



## Chapter 11

# IT Deployment

To meet the global trend of digitization, in 1999 the Taipei City Government began to promote the endeavor to build an IT infrastructure, popularize cyber education, promote e-government reform and digital life applications for its residents to both improve government efficiency and broaden the public's IT application ability. Due to its determined efforts, Taipei City has achieved outstanding results and distinguished itself from among global cities. In March 2002, Taipei City won the WITSA "Public Sector Global IT Excellence Award." In 2004, ICF of WTA as one of the world's seven major intelligent communities selected it. On Nov. 18th, 2005, ICF named Taipei as one of the Smart 21 communities once again affirming the results of CyberCity.

According to the results of a survey of residents 12 years and older issued in September 2005, 88% of the households in Taipei own computers, 83.6% had access to the Internet, 77.3% had access to the Internet with broadband, 76.5% residents had accessed the Internet, and 31.8% residents accessed it through wireless broadband. These statistics indicate the rapid development in IT application by residents. At the same time, Taipei City continues building its city-wide public wireless broadband network. By working with the private sector, the city has deployed and operates a wireless broadband environment, promoting wireless application by its residents and making available convenient services. By the end of 2005, the city had completed the installation of wireless access points at all MRT stations and the areas within a 150m radius of the stations. By end of the first half year of 2006, IT will reach 90% of the population. Taipei will become the first wireless network city in the world.

## I Building a CyberCity

In order to build Taipei into CyberCity, realizing the objectives of “Frequent the Net, Free up the road,” “Making Internet Services Equally Accessible to All,” “Making the Internet a public utility,” “Building Ubiquitous Networks,” “Partner with the Network, Synchronize with the world”. The IT Promotion Committee of the Taipei City Government formulated the Phases I and II “CyberCity Initiative Guidelines” (1999-2006).

### ■ Phase II Program Content

#### 1. Wireless Broadband Infrastructure

- (1) Promoting a wireless broadband network
- (2) Promoting the application of citizen digital certificate



Inauguration of Taipei wireless broadband city.

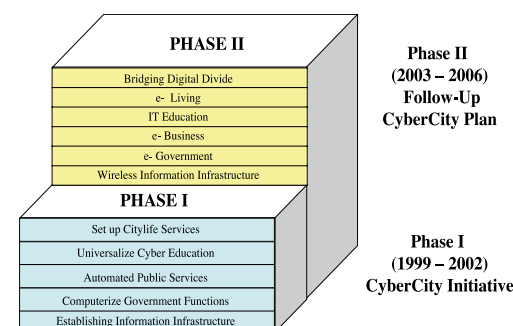


Figure 1 : Strategies framework of the CyberCity Initiative.

#### 2. e-Government

- (1) Setting up a municipal affairs citizen service center
- (2) Building an IT common platform
- (3) Establishing an integrated e-document processing system
- (4) Establishing a city government videoconferencing system

#### 3. e-Businesses

- (1) Promoting value-added application of geographic information
- (2) Promoting development of the Chinese-language content industry
- (3) Promoting e-enterprise

#### 4. e-Life

- (1) Promoting an intelligent transportation system (ITS)
- (2) Promoting a Citizen life net
- (3) Establishing a Taipei city real estate digital database
- (4) Establishing a disaster prevention information net

#### 5. IT Education

- (1) Popularizing e-learning
- (2) Popularizing IT application education
- (3) Wireless campus

#### 6. Bridging the Digital Divide

- (1) Promoting accessibility
- (2) Enabling web access for the disadvantaged

## II IT Infrastructure and the Wireless City

In collaborating with industry, government, and academia, Taipei has made great progress in the development of a metropolitan broadband network and a science technology park. Taipei also began extending application frameworks such as videoconferencing and VoIP telephony. In the meantime, in order to further upgrade its IT infrastructure, Taipei began collaborating with the private sector to deploy a city-wide public wireless broadband network to promote wireless web access and convenient services in an effort to build Taipei into a city with the densest wireless coverage in the world.

### 1. IT Infrastructure

#### (1) To Improve its IT Infrastructure and Wireless Broadband Network

The Taipei City Government has collaborated with the private sector through the BO mode. On Sep. 7th, 2004, the government signed an agreement with Q-ware Systems of the Uni-President. The network was to be completed in three phases. In Phase I, inclusion of 30 MRT stations and neighboring areas in the network was completed on Jan. 31st, 2005 (20% population coverage ratio.) In Phase II, inclusion of 63 MRT stations and neighboring areas in the network was completed on Dec. 20th, 2005 (50% population coverage ratio.) Phase III is expected to be completed in July 2006. By that time, Taipei will become the city with the world's densest wireless coverage, and achieve its objective of “Wireless Taipei, Taipei Infinity.”



The videoconferencing system was inaugurated on May 3rd, 2005.

## (2) Establishing the Neihu Technology Park and the Nangang Software Park

The Neihu Technology Park and the Nangang Software Park are Taipei's emerging industry clusters. In these parks, science, technology industries and corporate headquarters cluster. They are full of development potential and have created a significant amount of economic benefit for Taipei. According to the Department of Budget, Accounting & Statistics survey results for 2004 that appeared in May 2005, the number of firms in the Neihu Technology Park rose from 1,758 in 2004 to 2,005 in 2005, a 14.1% increase. The number of employees rose from 64,779 in 2004 to 73,367 in 2005, a 13.3% increase. Revenues for

2004 were NT\$1.51 trillion, a 29.6% increase compared with 2003.

