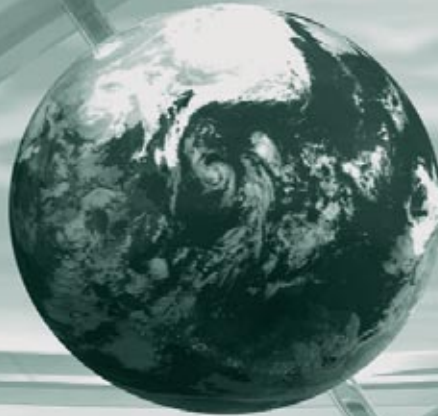


THE CEO'S GUIDE TO
INTERNATIONAL BUSINESS COSTS
G7-2004 Edition



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A GUIDE TO COST ADVANTAGE

Competitive Alternatives is a comprehensive guide for comparing business costs in North America, Europe, and Asia-Pacific. The 2004 report is the most thorough comparison of international business costs ever undertaken by KPMG. It contains essential information for any company seeking a cost advantage in locating international business operations.

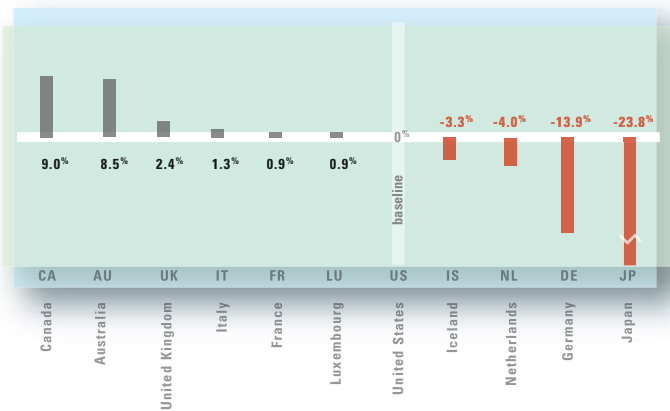
The study is an expansion and update of previous KPMG publications, and measures the combined impact of 27 significant cost components that are most likely to vary by location.

The eight-month research program covered 17 industry operations in 11 countries — Australia, Canada, France, Iceland, Italy, Japan, Germany, Luxembourg, the Netherlands, the United Kingdom, and the United States. More than 2,000 individual business scenarios were examined, combining more than 30,000 items of data. The basis for comparison is the after-tax cost of startup and operation, over a 10-year time horizon.

Full study results are available online at www.CompetitiveAlternatives.com.

Overall Results

Percentage cost advantage (disadvantage) relative to the United States



Cost Trends: Big Gains For the United States

- ▶ The cost competitiveness of the United States has improved significantly since 2002, aided by the decline in value of the US dollar. The US has overcome the significant cost disadvantage to European countries reported in the 2002 edition of *Competitive Alternatives*.
- ▶ Japan, Canada and the United Kingdom have also gained ground against the continental European countries, aided by the strength of the euro.
- ▶ France has experienced the greatest improvement in competitiveness among the Euro-member countries, due primarily to more competitive labor and benefits costs.

The Bottom Line

Canada is the overall cost leader, followed very closely by **Australia**, both with business costs approximately eight to nine percent below those in the **United States**.

The **United Kingdom** ranks third, with overall business costs lower than in the other European countries and the **United States**.

Italy, **France** and **Luxembourg** have the lowest costs among the continental European countries, with business costs about one percent lower than in the **United States**.

The **United States** represents the study baseline, and is the country that has experienced the greatest improvement in its competitiveness since 2002.

Iceland ranks as a more expensive location than the **United States** overall, although it outranks the US in most service operations where transportation costs are not significant.

The **Netherlands** has costs that are higher than in most other European countries, but are still significantly lower than those in **Germany**.

The most expensive country for international business costs is **Japan**, with costs approximately 24 percent higher than in the **United States**.

