WHITE BOOK OF VIET NAM INFORMATION AND COMMUNICATION TECHNOLOGY 2017

(Information and statistical data)
Dear readers,

On behalf of the Ministry of Information and Communications, I would like to introduce the White Book of Viet Nam Information and Communication Technology 2017. Since 2009, the White Book has become a prestigious publication of the Ministry of Information and Communications, which has been widely recognized and appreciated by domestic and foreign agencies and organizations.

The White Book 2017 provides official statistical data and information on a number of areas managed by the Ministry, namely: information technology application, information technology industry, information security, telecommunications, Internet, broadcasting and electronic information, posts, research and training in information and communication technology (ICT) and other related areas.

The figures in the White Book are compiled from reports of various ministries, national and local agencies, academic and vocational training institutions, associations, IT enterprises together with units under the Ministry of Information and Communications. The information in the White Book reflects the current status of ICT development in the years 2015 and 2016. The data on legal documents is updated to May 30th, 2017.

On this occasion, I would like to express my appreciation to the ministries, national and local agencies, agencies, units, associations, enterprises and academic and vocational training institutions on ICT throughout the country, especially the General Statistics Office, the Foreign Investment Agency and the Business Registration Authority under the Ministry of Planning and Investment, General Department of Customs under the Ministry of Finance, General Department of Vocational Training under the Ministry of Labor - Invalids and Social Affairs, Department of Information Technology under the Ministry of Education and Training, Department of Scientific Information and the National Technology under the Ministry of Science and Technology that have supported and provided information, data for this publication.

The agencies and departments under the Ministry of Information and Communications have endeavored to complete the 2017 White Book in order to timely provide sufficient and accurate information on the status of ICT development in Viet Nam, to satisfy the demand for data from domestic and foreign agencies, organizations and individuals as well. It would be grateful to receive your further comment and review about the White Book.

Sincerely,

Ha Noi, August 9th 2017

Dr. Truong Minh Tuan

MEMBER OF THE PARTY'S CENTRAL EXECUTIVE COMMITTEE
MINISTER OF INFORMATION AND COMMUNICATIONS
## CONTENT

**FOREWORD** .......................................................... 3

**GENERAL INFORMATION** ...................................... 7

I. **AN OVERVIEW OF VIET NAM ICT IN 2016** ................. 9

II. **HIERARCHY OF GOVERNING AGENCIES ON ICT** ......... 15

1. The Nation Commission on Application of Information Technology ........ 16
2. The Ministry of Information and Communications ................. 18
3. Provincial Department of Information and Communications .......... 25

III. **INFORMATION TECHNOLOGY APPLICATION** .......... 27

1. Infrastructure for IT application in state agencies ............. 28
2. Online public services ............................................. 28
3. IT application in the enterprises ................................ 29
4. IT workforce in state agencies .................................... 29

IV. **INFORMATION TECHNOLOGY INDUSTRY** ............... 31

1. Information technology infrastructure .......................... 32
2. Total number of registered enterprises in the IT industry sector ......... 32
3. Information technology market .................................... 32
4. Workforce in the IT industry ...................................... 34

V. **INFORMATION SECURITY** ..................................... 35

1. Regulation on information security .............................. 36
2. Information system security ....................................... 36
3. Personnel in charge of information security ..................... 37
4. Information security workforce ................................... 37

VI. **TELECOMMUNICATIONS, INTERNET** ..................... 39

1. Telecommunications, Internet Infrastructure ................. 40
2. Number of telecoms, Internet Operator .......................... 42
3. Telecommunications, Internet Market .......................... 42
4. Telecommunications, Internet Workforce ....................... 44

VII. **BROADCASTING AND ELECTRONIC INFORMATION** .... 45

1. Broadcasting .......................................................... 46
2. Electronic Information ............................................. 49
VIII POSTS
1. Public postal network infrastructure .......... 52
2. Number of postal operators .......... 52
3. Postal market .......... 52
4. Postal workforce .......... 52

IX RESEARCH AND TRAINING ON ICT .......... 53
1. Research and Development (R&D) on ICT .......... 54
2. Human resources training .......... 54

X. LEGAL DOCUMENTS, STRATEGIES, PLANS, PROGRAMS AND PROJECTS ON ICT .......... 57
1. Information technology application and development .......... 58
2. Telecommunications, frequency, Internet, broadcasting and electronic information .......... 59
3. Information security .......... 60
4. Posts .......... 61
5. Master plans, Strategies, plans, programs and projects on ICT .......... 62

XI INTERNATIONAL COOPERATION .......... 65
1. Membership in international and regional organizations .......... 66
2. Recent major events organized in Viet Nam in 2016 .......... 67
3. Some major international cooperation activities in 2016 .......... 67

XII AGENCIES, ORGANIZATIONS ON ICT .......... 69
1. Units of the Ministry of Information and Communications .......... 70
2. Units in provincial agencies .......... 72
3. Units in charge of ICT in central agencies .......... 76
4. Organizations and associations on ICT .......... 78
Country: **SOCIALIST REPUBLIC OF VIET NAM**

Area of land: 331,230.77 km²

Population up to December 31st, 2016: 92,695,100 people

Number of households in 2016: 25,062,200 households

GDP of 2016: 205.32 billion USD

GDP per capita of 2016: 2,215 USD

GDP Growth rate 2016: 6.21%

Export value of 2016: 176,632 million USD

Import value of 2016: 174,111 million USD

Inter-bank exchange rate of VND vs USD of the State Bank of Viet Nam on December 31st, 2016: 22,159 VND/USD

(Source: General Statistics Office and The State Bank of Viet Nam)
AN OVERVIEW OF VIET NAM ICT IN 2016
The Viet Nam Information and Communication Technology (ICT) sector entered the year of 2016 with many opportunities and huge potentials for growth in a period of demographic goldenage. One of many challenges that Viet Nam faces today is how to make full use of the positive effects brought about by the overwhelming revolution. Taking advantage of opportunities generated by the overwhelming revolution and overcoming challenges, Viet Nam expects to reduce the gap between her and advanced countries and move toward a modernized and industrialized country.

The Resolution No. 36-NQ/TW dated July 1st, 2014 of the Poliburo and Resolutions No. 26/NQ-CP dated April 15th, 2015, and No. 36a/NQ-CP dated October 14th, 2015 of the Government have set the goal of Viet Nam to become an advanced country in ICT and by ICT with the highest determination of both the political system and business community. With the rapid progress in IT development in the past, in 2016, Viet Nam was ranked a high position in the world map of IT, placing the number one in the field of global outsourcing software service as well as ranked the first in the mobile application economy index in ASEAN countries.

In 2016, Viet Nam's e-government index was ranked in the high group by the United Nations, 89th among 193 countries, an increase of 10 levels compared to that of 2015. According to the Global Information Technology Report of the World Economic Forum (WEF), Viet Nam's Networked Readiness Index (NRI) in 2016 reached 79/139, increasing 6 levels compared to 2015. In this report, Viet Nam had a high position ranking on readiness index for accessing IT services, standing at 3rd among 139 countries. Viet Nam's fixed broadband Internet service charges was at the lowest level in the world with the first position among 139 nations. These evaluations of international organizations reflex an objective recognition of Viet Nam's ICT development over the past period.

In 2015 and 2016, numerous new laws and legal documents were introduced, contributing to the improvement of the legal framework on ICT. Totally, 14 important ICT documents were issued, including 6 decrees of the Government and 8 legal decisions of the Prime Minister. One of the most important documents is the Law on information security which was adopted on November 19th, 2015 at the 10th session of the National Assembly, term XIII and came into effect from July 1st, 2016. In order to efficiently implement the provisions of the Law on information security, the Ministry of Information and Communications (MIC) is in charge of developing the legal documents and guidelines for implementation. The ministry advised the Government to promulgate decree No. 85/2016/ND-CP dated July 1st, 2016 on ensuring the information security system at all levels and decree No. 108/2016/ND-CP dated July 1st, 2016 stipulating business terms and conditions to products, networked information security services.

*ICT continues to play its role as critical infrastructure in the economy.* The Prime Minister issued decision No. 149/QD-TTg dated January 21st, 2016 approving the broadband infrastructure development program to 2020. With the view that telecommunication is a key apparatus for socio-economic development, the program has proposed 9 strategic solutions for the implementation of 2 specific objectives: broadband for the community and broadband for the public. After the trial period, in October, 2016, 3 operators including Viettel, Vinaphone, Mobifone were granted licenses to set up networks and to provide 4G LTE telecommunication services.
services. Viet Nam telecommunication market continued to record a fair competition. In 2016, there were 74 operators nationwide providing fixed telecommunication services and 05 ones providing terrestrial mobile telecommunication services. Total turnover of telecommunication services in 2016 reached 136,499 billion VND (equivalent to 6.16 billion USD, up 1.6% compared to 2015. The total number of mobile subscribers exceeded 128 million, of which 36.2 million was mobile broadband subscribers, reaching 39 subscribers per 100 inhabitants. The total number of fixed broadband subscribers was 9 million.

Viet Nam continued to be a country with the highest number of registered domain names in ASEAN countries. The total number of domain name “.vn” was currently 386,751, which raised the total number of Vietnamese domain names registered on the system to 994,161. The number of IPv6 Internet addresses converted within unit/64 was over 120 billion addresses. This was the premise for the development of Internet of Things (IoT) services in Viet Nam.

The issuance of Government’s decree No. 06/2016/ND-CP dated January 18th, 2016 of the Government on the management, provision and use of radio and television services has generated a dramatic growth of pay television services with the subscriber number of 13.2 million. Total revenue of pay television services in 2016 reached 7,499 trillion VND (equivalent to 338.4 million USD). In 2016, it was also the successful year of Phase 1 of the project on “National project on digitization of terrestrial TV transmission and broadcasting to 2020” in 5 central cities and several neighboring provinces. The MIC provided the digital television receivers to 511,456 households living in poverty and poverty threshold in accordance with the Government’s multi-dimensional approach to the poverty line with total fund of 302 billion VND (equivalent to 13.63 million USD).

In the field of posts, the total revenue of postal services in 2016 was 9,078 billion VND (equivalent to 409.72 million USD). The public postal network continued to grow with 12,386 service points, an average service radius of 2.92 km per each point, ensuring that each commune had at least one service point. The Communal Post - Culture Offices kept on promoting their role to propaganda of the State and Party’s policies and laws to farmers through books, newspapers and other means of media.

The year of 2016 was also notably recorded with the efforts of MIC to take drastic measures to eliminate spam messages to enhance security and social order. After network operators had signed the commitments with MIC on revoking activated but not used SIM cards in October 2016, about 15 million unused SIM cards were locked out by the end of this year. In 2016, it also saw a terrorist network attack on the Vietnam Airlines website which was defaced on July 29th, 2016. According to the Viet Nam Computer Emergency Response Team (VNCERT), the network attack in 2016 was four times severe than that in 2015. Fortunately, the awareness of agencies, organizations, enterprises and people on information security has been strengthened while the information security environment has been improved and users have been more active in responding to information security incidents. The percentage of organizations/units specialized in information security in 2016 was 65.6%, an increase of 34.9% compared to that of 2015. The percentage of organizations used digital signatures for electronic transactions in 2016 was 54%, increasing 8% compared to that of 2015.
One of the key conditions for the successful implementation of the fourth industrial revolution and the integration into the digital economy was to accelerate the use of ICT to meet the requirements of industrialization and modernization in the whole country, ensuring safety, synchronization, inter-sectoral and inter-regional connectivity. In 2016, the total number of online public services was 109,644, of which public services at levels 1 & 2 reached 97,394 (accounted for 88.8% of total public services); online services at level 3 reached 10,872 services (accounted for nearly 10% of total public services) and online services at level 4 reached 1,378 services. The average percentage of ministerial agencies and units with IT staffs was 71.29% and that of provincial agencies was 91.67%.

The IT industry has been becoming a fast-growing, sustainable, high-turnover, export-oriented industry. The total number of IT enterprises in 2016 was 24,501, an increase of 13.13% compared to that of 2015. Total revenue of the IT industry in 2016 reached 1,500,009 billion VND (equivalent to 67.7 billion USD, an increase of 11.49% compared to 2015) including the hardware-electronic industry revenue of 58.8 billion USD, the software industry revenue of 3 billion USD, the digital content industry revenue of 739 million USD and the IT service revenue (excluding trade and distribution) of 5.1 billion USD. The total export value accounted for about 60.8 billion USD including hardware-electronic export value reached 57.7 billion USD and software export value reached 2.5 billion USD. Total contribution to state's budget was 34,320 billion VND (contributed about 3.4% to the total State's budget).

