Chapter 4

Digital Government as a Business Enabler: An Analysis of Business Processes in India

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1. Introduction

Government services are the foundation of every functioning economy as they support the operations of all stakeholders – households, businesses, government, and the foreign sector.[1] Previously, many government services in India were only accessible through physical means. However, following the launch of Digital India[2] in 2015, the majority of these services have been made available electronically to a diverse group of stakeholders. Now, the governments worldwide are adopting digital ways of providing services to their stakeholders, including administrative functions. The coronavirus disease (COVID-19) pandemic has further accelerated the digitisation of government services across the globe, including in Asia-Pacific nations.

Successful digital transformation would allow public sector organisations to function more efficiently and effectively in the digital world, as well as provide simpler and more effective public services (Greenway et al., 2018). Today's strategic decisions to boost digital government will not only support recovery efforts, but will also lay the path for the public sector's future agility and resilience.

The COVID-19 pandemic has revealed gaps and disparities, and exacerbated challenges, where digital technologies or data were not exploited strategically or effectively. The current crisis should motivate governments to communicate significant lessons learnt about major digital enablers and critical digital flaws. The pandemic has also prompted governments to step up its digitisation efforts to aid in the development of long-term recovery strategies and initiatives, such as finding new ways to engage with communities and businesses to better understand and address their needs. Further, the Sustainable Development Goals (SDGs) emphasise the expansion of information and communication technologies (ICTs) to accelerate human progress, bridge the digital divide, and promote knowledge societies.

The utility of ICTs for governments to develop and modify public institutions, as well as the public sector environment in general, and their service delivery capacities is very well recognised globally. Early adoption of ICTs, dubbed 'e-government', aims to boost efficiency and transparency in the public sector by digitising operations. Governments are now attempting to exploit data and digital technologies to go even further – to create more participatory, inventive, and agile forms of governance. e-Government aims to increase sectoral efficiencies through the use of digital technologies, reducing the cost of and time taken for existing operations and public services (OECD, 2020a).

Digital government is a natural progression from e-government. The terms 'digital government' and 'e-government' are often used interchangeably; however, they differ in some aspects depending upon the context. In general, both terms refer to the use of digital technologies to enhance government operations and services. e-Government, which stands for electronic government, typically refers to

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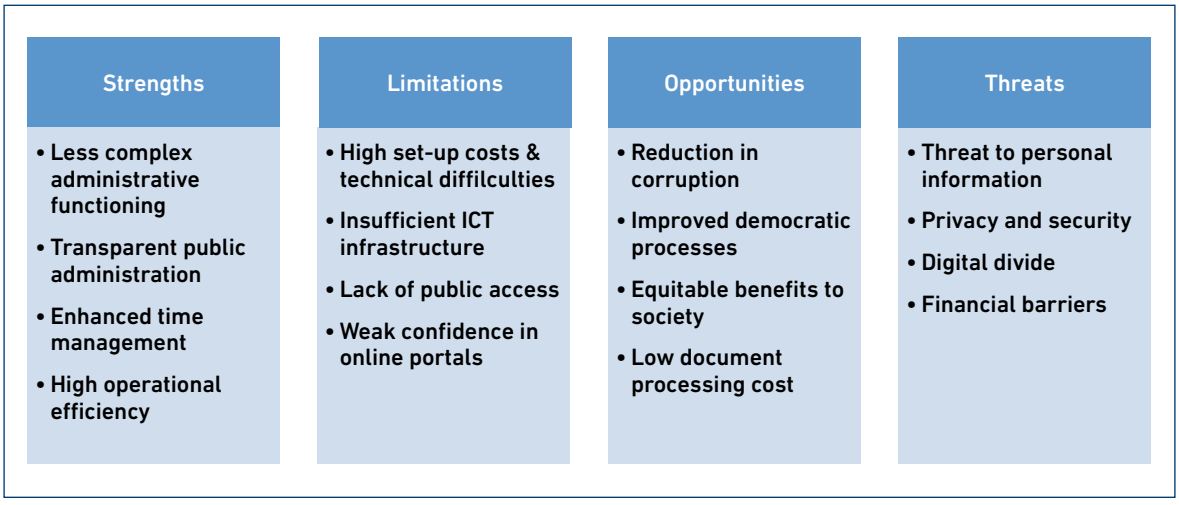
[1] The foreign sector includes all stakeholders associated with political and economic activities involving foreign transactions, such as international trade, investment, and foreign exchange.

[2] The Digital India initiative, launched in July 2015 by Prime Minister Narendra Modi, aims to digitally empower Indian society and transform the country into a leading knowledge economy through the infusion of digital technologies into the public service ecosystem, utilising information technology. The mission operates collaboratively with various departments under multiple ministries, with individual programs operating independently while contributing to the broader vision of a tech-enabled societal transformation in India.

the use of ICTs to improve government processes and service delivery, such as through the use of online portals and digital forms. e-Government can also encompass the use of ICTs to improve internal government operations, such as through electronic document management systems. On the other hand, digital government refers to a broader transformation of government operations and services through the use of digital technologies, including not only ICTs but also emerging technologies such as artificial intelligence and blockchain. Digital government can involve a more fundamental shift in the way government operates, with a greater emphasis on user-centred design, data-driven decision-making, and the creation of more responsive and agile government structures.

The aim of digital government is to assist various functionaries of the governments in moving away from an efficiency-focused approach to digital technology towards a more open, collaborative, and innovative approach. Digital government comprises the complete digitisation of government, allowing for the level of integration required to provide better services to citizens and businesses. The underlying principle of digital government, supported by an effective e-governance institutional framework, is to improve the internal workings of the public sector by reducing financial costs and transaction times to better integrate workflows and processes and to enable effective resource utilisation across the various public sector agencies, with the goal of achieving long-term solutions (OECD, 2020a). Figure 4.1 provides a strengths, limitations, opportunities, and threats (SLOT) analysis of digital government.

Figure 4.1. SLOT Analysis of Digital Government



ICT = information and communication technology; SLOT = strengths, limitations, opportunities, and threats.

Source: Author.

India's digitisation picked up speed in July 2015 with the launch of the Digital India programme, which included e-governance, mobile e-health services, and digital finance for digital inclusion, amongst others. Digital India was envisaged as a coordinated effort to bring together many projects in the fields of connectivity, skills development, and digital governance. Digital India has three main objectives: build a secure and stable digital infrastructure, provide digital services, and ensure that every citizen has access to the internet.

The Digital India programme not only helped the public to avail of e-government services but also assisted businesses to complete all government compliance requirements in the least time possible at the lowest level of cost and human effort. Governments that have succeeded in digital transformation have invested in good governance models to guide their digital government initiatives. They have explicit coordination procedures in place to oversee cross-government ICT projects, including institutional representation from several policy areas. Furthermore, all stakeholders must be involved throughout the policy cycle to ensure that the design, implementation, delivery, and monitoring of digitally connected public services are properly aligned with users' requirements, expectations, and preferences. This type of participation also enhances the legitimacy of decisions and actions. Additionally, adopting policy indicators and processes to track progress on digital transformation reforms can be effective policy tools for increasing government accountability by ensuring that digital government changes are transparent and efficient (OECD, 2020b).

The measurement of digital government has been a challenge. The Digital Government Index 2019, developed by the Organisation for Economic Co-operation and Development (OECD, 2020a) has proved quite helpful in measuring the comprehensiveness of digital government strategies and initiatives across OECD countries – by assessing the presence of a coherent and whole-of-government approach to adopt digital technologies and using data from central/federal public sector organisations.

Other indices measuring digital government include the E-Government Development Index and the E-Participation Index, which are developed by the United Nations (UN). The E-Government Development Index is a weighted average of normalised scores on the three most significant aspects of e-government: the scope and quality of online services (Online Service Index), the condition of telecommunication infrastructure development (Telecommunication Infrastructure Index), and intrinsic human capital (Human Capital Index). The E-Participation Index is a supplementary index and focuses on the use of online services to help governments provide information to citizens (e-information sharing), connect with stakeholders (e-consultation), and participate in decision-making processes.

Digital government comprises the interaction of government with four key stakeholders: households, businesses, government, and the foreign sector. This interaction happens in several ways, including issuing various certificates (e.g. birth certificates, marriage certificates, death certificates, and land and vehicle registrations); obtaining several kinds of permission (e.g. construction permits, land purchase and utilisation permits, and export–import licences); and complying with other government regulations (e.g. paying taxes, and audits).

In the context of government-to-business (G2B) interaction, there are more than 40 steps under four phases of starting and running a business in India: setting up the legal existence of the entity, starting/registering an entity/unit in the state, the pre-commissioning phase, and the post-commissioning phase. To reduce time and costs, and increase production, it is imperative to make government engagement with businesses more efficient, effective, time-saving, and cost-effective. However, the physical distance between the location of the business and government offices imposes restrictions, lengthens the time required, and adds to the expense of doing business. Performing the same interaction digitally helps to remove these constraints and save time and money.

2. Research Objective

This study attempts to identify the points of interaction between businesses and government in India in the context of setting up and running a business. It also presents significant projects implemented by the Government of India to provide its services in a digital mode, and identifies gaps where scope remains to bring government services for businesses under the purview of digital government.