Exchange Rates

Results of this study are sensitive to exchange rates. Rates have changed dramatically since 2002:

	Exchange rates				Two-year appreciation relative to US\$
	2002 Edition		2004 Edition		
Euro	€1.1220	(US \$0.891)	€ 0.8648	(US \$1.156)	30%
UK pound	£0.6950	(US \$1.439)	£0.6019	(US \$1.661)	15%
Iceland krona	100.21 kr.	(US \$0.010)	77.07 kr.	(US \$0.013)	30%
Canadian dollar	CA \$1.5460	(US \$0.647)	CA \$1.3328	(US \$0.750)	16%
Australian dollar	AU \$1.9517	(US \$0.512)	AU \$1.4464	(US \$0.691)	35%
Japanese yen	¥121.5	(US \$0.008)	¥111.2	(US \$0.009)	9%

Labor Costs Are Key

- Labor cost comparisons are based on 42 job positions.
- Total labor costs include wages and salaries, statutory benefits (such as government pension plans and workers' compensation), and other benefits usually provided by the employer.
- For manufacturing operations, labor costs typically represent 56 to 72 percent of total location-sensitive costs. For non-manufacturing operations, they typically represent 75 to 85 percent.
- Labor-related costs vary significantly among countries:
 - ▶ Salary and wage costs (before benefits) are lowest in Italy, followed by Canada, the United Kingdom and France.
 - ▶ Costs for statutory plans and other benefits (as a percentage of payroll) are lowest in Canada, Luxembourg, the United States, and Japan.
 - ▶ Overall labor costs are lowest in Canada, Australia, Italy and the United Kingdom.

Detailed Results

Further analysis of these results can be found in the study report or online at www.CompetitiveAlternatives.com, including:

- Industries and Operations – results for all 17 industry-specific business operations.
- Regions and Cities – full regional results by city.
- Exchange rates – sensitivity to exchange rate changes.



Other Major Costs

- **Facility** costs:
 - ▶ For manufacturing operations, facility ownership costs (including financing) range from 12 to 24 percent of location-sensitive costs. Initial investment costs for a new industrial facility are lowest in the United States, followed by Australia, Canada and France.
 - ▶ For non-manufacturing operations, lease costs represent 4 to 14 percent of location-sensitive costs. Office lease costs are lowest in Italy, followed by France, Germany and Canada.
- **Transportation** costs represent 1 to 17 percent of location-sensitive costs for the manufacturing operations examined. Transportation costs-to-market vary by product and market, but tend to be lowest in centrally located jurisdictions such as the Netherlands, Germany, and Luxembourg. Low road and sea freight rates also allow Australia to rate well in terms of total transportation costs.
- **Utility** costs represent 2 to 10 percent of location-sensitive costs. Canada offers the lowest electricity costs, while natural gas costs are lowest in the United Kingdom. Telecommunication costs are lowest in the United States.
- **Taxes** represent 3 to 11 percent of location-sensitive costs. Overall, the United Kingdom and Australia are the two countries that offer low effective income tax rates for the widest range of operations:
 - ▶ For manufacturing operations, Luxembourg, the United Kingdom, Australia and Canada are the countries with the lowest effective income tax rates.
 - ▶ For R&D operations, Canada, the United Kingdom and Australia offer very favourable tax treatment.
 - ▶ For other non-manufacturing operations, Iceland, the United Kingdom, Luxembourg and Australia offer the lowest effective income tax rates.

