

CENTER FOR HIGH DENSITY DEVELOPMENT CHDD RESEARCH JOURNAL 2008 Vol IV



COLUMBIA UNIVERSITY
MSc in Real Estate Development
Graduate School of Architecture, Planning & Preservation

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Summer Terrace Series

Three Strategic Conversations on the Character and Future of Metropolitan New York--P.3



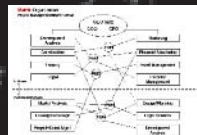
Repositioning and Turnaround Methodologies

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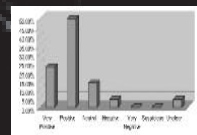
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DIRECTOR'S VIEWPOINT



Director's Viewpoint

Michael P. Buckley, Director, Columbia MSRED Program



Training The Next Generation Developer

We believe Developers must balance multiple objectives and command broad skill spectrums. Columbia MSRED Program is a fast-paced, curriculum for public policy and research, and core competencies in real estate finance, enterprise management, and product development.

Focus on Four Quadrants:

- ›Finance: Accessing Capital Markets and Equity Sources
- ›Enterprise Management: Managing Process & Talent
- ›Product Design: New Markets and Lifestyles
- ›Public Policy: Managing Quality of Life expectations

Special Emphasis on Managing Creativity

As developers seek to build competitive advantage, we seek to extend MSRED Research and integrated Case Study Studios to explore new methods for managing complex teams. We know creative ideas and concepts add value, and this means Managing the Enterprise is even more critical. Our new Development Case Study Studio format encourages teaming with other professionals from Architecture, Planning and Preservation.

Recognizing Globalization

New York City offers an extraordinary international venue with its concentration of executives, venture funds and financial institutions. Columbia's reputation for international studies will permit us to build on our current research on Global Development Incentives and Strategic Industries and on our new International Development course.

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GLOBAL DEVELOPMENT INCENTIVES STUDY

GLOBAL DEVELOPMENT INCENTIVE STUDY

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GDIS Target Regions + Strategic Industries:

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- Stephen Marino 05--USA
- Mohenad Itayim 05--- Dubai
- Shayoi Shang 05--Beijing
- Hannah Zhu 05--Shanghai
- Tak Sum Choy 05--Singapore
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- Yunsik Kim 05--Korea
- Jae Ho Chang 05-- Mega Projects
- Adam Feir 06--Transaction Support
- Aaron Mazell 06- Medical Expo

GDIS PREAMBLE/OBJECTIVES

IMPACT OF GLOBALIZATION ON DEVELOPMENT

Increasingly, the economic fate of both Sovereign Nations and Multinational companies are intertwined, a trend enhanced by communications and globalization. Both live in a world of competitiveness which has changed the rules of the game. Frontiers between nations are losing importance; ideas, values and practices now move freely from one nation to the other. Inside enterprises, specific high-quality areas of competency with specific boundaries, the so-called "silos" of excellence, are under attack. They are now challenged by a strategy of Industry Clusters in multiple locations and around-the-clock operations.

The use of central planning policies, subsidizing state-owned industries, protectionism and import substitution were the typical avenues to induce growth. Recent history of economic development argues against complacency –as rapid and stable growth is a high-wire balancing act that is not easily sustained. As is now becoming more apparent, investment-led, state-directed approaches that derive demand from exports alone may not yield the societal benefits that such mechanisms achieved in the past.

For perhaps the first time in human history, a true Global Development Environment exists--where Institutional, Government and Corporate Enterprise capital is now seeking productive placement. Countries are now placing greater emphasis on financial sector performance, and on education and workforce skill sets required to move into production of more technologically-advanced goods and services.

INDUSTRY CLUSTERS

Networking among firms in Industry Clusters has proven to promote both innovation and efficient resource use and is more fruitful when many like-style industries agglomerate in urban clusters.