The number of firms in the Nangang Software Park rose from 197 in 2004 to 223 in 2005, a 13.2% increase. The number of employees rose from 11,358 in 2004 to 12,033 in 2005, a 5.9% increase. Revenues for 2004 were NT\$170 billion, a 22.1% increase from 2003.

The Neihu Technology Park focuses on the manufacturing, wholesale, and retail industries and science and technical service industries, while the Nangang Software Park focuses on R&D and the manufacture of IT software and hardware, IC design and biotechnology.

## (3) Establishing a Videoconferencing System

The municipal videoconferencing system was inaugurated on May 3rd, 2005. The system encompasses 180 agencies and 250 videoconferencing points, and provides multiple services that include disaster emergency response, epidemic prevention, district affairs, administrative meetings, and international exchange. For example, tax offices can provide online consultative services to those who file their tax return over the Internet. In addition, district administration, household administration, and the review committee's online video service can serve residents living in remote areas.

## (4) Establishing a VOIP Telephony

By connecting and integrating existing networks and telephone switches, the municipal broadband network's application level can be lifted. In 2005, Phase I construction was completed, providing communication via Internet telephone to 59 agencies (33 offices within the municipal building and 26 outside the building). Phase II in 2006 will cover 124 offices outside the building and the city council. Meanwhile, the telephony systems of schools at all levels will be integrated, allowing schools to communicate via Internet telephone and saving communication expenses.

# 2. Wireless Network Application Services

## (1) Publicity of Network Application Services

To promote CyberCity's various services and encourage the public to take advantage of these services, web promotional events such as "CyberCity: Appreciate Flowers in the Spring," "Summer Grassland Taipei Wireless" and "Cyber Citizen Public Welfare Goes Easy" have been held. Their aim has been to encourage residents to take advantage of the CyberCity's various citizen services, and to publicize the use



CyberCity publicity event – Letter in a Jar.



"Culture Express PDA Version" wireless web application service exhibition, displaying results of the culture express PDA version.



Wireless MSN Support Frontline Contest.

of outdoor wireless Internet access and citizen services. Combined with public welfare activities, significantly more residents became cyber citizens as a result of the events.

## (2) Culture Express

On Oct. 11st, 2005, the Bureau of Culture's culture express website was inaugurated, providing PDA version culture express. Art and cultural information is made available in Chinese, English, and Japanese. With the help of an e-Art activities map, the location of performance sites can be found instantly. This is the only such art and culture website in the world. PDA version cultural express can be searched in one of the following three categories-the map, the calendar, and art and culture.

## (3) Wireless Web Digitized Learning Program

The Pilot Program of Wireless Digitization at the Dahu Primary School Butterfly Corridor is the demonstrative pilot program of "Wireless Web Digitized Learning Program" with thematic learning as its framework. Tablet PCs and wireless technology are used to help school children gain knowledge of campus insects and develop observational leaning through the butterfly corridor. Through teachers' guidance and learning from wireless web database, students can observe, discuss, take notes, and answer electronic homework questions, providing another option for teachers' teaching and students' learning.

## (4) Wireless MSN Support Frontline

At an intelligence contest held on Dec. 18th, 2005, the government and Microsoft co-organized the 2005 MSN Messenger Support Frontline

Contest, inviting MSN users from across the country to conduct a large-scale group MSN connection via wireless network. At the same time, a web think tank was called to open a second location, using WIFLY wireless network. Several dozens of primary school students participated in the event, with several hundred adult experts competing for NT\$200,000 in prize money.

### III Comprehensive Municipal IT Development Strategies

The government's goal is to pursue a balanced development of e-government, e-businesses, e-life, and IT education. For its electronic government, the government has established a single citizen service center and transparent processing, allowing residents to make appeals over the telephone and the Internet. In terms of e-business, the government has been promoting and educating small- and medium-sized enterprises (SMEs) to take advantage of information technology in order to improve competitiveness. In its e-life program, the government has been providing residents with information on transportation, medical care, food, clothing, housing, transportation, and recreation. At any time of day, citizens can use the Internet, PDA, mobile wireless network, or voice to submit queries or learn of the wide range of convenient services provided by the government. For its IT education, the government has established an on-campus wireless Internet environment to promote the concept and habit of learning in any place. In bridging the digital divide, the government helps handicapped and low-income residents to purchase computers and improve the conditions for accessing web service in order to bridge the digital divide.

#### 1. e-Government

##### (1) Information Operation Service System

The government has completed developing an information operation service system, allowing employees with convenient, data-sharing information operation application service. In 2005, annual information plans and estimates for 2006 prepared by various agencies and schools were submitted through Internet transmission. Paperless information reviews were conducted using laptops via wireless web access, reducing paper costs and significantly accelerating the review process. Review results were made available to various agencies of the government for real-time viewing.

##### (2) e-Document Integrated System

The government provides various agencies and schools with a system for processing documents, which simplifies the processing of documents, reduces manual processing and delivery costs, shortens the time documents spend traveling between offices, cuts down on paper usage, and reduces overall processing costs. From Jan. 1st, 2005, the format of all documents is required to be prepared laterally. The government has instructed all agencies and schools to prepare e-document exchange. The average number of documents received and sent is 380,000. As of December 2005, 44 agencies had signed up for this system.

