Small Business and Special Surveys Division



Geomatics Industry Survey, 2004

CONFIDENTIAL when completed

Collected under authority of Statistics Act, Revised Statutes of Canada, 1985, Chapter S19.

Please correct any errors on the label:

Business Address:	
City	
Province:	Postal Code:

The purpose of this survey

Statistics Canada, in partnership with Natural Resources Canada, is conducting a survey to produce new statistical information on the firms engaged in geomatics activities in Canada. The data from this survey will be used by Natural Resources Canada to determine the competitive position of the industry and its needs in terms of federal government policies and programs.

Your participation is important and appreciated

This survey is conducted under the authority of the Statistics Act, Revised Statutes of Canada, 1985, Chapter S19. Completion of this questionnaire is mandatory.

The data you report are confidential

Statistics Canada is prohibited by law from publishing or releasing statistics that could reveal individual information obtained from this survey. The data reported on the questionnaire will be treated in strict confidence and used for statistical purposes only. The confidentiality provisions of the *Statistics Act* are not affected by either the Access to Information Act or any other legislation.

Data Sharing agreement

Statistics Canada has entered into a data sharing agreement under Section 12 of the *Statistics Act* with Natural Resources Canada for the sharing of information from this survey. Natural Resources Canada will not be given your name, address or identifying information. They will keep the information confidential and use it only for statistical purposes. Under Section 12, you may refuse to share your information by writing to the Chief Statistician of Canada and returning your letter of objection along with your completed questionnaire.

Completion and Return

<u>Please complete and return within 20 days of receipt</u> of this questionnaire in the accompanying self addressed pre-paid envelope. If you require assistance in the completion of this questionnaire, contact the Small Business and Special Surveys Division at 1-866-888-0379, by fax at 1-866-222-6023 or by e-mail to sbss-info@statcan.ca.

Please complete the following information

Name of Respondent:	
Title / Position:	
Telephone Number:	Fax:
ext.:	
E-mail	

5-5200-7.1: 2005-05-09 STC/SBS-524-75394



Statistics

Statistique Canada Canadä

Geomatics is the science and technology of activities, products or services involved in:

- the collection, integration, interpretation, analysis and management of location based data (geospatial data); and
- the development of tools to support those activities.

Main business activities

1. Please indicate the extent to which your establishment is involved in the following geomatics activities (Jan. 1, 2004 to Dec. 31, 2004 or your fiscal year which includes the largest part of 2004).

Geomatics activities	Main/Core Activity	Secondary Activity	Not Applicable
a. Surveying (cadastral, land, hydrographic, geophysical, topographic, engineering, mining, marine, etc.)	Ο ₁	O_2	O ₃
b. Mapping and cartography (photogrammetry, charting, geophysical, etc.)	01	O_2	O ₃
c. Geodesy, Navigation and Positioning (including Global Positioning System (GPS))	01	02	O ₃
d. Remote sensing (airborne, satellite, radar, lidar, etc.)	Ο1	02	O ₃
e. Geospatial data management (including Geographical Information System (GIS))	01	O_2	O ₃
f. Geomatics consulting services	01	O_2	O ₃
g. Development of customized geospatial software	O ₁	O_2	O ₃
h. Other geomatics areas: Please specify	O ₁	O_2	O_3

Employee profile

2. Please report the average number of persons usually employed by this establishment during the reporting period. (Jan. 1, 2004 to Dec. 31, 2004 or your fiscal year which included the largest part of 2004)

	Number of Persons
a. Proprietors and partners who are owners of this company	1
b. Full-time employees (worked 30 or more hours per week)	2
c. Part-time employees (worked less than 30 hours per week)	3
d. Contract workers, consultants, co-op students hired during the year	4
e. Volunteers and unpaid staff	5
TOTAL EMPLOYMENT (sum of a. to e.)	6

3.	Please estimate the percentage of your establishment's employees who spent any time in the
	production/provision of geomatics products or services. Your best estimate is acceptable.

	%

4. What percentage of your establishment's employees work in each of the following areas?

Geomatics activities	Percentage
a. Surveying (cadastral, land, hydrographic, geophysical, topographic,	
engineering, mining, marine, etc.)	1
b. Mapping and cartography (photogrammetry, charting, geophysical, etc.)	2
c. Geodesy, Navigation and Positioning (including GPS)	3
d. Remote sensing (airborne, satellite, radar, lidar, etc.)	4
e. Geospatial data management (including GIS)	5
f. Geomatics consulting services	6
g. Development of customized geospatial software	7
h. Other geomatics areas. Please specify:	
	8
Non-geomatics activities	9

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	41	4 1	U/
	۱,	₩,	%

5.	Does <u>your establishment</u> have difficulties hiring employees with appropriate geomatics skills?
	10 Yes 20 No 30 Not applicable
6.	In your opinion, does Canada have a shortage of people with appropriate geomatics skills?
	1○ Yes 2○ No 3○ Don't know
7.	In your opinion, do you believe that the <u>geomatics industry</u> has difficulties keeping skilled employees in Canada?
	10 Yes 20 No 30 Don't know

8. Please indicate the number of employees with the following levels of education. Please only indicate the <u>highest</u> level attained.

