

E-Licensing in DGFT: A Best E-Governance Application

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Abstract - This is a case of effective and efficient e-Governance where the licenses are issued electronically by using of IT for web based delivery service in the Directorate General of Foreign Trade (DGFT). Now a days complete licensing procedure is dealing through electronically i.e. Exporter/Importer apply electronically to get the Importer Exporter Code(IEC) , submitting the fees as well as necessary documents electronically and received the IEC electronically. Trading Community is also availing the Online facility to submit the application for any licensing scheme, depositing the licensing fees, enclosing the required document from their end. The official procedure is also automated like initiating the note sheet, generating the ecom number, consolation of license fees and issuing the license to the exporter. There is fifty percent role of customs involved in trading. So that Electronic Data Interchange(EDI) facility is also established with Customs. In addition to above services, Bank Realization Certificate(BRC) is also integrated with this system. Henceforth an Exporter/Importer is equipped with electronic services without visiting to the office of DGFT, Customs and Bank. The web has been strategically leveraged for reengineering and transformation of trade processes for an economic trade facilitation.

Index Terms - E-Licensing, DGFT, E-Governance

1. INTRODUCTION

NIC-DGFT (Commerce and Industry Informatics Division) playing a significant role in architecting & implementing e-Governance initiatives with the best possible technology support in the Directorate General of Foreign Trade(DGFT). DGFT is a country wide organization and responsible to increase the export of the country has been discussed in [12]. Appropriate backbone ICT infrastructure has been established in DGFT which includes OFC-based Internet connectivity with Gigabit-based Local Area Network (LAN), Video Conferencing, IT equipped help desk, etc. supported by a team of highly qualified IT professional. [1-11] are the various e-Governance models defining the various e-Governance indicators and parameters which have been implemented in different forms. 'Trade Facilitation' is a key determinant of a country's competitiveness in the international market so there was a thrust of traders to familiar with it . Over the years, Government of India has taken various initiatives to simplify and rationalize procedural complexities in exports in order to put in place an efficient and effective trade facilitation mechanism and reduce the implicit transaction costs associated

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with the enforcement of legislation, regulation and administration of trade policies involving several agencies such as Customs, Airport and Port Authorities, bank, trade ministry etc. The transaction cost has been evaluated at about 8 to 10% of the value of exports and any mitigation in this has a permanent benefit accruing to the exporters.

NIC-DGFT has played catalytic & significant role in implementing e-Governance project in the DGFT with an aim to leverage IT for transparency and better governance. Keeping in view the object Directorate General of Foreign Trade had set up an online trade facilitation system. It containing EDI interfaces with the Trade Partners and all concerned in the value chain have been established. Customs, Banks, Trade and Industry and other Government Agencies are the part of this mechanism. Electronic Data Interchange (EDI) is core driver for facilitating international trade and one of the key initiatives is electronic transmission of foreign exchange realization details on exports by banks on a daily basis under the Electronic Bank realization Certificate (e-BRC) initiative. Exporter will not be required to make any request to Bank for issuance of Bank export and Realization Certificate (BRC). This will establish a seamless EDI connectivity amongst DGFT, Banks and Exporters. This is significant step to reduce transaction cost to the exporters..

2. OBJECTIVES OF DGFT

The major objectives of DGFT are as follows:

- 2.1. Effective and efficient e-governance services,
- 2.2. Globally accessibility of the e-services.
- 2.3. Maintaining the integrity of public services.
- 2.4. Reduction in transaction cost and time.
- 2.5. Elimination of fraud practice of trade and industry
- 2.6. Physical visit of exporter of the office reduced to minimum.
- 2.7. Publishing of Monthly license Bulletin.
- 2.8. Implementation of single common document for the trade.
- 2.9. To move the DGFT in paperless environment.

3. ACIEVMENTS

To achieve the above said goals DGF organization requires intensive use of ICT infrastructure. The online service has become a core implementation strategy for delivery of an efficient, transparent and easy to access service. For the implementation of powerful and successful e-Governance complete setup has been renovated in the following manner as:

- 3.1. DGFT has been automated in all respect
- 3.2. DGFT web site prepared and hosting annually including latest policies, procedures, Circulars, Notifications and public Notice etc

- 3.3. Launching the web based application to get the licenses for the trading community
- 3.4. Creation of Central Data ware house of license data.
- 3.5. Global trade facility is available round the clock through the DGFT Portal <http://dgft.gov.in>
- 3.6. EDI with Customs is operational.
- 3.7. Net banking facility is made available to pay the licensing fees. MOU between DGFT and 43 banks has been signed.
- 3.8. Serving the trading community of 5.5. lakh exporters and importers using online facility 365x24x7.
- 3.9. Professionally managed help desk is operational at DGFT HQ as well at regional office.
- 3.10. All 36 DGFT port offices are providing the trading facilities country wide.

