



Electronic Transaction
Aggregation
&
Analysis Layer

eTaal
2.0

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User and Technical Document

URL : <https://etaal.gov.in>



National Informatics Centre
Ministry of Electronics & Information Technology
Government of India



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1. Introduction

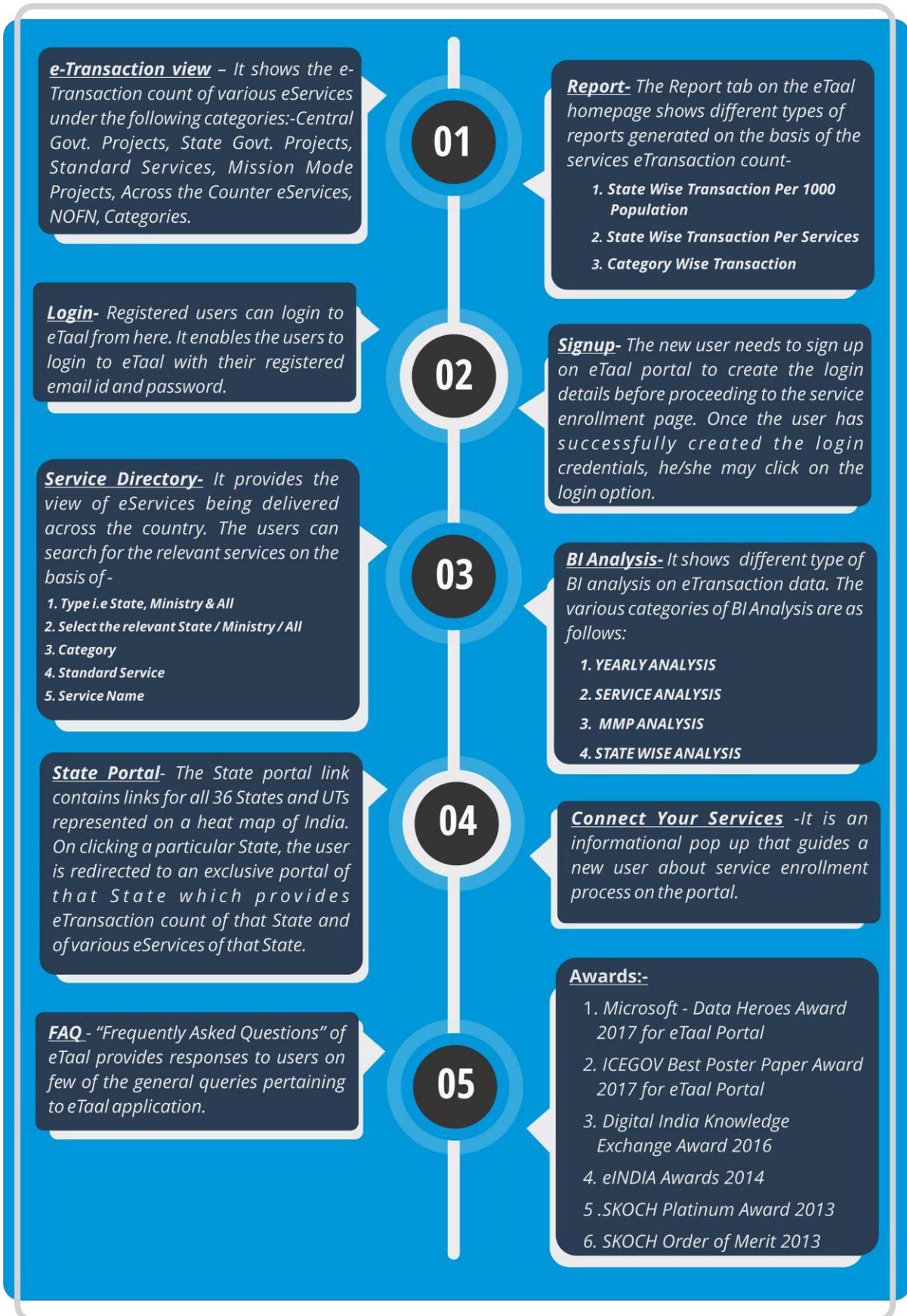
All Ministries and Departments of Central and State/UT Governments have been implementing eGovernance projects for providing eServices to citizens. An idea about the impact of eServices can be obtained from the number of eTransactions taking place under these applications implemented by various Government Ministries/Departments.

eTaal facilitates quick analysis of eTransaction data shared by various applications in tabular as well as graphical form enabling the user to drill down to the lowest possible level. It also enables the User/Ministry/Department to view the consolidated picture of eTransaction statistics of various eGovernance projects across the country and to visualize the status of utilization of various eGovernance applications running across the country. The mass popularity of eTaal 1.0 has led to the development of eTaal 2.0 which is equipped with multitude of features for a smoother and more meaningful experience for the user.

For the improvisation of the application, the following features are added to eTaal 2.0:

- **Service Directory** - To facilitate the view of eServices being delivered across the country, Service Directory has been developed. The eService directory provides the details of eGovernance applications delivering the service along with the details of spatial spread for a given service. It helps citizens to find state level services grouped under a particular standard service.
- **Business Intelligence (BI) Tools** - BI will give extra edge to eTaal and establish it as the most logical choice for monitoring and tracking the progress of various initiatives and help the Government in decision making.
- **State Portal** - A personalized portal for States and Union territories by the name of "State Portal" has been implemented on the eTaal website. It helps citizens in finding state level services grouped under a particular standard service.
- **Mobile Application for eTaal** - Mobile Application for eTaal is being further developed. The current feature of Application allow the users to get the information of eTransaction count on their mobiles.

2. System Overview



3. Abbreviation

Abbreviation	Description
B2C	<i>Business to Citizen</i>
DBT	<i>Direct Benefit Transfer</i>
MeitY	<i>Ministry of Electronics and Information Technology</i>
DCC	<i>Dashboard Client Connector</i>
DSC	<i>Dashboard Server Connector</i>
eTaal	<i>eTransaction Aggregation and Analysis Layer</i>
HTML	<i>Hypertext Markup Language</i>
IE	<i>Internet Explorer</i>
IIS	<i>Internet Information Services</i>
IT	<i>Information Technology</i>
MMP	<i>Mission Mode Project</i>
NeGP	<i>National eGovernance Plan</i>
NIC	<i>National Informatics Centre</i>
NOFN	<i>National Optical Fiber Network</i>
OS	<i>Operating System</i>
PDS	<i>Public Distribution System</i>
PHP	<i>Hypertext Preprocessor</i>
PMC	<i>Project Management Committee</i>
PNR	<i>Passenger Name Record</i>
RoR	<i>Record of Right</i>
RTI	<i>Right To Information</i>
SPMC	<i>State Project Management Committee</i>
SQL	<i>Structured Query Language</i>

4. Stakeholders



5. Purpose of this Document

The purpose of this document is to enable the user to identify transactions, categorize various services and effectively use the application. The user may further view the eTransaction count for various Central and State projects, State and Central MMPs, and other analysis as per requirement.

The document also aims at providing the users with all the necessary information regarding registration of their respective services and integration of their data with eTaal.

6. How to Access the Dashboard

The portal may be accessed using the URL <https://etaal.gov.in>

Home Page will be displayed as shown in Figure-1.



Figure-1

7. Functionalities of eTaal

Major functionalities incorporated in eTaal web portal are as follows:

- eTransaction view of Central / State Govt. projects aggregated at various levels
- eTransaction view of Mission Mode Projects (MMPs) aggregated at various levels
- eTransaction count for
 - Standard Services
 - Service Categories
 - States providing “Across the Counter” services
 - States providing eServices through NOFN
- Drill-down feature to get detailed view of eTransaction count. E.g. User can click on a single Ministry and view eTransaction count for all projects under that Ministry. In another case, user may select a particular Standard Service and view eTransaction count for all States giving that service. If the user further drills down and selects a particular State, he/she can view eTransaction count for all services that the State is providing under that respective Standard Service category.
- Time line analysis of eTransaction count across different time periods
- Graphical and Tabular presentation of eTransaction count
- Service enrollment feature through login
- Service Directory that gives list of services under any service category for selected State/Ministry
- Ranking of States and Projects on the basis of eTransaction count. E.g. Homepage of eTaal displays the names of Top 5 Projects and States/UTs on the basis of total eTransaction count since the eTaal portal got launched. The portal also gives ranking for ongoing month and trends for last six months

8. eTaal Home Page

eTaal 2.0 Home Page is displayed in Figure-1. The components of Home Page are -

1. Menu Bar i.e. – ‘**Left Menu Bar**’ and ‘**Right Menu Bar**’
2. National eTransaction Count
3. eTaal Description
4. Top 10 Mission Mode Projects
5. eTransaction Growth
6. Services Classification
7. Top 5 States
8. Top 10 Central Projects
9. State wise MMP Analysis

8.1 Menu Bar

The Home page of eTaal shows two “Menu Bar” - “Left menu Bar” and “Right menu Bar”.

8.1.1 Left Menu Bar

“Left Menu Bar” Contains:

- I. eTransactions view
- II. Report
- III. Service Directory
- IV. State Portal
- V. FAQ

I. eTransactions View

eTransaction count is number of ‘**end-to-end electronic transactions**’. User can view eTransaction count for Central and State Government projects, various standard services, etc. by clicking on ‘**eTransaction View**’ as shown in Figure-1.

The eTransaction View tab includes the following (Figure-2):



Figure-2

a. Central Govt. Projects

‘Central Govt. Projects’ is the default option displayed under eTransactions view. It shows two radio buttons - “**Union Ministries**” and “**Central Govt. project**”.

Union Ministries –

On clicking “**Union Ministries**” radio button, eTransaction count for all Union ministries will be displayed as shown in Figure-3

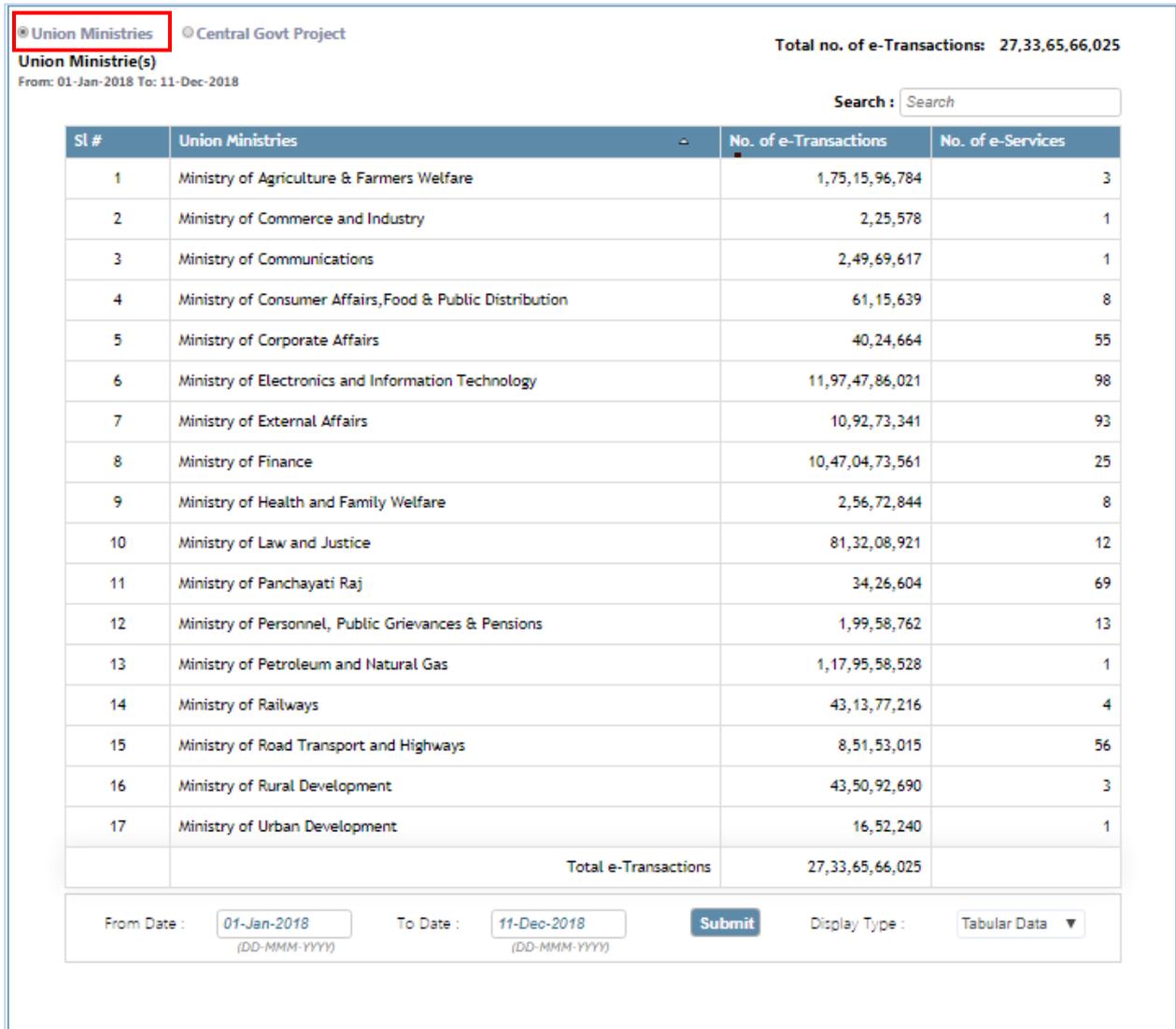


Figure-3

This page will display “**Total no. of eTransactions**” between two user-defined dates (From Date and To Date). User can view specific Display Type and Date wise Transactions for which the user needs to select ‘**From date**’, ‘**To Date**’, and **Display Type**, and then click on ‘**Submit**’ button. Filter options are available at the bottom of the page.

