

Defence Science

and Technology/

Organisation

Task Cost

Management

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA JOINT COMMITTEE OF PUBLIC ACCOUNTS

REPORT 280

DEFENCE SCIENCE AND TECHNOLOGY ORGANISATION:
TASK COST MANAGEMENT

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Section 8.(1) of the <u>Public Accounts Committee Act 1951</u> reads as follows:

Subject to sub-section (2), the duties of the Committee are:

- (a) to examine the accounts of the receipts and expenditure of the Commonwealth including the financial statements transmitted to the Auditor-General under sub-section (4) of section 50 of the Audit Act 1901;
- (aa) to examine the financial affairs of authorities of the Commonwealth to which this Act applies and of intergovernmental bodies to which this Act applies;
- (ab) to examine all reports of the Auditor-General (including reports of the results of efficiency audits) copies of which have been laid before the Houses of the Parliament;
- (b) to report to both Houses of the Parliament, with such comment as it thinks fit, any items or matters in those accounts, statements and reports, or any circumstances connected with them, to which the Committee is of the opinion that the attention of the Parliament should be directed;
- (c) to report to both Houses of the Parliament any alteration which the Committee thinks desirable in the form of the public accounts or in the method of keeping them, or in the mode of receipt, control, issue or payment of public moneys; and
- (d) to inquire into any question in connexion with the public accounts which is referred to it by either House of the Parliament, and to report to that House upon that question,

and include such other duties as are assigned to the Committee by Joint Standing Orders approved by both Houses of the Parliament.

PREFACE

This report outlines the findings of the Public Accounts Committee's review of the 'Report of the Auditor-General on an Efficiency Audit - Defence Science and Technology Organisation: task Cost management'. The Auditor-General's report was tabled in the House of Representatives on 19 March 1986.

The efficiency audit examined the Defence Science and Technology Organisations's (DSTO) management procedures and systems for directing and monitoring resources used in its research and development program. The audit was undertaken at DSTO's Central Office in Canberra and 3 major research laboratories in South Australia and Victoria.

The Committee notes that many of the Auditor-General's criticisms of DSTO's management procedures and sytems have been addressed with significant improvements in the administration of DSTO's resources.

The Department of Defence has advised that it is in broad agreement with the Auditor-General's report and that many of the matters of which the Audit Office was critical were known to the Department at the time of the review and corrective measures had either been taken or were being prepared.

The Committee is grateful to officers of the Department of Defence for the co-operation provided throughout the inquiry and the inspections the Committee undertook at Melbourne and Adelaide.

For and on behalf of the Committee.

R E Tickner, MP Chairman

M J Talberg Secretary Joint Committee of Public Accounts Parliament House Canberra 27 May 1987

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SUMMARY OF RECOMMENDATIONS

The Committee's recommendations are listed below and cross-referenced to their location within the text.

Task Estimating and Costing

 DOD consider the introduction of manuals similar to AEL's Task Management Manual into the other DSTO laboratories (paragraph 2.14).

Marketing

- The AEROTECH proposal of the Aeronautical Research Laboratories be implemented provided that AEROTECH will be commercially successful ie able to cover its own costs and provide income for ARL (paragraph 3.10).
- Bodies similar to AEROTECH be established for MRL and the DRCS laboratories provided such bodies will be commercially successful ie able to cover their own costs and provide income for MRL and the DRCS laboratories (paragraph 3.11).
- DITAC undertake a detailed examination of the UK 'ferret' system and its suitability for DSTO (paragraph 3.14).
- Recommendation 27 of the Cooksey Report be implemented ie an Australian Defence Exports Group (AUSDEX) be established within AUSTRADE to undertake the facilitation and promotion of the export of defence products and services (paragraph 3.22).
- The DSTO laboratories be allowed to retain part of the income generated by the commercialisation of their R & D (paragraph 3.25).

Staffing

 A merit advancement scheme be introduced promptly into DSTO (paragraph 3.30). 8. DOD undertake a review of the feasibility of, and the alternatives for, providing inventing scientific staff with a share of the financial returns earned on their R & D (paragraph 3.32).

Advice to Services

- Where the Services have requested advice from DSTO and ignore that advice, details of
 - the request;
- the resources expended by DSTO on the request; and
- the reason why the advice was not followed,
- should be provided in DOD's Annual Report . (paragraph 3.36).

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CHAPTER 1

BACKGROUND

Introduction

- 1.1 The Defence Science and Technology Organisation (DSTO) was formed in 1974 as part of a major reorganisation of the Department of Defence.
- 1.2 The Chief Defence Scientist, under the Secretary of the Department, heads the DSTO. He is chief adviser on science and technology to the Minister for Defence, the Secretary of the Department of Defence and the Chief of the Defence Force.
- 1.3 As at 30 June 1986 there were 4349 civilians and 54 Australian Defence Force regulars on the DSTO staff, about 1000 of. whom were scientists and engineers. The staff are located in the DSTO's Central Office in Canberra, its five main research and development laboratories in Melbourne and Adelaide and several small establishments throughout Australia.
- 1.4 The five main research laboratories are the:
 - Materials Research Laboratories (MRL) at Maribyrnong, Melbourne;
 - Aeronautical Research Laboratories (ARL) at
 - Fishermens Bend, Melbourne;
 - Advanced Engineering Laboratory (AEL); Electronics Research Laboratory (ERL); and
 - . Weapons Systems Research Laboratory (WSRL).
 - . weapons Systems Research Laboratory (WSRL).

The AEL, ERL and WSRL form the Defence Research Centre Salisbury, 24 km north of Adelaide. An organisation chart and a map of the DSTO principal locations appear at Appendices A and B.

- 1.5 The function of DSTO is to contribute to the development and implementation of Australian defence policies through the application of science and technology, including the provision of assistance to the Australian Defence Force, the Department of Defence, other defence agencies and (as necessary in the direct interests of Australian defence) Australian industry.
- 1.6 The objectives of DSTO are to:
 - develop and maintain a base of skill and knowledge in defence science and technology and foster scientific and technological expertise in industry and tertiary institutions, concentrating on areas relevant to the Australian strategic and natural environment;

- provide scientific and technical advice on defence policy matters and, in particular, advice on the selection and acquisition of new equipment and systems and their suitability for operation in the Australian environment;
- contribute to the solution of scientific and technological problems of the Australian Defence Force, the Department of Defence, other defence agencies and relevant Australian industries, including those arising from the operational use, maintenance, local production and extension of life of equipment and systems;
- conceive new devices, equipment or systems of potential value to Australian defence and, in accordance with delegated approvals, manage or undertake successive stages of development; and
- assist appropriate non-Defence bodies where DSTO has skills or facilities not available elsewhere in Australia and where defence priorities permit.

