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The World Capital Institute
Website: http://www.worldcapitalinstitute.org/
Preface

The second MAKCi study has now been completed. This executive summary reports the main results, including the winners of the 2008 edition. Young as they are, Knowledge Cities show an intense vitality and ability to transform themselves. The powerful leverage that knowledge-based development policies may provide to a community’s capacity to reinvent itself and negotiate its future are well exemplified by the numerous knowledge city cases around the world covered by this year’s study.

In this context, it is not surprising that the MAKCi Awards themselves, after only its second cycle, are evolving so rapidly. A historical perspective, however brief, becomes useful at this point. On the one hand, if we compare this edition with the inaugural one in 2007, we find a significant improvement in the number of experts participating in the study, as well as of city nominations and above all of the level of analysis and critical discussion. Also, a basic consistency in voting trends is shown by a significant resonance of last year’s trends.

On the other hand, we also find refreshing city presences not only in the nominations list, but also in the actual winners. The dynamic nature of the MAKCi initiative is reflected by its sensibility to a diverse list of cities that are entering the race to spell its future under the possibilities of knowledge based development. At the same time, we are already in the middle of a number of adjustments to the MAKCi process itself in order to consolidate its framework, method and operations according to its quantitative and qualitative evolution.

A thorough assessment of the first two years conducted by the MAKCi Executive Team in March 2008, led to a number of action items. First of all, the number of participating experts shall continue to increase, and to this effect a recruitment campaign within related practitioners and researchers communities across the world is already in place, targeted on multidisciplinary profiles. Secondly, the nomination, analysis and voting procedures are being redesigned to increase both depth of analysis and reliability of results. Thirdly, the
entire online platform is being redesigned to facilitate experts’ participation and build a memory from which we all can learn and observe developmental trends across the years.

As these improvements take place, it is my pleasure to present the 2008 report. I thank all participating experts for their commitment and continued support. I also thank Blanca Garcia and Rory Chase for their dedication and look forward to an increasingly exciting learning process in understanding what characterizes world-class knowledge cities and, above all, how all urban communities across the world can engage in productive efforts to become one in their own terms.

Francisco Javier Carrillo,
President, The World Capital Institute
& MAKCi Awards Chairman
Foreword

There is a growing imperative for cities and regions to focus on knowledge. The global credit crunch, inflation and spiralling commodity and energy costs are forcing urban areas to compete as never before. This global competition for people, resources and political power means that a small number of cities and regions will become ever more competitive (and wealthier), while many other areas will become less desirable places to live and work.

In 2007, the Most Admired Knowledge City (MAKCi) research program was established to provide public sector officials and business and social leaders with a framework as well as tools and measures to improve societal knowledge creation, dissemination and re-use – ultimately resulting in an improved standard of living for individuals living in a specific community or region.

As part of this research program, the MAKCi Awards were created to publicly recognize those cities and regions which are leaders in bringing together intellectual capital and knowledge workers, supported by an advanced ICT infrastructure, in order to create a knowledge-driven global competitive advantage.

The results of the 2008 MAKCi study are important for two reasons. Firstly, it is clear that several cities and/or regions are in the process of forming a top tier of MAKCi ‘winners.’ And, another group of urban areas is actively pursuing a knowledge-driven strategy with a goal of entering the top tier. On the other hand, there is growing evidence that most cities and regions have yet to understand the significant implications of not strategically managing societal knowledge creation, dissemination and re-use.

Secondly, the 2008 MAKCi study provides new statistical data which will enable planners, politicians, economists, and business and social leaders to create robust, viable strategies.
and approaches for enhanced urban design and development. The 2008 MAKCi study findings, combined with last year’s results, have made visible emerging urban development trends. The challenge for today’s leaders is to understand and learn from these trends.

MAKCi has quickly established itself as an authoritative resource for both the academic and practitioner communities. However, as with any recently-established research program, there are opportunities to learn and improve. The World Capital Institute (WCI) should be congratulated for continuing this ground-breaking research and investing time and resources to improve the MAKCi framework and methodology.

Rory Chase
Managing Director, Teleos & MAKE Awards Chairman
Introduction

Welcome to the *Most Admired Knowledge City Awards* (MAKCi), the international consulting process established to identify and recognize which cities can be distinguished as social capital engines for their regions. In the 2008 Edition of the MAKCi Awards, the *World Capital Institute* and *Teleos* join forces once more to advance research into those communities around the world who are successfully engaging in formal and systematic knowledge-based development processes under the flag of Knowledge Cities (KCs).

As knowledge-intensive collaborative research study, the MAKCi study involves the participation of a significant number of third-generation KM experts from the most diverse disciplines, nationalities and ways of life. They converge as the MAKCi Panel of Experts, whose effective sharing of knowledge generates strategic learning value for the Knowledge-based development (KBD) discipline. This knowledge-creation space also represents an exceptional opportunity to build collective explicit knowledge documents that purposefully contribute to the understanding of KCs dynamics and transformations on an annual basis. One of such core documents is the present 2008 MAKCi Report. I would therefore like to express my deep appreciation to every member of the 2008 MAKCi Panel of Experts for their creativity, their knowledge investments and collaborative proactivity during this year’s consultation. The joint nominations, the sharp observations, the passionate disagreements, the scholarly contributions on city-regions... they all have brought a significant cross-pollination of concepts and ideas to the 2008 exercise that will be reflected in this and future MAKCi Reports.

Although challenging, the knowledge-creation process of the 2008 MAKCi exercise constitutes a token of the KBD community advancements. They simply would not have been possible without the foundational work and creative expertise of Rory Chase (Teleos-MAKE) and Javier Carrillo (WCI). I would therefore like to honour their ground-breaking
initiative expressed in the MAKCi venture; and to deeply appreciate their steadfast unconditional support, making my share of the MAKCis an enjoyable learning adventure.

Blanca Garcia.
Research Fellow, The World Capital Institute & MAKCi Awards Technical Secretary
Creating and sustaining knowledge cities also conveys generating benchmarks to identify those cities and regions setting the pace through their knowledge-driven, global competitive edge\(^1\). Despite the young age of the Knowledge Cities area of study, a number of comparative frameworks have already been proposed to assess the relative importance of different development factors relative to specific explanatory and technical approaches (Ergazakis et al., 2004, 2006 a, b, c; Bañegil and Sanguino, 2006; Martínez, 2006). Amongst these approaches, emerging frameworks provided by the identification, valuation and systematic development of the city’s traditional and knowledge capital in an integrated way, seem to be raising interest amongst the international cohorts of experts.

The Most Admired Knowledge City Awards (MAKCi) have proposed one such frameworks. The convergence of the established Most Admired Knowledge Enterprise (MAKE) Delphi methodology with a Capital Systems Framework© (available from http://www.worldcapitalinstitute.org/makci) has resulted in a taxonomy of organizational and social capital that supports the observation and analysis of cities systems’ knowledge base. The underlying rationale for this taxonomy is to satisfy the formal requirements of a value-production system: complete, consistent and homogeneous. This taxonomy builds upon other efforts to identify and value collective individual capital at urban, national or regional levels. Known as Capital System, this taxonomy identifies the basic capital elements of productive systems and “metacapitals”: those other forms of non-productive capital but significant leveraging factors of the system’s overall capacity.

As a result, the MAKCi Framework includes eight knowledge capital dimensions that stand as indicators for the MAKCi exercise as the visible drivers of collective capital creation in knowledge-based development city-regions:

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1. Identity capital
2. Intelligence capital
3. Financial capital
4. Relational capital
5. Human Individual capital
6. Human Collective capital
7. Instrumental-material capital
8. Instrumental-knowledge capital.

With such framework, the Most Admired Knowledge City (MAKCi) Awards aim to foster the creation of Knowledge City (KC) benchmarks, with a consultation process that provides a space to distill collective comparisons, and to contribute to sharpen the profile of Knowledge Cities by means of cross-fertilization of ideas.

2008 MAKCi Protagonists

A total of twenty nominated city-regions converged for the 2008 edition of the MAKCi exercise. Through an orderly appearance, the Panel of Experts had a glimpse into the open windows offered by cities’ nominations. The cities’ actual contexts where citizens put knowledge to work on a daily basis has been paramount to observe, as well as how social intellectual capital is being leveraged to accelerate and deepen the cities’ development processes. A token of KC nominees’ windows is hence introduced in nomination order (full nominations available from the MAKCi Virtual Platform):

1) In Northern Europe, the Panel of experts was invited to witness the highly reputed Stockholm (Sweden)’s Green Infrastructure and its recognized polepost as an international knowledge hub.

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2) In Central Europe, **Zurich** (Switzerland) was clearly ranked as the number one European city on *Quality of Living Index*, and fifth as a Global Financial Centre.

3) In the South of Europe, project developments are being made to foster a higher quality of living and citizenship participation, such as a new Aquarium and an innovative *Sporting Port* in the city-region of **San Sebastian-Donostia** (Basque Country, Spain).

4) In the Middle East, **Dubai** (United Arab Emirates) has seemingly evolved from an oil and gas producer into a financial services hub. Dubai’s knowledge-based development initiatives such as *Internet City* and the *Knowledge and Human Development Authority (KHDA)* are Dubai’s first steps into Knowledge City (KC) aspirations. On the other hand, according to the latest Heritage Foundation report, Dubai, and the UAE in general is seemingly “weak in business freedom, investment freedom, financial freedom, and property rights. Foreign investment is restricted, and majority Emirati ownership is mandated in the free zones”\(^3\). Although strongly emerging as a regional financial epicenter, Dubai’s financial sector appears to be subject to considerable government interference. This would constitute one of Dubai’s key areas of opportunity in its journey into a Knowledge City.

5) In the North American side of the Pacific, **Seattle** (United States) has seemingly reinvented itself from being “the Queen City” for its former high development rate and its attraction power to a brand new “Emerald City” fostering sportive and ecology-friendly lifestyles amongst its citizens.

6) In the meantime, **Valencia** (Spain)’s City Council is energetically pursuing knowledge-based initiatives, amongst which strategic geographical connections are paramount. Plans

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\(^3\) Notes taken from experts’ views on the 2008 MAKCi Discussion Platform.
to connect Valencia with Barcelona, Madrid and the French southwest along the Mediterranean Sea through high speed, broad railway services seem to have swift progress.

7) At the other side of the Mediterranean Sea, Holon (Israel) has undergone a major transformation during the last twelve years. By offering high quality apartments, green open spaces, youth-oriented leisure facilities (such as the Israeli Children's Museum, the Mediatheque Theater, and the highly reputed Story Gardens introducing children to literature and the arts), Holon has become a knowledge-based Children’s City.

8) Going back to Northern Europe and despite its relatively low levels of knowledge intensity, Sheffield (United Kingdom) showed knowledge-relevant strengths and a distinctive knowledge-city offer, in terms of quality of life and cultural activities. Located within Peak District national park, Sheffield offers a meaningful sense of connection between city and countryside lifestyles, setting the pace in good health and well-being, qualifying amongst the healthiest cities in the U.K.

9) In Southern Asia, as India's fifth largest city and the fourth largest Technology Cluster in the World, Bangalore (India) has become “India's Silicon Valley": the South East Asian capital of electronics and computers. However, the rapid growth of IT in Bangalore has thrown up its own contradictions. Two worlds co-exist in one single time zone: Shikaripalya, a slum village, shares borders with Electronic City, Bangalore’s technology hub. While this affluent area speaks a first world language, the muddy, garbage-heaped village down the road seems to strongly highlight the vicious focus of public policy on the hi-tech growth sector in this Indian city of contrasts. However, as some experts have pointed out, “slums are the heartbeat of cities” (The EastAfrican, 2006; National Media Group Ltd). While Bangalore seemingly accounts for some of the (lower) slum crime rates in India, “it is heartwarming to note that Bangalore has the second highest literacy rate (83%) for an Indian metropolis, after Mumbai or even Kerala in the South. Bangalore’s roadside vendors, tea stalls, and South Indian, North Indian, Chinese and Western fast food are an intense reflection of its
social and economic diversity”. “Bangalore has a great potential of becoming an emerging knowledge city because of its human capital dynamism and its entrepreneurial spirit. It’s is certainly a place driven by the energy of the business sector, not the government” ⁴.

(Note: The 2008 Bangalore nomination has been the result of the decidedly collaborative efforts of three MAKCi experts from three different continents and regions. As one of the two first Joint Nominations in MAKCi history, is has been qualified as a balanced, responsible and mature view upon Bangalore’s nomination, as far as awareness of the city’s limitations and areas of potential developments are concerned).

