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TELECOMMUNICATIONS EXECUTIVE MANAGEMENT  
INSTITUTE OF CANADA

VOLUMES 1 AND 2

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# Evaluation Report

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PROGRAM EVALUATION DIVISION

This study was conducted by Anna Stahmer with Lindsay Green for the Program Evaluation Division of the Department of Communications and the Department of External Affairs, Canada.

The views expressed herein are the views of the authors and do not necessarily represent the views or policies of the Department of Communications or the Department of External Affairs.

This report was prepared under the direction of Erica Claus.

L'étude a été entreprise par Anna Stahmer avec Lindsay Green pour le compte de la Division de l'évaluation des programmes du ministère des Communications et du ministère des Affaires extérieures.

Les recommandations concernant les politiques et les programmes ou les points de vue exprimés, ici, sont ceux des auteurs et ne reflètent pas nécessairement ceux du ministère des Communications ou du ministère des Affaires extérieures.

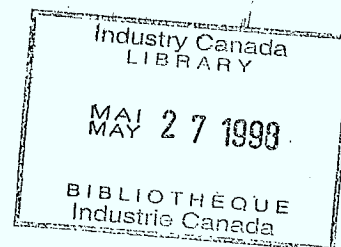
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# Anna Stahmer

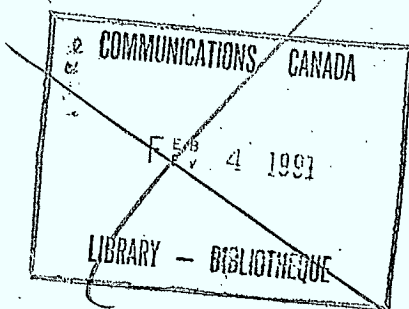
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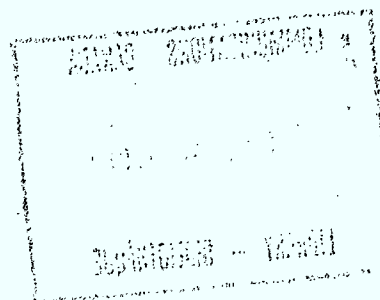
27 EVALUATION OF THE  
TELECOMMUNICATIONS EXECUTIVE MANAGEMENT INSTITUTE  
OF CANADA (TEMIC)  
VOLUME ONE



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Ce rapport a été rédigé pour le compte du ministère des Communications (MDC) et du ministère des Affaires extérieures (MAE) dans le cadre de l'évaluation de l'Institut des cadres supérieurs en gestion des télécommunications du Canada (TEMIC). Cette évaluation porte sur trois grandes questions, à savoir quelles sont les répercussions et les effets de TEMIC, s'il existe duplication avec les activités d'autres organismes et s'il existe des moyens plus rentables d'atteindre les mêmes résultats.

Le rapport est fondé sur des questionnaires et des interviews téléphoniques obtenus des participants, membres, non-membres et fonctionnaires des Affaires extérieures en mission ainsi que sur les données recueillies au cours de recherches supplémentaires.

TEMIC fut fondé en 1986. C'est un organisme sans but lucratif qui comprend vingt-cinq membres provenant de sociétés privées, d'établissements post-secondaires et du gouvernement fédéral. Il offre une formation en gestion supérieure des télécommunications aux professionnels des pays en développement, tout en procurant à ses membres l'occasion de démontrer leurs produits et leurs compétences. A la fin de mars 1990, TEMIC comptait sept programmes qui ont rejoint un total de 144 participants. Au cours des trois prochaines années, TEMIC offrira annuellement quatre programmes conçus pour accepter 84 participants.

Les contributions en espèce et en nature depuis la création de TEMIC se chiffrent à environ 4,5 millions de dollars. Les contributions du gouvernement comprennent 1,2 million de dollars de la part du MDC et du MAE pour le financement des opérations centrales et 855 000 \$ pour les bourses octroyées par l'Agence canadienne de développement international (ACDI). Les membres du secteur privé ont contribué 1,4 million \$ en cotisations dont l'échelle varie entre 500 \$ et 60 000 \$ par année. Les contributions en nature à l'élaboration des cours et à l'enseignement, aux visites des lieux, aux frais de représentation et de réunions sont de l'ordre de 850 000 \$ de la part des membres du secteur privé et de 292 000 \$ de la part du gouvernement. Ces contributions en nature représentent 30 pour cent du budget total de TEMIC.

La décision du Conseil du Trésor, qui autorisait les contributions du MDC et du MAE à TEMIC au cours d'une période de cinq ans, précise que ces contributions devraient correspondre à 50 pour cent des coûts réels. Le rapport indique que le principe des contributions égales offertes à TEMIC par le gouvernement et le secteur privé a été respecté. Pour ce qui est des contributions en

espèces seulement, la part du gouvernement (y compris l'ACDI), a été de 59 pour cent et celle du secteur privé, 41 pour cent. Cependant, compte tenu des contributions en nature, les parts du gouvernement et du secteur privé correspondent chacune à la moitié de la mise de fonds.

TEMIC poursuit deux objectifs : accroître les connaissances et les compétences des cadres supérieurs en gestion des télécommunications dans les pays en développement dans le but de les aider à développer leurs installations, leurs services et leurs ressources humaines et en second lieu, promouvoir la coopération et le commerce international du matériel et des services de télécommunications de l'industrie canadienne. L'évaluation précise que TEMIC a atteint ces deux objectifs avec succès. A cet égard, le succès de TEMIC est mis en évidence par le haut degré de satisfaction exprimé par les participants et les membres à l'endroit de l'organisme.

Les participants sont d'avis que les programmes de TEMIC ont contribué à l'accroissement de leurs connaissances des télécommunications en général. Dans une proportion de 95 pour cent, ils ont cité des exemples de la façon dont ils ont appliqué ces connaissances dans les domaines de la gestion, des décisions technologiques, de la planification, des politiques et de la réglementation. On s'attend à ce que les répercussions profitent au développement social et économique dans les pays en développement puisque plusieurs participants ont appliqué leurs connaissances acquises aux problèmes des régions rurales et plus de 50 pour cent des pays les moins développés ont délégué des participants à TEMIC.

Des avantages commerciaux directs et indirects ont découlé de TEMIC pour ses membres. Les avantages directs de TEMIC à ce jour atteignent 50 millions \$. Puisque les cycles d'acquisition du matériel de télécommunication pour le développement des infrastructures sont des opérations à long terme, on croit que les avantages commerciaux associés à TEMIC s'avéreront plus élevés à l'avenir.

Le rapport formule plusieurs recommandations qui pourraient accroître les avantages commerciaux rattachés à TEMIC, y compris la mise au point du processus de sélection des participants, l'élargissement des programmes d'études qui traitent du soutien financier et la mise en oeuvre de programmes de suivi auprès des participants et des fonctionnaires en mission à l'étranger.

Le nombre de membres de TEMIC est relativement stable et les divers intérêts de ces derniers sont généralement satisfaits. Cependant, il existe une certaine insatisfaction vis-à-vis les types de membres et les barèmes de cotisation afférents. Le rapport recommande que TEMIC révise l'ensemble de sa structure et son système de cotisation, les contributions en nature, ses sources de



revenu et identifie des mandats additionnels. TEMIC devrait aussi s'efforcer d'élargir sa base de recrutement en s'intéressant à de nouveaux volets tels que la téléphonie cellulaire et en modifiant son fonctionnement de façon à inciter les petites sociétés non-membres à y adhérer.

Le rapport démontre que les coûts quotidiens de TEMIC par participant se comparent avec les frais exigés par les autres institutions et constate que ses dépenses d'exploitation centrale ne peuvent être réduites d'une façon significative compte tenu de l'augmentation prévue du nombre de programmes annuels offerts de l'ordre de 25 pour cent et du nombre de participants de 20 pour cent.

Le rapport conclut que les membres du secteur privé ne sont pas susceptibles d'accroître leurs contributions en rapport avec les frais d'adhésion, mais plutôt d'offrir une contribution accrue en nature pour appuyer l'élargissement des programmes dont il a été fait état précédemment.

En examinant les différentes sources de financement, le rapport conclut que TEMIC ne peut fonctionner sans l'aide du gouvernement en raison de sa mission première qui veut former les professionnels dans les pays en développement. Cependant, le gouvernement pourrait diminuer sa contribution financière, si TEMIC réussissait à réaliser certaines des activités à revenu, décrites dans cette évaluation, c'est-à-dire : demander le plein paiement des cours à certains participants, augmenter les contributions en nature des membres et offrir aux membres des services spéciaux moyennant paiement. La mise en oeuvre d'une de ces activités nécessiterait cependant des modifications dans la structure de TEMIC ainsi qu'une période de stabilité financière afin d'en mesurer le rendement. Une flexibilité dans les articles budgétaires des opérations centrales et du programme de bourses aiderait TEMIC à optimiser son rendement d'exploitation. Si cela ne peut se réaliser, une diminution dans les activités des programmes futurs pourrait s'en suivre.

La participation soutenue du gouvernement du Canada est importante pour TEMIC et ce, de tous les points de vue, dans les domaines financier et du soutien logistique ainsi qu'en qualité de membre du conseil et de représentation diplomatique outre-mer. Le rapport recommande une présence gouvernementale plus importante dans les activités qui pourraient profiter à l'industrie entière, et par conséquent renforcer le rôle de TEMIC dans la création d'un "Canada Inc."

L'évaluation a constaté que TEMIC est un organisme unique; il n'est pas engagé dans des fonctions réalisées par d'autres institutions. Il offre un service essentiel aux Canadiens et à l'industrie canadienne des télécommunications. La plupart des pays industrialisés procurent une formation en télécommunications aux

professionnels des pays en développement. L'absence du Canada dans ce domaine conduirait à un désavantage concurrentiel pour l'industrie canadienne. Le Canada ne pourrait plus compter sur le prestige diplomatique associé à TEMIC.

En guise de conclusion, le rapport indique que les résultats de cette évaluation constituent un vote de confiance à l'égard de TEMIC de la part des participants internationaux et des membres de l'industrie canadienne. Il incite le gouvernement fédéral à promouvoir activement les programmes de TEMIC dans le secteur privé canadien et dans les milieux internationaux afin d'accroître son développement.

## EXECUTIVE SUMMARY

This report has been prepared for the Department of Communications (DOC) and the Department of External Affairs (DEA) as part of a comprehensive evaluation of the Telecommunications Executive Management Institute of Canada (TEMIC). The evaluation is concerned with the impacts and effects of TEMIC, whether it duplicates other activities and whether there are other, more cost-effective ways of obtaining the same results.

The report is based on written questionnaires and telephone interviews with Fellows, Members, Non-members and External Affairs Posts, as well as data gathered through additional research.

TEMIC was established in 1986 as a not-for-profit organisation and has 25 Members from private companies, post-secondary institutions and the federal government. It offers telecommunications management training to professionals from developing countries, while also giving its Members the opportunity to present their products and capabilities. By the end of March 1990, TEMIC had offered seven Programs with a total of 144 Fellows participating. Every year, for the next three years, TEMIC will offer four Programs designed to accommodate 84 Fellows annually.

Cash and in-kind contributions to TEMIC since its inception have amounted to approximately \$4.5 million. Government contributions of \$1.2 million from DOC and DEA have supported core operations and \$855,000 from CIDA has supported fellowships. Private sector Members have contributed \$1.4 million in membership fees, which range from \$500 to \$60,000 per annum. In-kind contributions to the development and delivery of courses, site visits, hospitality and meeting expenses are in the order of \$850,000 for private sector Members and \$292,000 for government. These in-kind contributions represent 30% of TEMIC's total budget.

The Treasury Board Decision which allocated the contributions of DOC and DEA to TEMIC for a period of five years states that these contributions should be 50% of the actual costs. The report concludes that the principle of equal contributions to TEMIC from the government and private sectors has been met. Considering cash contributions alone, the balance has been 59% government contributions (including CIDA) and 41% private sector. However, the inclusion of in-kind contributions brings the funding costs to a 50/50 split.

TEMIC has two stated objectives: to enhance the knowledge and skills of telecommunications executives and managers from developing countries to assist them in the development of their facilities, services and human resources and secondly, to promote international cooperation and trade for the telecommunications equipment and services industries in Canada. The evaluation concludes that TEMIC is very successfully meeting these two objectives. TEMIC's success

in this regard is best exemplified by the high degree of satisfaction with the organization expressed by both Fellows and Members.

Fellows report that the TEMIC Programs were successful in increasing their knowledge of telecommunications in general and 95% of the Fellows gave examples of how they had applied this knowledge in the areas of management, technology decisions, plans, policies or regulations. TEMIC is expected to benefit social and economic development in these countries since many Fellows stressed the application of what they learned to rural areas and over 50% of the world's least developed countries have sent Fellows to TEMIC.

TEMIC has achieved both direct and indirect trade benefits for its Members. Direct benefits from TEMIC to date may reach \$50 million and, since the procurement cycles for major telecommunication infrastructure developments are relatively long-term, it is anticipated that TEMIC will generate greater benefits in the future.

The report makes several recommendations that may increase trade benefits achieved by TEMIC, including fine-tuning the selection process for Fellows, expanding curricula sessions that focus on funding support and implementing follow-up programs with both the Fellows and the Posts.

TEMIC membership is relatively stable and the diverse interests of the membership are generally being met. However, there is some dissatisfaction with the membership structures and fees and the report recommends that a TEMIC review of the structure consider different fee structures, in-kind contributions, revenue generation and additional mandates for TEMIC. TEMIC should also consider expanding its membership into new fields such as cellular telephone and revising its operation to interest smaller Non-member companies in TEMIC membership.

The report finds that TEMIC's daily costs per Fellow are comparable to the fees charged by other institutions and concludes that TEMIC's core operating expenses could not be cut in any significant way given plans to increase the annual offering of Programs by 25% and the intake of Fellows by 20%.

The report concludes that the private sector Members are not likely to increase contributions through membership fees, but that they will increase their contributions through additional in-kind support for the expanded Program discussed above.

In examining alternative funding sources the report concludes that TEMIC will not be able to achieve self-sufficiency from government funding given the primacy of its mission to provide training to professionals from developing countries. However, government may be able to reduce its funding level if TEMIC is successful in implementing some of the income-generating activities discussed in this evaluation such as; charging some Fellows full course fees, increased in-kind contributions by Members, or special membership

services. However, the implementation of any of these activities will require modifications to the organization and a period of funding stability in which to assess their effectiveness. Budgetary line item flexibility between core and fellowship support would assist TEMIC in maximizing its operating efficiency. If this cannot be achieved, a reduction in future Program activities might be necessary.

The continued participation of the Government of Canada is important in all aspects of TEMIC; financial, logistical support, representation on TEMIC Boards and diplomatic representation overseas. The report recommends a greater government presence in those TEMIC activities which could be of benefit to the industry as a whole, thereby strengthening TEMIC's role in forging a 'Canada Inc.'.

The evaluation found that TEMIC is unique, it does not duplicate other activities and it is providing an important service for both Canada and the Canadian telecommunications industry. Most industrialised countries are providing telecommunication training to professionals from the developing world and the absence of a Canadian equivalent would be to Canada's competitive disadvantage. Canada would also not reap the diplomatic gains that are being achieved through TEMIC.

The report concludes that the results of this evaluation are a vote of confidence in TEMIC from both the international Fellows and from Canadian industry. It urges the federal government to actively promote TEMIC among the Canadian private sector and in international circles to ensure that TEMIC is able to build upon its successes.



## INTRODUCTION

This report has been prepared for the Department of Communications (DOC) and the Department of External Affairs (DEA) as part of a comprehensive evaluation of the Telecommunications Executive Management Institute of Canada (TEMIC), as mandated in Treasury Board Decision (TB 802885). Treasury Board approved government support to TEMIC for a five year period starting in 1986/87 and stipulated that continued funding beyond 1990/91 would be examined in 1989/90 in the course of evaluating the program.

TEMIC was established in 1986 to offer telecommunications executive management training for senior telecommunications officials from third world countries. It has two stated objectives; to enhance the knowledge and skills of telecommunications executives and managers from developing countries to assist them in the development of their facilities, services and human resources and secondly, to promote international cooperation and trade for the telecommunications equipment and services industries in Canada.

TEMIC is located in Montreal and offers programs, generally of a three week duration, in different cities throughout Canada. Programs are offered in English and French and plans are being developed to introduce a program in Spanish. Two different categories of programs are offered; Core Programs are reserved for senior management and Focus Programs are open to middle management. As of March 1990 TEMIC has offered five Core Programs and two Focus Programs to a total of 144 Fellows. TEMIC staff develops the Programs and member companies develop and deliver sections of them.

TEMIC has twenty-five Members, as of March 1990. Eighteen are private sector Members, three are government departments or agencies, one is a crown corporation, and three are post-secondary institutions. Seven Members, including two government departments, are Ordinary Members, two are Associate Members, four are Affiliate Members, eight are Participating Members, three are Post-secondary Members and one government agency is an ex-officio Member. The annual membership fees are \$60,000 for Ordinary Members (excluding government), \$15,000 for Associate Members, \$7,500 for Affiliate Members, \$2,000 for Participating Members and \$500 for Post-secondary institutions. A list of TEMIC members is attached as APPENDIX A.

TEMIC's Board of Directors is comprised of eleven members, including a representative from each of the membership categories and seven of the Board members make up the Executive Committee of the Board. The invitation process for the participants is determined by the Advisory-Selection Committee which is chaired by TEMIC's Managing Director and is made up of 22 individuals, none of whom sit on the Board of Directors.

## SECTION ONE: EVALUATION ISSUES AND METHODOLOGY

### 1.1 Evaluation Issues

The TEMIC Evaluation Assessment Report<sup>1</sup> established the context, orientation and methodology for an evaluation of TEMIC and specified focusing on what impacts and effects, both intended and unintended, have resulted from the program. Also at issue is whether the program complements, duplicates, overlaps or works at cross purposes with other similar activities, and whether there are other, more cost-effective ways of obtaining the same results.

Five evaluation issues were identified within this focus: trade, training, membership, funding and comparisons. Trade issues examine TEMIC's direct and indirect marketing and trade benefits for Canadian telecommunications firms. Training issues focus on the extent to which TEMIC has been successful in enhancing developing countries' senior managers' knowledge of telecommunications management and their ability to apply this knowledge. Membership issues consider whether Members are satisfied with the return on their investment in TEMIC and examines the potential for expanding TEMIC's membership.

Funding issues focus on the balance between funding levels of the private and public sectors, examine other sources of funds and consider whether there is a need for continued federal government support of TEMIC. Comparisons issues consider other international telecommunications training institutions and whether TEMIC could benefit from modifications based on other models.

In addition to the above issues we have expanded the trade issues to include an examination of developmental effects and influence on diplomacy. Developmental effects are those which result in the improvement of the infrastructure and human resources of developing countries and consider such factors as participation in TEMIC by countries representing limited trade opportunities, and advances in third world telecommunication infrastructures and services as a result of TEMIC participation. Under diplomatic impacts we consider factors such as an increase in Canada's profile, both world-wide and in multilateral bodies, as a result of TEMIC, as well as an increase in knowledge among developing countries about the relevance of the Canadian experience to their situation.

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<sup>1</sup> Evaluation Assessment Report, Department of Communications, Ottawa, January 1990.

It was decided to include these additional evaluation issues after reviewing the evaluation report of the United States Telecommunications Training Institute (USTTI)<sup>2</sup>, an institution similar to TEMIC, and after discussions with officials at the International Telecommunications Union (ITU), DOC and the Department of External Affairs (DEA).

Volume One of this report devotes a separate section (Sections Two to Six) to each of the five evaluation issues: trade (development and diplomacy), training, membership, funding and comparisons and conclusions are drawn at the end of each section. Section Seven summarizes the findings and Section Eight summarizes the conclusions. Volume Two of the report contains the questionnaires used in the data gathering and additional notes on methodology. The research approach is covered in the following section.

## 1.2 Research Approach

The information and data on which this evaluation is based have been gathered through the use of different research instruments, as appropriate to the task. Questionnaires were developed to solicit information from TEMIC Fellows, Members, Non-members and External Affairs Posts. Less structured documents were used for other purposes, such as to gather information, by mail and telephone, from other institutes offering telecommunications management training.

The data collected using these tools have been supplemented by information gathered from researching international telecommunications issues through discussions, literature search and statistical research, from sources such as the Department of Communications, External Affairs, CIDA, Statistics Canada, Industry, Science and Technology and the International Telecommunications Union (ITU). TEMIC personnel provided initial background information and responded to subsequent requests for clarification or elaboration.

Other international telecommunications training institutions which are used for comparison purposes in this report, were selected on the basis of discussions with ITU staff and the feedback from Fellows. Out of eight institutes contacted, four sent documentation about their activities, including one each from Sweden, the U.K., the Netherlands and the U.S.. We were able to assemble from ITU sources sufficient information about another institute in the U.K. and one in France. Information could not be

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<sup>2</sup> Internal Memorandum, USAID/SCI, John Daly, Washington, DC, June 1987 and "Analysis of USAID support for the US Telecommunications Training Institute", IIR, MacLean, Va., November 1987.

obtained from institutes in Japan or Germany but we are sufficiently familiar with the training activities in these two countries to know that their activities are organized differently, and that their absence from this report is not detrimental.

#### 1.2.1 Fellows

One hundred and twenty-four (124) TEMIC Fellows were sent a questionnaire. This total includes every Fellow who attended a TEMIC Program prior to the February/March 1990 Program, as well as four Fellows from this last Program. Only four people from the last group were included in the sample since those sections of the questionnaire focusing on the application of knowledge acquired through TEMIC were felt to be meaningful mainly to those who had attended the Program some time ago. At the same time, however, it was considered important to gain some feedback from the last group.

The questionnaire was accompanied by a letter from Mr. Ken Hepburn, Senior Assistant Deputy Minister of the Department of Communications, which explained the purpose of the evaluation and thanked the Fellow for his/her cooperation. Each Fellow received the questionnaire and the correspondence in the language of the TEMIC Program attended, either English or French.

Twenty-nine of the 124 Fellows were selected to receive, along with the questionnaire, a request for a telephone interview. Telephone interviews were requested to increase the response rate and to maximize the quantity and quality of the information obtained.

Several factors were taken into account in the selection of the Fellows for the telephone interviews including representation from all seven TEMIC programs and representation from each geographical region. Priority countries, as identified in discussions with DOC officials, were included. The sample also included some countries eligible for CIDA assistance; some countries with resources for self-financed procurements; and some with active or pending World Bank projects.

A total of 38 Fellows responded from the 124 contacted, representing a response rate of 30.6%. Of the 29 who were asked for a telephone interview, 15 responded. (Nine of the 15 consented to a telephone interview, five mailed in their completed questionnaires and one sent a letter.) Of the 95 Fellows who were asked to return their questionnaire by mail, 23 Fellows responded.

The 38 Fellows who responded come from 23 different countries, with representation from four regions, Asia, Africa, the Middle East and the Americas. Twenty-one of the respondents attended a Core program and 17 respondents attended a Focus program, with representation from all seven courses. The highest percentage of response is from the Focus program of November/December, 1989 and the second highest is from the inaugural Core Program of September/October, 1987.



A comparison of the respondents to the total population of Fellows indicates that the respondents are broadly representative of the Fellows as a whole with respect to geographic representation and participation in Core and Focus programs. Probing in the telephone interviews confirmed the findings from the mailed questionnaires and the data received from the mailed questionnaires was found to be consistent with that gathered from the telephone interviews.

#### 1.2.2 Members

As of March 8, 1990 TEMIC had a total of 25 Members from the private sector, government and post-secondary institutions. Requests for an interview by telephone were sent to all Members, accompanied by an Outline of Questions, which was an abbreviated version of the questionnaire. Twenty-two Members were interviewed for a response rate of 88%. The three Members with whom an interview could not be arranged have belonged to TEMIC for either one or two years as Participating Members. They are neither on the Board of Directors nor on the Advisory Selection Committee.

#### 1.2.3 Non-members

Twenty-nine (29) telecommunications companies that are currently not Members of TEMIC were sent a request for an interview by telephone, accompanied by an Outline of Questions which was an abbreviated version of the questionnaire<sup>3</sup>. The sample was drawn from the publication "Telecommunications Products and Services for World Markets" (DEA, 1989), coupled with information provided by officials of DOC and DEA regarding participation by companies in trade missions and export-related activities. The companies selected were considered to have interests in third world markets, and therefore might benefit from membership in TEMIC.

The sample had representation of a mix of companies with different types of expertise and interests, including manufacturers, consulting firms and providers of turnkey systems. There was representation from different regions of the country.

Interviews were conducted with eleven Non-member companies, for a total response rate of 37.9%. The response rate for the Non-members might have been higher had our research not coincided with other surveys on related topics. Interviewees informed us that two other government-sponsored surveys on international exports were being carried out with some of the same sample group. In addition, TEMIC was carrying out a membership drive and contacting some of the same people. Another factor that tends to lower the response rate in a sample of this nature is the amount of time prospective interviewees are out of the country on business. Nevertheless, the

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<sup>3</sup> The original mailing included 31 companies, but two of the companies were found to no longer have telephone listings.



eleven Non-members interviewed include representation from British Columbia, Alberta, Ontario and Quebec and include manufacturers, consulting firms and providers of turnkey systems.

The Non-member sample included three companies which had formerly been TEMIC Members but had discontinued membership. Of the three ex-members included in the sample, two were interviewed.