It was memorable when the Government of Viet Nam chose 2016 as the year of startups with the goal of facilitating the development of enterprises based on new business models that exploited the advanced technologies and intellectual properties. With strategic vision, over the past ten years, IT parks have been formed and developed to create endogenous capacity in science and technology for socio-economic development. The Party and State defined the development of the IT parks as one of major directions for the development of IT industry infrastructure in the coming years. MIC appraised and submitted to the Prime Minister for promulgation of decision No. 333/QD-TTg dated March 3rd, 2016 on setting up a chain of Quang Trung Software Parks and decision No. 491/QD-TTg dated March 28th, 2016 on establishment of Ha Noi Software Technology Park.

Developing digital human resources, turning the advantages of “golden population” into advantages of digital capacity to integrate into the digital economy and distribution of international labor. In 2016, the total number of employees in the IT industry was over 780,926 people, of which the number of employees working in the hardware and electronics industry was over 568,000 (accounted for 72.6%), the number of employees in the software industry, digital content industry and IT services accounted for 27.4%. The total number of IT human resources working in the IT parks was over 36,000 people, an increase of 80% compared to that of 2015.

Regarding the training and development of the IT human resources, the number of universities and colleges with majors of IT, electronics, telecommunications and information security in 2016 was 250 with a total enrollment of 68,883 students. As for vocational
training, the total number of vocational colleges and schools providing training courses on IT, electronics, telecommunications and information security was 164 with a total enrollment of 18,311 students.

**In international co-operation activities**, in 2016, the MIC prepared and advised the Government to sign cooperative agreements and protocols in the fields of ICT between Viet Nam and various countries such as Korea, Japan, Lao, France, Slovakia, Iran and India. The economic diplomacy was promoted to support Vietnamese enterprises to penetrate and expand to the foreign markets through foreign investment and promotion activities such as ICT Promotion Forum in France, Czech Republic and Slovakia. In the international integration activities, MIC focused on developing commitments for fulfilling the negotiation of free trade agreements (FTAs), especially key FTAs.

The Resolution No. 05/NQ-TW of the Communist Party dated November 1st, 2016 on “Major outlines policies to push ahead growth model reform and improve growth quality, labour productivity, and competitiveness of the economy as well as some priorities in developing smart cities”. The initial development of smart cities in large cities such as Ha Noi City, Ho Chi Minh City, Hai Phong City, Da Nang City, Can Tho City and also in provinces like Quang Ninh, Vinh Phuc, and Bac Ninh while the schemes for building the smart cities will be promulgated to provide a road map for solving social problems of transport, health, food safety, security and environment, etc. This will bring a modern living environment and improve the quality of life for people to show the active preparation of the ICT industry to catch up with the technological trends of the world.

Leading IT enterprises signed agreements on building smart cities such as Viettel with Phu Tho, Thai Binh, Thai Nguyen, Phu Yen, Hai Duong, Binh Phuoc, Hung Yen and Da Nang City. Vinaphone signed with Ho Chi Minh City, Binh Duong, Phu Quoc (Kien Giang), Da Lat (Lam Dong), My Tho (Tien Giang), Buon Ma Thuat (Dak Lak) and Lao Cai provinces that showed the willingness of Vietnamese enterprises to deploy IoT applications for building smart cities in Viet Nam.

At the Viet Nam ICT Summit 2016 with the theme “Digital Revolution - Opportunities and Challenges” on September 24th, 2016 in Ha Noi City, Prime Minister Nguyen Xuan Phuc pointed out “Enhancing the awareness on digital revolution, at the same time, accelerating IT applications to improve the capacity and effectiveness of operational management have made remarkable changes at all levels in branches and localities, businesses and the whole society. Promoting the development and application of IT will create new development methods for sharpening national competitiveness and to integrate successfully Viet Nam into the digital economy and global information society. It is our historic responsibility”.

Despite the great challenges, the Viet Nam ICT sector determines not to miss the chances of developing the country in the fourth industrial revolution. With an effort to overcome these challenges, the ICT sector continues to affirm its position as one of the most important fields in the economy and will contribute significantly to development and integration of the country.
HIERARCHY OF GOVERNING AGENCIES ON ICT
1. THE NATIONAL COMMISSION ON APPLICATION OF INFORMATION TECHNOLOGY (NCAIT)

1.1. Organizational structure (According to Decision No. 109/QD-TTg dated January 15th, 2014)
- Chairman: HE. Vu Duc Dam, Deputy Prime Minister
- Standing members:
  + Minister of Information and Communications - HE. Truong Minh Tuan
  + Minister of Finance - HE. Dinh Tien Dung
  + Minister of Planning and Investment - HE. Nguyen Chi Dung
  + Minister of Education and Training - HE. Phung Xuan Nha
- Members:
  + Vice Chairman of Office of the Government - General Secretary
  + Deputy Minister of Information and Communications
  + Deputy Minister of Science and Technology
  + Deputy Minister of Agriculture and Rural Development
  + Deputy Minister of Industry and Trade
  + Deputy Minister of Culture, Sports and Tourism
  + Deputy Minister of Health
  + Deputy Minister of Construction
  + Deputy Minister of Transport
  + Deputy Minister of Home Affairs
  + Deputy Minister of Natural Resources and Environment
  + Deputy Minister of National Defense
  + Deputy Minister of Public Security
  + Deputy Governor of the State Bank of Viet Nam
  + Deputy Chief of Central Office of Communist Party
  + Deputy Head of Central Economic Commission
  + Vice Chairman of the National Assembly Office

1.2. Main functions, duties
The NCAIT has the following duties and rights as in Article 2 of the Prime Minister’s Decision No. 109/QD-TTg dated January 15th, 2014 as follows:

1. Consulting the Government and the Prime Minister on guidelines, policies and strategies to foster IT development and application in the state agencies, key sectorial agencies and in the whole society;
2. Steering ministries, sectors and provincial agencies in IT development and application in order to boost the restructuring of the economy, enhance the national competitive capacity and socio-economic development;

3. Commenting on major mechanisms, policies, programs on IT development and application;

4. Supporting the Government and the Prime Minister to coordinate, supervise the implementation of crucial inter-sectorial strategies, programs and projects on IT development and application;

5. Executing other missions assigned by the Prime Minister or authorized agencies.
2. THE MINISTRY OF INFORMATION AND COMMUNICATIONS (MIC)

2.1. Organizational structure

<table>
<thead>
<tr>
<th>MINISTER AND DEPUTY MINISTERS</th>
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<tbody>
<tr>
<td>Consultant Units</td>
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<tr>
<td>Department of Posts</td>
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<tr>
<td>Department of Information Technology</td>
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<tr>
<td>Department of Science and Technology</td>
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<tr>
<td>Department of Planning and Finance</td>
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<td>Department of Enterprise Management</td>
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<td>Department of International Cooperation</td>
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<td>Department of Legal Affairs</td>
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<td>Department of Emulation and Rewarding</td>
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<td>Department of Personnel and Organization</td>
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<td>Department of Inspectorate</td>
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<tr>
<td>Ministry Office:</td>
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<tr>
<td>+ Ministry Representative Office in Ho Chi Minh City</td>
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<tr>
<td>+ Ministry Representative Office in Da Nang City</td>
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<th>Functional Units</th>
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<tr>
<td>Authority of Press</td>
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<tr>
<td>Authority of Broadcasting and Electronic Information</td>
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<tr>
<td>Authority of Publishing, Printing and Distribution</td>
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<td>Authority of Grassroots Information</td>
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<td>Authority of External Information Service</td>
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<tr>
<td>Authority of Telecommunications</td>
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<tr>
<td>Authority of Radio Frequency Management</td>
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<tr>
<td>Authority of Information Technology Application</td>
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<td>Authority of Information Security</td>
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<td>Authority of Central Posts</td>
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<th>Member Units</th>
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<tbody>
<tr>
<td>National Institute of Information and Communication Strategy (NIICS)</td>
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<tr>
<td>Information Center</td>
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<tr>
<td>Viet Nam Post News</td>
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<tr>
<td>Viet Nam Net</td>
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<tr>
<td>Information Technology and Communications Journal</td>
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<tr>
<td>Post and Telecommunications Institute of Technology (PTIT)</td>
</tr>
<tr>
<td>Information and Communications Public Management School</td>
</tr>
<tr>
<td>Viet Nam Internet Network Information Center (VNNIC)</td>
</tr>
<tr>
<td>National Institute of Software and Digital Content Industry (NISCI)</td>
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<tr>
<td>Information and Communications Publishing House</td>
</tr>
<tr>
<td>Viet Nam Public Utility Telecommunications Service Fund (VTF)</td>
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<tr>
<td>Viet Nam Computer Emergency Response Team (VNCERT)</td>
</tr>
<tr>
<td>Viet Nam-Korea Friendship Information Technology College</td>
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<tr>
<td>Printing Technology College</td>
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<tr>
<td>The National Electronic Authentication Centre (NEAC)</td>
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<tr>
<td>Public Utility Telecommunication Service Project Management Unit</td>
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</table>
2.2. Main functions and duties

The Ministry of Information and Communications (MIC) of the Socialist Republic of Viet Nam is the policy making and regulatory body in the fields of press; publishing; printing and distribution; posts; telecommunications; radio frequency; information technology, electronics; broadcasting; media; foreign information; grassroots information; and national information and communication infrastructure; management of related public services on behalf of the Government. The functions, roles and responsibilities of MIC are regulated in the Government’s Decree No. 17/2017/ND-CP dated February 17th, 2017.

1. To submit to the Government draft laws and resolutions of the National Assembly, draft ordinances and resolutions of the National Assembly Standing Committee; draft decrees of the Government under the Government’s annual lawmaker programs and plans, and projects and schemes assigned by the Government or Prime Minister.

2. To submit to the Government or Prime Minister strategies, master plans and long-term, five-year and annual development plans; national target programs, action programs and important national projects and works, programs and schemes on provision of public services and public non-business services in the fields and sectors under its management; decisions, directives and other documents falling under the competence of the Prime Minister.

3. To promulgate circulars, decisions, directives and other documents on management of the fields and sectors under its state management.

4. To direct, guide, inspect examine and organize the implementation of approved legal documents, strategies, master plans and plans falling under its state management; to communicate, disseminate and educate about the laws concerning the fields and sectors under its state management.

5. Regarding the press (including printed press, online press, radio, television and news agency bulletins)

- To guide, direct and organize the implementation of Prime Minister-approved master plans on development and management of the press nationwide and overseas representative offices and resident bureaus of Vietnamese press agencies;

- To organize provision of information for the press and management of press information; to carry out the measurement, verification and publicization of data related to press activities in accordance with law;

- To provide technical instructions on measures and processes of information preservation and information management systems in the implementation of regulations on access to information;

- To promulgate regulations on organization of press competitions, seminars and festivals;

- To check legal deposits of the press; to manage the national legal deposit system for printed press; to carry out the electronic legal deposit of audio, visual and online press works in accordance with law; to inspect the holding of press briefings and provision of information to the press by spokespersons of state administrative agencies in accordance with law;

- To grant, extend, modify, supplement, suspend, cancel or revoke assorted permits in the fields of press, radio and television broadcasting; to grant or revoke press cards; to approve press conferences in accordance with the press law;

- To guide the operation of the press and journalists nationwide, to coordinate with related agencies in managing Vietnamese press activities related to foreign countries and press activities of foreigners and foreign organizations in Viet Nam;
- To give opinions on the appointment of heads of press agencies in accordance with the press law;
- To manage contents, quality and prices of radio and television services in accordance with law.

6. Regarding publishing (including publishing, printing and distribution)
- To guide, direct and organize the implementation of Prime Minister approved master plans on networks of publishing, printing and distribution of publications;
- To grant, extend, modify, supplement, suspend, cancel or revoke assorted permits in the fields of publishing, printing and distribution in accordance with law;
- To certify and manage the registration of publishing plans of publishing houses, operation registration of printing establishments, registration of printing of products requiring no permits, registration of distribution of publications, registration of electronic publishing and distribution of electronic publications in accordance with law;
- To organize the appraisal of publications in accordance with law; to organize the inspection of deposited publications and management of the legal deposit of publications; to organize the placement of orders for and sending of publications to areas with particularly difficult socio-economic conditions; deep-lying, remote, mountainous and border areas and islands; to organize national publication fairs and manage the overseas distribution of publications in accordance with law;
- To decide on suspension, withdrawal, confiscation, circulation and destruction of illegal publications;
- To grant, extend and revoke editing practice certificates in accordance with law;
- To manage publishing support activities in accordance with law;
- To give opinions on the appointment, relief of duty and removal from office of general directors (directors) and editors-in-chief of publishing houses.

