

Grant Overview

Jerry Platt
School of Business



Grant #SBAHQ-06-I-0046

Period 9/1/06 to 8/31/09

SME Case Studies of GIS Technology Transfer to I.E. Small Businesses

Develop/Conduct SB/GIS
Training Workshops
@ I.E., SoCal, US level

Build Capacity and
Infrastructure at Redlands
for Spatial Analysis
of Business Problems

Spatial Conference(s) on Managing with GIS

for SB, SBA, B-Schools

Virtual
Spatial Resource Center
to provide Sustainable
GIS Assistance

Develop/Conduct SB/GIS
Training Workshops
@ I.E., SoCal, US level

2007 Grant Workshops: April-May, 2007

- 4/25 @ Redlands on Marketing
- 4/26 @ Ontario/RC on Logistics
- 5/01 @ High Desert on Strategy
- 5/10 @ Temecula on Logistics

• 5/17 @ Ontario: SBDC Conference Workshop

- 5/23 @ Ontario/RC on Strategy
- 5/30 @ Riverside on Marketing for Non-Profits

Develop/Conduct SB/GIS
Training Workshops
@ I.E., SoCal, US level

Workshop Format

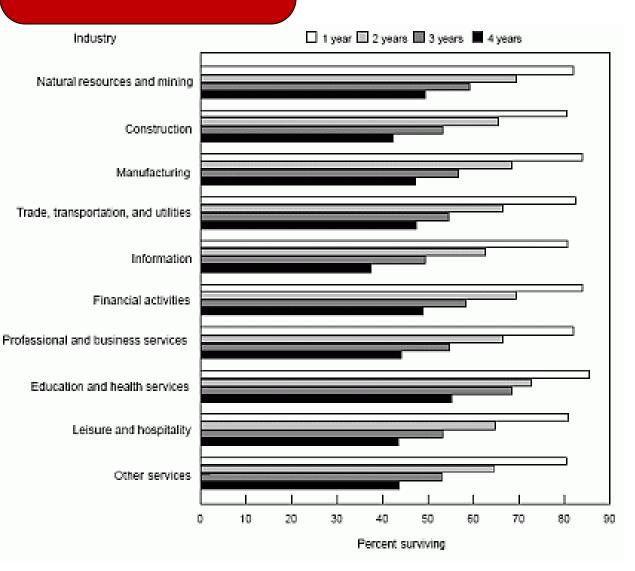
• 9:00-9:50

- An Introduction and Overview
 - Jerry Platt

- 10:00-10:50
- A GIS Tutorial and Tour
 - Rich Greene or Jim Pick

- 11:00-11:50
- Marketing, Strategy, or Logistics
 - Monica Perry, Johannes Moenius or Avijit Sarkar

Main Threat to SMEs = SURVIVAL



After 4 years:

- ~ 1/2 Survive
- ~ 1/6 Close; Successful
- ~ 1/3 Close; Unsuccessful
- + Survival Rate INVARIANT to Industry

Questions for You

- 1) Is the Small Business Survival Rate in CA:
 - a) HIGHER than the US Average
 - b) EQUAL to the US Average
 - c) LOWER than the US Average
- 2) What Accounts for Your Answer to 1)?

3) What Advantage Does CA Have, Compared to most other States?

SME_Business_Turnover_RateCA Ranking (50 States + DC)

• Fifth worst:	U.S. Total	1.15	
→ West Virginia	0.68	Florida	1.41
North Dakota	0.73	Idaho	1.44
Washington	0.73	New Mexico	1.64
Minnesota	0.74	Colorado	1.76
California	0.78	Nevada	2.62◀

18% of Business BIRTHS
10% of BANKRUPTCIES
28% of Business TERMINATIONS

SME_Risk to Survival Index CA Rankings (50 States + DC)

 Top Personal Income Tax Rate 	51
 Top Capital Gains Tax Rate 	51
 Top Corporate Income Tax Rate 	40
 State and Local Property Taxes 	17
 Number Health Insurance Mandates 	44
• Electric Utility Costs	44
 Workers' Compensation Benefits 	49
State Gasoline Taxes	50
 5-yr Government Spending Growth Rate 	51
 Per Capita Government Expenditures 	46

State_Innovation_Index CA Rankings (50 States + DC)

Entrepre-

Overall				IPOs		neurial Activity		Inventor Patents	
State	Rank	Score	State	Rank	Score	Rank	Score	Rank	Score
Massachusetts	1	96.1	MA	5	5.79	43	0.22%	8	0.109
New Jersey	2	86.4	NJ	14	5.16	21	0.29%	9	0.107
Maryland	3	85.0	MD	11	5.23	19	0.30%	20	0.081
Washington	4	84.6	WA	22	4.59	16	0.32%	18	0.086
California	5	82.9	CA	3	6.04	9	0.36%	1	0.143

Alabama	46 45.1
Arkansas	47 44.7
South Dakota	48 43.8
Mississippi	49 36.5
West Virginia	50 35.6
U.S. Average	62.1

CONCLUSION: Technological Innovation partially offsets the hostile environment to soften its impact on SME failures, BUT ...

CA SMEs must continue to INNOVATE, and spatial thinking about your business provides a set of opportunities to do so.