Industry Clusters feature vertical specialized core activities, such as electronics, biotechnology, digital media, and software, which are powerfully reinforced by suppliers of both technical inputs as well as business services, such as financiers, lawyers, marketing specialists, and accountants. Successful Industry Clusters rely on policies which encourage cultural diversity and expanded links with other Clusters worldwide. Process innovation is seen as a function with networked firms in an open and competitive, policy-supported environment. Now, as development shifts to more innovation, global integration, and knowledge flows, growth depends on:

- | |
|--|
| • Investment in R&D support for a strong and efficient Business Services sector; |
| • Promotion of IT as an end in itself as an enabler of both manufacturing and Business Services; |
| • Deliberate integration with world Capital and Supply chain markets. |

FOCUS ON STRATEGIC INDUSTRIES

We have focused on a select set of Technology Enabled Growth Industries which we believe to be mobile as to location. The discussion is intended to provoke a new Strategic direction for Cities or Special Projects in which Incentives are matched to these certain Niche Strategic Industries:

• Digital Media---emphasis on interactive and motion graphics in support of Internet sales and marketing
• Medical Equipment Exposition-- the display and training for high tech Diagnostic and Surgical equipment
• Aqua Science-- focus on water Quality, management, and supply /conservation applications
• Digital Transaction Support -- services and systems for volume transactions including clearing, account servicing and due diligence functions
• Alternative Energy -- services aligned with energy supply + conservation + alternative generation and transmission applications
• Logistics ---Supply Chain Management challenges with optimization and crisis management applications for Air / Sea Shipping , container evolution and handling technologies, warehousing and land based distribution systems
• Pan Asian Workforce Training--focus on specific business applications for accelerated concerted learning in cross-cultural contexts

CLUSTERING STRATEGIC INDUSTRIES

It has been proven that Industry Clustering spurs innovation and allows firms to benefit from generalized economies associated with the availability of diverse skills and infrastructure, from the cross fertilization of ideas and learning, and from face to face executive and team contacts. Industry Cluster and proximity generates benefits in productivity and innovation.

- **"Deep" qualified labor market.** This deep pool allow firms to find better employment matches for their needs, and allows transmission of tacit knowledge between firms as employees move from firm to firm. World cities such as London derive some of their success from providing specialized sector firms with the large supply of skills they need.
- **Pool of specialized service suppliers** that can customize services to meet purchasers' needs. Without a large potential market for specialist services, only generic service suppliers will remain.
- **Proximity to large multi-national foreign firms, or to universities and research institutes.** generates the potential for knowledge spillovers. Large firms tend to be demanding purchasers, requiring constant improvements from suppliers, encouraging collaboration and sharing best practices.

Clusters thus thrive on the density of informal networks made possible by proximity, further reinforced by new communications technology. High Tech Clusters depend on large, diversified, and efficient labor markets to draw and retain people with a mix of skills and discriminating knowledge workers. A successful cluster accumulates and continuously refreshes human capital.

KEY FINDINGS--ESTABLISH RESEARCH INSTITUTES

The use of extraordinary publicity and prestige value of selected new Research Institutes to induce commercial Development and encourage attractiveness to occupiers is proven in a variety of settings from Computer Science in Austin Texas to Bioscience in Singapore. The GDIS Study suggests that a host region should match a new Research Institutes to Niche Strategic Industries.



END USER LOCATION DRIVERS

INFLUENCE OF LOCATION ADVISORS

A relatively small group of professional location advisory consultancies of 15-20 firms worldwide, have a disproportionate share of influence on Corporate End User location decisions.

These firms are well known to Corporate Real Estate Executives based on the proprietary methodologies which analyze expansion options and new facility requirements combined with cost vs. opportunity models which factor in costs of doing business and offsets such as Incentives.

Often these professional have invested time to understand the unique requirements of specific business units and are frequently closely attuned to the goals and aspirations of the corporate sponsors.

