

DISSEMINATION DIRECTIONS IN STATISTICS CANADA

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National statistical offices are increasingly concerned about their dissemination activities. Continued budgetary constraints cause them to seek ways to reduce costs on one hand and to generate revenues on the other hand from their dissemination activities. In Statistics Canada, a variety of measures have been taken to rationalize dissemination activities while still fulfilling its role as a tax payer paid public information utility. This paper presents the current situation and future direction of the dissemination program of Statistics Canada from a management, marketing and technology point of view.

INTRODUCTION

Statistics Canada is, arguably, Canada's largest information producing utility and its largest publisher. The Statistics Act which provides its mandate and legal basis requires Statistics Canada to collect, compile, analyze, and publish statistical information on the economic, social and general conditions of Canada and its citizens. Each year, Statistics Canada conducts hundreds of surveys and publishes the results through almost 300 publications and other products and services.

Statistics Canada provides the nation with a base of information necessary to public debate, to the development, implementation and monitoring of public policy, and to private decision making. Its role is only fulfilled if such information is provided to all elements of Canadian society. This paper reviews the way Statistics Canada ensures that such wide dissemination takes place. It presents the guiding policies and principles as well as the practices in discharging its publishing mandate.

2. CURRENT SITUATION

The dissemination program of Statistics Canada has changed considerably from the '70s when, in times of comparatively budgetary plenty, statistics were published without due regard to cost effectiveness of dissemination activities. Since then, the publishing and dissemination program has been rationalized by following certain policies and by improving on practices.

2.1 POLICIES AND PRINCIPLES

In carrying out its functions, Statistics Canada has evolved a set of, often implicit, basic guiding principles. These have changed over time to allow the organization to adapt to its environment and notably to prolonged periods of budgetary restraints. Some of these principles as they apply to dissemination are as follows:

- Basic statistical information development in a democratic society, for the purposes of public policy development and monitoring, is a public good and should be government funded. No charge should be levied for the collection, compilation and analysis of the agency's information. Production of lower priority information required by specific users would be undertaken when sponsored.
- Access to this basic statistical information is a public good and should be provided without charge. Devices such as depository libraries, the agency's own regional reference centre network, the news media, provincial and territorial statistical agencies, and the agency's own library are used for this purpose.
- Copies of agency products for exclusive individual use by a person or organization and the production of specialized products are of the nature of private goods and should be fully cost recovered.
- Prices will be set for products and services so as to recover the "post manuscript" cost of production, distribution and marketing.
- Private sector partnerships with Statistics Canada in disseminating its information are highly desirable.
- Statistics Canada has a property right in the information it produces and will protect that right in order to ensure its ability to recover the dissemination costs and to preserve its ability to offer Canadians a strong and relevant information base.

The above principles can be translated into more specific objectives such as:

- Maximizing the use of our statistics in determining public policy, in support of academic research, and in support of individual users in their decision making.
- Recovering the costs of the dissemination program beyond the public good aspect.

2.2 PRACTICES

Statistics Canada ensures continued free public access to its information through several channels:

- Statistics Canada has a very active media program. Its *Daily/Quotidien* is published every day and contains the key statistics of the latest releases from all statistical programs. It is targeted for the media (news press, radio, television), and their coverage of information released by Statistics Canada is extensive. Statistics Canada has a news monitoring service to assess in what form and in what frequency the media report on statistical information releases.
- Statistics Canada receives specific funding from the federal government to provide copies of all its publications to so-called “depository libraries” which have to carry all or a selection of Statistics Canada publications and provide free access to all citizens.
- Statistics Canada has ten regional reference centres across the nation which provide free access to its publications and to its telephone answering service. Recently, automated answering systems have been put in place from which the most popular statistics can be extracted via touchtone telephone service.

Beyond these free access services all other dissemination activities are to be cost recovered.

Publications

Printed publications are still the mainstay of Statistics Canada’s dissemination activities. They are made available to depository library programs for free and are accessible for free in our regional reference centres, but otherwise are sold at market prices to individual users on a subscription basis or on individual orders. The total publication program has been rationalized over the years by imposing a management goal of having the costs of producing all publications recovered by revenues. As a result, during the last eight years some publications have been merged with others, some eliminated, while new ones have been added.