7. Regarding external information service
- To assume the prime responsibility for, and coordinate with related agencies in, guiding and directing the implementation of external information strategies, master plans, plans, programs and schemes;
- To guide contents and provision of external information to Vietnamese news and press agencies;
- To assume the prime responsibility for, and coordinate with related agencies in, examining and assessing the effectiveness of external information work of ministries, ministerial-level agencies, government-attached agencies, provincial-level People’s Committees and domestic and overseas press and publishing agencies;
- To create mechanisms for information exchange, coordination, provision and sharing between state agencies and press agencies;
- To monitor, sum up and report to the Prime Minister on the provision of information to correct and clarify untruthful information about Viet Nam in all fields.

8. Regarding advertising
- To perform the tasks of managing advertisements on the press, in the cyber environment, on publications and advertisements integrated in post, telecommunications and information technology products and services in accordance with law;
- To grant, extend, modify, supplement and revoke permits for advertising channels and programs for audio and visual press; to issue announcements on classified supplements for printed press.
9. Regarding electronic information
- To manage video game and information content services, applications for information provision on telecommunications networks and the Internet in accordance with law;
- To grant, extend, modify, supplement, suspend, cancel or revoke assorted permits and certificates for online video games and electronic information in the Internet in accordance with law.

10. Regarding grassroots information and the system of district-level radio and television stations
- To guide, direct and organize the implementation of grassroots information strategies, master plans and plans;
- To develop contents of public information falling under its functions and tasks and guide the organization of implementation;
- To guide the establishment and operation of grassroots information systems: commune-level public-address stations; grassroots information bulletins; non-commercial documents to serve grassroots information activities; information directly reported by grassroots communicators; public notice boards and other forms of grassroots information and district-level radio and television stations;
- To organize the provision of information for and manage information contents of grassroots information systems and district-level radio and television stations nationwide.

11. Regarding post
- To guide, organize and inspect the implementation of mechanisms, policies, plans, projects, schemes and programs on post; to inspect the list of public postal services and support mechanisms and the provision of these services in accordance with law;
- To establish charge tariffs and regulate the quality of public or exclusive-use postal services and public services in the press distribution, postal services for Party and State agencies and other postal services in accordance with law;
- To manage postage stamps and safety in postal activities according to its competence;
- To manage national postcodes and Viet Nam postage stamp code numbers;
- To grant, modify, supplement and revoke postal licenses; to grant, modify and supplement written certifications of announcements of postal activities;
- To regulate according to its competence and guide activities of the public postal network and postal network to serve Party and State agencies;
- To join in managing the competition and settling disputes in the field of post to protect lawful interests of postal service users in accordance with law.

12. Regarding telecommunications
- To guide, direct and organize the implementation of master plans, programs, mechanisms and policies on telecommunications and Internet development; to manage the telecommunications market; to promulgate the list of public telecommunications services, regulate the scope, users and charge tariffs of these services, and establish mechanisms and levels of support for enterprises investing in telecommunications infrastructure and providing public telecommunications services in accordance with law; to organize the implementation of programs on provision of public telecommunications services; to organize and manage the performance of public telecommunications tasks assigned by the State;
- To assume the prime responsibility for, coordinate, guide and manage the competition and settlement of petitions in the field of telecommunications and telecommunications and Internet application; to protect interests of telecommunications service and telecommunications and Internet application users in accordance with law;
- To grant, extend, modify, supplement, suspend, cancel or revoke assorted telecommunications licenses in accordance with law;
- To promulgate, and organize the implementation of, master plans and regulations on management and use of telecommunications numbers and domain names and Internet addresses; to distribute and recover telecommunications numbers and domain names and Internet addresses; to elaborate regulations on auction and transfer of the right to use telecommunications numbers and Internet domain names, detailed regulations on auction of telecommunications numbers and Internet resources and the list of to-be-auctioned telecommunications numbers and Internet resources, submit them to competent authorities for promulgation and organize the implementation thereof;
- To promulgate mechanisms, policies and regulations on, and organize the management of, service charge tariffs and sales promotions in the field of telecommunications and Internet in accordance with law; to control and stop the application of telecommunications service charge tariffs in case telecommunications businesses impose too high or too low service charge tariffs, thus destabilizing the telecommunications market or harming lawful rights and interests of telecommunications service users, other telecommunications businesses and the State. To direct and guide the implementation of regulations on reporting, accounting and audit to serve the management of telecommunications and Internet service charge tariffs;
- To promulgate, and organize the implementation of, regulations on management of connection of telecommunications networks;
- To promulgate according to its competence regulations on and guide the operation of exclusive-use telecommunications networks to serve Party and State agencies;
- To guide the formulation and implementation of master plans on passive telecommunications infrastructure facilities; to direct, guide and inspect the sharing and common use of telecommunications infrastructure facilities;
- To guide and direct the assurance of safety for information infrastructure facilities and information security in telecommunications activities in accordance with law;
- To manage the quality of telecommunications and Internet products; to build, manage and operate testing and calibration laboratories specialized in telecommunications and Internet;
- To establish, manage and operate in a safe manner the national system of country domain name servers and national Internet relay stations.

13. Regarding radio frequency
- To guide and organize the implementation of transmission and broadcasting master plans and national radio frequency spectrum master plans approved by the Prime Minister;
- To assume the prime responsibility for, and coordinate with the Ministry of National Defense and Ministry of Public Security in, allocating frequency bands for national defense and security purposes and submitting them to the Prime Minister for approval;
- To promulgate master plans on frequency bands, frequency channel allocation master plans, frequency channel use master plans, regulations on conditions for allocation, assignment and use of radio frequencies and frequency bands;
- To control the quality of radio radiation, electromagnetic compatibility and safety of radio radiation in accordance with law;
- To prescribe technical conditions and conditions for use of permit-exempt radio equipment and technical conditions (regarding frequency and transmission capacity) for radio equipment before manufacture or import for use in Viet Nam;
- To prescribe the training of radio operators; radio operator certificates; eligible subjects, conditions and procedures for grant, extension and re-grant of radio operator certificates; recognition of maritime radio operator certificates for foreign crewmembers working onboard ships flying Viet Nam flag;
- To grant, extend, modify, supplement, suspend, cancel or revoke assorted radio frequency permits;
- To inspect and control radio frequencies and equipment, to handle harmful interferences;
- To register international frequencies and implement international coordination on radio frequencies and satellite orbits;
- To submit regulations on auction and transfer of the right to use radio frequencies to competent authorities for promulgation and organize the implementation thereof.

14. Regarding information technology and electronic industries
- To guide, direct and organize the implementation of strategies, master plans, plans, policies, programs, schemes and projects on development of information technology and electronic industries;
- To submit to competent authorities for promulgation or promulgate according to its competence policies on incentives for and priorities of investment in the development of the information technology industry; to announce the list of programs on development of key information technology products and formulate these programs;
- To appraise programs, plans and projects on development of the information technology industry, trade and investment promotion activities in the information technology industry, and projects on development of information technology products financed with science and technology funds of ministries, sectors and localities;
- To promulgate or submit to competent authorities for promulgation criteria for evaluation and certification of functions and technical utilities of information technology and electronic products; mechanisms and policies for management and development of information technology parks;
- To grant, extend, modify, supplement, suspend, cancel and revoke licenses and certificates of information technology and electronic industries and information technology workers; to promulgate or recognize information technology skill standards;
- To organize activities in support of investment and trade promotion activities in information technology and electronic industries;
- To control the quality of information technology and electronic products and services.

15. Regarding information technology application and building of an e-government
- To guide, organize and inspect the implementation of programs, plans, schemes, projects, mechanisms, policies and regulations on information technology application; regulations on management of investment, assessment of efficiency of investment in information technology application funded by the state budget; to assist enterprises and the community in information technology application;
- To perform the state management of e-government; to build, maintain, update and realize the framework architecture of Vietnamese e-government; to guide the formulation and appraisal of schemes...
and projects on information technology application and building of an egovernment according to its competence, and architecture of ministerial-level e-government and provincial-level e-administrations; to guide the building of information technology application models at all levels;

- To build focal information systems to provide connection and assist convenient access to the national databases; to guide, inspect and assess the observance of regulations concerning the national databases;

- To promulgate or submit to competent authorities for promulgation regulations on interconnection, integration and sharing of information and data between ministries, sectors and localities and organize the implementation thereof; to announce according to its competence or submit to the Prime Minister for announcement a list of information and data for sharing and common use;

- To manage the national program on information technology application in state agencies; to assume the prime responsibility for organizing information technology application in state agencies according to the state administrative reform general program and plans;

- To manage the quality of information technology application activities and information systems; to build, manage and operate information system laboratories;

- To organize the building, management and operation of infrastructure facilities for information technology application and framework architecture of the Vietnamese e-government as well as information and data systems for common use as assigned by the Government or Prime Minister;

- To guide localities in organizing the information technology application for the development and provision of smart city services.

16. Regarding information safety

- To manage information safety; to ensure information safety for information systems and information technology application and development activities; to prevent and combat spams; to ensure safety of personal information in the cyber environment; to organize the performance of the function of managing and coordinating response to network information incidents nationwide; to assume the prime responsibility for coordinating urgent response to ensure network information safety nationwide in accordance with law;

- To manage the production and trading of information safety products and provision of information safety services; to organize information safety inspection and assessment and grant of information safety certificates; to grant, extend, modify, supplement, suspend, cancel or revoke licenses for trading in network information safety products and services, except civil cipher products and services;

- To build and operate systems to ensure information safety; to appraise network information safety in information system design dossiers, and safety level of information systems; to manage the information safety supervision in accordance with law;

- To promulgate regulations on digital signatures and digital signature certification services according to its competence; to assume the prime responsibility for, and coordinate with the Ministry of Public Security and Government Cipher Commission in, managing digital signature certification service providers; to organize the provision of national digital signature certification services in accordance with law; to coordinate with the Ministry of Public Security in maintaining security and safety for key works important to national security in the field of telecommunications and information technology.

...
3. PROVINCIAL DEPARTMENT OF INFORMATION AND COMMUNICATIONS

Provincial Departments of Information and Communications implement the organizational structure and functions, duties regulated in the Joint Circular No. 06/2016/TTLT-BTTTT-BNV dated March 10th, 2016 of the Ministry of Information and Communications and the Ministry of Home Affairs as follows.

3.1 Organizational Structure
- Leaders: Director and Deputy Directors.
- Functional units:
  + Office
  + Inspectorate
  + Planning and Finance Division
  + Information Technology Division
  + Information - Press - Publish Division
  + Post - Telecommunication Division
- Member units:
  + Information Technology and Communications Center.
  + Others (if available).

3.2 Functions and duties

The Provincial Department of Information and Communications is a functional agency under the Provincial People’s Committee, which implements the functions of state management on information and communications in the province.
1. INFRASTRUCTURE FOR IT APPLICATION IN STATE AGENCIES

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>Unit</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Ratio of computers per administrative official</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Ministries and ministerial-level agencies</td>
<td>%</td>
<td>87.94</td>
</tr>
<tr>
<td></td>
<td>- Provincial agencies</td>
<td>%</td>
<td>95.26</td>
</tr>
<tr>
<td>1.2</td>
<td>Ratio of computers with Internet access</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Ministries and ministerial-level agencies</td>
<td>%</td>
<td>94.49</td>
</tr>
<tr>
<td></td>
<td>- Provincial agencies</td>
<td>%</td>
<td>97.22</td>
</tr>
<tr>
<td>1.3</td>
<td>Ratio of state agencies with a website/portal</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Ministries and ministerial-level agencies</td>
<td>%</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>- Provincial agencies</td>
<td>%</td>
<td>100</td>
</tr>
<tr>
<td>1.4</td>
<td>Ratio of state agencies with information technology unit</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Ministries and ministerial-level agencies</td>
<td>%</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>- Provincial agencies</td>
<td>%</td>
<td>100</td>
</tr>
<tr>
<td>1.5</td>
<td>Ratio of state agencies with internal network (LAN. Intranet. Extranet)</td>
<td>%</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>- Ministries and ministerial-level agencies</td>
<td>%</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>- Provincial agencies</td>
<td>%</td>
<td>100</td>
</tr>
<tr>
<td>1.6</td>
<td>Ratio of state agencies with WAN</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Ministries and ministerial-level agencies</td>
<td>%</td>
<td>93.33</td>
</tr>
<tr>
<td></td>
<td>- Provincial agencies</td>
<td>%</td>
<td>77.78</td>
</tr>
</tbody>
</table>