	Number of <u>Geomatics</u> Employees	Number of Non-Geomatics Employees
a. Did not complete high school		
b. High school		
c. College diploma		
d. University degree (bachelor, master, doctorate)		

Revenues

9. Please report this establishment's <u>GROSS</u> revenues, as well as those revenues attributed to the sale of <u>GEOMATICS</u> products or services.

Year	Gross Revenues (\$ CDN)	Geomatics Revenues (\$ CDN)
2004		
2003		
2002		

10. How much of your GROSS revenues in 2004 was attributed to each of the following Geomatics products or services?

Geomatics activities	(\$ CDN)
a. Surveying (cadastral, land, hydrographic, geophysical, topographic,	
engineering, mining, marine, etc.)	1
b. Mapping and cartography (photogrammetry, charting, geophysical, etc.)	2
c. Geodesy, Navigation and Positioning (including GPS)	3
d. Remote sensing (airborne, satellite, radar, lidar, etc.)	4
e. Geospatial data management (including GIS)	5
f. Geomatics consulting services	6
g. Development of customized geospatial software	7
h. Other geomatics areas. Please specify:	
	8
Non-geomatics activities	9

Location of Clients

11. Please report the percentage of this establishment's 2004 <u>GROSS revenues</u> reported in Question 9 according to the location of the client to whom any products or services were delivered. Your best estimate is acceptable.

Within Canada	Percentage
Newfoundland and Labrador	1
Prince Edward Island	2
Nova Scotia	3
New Brunswick	4
Quebec	5
Ontario	6
Manitoba	7
Saskatchewan	8
Alberta	9
British Columbia	10
Yukon Territory, Northwest Territories, and Nunavut	11
Outside Canada (exports)	
United States	12
Mexico	13
Central America	14
South America	15
Europe	16
Africa	17
Middle East	18
Australia, New Zealand	19
China	20
India	21
Other Asian countries	22
All other countries	23

If your Geomatics revenues equalled your Gross revenues in Question 9, please go to Question 13

12. Please report the percentage of this establishment's 2004 <u>GEOMATICS revenues</u> according to the location of the client to whom the geomatics products or services were delivered. Your best estimate is acceptable.

Within Canada	Percentage
Newfoundland and Labrador	1
Prince Edward Island	2
Nova Scotia	3
New Brunswick	4
Quebec	5
Ontario	6
Manitoba	7
Saskatchewan	8
Alberta	9
British Columbia	10
Yukon Territory, Northwest Territories, and Nunavut	11
Outside Canada (exports) United States	12
Mexico	13
Central America	14
South America	15
Europe	16
Africa	17
Middle East	18
Australia, New Zealand	19
China	20
India	21
Other Asian countries	22
All other countries	23

TOTAL REVENUES

100%

13. Please report the percentage of this establishment's 2004 <u>GEOMATICS</u> revenues according to the following <u>sectors</u> to which the geomatics products or services were sold. Your best estimate is acceptable.

Sector	Percentage
a. Individuals and households	1
b. Business sector	2
c. All levels of governments and public institutions (hospitals, schools, etc.)	3
d. Non-governmental organizations (NGOs)	4
e. Other, please specify	5

100%

14. Please report the percentage of this establishment's 2004 <u>GEOMATICS revenues</u> according to the following <u>industries</u> to which the geomatics products or services were sold. Your best estimate is acceptable.

