

An Innovative use of Information & Communication Technology (ICT) in Trade Facilitation in India

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Abstract - Directorate General of Foreign Trade, a department of Ministry of Commerce and Industry, Govt. of India, is responsible to formulate, regulate and implement the Foreign Trade Policy through its 36 Port Offices through India. This is the case study of best e-governance project. This project is highlighted in various e-governance seminars /workshops. This is the first govt. project in which ICT was implemented in 1998. It is soon equipped with Digital Signature and Electronic Fund Transfer facility. The present study is an example of innovative use of Information and communication technology (ICT) for on-line delivery. The present services in the Directorate General of Foreign Trade (DGFT): e-licensing, e-BRC, e-tendering, e-monitoring, e-meeting e-delivery, e-PRC, e-grievance re-addressal etc. The web has been played a dynamic role for reengineering and transformation of trade processes for an efficient, cost effective and seamless trade facilitation.

1. INTRODUCTION

In [1] the survey report highlighted the importance of e-government to improve the public service delivery system to facilitate people in day to day life. E-governance is a tool for developmental activities of any country while in [2] clarify that ICT is a powerful media to transmit the information and knowledge to end user. Most effective and fast solution can be achieved to integrate the technology and planning for economic growth and sustainable human development. [3,4] reflect the idea that ICT may help to government in such a way that new innovative arrangements can flourish instead of traditional institutional arrangements. Such successful initiatives will deliver benefits to citizens and improve the efficiency of government and governmental agencies. [5] represents the role of e-government. [7,9,10,11,13,14,16] represent the web site of Maharashtra, West Bengal, Madhya Pradesh, Haryana, Himachal Pradesh, Rajasthan, and Andhra Pradesh showing the various E-Governance initiatives and applications being implemented in respective states. Mostly websites focus on IT-enabled services and e-governance which include call centre, data processing, back office. [8] Reflects the comparative impact study of many e-governance central government projects out come. processing. [12&15] express the web site features of Ministry of Information Technology including the National Informatics Centre, Ministry of Communication & Information Technology, Government of India, INDIA
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centralized e-governance projects. The object is included to offer technical services like consultation, awareness among decision makers at the centre as well as state level and guiding them implementing process and policy for effective governance. The IT based services take place for better citizen interface by computerization of Land record, vehicle registration, electricity/water billing, licensing, distance education, health services, online examination, birth/death certificate, e-post, e-court etc through internet. Transparency and free sharing of government database are the major factor to gain the public trust. Henceforth innovative use of technologies is powerful tool to fulfill the requirements of general citizen. In continuation [6] expressed the vital role of online services in around the world. The survey report shows that in many countries e-government initiates and information and communication technologies applications take place for the people to have better public services. Being the catalytic role of innovative technology solutions in government working has gained special recognition. Now a days in the world climate it is very important for the governments to increase electronic service delivery system towards in term of e-government and e-governance. [17] is also a example of ICT evolution in Banking while in [18] ICT strengthen the management and planning of water resources in rural areas. Keeping in view the gist as mentioned in cited reports we have implemented the innovative use of technology in Trade Facilitation in Govt. of India in a systematic manner as:

Directorate General of Foreign Trade (DGFT), an ISO 9001:2008 certified organization regulates and facilitates India's foreign trade by implementing the Foreign Trade Policy and its various Schemes, announced from time to time through Public Notices, Notifications and, Circulars etc. One of the key elements of the policy, apart from providing fiscal and financial incentives to exporters, is to address the issue of high transaction cost in India, so as to improve our global competitiveness. The facilitator role includes resolving trade dispute and attending to exporters / importers grievances.

At the global level, ease of doing business is one of the important parameters on which the status of trade facilitation in a country can be benchmarked. The World Bank's Doing Business Report 2009 and 2010 have pointed out that India is quite behind comparable economies like China, Indonesia and Mexico in this regard. The high transaction time and cost associated with the foreign trade processes have an adverse impact on competitiveness of Indian exports.

With this end in view, the Directorate General of Foreign Trade had established a web based trade facilitation system under which EDI interfaces with the Trading Community and all

concerned stakeholders in the value chain have been established. This includes Customs, Banks, Trade and Industry and other Government Agencies to facilitate seamless flow of e-documents and information. 'Web' is in-fact the driving engine in this entire endeavor.