10) In Australasia, Melbourne (Australia)’s historic roots for growth and development appear to be a key factor in its strong cultural and creative vitality, making this city the multicultural heart of Australia⁵. With a citizenship mix of over 140 countries, multicultural tolerance for variety and difference has been built in the city through periodical immigration, seemingly transforming Melbourne into a cultural hotspot and the leading Australian multicultural city. Today, Melbourne is attempting to manage such creative vibe through some knowledge-based initiatives such as Melbourne Knowledge Management Leadership Forum, and the Association of Knowledge Work, as physical and virtual environments for empowering Melbournian innovation.

11) Northern Asia witnessed the Citizens’ Day celebration in October 2002, in which Seoul (South Korea) government has announced its selection of Hi Seoul as the city brand. The name combines the greeting Hi with the name of the city Seoul, the new brand aims to convey a friendly image of Seoul to the global community, and to promote harmony and unity among Seoul citizens. Since Hi is a homophone of High, the brand offers a new vision for Seoul and reflects the city’s commitment to make Seoul one of the world’s leading cities.

⁴ Notes taken from experts’ views on the 2008 MAKCi Discussion Platform.
12) Going back to Southern Asia, Pune (India) is depicted as one of India’s major industrial centres, whose recent infrastructure and efficient transportation connects the city (within a three hour drive) to Mumbai, the financial capital of India. An important automobile manufacturing hub, Pune also has a burgeoning software industry. The IT sector seems to be regarding the city as a better option than Bangalore, given its abundant brain power and IT maturity. Pune has been attracting around 43 per cent of the industry in this sector (included government-funded IT developments), a preference expected to increase over Bangalore in the years to come.

13) A 2007 MAKCi nominee, Boston (United States) was the second top Most Admired Knowledge City (MAKCi) in the 2007 edition of the consultation. Its 2008 nomination conveys the intrinsic recognition that Boston is keeping up with the pace of being a top ranked knowledge city. The Boston Formula, a concept coined by the Boston Indicators Project, depicts a city that is walkable, livable, with high-density communities close to public transit stations, with nearby research institutes, educational institutions, cultural facilities, natural resources and new industry clusters.

14) Also a 2007 MAKCi nominee, Singapore (Singapore) was the top MAKCi Award Winner in 2007. The Southern Asia city-nation seemingly shows the key traits of a knowledge-based economy: the key sources of its wealth and opportunities are conspicuously based on its human capital. However, while Singapore ranks high on technical infrastructure, international observers have pointed out that there is a “complete absence of independent media” (Reporters Without Borders, World Press Freedom Ranking 2006). This would imply the city’s insufficiency of spaces for critical discourse and breath of opinions and views amongst its stakeholders. It has also been pointed out that Singapore’s press freedom ranking is 146 out of 168, with North Korea representing the lowest ranking. Since freedom of information and access to information is considered one of basic factors in knowledge-based

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6 Notes taken from experts’ views on the 2008 MAKCi Discussion Platform.
economies, the low score of Singapore is this regard has strongly nuanced its candidature as a MAKCi nominee in the (both previous and present) editions of the Exercise.

15) Going back to the North American region, **Montreal** (Canada) is recognized for its exceptional quality of life and its multiculturalism. The second-largest city in Canada, Montreal was ranked as the 10th cleanest city in the world in 2007. Montreal is first in Canada in terms of funding for university research and number of research centers; and first in North America with the most competitive overall business operating costs, particularly in the R&D sector. This city holds the distinction of being Canada’s innovation capital, and the City of design awarded by the United Nations’ UNESCO. Montreal nomination has been one of the two first **Joint Nominations** in MAKCi history, which involved two experts in two different continents and regions.

16) Within the Asia-Pacific region, **Shenzhen** (China) is a garden city adjacent to Hong Kong, in the Southern coastal zone of China. Shenzhen is the Chinese City with the highest Comprehensive Quality of Life, in terms of national standards. Recently, some knowledge-based initiatives have emerged, but Shenzhen was already home of more than 30,000 enterprises involved in research and development of high-tech products back in 2006. Most of these companies are involved in entrepreneurship, and the government has fostered such developments by offering funding support to potential entrepreneurs.

17) As another protagonist in the Australasian region, **Brisbane** (Australia) has recently accepted a ten year ‘Brisbane Smart City Strategy’ (2007), aimed at addressing and promoting the following to support KBUD: information access; lifelong learning; digital divide; social inclusion; quality of life; and economic development within the Brisbane City and its hinterland. Birubeane’s inner city revitalization has been underway by the formation of four super knowledge precincts, some of which possess a remarkable range of creative,
commercial, cultural, educational and research facilities to generate a strong knowledge economy for the city.

18) The Panel of experts also welcomed Nuremberg (Bavaria, Germany)’s stimulating nomination. Nuremberg is one out of ten Metropolitan Regions in Germany with 3.5 million inhabitants and a gross domestic product of 103 billion euro. The European Metropolitan Region of Nuremberg (EMN) is well known for inventions such as MP3, its biomedical engineering, and its culture heritage and food (Fränkisches Bier, Frankenwein, Nürnberger Bratwurst etc). Amongst other KBD features, the biannual "Lange Nacht der Wissenschaften" (Long Night of the Sciences) highlights how Nuremberg is fostering social and economic opportunities for individual citizens to develop their full potential.

19) In the final glimpse to the North American region, a 2007 MAKCi Finalist earned its second consecutive nomination: Ottawa (Canada). The Ottawa-Gatineau region is considered one of the world’s top sites for R&D, making it a knowledge-intensive hub. Moreover, through the Ottawa 20/20 Plan, this city has assumed a new approach to city building, and aims to reinforce the qualities that are most valued by the city’s residents: innovative economic development and exciting job opportunities; livable communities; diverse artistic and cultural life; varied housing alternatives; green and open spaces, and a reputation for high-quality services and a high standard of living.

20) Finally, the Panel witnessed the nomination of the city-region of Manchester (United Kingdom). Manchester has deliberately moved from industrial decline to Knowledge City renewal in the last two decades. The 1990’s inner city regeneration push has also triggered other KC elements such as infrastructure investments, a strong social capital (its partnerships, and long-term city leadership), plus internationally connected ports. The city is also reorientating its universities into (amongst others), healthcare and biotechnology research, two areas that have already a strong presence in the city-region (i.e. Greater Manchester has already 120,000 healthcare employees). By advancing three core strategies (Science
City, Manchester is My Planet, and Innovation Investment Fund), Manchester is actively seeking access into knowledge-based development success.

This brief overview of all 2008 MAKCi nominees aimed to illustrate the context and temperature of the Panel of Experts discussions that led to reach a consensus and to decide the cities that would become finalists in the 2008 MAKCi edition, as depicted in the following section of the MAKCi Report.
The 2008 edition of the MAKCi exercise has undoubtedly witnessed an intriguing array of twenty city-regions represented in the MAKCi Nomination Roster. As shown in Table A, a number of geo-regions around the globe were represented at the 2008 MAKCi Exercise. Australasia introduced two Australian cities (Melbourne and Brisbane), while the Asian continent was represented by five nominations (Seoul (South Korea), coastal Shenzhen (China), Singapore (Singapore), Bangalore and Pune (India). In the European region, four northern k-cities were nominated (Stockholm (Sweden) Sheffield, & Manchester (UK), and Nuremberg (Germany).

<table>
<thead>
<tr>
<th>Region</th>
<th>Total Votes</th>
<th>Total Vote %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangalore, India</td>
<td>9</td>
<td>8.8 %</td>
</tr>
<tr>
<td>Boston, U.S.A.</td>
<td>3</td>
<td>2.9 %</td>
</tr>
<tr>
<td>Brisbane, Australia</td>
<td>5</td>
<td>4.9 %</td>
</tr>
<tr>
<td>Donostia-San Sebastian, Spain</td>
<td>2</td>
<td>2.0 %</td>
</tr>
<tr>
<td>Dubai, United Arab Emirates</td>
<td>6</td>
<td>5.9 %</td>
</tr>
<tr>
<td>Holon, Israel</td>
<td>4</td>
<td>3.9 %</td>
</tr>
<tr>
<td>Manchester, U.K.</td>
<td>8</td>
<td>7.8 %</td>
</tr>
<tr>
<td>Melbourne, Australia</td>
<td>6</td>
<td>5.9 %</td>
</tr>
<tr>
<td>Montreal, Canada</td>
<td>7</td>
<td>6.9 %</td>
</tr>
<tr>
<td>Nuremberg, Germany</td>
<td>2</td>
<td>2.0 %</td>
</tr>
<tr>
<td>Ottawa, Canada</td>
<td>8</td>
<td>7.8 %</td>
</tr>
<tr>
<td>Pune, India</td>
<td>2</td>
<td>2.0 %</td>
</tr>
<tr>
<td>Seattle, U.S.A.</td>
<td>1</td>
<td>1.0 %</td>
</tr>
<tr>
<td>Seoul, Korea</td>
<td>0</td>
<td>0 %</td>
</tr>
<tr>
<td>Sheffield, U.K.</td>
<td>0</td>
<td>0 %</td>
</tr>
<tr>
<td>Shenzhen, China</td>
<td>6</td>
<td>5.9 %</td>
</tr>
<tr>
<td>Singapore, Singapore</td>
<td>8</td>
<td>7.8 %</td>
</tr>
<tr>
<td>Stockholm, Sweden</td>
<td>5</td>
<td>4.9 %</td>
</tr>
<tr>
<td>Valencia, Spain</td>
<td>7</td>
<td>6.9 %</td>
</tr>
<tr>
<td>Zurich, Switzerland</td>
<td>2</td>
<td>2.0 %</td>
</tr>
</tbody>
</table>

Three central-south European cities (Zurich (Switzerland), Donostia San Sebastian and Valencia (Spain)) also took their place in the MAKCi nominees scene. Opposite to Valencia
in the Mediterranean Sea, Holon (Israel) also got a MAKCi nomination. From the United Arab Emirates, Dubai (UAE) was also nominated. Emerging KC counterparts in the North American region were also nominated, such as Montreal and Seattle, while Boston and Ottawa, (both finalists in the 2007 MAKCi edition) were nominated for their second consecutive year.

Since the MAKCi exercise is fundamentally a consensus building exercise, nominations in Round 1 are a core step into the consultation of the invited Panel of Experts. However, the cornerstone of the MAKCi exercise rests on the dialogues, discussions, disagreements and knowledge sharing that emerge from experts’ interactions as responses to the nominations. With the 2008 MAKCi nominees displayed on the MAKCi Virtual Platform, most visited cities' discussion rooms were Valencia (183), Bangalore (115) and Dubai, (114), witnessing both collaboration and even confrontation amongst experts. Stockholm (81) Ottawa (80) and Manchester (78), also attracted the interest and opinions of the Panel.

The second round of the 2008 MAKCi exercise capitalized the Panel of Experts' interactions by deciding on six (6) cities as the Finalists. In the MAKCi exercise, cities with 10% or more of the votes qualify as finalists; or as it is the case of the 2008 Edition, the top tier of KC nominees with higher scores (Table A). During Round 2 of the 2008 MAKCi exercise, a total of 38 valid votes were received, with 50.66% of the Panel of Experts voting during the 2nd Round. Four votes were not valid: three of them were iterative (double) votes and the fourth invalidated vote arrived after deadline. Percentages were calculated from a total of 34 valid votes.

In this context, the 2008 MAKCi finalists are, in alphabetical order:

- Bangalore, India (9 Votes, 8.8%)
- Manchester, United Kingdom (8 Votes, 7.8%)
- Montreal, Canada (7 Votes, 6.9%)
- Ottawa, Canada (8 Votes, 7.8%)
- Singapore, Singapore (8 Votes, 7.8%)
- Valencia, Spain (7 Votes, 6.9%)

This group of six 2008 MAKCi finalists constituted a noteworthy cohort of two Asian Cities, two European Cities and two North American cities which have set the pace for the third and final round of the MAKCi exercise. A balanced assessment of these cities' tangible and intangible capitals would determine the Award winners of the 2008 edition, shown in the winners section of this Report.
2008 MAKCi Winners

As the MAKCi exercise collected the consensus reached by the invited Panel of Experts, a sound basis for creating and improving a comparative taxonomy for urban communities is being consolidated. In this opportunity, Bangalore, Manchester, Montreal, Ottawa, Singapore and Valencia were assessed as finalists under the lens of the MAKCi Framework. Each city’s knowledge-based initiatives have been considered and a number between 1 and 10 has been assigned to each capital criteria in order to translate the cities’ knowledge capitals into quantifiable indicators.