##### (3) Municipal Database Integrated Query System

To laterally consolidate data held by various offices, provide inter-office queries, simplify operating procedures, reduce the travel-time of citizens, and achieve the objective of free certificates and free transcriptions, five databases, including those of household administration, land administration, construction management, zoning of land use, and firefighting safety inspection have been linked up, thereby establishing a virtual municipal database. By the end of 2005, 64 agencies were using the system, with 181 items of services available. 106,644 inquiries had been made.

##### (4) Administrative Knowledge Management System

To establish a mechanism to compile, publicize, and share municipal information, and increase administrative efficiency and decision quality, in 2002 the government completed development of the administrative knowledge management system. Files for various operations and documents were created



"1999 citizen hotline" makes it convenient for citizens to request government services.

to enhance experience sharing and increase knowledge. Daily municipal news summaries, web viewing, and email delivery services have been provided to the China Times, the United Daily, and the Liberty Times. Complete news information from past years is provided to Central News Agency, chinatimes.com, and udndata.com.

##### (5) One-stop Contact for Inquiry Website

The service integrated mayor mailbox, united service center, call center, secretary mailbox, and public opinion mailbox, establishing a single inquiry window and allowing residents to obtain more convenient and consolidated municipal

#### 2. e-Businesses

##### (1) Industry and Commerce Service Website

Included are a new feature to update the Template website and the existing features of brief introduction of shops, news, product showcase, employment, business opportunities, and opinions. In addition, as many as 320 templates are provided to allow businesses to maintain automatic website content through a simple management interface without professional computer skills, offering businesses another marketing channel. Taipei Industry and Commerce Street has been established to provide businesses with the latest news and product-related information. By the end of 2005, 6,500 businesses had established template websites.

##### (2) Web-filing for Land Value Increment Taxes

To save taxpayers time, Taipei tax offices, on Nov. 1st, 2005, inaugurated web-filing for land value increment taxes and real estate taxes. Taxpayers can file tax returns and print electronic payment forms, so that land administration agents can go to the nearest tax office to file reports on the transfer of real estate and pay taxes at the same time. For land administration agents, the service saves time and personnel costs.



On Nov. 1st, 2005, web-filing of land value increment taxes and real estate taxes was inaugurated.

##### (3) Taipei 12 Shopping District Websites

To implement the "Taipei Shopping Districts Assistance Program," the government has been aggressively assisting various shopping districts in establishing exclusive websites. As of end of July 2005, several exclusive websites were established,



Swatch Smart Watch offers time telling and alarm features.

include the Yongkang Fuzhuli Shopping District, the Dihua Street Section One Shopping District and the Neighboring Tea Industry the Aiguo East Road Wedding Gown Shopping District, the Xiyuan Road Buddhist Utensils and Neighboring Herb Shopping District, the Siping Shopping District, the Textiles District, the Camera Shopping District, the Wenchang Furniture Shopping District, and the Neihu Recreation Shopping District. Characteristics, the surrounding environment, and a brief description of shops within the districts are placed on their websites,

allowing residents to get online and browse the districts and obtain information on events and products. The websites open a new marketing channel for traditional shops located in the districts and start up new business opportunities.

### 3. e-Life

#### (1) e-Transportation

##### A. Integration of Non-contact IC Smart Cards

Since MRT smart cards were introduced in September 2002, non-contact IC smart cards integrated the Greater Taipei Area's bus, MRT, and the toll system of public outdoor parking lots. On Sep. 20th, 2005, Taiwan's first watches with smart card feature were introduced. In addition to telling time and setting an alarm, the cards can be used to take the MRT, city buses, and parking payments. As of September 2005, more than six million MRT smart cards had been issued, ranking the sixth of all types of cards issued. As of October 2005, average daily number of transactions made with MRT smart cards exceeded 2.38 million, with an overall usage rate of 82%.

##### B. The Bus Route Inquiry Service

This service allows passengers to find the information they need with ease. The service is used on the average more than 20,000 times each day. In addition to the original feature of providing information

#### Using Mobiles to Pay for Roadside Parking to Pay your Parking Tickets

Beginning July 1st, 2005, parking fee data for roadside parking spaces are transmitted by the Department of Parking Administration through mobiles and the Internet to contractors the next day. Contractors collect the fees from registered citizens. Citizens may choose the method for paying parking fees. This way, drivers will not forget to pay parking fees. They don't have to visit convenient stores or banks to pay the fees and they enjoy the advantage of paying the fees at a later date by using mobiles or credit cards. By the end of 2005, 78,900 drivers had signed up for this service, with up to 289,531 tickets paid online. The amount has reached NT\$19,455,865.



The Taipei e-bus information system provides passengers with bus schedules.

about bus routes, stations, and schedules, the English version includes more international services.

##### C. Taipei e-bus Dynamic Information System

The Taipei e-bus dynamic information system was inaugurated at the end of May 2005. Passengers can make inquiries about bus schedules via intelligent bus signs, the Internet, and telephone voice, which reduce the uncertainty in waiting for buses and improve bus service quality. The bus monitoring system oversees bus operations, reducing manpower and providing operators with monitoring information.