In particular, publications with analytical orientation are now published on a regular basis to complement the more detailed data publications. They include: *Canadian Social Trends*, a quarterly magazine style publication with articles on social issues; the *Canadian Economic Observer*, a monthly publication containing key economic statistics and analysis of economic issues; *Perspectives on Labour and Income*, a quarterly publication containing the analysis of labour market issues. These new publications are called “flagships” and are characterized by emphasis on accessible analysis rather than tables of raw statistics.

Because the production and dissemination of information is an essential task of Statistics Canada, such an activity is widely dispersed. With respect to publications, for example, product development and authorship is very decentralized with over 35 divisions involved. Once a manuscript is created, however, production and

distribution is highly centralized to achieve economies of scale and provide better service to clients.

On average, Statistics Canada publishes about 300 titles annually with 1,800 issues, and a total number of between 80,000 to 90,000 original pages.

Over the years, costs have been reduced and revenues increased such that a balance has been achieved. Costs of publication production and marketing is counted from the manuscript stage on. Thus they include composition, design, printing, distribution, and marketing. About half of the costs are funded by the government in support of the depository library program, the other half is recovered through sales of publications.

Substantial cost savings have been achieved over the years by employing state of the art technology in composition and printing from XEROX Corporation. An integrated network has been built to which composition stations, graphic design stations, and printing facilities are linked. While five years ago, most printing was done on contract by private sector companies, in-house laser and electrostatic printing equipment have reduced the costs substantially for smaller press runs of publications. Manuscripts are provided always in electronic form either as Word Perfect documents or as computer files with tables created by the various tabulation software employed by author divisions.

Electronic Products

Statistics Canada was one of the first national statistical offices to offer an on-line data base service to the public. CANSIM was initiated in 1969 and has maintained its place among the various dissemination products. CANSIM, now a base of more than 500,000 time series, is offered by private sector companies under contract to Statistics Canada. Revenues to Statistics Canada are made up of licence fees and royalties to be paid by the private sector distributors. While diskettes were seen as a viable dissemination medium at one point, there have been few successes. Diskettes are now being used mostly as a medium of choice to contain the results of custom work provided by Statistics Canada to clients.

Rather, CD-ROMs have become much more popular and are growing in importance. The CANSIM data base, in addition to the on-line version, is also offered on a CD-ROM, as well as 1986 and 1991 Census results. Also recently, trade data and agricultural statistics have been put on CD-ROMs. This is a growing dissemination activity although market acceptance is only growing slowly. One of the main problems with statistical CD-ROMs is that you still have to be a statistician to understand the data. Most CD-ROMs on the market contain textual and bibliographical information which is easily understood by librarians and even end

users. This is not the case with statistics and some education is often required to explain to potential customers the nature of the contents.

Before the advent of diskettes and CD-ROMs, tapes were the preferred method of providing large volume of statistics to specialized clients and are still for market research companies and university researchers. The latter are particularly interested in public use sample tapes which contain not aggregated statistics but survey record level data which they use in support of their specific research.

E-STAT

A particular recent success has been a CD-ROM called E-STAT which Statistics Canada designed for the education market, specifically high schools (up to grade 13). E-STAT is the result of some evolutionary development. In the early '80s, a graphic display system using videotext technology was made available to selected high schools. Some high schools expressed interest in having statistical information in such electronic form in support of their teaching programs, but wanted to have a stand alone version working on PCs. In response, a CD-ROM containing '86 Census data with geographic mapping software, as well as CANSIM time series data with charting software was developed. The response to this CD-ROM has been tremendous. Within the first six months, starting in October 1992, 250 copies were sold at C\$495. As well, some provinces have signed provincial license agreements for all their schools. The second issue is in preparation which will contain more social statistics and also the latest statistics from the '91 Census.

One of the important feedback received is that teachers require lesson plans in order to use this large data warehouse effectively. Teachers and students can be overwhelmed by the variety of statistics and the terminology used by Statistics Canada to reference them. In partnership with interested teachers and education faculties of some universities, lesson plans are now being developed on specific subjects in support of high school curricula.