1.7 In 1985-86 DSTO outlays were \$166 million or 2.5 per cent of the total Defence budget. The outlays were paid as follows:1

Outlays		
Capital equipment Capital facilities	20.7	
Personnel	104.5	
Administrative and operating costs Less revenue	40.9 3.3	
Total DSTO outlays	166.2	

The Committee is disappointed at the small amount of revenue (\$3.3 million) generated by DSTO.

Overview of the Efficiency Audit Report

1.8 The efficiency audit examined DSTO's management procedures and systems for directing and monitoring resources used in its research and development program. The audit was undertaken at DSTO's Central Office in Canberra and 3 major research laboratories in South Australia and Victoria. The audit focused mainly on 'task management' covering:

task definition and approval; task estimating and costing; task review and priorities; and management information systems.

Department of Defence, Annual Report 1985-86, AGPS, Canberra, 1986, p 88.

- 1.9 The audit disclosed inadequacies in procedures for estimating, allocating and controlling the use of resources within DSTO. These inadequacies, combined with the absence of an effective management information system at DSTO's Central Office, reduced management's ability to monitor and control the deployment of resources effectively at laboratory level.
- 1.10 The lack of an adequate management information system was one of the major shortcomings identified in previous management reviews of DSTO.
- 1.11 DSTO has been the subject of several reviews since 1979 with the result that at the time of the audit DSTO was addressing a number of shortcomings identified by the Auditor-General.
- 1.12 A further review of DSTO was conducted in 1986 by the Australian Science and Technology Council (ASTEC) which stated that 'DSTO's current development of sub-program management will meet many of the problems identified by the Auditor-General, and in this sense the timing of the Auditor-General's investigation was unfortunate.'2
- 1.13 Details of the reviews conducted prior to the Auditor-General's efficiency audit can be found in the Auditor-General's report 3 and the ASTEC report on DSTO. 4

Overview of the Committee's Inquiry

- 1.14 The Committee referred the Audit Report to its Sectional Committee on Defence, chaired by Mrs Helen Mayer, MP, to undertake the inguiry and report to the full Committee.
- 1.15 Written submissions were sought from the Department of Defence and the Australian Science and Technology Council. In view of the Auditor-General's comments on certain aspects of DSTO's management procedures and systems, the Committee undertook inspections of DSTO's research laboratories in Melbourne and Salisbury on 6-7 April 1987. Details of the inspections are at Appendix C.

Australian Science and Technology Organisation, The Defence Science and Technology Organisation and National Objectives, AGPS, Canberra, 1986, p 22.

Auditor-General, Report on an Efficiency Audit - Defence Science and Technology Organisation: task cost management, AGPS, Canberra, 1986, pp 2-3.

^{4.} ASTEC Report, op. cit., pp 11-13.

- 1.16 The Committee's inquiry has focused primarily upon the Audit findings and recommendations. Chapter 2 looks at the aspects of DSTO's task cost management examined by the Auditor-General and is set out as follows:
 - major Audit findings;
 - . Audit recommendations;
 - the Department of Defence's responses to the Audit findings and recommendations;⁵ and
 - . Committee conclusions.
- 1.17 During its inspections several matters were raised with the Committee including the commercialisation of DSTO's research and development, recruitment and retention of staff, and the provision of advice by DSTO to the armed services. These matters are discussed in Chapter 3.

Department of Defence submission of 23 January 1987 to the Committee.

CHAPTER 2

TASK MANAGEMENT

Definition and Approval Procedures

2.1 Audit Findingsl

- There was non-compliance with and circumvention of task approval procedures resulting in difficulties in identifying the level of resources allocated and deployed, given specific objectives tasked at the Advanced Engineering Laboratory.
- . Tasks had been created with similar objectives to tasks which already existed. Resources could be approved for these 'new' tasks at lower levels of delegation than would have been the case if additional resources were sought for an existing task. This practice of 'task splitting' was found to be widespread at the Advanced Engineering Laboratory.
- For several years prior to September 1984, the Aeronautical Research Laboratories had not submitted task plans to DSTO Central as required, either for the appropriate delegate's consideration or to advise of tasks approved under local delegation.
- A review of DSTO records revealed that in all laboratories there was a high incidence of task costs exceeding approvals for both development and research tasks.

2.2 Audit Recommendations

Recommendation 1. The current approval procedures be reviewed and promptly modified to ensure decisions regarding the allocation of resources are made at the level determined appropriate by senior management.

Recommendation 2. The revised procedures should provide for approvals to be given on condition that progress reviews are undertaken and reported on at key points of the task before further work proceeds. The revised procedures should also reflect the critical importance of timeliness, recognising the need for interim approvals for work pending consideration and approval of the proposed task. The absence of such provisions encourages attempts to circumvent approval requirements and thus leads to a reduction in management's control.

The Audit findings listed in this chapter are taken verbatim from the Audit Report, op. cit., pp 23-24.

Departmental Response

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- 2.3 In a written response the Department of Defence advised that recommendation 1 has been implemented and that new procedures for the definition, approval and review of the DSTO program were issued on 3 December 1985 in Defence Science Instruction 1/85 (DSI 1/85) Appendix D.
- 2.4 The Department advised that recommendation 2 has also been implemented. The new procedures promulgated in DSI 1/85 are oriented towards program budgeting and give substantial increases in authority to laboratory managers (who may now approve tasks) while defining an appropriate level of reporting and accountability. DSTO Central Office now approves defined broad areas of resource allocation called 'sub-programs'.

Committee Conclusions

- 2.5 The Committee agrees with Audit's recommendations and notes that the definition, approval and review procedures for the DSTO program in DSI 1/85 appear to have overcome the problems identified in the Audit findings.
- 2.6 The Committee has been assured by the various DSTO laboratories that non-compliance with and circumvention of task approval procedures has ceased. The Committee is pleased to note that 'task splitting' has also ceased and that approvals for new tasks are being obtained at the appropriate levels.

Task Estimating and Costing

2.7 Audit findings

- The review of a number of development projects at the Advanced Engineering Laboratory revealed a high incidence of cost and/or time scale overruns. At the time of audit, measures were being taken by the laboratory to redress the situation in response to an internal review.
- Several instances of deficiencies in procedures for arranging and administering contracts for the performance of work associated with tasks at the Advanced Engineering Laboratory were noted.

2.8 Audit recommendations

Recommendation 3. The procedures introduced at the Advanced Engineering Laboratory in 1984 and the recommendations contained in the review panel's report be further developed and tested with a view to implementing similar procedures in other DSTO establishments as appropriate.

