ICT applications make the flow of information more efficient and systematic, supporting the development of an information society. Currently, however, China's 111 million Internet users account for less than 9 percent of its population. Several obstacles impede the spread of Internet use and other information and communication technology (ICT) applications. First, many municipalities and local governments are unable to provide the public with affordable, convenient information access points. Second, significant ICT demand remains latent due to low awareness levels and usage rates. Third, domestic ICT providers are unwilling to cater to users given the seemingly modest demand. Until demand and supply are synchronized, ICT growth will remain slow.

Government can play a significant role in stimulating ICT demand and supply. The Chinese government is probably the country's largest investor in ICT and can lead the adoption and use of ICT applications in several ways. One is for the government to become more capable with information technology (IT) and e-enabled. The government can have a tremendous impact on the ICT sector as a user, purchaser, and provider of ICT services. E-government initiatives make public administration more efficient and transparent. It can also provide citizens with direct access to public services, improving interactions between officials and citizens.

E-government in China has developed in three stages (figure 6.1):

- incorporating ICT applications into internal government processes
- using such applications to improve administrative and management capacity
- introducing e-government applications to deliver public services.

Although different administrations and departments are at various points in these stages, the awareness of advancing e-government has increased in recent years. General capacity has moved beyond administrative applications and into public service applications, and the development of e-government has made noticeable
achievements: The Golden Projects are playing an important role in improving governance and the delivery of public services. Increasingly, government Web sites have become a window for government departments to serve the public. Overall, e-government in China is entering the third stage characterized by intensifying applications and services.

**Incorporation of ICT Applications into Internal Government Processes**

China began incorporating IT applications and networks into government processes in the mid-1980s. It has since expanded the use of local area networks (LANs)—which, among other things, enable e-mail communications and Internet access—into all government departments. It has also built a basic e-government platform, consisting of metropolitan area networks and wide area networks that connect the central government to deputy provincial governments, and LANs that connect 47 governments above the deputy provincial level.

Government departments have generally adopted internal informatization appropriate to their functional objectives (figure 6.2). The most widely used applications involve financial management systems (83 percent), network security systems (76 percent), Web site development (75 percent), and office automation (69 percent).

**Major Public Service Projects**

The Chinese government has expressed the need for using ICT to increase administrative transparency, enhance management efficiency, and promote honest government. Government informatization initiatives aim to simplify administrative...
procedures, cut transaction costs (such as registration fees), and improve public services for the average citizen. Continued use and expansion of e-government services will largely depend on public satisfaction with them. Thus, the government has an important role to play in setting standards for the services it delivers using ICT applications.

The guidelines for China’s e-government development, issued by the State Council Informatization Office in 2002, emphasize two networks (intranet and Internet), one Web site (government portal), four databases (demographic, juridical, geographic and natural resources, and macroeconomic data), and 12 “golden” projects. A 2003 survey found that 98 percent of responding government organizations had deployed some type of e-government project. Still, China ranked 57 of 179 countries on the United Nations e-government index in 2005, up 10 positions from 2004 (see table 6.1). This ranking suggests that while China continues to improve in terms of the number of government Web sites, it lags behind many countries on the number of e-transactions and the level of intra-government connectivity (UN 2005).
Table 6.1 E-Government Readiness Rankings in East and South Asia, 2004 and 2005