4. MAJOR PARTNERS OF TRADE

- 4.1 **Customs;** Message Exchange pertaining to various FTP schemes like Advance Authorizations (AA), Duty Exemption Passbook (DEPB), Export Promotion Capital Goods (EPCG) etc.
- 4.2 **Banks;** Message Exchange to obtain Foreign Exchange realization against exports (under implementation)
- 4.3 **Export Promotion Councils (EPCs);** Message Exchange / uploading of membership details of registered exporters (e-RCMC)

5. KEY TECHNICAL ATTRIBUTES OF DGFT'S ONLINE SERVICES

All processes and procedures have, therefore, been reengineered leveraging the web technology. Capability, flexibility and management of DGFT's website is vital to the process of trade facilitation.

The four major key attributes of the DGFT's website are:

- 5.1 A broad application Filing Spectrum
- 5.2 Security Features
- 5.3 Web Management
- 5.4 Technology

The above key attributes of the DGFT's website are indicated in the following schematic (Figure 1).

6. CITIZEN CENTRIC APPROACH

- 6.1 Web based operational environment is made available for Trade policy and procedure implementation globally, on 24x7x365 basis for all citizen.
- 6.2 DGFT Head Quarter with all 36 regional offices spread (but virtually being one) across the country for providing the online trading facility at user end.
- 6.3 e-Licensing facility for almost schemes like Advance Authorization (AA), Duty Entitlement Passbook (DEPB), Export Promotion Capital Goods (EPCG), Focus Product Scheme(FPS), Focus Market Scheme(FMS), Vishesh Krishi and Gram Udyog Yojna (VKGUY) Scheme, Status Holder Incentive Scrip(SHIS) Scheme, Market Linked Focused Product

(MLFPS) Scheme, Served from India Scheme (SFIS) and Agri Infrastructure Incentive Scrip (AIIS) Scheme etc.

- 6.4 On the DGFT web site <http://dgft.gov.in> a facility has been provided to search/enquire about the current Import Policy of an item by entering either ITC (HS) Code of that item or brief description of that items. This would be of major help to trade and industry as well as to academicians and researchers.
- 6.5 Organization has undertaken a thorough revision of Foreign Trade Policy/ Handbook of procedures electronically to make it more user friendly. Substantial efforts have been made to remove ambiguities in language, delete repetitions and harmonize the text with amendments to policy and new policy announcements.
- 6.6 An extremely challenging and significant EDI initiative e-BRC has been launched by DGFT It would herald electronic transmission of Foreign Exchange Realization from the respective Banks to the DGFT,s server on a daily basis. In addition to this EDI linkages with Trade and Industry, Government. Agencies and related EDI community partners i.e., Customs, and EPC's etc. e-BRC would facilitate early settlement and release of FTP incentives/entitlements for the exporters/importers.

7. TRANSITIONAL COMPATIBILITIES

- 7.1 The 'on-line' filing facility is user friendly, data input through structured screens, access controlled by DSC's, inbuilt facility to edit and validate before submitting data and availability of FAQ's to assist filing.
- 7.2 Status of Authorization and Importer Exporter Code (IEC)
- 7.3 Electronic Fee Transfer (EFT)
- 7.4 Secure and automated EDI based environment with 'on-line' EDI Message Exchange with community partners
- 7.5 Covers all models of e-governance i.e. B2G, G2G, G2B, G2C and C2G.

8. SEARCH ENHANCEMENT

A comprehensive user friendly search facility is available on the web portal for the people to search any trade related information. Any Exporter/Importer may know the status of any Authorization as well as IEC at any time from any where. All Trade related documents may be obtained through the menu. Latest updates of Foreign Trade Policy and Procedure, RTI Related Information that who is who ? Citizen charter etc may be noted down from the DGFT site. All type of format may also be downloaded as and when required.