<table>
<thead>
<tr>
<th>Table B</th>
<th>2nd</th>
<th>3rd</th>
<th>3rd</th>
<th>Ottawa</th>
<th>Singapore</th>
<th>Valencia</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAKCi Scores (Best Scores)</td>
<td>Bangalore</td>
<td>Manchester</td>
<td>Montreal</td>
<td>Ottawa</td>
<td>Singapore</td>
<td>Valencia</td>
</tr>
<tr>
<td>City A Votes</td>
<td>4</td>
<td>7</td>
<td>2</td>
<td>7</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>City A Points</td>
<td>254</td>
<td>478</td>
<td>144</td>
<td>483</td>
<td>764</td>
<td>380</td>
</tr>
<tr>
<td>City B Votes</td>
<td>7</td>
<td>5</td>
<td>13</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>City B Points</td>
<td>413</td>
<td>338</td>
<td>878</td>
<td>155</td>
<td>270</td>
<td>214</td>
</tr>
<tr>
<td>City C Votes</td>
<td>8</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>City C Points</td>
<td>467</td>
<td>398</td>
<td>155</td>
<td>202</td>
<td>427</td>
<td>430</td>
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<td>MAKCI Index (Votes/Points)</td>
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<td>6.74</td>
<td>6.54</td>
<td>6.46</td>
<td>6.64</td>
<td>6.83</td>
</tr>
<tr>
<td>Total Points</td>
<td>1134</td>
<td>1214</td>
<td>1177</td>
<td>840</td>
<td>1461</td>
<td>1024</td>
</tr>
<tr>
<td>Total Votes</td>
<td>19</td>
<td>18</td>
<td>18</td>
<td>13</td>
<td>22</td>
<td>15</td>
</tr>
</tbody>
</table>

In this opportunity, the invited 2008 MAKCi Panel of Experts has been consistent with its 2007 MAKCi Panel predecessor. Both panels have regarded Singapore as a Knowledge City case worth recognizing. With 22 votes, Singapore’s high ranking in technical infrastructure and human capital propelled the city as the top 2008 MAKCi winner (Table B). The MAKCi Panel thus consolidates a consistent point of view in which Singapore, –according to the experts, evidences a number of strong points (notably intelligence, financial and instrumental capitals) to deserve the winner position in the MAKCi sphere for the second consecutive year. At the same time, a number of experts in the MAKCi Panel have raised strong concerns on some of Singapore’s central government documented practices on human
rights issues, which could disqualify Singapore’s nomination as a KC. With foremost areas of opportunity in press freedom, information access and citizenship rights, Singapore clearly remains an iconic contender in the 2008 MAKCi exercise.

Singapore is followed by the dynamic and contrasting k-based developments of Bangalore, with 19 votes. The other two MAKCi winners are a couple of cities with strong cultural, historical and research capitals: Manchester and Montreal (18 votes each, as shown in Table B). The cities’ distinctive capacities for value-creating combinations in the knowledge-based development arenas are discussed in the following sections of this Report.
2008 MAKCi Key Findings

Eight knowledge capital dimensions stand as indicators for the 2008 MAKCi exercise as the visible drivers of collective capital creation in knowledge-based development city-regions.

1. Identity Capital

Identity Capital in the MAKCi Framework refers to all formal and informal capital elements in the city that have contributed and/or are contributing to determine the city’s identity. In the 2008 MAKCi Awards, the first place for Identity capital corresponds to Manchester (8.83), followed by Valencia (8.67) and Montreal (8.17) as shown in Table 1.

<table>
<thead>
<tr>
<th>Identity Capital</th>
<th>Bangalore</th>
<th>1st</th>
<th>3rd</th>
<th>Ottawa</th>
<th>5th</th>
<th>Singapore</th>
<th>4th</th>
<th>2nd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ranking</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td></td>
<td>4</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Num Votes</td>
<td>19</td>
<td>18</td>
<td>18</td>
<td>13</td>
<td>22</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vote Points</td>
<td>136</td>
<td>159</td>
<td>147</td>
<td>97</td>
<td>172</td>
<td>130</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAKCI Score</td>
<td>7.16</td>
<td>8.83</td>
<td>8.17</td>
<td>7.46</td>
<td>7.82</td>
<td>8.67</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Indeed, Manchester’s reputation as a ‘Cottonopolis’, a “Shock City”, as well as a former leading centre for commerce in the north of UK have strongly contributed to determine the city’s identity and strong endogenous profile. Valencia’s nomination also has shown the city’s wealth in terms of identity capital since its foundation by the Roman Empire: “Valencia has clearly been valued for 2146 years. Its mixture of races and customs makes Valencia a city opened to the world, proud of its origin, its history, its culture”.

As for Montreal, although a young urban community, it has clearly benefited from the strong heritage of an ancient culture. Its French roots and strong links to France’s heritage, combined with a sound influence of anglosaxon culture and proximity seem to give to the
city the best of two worlds: a lucid prospective future, anchored in a well reputed inherited past. In Ottawa’s case, its nomination includes as part of its Identity Capital a sense of purpose, and belongingness to residents and visitors/partners, a city brand and a global positioning. In the 2007 MAKCi edition, it has been advanced that Ottawa’s condition as young urban community (and weak endogenous profile) puts Ottawa in a weaker position in terms of Identity Capital. However, Montreal’s comparable short-term history would counter-proof that sound identity capital is not privative of old, ancient urban communities.

In the case of Bangalore’s history, it seems the city has the most ancient history of all finalist cities. Originally know as Bengaluru, the city’s origins are registered since 1024 AC, when it was captured by an Indian dynasty (the Cholas), and later passed on to the Chalukya-cholas in 1070. Modern Bangalore was founded in 1537, when Kempe Gowda referred to the new town as his “gandu bhoomi” or “Land of Heroes”. With a strong endogenous profile of its own, Bangalore would have scored higher if more of its ancient history was made known.

2. Intelligence Capital

Intelligence Capital refers to the city’s systems capacity to sense, make sense of, and respond to agents and events which are significant to the city’s welfare. In the 2008 MAKCi Awards, the top place corresponds to Manchester (8.61), the second place corresponds to Valencia (8.60) and the third to Singapore (8.36) as shown in Table 2.

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Capital</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intelligence Ranking</td>
<td>Bangalore</td>
<td>Manchester</td>
<td>Montreal</td>
<td>Ottawa</td>
</tr>
<tr>
<td>Num Votes</td>
<td>6</td>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Vote Points</td>
<td>19</td>
<td>18</td>
<td>18</td>
<td>13</td>
</tr>
<tr>
<td>MAKCI Score</td>
<td>145</td>
<td>155</td>
<td>146</td>
<td>102</td>
</tr>
</tbody>
</table>

Clearly, in knowledge-based communities, creativity and innovation are key elements to economic growth and international recognition. However, it has been observed that the element that creates a strong Intelligence Capital in a city is the existence and quality of regional and urban prospective Future Centers. These are public and/or private entities with professional intelligence capabilities that give advice and support to cities’ regional strategic planning, and knowledge-based strategic developments through specialized and conscientious urban prospective studies overviewing the regional or even the national level.

In the case of Manchester, its City Council made a strong public awareness on Manchester: KC as the accredited government office that would overview the intelligent planning of its KBD initiatives (Science City, Manchester is My Planet, and Innovation Investment Fund) since 2003. Both emphases on the creation of a Future Center for the city and raising awareness on its existence could possibly explain the high score earned by Manchester, and also by Valencia.

The City Council of Valencia, by means of the Foundation of the Valencian Community for Urban Innovation and Knowledge Economy (FIVEC), constitutes the city’s intelligence center that impulses and leads the development of new economic sectors in the city. It also supports KBD initiatives and has backed up Valencia’s nomination to the 2008 MAKCis.

Moreover, in the case of Singapore, according to the National University of Singapore (2007), there are at least 14 centers for city intelligence services in the city-nation, monitoring and identifying different areas for future development. Such presence could account for Singapore’s high score in Intelligence Capital.

Montreal followed closely to the top ranked, with possible Panel of Experts’ less awareness of the existence of intelligence centers in the city. In recent years, Montréal International is arising from a private and public partnership whose mission is to contribute to Metropolitan
Montréal’s economic development and increase its international recognition. This could raise further awareness on Montreal’s intelligence capital.

It may also be Ottawa’s case. Founded in 1999, The Ottawa Partnership (TOP) plays a key role in shaping the policies to guide Ottawa’s economic future providing input and making recommendations to the City on important issues such as infrastructure development, education, training programs and creating the proper climate for business. However, further awareness of The Ottawa Partnership’s intelligence agency amongst the Panel of Experts would be expected.

As for Bangalore, no Future Center or city intelligence services for the city could be identified. This would explain the lower score on intelligence capital of this city.

3. Financial Capital

Financial Capital refers to the city’s articulation of monetary denomination of production value dimensions which make possible the interrelationship or exchange of value elements between each other. In the 2008 MAKCi Awards, the top place corresponds to Singapore (8.64), the second place corresponds to Montreal (8.44) and the third to Manchester (8.22) as shown in Table 3.

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Financial Capital Ranking</th>
<th>3rd</th>
<th>2nd</th>
<th>1st</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Bangalore</td>
<td>Manchester</td>
<td>Montreal</td>
</tr>
<tr>
<td>Num Votes</td>
<td></td>
<td>6</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Vote Points</td>
<td></td>
<td>143</td>
<td>148</td>
<td>152</td>
</tr>
<tr>
<td>MAKCi Score</td>
<td></td>
<td>7.53</td>
<td>8.22</td>
<td>8.44</td>
</tr>
</tbody>
</table>

As the top ranked in Financial Capital, one of the strongest points of Singapore as a KC comes from its development as a financial hub. By attracting funds while inducing low
inflation, Singapore shows sustained positive macroeconomic indicators. Furthermore, its strong currency complemented the high wage industrial strategy, forcing long-term quality rather than short-term prices to be the basis for export competition underpinning infrastructural investments and financial strength in the Singaporean economy.

In Montreal’s case, its macroeconomic and financial environment has a strong reputation. The city offers top infrastructure quality and an equitable administration of its legal system, highly attractive to foreign investments. In 2007, foreign investment accounted for 42.9% of all non-residential private investments in Greater Montreal, representing nearly one out of two private investment dollars. Foreign investors thus play a vital role in the economic development of Montreal’s metropolitan area.8

Manchester, on the other hand, has recently seen intense property-led regeneration in the inner city and other deprived areas. Local and foreign investments have further intensified. In September 2002, over £7.4bn was destined to investment capital, and since then the flow of incoming sources to fund development from private, central government and European initiatives is seemingly secured.

While there was insufficient financial information to assess Valencia’s high score in financial capital, Ottawa enjoys prime credit quality rating and had a combined sponsored research income over $300 million (CDN) in 2005.

Bangalore is also enjoying millionaire regeneration investments. The Rs. 1.35 billion “Mega-city project” focuses on shifting the iron and steel market to decongest central areas, and on the construction of ring roads, fly-over bridges and truck terminals. The Rs. 3.1 billion Asian Development Bank’s is also funding a project aiming to decongest Bangalore’s inner city by

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promoting four “satellite cities”. However, this emphasis on mega-investments to promote a hi-tech vision seems perverse when the scale and depth of poverty in the city is considered.

4. Relational Capital

Relational Capital refers to the city’s articulation capital that provides cohesion and makes possible the recombination or exchange of value elements in the city’s system of capitals. In the 2008 MAKCi Awards, the top place corresponds to Valencia (8.40), the second place corresponds to Manchester (8.39) and the third to Singapore (8.32) as shown in Table 4.

<table>
<thead>
<tr>
<th>Table 4</th>
<th>2nd</th>
<th>3rd</th>
<th>1st</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relational Capital Ranking</td>
<td>Bangalore</td>
<td>Manchester</td>
<td>Montreal</td>
</tr>
<tr>
<td>Num Votes</td>
<td>5</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Vote Points</td>
<td>19</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>MAKCI Score</td>
<td>146</td>
<td>151</td>
<td>135</td>
</tr>
<tr>
<td></td>
<td>7.68</td>
<td>8.39</td>
<td>7.50</td>
</tr>
</tbody>
</table>

As the top ranked in Relational Capital according to the 2008 MAKCi Panel, one of the strongest points of Valencia seems to be its internal relational capital, by means of a manifest level of solidarity: half of the Valencians have realized a gesture of solidarity during the last year (most of them economic contributions) and 13% have actively collaborated with voluntary organizations. Moreover, 55% of Valencians declare themselves very tolerant when they strike up friendship with people of different ideologies. The city also shows a high level of international activity that might account for its increasing external relational capital.