This report can be viewed in

- Tabular Data
- Column Chart
- Pie Chart

▪ **Tabular Data** –

If User wants to view eTransaction as ‘Tabular data’ user needs to select display type – “**Tabular Data**” from display type option. Tabular data of eTransaction view is displayed in Figure-4.

Union Ministries Central Govt Project

Union Ministrie(s) Total no. of e-Transactions: 27,33,65,66,025
 From: 01-Jan-2018 To: 11-Dec-2018

Search :

Sl #	Union Ministries	No. of e-Transactions	No. of e-Services
1	Ministry of Agriculture & Farmers Welfare	1,75,15,96,784	3
2	Ministry of Commerce and Industry	2,25,578	1
3	Ministry of Communications	2,49,69,617	1
4	Ministry of Consumer Affairs, Food & Public Distribution	61,15,639	8
5	Ministry of Corporate Affairs	40,24,664	55
6	Ministry of Electronics and Information Technology	11,97,47,86,021	98
7	Ministry of External Affairs	10,92,73,341	93
8	Ministry of Finance	10,47,04,73,561	25
9	Ministry of Health and Family Welfare	2,56,72,844	8
10	Ministry of Law and Justice	81,32,08,921	12
11	Ministry of Panchayati Raj	34,26,604	69
12	Ministry of Personnel, Public Grievances & Pensions	1,99,58,762	13
13	Ministry of Petroleum and Natural Gas	1,17,95,58,528	1
14	Ministry of Railways	43,13,77,216	4
15	Ministry of Road Transport and Highways	8,51,53,015	56
16	Ministry of Rural Development	43,50,92,690	3
17	Ministry of Urban Development	16,52,240	1
Total e-Transactions		27,33,65,66,025	

From Date : To Date : Display Type :

Figure-4

A Union Ministry can be clicked to further drill-down to view projects under that Ministry. E.g. all projects under ‘Ministries of Agriculture & Farmers Welfare’ are shown in Figure-5.

Union Ministries/Central Govt Projects > Ministry of Agriculture & Farmers Welfare

Central Govt Projects State Govt Projects Standard Services Mission Mode Project AcrossTheCounter NOFN Categories

Project(s) under Ministry of Agriculture and Farmers Welfare Total no. of e-Transactions: 96,32,09,799
 From: 01-Jan-2018 To: 01-Aug-2018

Search :

Sl #	Central Govt. Project	No. of e-Transactions
1	AGMARKNET	3,50,451
2	Farmers Web Registration	1,65,32,411
3	Kisaan SMS Portal	94,63,26,937
Total e-Transactions		96,32,09,799

From Date : To Date : Display Type :

Figure-5

A project can be further drilled down to view all services under that project. E.g. on clicking the project “Kisaan SMS Portal”, user is shown all services under this project (Figure-6)

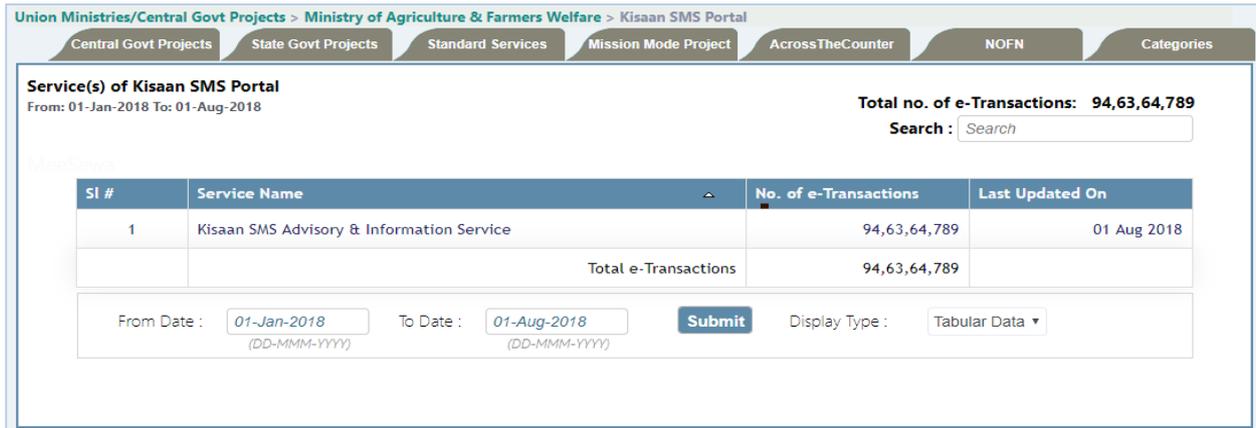


Figure-6

▪ **Column Chart**

If User wants to view eTransaction as ‘Column Chart’, user needs to select display type – “Column Chart” from display type option (Figure-7).

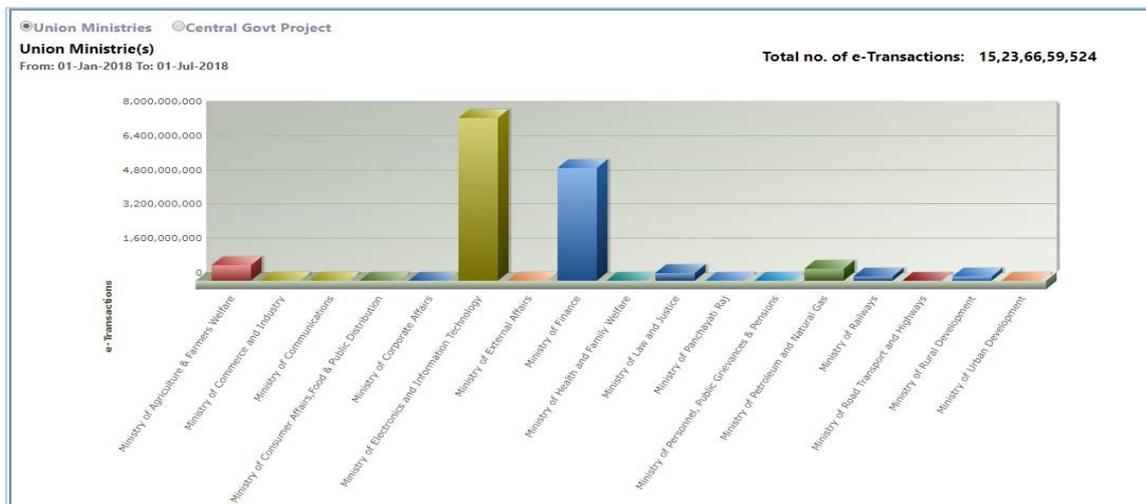


Figure-7

- Each 3D column bar depicts ‘Union Ministries’ identified by different color, Height of each column bar shows total transactions occurred in that Ministry’, during the period specified by user.
- Each Ministry can be clicked to further drill-down for details.

▪ **Pie Chart**

If User wants to view eTransaction as ‘Pie chart’, user needs to select display type – “Pie Chart” from display type option.

Central Government Projects -

On clicking “Central Government Projects” radio button, eTransaction count for all Central Government projects will be displayed (Figure-8).Central Government Projects page will display “Total no. of eTransactions” between two user-defined dates (From Date and To Date). User can view specific Display Type and Date wise Transactions for which user needs to select ‘From date’, ‘To Date’, and Display Type, and then click on ‘Submit’ button.

Union Ministries Central Govt Project

Central Govt Project Total no. of e-Transactions: 2,62,99,13,690

From: 01-Jan-2019 To: 22-Feb-2019

Search:

Sl #	Central Govt Project	No. of e-Transactions	No. of e-Services
1	Agriculture	27,89,53,636	3
2	Central Public Works Department (CPWD)	1,56,561	1
3	CSC	18,45,377	55
4	Dept. of Administrative Reforms and Public Grievances (DARPG)	12,87,873	1
5	Dept. of Pensions and Pensioners Welfare (DoP and PW)	9,758	2
6	Dept. of Personnel and Training (DoPT)	5,890	4
7	Dial.gov	1,409	1
8	Directorate General of Foreign Trade	38,600	1
9	e-Procurement	11,47,077	5
10	Finance	1,13,85,42,709	9
11	Food and Civil Supplies	8,12,630	4

Figure-8

Three Types of display are available –

- Tabular Data
- Column Chart
- Pie Chart

User can select display type according to need. Central Government Projects can be clicked to further drill-down for services as in earlier cases.

b. State Govt. Projects

The ‘State Govt. Projects’ tab enables the user to view eTransactions count of eServices under various States/UT.

- User can change time period for displaying data by changing ‘From Date’ and ‘To Date’ and clicking on Submit button.
- Each State/UT can be clicked to further drill-down for State/UT specific services.

▪ **Tabular Data (for State govt. Projects)**

State Govt Projects

Central Govt Projects State Govt Projects Standard Services Mission Mode Project AcrossTheCounter NOFN Categories

State Govt Projects Total no. of e-Transactions: 3,01,68,52,790

From: 01-Jan-2018 To: 01-Aug-2018

Search:

Sl #	State	No. of e-Transactions	e-Transaction per 1000 Population	No. of e-Services
1	Andaman and Nicobar	7,13,583	1882.8	12
2	Andhra Pradesh	50,42,58,425	10193.01	185
3	Arunachal Pradesh	6,13,980	444.27	34
4	Assam	1,89,73,502	608.73	77
5	Bihar	9,45,67,273	911.02	55
6	Chandigarh	27,21,914	2582.46	48
7	Chhattisgarh	7,20,24,299	2820.06	69
8	Dadra and Nagar Haveli	3,70,301	1082.75	42
9	Daman and Diu	2,50,467	1034.99	38

Figure-9

Each state can be drilled down by clicking on State name to get the eTransaction count of all Standard Services of that particular State. (Figure-10).

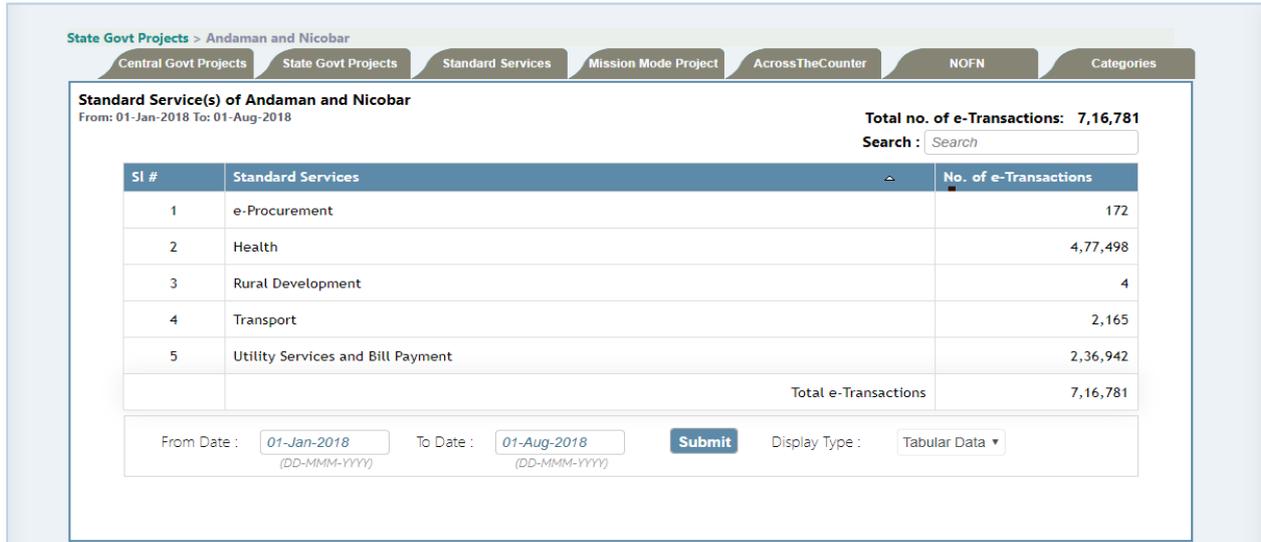


Figure-10

- Each Standard Service can be further drilled down to view specific services under that Standard Service.(Figure-11)

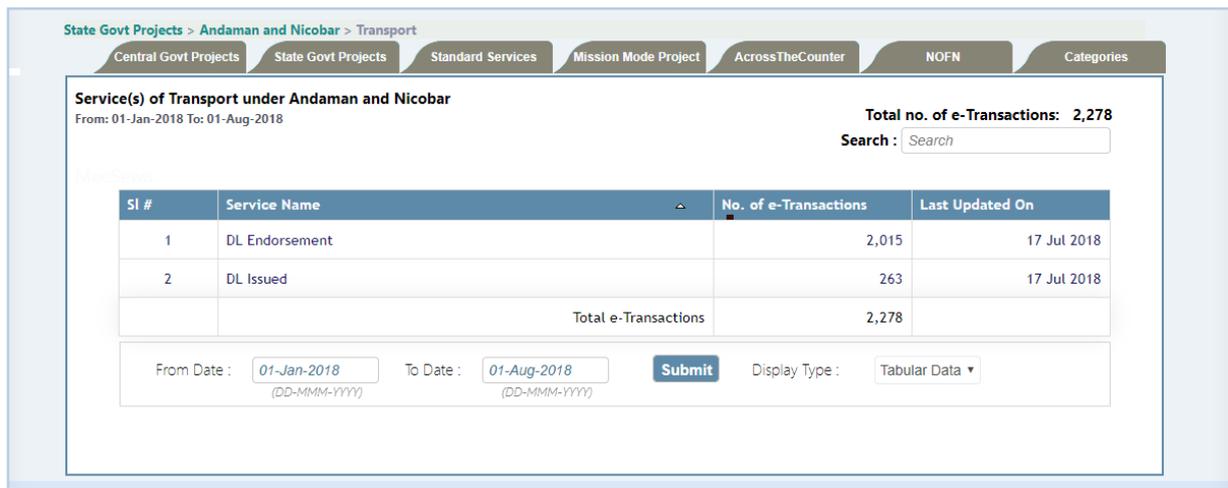


Figure-11

- Standard Services can be drilled down to view specific services under that category. E.g. when user clicks on “Education”, all services under this category are displayed.
- Same data can be viewed in bar chart as well as pie chart, by selecting appropriate option from Display Type drop-down located below the chart.

c. Standard Services

For ease of classification, grouping and presentation in a uniform manner, the services have been categorized into various Standard Services. It shows eTransactions count for both Central and State projects. The user can further drill down to see State wise details of the selected Standard Service (Figure-12).