##### D. Roadside Parking Lots Using PDAs to Prepare Parking Tickets

This measure was implemented in two phases. In Phase I, 110 sets of PDAs began being used on Sep. 12th, 2005 to prepare parking tickets for the roadside parking lots of the following three areas: (A) the Zhongshan District bounded by Minzu East Road, Changan East Road, Zhongshan North Road, and Dunhua North Road; (B) the area around the World Trade Center in Xinyi commercial district; and (C) the area bounded by Zhongxiao West Road, Ketagalan Avenue, Boai Road, and Zhongshan South Road in Nanyang Special District. In Phase II, all roadside parking lots will be covered beginning in January 2006.

##### E. WAP Mobile Inquiry System for MRT Operating Information

The system was inaugurated on Nov. 28th, 2005. It allows passengers to make inquiries about MRT operations and make use of on-line services through WAP mobiles.

The services allow users to make inquiries concerning MRT news, MRT-related events and messages, MRT ticket prices, the times of first and last trains, an introduction of tourist attractions surrounding the stations and transportation, transit stops, and popular MRT products sold at MRT shops.

##### F. Vehicle Inspection and Management (VIM) Offer Email and Mobile Text Messaging Services

Beginning September 2005, the Department of Motor Vehicles (DMV) began notifying drivers of outstanding matters to prevent drivers from being fined for missing deadlines. In order to save manpower and upgrade service quality, such services currently apply to notices to renew driver licenses, inspect driver licenses, renew registration of cars and motorcycles, periodically inspect cars, and pay fuel taxes.

##### G. Establishing Circuit Mobile VIM Service Stations

To broaden the scope of DMV services and work with the DMV e-Network-Circuit Mobile DMV Stations program sponsored by the Ministry of Transportation and Communications, GPRS wireless communication technology is used to build mobile DMV service cars and extending service stations. Beginning Sep. 6th, 2005, Mobile VIM Stations process renewals (replacements) of driver licenses and registration at the Wanhua District Administrative Center on each Tuesday, the Wenshan District Administrative Center on each Wednesday, and the Nangang District Administrative Center on each



Mobile VIM service car, extending service locations.

Thursday between 10:00 A.M. and 4:00 P.M., allowing residents to obtain such services at a VIM station near them, to save them travel time and enhance service quality.

### (2) e-Life

#### A. Promoting Convenient Website Services

The Taipei City Government Website continues undergoing resource consolidation of websites of various government agencies and establishing website databases. Through the implementation of value-added, thematic net and accessibility web pages, residents are provided with more complete and convenient municipal website information service. In

addition, if combines online application and free wireless Internet access, and residents are provided with personalized quality services. By the end of Dec. 2005, 299,854 persons had signed up for Cyber Citizens, and 30.9 million visits to the city government's website were recorded.

#### B. Promoting New e-Living

In cooperation with Seednet, the Taipei City Government has created the Taipei New e-Living Website to provide integrated convenient information, one-stop internet transaction services and commercial value-added information services. Utilizing various kinds of wired and wireless Internet accessing carriers, such as desktops, laptops, PDAs, and mobiles, the services provide information in multiple ways. A press conference was held on Dec. 23rd, 2005 to introduce "Taipei citizen Life mytaipei.com". Five major value-added application services were expected to be completed by April 2006. They include regulations inquiries, value-added parking lot information, value-added volunteer matching, an event calendar, and resident online fee payment and query.

### (3) e-Health

The Taipei City Hospital has introduced mobile clinic and mobile medical care services, which



Taipei Cyber University website platform provides members with more varied learning services.

fully take advantage of the medical information system and combine information with science and technology. When providing medical services at nursing organizations, doctors only need their laptops to connect to various locations' mainframes via the Internet and access patient's medical records before making diagnoses and prescriptions. Community pharmacies then proceed to fill prescriptions and have them delivered to patients' homes. Patients at nursing organizations do not have to visit hospitals to receive adequate medical attention.

## 4. Information Education and Bridging the Digital Divide

### (1) Information Education

#### A. Establishing a Cyber University

Since its inauguration five years ago, the Cyber University "Taipei e-Campus" online learning website has offered general knowledge courses on management, information, languages, and the humanities. As of December 2005, as many as 115 courses and 886 classes had been offered, and up to 55,218 students had enrolled. To develop more diversified learning services, provide members with richer learning messages, and make the website's operating interface more humanistic, in July 2005 the installation of a new website platform was completed. Five function classifications including "digital library" and "course selection center" were added. The homepage integrates the seven existing mechanisms including English supply station and update management bulletin, with features such as news of art and culture events, "online lectures," and "Gong Xun reports".

#### B. Trial of Digital Student IDs

In order to set up a quality education environment, from January to July 2005 the Bureau of Education introduced digital student IDs which combine the functions of student IDs and MRT cards to Datong

### Open Book Intelligent Library



Open Book Intelligent Library.

The unmanned city library service was inaugurated on July 22nd, 2005 at Carrefour's Neihu store. Residents with an RFID library card issued by the Taipei Public Library can borrow books at any of the library's locations. In addition, while shopping at Carrefour's Neihu store, they can swipe their cards and enter the Open Book Intelligent Library to borrow and return books there. Residents can enjoy reading while they shop.

