that the demand for and supply of evaluation information regarding the achievement of the objectives that have been set for actors are not matched satisfactorily in the present situation. Gaps in the feedback chain formed by evaluations and resulting gaps in the information base for decision-making are not due exclusively to the supply side, i.e. shortcomings or failures on the part of financing organizations, R&D organizations or individual evaluations. The reasons for the present situation and ways to resolve problems are traceable to different organizational levels and the entire actor field, including the demand side. Information needs, such as effectiveness objectives set in the budget, are not spelled out. The formulation of evaluation information in the state administration also has general institutional and organizational limitations that can affect the availability of evaluation information. For example, individual evaluation obligations may not be specified. Numerous organizational-level problems must also be resolved, such as financing organizations' evaluation capacity and how it is allocated. Problems that appear at different levels set limits on the matching of demand and supply with regard to evaluation information that is necessary to ensure accountability. Consequently development work should start with the entire system and its needs, though the audit report also calls attention to more concrete development needs regarding different organizations.

These key conclusions are based on the following audit starting points, perspectives and findings.

In order for evaluations to meet the requirements that have been set for them as management tools, they should produce the right kind of information in the right form at the right time for decision-makers. The audit investigated how responsibility requirements linked to accountability have been taken into consideration in steering evaluations, conducting evaluations and analysing, compiling and passing on evaluation information. The basic perspective in the audit is given concrete form in the question: What kind of opportunity do decision-makers have on the basis of existing evaluation practices to call actors to account for the achievement of the objectives that have been set for them? On the other hand the audit did not examine in what way or on what grounds actors were or were not called to account in decision-making, for instance by changing budgets or the budget framework.

Organizationally the audit focused on ministries and R&D financing organizations (the Academy of Finland, the Finnish Funding Agency for Technology and Innovation) as producers of evaluation information. The audit looked more closely at the Ministry of Trade and Industry, the Ministry of Agriculture and Forestry, the Ministry of Education and the Ministry of Social Affairs and Health, which play an important role in R&D and innovation work. Together with the Science and Technology Policy Council, which makes use of evaluation activities and builds evaluation culture, the ministries are particularly responsible for seeing that the Government and Parliament have at their disposal an adequate amount of high-quality evaluation information regarding how well, how comprehensively and how effectively R&D organizations have achieved the objectives that have been set for them at different levels and how well policy objectives have been achieved in sectors.

The audit indicated that evaluation information at present does not provide decision-makers an opportunity to call R&D actors to account for the achievement of the objectives that have been set for them. This is due to numerous reasons. In spite of the key position of evaluations as a steering instrument in the state administration, neither R&D policy and administrative actors nor other actors in the state administration have been made expressly responsible for pro-

ducing evaluation information concerning the achievement of objectives.

In the central government accounting reform, the intention was to give ministries a key role in requiring actors to produce evaluation information and ensure the social effectiveness of administration's activities and in steering subordinate organizations. Ministries' role in ensuring evaluation information has remained tenuous. Ministries do not have adequate means at their disposal to steer subordinate organizations' evaluation activities efficiently. Gaps in steering tools have not been corrected by the evaluation activities that have been carried out by ministries themselves, either.

In the background are general gaps in the information that is required by ministries to monitor policies and the steering of activities, problems in ministries' information management and special problems in steering expert organizations. Ministries have not taken an active role in ensuring the quality and content of evaluation activities but have shifted development tasks to financing organizations and R&D organizations. The basic nature of R&D and innovation - a long-term approach, open-mindedness and a tendency to become intertwined with other functions and cross lines between administrative sectors - has also weakened steering at the ministry level.

The Science and Technology Policy Council, which is an advisory body, has been left outside the official steering of R&D activities and related monitoring. Ministries' inadequate steering capacity has not been effectively compensated for with other steering and coordination arrangements, such as measures taken by the Government Controller-General function or the Prime Minister's Office. Actors' roles and operational practices have not formed a whole that would ensure the production and communication of information and allow and encourage the fullest utilization of information.

Internationally one strength of Finnish R&D has been actors' flexible networking and the dynamism, proactivity, flexibility and responsiveness made possible by the unofficial operating model. The operating culture in the R&D field is highly developed in Finland. R&D evaluations also have fairly long traditions as producers of critical information. In spite of the complicated evaluation environment, the field has sometimes been considered a model for good practices with regard to evaluations as well.