In the case of Manchester, its journey into regeneration initiatives has made special emphasis on city partnerships, with local, national and international entities. For over fifteen years, the city-region’s emergent partnership networks with local public, civic and private
stakeholders have purposefully had a positive impact in key areas of its socio-economic infrastructure. Also, by means of its social capital, Manchester's leadership is also building partnerships with other UK cities, the central government, the European Union representatives and an increasing cohort of European cities.

Singapore’s high score in relational capital would indicate milestones of progress in social integration and governance dynamism. However, recent research suggests that Singapore has slipped on Rule Law rating from 2.10 in 1995 to 1.83. Also, on Regulatory Quality, Singapore has slipped from 1.95 in 1995 to 1.79 in the latest World Bank Reports on the issue.

On the other hand, as the Capital City of Canada and home to the Federal Government, Ottawa has great regional, national and international (external) relational capital. As a member of the global trading community Ottawa recognizes that relationships abroad are crucial to the success of its economy and its companies. Such partnerships foster trade and catalyze export growth and international investment. Ottawa has also increased its internal relational capital, promoting culture integration, tolerance and service delivery in the area of provision and support of social, health and related services to all citizens.

In a different context, with an estimated population of 5,281,927 in the year 2007, Bangalore is the third most populous city in India and the 27th most populous city in the world. Such status inevitably challenges the internal social cohesion of the city, even if it can be assumed that slums are indeed a core part of Bangalore’s identity. To this respect, the 2004 National Crime Records Bureau statistics indicate that Bangalore accounts for 9.2% of the total crimes reported from 35 major cities in India. (Delhi and Mumbai accounted for 15.7% and 9.5% respectively). In terms of its external relational capital, Bangalore clearly enjoys a high score, by means of the multiple partnerships built around key foreign investments in the city.
Montreal, on the other hand, is internationally considered a cosmopolitan, multicultural and livable city. Known as having developed a unique personality born of a harmonious blend of European and North American cultures, Montreal is known for its openness, friendliness, creativity and intellectual vitality. Montreal boasts a high ranking for the quality of its neighbourhood life near the downtown core, not yet exempt of the proverbial confrontations between the anglo orderly world and the French-latin chaotic twist.

5. Human Capital (Individual Base)

Human Capital in its individual base refers to the value-generating capacity of individual citizens that contribute to the city’s system of capitals. In the 2008 MAKCi Awards, the top place corresponds to Valencia (8.73), the second place corresponds to Ottawa (8.69) and the third place to Manchester and Montreal (8.22) as shown in Table 5.

<table>
<thead>
<tr>
<th>Human Capital (Individual Base)</th>
<th>3rd</th>
<th>3rd</th>
<th>2nd</th>
<th>Singapore</th>
<th>1st</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ranking</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Num Votes</td>
<td>19</td>
<td>18</td>
<td>18</td>
<td>13</td>
<td>22</td>
</tr>
<tr>
<td>Vote Points</td>
<td>137</td>
<td>148</td>
<td>148</td>
<td>113</td>
<td>168</td>
</tr>
<tr>
<td>MAKCI Score</td>
<td>7.21</td>
<td>8.22</td>
<td>8.22</td>
<td>8.69</td>
<td>7.64</td>
</tr>
</tbody>
</table>

The highest-ranked city in terms of Human Capital according to the 2008 MAKCi Panel of Experts is Valencia. Indeed, amongst other indicators, it is the European city that attracts more ERASMUS students in all Europe, with knowledge-intensive areas for education, both in terms of numbers of institutions and in variety of course programs (3,618 graduates in 30 courses). The city relies on a comprehensive network of educational infrastructure only challenged by the brain drain to Madrid, Barcelona or other European cities to recent graduates.
According to the 2001 Census, 249,280 of Ottawa-Gatineau’s 774,075 population (32.2%) were under 25 years of age, which accounts for a fairly large cohort of youthful population. Also, education and equality are an important issue in Ottawa. The capital city of a very multicultural country, Ottawa enjoys high levels of education and human development, as well as an average physical and mental welfare of individuals, according to international standards.

Education, especially technological education has a lot of planning for younger generations in Manchester. Some examples are science-based businesses, (MANCAT) to be completed in 2008; and the e-Science North West Centre, managing a portfolio of e-science projects and Grid technologies in the North West region (ESNW, 2004). Indeed, Manchester shows a privileged geographical epicentre in terms of higher education, with 3 ranked universities, and student numbers in the lines of 86, 435 (MIDAS, 2004; University of Manchester, 2001). However, new graduates of some sectors encounter selective, exclusionary, segmented labour markets, and are thus discouraged to pursue further development. Manchester’s lack of intermediate level skills appears as a serious brake to knowledge-based competitiveness (Work Foundation, 2002).

The number of students and graduates (168,000 enrolments) is a key indicator of Greater Montréal’s solid, diversified, high-calibre university education system. With its 11 university institutions, Montreal’s intellectual climate is highly stimulating, with a unique creative energy. Human capital, in fact, is the main “raw material” of innovative Montreal multinationals, and Greater Montréal’s employers are thus relying on a skilled workforce that suits the requirements of a knowledge-based economy.

Singapore’s policy has clearly embraced a combination of education and human resource development. 

development as one of its knowledge-based national flags. Singapore is expected to further increase its human resource development in the light of freedom to individual liberties.

As for Bangalore, it has an edge over many other Indian cities. The renowned Indian Institute of Science which pioneers research in engineering and science is located in the city. Also, the Bangalore University with its 14 engineering colleges is a fertile training ground for young software engineers. Bangalore is also home to a number of science research establishments including the Indian Space Research Organisation, Centre for Advanced Computing, The National Aerospace laboratory and the Indian Institute of Astrophysics. These and other institutions provide the sort of ambience sought by knowledge intensive industries such as software. The availability of high tech professionals and the presence of research institutes constitute a core reason for industries and businesses to locate in Bangalore, and an important aspect of the city’s human capital.

### 6. Human Capital (Collective Base)

Human Capital in its collective base refers to the collective and team-based value-generating capacities of all citizens that contribute to the city’s system of capitals. In the 2008 MAKCi Awards, the top place corresponds to Valencia (8.60), the second place corresponds to Montreal (8.33) and the third place to Manchester (8.11) as shown in Table 6.

<table>
<thead>
<tr>
<th>Human Capital (Collective Base)</th>
<th>3rd</th>
<th>2nd</th>
<th>Ottawa</th>
<th>Singapore</th>
<th>1st</th>
</tr>
</thead>
<tbody>
<tr>
<td>Num Votes</td>
<td>19</td>
<td>18</td>
<td>18</td>
<td>13</td>
<td>22</td>
</tr>
<tr>
<td>Vote Points</td>
<td>142</td>
<td>146</td>
<td>150</td>
<td>105</td>
<td>171</td>
</tr>
<tr>
<td>MAKCI Score</td>
<td>7.47</td>
<td>8.11</td>
<td>8.33</td>
<td>8.08</td>
<td>7.77</td>
</tr>
</tbody>
</table>
Valencia’s Social Security services 100% of the population. The city’s life expectancy is among the highest in the world: Women 83.3 years / Men 76.1 years. It has a balanced youth vs mature population, and has undergone a fast but steady growth during recent years. Valencia city has more than 807,000 (eight hundred and seven thousand) inhabitants of whom 13% (thirteen per cent) are immigrants (over 10% legalized). Moreover, Valencia’s population is presented as a well trained and highly qualified workforce at different professional levels, graduated from an assorted offer of academic infrastructures in the city.

Seemingly, Greater Montreal’s economy has been remarkably dynamic over the past few years. Despite of specific available data on health and sanitation, a highly ranked array of medical services is visible in the city due to the relentless transformation into a services-oriented economy and the rise of its high technology sectors. Creativity is now central to the metropolitan area’s economic growth. Its vitality, international dimension, artistic and cultural wealth and capacity to develop innovative technologies confer a definite competitive advantage on the Montréal economy. According to Statistics Canada, Montréal ranks first among Canadian metropolitan areas for its industrial diversity, attesting to its robust economy and its potential for innovation. Recent trends in the job market indicate an overall increase in employment and the labour force, as well as a marked decrease in the unemployment rate. In fact, Montréal has experienced one of the highest job growths among major urban agglomerations in North America.

The city-region of Manchester offers health coverage and access to hospitals, dental surgery and specialised medical services to its entire population, with occasional delays and extra charge in specialized surgery. On the other hand, out of a population of 2.5m, the workforce in the Manchester city-region is of 1.2m, with a GDP of £28 billion, almost 40% of the regional GDP. Also, it is important to note that 65% of the population is under 45 years old, meaning that the city workforce is predominantly young (MIDAS, 2004). This numbers translate into a dynamic, flexible workforce as part of the agent capital of the KC model for Manchester. However, according to the Greater Manchester Learning and Skills Council
there are 420,000 people in the area with poor basic skills. One in five adults within the workforce is functionally illiterate and as high as one in four is functionally innumerate. (Work Foundation, 2002:23). However, the strength of the identity, partnership capacity and resilience of Manchester people (Mancunians) is indeed assumed as one of the core elements in the (collective) human capital of the city-region.

In Ottawa, under the health care system, individual citizens are provided preventative care and medical treatments from primary care physicians as well as access to hospitals, dental surgery and additional medical services. With a few exceptions, all citizens qualify for health coverage regardless of medical history, personal income, or standard of living. Ottawa is a city that promotes healthy lifestyles. A safe, clean, and friendly city, Ottawa enjoys a reputation for family values, celebrating multicultural heritage, bilingualism (English/French), and the rural-urban interface. All these elements account for the city’s capacity to create and sustain a favorable environment to generate knowledge-based value through innovation and entrepreneurial opportunities for emerging businesses.

Singapore on the other hand has a very high Adult Literacy Rate (92.5%), while it ranks very high on Royalty Payments & Receipts, Technical Journal Articles and Patents granted by USPTO. It also has improved its HDI (Health) Index from 0.86 in 1995 to 0.92 in the most recent period. Moreover, the Singaporean educational system was re-structured in the last few years in order to produce a future intelligent workforce (i.e., today’s school children) that is capable of advanced and continuous learning, knowledge creation, and creativity leapfrogging. Such schemes have led Singapore into a high ranking in internationally benchmarked value-generating capacities, such as competitiveness and the city’s high-value business innovation.

The several international-standard research institutes, the entrepreneurial spirit, pro-active policies by the Central and State Governments, the cultural and economic milieu of a high-tech city are all ingredients for the success Bangalore industry. With the best "bio-cluster" in
the country, Bangalore was selected by UNIDO as a dynamic city-region focussing on the two Sectors/Clusters of IT/electronics and the Biotechnology in 2004\cite{10}. However, health and sanitation are an issue in Bangalore. As an example, access to water is a useful indicator. At present, almost one-third of the population has only partial or no access to piped water. The very limited data available on slums suggest particularly serious problems. A 1996 study of five slums showed that two had no water supply, and slum residents often had to walk between 20-1,000 meters to fetch water – with women and children seriously affected by the poor environmental conditions. Clearly, this is one of Bangalore’s areas of opportunity to increase its collective human capital.

### 7. Instrumental Capital (Tangible Base)

Instrumental Capital in its tangible base refers to material-based means of production through which other capitals leverage their value-generating capacity. In the 2008 MAKCi Awards, the top place corresponds to Singapore (9.23), the second place corresponds to Valencia (8.73) and the third place to Ottawa (8.62) as shown in Table 7.

<table>
<thead>
<tr>
<th>Table 7</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Instrumental Capital (Tangible Base)</strong></td>
</tr>
<tr>
<td><strong>Ranking</strong></td>
</tr>
<tr>
<td><strong>Votes</strong></td>
</tr>
<tr>
<td><strong>Vote Points</strong></td>
</tr>
<tr>
<td><strong>MAKCI Score</strong></td>
</tr>
</tbody>
</table>

Singapore has been distinguished with a high index of attractivity mainly because of its solid material-based infrastructure. Tangible instrumental capital is one of Singapore’s most remarkable elements in the city’s system of capitals, as identified by the MAKCi Panel of

Experts. Local and foreign investments have indeed created wealth by triggering services-oriented industries and knowledge-based urban initiatives. Moreover, Singapore as a modern city came into being because of a privileged duality: its location and its harbor. Both assets have remained major sources of its economic vitality as the island-nation was transformed into a major transportation and communications hub. Today, the country also enjoys telecommunication connectivity: virtually 100 percent telephone coverage in homes and offices facilitate its knowledge-based operations.