Recommendation 4. As development contracts usually entail a high risk these contracts should be drawn up and closely supervised to accord with the risks involved. In particular, consideration should be given to the inclusion in contracts of incentives for the timely, successful completion of the work and to the incorporation of appropriate termination clauses where there is a high risk to the contractor and the Commonwealth, in order to provide adequate protection to both parties.

Departmental Response

- 2.9 The Department advised that action on recommendation 3 is continuing, Audit's recommendation that the new Advanced Engineering Laboratory (AEL) procedures be developed and applied in other DSTO laboratories is being examined; however, the nature of AEL's work which includes a large number of hardware projects, is different from the research activity carried out in other laboratories where AEL procedures will rarely be appropriate. New procedures (DSI 1/85) for approval of tasks progressively in phases should largely overcome problems associated with estimating costs of R & D work.
- 2.10 The Department has noted recommendation 4 and action on this recommendation is continuing. The Department already makes special provision, eg 'cost plus' provisions, to cover aspects of high technical risk. An investigation by the Defence Contracting Organisation of the wider application of incentive contracts is still continuing. This investigation also includes R & D contracts.

Committee Conclusions and Recommendation

- 2.11 With regard to recommendation 3, the Committee notes that the procedures introduced at AEL in 1984 (AEL Standard Operating Procedures SOP-6) have been incorporated with, and superseded by, the AEL Task Management Manual issued in April 1987. The Manual includes comprehensive task management procedures and is intended to supplement the information specified in DSI 1/85.
- 2.12 The Manual also appears to cover the recommendations contained in the review panel's report (Howard Report - March 1984) which looked at SOP-6.
- 2.13 The Committee accepts DOD's comment that the nature of AEL's work is different from the research activity carried out in the other DSTO laboratories. However, the Committee does not believe that this necessarily means the administrative procedures on task cost management at AEL will not be appropriate at the other laboratories.

- 2.14 The Committee believes manuals similar to the AEL Manual would be useful administrative aids in the other DSTO laboratories. Accordingly, the Committee recommends that:
 - DOD consider the introduction of manuals similar to AEL's Task Management Manual into the other DSTO laboratories.
- 2.15 The Committee agrees with Audit's recommendation 4. The inclusion in contracts of incentives for timely completion of tasks should decrease the number of time overruns experienced in the past. The Committee regards the incorporation of appropriate termination clauses as essential to the protection of the Commonwealth's interests.

Task Review

2.16 Audit findings

- . The review process had not operated effectively.
 - A number of tasks at the Advanced Engineering Laboratory were delayed as resources were transferred to tasks of higher priority. The delays were at times of such magnitude that it placed in question the benefit of continuing with the deferred task.

2.17 Audit recommendation

Recommendation 5. The review of tasks give more cognisance to financial and management aspects and a system be developed for task priorities which would provide management with information regarding the likely effect on laboratory work of new tasks and changes in task priorities. It is also suggested that review procedures clearly define the role and extent of DSTO Central's involvement in oversighting and monitoring tasks within the laboratories.

Departmental Response

2.18 The Department advised that recommendation 5 has been complied with and that the new procedures for managing the DSTO Program (DSI 1/85) have been designed to achieve the results recommended by Audit.

Committee Conclusions

2.19 The Committee agrees with the Audit recommendation and is satisfied that the review and task priority procedures specified in DSI 1/85 ensure compliance with the recommendation.

- 2.20 The Committee notes that paragraphs 30-34 of DSI 1/85 on the annual review of tasks and sub-programs by laboratory directors and Central Office require the provision of information on the resources used and progress made on tasks and sub-programs and also on the proposed allocation of resources and progress for the coming year.
- 2.21 The procedures in DSI 1/85 appear to ensure the involvement and informing of Central Office to a satisfactory degree. The provision of draft task register sheets and of task plans to Central Office should also ensure central management's awareness of tasks from an early stage (paragraph 28).

Management Information Systems

2.22 Audit findings

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- Cost information contained in DSTO's computerised data base was not in agreement with data shown on other DSTO records.
- . The total cost of a project was difficult to identify due to the widespread practice of task splitting and the creation of interdependent/associated tasks.
- There were inconsistencies between laboratories in calculating estimates and costs.
- Protracted delays had occurred in effectively responding to issues and problems which were raised in the Internal and External Review Committees' reports in 1980.
- There was no uniform instruction to guide laboratories on the calculation of overheads and a number of inconsistencies were observed in the application of overheads.

2.23 Audit Recommendations

Recommendation 6. The management initiatives recommended by the internal sub-committee which have recently been reactivated and further developed by DSTO Central should be brought to a satisfactory conclusion as soon as possible.

Recommendation 7. DSTO Central should issue instructions consistent with overall departmental costing policy and procedures on the treatment and application of overheads within laboratories. (In this regard, departmental officers have advised Audit that it is proposed to issue an instruction in the near future.) Audit considers that the decision-making process within DSTO would be enhanced if the information on task costs and laboratory costs were prepared on a consistent basis.

Recommendation 8. The Department should address recommendation 55 of the Report - 'Review of Administrative Support at the Defence Research Centre, Salisbury' to adequately define user requirements for the costing system reports and implement changes so as to improve the task management process at the Defence Research Centre, Salisbury.

Departmental Response

- 2.24 The Department advised that recommendation 6 has been implemented. New procedures establishing a uniform costing system for DSTO laboratories were issued on 27 January 1987 in Defence Science Instruction 1/87 (DSI 1/87)-Appendix E. The procedures have been in operation since 1 July 1986.
- 2.25 The Department advised that recommendation 7 has also been implemented. The new costing procedures covered in DSI 1/87 were developed in association with Departmental costing authorities and are consistent with the proposed new Defence Costing System to be covered by the Defence Costing Manual (SERVFINMAN 4-1) which is currently in final draft form.
- 2.26 The Department advised that work on recommendation 8 is continuing, including the establishment of an integrated data base for DSTO as a whole. Work is proceeding on the refinement of the DSTO management information system. A revised and enhanced system has been developed for Defence Research Centre Salisbury and is in the final stages of development; improved systems are being developed at other DSTO laboratories.

Committee Conclusions

- 2.27 The Committee agrees with the Audit recommendations and is satisfied that DOD has taken action to comply with the recommendations.
- 2.28 The Committee notes that DSI 1/87 provides that uniformly based costing procedures are mandatory (paragraph 13) and believes that the new procedures should ensure consistency between the laboratories in the calculating of estimates and costs.