3. Government Interaction with Various Sectors in India

e-Governance in India can be defined as continuous interaction between government and various stakeholders. India's digital tale is one of ICT-led growth through the application of technology that is both inexpensive and revolutionary. Since 2015, one of the most important movements in India has been digitalisation. Amongst the 17 major digital economies, it has emerged as the second-fastest digital adopter. This quick development has aided India's ascension to the forefront of digital and technical innovation, owing to the country's youthful population. Further, the COVID-19 pandemic has highlighted the significance of digital infrastructure, bringing the internet and other interconnected devices to the forefront. As remote learning and work became the norm, reliance on personal computers and cloud-based applications increased significantly, underscoring the importance of robust digital infrastructure.

India has already achieved significant progress in terms of digital adoption, with the total number of internet users exceeding that of other industrialised countries. Digital solutions have also re-engineered our economy and communities, in addition to changing the way we live. Customers, corporations, and governments all benefit from the internet's rising value offerings. However, to give access to every home, the pace of digital infrastructure creation must be quickened.

3.1. Government to public

Government-to-public (G2P) programmes (or government to consumer/citizen) aim to make it easier for individuals to interact with the government as citizens and consumers of public services. This covers contacts relating to public service delivery as well as involvement in the consultation and decision-making process. Figure 4.2 shows some of the important areas of digital G2P interaction in India.

Figure 4.2 Areas of Digital G2P Interaction in India

G2P = government-to-public.

Source: Author.

On the consumer side, India's digital revolution is already under way. The country has one of the world's largest and fastest-growing bases of digital consumers, thanks to the lowering cost and increasing availability of smartphones and high-speed internet. India is digitising faster than many mature and emerging countries. With 560 million internet customers in 2018, India is the second-largest and fastest-growing market for digital consumers, behind China. On average, Indian mobile data customers use 8.3 gigabytes (GBs) of data each month, compared with 5.5 GB in China and 8.0–8.5 GB in the Republic of Korea, a mature digital economy. In 2018, Indians had 1.2 billion mobile phone subscriptions and downloaded more than 12 billion applications.

The Jan-Dhan Yojana, a large-scale financial inclusion initiative by the Government of India, has resulted in a significant increase in the number of Indian adults with digital financial accounts. Since 2011, the percentage of Indian adults with at least one such account has risen more than fourfold, reaching 80%. The World Bank's Digital Adoption Index considers three factors: digital foundation (cost, speed, and reliability of the internet connection); digital reach (number of mobile devices, app downloads, and data consumption); and digital value (cost, speed, and dependability of internet service) (how much consumers engage online by chatting, tweeting, shopping, or streaming). Since 2014, India's score has increased by 90%.

Since its launch in 2009, Aadhaar has recruited 1.2 billion individuals, making it the world's largest digital ID programme and accelerating the adoption of other digital services. By February 2018, about 870 million bank accounts have been connected to Aadhaar, up from 399 million in April 2017 and 56 million in January 2014. Similarly, the Goods and Services Tax Network, launched in 2013, consolidates the transactions of more than 10.3 million indirect tax-paying enterprises onto a single digital platform, providing a tremendous incentive for businesses to digitise their operations.

The country's rapid expansion is assisting India's poorest states in closing the digital divide with wealthy regions. Lower-income states, such as Uttar Pradesh and Jharkhand, are growing internet infrastructure, such as base tower stations, and expanding internet service penetration to new subscribers at a quicker rate than wealthier states. Between 2014 and 2018, Uttar Pradesh alone added around 36 million internet users. Ordinary Indians in many parts of the country, including small towns and rural areas, can now read the news online, order food delivery via a phone app, video chat with a friend (Indians log 50 million video-calling minutes per day on WhatsApp), shop at a virtual retailer, send money to a family member using their phone, or watch a movie streamed to a handheld device.

In agriculture, healthcare, retail, logistics, and other industries, new digital ecosystems are already emerging, altering consumer–producer relations. Data-driven loans and insurance payouts in the agricultural sector are examples of opportunities, as are digital solutions that map out the most effective routes and track freight movements on India's highways. Patients in healthcare might benefit from teleconsultations via digital voice or high-definition video, and retailers would benefit from being part of e-commerce networks.

Individual Indians are already benefiting from digitalisation as consumers, but they must be aware that it has the potential to alter their lives and work in fundamental ways. They need to understand how digitally driven automation will affect their jobs and what skills they will need to succeed in the future. Individuals will also need to learn to be data stewards and wary information consumers.

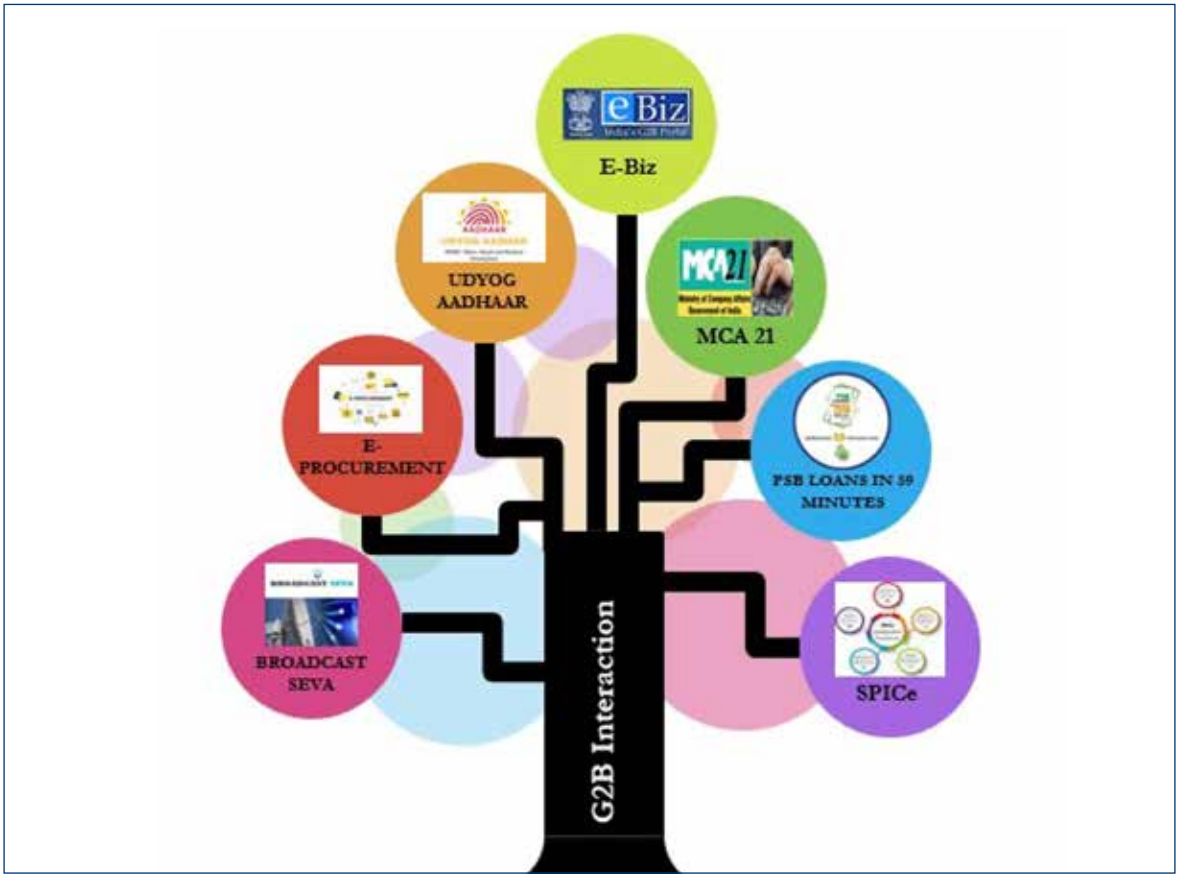
While India's public and commercial sectors have moved the nation to the forefront of global internet and digital application users in recent years, the country's digitisation journey is far from done.

3.2. Government to business

G2B transactions include payments, the sale and acquisition of products and services, and the supply of business-focused services. G2B interaction through the online mode enables the business sector to contact/work with local and central governments with the objective of exchanging information and complying with government norms to set up and run a business more quickly at a lower cost. G2B refers to the exchange of information between government agencies and commercial enterprises over the internet.

The government's contact with companies lowers the amount of time it takes for firms to complete a transaction. Digital government also supplies data that businesses require. For example, the government gathers extensive data on economic, demographic, and other trends, and makes it available to businesses helps them make vital choices. Furthermore, by offering an easy site structure with a plethora of helpful apps, e-government can assist firms in navigating government laws and regulations. One such example is the computerised filing of environmental permit applications. Figure 4.3 shows some of the major areas of digital G2B interaction in India.

Figure 4.3. Areas of Digital G2B Interaction in India



G2B = government to business, MCA = Ministry of Corporate Affairs, SPICe = Simplified Proforma for Incorporating a Company Electronically.

Source: Author.

3.3. Government to government

Government to government (G2G) refers to data sharing and electronic communications amongst government entities. This includes interactions at the national, provincial, and municipal levels, as well as intra- and inter-agency exchanges at the national level.

In this scenario, ICT is being utilised not only to reorganise the governmental procedures that are involved in the running of government institutions, but also to boost the flow of information and services inside and amongst them. This type of contact occurs solely inside the realm of government, and it might be horizontal (i.e. amongst various government agencies and functional areas within an organisation) or vertical (i.e. amongst national, provincial, and local government agencies and levels within an organisation). The major goal is to boost efficiency, productivity, and output.

Information is processed and decisions are made on a massive scale inside the government system. G2G projects aid in the improvement of internal government operations which require frequent changes dure G2P and G2B operations. The Government of India, as well as several state governments, have taken various initiatives for G2G interactions in the electronic mode.