The geo-location of Valencia makes it a privileged Spanish city for connections. The Port of Valencia is a driving force and leader in growth in the Mediterranean, becoming an emerging cruise destination. Valencia Airport has registered a continuous growth in recent years, and land transportations are made through a network of connections with the main areas of economic development and the most important markets using underground, tram, local trains and bus, with infrastructure undergoing constant expansion and improvement. Also, Valencia has a solid technological infrastructure for advanced telecommunications that guarantee businesses and employees the best support:

- 1st big city in Spain with fibre optic cables (98% city covered).
- 77.8% of users connected to Internet with advanced systems.

Ottawa's urban physical infrastructure is world class. This is evident in its transportation and telecommunications connectivity. In terms of land connectivity, it is supported by multiple methods of transport ranging form: air travel, rail, bus, and automobile. For instance, the Transitway is the largest project in the City’s transportation history and has been honored with a Canadian Public Works Project of the Century Award. A dedicated system of bus-only roadways, the Transitway provides an exclusive rapid transit link across much of the City’s urban area, with service operating 22 hours a day. Moreover, Ottawa ranks first among 20 Canadian cities for internet use at home; 78.9% of households in the city have at least one regular internet user. (Source: Statistics Canada 2001 Census). Virtually 100% of Ottawa’s schools, universities, hospitals, libraries, research institutes and municipal facilities
are wired with high-speed internet access. No other city in Canada has the breadth and depth of fiber optic connectivity as Ottawa – making it Canada’s most connected city. Also, by 2006, Ottawa was the most wireless city, with 80% of households having a cell phone for direct use.

A solid £400m has been invested on the Manchester Airport, for additional terminals and a second runaway that will increase yearly passenger numbers to 39 million by 2015. It is the second largest regional airfreight facility, with 117 tone capacity (Work Foundation, 2002). Also, over £750m have been invested for office, retail and leisure facilities in some areas of the centre (MIDAS, 2004); amongst which the ‘MIDAS touch’ was present in Piccadilly Train Station. It had a complete face-lift, changing the image of the city in preparation for the Commonwealth games (Peck and Ward, 2002).

Montreal is well known for its capital investments from private businesses, many of which are foreign-based and leaders in high technology—attesting to the quality of the metropolitan area’s investment climate. The solid and diversified foundations of Montréal’s economy and the growing competitiveness of its businesses combine the conditions necessary to achieve its high potential for short-term and long-term investments. In many of Greater Montréal’s key economic sectors, including aerospace and gaming, corporate investments have been increasing at a steady rate. These investments have made the metropolitan area a dynamic high technology centre that is well positioned within major international innovation networks. Parallel to this, within the context of its bold development plan (Montreal 2025: Imagining and Building Montreal), in partnership with the players concerned, the city intends to develop over 130 projects and initiatives, representing total investments of several tens of billions of dollars which will have structuring effects on Greater Montréal’s quality of life, economic competitiveness and attractiveness.

Lopsided development has sharply aggravated social inequality in Bangalore. While real estate builders frantically construct western-style villas and residential facilities with
swimming pools and tennis courts for the software industries elites, 35 per cent of the city’s population lives in slums. “About 400 slums dot the city,” says Samuel Paul, chairman, Public Affairs Centre (PAC), a city-based NGO.

8. Instrumental Capital (Intangible Base)

Instrumental Capital in its tangible base refers to knowledge-based means of production through which other capitals leverage their value-generating capacity. In the 2008 MAKCi Awards, the top place corresponds to Singapore (8.64), the second place corresponds to Montreal (8.61) and the third place to Manchester (8.57) as shown in Table 8.

Intangible instrumental capital is seemingly one of Singapore’s core capitals, as a consequence of its knowledge-based initiatives. During the late 1990s, the Singaporean government acknowledged the need to forge an environment that is conducive to innovations, new discoveries and the creation of new knowledge and one that harnesses the intangibles such as ideas, knowledge and expertise to add value and create new value in the knowledge economy. The Committee on Singapore’s Competitiveness (CSC) was instrumental in recommending specific plan for key sectors such as manufacturing, finance and telecommunications so as to thrust Singapore into an advanced and globally competitive knowledge-based economy.

In the case of Manchester, the city launched the UK’s first public access information and communications system, the Manchester Host in 1991. It was followed by the establishment
of Manchester’s Electronic Village Halls (EVHs). At the time, some experts drew parallels between the role Manchester played in the Industrial Revolution, creating sense of Manchester as an Information City (Leach and Copitch, 2005). They compared the Host with other Manchester-based “forward-looking, infrastructure developments which have contributed much to the regional economy”. Also, the importance of connectivity is symbolized in the BBC building and the National Computer Centre. The core importance of Information and Communication Technologies, (ICTs) as instrumental capital in knowledge city models is apparent. As connectivity becomes critical for the model, a plan has been made to establish the Manchester Digital Development Agency, to attract and sustain further investment in ICT and e-commerce across all sectors of the economy (MCC, 2003).

Valencia, on the other hand is experiencing a favourable and stable economic transition, together with the city’s business experience throughout the years and the close collaboration between the public and private sectors. In the emerging economy systems, the contribution of foreign entrepreneurs in Valencias’ economy accelerates and deepens the process. Also, fostering innovation is essential to such transition. Valencia’s City Council promotes the technological cooperation between research & educational organizations and the different departments of the city Council for the development and innovation with urban applicability. It is an expression of a Public Private Partnership with the aim of improving citizen’s life in the city.

On the other side of the Atlantic, the City of Ottawa exhibits ability to foster political innovation. This was evident in 2001 with the merger project Amalgamated City of Ottawa, which brought 11 urban and rural municipalities and the regional municipality together in one government structure, responsible for providing services to a population of about 800,000. Over the following 20 years, the city's population will push past the one million mark and possibly reach 1.2 million. Employment growth would be expected to be robust over the coming years. The city's job base is expected to grow by about 250,000 by 2021.
In Asia, the software cluster in Bangalore goes beyond the concentration of skilled labour. It actually provides the technical infrastructure that distinguishes the flow suppliers and information in the city-region. A variety of regional institutions (universities, several trade associations and local business organisations, and a myriad of specialised consulting, market research, public relations and venture capital firms) provide technical, financial, and networking services which the regions enterprises cannot afford individually. These networks defy sectoral barriers; individuals move easily from semiconductor to disk drive firms or from computers to network makers. They continue to meet in communal forums, in which relationships are easily formed and maintained, technical and market information is exchanged, business contacts are established and new enterprises are conceived. This decentralised and fluid environment of intangible technological capabilities could constitute the most affluent (intangible) instrumental capital of Bangalore.
**2008 MAKCi Trends**

The nominated city-regions during the 2008 edition of the MAKCi Awards have undoubtedy presented an intriguing tapestry of tangible and intangible capitals. The group of cities nominated and selected as 2008 MAKCi Finalists is a significant cohort: they represent an emerging world-wide creative class, attractive, open and dynamic. The 2008 MAKCi nomination stage made every effort to create enough permeability so as to allow such world-wide new players into the team of aspiring k-Cities, which could be representative of the Knowledge City Flag. As a result, the 2008 MAKCi exercise made room for a number of trends and patterns, some of which are the following:

1. Converging patterns of Development. It has been observed that most nominee cities in the 2008 edition of the MAKCi exercise exhibit parallel increases in their capitals systems, regardless of the contextual differences between them. For instance,
   - They have created a thriving developing community for their city-region. Beyond the official discourse of their City Council or the marketable brand of the city image, their citizenship strive to generate a sense of openness, friendliness, creativity and intellectual vitality in day-to-day life activities. This translates into an international reputation for heritage, culture and gastronomy, allowing different styles and cultural influences, as well as popular cultural events and festivals. Their streets and public places are learning meeting spaces in which the social and economic diversity is intensely (and sincerely) reflected. Manchester (UK), Montreal (Canada), Bangalore (India) and Melbourne (Australia) are seemingly setting the pace in such community developments.
   - They have a sharp drive for creating a culture of innovation despite their financial capital challenges and limited structural investments. This appears to be the case of Sheffield (UK), Donostia San Sebastian (Spain) and Nuremberg (Germany).
• They have a significant Regional Distribution. The 2008 MAKCi exercise witnessed the access of new players (city-regions) increasing their participation in the KBD arena. The Australasia Basin plays a strategic importance in terms of KBD developments. The presence of Melbourne and Brisbane (Australia) has amplified the scope of the exercise, and it is expected that emerging New Zealand communities would further enrich the global perspectives needed in the KBD field.

2. Distinctive knowledge-based capitals. It has been observed that most cities in the 2008 edition of the MAKCi exercise rely on one or more of the capitals in their city system, using it as a spring board to trigger true knowledge-based development. For instance,

• They rely on an identity created by their emerging research and specialized industries, some of them iconic high-tech industries (such as Biotechnology or ICT), like Boston and Seattle (USA), Stockholm (Sweden), Bangalore and Pune (India), Manchester (U.K.), Melbourne and Brisbane (Australia) Montreal (Canada) and Valencia (Spain).

• They rely on their high permeability and the fluid networks of their industries: Brisbane, Bangalore and Pune (India), Shenzhen (China) and quite possibly Seoul (Korea).

• They rely on their financial capital and wealth, entering the KBD world as financial hubs. Dubai (UAE), Singapore (Singapore) and Zurich (Switzerland) could have followed such pattern.

• They rely on the highly ranked prestige and cultural heritage: Ottawa (Canada), Holon (Israel), Stockholm (Sweden), Nuremberg (Germany), Zurich (Switzerland) and Boston (USA) can be examples of these capital developments.

In balance, it has been observed that there are no abrupt contrasts in terms of development of capitals amongst Finalists. However, these perceptions would need further focus and research.
2008 MAKCi Conclusions

In this sense, the MAKCi Awards are a learning process that offers different avenues of reflection. Although the MAKE Awards have been a splendid and inspiring guide, it is expected that the MAKCi Awards would progressively acquire a singular personality given the nature of its variables and indicators. Relentlessly, the MAKCi study is expected to evolve as knowledge cities—and our understanding of these—also evolve.

At the same time, the novelty of the subject, the diversity of backgrounds, the need to better understand the framework, the different degrees of familiarity with nominated cities and above all, the need to acquire a truly global perspective are all areas of opportunity for the MAKCi study to grow in depth, scope and validity. Nevertheless, the results constitute a clear expression of the collective perceptions of the international panel of experts on the urban communities leading deliberate and successful knowledge based development efforts.

The aim of the 2008 MAKCi exercise is to foster that international (vs. regional) perspectives emerge. Therefore, the MAKCi exercise seeks for a refining analysis: that each city is recognized for its actual capitals and areas of opportunity. We are enthused by the sequel of this second exercise in which the MAKCi organisation as a community/knowledge network is still undergoing a mayor learning curve. The 2008 MAKci exercise has added a critical experience to sharpen the MAKCi Scope in the future.

Overall the MAKCi Awards aim for a global profile, and aspires to analyse trends and patterns with an integrative scope. Most definitely, it aspires to gain increasing analytic rigour, stronger consensus tools and a consolidated knowledge-creating space that could contribute to the tacit knowledge conversion of KCs scholarship, thus advancing the principles and aspirations of the knowledge society.
Appendix 1 - 2008 MAKCi Framework

Most Admired Knowledge City – MAKCi – Awards
The World Capital Institute and Teleos

The MAKCi Framework is based on an assessment of a city’s Urban Capital Systems. The city’s capital base (both tangible and intangible) and its capacity recombine it in innovative ways. The major capital categories are:

1. Identity capital
2. Intelligence capital
3. Financial capital
4. Relational capital
5. Human Individual capital
6. Human Collective capital
7. Instrumental-material capital
8. Instrumental-knowledge capital

These correspond to a taxonomy of Urban Capital deliberately and systematically mapped upon all the resources – both traditional and knowledge-based – required to leverage the balanced and sustainable development of contemporary urban communities.