The E-STAT initiative, which does not recover its complete development costs, is an important example of Statistics Canada's commitment to provide public good information. As well, Statistics Canada sees the need to improve the levels of literacy, numeracy and analytical skills as the existing curriculum in schools does not provide an adequate exposure of students to the use of data, analytical techniques, and the latest technology.

In this regard, another aspect should be mentioned. Many high schools are now providing computing facilities to its students. However, they often look for material which can be used with this technology, including information bases. E-STAT, together with other CD-ROMs, mostly of textual nature, are addressing this need.

FAX Services

While FAX for answering ad hoc inquiries has become a frequent mode of communication, Statistics Canada is also starting to offer FAX services on a subscription basis. Because most of the publications are created in electronic form, they can be routed, instead to the printing facilities, to FAX operations which can then distribute them simultaneously to a number of subscribing customers. While the service is still in its infancy, it promises to become very popular. Many of our publications are only a few pages and have a limited subscription base. FAX is a way to provide clients with their personal copies in a timely and cost effective manner.

Custom Services

Customer services provide clients with statistics which are either not published and need to be extracted from internal data bases, or which cross product and source boundaries and need to be integrated into a customized product. Nearly all statistical programs in Statistics Canada provide such services either directly from headquarters or through the Regional Offices.

Examples of such custom services are: printout of selected time series statistics extraction from CANSIM; special tabulation runs from one of the Census data bases; selected trade statistics; small area data.

3. FUTURE DIRECTIONS

While so far the emphasis has been on letting individual subject matter divisions determine their products and to pursue their own marketing strategies, budgetary pressures cause Statistics Canada to emphasize a more corporate strategy for dissemination and marketing. A strategy has been defined which will rationalize the overall dissemination program by seeking further reductions in costs to produce products as well as by increasing revenues from those products in order to ensure that all aspects of dissemination are funded through revenues, including appropriate overheads. The general objectives of this strategy are:

- To maximize the dissemination of Statistics Canada's products.
- To recover the full costs of the dissemination program, not necessarily product by product, but over the entire product line.
- To disseminate survey specific results as well as information products and services spanning diverse sources (i.e. integration of statistical information into client oriented packages).

- To continue the free public access to our statistical information through the appropriate channels.

For the purpose of planning and accounting, four categories of products have been identified:

- Category 1: Off the shelf products and services which are sold and delivered as is to clients. These include publications, electronic off-line products (diskettes, CD-ROM), on-line services, subscribed FAX services, off-the-shelf tabulations, etc.
- Category 2: Custom products and services which are assembled and delivered using standard modes of customizing available to Regional Offices to bring data together from several sources.
- Category 3: Custom products and services which are assembled and delivered using non-standard modes of customizing in each subject matter division (e.g. special tabulations).
- Category 4: Cost recovered special statistical programs such as complete special surveys. Currently the breakdown in terms of revenues for the four categories is as follows:

Category 1	24%	of total revenues
Category 2	8%	
Category 3	2%	
Category 4	66%	

As the above figures show, most of our revenues are from special surveys.

The marketing strategy concentrates only on categories 1 to 3 products where particular emphasis will be given to category 2 and category 3, as these seem to be the items with most potential market growth.

In addition to clients who have the knowledge, the inclination and the time to search themselves through the ream of data products to identify statistics which are relevant to their needs, there seems to be a potential market to provide custom service to clients who are prepared to pay for custom consulting services.

While further cost reductions will be pursued in category 1 products, the market for them seems to be more limited as experience has shown over the last five years in which emphasis was given to category 1 products. A more potential revenue source is seen in category 2 and category 3.

Successes in customized information delivery have been demonstrated by other statistical offices. This strategy has just been announced recently and it is too early to present any results.

4. CURRENT DEVELOPMENTS

A large part of pursuing the enunciated strategy will be to strengthen market orientated services to address users's needs and to deliver what they wish to obtain. But there are also technological elements which will be pursued to support the overall marketing strategy.

SGML

Standard Generalized Marking Language has become the standard which is being adopted increasingly by the publishing industry. Statistics Canada has realized the potential of SGML and is actively implementing SGML technology in its publishing approach. Already several publications using SGML have been produced and have demonstrated major savings in terms of human resources and turnaround time. One of the advantages of SGML is that it does not only allow to compose SGML coded documents quickly and automatically, but that SGML coded documents can be offered also through electronic dissemination methods. In the future, it is envisaged to have on-line distribution systems display composite documents. While this will require higher communication band width than currently available at reasonable cost, there is no doubt that those will be available in the future and will make on-line access to documents feasible.

