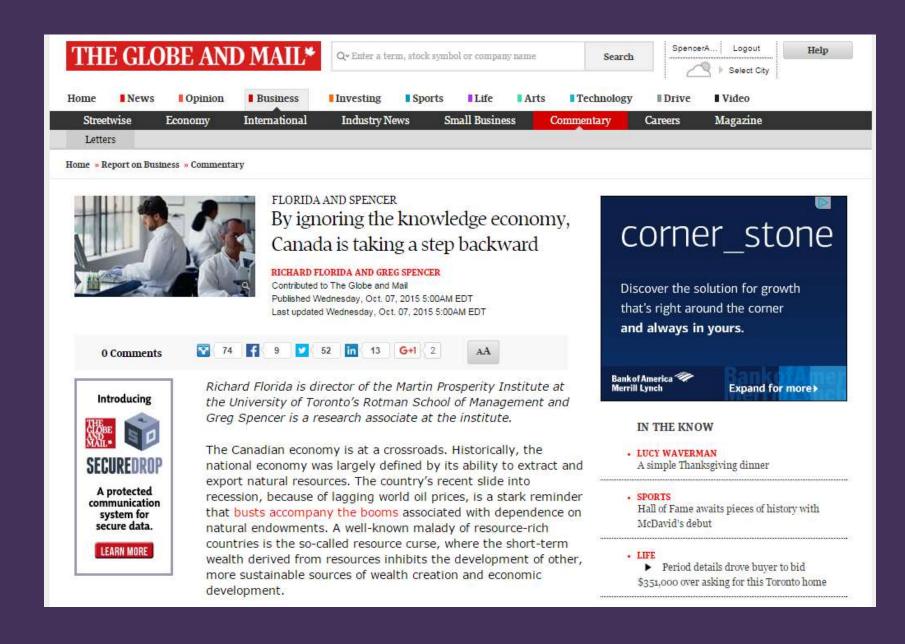


#### The changing nature of work and what it means for cities and locations





The 'Rise of the Creative Class' and the 3T model of economic development

### 1. Talent

- The knowledge economy (geography of) is driven by highly skilled workers
- Occupations as the key metric (creative class)

# 2. Technology

 The production of new technology as the key ingredient of economic growth

### 3. Tolerance

- Highly tolerant places are open to new people and new ideas
- Important aspect of attracting (young) talent

#### Measuring the 3Ts

#### **Canadian Creativity Index**

#### **Canadian Talent Index**

Creative class share

University degree share

PhD per 1,000 pop.