NATIONAL RESULTS BY INDUSTRY AND OPERATION¹

Industry	Operation	Cost Index (Rank)										
		Europe						North America		Asia Pacific		
MANUFACTURING		France	Germany	Iceland	Italy	Luxembourg	Netherlands	UK	Canada	US	Australia	Japan
Aerospace	Aircraft parts	99.2 (4)	117.1 (10)	101.3 (8)	100.6 (7)	99.9 (5)	104.5 (9)	97.9 (3)	92.9 (1)	100.0 (6)	93.5 (2)	126.7 (11)
Agri-food	Food processing ²	98.0 (4)	106.3 (9)	116.5 (11)	99.6 (7)	98.5 (5)	99.4 (6)	96.8 (3)	95.3 (2)	100.0 (8)	94.7 (1)	112.7 (10)
Automotive	Auto parts	98.9 (4)	113.8 (10)	102.2 (8)	100.5 (7)	100.2 (6)	103.2 (9)	97.5 (3)	93.6 (2)	100.0 (5)	92.1 (1)	129.6 (11)
Chemicals	Specialty chemicals ²	99.9 (6)	109.8 (10)	100.9 (8)	97.0 (4)	96.7 (2)	104.2 (9)	98.1 (5)	93.9 (1)	100.0 (7)	96.9 (3)	114.0 (11)
Electronics	Electronics assembly ²	100.8 (7)	115.0 (10)	101.9 (8)	99.2 (4)	100.5 (6)	105.7 (9)	98.7 (3)	93.2 (1)	100.0 (5)	95.1 (2)	123.7 (11)
Medical devices	Medical device manufacturing	100.3 (6)	115.8 (10)	100.2 (5)	101.2 (8)	100.6 (7)	104.9 (9)	98.2 (3)	94.4 (1)	100.0 (4)	95.6 (2)	124.5 (11)
Metal components	Metal machining ²	98.8 (4)	114.0 (10)	102.7 (8)	100.7 (7)	100.2 (6)	103.2 (9)	97.4 (3)	93.7 (2)	100.0 (5)	92.0 (1)	130.5 (11)
Pharmaceuticals	Pharmaceutical products ²	99.6 (6)	113.4 (10)	99.4 (5)	100.4 (8)	99.4 (4)	103.2 (9)	97.5 (3)	94.0 (1)	100.0 (7)	95.8 (2)	120.4 (11)
Plastics	Plastic products ²	97.9 (4)	114.4 (9)	120.1 (10)	101.4 (7)	99.6 (5)	101.9 (8)	97.4 (3)	93.6 (2)	100.0 (6)	91.3 (1)	129.1 (11)
Precision manufacturing	Precision components ²	98.0 (4)	124.4 (10)	101.6 (7)	102.1 (9)	99.8 (5)	102.0 (8)	95.9 (3)	91.8 (2)	100.0 (6)	91.2 (1)	128.6 (11)
Telecommunications	Telecom equipment	98.5 (4)	105.1 (10)	102.3 (9)	98.9 (6)	98.9 (5)	101.0 (8)	97.2 (3)	95.7 (1)	100.0 (7)	96.4 (2)	108.6 (11)
R&D												
Biotechnology	Biomedical R&D ²	97.3 (6)	115.0 (10)	94.8 (4)	91.8 (3)	100.2 (8)	101.3 (9)	96.6 (5)	83.4 (1)	100.0 (7)	88.6 (2)	135.9 (11)
Clinical trials	Clinical trials management	105.6 (9)	131.5 (10)	95.5 (6)	97.2 (7)	94.8 (5)	83.8 (2)	94.0 (4)	77.6 (1)	100.0 (8)	85.7 (3)	153.3 (11)
Product testing	Electronic syst. dev./testing ²	86.8 (6)	102.2 (10)	81.7 (3)	82.6 (4)	89.4 (7)	90.5 (8)	85.4 (5)	75.3 (2)	100.0 (9)	71.7 (1)	120.8 (11)
SOFTWARE												
Software design	Advanced software ²	98.5 (7)	108.2 (10)	88.4 (3)	95.6 (5)	95.7 (6)	105.3 (9)	92.9 (4)	86.4 (2)	100.0 (8)	84.7 (1)	114.4 (11)
Web and multimedia	Content development ²	98.4 (7)	120.5 (10)	93.4 (3)	96.3 (5)	94.9 (4)	108.6 (9)	97.3 (6)	87.5 (2)	100.0 (8)	84.2 (1)	128.1 (11)
CORPORATE SERVICES												
Back office/call centers	Shared services center ²	114.3 (4)	144.0 (10)	121.3 (8)	114.6 (5)	118.3 (7)	128.4 (9)	116.9 (6)	88.3 (1)	100.0 (3)	95.9 (2)	162.4 (11)
OVERALL RESULTS	Overall results ²	99.1 (5)	113.9 (10)	103.3 (8)	98.7 (4)	99.1 (5)	104.0 (9)	97.6 (3)	91.0 (1)	100.0 (7)	91.5 (2)	123.8 (11)

1: Business costs are expressed as an index, with the United States being assigned the baseline index of 100.0. A cost index less than 100 indicates lower costs than the US. A cost index greater than 100 indicates higher costs than the US.
2: Overall 2004 results are based on the same 12 operations analyzed in 2002, as indicated.