The underlying rationale for this taxonomy is to satisfy the formal requirements of a value-production system, i.e., that it be complete, consistent and homogeneous. This Taxonomy builds upon other efforts to identify and value collective individual capital at either urban, national or regional levels. Known as Capital System, this taxonomy identifies the basic

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12 The Most Admired Knowledge City Awards© is a joint initiative between the World Capital Institute – developer of the Capital System© method – and Teleos – developer of the Most Admired Knowledge Enterprise© Awards. All intellectual property rights reserved: Capital Systems © by The World Capital Institute; Most Admired Knowledge City Enterprise© Awards © by Teleos; and Most Admired Knowledge City Awards © jointly presented by the World Capital Institute and Teleos.
13 This Taxonomy has been developed over the last decade by a group of faculty and students of The Center for Knowledge Systems, the Knowledge Capital Institute, The University of Manchester and MIK-Spain led by Professor F. J. Carrillo. See, e.g.: Carrillo, 1998, 2002, 2004, 2006; Medrano, 2000; Flores, 2000, 2006; Martínez, 2005, 2006; García 2004, 2006; Altamar and Carrillo, 2006. The Capital System Framework is WCI Copyright.
14 Bonfour and Edvinsson (2005) provide a recent perspective on alternative frameworks and methods to assess collective intellectual capital.
capital elements of productive systems and “meta-capitals”: those other forms of capital not productive themselves but significantly leveraging the system’s overall capacity. Figure 1 describes this general structure.

**Figure 1 Generic System of Capitals**

Despite the young age of the Knowledge Cities field, a number of comparative frameworks have already been proposed to assess the relative importance of different development factors relative to specific explanatory and technical approaches (Ergazakis et al, 2004, 2006 a, b, c; Bañegil and Sanguino, 2006; Martinez, 2006). Amongst these approaches, the strategic framework provided by the identification, valuation and systematic development of the city’s traditional and knowledge capital in an integrated way, seems to be gaining support. The recently founded New Club of Paris—devoted to the valuation and development of collective Intellectual Capital— and its leading role in the Knowledge Capital Accounts of countries and regions, as well as an independent assessment of the Knowledge-based Developments potential of 40 cities around the world carried out by
Price Waterhouse Coopers, constitute testimonies of this trend. Thus, the MAKCi Framework adapts the Capital System approach for the purpose of establishing the relative capacity of a city to determine its course and rate of change in a knowledge-based world. The MAKCi Framework is a basic economic model since it involves an assessment of the value base on which the future development of a city is made possible through a recombination or trading of actually existing capitals, both traditional and knowledge-based.

From next page, the definitions of the major categories follow, with an instantiation of some subcategory, attribute or indicator. These categories can be disaggregated further into detailed sets of value dimensions for a particular city. In this particular disaggregation, we keep the same indexing corresponding to the eight major MAKCi categories:

1. Identity capital
2. Intelligence capital
3. Financial capital
4. Relational capital
5. Human Individual capital
6. Human Collective capital
7. Instrumental-material capital
8. Instrumental-knowledge capital

What is a city?

The concept of “city” is far from being standardized internationally. Different countries, different languages and different cultures provide different contexts for the definition of city. Most are based on a criterion of “relative importance” for granting a particular urban settlement such status, but these criteria are often too arbitrary and context-bound. For the

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16 e.g.: ‘A capital System for Monterrey’ (Carrillo, 2006, pp. 145-165)
17 Just looking at the many ways of distinguishing “town” and “city” in English-speaking countries, one realizes the huge amount of variations of the “city” concept (see: http://en.wikipedia.org/wiki/City#The_difference_between_towns_and_cities). Contemporary uses of the term “city” are also determined by the diversity and evolution of modern urban experiences (cfr. Carrillo, 2006, pp. 274-278).
purpose of this study, it seems more convenient to select a definition based on a criterion of more global applicability, such as population size. Therefore, we have chosen the concept of Metropolitan Statistical Area (MSA) as defined by the U. S. Office of Management and Budget. According to that, an MSA (and for the purpose of this study, a city) is

“... [a place] that has at least one urbanized area of 50,000 or more population, plus adjacent territory that has a high degree of social integration with the core as measured by commuting ties”\(^\text{18}\).

By extension, a Knowledge City in the context of the MAKCi framework is one such place...

“...that has undertaken a deliberate initiative to identify and develop the city’s capital base in a balanced, sustainable manner”\(^\text{19}\).

**TAXONOMY OF URBAN CAPITAL**

The generic classification of city categories as a value system

Metacapitals are those forms of capital not productive in themselves, but significantly increasing the system’s overall productivity by providing it with alignment and cohesion.

**Referential Capital.** Value elements that allow the identification and alignment of all other forms of capital.

1. **Identity capital.** Internal value referents: all those elements generated as an attempt to determine the essence and purpose of a city as a collective venture. The quality of identity construction significantly determines the sense of purpose and belongingness of its citizens.
   - Inherited identity. Formal and informal elements, accumulated through the city’s history, that have contributed to shape its identity, e.g.:
     - Name(s), etymology
     - Foundation Act
     - Heraldry

\(^{18}\) In Sperling and Sander (2004), p. 3.
\(^{19}\) Carrillo (2004), p. 34.
• Political and administrative adscription and jurisdiction
• Historical records of the city’s demarcation, jurisdiction and evolution
• Endogenous profile as substantiated by historical, archaeological, political, relational, geographic, climatic and economic inheritance: the space of possibilities determined by the past

• Current identity. Formal and informal elements, contributing to determine its current identity, e.g.:
  o Value proposition: distinctiveness and actualization of the city’s offerings as a residence and destination
  o Sense of purpose, belongingness and fulfillment of both residents and visitors/partners
  o City Brand: quality of definition, global positioning, presence and mind retention amongst target audiences
  o Differentiators: deliberate fostering of distinctive features, uniqueness of these, recognition by target audiences
  o Core competencies: areas of outstanding presence or performance
  o Attractiveness: capacity to retain its native citizens and attract new ones, particularly talented ones
  o Comparative positioning: rankings, awards, recognitions, benchmarks
  o KBD Policy: existence and enactment of a formal KBD Strategy

2. **Intelligence capital.** External value referents: all those elements generated as an attempt to visualize and understand its context, to check against its identity and to develop into a strategy

• City Intelligence System. Quality of the city’s systems to sense, make sense of and respond to agents and events which are significant to the city’s welfare
  o Sensing capabilities: systems, procedures and competencies to focus upon and obtain strategic information
  o Sense making capabilities: capacity to interpret and communicate intelligence findings and to generate citizen’s participation and commitment
  o Response capabilities: capacity to enact effectively and efficiently collective realizations, policy making and execution

• City Future Management. Quality of the city’s system to foresee and foster its future
  o Prospected identity. Formal and informal elements composing its future vision. Clarity, viability and compelling power of such vision

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20 This factor has been extensively explored by Professor Richard Florida (2002, 2005) and others. See http://www.creativeclass.org/author.shtml
o Existence of the City’s Future Centre or formal enablement of its functions\textsuperscript{21} through another kind of social innovation initiative

**Articulation Capital.** Value elements providing cohesion and making possible the recombination or exchange of value elements

3. **Relational Capital.** The quality of the interaction between the city’s internal significant agents, as well as between the city and its external significant ones.

4. • Internal Relational Capital. State of the interaction between significant internal agents, e.g.,
  o Cultural, legal, and economic environment
  o Institutional and political stability
  o Employment and proportion of economically active population
  o Social cohesion and urban integration
  o Human rights enforcement
  o Wealth and knowledge distribution
  o Race, religion and culture diversity and tolerance
  o Social integration of women and gender equality
  o Social awareness and democratic participation
  o Neighborhood integration and urban sprawl\textsuperscript{22}
  o Intensity and quality of social transactions
  o Public safety
  o Private (family and other social cells) bonding
  o Legality and egalitarianism. Social inclusion and law enforcement
  o Transparency. Advances in legislation and practices of access to information and social accountability
  o Corruption control. International transparency benchmarks
  o Gobernability. Strength of social institutions’ international benchmarks

• External Relational Capital. State of the interaction with significant external agents, e.g.,
  o International and national image
  o Public and private networking


\textsuperscript{22} See Carrillo, 2006, p. 280: “sprawl” epitomizes the alienation of urban experience, often expressed by a growing inability to recognize and respond to others (see also Robert Putnam’s work on social degradation in US society).
5. **Financial Capital.** Monetary denomination of a set of value dimensions.

- **Macro-indicators.** Set of economic indicators conventionally used for basic international comparisons, e.g.,
  - GDP, GDP per cápita, growth forecasts
  - Budget balance
  - Industrial production
  - Consumer price index
  - Trade balance
  - Current account
  - Foreign currency reserves
  - Bonds
  - Stock exchange index
  - Interest rates
  - Inflation
  - Unemployment
  - Income salary
  - Sovereign debt
  - Investment risk qualification

- **Public accounts.** The official city accounts as established by regional, national and international accounting norms\(^\text{23}\)
  - Gross domestic product (GDP) at market prices
  - Gross national income (GNI) at market prices
  - Net national income (NNI) at market prices
  - Net national disposable income
  - Gross capital formation
  - Saving net

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PRODUCTIVE CAPITALS. Those forms of capital that directly intervene in a value generation process, as inputs, agents, instruments or products.

**Human Capital.** Value generating capacity of individual and collective social agents

### 6. Human Individual Capital. Value generating capacity of individuals

- Individual endowment. Aspects of the individual’s physical constitution, its developments and health condition, depending on environmental and social factors and determining her/his organic integrity and overall potential
  - Ethnic diversity
    - Quantitative and qualitative demographic variations
    - Immigration rate
    - Resident population by migratory status, origin and time of residence
  - Health and nutrition
    - Physical and mental welfare of individuals as well as nutrition habits
    - Life expectancy at birth
    - Life expectancy index
    - Infant mortality rate
    - Children with deficit in weight/age/height rates
    - Nutrition. Quantity and quality of food and drink intake with reference to the needs of human organism and its balance
  - Socio Economic: Economic base from which the city inhabitants have access to opportunities to develop their productive potential
    - Economically active population
    - Economic participation rate
    - Week workload average
    - Income distribution
    - Poverty indicators

- Intellectual. Aspects of intellectual and emotional development of individuals which are determined by the environmental and social conditions and determine its organic integrity and overall potential
  - Normal capacities. Individual competencies and performance in the family, education and production environments
- Family integration competencies. “Knowledge, capacities and skills aggregated to the effectiveness of attitudes and practice of families which facilitate and promote children’s survival, development, protection and participation” (UNICEF)
- Formative competencies. Amount of individuals and quality of their performance in formal education institutions
- School education system. Amount of individuals and quality of their performance in formal education institutions of the school system
- Productive competencies. Amount of individuals and quality of their performance in formal production activities
- Knowledge intensive competencies. Amount of individuals and quality of their performance in formal production activities
- Lifelong and career development. Amount of individuals and quality of their performance in continued training and education after regular graduation and before retirement
  - Special capacities. Individuals with special capacities with access to required learning process and infrastructure
  - Knowledge citizens competencies
  - Socio-cultural competencies. General level of cultural and civic performance
    - Social. Habits, civic culture, urbanism, including driving and waste-disposal habits
    - Domestic. Individual social behavior and neighbor relationships
    - Cultural. Cultural competencies of individuals, including artistic capacities and cultural patterns and attitudes such as reading habits, diversity tolerance and safe-sex practices

- Organic. Structural human dispositions having an impact on the constitution of organizations or on their functions
  - Demographic structure. Statistical composition of the population by demographic factor
  - Public health. State of collective physical and mental welfare and conditions determining it
    - Social welfare. Coverage and quality of social welfare institutions
    - Births managed by health professionals
    - Urban population with access to adequate sanitation
    - Epidemiology. Public management of endemic diseases and health risks
    - Public response capacity to epidemic hazards

24 see Martínez, 2006
- High impact diseases. Deadly or severe avoidable diseases which depend on habits and affect large sections of the population, such as cardiovascular diseases, diabetes and AIDS
- Main causes of death
- Percentage of deaths attributed to avoidable causes
- Addictions. Narcotics, alcohol and tobacco consumption
- Volume of consumption and annual variation
- Number of deaths caused by addictions

• Intellectual. Knowledge-based, including emotional and cultural collective capacities
  - Cultural heritage. Social transmission of knowledge and values from generation to generation through uses and customs
    - Languages. Conservation and general level of proficiency
    - Native language proficiency level
    - Mastery of a second language
    - Religions. Consistency with own religious beliefs and tolerance of other religious or non-religious perspectives
    - Arts. General aesthetic development and artistic expression capacity of the population
    - Handcrafts, customs, regional cuisine and dressings, celebrations and rituals.
  - Socio-economic environment. Collective dispositions to effectively engage in productive action
    - Competitiveness. Capacity to create and sustain a favorable environment to generate more economic value and social prosperity
    - City ranking in national and international competitiveness benchmarks
  - Evolutionary capacities. Collective dispositions towards social learning and effective change
    - Cultural diversity. Richness of the city’s cultural makeup
    - Tolerance. Capacity to relate empathically and assertively with people of a different racial, social, cultural or economic background
    - Civic culture and citizen participation. General level of self-governance and initiative
  - Entrepreneurship. Collective capacity to create new high-value businesses
  - Innovation. Collective capacity to conceive and effectively develop new ways to add value in any relevant human activity

Instrumental Capital. The means of production through which other capitals leverage their value generation capacity
8. **Instrumental-material Capital.** Physical-based means of production through which other capitals leverage their value generation capacity.