. CHAPTER 3

COMMERCIALISATION

- Marketing
- . Staffing
- Advice to Services

Marketing

- 3.1 A point raised by all DSTO laboratories during the Committee's inspections was the gap between the research and development conducted by DSTO and the marketing of the results of that R & D. Reasons given for this marketing gap are the lack of entrepreneurial skills and legal expertise within DOD and the lack of financial incentive for DSTO laboratories.
- 3.2 The marketing of DOD products, services and technology is undertaken by the Office of Defence Production (through its Commercial Services Division) and the Capital Procurement Office (through its Defence Industry Development Division and Defence Industry and Materiel Policy Division).
- 3.3 However, the various Divisions involved with marketing are fragmented and DOD has no overall expertise in the commercial field. Consequently returns to DOD from its efforts on marketing DSTO's R & D have been disappointing.
- 3.4 For example, the following figures provide details of licences granted by DOD to industry for the use of DOD technology and the revenue generated by those licences. Most, but not all, of the figures relate to DSTO inventions DOD does not separate the DSTO contribution from contributions by other areas of DOD.

Licences Issued to Industry for Defence Technology

8	1/82	82/83	83/84	84/85	85/86	86/87 (10 months)
	2	nil	3	1	7	10
	Lice	ncing R	evenue for	Defence	Technology	
8	31/82	82/83	83/84	84/85	85/86	86/87
	nil	nil	\$21,753	\$7,997	\$37,966	\$74,212

AEROTECH

- 3.5 Several solutions to the marketing gap were suggested to the Committee. One put forward by ARL was the proposed creation of a private company, ARROTECH, which would act as an agent for ARL to seek contracts with national and international aerospace industry and would have skills in marketing and in legal and financial administration.
- 3.6 It is proposed that AEROTECH would retain a percentage of the gross revenue generated by the contracts it obtained and the balance would provide the resources for the AEROTECH programs undertaken by ARL and other subcontractors. Funds paid to ARL by AEROTECH would be deposited in an ARL trust account and any DOD resources used on AEROTECH programs would be reimbursed from the trust account.
- 3.7 ASTEC was impressed with the AEROTECH proposal and felt the proposal would be able 'to promote the further utilisation of major aeronautical facilities required by Defence but not fully used in periods of low threat to Australia, and the development and commercialisation of ARL technological innovations'.²
- 3.8 ASTEC recommended that the AEROTECH proposal be implemented as soon as practicable. 3 A similar recommendation was made in the Cooksey Report (recommendation 21) although it went further and recommended that the establishment of AEROTECH should be followed by similar bodies within the MRL and the DRCS. 4
- 3.9 The Central Office of DOD believes that it would be premature to establish AEROTECH before being aware of the market for its services. Initially, Central Office would prefer to have a trust account set up for ARL. This would have the advantage of separating revenue due solely to ARL efforts from Consolidated Revenue.
- 3.10 However, the Committee feels that simply establishing a separate trust account for ARL would do little to increase the level of entrepreneurial skills within, or available to, ARL. On the other hand, it is essential that AEROTECH be able to pay for itself. Accordingly, the Committee recommends that:
 - the AEROTECH proposal of the Aeronautical Research Laboratories be implemented provided that AEROTECH will be commercially successful ie able to cover its own costs and provide income for ARL.

Department of Defence, Aeronautical Research Laboratories -A proposal for ARL to Support More Effectively the Australian Defence Force and to Participate More Effectively in National Aerospace Programs, 21 April 1986, p 8.

^{2.} ASTEC Report, op. cit., p 7.

ibid, p 8.

Cooksey, Robert J, Review of Australia's Defence Exports and Defence Industry, AGPS, Canberra 1986, pp 11, 333.

- 3.11 The Committee believes that the establishment of similar bodies for the other DSTO laboratories may also lead to greater commercialisation for their R & D efforts. However, the commercial success of such bodies would depend upon the motivation and drive of the staff at the laboratories. Without a commitment to the AEROTECH concept these bodies would fail. Accordingly, the Committee recommends that:
 - bodies similar to AEROTECH be established for MRL and the DRCS laboratories provided such bodies will be commercially successful ie able to cover their own costs and provide income for MRL and the DRCS laboratories.

Ferret System

- 3.12 A second solution suggested to overcome DOD's current lack of entrepreneurial skill was the introduction of a 'ferret' system similar to that adopted by the UK Ministry of Defence. Under this system representatives of private companies would be installed in DSTO laboratories to search for DOD R & D tasks which have commercial potential. The companies would then make arrangements with industry to develop and manufacture the technology with a percentage of the resulting profit going to the inventing laboratory.
- 3.13 This solution was recommended in the Cooksey Report (recommendation 20)5 while the ASTEC Report recommended that either the 'ferret' system be introducted or that the DSTO laboratories form their own commercial cells which would be responsible for informing industry of the laboratories' capabilities and for seeking commercial opportunities for the laboratories' R & D results. 6
- 3.14 The Committee considers that, given the current public service conditions and rates of pay, it may be difficult to attract commercial officers with the skills and experience required to liaise with industry. The Committee sees merit in the 'ferret' system but considers that the success of the UK system and its applicability to Australian conditions should be investigated. The Committee believes that the Department of Industry, Technology and Commerce (DITAC) would be the most suitable organisation to examine the 'ferret' system. Accordingly, the Committee recommends that:
 - DITAC undertake a detailed examination of the UK 'ferret' system and its suitability for DSTO.

Cooksey Report, op. cit., pp 11, 333.

^{6.} ASTEC Report, op. cit., p 8.

Single Marketing Body

- 3.15 During the Committee's discussions with DOD officers on the commercialisation of DSTO's R & D, it became apparent that the present fragmented marketing procedures are not satisfactory and are not maximising the commercial potential of DSTO's R & D. The question was raised whether it would be preferable to have a single marketing body (not necessarily within DOD) to co-ordinate the commercialisation of DSTO's R & D.
- 3.16 This question is not new and the Cooksey Report notes that:

DOD has done a number of studies over the last nine years which support the establishment of a centralised body within DOD to facilitate the sale of defence equipment.⁷

- 3.17 The Committee notes that AUSTRADE is developing a marketing strategy for the export of defence products and services. A report on the strategy by Dr Bob Webb, General Manager, Export Development Group, AUSTRADE, is to be completed by June 1987.
- 3.18 The matter of a single export marketing body was discussed in some detail in the Cooksey Report which recommended (recommendation 27) the establishment within AUSTRADS of an Australian Defence Exports Group to facilitate and promote the export of defence products and services, 8
- 3.19 The Committee agrees with the comments in the Cooksey Report that 'defence exports have not been and will never be a major preoccupation of DOD'9 and that 'there is no place for AUSDEX within the matrix that is Defence, where line responsibility and accountability are so diffuse. AUSDEX needs to be part of a simpler organisation, dedicated to exports in a word, AUSTRADE', 10
- 3.20 While the Committee supports the expansion of export markets for Australian manufactured defence products, it understands the humanitarian concerns of some people and departments about the export of weapons.
- 3.21 However, the Committee believes there are certain categories of defence products, which are suitable for export. Provided the Government's Guidelines on the Export of Defence Materiel are adhered to, the Committee has no objection to the export of defence products.