A typical location analysis will illuminate regional differences in Workforce availability and skill sets, operational costs and history of Incentives. Increasingly these professional advisors are guiding their Corporate clients to locations which feature--

• Presence of defined Industry Clusters
• Critical mass in facilities, people and amenities
• Recognized Centers of Excellence with "Branded Research" and / or Educational Institutes
• Locations which favor diversified and sophisticated Live / Work options to attract Global talent
• Government Incentives for both Enterprise Operations and Workforce.

These Location Advisors promote active screening of host communities locations and have reputations for actively promoting areas where they can demonstrate certain attractive qualities such as:

LOCATION ADVISORY EXPERTS INTERVIEWS

The Columbia CHDD Team interviewed several of the top Location Advisory consultants with regard to the primary Decision Drivers for Corporate End Users in location decision-making. The following are the largest considerations evidenced by these experts--

Business Factors

- **Enterprise Vision**--the market share goals and economic performance measures sought by the corporate
- **Market Dynamics / Size / Velocity**--the absolute size and growth potentials for the host market
- **Workforce skill sets + labor rate + availability**--based on business mission and match to local market sources
- **Business / Occupancy Cost Factors**--costs of doing business including enterprise-level taxation--and commercial space / occupancy costs per employee
- **Social Factors / QOL**--degree of Diversity and Cultural openness sought and Quality of Life measures--Residential +Educational + Healthcare + Amenities, etc
- **Govt / Legal Complexity**--degree of difficulty compared to home venue for compliance to regulatory / tax/reporting requirements

WEIGHTED SCORING OF LOCATIONS

According to Location Advisory experts, the following matrix illustrates the relative weight value importance of the major business factors:

Business Category	Relative Importance	Weighted Score Factors
Market Access / Capture	20%	Scale of Opportunity
Logistics	10%	Transp + Distribution Channels
Property/ Occupancy Costs	10%	Facilities + Incentives
Tele + Util Infrastructure	5%	(Presumed Available)
Labor / Workforce	15%	Skill Sets + Availability
Operating Costs	25%	Emphasis on Incentives
Businesses Risk	10%	Mitigated by IP / Legal Sys
Quality of Life	5%	Residential + Educ + Diversity
	100%	
<i>Source: Dennis Donovan</i>		

FINANCIAL FACTORS

While it is recognized that Facilities are not as significant a financial impact as Labor and for many industries, Equipment--including more sophisticated IT Infrastructure due to Enterprise Management demands--the company seeking a new location will create a Financial Model to evaluate the costs of Occupancy, including:

• Facility Occupancy Costs--adjusted by Incentives as secured
• Labor Cost differentials to staff the new location--assuming most multi-nationals employ at least 80% locals
• Recurring Costs for operations
• One-Time relocation costs
• Equipment Investment --less any set asides or grants

Very likely the differential between local labor savings and home operations will be significant --but start-up times for Occupancy and Staff Training are also a big negative factor.

Incentives, properly matched to an end User's requirements --and to the perceived biggest obstacles or hurdles such as Approvals, Workforce Flexibility, and Enterprise Taxation--can be most effective to solidify the location decision.

COLLATERAL FACTORS - PEER GROUP EXPERIENCE AND LOCAL AGENCIES

Corporate End Users also make decisions based on their Peer Groups--others they trust. Hence an early Incentive offer may well be productive to create a sense of acceptability. Leadership attitude and endorsement a critical determinants. Peer Group opinions which can influence location decisions include:

• Cooperative attitude of local /region authorities
• Perceived ease of securing As-Of-Right Incentives
• Infrastructure Reliability Telecommunication + Transport
• Quality of life and Diversity
• Workforce Availability--Ease of Hiring and Work Ethic
• True experience with fully loaded Local Operating Costs

Clearly some factors are beyond Government Influence and are driven by market Dynamics and long-wave Trends. Others can be shaped and mitigated by Incentives --both Legislation and Economic Incentives. New development should carefully assess how it would score for each category.