### Mobile Medical Care

To provide residents with convenient and quick medical care, the Taipei City Hospital-Bank Type Medical Information Deposit Service was inaugurated. The service integrates medical information systems at various locations. The establishment of Taiwan's first medical information platform was completed, achieving the ideal of a bank-type medical information deposit. Residents can visit doctors at any location of the hospital. Their medical records, X-ray images, test results, and various exam reports can be queried at any location without having to retake exams, saving patients' time and the hospital's medical costs. Complete medical records can be provided and the accuracy of diagnoses can be raised, substantially raising the quality of medical care. In 2005, inter-location services were provided to nearly 120,000 hospital visitors.



CyberCity publicity event-Letter in a Jar.

and Yucheng Senior High Schools, Dungmen Primary School, and Fuhsing Junior High and Primary Schools on a trial basis. The results are detailed below.

(A) Management System for Students Entering and Exiting Schools

When students with digital student IDs enter or exit schools past card readers, the system automatically detects and sends a text message to parents' mobiles. Parents have full control of the time when students enter and exit the school. If they need to pick up their children after school, they can get to the school after receiving the text message, which reduces

traffic congestion near the school during after-school hours.

(B) System for Students Borrowing Books from and Returning Books to the Library

Through RFID inductive registration, students can use digital student IDs to borrow books from and return books to libraries, increasing their administrative efficiency.

(C) Cooperative Consumption System

As small amounts of money can be deposited in digital student IDs, students can use their ID to make purchases at cooperatives. Students who lose their IDs, he can report the loss with the value stored in the IDs remaining unchanged.

C. Establishing an On-campus Wireless Internet Environment

The campus environment is comprised of four aspects-campus safety, teaching application, administrative application, and student life. In 2005, a wireless web application focused on campus safety, with "campus wireless Internet telephone" and "web family contact notebook" being the primary development items. By the end of 2005, Taipei campus wireless coverage reached 100%.

D. Promoting Taipei City Education Portal Site

This website integrates various educational resources, and provides a well-rounded convenient search interface and rich teaching resources. It was inaugurated on May 7th, 2004. By the end of 2005, the website had been visited 8,364,204 times. It integrates Taipei's educational policies, education-related information, news of events, and provides a place where teachers can share their teaching experiences. By the end of 2005, 45,885 persons had subscribed to the site.

E. The School of the Future Project

To nurture on-campus education, Microsoft Taiwan, in cooperation with governmental and educational organizations, and non-governmental organizations of various countries, invited them to share the company's technology and application development resources in an effort to help teachers and students to learn through more diverse channels. At the end of 2004, Microsoft invited representatives from Zhonglun Senior High School to take part in the Partners in Learning (PiL) program sponsored by the company. On June 16th, 2005, a press conference was held at the school to unveil the program. The

school was the world's first to cooperate with Microsoft to build a school of the future.

F. The 2005 Taipei International Conference on Information Education

On Dec. 14th-16th, 2005, the "2005 Taipei International Conference on Information Education" was held at Zhonglun Senior High School. Experts from the industry, the government, and academia from Taiwan and abroad (US, UK, New Zealand, Korea, Malaysia, Philippines, Vietnam, and Thailand) were invited. Subjects discussed included "wireless learning," "Taipei wireless," and "ICT teaching and curriculum." Participants exploring the trend of mobile learning in place of traditional learning, introduced Taipei's wireless environment, and visited Xingya, and Dahu Primary Schools, Jancheng Junior High School, Lishan Senior High School, and Nanhu Primary and Senior High Schools.

In addition to sharing their experiences and research in their respective fields with others, participants came to understand the current status of Taipei's information education at various levels.

(2) Bridging the Digital Gap

A. Donating PCs to the Disadvantaged

The "Digital feast, a dream comes true" event was held on Aug. 9th, 2005 to help low-income families purchase PCs. Acer, Lenovo, Microsoft, Symantec, Gjun, and Chunghwa Telecom offered 350 PCs together with software, PC courses, certifications, and discounted internet access.

On June 28th, 2005, the Department of Education donated 29 used desktops and 24 used laptops to the



Donation ceremony for "Digital feast, a dream comes true" to subsidize low-income families in the purchase of computers.



Residents participate in a free three-hour Internet training course.

Institute for Information Industry, to be used for public welfare after being repaired.

#### B. Subsidizing the Handicapped to Purchase Special Computer Aids and Computer Equipment

In 2005, the handicapped received subsidies to purchase special computer aids. By the end of November 2005, a total of 242 persons had received subsidies in the amount of NT\$4,390,344. Organizations for the handicapped were also subsidized to purchase computer equipment. By the end of November 2005, these organizations had received subsidies for the purchase of nine computers in the amount of NT\$288,836.

#### C. Setting up Computer Classes for the Elderly

The Taipei Evergreen Academy sponsored by the Department of Social Welfare began offering computer classes for the elderly. In 2005, 2,983 students signed up for 11,549 classes.

#### D. Offering Residents Participate in a free Three-hour Course Internet Training Course

The information education resources of the government, public schools, communities, and private enterprises were combined to offer residents a free three-hour course in Internet training in an effort to bridge the digital gap among citizens. As of December 2005, over 330,000 persons had participated in the training course.