Examples of G2G initiatives are (i) the Government of Karnataka's Khajane Initiative, a comprehensive online treasury computerisation project that resulted in the computerisation of the state government's treasury-related activities, which can trace every activity from the adoption of the state budget to the rendering of accounts to the government; and (ii) Andhra Pradesh's SmartGov, created to help the Andhra Pradesh Secretariat simplify processes and improve efficiency through workflow automation and information management.

3.4. Government to foreign

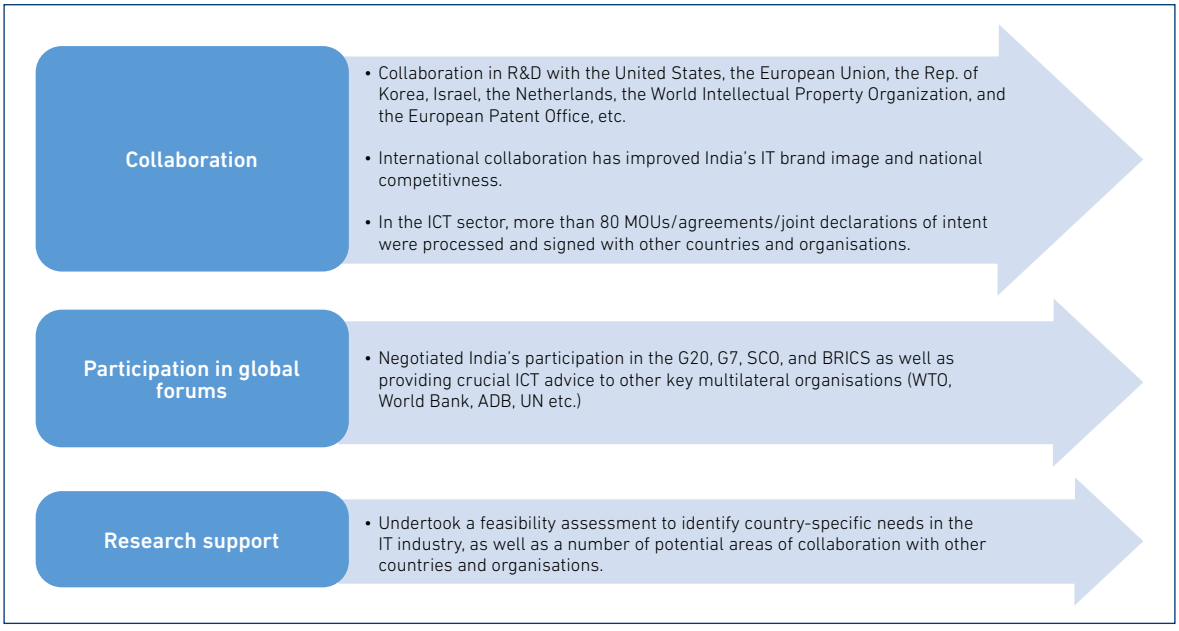
Government to foreign (G2F) includes transactions and interactions of the government with international/regional organisations (e.g. the United Nations, the World Trade Organization, the International Monetary Fund, and the Asian Development Bank); foreign investors and citizens; and the governments of other countries, etc. The Government of India relies heavily on information technology (IT) and information technology enabled services (ITeS) to engage with the foreign sector. To expand the use of IT/ITeS, the government has adopted a coordinated approach, leveraging initiatives like geographic diversification, domain expertise, and deploying highly skilled workforces to take advantage of emerging business opportunities.

International Cooperation Division

The Ministry of Electronics and Information Technology established the International Cooperation Division (ICD) to foster international cooperation in developing and frontier areas of electronics and IT through bilateral, multilateral, and regional frameworks. It is widely acknowledged that ICT may aid in society's long-term socioeconomic evolution.

The digital divide must be bridged for the advantages of ICT to reach the world's underprivileged communities. India is assisting several emerging economies by providing technical support in the areas of IT infrastructure, networking, capacity building, human resources development, and e-government, based on its significant expertise in bridging the digital gap. Moreover, various collaborative efforts have been geared up to encourage sustainable development and strengthen synergetic partnerships with other countries in the emerging and frontier areas of electronics and IT; explore ways to enhance investment; and address regulatory mechanisms to promote international cooperation in the emerging and frontier areas of electronics and IT. Figure 4.4 shows the achievements of the ICD in India.

Figure 4.4. Achievements of the International Cooperation Division in India



ADB = Asian Development Bank; BRICS = Brazil, Russia, India, China, and South Africa; ICD = International Cooperation Division; ICT = information and communication technology; IT = information technology; MOU = memorandum of understanding; R&D = research and development; SCO = Shanghai Cooperation Organisation; UN = United Nations; WTO = World Trade Organization.

Source: Author.

Immigration, Visa, and Foreigners Registration & Tracking

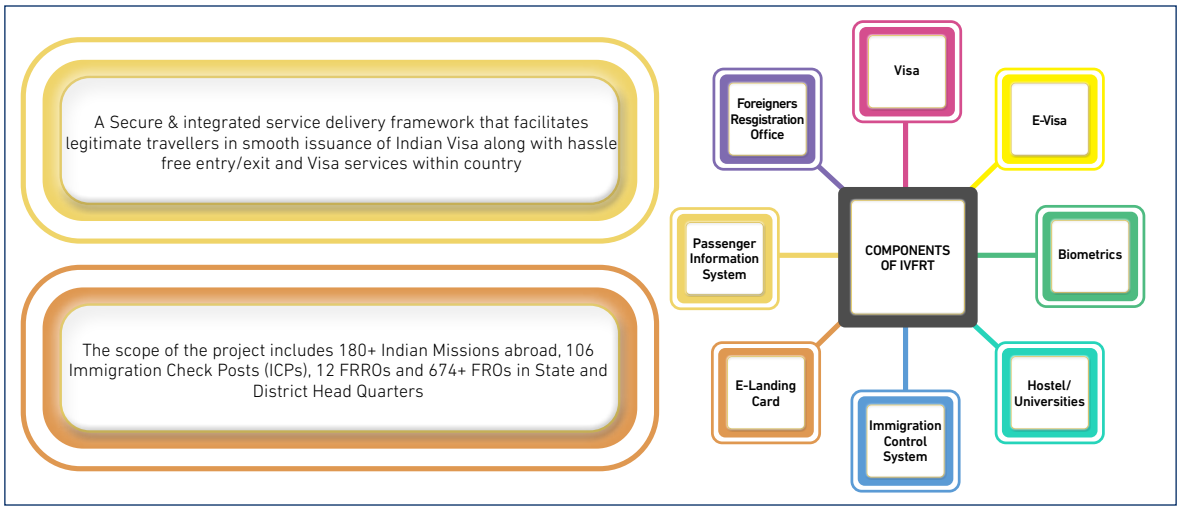
India has become a popular tourist destination as well as a significant commercial and service centre. Since the Immigration Check Post (ICP) is the initial point of contact for the public, it requires innovative technology that provides quick and user-friendly services.

The Ministry of Home Affairs has launched a mission mode project (MMP) to offer effective and efficient online immigration services, called Immigration, Visa, and Foreigners Registration & Tracking (IVFRT). The main goal of this project is to create and put into action a framework for the delivery of safe, integrated services that helps authorised travellers while enhancing security. The IVFRT project aims to optimise and interlink functions related to visa issuance, immigration, foreigner registration, and movement tracking in India. It covers 192 Indian missions worldwide, 108 Immigration Check Posts (ICPs) within India, 12 Foreigners Regional Registration Officers (FRROs), and over 700 Foreigner Registration Officers (FROs). The implementation of this mission mode project will enable the authentication of traveller's identity at missions, immigration check posts (ICPs), and foreigner registration offices (FROs) through the use of intelligent document scanners and biometrics. It will also facilitate the updating of foreigners' details at entry and exit points, as well as improved tracking of foreigners through the sharing of information captured during visa issuance at missions, immigration checks at ICPs, and registration at FRRO/FROs. The key stakeholders of the IVFRT are the Ministry of Home Affairs, Ministry of External Affairs, National Informatics Centre, State Police, Ministry of Tourism, Ministry of Civil Aviation, travellers, and customs.

The MMP will comprise 37 services, including nine core services, to streamline and integrate the visa, immigration, and foreigners registration and tracking procedures. The following are the nine core services that will be provided under this project:

- Traveller facilitation services by providing multichannel access to relevant information and form submission
- Online appointments, application status tracking, feedback, and grievance redressal
- Visa issuance service
- Document verification and authentication services to the mission, ICPs, and FRROs/FROs
- Effective targeted intervention for travellers at Immigration Check Posts (ICPs)
- Effective targeted intervention through an integrated approach to profiling, risk assessment, and watch-listing
- Integrated database for unique case files for passengers for effective collection and dissemination of traveller information
- Services for exchanging information and alerts across agencies
- Service for alert generation and distribution

Figure 4.5. Mission Mode Project on Immigration, Visa, Foreigners Registration & Tracking



FRO = Foreigners Registration Office; FRRO = Foreigners Regional Registration Office; ICP = Immigration Check Post; IVFRT = Immigration, Visa, Foreigners Registration & Tracking.

Source: NIC (n.d.).

4. Digital Government and Businesses in India

Businesses are considered the backbone of any economy as they mobilise an economy's resources and lead to value generation and the creation of employment. However, conducting a business requires continuous interaction with the government at various levels to obtain permits and comply with norms and regulations. As part of its efforts to create an enabling business environment, the Government of India has initiated various reforms – including launching projects to make government services available in a digital mode.