2. ONLINE PUBLIC SERVICES

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>Unit</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Total number of online public services</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Levels 1 &amp; 2</td>
<td>Service</td>
<td>97,394</td>
</tr>
<tr>
<td></td>
<td>- Level 3</td>
<td>Service</td>
<td>10,872</td>
</tr>
<tr>
<td></td>
<td>- Level 4</td>
<td>Service</td>
<td>1,378</td>
</tr>
<tr>
<td>2.2</td>
<td>Number of online public services in ministries and ministerial-level agencies</td>
<td>Service</td>
<td>4,063</td>
</tr>
<tr>
<td></td>
<td>- Levels 1 &amp; 2</td>
<td>Service</td>
<td>564</td>
</tr>
<tr>
<td></td>
<td>- Level 3</td>
<td>Service</td>
<td>278</td>
</tr>
<tr>
<td>2.3</td>
<td>Number of online public services in provincial agencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Levels 1 &amp; 2</td>
<td>Service</td>
<td>93,331</td>
</tr>
<tr>
<td>No.</td>
<td>Indicator</td>
<td>Unit</td>
<td>2016</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------------------------------------------------------</td>
<td>--------</td>
<td>-------</td>
</tr>
<tr>
<td></td>
<td>- Level 3</td>
<td>Service</td>
<td>10,308</td>
</tr>
<tr>
<td></td>
<td>- Level 4</td>
<td>Service</td>
<td>1,100</td>
</tr>
</tbody>
</table>

2.4 Some online public services have many uses in society

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>Unit</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.4.1</td>
<td>Customs procedures for export and import goods via VNACC / VCIS system (Ministry of Finance)</td>
<td>Transaction</td>
<td>9,970,000</td>
</tr>
<tr>
<td>2.4.2</td>
<td>Online tax invoice declaration (Ministry of Finance)</td>
<td>Transaction</td>
<td>11,251,439</td>
</tr>
<tr>
<td>2.4.3</td>
<td>Online bidding (Ministry of Planning and Investment)</td>
<td>Transaction</td>
<td>158,400</td>
</tr>
<tr>
<td>2.4.4</td>
<td>Business registration (Ministry of Planning and Investment)</td>
<td>Transaction</td>
<td>63,148</td>
</tr>
<tr>
<td>2.4.5</td>
<td>Secured transactions registration (Ministry of Justice)</td>
<td>Transaction</td>
<td>258,531</td>
</tr>
<tr>
<td>2.4.6</td>
<td>Issuance of announcement paper to receive regulation conformity and certificate of conformity of food safety regulation (Ministry of Health)</td>
<td>Transaction</td>
<td>26,634</td>
</tr>
</tbody>
</table>

3. INFORMATION TECHNOLOGY APPLICATION IN THE ENTERPRISES

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>Unit</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Ratio of enterprises having website (*) %</td>
<td></td>
<td>45</td>
</tr>
<tr>
<td>3.2</td>
<td>Ratio of enterprises making e-tax declaration (**) %</td>
<td></td>
<td>99.64</td>
</tr>
<tr>
<td>3.3</td>
<td>Ratio of enterprises carrying out e-customs procedures (***) %</td>
<td></td>
<td>95.31</td>
</tr>
</tbody>
</table>

Source: (*): Viet Nam E-Bussiness Index 2017
( **) and (***) : Ministry of Finance Report for 2016

4. IT WORKFORCE IN STATE AGENCIES

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>Unit</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>In ministries and ministerial level agencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1.1</td>
<td>Average ratio of a number of units of ministries and ministerial level agencies which have IT staff</td>
<td>%</td>
<td>71.29</td>
</tr>
<tr>
<td>4.1.2</td>
<td>Average number of IT staff in the units of ministries and ministerial level agencies</td>
<td>Person</td>
<td>3.86</td>
</tr>
<tr>
<td>4.2</td>
<td>In provincial agencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.2.1</td>
<td>Average ratio of a number of units of provincial agencies which have IT staff</td>
<td>%</td>
<td>91.67</td>
</tr>
<tr>
<td>4.2.2</td>
<td>Average number of IT staff in the units of provincial agencies which have IT staff</td>
<td>Person</td>
<td>3.08</td>
</tr>
<tr>
<td>4.2.3</td>
<td>Average ratio of a number of district-level people’s committees which have IT staff per provincial agencies</td>
<td>%</td>
<td>93.95</td>
</tr>
<tr>
<td>4.2.4</td>
<td>Average number of employees in charge of IT in district-level people’s committees</td>
<td>Person</td>
<td>2.39</td>
</tr>
</tbody>
</table>
1. INFORMATION TECHNOLOGY INFRASTRUCTURE

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>Unit</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Households with computers per inhabitants</td>
<td>%</td>
<td>21.3</td>
</tr>
<tr>
<td>1.2</td>
<td>Households with computers per 100 households</td>
<td>Computer</td>
<td>23</td>
</tr>
</tbody>
</table>

Source: General Statistics Office

1.3. Information technology parks

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>Unit</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3.1</td>
<td>Number of IT parks (*)</td>
<td>IT Park</td>
<td>03</td>
<td>04</td>
</tr>
<tr>
<td>1.3.2</td>
<td>Total size of land</td>
<td>m²</td>
<td>524,875</td>
<td>845,015</td>
</tr>
<tr>
<td>1.3.3</td>
<td>Total size of office space</td>
<td>m²</td>
<td>466,215</td>
<td>579,215</td>
</tr>
<tr>
<td>1.3.4</td>
<td>Total number of enterprises IT parks</td>
<td>Enterprise</td>
<td>nearly 300</td>
<td>over 700</td>
</tr>
<tr>
<td>1.3.5</td>
<td>Total number of IT employees in IT parks</td>
<td>Person</td>
<td>over 20,000</td>
<td>over 36,000</td>
</tr>
</tbody>
</table>

Note: (*) Recognized according to Decree No. 154/2013/ ND-CP dated November 8th, 2013 the government’s regulations on IT parks

Source: Data from report from IT parks

2. TOTAL NUMBER OF REGISTERED ENTERPRISES IN THE IT INDUSTRY SECTOR

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>2015</th>
<th>2016 (Estimated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Hardware, electronic industry enterprise</td>
<td>2,980</td>
<td>3,404</td>
</tr>
<tr>
<td>2.2</td>
<td>Software industry enterprise</td>
<td>6,143</td>
<td>7,433</td>
</tr>
<tr>
<td>2.3</td>
<td>Digital content industry enterprise</td>
<td>2,339</td>
<td>2,700</td>
</tr>
<tr>
<td>2.4</td>
<td>IT services enterprise (not including trade and distribution)</td>
<td>10,196</td>
<td>10,965</td>
</tr>
</tbody>
</table>

Source: Report from provinces

3. INFORMATION TECHNOLOGY MARKET

3.1. Revenue from IT Industry

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>2015</th>
<th>2016 (Estimated)</th>
<th>Growth rate (Estimated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1.1</td>
<td>Total revenue of IT industry</td>
<td>60,715</td>
<td>67,693</td>
<td>11.49%</td>
</tr>
<tr>
<td>3.1.2</td>
<td>Revenue of hardware - electronic industry</td>
<td>53,023</td>
<td>58,838</td>
<td>10.97%</td>
</tr>
<tr>
<td>3.1.3</td>
<td>Revenue of software industry</td>
<td>2,602</td>
<td>3,038</td>
<td>16.80%</td>
</tr>
<tr>
<td>3.1.4</td>
<td>Revenue of digital content industry</td>
<td>638</td>
<td>739</td>
<td>15.83%</td>
</tr>
<tr>
<td>3.1.5</td>
<td>Revenue of IT services (not including trade and distribution)</td>
<td>4,453</td>
<td>5,078</td>
<td>14.04%</td>
</tr>
</tbody>
</table>

Source: Report from provinces
3.2. IT Import - Export

Unit: Million USD

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>2015</th>
<th>2016 (Estimate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2.1</td>
<td>Total IT export turnover</td>
<td>52,954</td>
<td>60,789</td>
</tr>
<tr>
<td>3.2.2</td>
<td>Software export turnover</td>
<td>2,192</td>
<td>2,491</td>
</tr>
<tr>
<td>3.2.3</td>
<td>Digital contents export turnover</td>
<td>503</td>
<td>561</td>
</tr>
<tr>
<td>3.2.4</td>
<td>Hardware, computers, electronic products export turnover</td>
<td>49,860</td>
<td>57,737</td>
</tr>
<tr>
<td>3.2.5</td>
<td>Hardware, computers, electronic products import turnover</td>
<td>34,365</td>
<td>38,738</td>
</tr>
</tbody>
</table>

Source: Report from Provinces and General Department of Viet Nam Customs

3.2.6. Hardware, electronics export by item in 2016

Source: General Department of Viet Nam Customs

3.2.7. Hardware, electronics import by item in 2016

Source: General Department of Viet Nam Customs
4. WORKFORCE IN THE IT INDUSTRY

4.1. Employees in IT industry

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>2015</th>
<th>2016 (Estimated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1.1</td>
<td>Total number of employees</td>
<td>721,584</td>
<td>780,926</td>
</tr>
<tr>
<td>4.1.2</td>
<td>Number of employees in hardware, electronic industry</td>
<td>533,003</td>
<td>568,288</td>
</tr>
<tr>
<td>4.1.3</td>
<td>Number of employees in software industry</td>
<td>81,373</td>
<td>97,387</td>
</tr>
<tr>
<td>4.1.4</td>
<td>Number of employees in digital content industry</td>
<td>44,320</td>
<td>46,647</td>
</tr>
<tr>
<td>4.1.4</td>
<td>Number of employees in IT services (not including trade and distribution)</td>
<td>62,888</td>
<td>68,605</td>
</tr>
</tbody>
</table>

Source: Report from provinces

4.2. Average of salary per employee

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>2015</th>
<th>2016 (Estimate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2.1</td>
<td>Average of salary per employee in hardware, electronic industry</td>
<td>2,859</td>
<td>3,866</td>
</tr>
<tr>
<td>4.2.2</td>
<td>Average of salary per employee in software industry</td>
<td>6,215</td>
<td>6,849</td>
</tr>
<tr>
<td>4.2.3</td>
<td>Average of salary per employee in digital content industry</td>
<td>6,120</td>
<td>6,189</td>
</tr>
<tr>
<td>4.2.3</td>
<td>Average of salary per employee in IT services (not including trade and distribution)</td>
<td>5,376</td>
<td>5,609</td>
</tr>
</tbody>
</table>

Source: Report from provinces
INFORMATION SECURITY
1. REGULATION ON INFORMATION SECURITY

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Percentage of organizations issued internal regulations on information security</td>
<td>43.90</td>
<td>65.80</td>
</tr>
<tr>
<td>1.2</td>
<td>Percentage of organizations issued internal procedures to respond to information security incidents</td>
<td>37.00</td>
<td>49.00</td>
</tr>
</tbody>
</table>

Source: MIC

2. INFORMATION SYSTEM SECURITY

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>Unit:</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Percentage of organizations capable of recognizing cyberattacks to their information systems (including unsuccessful cyberattacks)</td>
<td>%</td>
<td>46.00</td>
<td>62.00</td>
</tr>
</tbody>
</table>

Source: MIC

2.2. Percentage of organizations applied technical measures/solutions to protect their information systems (by types of measures/solutions)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Security Management System</td>
<td>19.1</td>
<td>32.9</td>
</tr>
<tr>
<td>Wireless network security</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anti-spam filter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Web content filter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network-level antivirus software</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire wall</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intrusion detection network system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DoS/DDoS attack prevention system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digital signatures for online transactions</td>
<td>%</td>
<td>46</td>
</tr>
<tr>
<td>Number of public digital signatures</td>
<td>Digital signatures</td>
<td>733,846</td>
</tr>
</tbody>
</table>

Source: MIC
2.5. Market share of public CA services

Source: MIC

3. PERSONNEL IN CHARGE OF INFORMATION SECURITY

Unit: %

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Percentage of organizations having internal unit responsible for information security</td>
<td>30.70</td>
<td>65.60</td>
</tr>
<tr>
<td>3.2</td>
<td>Percentage of organizations having personnel full-time/part-time in charge of information security</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Personnel full-time in charge of information security</td>
<td>46.60</td>
<td>65.50</td>
</tr>
<tr>
<td></td>
<td>- Personnel part-time in charge of information security</td>
<td>29.00</td>
<td>16.80</td>
</tr>
</tbody>
</table>

Source: MIC

4. INFORMATION SECURITY WORKFORCE

Unit: %

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Percentage of organizations that have information security training plan</td>
<td>40.80</td>
<td>63.60</td>
</tr>
<tr>
<td>4.2</td>
<td>Percentage of organizations that organize or send staff to participate in information security training</td>
<td>76.80</td>
<td>73.90</td>
</tr>
<tr>
<td>4.3</td>
<td>Percentage of organizations that periodically carry out information security awareness raise</td>
<td>48.10</td>
<td>66.20</td>
</tr>
</tbody>
</table>