Cooksey Report, op. cit., p 293.

^{8.} ibid, pp 12, 346.

^{9.} ibid, p 346.

^{10.} ibid, p 346.

- 3.22 Accordingly, the Committee recommends that:
 - 5. Recommendation 27 of the Cooksey Report be implemented ie an Australian Defence Exports Group (AUSDEX) be established within AUSTRADE to undertake the facilitation and promotion of the export of defence products and services.

Financial Incentive

- 3.23 It was also suggested to the Committee that providing financial incentive to DSTO laboratories would lead to greater interaction between the laboratories and industry. At present, all payments for royalties, patents, licensing arrangements etc relating to DSTO's commercial R & D go into Consolidated Revenue.
- 3.24 The Cooksey Report¹¹ recommended that DSTO laboratories be allowed to retain income earned from the commercialisation of their R & D while the ASTEC Report^{1,2} recommended that the laboratories retain a portion of such income.
 - 3.25 The Committee believes that the retention of earnings by DSTO laboratories would encourage greater interaction with industry and recommends that:
 - 6. the DSTO laboratories be allowed to retain part of the income generated by the commercialisation of their R & D.

Staffing

- 3.26 Both MRL and ARL are experiencing difficulties in recruiting and retaining scientific staff. Reasons put forward to the Committee for the difficulties included:
 - growth in industry is increasing the demand for scientists with skills required by these laboratories at a time when the supply of such personnel is decreasing;
 - industry has an advantage because of the 150 per cent tax concession for its expenditure on R & D;
 - foreign scientists are sometimes unemployable because of security problems.
- 3.27 The laboratories at DRCS have not had the same difficulties in recruiting suitable professional staff. This is because many of the staff who were employed at Woomera transferred to Salisbury when the UK/Australia Joint Project at Woomera came to an end in 1980.

- 3.28 The Committee feels that greater incentives should be given to attract scientific staff to MRL and ARL. It is noted that the Public Service Board has given approval for a merit advancement scheme within DSTO. The Committee believes that the implementation of such a scheme would boost morale and make a long-term career with DSTO more attractive.
- 3.29 The merit advancement scheme should be implemented promptly. The ASTEC Report stated that:

...many interested parties commented on the delays experienced in introducing a scheme for merit assessment and promotion of research scientists (no such scheme exists, or is envisaged for engineers). Merit promotion for DSTO officers was recognised by the 1976 Royal Commission on Australian Government Administration and the 1980 external review of DSTO.13

- 3.30 The Committee recommends that:
 - a merit advancement scheme be introduced promptly into DSTO.
- 3.31 A further incentive to potential and existing staff would be the sharing of financial returns on commercially successful R & D. This could be done by, for example, paying a percentage of the royalties and licence fees paid for R & D to the research personnel responsible for the R & D or by granting joint ownership of the patent and licence rights to the personnel.
- 3.32 The Committee recommends that:
 - DOD undertake a review of the feasibility of, and the alternatives for, providing inventing scientific staff with a share of the financial returns earned on their R & D.

Advice to Services

3.33 The Committee understands there are no formal requirements for the Services to seek advice from DSTO although on several occasions DSTO has assisted the Services to be 'smart buyers'. One of DSTO's objectives is to:

provide...advice on the selection and acquisition of new equipment and systems and their suitability for operation in the Australian environment.

13. ibid, p 30.

3.34 DOD has advised the Committee that:

In relation to major materiel acquisitions the higher Defence Committee structure, notably the Force Structure Committee and the Defence Source Definition Committee, include DSTO representatives as members. During deliberation matters before these Committees benefit from DSTO expertise up to the point that actual decisions are taken. Beyond that point, that is during the actual acquisition process, there is a tendency by the Services not to seek DSTO involvement, 14

- 3.35 The Committee is concerned that there are no formal requirements for explanations to be given when the Services choose to ignore advice from DSTO after having requested that advice be given. In view of the resources which must be allocated within DSTO to comply with such requests, there should be some accountability by the Services.
- 3.36 The Committee recommends that:
 - where the Services have requested advice from DSTO and ignore that advice, details of:
 - . the request;
 - the resources expended by DSTO on the request; and
 - the reason why the advice was not followed,

should be provided in DOD's Annual Report.

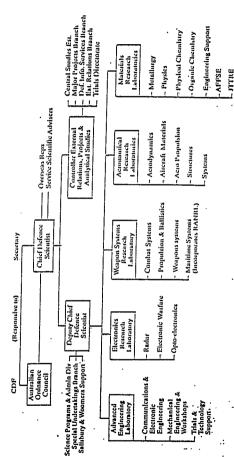
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^{14.} Correspondence, Department of Defence, 8 May 1987.

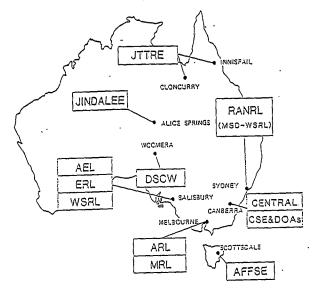
Figure 1 Defence Science und Technology Organisation as at 31 Murch 1986

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DSTO Principal Locations



WASHINGTON
COUNSELLOR DEFENCE SCIENCE LONDON
DEFENCE SCIENCE REP. BANGKOK
SCIENTIFIC ADVISER KUALA LUMPUR

Advanced Engineering Laboratory AEL Armed Forces Food Science Establishment AFFSE Aeronautical Research Laboratories ARL Cantral Studies Establishment csa Defence Support Centre Woomers OSCW Electronics Research Laboratory Over-the-horizon radar installation BAJADAIL Joint Tropical Trials Research Establishment STRE Materials Research Laboratories MRL Royal Australian Navy Research Laboratory RANAL Weapons Systems Research Laboratory WSAL

APPENDIX C

DSTO LABORATORY SITE INSPECTIONS

To gain a better appreciation of the DSTO laboratories' administration and facilities, the Sectional Committee undertook the following inspections as part of its inquiry:

- . Melbourne, 6 April 1987
- Materials Research Laboratories, Maribyrnong
- Aeronautical Research Laboratories, Fishermens Bend
 - . Adelaide, 7 April 1987

Defence Research Centre, Salisbury

- Advanced Engineering Laboratory
- Electronics Research Laboratory
- Weapons Systems Research Laboratory

Department of Defence

DEPARTMENTAL SCIENCE INSTRUCTION No 1/85

Note: Unless cancelled at an earlier date, this Instruction will be automatically cancelled two (2) years after the date of issue, It should be incorporated into a Departmental Manual before the automatic cancelling date.