Industry	Percentage
a. Agriculture	1
b. Forestry	2
c. Fisheries	3
d. Oil and Gas	4
e. Geology and mining	5
f. Environment	6
g. Property (including Housing)	7
h. Engineering and construction	8
i. Transportation	9
j. Utilities	10
k. Health	11
1. Emergency preparedness and defence	12
m. Commerce (Retail trade or wholesale trade)	13
n. Education	14
o. Marine applications (seabed mapping etc.)	15
p. Space	16
q. Other, please specify	17

100%

If you do not export products or services outside of Canada, please go to Question 16

Exports

15. Please indicate to which of the following countries or regions your geomatics products or services were exported.

Country or region	Surveying	Mapping and Cartography	Geodesy, Navigation and Positioning	Remote sensing	Geospatial data management	Geomatics Consulting services	Development of customized geospatial software	Other geomatics activities
a. United States	01	O ₂	O ₃	O ₄	05	06	07	08
b. Mexico	01	O ₂	O ₃	O ₄	05	06	07	08
c. Central America	O ₁	O ₂	O ₃	O ₄	05	06	07	08
d. South America	O ₁	O ₂	O ₃	O ₄	05	06	07	08
e. Europe	O ₁	O ₂	O ₃	O ₄	05	06	07	08
f. Africa	O ₁	O ₂	O ₃	O ₄	05	06	07	08
g. Middle East	O ₁	O ₂	O ₃	O ₄	05	06	07	08
h. Australia, New Zealand	O ₁	O ₂	O ₃	04	05	06	07	08
i. China	O ₁	O ₂	O ₃	04	05	06	07	08
j. India	O ₁	O ₂	O ₃	O ₄	05	06	07	08
k. Other Asian countries	O ₁	O_2	O ₃	O ₄	05	06	07	08
l. Any other regions (specify)	O ₁	O_2	O ₃	O ₄	O ₅	O ₆	07	O ₈

Page	7

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16.	Please report the following expenses incurred by this establishment between Jan. 1, 2004 to
	Dec. 31, 2004 or for your fiscal year which included the largest part of 2004. Your best estimates
	are acceptable.

	EXPENSES	(\$ CDN)		
a.	Total salaries and wages of employees before deductions.			
b.	Employer portion of employee benefits			
	<u>Include</u> : contributions to insurance plans, employment insurance, private or			
	public (CPP, QPP) pension contributions, workers' compensation, retiring			
	allowances)		(\$CDN)	
c.	Total labour remuneration (sum of a and b)			
d.	Telephone and other telecommunications			
e.	Rental and leasing			
	<u>Include</u> : office space or other real estate, vehicles, computers, other equipment			
f.	Energy expenses (e.g., gas, oil, electricity, water)			
g.	Purchased maintenance and repair services			
	<u>Include</u> : All expenses related to the repair and maintenance of buildings,			
	structures, machinery and equipment			
h.	Geomatics work sub-contracted to others firms (either individual			
	contractors or business firms)			
i.	Architectural, engineering, consulting fees and other professional and			
	business service fees (including legal fees, accounting fees)			
j.	Insurance (including liability insurance, vehicle insurance, property and			
	all other casualty insurance coverage)			
k.	Advertising, marketing expenses			
l.	Travel and transportation, meals and hospitality			
m.	Depreciation and amortization			
n.	All other operating expenses (e.g. employment agency payments, royalty			
	and franchise fees, research and development, office supplies, etc.)			
0.	Total operating expenses (sum of c to n above)			
p.	Other expenses (e.g. interest expenses on capital lease obligations plus all			
	other miscellaneous interest expenses such as interest on loans)			
q.	Total expenses (sum of o and p above)			
		-		

17. Between 2002 and 2004, please report the approximate percentage of your total expenses that were associated with the purchase and/or lease of technological goods. Include the following items: specialized or industry specific equipment, geomatics technology (e.g. pen computing, mobile computing, field devices, tablets, pockets, GPS devices, etc.), purchase of computer hardware components, computer software, lease contracts of technological goods, etc.

%

Research and Development

- Research and Development (R&D) is systematic investigation carried out in the natural and engineering sciences by means of experiment or analysis to achieve a scientific or technological advance.
- Generally speaking, R&D is intended to result in an invention which may subsequently become a technological innovation. An essential requirement is that the outcome of the work is uncertain (i.e. that the possibility of obtaining a given technical objective cannot be known in advance on the basis of current knowledge or experience).

18.	Between 2002 and 2004, on average, how much was spent on R&D (internally and externally)
	by your establishment per year?

a. Total R&D expenditures	(\$ CDN)	
b. Geomatics R&D expenditures	s (\$ CDN)	

1	If this establishment	spends no money	on R&D n	lease on to	Ouestion 24
	u uns estabnshinent	Spends no mones	OH K&D. D	HEASE YO LO	()UESUON 24