#### **Canadian Technology Index**

Venture capital

Patents per 10,000 population

Information and communication technology manufacturing

Information and communication technology services

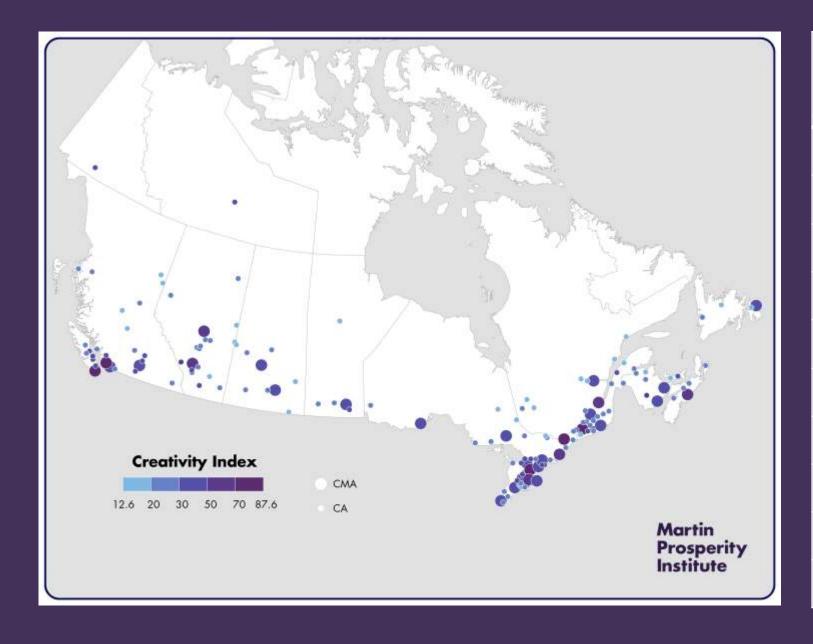
#### **Canadian Tolerance Index**

Foreign born population

Gay & lesbian population

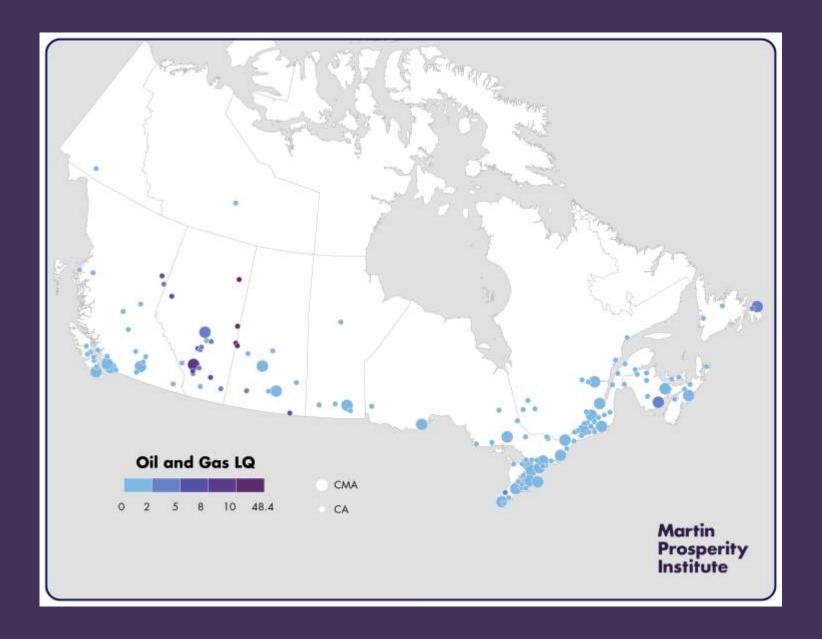
Arts & culture occupations

## The Canadian Creativity Index



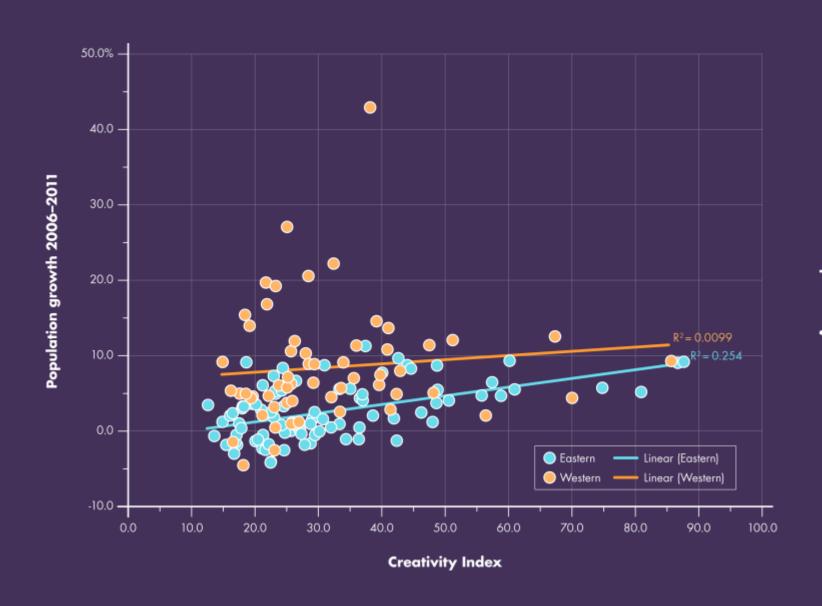
Rank (147)	City-region (Min pop 100K)	Prov. Terr.	Talent Index	Technology Index	Tolerance Index	Creativity Index
1	Toronto	ON	80.9	84.7	97.4	87.6
2	Ottawa - Gatineau	ON/ QC	100.0	82.6	77.4	86.7
3	Vancouver	ВС	79.6	77.4	100.0	85.7
4	Montréal	QC	73.5	82.2	87.1	80.9
5	Kitchener - Waterloo	ON	69.2	100.0	55.2	74.8
6	Victoria	ВС	85.6	43.8	80.7	70.0
7	Calgary	AB	79.2	57.4	65.4	67.3
8	Guelph	ON	93.0	33.1	56.8	61.0
10	Halifax	NS	78.6	33.2	64.7	58.8
11	Québec City	QC	72.6	39.4	60.2	57.4