2. DIRECTORATE GENERAL OF FOREIGN TRADE (DGFT) INFRASTRUCTURE

Directorate General of Foreign Trade (DGFT) is a multi locational organization, with 36 offices throughout the country. It has Headquarters in Delhi and four Zonal offices at Mumbai, Kolkata, Chennai and Delhi. All locations are interconnected with high speed bandwidth leased line. A backup network facility has also been provided using Broadband.

3. ROLE AS WELL AS FUNCTIONALITIES OF DGFT

The role and functioning of DGFT requires intensive and innovative use of Information and Communication Technology (ICT). The 'Web based solution' has become a core implementation strategy for delivery of an efficient, transparent and easy to access service. The web service includes the following for providing information and implementing transactions;

- (i) 'On-line' filing of applications for obtaining all Authorizations through web (B2G model).
- (ii) 'On-line' filing of applications for obtaining Importer Exporter Code (IEC).
- (iii) Interfaces with various Electronic Data Interchange (EDI) Network Partners.
- (iv) Hyperlinked Foreign Trade Policy/Procedure with latest amendments / updates. of status of various applications / authorizations
- (v) A Comprehensive Chapter-Wise Directory of Products based on Indian Trade Classification (ITC) for importability / exportability.
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- (vii) A Comprehensive Chapter-Wise Directory of Products based on Indian Trade Classification (ITC) for importability / exportability.
- (viii) Web based monitoring of status of various applications / authorizations.

4. KEY FUNCTIONALITY THRUST AREAS OF DGFT'S WEBSITE

A snap shot of the DGFT's website is shown in Figure 1. The functionality thrust of DGFT's website is on the following parameters.

4.1 Citizen Focus

The citizen focus of the web delivery services is achieved through:

1. Accountability and 'SMART' e-Governance Services (Specific, Measurable, Attainable, Realistic, Timely)
2. Transparency in Operations and access to information
3. Continuous improvement in performance and integrity of public services

4. Continuous simplification of Export Promotion and Trade Facilitation measures

4.2 Reach

1. 'On-line' facility for FTP operations available globally, round the clock
2. (24x7x365) through the DGFT's web portal (<http://dgft.gov.in>) to almost 5 lakh users
3. 36 regional offices of DGFT's spread (but virtually being one) across the country
4. Facilitating of a broad range of 'e-filing' applications under different Schemes like Advance Authorization (AA), Duty Entitlement Passbook (DEPB), Export Promotion Capital Goods (EPCG), incentive/reward schemes i.e. Focus Market / Products, Vishesh Krishi Upaj Yojna, etc.
5. EDI linkages with trade and Industry, Government. Agencies and related EDI community partners i.e., Customs, banks and EPC's etc.

4.3 Scope

(i) Information Access;

1. Foreign Trade Policy / Procedure, Publication of Notifications / Public Notices / Circulars / Trade Notices
2. Indian Trade Classification for Harmonised System (ITCHS) for providing status on importability / exportability
3. Standard Input / Output Norms (SION) for providing details on imports required for export products

(ii) Transaction Facility;

Covers all models of e-governance i.e. B2G, G2G, G2B, G2C and C2G.

B2G: 'On-line' filling of application of authorization/ Importer Exporter Code (IEC) by any business organization

G2G: Message Exchange with Customs, Banks

G2B: Model for 'on-line' filing of applications for authorization / Importer Exporter Code (IEC) and Status thereof

G2C: 'On-line' tracking of application status

C2G: 'On-line' filling of application by individual.

(iii) Monitoring and Tracking

1. Redressal of Trade related queries.
2. MIS available on real time basis.
3. Elimination of fraudulent practices by unscrupulous elements.

5. INNOVATIVE USE OF IT FOR WEB ENABLED APPLICATIONS

'Information Technology' has been innovatively used for web based solutions in DGFT not only to merely Automate and Informate but to Transformate the entire value chain of trade processes.

The Web Enabled Reengineered Work Flow among the various stake holders is shown in Figure 2

The innovative technology intervention has also led to strengthening and almost complete compliance of DGFT's website with the stipulated web guidelines of the Ministry of Information Technology

The innovative use of Information Technology (IT) has been in the following areas:

5.1 “On-line” Filing of Applications:

Flexibility has been provided in ‘e-filing’ of application through both modes i.e. ‘on-line’ and ‘off-line’. The ‘e-filing’ facility covers all authorizations on an ‘on-line’ mode. To maintain high level of server response, an ‘off-line’ data entry module for Advance Authorizations (AA) and Export Promotion Capital Goods (EPCG) has also been made available on the website. This hybrid approach has enhanced flexibility and eased operations significantly

5.2 The EDI Linkages (‘On-Line’ Message Exchange with Various Trade Partners);

“Message Exchange” with Customs, Banks and EPC’s is Digitally Signed. The Message Exchange design includes a structured and comprehensive monitoring and tracking system comprising of acknowledgment and error message flagging.