C

Process Innovation Increases SME Survival Rates

ICC Advance Access originally published online on November 3, 2005 Industrial and Corporate Change 2005 14(6):1167-1192; doi:10.1093/icc/dth081

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A matter of life and death: innovation and firm survival

Elena Cefis

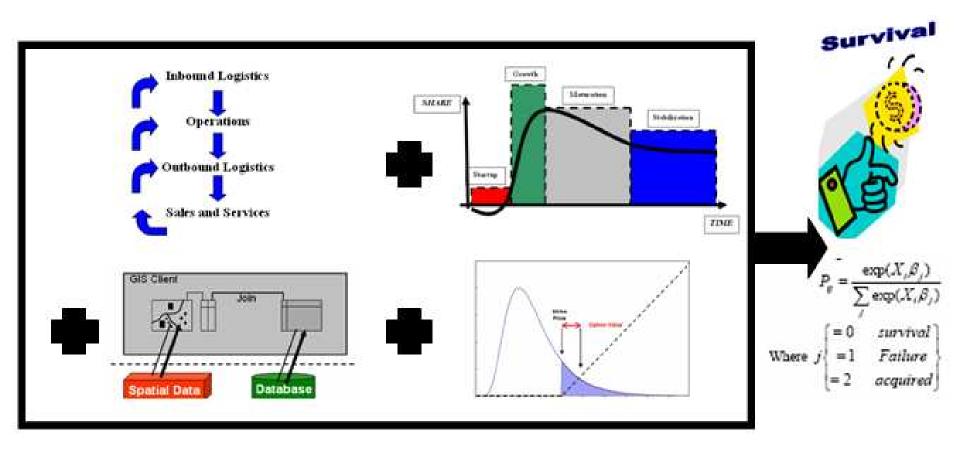
Orietta Marsili



Survey. By estimating a parametric duration model, we show that firms benefit from an innovation premium that extends their life expectancy, independent of firm-specific traits such as age and size. Process innovation in particular seems to have a distinctive effect on survival. Furthermore, survival chances increase with the age and growth rate of a firm, the

Process Innovators > Product Innovators > Non-Innovators

Operational Model

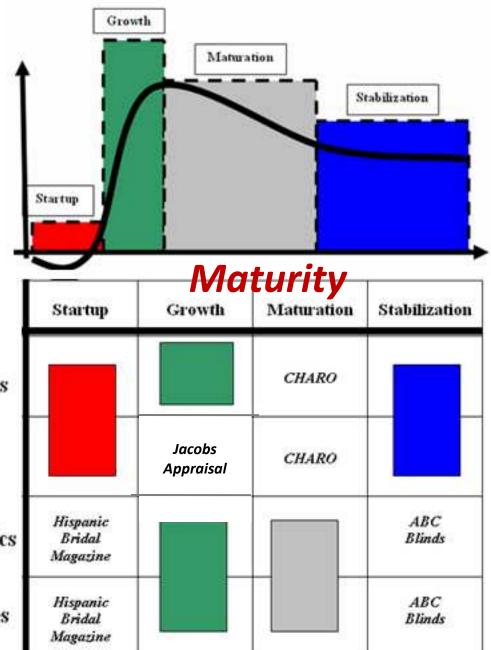


SME Case Studies of GIS Technology Transfer to I.E. Small Businesses

CASE STUDY SELECTION

Supply Chain





SME Case Studies of GIS Technology Transfer to I.E. Small Businesses

Case Studies

Report on Case Study

ABC Blinds, Draperies, and Shutters

Version 2.5 Draft 10/14/07

PLEASE SEND COMMENTS AND CORRECTIONS TO J. PICK (james pick@redlands.edu)

James Pick, Hamid Falatoon, Kamala Gollakota, Lisa Benvenuti, Nathan Jimerson

Report on Case Study

Jacobs Appraisal and Affiliates

By James B. Pick, Richard Greene, and Lee Peterson

Acknowledgment to Nathan Jimerson, former project coordinator and Matt Riley, undergraduate research assistant

Report on Case Study

Inland Empire Minority Business Enterprise Center

Jerry Platt (Lead), Rich Greene (Associate Lead), and Nathan Jimerson

GIS and Small Business

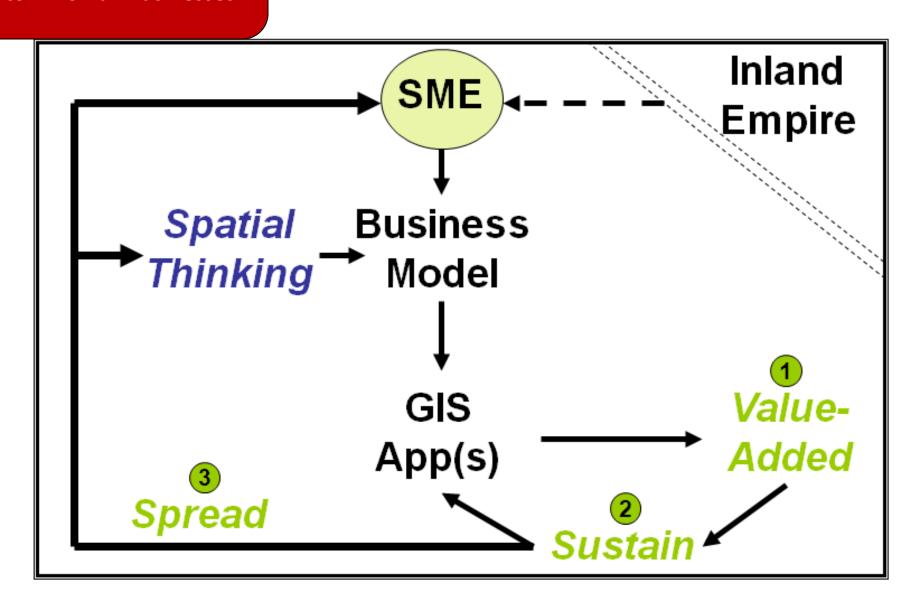
8:30 - 9:45 am

GIS isn't just for big companies, it's applicable to small businesses too. See how through an in-depth case study, an analysis of relevant global business data, and a presentation of a local business atlas. Sessions will include

Trade Area Analysis for a Hispanic Bridal Magazine

SME Case Studies of GIS Technology Transfer to I.E. Small Businesses

Intention of Case Studies



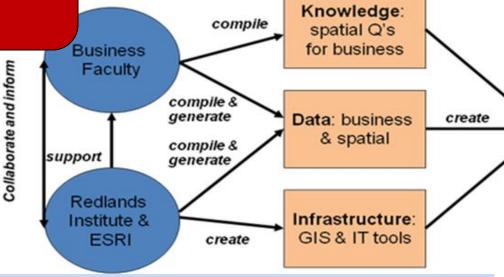
Spatial Conference(s) on Managing with GIS for SB, SBA, B-Schools

Business GIS Summit





Design and Development





Spatial Programs at the University of Redlands

Space and place are part of human experience. We use spatial thinking to orient our bodies, navigate terrain, and envision objects. The vast majority of information and data in our world has a geographic component, and spatial factors affect every aspect of our lives.