31 DECEMBER 1985

DEFINITION, APPROVAL AND REVIEW PROCEDURES FOR THE DSTO PROGRAM

INTRODUCTION

- 1. This instruction supersedes Departmental Science Instruction No 1/83 of 20 December 1983, and is issued for the compliance of all staff of the Defence Science and Technology Organisation (DSTO).
- The DSTO engages in research, development, trials and evaluation activities in support of Australian defence needs. Its objectives are shown at Annex A.
- In meeting these objectives, the DSTO is required to arrange its work to conform with DSTO policy guidance as primarily expressed in its endorsed Statement of Objectives and Activities.

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4. The aim of this instruction is to detail the procedures to be followed in initiating, defining, approving, executing and reviewing Research and Development (RSD) activities in the DSTO Program. The DSTO Program is comprised of all DSTO activities and their related expenditure, plus capital expenditure, listed under sub-programs. The instruction applies to all RSD activities conducted by the DSTO; non-RSD activities such as laboratory level (not divisional) management, training (apprentice and non-acorentice) and library operations are excluded.

DSTO PROGRAM PLANNING

5. The DSTO Program is planned as part of the Five Year Defence Program (FYDP). The DSTO bid for the FYDP is supported by a Statement of Objectives and Activities (SOA) which provides definitive information linking policy guidance with proposed scientific and technical objectives and their related activity levels in the FYDP period, and with bids for financial and manpower resources. The SOA specifies activity levels and resources proposed for each sub-program in, and introduces new sub-programs into, the DSTO Program. On endorsement of the FYDP (which is for planning purposes only and carries no commitment to specific levels of resources) the sub-programs in the SOA, adjusted as necessary, will provide the approved guidance for DSTO activity planning. For some presentational purposes, sub-programs may be aggregated into fields of science and technology.

6. Year One of the endorsed FYDP and related SOA will be the basis of proposals for the annual DSTO program. The DSTO Program categorised by fields will support the bid for draft estimates to Programs and Budgets Division and higher Defence decision-making authorities, and will be included in the submission to the Minister for approval of the Defence Program.

SUB-PROGRAM DEFINITION

- 7. A sub-program is defined as:
- a. activity in a particular area of science or technology, planned and managed as an entity over the medium to long term;
- b. a nominated project normally requiring resources estimated at \$2m or more in total; or
- c. DSTO activity not included in a. or b. above, ie, non-R&D activities.

Each division typically is responsible for two to five sub-programs. The sub-program structure should reflect the way in which line management plans, organises and controls divisions' activities; it should aid accountability. Sub-programs may cross divisional and laboratory boundaries. Taken together, sub-programs will cover all DSTO activity and account for all DSTO resources.

SUB-PROGRAM APPROVAL

8. Sub-programs will be submitted by laboratory directors to the appropriate delegate for approval in May-June, subsequent to annual reviews (paragraphs 32-34). Delegations for approval of sub-programs are given at Annex B. CDS and DCDS, prior to approving any sub-program, will, through ASSTA, ensure its concurrence with current draft estimates and FYDP allocations.

TASK DEFINITION AND SPONSORSHIP

- A sub-program may be divided into several tasks. Each task, which is the basic unit for DSTO approval and recording systems, may also be categorised by other descriptors for various illustrative purposes.
- 10. A task may be sponsored by a Service, Defence Central element, Office of Defence Production, other Government department, an external organisation or by DSTO itself.
- 11. Service procedures for raising tasks on the DSTO are described in complementary Service instructions, namely:
- DI(N) ADMIN 66-1 'Navy Procedures for Initiating, Sponsoring and Monitoring DSTO Laboratory Tasks'
- DI(A) TECH 24-2 'Procedures for Raising Army Tasks on the DSTO'
- DI(AF) ADMIN 4-7 'Procedures for RAAF RED Tasks Raised on the DSTO'

- 12. DSTO sponsors tasks to develop its own capabilities (the technology base) so as to be able to address customer-sponsored tasks that are expected to arise in the longer term. Formal Service or other support for these tasks should be actively sought where appropriate, with the aid of the scientific adviser(s). Definitions of sponsorship and support are given at Annex C.
- 13. Task managers should ensure that tasks which are directed towards solving customer problems are sponsored by the customer concerned wherever possible. Furthermore, before significant resources are committed to concept development, the customer should not only sponsor relevant tasks but also show that the work is required to meet an appropriately approved staff target or staff requirement (or equivalent), as appropriate to the planned resource commitment.
- 14. Dual sponsorship is not acceptable, because it may affect the clarity of objectives and priorities. However, one Service or other organisation may <u>support</u> a task sponsored or supported by another. External sponsorship may entail assistance from the sponsor in the form of operational time, manpower, contract funds, equipment, stores or facilities.
- 15. Tasks fall into one of five types, as shown below, according to the total estimated cost of resources (see Annex C, paragraph 7) proposed for deployment against them within an approved sub-program:
- Type 1 Task requires resources estimated to cost more than \$4m;
- b. Type 2 Task requires resources estimated to cost up to \$4m but more than \$2m;
- c. Type 3 Task requires resources estimated to cost up to \$2m but more than \$200K;
- d. Type 4 Task requires resources estimated to cost up to \$200K, divided into two categories:
 - Type 4A tasks having a separate Task Number and Task Plan and requiring resources estimated to cost up to \$200K but more than \$50K; and
 - Type 4B tasks requiring resources up to \$50% and which may be included in a general task for each sub-program.
- 16. Some tasks may require to be divided into phases to permit separate commitments to activities such as:
- a. the preparation of a comprehensive, detailed Task Plan;
- b. the conduct of a preliminary study (eg, project definition);
- the achievement of intermediate milestones if technology or resources to achieve ultimate objectives are uncertain at the outset;
- d. the undertaking of closely associated but separate activities; or

e. to address specific problems arising during the course of the task.

Paragraph 26 describes the numbering procedure for tasks with multiple phases

- 17. In preparing task plans for each phase, indicative estimates of subsequent phases should be drawn to the attention of the delegate(s) likely to be responsible for approving tasks which will be raised to cover them. A proposed task plan for a subsequent phase should, anticipating results of the current phase, be referred to the sponsor for concurrence (if appropriate) and submitted to the delegate for approval in time to allow at least four weeks for his enquiries and consideration.
- 18. A task plan, following the format at Annex D, is to be prepared for all Type 1, 2, 3 and 4A tasks. The detail should be commensurate with the objectives and estimated magnitude of the particular task. The Type 4B category is provided primarily to allow customers a ready and less formal access directly to laboratories, generally to obtain timely solutions to Service problems or for general consultation. These tasks should, however, be defined by a short statement of objectives and estimated resource requirements.