<table>
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<tr>
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<tbody>
<tr>
<td>1 Korea, Rep. of</td>
<td>0.8727</td>
<td>5</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>2 Singapore</td>
<td>0.8503</td>
<td>7</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>3 Japan</td>
<td>0.7801</td>
<td>14</td>
<td>18</td>
<td>4</td>
</tr>
<tr>
<td>4 Philippines</td>
<td>0.5721</td>
<td>41</td>
<td>47</td>
<td>6</td>
</tr>
<tr>
<td>5 Malaysia</td>
<td>0.5706</td>
<td>43</td>
<td>42</td>
<td>-1</td>
</tr>
<tr>
<td>6 Thailand</td>
<td>0.5518</td>
<td>46</td>
<td>50</td>
<td>4</td>
</tr>
<tr>
<td>7 China</td>
<td>0.5078</td>
<td>57</td>
<td>67</td>
<td>10</td>
</tr>
<tr>
<td>8 Brunei Darussalam</td>
<td>0.4475</td>
<td>73</td>
<td>63</td>
<td>-10</td>
</tr>
<tr>
<td>9 Mongolia</td>
<td>0.3962</td>
<td>93</td>
<td>75</td>
<td>-18</td>
</tr>
<tr>
<td>10 Indonesia</td>
<td>0.3819</td>
<td>96</td>
<td>85</td>
<td>-11</td>
</tr>
<tr>
<td>11 Vietnam</td>
<td>0.3640</td>
<td>105</td>
<td>112</td>
<td>7</td>
</tr>
<tr>
<td>12 Cambodia</td>
<td>0.2989</td>
<td>128</td>
<td>129</td>
<td>1</td>
</tr>
<tr>
<td>13 Myanmar</td>
<td>0.2959</td>
<td>129</td>
<td>123</td>
<td>-6</td>
</tr>
<tr>
<td>14 Timor-Leste</td>
<td>0.2512</td>
<td>144</td>
<td>174</td>
<td>30</td>
</tr>
<tr>
<td>15 Lao PDR</td>
<td>0.2421</td>
<td>147</td>
<td>144</td>
<td>-3</td>
</tr>
</tbody>
</table>

Source: UN 2005.

Golden Projects

The Golden Projects, most of which were introduced in the late 1990s, have facilitated China’s transition from a strictly administrative use of ICT applications to a more public service–oriented use (table 6.2). The scope of the projects varies, from automating internal processes to creating interactive Web sites allowing online transactions.

Implementation of these projects has been widespread and is largely complete (figure 6.3). For instance, the three primary applications of the Golden Shield project—a household registration management system, a crime case management system, and a 110 police alarm system—are now used by all government departments. The project also introduced a safeguard and antitheft system and a geographic information system. Because of the Golden Wealth project, nearly 85 percent of government agencies now use the electronic budget management system. The project also introduced ICT applications for financial payment management, salary payments, and budget accounting, with adoption rates ranging from 69 percent to 77 percent.

Some of the Golden Projects have produced impressive results. For example, 13,874 fake customs declarations were discovered in 1998, amounting to more than $11.2 billion in undeclared exchange. Since the introduction of an e-customs system in 1999 under the Golden Gate project, smuggling has been reduced by curtailing false customs declarations, and the negative effects of illegal currency exchanges on tax revenue have been mitigated by better foreign exchange management. The
### Table 6.2 China's Golden Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Stakeholder</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier one (the most high-profile)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Golden Gate</td>
<td>Ministry of Foreign Trade, Customs, Jitong Co.</td>
<td>Develop an information network of foreign trade activities to speed up customs clearance and enhance the authorities' ability to detect and prevent illegal activities, and collect taxes and duties.</td>
</tr>
<tr>
<td>Golden Bridge</td>
<td>Ministry of Electronics, State Information Center</td>
<td>Create an infrastructure backbone for the first national economic information network.</td>
</tr>
<tr>
<td>Golden Card</td>
<td>People's Bank of China, Ministry of Electronics, Ministry of Internal Trade, Great Wall Computer Co.</td>
<td>Create a unified payment settlement system to enable the wide use of credit and debit cards.</td>
</tr>
<tr>
<td>Tier two (designed to apply information networks to speed up economic reform)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Golden Macro</td>
<td>China Ex-Im Bank, Ministry of Finance, State Information Center</td>
<td>Strengthen the central government’s (Central Economic and Financial Leading Group) macro-economic control over national economic activities and analysis capacity.</td>
</tr>
<tr>
<td>Golden Tax</td>
<td>Ministry of Finance, Ministry of Electronics, National Tax Bureau, Great Wall Computer Co.</td>
<td>Computerize the tax collection system, prevent tax evasion and fraud, and reduce tax losses; also allow customs departments to verify a range of data to facilitate customs management.</td>
</tr>
<tr>
<td>Golden Wealth</td>
<td>Ministry of Finance</td>
<td>Construct a government financial management information system to support budgeting, payment and accounting.</td>
</tr>
<tr>
<td>Tier three (sector-specific IT applications)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Golden Agriculture</td>
<td>Agriculture</td>
<td>Build a databank service network providing agricultural information, weather reports, and market information.</td>
</tr>
<tr>
<td>Golden Audit</td>
<td>National Audit Office</td>
<td>Transform the reactive audit system to a more proactive one by having a secure platform for information sharing and for tracking and checking accounts.</td>
</tr>
<tr>
<td>Golden Quality</td>
<td>Government departments</td>
<td>Enhance regulation, quality, transparency, and service orientation of government units that carry out quality control activities such as certification of products and services.</td>
</tr>
<tr>
<td>Golden Social Security</td>
<td>Ministry of Labor and Social Security</td>
<td>Better manage the increasing labor force covered by the national insurance system and offer retirement and medical information to the insured.</td>
</tr>
<tr>
<td>Golden Shield</td>
<td>Ministry of Public Security</td>
<td>Strengthen central police control, responsiveness, and crime-fighting capacity.</td>
</tr>
<tr>
<td>Golden Water</td>
<td>Ministry of Water Resources</td>
<td>Harness technology for the collection, transfer, storage, and management of water resources; also encompass a system to better manage floods and droughts in the country.</td>
</tr>
</tbody>
</table>