The University of Redlands is a spatially-infused institution. We use spatial reasoning to enhance our curriculum, research and operations. Geospatial technologies support our activities, but our focus is on how thinking spatially enriches our understanding of our world.

The Master of Science in Geographic Information Systems Program is designed

Systems Program is designed for professionals seeking to enhance their knowledge of analysis, management, and communication of geographic information. It combines the development of strong technical skills and in-depth understanding of geographic information science and theory.



The Redlands Institute

supports the University's mission of education, research, and community outreach. The Institute serves as a resource for departments and programs across the campus. Working with teams of students, faculty, staff and administrators, we apply GIScience expertise and technology support to a wide array of projects and educational



Learning Spatially (LENS) is

a campus-wide initiative promoting spatial literacy as a foundational component of a liberal arts curriculum. This program is one outcome of Redlands' institutional dedication to spatial reasoning in programs, research and curriculum. LENS harnesses the integrative power of geography with technologies to help faculty and students visualize knowledge, solve problems, and understand relationships through a spatial lens.





Redlands



Atlas Pages:

- Provide basic info on the context of the IE (population, income, etc.)
- Profile faculty research on how GIS can be used to help businesses
- •Thumbnail graphics of maps, charts, and videos
- · Links to resources (right)

Linking Data, Docs, Charts, Maps, Videos, Reports, etc., to...







- Create a study area
 Explore/print maps
- Create reports
- Simple map query for defining potential markets

Answers questions like:

- Who are my competitors?
- Why are certain stores performing poorly?
- Where should the next store go?
- Who are my customers?
- Who are my most profitable customers?
- Where are they?
- How far do they typically travel?
- Where can I find more like them?
- How do I reach them?

Technology

Technology used to develop Spatial Business Resource Center:

- ArcGIS Desktop
- ArcGIS Server Enterprise Edition
- ArcGIS Business Analyst Desktop & Server
- Adobe Flex
- Adobe Flash
- MS SharePoint
- MS ASP.NET

NOTE: Open-source Web Mapping and Spatial Analysis Tools were used in OTHER Grant Activities, but Not in Developing the Spatial Business Resource Center

II. ABOUT

Contributors And Credits

History Of The IE

How To Use The Atlas

Resources And Tools

Sources And Citations

Where Is The Inland Empire?

III. PEOPLE

IV. INCOME AND EMPLOYMENT

V. HOUSING

VI. BUSINESS AND INDUSTRY

VII. OUR FUTURE

VIII, INDEX

About | History

The Inland Empire is a region mainly located in Southeast California, particularly the Riverside and San Bernardino counties. It is the second largest metropolitan area in Southern California, third in California, 14th largest in the United States and 25th in the Americas. It generally encompasses the urbanized, western areas of those counties. The Inland Empire is centered in the region's oldest cities: Ontario, San Bernardino, and Riverside. These cities were established at about the end of the 19th century and were major centers of agriculture including citrus, dairy, and wine-making. The name "Inland Empire" was first used in the 1950s to distinguish the region from the coastal communities of the Greater Los Angeles Area, and Los Angeles itself.

The "Inland" part of the name is derived from the region's location about 37 miles (60 km) inland from the Pacific Ocean (from Huntington Beach) and east of downtown Los Angeles. The most accepted physical boundaries between Los Angeles and the Inland Empire from west to east are the San Jose Hills splitting the San Gabriel Valley from the Pomona Valley, leading to the urban populations centered in the Greater San Bernardino area. From the south to north, the Santa Ana Mountains physically divide Orange from San Bernardino and Riverside Counties. The Santa Rosa Mountains, as well as the Southern California portion of the Sonoran Desert, physically divide Riverside from San Diego county. Interconnectivity provided by one of the most comprehensive freeway systems in the United States has eroded any sense of physical boundaries between the Inland Empire and the Greater Los Angeles area. Since the 1970s a rapidly growing population has led to more residential, commercial, and industrial development in this rural "intermediate" area east of LA and Orange County, and north of San Diego County. With a population of over 4 million people, the Inland Empire is the 14th largest metropolitan area in the United States.

Prior to the mid-19th century, the area was sparsely populated by Native Americans; the Spanish and Mexicans who once controlled the area considered it largely unsuitable for colonization. The first group of White American settlers arrived over the Cajon Pass in 1851, in the form of Mormon pioneers who were the first



County lines animation



Exploration trails created by Spanish explorers, trappers and emigrants.



Historic tribal lands



Surveyor information, mid 1800s

Example of an Atlas Page



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The entire landmass of Southern California was subdivided according to the San Bernardino Mendan, which was first plotted as part of the Public Land Survey System in November 1852, by Col. Henry Washington, Base Line road, a major thoroughfare, today runs from Highland to San Denas, intermittently along the absolute baseline coordinates plotted by Col. Washington.

San Bernardino County was first formed out of parts of Los Angeles County on April 26, 1953, While the partition once included what is today most of Riverside County, the region is not as monolithic as it may sound. Rivalries between Colton, Redlands, Riverside and San Bernardino over the location of the county seat in the 1890s caused each of them to form their own civic communities, each with their own newspapers. On August 14, 1893 the Senate allowed Riverside County to form out of land previously in San Bernardino and San Diego. counties, after rejecting a bill for Pomona to split from LA County and become the seat of what would have been called San Antonio County



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County lines animation

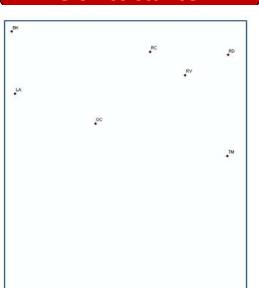


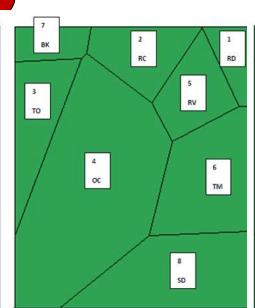
Exploration trails created by Spanish explorers, trappers and emigrants.