In questions regarding responsibility for the achievement of social effectiveness and the social objectives that have been set for actors, Finnish R&D culture and evaluation culture are undeveloped, however. The audit suggested that R&D activities in Finland are characterized more by the development and justification of evaluative activities than by social accountability. An information policy for R&D and innovation activities is lacking. According to the typical way of thinking in the field, new requirements should focus on evaluation regarding the anticipation of social development and future activities rather than responsibilities for activity up to now. This is also visible in the meagre demand for evaluation information that is necessary to ensure accountability. In this respect Finnish R&D evaluation culture is unusual by international comparison.

As a result of the above factors, R&D and innovation activities in Finland do not form a whole in which the demand for and supply of evaluation information that is necessary to ensure accountability are genuinely matched. Evaluation activities are not built on clear objectives or separately defined needs for evaluation information. Particularly as far as the evaluation of the achievement of social objectives is concerned, the methods used to evaluate R&D activities vary from case to case, without the predictability and overall framework that would be provided by a systematic operating model.

The lack of a systematic model in producing and communicating evaluation information that is necessary to ensure accountability is also visible in the activities of R&D and financing organizations. Both the Finnish Funding Agency for Technology and Innovation and the Academy of Finland have in recent years developed, diversified and systemized their evaluation activities, which has also received international recognition. Ministries have wanted to give financing organizations significant responsibility for focusing evaluation activities and producing and compiling evaluation information. This responsibility has not been spelled out, however, particularly with regard to evaluation information that is necessary to ensure accountability.

The Academy of Finland evaluates entire fields of science or research and organizes surveys of the state and level of Finnish science. The Finnish Funding Agency for Technology and Innovation compiles indicators concerning the development of activities. Dur-

ing the audit the Finnish Funding Agency for Technology and Innovation also prepared summaries of R&D activities' observed impact mechanisms and impacts. As a whole the focus of financing organizations' evaluation activities is, however, on evaluating their own measures and activities.

In addition, financing organizations' evaluation projects have generally had other aims besides monitoring the achievement of effectiveness objectives or the surveying of evaluation materials required by the accounting procedure. Systematic information concerning completed evaluations is not compiled or passed on to the Science and Technology Policy Council, the Government or Parliament. The reporting of evaluation results through ministries is also sketchy and haphazard.

Neither organization has considered the evaluation of R&D activities or policy as a whole or cross-sectoral evaluation questions to be its task. The accountability perspective has been limited mainly to the examination of the results of individual R&D programmes. Even in this case the effectiveness perspective has had only a minor role. Evaluation topics and perspectives are selected for the most part according to problem-solving needs related to the execution of R&D activities.

The utilization of financing organizations' evaluations is impromptu and is often limited to individual programmes' or the programme administration's monitoring needs or the specification of individual development tasks. Evaluation projects or syntheses regarding the success of financing instruments are not conducted. Evaluation activities are project-centred and one-off measures. The fact that evaluation activities focusing on financing organizations or conducted by them do not meet the information needs of national R&D and innovation policy is largely due to shortcomings in specifying information needs regarding objectives and effectiveness as well as other problems in R&D activities and related evaluation at the system level.

The tenuous nature of financing organizations' evaluation activities' policy links and the one-off nature of evaluations concern R&D evaluations more broadly. In addition to evaluations conducted by the Finnish Funding Agency for Technology and Innovation and the Academy of Finland, the audit's case analysis looked at evaluations undertaken by ministries concerning the innovation system's struc-

tures, cluster programmes and research institutions. The case analysis indicated that there are gaps in the process of utilizing evaluations. With a few individual exceptions, evaluations are often undertaken in a routine manner and links to key decision processes' information needs have not been spelled out. This also characterizes state administration in other areas as well, however.

As a whole shortcomings or inconsistencies in ministries' and financing organizations' evaluation projects were visible particularly in the following ways:

- Information needs are not investigated and evaluation tasks are not specified carefully and appropriately.
- The purpose of evaluation projects and their link to key decision-making processes remain unclear.
- The independence of evaluations is not always optimally ensured.
- Evaluation possibilities and limits are not always identified.
- Evaluation results are not handled, communicated and utilized efficiently.