GLOBAL DEVELOPMENT INCENTIVES STUDY

INTERNATIONAL LOCATIONS---ASSESSING RISK

Companies seeking new International locations are increasingly concerned about certain Risks which cannot easily be factored into the location decision. These risks now include:

- Social/Labor Disruptions
- Security for Senior Execs
- Currency Devaluation
- Legislative reversals
- Political Instability
- Profit vs. Local Taxation
- Earnings Repatriation
- Intellectual Property
- Land ownership

Regions seeking to attract companies, should counter each and every one of these perceived Risks--as best they can with a purposeful exposition including these--

- Operating Experience
- Peer group endorsements
- Targeted legislation
- Special Industry targeted Incentives

To offset Risks, most Location Advisors recommend an Exit Strategy be considered by each end user --which favors commercial leased space.

STRATEGIC LOCATION FACTORS

Certain Strategic Factors are important to the Business Enterprise Location Decision, and to a Region's future growth. The location decision is composed of the following:

QUALITY OF LIFE	BUSINESS DRIVERS	STRATEGIC FACTORS
<ul style="list-style-type: none"> • Schools – Primary, Secondary, and University education • Medical/Healthcare Services + clinics • Cultural/ Learning Environment • Perceptions of Security • Housing Availability + Choice • Cost of Living • Retail and Foodservice Choices • Quality of Landscape/Open Space • Architectural Character • Climate Quality • Regional Accessibility + Transportation Systems • Recreational Offerings 	<p>Human Resources</p> <ul style="list-style-type: none"> • Skill Sets +Availability • Educational Base • Political Stability • Recruiting/Retention <p>Operating Environment</p> <ul style="list-style-type: none"> • Market Size/Share • Utilities, Telecomm, and Energy Costs • Transp / Distribution Channels • Political Risks <p>Business Costs</p> <ul style="list-style-type: none"> • Labor Cost + Reliability • Corporate Taxation • Business Charter Complexity • Legal System • Real Estate Costs 	<ul style="list-style-type: none"> • QOL measures • University R&D Linkages • Labor Skill Sets + Training regimes • IT Infrastructure • Enterprise Financing • Exploitable Market Niche • Targeted Legislation + Incentives • Development Incentives • Intellectual Property Rights • Target Market • Proximity • Transportation Network • Distribution Costs

HYPOTHETICAL "GLOBALTECH DEV CORP"

The Columbia GDIS Study created a Global Comparative Example ---with a fictional company called "GlobalTech". This entity was envisioned as an IT Software company with annual revenues of \$US. 29 Million which is seeking a regional Headquarters, and is seeking the location to penetrate new markets. The Staff composition of 250 professionals includes foreign Executives and Scientific staff--as well as locals hired to a range of skillsets. A relatively small group of foreign nationals direct the Global Tech Corp. effort.

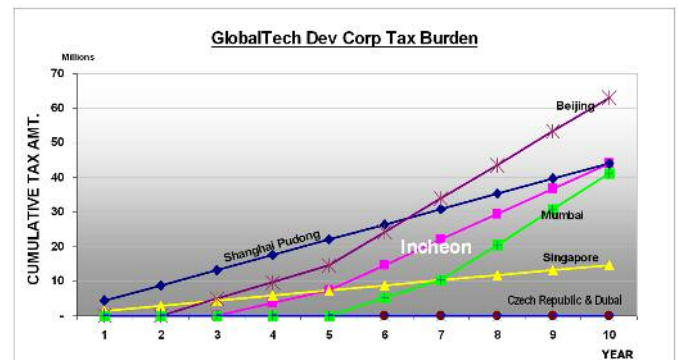
In order to compare the Incentives by each region or country. The hypothetical Company, "GlobalTech Development Corporation" was to have the following business characteristics:

- Regional Headquarters--- to be located in one of the target research regions.
- GlobalTech's Primary function ---- to support regional business activities such as finance, accounting, technical support, excluding manufacturing function.
- Stage of investment--part of an existing enterprise ---not a pioneer eligible for additional benefits from certain regions such as China and Singapore.