Source: MIC
TELECOMMUNICATIONS, INTERNET
1. TELECOMMUNICATIONS, INTERNET INFRASTRUCTURE

1.1. Terrestrial fixed-line telephones

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>Unit</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.1</td>
<td>Number of fixed-line telephone subscribers</td>
<td>Subscriber</td>
<td>5,437,741</td>
<td>5,598,017</td>
</tr>
<tr>
<td>1.1.2</td>
<td>Ratio of fixed-line telephone subscribers per 100 inhabitants</td>
<td>%</td>
<td>5.93</td>
<td>6.04</td>
</tr>
<tr>
<td>1.1.3</td>
<td>Households with a fixed-line telephone per 100 households</td>
<td>%</td>
<td>-</td>
<td>9.3</td>
</tr>
</tbody>
</table>

Note: “-” No data

Source: MIC

1.2. Terrestrial fixed-line broadband

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>Unit</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2.1</td>
<td>Number of Internet users</td>
<td>User</td>
<td>49,288,223</td>
<td>50,231,474</td>
</tr>
<tr>
<td>1.2.2</td>
<td>Internet users per 100 inhabitants</td>
<td>%</td>
<td>54</td>
<td>54.19</td>
</tr>
<tr>
<td>1.2.3</td>
<td>Number of households with Internet access</td>
<td>Households</td>
<td>-</td>
<td>6,841,981</td>
</tr>
<tr>
<td>1.2.4</td>
<td>Households with Internet access at home per 100 households</td>
<td>%</td>
<td>-</td>
<td>27.3</td>
</tr>
<tr>
<td>1.2.5</td>
<td>Number of fixed (wired)-broadband subscribers</td>
<td>Subscriber</td>
<td>7,657,619</td>
<td>9,098,288</td>
</tr>
<tr>
<td></td>
<td>Number of fixed (wired)-broadband Internet subscribers via xDSL</td>
<td>Subscriber</td>
<td>3,369,950</td>
<td>1,774,487</td>
</tr>
<tr>
<td></td>
<td>Number of fixed (wired)-broadband Internet subscribers via Leased line</td>
<td>Subscriber</td>
<td>272,476</td>
<td>303,114</td>
</tr>
<tr>
<td></td>
<td>Number of fixed (wired)-broadband Internet subscribers via CATV</td>
<td>Subscriber</td>
<td>383,119</td>
<td>611,665</td>
</tr>
<tr>
<td></td>
<td>Number of fixed (wired)-broadband Internet subscribers via FTTH</td>
<td>Subscriber</td>
<td>3,632,074</td>
<td>6,409,022</td>
</tr>
<tr>
<td>1.2.6</td>
<td>Number of fixed (wired)-broadband subscribers per 100 inhabitants</td>
<td>Subscriber</td>
<td>8.4</td>
<td>9.8</td>
</tr>
<tr>
<td>1.2.7</td>
<td>Number of fixed (wired)-broadband from 256 Kbps to less than 2 Mbps subscribers</td>
<td>Subscriber</td>
<td>15,592</td>
<td>23,666</td>
</tr>
<tr>
<td>1.2.8</td>
<td>Number of fixed (wired)-broadband from 2Mbps to less than 10 Mbps subscribers</td>
<td>Subscriber</td>
<td>4,420,342</td>
<td>3,300,928</td>
</tr>
<tr>
<td>1.2.9</td>
<td>Number of fixed (wired)-broadband equal to or above 10Mbps subscribers</td>
<td>Subscriber</td>
<td>2,938,482</td>
<td>5,433,583</td>
</tr>
<tr>
<td>1.2.10</td>
<td>International Internet Bandwidth (Mbit/s)</td>
<td>Mbit/s</td>
<td>1,677,775</td>
<td>3,816,027</td>
</tr>
<tr>
<td>1.2.11</td>
<td>International Internet Bandwidth (Bit/s) per Internet user</td>
<td>bit/s</td>
<td>35,694</td>
<td>79,659</td>
</tr>
</tbody>
</table>

Note: “-” No data

Source: MIC
### 1.3. Terrestrial mobile subscription

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>Unit</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3.1</td>
<td>Mobile-cellular telephone subscriptions generated voice, SMS traffic (2G)</td>
<td>Subscriber</td>
<td>94,552,934</td>
<td>92,807,762</td>
</tr>
<tr>
<td>1.3.2</td>
<td>Mobile-cellular telephone subscriptions generated voice, SMS traffic (2G) per 100 inhabitants</td>
<td>%</td>
<td>103.1</td>
<td>100.1</td>
</tr>
<tr>
<td>1.3.3</td>
<td>Mobile-cellular subscriptions generated voice, SMS, data traffic (2G and 3G)</td>
<td>Subscriber</td>
<td>126,499,499</td>
<td>128,996,179</td>
</tr>
<tr>
<td>1.3.4</td>
<td>Mobile-cellular subscriptions generated voice, SMS, data traffic (2G and 3G) per 100 inhabitants</td>
<td>%</td>
<td>137.9</td>
<td>139.2</td>
</tr>
</tbody>
</table>

*Source: MIC*

### 1.4. Terrestrial mobile broadband

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>Unit</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.4.1</td>
<td>Mobile broadband subscriptions generated voice, SMS, data traffic (3G)</td>
<td>Subscriber</td>
<td>31,946,565</td>
<td>36,188,417</td>
</tr>
<tr>
<td>1.4.2</td>
<td>Mobile broadband subscriptions generated voice, SMS, data traffic (3G) per 100 inhabitants</td>
<td>%</td>
<td>34.8</td>
<td>39</td>
</tr>
</tbody>
</table>

*Source: MIC*

### 1.5. Coast mobile cellular telecommunication services

*Unit: Subscriber*

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of coast radio station network subscriptions</td>
<td>13,634</td>
<td>13,160</td>
</tr>
</tbody>
</table>

*Source: MIC*

### 1.6. Internet resource

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>Unit</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.6.1</td>
<td>Number of &quot;vn&quot; registered domain</td>
<td>Domain</td>
<td>348,514</td>
<td>386,751</td>
</tr>
<tr>
<td>1.6.2</td>
<td>Number of Vietnamese Internationalized domain names (IDN.vn) registered</td>
<td>Domain</td>
<td>962,241</td>
<td>994,161</td>
</tr>
<tr>
<td>1.6.3</td>
<td>Number of allocated IP4 addresses</td>
<td>Addresses</td>
<td>15,773,440</td>
<td>15,855,360</td>
</tr>
<tr>
<td>1.6.4</td>
<td>Number of allocated IP6 addresses (unit/64)</td>
<td>Addresses</td>
<td>90,196,279</td>
<td>120,262,426,624</td>
</tr>
<tr>
<td>1.6.5</td>
<td>Number of Registrars of &quot;vn&quot;</td>
<td>Registrars</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

*Source: MIC*
2. NUMBER OF TELECOMS, INTERNET OPERATOR

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Number of licensed terrestrial fixed services operators</td>
<td>87</td>
<td>104</td>
</tr>
<tr>
<td>2.2</td>
<td>Number of current terrestrial fixed services operators</td>
<td>80</td>
<td>74</td>
</tr>
<tr>
<td>2.3</td>
<td>Number of licensed satellite fixed services operators</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>2.4</td>
<td>Number of current satellite fixed services operators</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2.5</td>
<td>Number of licensed terrestrial mobile cellular services operators</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>2.6</td>
<td>Number of current terrestrial mobile cellular services operators</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>2.7</td>
<td>Number of licensed satellite mobile cellular services operators</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2.8</td>
<td>Number of current satellite mobile cellular services operators</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2.9</td>
<td>Number of licensed coast mobile cellular services operators</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2.10</td>
<td>Number of current coast mobile cellular services operators</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2.11</td>
<td>Number of licensed air mobile cellular services operators</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2.12</td>
<td>Number of current air mobile cellular services operators</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2.13</td>
<td>Number of licensed Internet services operators</td>
<td>57</td>
<td>65</td>
</tr>
<tr>
<td>2.14</td>
<td>Number of current Internet services operators</td>
<td>52</td>
<td>51</td>
</tr>
</tbody>
</table>

Source: MIC

3. TELECOMMUNICATIONS, INTERNET MARKET

3.1. Telecommunication service revenue

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1.1</td>
<td>Terrestrial Fixed Telecommunication Services Revenue</td>
<td>1,176.78</td>
<td>1,142.52</td>
</tr>
<tr>
<td>3.1.2</td>
<td>Satellite Fixed Telecommunication Services Revenue</td>
<td>0.084</td>
<td>0.033</td>
</tr>
<tr>
<td>3.1.3</td>
<td>Terrestrial Mobile cellular Telecommunication Services Revenue</td>
<td>4,882.4</td>
<td>5,013</td>
</tr>
<tr>
<td>3.1.4</td>
<td>Satellite Mobile cellular Telecommunication Services Revenue</td>
<td>2.79</td>
<td>2.35</td>
</tr>
<tr>
<td>3.1.5</td>
<td>Coast Mobile cellular Telecommunication Services Revenue</td>
<td>0.178</td>
<td>0.174</td>
</tr>
<tr>
<td>3.1.6</td>
<td>Air Mobile cellular Telecommunication Services Revenue</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Total telecommunication service revenue</td>
<td>6,062.23</td>
<td>6,158.08</td>
</tr>
</tbody>
</table>

Note: "-" No data

Source: MIC
3.2. Market shares (by subscriptions) of telecommunications and Internet operators in 2016

3.2.1. Market shares (by subscriptions) of terrestrial fixed-line telephone service providers

3.2.2. Market shares (by subscriptions) of terrestrial mobile-cellular telephone service providers on generated voice, SMS traffic (2G)

3.2.3. Market shares (by subscriptions) of terrestrial fixed (wired)-broadband service providers
3.2.4. Market shares (by subscriptions) of terrestrial mobile-cellular broadband service providers on generated voice, SMS, data traffic (3G)

Source: MIC

3.2.5. Market shares (by subscriptions) of terrestrial mobile service providers on generated voice, SMS, data traffic (2G and 3G)

Source: MIC

3.2.6. Market shares (by subscriptions) of terrestrial mobile and fixed (wired) service providers

Source: MIC

4. TELECOMMUNICATIONS, INTERNET WORKFORCE

Unit: Person

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of employees in the field of telecommunications, Internet</td>
<td>72,609</td>
<td>71,298</td>
</tr>
</tbody>
</table>

Source: MIC
BROADCASTING AND ELECTRONIC INFORMATION
1. BROADCASTING

1.1. Broadcasting platform

1.1.1. Number of pay television subscribers

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.1.1</td>
<td>Number of cable TV subscribers</td>
<td>10,873,905</td>
</tr>
<tr>
<td></td>
<td>Number of analog cable TV subscribers</td>
<td>7,238,572</td>
</tr>
<tr>
<td></td>
<td>Number of digital cable TV subscribers</td>
<td>1,852,113</td>
</tr>
<tr>
<td></td>
<td>Number of IPTV subscribers</td>
<td>1,783,220</td>
</tr>
<tr>
<td>1.1.1.2</td>
<td>Number of digital terrestrial TV subscribers</td>
<td>521,137</td>
</tr>
<tr>
<td>1.1.1.3</td>
<td>Number of digital satellite TV subscribers</td>
<td>1,367,790</td>
</tr>
<tr>
<td>1.1.1.4</td>
<td>Number of mobile TV subscribers</td>
<td>387,687</td>
</tr>
</tbody>
</table>

Source: MIC

1.1.2. Number of Radio - TV Broadcasters

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.2.1</td>
<td>Number of National Radio Broadcasters</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1.1.2.2</td>
<td>Number of National TV Broadcasters</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1.1.2.3</td>
<td>Number of Local Radio -TV Broadcasters</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>1.1.2.4</td>
<td>Number of Ministry and Sector TV Units</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: MIC

1.1.3. Number of Broadcasting Channels

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.3.1</td>
<td>Number of Vietnamese radio channels</td>
<td>86</td>
<td>86</td>
</tr>
<tr>
<td></td>
<td>Number of free-to-air radio channels</td>
<td>77</td>
<td>77</td>
</tr>
<tr>
<td></td>
<td>Number of radio channels on subscription broadcasting services</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>1.1.3.2</td>
<td>Number of Vietnamese TV channels</td>
<td>178</td>
<td>181</td>
</tr>
<tr>
<td></td>
<td>Number of TV channels on free-to-air service</td>
<td>103</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td>Number of TV channels on subscription broadcasting services</td>
<td>75</td>
<td>78</td>
</tr>
<tr>
<td>1.1.3.3</td>
<td>Number of foreign channels granted editing license to broadcast on subscription services</td>
<td>40</td>
<td>50</td>
</tr>
</tbody>
</table>