- **Geographic**
  - Longitude and latitude
  - Orography, hydrography, geology, seismology and soil composition. Geographic elements determining the physical setting of the city and its possibilities, such as accessibility, water resources, type of constructions, etc.
  - Climate. Is the average state of meteorological elements in a region, considering a long period of time
  - Landscape. Aspect of natural surroundings
  - Flora, fauna and other natural assets and liabilities

- **Environmental**
  - Physical environment: air, soil and water quality and pollution
  - Urban environment: urban landscape, architectural harmony
  - Visual, auditive and olfative pollution

- **Urban infrastructure**
  - Material cultural heritage (Historical sites and archaeological records, historic buildings and monuments, museums and retrospective collections, objects and samples inventories)
  - Underground infrastructure (pipelines, drinking water, coverage and quality of the drinking water distribution network, quality of drinking water, sewage, natural gas, wire networks, civil infrastructure
    - Urban configuration (Zonification, district configuration, neighborhoods, housing, green and recreational areas, parks, natural reserves and protected areas, squares, sports centers, streets, avenues and transit infrastructure, highways and fast roads, bridges and tunnels, natural hazards protection infrastructure
    - Urban sprawl, massive popular housing, enclosed residential areas, urban gap, architectural eclecticism, visual pollution density, disruption of natural landscape, automobile precedence, automobile infrastructure, vehicle census, traffic fluency
    - Public transportation network, metro, buses, taxis, suburban connectivity
    - Airports, national flights, international flights
    - Maritime ports, train and bus terminals and stations, railroad network, road network
    - Communications, surface mail and telegraph, telecommunications, intra-connectivity
- Local radio, TV and data networks
- External Connectivity: telephone, national and international radio, TV and data networks, Internet access
- Crime prevention, ranking in regional and international crime prevention index; inhabitants: policemen ratio; coverage, quality of public and private crime prevention

  o Productive Infrastructure
    - Industrial infrastructure. Installed capacity in investment and productivity
    - Commercial infrastructure.
    - Service Infrastructure
    - Health and social welfare: land, buildings, installations, equipment, furniture and tools for medical and sanitary services.
    - Hotel capacity. Rankings in international benchmarks
    - Leisure and entertainment facilities: total area of family recreation space, restaurants, theatres, cinemas, arenas, stadiums and other spectacle seats
    - Bohemian index\(^2^5\), number of places offering live music
    - Conferences, fairs and business events infrastructure. Ranking in international benchmarks for business events.

9. **Instrumental-intangible Capital.** Knowledge-based means of production through which other capitals leverage their value generation capacity.

  • Social organization structure. Structural capacities of social subsystems
    
    o Social innovation system. Structural innovation capacity of social subsystems
      - Productive innovation. Innovation capacity of the private sector, new businesses incubation and creation, proportion of high-value new business creation, survival rate of new businesses after 5 years, initial public offerings
      - Educational, scientific and technological innovation. Innovation capacity of the education, scientific and technological establishment, university curricula life cycle, scientific citations and networking, patents and licenses as percentage of population
      - Government innovation. Innovation capacity of the public sector; legal reforms; rankings in international government efficiency benchmarks, political organization and participation
    
    o Civil organization system. Structural capacities of NGOs, total registered NGOs, annual NGOs growth, citizen participation in NGOs.

MAKCi Criteria (Macro-performance dimensions or capital base). As mentioned earlier, the MAKCi Framework is based on an assessment of a city’s capital base (both tangible and intangible) and its capacity to recombine it in innovative ways. Based on the above concepts, the following eight criteria will be used to assess each of the cities nominated to the MAKCi Awards:

[Rate on a scale of 1 (poor) to 10 (excellent) each city's capabilities against the eight capital categories listed below:]

- **Productive System.** Structural capacities of the private sector, total ISO certified companies, ISO certifications by sector.
- **Educational, scientific and technological system.** Structural capacities for education, science and technology: education indicators; science and technology indicators.
- **Government system.** Structural capacities of government bodies: Legislative, Executive, Judiciary; government efficiency; accountability and performance of government bodies.
- **Information and telecommunications functional capacities.** Structural capacities, traditional and ITC-based for information and communications
  - **Information platforms.** Printed and electronic media containing information about civil society, private industry, education and government.
    - Physical systems for recording, storing, retrieving, processing, and distribution; printed and electronic periodical publications.
    - Electronic information systems. Electronic systems for recording, storing, retrieving, processing, and distribution
    - E-government: coverage, transparency, accessibility and usability, content, services, participation.
- **Knowledge bases and systems.** Records, archives and collections sustaining the city memory.
  - Physical-base records. Records in non conventional documentary units, e.g.: stone encryptions, codices, etc. where the content is the most valuable aspect.
  - Records and archives. All records in formal document units.
  - Digital memory. All records and document units containing information about the civil society, private industry, education and government.
  - Electronic databases. Data repository about the civil society, private industry, education and government.
  - Public information services. Information resources offered to the public by agents of the civil society, private industry, education and government.
1. **Identity** – capability to create and evolve a distinctive and well-positioned urban personality.

2. **Intelligence** – capability to identify/foresee and adequately respond to significant agents and events.

3. **Financial** – capability to generate and sustain a healthy monetary base

4. **Relational** – capability to develop quality interactions with all significant internal and external agents.

5. **Human Individual** – capability to create conditions for the full biological and psychological development of residents.

6. **Human Collective** – capability to enhance the goal achievement potential of its constituent communities.

7. **Instrumental-material** – capability to take advantage of location and to build and renew a world-class physical infrastructure.

8. **Instrumental-intangible** – capability to transfer knowledge and foster innovation in all major areas of city life.

**References**


Appendix 2 – 2008 MAKCi Method

The MAKCi Awards exercise replicates Teleos' MAKE method, based on a Delphi technique to select the winner of the Award.

In order to conduct the MAKCi exercise, the same method followed by Teleos for the MAKE Awards has been replicated. These procedures have been adapted to integrate a number of criteria drawn from state-of-the-art R&D on the subject. A panel of 100 experts has been assembled after screening around 500 profiles among practitioners, scholars and public officers around the world. In doing so, a balance of region, discipline, gender and culture has been followed as far as possible in order to achieve the most balanced and unbiased perspective. With the exception of the regions of Africa and Central Asia, those criteria have been met. We expect to correct this constraint in further editions of the study.

In the MAKE, as well as in the MAKCi exercise, there are three rounds to select the winners of the award. The dynamics of this years’ exercise are the following:

1. While permanently using a digital online platform to manage contributions, the first round invited to nominate a limitless number of candidates and substantiate nominations by using the MAKCi Nomination Form (see Appendix 6). Other participants could continually add elements in favor or against any specific nomination.

2. The second round requested the selection of up to three finalists, while continuing to add elements of justifications on all nominated cities. You can read and post your criteria for voting 24/7 (anonymously) in the Discussion Room of the MAKCi Virtual Platform.

   All nominated cities could qualify as finalists with 10% (p.r.) of total votes, and thus could be included in the final round (this year, the minimum percentage was 8%). The list of cities voted as finalists is also limitless, and votes were received on an online survey tool platform. The MAKCi Awards Committee is accountable and auditable for every vote received.

   1. Round 3 is conducted through an online survey tool (similar to the Round 2 tool). In order to minimize time commitments, the survey was designed to be completed online. It aimed to require no more than 5 minutes to complete each of the planned three survey stages.

In the survey, participants were asked to rate three cities out of the list of finalists in each of the eight capitals mentioned in the MAKCi Framework:
   1. Identity capital
   2. Intelligence capital
3. Financial capital
4. Relational capital
5. Human Individual capital
6. Human Collective capital
7. Instrumental-material capital
8. Instrumental-knowledge capital.

Each finalist city underwent the scrutiny of these standards in the 3rd round. The first, second and third best ratings would be designated as the three 2007 MAKCi winners. In the 2007 MAKCi study edition, the winners were representatives of three different continents.

On the other hand, the MAKCi Committee follows a strict privacy policy during the first two Rounds of the exercise, and only participants who wished to disclose their identities were able to do so in discussion rooms. This anonymity commitment seems to be a core social etiquette in this kind of exercise. However, the MAKCi Committee is fully accountable and auditable for all information received for the purposes of the MAKCi awards.

It is from the above-mentioned list only that participations, nominations and votes were accepted to build up the first two Rounds of the MAKCi exercise. It also informed the Final Round 3, which decided the winners of the Most Admired City Award.

The timeframe for conducting the 2008 edition of the MAKCi study was planned as follows:

- February-March 2008: Consultation
- April-May 2008: Data analysis
- October-November 2008: Release of 2008 MAKCi Awards results to the general public and Presentation of Finalists case studies.
### Appendix 3 - 2008 MAKCi Nominees

<table>
<thead>
<tr>
<th>2008 MAKCi Nominees</th>
<th>Total Votes</th>
<th>Total Vote %</th>
</tr>
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<td><strong>Donostia-San Sebastian, Spain</strong></td>
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## Appendix 4 – 2008 MAKCi Voting Trends

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<th>Manchester</th>
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<td>17.14%</td>
<td>17.14%</td>
<td>12.38%</td>
<td>20.95%</td>
<td>14.29%</td>
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## Appendix A — 2008 MAKCi Panel of Experts