9. WEB SECURITY FEATURES

- 9.1 The user authorization is through digital signatures. However option to login through a user name and password also exists to provide flexibility
- 9.2 The Digital Signature includes embedded IEC details also which when registered on DGFT’s website get validated and ensure high level of security. DGFT has also recently migrated to a 2048 bit encryption for higher level of security. DGFT is geared to handle any changes which may be required after implementation of interoperability in issuance of Digital Signature Certificates (DSCs)
- 9.3 Database and application server maintained under firewall
- 9.4 A three tier architecture used for the application
- 9.5 Physical security is ensured by NIC Data center authorities

10. MESSAGE EXCHANGE BEHAVIOR WITH VARIOUS COMMUNITY PARTNERS)

The message exchange behavior with various community partners may be shown as given in the table 1:

Network Partner	Projects/ Activities	Network Topology	Mode	Security	Message Exchange file format
Customs	Authorization, Shipping bill	One to one	Offline	Access control through DSC	Flat file through FTP
Banks(e-BRC)	E-BRC	One to many	Offline	Access control through DSC	XML file upload
EPC’s(e-RCMC)	E-RCMC	One to many	Offline	Access control through DSC	XML file upload
Banks	EFT	One to many	Online	Access control through DSC	Integration with bank website

11. TECHNOLOGY ADOPTED

For smooth functioning of e-Governance project we have adopted the object oriented language (java) and supporting the database (DB2) at back end. The details of the technology tools are as follows:

- 11.1. J2EE technology (Applet, Servlet, Enterprise Java Beans, JSP, ASP),XML IBM DB2 as database with digital signature.
- 11.2. J Builder 2007, J2SDK/J2SEE tools for applications development. IBM Web Sphere, Macro Media JRun Web Server for application servers.
- 11.3. Rational Suite is implemented for documenting/ designing/development of the application.
- 11.4. The website is being updated using the Extended Markup Language (XML) technology.

- 11.5. Whole DGFT Organization is connected with internet / intranet / VPN through very high speed connectivity with NICNET infrastructure.

The continuous technology up gradation has not only prevented obsolescence but has kept our infrastructure robust from security, capability, flexibility and compatibility perspective

12. EDI/ONLINE FILLING ERROR RESOLUTION SYSTEM

- 12.1. EDI Help Desk is manned by expert professionals
- 12.2. managed by the EDI Division to resolve EDI related complaints. Nodal officers have been nominated at DGFT / major RA’s to monitor / resolve EDI related complaints from trade and industry.
- 12.3. A tracking system has been established on the basis of a unique complaint number. An online complaint registration system is implemented.

13. OTHER IMPORTANT INFORMATION LINKS

- 13.1. Right to Information Act (RTI)
- 13.2. Citizen Charter

- 13.3. DGFT’s Regional Offices, Ministry of Commerce & Industry, Directorate General of Commercial Intelligence & Statistic (DGCI&S), Central Board of Excise & Customs (CBEC), Special Economic Zone (SEZ), World Trade Organization (WTO), Customs Port Location Code
- 13.4. Public Grievances

14. ECONOMIC OUTCOMES

Due to providing the SMART services by e-Governance to Trading Community the money is saving by each stake holders. Public as well as Government is benefited with this application.

The major factors as below:

- 14.1. Application for licensing can be filed from any where
- 14.2. Status of the application can be tracked just click a button
- 14.3. Physical visit of exporters of the office has been reduced to minimum

- 14.4. Interview through Video Conference saves on an average Rs. 50,000/per interview
- 14.5. Cost of stationery brought down up to 80%
- 14.6. Reduction in paper work due to paperless operation in DGFT
- 14.7. Reduction in transaction cost
- 14.8. File preparation cost come down to 0

15. TIME FACTOR OUTCOME

- 15.1. Licensing application preparation time come down from 5 hours to 5 minutes
- 15.2. Application processing time has also come down from 45 days to 5 hours.
- 15.3. Message exchange time for license verification has come down from 6 month to instant
- 15.4. Status of application can be traces on urgent basis.
- 15.5. Complete process is very fast
- 15.6. Collection of license fees as well as consolation is too fast due to EFT implementation .
- 15.7. Reduction in transaction time

16. GENERAL OUTCOME

- 16.1. Fraud practice of trade and industry in eliminated
- 16.2. Entire process is transparent
- 16.3. Collection of license fees is easy and systematic
- 16.4. G2G, G2B, G2C, C2G, B2G model of e-Governance
- 16.5. Secured automated EDI based environment,
- 16.6. Implementation of single common documents

17. E- LICENSING IN VIEW OF RESEARCH TECHNOLOGY

In India, over the last two decades, Information and Communication Technology(ICT) has emerged an effective tool to deliver services to the people. Expansion of Telecommunication Infrastructure and penetration on Internet in large parts of county, has enabled the government to provide effective, efficient and multichannel delivery of government services to the citizens. Initially the emphasis of e-governance initiated towards G2 G services relating to automation and computerization of inter functioning of the government since last few years focus on e-governance has shifted to electronic delivery of services to the citizens at his end. So that as the interest in new and expanded e-governance increases public managers find themselves making decisions about information and information technology for which they are often unprepared or ill-equipped. Identification of the complexity and risk of IT decisions public managers involved in making these types of decisions has spurred the development of many structured tools and rigorous to support IT business case analysis and risk assessment strategies recommended in some government agencies and required in other also as referred in [11].