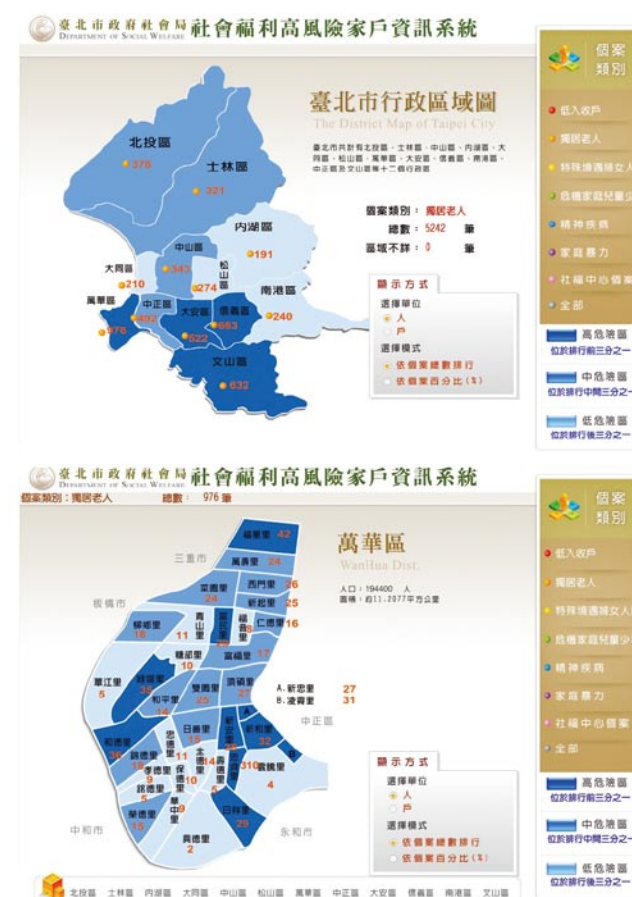
#### E. Promoting the Accessibility of Web Pages

To bridge the digital divide and allow the handicapped to obtain information on the services provided by the Taipei City Government via the Internet, the government has been aggressively urging all offices to pay special attention to the issue and modify their websites in order to meet the standards for accessibility of web pages. By the end of 2005, the offices that had passed website accessibility tests administered by the Research, Development, and Evaluation Commission (RDEC) of the Executive Yuan included: (A) 28 offices, including the Department of Civil Affairs, passed the AAA test; (B) 60 offices, including the Department of Social Welfare, passed the AA test; (C) 14 offices, including the Department of Transportation, passed the A test; (D) 9 offices, including the Peace Preservation Corps of the Taipei City Police Department passed the A+ test.

#### F. Establishing a “Social Welfare System for High-Risk Families”

This system displays the geographical distribution of high-risk families, potential crises and assistance resources within specific areas. Related offices are alerted in cases of emergency to provide relevant information to related offices in order for them to dispense immediate assistance or relief. In addition, past information can be requested and trend analyses made for decision-making and resource allocation in an effort to prevent or mitigate family crises.

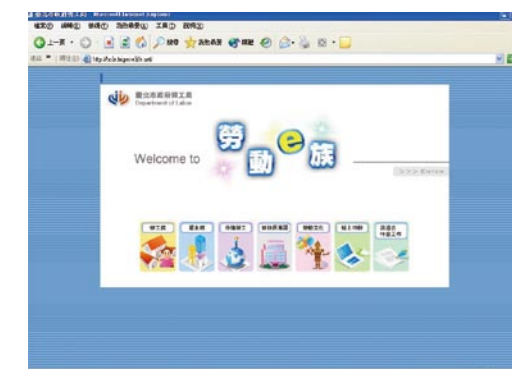
Thus, crises affecting individuals can be dealt with in timely fashion so as to prevent deterioration and safeguard their social welfare rights.



The “Social welfare system for high-risk families” displays the geographical distribution of high-risk families and potential crises.

#### G. Establishing the “Labor e-Group” Website

In 2005, the “labor e-group” website was established, comprised of seven major thematic zones-employees, employers, alien workers, new immigrants, labor culture, online application, and job streamlining. The homepage offers a “speedy search” feature, allowing visitors to click on and quickly find the service. The website provides information on the various steps and stages of the entire employment-seeking process, serving as a handy reference for visitors seeking employment. The website was scheduled to be inaugurated at the beginning of 2006.



On the Labor e-group website, both employers and employees can click on the service they need.

## IV Geographical Information and the Development of Computer Application Service

GIS technology has been widely applied to areas, such as public works, urban planning, land administration, traffic and transportation, public security and policing, firefighting and disaster prevention, social welfare, public hygiene and medical care, resource preservation, and environment monitoring. The Taipei City Government has set up the “Geographical Information Promotion Taskforce” to strengthen the promotion of GIS by all units. The taskforce has made notable achievements in the areas of landform, land registration, construction, disaster prevention and relief, the MRT, and urban planning. In order for Taiwan to move forward in building an information society to provide everyone with the benefits of information technology, the government and the private sector have joined forces. They have promoted the knowledge that businesses and families need to take full advantage of information through computer exhibitions.