#### 1.2.4 External Affairs Posts

Forty-four External Affairs Posts received a written questionnaire. Included in this sample were all Posts with countries in the area of coverage which have TEMIC Fellows, as well as some Posts whose countries have not yet sent TEMIC participants. The sample included Posts that represent some CIDA eligible countries as well as Posts whose countries have resources for self-financed procurements. Posts were also included that represented priority countries as identified by DOC and DEA officials. (See discussion under Fellows.)

Nineteen Posts responded for a response rate of 43.2%. These Posts represent countries from four regions; Asia, the Middle East, Africa and the Americas. Three of the respondents are from Posts whose countries have not yet sent TEMIC participants. In addition to these respondents, embassy personnel were interviewed in person in Tunisia and Kenya, prior to the development of the questionnaire.

#### 1.3 Conclusions

The response rates from the questionnaires are summarized in the table below:

CATEGORY	TOTAL SAMPLE	RESPONSE	PERCENTAGE RESPONSE
FELLOWS	124	38	30.6%
MEMBERS	25	22	88.0%
NON-MEMBERS	29	11	37.9%
POSTS	44	19	43.2%

It is important to note that this is the first time that extensive feedback has been received from TEMIC Fellows after they have returned home and had an opportunity to evaluate their success in applying knowledge gained through the Program.

TEMIC conducts extensive surveys with the participants during and on the final day of their programs. For the TEMIC Telecommunications Customer Services Management Program (February 19 - March 9, 1990), for example, the participants were asked to complete five written opinion questionnaires, including an assessment of the curriculum presented at the end of each of the three weeks, an overall curriculum evaluation and a logistical and social evaluation.

TEMIC has not, however, received very much post-Program feedback from the Fellows. A post-Program questionnaire was sent to the participants of the May-June 1988 Executive Management Program but it appeared, according to the files, that only three Fellows responded. Based on TEMIC's experience and that of other research projects with similar target groups the Fellows response rate for this evaluation must be regarded as very good.

In the spring of 1989, DEA solicited feedback on TEMIC from its overseas Posts. The fifteen responses received at that time were taken into account in the design of the questionnaire sent to the Posts, which likely contributed to the relatively high response rate from the Posts to this evaluation.

Further, discussions with knowledgeable officials in Canada and overseas were crucial to the development of the tools and methodology for the analysis of the data gathered from questionnaires, interviews and other sources.

In carrying out this evaluation we were able to draw on two evaluations of USTTI, undertaken in 1987. Neither of these was of the scope of this evaluation. Taken together, however, they addressed many of the same issues. To our knowledge, the European institutions which are discussed in this report have not undergone broad program evaluations. Rather, the materials received indicate a focus on course specific evaluations, which, in some cases are carried out with input from the ITU.

Overall, the methodology used for this evaluation was found to be effective in gathering the required data and the findings can be stated with confidence.

## SECTION TWO: TEMIC AND TRADE, DEVELOPMENT AND DIPLOMACY

### 2.1 Present Volume of Trade with Developing Countries

Canada's export of telecommunications equipment to developing countries in 1988 was roughly in the order of \$155 million<sup>4</sup>, out of a total telecommunications equipment export of \$775 million. Data on the sales of consulting services are not traced in a consistent manner but their total value is estimated<sup>5</sup> at two to five per cent of equipment export. Using 3.5 %, this sector may account for an additional \$5,425,000, which brings the total of telecommunications exports to developing countries to \$160.5 million (rounded).

The estimates of exports (1988) to developing countries, based on self-reported figures by TEMIC Member companies indicate that the Member companies include the main exporters. The 1988 estimates provided by Members interviewed for this evaluation actually end up to be higher than the Statistics Canada data at \$224.6 million (rounded)<sup>6</sup>. This discrepancy can be explained by a number of assumptions<sup>7</sup> which had to be made in the Members' estimate, however,

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<sup>4</sup> based on Statistics Canada Information Technologies Industry Performance, Statistical Summary ISSN # 0838-1828 (page 68) and on Statistics Canada Exports; Merchandise Trade, 1988(pages 911 to 928). We arrived at this figure by first reducing the total Canadian equipment export figure of \$775,000,000 by 72.5% (or \$562 million, which is listed as exports to clients in five industrialized countries. We further deducted another 7.5% (or \$58 million), as a rough estimate of products exported to other industrialized countries such as Japan, Australia, etc.

Total exports (1988)	\$775 million
Exports to major customers (72,5%)	\$562 million
Exports to remaining 7,5%	\$ 58 million
Exports (rest of world) 20%	\$155 million

<sup>5</sup> Discussions with government official at the Departments of Communications and Industry, Science and Technology.

<sup>6</sup> This figure excludes sales to developing countries from Northern Telecom, which exports about \$303 Million to developing countries from its global divisions. We were not able to break out the data in a suitable fashion to include it in this analysis.

<sup>7</sup> A number of members gave figures only for 1981 and for 1989, and suggested constant annual incremental growth percentages. Some gave only general estimates of sales to developing countries. Adjustments in the 1988 figures related to factors such as carry-over from large sales in the previous year were not possible. Further, a number of companies did not report on their sales nor

it is safe to conclude that TEMIC's present membership represents a large percentage of the total Canadian exports to developing countries.

Given the assumptions inherent in the data provided by the Members, the figure of \$160.5 million based on Statistics Canada figures will be used as a basis for later discussions related to export volume to developing countries, rather than the Member's data.

## 2.2 Future Prospects in Telecommunications Trade

In order to situate TEMIC in the context of future telecommunications trade, a look at future prospects for Canadian telecommunication export to developing countries is necessary. Responses from Posts, Members, Non-members and Fellows affirmed the commonly held belief that trade opportunities exist for Canadian companies in most parts of the Third World.

The responses from the Fellows highlighted opportunities for Canadian exports in the following areas: 23 (60.5%) Fellows reported that they could now or in the future use Canadian solutions to their telecommunications problems. Twenty-eight (28) (73.7%) Fellows reported that they could use Canadian products, and eleven (28.9%) Fellows identified Canadian services which they could use.

Eleven (50%) of the Members sampled see developing countries as major growth areas for their companies. Of these, nine (40.9%) see them as present growth areas, the remaining two see growth occurring in a time frame of between two and five years. Members mentioned that export opportunities exist for their company in all regions of the world and identified 25 individual countries of trade interest.

All Posts saw opportunities for Canadian companies in their geographic areas. The market areas most frequently identified were rural systems, cellular systems and switching equipment. Overall, the opportunities mentioned included a broad range of technologies.

While many developing countries have requirements for a broad range of technologies and services, it is important to remember that other industrialised countries are also in this market. The Posts reported in all countries but one, the presence of two or more established suppliers from developed countries. According to the Posts, Canadian suppliers are present in five countries. This puts Canada behind Germany, Japan, France, Sweden, U.K., USA, and Italy, but ahead of the Netherlands and Spain.

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export figures. For the purpose of this analysis, however, the figures are sufficient.

It is not possible to quantify potential growth figures for telecommunications exports to developing countries. The investment needs for telecommunications infrastructure requirements of developing countries have been projected as high as \$12 Billion per annum<sup>8</sup> over the next decade. These figures, however, cannot be used to predict future exports because the mere existence of requirements does not mean that procurements will actually occur. Further, to estimate Canada's potential share of upcoming potential procurements is well beyond the scope of this study. Historical data cannot assist in this analysis because of a newly adopted (1988) concept for trade commodity classification<sup>9</sup>.

### 2.3 TEMIC's Role in Realizing Marketing Prospects

Private sector Members were asked to rate TEMIC in terms of usefulness to their company as one of eight different international marketing vehicles to reach customers in developing countries. The vehicles included: their own company's international sales division, manufacturer's representatives, local agents, staff trips, government trade missions, embassies, international telecommunications shows, TEMIC and other.

#### MIX OF MARKETING VEHICLES EMPLOYED BY MEMBERS

NUMBER OF MEMBERS	NUMBER OF VEHICLES USED
2	10
4	8
3	7
3	6
1	5
1	4
8	0*

\* Members from government, post-secondary institutions and the private sector without direct marketing interests.

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<sup>8</sup> North-South Institute, briefing paper entitled "Telecommunications and Development", Ottawa, April 1989.

<sup>9</sup> The introduction to Information Technologies Industry Performance, statistical summary 1988, Information Technologies Industry Branch, I.S.T.C., August 1989 (ISSN # 0838-1828) states on page ii "data for the years prior to and including 1987 are based on commodity data defined according to the ... CITC classification. Commencing in 1988, Canada adopted the Harmonized System for commodity trade classifications. Because of differences in concepts" .. behind the two classifications, "the 1988 data are not strictly comparable with data from previous years".



The following table compares the rating of marketing vehicles by TEMIC Members (private sector) with those ratings provided by Non-member companies\*:

**RATING OF MARKETING VEHICLES BY  
MEMBERS AND NON-MEMBERS**

MARKETING VEHICLE	PRIVATE SECTOR	NON-MEMBER
	MEMBER (average rating)	(average rating)
INTERNATIONAL SALES DIVISION	3.8	3.9
STAFF TRIPS	3.8	3.6
CANADIAN EMBASSIES	3.6	2.8
TEMIC	3.2	1.5 <sup>10</sup>
INTERNATIONAL TRADE SHOWS	3.2	2.8
LOCAL AGENTS	3.2	3.3
TRADE MISSIONS	3.1	2.6
MANUFACTURERS REPRESENTATIVE	2.0	3.3

\* The rating of one represents very unsuccessful and the rating of five represents very successful.

Members rated TEMIC on a par with international trade shows and local agents. Given the short period of TEMIC's existence, this can be seen as a positive rating. Members gave highest average ratings to their international sales division and to staff trips. Non-members also rated these two vehicles as most successful.

An important difference is apparent between the Member's and Non-member's ratings of government trade missions, exhibits and embassy activities. Non-members typically gave ratings of below three (neither successful nor unsuccessful) to government-led initiatives or broad international exposure, such as trade shows. This finding, combined with the fact that they gave higher marks (3.3) to local agents and to intermediaries, such as manufacturer's representatives, suggests that they operate in specialised markets, and sell to specific customers or do not sell directly to the end client. As supporting evidence, four Non-members, when asked if

<sup>10</sup> Ex-member.

TEMIC could assist in their international marketing, responded in the negative. The reason given by some was that they sell specialised products and services, of interest to specific customers only, commonly called niche markets.

#### 2.4 Direct Trade Benefits from TEMIC

In most cases Members felt that it was not possible to isolate the impact of TEMIC from all the other factors that contribute to a sale, and they were therefore unable to credit TEMIC directly with a specific signed contract. As one Member said, "TEMIC is a first-class promotional vehicle, but you can never claim that a sale resulted from promotion". As another Member expressed it, "It's a contributing factor. TEMIC has been helpful but it's hard to quantify. I feel we would have gotten it anyway."

Nevertheless, one Member felt that his company had concluded a sale that he could directly link to a particular TEMIC Program and to a particular TEMIC Fellow. Three others Members expect to sign contracts in the future which they could link to a specific TEMIC program and Fellow, and three Members have hopes that such contracts will materialize. The total dollar value of the one contract already concluded and the three contracts which are anticipated is \$42,300,000. Adding the "maybe's" would bring the total to over \$50 million.

In assessing these numbers it is important to remember that not all of the Members have as an objective of their membership in TEMIC, the obtaining of contracts. (See section 4.1 Objectives of Members). Of the 14 Members with trade interest in developing countries, six anticipate direct benefits either now or in the future and eight do not have any such expectations.

It should be emphasized that one difficulty in establishing a direct link between TEMIC and sales is TEMIC's relatively short existence. Most Members report that it takes up to five years to secure a contract after initial contacts are made and TEMIC has only been offering courses since October 1987. (See section 2.6 Sales Completion Time Frames.)

The Posts anticipate that direct trade benefits will result from TEMIC but more in the long term, than in the short. Seven (7) Posts do not see any benefits in the short-term, three do not anticipate any in the medium term, however, in the long-term all Posts see TEMIC resulting in direct trade benefits.

#### 2.5 Indirect Benefits from TEMIC

Over half (73.7%) of the non-government Members say that they have achieved indirect benefits through TEMIC, mainly in the form of contacts. In addition, a number of Members reported that they were

able to establish a number of useful contacts with other Members, leading in some cases to sub-contracts in overseas projects.

Just under half (47.1%) of the Posts report indirect trade benefits resulting from TEMIC because it raises Canada's telecommunications profile internationally and in some cases assists the embassies in establishing and maintaining relationships. Just over half (52.9%) of the Posts, however, do not see any indirect benefits from TEMIC.

## 2.6 Sales Completion Time Frames

The time frame from initial contacts to the point of signing a deal is important to the discussion of direct or indirect trade benefits which might have been achieved through TEMIC.

Most Members report that it takes up to five years to secure a contract after initial contacts are made. Only one Member reported a time frame of less than one year. A few Non-member companies report shorter time frames, from a few months to three years. The contracts that these companies seek appear to be typically smaller than those of the Members, some sell to distributors and some operate in specialized niche markets.

The procurement of major telecommunication systems and services is the culmination of a multi-year process which includes systems and economic studies as well as the development of financing vehicles. Smaller procurements can proceed more quickly. Participation in TEMIC programs may not be a significant factor in obtaining contracts for large projects at this time since the first TEMIC program was held only in October 1987, less than three years ago.

For large projects it is very important that a company's systems and technologies are known in the procuring country when specifications are being prepared. This suggests the potential importance of having Canadian experts participate in the drawing up of the procurement specifications. We are aware<sup>11</sup>, that, as a result of a TEMIC program, Canadian consultants have been invited by one country to consult in the early stages of a major infrastructure development activity. Should this activity proceed into the procurement phase, it is not likely that the tender stage would be reached in less than four to five years after project conception.

## 2.7 Priority Countries

Links between TEMIC and direct and indirect trade benefits can only be established if Fellows come from countries in which Members have export interests or which have active ongoing or pending procurements.

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<sup>11</sup> Interview with DOC staff.

Members identify export interests in all parts of the globe. As regions, the Caribbean, Latin America and Asia receive a higher expression of interest than Africa, the East Block and the Middle East.

#### REGIONAL DISTRIBUTION OF FELLOWS

REGION	NUMBER OF COUNTRIES AT TEMIC
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SOUTH/CENTRAL AMERICA	6
CARIBBEAN	9
AFRICA (incl. North Africa)	32
MIDDLE EAST	3
ASIA	12

This break-down shows that African countries<sup>12</sup> represented just over half of the countries present at TEMIC Programs. Further, 69 Fellows have come from African countries, representing almost 50% of the total numbers of Fellows.

Of the 25 individual countries identified as priority countries by Members, 16 had representatives in TEMIC programs. Seven of the eight countries with highest concentration of interest by Members had sent Fellows. Indonesia is ranked as country of highest interest, followed by Thailand, China and Brazil. Every one of these countries received invitations to each of the Programs<sup>13</sup>. Eight Members included regions as well as individual countries in their top priorities, which makes it difficult to clearly delineate priority countries represented at TEMIC. For the same reason, it is not possible to establish the number of TEMIC participants from countries in which no TEMIC Member has an export interest.

Thirty-six prime interest countries were identified in discussions with government trade promotion officials, using selection factors such as upcoming procurement activities, availability of financing, or a generally positive business climate for Canada. Of the countries identified by this group, 22 have sent Fellows and 14 have not sent Fellows to TEMIC.

A total of 15 countries were included in the above priority lists of both Members and government officials. Of these, four have not sent Fellows to date.

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<sup>12</sup> Two Magreb States as well as Egypt are included in the African sample.

<sup>13</sup> They received invitations to the five English-language Programs.

The number of Fellows from any given country received at TEMIC is likely the most useful measure of priority countries represented at TEMIC. Larger numbers of Fellows per country will assist in the implementation of new methods learned because more people have a common base of knowledge. Further, larger number of people familiar with Canadian expertise and solutions may make a difference in procurement decisions.

#### COUNTRIES WITH LARGEST NUMBER OF FELLOWS

COUNTRY	NUMBER OF FELLOWS	MEMBER PRIORITY	GOVERNMENT PRIORITY
THAILAND	8	YES	YES
TRINIDAD	6	NO	NO
ZIMBABWE	5	NO	YES
UGANDA	5	NO	YES
MALAYSIA	5	YES	YES
INDIA	5	NO	NO
CHINA	4	YES	YES
JORDAN	4	NO	YES
LESOTHO	4	NO	NO
MOROCCO	4	YES	YES
NIGERIA	4	YES	YES
INDONESIA	3	YES	YES

In total, 54 Fellows, or almost one third, came from 11 countries (out of 62 countries), which sent four fellows or more. At the other end of the spectrum, 41 countries sent one or two Fellows.

Three countries which have sent four , five and six Fellows respectively, were neither on the priority list identified by Members nor by government trade officials. Overall, government priority countries are more strongly reflected in the above list than Member priorities.

A report prepared by staff of the Canadian embassy in Washington (1989) lists 28 countries actively engaged in different stages of the World Bank loan cycles, with a small number in the tendering phase. TEMIC has had Fellows from 18 of these 28 countries. TEMIC Fellows included 29 from countries that did not appear on either of these lists and could be construed as having little known Canadian export potential.

A comparison of Fellow's country of origin with the list of CIDA eligible countries shows that out of 62 countries represented, only one Fellow is from a country which is not eligible for Canadian Official Development Assistance.



It is important to note that there is a time discrepancy between data related to Fellows' country of origin and countries identified as having export potential. The Members and Posts were asked to report on present or future countries or regions with export potential. And Fellows may represent countries that were of trade interest at the time of their participation. This factor should not be of great significance, however. Since market development is a long-term process and TEMIC's programs have only been offered for the past two and a half years, there should be a fairly high degree of correspondence between prior and current interest/non-interest in the countries represented by TEMIC participants.

## 2.8 Financing Vehicles

In the discussion of export opportunities to developing countries, the type of financing used by the procuring country is of obvious importance. Bilateral sources of procurement financing are often tied to the purchase of equipment and services from companies in the country which makes the financing available. In Canada, CIDA and the Export Development Corporation (EDC) are the two main agencies with responsibility for bilateral financing instruments. Both use a number of financing mechanisms<sup>14</sup>. In most instances, these funds are used to purchase Canadian products and services.

Canadian Chartered Banks provide a number of techniques for financing exports sales. Their financing facilities are typically not as favourable as bilateral instruments. The Chartered Banks cooperate with EDC in financing exports of capital goods and services. EDC's function in these arrangements is to provide financing so the overall cost of lending is competitive with terms available from foreign credit agencies.

Projects financed through multilateral sources like the World Bank must go to competitive open international procurement. Loans from these multilateral institutions at times supplement the other financing instruments identified earlier, leading to mixed financing instruments.

The revenues generated from telecommunications services in the purchasing country are often substantial. They account for a major share of the financing of telecommunications systems in developing countries<sup>15</sup>.

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<sup>14</sup> Source: International Financing Data: "A Business Guide to Export Financing and other Financial Assistance", External Affairs Canada, March 1989.

<sup>15</sup> Source: Bjorn Wellenius, World Bank telecommunications economist in a presentation at the PTC 1990, January 1990, Hawaii.

Posts, Members and Non-members reported on a large spectrum of financing vehicles used, including commercial banks, in-country telecommunications revenues, CIDA, Export Development Corporation (EDC), loans from the World Bank and other multilateral banks and subcontracts.

The Posts report the general prevalence of mixed financing arrangements with concessional financing and bilateral aid being the most common instruments (nine countries). Multilateral banks are important in seven of the countries and in six countries some or all of the funds are raised on the commercial market. When reporting on the financing of present activities of Canadian companies in their region, Posts report that five companies were supported by CIDA, and 14 were private sector financed, two of which also had access to EDC financing.

It is important to note that the Non-member companies report that their exports are more often financed through the revenues of the purchasing telephone companies than through any other vehicle. Seven companies out of 11 have experience with this method.

Revenue from the purchasing telephone companies was also a major financing vehicle for the exports from Member companies. This type of financing and CIDA financing each were identified by 12, or 2/3 of 16 private sector Member companies as sources of financing. EDC financing was used in seven cases, the World Bank and other multilateral institutions in five cases each.

Commercial banks have played a relatively minor role for Members in financing exports. Only one Member identified commercial loans as the source of financing. The Non-member companies, however, identified three cases in which commercial banks financed the purchase. This means that exports of 1/3 of the Non-member companies have been financed through commercial banks.

Overall, financing mechanisms with which Members have experience are dominated by bilateral or multilateral governmental vehicles. They report the presence of these vehicles in almost 2/3 of all contracts. Non-member companies report the use of bilateral or multilateral vehicles in just under 1/3 of all contracts.

These data further indicate that the Non-member companies may be quite different from Member companies. We suspect that the main reasons for these differences stem from the earlier observation that the Non-member companies operate in niche markets and that the size of the projects they deal with is relatively small and can more often be financed commercially.

## 2.9 Developmental Effects

TEMIC strives for a developmental effect through its training program which aims to further the development of infrastructure and human resources in the telecommunication sector in developing countries. Studies show that telecommunications services can substantially contribute to the social and economic development of developing countries, in particular in rural areas. Therefore, any innovations or improvements to the telecommunications services and systems, which results from the application of TEMIC knowledge, will have a developmental effect, not only for the telecommunications sector but for the country as a whole.

The next section on Training reports that TEMIC Fellows have been able to apply the knowledge that they gained at TEMIC. Only two Fellows did not give specific examples of such applications. The section also points out the emphasis many Fellows give to the applicability of Canadian technology, solutions and expertise to meeting rural telecommunications needs.

TEMIC training has benefited the more advanced developing countries as well as a large number of the poorest countries of the world. Fellows from over 50% of the world's least developed countries, commonly designated as LLDC's<sup>16</sup>, have participated in the TEMIC program. These countries represent no or limited trade opportunities for TEMIC Members.

## 2.10 Influence on Diplomacy

By providing representatives from developing countries with a better understanding of Canadian telecommunications services, TEMIC helps open the door, world-wide, for both Canada and the Canadian telecommunications industry. Although TEMIC is not an official vehicle of the Canadian government, both its very existence and the contact it has had with Fellows around the world can strengthen Canada's position in bilateral and multilateral meetings. By exposing Fellows from many countries to Canadian capabilities in telecommunications systems and services, the odds are increased that there will be people around the table knowledgeable about Canada's achievements and respectful of its abilities.

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<sup>16</sup> The term LLDC has been in use since 1971 by the United Nations systems to designate the world's least developed countries. A total of 41 countries are presently designated as such. They are a sub-group of less developed countries, or LDCs.

The Administrative Council of the ITU<sup>17</sup> shows a significant presence of countries from which TEMIC hosted Fellows. Excluding industrialized countries and Eastern Europe, only four countries on the Administrative Council have not had Fellows attended a program. They are Algeria, Cameroon, Zambia and Kuwait.

The analysis of committee chairs of ITU bodies by country of origin also shows that out of seven chairs of the Administrative Council since 1982, four were from countries from which TEMIC has drawn Fellows. All non-European chairs (since 1983) of the Finance, Staff and Pensions and Technical Cooperation committees represent countries which have sent Fellows to TEMIC.

Although Fellows are not necessarily the same individuals as the country's delegates, the fact that Canada, through TEMIC, has provided training opportunities for officials from their country is likely known to them.

As seen in the following section, Fellows commented on various aspects of the importance of the participation of the Canadian government in TEMIC. Successful TEMIC programs are not only credited to the institute itself, but also to the goodwill and expertise of the Canadian government.

When the Posts were asked to address indirect benefits of TEMIC, some cited benefits related to diplomatic gains, such as raising the Canadian profile and giving credibility to Canadian industry.

## 2.11 Conclusions

The analysis of the relationship between TEMIC and telecommunications trade needs to take into account the global export figures for Canadian industry. Exports to all developing countries comprise a maximum of 20% of total Canadian exports in telecommunications, whereas exports to only five industrialized countries make up for over 70%. While significant potential demand for telecommunication products exists in developing countries, demand also exists in markets in developed countries. The latter markets are better known to Canadian suppliers and it can be expected that they remain the key areas of interest. TEMIC may be able to help Canadian companies to gain a better understanding of markets in developing countries, and thereby increase exports to those countries.

TEMIC Members recognise the institute's complementarity to a number of interrelated trade promotion vehicles. TEMIC has helped to achieve some direct trade benefits which could be as high as \$50 million. It is further achieving indirect trade benefits in the

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<sup>17</sup> The Administrative Council is made up of 42 ITU member countries and is elected by the Plenipotentiary Conference.



form of contacts. In addition, unintended benefits are emerging, resulting from the fact that Canadian companies learn about each other. Sub-contracts are an example of such benefits. The full extent of TEMIC's potential, however, could not have materialized as of yet, since procurement cycles for major telecommunication infrastructure developments are relatively long-term.

The evaluation showed that future growth opportunities for telecommunications exports exist, that a number of Members are targeting markets in developing countries and that Fellows express interest in a range of Canadian telecommunication products and services. It also showed that a number of other industrialized countries are present in these markets. We will see in section five that many of these countries operate training and familiarisation programs for professionals from developing countries.