Source: MIC
1.2. Number of pay TV service providers

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2.1</td>
<td>Number of cable TV service providers</td>
<td>27</td>
</tr>
<tr>
<td>1.2.2</td>
<td>Number of digital terrestrial TV service providers</td>
<td>1</td>
</tr>
<tr>
<td>1.2.3</td>
<td>Number of digital satellite TV service providers</td>
<td>3</td>
</tr>
<tr>
<td>1.2.4</td>
<td>Number of mobile TV service providers</td>
<td>2</td>
</tr>
<tr>
<td>1.2.5</td>
<td>Number of internet TV service providers</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: MIC

1.3. Broadcasting market

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3.1</td>
<td>Revenue of cable TV service</td>
<td>5,687.5</td>
</tr>
<tr>
<td>1.3.2</td>
<td>Revenue of digital terrestrial TV service</td>
<td>198.6</td>
</tr>
<tr>
<td>1.3.3</td>
<td>Revenue of digital satellite TV service</td>
<td>1,548</td>
</tr>
<tr>
<td>1.3.4</td>
<td>Revenue of mobile TV service</td>
<td>65</td>
</tr>
</tbody>
</table>

Source: MIC

1.4. Market share (subscribers) of pay TV service providers

Market share (subscribers) of terrestrial digital TV service 4.0%
Market share (subscribers) of satellite digital TV service 10.4%
Market share (subscribers) of mobile TV service 2.9%
Market share (subscribers) of cable TV service providers 82.7%

Source: MIC

1.5. Broadcasting workforce

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5.1</td>
<td>Number of employees in National Radio Broadcasters</td>
<td>2,081</td>
</tr>
<tr>
<td>1.5.2</td>
<td>Number of employees in National TV Broadcasters</td>
<td>3,985</td>
</tr>
<tr>
<td>1.5.3</td>
<td>Number of employees in Local Radio-TV Broadcasters</td>
<td>11,559</td>
</tr>
<tr>
<td>1.5.4</td>
<td>Number of employees in Ministry and Sector TV providers</td>
<td>1,200</td>
</tr>
</tbody>
</table>

Source: MIC
### 1.6. TV Audience Measurement Index of national and local essential channels (H1 and HTV9) in Ha Noi City and Ho Chi Minh City

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Channel</th>
<th>Ha Noi City</th>
<th>Ho Chi Minh City</th>
</tr>
</thead>
<tbody>
<tr>
<td>The average number of audience viewing TV channels at least one minute over total audiences (%)</td>
<td>Data collection from 221 TV channels in Ha Noi City and Ho Chi Minh City</td>
<td>14.3</td>
<td>14.4</td>
</tr>
<tr>
<td>The average number of audience viewing TV channels at least one minute per day over total audiences (%)</td>
<td>Data collection from 221 TV channels in Ha Noi City and Ho Chi Minh City</td>
<td>69.1</td>
<td>66.5</td>
</tr>
<tr>
<td>The average number of audience viewing TV channels at least one minute of each channel over the total audiences of television channels serving essential national and local political missions and propaganda (%)</td>
<td>VTV1</td>
<td>18.7</td>
<td>3.1</td>
</tr>
<tr>
<td>VTC1</td>
<td>1.5</td>
<td>0.9</td>
<td></td>
</tr>
<tr>
<td>TTXVN</td>
<td>1.2</td>
<td>0.7</td>
<td></td>
</tr>
<tr>
<td>ANTV</td>
<td>2.7</td>
<td>1.9</td>
<td></td>
</tr>
<tr>
<td>QPVN</td>
<td>1.5</td>
<td>1.2</td>
<td></td>
</tr>
<tr>
<td>H1</td>
<td>2.5</td>
<td>1.3</td>
<td></td>
</tr>
<tr>
<td>HTV9</td>
<td>1.1</td>
<td>7.9</td>
<td></td>
</tr>
<tr>
<td>The average number of daily audience viewing TV channels over the total audiences viewed at least one channel per minute at a given time period of television channels serving essential national and local political missions and propaganda (%)</td>
<td>VTV1</td>
<td>23.2</td>
<td>4.8</td>
</tr>
<tr>
<td>VTC1</td>
<td>1.9</td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>TTXVN</td>
<td>1.5</td>
<td>0.7</td>
<td></td>
</tr>
<tr>
<td>ANTV</td>
<td>3.4</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>QPVN</td>
<td>2.5</td>
<td>1.3</td>
<td></td>
</tr>
<tr>
<td>H1</td>
<td>3.6</td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>HTV9</td>
<td>1.4</td>
<td>13.0</td>
<td></td>
</tr>
<tr>
<td>The audience market share of each TV channel over remaining channels serving essential national and local political missions and propaganda, given at the same time frame (%)</td>
<td>VTV1</td>
<td>51.9</td>
<td>9.4</td>
</tr>
<tr>
<td>VTC1</td>
<td>5.0</td>
<td>3.4</td>
<td></td>
</tr>
<tr>
<td>TTXVN</td>
<td>3.4</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>ANTV</td>
<td>7.8</td>
<td>6.0</td>
<td></td>
</tr>
<tr>
<td>QPVN</td>
<td>4.6</td>
<td>6.4</td>
<td></td>
</tr>
<tr>
<td>H1</td>
<td>8.1</td>
<td>5.2</td>
<td></td>
</tr>
<tr>
<td>HTV9</td>
<td>3.6</td>
<td>32.7</td>
<td></td>
</tr>
</tbody>
</table>

Source: MIC
2. ELECTRONIC INFORMATION

2.1. Websites

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>Unit</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.1</td>
<td>Number of electronic newspapers</td>
<td>Newspaper</td>
<td>105</td>
<td>125</td>
</tr>
<tr>
<td>2.1.2</td>
<td>Number of electronic publications</td>
<td>E-Publication</td>
<td>2.774</td>
<td>1.893</td>
</tr>
<tr>
<td>2.1.3</td>
<td>Number of general websites of press agencies</td>
<td>Website</td>
<td>211</td>
<td>172</td>
</tr>
<tr>
<td>2.1.4</td>
<td>Number of licensed general websites of agencies, enterprises, organizations (excluded those of press agencies)</td>
<td>Website</td>
<td>1388</td>
<td>1.323</td>
</tr>
<tr>
<td>2.1.5</td>
<td>Number of licensed online social networks</td>
<td>Social network</td>
<td>116</td>
<td>240</td>
</tr>
</tbody>
</table>

Source: MIC

2.2. Online Games

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2.1</td>
<td>Number of licensed enterprises to provide online game service</td>
<td></td>
<td>59</td>
</tr>
<tr>
<td></td>
<td>Number of licensed enterprises to provide G1 online games</td>
<td></td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>Number of licensed enterprises to provide G2, G3, G4 online games</td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

Source: MIC
1. PUBLIC POSTAL NETWORK INFRASTRUCTURE

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>Unit</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Total number of postal outlets</td>
<td>Outlet</td>
<td>12,757</td>
<td>12,386</td>
</tr>
<tr>
<td>1.2</td>
<td>Average radius per postal outlet</td>
<td>Km</td>
<td>2.87</td>
<td>2.92</td>
</tr>
<tr>
<td>1.3</td>
<td>Average number of inhabitants served by a postal outlet</td>
<td>Person</td>
<td>7,093</td>
<td>7,483</td>
</tr>
</tbody>
</table>

Source: MIC

2. NUMBER OF POSTAL OPERATORS

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>Unit</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Number of licensed postal operators</td>
<td>Enterprise</td>
<td>216</td>
</tr>
<tr>
<td>2.2</td>
<td>Number of certified postal operators</td>
<td>Enterprise</td>
<td>210</td>
</tr>
<tr>
<td>2.3</td>
<td>Total number of licensed and certified postal operators</td>
<td>Enterprise</td>
<td>248</td>
</tr>
</tbody>
</table>

Source: MIC

3. POSTAL MARKET

3.1. Revenue of Postal Services

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue of postal service</td>
<td>409.68</td>
</tr>
</tbody>
</table>

Source: MIC

3.2. MARKET SHARE (BY REVENUE) OF POSTAL OPERATORS 2016

Source: MIC

4. POSTAL WORKFORCE

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of employees in the field of postal</td>
<td>38,531</td>
</tr>
</tbody>
</table>

Source: MIC
IX

RESEARCH AND TRAINING ON ICT
1. RESEARCH AND DEVELOPMENT (R&D) ON ICT

1.1. Number of national level R&D projects on ICT

1.2. Number of ministerial level R&D projects on ICT of MIC

2. HUMAN RESOURCE TRAINING

2.1. Education level

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Unit</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratio of literate population aged 15 and above</td>
<td>%</td>
<td>95</td>
</tr>
<tr>
<td>Ratio of pupils (primary, lower and upper secondary) over population in primary and secondary education age</td>
<td>%</td>
<td>90.7</td>
</tr>
<tr>
<td>Ratio of tertiary students over population in tertiary education age</td>
<td>%</td>
<td>33.5</td>
</tr>
</tbody>
</table>
### 2.2. ICT human resource training

#### 2.2.1. Tertiary training

<table>
<thead>
<tr>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicator</td>
</tr>
<tr>
<td>Unit 2016</td>
</tr>
<tr>
<td>Total number of universities and colleges</td>
</tr>
<tr>
<td>Universities or College</td>
</tr>
<tr>
<td>Total quota of students enrolment in universities and colleges</td>
</tr>
<tr>
<td>Student</td>
</tr>
<tr>
<td>Actual number of students enrolled in universities and colleges</td>
</tr>
<tr>
<td>Student</td>
</tr>
<tr>
<td>Total number of students studying in universities and colleges</td>
</tr>
<tr>
<td>Student</td>
</tr>
<tr>
<td>Total number of graduated students</td>
</tr>
<tr>
<td>Student</td>
</tr>
<tr>
<td>Number of universities and colleges which offer IT, electronics, telecommunications and information security training</td>
</tr>
<tr>
<td>University or College</td>
</tr>
<tr>
<td>Quota of enrollment for universities, colleges in IT, electronics, telecommunications and information security training</td>
</tr>
<tr>
<td>Student</td>
</tr>
<tr>
<td>Percentage of universities and colleges offering IT, electronics, telecommunications and information security training/Total number of universities and colleges</td>
</tr>
<tr>
<td>%</td>
</tr>
<tr>
<td>Percentage of quota of enrollment in universities and colleges having IT, electronics, telecommunications and information security training/Total quota of enrollment in universities and colleges.</td>
</tr>
<tr>
<td>%</td>
</tr>
<tr>
<td>Actual rate of students enrolled in universities and colleges having IT, electronics, telecommunications and information security training</td>
</tr>
<tr>
<td>%</td>
</tr>
<tr>
<td>Graduation rate of universities, colleges having IT, electronics, telecommunications and information security training</td>
</tr>
<tr>
<td>%</td>
</tr>
</tbody>
</table>

Source: Data from universities, colleges of MIC Survey in 2017; Guidebook “What you should need to know about enrollment into universities and colleges, 2016”; Figures in 2017 from Ministry of Education and Training

#### 2.2.2. Vocational training

<table>
<thead>
<tr>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicator</td>
</tr>
<tr>
<td>Unit 2016</td>
</tr>
<tr>
<td>Total number of vocational training schools and colleges</td>
</tr>
<tr>
<td>School or College</td>
</tr>
<tr>
<td>Total quota of students enrolment in vocational training schools and colleges</td>
</tr>
<tr>
<td>Student</td>
</tr>
<tr>
<td>Actual number of students enrolled in secondary vocational training schools and colleges</td>
</tr>
<tr>
<td>Student</td>
</tr>
<tr>
<td>Total number of students studying in vocational training schools and colleges</td>
</tr>
<tr>
<td>Student</td>
</tr>
<tr>
<td>Total number of graduated students</td>
</tr>
<tr>
<td>Student</td>
</tr>
<tr>
<td>Total number of vocational training schools and colleges offering IT, electronics, telecommunications and information security training</td>
</tr>
<tr>
<td>School or College</td>
</tr>
<tr>
<td>Total quota of students enrolment in vocational training schools and colleges offering IT, electronics, telecommunications and information security training</td>
</tr>
<tr>
<td>Student</td>
</tr>
<tr>
<td>Indicator</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Actual rate of students enrolled in vocational training schools and colleges offering IT, electronics, telecommunications and information security training/Total quota of enrollment in secondary vocational training schools and colleges offering IT, electronics, telecommunications and information security training</td>
</tr>
<tr>
<td>Graduation rate of vocational training schools and colleges having IT, electronics, telecommunications and information security training</td>
</tr>
</tbody>
</table>

Resource: Data from universities, colleges of MIC Survey in 2017; Guidebook "What you should need to know about enrollment into universities and colleges, 2016"; Figures in 2017 of General Directorate of Vocation Training - Ministry of Labor - Invalids and Social Affairs
LEGAL DOCUMENTS, STRATEGIES, PLANS, PROGRAMS AND PROJECTS ON ICT
1. INFORMATION TECHNOLOGY APPLICATION AND DEVELOPMENT

1.1. Laws
- Law on Information Technology was adopted on June 29th, 2006 by the XIth National Assembly of the Socialist Republic of Viet Nam at its 9th Session (No. 67/2006/QH11).
- Law on E-Transaction was adopted on November 29th, 2005 by the XIth National Assembly of the Socialist Republic of Viet Nam at its 8th Session (No. 51/2005/QH11).