A gap analysis between a selected set of practitioner tools and a set of key success factors of IT initiatives has the potential to inform questions about the relationship between research and practical. A gap analysis strategy represents an opportunity to do a component-by-component analysis to determine the extent

to which the decision of each reflects awareness of relevant research on information system success. The gap analysis is comprised of the steps as follows:

- 17.1. A review of current literature in information system research is used to identify factors found to influence the success of IT initiatives.
- 17.2. The research identified and described a set of tools used for government IT initiatives. These tools to be selected based on their visibility and central role in informing practitioners at the National Level.
- 17.3. A comparison of the factors against the selective descriptions was conducted
- 17.4. An identification of the gap between the research and the practical tools is presented and discussed.

18. EMERGING CHALLENGES FOR E-LICENSING

Although providing numerous opportunities for better governance globalization and ICT have also brought in many new challenges for **e-Licensing** like information and data, information technology, organizational and managerial, legal and regulatory, institutional and environmental factor etc. The major challenges may be classified in a following manner:

- 18.1. **Information and data challenges:** e-Licensing initiatives are about the capture, management, use, dissemination, and sharing of information. A number of challenges relate to the information that is at the core of e-Licensing initiatives. Information and data quality, security issues, Technological incompatibility, Technology complexity, Technical skills and experience, technology newness, project size, management attributes and behavior, organizational diversity, lack of alignment of organizational goals and project multiple or conflicting goals, restrictive laws and regulations, intergovernmental relationship, budget and political pressure, autonomy of agencies etc. are the major challenges to implement the e-licensing application.
- 18.2. **Information Technology:** Technology incompatibility has also been identified as one difficult challenge to **e-Licensing** project. Very different and old systems increase complexity of IT projects, complexity and newness of technology are also constraints to effect the result of IT projects. The lack of relevant technical skills as well as the shortage of qualified technical personnel within the project team has been found to be an important challenging factor.
- 18.3. **Organizational and managerial:** The size of the project and the diversity of the users and organizations involved are two of the main challenges of **e-Licensing** project. There are lack of alignment between organizational goals and the existing project, secondly individual interests and associated behaviors lead to resistance to change internal conflicts.
- 18.4. **Legal and regulatory:** Like most of government department DGFT is also created and operate by virtue

of a specific formal rule or group of rules. In making any kind of decision, including those in this project, public managers take into account a large number of restrictive laws and regulations.

19. RECOMMENDED RESEARCH METHODOLOGY TO OVERCOME THE CHALLENGES

To achieve success in e-Licensing as e-governance initiative a set of strategies may be drawn by mapping the challenged categories. This illustrates the degree of correspondence in research itself between challenges and possible strategies for meeting those challenges as:

- 19.1. **Information and data strategies:** Information and data challenges require an overall plan for managing data and information processes. A quality and compliance assurance program is an effective strategy for dealing with information and data challenges managers have attempted to minimize data related problems by sharing standards, definitions and meta data with their potential partners like customs, banks, export promotion councils etc. In spite of this continual feedback from partners and users should maintain.
- 19.2. **Information Technology Strategies:** IT related issues i.e. ease of use, usefulness, demonstrations and prototypes etc. are success strategy. Well skilled and respected IT leader, expert project team, clear and realistic goal, identification of relevant stakeholders and user involvement proper planning, good communication, clear milestones and measurable deliverables adequate funding, best practice review, IT policies and standards etc. are the key success strategies.
- 19.3. **Organizational and Managerial Strategies:** For the successful IT initiatives there is a clear realistic goals is an important factor. Relevant stake holders and getting their involvement in the project development process, specially end users has also been found to be an effective strategy in overcoming the organizational and managerial challenges. Strategic planning technique can be seen as an umbrella for more specific strategies such as milestone and measurable deliverables, good communication channels. It is also extremely important to take care of developers and end users current skills and training needs. Successful projects need a balanced combination of technical managerial skills and expertise among their members.
- 19.4. **Legal and regulatory Strategies:** Restrictive laws and regulations developed prior to or in ignorance of technologies relevant to **e-Licensing** can affect the success of project. Our strategy for responding to these challenges is to invest in changes to the regulatory environment that allow for or enable adoption of emerging technologies. As Digital Signature Technologies for example required statutory changes in most jurisdictions before they would be

adopted for use. Developing appropriate government wide IT Policies and standards can also provide an adequate framework for e-government initiatives to be successful.