Source: Yong 2005.
China’s Information Revolution

Figure 6.3 Implementation of Selected Golden Projects, 2004

e-customs system enables private enterprises to electronically declare customs information, track export permits and vouchers, and provide inspections data. The system also enables the customs administration to share and exchange data with enterprises and conduct online inspections. More advanced ICT applications under development will manage operations involving permit grants, foreign exchange settlements, customs declarations, and tax refunds. These new initiatives aim to make customs administration even easier for firms and further reduce waste and abuse.

The Golden Tax project was launched in 2001; by July of that year, it had connected 31 provinces, more than 300 cities, and over 3,000 counties to the State Administration of Taxation. By 2004, 97 percent of government departments were using online tax registration systems, and 90 percent were using online tax declaration systems and invoice management systems (see figure 6.3). These
interconnected systems enable the government to standardize and improve the management of value-added taxes. As a result, revenue from such taxes jumped to $66 billion in 2001—a 17 percent increase over 2000. In 2002, such revenue rose to $76 billion, a 15 percent increase. Since 2003, private enterprises have been required to produce online invoices for value-added taxes.

The Golden Tax project has also helped reduce tax fraud and avoidance. For example, between early 2001 and late 2003 the share of invoices that were forged fell from 0.227 percent to 0.004 percent, while the share of dutiable goods declared by registered businesses rose from 92 percent to nearly 100 percent. The number of large enterprises committing tax offenses has also fallen significantly since the project began. In addition, there have been widespread improvements in government transparency and accountability.

**Government Online**

China started to push the Government Online project in 2000, encouraging government departments at all levels to establish Web sites. As of June 2005, China had 19,800 domain names and 11,750 Web sites under gov.cn (CNNIC 2005). Increasingly, government Web sites have become a window for government departments to serve the public.

Each year, the State Council Informatization Office ranks government Web sites using a 0–1 scale, based on four subindexes: information openness, government online services, interactivity, and Web design. In 2005, all 76 ministries and their affiliated organizations, 31 provinces and municipalities, 333 cities, and 408 sampled counties were included in this evaluation. Table 6.3 shows the Web sites that received the highest rankings.

On the whole, China's government Web sites remain at the stage of information posting. Information openness has made notable progress at the province and municipality levels, with a subindex above 0.5 (figure 6.4). The most commonly
posted information involved policies and regulations, overviews of the area or organization, organizational structures, and contact information.

Although interactive services are the core purpose for government portals, this subindex value was low (below 0.4) at all government levels. More than 80 percent of provincial and city government sites contained citizen surveys and complaint mechanisms, but useful services, such as government feedback and online advice, were rare. Site functionalities—such as content structure, user friendliness, help functions, and quality—also require strengthening, according to the survey results. Maintaining and updating the Web sites remain a challenge (box 6.1).