Sources of funding	Higl	n M	[edium	Low
a. Parent, affiliated or subsidiary firms	01		O ₂	O ₃
b. Canadian federal government (grants, tax credits, contracts, etc.)	01		O ₂	O ₃
c. Provincial/territorial government	01		O_2	\bigcirc_3
d. R&D contract work conducted for other firms	O ₁		02	O ₃
e. Universities	O ₁		O ₂	O ₃
f. Other, specify:	O ₁		O ₂	O ₃
Please indicate the extent to which each of the followur establishment's overall R&D expenditures. Geomatics activities	lowing ge	omatics a	ctivities acc	counted :
a. Surveying (cadastral, land, hydrographic, geophy	/sical,	O_1	O ₂	O ₃
topographic, engineering, mining, marine, etc.) b. Mapping and cartography (photogrammetry, cha geophysical, etc.)	rting,	O ₁	O_2	O ₃
c. Geodesy, Navigation and Positioning (including Global Positioning System, GPS)	,	O ₁	02	O ₃
d. Remote sensing (airborne, satellite, radar, lidar, o	•	O_1	O_2	O ₃
e. Geospatial data management (including Geograp Information System, GIS)	hical	O ₁	O ₂	O ₃
f. Geomatics consulting services		O_1	O_2	O ₃
g. Development of customized geospatial software		O_1	O_2	O_3
h. Other geomatics areas: Please specify		O ₁	O_2	O ₃
Please indicate how all R&D activities were carried 1 R&D carried out in-house 2 R&D contracted out to other firms or research 3 R&D carried out jointly with other firms or required out in the contracted out in the contracted out jointly with other firms or required out jointly with any level of government.	n institutio	ons (i.e. pri	ivate firms o	or univers
Please estimate the percentage of the full-time eminvolved in any R&D in 2004.	ployees i	n your est	ablishment	who we

19. How much funding (including grants, tax credits, programs, etc.) did your establishment receive from the federal, provincial or municipal governments for all R&D in 2004?

(\$ CDN)

Innovation

There are two types of innovation: *Product Innovation* and *Process Innovation*.

Product Innovation occurs whenever a new product or a significantly improved product is introduced. A new product (good or service) is a product new to your establishment whose characteristics or intended uses differ significantly from those of your establishment's previously produced products. A significantly improved product (good or service) is an existing product whose performance has been significantly enhanced or upgraded. Minor or routine changes to products are not to be included.

24.	During the last three years, 2002 to 2004, did your establishment introduce into the market
	any new or significantly improved <u>products</u> ?

10Yes 20 No

Process Innovation includes new and significantly improved processes as well as new or significantly improved ways of supplying services and delivering products which are <u>new to your establishment</u>. The outcome should be significant with respect to the level of output, quality of products (goods or services) or costs of production and distribution. Minor or routine changes to processes are not to be included.

25. During the last three years, 2002 to 2004, did your establishment introduce any new or significantly improved <u>processes</u> (including improved ways of delivering goods or services)?

$_{1}$ OYes	20 No
1 - 100	2 - 110

Obstacles

26. For this establishment, to what extent are the following items obstacles to growth?

Extent of importance				
Obstacles	High	Medium	Low	Not relevant
a. Lack of market demand	O ₁	O_2	O ₃	O_0
b. Lack of marketing capabilities	O ₁	O_2	O ₃	O_0
c. Lack of skilled personnel	O ₁	O_2	O ₃	O_0
d. Absence of standards	O ₁	O_2	O ₃	O_0
e. Access to capital/financing	O ₁	O_2	O ₃	00
f. Access to data	O ₁	O_2	O ₃	O_0
g. Pricing of data	O ₁	O_2	O ₃	O_0
h. Cost of doing business internationally	O ₁	O_2	O ₃	00
i. Cost of technology	O ₁	O_2	O ₃	00
j. Government regulation, policies	O ₁	O_2	O ₃	00
k. Trade Barriers, provincial (including non-tariff)	O ₁	02	O ₃	00
1. Trade Barriers, international (including non-tariff)	O ₁	O_2	O ₃	\bigcirc_0
m. Subsidized competition from abroad	O ₁	O ₂	O ₃	00
n. Other, please specify:	O ₁	O ₂	O ₃	Ο ₀