This hypothetical company was then compared region to region, in an application of the GDIS Incentives Matrix to determine the relative attractiveness of each region to the location of "GlobalTech"'s new regional headquarters.

To simulate hypothetical tax advantages in each target region, the GlobalTech comparison has following assumptions:

- Simulates only corporate tax burden in cumulative amount by country.
- Excludes other tax-related financial benefits such as rebate, deferral, and deduction of corporate income tax.
- If "GlobalTech Dev Corp" did not fit into any tax incentive category of a target region, it was assumed by default to pay full corporate income tax rates.



The graph above, which shows the impact of enterprise level Corporate Income Tax from selected Regions. Dubai and Czech Republic have the best tax incentives for GlobalTech with 0% corporate income tax for 10 years. Each country, except Dubai and Czech Republic, has different strengths over others depending on how long "GlobalTech", invests. For example, Incheon in Korea has strong initial advantage against Singapore, Beijing, and Shanghai by offering 0% corporate income tax for the first 3 years and 50% reduction for the next 2 years. However, Singapore exhibits a purposeful overall 10 year advantage over all of the other Asian nations.



STRATEGIC INDUSTRIES OVERVIEW

The Columbia GDIS Study focused on a select set of technology enabled Growth Industries particularly applicable to New development. The discussion is intended to provoke a new Strategic direction for development in which Incentives are matched to Niche areas which are subsets of Strategic Industries. We fully recognize that these Niche areas are a subset of the primary Strategic Industries as defined by, for example, MIT Technology Review's list of key Technology growth sectors.

- Bioscience
- Health Sciences
- Nanno Tech
- Info Technology
- Wireless Communication
- Agro-Science
- Alternative Energy
- Aqua-Science
- Digital Imaging
- Nanno Lithography
- Glycomics
- Digital Transactions
- Mass Customization
- Interactive Graphics
- Computer Processing Technology
- Data Storage & Retrieval
- Artificial Intelligence
- Cryptography

From these lists, Columbia CHDD has selected the following components as Niche areas within the Strategic Industries, which are appropriate given the scale and level of effort required for new development. For several we have also proposed the creation or sponsorship of related Strategic Niche Research Institutes:

- Digital Media
- Medical Equipment Expo.
- Pan-Asian Workforce Training
- Transaction Support
- Alternative Energy
- Logistics Support



Concept : Genster + Halcyon +Streetworks +Ernst &Young with Columbia Faculty Charles Shorter and Michael Buckley



New Songdo City in Incheon Korea is designed to create an entirely new Office and Residential District anchored by a significant Open Space and a new Convention Center with Urban Retail amenities environment, as envisioned by Gale International.

MEGA PROJECTS AND SCIENCE CITIES

The Columbia CHDD Team also researched Lessons-Learned and Best Practices from a selected set of large-scale special projects--all of which represent dedicated efforts by both the Public/ Private sectors to establish new economic expansion areas --sometimes linked specifically to target industries--with comparative data on:

- Project Area
- Density
- Quality of Life
- Land uses
- Iconic Architecture + Project Image
- Development Timeline

Science Cities include--Research Triangle USA; MIT Technology Park, USA; Sophia Antipolis, Provence France; Tskuba Science City, Japan; and Biopolis, Singapore.

Mega Projects Included-- Canary Wharf, The Docklands, London; La Defense, Paris, France; Pudong District, Shanghai, China; Hudson Yards, NYS USA; Mission Bay, San Francisco; and New Songdo.