1. An appropriate communication technology has been used for different network partners based on users profile, technical and process requirements
2. An ‘e-Payment’ facility for Authorization fee payment with various banks having Net Banking Facility is available. The number of participating banks is further being expanded to enlarge coverage and scope.

5.3 Technology Up Gradation:

Technology up gradation of Hardware / Software and networking is a continuous exercise. The last up gradation was done in 2011. The present technology profile support / web service is as under:

1. J2EE technology (Applet, Servlet, Enterprise Java Beans, JSP, ASP),XML IBM DB2 as database with digital signature.
J Builder 2007, J2SDK/J2SEE tools for applications development.
IBM Web Sphere, Macro Media JRun Web Server for application servers.
2. Rational Suite is implemented for documenting/ designing/ development of the application
3. The website is being updated using the Extended Markup Language (XML) technology.
4. Whole DGFT Organization is connected with internet / intranet / VPN through very high speed connectivity with NICNET infrastructure.

5.4 Adoption of Comprehensive Technology Management Practices

‘On-line’ data backup / archiving is done regularly so as to ensure that only 2 years data is available for ready access and the rest is archived. This improves the server response.

1. A Data Warehousing of complete license database from which we may retrieve the data as per the requirement, as and when arises using the Data Mining technology.
2. A Disaster Recovery Site has been installed and is maintained at National Informatics Center (Regional Office, Hyderabad).
3. Site is maintained regularly to ensure 100% uptime.

6. THE IMPACT ASSESSMENT

6.1 Reduction In Transaction Time

1. Cost of preparation of application for an exporter almost brought down to 0.
2. Time required to prepare an application has come down to 5 minutes from 5 hours on an average.
3. Processing time of application has come down to 1 hour instead of 45 days
4. Message Exchange for Authorizations have brought down license verification time from 6 months to automatic instantaneous verification.
5. Status tracking of applications only a click away.
6. Need of paper eliminated completely for application.

6.2 Reduction In Transaction Cost

1. Application can be filed from anywhere
2. Visits of exporters / their representative’s to DGFT offices have been reduced to minimum.
3. Trade related documents have been streamlined and reengineered to enhance transparency with no redundancy.
4. Dispensation of physical documents due to integration of digital signature with the system.
5. Application fee has been halved for ‘on-line’ application.
6. Paper cost brought down by 80%.
7. Physical interface with exporter being reduced further through video conferencing.
8. Journey to a paper less and a green DGFT fast tracked.

7. THE IMPACT SCORE CARD OF TRADE FACILITATION NOW DAYS:

The Impact Score Card			
Activity	Before / After Direct Filing		
	Visits (No.)	Times (Days)	Paper (no.)
Application Filing	2/0	1/@	10/0
Allotment of File No.	1/0	1/@	1/0
Processing of Application	3/0	15-20/1 hrs.	10/2
Issuance of Authorization	3/1	15-30/6 hrs.	10/0
Interchange of Authorization Data with Customs	3/0	7/@	15/0

@; Almost Instantaneous / Automatic

Table1: “Impact Score Card”

8. EXTERNAL RECOGNITION

1. Runner Up for E-Asia Award (AFACT 2005), Taiwan.

2. Participated in ICT solutions for good Governance, 2004 in Hyderabad

9. CONCLUSION AND FUTURE SCOPE

In this paper, we have presented the effects of Innovative Technology in Directorate General of Foreign Trade, Ministry of Commerce and Industries, Govt. of India that support the decision whether an Importer/Exporter get the maximum benefit in minimum time schedule without physical intervention in Governments Offices 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 manner we have applied the latest techniques in DGFT to move in a successful e-governance. The fruitful results and outcome has been mentioned to prove the major impact of Innovative technologies in government sector.

***Note:**

Author is posted in Directorate General of Foreign Trade and he is a senior member of Technical Team to automate the DGFT Organization.

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Figure1: "Snapshot of DGFT Website"

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