Although interests by the Fellows cover a wide range of products and services, rural telecommunications systems appear to be the key area of interest ahead of areas such as switching systems or satellite technologies. TEMIC has a number of Members which specialise in these areas. Further, some Members have no direct interest in trade with developing countries, but have in-house expertise which could be offered as consulting services. Such a step would require some internal reorganisation for some Members. One area of future export growth potential, cellular and mobile systems, is not represented in the TEMIC membership, although they have been included in some of the Programs. Another area of strength in the Canadian industry, cable television, appears to be of interest only to a few developing countries.

In order for future growth opportunities to materialise for Canadian companies not only is exposure to Canadian know-how important, but access to financing and the openness of the market to Canadian products in a given country are critical. The evaluation showed that the revenues from telecommunication services play an important role in many developing countries in telecommunication procurements. However, poorer developing countries have a heavier reliance on bilateral and multilateral support than other developing countries. Since TEMIC hosts a large number of representatives from the poorest countries, access to this type of support is necessary for this group. TEMIC might adjust its Program to assist these countries to take advantage of Canadian financing support.

Larger numbers of Fellows from a given country can be expected to contribute to a decision to purchase Canadian products and services. It is interesting to note, that over half of the 11 countries with four or more TEMIC Fellows were not singled out as priority countries by the private sector Members. This may result from the fact that most Fellows are financially supported by CIDA. At the same time, countries which were identified as highest priority countries by Members received invitations to attend all



or most TEMIC Programs, without making use of the invitation. While it does not appear feasible nor desirable to match trade interests directly to numbers of Fellows, it would appear that the selection process for Fellows could achieve over time a greater numerical presence of countries with trade interests among the private sector Members.

The evaluation found that TEMIC Member companies account for a large share of present Canadian exports to developing countries. The Non-member companies which were included in the study typically differ from Member companies in a variety of ways. They are smaller, offer more specialised products and services, serve different clients, use different marketing channels, and rely on somewhat different financial arrangement. An important future decision point for TEMIC will be its relation to smaller companies.

Benefits for smaller Non-member companies from participation in TEMIC would improve with some adjustments to TEMIC's mode of operation. A Non-member company suggested, for example, that they would be interested to work with TEMIC, if the institute could bring a few specialists to the company's premises for a week's course. Others suggested that their principal markets, albeit with telecommunications products, is not with telecommunication agencies, but with other sectors, such as transport.

Benefits from the small Non-member companies' participating in TEMIC would accrue more in the area of small business development and the presentation of a unified Canadian presence than in increased operating revenues for TEMIC. We will see later that it is unlikely that the addition of Non-members to the TEMIC membership will noticeably increase the revenues of the institute, however their inclusion would necessitate adjustments to the Program or to the invitation criteria.

An examination of the countries of origin of TEMIC Fellows shows that the institute is well on the way to making important contributions through training to the development of infrastructures and human resources in a significant number of the poorest countries of the world.

## CHAPTER THREE: TRAINING

### 3.1 Knowledge Gain

The following section evaluates the knowledge gained by Fellows through the TEMIC Program by considering both the Fellows' self-assessment and the opinion of the Members. The extent to which Fellows have been able to apply their knowledge is assessed by examining specific examples provided by the Fellows. Whether the Fellows would recommend the Program to their colleagues is considered as another indicator of the success of the Program in knowledge transfer.

#### 3.1.1 Knowledge of Telecommunications in General

The Fellows were asked how successful the TEMIC Program was in increasing their knowledge of telecommunications in general and nearly everyone rated it either successful or very successful in this regard. Only one respondent gave the answer "neither successful nor unsuccessful" to this question. The average of the 37 responses to this question was 4.6, where a ranking of 4 was successful and 5 was very successful.

TEMIC Members were asked how successful they felt that TEMIC had been in meeting its objective of "enhancing the knowledge and skills of telecommunications executives and managers from developing countries to assist them in the development of their facilities, services and human resources". Of the eighteen Members who responded to this question the average response was 4.14, where 4 is successful and 5 is very successful. Two respondents rated the program as 3 - "neither successful nor unsuccessful" in meeting this objective and the balance of responses were 4 or 5. Four Members said that they did not know the answer to this question, either because they had not attended any of the courses personally, or because they felt the Fellows themselves were the only ones who could answer the question.

#### 3.1.2 Application of Knowledge Gained

The Fellows were asked to what degree they were able to apply the knowledge gained by responding to a scale where the number 1 indicated "no application", 3 indicated "some degree of application" and 5 indicated "high degree of application". The average of the 37 responses to this question was 3.6, with respondents almost equally divided between the responses of 3 and 4 and one respondent giving the question a 2 rating and another giving a 5 rating.

When asked to be specific about how the knowledge was applied only two Fellows did not give any examples. Twenty-five respondents indicated that they used the knowledge to develop or improve telecommunications management and administrative practices. The same number said that they had used the knowledge to assist in making technological decisions related to telecommunications infrastructure (e.g., systems design or equipment selection). The next most frequently mentioned application was in the development of telecommunications plans, which was indicated by 22 respondents. Seventeen respondents said they had used the knowledge in the development of telecommunications policies, and seven said they had used the knowledge in the development of telecommunications regulations.

**FELLOWS' APPLICATION OF KNOWLEDGE  
GAINED FROM THE TEMIC  
CORE AND FOCUS PROGRAMS**

TYPE OF APPLICATION	FELLOWS RESPONDING					
	TOTAL		CORE		FOCUS	
	#	%	#	%	#	%
MANAGEMENT AND ADMINISTRATIVE	25	65.8%	15	71.4%	10	58.8%
TECHNOLOGICAL DECISIONS	25	65.8%	13	61.9%	12	70.6%
PLANS	22	57.9%	10	47.6%	12	70.6%
POLICIES	17	44.7%	10	47.6%	7	41.2%
REGULATIONS	7	18.4%	6	28.6%	1	5.9%
TOTAL FELLOWS RESPONDING	38		21		17	

When responses regarding the application of knowledge gained were compared between the Fellows who had attended a Core Program intended for senior management and those who had attended a Focus program, more directed at middle management, there was found to be a slight difference in emphasis which would be consistent with the job responsibilities of the Fellows. For the Core participants the application most often cited was to develop or improve telecommunications management and administrative practices. With the Focus participants the applications cited most often were for making technological decisions and for developing

telecommunications plans. However, the distinctions among each of these categories of application are not clear cut, either in theory or practice, as illustrated in the examples given below.

### 3.1.3 Examples of Application of Knowledge

Fellows were asked to give specific examples of how they had applied the knowledge in each category and in nearly every case such examples were given. Examples of the use of the knowledge to develop or improve telecommunications management and administrative practices included setting up new maintenance procedures, starting new employee training programs and introducing monitoring procedures for customer services. Some of the applications are very concrete, such as introducing a specific customer service offering that they heard about at TEMIC. Other applications are more theoretical and relate to giving the Fellow new perspectives on the regulatory and economic structure of their telecommunications system.

In giving examples of how the Fellows used their knowledge to assist in making technological decisions related to telecommunications infrastructure they mentioned examples of equipment specification, equipment selection and system implementation. In some cases they were applying knowledge gained in a process of tendering of equipment, in some cases they were pursuing the introduction of specific Canadian equipment and in other cases they were considering future prospects for such technology as satellite systems or fibre optics.

With regard to the application of the knowledge gained at TEMIC in the development of telecommunications plans, several Fellows gave examples of planning for the introduction of new services such as packet switching, international gateway exchanges or rural service improvements. Others cited the application of new forecasting techniques they had learned at TEMIC. For example, one Fellow used TEMIC-learned formulas to calculate human resource requirements for a recent budget submission.

Examples of knowledge applied in the development of telecommunications policies included several references to overall national policy issues, such as privatization or other changes of ownership structure. Examples also were given that pertained to a company's internal policies regarding technological decisions, customer services, billing systems and the like.

Examples of knowledge applied in the development of telecommunications regulations included considerations of privatization as well as regulations relating to the introduction of new equipment, such as cellular radio and new regulatory approaches such as quality of service indicators.

In addition to the category of applications referred to above Fellows were asked to describe other ways in which they had used the knowledge gained from the TEMIC Program. Twenty respondents gave additional diverse examples, including learning about the feasibility of carriers cooperating through a coordinating structure such as Telecom Canada, propagating quality of service concepts and emphasizing human resource development. Several references were made to using the TEMIC-gained knowledge to teach others, through such vehicles as company seminars and classroom lectures.

#### 3.1.4 Recommend TEMIC to Others

When Fellows were asked if they would recommend the TEMIC Program to someone holding responsibilities similar to those of their position all thirty-six who responded said "yes". In their reasons they emphasized that the course was beneficial to them because of what they had learned. As well as learning about Canadian systems and technology several Fellows emphasized how much they had benefited from the interaction with other Fellows and from learning about their systems. As one Fellow expressed it, "TEMIC provides insight into how systems work all over the world, not just Canada. There was so much opportunity to interact with others, including my neighbours." Many respondents talked about the benefits of the overview of telecommunications that TEMIC offered them, and several commented on appreciating the combination of theory and practice in the TEMIC approach.

Several people explained that they would recommend TEMIC to others in their organization because of the benefits of having others in their organization, as one respondent phrased it, "on the same wavelength towards improved telephone service". One respondent had already sent two others in his organization to TEMIC and another was in the process of so doing.

#### 3.2 Satisfaction

The Fellow's level of satisfaction with the TEMIC program can be deducted from their responses examined in the above section as well as from answers to other questions reviewed in this section. Fellows were asked if either they or another representative of their organization had attended a telecommunications management training program in another country. They were then asked to compare the TEMIC Program to these other programs and give examples of TEMIC's strengths and weaknesses. The following section examines their responses to these questions and adds relevant comments provided in the final part of the questionnaire, which asked for any additional comments.



Twenty-three Fellows gave examples of TEMIC's strengths, sometimes with specific reference to another training program, and sometimes by way of general comment. In specifying TEMIC's strengths most comments focused on aspects of the course content such as the combination of theory and practice, the case study approach and the site visits. Four Fellows cited the broad-based nature of the course as its strength and five Fellows mentioned the short duration of the course as a strength, coupled with the large amount of information covered. Three Fellows felt that TEMIC's strength lay in the variety of background's of the participants but this was viewed by one as both a strength and a weakness. Three Fellows mentioned that a strength of the TEMIC Program was that it was not just a marketing vehicle. Three additional Fellows made general comments about the excellence of the TEMIC Program.

Seventeen Fellows gave examples of points of weakness when asked to compare TEMIC to other telecommunications management training being offered in other countries. Some comments were made with specific reference to another training program, and some by way of general comment. Three additional Fellows made critical comments when asked for additional comments. The most cited negative comment was that TEMIC attempted to cover too much material in too short a time, a comment made by seven Fellows. Three others said that the approach was too broad and general and not didactic enough. Two others said the Program was too product-oriented. The Fellows who made the above comments were equally from Core and Focus programs and from every year of program delivery.

Six Fellows mentioned the Canadian weather or the time of year that the course was held as a weakness of the Program. Other less frequently mentioned weaknesses were insufficient leisure time, no follow-up after the TEMIC program, the accommodations being too luxurious and the need for the program to be shorter in duration.

### 3.3 Marketing Element

Fellows were asked to rate the extent of their knowledge about Canadian telecommunications products, services and management expertise, prior to attending the TEMIC Program. The average of the 35 responses to this question was 2.53 on a scale where 1 indicates no knowledge and 5 represents a high degree of knowledge. Sixteen of the Fellows rated their level of knowledge as 1 or 2. Those who had some knowledge had gained it from experience with Canadian equipment or consultants in their own country, from reading technical magazines and four Fellows had been to Canada to visit Members of the Canadian telecommunications industry. This finding supports the observation gained from personal discussions with telecommunications officials from a number of countries, as well as the ITU, that for many telecommunications personnel in developing countries, Canada is "very far away".

The Fellows were then asked, using the same scale to rate the extent of their knowledge, about Canadian telecommunications products, services and management expertise, after attending the TEMIC Program. The average of the 37 responses to this question was 4.03 on a scale where 1 indicates no knowledge and 5 represents a high degree of knowledge, for an average increase in knowledge of 1.5 on the scale. Most Fellows rated their knowledge after the Program at 4 , with four Fellows giving it a 5 rating and three Fellows a 3 rating.

Five Fellows, who rated themselves at level 4 prior to TEMIC, gave themselves the same rating post-TEMIC, fourteen estimated an increase by one level, ten by two levels, four by three levels and one by four levels on the scale. The ratings, both pre- and post-TEMIC were similar for both Core and Focus participants, as shown in the following table.

**KNOWLEDGE ABOUT CANADIAN  
TELECOMMUNICATIONS PRODUCTS, SERVICES  
AND MANAGEMENT EXPERTISE**

	AVERAGE RATING OF KNOWLEDGE*	
	PRE-TEMIC	POST TEMIC
AVERAGE FOR TOTAL FELLOWS RESPONDING	2.53	4.03
AVERAGE FOR CORE PROGRAM	2.65	4.00
AVERAGE FOR FOCUS PROGRAM	2.37	4.06

\* Ratings were based on a scale of 1 - 5 where one represents no knowledge, 3 represents some degree of knowledge and 5 represents a high degree of knowledge.

The Fellows were asked to provide specific examples of ways in which they or their organization might be able, now or in the future, to utilize Canadian solutions to telecommunications problems, products, services or experts as a result of the TEMIC Program. Twenty-three Fellows gave examples of Canadian solutions that they were using or might put to use, 28 could envision the use of Canadian products, 11 identified Canadian services and 13 mentioned the potential use of Canadian experts. Nine Fellows, or 23,7% of the sample, did not respond to this question. The specific nature of the solutions, products, services or expertise is discussed in 2.2 Future Prospects in Telecommunication Trade.

There is a natural overlap between the answers to this question and to the question regarding application of knowledge gained from the TEMIC Program, discussed in 3.1 Knowledge gain, and these responses should be considered together in assessing the marketing element.

TEMIC Members were asked how successful they felt that TEMIC had been in meeting its objective of "familiarizing telecommunications authorities in developing countries with the extent and availability of Canadian products, services and management expertise in order to promote cooperation and trade between Canada and the developing world". Of the 19 Members who responded to this question the average response was 4.24, where 4 is successful and 5 is very successful. One respondent rated the program as 3 - "neither successful nor unsuccessful" in meeting this objective and the balance of responses were 4 or 5. Three Members said that they did not know the answer to this question.

Overall, there was not a high degree of concern expressed by the Fellows about an over-emphasis on marketing in the TEMIC Program. Three Fellows mentioned that a strength of the Program is that it is not just a marketing vehicle. Three additional Fellows commented that the Federal government's participation in the TEMIC Program ensured that the marketing emphasis was restrained. As one Fellow phrased it, "It (support of the Canadian government) provides the assurance that the program maintains a certain degree of standards and is not too commercialised." One Fellow, however, said he did not sense a government presence in the Program, only a strong industry/manufacturers presence and two additional Fellows mentioned, as a weakness of the Program, that it was too product-oriented.

#### 3.4 Post-Program Follow-up

There would appear to have been limited post-Program contact with Fellows, initiated either by TEMIC or by the Members. The Fellows were asked whether, after their return from the TEMIC Program, they had been kept informed of telecommunications developments in Canada. Twenty-nine (82.9%) said "no" and six (17.1%) said "yes". Of those who responded in the affirmative four had received information from the private sector TEMIC Members and two said they had received something from TEMIC. One Fellow specifically mentioned in the additional comments section that feedback requested from the suppliers was long in coming.

Two Fellows commented on the need for some form of regular follow-up. One Fellow made the suggestion that, "A follow-up in which Fellows are informed of future telecommunications developments should be organized, e.g. through a periodical". The other Fellow saw it taking the form of reunions of the Fellows, with the purpose of evaluating the Program and making recommendations for improvements.

When the Posts were asked, from their experience with TEMIC, what they would do differently to enhance direct or indirect benefits three of the Posts suggested introducing post-Program follow-up. Specific suggestions were for a newsletter or a quarterly/bi-annual journal for Fellows which would provide a technical update about new technologies and new applications identified as solutions to given problems, and also provide information about TEMIC activities. Two Posts suggested the importance of involving the Posts in follow-up by providing them with information on products/services which were of interest to participants, and information on telecommunications requirements identified by the Fellows. Another suggestion was for information kits on Canadian industry and technology to be distributed to local contacts suggested by Fellows, advising them to contact the Post or the Canadian company directly for more information.

### 3.5 Importance of Government Sponsorship

The Fellows were asked to rate the importance of Canadian government support to TEMIC in their decision to attend the TEMIC program. The average of the 34 responses was 4.38, where 4 was "important" and 5 was "very important". Three Fellows rated this factor as 3, "neither important nor unimportant" and the balance of the Fellows almost equally rated the importance as 4 or 5.

In explaining why the Canadian government support was important ten Fellows mentioned a concern that without the government's financial support the participation of developing countries would be restricted because of their own financial limitations and possibly the TEMIC Program would not be able to operate to its full potential, ( for example, the Program duration would be shortened).

Nine Fellows emphasized that in their countries it was either a requirement to deal government to government or a major assistance to do so. As one Fellow expressed it, "Government is the most important coordinator worldwide. TEMIC alone cannot contact all developing countries like the Government of Canada. And it is the direct responsibility of the government to provide convenience to the participant's entry to Canada".

Eight Fellows saw the Canadian government presence as either giving the impression, or in fact ensuring, that the marketing aspects of the Program were not emphasized to the detriment of the training side. As one Fellow phrased it, "to attend any program supported by government and not a single supplier will be more attractive", or as another said, "Without government support TEMIC will be considered as a products promotion seminar". Four Fellows mentioned the importance of the role of the Canadian government in facilitating the travel arrangements, including the obtaining of a visa.



The Posts were asked to rate the importance of government affiliation with TEMIC in the minds of Regional Authorities. The average of the responses of the 15 Posts that answered this question is just over four, indicating "important", on a scale of 1-5 where 1 represents very unimportant and 5 represents very important. The importance attached to this factor would appear to vary considerably from country to country with one Post giving this factor a 1 "very unimportant", three Posts giving a rating of 3 "neither important nor unimportant", four Posts seeing it as "important" and seven as "very important".

### 3.6 Conclusions

It can be concluded that TEMIC is meeting its training objective. The Fellows feel that the TEMIC Program was successful in increasing their knowledge of telecommunications in general and have found that what they learned had some degree of application to their work. The Fellows were unanimous in saying they would recommend the TEMIC Program to someone holding responsibilities similar to their own. The TEMIC Members, as well, consider that the Program has been successful in enhancing the Fellows' knowledge and skills.

It can also be concluded that the Fellows increased their knowledge about Canadian telecommunications products, services and management expertise through TEMIC, except in those few cases where they rated their level of knowledge as fairly high prior to the Program. Both Fellows and TEMIC Members rate the Program successful in this regard. Over three-quarters of the Fellows were able to give specific examples of ways they might be able to use Canadian solutions to telecommunications problems, products, services or experts, either now or in the future, as a result of the TEMIC Program.

Nearly seventy percent of the Fellows emphasized the strength of the TEMIC training approach, with its combination of theory and practice. The case study method used by TEMIC allows Fellows to practice applying the knowledge to relevant situations and to learn from the experiences of other Fellows. One important unintended effect of this approach is the forging of relationships among telecommunications managers from developing countries that may lead to ongoing communication and collaboration.

There does not seem to be very much concern among the Fellows that there is an undue emphasis on marketing in the TEMIC Program. Some Fellows feel that the Federal government's participation in TEMIC ensures that the marketing emphasis is constrained. In general, Fellows feel that the support of the Canadian government to TEMIC was an important factor in their decision to attend the TEMIC program. Most of the Posts agree that government affiliation with TEMIC is important in the minds of Regional Authorities.



One significant finding with implications for TEMIC's success in meeting both its training and trade objectives is the limited post-Program contact with Fellows, initiated either by TEMIC or by the Members. Both Fellows and Posts make specific suggestions for implementing some form of follow-up which should be considered both by TEMIC and Members.

Other areas of weakness in TEMIC's Program cited by some Fellows, such as the Program length, the amount of material covered and the type of accommodation are the subject of TEMIC's own extensive feedback process and appear to receive on-going assessment by TEMIC to find the right balance. Complaints about the Canadian climate are difficult to assuage unless TEMIC were to restrict operations to those few weeks of guaranteed 'good weather' which would neither be practical nor economically feasible.

## SECTION FOUR: MEMBERSHIP

### 4.1 Objectives of Members

Members were asked to state their objectives in participating in TEMIC and the range of responses reflects the diversity of the Members and the variety of their reasons for belonging to the organization. The following section examines the objectives of the private sector and post-secondary Members, as expressed in the questionnaire responses, as well as the objectives of the government Members as stated in the Evaluation Assessment Report.

The three federal government departments have the following interests in TEMIC. DOC has interests in TEMIC's marketing potential as well as in the training component, by virtue of its association with the ITU. DEA is interested in the commercial aspects of marketing and trade opportunities as they complement DEA's own trade missions, for example. CIDA is concerned with the training component of TEMIC.

Private sector and post-secondary Members often have several objectives in belonging to TEMIC and the following breakdown incorporates their multiple responses. Ten Members were clear cut in stating their objective as belonging to TEMIC for marketing development, with the goal of obtaining contracts. Nine Members said that one of their objectives was to make contacts with the Fellows, which is obviously a prerequisite to the above objective.

Five Members, all private sector Members, said that their goal was to help Canadian industry. Several of the major private sector Members said that they have little or no interest in marketing to developing countries and they consider their membership to be more of a "charitable contribution" or being "corporate good guys". As one Member phrased it, "Our objective is one of showing solidarity, to demonstrate that the community is doing its share for the telecommunications industry as a group, and for Canada".

Five Members mentioned an objective of establishing or improving their contacts with other TEMIC Members. Some Members see TEMIC membership as an opportunity to get better known among their peers and to demonstrate their capabilities. One Member said that relationships established through TEMIC with other Canadian companies can be as important as those with Fellows. He credits TEMIC with providing the Member contact that resulted in a subcontract in a developing country for his company.

Other Members have as an objective, the chance to learn something about the "culture" of the Canadian government departments and agencies, through contact with TEMIC government Members. Members found this knowledge of how government operates to be valuable in dealing with the Canadian government representatives.

Three Members, two from the private sector and one post-secondary Member, saw one of their organization's objectives as "helping the third world". Increasing their understanding of developing countries was expressed as an objective by two Members.

#### 4.2 Meeting Members' Objectives

When Members were asked if their company's objectives are being met by their participation in TEMIC, 16 of the 22 respondents, representing 72.7%, said "yes". One responded "no", four felt that their company's objectives were only partly being met, and one Member, whose company was participating for the first year, said that it was too soon to say. Of the five companies whose objectives were not being completely met, one is at the Associate level, two are at the Affiliate level and two are Participating Members.

Whether the respondents feel that their company's objectives are being met is obviously affected by their expectations. The one Member who responded "no" said their objectives are not being met because they have not been successful in any business deals. Two of the four Members whose objectives have only been partly met also said that expected sales or contracts have not materialized. "We developed the connections but have not been able to get much business." Another Member felt that their objectives could be better met. "We have had a good exposure to the higher brass, now we would like to see more people at the working level. TEMIC is moving in the right direction."

Another Member emphasized that TEMIC participation was only a part of the process and "TEMIC could not make the sale." "It provides an opportunity to make the initial contact but you then have to follow up with letters and visits if an interest is expressed by the Fellow".

One Member who said that his company's expectations have been "extremely well met" explained his assessment this way. "Comparing TEMIC as a public relations alternative to other promotional methods, they are superior. The alternative, both in terms of government Members and Fellows, would be working the hallways. With TEMIC, you host 40 people, you have half the room government, half Fellows and cover it off in one draw".

##### 4.2.1 Factors Affecting Satisfaction

One factor affecting Members' satisfaction is the time-frame within which they want to achieve their objectives. Four (4) of the Members who said their objectives were being met referred to the future in their explanations, using terms such as, "it's an evolving situation", the objectives would be "met in the long term" and TEMIC is "going in the right direction". As one Member phrased

it, " Our objectives are understanding, market base and commercial contracts and, so far, we have met all objectives except the actual contracts".

The level of active participation in TEMIC would appear to play a role in whether one's objectives are being met. As one Member said whose objectives were only partly being met, "It would not be fair to TEMIC to blame them. Part of the problem is not being able to afford to participate (in course development/presentation, or hospitality). TEMIC has encouraged us to take part, but we have not been able to respond". Of the five Members who felt their objectives were not totally being met only one has participated in all the TEMIC curriculum programs.

In addition, if one examines the amount of money Members reported that they spent on hospitality, four of the five Members whose objectives are not being met either have not participated in hosting events or have spent approximately one-quarter of the average expenditure<sup>18</sup>.

#### 4.2.2 Membership Stability

One indication of the Member's degree of satisfaction that their objectives are being met through TEMIC is the relative stability of the membership. Considering the non-government Members only, as of March 1990, 11 Members have belonged to TEMIC for four years, nine for three years, two for two years and one for one year. Since TEMIC's inception a total of four companies have not renewed their membership in TEMIC. In reviewing expected membership confirmations there would appear to be little change in Members anticipated for fiscal year 1990/91.

Over the period of their membership several Members have changed the category of their membership. As of March 1990, three Members have increased their level of participation to a higher membership fee category. One company has reduced its membership level and another will be doing so for this fiscal year, 1990/91. The reasons given for membership level reductions are related to the financial profitability of the company at the time of the reduction, or the redirection of market focus away from developing countries. The Members involved did not indicate that the reductions were a reflection on TEMIC's performance.