### Box 6.1  A Government Web Site Is Not a One-Off Investment

A 2004 report by the *Economy Reference Newspaper* revealed that more than 40,000 government Web sites in China can be found using search engines. A random sampling of these sites showed that many had only a main page. More than 90 percent of the main pages offered news. However, the information and data were often old; some had not been updated for several years.

For instance, the Web site for the Bureau of Investment Promotion of Ji County (Heilongjiang province) refers to “local government special windows for outside investors.” Except for the bureau’s address and telephone number, no other useful information is provided. The most recent update was dated January 1, 1970—an obvious mistake.

When a staff member at the Food Bureau of Yan City (Henan province) was asked why the bureau’s Web site had not been maintained and updated—the market information for products such as corn, beans, and other products was dated July 2000—he responded that farmers could go to the bureau directly and ask for information they needed.

*Source: China Newsnet 2004.*
Local E-Government and E-Community

Together with the development of market economy, the society has increasingly higher demand for public services:

- In a dynamic and competitive environment, individuals and businesses demand that the government provide comprehensive and convenient services.
- The disadvantaged in the cities—including low-income households, the unemployed, old persons without family support, and disabled persons—want to get assistance from the government in various areas.
- A large population of migrant workers requires government departments at all levels to ensure effective management and to provide diverse services. Such demand for comprehensive public services has led to the integration of resources and services, enabling innovative local e-government and e-community models.

At very early stage, some e-community applications have grown out of applications initially designed to support administrative functions of the Chinese government (figure 6.5). As a result, many applications described as focused on communities are really aimed at strengthening the government’s capacity to provide services to communities. More community-centered services, such as employment information and volunteer service applications, are less widespread.

In recent years, community informatization development has become a priority task for the Chinese government. Different regions have been actively exploring effective models to build harmonious communities and have accumulated preliminary experiences during this process. Some municipal governments have established

Figure 6.5 E-Community Content in China, 2004

integrated e-community service platforms, with call centers and Web sites, in response to increasing demand for information services in large cities. There are e-community applications in central cities such as Beijing, Shanghai, Tianjin, Guangzhou, Wuhan, Hangzhou, Fuzhou, Ningbo, and Qingdao. For example, Yuexiu District in Guangzhou established a one-stop community service system. Residents receive 23 different services at the community centers and are encouraged to provide feedback through Web sites on community planning and administration, thus overseeing government performance. Haishu District, in Ningbo City, has established an interactive community service center accessed using telephone and the Internet. This service platform has helped 12,000 workers find jobs, including 4,000 laid-off workers. Other notable examples at the city level include the community live television Webcast system of Chengdu (Wenjiang District) and the online interview column of focus topics of Xi’an.

Some cities and districts have made distinctive contributions in assisting disadvantaged groups. For instance, Huangpu District in Shanghai set up a social protection “one-stop” service platform, offering services ranging from minimum living guarantee (dibao), low-rental housing, and medical assistance, to social relief for original Shanghai residents returning from western provinces. The residents benefit substantially from this effective system. Taking the dibao system as an example, the recipients currently spend only three days (15 days before), provide three to nine supporting documents/certificates (five to 19 before), and they do not need to fill out any form (two forms before). Different government departments coordinate internally, and verification of information within a district can be conducted online—previously, the staff had to visit 12 departments to verify information. This helps fill administration loopholes and reflect social fairness. The application and promotion of the dibao system in Beijing has also achieved good results. As of July 30, 2005, its information database included 8,190 institutions at city, district, county, village, and community levels, as well as 7,095 registered users. A range of services, such as submission of the dibao application, verification, approval, release of funds, reconfirmation of dibao coverage, and adjustment of dibao standards, are now all computer-enabled. This system handles on average 1,500 cases daily and has become a common social assistance platform for related departments in Beijing.