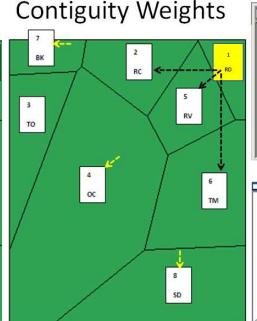


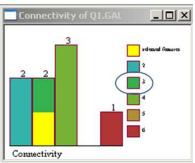


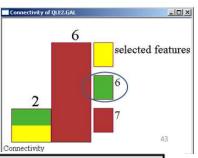
Tools



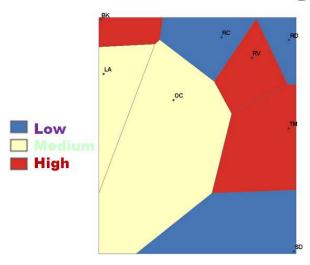








Median Residential Value @ Zip Code

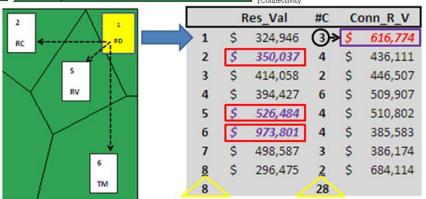


QUESTION:

Is There Any **Spatial Pattern** in This Map?

At the Borders, R/B or B/R = 5R/R or B/B = 2So, expect a NEGATIVE

ASSOCIATION. (but too few points to be sure)



A Measure of Spatial Association → PolyCtE1N

- = (8/28) * Correlation[Res Val, Conn R V]
- = (8/28)*(-0.61) = -0.17 NEGATIVE Correlation



The Inland Empire Business Atlas

I. HOME

II. ABOUT

III. PEOPLE

Age

Crime

Education

Health

Languages

Lifestyle

Population

Race/Ethnicity

IV. INCOME AND EMPLOYMENT

V. HOUSING

VI. BUSINESS AND INDUSTRY

VII. OUR FUTURE

VIII. INDEX

People | Population

From 2000-2008, the CA Finance Department reports that the Inland Empire added 888,562 people to reach 4,144,088, a 2.8% compound growth rate. Ten cities now have over 100,000 people, led by Riverside (296,842) and San Bernardino (205,493) followed by Fontana (188,498) and Moreno Valley (183,860). The two newest were Temecula (101,057) and Murrieta (100,173). The smallest cities were Indian Wells (5,025), Needles (5,807) and Big Bear Lake (6,256). Three cities added over 45,000 people from 2000-2008: Fontana (59,570), Murrieta (55,891), Rancho Cucamonga (46,565). Four cities added under 1,000: Needles (977), Grand Terrace (917), Big Bear Lake (818), Calimesa (397).

Of California's 478 cities, the Inland Empire's five largest places ranked: Riverside (12th), San Bernardino (19th), Fontana (22nd), Moreno Valley (23rd), Rancho Cucamonga (26th). From 2007-2008, the area had six of the state's fastest growth rates: Beaumont (11.3%; 2nd), Perris (5.7%; 11th), Indio (5.6%; 15th), Coachella (5.2%; 16th), Victorville (4.9%; 18th), Desert Hot Springs (4.7%, 20th). Six cities ranked in the top 20 in absolute growth: Fontana (7,216; 8th), Riverside (5,231, 11th), Victorville (5,059; 12th), Indio (4,304; 14th), Moreno Valley (3,257; 18th) and Beaumont (3,206; 20th).

County Migrations	1995 to 2000	2000 to 2008	percent increase
LA to Ventura	21,300	19,000	-11%
LA to San Bernardino	76,000	192,000	153%
LA to Riverside	47,000	108,100	130%
LA to Orange	68,300	72,500	6%
LA to San Diego	21,100	18,200	-14%
Orange to Riverside	29,600	129,500	338%
Orange to San Diego	7,500	-	-100%



Population density 2008



Population growth rate 2000-2008



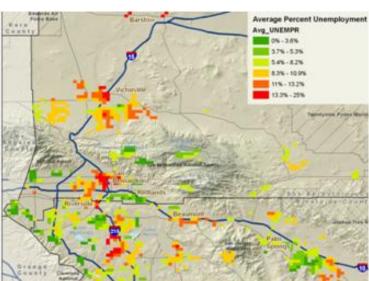
Total Population 2008

Sample Faculty Projects

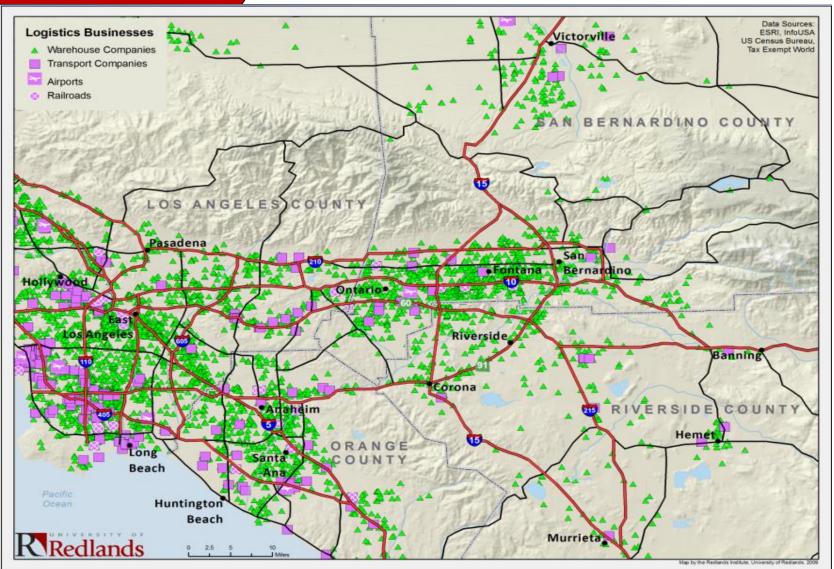
- Job centers and industry types
- Poverty & access to services
- Warehousing & transportation
- Linguistically-isolated households
- The IE housing "bubble"
- Not-for-profit organizations
- Ethnicity and buying power
- Aviation industry & education