Standard Services

Central Govt Projects | State Govt Projects | **Standard Services** | Mission Mode Project | AcrossTheCounter | NOFN | Categories

Standard Service(s)
From: 01-01-2018 To: 19-Dec-2018 Total no. of e-Transactions: 32,13,88,84,845

Search :

Sl #	Standard Service Name	No. of e-Transactions
1	Certificates	12,53,28,780
2	Public Distribution System	41,23,82,620
3	Agriculture & Allied	1,87,67,97,448
4	Court and Judiciary	83,82,01,148
5	Election	18,42,01,935
6	Police	36,41,132
7	Personnel and Admin	3,49,24,244
8	Grievance	2,76,08,776
9	RTI	38,462
10	Property Registration & House Tax	4,13,21,046
11	Licenses and Permits	1,44,39,728
12	Health	16,33,92,705
13	Rural Development	88,70,50,249

Figure-12

- User can change time period for displaying data by changing 'From Date' and 'To Date' and clicking on 'Submit' button

Standard Services can be drilled down to get the State view. Figure-13 shows drilled-down Service Classification of the service 'RTI'. It shows eTransaction count for all States for RTI eService.

Standard Services > RTI

Central Govt Projects | State Govt Projects | **Standard Services** | Mission Mode Project | AcrossTheCounter | NOFN | Categories

State(s) under RTI
From: 01-01-2018 To: 03-Aug-2018 Total no. of e-Transactions: 22,796

Search :

Sl #	State	No. of e-Transactions
1	Assam	99
2	Central Projects	22,391
3	Kerala	12
4	Punjab	177
5	Tripura	1
6	West Bengal	116
Total e-Transactions		22,796

From Date : To Date : Display Type :

(DD-MMM-YYYY) (DD-MMM-YYYY)

Figure-13

The State/UT can further be drilled down to get the Service view of that State for the selected Standard Service. Figure-14 shows Services of Assam under RTI.

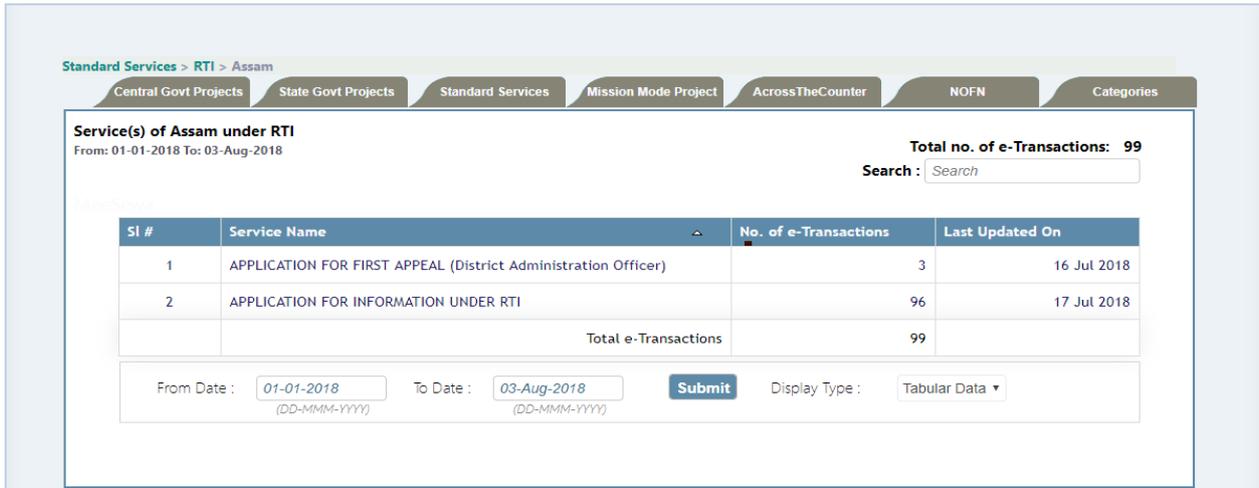


Figure-14

- Same data can be viewed in bar chart and pie chart, by selecting appropriate option from the Display-type drop down located below the chart.

d. Mission Mode Projects

This option enables the user to view the eTransactions count for various Central and State MMPs across the nation. Figure-15 shows eTransaction count of all Mission Mode Projects integrated with eTaal in tabular form.

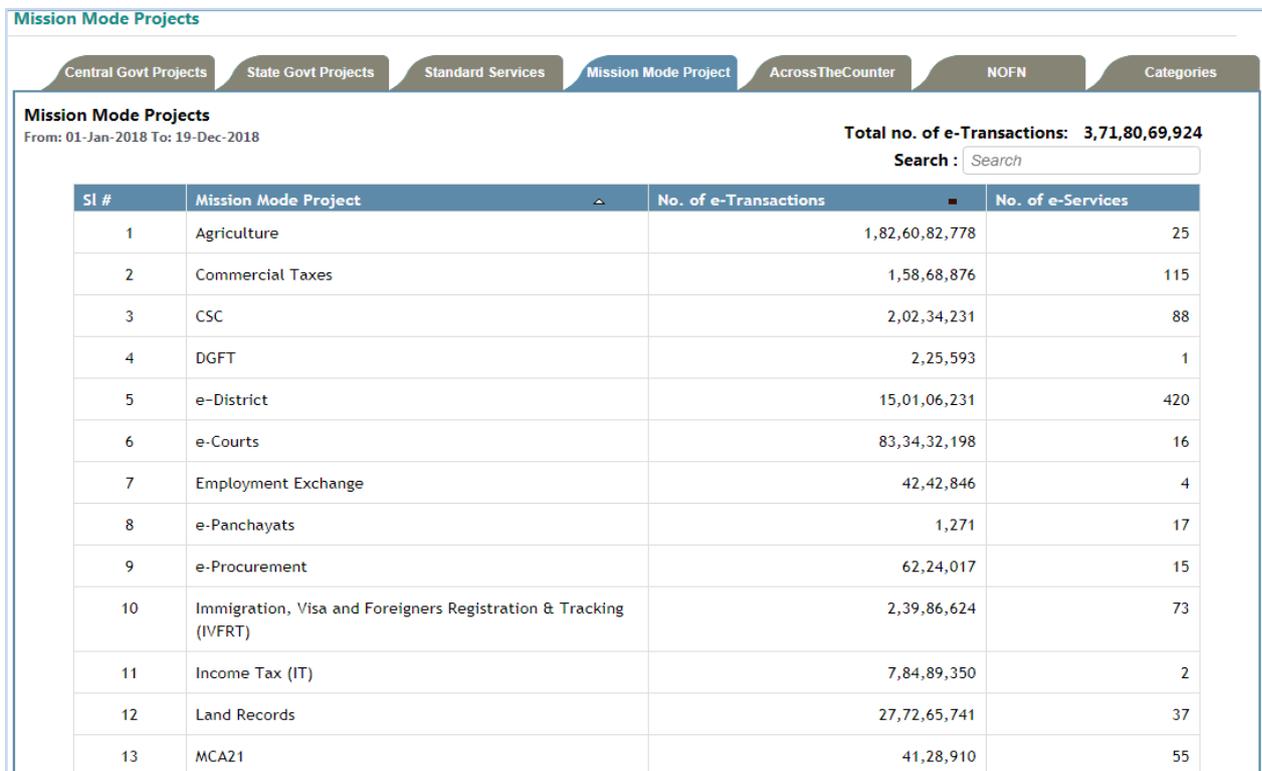


Figure-15

- Same data can be viewed in bar chart and pie chart, by choosing appropriate option from Display-type drop-down located below the chart.
- User can change time period for displaying data by changing 'From Date' and 'To Date' and clicking on Submit button.

- A Mission Mode Project can be drilled down to get the status of that project across various States. Figure-16 shows drilled-down view of e-Panchayats Mission Mode Project.

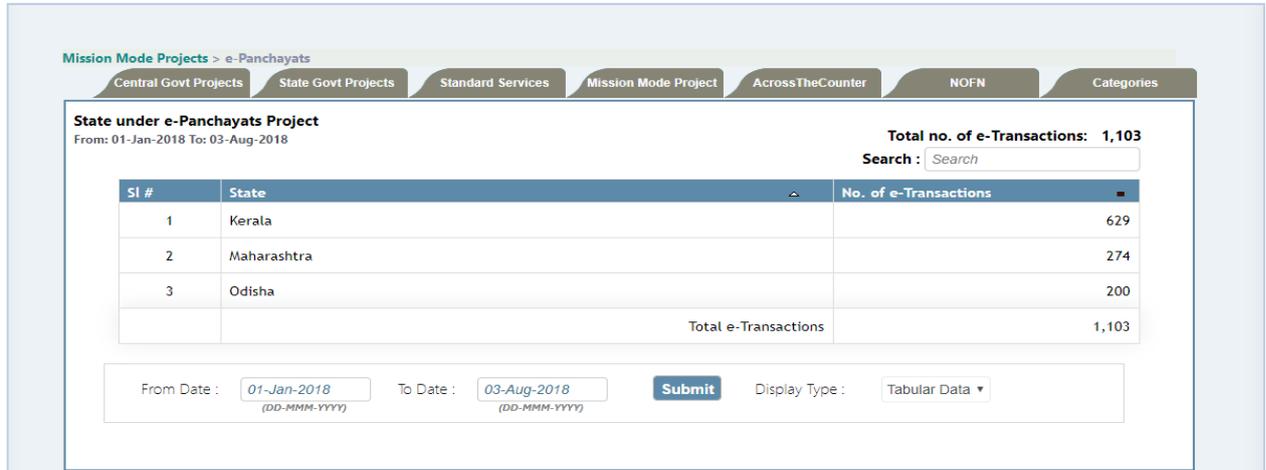


Figure-16

A State can further be drilled down to get the Service view of that State for the selected Mission Mode Project. Figure-17 shows Standard Services of Kerala State under e-Panchayats MMP.

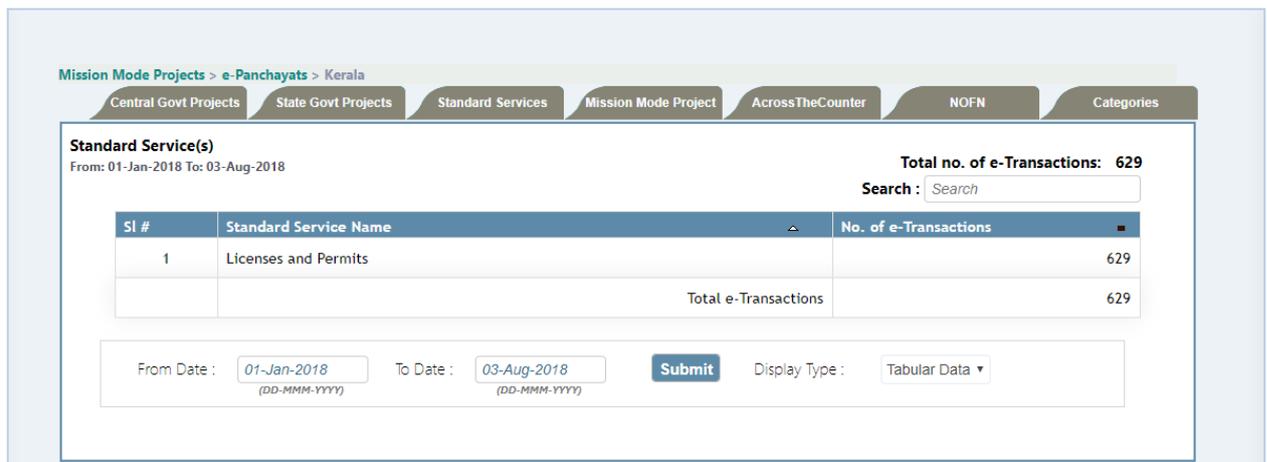


Figure-17

e. Across The Counter

“In several instances, the relevant information is proactively, collected, digitized, verified and stored in digital repository. These services are delivered across the counter as and when requested by citizen. E.g. Record of Right (ROR)” Figure-18 shows the states providing across the counter services.