Rural areas in China could also benefit from online information services. Access to relevant information has the potential to transform economic opportunities and improve livelihoods for rural households. It can do so by facilitating better farming techniques, helping to choose crops to plant in response to market information, reducing exploitation in pricing, creating new possibilities for trade, and improving health and education services.

E-agriculture portals provide three types of information services:

- topics such as weather, crop diseases, and agricultural standards
- government services such as funding and subsidies
- market information for entrepreneurial farmers, such as prices and pesticide standards for exporting to a particular country.
Advancing E-Government

The agriculture sector in Chongqing has gone through intensive modernization since 1999. A management structure for ICT promotion and project implementation within the agricultural sector was established by the local government, following a step-by-step implementation approach.

Some 39 districts and 29 counties have set up information centers within the agriculture department, and the rest have designated one particular office to take on the same responsibility. About 70 percent of organizations affiliated with the agriculture department have established information administration and service departments within their organizations. Finally, 47 percent of townships and villages have established information service centers with both full-time and part-time information officers. Prefecture- and county/town-level local area networks and wide area networks connect all the agriculture and livestock and pastoral departments at these two levels as well as business units under the departments. By 2003, 40 districts and counties had built intranet and e-government platforms.

Chongqing has also constructed a number of shared databases and Web sites that cover topics ranging from agricultural products to technologies and equipment. Market information and price fluctuations are collected and disseminated through terminals in 16 wholesale agricultural markets across the city.

The information service for farmers is provided through three channels:

- The first, farming techniques—inquiry service system, is a call center. Farmers and local farming technicians can call a toll-free number to ask about farming techniques and related information. The callers are answered by an automated system on standard inquiries or receive personal attention from the call center staff. For difficult inquiries, the call center staff members consult experts.

- The second channel, for agriculture network broadcasting, is similar to the first but only provides prerecorded information to local telephone subscribers. This service center is responsible for collecting, editing, and broadcasting relevant information. The program has six sections: daily farming activities, government policies, labor market information, market prices, practical techniques, and inquiries. The monthly subscriber fee is just $0.4 for unlimited access to a specific phone number, and there is no extra charge for telephone connection. After eight months of trial, the system had 26,000 subscribers in October 2005.

Although thousands of municipalities in China have e-agriculture portals, many are merely information boards, and much of the information is outdated. Maintaining a resourceful, interactive, and sustainable e-agriculture portal requires considerable resources and commitment from local governments (box 6.2).

Box 6.2 Rural Informatization Case Study of Chongqing

The agriculture sector in Chongqing has gone through intensive modernization since 1999. A management structure for ICT promotion and project implementation within the agricultural sector was established by the local government, following a step-by-step implementation approach.

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(Continued)
Chongqing’s agriculture department is also working with Chongqing Mobile to provide a third system to deliver agricultural information to rural mobile device users by voice and text messages. The project has been tested in Hechuan, Kaixian, and Yongchuan, and has more than 4,000 registered users.

Because these rural ICT initiatives are in pilot stages, it is difficult to assess their impact on increasing rural household income and improving living conditions. Efforts should be put into a monitoring system to continuously evaluate the impact of these projects on the rural economy, improve project implementation, and optimize benefits.

Source: Author summary from field visit.

Movement Forward

Developing e-government is a massive undertaking with profound effects on the economy, government institutions, enterprises, and individual citizens. The following discussion identifies priorities for China’s e-government agenda and obstacles that should be tackled first.

Clarifying the Aims of E-Government through Well-Defined IT Architecture

In developed countries, e-government was initiated as part of reforms to promote transparent governance and open government information in the 1970s. In contrast, many local government officials in China fail to realize that e-government is not about constructing technological networks, but rather about applying technology
Advancing E-Government

for reengineering administrative and business processes, transforming government functions, and improving public services.

China is in the midst of two major transformations: from an overwhelmingly agricultural to an industrial economy and thus from a rural to an urban society, and from a highly centrally planned economy to a market economy. In this context, a major challenge is using ICT to help make the government more effective, efficient, and transparent, to facilitate these transformations. ICT is a means, not an end in itself.