In asking Members whether they intend to maintain their category of membership in TEMIC at the same level for the future, five

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<sup>18</sup> We are using expenditure figures as a proxy for number of events hosted, rather than to imply that lavish meals are more successful than informal dinners. The comments from some of the Fellows would imply the opposite.

Members said that they might reduce their level of membership in the future. Of these five Members, one is an Ordinary Member, two are Affiliates, one is Participating and one is a post-secondary institute. This review of membership was explained as a continuing assessment of the costs vs. the benefits of belonging to TEMIC. None of the Members anticipate increasing their level of membership, but one did say that they "would increase if they could".

Two of TEMIC's four ex-members were interviewed and were asked their reasons for non-renewal. One ex-member had to cut expenses due to their financial status and TEMIC was one of the expenditures that didn't show direct and immediate benefits. The other ex-member also felt they were not getting the sales they wanted and that the process was too time-consuming for the results gained. They found that the Fellows were not necessarily those in whom their company had an interest or who could contribute to making the deal.

Of the two ex-members, one said they may well join again at some point in the future but developing countries are not currently a major growth area for their company. The other company, for whom developing countries are a major customer, considers it unlikely they will be joining again in the future.

#### 4.3 TEMIC's Membership Structure

The current TEMIC membership policy allows each Member to choose its own membership category and corresponding membership fee. All Members have the same privileges, regardless of membership category, with the exception of participation on the Executive Committee of the Board of Directors. There were no Participating Members on the 1989/90 Executive Committee but there does not appear to be a written policy restricting such participation. There was one Member from each membership category, including Participating, on the 1989/90 TEMIC Board of Directors.

Members in all categories may develop and present courses to TEMIC Fellows, host events and hold site visits. In addition, such privileges are not restricted to Members. As a result, a Members' category of membership need not correspond to such factors as the company's size or its level of exports to developing countries. There would appear to be little incentive within the current structure, other than peer pressure, to hold higher categories of membership, and pay correspondingly higher membership fees. There are also additional factors at play. For example, one Member emphasized that its TEMIC membership fee comes from a subdivision of the company and only the sales of that subdivision should be considered when assessing membership level.



It is also very important to remember that Members make in-kind contributions to TEMIC above their membership fees, through participation in curriculum development and presentation, hosting hospitality events, making their facilities available for site visits and serving on TEMIC's boards. Based on the cost estimates for these activities provided by Members interviewed, the total average cost per year per Member of these activities is an additional \$16,777. Some Members expressed their preference to put additional funding into sponsoring Fellows or other TEMIC activities, rather than membership fees, because of the increased control it gave them over both the allocation and the timing of the expenditure.

The average amount of in-kind contributions above membership fees varies by membership category with Ordinary Members contributing an average of \$26,615 per year per member, Associate and Affiliate Members contributing an average of \$12,470 per year and Participating Members contributing an average of \$9,863 per year.

#### 4.3.1 Degree of Satisfaction with the Membership Structure

Members were asked whether the TEMIC membership and fee structure is appropriate. Ten Members feel that it is. Seven Members do not feel the present membership and fee structure is appropriate, including four Ordinary Members, two Participating Members and one Affiliate Member. Five Members were not sure or didn't wish to comment.

Of those who feel it is appropriate, three said it seemed fair or reasonable and one Member emphasized that it gives opportunities for different organizations with different financial capabilities. Three Members feel it is appropriate that the Ordinary Member's fee is high because they "take a lot more advantage of TEMIC" and the fee "makes sense as a percentage of their sales". One Member who feels the structure is appropriate, nevertheless feels that the fees are "hefty for all levels".

Six of the seven Members who do not feel that the TEMIC membership and fee structure are appropriate feel that some categories of companies should pay more. The remaining Member feels that the fees are "too high for what you get". Four Members feel that the low end of the membership scale is "too low for the benefits received". As one Member phrased it, "We need more people at the \$10,000, \$15,000 and \$30,000 category." Another saw the need to link benefits or "advantages" to membership categories.

Four Members suggested that TEMIC should revise the categories of membership and gave examples of potential formulas including some used by other organizations based on such factors as payroll, size of company, nature of company, actual sales or view to future profits and exports. Another formula presented in section 5.5

illustrates the use of a uniform fee for a specific number of key private sector members, with others providing in-kind support exclusively.

#### 4.3.2 A Sample Membership Formula

For purpose of illustration we applied a membership formula that would link a Member's level of financial contribution to TEMIC to the size of their sales to developing countries. Currently there is no correlation between these two variables. There are a number of companies with significant exports to developing countries holding the lowest membership category of Participating member. At the other end of the spectrum there are companies with no interest in selling to the third world who are Ordinary Members, at the highest end of the membership scale.

As an example of one approach we assume that for every dollar a company spends on trade promotion it should achieve \$35 of actual sales<sup>19</sup>. We then assume, for sake of argument<sup>20</sup>, that TEMIC expenditures represent 5 per cent of a company's expenditures on trade promotion. On that basis an appropriate TEMIC expenditure for a company with \$1 million of sales to developing countries would be \$1,429. The application of such a formula would mean that of seven private sector Members for which the data is available, three are already well exceeding an appropriate level of contribution to TEMIC (two Participating and one Affiliate Member) and four would be paying significantly higher amounts under this formula (two Ordinary Members, one Associate Member and two Participating Members). These figures take into account membership fees, as well as all other TEMIC-related expenditures estimated by the Members. For these seven cases the lowest total contribution to TEMIC would be \$643 and the highest would be \$146,000.

There are many valid reasons to quarrel with the above illustration. First, the formula is based on overall sales to developing countries, not only on those sales that are linked to TEMIC. And the formula is based on past sales, not on future sales and, one's need for an organization such as TEMIC may well diminish once one's own network is in place on the ground. As well, it is difficult to support the argument that TEMIC expenses should represent the same percentage cost for companies of all sizes.

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<sup>19</sup> Informal estimates for the ratio of rate of return on each dollar spent on marketing related activities range from 1:30 to 1:40. We use 1:35 as a guideline.

<sup>20</sup> The figure of 5% is arrived at by allocating 3/4 of the marketing budget to the three promotional vehicles rated by Members as being most effective and by dividing the balance of the budget among the five remaining vehicles.

One practical problem with TEMIC adopting a formula based on sales to developing countries is that, in many cases, the data is confidential to the company and they may not wish to reveal it to an organization that includes their competitors. Another major weakness in this approach is that it does not accommodate those Members with little trade interest who are nevertheless willing to make a significant contribution to TEMIC.

For all the above reasons a formula based solely on sales to developing countries may not be appropriate, however, it might be useful in conjunction with other factors such as company size. It would appear that a new approach to membership should be considered since there is no disincentive to discourage current Members from reducing to the Participating level and no incentive for new Members to join as other than Participating Members.

#### 4.4 Expanding the Membership

The following section looks at the potential for TEMIC to expand its membership by considering the characteristics of Non-member companies with an interest in third world trade. A number of Non-member companies report that their 1989 exports to developing countries were as high as 100%, 90%, 75%, or 50% of total exports, however, all but two of the companies interviewed are relatively small. For seven of the Non-members the dollar value of these exports ranges from \$150,000 to \$2 million.

When the 11 Non-members were asked if they were considering joining TEMIC in the future one responded "yes", three said "no", one said "maybe" and six Non-members didn't know enough about the organization to be able to answer the question. One company that said "no" saw their major clients as being the industrialized world and another company sub-contracts with TEMIC Members and feels that there would be no need to join, since their interests are already represented. Two of the companies that didn't know enough about TEMIC mentioned that they had the impression it was an organization "for large companies".

Three of the Non-member companies state that their equipment is too specialised to be effectively promoted through TEMIC. One company suggested that they would like TEMIC support in bringing one or two professionals from potential client organizations to their premises for on-site training. One company, although exporting telecommunications equipment to developing countries, sells to other government departments which use telecommunications equipment, not to the telephone companies which are typically represented at TEMIC.

The above information suggests that in some cases the promise of increased exposure to decision-makers from the telecommunications sector in developing countries may not stimulate the interest of

the Non-members. Further, smaller companies may not have the resources to actively participate in TEMIC, even though developing countries may represent a large percentage of their export sales.

Before TEMIC were to launch on a drive to solicit new Members there must be an assessment of the costs and benefits of an expanded membership base. The three new Members that joined TEMIC in fiscal year 1989/90 and the one Member that is joining for fiscal year 1990/91 are all joining as Participating Members at the \$2,000 membership level. Their decision to join at the lowest membership category is probably a function both of their smaller size and of the current membership structure, in which there is little incentive for new Members to join at other than a Participating level. Even if TEMIC were to change its membership structure the relatively small size of the Non-member companies may still qualify them for the lowest membership category.

Experience in other membership organizations shows that it can cost more to service members at the low end of the fee scale, than they contribute financially. For example, the costs of keeping Participating Members informed about TEMIC's business and soliciting their input may exceed their \$2,000 membership fee. It also must be kept in mind that membership campaigns can be expensive and results may be hard to achieve. Five of the Non-members who said they had not been asked to become TEMIC Members had been contacted by TEMIC, according to TEMIC files. Two of the companies who said they were not familiar with TEMIC had been on its January 1990 membership campaign mailing list.

However, TEMIC must consider the costs of eliciting new Members, not only in relationship to the membership fee but also to the other potential contributions of the Member, such as, participation in curriculum development and presentation, hosting hospitality events, making their facilities available for site visits and serving on TEMIC's boards.

In addition, there may be broad policy decisions for desiring an expanded TEMIC membership. As discussed in the following section, some Members feel that TEMIC has an important role to play in forming a 'Canada Inc.', and expanding TEMIC membership could be an important contribution. Also, several Members said they would like TEMIC's Member representation to be broader to demonstrate more of the Canadian capability to the Fellows.

For these reasons TEMIC may wish to consider expanding into new fields such as CATV or cellular telephone where there are some larger-sized companies that could contribute at the higher end of the fee scale. It is important to keep in mind that bringing in one Ordinary Member is the equivalent in membership fees of signing up 30 Participating Members, and the upgrade of one Associate Member to Ordinary Member would bring in more funds than the addition of 22 new Members at the Participating level.



#### 4.5 Role of Government Sponsorship

The Members were asked to give their assessment of the importance of the continued participation of the Government of Canada in the following aspects of TEMIC; financial contribution, logistical support, representation on the Board of Directors and diplomatic representation overseas. The rating of importance for all four categories was between 4 and 5, where 4 was "important" and 5 was "very important". (These ratings exclude the opinion of the government Members.)

The aspect that was rated most important was government's continued financial contribution, at an average of 4.75. None of the Members rated this aspect below 4. The factor that received the next highest average rating was continued diplomatic representation overseas, an average of 4.61 and again, none of the Members rating its importance below 4. Government's continued logistical support received an average rating of importance of 4.42, again with none of the Members rating its importance below 4. Government's continued representation on the Board of Directors received an average rating of importance of 4.31 with three Members rating its importance at level 2 or 3.

Members were also asked whether there were other aspects of participation by the Canadian government that were important and three Members mentioned the need for the government to provide follow-up support to the Members to assist in concluding the sales and rated the importance of this at a 5. Another Member felt the continued participation of the government in the other committees of TEMIC, such as the Advisory Selection Committee was at a level of importance of 4.

Several Members made some general comments about the reasons for the importance of government participation in TEMIC. The opinion was expressed that government's participation is a pre-condition of TEMIC's existence. "Without them, competitors would not come together in an institution of this nature, where they operate an organization and then compete for the product, (Fellows). Government's involvement ensures that it is a fair, equal and unbiased type of operation. It ensures the national dimension and brings forward other politically sensitive aspects."

Others emphasized the importance of government participation from the point of view of giving developing countries "a certain comfort level". As Members expressed it, "It is important in the eyes of other countries to feel that the Canadian government officially approves." and "Other countries are used to dealing country to country". Another Member said that the only people who can deal with the Fellow invitational process in a culturally and politically appropriate manner are the embassies. The above opinions were corroborated by the Fellows, as discussed in section 3.5 on the Importance of Government Sponsorship.



Members' general comments emphasized the need for the Canadian government to contribute to the development of a 'Canada Inc.' and the role that TEMIC can play in this process. The concept of 'Canada Inc.' is the development of a coordinated approach to international telecommunications bidding and sales to reduce head-to-head competition among Canadian firms when competing internationally. Also, the opinion was expressed that, "TEMIC is benefiting the industry in total, not each Member and that is good for the country". Others said that the government "puts lots of money into supporting R & D, looking for long-term future benefits in export markets and TEMIC is the same thing." They feel that government should treat TEMIC as a complement to other programs.

#### 4.6 Members' Experience With Other Institutions.

We have found TEMIC to be unique in the Canadian telecommunications sector. It brings together companies, large and small, from sectors such as manufacturing, carriers and consulting, as well as government departments. Many of these companies at various times are competitors in the national and international marketplace.

Many TEMIC Members are also Members of trade or professional associations which differ significantly from TEMIC in terms of objectives and activities. While TEMIC promotes international cooperation and trade with developing countries through training in the telecommunications sector other associations, such as the Canadian Manufacturing Association, represent the sector's specific interests through lobbying and advocacy.

One Member thought that the VISION 2000 initiative might evolve to become similar to TEMIC in its promotion of a 'Canada Inc.', since it brings together telecommunications industries and the government to help develop a competitive Canadian industry through targeted joint research and cooperation. VISION 2000 is just starting, however, and cannot provide a point of comparison for TEMIC. And the provision of telecommunications executive management training to third world countries is not in its mandate.

#### 4.7 Conclusion

Nearly three-quarters of the Members feel that their objectives in participating in TEMIC have been fully met; several feel they have been partially met; and only one Member feels that none of his company's objectives have been met. When comparing this high degree of satisfaction with TEMIC's success in meeting its trade objective it is important to note that only ten of the 22 Members interviewed said that their objective was marketing, with the goal of obtaining contracts. Other objectives include making contacts, helping Canadian industry, improving relationships with other Members, both private sector and government and helping developing countries.

As an example, a number of major private sector companies with little or no interest in sales to developing countries are willing to participate in TEMIC for other reasons. Their high membership category represents their importance in the industry in general, rather than being a reflection of potential benefits from TEMIC. TEMIC should consider a new approach to membership categories since there is currently no disincentive to discourage Members from reducing to Participating level and no incentive for new Members to join as other than Participating Members. Although TEMIC's membership has been relatively stable in the past four years of operation five Members report that they might reduce their level of membership, subject to continual cost-benefit review. Any economic slow down will increase the probability of this happening. Seven Members do not feel the present membership and fee structure is appropriate, including four Ordinary Members, who pay the highest fees. Suggestions for revised membership categories include such factors as payroll, size of company, nature of company, sales, future export profits or a uniform fee for all Members.

As discussed, a formula based solely on sales to developing countries may not be appropriate. However, it might be useful in conjunction with other factors such as company size. Certain benefits might be attached to higher membership levels. It is essential to consider membership fees in combination with the in-kind contributions by the Members to TEMIC, such as course presentation and hospitality, which are estimated to average \$16,777 per year per Member.

Before TEMIC launches on a drive to solicit new Members it should assess the costs and benefits of an expanded membership base. Current TEMIC Members account for a large percentage of Canadian exports to developing countries and, although some Non-members report a high percentage of their total exports as being to developing countries, most of the companies are relatively small. If the new Members are small they may not be able to contribute a great deal financially to TEMIC.

However, there may be broader policy issues for an expanded membership base, such as assisting with curriculum development and presentation, demonstrating more of the Canadian capability to Fellows and contributing to the formation of a 'Canada Inc.'.

In addition, TEMIC may wish to consider expanding into new fields such as cellular telephone where there are some larger sized companies that could contribute at the higher end of the fee scale.

The continued participation of the Government of Canada is important in all aspects of TEMIC; financial contribution, logistical support, representation on the Board of Directors and diplomatic representation overseas. It ensures an operation that is unbiased toward all Members, allows for the incorporation of broad national policy considerations and provides a comfort level

in the eyes of the developing countries. In addition, some Members emphasized the need for government to assist in follow-up to ensure finalization of sales initiated through TEMIC.

TEMIC is unique in the Canadian telecommunications sector in bringing together a number of companies from diverse sectors to manage an operating company that sometimes brings them into competition for the same customers. Because of TEMIC's success in encouraging contact and collaboration among Members it is contributing to the development of a 'Canada Inc.'. The Members' level of satisfaction with TEMIC and their sustained participation are a vote of confidence in the organization and we would concur with those Members that urge the government to actively support TEMIC and to treat it as a complement to other trade programs.

## SECTION FIVE: COMPARISONS

In order to gain an understanding of TEMIC's Program and operations in the broader context of telecommunication management training for senior professionals from developing countries, a number of programs and initiatives operated by other industrialised countries were reviewed. The review included telecommunications training programs in the USA, the U.K., the Netherlands, Sweden and France. Two other Canadian specialised training institutes were also included which offer training for managers from developing countries, in other fields, such as aviation management.

While descriptive information was received for all these programs, only the U.S. program has undergone a broad program evaluation. However, structural and operational differences between that program and TEMIC are too significant to allow a full comparison. Thus, little comparable data emerged from the international review. However, a number of points arose from the comparisons which provide valuable insight for the analysis of TEMIC's operation.

### 5.1 Objectives

The institute in the Netherlands and the United States Telecommunications Training Institute (USTTI) are, like TEMIC, partnerships among a number of private sector companies and include government participation. Unlike TEMIC, they do not develop their own curricula, but act as brokers for Members which offer their own training. The other training institutes are closely identified with a single company. Amongst all of the programs, TEMIC offers the broadest national exposure for the trainees, because it involves a range of companies in each and every training Program.

Despite this basic difference in operations, of all the organizations the most directly relevant for comparison with TEMIC is USTTI. Like TEMIC, USTTI has objectives related to development, diplomatic relations and trade promotion. It operates as a membership organization and it has government and private sector members. USTTI was created in 1982 with the mandate to "share the United State's communications and technological advances on a global basis by providing a comprehensive array of free telecommunications and broadcast training courses for qualified men and women from developing nations<sup>21</sup>".

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<sup>21</sup> USTTI Program Announcement for 1990-91.

USTTI added one special high level management course in 1990 as a result of an evaluation study<sup>22</sup> which pointed out that while USTTI had met its developmental objectives the courses were not targeted sufficiently to senior management, which was seen as a drawback to its trade-related objectives.

While TEMIC has added Focus Programs to its curriculum to reach more of the mid-level technical/managerial staff, USTTI is adding more or less the equivalent of a Core Program to reach senior managers in order to better achieve its trade-related objectives.

## 5.2 Government and Private Sector Relations

In terms of government and private sector relations, again, USTTI is most closely related to TEMIC. The other telecommunications institutes are either dominated by one telecommunication company, or are very closely related to the Official Development Assistance program of the country, such as the Swedish program.

USTTI has 38 Sponsors, including private sector companies, government agencies, universities and non-governmental organizations which offer courses only. Eleven of the private sector companies offer courses and pay a membership fee of U.S. \$25,000 or Cd \$30,000. These companies serve on the Board of Directors, jointly with five federal government departments. The government departments cover, through in-kind contributions, roughly ten per cent of the total estimated operational costs (excluding travel and per diem Fellowships).

Compared to TEMIC, USTTI has a relatively small number of Sponsors, considering the large number of big companies in the country. It has an extremely small number of members which make actual cash contributions. As shown in section 6.1, TEMIC's cash revenues are larger than those of USTTI.

One reason for TEMIC's higher core costs is the fact that TEMIC handles program development functions within the institute. TEMIC also has a higher percentage of government support than USTTI (see section 6.2), leading one to conclude that industry appears to absorb in-kind contributions more easily than cash contributions.

In addition to its financial contribution, the value of the U.S. government's diplomatic support to USTTI is immeasurable. The government frequently promotes USTTI in its diplomatic dealings as a successful support vehicle for telecommunications development and argues that USTTI demonstrates that responsible corporations can make effective contributions to international development.

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<sup>22</sup> Internal Memorandum, USAID/SCI, John Daly, Washington, DC, June 15, 1987.



### 5.3 Cash and In-kind Contributions

TEMIC has achieved significantly larger cash contributions from its private sector Members than two other training organizations for which we had relevant data, USTTI and the Centre GP<sup>23</sup>. These two, like TEMIC, operate as a membership organization. The Centre GP has over three times as many Members, but its total annual revenues from membership fees are between \$44,000 and \$92,000<sup>24</sup>, while USTTI's annual membership income from 11 members is Cdn\$330,000 from uniform membership fees of US\$25,000 or Cdn\$30,000. TEMIC's 1989/90 membership fees totalled \$375,000 from 25 Members.

The bulk of USTTI's operating funds<sup>25</sup> (roughly 85%) comes from the private sector, since training costs are covered exclusively (100%) by in-kind contributions. Also, just over 20% of the administrative costs are covered from in-kind contributions. USTTI's typical annual operational budget is US\$2,194,000 which is comprised of 88% in-kind contributions and 12% cash contributions.

The budget for 1987, during which time 37 courses were offered to 450 Fellows, shows that in-kind contributions are of extreme importance to USTTI. We will see in sections 6.2 and 6.4 that they are also significant to the operations of TEMIC.

The following table illustrates the break-down:

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<sup>23</sup> The "International Centre Grands Projets" is based in Montreal and provides training and research services in the management of large projects.

<sup>24</sup> The membership fee for corporate members represents a sliding scale from \$250 to \$1,000 per annum, depending on the number of employees. At present, the Centre GP has 64 corporate members in addition to 16 institutional members who pay \$500 per annum and eight sponsors who pay \$2,500 per annum. The range of \$44,000 to \$92,000 represents the lowest and highest possible fees that can be achieved under this structure.

<sup>25</sup> We only include administrative and training related items in this discussion.

## IN-KIND AND CASH CONTRIBUTIONS TO USTTI

TYPE OF EXPENSE	AMOUNT (\$US)	SOURCE(\$U.S.)
ADMINISTRATION	334,000	69,000 MEMBERS IN-KIND <sup>26</sup>
		35,000 FELLOW FEES
		230,000 MEMBER FEES
TRAINING	1,860,000	1,660,000 PRIVATE SECTOR
(ALL IN-KIND)		200,000 GOVERNMENT
<u>TOTAL</u>	<u>2,194,000</u>	

### 5.4 Comparison of Costs

In regard to operating costs, it is most useful to compare TEMIC to USTTI. While doing so, it is important to remember, that the two organizations operate under different assumptions regarding responsibilities for development and delivery of the training programs, which changes the requirements for core operating costs. In specific, TEMIC carries out its own course development and targets a more senior group of Fellows.

The cost figures obtained from USTTI indicate significantly lower expenses for program administration (overhead and staff). TEMIC's expenses in 1989/90 for office overhead were \$184,000 (rounded), and for staff expenses were \$584,000(rounded). This adds to \$768,000(rounded) serving 65 Fellows, while USTTI's administration expenses for 1987/88 (including both categories) were (Cdn)\$400,000(rounded), serving 450 Fellows. One of the reasons for USTTI's lower operating costs is the fact that all the program development and delivery is provided by the Members themselves.

In addition, USTTI is located on the premises of another non-profit consulting firm and has access to that company's facilities, equipment, staff benefits, financial administration and banking on the basis of 28% overhead on base salary. The same overhead formula applied to TEMIC's (1989/90) salary expenses would result in an overhead expense of \$164,000, at an annual saving against present overhead expenses of \$20,000. Further, we also suspect that USTTI's affiliation with the other firm reduces the need for some in-house administrative and staff functions.

With regard to cost-per-trainee, we are in the position only to compare TEMIC's cost-per-Fellow with the fees listed by some of the other institutions. While we are aware that fees and costs are not necessarily the same, this comparison establishes general

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<sup>26</sup> These calculations include in-kind contributions by government and private sector members, but exclude any costs incurred by the board and by trainers related to the attendance of meetings or general board business.

parameters. TEMIC's daily costs are \$219 (see section 6.3 for details of the analysis). The tuition fees listed by the Aviation Management Institute total \$210 per day, and fees listed by the Swedish program translate into a daily rate of \$219. The weekly fee listed by France Telecom translates into \$108 per day. USTTI does not charge any course fees, as all costs for course development and presentation are absorbed by the sponsoring companies.

Fees actually paid under some of the international scholarship schemes are well below these fees. Fees paid for Canadian training through the Commonwealth Telecommunication Organization are \$550 per person week and is about to be raised to \$610 per person week. This translates into a daily fee of \$79 (rounded). The registration fee of \$1,500 per Fellow allowable under the CIDA contribution agreement is comparable to this fee at \$75 per day.

### 5.5 Membership Services and Income Generation

The International Aviation Management Institute combines training support to managers from developing countries with income-generating activities. It serves trainees from all countries of the world and can therefore charge a commercial fee, which in the case of developing countries, are waved or supplemented. It also offers training advice and tailor-made courses at commercial rates to clients located anywhere.

The Centre GP provides direct benefits and services to its Canadian members, including access to management training for Canadian staff, a clearinghouse service and newsletters.

Some of these services could possibly be offered by TEMIC. Such additional services might catapult TEMIC into the broader role of focal point for the development of 'Canada Inc.', a concept which was supported by a number of the Members.