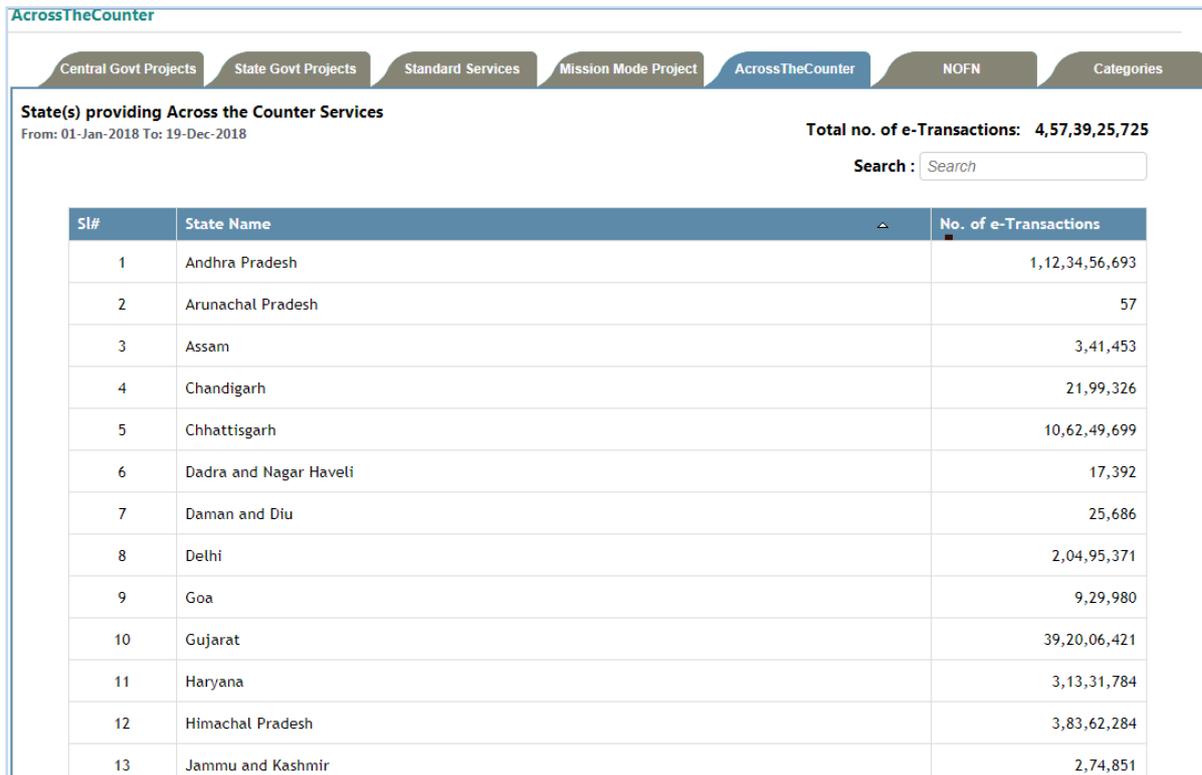


Figure-18

- Same data can be viewed in bar chart and pie chart, by selecting appropriate option from the Display-type drop-down located below the chart.
- User can change time period for displaying data by changing 'From Date' and 'To Date' and clicking on 'Submit' button.

A State can be drilled down to view all Across the Counter Services provided by that particular State. Figure-19 shows all such services for Daman and Diu State.

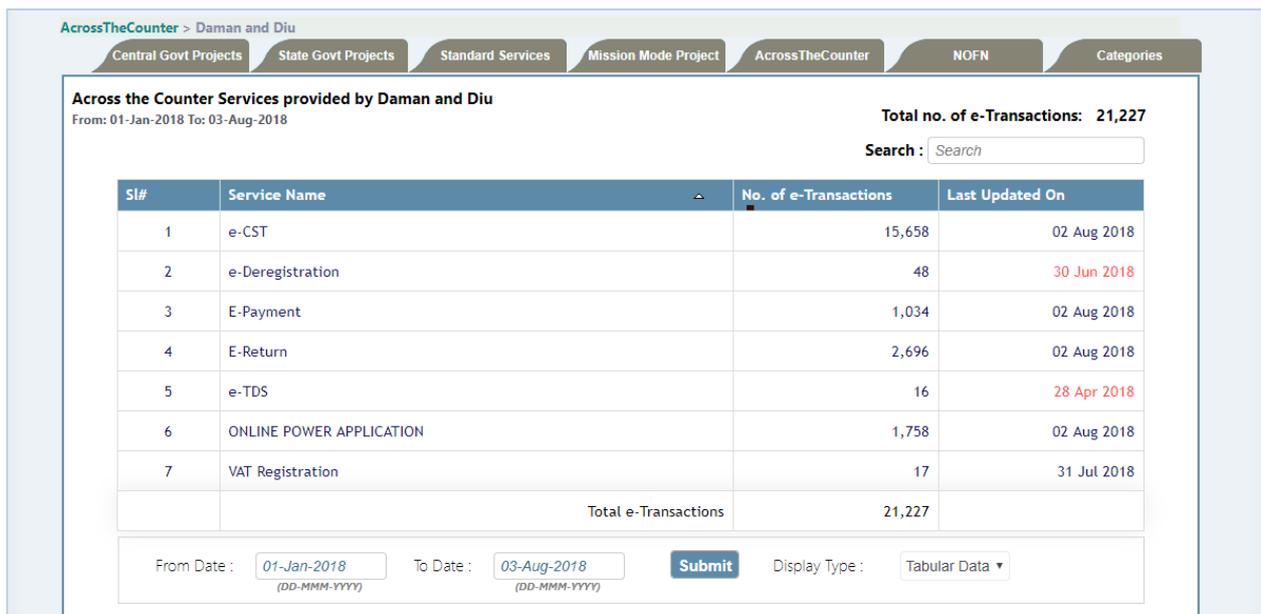


Figure-19

f. NOFN

This option includes all services under National Optical Fiber Network (NOFN). It provides State wise, District wise, Block wise and services wise transaction count. Figure-20 shows State wise transaction count.

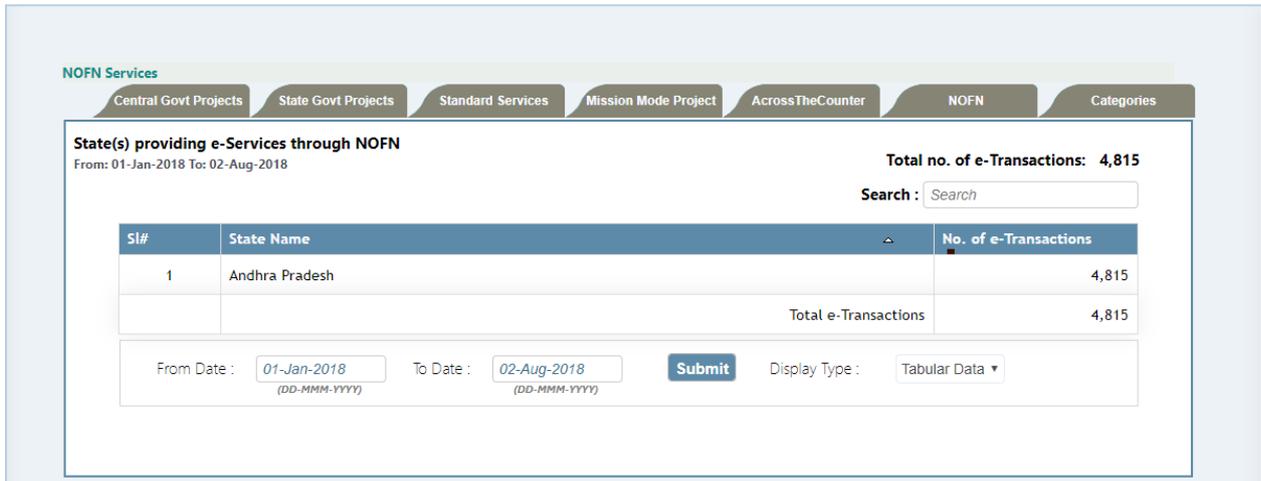


Figure-20

- User can change time period for displaying data by changing 'From Date' and 'To Date' and clicking on 'Submit' button.
- User can drill down States providing eServices through NOFN to view District wise eTransaction count. This is shown in Figure-21

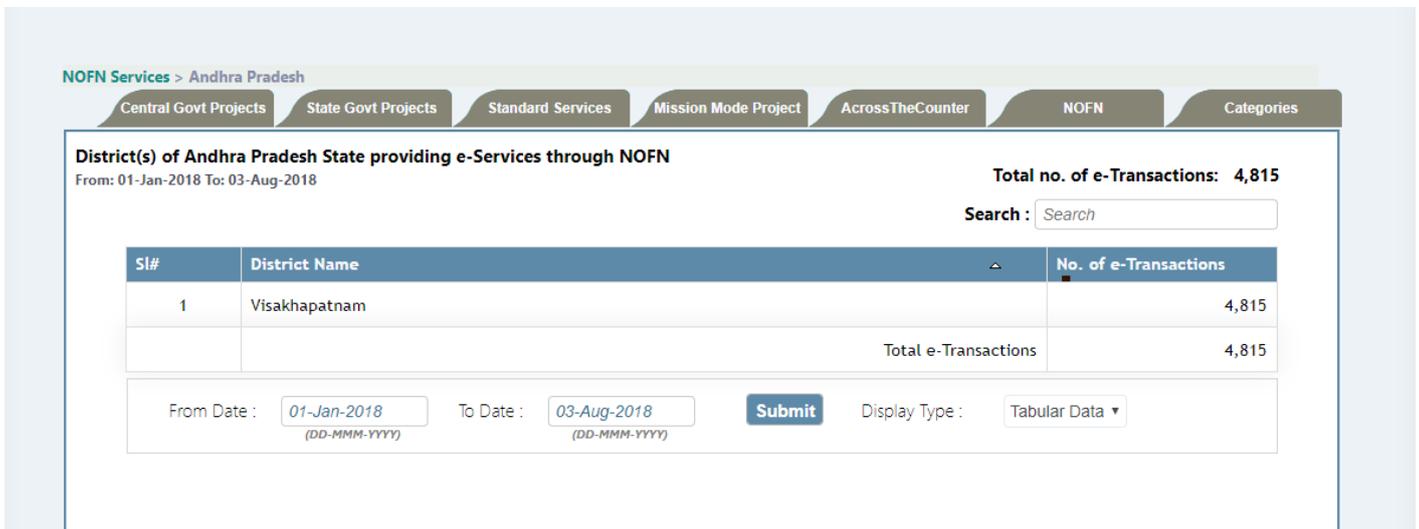


Figure-21

User can further drill down Districts providing eServices through NOFN to view Block wise transactions. This is illustrated in Figure-22.

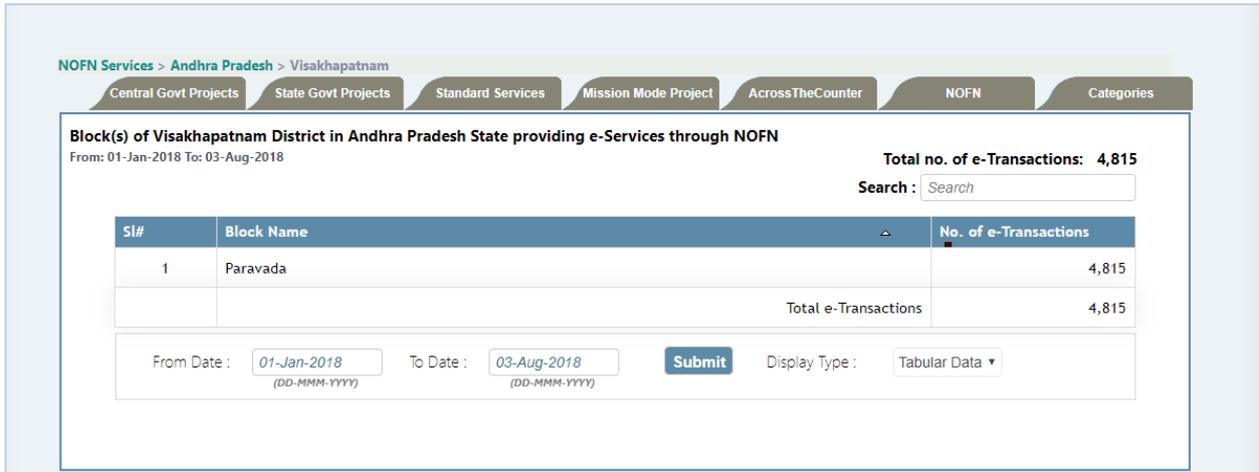


Figure-22

A Block can further be selected to view all eServices of that Block through NOFN (Figure-23).

