

ternational Journal of Advance Engineering and Research

e-ISSN (0): 2348-4470

# International Journal of Advance Engineering and Research Development

International Conference of Trends in Information, Management, Engineering and Sciences (ICTIMES)

Volume 5, Special Issue 02, Feb.-2018 (UGC Approved)

# Role of Technology As A Service Enabler-The Case Of Railway Ticket Booking Through IRCTC

(Indian Railway Catering and Tourism Corporation) Website

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Abstract: The last decade has witnessed deployment of information technology in the delivery of numerous services. The role played by technology is increasingly becoming a key component in delivering superior services to customers in various industries like Banking, Airlines (ticket booking), Rail and Road travel (ticket booking), Insurance, Stock Trading etc. Technology is fast replacing the role played by humans in certain areas of service delivery. In certain cases, technology has the capability to deliver the core service and in other cases technology enables the delivery of core service. Self Service Technologies (SSTs) like ATMs, mobile banking, online banking, online ticket booking etc have resulted in reduced stress and strain for the customers and offered them benefits like convenience, time saving etc. The establishment of Indian Railway Catering and Tourism Corporation (IRCTC) website for online Train ticket booking is changing the face of railway ticket booking in India. Indian Railways has pioneered internet based rail ticket booking through its website, as well as from the mobile phones via GPRS (General Packet Radio Service) or SMS (Short Message Service). This paper attempts to present the case of railway ticket booking through IRCTC website.

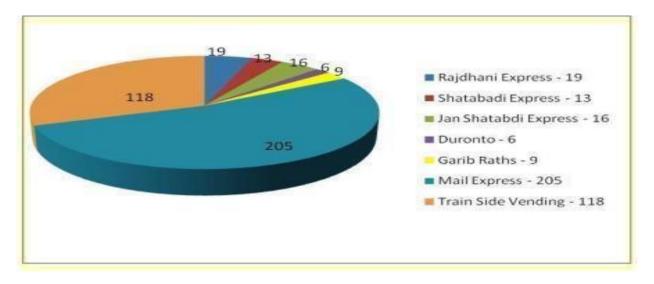
**Keywords:** Service delivery, Customer Convenience, Self Service Technologies (SSTs), Online Ticket Booking, IRCTC, Indian Railway, etc.

1. INDIAN RAILWAYS - AN INTRODUCTION Indian Railways is one of the largest and busiest rail networks in the world and an important mode of public transportation in India. Since its inception (16<sup>th</sup> April 1853), 161 years ago, the Indian Railways has contributed significantly to India's transport needs and economic growth. Today, Indian Railways ranks among the top five National Railway Systems in terms of size and scale and is poised to emerge as a world class railway system. The developmental role of the railways is particularly important in India, in both passenger and freight sectors. It has been performing a valuable social role in passenger sector by providing affordable means of relatively safe and efficient transportation for millions of passengers daily. As a carrier of bulk freight such as ores and minerals, grains, fertilizers, mineral oils, iron and steel, container cargo etc., the cost advantages of the railways are well known. In consonance with the increased expectations and present requirements various Information Technology (IT) related measures have been taken for making Indian Railways one of the most efficient railway network in the world.

Indian Railways is an Indian state-owned enterprise, owned and operated by the Government of India through the Ministry of Railways. It is one of the world's largest railway networks comprising 115,000 km (71,000 mi) of track over a route of 65,000 km (40,000 mi) and 7,500 stations. As of December 2012, it transported over 25 million passengers daily (over 9 billion on an annual basis). In 2011, Indian Railway carried over 8,900 million passengers' annually or more than 24 million passengers daily (roughly half of which were suburban passengers) and 2.8 million tons of freight daily. Indian Railways is the world's ninth largest commercial or utility employer, by number of employees, with over 1.4 million employees. As for rolling stock, Indian Railway holds over 229,381 Freight Wagons, 59,713 Passenger Coaches and 9,213 Locomotives. The trains have a 5-digit numbering system as the Indian Railways runs about 10,000 trains daily. As of 31 March 2012, 22,224 km (13,809 mi) (34%) of the total 65,000 km (40,000 mi) km route length was electrified. Since 1960, almost all electrified sections on Indian Railway use 25,000 Volt AC traction through overhead catenary delivery. (www. Indianrailway.gov.com)

## 2. HISTORY OF IRCTC WEB SITE:

Indian Railway Catering and Tourism Corporation Ltd. (IRCTC) is a Public-Sector Enterprise under the Ministry of Railways. IRCTC was incorporated on 27<sup>th</sup> September 1999 as an extended arm of the Indian Railways to upgrade, professionalize and manage the catering and hospitality services at stations, on trains and other locations and to promote domestic and international tourism through development of budget hotels, special tour packages, information & commercial publicity and global reservation systems. IRCTC is better known for changing the face of railway ticketing in India. It pioneered Internet-based rail ticket booking through its website, as well as from the mobile phones via GPRS (General Packet Radio Service) or SMS (Short Message Service). Ticket cancellations or modifications can also be done online. In addition to E-tickets, IRCTC also offers I-tickets that are basically like regular tickets except that they are booked online and delivered by post. The Tickets PNR (Passenger Name Record) Status is also made available here recently. IRCTC is currently using 58 iridium servers and is planning to add 10 more servers to cater the heavy traffic in peak hours. Indian Railways Catering and Tourism Corporation (IRCTC) launched E-Wallet Scheme in the second week of February 2014. The scheme was launched to make payment process fast and to reduce transaction failures due to bank payment related problems. Under the scheme, user can deposit money in advance with IRCTC and the money can be used as payment option along with other payment options available on IRCTC website for the payment at the time of booking tickets. Names of all the passengers booked on a fully waitlisted e-ticket are dropped at the time of preparation of reservation charts and fare is refunded automatically. In this regard, there is no difference between e-tickets booked through E-wallet scheme or those booked through other payment options available on website www.irctc.co.in. The scheme is available only for PAN verified users. (www.irctc.co.in) IRCTC is managing currently 19 Rajdhani, 13 Shatabdi, 16 Jan Shatabdi, 6 Duronto Express, 9 Garib Raths, 205 Mail & Express trains and 118 train side vending facility. The graphical representation of various types of trains is depicted below