### 1. Applications of Geographical Information

#### (1) Geographical Information Data Storage System

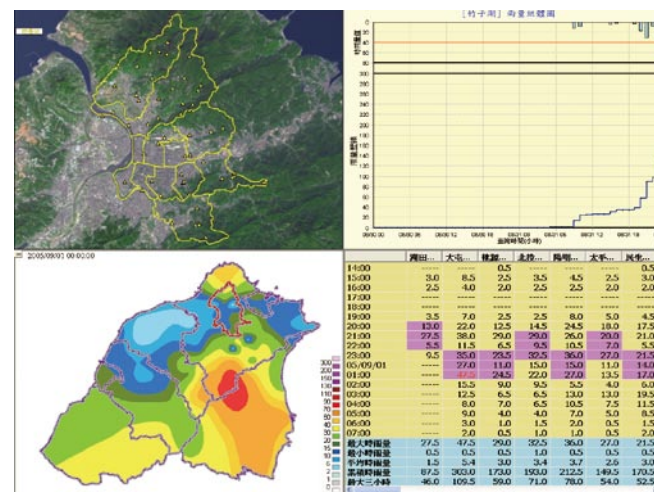
The system is the single window of Taipei City Government’s GIS data, and provides geographical data. The data can be downloaded through the system or obtained by connecting to the system or database. With the promotion of resident digital IDs, the system can be used as a value-added platform, promoting value-added applications of geographical information, such as the promotion and development of an Intelligent Transportation System (ITS), disaster prevention information, and a real estate digital database. Businesses and individuals can enjoy the convenience of electronic applications.

#### (2) Integrated Geographical e-Information Service

This service integrates the government’s key geographical information. In order to better serve the public and provide analysis of GIS surroundings, the service provides statistical distribution data of government offices, schools, entertainment activities, and businesses. In order to meet various statistical needs, the content is



Geographical e-information offers a Chinese electronic map search.



Screen display of the precipitation station of the disaster prevention information net.

comprehensive. The user can select statistical charts of different statistical contents according to categories or distances. In addition, they can choose a life information distribution chart, which provides data for more than 5,000 entries of key landmarks. The service provides the life landmarks and their websites within 50-300m radius of the selected targets. It is hoped that the public can obtain the information they desire without having to leave their homes.

#### (3) The Disaster Prevention Decision Support System and the Disaster Prevention Information Website

Using information technology, disaster prevention information techniques are integrated into the four stages (damage reduction, reorganization, emergency handling, and recovery) of disaster management. The disaster prevention decision database was established and the disaster prevention decision support demonstration system was developed in order to enhance disaster prevention efficiency.

The results of disaster potential analysis research helps increase understanding of the causes and impact of various kinds of disasters and assists in preparedness for various kinds of disasters by providing the information and dynamics of natural and man-made disasters. The public now has access to first-hand information. As of December 2005, over 77,000 persons had visited the website since its inauguration on May 27th, 2004.

#### (4) Intelligent Firefighting Assistance Dispatch System

Using of the GIS, with its integrated disaster prevention database, and incorporation of its 119 call number/address display system and GIS increases the speed of response. The electronic map call address system can be automatically positioned to provide the fastest possible dispatch of firemen and fire engines. Using a computer database to manage information on firemen and fire engines increases the

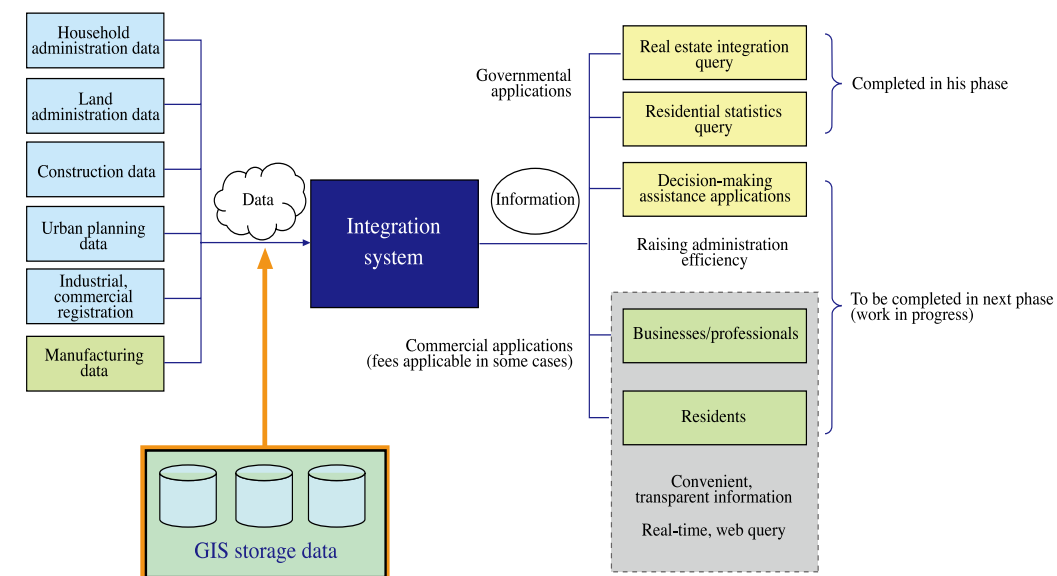


Figure 2 : Framework of the Taipei Real Estate Digital Database

accuracy and speed of dispatching. The exchange equipment, which possesses the feature of computer telephony integration (CTI) integrates information and communication and makes for quick and diversified notification.

#### (5) The Real Estate Digital Database

The real estate digital database was established in December 2005. It provides the following features: real estate basic information, real estate trading information, environment information, weight factor, real estate regulation queries, and e-service. Thus, the general public, construction firms, real estate appraisers, real estate agents, bank investors, and government decision units can have access to the most up-to-date status of urban real estate. The normal trading of real estate can be promoted, blind investments reduced, and urban land use and regional development improved.