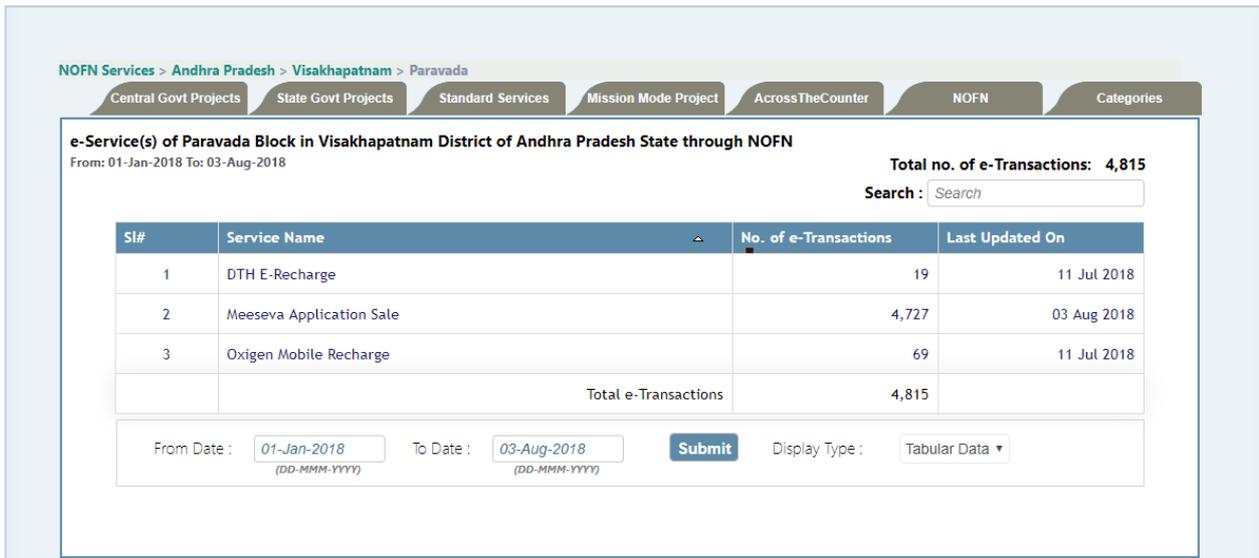


Figure-23

g. Categories

To facilitate better analysis & more effective decision making services have been classified into six categories: A, B, C, D, E and F:

1. **A**-Statutory and Non Statutory Services
2. **B**-Utility Bill payments
3. **C**-Business to Citizen (B2C) Services
4. **D**-Information Services
5. **E**-Social Benefits
6. **F**-Mobile Governance

Figure-24 shows eTransaction count for all six categories for the selected period in tabular form.

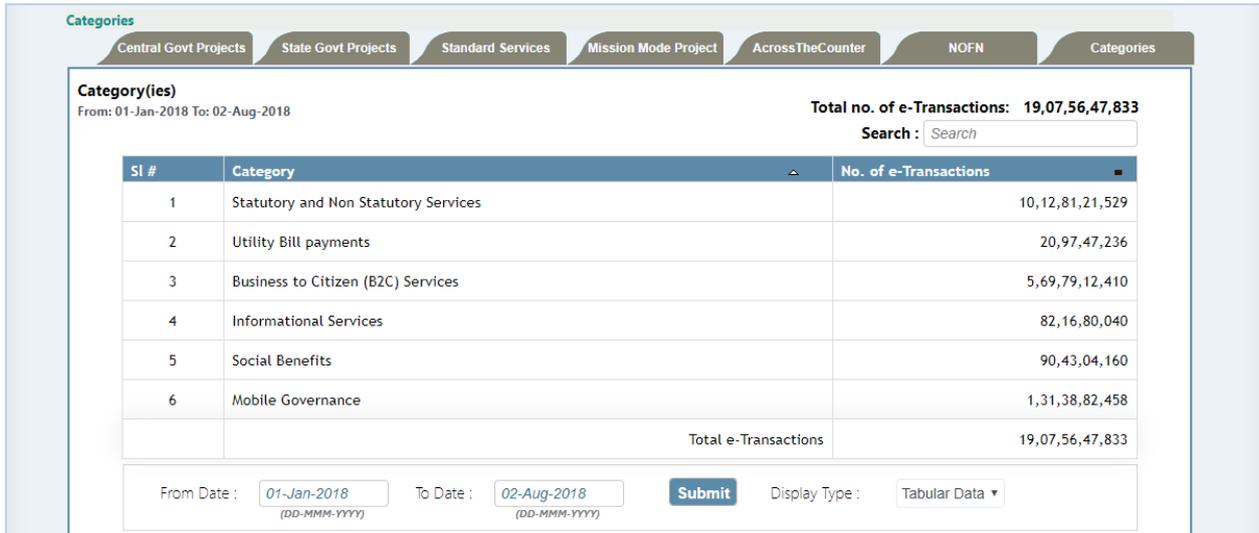


Figure-24

If a Service Category is selected, user can view eTransaction count for all States under this particular category. Figure-25 shows drilled-down view of category B service “Utility Bill payments”.

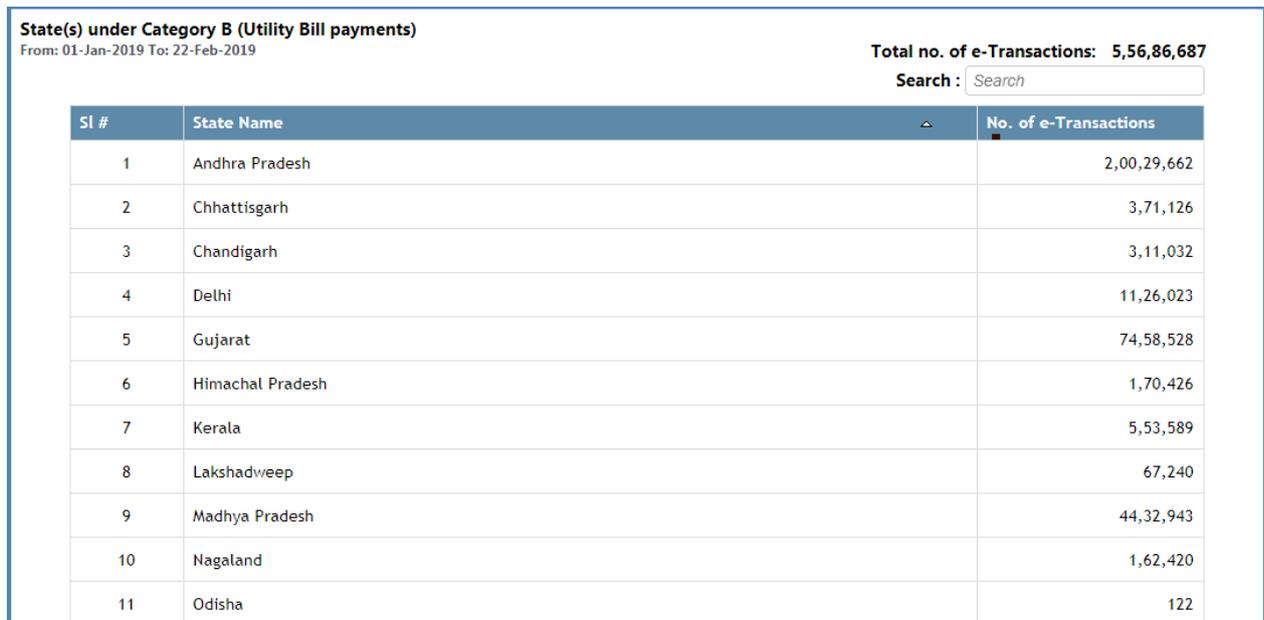


Figure-25

User can further select a State to view all Services under the Category selected for this particular State. Figure-26 shows drilled-down view of all services under Category ‘B’ for Chandigarh State.

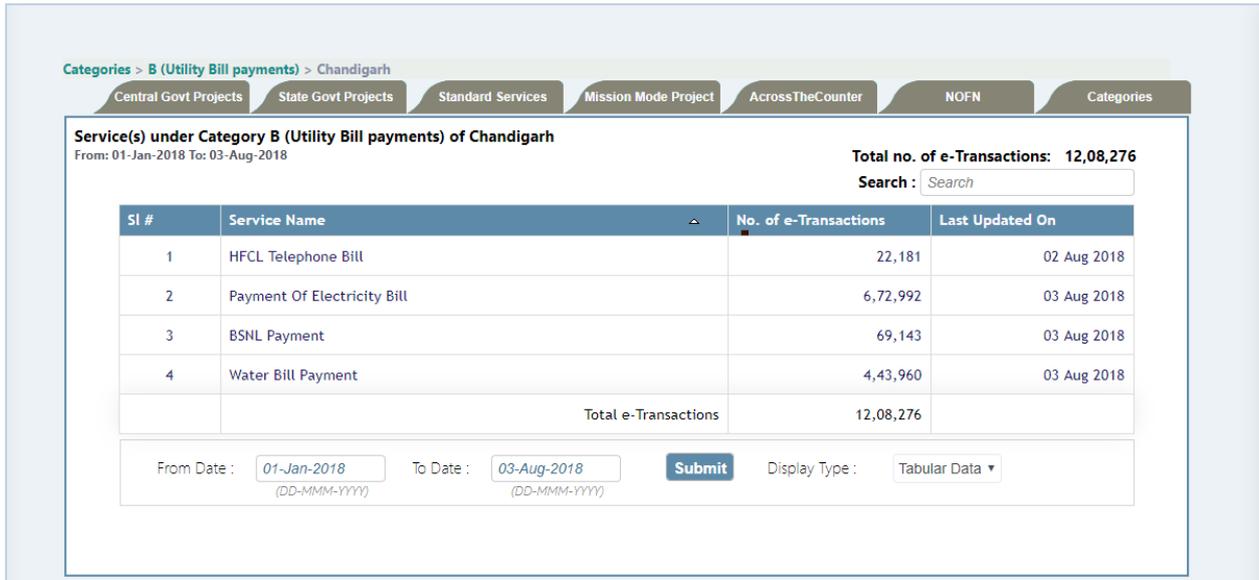


Figure-26

Same data can be viewed in bar chart as well as pie chart, by choosing appropriate option from Display-type drop-down located below the chart.

II. Report

The Report tab on Left Menu Bar lists various reports generated on the basis of the services eTransaction count (Figure-1).

When user clicks on report option, a pop up comes with lists of all reports mentioned below:

- State wise Transaction Per 1000 Population
- Central/State Wise Transaction Per Services
- Central/State Category Wise.

a. State Wise Transaction per 1000 Population Report

This report provides details of eTransactions captured for per 1000 population of each of the 36 States/UTs. The user needs to select the date range for the period for which the report needs to be generated, and then click on 'Generate Report' Button.

On the selected date range, the report is generated as displayed in Figure-27. It shows population for all States/UTs, total eTransaction count for the period selected and average eTransaction per 1000 population.



Figure-27

b. Central/State Wise Transaction per Services

This report provides average number of eTransactions under an eService for a particular Central project/ State/UT. It also gives % share of eTransactions for different Central projects/State/UT. User can select and generate the report under following two categories:

1. Central Wise Report
2. State Wise Report

User needs to select the date range for the period for which the report needs to be generated. Figure-28 provides view of Central wise report generated for a selected period. The report lists count of eServices for all Central projects for the selected time period along with count of eTransactions.

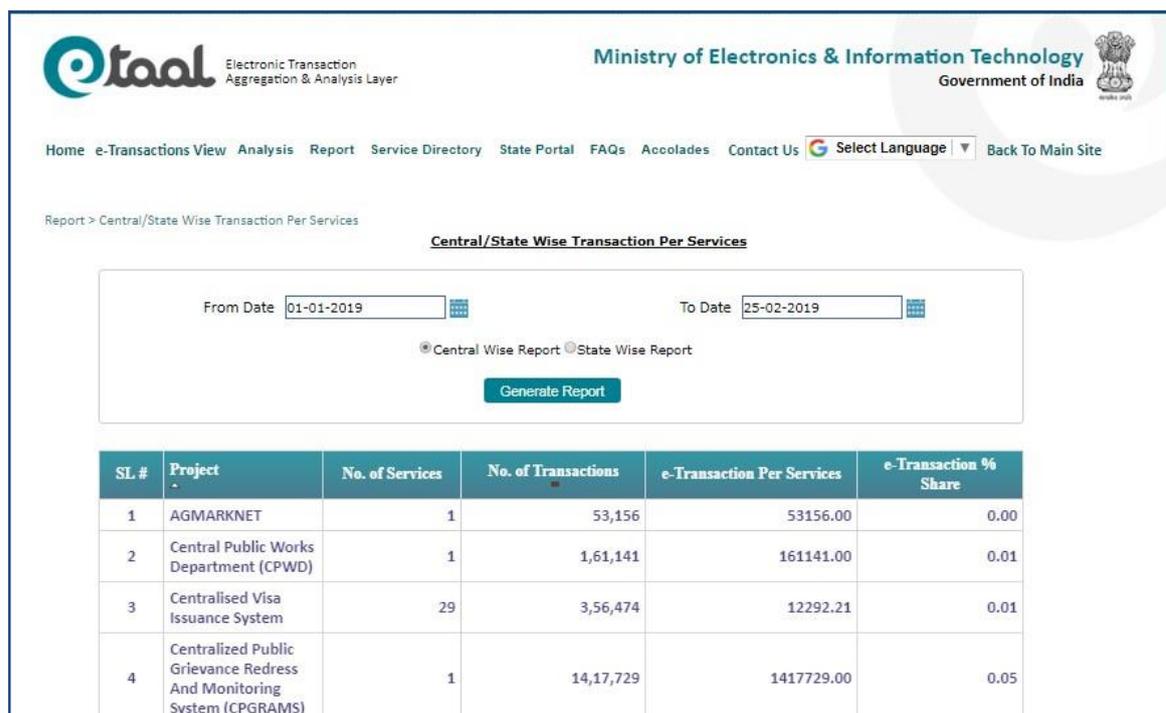


Figure-30

c. Central/State Category Wise Report

This report provides the details of number of eTransactions captured under various Categories of eServices (A, B, C, D, E, and F) for the Central and State Projects.