4.1. Setting up a business in India

In India, setting up a business requires the completion of four phases: setting up the legal existence of the entity, registering an entity/unit in the state, the pre-commissioning phase, and the post-commissioning phase. These four phases have 41 steps; 25 steps can be completed digitally and the rest are offline. Their description and detailed steps are given in Tables 4.1–4.4 and Figures 4.6–4.9. Figure 4.6 shows the process of setting up the legal existence of an entity in India. Figure 4.7 shows the procedure of registering an entity in the state. Figure 4.8 shows the steps adopted in the pre-commissioning phase. Figure 4.9 shows the steps followed in the post-commissioning phase.

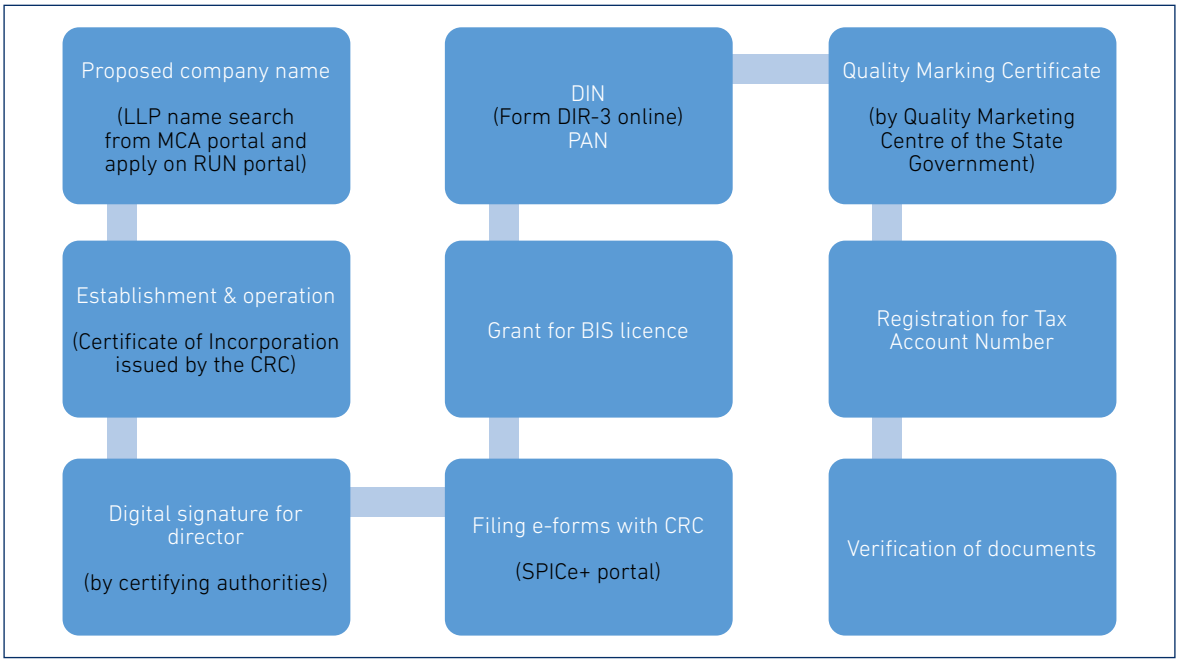
Table 4.1. Setting up the Legal Existence of the Entity

Steps	Online	Offline
1.1 Approval for proposed company name	✔	
1.2 Consent to establish and operate	✔	
1.3 Digital Signature Certificate for proposed directors	✔	
1.4 Filling e-forms with CRC and finalisation of documents	✔	
1.5 Grant for BIS licence	✔	
1.6 Obtain DIN and PAN	✔	
1.7 Quality marking certificate	✔	
1.8 Registration for Tax Account Number	✔	
1.9 Verification of documents	✔	

BIS = Bureau of Indian Standards, CRC = the Central Registration Centre, DIN = Director Identification Number, PAN = Permanent Account Number.

Source: Compiled from Government of India, Ministry of Corporate Affairs.

Figure 4.6. Setting Up the Legal Existence of the Entity



BIS = Bureau of Indian Standards, CRC = Central Registration Centre, DIN = Director Identification Number, DIR = Director, LLP = Limited Liability Partnership, MCA = Ministry of Corporate Affairs, PAN = Permanent Account Number, RUN = Reserve Unique Name, SPICe = an integrated web form offering 10 services by three Central Government Ministries & Departments.

Source: Compiled from Government of India, Ministry of Corporate Affairs.

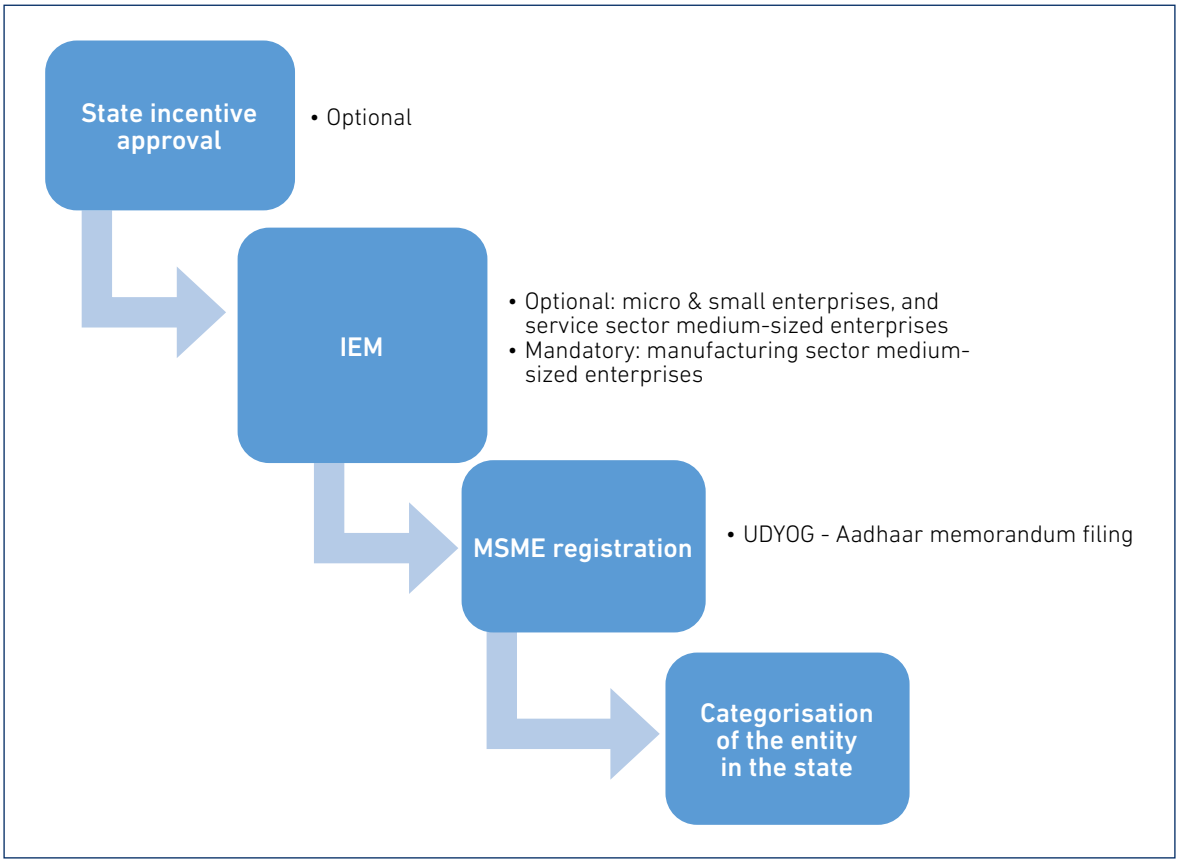
Table 4.2. Starting/Registering an Entity in the State

Steps	Online	Offline
2.1 Approval for state incentives		✔
2.2 IEM registration	✔	
2.3 MSME registration	✔	
2.4 Registering/Categorisation of an entity/unit in the state		✔

IEM = Industrial Entrepreneurs Memorandum; MSME = micro, small, and medium-sized enterprises.

Source: Compiled from Government of India, Ministry of Corporate Affairs.

Figure 4.7. Registering an Entity in the State



IEM = Industrial Entrepreneurs Memorandum; MSME = micro, small, and medium-sized enterprise.

Source: Compiled from Government of India, Ministry of Corporate Affairs.