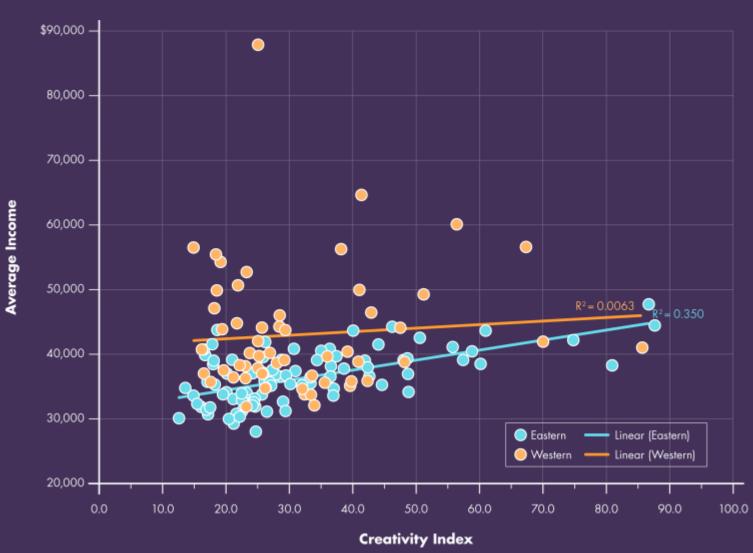
## The geography of the oil & gas sector in Canada



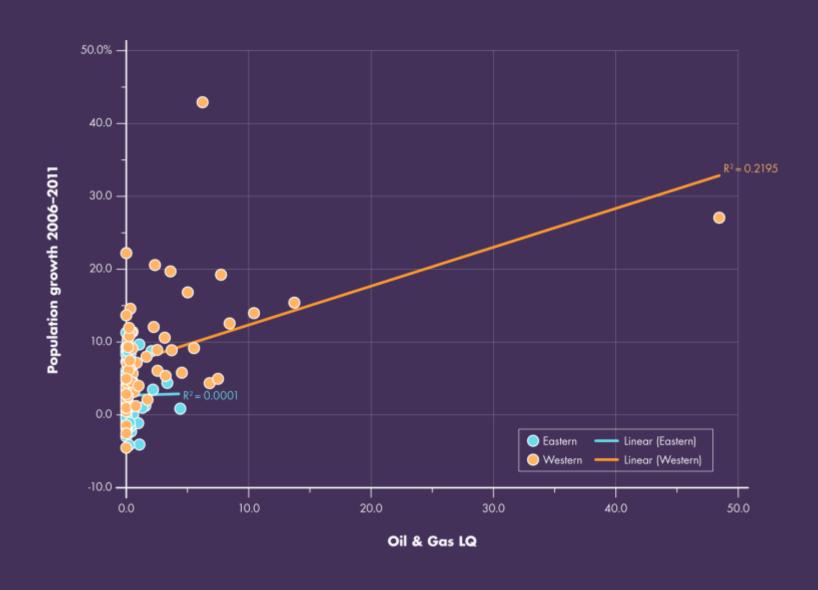
Rank	City	Prov. Terr.	Oil & Gas LQ
1	Wood Buffalo	AB	48.45
2	Cold Lake	AB	13.73
3	Lloydminster	AB/SK	10.43
4	Calgary	AB	8.44
5	Sylvan Lake	AB	7.74
6	Fort St. John	BC	7.49
7	Brooks	AB	6.81
8	Okotoks	AB	6.23
9	Estevan	SK	5.53
10	Grande Prairie	AB	5.02
11	Medicine Hat	AB	4.54
12	Sarnia	ON	4.41
13	Lacombe	AB	3.71
14	Strathmore	AB	3.61
15	Saint John	NB	3.35
16	Dawson Creek	ВС	3.21
17	Camrose	AB	3.14
18	Swift Current	SK	2.55
19	Red Deer	AB	2.52
20	High River	AB	2.34