The User has the option to select and generate the report under following two Categories:

- I. Central Wise Report
- II. State Wise Report

Figure-29 provides the search parameters available to Users for the generation of report for Category Wise Transaction for Central and State Projects. Figure -29 shows the Central wise Report.

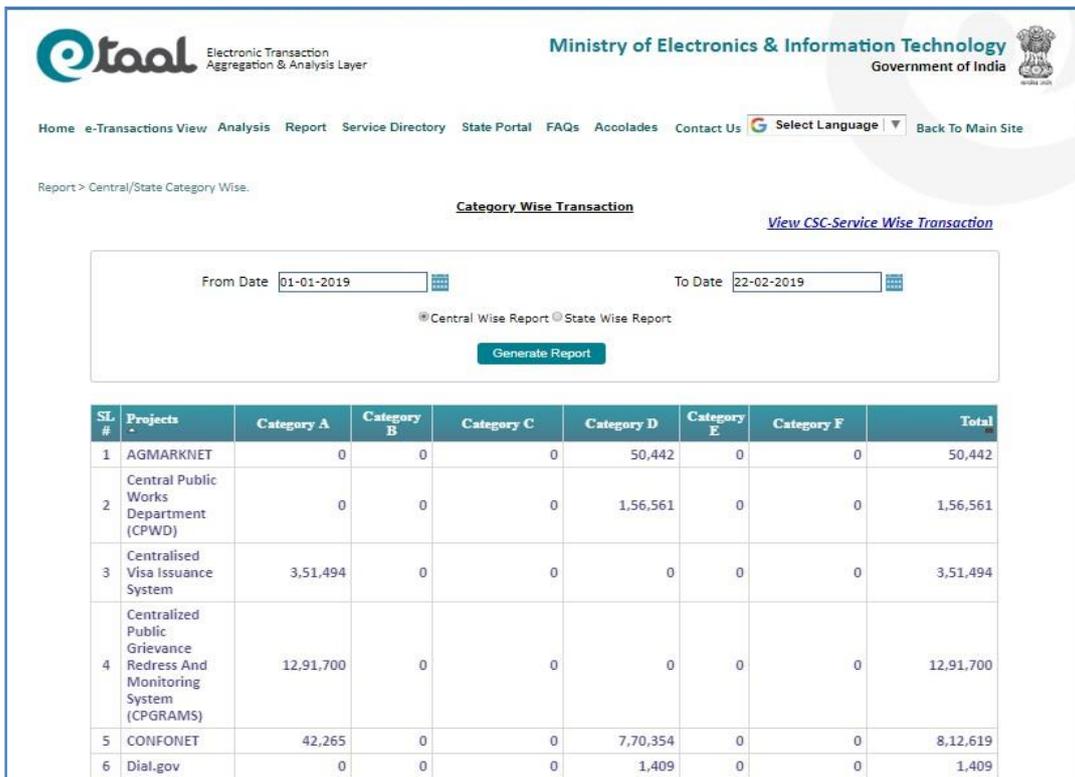


Figure-29

There is a provision for users to sort the report in ascending or descending order to view the ranking of the Central Projects on the basis of the total count of eTransactions inclusive of all the Categories.

III. Service Directory

The 'Service Directory' option is located on the left menu Bar as shown in Figure-1.

It provides list of eServices being delivered across the country. Users can search for relevant services on the basis of following search parameters-Type i.e. State/Ministry, State, Category, Standard Service, and Service Name. (Figure-30)

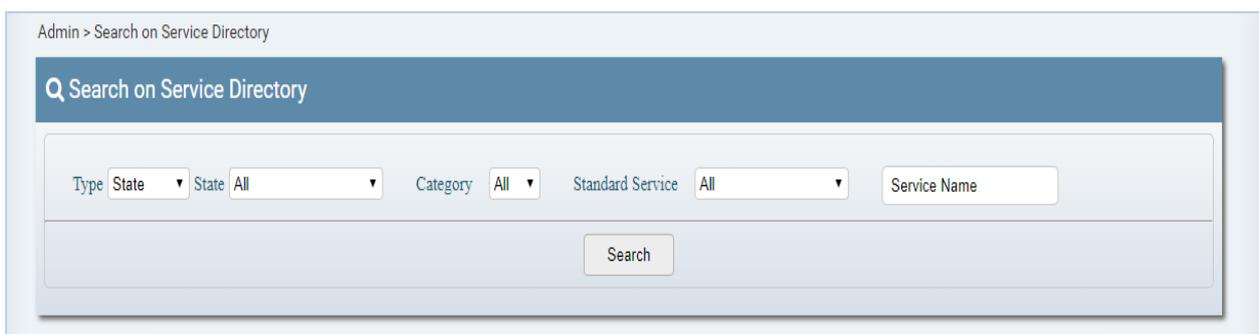


Figure-30

IV. State Portal

The 'State Portal' tab is located on left menu Bar as shown in Figure-1. The link "State Portal" on the eTaal dashboard, allows the users of different states to view their eTransaction counts, by clicking on a Particular state. When the user clicks on State Portal option, a pop up comes which shows eTransaction count for all States as shown in Figure-31.

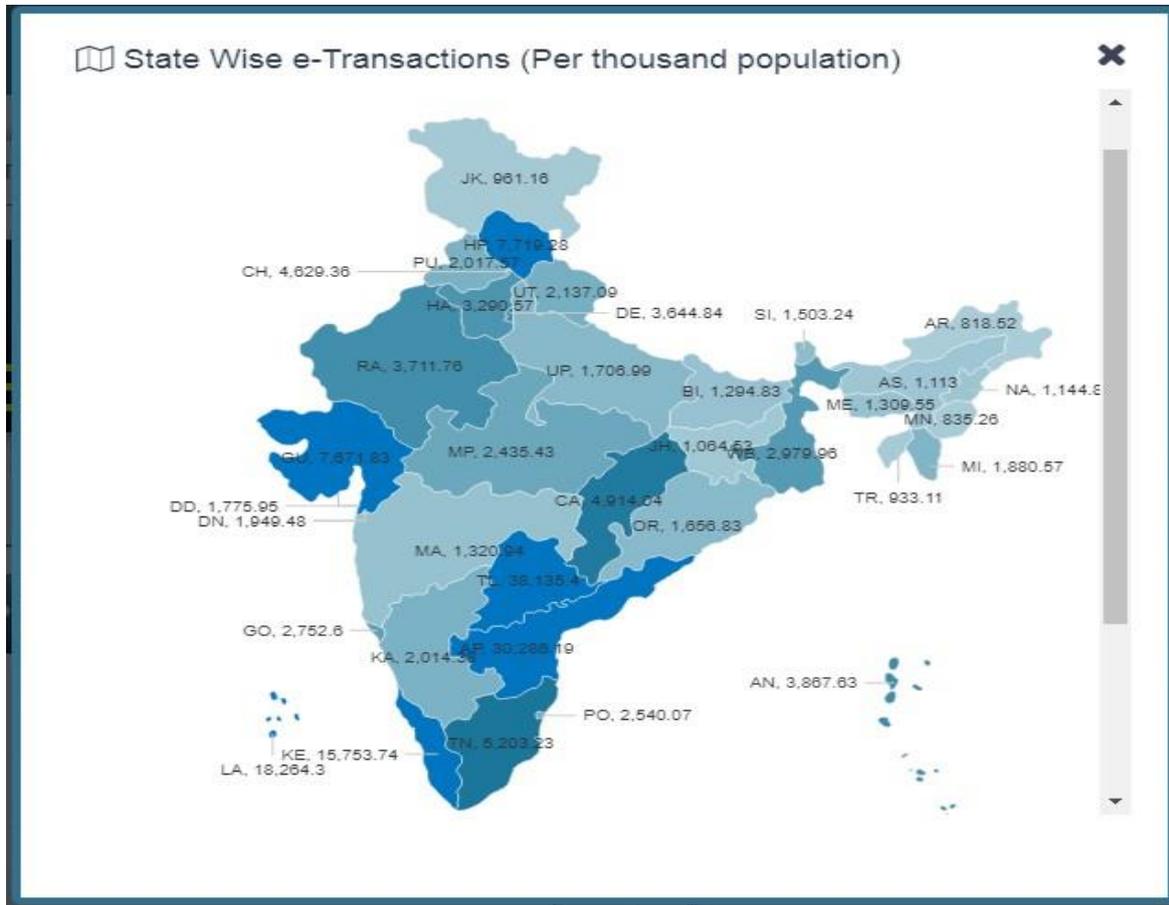


Figure-31

Once user clicks on a particular State, the portal for that state opens in another window. "State Portal" of Madhya Pradesh shown in Figure-32.



Figure-32

a) Top 5 Projects

The State Portal of eTaal displays names of “**Top 5 Projects**” of particular State on the basis of the monthly transactions count. Figure-32 shows eTransaction count of Top 5 Projects of Madhya Pradesh state. By clicking on “**View More**” Tab, user can view “**eTransaction-Project Analysis State wise**” integrated with eTaal. This is displayed in Figure-33

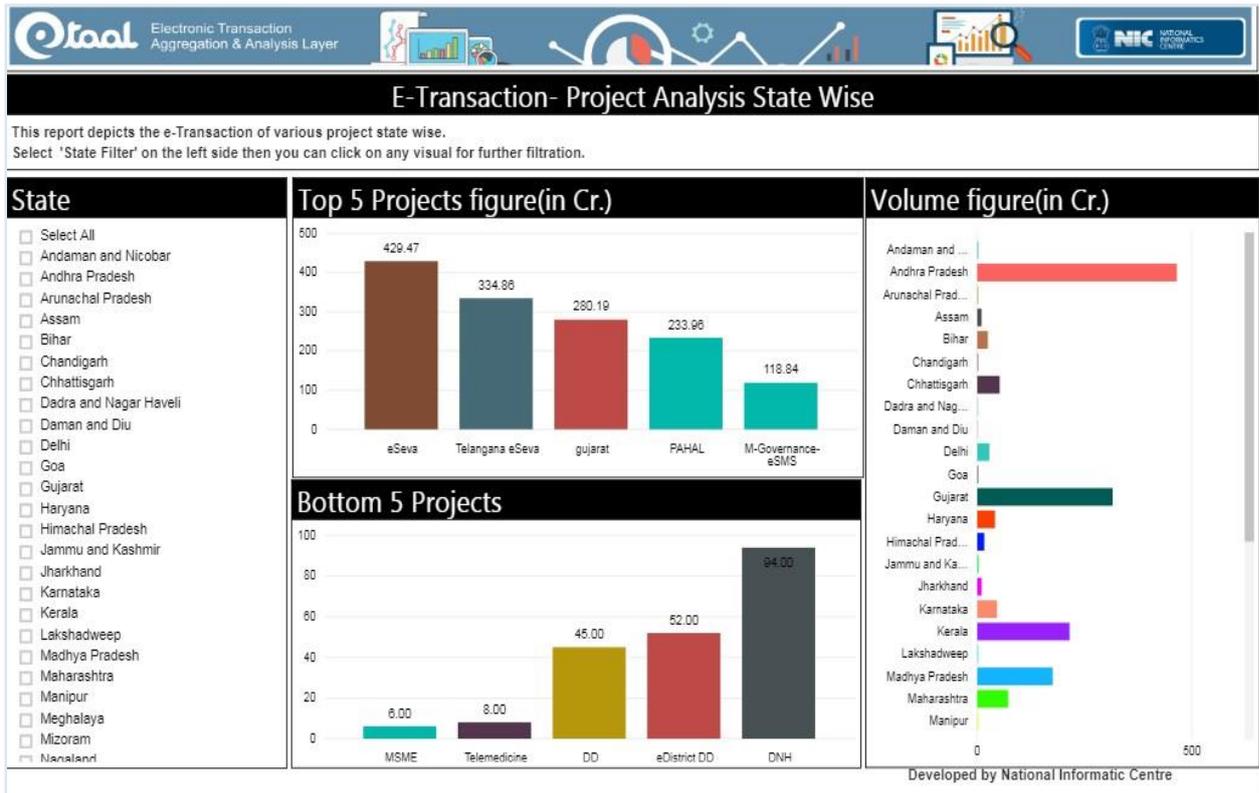


Figure-33

b) Top 5 Services

The State Portal of eTaal displays **Top 5 Services** of particular State. Figure-32 shows Top 5 Services of Madhya Pradesh state. By clicking on **“View More”** Tab, user can view **“eTransaction-Services by State wise”** integrated with eTaal. This is displayed in Figure-34