TASK APPROVAL

- 19. Formal concurrence of the sponsor with Part A (Task Summary) and Part B (Technical Aspects) of the task plan must be obtained before approval. Reference to this concurrence should be attached to the task plan. Parts A and B may also be provided to the supporter for information.
- 20. DSTO resources are to be deployed only on approved tasks or activities. Delegations for approval of tasks are given at Annex B. The delegations made in this instruction give effect to substantial decentralisation of authority. The attendant requirements for accountability are dealt with later in this instruction. Notwithstanding the various levels of delegation listed, occasionally tasks (other than Type 1) will arise which, because of their nature or sensitivity, will be referred to CDs for his consideration and approval. The decision on the need for referral lies with the laboratory director.
- 21. The approving officer is to assure himself, taking into account advice from the appropriate financial adviser, that the task satisfies the following criteria:
- a. the overall objectives of the task are consistent with current DSTO policy guidance as stated in the Statement of Objectives and Activities: this may require advice from the Director, Forward Planning-Science (DFP-S);
- b. the task can be conducted within the limits of the relevant approved sub-program in the current year and is in accordance with future planning as approved in the SOA (if the task cannot be accommodated within resource allocation to a relevant sub-program, a submission to DCDS through Superintendent, Science Programs and Administration (SSPA) seeking the necessary amendment of sub-program allocations is required);

- capital, external contracts and any assistance from outside DSTO essential for execution of the task have been provided for in appropriate programs;
- d. the objectives and timescales of the task are in accord with the sponsor's requirement and the task has his formal concurrence;
- e. the resource costs (Annex C) are fully stated and the estimated total places the task within his delegation for approval; and
- f. the task has sufficient priority compared with other tasks in the sub-program.
- 22. A lower level delegate may approve an increase in the estimated cost of a task, provided that:
- a. the total approved cost, including the proposed additional cost, does not exceed the delegation of the original approving officer;
- b. the cumulative total of variations from the originally approved task cost does not exceed:
 - the limit of the delegation held by the delegate approving the variation, and
 - (2) 10% of the original approval; and
- c. the variation does not alter the basis of the original approval or reflect a change in policy.

 $\ensuremath{\mathtt{A}}$ progressive record of approved variations should be available to the delegate.

TASK PRIORITY

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- 23. Priority is categorised as high, medium or low; definitions of priorities are given in Annex C. Each task should be allocated a priority by its sponsor and, where supported, a priority should be accorded by the supporting organisation. For DSTO-sponsored tasks, the allocation of priority is the responsibility of the relevant laboratory director, subject (for Type 1 and 2 tasks) to agreement by CDS or DCDS respectively.
- 24. Indications of priority should be sought by the laboratories, with the aid of the scientific advisers where appropriate, for all customer-sponsored tasks and supported tasks at least every twelve months. It is not appropriate for customer organisations to express priorities for tasks they neither sponsor nor support.
- 25. The definitions of priority enable judgements made by separate sponsors to be related to each other. Issues of overall priorities of tasks are for determination by approving delegates and, as necessary, by Central Office (DCDS) in consultation with Service Offices and other customers; such issues should be referred to SSPA.

TASK RECORDING

- 26. A sequential task number will be allocated to each task, except Type 4B tasks. Each phase of a multi-phase task will be identified by an additional decimal digit.
- 27. In addition, codes will be assigned to each task to identify:
- a. its sponsor and the sponsor's priority for the task (Annex C);
- b. any supporting organisation(s) and its (their) priority for the task (Annex C);
- c. the sub-program to which it belongs;
- d. task type (paragraph 15);
- e. task approval status (Annex C);
- f. the objective category to which it belongs;
- g. the activity category to which it belongs; and
- its categorisation within any other set(s) of descriptors, as required by the current SOA format (eg military capability categories).

The objective and activity categories are listed in Annex E. The objective categories are based directly on Annex A, the activity categories are defined in Appendix 1 to Annex E. Details of sponsor, supporting organisation, sub-program, task type, objective, activity or other category will be recorded from the approved task plan. Priority will be recorded from information sought, as required by paragraph 24. Task approval status will be provided from Central Office records.

28. A Task Register Sheet will be issued for each task, except Type 4B, from information held on the DSTO management information system. This information, summarised from approved task plans, should be agreed between the laboratory and Central Office before entry into the system; a draft Task Register Sheet should be provided concurrently with each task plan forwarded to Central Office. The Task Register Sheet is an information sheet and not an authorizative document.

TASK TERMINATION

29. On completion or premature termination of a task, the approving delegate and the external sponsor, if any, should be provided with a report on achievements (to meet the sponsor's requirements) and a list of relevant publications. The approving delegate should also be provided with a statement of actual resource usage on the task. Premature termination of a task must be agreed to by the approving delegate in consultation with the sponsoring agency. Central Office should be kept informed of all such actions pertaining to task completion or termination.

ANNUAL REVIEW - TASKS

- 30. Tasks will be reviewed annually by the respective approving delegate; the task and sub-program timetable is given at Annex F. For this purpose, task managers will provide a report on the resources deployed on the task, together with its progress measured against milestones for the previous year and the milestones and resource deployment for the ensuing year. Task managers should consult with the Service sponsor, if appropriate, in preparing the task report and plan for the ensuing year. Resource deployment is to be given in manyears and budget requirements. A copy of the task report will be forwarded, for information, to Central Office and the task sponsor.
- 31. Subsequent to sub-program approval, delegates, in June-July, will endorse those tasks that are to continue within approved sub-programs. In the event that significant changes are proposed to the plan of activities (3.a Part B of Task Plan) or the resource allocations, an amended task plan should be forwarded to Central Office.

ANNUAL REVIEWS - SUB-PROGRAMS

- 32. In May-June, the director of each laboratory will present to CDS or DCDS a review of the work of each laboratory divison by sub-program. The sub-programs will be presented in sufficient depth to give CDS or DCDS a good appreciation of the work being conducted, the results achieved, the resources programmed and actually used, and future work and resources planned.
- 33. Documentation for the review is to be in the hands of CDS or DCDS at least ten working days prior to the review. The documentation must, for each of the division's sub-programs:
- identify the sub-program, its co-ordinator, and the tasks which constitute in;
- b. state concisely the progress against previously forecast targets for the current year;
- c. propose targets for the ensuing year, emphasising the effect on the sub-program of introducing any new activity or development for the next or future years;
- d. compare resources (manyears and budget requirements) used on the sub-program for the current year with resources that had been planned; and
- e. propose resource allocations (manyears and budget requirements) for the ensuing year, highlighting any significant changes to previous plans.
- 34. A summary of conclusions reached at the review should be drafted and forwarded to the appropriate delegate by the Director. Sub-program proposals amended to take into account any changes in the light of the sub-program review will be forwarded for approval in accordance with paragraph 8.
- 35. Notwithstanding the above procedures, CDS or DCDS may call at any time for special reviews of any specified sub-programs or tasks.