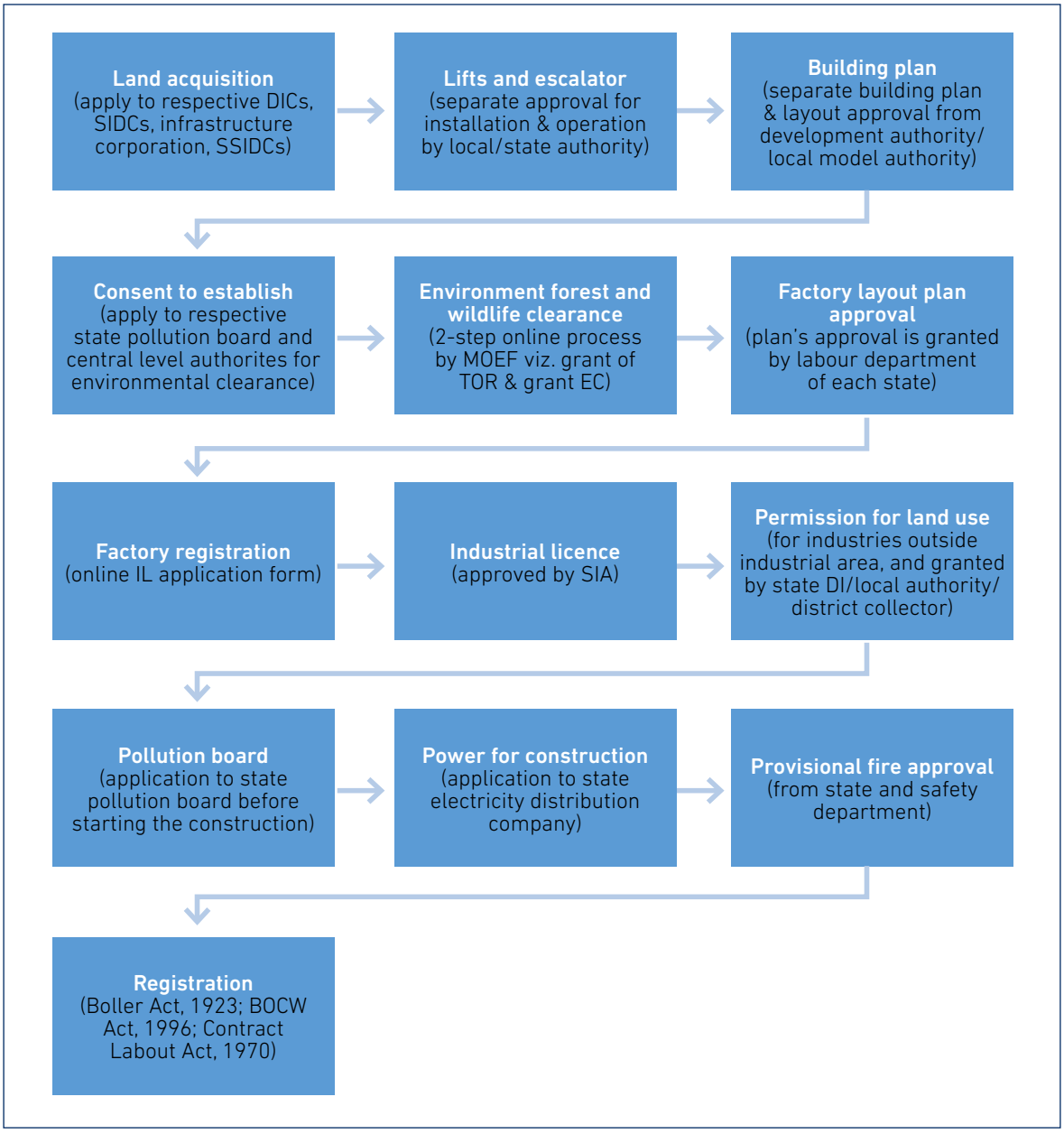
Table 4.3. Pre-Commissioning Phase

Steps		Online	Offline
3.1	Acquisition of land		✔
3.2	Approval for lifts and escalator		✔
3.3.	Building plan approval		✔
3.4	Consent to establish		✔
3.5	Environment, forest, and wildlife clearance	✔	
3.6	Factory layout plan approval		✔
3.7	Factory registration	✔	
3.8	Industrial licence	✔	
3.9	Permission for land use		✔
3.10	Pollution board		✔
3.11	Power for construction		✔
3.12	Provisional fire approval		✔
3.13	Registration under Boiler Act, BOCW Act, or Contract Labour Act	✔	

BOCW Act = the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996.

Source: Compiled from Government of India, Ministry of Corporate Affairs.

Figure 4.8. Pre-Commissioning Phase



BOWC = Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act; DIC = District Industrial Centre; EC = environmental clearance; IL = industrial licence; MOEF = Ministry of Environment, Forest and Climate Change; SIA = Secretariat for Industrial Assistance; SIDC = State Industrial Development Corporation; SSIDC = State Small Industries Development Corporation; TOR = standard terms of reference.

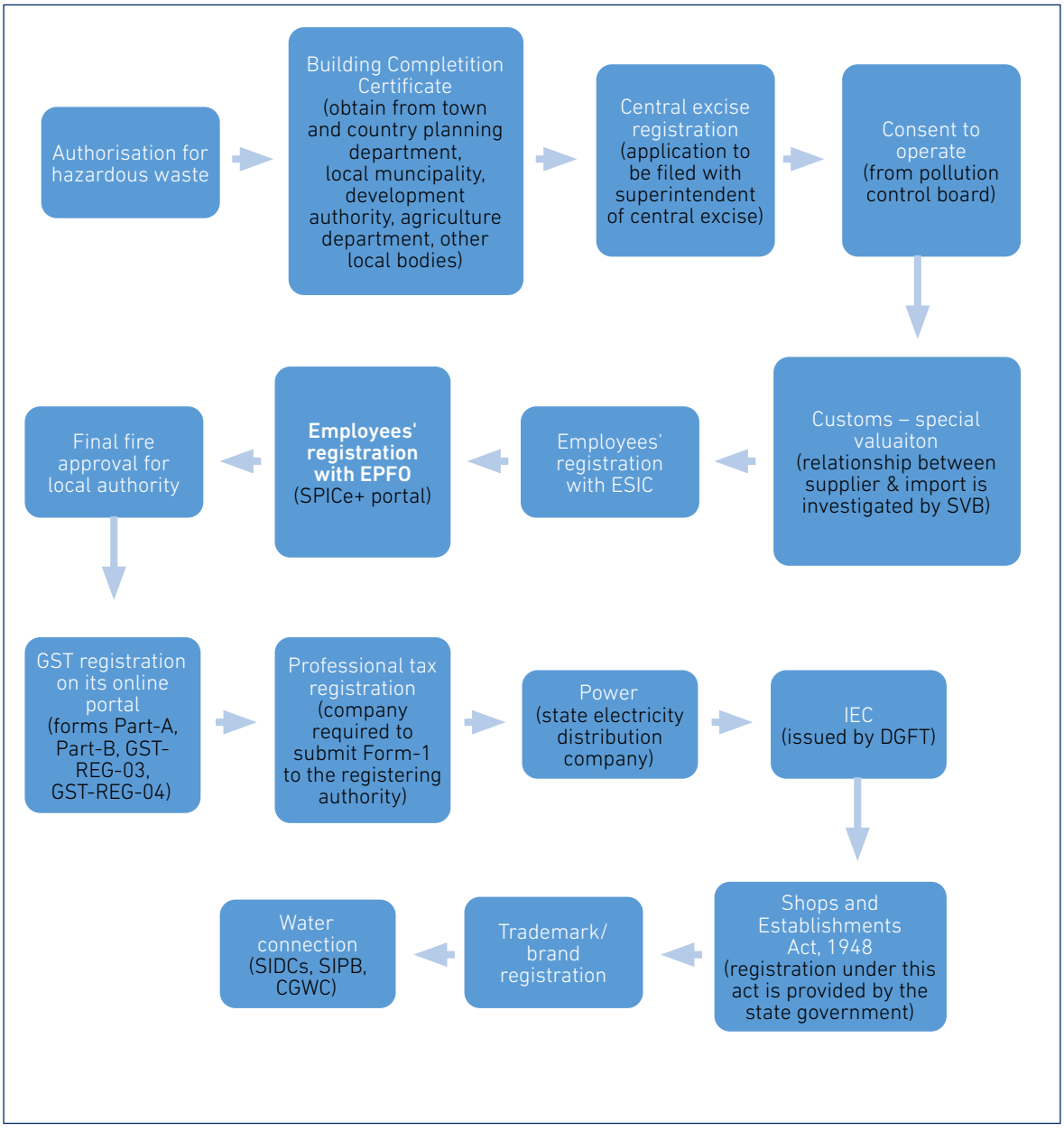
Source: Compiled from Government of India, Ministry of Corporate Affairs.

Table 4.4. Post-Commissioning Phase

Steps	Online	Offline
4.1 Authorisation for hazardous waste		✔
4.2 Building completion certificate		✔
4.3 Central excise registration	✔	
4.4 Consent to operate		✔
4.5 Customs Special Valuation Branch	✔	
4.6 Employee registration with ESIC	✔	
4.7 Employer registration with EPFO	✔	
4.8 Final Fire Approval		✔
4.9 GST registration	✔	
4.10 Professional tax registration	✔	
4.11 Power		✔
4.12 Importer–Exporter Code	✔	
4.13 Shops and Establishment Act	✔	
4.14 Trademark/Brand registration	✔	
4.15 Water connection	✔	

EPFO = Employees' Provident Fund Organisation, ESIC = Employees' State Insurance Corporation, GST = Goods and Services Tax.
Source: Compiled from Government of India, Ministry of Corporate Affairs.

Figure 4.9. Post-Commissioning Phase



CGWC = Central Ground Water Commission, DGFT = Directorate General of Foreign Trade, EPFO = Employees' Provident Fund Organisation, ESIC = Employees' State Insurance Corporation, GST = Goods and Services Tax, IEC = Importer–Exporter Code, SIDC = State Industrial Development Corporation, SIPB = State Investment Promotion Board, SPICe+ = Simplified Proforma for Incorporating a Company Electronically, SVB = Special Valuation Branch.

Source: Compiled from Government of India, Ministry of Corporate Affairs.