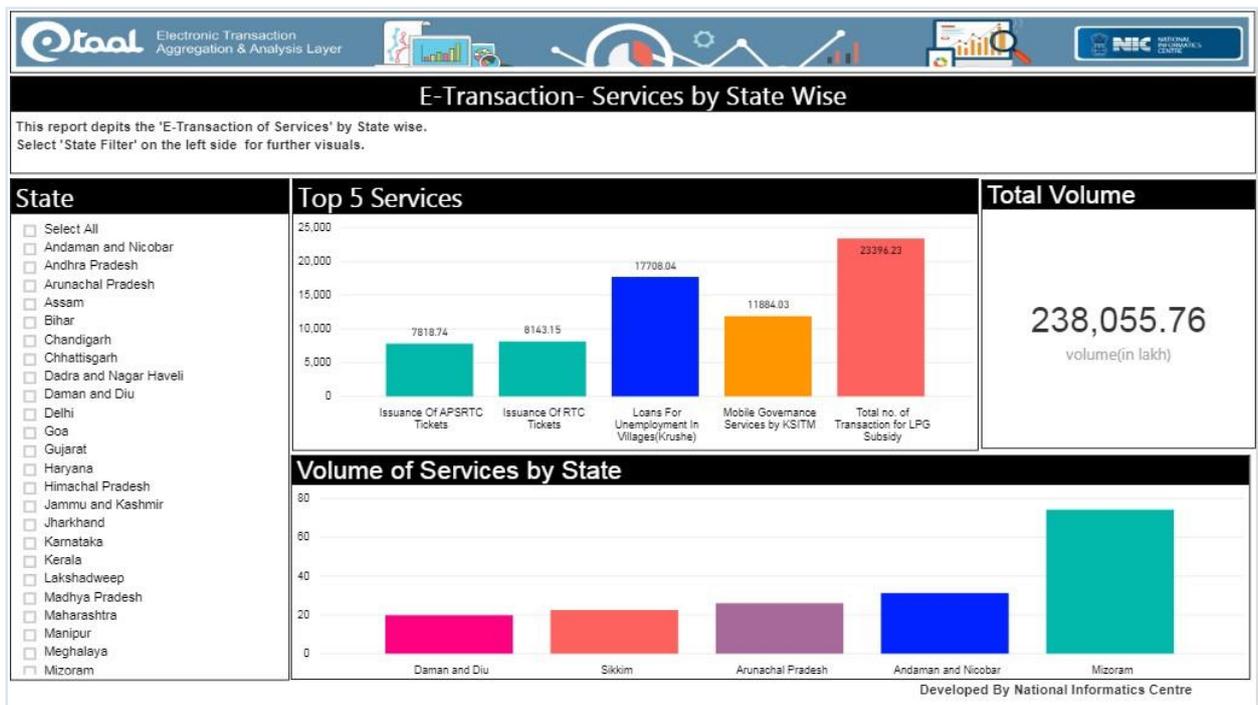


Figure-34

By clicking on **“Analysis”** Tab, user can view **“Project and Service wise State Analysis”** integrated with eTaal.

c). Yearly Analysis

The State Portal of eTaal displays “Yearly Analysis” of particular State. Figure-32 shows Yearly Analysis of Madhya Pradesh state. By clicking on “View More” Tab, user can view “eTransaction Year wise” integrated with eTaal. This is displayed in Figure-35

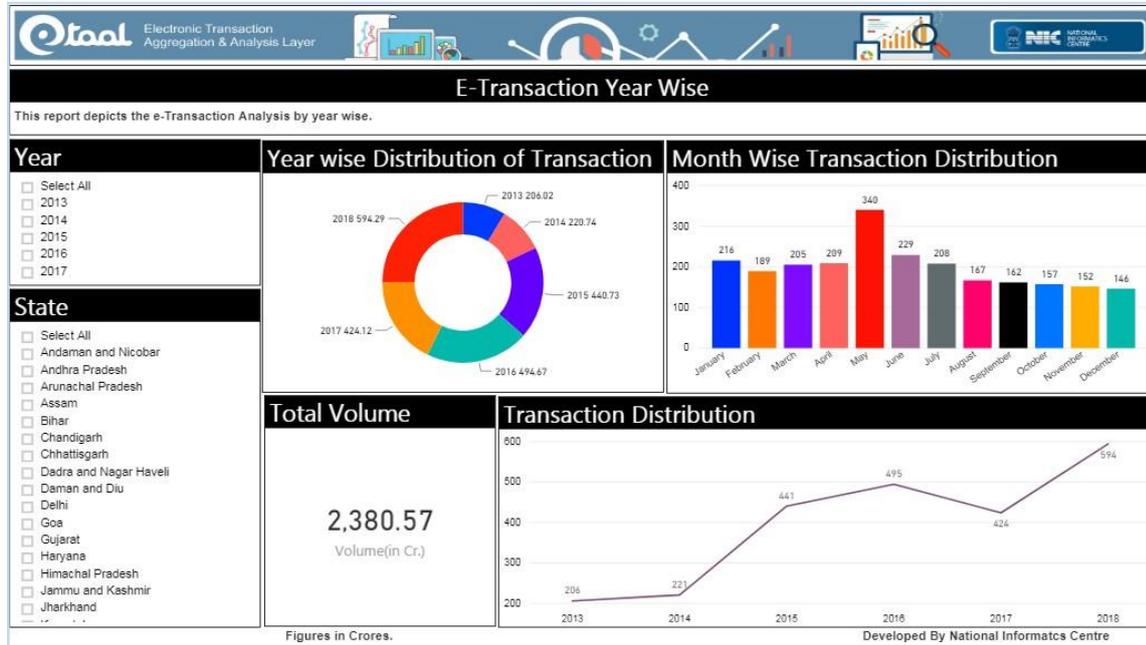


Figure-35

By clicking on “Analysis” Tab, user can view “State Wise Analysis” integrated with eTaal.

d). Service Classification (figures in Cr.)

The State Portal of eTaal displays “Service Classification” of particular State. Figure-32 shows Services Classification (in Cr.) of Madhya Pradesh state. By clicking on “View More” Tab, user can view “eTransaction of Standard Services” integrated with eTaal. This is displayed in Figure-36

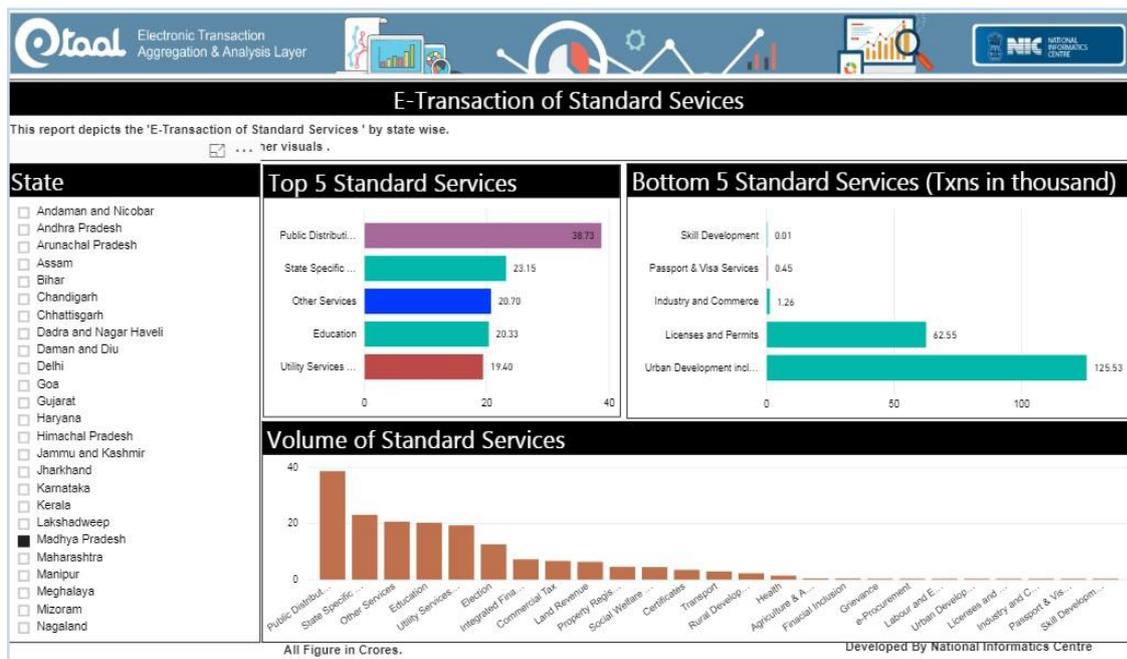


Figure-36

V. Frequently Asked Questions

The 'FAQ' tab is located on the left menu Bar on eTaal Homepage as shown in Figure-1.

This section "Frequently Asked Questions" provides users with answers to some of the general queries pertaining to eTaal application.

8.1.2 Right Menu Bar

"Right Menu Bar" Consists of-

- I. Login
- II. Signup
- III. BI Analysis
- IV. Connect your Services
- V. Contact Us

I. Login

The 'Login' tab is located on the Right menu Bar as shown in Figure-1. In order to Login, user needs to click on this option. The login page will open where user will need to enter his/her 'Username', 'Password', and 'CAPTCHA' as shown in Figure-37.

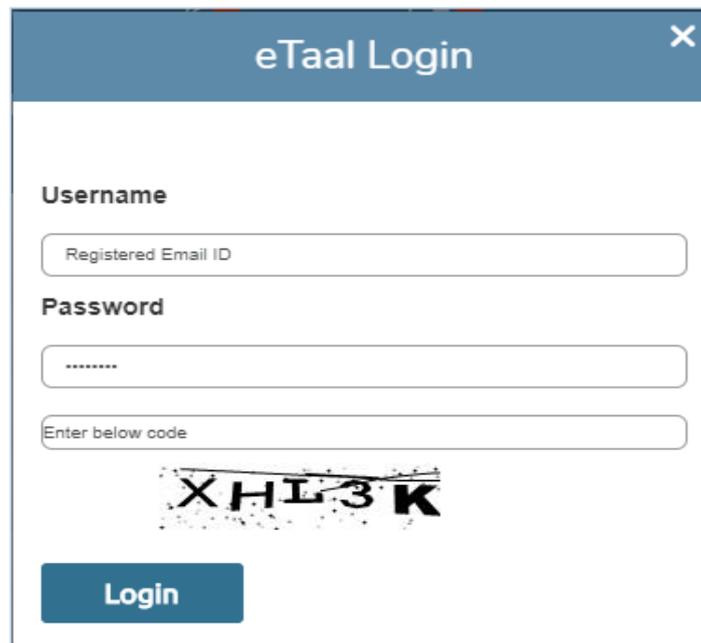


Figure-37

II. Signup

The 'Signup' tab is located on the Right menu Bar as shown in Figure-1.

User needs to sign up first in case he/she is logging in first time on eTaal portal to create the login details. The signup page is displayed in Figure-38.

Figure-38

A new user can sign up as **‘State’, ‘Ministry’, or ‘Other’**. For example if user selects the ‘state’ radio button, he/she will need to enter ‘State’, ‘Name’, ‘Email Id’ , ‘Captcha Code’, ‘Designation’, ‘Contact No’ and click on ‘Signup’ Button . Once the user clicks on Signup button, the login details are shared with the user on his email id and phone number.

III. BI Analysis

The ‘BI Analysis’ tab is located on the Right menu Bar as shown in Figure 1. There are four kinds of analysis dashboards available to the user:

1. Yearly Analysis
2. Service Analysis
3. MMP Analysis
4. State wise Analysis

IV. Connect your services

The ‘Connect Your Services’ tab is located on Right menu Bar as shown in Figure-1.This option pops up an information window for a new user. A new user who wants to integrate eServices with eTaal need to sign up in order to create his/her login details. Once the user has his/her login credentials, he/she can login and begin integration of their eServices with the portal.

V. Contact Us

The ‘Contact Us’ tab is located on the Right menu Bar as shown in Figure-1, it will show the following details – (Figure-39)

Figure-39

It provides user with helpdesk information in case the user needs to inquire while integrating their eServices.

8.2 National e Transaction Count

This section of the eTaal Home page provides integrated, near real-time aggregated view of eTransaction statistics:

1. Since beginning of current year
2. Since beginning of current month
3. Total number of eServices integrated

The counter provides eTransaction count, consolidated on near real-time basis, for all the eServices integrated with eTaal.

The counter also provides the total number of eServices integrated, count of which gets updated every time when a new service is approved and integrated on eTaal. The counter is displayed in Figure-40



Figure-40

8.3 eTaal Description

This section of homepage provides description of eTaal as shown in Figure-41

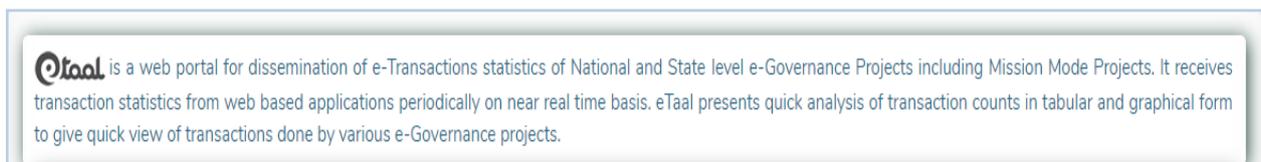


Figure-41

8.4 Top 10 Mission Mode Projects (MMP)

The homepage of eTaal displays names of **Top 10 Mission Mode Projects (MMP)** on the basis of the monthly transaction count. Figure-42 shows eTransaction count of top 10 Mission Mode Projects since 1st Jan 2013 to 31st Dec. 2018.