1.2. Decrees
- Decree No. 174/2013/ND-CP dated November 13th, 2013 on sanctioning of administrative violations in the field of posts, telecommunications, information technology and radio frequencies.
- Decree No. 154/2013/ND-CP dated November 8th, 2013 on the concentrated information technology park.
- Decree No. 52/2013/ND-CP dated June 9th, 2013 on e-commerce.
- Decree No. 43/2011/ND-CP dated June 13th, 2011 regulating the provision of information and online public services on websites or portals of state agencies.
- Decree No. 102/2009/ND-CP dated November 6th, 2009 on the management of investment in information technology application using by the state budget
- Decree No. 71/2007/ND-CP dated May 3rd, 2007 detailing and guiding the implementation of a number of articles of the Law on Information Technology regarding information technology industry.
- Decree No. 64/2007/ND-CP dated August 10th, 2007 on information technology application in the operations of state agencies.

1.3. Prime Minister’s Decisions
- Decision No. 18/2016/QD-TTg dated May 6th, 2016 on circumstances that enable importation of used information technology products under import prohibition.
- Decision No. 80/2014/QD-TTg dated December 30th, 2014, providing for the pilot outsourcing of information technology services in state agencies.
- Decision No. 169/2006/QD-TTg dated July 17th, 2006 providing for investment in and procurement of information technology products by agencies and organization using state budget capital.

2. TELECOMMUNICATIONS, FREQUENCY, INTERNET, BROADCASTING AND ELECTRONIC INFORMATION

2.1. Laws
- Law on Telecommunications was adopted on November 23rd, 2009 by the XIIth National Assembly of the Socialist Republic of Viet Nam at its 6th Session (No. 41/2009/QH12).
- Law on Radio Frequencies was adopted on November 23rd, 2009 by the XIIth National Assembly of the Socialist Republic of Viet Nam at its 6th Session (No. 42/2009/QH12).

2.2. Decrees
- Decree No. 81/2016/ND-CP dated July 1st, 2016 on amending and supplementing a number of articles of the Government’s Decree No. 25/2011/ND-CP dated April 6th, 2011 detailing and guiding the implementation of a number of articles of the law on telecommunications.
- Decree No. 06/2016/ND-CP dated January 18th, 2016 on management, provision and utilization of radio and television services.
- Decree No. 174/2013/ND-CP dated November 13th, 2013 on sanctioning of administrative violations in the field of posts, telecommunications, information technology and radio frequencies.
- Decree No. 159/2013/ND-CP dated November 13th, 2013 providing for administrative penalties for violations arising in the realm of journalism and publishing.
- Decree No. 72/2013/ND-CP dated July 15th, 2013 on the management, provision, use of internet services and online information.
- Decree No. 25/2011/ND-CP dated April 6th, 2011 guiding to implement a number of articles of the law on telecommunications.

2.3. Prime Minister’s Decisions
- Decision No. 02/2017/QD-TTg dated January 17th, 2017 on amending and supplementing the national radio frequency spectrum planning attached Decision No. 71/2013/QD-TTg dated November 23rd 2013.
- Decision No. 01/2015/QD-TTg dated January 7th, 2015 amending and supplementing the Prime Minister’s Decision No. 22/2009/QD-TTg dated February 16th, 2009 approving the Master Plan on radio and television transmission and broadcasting through 2020.
- Decision No. 38/2014/QD-TTg dated July 1st, 2014 providing the auction and transfer of the right to use the telecommunications number storage and internet domain names.
- Decision No. 71/2013/QD-TTg dated November 23rd, 2013 promulgating the national radio spectrum planning.
- Decision No. 45/2012/QD-TTg dated October 23rd, 2012 providing the criteria for identifying important telecommunications projects related to national security.
- Decision No. 16/2012/QD-TTg dated March 8th, 2012 on auctioning and transfer right to use radio frequencies.
- Decision No. 55/2011/QD-TTg dated October 14th, 2011 promulgating a list of telecommunications service providers with network infrastructure in which the state holds dominating shares or capital contributions.
- Decision No. 22/2009/QD-TTg dated February 16th, 2009 approving the up-to-2020 planning for radio and television wave transmission and broadcasting.
- Decision No. 60/2008/QD-TTg dated May 2nd, 2008, regarding the management and use of information mobile devices.

3. INFORMATION SECURITY

3.1. Laws
- Law on Cyber Information Security was adopted on November 19th, 2015 by the XIIIth by National Assembly of the Socialist Republic of Viet Nam at its 10th Session (No. 86/2015/QH13).

3.2. Decrees
- Decree No. 142/2016/ND-CP dated October 14th, 2016 promulgating the prevention of online information conflicts.
- Decree No. 108/2016/ND-CP dated July 1st, 2016 on detailing conditions for provision of cyber security products and services.
- Decree No. 85/2016/ND-CP dated July 1st, 2016 on the security of information systems by classification.
- Decree No. 58/2016/ND-CP dated July 1st, 2016 on the sale and provision of civil cryptography products and services and the exportation or importation of civil cryptography products.


- Decree No. 90/2008/ND-CP dated August 13th, 2008 on anti-spamming.


3.3. Prime Minister's Decisions
- Decision No. 632/QD-TTg dated May 10th, 2017 promulgating the list of important priority domains to ensure the safety of information and information networks and national important information.

- Decision No. 05/2017/QD-TTg dated March 16th, 2017 providing for emergency response plans to ensure national cyber information security.

- Decision No. 898/QD-TTg dated May 27th, 2016 approving the orientation, objectives and duties to ensure the cyber information security for the period 2016-2020.

4. POSTS

4.1. Laws
- Law on Post was adopted on June 17th, 2010 by the XIIth by National Assembly of the Socialist Republic of Viet Nam at its 7th Session (No. 49/2010/QH12).

4.2. Decrees
- Decree No. 174/2013/ND-CP dated November 13th, 2013 on sanctioning of administrative violations in the field of posts, telecommunications, information technology and radio frequencies.

- Decree No. 47/2011/ND-CP dated June 17th, 2011 providing the detailing implementation of some content of the Law on Post.

4.3. Prime Minister’s Decisions
- Decision No. 55/2016/QD-TTg dated December 26th, 2016 promulgating the post network serving Party and State agencies.
- Decision No. 45/2016/QD-TTg dated October 19th, 2016 on receipt of dossiers and return of results of settlement of administrative procedures via public postal.

- Decision No. 45/2015/QD-TTg dated September 24th, 2015 promulgating the provision of public postal services and public services in press publishing.

- Decision No. 41/2011/QD-TTg dated August 3rd, 2011 providing the appointment of enterprises to maintain and manage the public post network, the provision of public postal services, the international postal service.

5. MASTER PLANS, STRATEGIES, PLANS, PROGRAMS AND PROJECTS ON ICT

5.1. Strategies, plans and projects

- Project on propaganda and dissemination to raise awareness and responsibility for information security up to 2020 (Decision No. 893/QD-TTg dated May 27th, 2016).

- The plan of action for development of electronics industry in implementation of Viet Nam industrialization strategy within the framework of Viet Nam - Japan cooperation through 2020, with a vision toward 2030 (Decision No. 1290/QD-TTg dated August 1st, 2014).

- Project on training and development of a team of security experts and information security to 2020 (Decision No. 99/QD-TTg dated January 14th, 2014).

- Master Plan on national radio frequency spectrum (Prime Minister’s No. 71/2013/QD-TTg dated November 21st, 2013).

- National Master Plan to develop Viet Nam’s radio and television broadcasting services to 2020 (Decision No. 1448/QD-TTg dated August 19th, 2013).

- National Master Plan to develop the national telecommunications up to 2020 (Decision No. 32/2012/QD-TTg dated July 27th, 2012).

- National project on digitization of terrestrial TV transmission and broadcasting to 2020 (Prime Minister’s Decision No. 2451/QD-TTg dated December 27th, 2011).

- National strategy on human resources development period 2011-2020 (Prime Minister’s Decision No. 579/QD-TTg dated April 19th, 2011).

- National strategy on “Transforming Viet Nam into an advanced ICT country” (Prime Minister’s Decision No. 1755/QD-TTg dated Sep 22nd, 2010).

- National master plan on development of digital information security through 2020 (Decision No. 63/QD-TTg dated January 13th, 2010).

- National Master Plan on development of information technology human resources up to 2015 and orientations toward 2020 (Decision No. 698/QD-TTg dated June 1st, 2009).

- Plan on information technology application in state agencies’ operations during 2009-2010 (Decision No. 48/2009/QD-TTg dated March 31st, 2009).

- National Master Plan on radio, TV transmission and broadcasting to 2020 (Prime Minister’s Decision No. 22/2009/QD-TTg dated February 16th, 2009).
- Plan on Information Technology applications for operations of state agencies in 2008 (Decision No. 43/2008/QD-TTg dated March 24th, 2008).
- National Master Plan to develop Viet Nam IT human resources to 2020 (Decision No. 05/2007/QD-BTTTT dated October 26th, 2007).
- National Master Plan to develop information technology and communication in the northern key economic region to 2010 and orientations towards 2020 (Decision No. 15/2007/QD-BBCVT June 15th, 2007).
- National Master Plan to develop information and communication technology in the southern key economic region up to 2010, and orientations towards 2020 (Decision No. 14/2007/QD-BBCVT dated June 15th, 2007).
- Master Plan on development of Viet Nam’s electronics industry up to 2010, with a vision toward 2020 (Decision No. 75/2007/QD-TTg dated May 28th, 2007).
- National Strategy on development of posts and telecommunications to 2020 (Prime Minister’s Decision No. 158/2001/QD-TTg dated January 22nd, 2001).

5.2. National programs and projects on ICT

5.2.1. Information Technology
- The project “Enhancing Computer Accessibility and Public Internet Access in Viet Nam” (BMGF), Ministry of Information and Communications, duration: 2011-2016.
  - The project “Development rural communication and information period 2011-2020”, Ministry of Information and Communications (Decision No. 119/QD-TTg dated January 18th, 2011).
  - National target Program “Bringing information on remote, mountainous, border and island facilities duration 2012-2015”, Ministry of Information and Communications (Decision No. 1212/QD-TTg dated September 5th, 2012).
- National Program on information technology application in state agencies’ operation for the period 2016-2020 (Decision No. 1819/QD-TTg dated October 26th, 2015).
- Program on development of the information technology industry up to 2020 with a vision to 2025 (Decision No. 392/QD-TTg dated March 27th, 2015).
- National Program on application of information technology to operations of state agencies during 2011-2015 (Decision No. 1605/QD-TTg dated August 27th, 2010).

5.2.2. Telecommunications, Frequencies, Internet, Broadcasting and Electronic Information
- Program to develop broadband telecommunication infrastructure until 2020 (Decision No. 149/QD-TTg dated October 21st, 2016).
- Program on supplying the public telecommunications services by 2020 (Decision No. 1168/2015/ QD-TTg dated July 24th, 2015).

- Project on communication, propagandizing of terrestrial TV transmission and broadcasting (Decision No. 891/QD-BTTTTT of Minister of Information and Communications dated July 22nd, 2013).

- National Project on digitization of terrestrial TV transmission and broadcasting to 2020 (Prime Minister’s Decision No. 2451/QD-TTg dated December 27th, 2011).

- Project on organization of information for the prevention and control of disasters at sea (Decision No. 137/2007/QD-TTg dated August 21st, 2007).