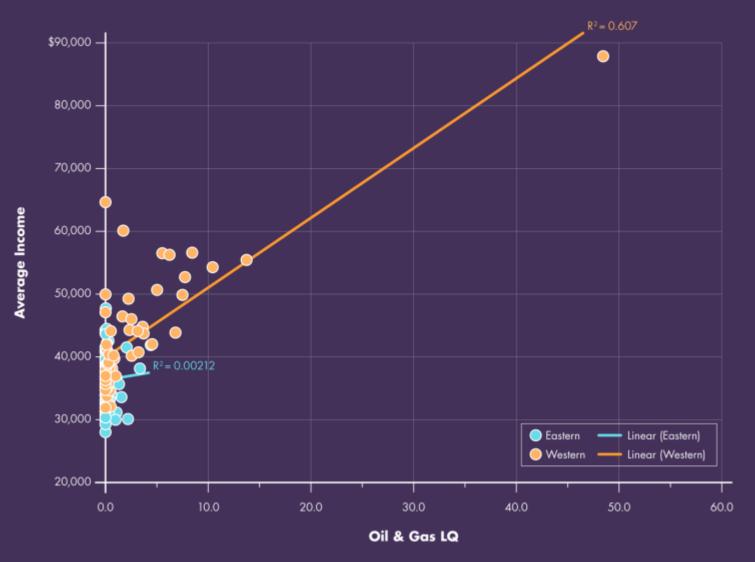
The Canadian Creativity Index versus growth and incomes for Eastern and Western Canada