27. For this establishment, to what extent are the following items obstacles in carrying out <u>R&D or innovation</u>?

	Extent of importance			tance
Obstacles	High	Medium	Low	Not relevant
a. Lack of market demand	Ο1	O_2	O ₃	O_0
b. Lack of marketing capabilities	Ο ₁	02	O ₃	00
c. Lack of skilled personnel	O ₁	O_2	O ₃	O_0
d. Absence of standards	Ο1	O_2	O ₃	O ₀
e. Access to capital/financing	Ο ₁	O_2	O ₃	00
f. Access to data	Ο ₁	O_2	O ₃	00
g. Pricing of data	Ο1	O_2	O ₃	O ₀
h. Cost of doing business internationally	Ο ₁	02	O ₃	O ₀
i. Cost of technology	Ο ₁	O_2	O ₃	\bigcirc_0
j. Government regulation, policies	Ο ₁	O_2	O_3	O ₀
k. Trade Barriers, provincial (including non-tariff)	O ₁	O_2	O ₃	00
1. Trade Barriers, international (including non-tariff)	Ο ₁	√ O ₂	O ₃	00
m. Subsidized competition from abroad	01	O_2	O ₃	O ₀
n. Other, please specify:	Oi	O_2	O ₃	O ₀

28. To what extent are the following items obstacles for this establishment in <u>exporting</u> geomatics products or services?

	Extent of importance				
Obstacles	High	Medium	Low	Not relevant	
a. Lack of market demand	O ₁	O_2	O ₃	O_0	
b. Lack of marketing capabilities	01	O_2	O ₃	O_0	
c. Lack of skilled personnel	01	O_2	O ₃	O_0	
d. Absence of standards	Ο ₁	O_2	O ₃	O_0	
e. Access to capital/financing	01	O_2	O ₃	Ο ₀	
f. Access to data	O ₁	02	O ₃	00	
g. Pricing of data	01	O_2	O ₃	00	
h. Cost of doing business internationally	O ₁	O_2	O ₃	O_0	
i. Cost of technology	O ₁	O_2	O ₃	00	
j. Government regulation, policies	O ₁	O_2	O ₃	00	
k. Trade Barriers, provincial (including non-tariff)	O ₁	O_2	O ₃	O_0	
1. Trade Barriers, international (including non-tariff)	O ₁	02	O ₃	00	
m. Subsidized competition from abroad	O ₁	02	O ₃	\bigcirc_0	
n. Other, please specify	O ₁	O ₂	O ₃	Ο ₀	

Growth Areas

29. In your opinion, what are the <u>geomatics industry's</u> growth prospects for the following geomatics activities within the next 5 years?

	Extent of growth					
Geomatics activities	High Growth	Some Growth	No growth	Decline	Don't Know	
a. Surveying (cadastral, land, hydrographic, geophysical, topographic, engineering, mining, marine, etc.)	01	02	O ₃	O ₄	05	
b. Mapping and cartography (photogrammetry, charting, geophysical, etc.)	01	02	O ₃	O ₄	O ₅	
c. Geodesy, Navigation and Positioning (including GPS)	01	O ₂	O ₃	O ₄	O ₅	
d. Remote sensing (airborne, satellite, radar, lidar, etc.)	01	O ₂	O ₃	04	O ₅	
e. Geospatial data management (including GIS)	01	O_2	O ₃	1 0 ₄	05	
f. Geomatics consulting services	01	O_2	O_3	04	O ₅	
g. Development of customized geospatial software	O ₁	O_2	O ₃	Ο ₄	O ₅	
h. Other geomatics areas: Please specify:	01	02	O ₃	O ₄	O ₅	

30. In your opinion, what are the <u>geomatics industry's</u> growth prospects for geomatics products or services in the following regions over the next 5 years?

		Ext	ent of grov	of growth			
Regions	High Growth	Some Growth	No growth	Decline	Don't Know		
a. Within Canada	01	O ₂	O ₃	O ₄	O ₅		
b. United States	O ₁	O ₂	O ₃	O ₄	O ₅		
c. Mexico	O ₁	O ₂	O ₃	O ₄	O ₅		
d. Central America	O ₁	O_2	O ₃	O ₄	O ₅		
e. South America	Ο ₁	O_2	O ₃	Ο ₄	O ₅		
f. Europe	Ο ₁	O_2	O_3	Ο ₄	O ₅		
g. Africa	01	O_2	O ₃	O ₄	O ₅		
h. Middle East	Ο ₁	O_2	O ₃	O_4	O ₅		
i. Australia, New Zealand	O ₁	O_2	O ₃	O ₄	O ₅		
j. China	O ₁	O ₂	O ₃	O ₄	O ₅		
k. India	O ₁	O_2	O ₃	O ₄	O ₅		
1. Other Asian countries	O ₁	O_2	O ₃	O ₄	O ₅		
m. All other countries. Please specify:	O ₁	O ₂	O ₃	O ₄	O ₅		

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Thank you for your time.

Please return the questionnaire in the accompanying self addressed prepaid envelope within 20 days of receipt to:

Statistics Canada Small Business and Special Surveys Division 120 Parkdale Avenue Ottawa, On K1A 9Z9