4.2. Selected Projects Implemented in India to Digitalise G2B Interaction

4.2.1. Simplified Proforma for Incorporating Company Electronically Plus

Enhancing the ease of doing business in the country is amongst the priority areas for the Government of India. Several initiatives have been undertaken in recent years and India's ease of doing business ranking improved from 142 in 2014 to 63 in 2020 (Times of India, 2019). One such initiative is the Simplified Proforma for Incorporating Company Electronically Plus (SPICe+), which is an integrated web platform offering 11 key services from three central government ministries and departments (the Ministry of Corporate Affairs (MCA), Ministry of Labour, and Department of Revenue under the Ministry of Finance) and three state governments (Maharashtra, Karnataka, and West Bengal) and Delhi (National Capital Territory), developed by the MCA. This platform has streamlined a number of procedures, which has led to less time and lower costs for starting a business in the country and is applicable for all new company corporations with effect from 7 July 2021.

SPICe+ is divided into two parts. Part A is used to reserve names for new businesses. Part B includes a variety of services: (i) incorporation; (ii) allotment of a Director Identification Number (DIN); (iii) mandatory issuance of a Permanent Account Number (PAN); (iv) mandatory issuance of a Tax Deduction Account Number or Tax Collection Account Number (TAN); (v) mandatory issuance of Employees' Provident Fund Organisation (EPFO) registration; (vi) mandatory issuance of Employees' State Insurance Corporation (ESIC) registration; (vii) mandatory issuance of profession tax registration (Maharashtra); (viii) mandatory opening of a bank account for the company; and (ix) allotment of the Goods and Services Tax Identification Number (GSTIN) (if applied for).

In addition, the ministry connected the MCA21[3] with the Central Board of Direct Taxes (CBDT) for the issuance of a PAN and TAN to a firm formed using the MCA21 system (SPICe). Stakeholders apply for a PAN and TAN at the same time as they apply for incorporation through SPICe+. The PAN/TAN assigned by the Income Tax Department is affixed to the company's Certificate of Incorporation. Stakeholders can apply for up to three DINs through SPICe+. As a result, the number of processes and the time it takes to start a business in the country have decreased.

[3] The MCA21 is an e-governance system of the MCA to automate all the processes related to the proactive enforcement of and compliance with the legal requirements under the Companies Act, 1956; New Companies Act, 2013; and Limited Liability Partnership Act, 2008.

4.2.2. MCA21

The MCA21 MMP was executed under the National e-Governance Plan by the MCA in September 2006 and is currently in the post-implementation phase. The initiative intends to provide corporations and other stakeholders with convenient and secure online access to all registry-related services provided by the MCA at any time and in the manner that best fits them. The project's objectives were developed with several stakeholders in mind. The MCA21 is intended to automate activities linked to proactive enforcement of and compliance with the regulatory obligations of the Companies Act, 1956.

Companies are obliged by several provisions of the Companies Act to interact with the Registrar of Companies (RoC), regional directors, and the Union Government. Prior to the adoption of MCA21, all company filings were done on paper, which meant that a stakeholder or their representative had to physically visit the relevant offices or submit the documents by mail. Large amounts of paper were a serious issue, and there were concerns about a variety of nefarious tactics such as the loss of paper papers, ante-dated filings, and the substitution of statutory documents, amongst other things.

It had become very difficult to assess the quality of the filings (for proper and comprehensive information). Various forms have been re-engineered and converted to electronic forms (e-forms) under MCA21 to make them compatible with e-government operations. The e-forms offer a built-in 'pre-fill' function, which automatically populates the appropriate fields with data from the electronic registry's database. Repetitive data input requirements have been greatly decreased. The 'pre-scrutiny' facility of the e-form is also included in the electronic filing procedure.

This is an entirely computerised procedure in which the system checks if the form is complete in terms of the required fields. However, this is restricted to the tests that the automated system can undertake. Second, as part of the process, the method for paying statutory fees has been re-engineered. Online payment technologies, including the use of digital signatures based on a DIN database, have been added to the pre-MCA21 system, in addition to the traditional challan-based offline payment system. Third, services are now accessible 24 hours a day, 7 days a week, 365 days a year. As a result, record management is automated, digital records have mostly replaced paper records, and there is no risk of ante-dated filings, document loss, or document replacement. The elements of speed, certainty, and integrity in document filing have been implemented.

Table 4.5. Impact of MCA21 on Time Spent on Various Phases of G2B Interaction

Type of service	Prior to MCA21	After MCA21
Name approval	7 days	1–2 days
Company incorporation	15 days	1–3 days
Charge creation/modification	10–15 days	2 days
Inspection of public documents	Physical appearance	Online
Increase in authorised capital	60 days	1–3 days
Change in registered office address	60 days	1–3 days
Annual return/balance sheet	60 days	Instantaneous

G2B = government to business, MCA21 = Mission Mode Project of the Ministry of Corporate Affairs under its National e-Governance Plan to automate G2B interaction.

Sources = Compiled from Government of India, Ministry of Corporate Affairs and other sources.

4.2.3. eBiz – India's G2B Portal

The eBiz Portal, also known as the e-Business Portal, is an initiative of the Ministry of Commerce and Industry's Department for Promotion of Industry and Internal Trade to provide a single-window online platform for businesses to access various government services. The portal aims to simplify the process of starting and operating a business in India by reducing the time, cost, and complexity associated with obtaining licences, permits, and registrations.

Key services available under eBiz Portal:

- Company registration and incorporation
- Obtaining licences and permits, such as industrial licences, import-export licences, and environmental clearances
- Tax registration and compliance, such as Goods and Services Tax (GST) registration and filing of returns
- Compliance with labour laws and regulations
- Registration and compliance with various industry-specific regulations

Key features of the eBiz Portal:

- Single-window platform - eBiz Portal consolidates multiple government services and departments under one platform, making it easier for businesses to access and manage various services without having to visit multiple websites or offices.
- Better access to information – the portal serves as a comprehensive source of information on various government services, policies, and regulations. This easy access to information helps businesses make informed decisions and stay updated on the latest developments.

- Online application and processing – the portal allows businesses to submit applications, make payments, and track the status of their applications online, reducing the need for physical visits to government offices. This offers a transparent system for businesses, which helps businesses plan their operations more effectively and reduces the scope for corruption.
- Reduced time and cost – by enabling online application submission, payment, and tracking, the portal significantly reduces the time and cost associated with obtaining government services.
- Integration with other government services – the portal is integrated with other government services provided by various ministries and departments such as the MCA, the Central Board of Direct Taxes (CBDT), and the Reserve Bank of India (RBI) to facilitate seamless data exchange and faster processing of applications.
- Environmentally friendly – the portal supports the use of digital signatures for secure and paperless transactions. It also provides a document management system for businesses to store and manage their documents online. This not only reduces the environmental impact of business operations but also makes the process more secure and efficient.
- Licence and permits information wizard – the portal is a centralised repository of all applicable licences, permits, and other regulatory information, as well as their applicability requirements.
- Service orchestration – the portal enables a single request from the investor to be routed through numerous government agencies in a logical sequence using the Composite Applicable Form.
- User-friendly interface – the eBiz Portal features a user-friendly interface with easy navigation, making it simple for businesses to find and access the services they need.
- Customer support – the portal offers customer support via email, phone, and chat to assist businesses with any issues or queries they may have.

By offering these benefits, the eBiz Portal plays a crucial role in promoting the ease of doing business in India and fostering a conducive environment for businesses to thrive.

4.2.4. Udyog Aadhaar Memorandum

The micro, small, and medium-sized enterprise (MSME) sector has developed into a thriving and dynamic section of the Indian economy during the past five decades. It is the second largest contributor to the economic and social growth of the country, after agriculture, as it fosters entrepreneurship and generates significant employment possibilities at a low capital cost. Data on new MSMEs reflect the favourable environment for the opening and growth of such units in an economy, as well as the high level of confidence of entrepreneurs in the macroeconomics of the economy. These are critical indicators to assess the successful development of the MSME sector in an economy.

A substantial number of businesses in India are simply not registered due to the time-consuming paperwork needed for the procedure, and hence are unable to benefit from government programmes. Before the MSME Development (MSMED) Act was passed in 2006, a system was in place for small-scale industrial companies

to register with District Industrial Centres. MSMEs were required to submit an Entrepreneurs Memorandum (Part-I) at District Industrial Centres before starting a firm in accordance with the MSMED Act, 2006's regulations. After production started, the concerned entrepreneur was required to submit an Entrepreneurs Memorandum (Part-II).

This Udyog Aadhaar Memorandum filing method has been replaced with Udyam Registration on a platform created by the Ministry of Micro, Small and Medium Enterprises based on composite MSME classification criteria, as announced in a notification dated 26 June 2020. Now, both current and future business owners can submit their Udyam registrations online (https://udyamregistration.gov.in/Government-India/Ministry-MSME-registration.htm). An Aadhar number, PAN, and GST number are required to complete the Udyam Registration process. As of 18 July 2023, more than 17.56 million MSMEs had registered on Udyam.[4]

The following are the salient features and benefits of Udyam Registration:

- Udyam Registration is open to anyone, and the process is completely digitalised and paperless.
- The registration process is free; no costs or fees are paid to anyone.
- An e-certificate (Udyam Registration Certificate) is issued online on completion of the registration process. This certificate has a dynamic QR code that provides access to the web page and details on the enterprise.
- The online system is fully integrated with the income tax and GSTIN systems. Details on the investment and turnover of enterprises are taken automatically from government databases. Exports are not considered as part of the turnover calculation.
- Enterprises can only file one Udyam Registration, but any number of activities (including manufacturing or services or both) may be specified or added in one registration.
- The registration is permanent and provides a basic identification number for an enterprise.
- The registration does not need to be renewed.
- Registration may help MSMEs avail of government schemes such as the credit guarantee scheme and public procurement policy, and provide an advantage in government tenders and protection against delayed payments, etc.
- Registered enterprises are eligible for priority sector lending from banks.