### 5.6 Relationship to the ITU and Regional Telecommunication Organizations

The ITU coordinates and promotes telecommunications training for developing countries through a number of vehicles<sup>27</sup>, including training Fellowships, the development of training standards, seminars, newsletters and the provision of lecturers and experts in training development. Close working relationship with the ITU training program would ensure TEMIC that its Programs contribute to the fullest extent possible to the development of global telecommunication training standards.

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<sup>27</sup> Based on the report of the Administrative Council to the ITU Plenipotentiary conference in Nice, 1989.

Regional telecommunications or development organizations, such as the Commonwealth Telecommunication Organization also contribute to telecommunication training. Like the ITU, they represent not only potential sources of Fellowships, but also input into needs definition.

Most of the training institutions reviewed for this analysis appear to have a relatively close working relationship with the ITU. As evidence, some classify their courses according to the ITU classification system, list ITU Fellowships as potential funding sources, or undertake course evaluations with ITU input.

ITU Fellows participate in courses carried out in Canada, and scholarships from both the ITU or the Commonwealth Telecommunication Organisation are offered in a number of Canadian training courses. However, neither TEMIC nor other entities, such as the Department of Communications, have an active liaison with the ITU.

A closer relationship between TEMIC and these organizations would not only benefit TEMIC, but would assist in coordinating telecommunication training for developing countries in general.

#### 5.7 Fellows' Exposure to Other Institutions

Fellows report that they or their colleagues have attended telecommunications management training programs in the U.S., the U.K., France, Sweden, the Netherlands, Japan, Germany, Italy, Finland, Belgium, Switzerland, India and Kenya. The most frequently named countries were the U.S., Sweden, France and Japan.

TEMIC provides Canada with an international training institution to represent Canadian telecommunication interests and expertise. The programs of the other countries have existed for longer time periods than TEMIC and likely have contributed to a better understanding of the countries' capabilities by the trainees.

#### 5.8 Conclusions

Most industrialised countries are providing telecommunication training to professionals from the developing world. Prior to the existence of TEMIC, some Canadian companies and the government already offered training opportunities. Only with TEMIC, however, is a focal point created which can give a certain international status to Canadian activities in this field, comparable to special training institutes created in Europe and the USA.

We found that TEMIC gives exposure to a wider range of national capabilities than any of the other training programs. This mode of operation can be a good basis for a broader organizational mandate

representing Canadian telecommunication expertise, as suggested by some members. However, in order to serve future members with specialised products through the institute, it is likely worthwhile to also offer a number of specialised Programs, targeted to a select group of Fellows, as suggested in Section two .

Of particular interest in the review of USTTI is its strong reliance on in-kind contributions and its membership structure which incorporates companies which cannot or do not wish to pay a membership fee, but which prefer to offer in-kind support through training programs on their own premises. A similar concept might benefit TEMIC in its relations with many of the small or specialised companies which would be willing to offer training and in-kind support on their own premises.

Again, through USTTI's reliance on in-kind contributions, it achieves a much larger percentage of its operating budget from its private sector members than from government. Section six will take a closer look at options and implications for in-kind contributions for TEMIC.

Further, USTTI's uniform fee for companies with seats on the Board of Directors is another approach to the establishment of membership fees. Since many more larger companies exist in the U.S. than in Canada, and since TEMIC has higher cash income requirements for core operations than USTTI, the appropriateness of some of the basic principles for such membership formula in the Canadian context would need to be carefully explored.

Membership services such as those offered by the Centre GP may be of interest to Canadian private sector companies. Clearinghouse functions on business opportunities with developing countries, or on sub-contract opportunities with Canadian firms, for example, may be of interest to smaller companies. Staff training opportunities may also be of interest where in-house programs may be too costly. Such additional functions to TEMIC's present mandate may propel the institute more firmly into the foreground of Canadian telecommunications relations with developing countries.

The inclusion of Fellows paying full costs, as practised by the Aviation Management Institute, may be possible and will generate additional income. A few of the Posts reported that this would be possible. In addition, TEMIC might look at a totally new group of paying Fellows, such as representatives from Eastern European countries, who are looking to gain knowledge of different telecommunication systems and services.

TEMIC's costs are in line with the fees charged by some of the other training programs. The fees paid, however, under many of the international scholarship schemes, are typically well below TEMIC's costs per Fellow.



## CHAPTER SIX: FUNDING

The issues relevant to the analysis of TEMIC funding focus on income and expenses in relation to the number of Fellows served, the ratio between private sector and public sector contributions, the stability of private sector support and other funding sources.

### 6.1 TEMIC Revenues

TEMIC revenues come from membership fees, contributions by DOC and DEA, as well as from CIDA, registration fees and interest income. DOC and DEA contribute equal amounts of the totals identified for them in the following. The following figures are based on audited statements and unaudited accounts for 1989/90<sup>28</sup>.

#### REVENUES FROM MEMBER FEES AND GOVERNMENT CONTRIBUTIONS

FISCAL YEAR	MEMBER FEES (\$)	GOVERNMENT OF CANADA CONTRIBUTIONS	
		EXTERNAL AFFAIRS & DOC <sup>29</sup> (\$)	CIDA (\$)
1986/87	165,000	86,550	0
1987/88	428,000	310,500	233,128
1988/89	437,500	361,500	308,508
1989/90	373,500	435,000	313,008
	<u>TOTAL</u>	<u>1,193,550</u>	<u>854,644</u>
	1,404,000		

TEMIC further shows revenues of \$20,000 from other registration fees and of \$98,596 from interest:

#### REVENUES FROM ALL SOURCES

<u>SOURCE</u>	<u>AMOUNT (\$)</u>
MEMBER FEES	1,404,000
DOC & DEA	1,193,550
CIDA	854,644
OTHER	118,596
<u>TOTAL</u>	<u>3,570,790 - 3,571,000(rounded)</u>

<sup>28</sup> Based on a letter from TEMIC, dated May 10, 1990.

<sup>29</sup> Split on a 50/50 basis between the two departments.

DOC and DEA, as per Treasury Board Decision (TB 802885) have agreed to "provide for TEMIC's budgetary requirement to develop and operate the institute over its first five years. The private sector was to account for one half of the costs and the Government of Canada agreed to contribute 50% of the actual costs"<sup>30</sup>. As the government contributions are tied to actual costs, the following breakdown of cash contributions has occurred:

**ANNUAL \$ CONTRIBUTIONS FROM  
DOC, DEA AND MEMBERS**

<u>FISCAL YEARS</u>	<u>1986/87</u>	<u>1987/88</u>	<u>1988/89</u>	<u>1989/90</u>
MEMBER FEES	165,000	428,000	437,500	373,500
DOC AND DEA CONTRIBUTIONS	86,550	310,500	361,500	435,000

The contributions from DOC and DEA, as well as from the Members, support the core operational costs of TEMIC. The CIDA contributions, which were agreed upon after the DOC and DEA participation was worked out, have been designated<sup>31</sup> to cover Fellows' registration fees, travel expenses, per diem living allowances, invitational and medical expenses.

Member in-kind contributions do not appear as TEMIC revenues here, but are discussed in subsequent sections.

## 6.2 Balance of Government and Private Sector

In the following, we add Members' estimates of their in-kind contributions to get a fuller understanding of the total operating costs of TEMIC, as well as of the relative contributions of the government and private sector Members. The figures for in-kind contributions are based on Members' <sup>32</sup> own estimates of costs related

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<sup>30</sup> TEMIC Evaluation Assessment Report, Department of Communications, Ottawa, January 1990.

<sup>31</sup> CIDA Contribution Agreement Application for FY 1989-1990, section 5.2. TEMIC January 24, 1989.

<sup>32</sup> This total is based on the figures provided by the 22 Members interviewed for this evaluation and do not include any figures for the three members that were not interviewed. The amounts contributed by these Members are not considered to be significant because they are Participating Members and do not serve on the Board or on Committees.

to courses lectures, site visits, hospitality and committee work. We include contributions by the post-secondary education institutions and the Canadian Broadcasting Corporation under private sector contributions. Their combined contributions are not large enough to be of concern and do not effect the overall balance.

The total contributions, both cash and in-kind, by government and private sector Members up to the period ending March 1990 are as follows:

**CASH AND IN-KIND CONTRIBUTIONS  
BY ALL MEMBERS**

	<u>MEMBERSHIP &amp; CASH CONTRIBUTIONS (\$)</u>	<u>IN-KIND CONTRIB. (\$)</u>	<u>TOTAL</u>
PRIVATE SECTOR	1,404,000	849,450	2,253,450
DOC & DEA	1,193,550	203,900	1,397,450
CIDA	854,644	none	854,644
TOTAL	3,452,194	1,053,350	4,505,544 <sup>33</sup>
DOC, DEA, CIDA combined:			2,252,094

The Treasury Board decision stipulates a split of actual costs of 50/50 between the Government of Canada and the private sector. The above figures show that, in terms of cash contributions, the private sector's contribution is higher (54%) than the combined contributions of DOC and DEA (46%).

The addition of CIDA cash contributions brings the government total to \$2,048,194 of a total of \$3,452,194 in cash contributions, which translates into 41% private sector and 59% government contributions.

The addition of the estimated in-kind contributions by the private and government sectors bring the two sides closer together, with a slightly larger contribution of just over \$1,000 by the private sector over government contributions. In percentage terms, the contributions can be considered equal.

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<sup>33</sup> This total does not include the budget line item "other", which cannot be assigned to either sector.

It is important to note that the \$1,053,350 of in-kind contributions reported by Members represents 30% of the total operating expenses of TEMIC. These figures do not include any estimate for costs incurred at the Posts for staff time, cable, telex and other costs related to TEMIC. These in-kind contributions are extremely important to the operations of TEMIC, however. Without them, it is doubtful that the institute could accommodate the present level of Fellows.

Even without quantifying the Post contributions, the in-kind contributions from DOC and DEA are significantly larger than those of the other Members on a percentage basis. DOC and DEA represent eight per cent of the total membership of 25, while their in-kind contributions account for almost 24% of the total.

Members were asked whether they felt that the current ratio of financial support provided to TEMIC by the public sector vs. the private sector was appropriate. Thirteen (59.1%) Members said yes, 3(13.6%) said no and six (27.3%) felt that it was "hard to say" or they didn't know. Of those who felt that level was right seven said that a 50/50 split should be the objective. Five Members expressed the opinion that, through TEMIC, all of Canada, (and therefore government), is benefiting. One Member felt that the government's contribution should be considered to be contributed on behalf of the smaller Members of TEMIC, who can't really afford to participate and yet are major job creators and contribute to the economy.

Two others expressed the question in terms of ensuring TEMIC's survival, and that the funds should be sufficient to allow that.

Of the three Members who did not feel the current ratio is appropriate all three felt that government funding is too high and the private sector should contribute more, since they are getting the benefits.

### 6.3 Operating Costs and Number of Fellows

The following table shows TEMIC's expenses<sup>34</sup> as compared to the number of Fellows who attended the TEMIC Program in a given year:

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<sup>34</sup> Reported by TEMIC on May 10, 1990 and based on Charette, Fortier, Hawey, Tough Ross, Report and Financial Statements, March 31, 1989 as well as on TEMIC approximations of expenses for FY 1989-1990 (unaudited).

## OPERATING COSTS

<u>FISCAL YEARS</u>	<u>EXPENSES (\$)</u>	<u>NUMBER OF FELLOWS</u>
1986/87	138,994	0
1987/88	918,174	35
1988/89	976,807	44
1989/90	1,146,908	65
	<u>TOTAL</u>	
	3,180,883	144
	3,181,000 (rounded)	

The figures show that increasing numbers of Fellows has not increased the costs-per-Fellow on a proportionate basis. Between 1987/88 and 1989/90, the annual number of Fellows almost doubled from 35 to 65, while expenses increased by \$229,000 or roughly 20%. It is not possible, however, to establish how many more Fellows could be accommodated without significant increases in core costs.

The above calculations also show that since 1986 TEMIC has achieved an overall surplus of cash revenues (from member fees, registration and interest income) over expenses of \$390,000 (rounded). These surpluses, for the FY's 1986-87 to 1989/90 were \$114,477, \$74,969, \$172,080 and \$28,099 respectively. The drop in surplus in the last year can be explained by a combination of factors, including lower fee income as well an increase in expenses over the previous year, in particular, increases in program development costs, related to the fact that two new courses were developed during that year.

In the next three years, beginning 1990/91, TEMIC aims to offer four Programs, serving 21 Fellows each<sup>35</sup>. One Program per year will be new, while three will be repeats of earlier Programs.

### 6.4 Operating Costs in Relation to Training

The principal vehicle to achieving TEMIC's multiple objectives is the development and delivery of training to Fellows. In order to develop a reasonable basis for the assessment of costs-per-Fellow, we included in the calculations factors such as staff expenses, office overhead, corporate promotion, program development and various in-kind contributions, but no travel-related costs. These categories are the ones typically used as basis for the assessment

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<sup>35</sup> Source: CIDA Contributions Agreement, 1990-1992, page 43.



of training costs<sup>36</sup>. The following summarizes expenses in these categories since 1986 and estimates them for 1989/90 alone.

#### COSTS BY EXPENSE CATEGORIES

TYPE OF EXPENSE	TOTAL AMOUNT (\$)	1989-90 EXPENSES (\$)
TEMIC-BUDGET:		
STAFF EXPENSES	1,695,347	584,069
OFFICE OVERHEAD	603,898	184,326
CORPORATE PROMOTION	36,649	10,184
PROGRAM DEVELOPMENT	102,257	49,517
MEMBERS-IN-KIND:		
COURSE LECTURES	308,600	ESTIMATED
SITE VISITS	55,800	1/4 OF TOTAL
HOSPITALITY	120,750	IN-KIND
COMMITTEES	356,200	(210,338)
	<u>TOTAL</u>	<u>TOTAL</u>
	3,279,501	1,040,000
	(rounded) 3,280,000	(rounded)

TEMIC has hosted 144 Fellows since 1986. Thus, the cost-per-Fellow averaged over the whole of TEMIC's existence comes to \$22,800 (rounded). This figure is only meaningful in a cost-per-Fellow context when it is related to training days. TEMIC has offered a total of 104 training days for 144 Fellows since its existence. The cost-per-training-day for each Fellow can be calculated at \$219<sup>37</sup>. Using 1989/90 figures as the basis for cost projections per Fellow for 1990/91, TEMIC's fee could decrease to \$174 per day<sup>38</sup>, given present projections for enrolment and number of training days.

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<sup>36</sup> USTTI, for example, uses the same categories in its evaluation, but excludes committee meetings from the final calculations. As we were able to gather these data from Members, we decided to include them because they represent significant levels of commitment.

<sup>37</sup> This is calculated on a seven-day week basis.

<sup>38</sup> See section 6.9 for supporting discussions of anticipated cash contributions for 1990-91.

## 6.5 Additional Sources of Funding

The following section focuses on funding sources other than the federal government. Government programs such as PEMD, which may in principle be applicable to TEMIC's mandate, do not represent useful additional sources, since they still represent federal government funds. Under the present formula of government/private sector contributions any new funding sources within government would have to be considered alternative rather than additional sources.

In the following analysis we have found it important to distinguish between sources of funds for core operations and sources of funds for Fellowships.

### 6.5.1 Core Operations

Options for additional sources of core funds include: increased private sector membership, income generation and student fees.

Section four concludes that TEMIC cannot expect significant increases in core funds from additional private sector memberships, with the exception of a few members from areas such as cellular radio, where a number of large sized companies exist. In addition, the following analysis shows that it may be difficult at this time to expect increased cash contributions from TEMIC's present membership when one considers the appropriate marketing costs for a given level of sales.

Informal estimates for ratio of return on each dollar spent on marketing related activities range from 1:30 to 1:40. Using 1:35 as a guideline, approximately \$4.7 million should be invested to achieve sales of \$160.5 million<sup>39</sup>. As demonstrated in the Member's assessment of the effectiveness of different marketing vehicles, up to ten marketing vehicles are used by the Members<sup>40</sup>. The allocation of relative weight and budgets to these marketing vehicles will obviously differ, depending on the products, clients, and short- or long-term goals of the different Members.

In the following calculation we arbitrarily allocate 3/4 of the total marketing budget to the three vehicles rated as most effective by the Members, including their own staff, staff trips and dealing with Canadian embassies. This leaves \$1.175 million for the remaining five most frequently used vehicles. An arbitrary equal division among the five allocates \$235,000 for each.

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<sup>39</sup> This figure was developed in section 2.1 as adequately representing the present volume of trade with developing countries by TEMIC members.

<sup>40</sup> See section 2.3.

Using this formula, TEMIC's share of the marketing budget to achieve \$1.65 million in export sales should be approximately \$235,000. As we saw earlier, this figure represents slightly less than 2/3 of the \$373,500 direct cash contributions of private sector Members to TEMIC's annual operations. To further examine this hypothesis we considered only the financial contributions of those fourteen private sector members with trade interest in developing countries. Their direct cash contribution from membership fees totals \$242,500, without taking into account in-kind contributions such as course offerings and hospitality.

Application of this one formula would suggest that it might be difficult to expect at this time larger cash contributions to TEMIC's operations from the present group of Members on the basis of commercial benefits. A further argument against expecting increased cash contributions is the fact that Member's in-kind contributions will increase in the coming years, because one additional course will be offered per year.

However, it might be possible for private sector Members to cover some additional TEMIC core expenses through in-kind contributions. For example, corporate promotion which costs annually about \$10,000, might be absorbed by some Members' in-house services.

Income generation from related activities and services could be a third source for core financial support. The other two Canadian Specialized Training Institutes each undertake such activities, as discussed in section 5.5.

As a general rule, fees paid under Fellowship programs of international agencies make allowance for limited (albeit increasing) concessions<sup>41</sup> to some percentage payments for overhead expenses, but do not cover core costs of training programs. (See section 5.4 for details.)

#### 6.5.2 Fellowships

Fellowship programs administered by organizations such as the ITU, the Commonwealth Telecommunications Organization or the International Program for the Development of Communications (IPDC) program of UNESCO pay some tuition fees (see above section), and thus some cost recovery is possible. However, the funding arrangements with CIDA, already secure tuition fees for 90% of the Fellows. Thus, TEMIC would bring in little, if any, additional revenues by diversifying sources of Fellowships.

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<sup>41</sup> Report of the ITU Administrative Council, Nice Plenipotentiary Conference, Section 5.2.1, Resolution No.30, ITU Training Fellowship Program, point 5, page 79.

In addition to tuition fees, international travel, domestic travel and per diem are the other areas for Fellowship support and obviously necessary for many of the Fellows. USTTI estimates that 65% of Fellows must have funding assistance to attend its courses, to cover travel and per diem expenses. ( USTTI does not charge course fees.) The following table shows the sources of Fellowship support for TEMIC Fellows:

#### SOURCES OF FELLOWSHIP SUPPORT

SPONSOR	NUMBER OF FELLOWS	PERCENT
CIDA	129	90%
TEMIC MEMBER	12	8%
TEMIC	3	2%
TOTAL	144	100%
FELLOWS(international air travel only)	47	33%

A main source of Fellowships for Fellows from developing countries are national official Overseas Development Assistance programs. This is exemplified in the TEMIC-CIDA contributions agreement, where the in-country and per diem expenses have been covered by CIDA<sup>42</sup> for 90% of the Fellows. In the case of USTTI, USAID is the largest single source of scholarship support, with an annual contribution of U.S.\$300,000.

Twelve (eight per cent) of the Fellows have been supported by private sector members. Support for Fellowships from private sector Members was an early objective of TEMIC but several factors have operated to reduce the level of participation. Primarily, since the Members have a say in the selection of Fellows who come under CIDA Fellowships the need is reduced for Members to sponsor their own Fellows. We did not encounter cases where company-sponsorship of a Fellow was turned down by the Selection Committee but in one case a Member proposed two sponsorships which never materialised because the Fellows they wanted to sponsor were not available to come.

<sup>42</sup> See CIDA Contributions Agreement 1990-1992, page 43, where 80 of the estimated 80-88 Fellows are covered under the Agreement.

Fellowship sponsors from outside TEMIC's membership may be another option, as illustrated in the case of USTTI. A review of scholarship sponsors for USTTI shows 12 private sector sponsors and five sponsors representing membership or professional associations. Seven of the private sector Fellowship contributors are not Sponsors of USTTI, nor are the associations.

In many of the other programs which we reviewed, in-country travel and per diem costs are covered through overseas development assistance programs<sup>43</sup>, while international travel costs are often first responsibility of the Fellows' national administrations. Continued scholarship support for TEMIC Fellows along the line presently practised falls within the general operating practices for similar activities elsewhere.

### 6.5.3 Cost-sharing by Fellows

When asked about potential cost-sharing of attendance in TEMIC programs, eight Posts did not think that this would be a viable option. Reasons fall into three groups. The major reason is the lack of access to necessary foreign exchange. One Post feels that the emphasis of the program on Canadian technologies calls for an invitational program. Three other Posts report that such funds are not readily available because most other hosting countries or governments pay these costs for visiting Fellows.

Ten Posts thought that Fellows would have access to funds for cost-sharing. Four suggested that up to \$4,000 might be reasonable, four suggested that up to \$6,000 could be affordable, while one each suggested contributions of up to \$10,000 and up to \$15,000 or above. The most common supporting reason given was the fact that telephone companies are relatively rich. Several of the ten Posts feel that as long as the program is worthwhile or as long as the Fellows' contributions can be paid in local currency, cost-sharing is feasible.

For the last two programs TEMIC has instituted the policy that Fellows pay the international travel expenses. In both of the programs all but one Fellow, for a total of 43 Fellows paid their own international travel. Two Posts report that the payment of international airfares was of no noticeable concern. One of the Posts reports that since the initiation of this policy the local administration has been slow to respond to invitations, while another stated that the policy put a stop to Fellows from that country.

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<sup>43</sup> The degree of coverage is in some cases tied to the per capita income of a given country.



A number of methods exist, as illustrated in the case of the Aviation Management Institute, to increase cost-sharing by Fellows, but, because external funding sources come into play, these sources will likely influence the focus of the Programs. The inclusion of Fellows from countries (or from Canadian companies) which are capable of paying course fees could constitute an additional source of revenues. For a three-week course TEMIC might be able to charge \$4,500. By way of illustration, four paying Fellows for each of TEMIC's four courses annually could bring in \$72,000.

#### 6.5.4 Number of Programs Offered

An increase in the number of planned Programs could reduce the cost-per-Fellow, if this increase could be handled within present core resources (cash and in-kind). Contributions from registration fees of \$1,500 per additional Fellow, financed from other than the CIDA quota, would yield some additional funds. Such steps would have to be carefully weighed, however, assessing the resources available and the readiness of Members to make available the in-kind contributions necessary to present additional courses.

TEMIC has discussed the possibility of offering a Spanish-language course in the coming year. Within the present structure, where course delivery is handled through member in-kind contributions, such course could add significant expense, unless sufficient Spanish-language skills exist within the Member companies.

A decrease in the number of Programs offered, as illustrated earlier, does not bring about proportionate reductions in costs. One option for TEMIC to consider, should core revenues slowly decrease, is a drastic reduction of the number of Programs offered. The Swedish telecommunication management training course is only offered once a year. The program, however, is anchored at a major telecommunication training centre and staff can be re-assigned. For TEMIC such re-assignments are not easily achieved and such reduced level of programming is not likely to be cost-effective.

#### 6.6 Stability of Private Sector Support

Section 4.2 "Meeting Members' Objectives" observes that the Member's degree of satisfaction shows in the relative stability of the membership. Eleven non-government Members have belonged for four years and nine for three years, leaving three with shorter membership duration. Only four have not renewed membership. The renewal of membership in TEMIC does not appear to be an issue.

The level of future membership contributions, however, is less predictable. Section 4.2 showed that some Members have changed their membership categories over the years. It further indicated the possibility that several Members might reduce their level of

membership in the future. In the revenue section 6.1 we saw a drop in membership fees between the last two fiscal years by \$64,000. The single largest contributing factor was the change in membership category of one Ordinary Member<sup>44</sup>.

A trend towards membership in the lower fee categories is discernable, and suggests the need for a review of membership fee structures. This review should also include an assessment of changes in in-kind contributions as well as an assessment of other vehicles, such as revenue generation. In order to ensure that TEMIC will be an organization which meets the objectives of all of its Members, it is important that it maintains a certain independence from any one group of Members.

#### 6.7 Impact on TEMIC of a Change in Federal Financial Contribution

Core operational support and Fellowship support for travel and per diem are treated in separate agreements between TEMIC and the government departments. The following analysis shows a certain dilemma resulting from this strict division.

We saw in section 6.5.2 that a number of options for Fellowship support might exist outside the CIDA contribution. The situation is different when it comes to support for core expenses. A reduction in income for core support would have an impact on the operation of the organization over the next three years because significant increases in Program offerings and number of Fellows are planned, without additional core costs. The expanded Program likely could not proceed with reduced revenues for core expenses.

The following analysis supports this point. Revenues (excluding in-kind contributions) from membership fees (\$373,500), from DOC/DEA contributions (\$435,000), and registrations (\$97,500) in 1989/90 were \$898,000. During this time three courses were offered to 65 Fellows. In 1990/91, four courses will be offered to 80 Fellows. Cash revenues for 1990/91 can be projected at \$974,500<sup>45</sup>, composed of \$373,000 in membership contributions, \$475,500 from anticipated government contributions and \$126,000 from registration fees.

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<sup>44</sup> Ordinary Members pay \$60,000 per annum, while the next category of Associate Members pay \$15,000.