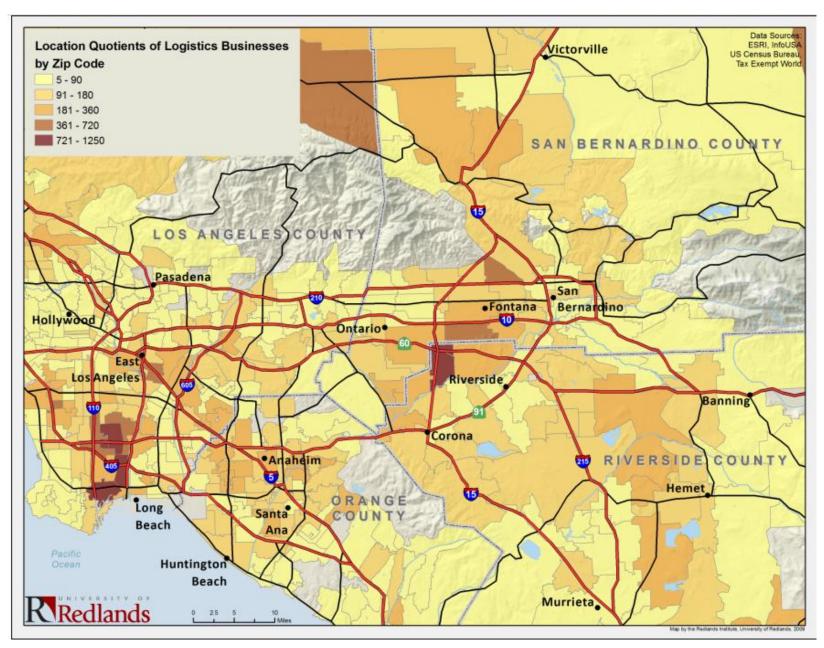


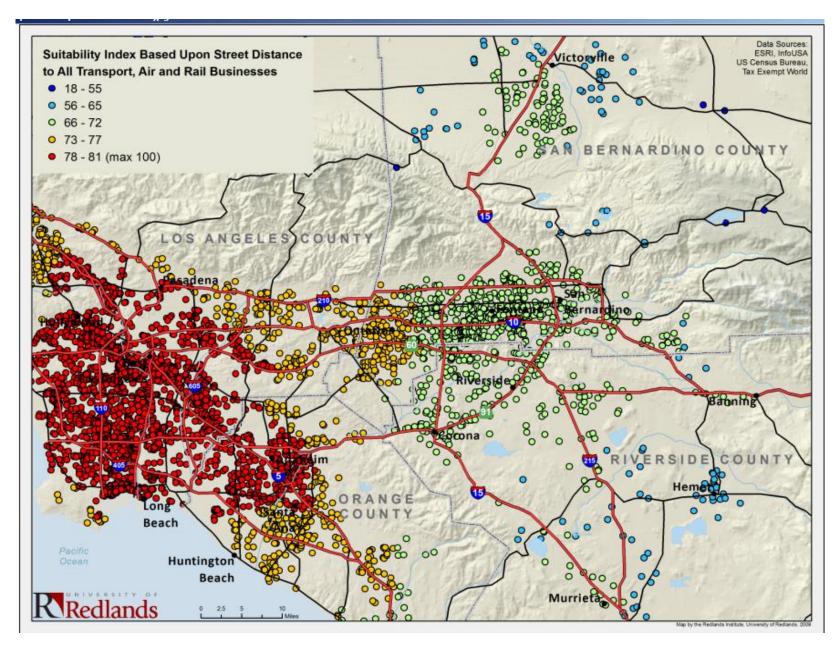
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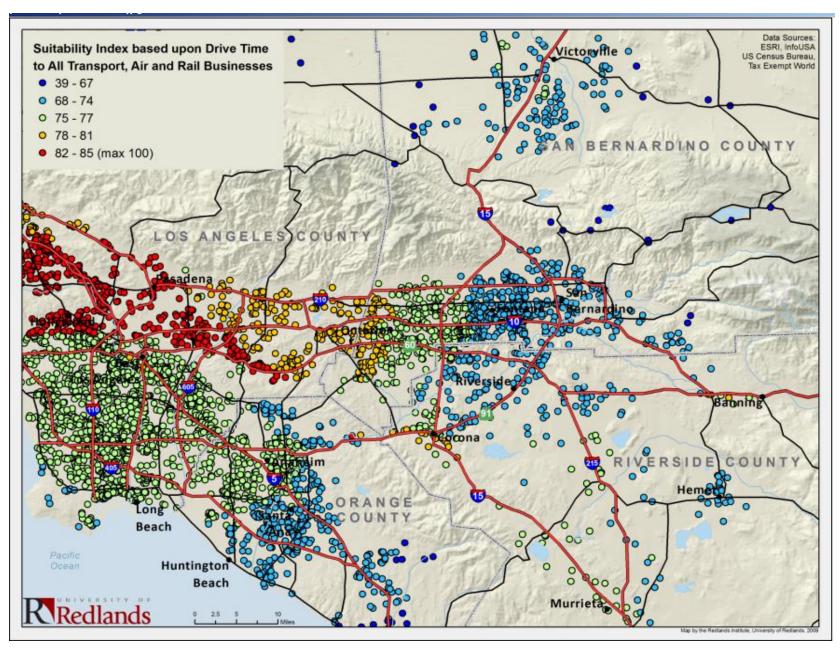