20. FUTURISTIC RESEARCH TOOL

e- Licensing is a key challenge for government today as they involve multiple stake holders and multiple processes and demand considerable co-ordination and collaboration as well as managerial and financial resources we may adopt the following strategies as:

- 20.1. Promoting advance ICT training, education and research as and when conception of new technologies.
- 20.2. Negotiating and influencing the proper adoption of international frameworks, norms and standards by participating actively in the governance of the global information economy.
- 20.3. Documenting best success and worst failure benefiting knowledge
- 20.4. Promoting innovation and risk taking through fiscal concessions and availability of venture capital, creating an investment climate for domestic and foreign investment in ICT sector
- 20.5. Developing a supportive framework for early adoption of ICT and creating a regulatory framework for ICT-related activities, e.g. fixed and mobile communication, e-commerce and internet services.
- 20.6. Application of Online Performance Tracing System
- 20.7. Implementation of online Audit System.
- 20.8. Integration of Realty simple syndication (RSS) system with existing system for wider level simplification.
- 20.9. Inclusion of Cloud computing concept as futuristic approach.
- 20.10. Adoption of Yi Fi communication in the entire organization.
- 20.11. User requirement analysis is a major tool for refinement of the project
- 20.12. Use feedback analysis is also a powerful key factor for improvement of project.
- 20.13. Cost analysis is always a considerable measure for the project.

21. CONCLUSION

In this paper, I have presented the effects of e-Governance indicators in Directorate General of Foreign Trade, Ministry of Commerce and Industries, Govt. of India that the trading community availing the maximum facilities in minimum time from their end only within transparent environment. The Government of India, department of Electronics and Information Technology, has initiated national e-governance plan for the execution of e-governance projects in the country. In the same pattern we have applied the e-Governance module in DGFT to move in a paperless Journey. The various outcomes are indicated to support the effective and successful e-Governance.

This is the case study of best e-governance project. This project is highlighted in various e-governance seminar /workshop. This is the first govt. project in which ICT was implemented with digital signature and electronic fund transfer facility in 1998. Now a days this office is operational in paperless environment.

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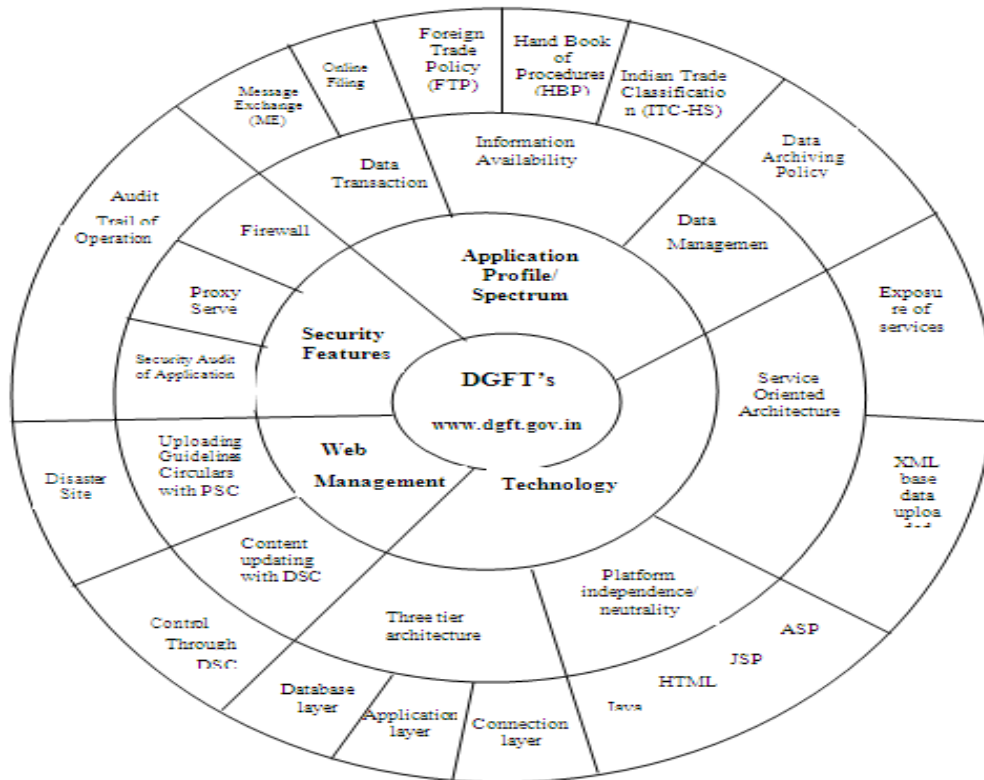


Figure 1: Key Attributes of DGFT Website