<sup>45</sup> We assumed membership fees to remain constant from 1989-90. Further, we used the DOC/DEA contributions figures as per Evaluation Assessment Report and added the projected registration fees as per CIDA Contributions Agreement.

Thus, the cash increase for program operation between the two years will be around \$70,000, or about seven per cent. At the same time, a 25% increase in Programs and roughly 20% more Fellows are projected for the same time period.

We could not identify other significant additional sources of funds to offset reductions in federal contributions for core support. Methods discussed in earlier sections, such as cutting operating costs, increasing private sector Member contributions, generating other income or levying fees at market rates, might result in a total gain of roughly \$100,000 per annum. The sources of this gain are a mix of savings in cash expenses and increased income and could consist of the following: \$20,000 from use of shared premises, \$10,000 through further in-kind contributions from Members, \$72,000 from market-rate tuition fees.

Potential revenues from Fellowships from international organizations, as speculated in section 6.5, would not bring in core funds, since they would replace CIDA's contributions, which cannot be applied to core funds as per agreement.

Income generating activities, such as tailor-made training, clearinghouse and information services, could constitute a source of funds to offset some government contributions, however, they need time to evolve and mature.

The above discussion leads us to suggest that changes in support from DOC and DEA to TEMIC's core funds may be possible, but need to be prepared for carefully and must be accompanied by a number of adjustments to the operating procedures, such as additional in-kind contributions by Members, inclusion of Fellows who can pay market-rate fees, or additional membership services.

The accumulated surplus of revenues as discussed in section 6.3 is declining. Reliance on this surplus does not present a long-term solution to offset reductions in federal support, but could be used as an emergency measure to fill temporary shortfalls.

## 6.8 Conclusions

The Treasury Board Decision (TB 802885), which allocated the contributions of DOC and DEA to TEMIC for a period of five years states that these contributions should be 50% of the actual costs. Including in-kind contributions as well as the contributions of CIDA, the federal government's contributions represent 50% of the total costs. Although the contributions from overseas Posts could not be quantified for this estimate, we feel that the principle of equal contributions has been met.

This conclusion section focuses on funding alternatives which could be developed by TEMIC in order to off-set potential reductions in cash fees and cash contributions from Members.

Increased cash contributions from existing Members are not likely. A calculation linking potential sales revenues to present contributions to TEMIC indicates that TEMIC is receiving a fair share of company marketing funds. New members also are not likely to make significant cash contributions, although a number of exemptions may exist, e.g. by soliciting membership of large companies from areas such as cellular technology.

TEMIC's cash revenues since its inception were \$3,571,000. Including in-kind contributions, TEMIC's operating budget was \$4,505,544. DEA and DOC accounted for 24% of the in-kind contributions, the remaining Members combined accounted for 76%.

The importance of in-kind contributions to an organisation such as TEMIC is evident from the fact that 30% of its present operating expenses are covered by in-kind contributions. This percentage is expected to increase with the projected increase of numbers of Programs as well as numbers of Fellows in the next three years. Increased reliance on in-kind contributions as opposed to cash contributions from Members may well be a viable source to cover more of the operating expenses in the future. We also believe that Members are open to discussions along these lines. Further, as we saw in section two, new Members representing small companies might join under a scheme which highlights in-kind contributions.

We do not believe that core operating expenses can be cut in any significant way, because TEMIC's present daily costs per Fellow are in line with the daily fees listed by other international training institutes. Using operating expenses as basis, TEMIC's daily costs per Fellow can be calculated at \$219. These costs may drop to \$174 in the next three years, through an expansion of the Program.

International Fellowships make some contributions to core costs, but typically cover only up to one-third of actual costs through registration fees. The registration fees from CIDA contributions are almost identical to this international fee scale. Since the Canadian-based costs of 90% of the Fellows are already covered under the CIDA agreement, increases in international Fellowships do not assist TEMIC to off-set some of its core costs.

Over half of the External Affairs Posts suggested that some cost-sharing by Fellows themselves might be possible, often linking this to the provision that these funds would be available in local currencies, i.e. for international airfares. This is further supported by the fact that most Fellows in the last two Programs paid their own international airfares. Again, these funds do not contribute to core support for TEMIC. Only a few Posts suggests the availability of funds in the range covering full course costs.



Additional sources for funds for core operations for TEMIC might evolve over time through income generating vehicles such as offering special services to Members, or by adding Fellows to the Programs who pay the full costs. We feel that it is important for TEMIC to explore such options in order to achieve some level of operating security which allows it both to serve all its Members equally and not be too dependent on any one category of Member.

Given the fact that alternate sources of funds are not obvious, reductions in federal contributions to TEMIC's core budget, as well as reductions in membership income, would have an important impact on its operation. Basically, TEMIC is dependant on its present operating cash income to carry out its program over the next three years. TEMIC plans to increase its annual offering of Programs by 25% and its intake of Fellows by 20% and has secured the requisite cash funds for in-country travel and per diem support for the next three years. It expects the Members to provide the requisite increased in-kind contributions.

Our analysis leads us to suggest that it is important for TEMIC Members to review the whole funding side of organization with the mandate to aim for a restructured revenue base.

In addition to looking at new fee and membership structures, additional sources of income and increased in-kind contributions, it will be important to look at the government contributions in their totality, i.e. include CIDA as well as DEA and DOC contributions. The split of contributions between Fellowships and core support basically prevents TEMIC from benefiting from income from international Fellowships. It would appear that the flexibility of switching between line items for Fellowships and for core operations would provide incentives to TEMIC to pursue international sources of revenues through Fellowships.

Expanding TEMIC's contribution to 'Canada Inc.', should be treated as an additional mandate with special financial (cash or in-kind) provisions. Our discussions with the Members lead us to suggest that this is a worthwhile direction to take, however, a concise implementation program would need to be developed. We suggest that this would include a concerted and continuous program for follow-up with Fellows, membership services or tracking of international procurements. Our review of the present Program and operating budget leads us to suggest that this mandate cannot be taken on successfully with existing financing.

Lastly, we conclude that TEMIC should be careful in expanding its Program and intake of Fellows, given its present membership. We do not doubt that demand exists in developing countries for these Programs. Resources of Members may become stretched, however.



## SECTION SEVEN: HIGHLIGHTS OF FINDINGS

The methodology used for this evaluation was found to be effective in gathering the required data and in developing the approach to the analysis of the data. The findings are stated with confidence. The following section highlights the findings for each of the evaluation issues examined in the evaluation.

### 7.1 Trade, Development and Diplomacy

- o Present TEMIC Members generate the bulk of Canadian telecommunications exports to developing countries, estimated at \$160.5 million in 1988.
- o Exports to developing countries comprise 20% of the total volume of \$775 million in Canadian telecommunications exports. In comparison, five industrialised countries represent 70% of the total.
- o Half of the TEMIC Members see developing countries as major growth areas for their companies. Over 70% of the Fellows report that they could use Canadian products and over 60% report that they could use Canadian solutions.
- o Among eight marketing vehicles, Members rated TEMIC, on the average, as being on a par with the use of local agents and attendance or exhibits at international trade shows and not quite as successful as their own staff, or the assistance of embassies.
- o Most Members report that it is very hard to isolate the impact of TEMIC from all the other factors that contribute to a sale and to credit TEMIC directly with obtaining a contract.
- o Nevertheless, Members report direct trade benefits from TEMIC to date which may reach \$50 million.
- o Most Members report that it takes up to five years to secure a contract after initial contacts. Since TEMIC has only been offering Programs for less than three years more direct benefits are anticipated in the future.
- o Indirect commercial benefits, in terms of contacts with Fellows and forming relationships with other Members, have been achieved by almost three-quarters of the Members. Half of the Posts have seen indirect commercial benefits in their region resulting from TEMIC.

- o Unintended benefits have been achieved in the form of sub-contract arrangements among Members as a result of relationships formed through TEMIC.
- o Companies which are at present not members of TEMIC, differ from Members in a number of ways. They may be smaller companies, provide specialised equipment or technologies, sell to special customers or through agents, use more commercial financing vehicles or achieve sales in shorter time periods than Members.
- o A number of the small companies, which are at present not Members, could envision trade benefits from TEMIC. However, a number of Program modifications would be required to realize these benefits.
- o Bilateral and multilateral financing are important for securing Canadian export opportunities in the poorer developing countries. The degree to which such financing is available sets limits on the extent to which TEMIC can contribute to sales in these countries.
- o Countries of export interest to Members, as well as countries of little interest to Members have participated in TEMIC Programs. Over 50% of the world's least developed countries have sent Fellows to TEMIC.
- o 11 countries (out of 62 total) sent over 1/3 of the TEMIC Fellows. Three of these countries are neither of trade priority to Members nor to government trade officials. Overall, government priorities are more strongly reflected among those 11 countries than priorities of the Members. Only one country that participated in TEMIC Programs is not eligible for CIDA funding support.
- o Nearly all Fellows report that they have been able to apply what they learned at TEMIC to various aspects of their own jobs. This application should have a positive impact on the development of telecommunication services in their countries. In particular, the application of TEMIC knowledge should benefit the social and economic development of rural areas since many Fellows emphasized the applicability of Canadian technology, solutions and expertise to meeting rural telecommunication needs.
- o TEMIC is promoting a better international understanding of Canadian telecommunications expertise, thereby raising the Canadian profile and giving credibility to the Canadian telecommunications industry. This, in turn can support the positions taken by the Canadian government in international fora.

## 7.2 Training

- o Fellows report that the TEMIC Programs were successful to very successful in increasing their knowledge of telecommunications in general.
- o Ninety-five percent of the Fellows gave examples of how they had applied this knowledge in the areas of management, technology decisions, plans, policies or regulations.
- o Most Fellows reported that they increased their knowledge of Canadian telecommunications products, services and management expertise, on the average, from a limited degree of knowledge to a good level of knowledge.
- o Three-quarters of the Fellows gave specific examples of ways they might be able to use Canadian solutions, telecommunication products, services or experts in their own organization.
- o In commenting on TEMIC's strengths most Fellows focused on the combination of theory and practice in the courses, the case study approach and the site visits.
- o There was not a high degree of concern expressed by Fellows about an undue marketing emphasis in TEMIC. Some credit government participation in TEMIC as mediating against too much marketing.
- o Fellows were unanimous in saying they would recommend TEMIC Programs to others in similar positions and some have already sent others in their organization to TEMIC.
- o Fellows state that the government's support of TEMIC was important in their decision to attend the Program. On average the Posts agree with this assessment.
- o Post-Program contact with Fellows, either by Members or by TEMIC, has been very limited, according to the Fellows. Over 80 percent of Fellows had not received follow-up communications since attending the Program. A number of recommendations were made by Fellows, Members and Posts to improve follow-up including; newsletters, updating journals, follow-up through the Posts, and reunions of Fellows to provide advice to TEMIC.

### 7.3 Membership

- o TEMIC's 25 Members from government, the private sector and post-secondary education reflect a diversity of objectives for membership in TEMIC. Most Members have multiple objectives, combining training, trade, as well as general support to Canadian industry.
- o Government objectives include trade as well as social and economic development through training.
- o Just under half of the private sector Members (ten ) see market development and signed contracts as their ultimate objective and nine Members wish to establish contacts with Fellows. Several of the major private sector Members have little or no interest in international marketing. These Members see their participation as a corporate responsibility to the Canadian telecommunications industry in general.
- o Other objectives include improved contacts with other Canadian companies, a better knowledge of how the Canadian government operates and providing support to developing countries.
- o Almost three-quarters of the Members feel that their objectives have been fully met. One member states that none of his company's objectives have been met.
- o Factors that effect the degree to which people feel their objectives are being met include their objectives for participating, their expectations regarding direct trade benefits, the time frame within which they hope to achieve their objectives and the extent of their participation in TEMIC activities.
- o TEMIC membership has been relatively stable in terms of retaining Members and of avoiding major changes among membership categories.
- o Seven Members do not feel that the present membership and fee structure is appropriate. Four Ordinary Members who pay the highest fees are in this group.
- o Rather than increasing their membership category to a higher fee level, some Members prefer to concentrate their TEMIC contributions on in-kind services, such as curriculum delivery or on sponsoring Fellows or hosting hospitality events. This gives them the flexibility to control expenditures on a quarterly basis.

- o While current Members expect to remain in TEMIC, reductions in categories of membership are being considered on the basis of on-going cost-benefit reviews.
- o Non-members are typically relatively small by comparison to Members. Although exports to developing countries may represent a high percentage of their total sales volume, the dollar value of these sales may only be in the range of a few hundred thousand dollars.
- o Any assessment of expanding the TEMIC membership needs to consider the costs and benefits, given that most major exporters to developing countries are already Members. Additional Members at the low fee end may not contribute a great deal financially to the operations, but may be desirable for other reasons, including the representation of a broader spectrum of Canadian capabilities to Fellows. In this regard, TEMIC may wish to consider expanding into new fields, such as cellular radio, where there are some larger-sized companies that could contribute at the higher end of the fee scale.
- o Continued participation by the government of Canada is seen as important by the Members in all aspects of TEMIC, including financing, logistics and Board representation.
- o Members emphasised that TEMIC's role could evolve into a broader export development tool by encouraging the formation of 'Canada Inc.', i.e. the representation of Canadian interests in a more unified way than possible through individual company activities. Members feel that government should treat TEMIC as complementary to its other trade programs.

#### 7.4 Comparisons

- o Fellows or their colleagues have attended short courses in telecommunications training in 13 countries.
- o One of these programs, the US Telecommunication Training Institute (USTTI) combines, like TEMIC, trade and development and training objectives. It recently added a senior level course to better achieve its trade objectives.
- o Both TEMIC and USTTI are partnerships among a number of private sector companies and government departments. About 85% of USTTI's operating budget is contributed by the private sector, with the remainder contributed by government and registration, while the TEMIC split of contributions from the two sectors is roughly equal.



- o Differences between the Canadian and the US model, in particular in the way Programs are developed and delivered, make cost comparisons difficult. For example, 100% of USTTI courses are in-kind contributions from industry, while TEMIC develops its own Program curricula, and Members develop and deliver the individual sessions.
- o For USTTI, in-kind contributions make up 88% of the operating budget for administration and training, which is in the order of \$2.2 million annually. TEMIC's in-kind contributions have comprised 30% of its total operating expenses since start-up.
- o USTTI's membership structure distinguishes between member companies of the Board which pay a uniform membership fee of \$30,000 and sponsoring companies which exclusively provide in-kind contributions by presenting training courses. Eleven companies fall in the first category out of a total of 39 sponsors in total.
- o Given the large number of companies in the United States, USTTI has a small number of members and sponsors.
- o TEMIC has achieved significantly larger financial contributions from private sector Members than either of the two Canadian Specialized Training Institutes (STI) which provide training for representatives from developing countries.
- o Both of these STI's operate a number of membership services and income generating schemes, which might be potentially attractive to TEMIC to help draw in smaller companies and to gain some degree of operational security.
- o TEMIC's daily costs per Fellow amount to \$219, which is comparable to fees typically charged for similar courses in other countries. International fellowships, as well as registration fees paid by CIDA, typically amount to only one third of this range of fees.
- o The other international telecommunication training institutes seem to have close operational links to bodies such as the ITU.

## 7.5 Funding

- o Cash and in-kind contributions to TEMIC since its inception amount to \$4,506,000 (rounded).

- o Considering only cash contributions, government (DOC, DEA, and CIDA) has contributed 59% of TEMIC's total revenues since start-up and the private sector has contributed 41%.
- o When in-kind contributions are included, government and private sector contributions each account for 50% of the total TEMIC budget. In-kind contributions account for 30% of the total budget.
- o TEMIC Fellows may have access to fellowship funds from international organizations or to their own funds for cost-sharing in local currency expenses, and in a few cases, to pay full course costs. International fellowship programs will not generate sufficient revenues to pay TEMIC's full operating costs.
- o Sources of funds to support core activities are not likely to come from increased cash contributions from Members, given the return that Members are receiving from their marketing dollar, and given the fact that increased Program offerings in the next years will require increased in-kind contributions from existing Members.
- o Some opportunities exist to add revenues through new memberships, but these opportunities may be limited, given the tendency for new Members to join at the lower fee scales, and the small size of most Non-members.
- o Some support for core activities might come from any of the following: income generating activities, charging some Fellows full course fees, increased in-kind contributions by Members, or special membership services. The implementation of any of these will require modifications to the organization.
- o Cost-cutting measures do not appear reasonable over the next three years since TEMIC has expanded its annual offering of Programs by 25% and its intake of Fellows by 20%, while operating income likely will increase by only seven per cent. This will bring the daily cost-per-fellow to \$174.
- o TEMIC has accrued an operating surplus of \$390,000 from Membership fees, which is decreasing as membership fee income reduces and as it is being applied against fellowships. Reliance on this surplus in the long-term is not feasible.
- o Present financial arrangements split government contributions into core support on one hand (from DEA and DOC) and travel and per diem support (from CIDA) on the

other. TEMIC cannot translate benefits which might accrue from international fellowships into contributions to core operations, because these funds would merely replace CIDA contributions. Line item flexibility between government contributions would be desirable.

## SECTION EIGHT: FINAL CONCLUSIONS

- 1     TEMIC deserves major credit for successfully meeting its two primary objectives: training and trade. It also balanced the sometimes competing interests of these two objectives. TEMIC's success in this regard is best exemplified by the high degree of satisfaction with the organization expressed by both Fellows and Members.
- 2     In order for TEMIC to achieve its trade objectives, its training Programs for telecommunication professionals from developing countries must continue to be first class.
- 3     TEMIC has achieved both direct and indirect trade benefits for its Members. Since the procurement cycles for major telecommunication infrastructure developments are relatively long-term, it is anticipated that TEMIC will generate greater benefits in the future.
- 4     Increased trade benefits might be achieved by TEMIC if the selection process for Fellows could result in more countries of trade interest to the private sector Members. However, TEMIC also has a training objective and it would be neither feasible nor desirable to match trade interests directly to numbers of Fellows.
- 5     Since access to financing is critical, particularly for the poorer developing countries, TEMIC should expand in its curricula sessions that focus on bilateral and multilateral funding support. These sessions would most appropriately be developed and presented by government Members.
- 6     Neither the training objective nor the trade objective will be fully realized unless both TEMIC and Members implement programs to follow up with both the Fellows and the Posts. The specific suggestions included in the evaluation report should be considered.
- 7     TEMIC should consider expanding its membership into new fields such as cellular telephone where there are some larger-sized companies that could contribute at the higher end of the fee scale.
- 8     If TEMIC were to be successful in attracting smaller non-member companies, it would have to adjust its mode of operation to offer them sufficient benefits to join, necessitating adjustments to the Program or to the invitation criteria. However, there may be broader policy issues for desiring an expanded membership base.

- 9 The principle of equal contributions to TEMIC from the government and private sectors has been met. Considering cash contributions alone, the balance has been 59% government contributions (including CIDA) and 41% private sector. However, the inclusion of in-kind contributions brings the funding contributions to a 50/50 split.
- 10 TEMIC will not be able to achieve full self-sufficiency from government funding given the primacy of its mission to provide training to professionals from developing countries. However, government may be able to reduce its funding level if TEMIC is successful in implementing some of the income-generating activities discussed in this evaluation such as: charging some Fellows full course fees, increased in-kind contributions by Members, or special membership services. However, the implementation of any of these activities will require modifications to the organization and a period of funding stability in which to assess their effectiveness.
- 11 It is important for TEMIC to explore the above options in order to achieve some level of operating security which allows it both to serve all its Members equally and not be too dependent on any one category of Member.
- 12 Core operating expenses could not be cut in any significant way given TEMIC's plans to increase its annual offering of Programs by 25% and its intake of Fellows by 20%.
- 13 It is not likely that there will be a large increase in the membership contributions of the private sector but increased in-kind support will be required from them to support the expanded Program referred to above, through the development and presentation of courses and hospitality.
- 14 When setting future plans with regard to its Program, TEMIC must ensure that core support from membership fees, government contributions, and in-kind support are sufficient to meet resource requirements. In order to assist TEMIC in maximising its operating efficiency, budgetary line item flexibility between core funding and scholarship support should be permitted. If this cannot be achieved, a reduction in future Program activities might be necessary.
- 15 A review of membership structures and fees will be necessary in the near term and should include a review of different fee structures, in-kind contributions, revenue generation and additional mandates for TEMIC.



- 16 The continued participation of the Government of Canada is important in all aspects of TEMIC; financial, logistical support, representation on TEMIC Boards and diplomatic representation overseas.
- 17 Members feel that TEMIC has been particularly effective in supporting the development of a 'Canada Inc.' and we recommend an increased participation by the government in those aspects of TEMIC's operation that are more of benefit to the industry as a whole, rather than to any one individual Member. As examples, Government should provide the sessions on funding referred to above and assist the smaller Non-members to find a role in TEMIC.
- 18 Canada and the Canadian telecommunications industry need an organization like TEMIC for several reasons. Significant potential demand for Canadian telecommunication products exists in developing countries but it is expensive and time-consuming to break into these markets. If Canadian companies are to increase exports to developing countries they need to gain a better understanding of their needs and of the potential markets. Most industrialised countries are providing telecommunication training to professionals from the developing world and the absence of a Canadian equivalent would be to Canada's competitive disadvantage. Canada would also not reap the diplomatic gains that are being achieved through TEMIC.
- 19 It will be important for TEMIC to develop closer relationships with other specialised international agencies, in order to coordinate its telecommunication training with global developments.
- 20 We feel that the results of this evaluation are a vote of confidence in TEMIC from both the international Fellows and from Canadian industry and urge the federal government to actively promote TEMIC among the Canadian private sector and in international circles to ensure that TEMIC is able to build upon its successes.

## **APPENDIX A**

### **LIST OF TEMIC MEMBERS (AS OF FEBRUARY 1990)**

#### **ORDINARY MEMBERS:**

Bell Canada International

Department of Communications of the Federal Government of Canada

Department of External Affairs of the Federal Government of Canada

Northern Telecom Canada Ltd

Telecom Canada

Telecommunication Services International of the British Columbia  
Telephone Company

Teleglobe Canada Inc.

#### **ASSOCIATE MEMBERS:**

Alta Telecom International Ltd.

Spar Aerospace

#### **AFFILIATE MEMBERS:**

Canac Telecom

Canadian Broadcasting Corporation

Canadian Pacific Consulting Services Ltd.

Mitel Corporation

#### **PARTICIPATING MEMBERS:**

ADGA Systems International Ltd.

Canadian Marconi

DGB Systems Integrator Inc.

**APPENDIX A (continued)**

DTI Telecom Inc.

Plan Tel Inc.

SR Telecom Inc.

Telesat Canada

Wescom Communications Research International Inc.

**UNIVERSITY AND POST-SECONDARY MEMBERS:**

Humber College of Applied Arts and Technology

Ryerson Polytechnical Institute

Sheridan College of Applied Arts and Technology

**EX-OFFICIO MEMBER:**

Canadian International Development Agency

## APPENDIX B

### ABBREVIATIONS USED

CIDA	Canadian International Development Agency
DEA	Department of External Affairs of the Federal Government of Canada
DOC	Department of Communications of the Federal Government of Canada
EDC	Export Development Corporation of the Federal Government of Canada
LDC	Less developed country.
LLDC	The term has been used by the United Nations system since 1971 to designate the world's least developed countries. Presently 41 countries are included in this list. They are a subgroup of LDCs.
ITU	International Telecommunication Union
STI	Specialized Training Institute
TEMIC	Telecommunications Executive Management Institute of Canada
USAID	United States Agency for International Development
USTTI	United States Telecommunication Training Institute

EVALUATION OF THE  
TELECOMMUNICATIONS EXECUTIVE MANAGEMENT INSTITUTE  
OF CANADA (TEMIC)

VOLUME TWO - SURVEY INSTRUMENTS



## INTRODUCTION TO VOLUME TWO:

This report is prepared under contract to the federal Department of Communications and the Department of External Affairs as part of a comprehensive evaluation of the Telecommunications Executive Management Institute of Canada (TEMIC), as mandated in Treasury Board Decision (TB 802885).

Volume two consists of the four questionnaires which were developed to solicit information from TEMIC Fellows, Members, Non-Members and External Affairs posts. They were administered in English and in French. Questionnaires in both languages are included.

Background research was carried out prior to the development of the questionnaires and other research instruments in order to clarify the research requirements of the evaluation. Preliminary research was conducted at TEMIC to gather data pertinent to the evaluation issues, and TEMIC personnel provided additional information in response to subsequent requests for clarification or elaboration.

Evaluation issues and the overall approach were discussed in person with commercial officers in the Canadian embassies in Tunis and Nairobi, and with the head of the Tunisian telephone company. Discussions regarding the evaluation were also held with representatives of the ITU in Geneva, including officials from the training division, the fellowship program and the technical cooperation program, as well as with a TEMIC Fellow currently working at the ITU.

Evaluation issues, as well as sampling suggestions and development of research instruments, were discussed with officials from the Department of Communications, External Affairs, CIDA, and Industry, Science and Technology. The evaluation approach and issues of methodology were discussed with an evaluator for the USTTI program.

One hundred and twenty-four TEMIC Fellows were sent a questionnaire. This total includes every Fellow who has attended a TEMIC Program, with the exception of those who attended the February/March 1990 program. Only four Fellows from the last group were included in the sample, since it was felt that the questionnaire, because it focused on such issues as application of knowledge gained, had relevance mainly to those Fellows who had attended the Program some time ago. A total of 38 Fellows responded from the 124 contacted, representing a response rate of 30.6%.