OVERALL RESULTS BY REGION AND CITY¹

LOCATION	COUNTRY	INDEX	RANK	LOCATION	COUNTRY	INDEX	RANK	LOCATION	COUNTRY	INDEX	RANK
CONTINENTAL EUROPE				NORTH AMERICA				MIDWEST			
Grenoble	France	99.1	5	New England/Atlantic				Calgary, AB	Canada	91.4	4
Mulhouse	France	97.2	2	Boston, MA	United States	103.8	9	Cedar Rapids, IA	United States	99.3	8
Nantes	France	99.2	8	Burlington, VT	United States	99.8	6	Chicago, IL	United States	103.5	15
Toulouse	France	101.0	9	Charlottetown, PE	Canada	87.8	1	Colorado Springs, CO	United States	98.6	7
Chemnitz	Germany	106.5	14	Halifax, NS	Canada	88.6	3	Dallas-Fort Worth, TX	United States	102.8	14
Darmstadt	Germany	116.6	15	Hartford, CT	United States	102.9	8	Edmonton, AB	Canada	89.2	1
Frankfurt	Germany	118.5	16	Lewiston, ME	United States	97.6	5	Houston, TX	United States	104.7	17
Reykjavik	Iceland	103.3	11	Moncton, NB	Canada	88.1	2	Milwaukee, WI	United States	102.1	13
Caserta	Italy	95.1	1	Providence, RI	United States	100.6	7	Minneapolis, MN	United States	104.1	16
Livorno	Italy	98.0	3	St. John's, NF	Canada	89.7	4	Oklahoma City, OK	United States	100.1	10
Turin	Italy	99.1	5	Northeast				Phoenix, AZ	United States	99.4	9
Vicenza	Italy	98.9	4	Buffalo, NY	United States	100.3	10	Salt Lake City, UT	United States	97.8	6
Luxembourg	Luxembourg	99.1	5	Columbus, OH	United States	99.8	9	Saskatoon, SK	Canada	89.4	2
Amsterdam Area	Netherlands	104.9	12	Detroit, MI	United States	105.6	15	Sioux Falls, SD	United States	97.6	5
Groningen	Netherlands	102.9	10	Indianapolis, IN	United States	99.6	8	St. Louis, MO	United States	102.0	12
Rotterdam Area	Netherlands	105.1	13	Lexington, KY	United States	97.0	7	Wichita, KS	United States	100.1	11
UNITED KINGDOM				Montreal, QC	Canada	91.3	4	Winnipeg, MB	Canada	90.5	3
Birmingham	England	100.0	13	New York City, NY	United States	109.8	16	Pacific			
Derby	England	97.8	7	Newark, NJ	United States	104.3	14	Boise, ID	United States	97.9	3
Durham	England	97.1	3	Northern Virginia (Metro DC), VA	United States	101.3	12	Kelowna, BC	Canada	89.7	1
Leicester	England	98.3	9	Ottawa, ON	Canada	92.0	5	Las Vegas, NV	United States	102.2	5
London	England	115.1	14	Philadelphia, PA	United States	102.1	13	Portland, OR	United States	102.5	6
Manchester	England	96.9	2	Quebec City, QC	Canada	89.1	2	Riverside-San Bernardino, CA	United States	104.8	7
Newcastle-Gateshead	England	98.0	8	Saginaw, MI	United States	101.2	11	San Diego, CA	United States	105.1	8
Nottingham	England	98.7	10	Sherbrooke, QC	Canada	86.5	1	San Jose, CA	United States	110.9	10
Stoke-on-Trent	England	96.1	1	Toronto, ON	Canada	93.2	6	Seattle, WA	United States	105.6	9
Sunderland	England	97.2	4	Waterloo Region, ON	Canada	91.0	3	Spokane, WA	United States	101.4	4
Telford	England	97.7	6	Southeast				Vancouver, BC	Canada	93.6	2
Belfast	Northern Ireland	97.3	5	Atlanta, GA	United States	99.2	6	ASIA-PACIFIC			
Derry	Northern Ireland	98.8	12	Dothan, AL	United States	94.7	2	Adelaide	Australia	90.4	1
Newry	Northern Ireland	98.7	11	Greenville-Spartanburg, SC	United States	96.7	3	Brisbane	Australia	91.0	2
				Jackson, MS	United States	97.1	4	Canberra	Australia	91.5	3
				Nashville, TN	United States	97.4	5	Melbourne	Australia	92.1	4
				Raleigh, NC	United States	99.4	8	Sydney	Australia	93.8	5
				San Juan, PR	United States	93.0	1	Fukuoka	Japan	121.5	6
				Tampa, FL	United States	99.3	7	Hamamatsu	Japan	121.9	7
								Yokohama	Japan	128.0	8

1: Business costs are expressed as an index, with the United States being assigned the baseline index of 100.0. A cost index less than 100 indicates lower costs than the US. A cost index greater than 100 indicates higher costs than the US.