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- 36. For the purposes of co-ordination of the DSTO Program, the following procedures must be followed:
- a. Task plans for Type 1 and 2 tasks are to be submitted for approval to CDS and DCDS respectively by line management.
- b. Approval of Type 3 and 4A tasks must be notified by line management to SSPA together with a copy of the approved task plan.
- c. SSPA must be notified immediately of approvals of variations (paragraph 22).
- d. Termination of Type 1, 2, 3 and 4A tasks must be notified to SSPA together with documentation furnished in accordance with paragraph 29.
- e. Through formal returns to the DSTO management information system, laboratories must provide information as follows:
 - beginning of July estimates of resource allocation to tasks for the ensuing year;
 - (2) end of October and February notification of changes in task estimates exceeding \$50K from July estimate; resource deployment on tasks taken from the costing system;
 - (3) end of June actual resource deployment on tasks taken from the costing system.
- f. A list by sub-program of Type 4B tasks on which resources have been deployed during the previous six months must be submitted to SSPA every January and July.
- 37. Director, Program Co-ordination Science (DPC-S) in SPA Division is the officer responsible for overall co-ordination of the current DSTO Program and for the DSTO management information system.

P.T. Fink

(P.T. FINK)

Chief Defence Scientist

31.12.1985

- ANNEXES: A. The Objectives of the Defence Science and Technology Organisation
 - B. Levels of Delegation for Approvals of Resource Deployment
 - C. Definitions
 - D. Format of Task Plan
 - E. DSTO Objectives and Activity Categories
 - F. Tasks and Sub-program Review and Approval Timetable
 - G. Additional Distribution List '

REFERENCE: DST 85/27262

CONTACT OFFICER: Mr W.R. Clark (062) 66 4471 (CP3-4-28)

Program Co-ordination - Science

DISTRIBUTION: SDL 4, 6, 7Q, 7U, 7V, 7W + List attached at Annex G

EARLIER INSTR CANCELLED: Departmental Science Instruction No 1/83

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DEPARTMENTAL SCIENCE INSTRUCTION No. 1 /27

Note: Unless cancelled at an earlier date, this Instruction will be automatically cancelled two (2) years after the date of issue. It should be incorporated into a Departmental Manual before the automatic cancelling date,

27 JANUARY 1987

DEFENCE SCIENCE AND TECHNOLOGY ORGANISATION (DSTO) COSTING SYSTEM

INTRODUCTION

- The Defence Science and Technology Organisation (DSTO) is required to identify, attribute and account for the manpower and other resources which it applies to its program of work.
- 2. This function is carried out by means of computer-based costing systems which are required to conform with relevant departmental financial instructions and provide a database which will satisfy the requirements of central DSTO management and laboratory managers. These requirements are broadly as follows:
- to provide the basis for assessing costs of projects or activities requiring the approval or endorsement of senior, Defence committees, the Sacretary, the Minister or Cabinet;
- to identify the value of all resources used in the various components of the DSTO program for approval, management, monitoring and accountability purposes;
- c. to provide the basis for determining the financial recovery for work done for external organisations (eg commercial customers, other departments or other governments); and
- d. to provide supporting data for the budgetary process.

AIM

 This instruction promulgates the definitions and principles upon which DSTO laboratory costing systems are based.

DEFINITIONS

The terms used in this instruction are defined at Annex A.

RELATED INSTRUCTIONS

5. This instruction should be read in conjunction with Departmental Science Instruction (DSI) 1/85-Definition, Approval and Review Procedures for the DSTO Program and Departmental Finance Instruction (DFI) 2/84-Costing Policy within the Defence Organisation (and their successor instructions).

SYSTEM PRINCIPLES

- Laboratory costing systems are to identify and account for all costs. Costing data is to be compiled so that costs can be aggregated to task, subprogram and program levels.
- 7. The basic cost centre is a laboratory division. Other cost centres may be defined where the divisional structure is not appropriate or where specific identification of a cost entity is required (eg in administration or policy areas, major project management or special centres for cost accounting purposes). Approval for establishing cost centres other than divisions is to be obtained from the Assistant Secretary, Science and Technology Administration (ASSTA).
- 8. For approval and reporting purposes, tasks are to be costed at cost centre level.
- 9. Within a cost centre, all costs which can be identified as incurred specifically for the purposes of a task are to be brought to account against that task as prime costs. All other costs incurred within the cost centre in support of the tasks or subprogram it undertakes are to be termed support costs.
- 10. The support costs within a divisional cost centre are to be distributed to the division's tasks in the form of an overhead expressed as a percentage of prime labour cost.
- 11. $\,\,$ A similar principle applies to an approved cost centre which is not organisationally a division.
- 12. Laboratory level management and administration are not to be included in the task overhead but are to be included in specific laboratory management and administration non research and development (R&D) subprograms (see Annex A). The Defence Research Centre Salisbury Administration Branch (DRCSA) and the establishment level accounting, supply, personnel and other common services at the Aeronautical Research Laboratories (ARL) and the Materials Research Laboratories (ARL) are to be included in the laboratory administration subprogram for DRCS, ARL and MRL respectively.
- 13. Uniformly based costing procedures are mandatory, enabling the costing system to provide compatible data for use by DSTO Central and for other high level DSTO management purposes. The system may provide additional data for the specific requirements of the management of each laboratory and its functional elements.
- 14. Manpower is to be estimated, recorded and reported at the levels appropriate for each requirement. These levels are explained at Annex B.

MATCHING PROGRAM COSTS TO OUTLAY

15. Some DSTO expenditure not directly related to R&D subprograms (eg general plant and machinery, facilities) and revenue is to be allocated to non R&D subprograms (see Annex A). The total of all R&D and non R&D subprograms is to match total DSTO outlay.

IMPLEMENTATION

16. The procedures promulgated in this instruction are to be implemented retrospectively from ! July 1986.

SYSTEM AUTHORITY

17. The DSTO costing system management authority is ASSTA who is responsible for the policy and procedures governing operation of the system.

Heller

H.A. d'ASSUMPCAO Chief Defence Scientist

REFERENCE: DST 86/9447

DISTRIBUTION: SDL 4, 6, 7A, 7B, 7E, 7V, 7X, 14, Reg Sec SA, Reg Sec Vic

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(CP3-4-43)

EARLIER SCI INSTR CANCELLED: Nil