<table>
<thead>
<tr>
<th>Appendix A</th>
<th>MAKCi Experts</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008 MAKCi</td>
<td>Panel of Experts</td>
<td></td>
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<tr>
<td>1</td>
<td>Katarina Ala-Råmi</td>
<td>PhD Senior lecturer. Department of Geography. University of Oulu, Oulu, Finland.</td>
</tr>
<tr>
<td>2</td>
<td>Angel Arbonies</td>
<td>Director. MIK. Mondragon, Bilbao, Spain.</td>
</tr>
<tr>
<td>3</td>
<td>Glenn Arce Larrea</td>
<td>Ibero-American Community for Knowledge Systems (CISC), Arequipa, Peru.</td>
</tr>
<tr>
<td>4</td>
<td>Jon Azua Mendia</td>
<td>Chairman, Entovating Lab. Bilbao, Spain.</td>
</tr>
<tr>
<td>5</td>
<td>Surinder Batra</td>
<td>Professor. IT. Institute of Management Technology and CIMI Founder. Ghaziabad, India.</td>
</tr>
<tr>
<td>6</td>
<td>Alex Bennet</td>
<td>Senior Consultant &amp; Founder. Mountain Quest Institute. USA.</td>
</tr>
<tr>
<td>7</td>
<td>David Bennet</td>
<td>Senior Consultant &amp; Founder. Mountain Quest Institute. USA.</td>
</tr>
<tr>
<td>8</td>
<td>Raphaële Bidault-Waddington</td>
<td>Laboratoire d'Ingénierie d’Idées./ The Idea Engineering Laboratory, France.</td>
</tr>
<tr>
<td>9</td>
<td>Ahmed Bounfour</td>
<td>Professor. University Paris-Sud (Orsay) France, &amp; European Chairman on IC Management.</td>
</tr>
<tr>
<td>10</td>
<td>Eduardo Bueno</td>
<td>Director. Research Centre of Knowledge Societies, Spain. Ibero-American Community for Knowledge Systems (CISC), Guayaquil, Colombia.</td>
</tr>
<tr>
<td>11</td>
<td>Ollilia Carlier</td>
<td>President. AITH Consultants INTECYPEM. Valencia, Spain.</td>
</tr>
<tr>
<td>12</td>
<td>Fernando Casado B.</td>
<td>Director. AITH Consultants INTECYPEM. Valencia, Spain.</td>
</tr>
<tr>
<td>13</td>
<td>Fernando Chaparro</td>
<td>Director. Centre for Knowledge Management. University of Rosario, Colombia.</td>
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<tr>
<td>14</td>
<td>Jay Chatzkel</td>
<td>Director. Progressive Practices. Phoenix, Arizona. USA.</td>
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<tr>
<td>15</td>
<td>Stephen Chen</td>
<td>Associate Professor of Management. Department of Business. Macquarie University, North Ryde NSW. Australia.</td>
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<td>16</td>
<td>Carol C. Coletta</td>
<td>CEO &amp; President. CEOs for Cities. Chicago, Ill. USA.</td>
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<tr>
<td>17</td>
<td>Simon Duecker</td>
<td>CEO. Cognexeon GmbH-The Knowledge Company.</td>
</tr>
<tr>
<td>19</td>
<td>Ron Dvir</td>
<td>Future Centers, Tel-Aviv, Israel.</td>
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<tr>
<td>21</td>
<td>Kostas Ergazakis</td>
<td>Lecturer. School of Electrical and Computer Engineering. National Technical University of Athens, Greece.</td>
</tr>
<tr>
<td>Number</td>
<td>Name</td>
<td>Position/Institution</td>
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<tr>
<td>25</td>
<td>Peter Franz</td>
<td>Professor. Urban Economics, Halle Institute for Economic Research, Halle (Saale), Germany</td>
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<tr>
<td>26</td>
<td>Cathy Garner</td>
<td>Chief Executive Officer, Manchester: Knowledge Capital, Manchester, UK.</td>
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<tr>
<td>27</td>
<td>Cindy Gordon</td>
<td>Chief Executive Officer and Founder. Helix Commerce.</td>
</tr>
<tr>
<td>28</td>
<td>Nicolas Gorjestani</td>
<td>Senior Adviser and Chief Knowledge and Learning Officer of the African Region, The World Bank Group</td>
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<tr>
<td>29</td>
<td>Daniel Guevara</td>
<td>KM Team Leader, Prolec GE, Mexico</td>
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<td>30</td>
<td>Dario Herrera</td>
<td>Ibero-American Community for Knowledge Systems (CISC), Country Representative, Colombia</td>
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<td>31</td>
<td>Hana Hertzman</td>
<td>CEO, Municipality of Holon, Israel</td>
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<td>32</td>
<td>Tommi Inkinen</td>
<td>Senior Lecturer Department of Geography University of Helsinki, Finland.</td>
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<td>33</td>
<td>Karmen Jelcic</td>
<td>Intelligence Capital Centre, Zagreb, Croatia</td>
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<td>34</td>
<td>Omar Jimenez Rosano</td>
<td>Lecturer in Economics, Monterrey Institute of Technology, Puebla, México.</td>
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<td>35</td>
<td>Günter Koch</td>
<td>President, Execupery, Wien, Austria</td>
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<td>36</td>
<td>Konstantinos Kostopoulas</td>
<td>Research Fellow at the Management Science Laboratory, Athens University of Economics &amp; Business, Greece</td>
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<td>37</td>
<td>Charles Landry</td>
<td>Director &amp; Founder. Comedia. (Consultancy on Creativity, Culture and Urban Change) Gloucester, UK</td>
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<td>38</td>
<td>Rongbin W. B. Lee</td>
<td>Director. ICT Policy Research Fellow. Public Policy Department, Hong Kong Polytechnic University, Hong Kong, China</td>
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<td>39</td>
<td>America Martinez</td>
<td>Associate Professor, School of Electrical and Computer Engineering, National Technical University of Athens, Greece</td>
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<td>40</td>
<td>Christian Mathiessen</td>
<td>Professor. Urban Studies. Institute of Geography, University of Copenhagen, Denmark.</td>
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<td>41</td>
<td>Nicholas C. Maynard</td>
<td>Associate Professor. School of Electrical and Computer Engineering, National Technical University of Athens, Greece</td>
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<td>42</td>
<td>Kostas Metaxiotis</td>
<td>Associate Dean, Faculty of Humanities. University of Deusto, San Sebastian, Spain.</td>
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<tr>
<td>43</td>
<td>Carla Millar</td>
<td>Research Associate Centre for Cities London, UK.</td>
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<td>44</td>
<td>Sandrine Molinard</td>
<td>Metropolitan Development Centre, Monterrey Institute of Technology, Monterrey México.</td>
</tr>
<tr>
<td>45</td>
<td>Alazne Mújika</td>
<td>President, COLDi (Colombian Corporation for Intelligent Development), Santander, Colombia</td>
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<tr>
<td>46</td>
<td>Max Nathan</td>
<td>Director and Senior Consultant. Edna Pasher PhD, and Associates, Management Consultants, Tel-Aviv, Israel</td>
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<tr>
<td>47</td>
<td>Manuel Neira</td>
<td>Director &amp; Senior Consultant. Yossi Pasher &amp; Associates. (Training, Coaching and Management Consulting), Tel-</td>
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50. Katia Passerini - Assistant Professor, MIS/ School of Management, New Jersey Institute of Technology, New Jersey, USA

51. Cesar Peña Vigas - Chancellor, Technological University of the Centre, Carabobo, Venezuela


53. Reinaldo Plaz Landeta - Technology Development Director, Centre for K-Society Research, Research Institute on KM & Innovation, University of Madrid, Spain.

54. Ante Pulic - Founder of Croatia IC Centre, Professor of Economics and Business Organization, University of Zagreb, Croatia & University of Graz, Austria.

55. Pablo Ramirez - Institute of Technology, (ITESM) Monterrey, Mexico.

56. Gabriel Ramirez - Ibero-American Community for Knowledge Systems (CISC), Santiago, Chile.

57. Ahmad Raza - Senior Research Associate in Management Sciences, School of Business and Economics, University of Management and Technology, Lahore, Pakistan.

58. Waltraut Ritter - Managing Director, Knowledge Enterprises, Founding President of the Hong Kong KM Society, Hong Kong, China.

59. Francisco Rodríguez - Ibero-American Community for Knowledge Systems (CISC), Lima, Peru.

60. Leandro Roldán - Program Coordinator, INCUBACEN, University of Buenos Aires. Member of CISC, Buenos Aires, Argentina.

61. Ramon Sanguino Galvan - Professor, University of Extremadura, Badajoz, Spain

62. Giovanni Schiuma - Professor and Scientific Director of Centre for Value Management, University of Basilicata, Italy.


64. Ursula Schneider - Professor, Head of Institute of International Management, University of Graz, Austria.


66. Anssi Smedlund - University of Technology, Helsinki, Finland.

67. David Snowden - Founder and Chief Scientific Officer of The Cognitive Edge, UK.

68. Takayuki Sumita - Director, Technology Promotion Division, KPMG ASZA & Co, Tokio, Japan.

69. Rémy Tremblay - Chair, Canada Research on Knowledge Cities, University of Quebec, Canada.

70. Gabriel Valerio - Centre for Knowledge Systems, Monterrey Institute of Technology, (ITESM) Monterrey, Mexico.
### Appendix B

<table>
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<th>2008 MAKCi IAB</th>
<th>MAKCi International Advisory Board</th>
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<td>1</td>
<td>Surinder Batra</td>
<td>Professor, IT. Institute of Management Technology and CIMI Founder, Ghaziabad, India.</td>
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<td>Alex Bennet</td>
<td>Senior Consultant, Founder, Mountain Quest Institute, USA.</td>
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<td>3</td>
<td>Nick Bontis</td>
<td>Director, Institute for Intellectual Capital Research, &amp; Associate Professor, McMaster University.</td>
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<tr>
<td>4</td>
<td>Fernando Chaparro</td>
<td>Director, Centre for Knowledge Management, University of Rosario, Colombia.</td>
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<td>Cathy Garner</td>
<td>Chief Executive Officer, Manchester: Knowledge Capital, Manchester, Manchester, UK.</td>
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<tr>
<td>6</td>
<td>Carla Millar</td>
<td>Professor of International Marketing and Management. University of Twente, Enschede, The Netherlands.</td>
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<tr>
<td>7</td>
<td>Katia Passerini</td>
<td>Assistant Professor, MIS/ School of Management. New Jersey Institute of Technology, N.J., USA.</td>
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<td>Edna Pasher</td>
<td>Senior Consultant, Edna Pasher Associates, Tel-Aviv, Israel.</td>
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<td>9</td>
<td>Giovanni Schiuma</td>
<td>Centre for Value Management, University of Basilicata, Italy.</td>
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<tr>
<td>10</td>
<td>Caroline Wong</td>
<td>Associate Lecturer for the MBA and Management postgraduate programs, Australia National University (ANU), Canberra, Australia.</td>
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<td>Appendix C</td>
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<td>1</td>
<td>Javier Carrillo</td>
<td>President, The World Capital Institute. MAKCi Awards Project Director.</td>
</tr>
<tr>
<td>2</td>
<td>Rory Chase</td>
<td>Managing Director, Teleos-MAKE</td>
</tr>
<tr>
<td>3</td>
<td>Blanca Garcia</td>
<td>Research Fellow, The World Capital Institute. MAKCi Awards Technical Secretary.</td>
</tr>
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</table>
## Appendix 6 - MAKCi 2008 Nomination Form

**Name**: ____________________________  **Email**: ____________________________

**Affiliation**: ________________________________________________________________

*This information will remain strictly confidential, only needed for auditing purposes.

**Nominated City**: __________________ (Country: ________________________)

*Please use one MAKCi Nomination form for each nominated city. You can nominate as many cities as you like.

### MAKCi Questions
(They are grouped together according to **MAKCi Framework** capital categories)

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<tr>
<th>A. IDENTITY, INTELLIGENCE AND RELATIONAL CAPITALS</th>
<th>Supporting reasons and relevant information, documents and links (to be provided/posted by expert) on the MAKCi Forum</th>
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<tbody>
<tr>
<td>1. How distinctive and well positioned is the city’s identity (how valuable is the city’s brand and reputation)? (1. Identity).</td>
<td></td>
</tr>
<tr>
<td>2. How good is the city knowledge-based development strategy and the capability to enact it? (1. Identity).</td>
<td></td>
</tr>
<tr>
<td>3. How good are the city’s strategic intelligence systems (e.g. does it have a <em>Future Center</em> or equivalent initiative?) (2. Intelligence).</td>
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</tr>
<tr>
<td>4. How strong is the city’s social cohesion? (4. Relational).</td>
<td></td>
</tr>
<tr>
<td>5. How good are the city’s regional, national and international relations? (4. Relational).</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>B. FINANCIAL AND INSTRUMENTAL-MATERIAL CAPITALS.</th>
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<tbody>
<tr>
<td>6. How healthy are public financial accounts? (3. Financial)</td>
</tr>
<tr>
<td>7. How good is the city’s location, climate and physical landscape? (7. Instrumental-material).</td>
</tr>
<tr>
<td>8. How advanced are the city’s environmental policies? (7. Instrumental-material).</td>
</tr>
<tr>
<td>Question</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>9. How good is the quality of urban physical infrastructure? (7. instrumental-material).</td>
</tr>
<tr>
<td>10. How good is the city’s transportation and telecommunications connectivity? (7. Instrumental-material).</td>
</tr>
<tr>
<td>C. HUMAN INDIVIDUAL, HUMAN COLLECTIVE AND INSTRUMENTAL K-CAPITALS.</td>
</tr>
<tr>
<td>11. How ‘youthful’ is the city (e.g., how large is the demographic cohort of people under the age of 25)? (5. Human individual).</td>
</tr>
<tr>
<td>13. How equal are social and economic opportunities for individuals citizens to develop their full potential? (5. Human individual).</td>
</tr>
<tr>
<td>D. INSTRUMENTAL TANGIBLE-INTANGIBLE CAPITALS</td>
</tr>
<tr>
<td>14. How robust is the governance and social organization structure?</td>
</tr>
<tr>
<td>15. How good is the coverage and quality of public information services (e.g., e-Government)?</td>
</tr>
<tr>
<td>16. How diverse and creative is the city’s cultural environment?</td>
</tr>
<tr>
<td>17. How good is the city’s collective capacity to foster economic and political innovation?</td>
</tr>
</tbody>
</table>

Please feel free to include additional information (as many pages as you like) to support each of your nominee cities, especially if relevant to IC/KBD/KBUD schemes.

Feel free to send your MAKCi Nomination Form to makci.mty@servicios.itesm.mx. Alternatively, send us a note and we will create the folder in which you can Upload your nomination, using the KBD Community Uploads tool (Find it within the Modules menu).