[4] The Hindu Business Line. (2023, July 25). Highest number of MSME shutdowns and new registrations seen in post-Covid FY23. Retrieved from https://www.thehindubusinessline.com/economy/highest-number-of-msme-shutdowns-and-new-registrations-seen-in-post-covid-fy23/article67118594.ece

4.2.5. Public Sector Banks Loans Scheme

In the MSME credit arena, the web platform www.psbloansin59minutes.com is a game-changing venture. The Small Industries Development Bank of India (SIDBI), with more than 21 partner banks, provides in principle digital loan approval to MSMEs up to ₹50 million via the platform in 59 minutes. It is a strategic project of the SIBDI-led public sector banks (PSBs) consortium, which is incubated under the Ministry of Finance's Department of Financial Services.

A user-friendly platform has been developed that eliminates the need for MSME borrowers to submit physical documents for in principle approval. The system employs advanced algorithms to read and analyse data points from a variety of sources in less than an hour, including IT returns, GST data, bank statements, and the MCA21, while gathering the applicant's basic information utilising smart analytics from accessible documents. The solution makes it easier for a loan officer to make decisions since the final output displays a credit, valuation, and verification summary on a user-friendly dashboard in real time.
The key features of www.psbloansin59minutes.com are:

- An advanced digital platform, with services-driven architecture and high-level information security for MSME financing.
- A banker interface that covers branch-level integration (with maker-checker-approver) that is compatible with PSB systems.
- Allows bankers to construct loan products based on their authorised credit policy's scoring models and assessment processes.
- An integrated GST, income tax return, bank statement analyser, fraud check, and bureau check, as well as additional capabilities.
- Connection with the Credit Guarantee Fund Trust for Micro and Small Enterprises to verify borrower eligibility.
- Digital approval of loans in 59 minutes via a contactless and hassle-free application process from anywhere.
- A common form for all lenders on the platform.
- New standards in loan processing – cutting turnaround time from 20–25 days to 59 minutes, where loans are sanctioned and disbursed within 7–10 working days.
- Enables enterprises to connect with numerous lenders without visiting a branch and provides the option to choose preferred lender products from multiple loan offers.
- Enterprises can track loan application on a real-time basis.

4.2.6. Goods and Services Tax

Under the Goods and Services Tax (GST) regime in India, firms with a turnover exceeding ₹2 million (₹1 million in the north-eastern and hill regions) are mandated to register for GST. Additionally, businesses that are already registered under pre-GST legislations such as value-added tax (VAT), excise tax, or service tax are automatically required to register for GST.

Firms may register for the GST by filling out an application on the GST online portal or visiting a GST Seva Kendra. Part A of the form (PAN, mobile number, and email address) must be completed. The site uses a one-time password (OTP) to verify information. Paperwork must be uploaded according to the kind of business. Part B of the form should be filled out using the OTP number. The application reference number is sent via text message or email. The application/document is verified by the GST officer. If extra information/documents are requested via Form GST-REG-03, they must be provided via Form GST-REG-04 within 7 working days. Then, within 7 working days, the GST officer accepts the application and issues the GST Identification Number.

The GST common portal allows taxpayers to register for GST and satisfy GST compliance requirements, such as submitting returns and paying taxes.

GST Suvidha Providers (GSPs) were onboarded by the Goods and Services Tax Network (GSTN) following a selection process that included evaluating their financial and IT capabilities to provide the services required for taxpayers to become GST compliant under the new GST system. Businesses can use GSP services according to their requirements.

Companies in IT; ITeS; and/or banking, financial services, and insurance that are registered in India are anticipated to join up as GSPs. A pre-qualification requirement must be met by prospective GSP applicants. To become an approved GSP, GSPs that satisfy the pre-qualification requirement sign a contract with GSTN.

4.2.7. e-Trade

e-Trade, an integrated MMP, aims to promote an effective and efficient manner of doing business in the domain of overseas trade. The Department of Commerce is the nodal agency for the e-Trade project's execution. To facilitate electronic delivery of services, the different trade regulatory and facilitation organisations have built electronic interfaces amongst themselves as well as with the trading community.

e-Trade helps facilitate international commerce in India by fostering effective and efficient delivery of services in an online environment by different regulatory or facilitating bodies, and assuring 24/7 clearance of export/import goods at ports/airports/inland container depots, amongst others.

Many of the improvements envisioned by the project have been realised. The project's most important success is empowering the trade and industry community by building a transparent system for international commerce in which they may access all trade regulatory/facilitating agencies from anywhere at any time. A significant decrease in the service transaction time has been achieved, e.g. a licence application is now processed in 6 hours instead of 45 days.

Shipping invoices are now received electronically by the Directorate General of Foreign Trade from customs, and licences are delivered electronically to customs, removing the need for physical verification of the Duty Entitlement Pass Book licences – thus lowering licence submission fraud and service time. All major seaports have a single window interface with the Centralised Port System, which is being expanded to include non-major seaports. Automatic data capture technologies for freight tracing and tracking have also been developed at airports. To give the status on container locations, the Container Corporation of India has been connected with the Freight Operations Information System of Indian Railways.

4.2.8. Parivesh Portal

Parivesh is a web-based, role-based workflow programme created for the online submission and monitoring of proposals filed by proponents seeking environmental, forest, wildlife, and coastal regulatory zone clearances from central, state, and district level authorities. It automates the proposal tracking process, including online submission of new proposals, editing/updating of proposal details, and displaying the proposal status at each stage of the workflow.

Parivesh allows project proponents and people to observe, follow, and communicate with scrutiny officers, as well as create online clearance letters, online mailers, and notifications to state officials in the event of delays beyond the application's deadline.

4.2.9. Shram Suvidha Portal

The Shram Suvidha portal enables businesspeople to get all types of registrations and submit the returns needed by labour regulations via a single online portal. It also makes the inspection reports generated by enforcement agency inspectors available to them online. Procedures have been streamlined, and returns and registration forms have been combined to create a corporate climate that fosters compliance by lowering transaction costs and facilitating transactions. The Shram Suvidha portal was launched on 16 October 2014.

The portal's goal is to compile labour inspection data and ensure that they are enforced. Inspections have become more transparent and accountable as a result. Compliance is reported using a Single Harmonised Form, which makes submitting such documents simple and straightforward. Key indicators are used to track performance, making the evaluation process objective. The portal encourages all implementing agencies to use a single Labour Identification Number.

4.2.10. E-Procurement project in Andhra Pradesh: An example of government procurement from businesses

One of the biggest consumers of products and services in each economy is the government sector. The Union Government of India and several state governments have implemented an electronic form of procurement in their various ministries and departments as part of the National e-Governance Mission.

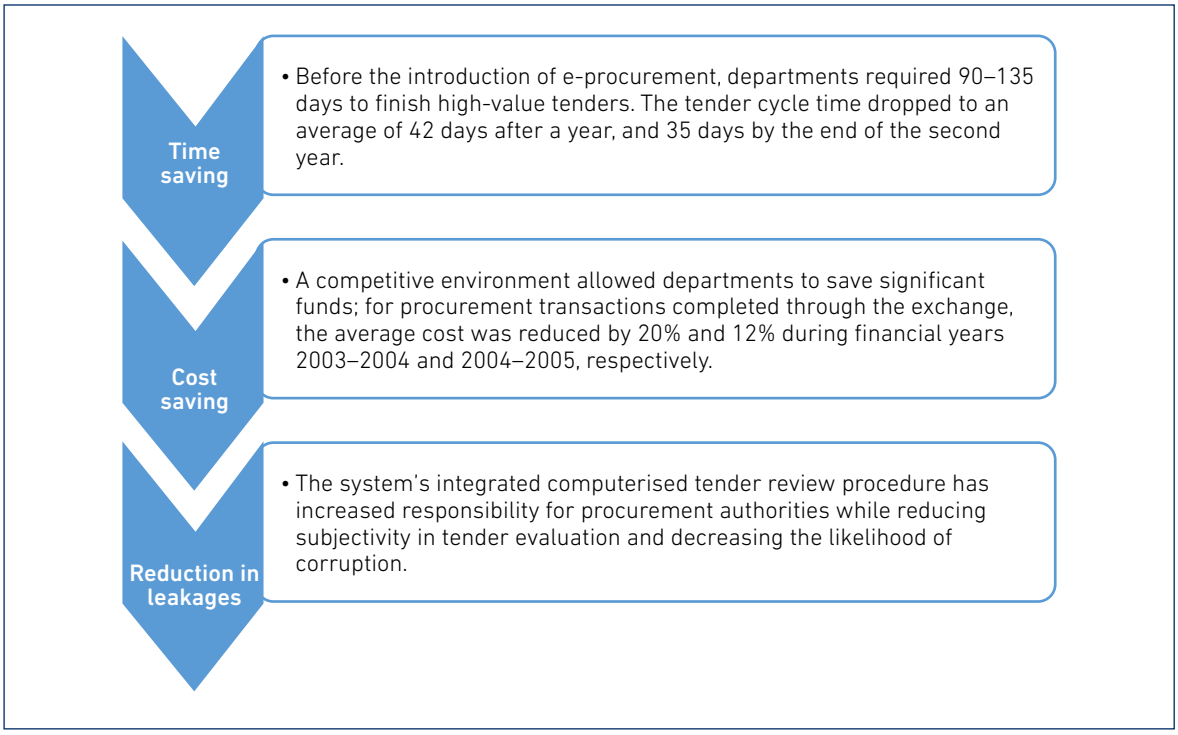
The Government e-Marketplace is one of the platforms the Union Government utilises. This is an online marketplace that makes it easier for government ministries and departments to buy products and services from authorised vendors. It strives to improve public procurement's efficiency, speed, and transparency.