MEGA PROJECTS LESSONS -LEARNED

Review of development histories and strategic impact of selected Mega Projects illustrates:

Exclusively enabled by Public Sector with high quality Master planning with Urban Design goals and Iconic architecture fully expressed
Cohesive sequences of Public Space and quality Landscape treatments
Large modern Building Footprints for both Commercial and retail
Live/ Work interplay reinforced
Commercial expectations for Timely Delivery of occupancy
Streamlined Approvals processes in place for Fast Tract Construction
Realistic and reliable one-stop Code /Planning / Design reviews
Amenities emphasized--Retail +Leisure + Cultural attractions provided
Regional Accessibility and connectivity to Mass Transit
Recruiting focus on multiple Industry Clusters

SCIENCE CITIES--LESSONS LEARNED






Reviews of the selected Science Cities showed massive investment by the public sector including all the success factors found in the Mega projects. In addition the best of the Science Cities also exhibited:

Conservation on Specific Industry focus which was promoted widely
Effective and sustained outreach to Targeted End Users and Scientific Education communities
Flexible Financing with a veresatile of conventional source
Land Write-Downs and land buidling assistance
Grants and targeted Incentives
Direct Government support for Research
Linkages with University R&D
Emphasis on collateral Amenities--Retail + Cultural+ Restaurant
Emphasis on Diversity and workforce collaboration

MEGA MIXED USE

	New Songdo City Incheon Korea	Hudson Yards, New York City	Roppongi Hills Tokyo, Japan	La Defence, Paris, France	Pudong Financial Center Shanghai	Canary Wharf London, UK
MEGA PROJECT Visionary Image						
Strategic Focus	Create New Korean International City	Expansion of NYC's Midtown Office & Residential core	Create New Tokyo Paradigm for Urban mixed-use	New Commercial district adjacent to Paris historic core	Create Rival Financial Center against Hong Kong	Rejuvenate London as Europe's Financial Capital
Land (Acres)	1,364	360	27	1,875	6,919	72
Major Office	50,000,000	28,000,000	4,100,000	30,000,000	40,466,921	6,000,000
Land Uses (SF)						
Retail	2,000,000	700,000	446,000	258,334	4,409,974	750,000
Resid	13,500,000	12,600,000	1,600,000		104,177,431	
Hotel	1,530,000	1,500,000	574,000	1,170,000	2,824,450	
Conv	900,000	600,000	68,000		1,184,030	
TOTAL	67,930,000	43,400,000	6,788,000	31,428,334	153,062,806	6,750,000
Density [Bldg Area: Land SF]	1.14	2.77	5.77	0.38	0.51	2.15
Dev Timeline	2004-2014 (11 years)	2005 to 2025 (20 years)	2004 completed (17 years)	1958 to 1985 (27 years)	1990 to 2005 (15 years)	Phase 1 : 88' - 1992 Phase 2: 91 - 1995
Major Components	World Class Architecture - Central Park + 5,000 parking - Conv Cntr + Housing + Retail	- Subway Extension and Terminal Station - Conv Center Expansion	- Ashahi TV Broadcasting + Mori Tower--Emphasis on high density highrise	- Flagstone and sidewalk - Greenery	- Central Green - Oriental Pearl TV Tower - Riverside Promenade	- Extension to Jubilee Railway Line --Iconic Architecture
Architectural profile	- Waterfront Development - 65 flr Asian Trade Tower	Proposed Interior Boulevards and Mini-Parks	On axis with Champs Elysee provides dramatic setting	- The Arch of La Defense symbolizes the triumph of Man kind	- Variety of architectural concepts. - Contrast Pudong vs.Blund Pelli - Major corporate statements	- One Canada Square by Cesar Pelli - Major corporate statements
Mixed-use Amenities	Mixed-Use Mall, Canal Street Retail, Cultural Center, Musuem/Aquarium	Major High Rise developments	One of Japan's largest Mixed-use Office developments	Major Corporate Offices + Retail +Hotels + Conference Center	High density Office, Hotels , Hospitals,Convention Center, Restaurants	Retail + Adjacent residential
Transit Linkages	Bridge to Incheon Int'l Airport ;linked by Railroad, Subway, Highway	No. 7 Subway Extension, Lincoln Tunnel, PA Bus Terminal), Penn Station	Subway, Car (10 mins to Metro Expressway), Airport - 90 mins Narita ;40 mins Haneda	Linkages --Metro station, Regional express rail station, highway access	4 bridges, 3 major roads; 4 Tunnels, Pudong Intl airport, Metro , Light Railway , Maglev	Jubilee Metro Line;10 mins from London City Airport, commuter rail
Employment	300,000 employment expected	95,000	22,000	150,000	227,000	63,000
Fast-Track P	N/A	Fast track + BID available	Single Developer	Govt Sponsored Master Plan	One stop service on approvals	Special district
Government Support	- Exemption for Corporate Tax - Foreign Land Ownership	- Rezoning Westside + Tax-Exempt Financing	- Received 64 million public subsidy	- Allows high densities - Differential taxes	Reduced Business taxes	- Enterprise Zones