As of March 8, 1990 TEMIC had a total of twenty-five Members from the private sector, government and post-secondary institutions. Requests for an interview by telephone were sent to all Members, accompanied by an Outline of Questions, which was an abbreviated version of the questionnaire. Twenty-two Members were interviewed for a response rate of 88%.

Twenty-nine telecommunications companies that are currently not Members of TEMIC were sent a request to interview them by telephone, accompanied by an Outline of Questions, which was an abbreviated version of the questionnaire. The sample was drawn from the External Affairs' publication "Telecommunications Products and Services for World Markets", coupled with information provided by officials of DOC and External Affairs regarding participation by companies in trade missions and export-related activities. The companies selected were considered to have interests in third world markets, and therefore might benefit from membership in TEMIC. Interviews were conducted with eleven non-member companies, for a total response rate of 37.9%.

Forty-four External Affairs Posts received a written questionnaire. Included in this sample were all posts with countries in their area of coverage which have TEMIC Fellows, as well as some posts whose countries have not yet sent TEMIC participants. The sample included posts that represent some CIDA eligible countries and posts with countries with resources for self-financed procurements. Posts were included that represented priority countries as identified by DOC and External Affairs officials. Nineteen posts responded for a response rate of 43.2%.

The response rates from the questionnaires are summarized in the chart below:

CATEGORY	TOTAL SAMPLE	RESPONSE	PERCENTAGE RESPONSE
FELLOWS	124	38	30.6%
MEMBERS	25	22	88.0%
NON-MEMBERS	29	11	37.9%
POSTS	44	19	43.2%

**EVALUATION OF THE TELECOMMUNICATIONS EXECUTIVE MANAGEMENT  
INSTITUTE OF CANADA (TEMIC)**

**MARCH 1990**

**QUESTIONNAIRE FOR FELLOWS**

The Canadian government has committed financial support to help the Telecommunications Executive Management Institute of Canada (TEMIC) in its development and operations for the first five years. An evaluation is being conducted under the auspices of the Department of Communications of the Government of Canada, in order to review continued participation in the TEMIC Program.

Your participation in this evaluation is voluntary, however, as a Fellow of the TEMIC Program your feedback is very important and we would like to thank you in advance for your co-operation. Please feel free to express your opinions in a frank and open manner. Rest assured that the evaluation report will aggregate the information collected and the anonymity of your individual responses will be assured.

Please try to complete every question as best you can. If you do not know the answer to any question please leave it blank. Please note that there are questions on both sides of the page.

**SECTION A: PROFILE**

**NAME:** \_\_\_\_\_ **COUNTRY:** \_\_\_\_\_

**ORGANIZATION:** \_\_\_\_\_

**TITLE:** \_\_\_\_\_

## SECTION B: TRAINING

One of TEMIC's goals is "to enhance the knowledge and skills of telecommunications executives and managers from developing countries to assist them in the development of their facilities, services and human resources".

The following questions ask for your opinion on how well the TEMIC Program that you attended met this objective for you. Please circle the number that best answers the questions.

1. Using the scale below where 1 is very unsuccessful and 5 is very successful, how successful was the TEMIC Program in increasing your knowledge of telecommunications in general?

VERY UNSUCCESSFUL	UNSUCCESSFUL	NEITHER SUCCESSFUL NOR UNSUCCESSFUL	SUCCESSFUL	VERY SUCCESSFUL
1	2	3	4	5

2. Using the scale below, where 1 indicates no application and 5 a high degree of application, to what degree have you been able to apply knowledge that you gained from the TEMIC Program in your job?

NO APPLICATION		SOME DEGREE OF APPLICATION		HIGH DEGREE OF APPLICATION
1	2	3	4	5

3. Please put a check mark beside the ways in which you have been able to apply knowledge gained from the TEMIC Program. We would appreciate a brief description of some applications in the space provided.

- ( ) a. Used the knowledge to develop or improve telecommunications management and administrative practices.

EXAMPLE:

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- ( ) b. Used the knowledge to assist in making technological decisions related to telecommunications infrastructure. (e.g., system design or equipment selection)

EXAMPLE:

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- ( ) c. Used the knowledge in the development of telecommunications policies.

EXAMPLE:

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- ( ) d. Used the knowledge in the development of telecommunications regulations.

EXAMPLE:

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- ( ) e. Used the knowledge in the development of telecommunications plans.

EXAMPLE:

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4. Please describe any other ways in which you have used the knowledge gained from the TEMIC Program?

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5. Would you recommend the TEMIC Program to someone holding responsibilities similar to those of your position?

Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, why?

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If no, why not?

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6. Telecommunications management training is being offered in a number of countries. We are interested in whether you or another representative of your organization have attended one of these programs. If so, please indicate the country in which the training was held and the name of the institution that offered the program. Please indicate whether it was you (by circling 1) or another representative from your organization (by circling 2) that attended the program.

<u>Country</u>	<u>Name of Institution</u>	<u>Self 1/Other 2</u>
( ) United States of America	<hr/>	1 / 2
( ) Federal Republic of Germany	<hr/>	1 / 2
( ) Sweden	<hr/>	1 / 2
( ) Netherlands	<hr/>	1 / 2
( ) Japan	<hr/>	1 / 2
( ) France	<hr/>	1 / 2
( ) Italy	<hr/>	1 / 2
( ) Other, please list	<hr/>	1 / 2

7. In comparison to the above program(s) that you or your organization's representative have attended, what do you feel are the strengths of the TEMIC Program? Please identify the program you are comparing to TEMIC and then list TEMIC's strengths.

**Name of Program**

**List TEMIC's Strengths**

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8. In comparison to the above program(s) that you or your organization's representative have attended, what do you feel are the weaknesses of the TEMIC Program? Please identify the program you are comparing to TEMIC and then list TEMIC's weaknesses.

**Name of Program**

**List TEMIC's Weaknesses**

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**SECTION C: FAMILIARIZATION WITH CANADIAN PRODUCTS, SERVICES AND MANAGEMENT EXPERTISE**

One of TEMIC's objectives is "to familiarize telecommunications authorities in developing countries with the extent and availability of Canadian products, services and management expertise in order to promote cooperation and trade between Canada and the developing world". The following questions ask for your opinion on how well the TEMIC Program that you attended met this objective for you.

9. a. Prior to attending the TEMIC Program, on a scale of 1-5 where 1 represents no knowledge and 5 represents a high degree of knowledge, how would you rate the extent of your knowledge about Canadian telecommunications products, services and management expertise?

No Knowledge		Some Degree of Knowledge		High Degree of Knowledge
1	2	3	4	5

- b. Please describe how this knowledge was acquired.

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10. After attending the TEMIC Program how would you rate, using the same scale as above, the extent of your knowledge about Canadian telecommunications products, services and management expertise?

No Knowledge		Some Degree of Knowledge		High Degree of Knowledge
1	2	3	4	5

11. Can you provide specific examples of ways in which you or your organization may be able, either now or in the future, to utilize Canadian solutions to telecommunications problems, products, services or experts as a result of the TEMIC Program?

Solutions

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Products

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Services

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Experts

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Other

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12. After your return from the TEMIC Program have you been kept informed of telecommunications developments in Canada?

Yes \_\_\_ No \_\_\_ If no, please go to Section D.

If yes, please explain how and by what organization.

How?

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By What Organization?

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#### SECTION D: PARTNERSHIP BETWEEN GOVERNMENT AND INDUSTRY

As you are aware, TEMIC is a partnership between the Canadian telecommunications industry and the Government of Canada.

13. On a scale of 1-5 where 1 represents very unimportant and 5 represents very important, in your decision to attend the TEMIC Program how important was the fact that the Canadian government supports TEMIC?

VERY UNIMPORTANT	UNIMPORTANT	NEITHER IMPORTANT NOR UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4	5

Please explain:

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#### SECTION E: ADDITIONAL COMMENTS

Please provide any other comments about your experience with TEMIC or the Canadian telecommunications industry in general which may not have been covered in the questionnaire.

Comments:

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THANK YOU VERY MUCH FOR TAKING THE TIME TO COMPLETE THIS QUESTIONNAIRE.

PLEASE RETURN THE COMPLETED QUESTIONNAIRE IN THE ENCLOSED SELF-ADDRESSED ENVELOPE BY APRIL 15, 1990.



**EVALUATION OF THE TELECOMMUNICATIONS EXECUTIVE MANAGEMENT  
INSTITUTE OF CANADA (TEMIC)  
MARCH 1990**

The Canadian government has committed financial support to help the Telecommunications Executive Management Institute of Canada (TEMIC) in its development and operations for the first five years. An evaluation is being conducted under the auspices of the Department of Communications of the Government of Canada, in order to review continued participation in the TEMIC Program.

Your participation in this evaluation is voluntary, however, as a member of TEMIC your feedback is very important, and we would like to thank you in advance for your cooperation.

An analyst will be contacting you to request a telephone interview using the following questions as guidelines. We would very much appreciate you taking a few minutes to read through the questions prior to the interview. Some of the questions may require the gathering of background information and we would very much appreciate if this could be done in advance of the interview.

The evaluators have been assured that the Government of Canada will treat the information contained in this document as confidential and the information gathered from you and others will be aggregated to ensure the anonymity of the individual responses.

**OUTLINE OF QUESTIONS FOR TEMIC MEMBERS**

1. What is your company's current TEMIC membership category?
2. Has the category of your membership changed since joining TEMIC? If yes, what was your previous membership category and for what reason did you make the change?
3. Do you consider developing countries as a significant growth area for your organization? If yes, within what timeframe do you expect to engage in negotiations with developing countries? If no, why are developing countries not a significant growth area for you?
4. Which specific developing countries do you feel have the greatest potential for your company? Please list in order of priority, listing first those with greatest potential.
5. In your experience, how long does it typically take to secure a contract from the time initial contacts are made?

6. On a scale of 1-5 where 1 represents very unsuccessful and 5 represents very successful, please rate the success in terms of usefulness to your company of the following international marketing vehicles available to reach customers in developing countries.

VERY UNSUCCESSFUL	UNSUCCESSFUL	NEITHER SUCCESSFUL NOR UNSUCCESSFUL	SUCCESSFUL	VERY SUCCESSFUL
1	2	3	4	5

Your company's international sales division ( ), Working through manufacturers representatives ( ), Local agents ( ), Staff trips ( ), Canadian government trade missions ( ), Canadian embassies ( ), Attendance or exhibits at international telecommunications shows ( ), Participation in TEMIC activities ( ), Other, please specify ( ).

7. We would like to calculate the total financial contribution of members to TEMIC, (in addition to membership fees). Please provide estimates of the costs to your organization of those activities which support TEMIC's operation and programs, as follows:

Your organization participated  
in the following:

Estimated cost to  
your organization:

Sponsorships	( )	\$	
Course lectures*	( )	\$	
Site visits	( )	\$	
Hospitality	( )	\$	
Membership in			
committees, boards	( )	\$	
Other [please list]	( )	\$	
	( )	\$	
	( )	\$	
	( )	\$	
	( )	\$	

\* in order to arrive at a common basis for estimating course costs, we propose to use 20 hours preparation time per course hour delivered, at an instructor cost of \$40 per hour for a total of \$800 per hour of course delivery. Please inform us if these figures are far outside your company's real costs.

8. a. To date, has your company been able to achieve direct commercial benefits from its participation in TEMIC? If yes, specify the nature of the commercial benefit, its dollar value, and the TEMIC Program and Fellow(s) involved.
- b. Does your company anticipate future direct commercial benefits from its participation in TEMIC? If yes, specify anticipated nature of the commercial benefit, its dollar value, and the TEMIC Program and Fellow(s) involved.

9. Has your company been able to achieve indirect commercial benefits (such as goodwill or country contacts), from its participation in TEMIC? Please specify the nature of such benefits.
10. What are your company's objective(s) in participating in TEMIC?
11. Do you feel that your objectives are being met? If yes, in what manner are they being met? If no, for what reasons are they not being met?
12. On a scale of 1-5 where 1 represents very unimportant and 5 represents very important, please give your assessment of the importance of the continued participation of the Government of Canada in the following aspects of TEMIC.

VERY UNIMPORTANT	UNIMPORTANT	NEITHER IMPORTANT NOR UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4	5

Financial contribution ( ), Logistical support ( ), Representation on Board of Directors ( ), Diplomatic representation overseas ( ), Other, please specify ( ).

13. Do you feel that the current ratio of financial support provided to TEMIC by the public sector vs. the private sector is appropriate? If yes, why? If no, why not?
14. Does your company intend to maintain its category of membership in TEMIC at the same level for the future ( ), at an increased level ( ), or at a decreased level ( )? Please state your reasons for any change.
15. Do you feel that the membership and fee structure is appropriate? Why or why not?
16. What division in your company is responsible for including TEMIC membership fees in its budget?
17.
  - a. Does your company offer any training programs that are similar to TEMIC's to third world clients for a fee?
  - b. If so, do you perceive any overlap between your courses and those offered in the TEMIC Program?
18. Are you aware of other telecommunications management training courses for officials from developing countries? Please specify.
19. How does the TEMIC Program compare to these other courses? Please elaborate.

20. On a scale of 1-5 where 1 represents very unsuccessful and 5 represents very successful, how successful do you feel the TEMIC program has been in meeting the following objectives. Please explain your rating.

VERY UNSUCCESSFUL	UNSUCCESSFUL	NEITHER SUCCESSFUL NOR UNSUCCESSFUL	SUCCESSFUL	VERY SUCCESSFUL
1	2	3	4	5

- a. Enhancing the knowledge and skills of telecommunications executives and managers from developing countries to assist them in the development of their facilities, services and human resources.
  - b. Familiarizing telecommunications authorities in developing countries with the extent and availability of Canadian products, services and management expertise in order to promote cooperation and trade between Canada and the developing world.
21. What has your company's annual sales revenue been for every year from 1981 to 1989 inclusive? Please specify the financial year being used.
22. What percentage and/or dollar value of the annual sales revenue has been from export? Please provide the figure for every year from 1981 to 1989 inclusive. Please specify the financial year being used.
23. What percentage of this export revenue resulted from sales to developing countries? Please provide the percentage for every year from 1981 to 1989 inclusive.
24. Do your exports to developing countries consist principally of goods, consulting services, or other, please specify?
25. How have your exports to developing countries been financed by the purchaser?
- Commercial banks ( ), Telecommunications revenues in the purchasing country ( ), Canadian International Development Agency ( ), Export Development Corporation ( ), Loans/grants to the purchaser ( ), World Bank loan ( ), Other multilateral banks ( ), Other, please identify ( ).
26. Please provide any additional comments about the TEMIC Program that may not have been covered already.

THANK YOU VERY MUCH FOR PARTICIPATING IN THIS EVALUATION.

**EVALUATION OF THE TELECOMMUNICATIONS EXECUTIVE MANAGEMENT  
INSTITUTE OF CANADA (TEMIC)  
MARCH 1990**

The Canadian government has committed financial support to help the Telecommunications Executive Management Institute of Canada (TEMIC) in its development and operations for the first five years. An evaluation is being conducted under the auspices of the Department of Communications of the Government of Canada, in order to review continued participation in the TEMIC Program.

Your participation in this evaluation is voluntary, however, your feedback is very important, and we would like to thank you in advance for your cooperation.

An analyst will be contacting you to request a telephone interview using the following questions as guidelines. We would very much appreciate you taking a few minutes to read through the questions prior to the interview. Some of the questions may require the gathering of background information and we would very much appreciate if this could be done in advance of the interview.

The evaluators have been assured that the Government of Canada will treat the information contained in this document as confidential and the information gathered from you and others will be aggregated to ensure the anonymity of the individual responses.

**OUTLINE OF QUESTIONS FOR NON-MEMBERS**

1. Are you familiar with the Telecommunications Executive Management Institute of Canada (TEMIC)? If yes, how did you become aware of the Institute?
2. Has your company been asked to become a member of TEMIC?
3. Why has your company, to date, not joined?
4. Are you considering joining in the future? Why or why not?
5. Do you consider developing countries as a significant growth area for your organization? If yes, within what timeframe do you expect to engage in negotiations with developing countries? If no, why are developing countries not a significant growth area for you?
6. Which specific developing countries do you feel have the greatest potential for your company? Please list in order of priority, listing first those with greatest potential.
7. In your experience, how long does it typically take to secure a contract from the time initial contacts are made?



8. On a scale of 1-5 where 1 represents very unsuccessful and 5 represents very successful, please rate the success in terms of usefulness to your company of the following international marketing vehicles available to reach customers in developing countries.

VERY UNSUCCESSFUL	UNSUCCESSFUL	NEITHER SUCCESSFUL NOR UNSUCCESSFUL	SUCCESSFUL	VERY SUCCESSFUL
1	2	3	4	5

Your company's international sales division ( ), Working through manufacturers representatives ( ), Local agents ( ), Staff trips ( ), Canadian government trade missions ( ), The Canadian embassy ( ), Attendance or exhibits at international telecommunications shows ( ), Participation in TEMIC activities ( ), Other, please specify ( ).

9. Do you feel that TEMIC could make a contribution to your company's current marketing efforts? Why or why not?
10. What has your company's annual sales revenue been for every year from 1981 to 1989 inclusive? Please specify the financial year being used.
11. What percentage and/or dollar value of the annual sales revenue has been from export? Please provide the figure for every year from 1981 to 1989 inclusive. Please specify the financial year being used.
12. What percentage of this export revenue resulted from sales to developing countries? Please provide the percentage for every year from 1981 to 1989 inclusive.
13. Do your exports to developing countries consist principally of goods, consulting services, or other, please specify?
14. How have your exports to developing countries been financed by the purchaser?  
Commercial banks ( ), Telecommunications revenues in the purchasing country ( ), Canadian International Development Agency ( ), Export Development Corporation ( ), Loans/grants to the purchaser ( ), World Bank loan ( ), Other multilateral banks ( ), Other, please identify ( ).
15. Please provide any additional comments that may not have been covered already.

THANK YOU VERY MUCH FOR PARTICIPATING IN THIS EVALUATION.

**EVALUATION OF THE TELECOMMUNICATIONS EXECUTIVE MANAGEMENT  
INSTITUTE OF CANADA (TEMIC)  
MARCH 1990**

**QUESTIONNAIRE FOR EXTERNAL AFFAIRS POSTS**

The Telecommunications Executive Management Institute of Canada (TEMIC) was established in Montreal in 1986 by Canadian industry and government jointly, to offer telecommunications executive management training for senior telecommunications officials from third world countries.

The Canadian government has committed financial support to help TEMIC in its development and operations for the first five years and is now conducting an evaluation of TEMIC in order to review continued participation in the TEMIC Program. This review is being done under the auspices of the Department of Communications of the Government of Canada.

Your feedback is very important to this evaluation and we would like to thank you in advance for your cooperation. Your input will be valuable in the upcoming decisions being made by External Affairs and the Department of Communications.

**PROFILE**

**NAME:** \_\_\_\_\_ **COUNTRY:** \_\_\_\_\_

**TITLE:** \_\_\_\_\_

1. Are there potential markets for Canadian telecommunications goods and services in your region?

Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, please identify them.

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2. What subject matters might TEMIC emphasize in its curriculum to enhance understanding of Canadian goods and services related to the markets you specified above?

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3. Which are the major established suppliers for telecommunications services and equipment in your region? Please specify on a country by country basis.

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4. What are the main vehicles for financing telecommunication procurement used by the authorities in your region? Please specify on a country by country basis.

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5. Please give details of any Canadian telecommunications trade activities in your region over the past 5 years - including both those which were financed by CIDA, and those financed from commercial sources.

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6. Do you see direct trade benefits resulting from TEMIC in the short, medium or long term? If so, can you give examples? If not, what are the barriers to achieving such benefits?

- a. Short-term direct trade benefits:

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Barriers:

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- b. Medium-term direct trade benefits:

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Barriers:

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- c. Long-term direct trade benefits:

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Barriers:

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7. a. Are you aware of indirect commercial benefits from the attendance at TEMIC Programs by the telecommunications officials from your region?

Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, please give specific examples.

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- b. On a scale of 1-5 where 1 represents very unimportant and 5 represents very important, how important are these indirect benefits to the development of telecommunications trade in your region?

VERY UNIMPORTANT	UNIMPORTANT	NEITHER IMPORTANT NOR UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4	5

8. In what way has the attendance at TEMIC Programs by the telecommunications officials from your region contributed to the region's development in telecommunications?

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9. Have debriefings with returning TEMIC fellows helped you in assessing and targeting telecommunications trade opportunities for Canadian firms?

Yes \_\_\_\_\_ No \_\_\_\_\_

Please explain.

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10. From your experience with TEMIC, what would you do differently to enhance direct or indirect benefits?

Direct:

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Indirect:

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11. a. On a scale of 1-5 where 1 represents unimportant and 5 represents very important, in general, how important is official government sponsorship of TEMIC in attracting participants to attend the program?

VERY UNIMPORTANT	UNIMPORTANT	NEITHER IMPORTANT NOR UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4	5

- b. Using the above scale, please specify the different aspects of government support which are of importance by circling the appropriate rating below.

<u>Factor</u>	<u>Rating in Importance</u>				
Financial Contribution to TEMIC	1	2	3	4	5
Logistical Support in the Region	1	2	3	4	5
Affiliation with TEMIC in the Minds of Regional Authorities	1	2	3	4	5
Other _____	1	2	3	4	5
_____	1	2	3	4	5

12. a. Do you think that telecommunications organizations in your region would have access to funds to cost-share attendance of their staff at TEMIC Programs?

Yes \_\_\_\_\_ No \_\_\_\_\_

Please explain:


- b. If yes, in your opinion, what range would be possible?

- ( ) \$1 - 3,999  
( ) \$4,000 - 5,999  
( ) \$6,000 - 9,999  
( ) \$10,000 - 15,000

13. Please provide any other comments about the TEMIC Program or the potential for the Canadian telecommunications industry in your region in general which may not have been covered in the questionnaire.


THANK YOU VERY MUCH FOR TAKING THE TIME TO COMPLETE THIS QUESTIONNAIRE.

PLEASE RETURN THE COMPLETED QUESTIONNAIRE IN THE ENCLOSED SELF-ADDRESSED ENVELOPE BY APRIL 10, 1990.

EVALUATION DE L'INSTITUT DES CADRES SUPERIEURS EN GESTION DES  
TELECOMMUNICATIONS DU CANADA (TEMIC)

MARS 1990

QUESTIONNAIRE DES MEMBRES AGREES

Le gouvernement canadien s'est engagé à fournir une aide à l'Institut des cadres supérieurs en gestion des télécommunications du Canada (TEMIC) pendant les cinq premières années de son existence pour financer ses activités et étayer son évolution. Le ministère des Communications au gouvernement du Canada mène présentement une évaluation en vue d'une participation soutenue au programme de TEMIC.

Votre collaboration dans cette évaluation se veut volontaire. Cependant, en tant que membre principal du programme de TEMIC, vos observations nous seraient très utiles. Nous vous remercions d'avance de votre coopération. Soyez libre d'exprimer vos opinions d'une façon franche et sans réserve. Le rapport d'évaluation saura rassembler les renseignements reçus tout en assurant l'anonymat.

Nous vous demandons de répondre le mieux possible aux questions. Si vous ne connaissez pas la réponse à une question quelconque, n'y répondez pas et passez à la suivante. Il est à remarquer que les questions figurent sur les deux côtés de la page.

PARTIE A : RENSEIGNEMENTS PERSONNELS

NOM : \_\_\_\_\_ PAYS : \_\_\_\_\_

ORGANISME : \_\_\_\_\_

TITRE : \_\_\_\_\_

## PARTIE B : FORMATION

Un des buts de TEMIC consiste à augmenter les connaissances et les aptitudes des cadres en gestion des télécommunications des pays en développement afin de les aider à planifier leurs installations et leurs services et à mettre en valeur leurs ressources humaines.

Dans les questions suivantes, on vous demande votre opinion à savoir jusqu'à quel point le programme de TEMIC auquel vous avez participé a atteint cet objectif dans votre cas. Veuillez encercler le chiffre qui correspond à la meilleure réponse aux questions.

1. Répondez à l'aide de l'échelle ci-dessous où 1 correspond à un gros échec et 5 à une pleine réussite. Le programme de TEMIC a-t-il contribué à accroître vos connaissances des télécommunications en général?

GROS ECHEC	ECHEC	NI ECHEC NI REUSSITE	REUSSITE	PLEINE REUSSITE
1	2	3	4	5

2. Répondez à l'aide de l'échelle ci-dessous où 1 correspond à aucune application et 5 à un degré élevé d'application. Jusqu'à quel point avez-vous été en mesure d'appliquer les connaissances que vous avez acquises au cours du programme TEMIC à votre travail?

AUCUNE APPLICATION		UN CERTAIN DEGRE D'APPLICATION	DEGRE ELEVE D'APPLICATION	
1	2	3	4	5

3. Cochez les énoncés ci-dessous qui correspondent à la façon dont vous avez été en mesure d'appliquer les connaissances acquises au cours du programme de TEMIC. Une description sommaire de certaines applications à titre d'exemple serait bien appréciée.

- a. J'ai fait appel aux connaissances acquises pour élargir et améliorer les procédures administratives et gestionnaires.