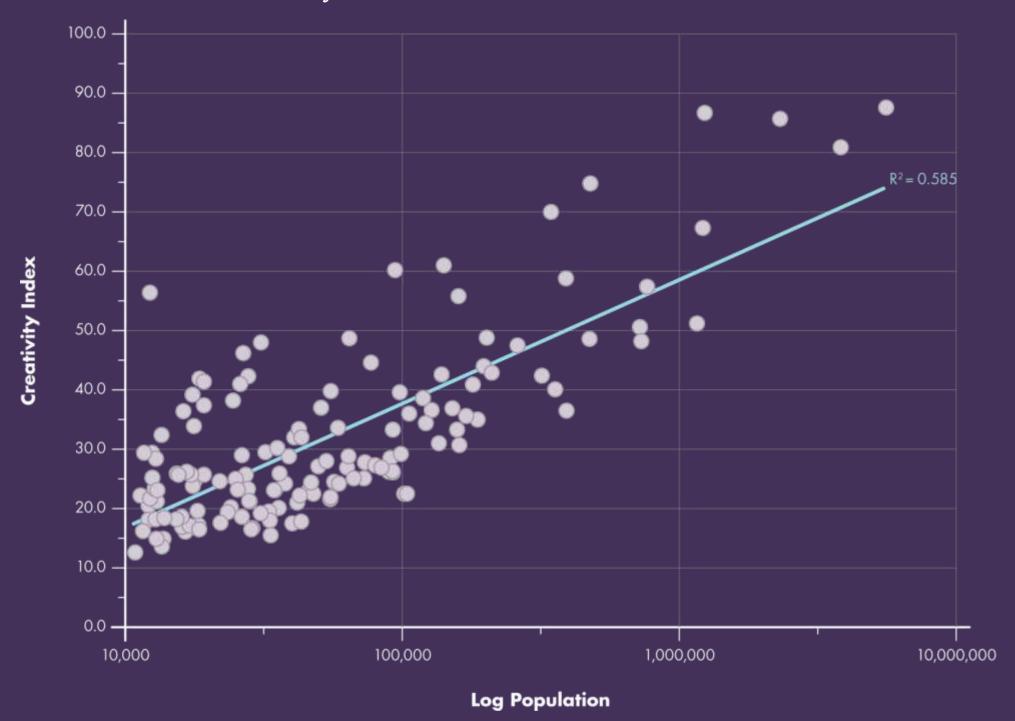


The oil & gas sector versus growth and incomes for Eastern and Western Canada





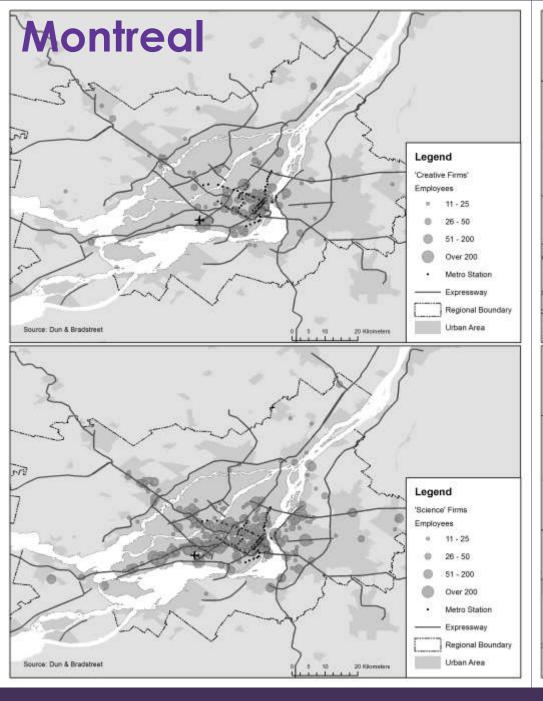
## City size versus the Canadian Creativity Index

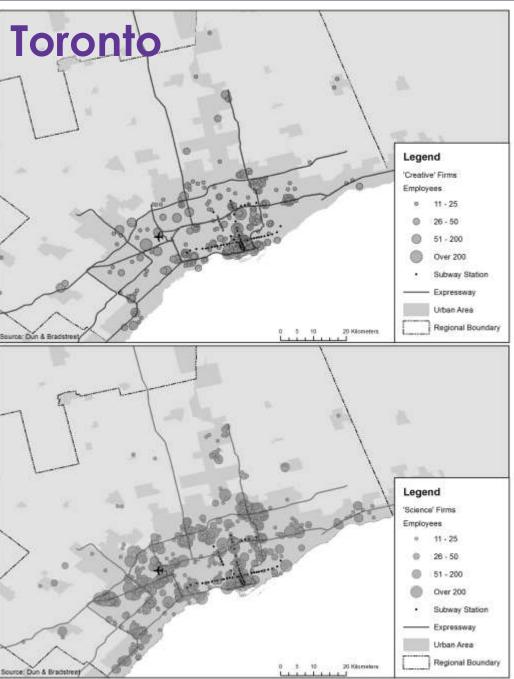


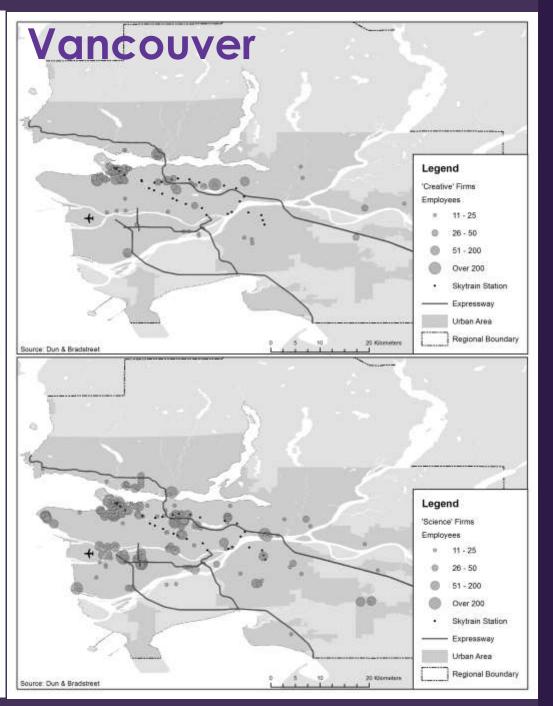
## Where creative and S&T industries are in Canada