SCIENCE CITIES

	Singapore Biopolis	Seoul Digital Media City	Tskuba Science City	Hong Kong Cyberport	MIT University Park
SCIENCE CITIES Visionary Image					
Mission statement	Create new world-class biomedical sciences research hub for Asia.	Become world production center for digital media content in North East Asia.	Become Japan's center of advanced research relocated from overcrowded Tokyo.	Establish leading information technology hub of the Asia-Pacific region.	Enhance technology transfer between MIT university and High Tech industry
Strategic Industry Focus	Biomedical R&D in an environment that fosters collaborative culture	Media and entertainment industries, cultural contents providers of broadcasting	Research & educational institutes.	Focuses on IT, information services (IS) and multi-media content creation.	Institutes, R&D, Manufacturing
University Linkage	National University of Singapore	Korea Institute of Science and Technology and the University of Seoul	University of Tsukuba	N/A	MIT + Boston University + New England Medical Center
Land in acres	9.90	79.30	6,661	59.30	27
Development SF	1,990,000	1,990,000	N/A	1,477,850	2,300,000
Density	4.61	0.58	N/A	0.57	1.96
Major Land Uses	62% - public research institutes. 19% - laboratory area, 11% - office area, 3% - retail, 6% - utilities.. 850 parking spaces	64% - office 9% - Residential-retail mixed use 9% - Retail, 7% - hotel, 7% - foreign school, 2% - parking.	54.3% - Research and education 24.7% - Private housings 16.7% - Public utilities 3.4% - Community facilities 0.9% - Business-residence facilities	73.3 % Office 20 % Retail 1.5% Service annex 5.2% Hotel	Research and Development office Residential Hotel Restaurant Retail Parking
Development Timeline	2001 - 2004 (substantially completed)	2002 - 2010 expected	1966 - 1980 (substantially completed)	2000 to 2004 (substantially complete)	1983 to 2003
Architectural Quality	Modern-style and high-end	Landmark Development	Modern design with minimal complexity.	Modern architecture with Green emphasis	Winner of Progressive Architecture's Urban design.
Transit Links	MRT Station with free connecting shuttles	3 subway stations, buses, one of two arteries along the Han River.	JR stations, Tsukuba Express Line.	Buses, mini-buses and taxis.	Buses, bikes, or subways, and shuttle service (Ezride)
Employment	N/A	N/A	26,000	10,000	9,780
Government support	Financial incentives, Growth and Grants	Free economy zone, lower office and residential rent	Strongly promoted by the government.	No special incentives	N/A
Amenities	Retail shops, restaurants, cafe, food court, pubs, childcare center, auditoriums, lecture theaters, meeting rooms	Wireless communication, parks, Han River, public golf course	Hotel, Public Hall, Shopping center, restaurants, culture center, hospital, expo center..	Retail, Entertainment, Hotel, restaurants, Bauhinia Garden, Recreational facilities, Digital Media Center, video conferencing	Campus setting, Hotel, Dining and entertainment, large grocery store, retail shops, banking , childcare , arts programs