EXEMPLE:

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- b. J'ai fait appel aux connaissances acquises pour prendre des décisions technologiques en rapport avec la gestion des infrastructures des télécommunications (p.ex. la conception des systèmes ou la sélection du matériel).

EXEMPLE:

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- c. J'ai fait appel aux connaissances acquises dans le développement des politiques des télécommunications.

EXEMPLE:

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- d. J'ai fait appel aux connaissances acquises dans le développement de la réglementation des télécommunications.

EXEMPLE:

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- e. J'ai fait appel aux connaissances acquises dans le développement des plans des télécommunications.

EXEMPLE:

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4. Avez-vous fait appel aux connaissances acquises au cours du programme de TEMIC pour d'autres fins?

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5. Est-ce que vous recommanderiez le programme de TEMIC à une personne ayant des responsabilités semblables à celles de votre poste?

Oui \_\_\_\_\_ Non \_\_\_\_\_

Dans l'affirmative, pourquoi?

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Si la réponse est non, pourquoi pas?

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6. La formation en gestion des télécommunications est dispensée dans un certain nombre de pays. Nous aimerions savoir si vous ou une personne de votre organisme avez participé à un de ces programmes. Dans l'affirmative, indiquez le pays dans lequel la formation a été dispensée et le nom de l'institution qui a organisé le programme. Indiquez si c'était vous (en encerclant le 1) ou une autre personne de votre organisme (en encerclant le 2) qui avez participé à ce programme.

PAYS	Nom de l'institution	vous-même 1/autre personne 2
( ) Etats-Unis d'Amérique	_____	1 / 2
( ) République Fédérale d'Allemagne	_____	1 / 2
( ) Suède	_____	1 / 2
( ) Hollande	_____	1 / 2
( ) Japon	_____	1 / 2
( ) France	_____	1 / 2
( ) Italie	_____	1 / 2
( ) Autres pays. Précisez s.v.p.	_____	1 / 2

7. Comparé au(x) programme(s) précité(s) au(x)quel(s) vous ou une personne de votre organisme avez participé, quels sont les points forts des programmes de TEMIC? Identifiez le programme de comparaison avec celui de TEMIC, ensuite énumérez les points forts de TEMIC.

Nom du programme de comparaison

Points forts de TEMIC

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8. Comparé au(x) programme(s) précité(s) auquel(s) vous ou une personne de votre organisme avez participé, quels sont les points faibles des programmes de TEMIC? Identifiez le programme de comparaison avec celui de TEMIC, ensuite énumérez les points faibles de TEMIC.

Nom du programme de comparaison

Points faibles de TEMIC

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**PARTIE C : FAMILIARISATION AVEC LES PRODUITS CANADIENS, LES SERVICES ET L'EXPERTISE DE GESTION**

Un des objectifs de TEMIC consiste à familiariser les organismes de télécommunications dans les pays en développement avec l'éventail et la disponibilité des produits canadiens, les services et l'expertise de gestion de façon à promouvoir la coopération et les échanges entre le Canada et les pays en développement. Dans la question suivante, on vous demande de quelle façon le programme de TEMIC auquel vous avez participé a atteint cet objectif dans votre cas?

9. a. Avant de suivre le programme de TEMIC, (sur une échelle de 1 à 5 où 1 correspond à aucune connaissance et 5 qui signifie une grande connaissance) quel était votre degré de connaissance en rapport avec les produits canadiens des télécommunications, les services et l'expertise de gestion?

AUCUNE  
CONNAISSANCE

UNE CERTAINE  
CONNAISSANCE

UNE GRANDE  
CONNAISSANCE

1

2

3

4

5

- b. Décrivez s.v.p. la façon dont vous avez acquis cette connaissance.

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10. A la fin du programme de TEMIC (à l'aide de la même échelle que ci-dessus) quel est maintenant votre degré de connaissance en rapport avec les produits canadiens des télécommunications, les services et l'expertise de gestion?

AUCUNE  
CONNAISSANCE

UNE CERTAINE  
CONNAISSANCE

UNE GRANDE  
CONNAISSANCE

1

2

3

4

5

11. Pouvez-vous donner des exemples particuliers sur la façon dont vous ou votre organisme pourrait, maintenant ou dans l'avenir, faire appel aux solutions canadiennes aux problèmes des télécommunications, aux produits, aux services ou à l'expertise canadienne à la suite de votre participation au programme de TEMIC?

Solutions

_____
_____
_____ Produits
_____
_____
_____ Services
_____
_____
_____ Expertise canadienne
_____
_____
_____ Autres
_____
_____
_____

12. Depuis votre retour des programmes de TEMIC, est-ce que vous avez suivi les développements des télécommunications au Canada?

Oui \_\_\_\_\_ Non \_\_\_\_\_ Si la réponse est non, passez à la partie D.

Si la réponse est oui, expliquez s.v.p. de quelle façon et par l'entremise de quel organisme?

De quelle façon?

Par quel organisme?

_____	_____
_____	_____
_____	_____

PARTIE D :        PARTENARIAT ENTRE LE GOUVERNEMENT ET L'INDUSTRIE

Vous êtes sûrement au courant que TEMIC est un partenariat qui comprend l'industrie canadienne des télécommunications et le gouvernement du Canada.

13.     A l'aide d'une échelle de 1 à 5 où 1 correspond à tres peu important et 5 à très important, indiquez dans votre décision de participer au programme de TEMIC s'il est important que le gouvernement canadien apporte un appui financier à TEMIC?

TRES PEU IMPORTANT	PEU IMPORTANT	NI PEU IMPORTANT NI IMPORTANT	IMPORTANT	TRES IMPORTANT
1	2	3	4	5

Expliquez s.v.p.

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PARTIE E :        OBSERVATIONS SUPPLEMENTAIRES

Veillez s.v.p. nous faire part de toutes autres observations qui auraient pu échapper à ce questionnaire découlant de votre expérience avec TEMIC ou avec l'industrie canadienne des télécommunications en général.

Observations:

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UN GROS MERCI D'AVOIR PRIS LE TEMPS DE REMPLIR CE QUESTIONNAIRE.

VEILLEZ RENVoyer S.V.P. LE QUESTIONNAIRE DUMENT REMPLI DANS L'ENVELOPPE ADRESSEE CI-JOINT D'ICI LE 20 AVRIL 1990.

EVALUATION DE L'INSTITUT DES CADRES SUPERIEURS EN GESTION  
DES TELECOMMUNICATIONS DU CANADA  
MARS 1990

Le gouvernement canadien s'est engagé à fournir une aide à TEMIC pendant les cinq premières années de son existence pour financer ses activités et son évolution. Une évaluation est en cours sous les auspices du ministère des Communications du Canada dans le but d'une participation soutenue au programme de TEMIC.

Votre collaboration dans cette évaluation se veut volontaire. Cependant, à titre de membre du programme de TEMIC, vos observations nous seraient très utiles. Nous vous remercions d'avance de votre coopération.

Un(e) analyste communiquera avec vous pour demander de lui accorder un interview téléphonique afin de discuter, en quelque sorte, des questions suivantes. Nous vous prions de les étudier avant l'interview. Certaines de ces questions pourraient nécessiter un peu de recherche que nous vous suggérons de faire avant l'interview.

Les évaluateurs ont obtenu l'assurance que le gouvernement du Canada considérera les informations contenues dans ce document comme étant confidentielles et que les renseignements donnés par vous et les autres membres seront compilés de façon à assurer l'anonymat.



### APERCU DES QUESTIONS DES MEMBRES DE TEMIC

1. Quelle est la catégorie actuelle d'adhésion à TEMIC de votre société?
2. La catégorie de votre adhésion a-t-elle changé depuis que vous êtes devenu membre de TEMIC? Dans l'affirmative, quelle était votre catégorie d'adhésion et pour quelle raison avez-vous changé?
3. Croyez-vous que les pays en développement offrent une possibilité de croissance commerciale importante pour votre organisation? Dans l'affirmative, dans combien de temps pensez-vous amorcer des négociations avec les pays en développement? Si la réponse est non, pour quelles raisons les pays en développement ne constituent-ils pas une possibilité de croissance commerciale dans votre cas?
4. Quels pays en développement croyez-vous offrent le plus d'intérêt pour votre société? énumérez s.v.p. par ordre prioritaire en commençant par l'intérêt le plus grand.
5. D'après votre expérience, combien de temps en général, faut-il compter pour conclure un marché après avoir établi le premier contact?
6. Répondez à l'aide de l'échelle ci-dessous où 1 correspond à un gros échec et 5 à une pleine réussite. Évaluez le degré de réussite, en rapport avec les avantages pour votre société, des moyens suivants de mise en marché sur le plan international pour atteindre les clients dans les pays en développement?

GROS ECHEC	ECHEC	NI ECHEC NI REUSSITE	REUSSITE	PLEINE REUSSITE
1	2	3	4	5

Le bureau de ventes internationales de votre société ( );  
les représentations commerciales des fabricants ( ); les  
agents locaux ( ); les voyages du personnel de votre société  
( ); les missions commerciales du gouvernement canadien ( );  
la participation ou les expositions dans les foires  
internationales des télécommunications ( ); la participation  
aux activités et aux programmes de TEMIC ( ); autres moyens,  
précisez ( ).

7. Nous aimerions établir la contribution financière globale des membres de TEMIC, (en plus des frais d'adhésion). S.V.P. indiquez les montants estimatifs que votre organisme contribue aux activités et aux programmes de TEMIC selon la répartition ci-dessous :

Contribution financière de votre organisme		Montant estimatif
Contribution	( )	\$ _____
Cours*	( )	\$ _____
Visites sur le terrain	( )	\$ _____
Frais de représentation	( )	\$ _____
Membres de comités ou de conseils	( )	\$ _____
Autres façons, précisez s.v.p.	( )	\$ _____
	( )	\$ _____
	( )	\$ _____
	( )	\$ _____
	( )	\$ _____

\* Pour établir une base commune de coûts estimatifs pour les cours, nous suggérons de calculer 20 heures de préparation par heure de cours dispensée à un tarif horaire de \$40 pour le professeur totalisant \$800 de l'heure de cours dispensée. Nous vous prions de nous aviser si ces calculs dépassent les coûts réels à votre société.

8. a. A ce jour, votre société a-t-elle obtenu des avantages commerciaux directs à la suite de sa participation aux programmes de TEMIC? Dans l'affirmative, indiquez la nature de ces avantages commerciaux, leur valeur en dollars ainsi que le programme de TEMIC et les membres impliqués.
- b. Votre société anticipe-t-elle des avantages commerciaux directs à la suite de sa participation aux programmes de TEMIC? Dans l'affirmative, précisez la nature anticipée des avantages commerciaux, leur valeur en dollars ainsi que le programme de TEMIC et les membres impliqués.
9. Votre société a-t-elle réussi à obtenir des avantages commerciaux indirects (comme une clientèle accrue ou des relations avec les pays) en raison de sa participation aux programmes de TEMIC? Précisez s.v.p. la nature de ces avantages.

10. Quels sont les objectifs de votre société dans sa participation à TEMIC?
11. Croyez-vous que vos objectifs ont été atteints? Dans l'affirmative, de quelle façon ont-ils été atteints? Si la réponse est non, pour quelles raisons?
12. A l'aide d'une échelle de 1 à 5 où 1 correspond à très peu important et 5 à très important, donnez s.v.p. votre évaluation de l'importance d'une participation soutenue du gouvernement du Canada dans les aspects de TEMIC ci-après :

TRES PEU IMPORTANT	PEU IMPORTANT	NI PEU NI IMPORTANT	IMPORTANT	TRES IMPORTANT
1	2	3	4	5

Contribution financière ( ); soutien logistique ( );  
 membre du conseil de direction ( ); représentations  
 diplomatiques outre-mer ( ); autres aspects, précisez  
 s.v.p. ( ).

13. Croyez-vous que la proportion actuelle du soutien financier accordé à TEMIC par le secteur public comparé à celle du secteur privé est appropriée? Dans l'affirmative, pourquoi? Si la réponse est non, pourquoi pas?
14. Votre société a-t-elle l'intention de maintenir la même catégorie d'adhésion à TEMIC à l'avenir ( ); passer à une catégorie supérieure ( ); ou à une catégorie inférieure ( )? Énoncez les raisons en cas de modifications.
15. Croyez-vous que la structure des frais d'adhésion à TEMIC est convenable? Pourquoi ou pourquoi pas?
16. Quelle est la division de votre société qui est responsable d'inscrire le montant des frais d'adhésion à TEMIC dans son budget?
17. a. Votre société offre-t-elle des programmes payants de formation semblables à ceux de TEMIC dans les pays en développement?
- b. Dans l'affirmative, voyez-vous un chevauchement entre vos cours de formation et ceux des programmes de TEMIC?
18. Connaissez-vous d'autres cours de formation en gestion des télécommunications destinés aux fonctionnaires des pays en développement? Précisez s.v.p.

19. De quelle façon le programme de TEMIC se compare-t-il à ces autres cours de formation? Expliquez s.v.p.
20. Répondez à l'aide d'une échelle de 1 à 5 où 1 représente un très gros échec et 5 une pleine réussite. Le programme de TEMIC, selon votre opinion, a-t-il atteint les objectifs ci-dessous? Expliquez votre évaluation.

GROS ECHEC	ECHEC	NI ECHEC NI REUSSITE	REUSSITE	PLEINE REUSSITE
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1	2	3	4	5
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- a. Accroissement des connaissances et des compétences des cadres supérieurs des télécommunications et des administrations dans les pays en développement afin de les aider à développer leurs installations, leurs services et leurs ressources humaines.
- b. Familiarisation des administrations des télécommunications dans les pays en développement avec la disponibilité et l'étendue des produits canadiens, des services et de l'expertise de gestion afin de promouvoir la coopération et le commerce entre le Canada et les pays en développement.
21. Quelles ont été les recettes annuelles de votre société pour chacune des années 1981 à 1989 comprise? Définissez s.v.p. l'année financière s'y rapportant.
22. Quel pourcentage et/ou valeur en dollars des recettes annuelles avez-vous réalisés dans vos exportations? Donnez s.v.p. les résultats pour chacune des années 1981 à 1989 comprise en définissant l'année financière.
23. Quel pourcentage de ces recettes d'exportation provient de ventes aux pays en développement? Indiquez s.v.p. le pourcentage annuel pour chacune des années 1981 à 1989 comprise.
24. Vos exportations dans les pays en développement comprennent-elles principalement des biens, des services professionnels ou autres choses? Expliquez s.v.p.
25. De quelle façon vos exportations dans les pays en développement ont-elles été financées par l'acheteur?

Banques commerciales ( ); recettes des télécommunications dans le pays acheteur ( ); Agence canadienne de

développement international ( ); Société pour l'expansion  
des exportations ( ); prêts ou dons à l'acheteur ( );  
prêts de la Banque mondiale ( ); prêts d'autres banques  
multilatérales ( ); autres sources, identifiez s.v.p.

26. Toutes autres observations au sujet du programme de TEMIC  
seraient bien appréciées.

UN GROS MERCI D'AVOIR PARTICIPE A CETTE EVALUATION

EVALUATION DE L'INSTITUT DES CADRES SUPERIEURS EN GESTION  
DES TELECOMMUNICATIONS DU CANADA  
MARS 1990

Le gouvernement canadien s'est engagé à fournir une aide à TEMIC pendant les cinq premières années de son existence pour financer ses activités et son évolution. Une évaluation est en cours sous les auspices du ministère des Communications du Canada dans le but d'une participation soutenue au programme de TEMIC.

Votre collaboration dans cette évaluation se veut volontaire. Cependant, vos observations nous seraient très utiles. Nous vous remercions d'avance de votre coopération.

Un(e) analyste communiquera avec vous pour demander de lui accorder un interview téléphonique afin de discuter, en quelque sorte, des questions suivantes. Nous vous prions de les étudier avant l'interview. Certaines de ces questions pourraient nécessiter un peu de recherche que nous vous suggérons de faire avant l'interview.

Les évaluateurs ont obtenu l'assurance que le gouvernement du Canada considérera les informations contenues dans ce document comme étant confidentielles et que tous les renseignements que nous recevrons seront compilés de façon à assurer l'anonymat.



### APERCU DES QUESTIONS DES NON-MEMBRES

1. Connaissez-vous l'Institut des cadres supérieurs en gestion des télécommunications du Canada (TEMIC)? Dans l'affirmative, comment l'avez-vous connu?
2. Votre société a-t-elle été sollicitée pour devenir membre de TEMIC?
3. Pourquoi votre société n'est-elle pas devenue membre jusqu'à présent?
4. Croyez-vous devenir membre à l'avenir? Pourquoi, pourquoi pas?
5. Pensez-vous que les pays en développement représentent une possibilité de croissance commerciale importante pour votre organisme? Dans l'affirmative, d'ici combien de temps croyez-vous amorcer les négociations avec ces pays? Dans le cas contraire, pour quelles raisons les pays en développement ne représentent-ils pas de possibilité de croissance commerciale dans votre cas?
6. Quels pays en développement particulièrement selon votre opinion offrent la plus grande possibilité de croissance commerciale pour votre société? Enumérez s.v.p. par ordre prioritaire en commençant par la plus grande.
7. D'après votre expérience, combien de temps, en général, faut-il compter pour conclure un marché après avoir établi la première relation?
8. A l'aide d'une échelle de 1 à 5 où 1 représente un gros échec et 5 une pleine réussite, évaluez le degré de réussite en rapport avec l'utilité, pour votre société, des moyens de mise en marché ci-dessous sur le plan international pour atteindre les clients dans les pays en développement.

GROS ECHEC	ECHEC	NI ECHEC NI REUSSITE	REUSSITE	PLEINE REUSSITE
------------	-------	-------------------------	----------	-----------------

1

2

3

4

5

Le bureau de ventes internationales de votre société ( );  
les représentations commerciales des fabricants ( ); les  
agents locaux ( ); les missions commerciales du  
gouvernement canadien ( ); les ambassades canadiennes ( );  
la participation ou expositions dans les foires  
internationales des télécommunications ( );

la participation aux activités de TEMIC ( ); autres moyens, précisez s.v.p. ( ).

9. Croyez-vous que TEMIC pourrait compléter les efforts actuels de mise en marché de votre société? Pourquoi, pourquoi pas?
10. Quelles ont été les recettes annuelles de votre société pour chacune des années 1981 à 1989 comprise? Définissez s.v.p. l'année financière s'y rapportant.
11. Quel pourcentage et/ou valeur en dollars des recettes annuelles avez-vous réalisés dans vos exportations? Donnez s.v.p. les résultats pour chacune des années 1981 à 1989 comprise en définissant l'année financière.
12. Quel pourcentage de ces recettes d'exportation provient de ventes aux pays en développement? Indiquez s.v.p. le pourcentage annuel pour chacune des années 1981 à 1989 comprise.
13. Vos exportations dans les pays en développement comprennent-elles principalement des biens, des services professionnels ou autres choses? Expliquez s.v.p.
14. De quelle façon vos exportations dans les pays en développement ont-elles été financées par l'acheteur?  
  
Banques commerciales ( ); recettes des télécommunications dans le pays acheteur ( ); Agence canadienne de développement international ( ); Société pour l'expansion des exportations ( ); prêts ou dons à l'acheteur ( ); prêts de la Banque mondiale ( ); prêts d'autres banques multilatérales ( ); autres sources, identifiez s.v.p.
15. Toutes autres observations au sujet du programme de TEMIC seraient bien appréciées.

UN GROS MERCI D'AVOIR PARTICIPE A CETTE EVALUATION

EVALUATION DE L'INSTITUT DES CADRES SUPERIEURS EN GESTIONS  
DES TELECOMMUNICATIONS DU CANADA  
MARS 1990

QUESTIONNAIRE DES FONCTIONNAIRES DES AFFAIRES EXTERIEURES  
EN POSTE

L'institut des cadres supérieurs en gestion des télécommunications du Canada (TEMIC) fut fondé en 1986 à Montréal conjointement par l'industrie canadienne et le gouvernement du Canada afin d'offrir une formation en gestion supérieure aux fonctionnaires principaux des télécommunications dans les pays en développement.

Le gouvernement canadien s'est engagé à fournir une aide à TEMIC pendant les cinq premières années de son existence pour financer ses activités et son évolution. Il mène présentement une évaluation de TEMIC dans le but d'une participation soutenue à ses programmes. Cette évaluation est effectuée sous les auspices du ministère des Communications au gouvernement du Canada.

Vos observations sont essentielles à cette évaluation et nous vous remercions d'avance de votre coopération. Vos commentaires seront des plus précieux dans les décisions à venir du ministère des Affaires extérieures et du ministère des Communications

RENSEIGNEMENTS PERSONNELS

NOM : \_\_\_\_\_ PAYS : \_\_\_\_\_

TITRE : \_\_\_\_\_

1. Y a-t-il des marchés pour les biens et services canadiens en matière de télécommunications dans votre région?

Oui \_\_\_\_\_ Non \_\_\_\_\_

Dans l'affirmative, nommez-les s.v.p.

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2. Quelles matières de cours TEMIC pourrait-il accentuer dans son curriculum afin de promouvoir les biens et services canadiens en rapport avec les marchés que vous avez nommés ci-dessus?

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3. Quels sont les gros fournisseurs locaux de services et de matériel de télécommunications dans votre région? S.V.P. nommez-les par pays.

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4. Quels sont les moyens principaux de financement, dans l'acquisition du matériel de télécommunications, employés par les administrations dans votre région? S.V.P. nommez-les par pays.

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5. S.V.P. donnez des détails sur les acquisitions de matériel canadien de télécommunications dans votre région depuis 5 ans, y compris celles qui ont été financées par l'ACDI et celles qui ont été financées par des sources commerciales.

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6. Anticipez-vous des avantages commerciaux directs à la suite des programmes de TEMIC à courte, moyenne et longue échéance? Dans l'affirmative, donnez des exemples. Dans le cas contraire, indiquez les empêchements.

a. Avantages commerciaux directs à courte échéance :

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Empêchements :

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b. Avantages commerciaux directs à moyenne échéance :

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Empêchements :

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c. Avantages commerciaux directs à longue échéance :

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Empêchements :

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7. a. Connaissez-vous les avantages commerciaux indirects rattachés à la participation aux programmes de TEMIC des fonctionnaires des télécommunications dans votre région?

Oui \_\_\_\_\_ Non \_\_\_\_\_

Dans l'affirmative, donnez s.v.p. des exemples particuliers.

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- b. Répondez à l'aide d'une échelle de 1 à 5 où 1 correspond à très peu important et 5 à très important. Quelle est l'importance de ces avantages commerciaux indirects dans le développement du commerce des télécommunications dans votre région?

TRES PEU IMPORTANT	PEU IMPORTANT	NI PEU NI IMPORTANT	IMPORTANT	TRES IMPORTANT
1	2	3	4	5

8. De quelle façon la participation aux programmes de TEMIC des fonctionnaires des télécommunications dans votre région a-t-elle contribué au développement des télécommunications de votre région?

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9. Les comptes rendus des membres principaux ayant participé aux programmes de TEMIC vous ont-ils aidé à évaluer et à repérer les possibilités commerciales dans le secteur des télécommunications pour les sociétés canadiennes?

Oui \_\_\_\_\_ Non \_\_\_\_\_

S.V.P. expliquez

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10. D'après votre expérience avec TEMIC, que feriez-vous d'une façon différente pour accroître les avantages directs et indirects?

Avantages directs :

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Avantages indirects :

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11. a. Répondez à l'aide d'une échelle de 1 à 5 où 1 correspond à très peu important et 5 à très important. D'une façon générale, l'appui financier officiel du Gouvernement à TEMIC est-il important dans le recrutement des participants aux programmes?

TRES PEU IMPORTANT	PEU IMPORTANT	NI PEU NI IMPORTANT	IMPORTANT	TRES IMPORTANT
1	2	3	4	5

- b. A l'aide de l'échelle ci-dessus, s.v.p. identifiez les différentes formes d'appui gouvernemental qui sont importantes en encerclant la cote appropriée ci-dessous.

<u>Facteurs</u>	<u>Cote d'importance</u>				
Appui financier à TEMIC	1	2	3	4	5
Soutien logistique dans la région	1	2	3	4	5
Affiliation avec TEMIC dans l'esprit des administrations régionales	1	2	3	4	5
Autres _____	1	2	3	4	5
_____	1	2	3	4	5

12. a. Croyez-vous que les organismes des télécommunications dans votre région pourraient co-financer la participation de leur personnel aux programmes de TEMIC?

Oui\_\_\_\_\_ Non\_\_\_\_\_

S.V.P. expliquez :

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- b. Dans l'affirmative, le montant se situerait dans quelle plage?

- ( ) \$1-3 999  
( ) \$4 000-5 999  
( ) \$6 000-9 999  
( ) \$10 000-15 000

13. Veuillez s.v.p. nous faire part de toutes autres observations qui auraient pu échapper à ce questionnaire, en rapport avec les programmes de TEMIC ou des possibilités commerciales pour l'industrie canadienne des télécommunications dans votre région en général.

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UN GROS MERCI D'AVOIR PRIS LE TEMPS DE REMPLIR CE QUESTIONNAIRE.

VEUILLEZ RENVoyer S.V.P. LE QUESTIONNAIRE REMPLI DANS L'ENVELOPPE ADRESSEE CI-JOINTE.

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--Evaluation of the Telecommuni-  
cations Executive Management Ins-  
titute of Canada (TEMIC)

DATE DUE

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