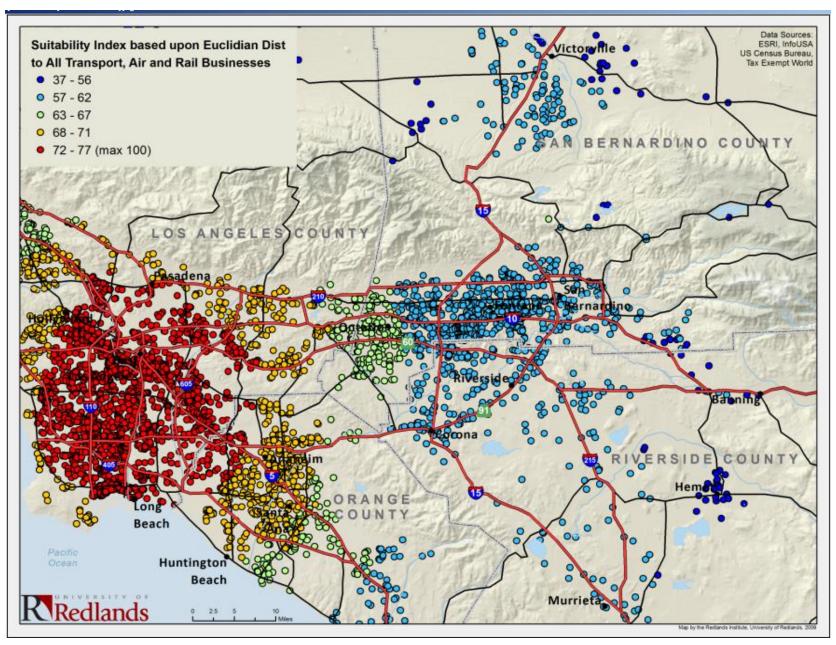
Warehousing & Transportation











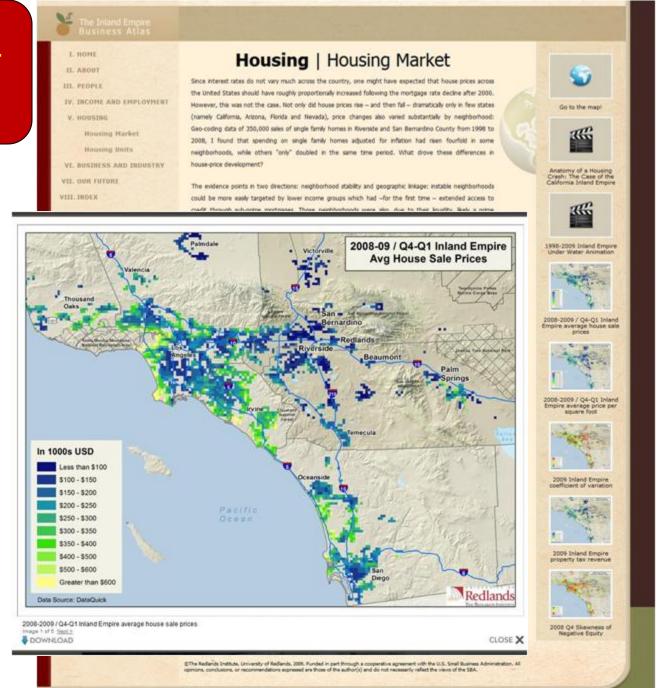
Housing Chapter:

Includes both:

Basic information on housing and home values

And:

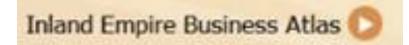
Faculty research project on factors influencing the IE Housing "Bubble"



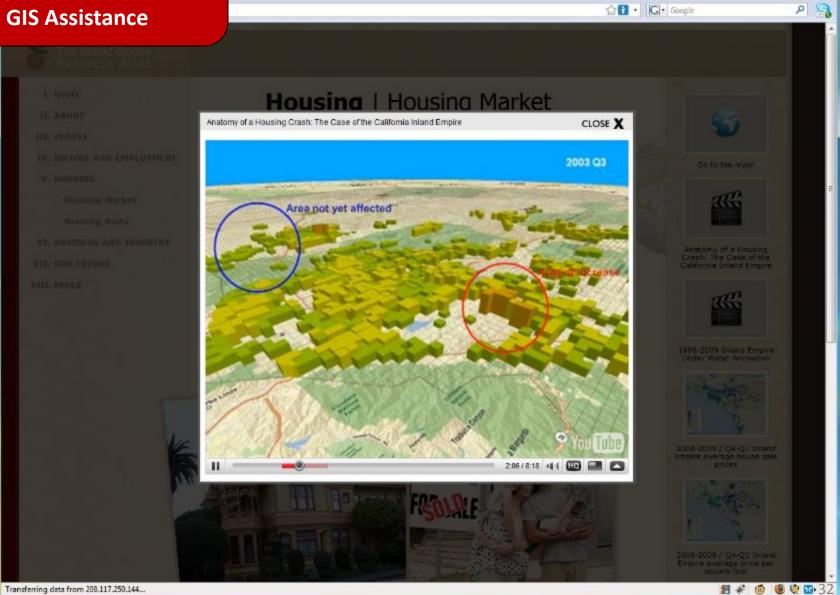




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Link to Quarterly-Updated, Aggregate Housing Data

SOUTHERN CALIFORNIA HOME RESALE ACTIVITY

L.A. Times Sunday Edition Charts - Data for May 2009

% Change is from the same month last year Past Issues are available from DQNews Custom Reports