	'Creative' Industries			'Science' Industries		
NAICS Codes	5121 Motion picture and video industries*			3254 Pharmaceutical and medicine manufacturing		
Definitions	5122 Sound recording industries			5112 Software publishers		
	5151 Radio and television broadcasting			5415 Computer systems design and related services		
	5414 Specialized design services			5417 Scientific research and development services		
	7111 Performing arts companies			6215 Medical and diagnostic laboratories		
	7115 Independent artists, writers and performers					
	Employment	LQ	National Share	Employment	LQ	National Share
Montreal	43,550	1.62	18.4%	68,455	1.61	18.4%
Toronto	62,855	1.63	26.6%	98,505	1.62	26.4%
Vancouver	28,385	1.76	12.0%	37,075	1.46	9.9%
3-region total	134,790	1.65	57.1%	204,035	1.58	54.7%

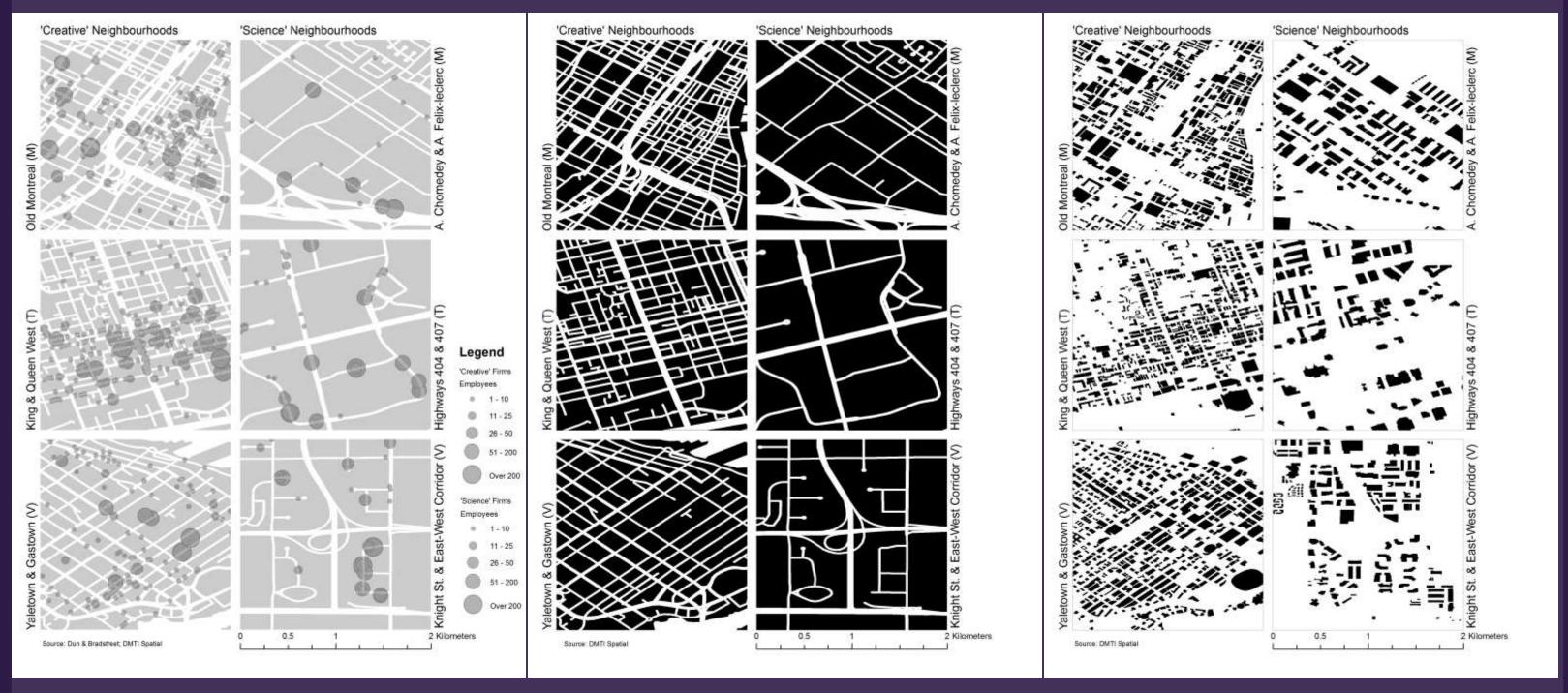
### Creative industries in the center and science industries in the suburbs