## 2. Computer Application Exhibition

### (1) The 2005 Taipei International Computer Expo

The 2005 Taipei International Computer Expo was held on June 1st-5th, with 1,278 firms from Taiwan and abroad participating. 2,853 booths were rented out. 27,500 international buyers registered to visit the expo. Firms participating in the expo included internationally well-known software, hardware manufacturers such as Acer, VIA, Foxconn, Asus, Elite, MiTAC, Intel, AMD, Microsoft, Texas Instruments, and National Semiconductor. This year, COMPUTEX placed 3C and consumer electronic products in the general exhibition zone, while digital audiovisual products were placed in a separate zone. Many firms participated in the expo and many different were products displayed, driving up demand for information products, promoting the development of the IT industry, and substantially raising publicity of Taiwan's competitiveness.

### (2) The Taipei Computer Software and Spring Computer Exhibition

The Taipei Computer Association held the Taipei Computer Software and Spring Computer Exhibition at the World Trade Center from May 5th-9th, 2005, offering businesses, government offices, and academic organizations abundant information and services. It also displayed to consumers a novel, lively science and technology zone rich in content (Beautiful New World and Mac Creative Life Hall), taking visitors to the forefront of the age of science and technology. In addition, an e-query virtual online display for small- and medium-sized businesses was included to provide exhibitors and buyers with added convenience and services.

### (3) The Taipei Computer Application

#### Exhibition and Summer Game Festival

The Taipei Computer Application Exhibition was held from July 28th-Aug. 1st, 2005 at Exhibition Hall One of the Taipei World Trade Center. A "Digital Audiovisual Product Zone" was added this year in the hope of offering consumers

more focused product features. To keep up with the rapid development of the digital content market, the Summer Game Festival was held at Exhibition Hall Three from July 23rd-31st.

By integrating games, animation, digital learning, communication entertainment, and peripheral software and hardware products, youngsters were offered a complete, digital entertainment holiday during their summer vacation.

### (4) Information Month

The Information Month event held in December 2005 highlighted the theme of "creativity, care, and embracing the future." The event lasted nine days with 720,000 visitors. A total of 350 firms had booths in the information product zone. More laptops, 19-inch LCDs, MP3 players, and DVD burners were sold than other products. The sale of laptops was up 40% from the same time period of the previous year, creating many business opportunities for Taiwan's information industry. In addition to the rich, lively thematic content, other themes of Information Month 2005 were "Government and Public Service Results Display Zone" and the new "Projector Zone." Thirteen government offices including the Taipei City Government, the Ministry of Education, the Government Information Office, RDEC, and the Industrial Development Bureau had booths in the Government Hall. For Information Month, the Taipei City Government set up the "CyberCity, Wireless Taipei" thematic hall, attracting 5,000 visitors. The annual Information Month has become the information platform for the information industry, government offices, and the public. It is one of Asia's biggest information product promotional events.

## 3. Development of Nationwide Public Convenient Services

### (1) On-line Application for Replacement of Lost ID Cards

On Oct. 17th, 2005, web application for loss of ID cards and cancellation of applications was introduced, offering 24-hour services. Residents can click on "Application for loss of ID cards and cancellation of applications" at the "Household, military service public database" website before applying for loss of ID cards using personal IDs. They can make inquiries about the status of the application without having to visit or call the household registration office.

### (2) Household Registration Digitization System

Before the computerization of household registration was established in October 1997, over 26 million entries of household registration removal data had been scanned and files created. Household registration digitization of a total of 44 million pages of images had been completed. The public can now apply at any household registration office in the nation for all household registration transcripts without having to visit their local household registration office.

### (3) Taxation Portal Site

This site was inaugurated in November 2005. All tax offices now post the latest taxation information, seminars, and public events, and various tax forms on the site, integrating the online query services provided by the various regions of the National Tax Administration (NTA). Taxpayers no longer have to visit the NTA in person. They only have to access the Taxation Portal Site.

### (4) Convenient e-Trade Website

The website was inaugurated on Mar. 14th to provide free services for vendors. Operators can use the website when they have goods that need to go through customs. They no longer have to go through repeated



Site of Information Month 2005.

reviews. Instead, they can enjoy the convenience of “one data entry all the way through” substantially reducing the cost and time spent on clearing their goods through customs. Initially, the website provided basic services such as “division of cases to be signed and reviewed” and “application status check.” Value-added features such as “production certificate processing”, “customs clearance data transfer”, and “document custody management” are now included.

#### (5) Web Access to Air Quality of Foreign Countries

As citizens spend more and more time traveling, traveling abroad is becoming increasingly frequent. To allow citizens traveling abroad to find out information about the air quality of the countries they are visiting, a web page containing information on the air quality across the world has been created. Currently, countries and regions included on the web page are fourteen nations from Asia, Europe, North America, and Australia. Countries frequently visited by Taiwanese, such as Japan, Thailand, HK, US, UK, and France, are all included in the link.

Establishing a CyberCity and building a digital city is one of the key commitments the government has made to its citizens. The Taipei City Government has endeavored to broaden the wireless application of various forms of information construction with a focus on wireless broadband construction. The government has been doing its best to transform the city into one of the most competitive, first-class international web cities that features efficiency and speed. We believe the future establishment of a Taipei wireless broadband network will bring unlimited business opportunities to local enterprises. In 2005, the Taipei City Government aggressively promoted a healthy and friendly resident living environment in order for all residents to come to love this beautiful city and work hard for the city’s perpetual development.