At the state level, the Andhra Pradesh E-Procurement Portal has been implemented by the state government of Andhra Pradesh. Government agencies in the state utilised a manual tendering process before adopting an e-procurement system. The process required numerous trips by vendors to government offices and involved a protracted chain of internal approvals and inspections. The manual tender process has a number of issues, including unequal treatment, the emergence of cartels, delays, and lack of transparency.

The e-procurement project in Andhra Pradesh is a state government initiative to streamline and automate the procurement process for government departments, public sector undertakings, and other organisations. The project aims to enhance the transparency, efficiency, and competitiveness of the procurement process while reducing costs and promoting a fair and level playing field for all suppliers.

The e-procurement process was created to avoid human involvement, i.e. supplier and buyer interaction, during the pre- and post-bidding stages. The approach ensures complete anonymity of the participating providers, even to the buyers, up until the bids are opened on-site. The e-procurement programme performs automated bid evaluation based on the assessment parameters supplied to the system. These improved mechanisms have eliminated subjectivity in the receipt and evaluation of bids, and have greatly decreased corruption. Complete tender documents are also uploaded to encourage transparency in e-procurement. Vendors may download the papers without charge on the day the tender is issued. Each party to the transaction may check the status of the transaction at any point during the procurement cycle and be aware of it. This makes inventory planning easier and reduces the time and effort required to determine the status of a purchase order. Figure 4.10 shows the impact of this e-procurement project.

Figure 4.10. Success of Andhra Pradesh E-Procurement Portal



Source: Government of Andhra Pradesh (n.d.), AP E-Procurement Portal. https://www.apeprocurement.gov.in/

Services provided on the Andhra Pradesh E-procurement Portal include:

- Tender publication – government organisations can publish tenders on the platform, making them accessible to registered suppliers.
- Bid submission – suppliers can submit their bids online, eliminating the need for physical document submission.
- Bid evaluation – the platform automates the bid evaluation process, ensuring that bids are evaluated fairly and transparently.
- Contract award and management – government organisations can award contracts and manage them via the platform, ensuring a seamless procurement process.
- Supplier performance monitoring – the platform allows government organisations to monitor the performance of suppliers, helping them make informed decisions about future procurement activities.

The key features of the Andhra Pradesh E-Procurement Portal are:

- Online platform – the project provides a centralised online platform for government organisations to publish tenders, receive bids, and manage the entire procurement process electronically.
- Transparency – the e-procurement system ensures transparency by making tender information, bidding documents, and bid evaluation reports available to the public. This helps prevent corruption and promotes fair competition amongst suppliers.
- Efficiency – the online platform automates various procurement processes, such as tender publication, bid submission, and bid evaluation, reducing the time and effort required by both government organisations and suppliers.
- Cost reduction – by streamlining the procurement process and eliminating the need for physical document submission, the e-procurement system reduces the overall cost of procurement for both government organisations and suppliers.
- Security – the platform uses advanced security measures, such as digital signatures and encryption, to ensure the confidentiality and integrity of the procurement process.
- Supplier registration – suppliers can register on the e-procurement platform to receive notifications about relevant tenders and participate in the bidding process.
- Training and support – the project provides training and support to government organisations and suppliers to help them use the e-procurement platform effectively.

5. Conclusion

India's digital story is one of ICT-led development through the use of both accessible and ground-breaking technology. The digitalisation movement has been one of the most significant in India since 2015. Due to its youthful population, this rapid development has helped India rise to the top of the digital and technological innovation spectrum. Governments used to communicate with stakeholders, including the public/consumers, enterprises, government, and foreign sector, by a physical form (pen and paper), back in the early 2000s. All parties involved had to fill out paper applications for various government services and wait in a queue in front of government buildings. This involved a lot of time and money. However, the digitalisation of government services has fundamentally altered how the government interacts with its constituents.

Government contacts have been significantly improved by the availability of ICT facilities throughout India's regions and the quick adoption of this technology by all stakeholders and economic sectors. This has allowed stakeholders to access government services round the clock without regard to location, saving significant time and money.

In developing a digital ecosystem for launching and operating businesses, the Government of India has been fairly successful. Most government services are now offered to businesses online, and important ministries like the MCA, Ministry of Commerce and Industry, and Ministry of Finance have been instrumental in putting digital government into practice. State governments have digitalised a sizable portion of their services, in line with this support for the mission of digital government. More services are being brought under the digital system, and existing digital services are being reviewed and enhanced. This process of digital government is still progressing across the nation.

The government's initiatives – including SPICe+, MCA21, eBiz, India's G2B portal, Udyog Aadhaar, PSB Loans in 59 Minutes, Parivesh, Shram Suvidha, GST, and e-Trade, amongst others – have been quite successful in fostering a business-friendly environment. These initiatives to make services available online have contributed to India moving up the ranks for ease of doing business, from 142 in 2014 to 63 in 2020.

Moving all G2B exchanges to the digital paradigm still has certain holes, though. Government services for state incentive approval, entity registration, land acquisition, lift and escalator approval, building plan approval, factory layout plan approval, land use permits, power connection and availability, fire approval, authorisation for hazardous waste, and building competition certificates are a few examples of these areas. Most of these approvals are given by state agencies, many of which demand in-person inspections.

The government has made significant efforts to promote digital progress. However, much work needs to be done before the nation realises its full potential. Governments at all levels may aid in accelerating digitalisation by working with the corporate sector, starting by putting technology at the centre of their operations. This would help establish a market for digital solutions, which generates income for suppliers, stimulates digital start-ups, and gives individuals more reasons for using the internet to conduct government business, apply for a cooking gas subsidy, register for a home purchase, or perform other tasks.

Governments can also help by developing and managing public data sources that businesses can use to enhance and develop new products and services, encouraging the adoption of digital technologies while safeguarding the privacy of citizens, and promoting the development of labour markets in sectors affected by automation.

India has come a long way in its aim to provide companies with digital government, but it is still well behind developed nations in this regard. Nonetheless, the government is making every effort to make all G2B transactions paperless and without interaction.

References

Ardagna, S. and A. Lusardi (2008), 'Explaining International Differences in Entrepreneurship: The Role of Individual Characteristics and Regulatory Constraints', *NBER Working Paper* Series, No. 14012. Cambridge, MA: National Bureau of Economic Research.

Geginat, C. and R. Ramalho (2018), 'Electricity Connections and Firm Performance in 183 Countries', *Energy Economics*, 76, pp.344–66.

Government of India (2008), *Promoting e-Governance: The SMART Way Forward*, Second Administrative Reforms Commission, Eleventh Report. New Delhi: Department of Administrative Reforms and Public Grievances. https://darpg.gov.in/sites/default/files/promoting_egov11.pdf

Greenway, A., B. Terrett, M. Bracken, and T. Loosemore (2018), *Digital Transformation at Scale: Why the Strategy Is Delivery*. London: London Publishing Partnership.

Indiashine (2022), 'What Is eBiz Portal – How to Use eBiz Portal?', 7 February. https://www.15august.in/ebiz-portal-benefits/

Kaka, N. et al. (2020), *Digital India: Technology to Transform a Connected Nation*. McKinsey Global Institute. https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/digital-india-technology-to-transform-a-connected-nation

Klapper, L. and I. Love (2011), 'The Impact of Business Environment Reforms on New Firm Registration', *Policy Research Working Paper,* No. 5493. Washington, DC: World Bank.

Kohli, H. (2021), 'How Digital India Can Become a Success Story', *Fortune India*, 4 July.

Ministry of Electronics and Information Technology (n.d.), ICD Objectives & Activities. https://www.meity.gov.in/content/icd-objectives

Ministry of Micro, Small, and Medium Enterprises (n.d.), https://udyamregistration.gov.in/

NIC (n.d.), IVFRT. https://www.nic.in/products/ivfrt/

OECD (2020a), 'Digital Government Index: 2019 Results', *OECD Public Governance Policy Papers*, No. 03. Paris: Organisation for Economic Co-operation and Development.

OECD (2020b), 'The OECD Digital Government Policy Framework: Six Dimensions of a Digital Government', *OECD Public Governance Policy Papers*, No. 02. Paris: Organisation for Economic Co-operation and Development.

Singh, A. and K.K. Jaiswal (2018), 'Ease of Doing Business in India: A Vision of Make in India', *Economic Affairs*, 63(1), pp.129–35.

Times of India (2019), 'India Moves up 14 Spots to 63 on World Bank's Ease of Doing Business', 24 October. https://timesofindia.indiatimes.com/business/india-business/india-moves-up-14-spots-to-63-on-world-banks-ease-of-doing-business/articleshow/71731668.cms

United Nations (n.d.-a), Digital Government. https://publicadministration.un.org/en/ict4d

United Nations (n.d.-b), UN E-government Knowledgebase. https://publicadministration.un.org/egovkb/en-us/about/unegovdd-framework

Vikaspedia (n.d.), e-Governance. https://vikaspedia.in/e-governance/national-e-governance-plan/copy_of_e-governance-in-state-and-services

World Bank (2018), 'Digital Government for Development', *Brief*. https://www.worldbank.org/en/topic/digitaldevelopment/brief/digital-government-for-development