Some of the more successful countries have adopted enterprise architecture as an approach to e-government. For example, Canada has established the Business Transformation Enablement Program, which seeks to integrate business processes across the government to provide seamless public services. The United States has created a Federal Enterprise Architecture for ensuring the development of e-government applications in a coordinated manner.

It will be important for China to embrace IT architecture for the successful deployment of e-government services. When defining its IT architecture, the Chinese government needs to revisit organizational structures for guiding ICT development. This will be vital to the coordinated and coherent development of e-government applications across different wings of the government.

Such an approach to e-government can help China’s central government coordinate government departments and institutions at different levels, planning both vertically and horizontally and integrating government information resources to connect information “islands” at all government levels. As the development of government-to-business (G2B) and government-to-citizen (G2C) applications accelerates and the quality of service improves, businesses and citizens will experience more transparent, responsive, and efficient government services, and subsequently increase their support for e-government. Thus the openness of information flows to the public must be improved; the continuous process of generating, updating, absorbing, and exchanging information resources as part of a well-defined IT architecture remains key to achieving its huge economic and social benefits.

Using Public-Private Partnerships

For a long time, China’s e-government applications have been led by technology rather than driven by demand—leading to a structural imbalance between supply and demand. ICT vendors tend to build networks, databases, hardware, and software based on existing technologies and products. Many do not have the capacity to analyze the types of services that are in demand and, as a result, cannot provide mature solutions to the problems the government urgently needs to resolve. Hence the supply and demand of e-government applications need to be carefully matched.

The use of public-private partnerships (PPPs) can accomplish the following:

• assist in leveraging private sector funding for delivery of e-services
• give the government access to advanced ICT project-management skills
• accelerate e-government project implementation
• help the private sector better understand demand and offer a solid and continuous market base.

While PPPs are not a panacea for all the challenges involved in implementing e-government, they can provide distinct value for a range of e-government applications and offer relevant, cost-effective solutions.

China has made limited use of PPPs in e-government. In response to rapid economic and social development, the government’s functions are shifting from micro-management to macro-coordination. Its agenda includes large initiatives such as developing a social security system, providing employment for agricultural workers, maintaining economic growth, and reforming and building the tax system. The challenge will be to entrust the private sector to participate in such initiatives while creating incentives for the country’s application providers to develop the ability to support such complex tasks.

As encouragement for greater adoption of PPPs, it will be necessary to develop a framework for e-government PPPs at the central, provincial, and local levels, and train key government staff members on the planning, design, development, implementation, and monitoring of PPP projects.

Enhancing Quality Standards

The link between the government and ICT suppliers is only part of the story. The ultimate beneficiaries of e-government projects are Chinese citizens and businesses. The quality and standards of ICT application providers must improve to meet the demands of these users. The government has experimented with the use of third-party supervision to ensure the quality of e-government projects. For example, companies like Qing Hua Wang Bo (an IT service provider linked to Qing Hua University), Ken Si Jie (a computer system research institute), and China Software Testing Center have been involved as auditors of government projects. It would be desirable to create capabilities for defining and monitoring standards for application and process design in e-government. Leading universities and quality standards organizations would be natural partners for such an initiative.

Integrating and Sharing Information Resources

Gaps in economic development have resulted in huge differences among Chinese regions in terms of information resource development and use, giving rise to a digital divide in addition to those for information infrastructure and technology (see chapter 3). The annual survey of government Web sites by the State Council Informatization Office shows that the top 10 local government sites are all in the eastern region (see table 6.3). In particular, Beijing, Shanghai, Jiangsu, Shandong, and Guangdong have a large lead in e-government applications over other provinces. As for e-communities, few demonstration projects are from the central and western regions. Among the 400 million citizens covered by the national population information database, 70 percent are from the eastern region.
Advancing E-Government

There is a clear need to establish cross-regional mechanisms for sharing and exchanging information resources. To a large extent, development in China’s eastern region depends on the huge pool of low-cost human resources and raw materials from the central and western regions and would benefit from those regions achieving sustainable development.