RESULTS BY INDUSTRY SECTOR

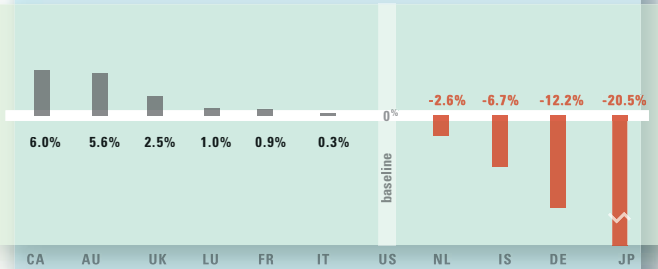
Detailed results for 12 specific business operations form the basis for comparing industry sectors.

MANUFACTURING

Cost differentials are lowest in manufacturing...

Seven manufacturing operations

- Metal machining
- Plastic products
- Food processing
- Electronics assembly
- Precision components
- Pharmaceuticals
- Specialty chemicals



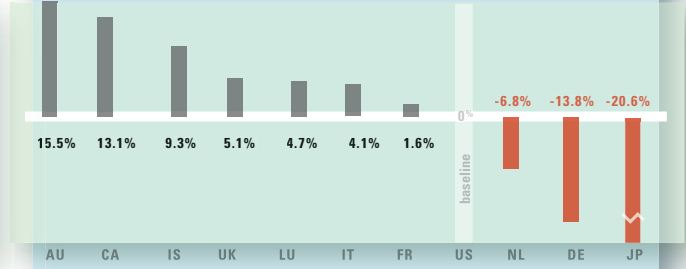
- For manufacturers, costs for globally-sourced materials and equipment are significant, and do not vary by location.
- The **United Kingdom, Luxembourg and France** have their strongest relative results in this sector, reflecting affordable labor, transportation and utility costs.

SOFTWARE

Cost differentials are higher in software operations...

Two software operations

- Advanced software
- Content development



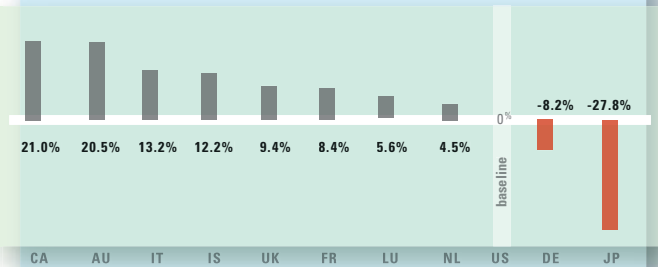
- Labor costs are more significant in this sector, and vary considerably by location.
- **Australia and Iceland** have their strongest relative results in this sector, reflecting labor cost advantages for technical and professional employees.

RESEARCH & DEVELOPMENT

Cost differentials are even higher for R&D...

Two R&D operations

- Biomedical R&D
- Electronics systems development/testing



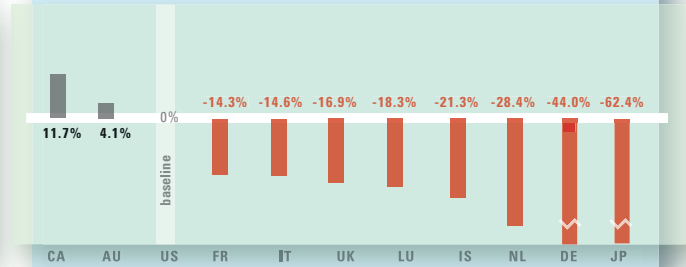
- Cost differentials are even higher for R&D, due to the impact of labor costs for experienced scientific and technical employees and the taxation treatment of R&D costs.
- **Italy and the Netherlands** have their strongest relative results in this sector.