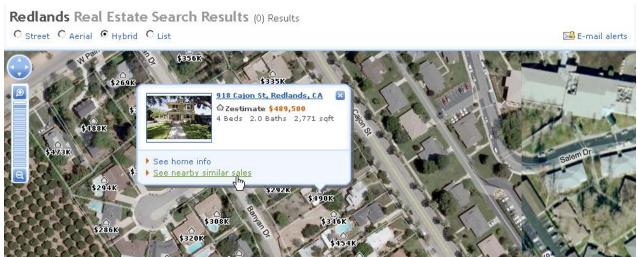
		Single Family Homes			Co	SFR Only		
		Sales of Price Price %			Price	Price %	Median	
		Single		Cha from	Sales		Cha from	
		Familγ	SFR	May	Count	Condos	May	Price/Sq.
Community Name	ZIP Code		(\$1,000)	2008		(\$1,000)	2008	Ft Ft
LOS ANGELES COUNTY			(*.,/			(*.,/		
Countywide		4,833	\$295	-32.2%	1,330	\$290	-20.2%	\$214
Acton	93510	12	\$395	-28.2%	n/a	n/a	n/a	\$161
Agoura Hills	91301	8	\$810	15.7%	17	\$470	-8.7%	\$307
Alhambra	91801	11	\$630	23.2%	8	\$398	6.1%	\$341
Alhambra	91803	9	\$485	-4.0%	3	\$317	-31.5%	\$347
Altadena	91001	32	\$420	-22.2%	4	\$940	-24.8%	\$308
Arcadia	91006	26	\$718	1.9%	4	\$483	-12.3%	\$394
Arcadia	91007	18	\$978	14.7%	10	\$448	-10.5%	\$399
Artesia	90701	13	\$367	-5.9%	2	\$310	3.3%	\$217
Avalon	90704	n/a	n/a	n/a	1	\$500	-7.4%	n/a
Azusa	91702	38	\$238	-28.9%	13	\$235	-1.1%	\$208
Baldwin Park	91706	37	\$227	-31.2%	13	\$173	-30.2%	\$221
Bell	90201	8	\$245	-49.0%	4	\$250	n/a	\$223
Bellflower	90706	32	\$324	-18.8%	6	\$220	-17.0%	\$227
Beverly Hills	90210	13	\$2,383	-35.6%	2	\$840	n/a	\$751
Beverly Hills	90211	4	\$1,625	16.1%	2	\$858	42.9%	\$1,043
Beverly Hills	90212	4	\$1,709	n/a	n/a	n/a	n/a	\$593
Burbank	91501	3	\$775	7.6%	4	\$383	-7.8%	\$320
Burbank	91502	1	\$305	n/a	1	\$280	-36.0%	\$240
Burbank	91504	3	\$619	-16.9%	2	\$368	-5.2%	\$334
Burbank	91505	22	\$450	-15.1%	3	\$450	18.4%	\$369
Burbank	91506	12	\$469	-20.8%	1	\$280	-55.2%	\$361

Available by Zip Code for Six Counties

http://www.dqnews.com/Charts/Monthly-Charts/LA-Times-Charts/ZIPLAT.aspx

Link to Continuously-Updated, Localized Housing Data





Address	Price	Sold On	Вd	Ва	Size (sqft)	Lot (sqft)	Year	Price/SqFt	Dist. (mi)
626 S Buena Vista St	\$425,000	06/05/2009	3	2.0	2,100		1940	\$218	0.46
1341 Elizabeth St	\$405,000	05/29/2009	4	2.5	2,172		1980	\$186	0.53
419 Walnut Ave	\$335,000	03/30/2009	3	2.0					0.27
112 E Fern Ave	\$285,000	06/24/2009	4	2.0	2,253		1894	\$126	0.56
1314 Garden St	\$370,000	06/03/2009	4	2.5	4,014			\$92	0.53
803 Banyan Dr	\$233,000	05/29/2009	3	2.0	1,292	8,880	1970	\$180	0.06
218 Phlox Ave	\$250,000	05/13/2009	4	1.5	1,722	8,600	1959	\$145	0.17
631 Alvarado St	\$505,000	12/30/2008	3	2.0	2,187			\$230	0.33
814 La Paloma St	\$350,000	01/02/2009	4	2.0	2,053		1963	\$170	0.30
10 Sherril Ln	\$335,000	05/29/2009	3	2.0					0.71
1004 Cajon St	\$250,000	02/27/2009	5	3.0	3,615	32,465		\$69	0.08

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Spatial Business Library 🔘



About the Library

The primary purpose of this library is to be a one-stop resource for anyone who is looking for materials (articles, courses, cases, books, audio/video clips, data sources, analysis templates, tools for analysis, events, etc.) to enhance their knowledge of GIS applications in business. Students and faculty in business schools/programs, employees of a wide variety of businesses (large or small, for-profit or not-for-profit, or public or private) in a wide variety of industries, and consultants and businesses catering to GIS applications in business will find the material in the site useful.

Starting with an initial collection of about 500 entries we expect the library to grow, and become increasingly more useful, with the active participation of the user community. We anticipate that the growing infusion of GIS in the business world will lead to growing infusion of this knowledge in business schools thus increasing the usefulness of the resources on this site. As usage, and user base, increases it is natural to expect that contributions to this site will also increase.



community.



Popular

A case for spatial decisionsupport systems in retail location planning viewed 34 time(s)