5.2.3. Information Security

- Project “Training information security experts for government agencies and national key information systems”, agency: Ministry of Information and Communications, period of implementation: 2010 - 2020 (Decision No. 63 / QD-TTg dated January 13th, 2010).
INTERNATIONAL COOPERATION
1. MEMBERSHIP IN INTERNATIONAL AND REGIONAL ORGANIZATIONS

1.1. State membership in inter-governmental specialized international and regional organizations

- Universal Postal Union (UPU)
  Website: www.upu.int
- Asia Pacific Postal Union (APPU)
  Website: www.appu-bureau.org
- International Telecommunication Union (ITU)
  Website: www.itu.int
- Asia Pacific Telecommunity (APT)
  Website: www.aptsec.org
- International Telecommunication Satellite Organization (ITSO)
  Website: www.itso.int
- Intersputnik International Organization of Space Communications (INTERSPUTNIK)
  Website: www.intersputnik.com
- Association of Southeast Asian Nations (ASEAN)
  Website: www.asean.org
- APEC Telecommunications and Information Working Group (APEC TEL)
  Website: www.apec.org
- Asia Europe Meeting (ASEM) (ASEM ICT Ministerial Meeting)
  Website: www.asemininfoboard.org

1.2. Members of professional organizations and associations

- World Information Technology and Service Alliance (WITSA)
  Website: www.witsa.org
- Asian - Oceania Computing Industry Organization (ASOCIO)
  Website: www.asocio.org
- International Federation for Information Processing (IFIP)
  Website: www.ifip.org
- Asia Pacific Network Information Centre (APNIC)
  Website: www.apnic.net
- Asia Pacific Network Information Centre (APCERT)
  Website: www.apcert.org
- International Multilateral Partnership Against Cyber Threats (ITU- IMPACT)
  Website: www.impact-alliance.org
- Internet Corporation for Assigned Names and Numbers (ICANN)
  Website: www.icann.org
2. RECENT MAJOR EVENTS ORGANIZED IN VIET NAM IN 2016

<table>
<thead>
<tr>
<th>No.</th>
<th>Event</th>
<th>Time and Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The fourth UPU Workshop on Quality of Service and Supply Chain</td>
<td>May 30th - June 2nd 2016, Da Nang</td>
</tr>
<tr>
<td></td>
<td>Improvement Project in the ASEAN Countries.</td>
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<tr>
<td>2</td>
<td>Workshop in Internet of Things.</td>
<td>July 2016, Ha Noi</td>
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<tr>
<td>3</td>
<td>Workshop on Asia-Pacific Regional Standardization and APT</td>
<td>August 2016, Da Nang</td>
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<td></td>
<td>the fourth Preparatory Meeting for World Telecommunication</td>
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<td>Standardization Conference 2016</td>
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<tr>
<td>4</td>
<td>Conference - International Exhibition on 4G LTE with the theme:</td>
<td>August 2016, Ha Noi</td>
</tr>
<tr>
<td></td>
<td>“Developing 4G LTE Toward the Internet of Things era”.</td>
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<tr>
<td>5</td>
<td>Viet Nam - US Workshop on “Smart Cities”</td>
<td>October 2016, Ha Noi</td>
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</table>

3. SOME MAJOR INTERNATIONAL COOPERATION ACTIVITIES IN 2016

3.1. Bilateral Cooperation

Viet Nam has established closed bilateral cooperation in the Information and Communication sector with many countries all over the world. Cooperation relationships have been developed thoroughly and effectively through various forms and mechanisms such as policy, law and regulation consultation, advanced technology and ICT services sharing; Cooperation in training, research and development in ICT, Exchange of ICT experts for the Sector’s development goals.

Viet Nam has been focusing on the development and implementation of bilateral agreements in the information and communication sector. In recent years, bilateral agreements and/or MoUs with ministries and regulators in ICT sector from such countries as Korea, Japan, India, China, Laos, Cambodia, England, France, Slovakia, Hungary, Iran... have been developed actively and effectively.

Foreign economic relations have been identified as important mission to mobilize international resources and support Vietnamese ICT enterprises to increase their foreign investment and business cooperation through investment promotion programs and forums to be organized annually in Viet Nam and other countries.

3.2. Multilateral Cooperation

Viet Nam has always shown its positive, active and responsible membership status in international organizations.

a) In Telecommunication and ICT sector

Viet Nam has contributed many important initiatives and contents at international and regional organizations through working groups, study groups such as the International Telecommunication Union (ITU), the Asia-Pacific Telecommunication Union (APT). Viet Nam has also participated actively in many global events such as the ITU Conference, the World Telecommunications Development Conference (WTDC), the World Telecommunications...
Standardization Conference (WTSA), the World Radio Communication Conference (WRC), the World Information Society Summit (WSIS), ICANN annual conferences; World Telecommunication - Information Society (WTISD), ...

Viet Nam is a member of the Radio Regulations Board (RRB), the Chair and Vice Chair of several study groups and working groups in ITU and APT; Member of the Steering Committee of the ITU Asia-Pacific Centers of Excellence; Vice Chairman of the Liberalization Steering Group in APEC TEL Working Group, ...

ASEAN is now orienting to the digitized era. On November 27th, 2015 at the ASEAN TELMIN 15 Conference held in Da Nang, chaired by the host country of Viet Nam, ASEAN Ministers declared and announced the ICT Master Plan of ASEAN Countries to 2020 with the goal of promoting ASEAN into a secure, sustainable and digital-based economy, contributing to the creation of an ASEAN Economic Community.

b) Postal Sector

Viet Nam is one of the most active participants in activities of the Universal Postal Union (UPU) and Asia-Pacific Postal Union (APPU) such as the 7th UPU Regional Conference on Developing Electronic Postal Payment Services; Conference of the Executive Council of APPU; 3rd Regional Workshop on Supply Chain Requirements; Viet Nam has been re-elected as member of the UPU Council of Administration for the term of 2017 - 2020. In 2016, Viet Nam continued to win the first prize - gold medal at the 45th UPU Letter-writing Contest, and this is the 12th time that Viet Nam has won the highest prize in this Contest.

c) Information within ASEAN

Towards the realization of ASEAN Vision 2025, Viet Nam is one of the most active players in enhancing information co-operation among ASEAN countries through various cooperation mechanisms/activities such as ASEAN Information Ministers Meeting, ASEAN Senior Officials Responsible for Information (SOMRI), 3 Working Groups under SOMRI, Committee for Culture and Information (ASEAN COCI) and Sub-committee for Information (ASEAN-COCI SCI).

In addition to intra-ASEAN activities, ASEAN Members are also promoting information cooperation with dialogue partners, as well as other international and regional organizations.

3.3. Activities relating to negotiation of free trade agreements on information and communication sector in particular in line with the negotiation activities of the international economic integration in general have been positively and actively pursued towards a competitive and transparent market in the postal, telecommunication/ICT sectors.
AGENCIES, ORGANIZATIONS ON ICT
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**Authority of Press**  
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**Authority of Broadcasting and Electronic Information**  
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Website: www.abei.gov.vn

**Authority of Publications, Printing and Distribution**  
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Website: www.ppdvn.gov.vn

**Authority of Grassroot Information**  
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Email: vanthuttoncs@mic.gov.vn

**Authority of Foreign Information Service**  
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Website: www.vietnam.vn
Viet Nam Telecommunication Authority (VNTA)
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Fax: (84-24) 3943 6607
Website: www.vnta.gov.vn

Authority of Radio Frequency Management (RFD)
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Fax: (84-24) 3556 4930
Website: www.rdf.gov.vn

Authority of Information Technology Application (AITA)
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Fax: (84-24) 3537 8208
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Authority of Information Security
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The Viet Nam Post News
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Fax: (84-24) 3936 9364
Website: www.vietnecnews.vn

VietNamNet Online Newspaper
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Website: www.vietnamnet.vn

Information and Communications Technology Journal
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Website: www.nisci.gov.vn

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Office of the Government
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Ministry of National Defense
Authority of Information Technology
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Website: www.mod.gov.vn

Ministry of Public Security
Authority of Technical Informatics (E15)
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Ministry of Foreign Affairs
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Website: www.mofa.gov.vn

Ministry of Justice
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Website: www.cntt.botuphap.vn

Ministry of Finance
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Website: www.mof.gov.vn

Ministry of Industry and Trade
Viet Nam E-Commerce and Information Technology Agency
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Fax: (84-24) 6270 3609
Website: www.molisa.gov.vn
Ministry of Transport
Information Technology Center
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Website: www.mt.gov.vn

Ministry of Construction
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Ministry of Education and Training
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Fax: (84-24) 38693712
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Ministry of Agriculture and Rural Development
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Website: www.mard.gov.vn

Ministry of Planning and Investment
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Ministry of Home Affairs
Information Center
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Ministry of Health
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Website: www.ehealth.gov.vn

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Ministry of Culture - Sports and Tourism
Information Technology Center
Address: 20, Alley 2, Hoa Lu, Van Ho, Hai Ba Trung, Ha Noi
Tel: (84-24) 3974 5846
Fax: (84-24) 3974 5846
Website: www.cctt.gov.vn

Ministry of Natural Resources and Environment
Authority of Information Technology and Natural Resources and Environment Data
Address: 28 Pham Van Dong, Cau Giay, Ha Noi
Tel: (84-24) 3754 8925
Fax: (84-24) 3754 8925
Website: www.dinte.gov.vn

Government Inspectorate
Information Center
Address: Block D29, New Urban Area - Tran Thai Tong, Cau Giay, Ha Noi
Tel: (84) 80 48114
Website: www.thanhtra.gov.vn

The State Bank of Viet Nam
Authority of Information Technology
Address: 64 Nguyen Chi Thanh, Ba Dinh, Ha Noi
Tel: (84-24) 3834 3784
Fax: (84-24) 3834 5180
Website: www.sbv.gov.vn

Committee for Ethnic Minority Affairs
Information Technology Center
Address: 80 Phan Dinh Phung, Ba Dinh, Ha Noi
Tel: (84-24) 3823 1122
Website: www.cema.gov.vn

Viet Nam Academy of Science and Technology
Institute for Scientific Information
Center for Informatics and Computing
Address: 18 Hoang Quoc Viet, Cau Giay, Ha Noi
Tel: (84-24) 3791 6938
(84-24) 3791 4773
Fax: (84-24) 3791 6938
Website: www.cic.vast.vn

Viet Nam Academy of Social Sciences
Center for Information Technology Application
Address: 1 Lieu Giai, Ba Dinh, Ha Noi
Tel: (84-24) 6273 0552
Fax: (84-24) 6273 0552
Website: www.vass.gov.vn
4. ORGANIZATIONS AND ASSOCIATIONS ON ICT

**Viet Nam Association for Information Processing (VAIP)**
Address: 06th Floor, 14 Tran Hung Dao, Hoan Kiem Dist, Ha Noi
Tel: (84-24) 38211725
Fax: (84-24) 38211708
Website: www.vaip.org.vn

**Viet Nam Software and Information Technology Services Association (VINASA)**
Address: 11th Floor, Cung Tri Thuc Building, Tran Thai Tong, Cau Giay Dist, Ha Noi
Tel: (84-24) 3577 2336
Fax: (84-24) 3577 2337
Website: www.vinasa.org.vn

**Viet Nam Electronic Industries Association (VEIA)**
Address: 11th Floor, MIPEC TOWER Building, No. 229 Tay Son, Dong Da Dist, Ha Noi
Tel: (84-24) 933 2845
Fax: (84-24) 3933 2846
Website: www.veia.org.vn

**Viet Nam Information Security Association (VNISA)**
Address: No. 226 Hao Nam, Dong Da Dist, Ha Noi
Tel: (84-24) 6290 1028;
Website: www.vnisa.org.vn

**Viet Nam Internet Association (VIA)**
Address: 3rd Floor, No. 82 Duy Tan, Cau Giay Dist, Ha Noi
Tel: (84-24) 3633 0355
Fax: (84-24) 3633 0481
Website: www.via.org.vn

**The Supreme People’s Procuracy of Viet Nam Authority of Crime Statistics and Information Technology**
Address: 44 Ly Thuong Kiet, Hoan Kiem, Ha Noi
Tel: (84-24) 38255058
Website: www.vksndtctc.gov.vn

**The Radio and Electronics Association of Viet Nam (REV)**
Address: 2nd Floor, No. 57 Vu Thanh, Dong Da Dist, Ha Noi
Tel: (84-24) 6295 9849
Fax: (84-24) 3512 3614
Website: www.rev.org.vn

**Viet Nam E-commerce Association (VECOM)**
Address: Room 702, 07th Floor, HKC Building, No. 285 Doi Can, Lieu Giai, Ba Dinh Dist, Ha Noi
Tel: (84-24) 6278 4479
Website: www.vecom.vn

**Viet Nam Digital Communication Association (VDCA)**
Address: 12thA Floor, VTC Online Building, No. 18 Tam Trinh, Hai Ba Trung Dist, Ha Noi
Tel: (84-24) 3633 8833
Fax: (84-24) 3633 9933
Website: www.vdca.org.vn

**Ho Chi Minh City Computer Association (HCA)**
Address: No. 79 Truong Dinh, Dist 1, Ho Chi Minh City
Tel: (84-28) 3822 2876
Fax: (84-28) 3825 0053
Website: www.hca.org.vn

**Ha Noi Association of Information and Communications Technology Association (HANICT)**
Address: No. 2 Lane 87 Le Thanh Nghi, Hai Ba Trung Dist, Ha Noi
Website: www.hanict.org.vn