CORPORATE SERVICES

Cost differentials are highest in corporate services...

One corporate services operation

- Shared services center



- Results for the corporate services sector are driven primarily by labor costs for lower-skilled workers.
- **Canada, Australia and the United States** offer the lowest business costs in this sector.

FULL RESULTS OF THIS STUDY ARE AVAILABLE AT:

www.CompetitiveAlternatives.com

FOR MORE INFORMATION PLEASE CONTACT THE FOLLOWING INDIVIDUALS:

KPMG LLP (SRES) Strategic Relocation & Expansion Services

Laurence Cusack
+1 267 256 1730
lcusack@kpmg.com

Scot Butcher
+1 617 988 1215
sbutcher@kpmg.com

George Tobjy
+1 212 872 5719
gtobjy@kpmg.com

Andreas Dressler
+49 69 9587 3407
adressler@kpmg.com

MMK Consulting Inc, Study Leaders

Glenn Mair
+1 604 484 4622
gmair@mmkconsulting.com

Stuart MacKay
+1 604 484 4621
smackay@mmkconsulting.com

Treena Cook
+1 604 484 4623
tcook@mmkconsulting.com

Angela Rey
+1 604 484 4627
arey@mmkconsulting.com

KPMG Contacts

Australia
Christine Farmer
+61 3 9288 6696
cfarmer@kpmg.com.au

Japan
Hiromi Seki
+81 3 5400 7835
hseki@kpmg.or.jp

Canada
Carl Deslongchamps
+1 514 840 2276
cdeslongchamps@kpmg.ca

Luxembourg
Véronique Degbomont
+352 22 5151 913
veronique.degbomont@kpmg.lu

France
Kelly Beaurain
+33 1 5568 68 68
kbeaurain@kpmg.com

Netherlands
Elbert Waller
+31 20 656 7009
waller.elbert@kpmg.nl

Germany
Andreas Dressler
+49 69 9587 3407
adressler@kpmg.com

United Kingdom
Justin Patty
+44 28 9089 3851
justin.patty@kpmg.ie

Iceland
Unnar Hermannsson
+354 545 6000
uhermannsson@kpmg.com

United States
Laurence Cusack
+1 267 256 1730
lcusack@kpmg.com

Italy
Stefano Tamiazzo
+39 02 6764 3678
stamiazzo@kpmg.it

United States
Scot Butcher
+1 617 988 1215
sbutcher@kpmg.com

MAJOR STUDY CONTRIBUTORS:



Colliers International
www.colliers.com

WILLIAM M.
MERCER

William M. Mercer
www.imercer.com



Economic Research Institute
www.eri-ri.com



MMK Consulting
www.mmkconsulting.com

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www.nfia.nl

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New South Wales Department of State & Regional Development
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Caserta Chamber of Commerce and Industry
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Ottawa Centre for Research and Innovation
www.ocri.ca

City of Almere, Department of Economic Affairs
www.almere.nl

Ouest Atlantique - France Atlantique Development Agency
www.france-atlantique.org

City of Amsterdam, Amsterdam Foreign Investment Office
www.afio.amsterdam.nl

Pôle Québec Chaudière-Appalaches
www.pole-qca.ca

City of Haarlemmermeer
www.haarlemmermeer.nl

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www.peibusinessdevelopment.com

City of Toronto
www.city.toronto.on.ca

Puerto Rico Industrial Development Company
www.pridco.com

Destination Winnipeg Inc.
www.destinationwinnipeg.ca

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www.sd.qld.gov.au

East Midlands Development Agency
www.emda.org.uk

Regional District of Central Okanagan
www.investkelowna.com

Economic Development Edmonton
www.edmonton.com

Rotterdam Chamber of Commerce
www.kvk.nl

Enterprise Greater Moncton
www.gmec.nb.ca

Saskatchewan Industry and Resources
www.ir.gov.sk.ca

Grand Duchy of Luxembourg Economic Ministry
www.eco.public.lu

Saskatoon Regional Economic Development Authority
www.sreda.com

Greater Halifax Partnership
www.greaterhalifax.com

Schiphol Area Development Company NV
www.sadc.nl

Greater Toronto Marketing Alliance
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Sherbrooke Economic Development Corporation
www.sdes.ca

Invest in Turin and Piedmont
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