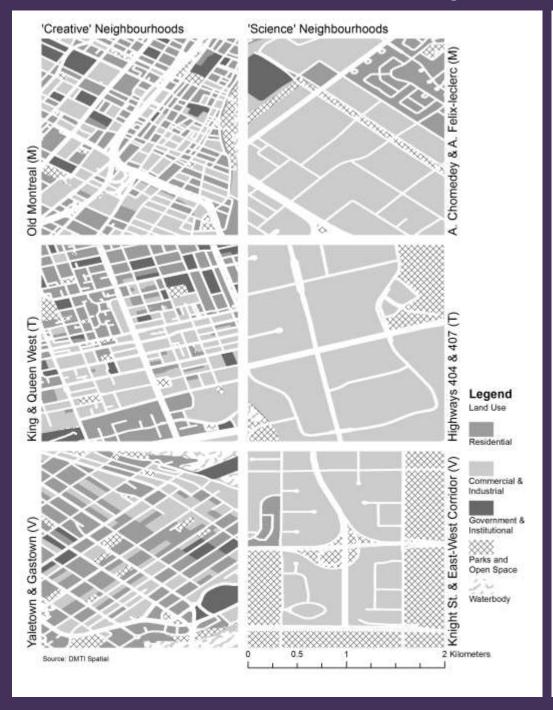




## 'Creative' neighbourhoods versus 'science' neighbourhoods



## 'Creative' neighbourhoods versus 'science' neighbourhoods





## 'Creative' neighbourhoods versus 'science' neighbourhoods

Characteristics	'Creative' Neighbourhoods	'Science' Neighbourhoods
Firm Location	Edge of core	Suburban
Office Rents	Medium-high	Low-medium
Firm Structure	Micro-Small	Medium-Large
Anchors	Venues; institutions	Large firms; institutions
Work force location	Overlapping	Adjacent
Transportation	Public; walk; bike	Private (cars)
Density	Very High	Low-medium
Land Use	Mixed	Mono
Building Types	Varied; adapted re-use	New; purpose-built
Bars, restaurants, cafes	Dense; authentic	Sparse; inauthentic
Change/evolution	Gentrification	Sprawl
Social dynamics	Larger social networks; Inter-firm (?)	Smaller social networks; Intra-firm (?)

# Different types of work, different types of knowledge

	Creative and Cultural Occupations	Science and Technology Occupations
Work Arrangements	High levels of self-employment	Low levels of self-employment
	High levels of contract, temporary, casual, and seasonal employment	High levels of regular, permanent employment
	High levels of multiple job holding	Low levels of multiple job holding
	High levels of part-time employment	High levels of full-time employment
	Highly irregular work schedules	Highly regular 9-5 Monday-Friday work schedules
Social Networks	Larger	Smaller
	More weak-ties	Fewer weak-ties
	Highly dynamic	Less dynamic
Spatial Systems	More local weak-tie relationships	Fewer local weak-tie relationships
	Live and work in same neighborhood	Clear geographic separation between home and work

Five pillars for a Canadian urban knowledge economy

# 1. Density

Planning cities for maximum human interaction

# 2. Infrastructure

Public transportation as the backbone

# 3. Affordable housing

Proximity to jobs

# 4. Better urban jobs

Upgrading of the service economy

# 5. A new federalism for cities

Powers over revenue