The government needs to look at some of the emerging models for sharing and collaborating on e-government applications from other parts of the world. For example, the Association of Developers and Users of Open Source Software in Administrations and Local Communities (ADULLACT) in France has members from local authorities, associations, and service companies. ADULLACT has emerged as a platform for collaboration and sharing of applications by local authorities, thus avoiding duplication and reducing the time and cost of developing e-government solutions. Other initiatives include Ireland’s Local Government Computer Services Board and the United Kingdom’s Local Authority Software Consortium. While these examples relate to local governments, the logic would apply equally to provincial, national, and regional government entities. For example, the European Union has set up an e-Government Observatory to share best practices and help in the interoperable delivery of European e-government services to public administrations, businesses, and citizens.

China should consider creating an institutional mechanism for integrating and sharing e-government applications across provinces and local governments. This could prove especially helpful to those regions and provinces currently lagging on e-government application development.

Maximizing Investment Returns on E-Government Projects

E-government applications are often huge management information system projects that require large investments. At the same time, one of the main objectives of e-government is to reduce the transaction costs of government operations. In China, many investments in large-scale informatization projects have had a mixed record, with some projects exceeding expectations while others have yielded limited results.

A lot of this investment went into telecommunications infrastructure, networks, and databases. While these provide the foundation for ICT applications, such investment was sunk and construction is often repeated, resulting in overinvestment and overcapacity. At the same time, returns are small when e-government applications are at an early stage of development. In addition, there have been more government automation projects (including government-to-government, or G2G, applications) than government-to-citizen or -business services thus far, so the general public may not be aware of the savings resulting from G2G—but have high and unmet expectations for G2C and G2B services. For example, only 3 percent of Internet users accessed e-government applications in 2005, and only 11 percent were satisfied with the e-government information available (CNNIC 2005). Moreover, impacts of ICT applications are hard to quantify. All this leads to reduced support and participation in e-government initiatives.
It would be useful to adopt a clear methodology for prioritizing e-government investments. For example, Australia has established a demand-and-value assessment methodology for objectively determining which e-government applications deserve funding. The United States has a similarly well-structured process as part of its Performance Reference Model. The Chinese government would be well advised to consider such an approach so that investments in e-government can yield tangible results. This apart, the importance of monitoring and evaluation frameworks with clear and measurable output and outcome indicators for each project cannot be overemphasized.

Making Information Flows More Transparent

The primary goal of any e-government application is to achieve transparent information flows. Like many countries, China has a long, entrenched tradition of government secrecy. Chinese scholars estimate that some 80 percent of useful information in China languishes in government files (Horsley 2004). This culture of secrecy has meant that the government acts as a bottleneck to the free flow of economic, social, and other information that would facilitate continued dynamic growth and development. Officials and scholars alike have noted that the lack of transparency contributes to corruption, misallocation of resources, and distrust of public institutions.

Information access is likely to improve in the near future. Provisions on open government information have been drafted (China Newsnet 2004). The draft provisions establish a presumption of disclosure, making secrecy the exception rather than the rule. They provide that citizens, legal persons, and other organizations have the right to request government information from government agencies, including information about individuals themselves, and refer to the right to know. The provisions impose a legal obligation on government agencies to disclose all information not covered by a specified exemption. In addition, such information must be posted on the government’s Web site.

It would be interesting to emphasize the performance of different government departments and agencies in achieving transparency (within the information openness subcategory) in annual e-government Web site rankings and to give the matter wide publicity so as to motivate government entities to be more transparent.

Notes


2. The national agro-industry’s Web site provides daily postings of price information for more than 300 products in 280 large, wholesale agricultural markets. This e-government service also publishes over 300 pieces of information a day for more than 25,000 customers. The site is visited by over 15,000 users a day, and about 9,000 village service points have been linked to this system (World Bank 2006a).

3. All government information is to be accessible by the public unless it falls within one of six listed exemptions from disclosure: a state secret; a commercial secret; an individual’s private information; information related to a matter being investigated, discussed, or processed; information related to an administrative enforcement action that might influence the enforcement activity or endanger an individual’s life or safety; or information otherwise exempted from disclosure by law or regulation. All but the state secrets exemption may be subject to a balancing test.