Computer Assisted Translation

Given the bilingual status of Canada, every disseminated information from Statistics Canada needs to be translated. We are actually testing a computer assisted translation system that will not only translate documents but also transport automatically the document's layout and properties into the translated version. This represents a significant potential for savings resources and time in the document preparation process. The actual text will provide factual information on its applicability and impact.

INTERNET

INTERNET has become the defacto communication network in the university and research environment across the world. Statistics Canada has become a node in INTERNET, although access to only a limited number of documents is offered at present. As a start, the DAILY is made available in INTERNET.

INTERNET is a possible distribution mechanism of electronic files. As a first step, we plan to provide updates to the CANSIM data base to universities via INTERNET.

On Demand Printing

Many publications are of such a nature that they can be printed upon demand.

Already some publications are printed by the in-house printing facilities when orders have been received. This avoids the problems of inventory and stocking control and the risk of having either underestimated or overestimated the press run. In the long run, remote on-demand printing facilities could be established, particularly in the Regional Offices.

FAX Services

FAX services will become an important dissemination mechanism which can transmit composite documents (text, table and graphs) not only as fax images to be reproduced on paper, but also as a method to communicate electronic images from computer to computer. This technology needs to be watched.

On-Line Services

While CANSIM is at this point the only large on-line service which Statistics Canada provides, there is a potential market for other information in on-line mode.

Firstly, once data has been organized into on-line databases, experts such as Regional Office staff as well as librarians can search for information quickly. Secondly, it allows expert end-users to search for information themselves via on-line terminals. However, at this time, the potential market for on-line services for static statistical information should not be over estimated. Some of the CANSIM distributors are in the process of reevaluating their services for our information by stressing the timeliness and widespread availability of key indicators to as many terminals as possible rather than the depths of statistical data.

Corporate Data Base

Customizing information products requires the ability to access data from a variety of survey sectors. This in turn means to organize data in a more coherent way across statistical programs. This goal is being pursued by other statistical agencies as well and Statistics Canada is participating in various information exchanges on the subject. However, in an environment where, so far, survey organizations are the final decision makers on the way data are processed, the setting up and adhering to corporate guidelines and standards will require a change in culture, not just technical solutions.

Meta Information

One of the most common complaints is that there is not enough information available about what statistics are readily or potentially available. Of course, Statistics Canada publishes an annual catalogue of publications and selected

electronic products, but the catalogue does not cover all products and services available from the agency. For that matter, Statistics Canada's staff still needs to refer to various paper documents to answer clients' enquiries as opposed to an on-line terminal. However, the creation of such all encompassing directory information (meta information) is expensive and needs cooperation from every part of the organization. So far, it has been difficult to make a business case where increased revenues or saved costs could justify the development and maintenance costs.

However, that may change in the future as the marketing of information becomes a higher priority item.

5. CONCLUSION

Statistics Canada, like many other national statistical offices, has started to emphasise dissemination and marketing. The objective is not only to increase revenues but also to assure demonstration of relevance of its programs. With the reduction of government spending in Canada as well as other countries, statistical offices have to be sure that when they need to cut particular programs, such cuts are based on a rationale which includes information on the use and the relevance of the resulting statistics. During the past eight years managers in Statistics Canada have been sensitized to the overall need of marketing. While so far that activity was not as coordinated as it could be, this is about to change as the result of a major corporate wide strategy.

RIASSUNTO

Gli uffici statistici nazionali sono sempre più interessati all'attività di divulgazione. Continui vincoli di budget li costringono da un lato a un processo di razionalizzazione per ridurre i costi e dall'altro a ottenere delle risorse finanziarie dalla loro attività di divulgazione. Statistics Canada ha avviato una molteplicità di iniziative al fine di razionalizzare l'attività di divulgazione, soddisfacendo contemporaneamente al suo ruolo di ente di servizio pubblico.

Questo lavoro presenta l'attuale situazione e le linee future del programma di divulgazione di Statistics Canada da un punto di vista del management, del marketing e tecnologico.