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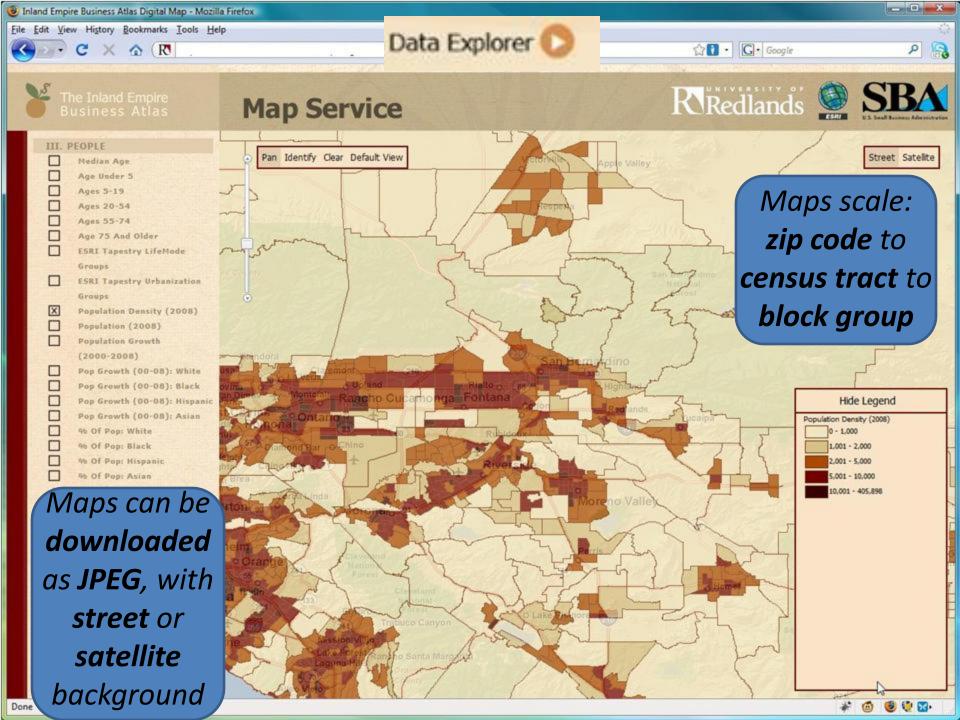
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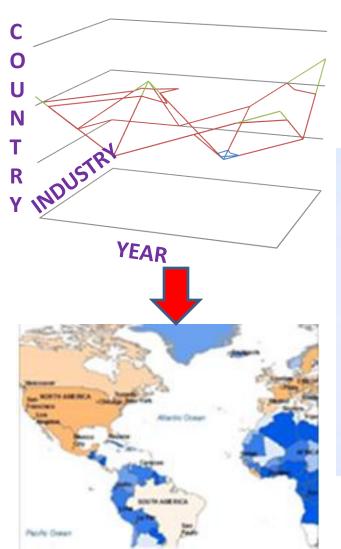
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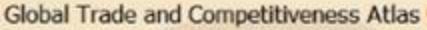
Global Trade & Competitiveness Atlas

Coming Soon!

Visit the site >>

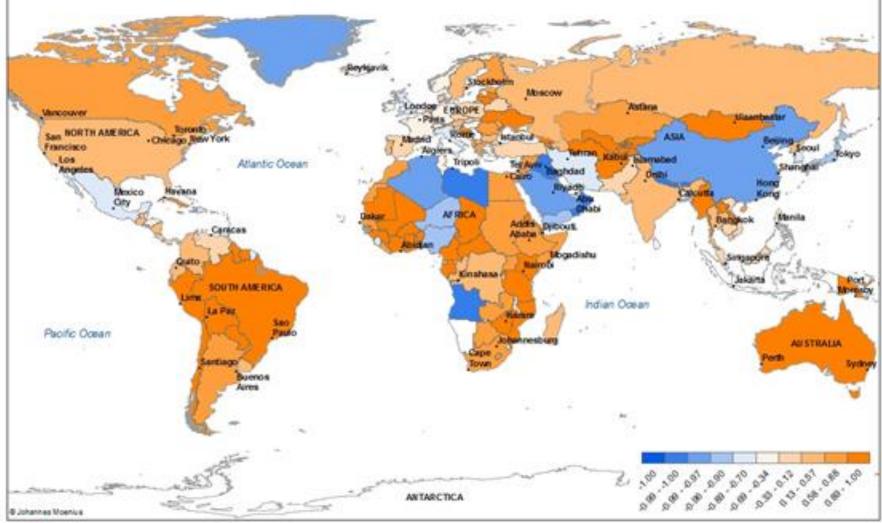
Global Trade Atlas

The Global Competitiveness Atlas allows researchers, politicians and practitioners alike to see and analyze how global competitiveness patterns evolved over time. Johannes Moenius, an economist in the School of Business, has combined trade theory, namely the theory of comparative advantage, with statistical methods, to create a digital atlas that displays global competitiveness measures for about 200 countries and 800 industries over a 40 year time period. For example, this sample indicates that in the year 2000, only a relatively small number of predominantly either rich or large countries had a comparative advantage in machinery. Overall competitive measures are disentangled by their main drivers, namely relative production cost advantages and relative trade cost advantages. For more information, see http://bulldog2.redlands.edu/fac/johannes_moenius/index.htm and click on "comparative advantage".



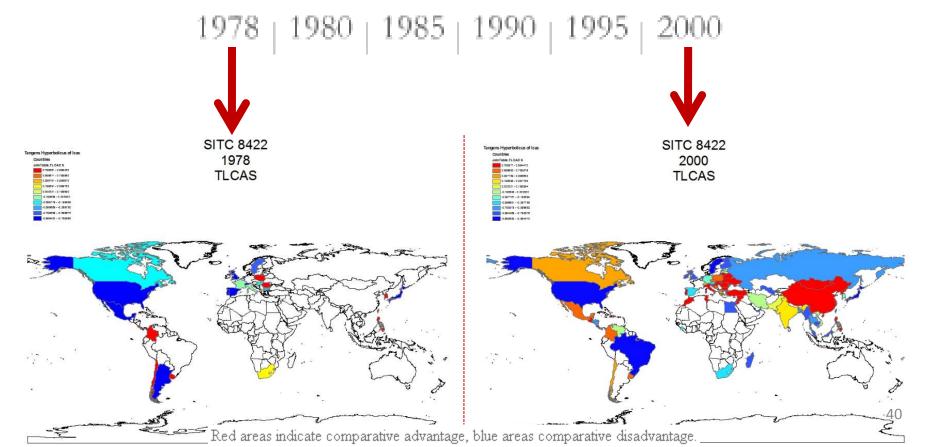


Industry: 2 Year: 2000





8422: Suits, Mens, of Textile Fabrics



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