(Source: www.irctc.co.in)

## 3. ROLE OF TECHNOLOGY ON WEB BASED RAIL RESERVATION SYSTEM:

Role of Technology has been part and parcel of different cross sections of society, Indian Railway has taken initiatives to selling e-Ticket and i-Tickets, for that IRCTC has designed an e-Commerce portal where the web based rail reservations are done. It was launched in the year 2002 and sale of tickets has reached to 45,000 tickets per day from few hundreds. Technology has giving customer's convenience, time saving, speed, and avoiding long queues etc. The website www.irctc.co.in/ has more than 40 lakhs registered users and in terms of transactions, making it the biggest e-Commerce site of India.

As per the latest statistics available, IRCTC website has registered the highest ever number of bookings 5.80 lakhs on Wednesday March 19, 2014. Before that highest booking record was 5.72 lakhs on September 2, 2013. During the period of January'14 to March'14 the website has booked more than 4.63 lakhs tickets with an average of 9.47 lakhs passengers every day against 3.85 lakhs tickets with 6.86 lakhs passengers booked daily during 2013. There is a 20% increase in the number of tickets and a 38% increase in the number of passengers. One measure that IRCTC took in

achieving this target was to launch a new website called 'IRCTC Lite' for premium tatkal ticket booking between 10 to 12 in the morning. The corporation removed all the links, images, ads, services, features from the website that didn't directly help a user in booking a ticket, and minimized the load that server had to bear in opening a page. This freed up some bandwidth allowing more users to get on the same page. Crores of rupees and a slew of measures have been invested to improve the experience of those wishing to book a ticket online. (May 21, 2014 Times of India)

#### 4. TYPES OF TRAVEL TICKETS OFFERED BY INDIAN RAIL WAYS:

#### **Ticket**

Means any ticket issued by Indian Railway. It is an authorization to travel using the ticket booking facility for the specified journey over the network of Indian Railways. This can mean an I-ticket or an E- ticket.

#### I-ticket

Refers to a Railway reservation booked on this website, for the consummation of which a printed Railway ticket on standard Stationery is dispatched by IRCTC to the Customer by courier which constitutes the authority to travel on a train.

#### E-ticket

Refers to a Railway reservation booked on this website, for the consummation of which the customer prints out an Electronic Reservation Slip which, along with the concerned authorized personal identification, constitutes the authority to travel, in lieu of the regular ticket on standard Stationery.

#### **Tatkal Ticket:**

A ticket booked against Tatkal Quota against extra payment of premium charges as per extant Railway rules.

#### **ATVMS (Automated Teller Vending Machines):**

Initially, a work for 300 ATVMs was sanctioned for Mumbai area. Subsequently, 450 more ATVMs were sanctioned for other Railways. 117 ATVMs have been made functional on the Western Railways suburban system by 11<sup>th</sup> October 2007.

#### **ERS** (Electronic Reservation Slip):

The printout in standard specified Performa containing reservation, and instructions for use which can be used by the Passenger along with the relevant authorized Identification, as travel authority for performing the journey. The user of the ERS is governed by these rules and the instructions available on the ERS itself.

#### **Timings of Booking Tickets:**

Generally, reservation office counter is open for booking from 8.00 am to 8.00 pm and some counters from 8.00 am to 10.00 pm. While online booking is available from 0.30 hours to 23.30 hours. Tatkal tickets can be booked from reservation office counter during timings mentioned above and online after 10.00am before 24 hours of travel.

#### **Future Activities**

IRCTC is associating with Banks for the issue of e- Ticket from their ATMs. For bookings through ATM kiosks of SBI, UBI, PNB, BOB, Dena Bank, Canara Bank and Indian Bank, POC (Point of Contact) has been finalized with SBI and UBI and remaining integration is in process. In addition to this, initiatives are being taken for booking tickets through call centers.

#### **Advantages OF Internet Ticket Booking:**

- Information Accessibility regarding various trains and their timings
- Convenience of ticket booking for passengers
- Time saving for both passengers and railway officials
- Avoiding long queues and making the service available any time anywhere.
- Transparent Transactions
- Availability of status of booked ticket
- Speed & Reliable transactions
- SMS service for customers about PNR status.
- No need to carry paper based ticket

## **Limitations:**

- This facility would be used by passengers capable of accessing and using Internet.
- Failed transactions are bound to create discontent and anxiety among the users.
- User friendly design of website is a prerequisite.
- Servers getting busy during the peak time is the biggest demerit of IRCTC portal.

#### **CONCLUSION:**

In the current scenario, of increasing penetration of internet and preference for usage of smart phones by various cross sections of society, technology is playing a key role of enabling superior services to customers. A variety of factors like, knowledge and skills related to usage of IRCTC portal (web based rail reservation system) and the kind of services delivered through portal and the value of transaction involved, etc. influence the outcomes of passenger convenience and satisfaction. Technology as service enabler is playing core role to delivering superior passenger experience, availability, convenience, speed, perceived ease of use, perceived useful etc. which further leads to the superior passenger delight.

In the Indian context where there is a clear digital divide across various cross sections of the society, customer adoption of technology, and the rate of adoption are key for increased usage of railway ticket booking over internet. With the increased usage, railways face the challenging task of perpetual up gradation of technology and facilities to meet the requirements of users.

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