Figure-42

By clicking on “View More” Tab, user can view year wise analysis of MMPs integrated with eTaal. This is displayed in Figure-43

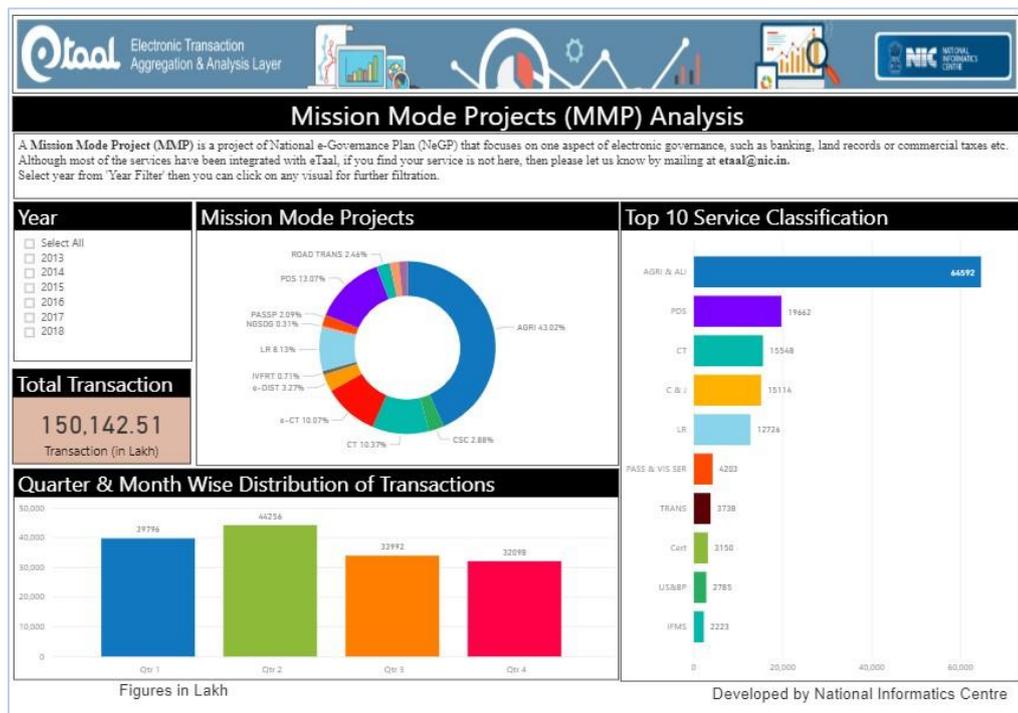


Figure-43

8.5 eTransaction Growth

The homepage of eTaal displays the “eTransaction Growth” on the basis of the yearly eTransaction count. This is shown in Figure-44



Figure-44

By clicking on **View More** Tab, user can view year wise analysis of eTransaction as illustrated in Figure-45 and Figure-46.

Figure-45

- Shows year/ month wise distribution of eTransaction
- Shows Avg. Transaction Distribution Month/Year Wise

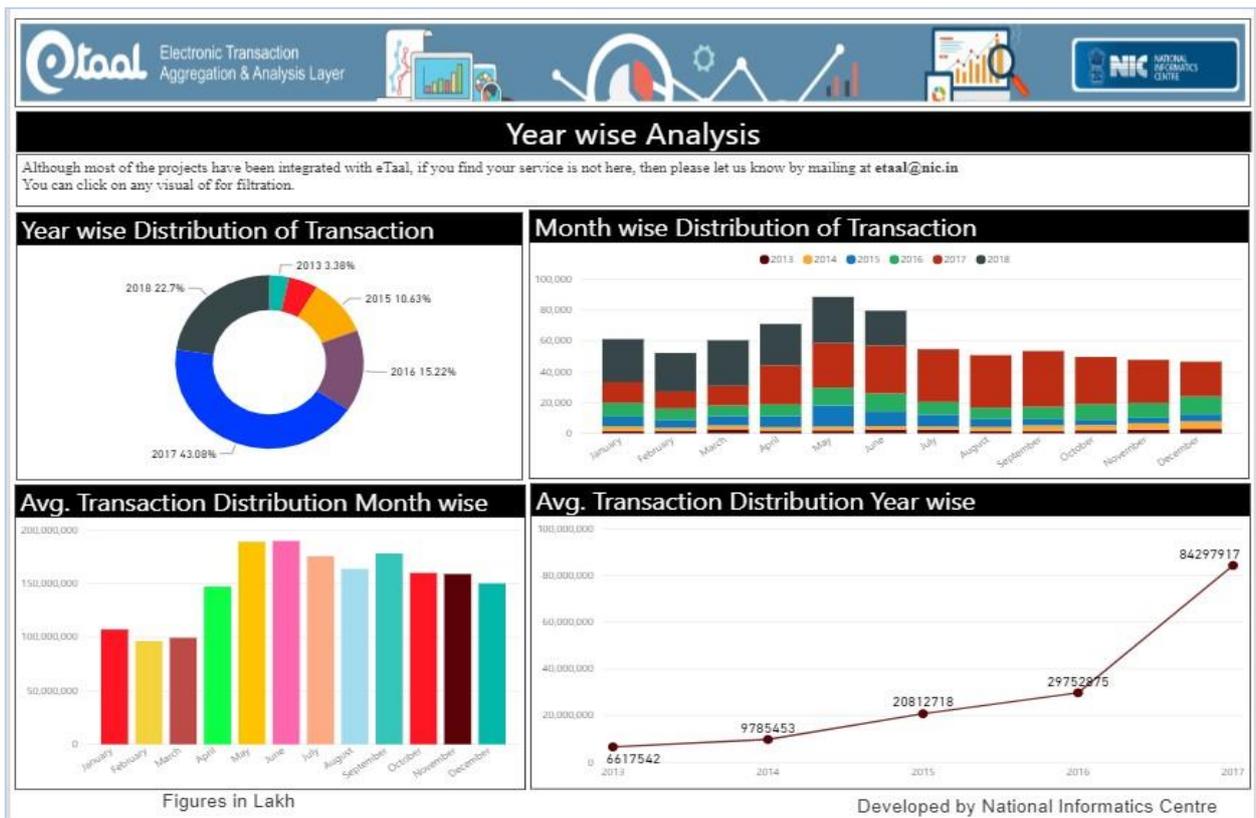


Figure-46

- Shows yearly **Time line analysis** on the basis of No. of eTransaction and average transaction per day

Year wise Analysis

Although most of the projects have been integrated with eTaal, if you find your service is not here, then please let us know by mailing at etaal@nic.in

Time line Analysis

Year	2016		2017		2018
Month	No. of e-Transactions	Average Transaction per day	No. of e-Transactions	Average Transaction per day	No. of e-Transactions
January	879874465	28,383,047.00	1352608174	43,632,521.00	2797256273
February	736247222	25,387,835.00	1111008432	39,678,872.00	2492848078
March	674329327	21,752,558.00	1278385140	41,238,230.00	2958344320
April	760844236	25,361,474.00	2537534343	84,584,478.00	2686538458
May	1154745972	37,249,870.00	2898524917	93,500,803.00	2999673652
June	1176360651	39,212,021.00	3105141266	103,504,708.00	2265565418
July	830791253	26,799,717.00	3396739322	109,572,236.00	49284045
August	746194305	24,070,784.00	3408614866	109,955,318.00	
September	808409533	26,946,984.00	3619523046	120,650,768.00	
October	1001308893	32,300,286.00	3068126706	98,971,829.00	
November	958297543	31,943,251.00	2808257624	93,608,587.00	
December	1166426821	37,626,671.00	2252976194	72,676,651.00	

Developed by National Informatics Centre

8.6 Service Classification

The homepage of eTaal displays eTransaction count since 1st Jan 2013 for various Standard Services like Commercial Tax, PDS, Utility Services, Rural Development, Agriculture and other services under “Service Classification (Figures in cr.)”. This is shown in Figure-47

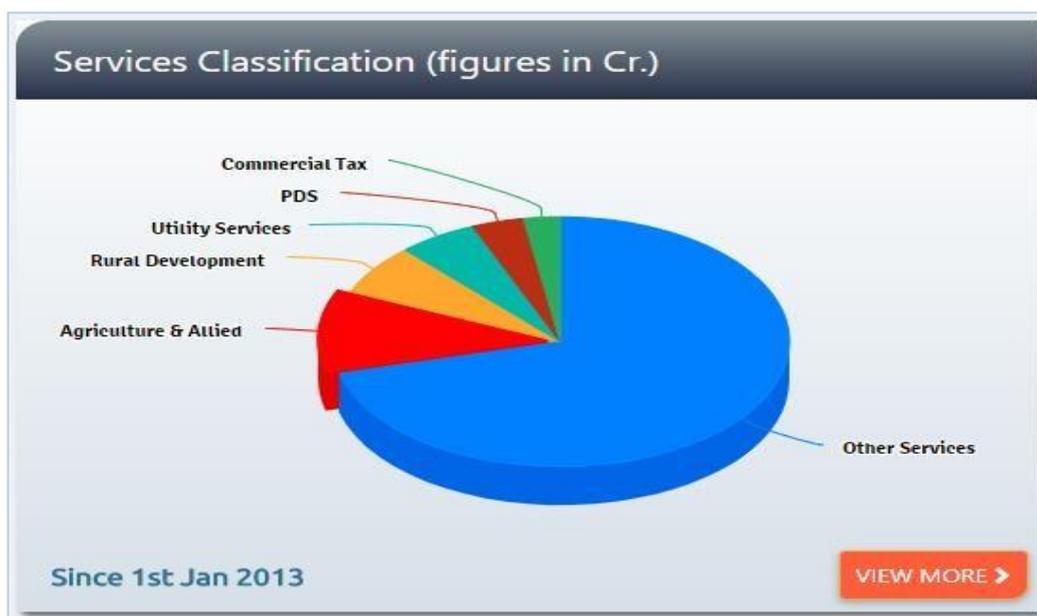


Figure-47

By clicking on “View More” Tab, user can view “Service Classification Analysis” dashboard. The dashboard allows user to see eTransaction count by selecting respective service Category and name from Service Classification filter and Services filter. This is displayed in Figure-48

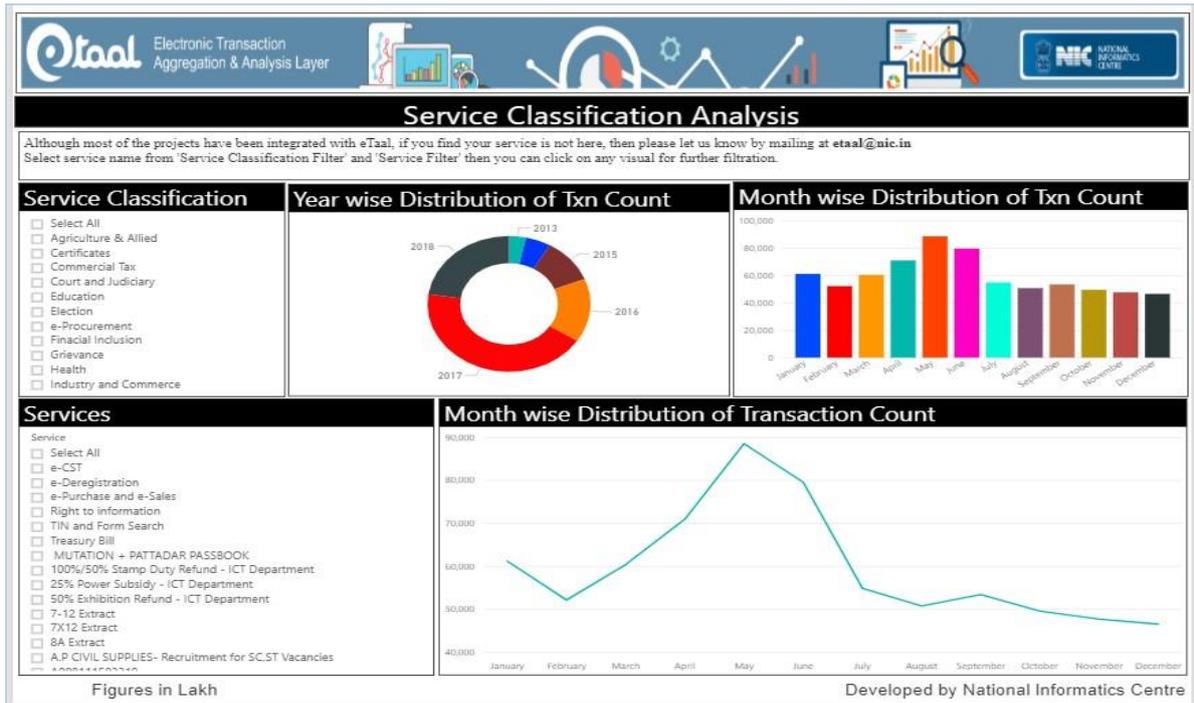


Figure-48

8.7 Top 5 States

The home page of eTaal displays “Top 5 States” on basis of the eTransaction count since 1st Jan 2013 as shown in Figure-49.



Figure-49

By clicking on “View More” Tab, user can view “State project Analysis” dashboard as illustrated in Figure-50.1 and figure 50.2.

Figure-50.1 (Service category and classification)

- Select date from ‘Duration filter’ the User can click on any visual for further filtration.
- Analysis shows Top 10 Standard Services, Top 10 States and distribution of Service Category.

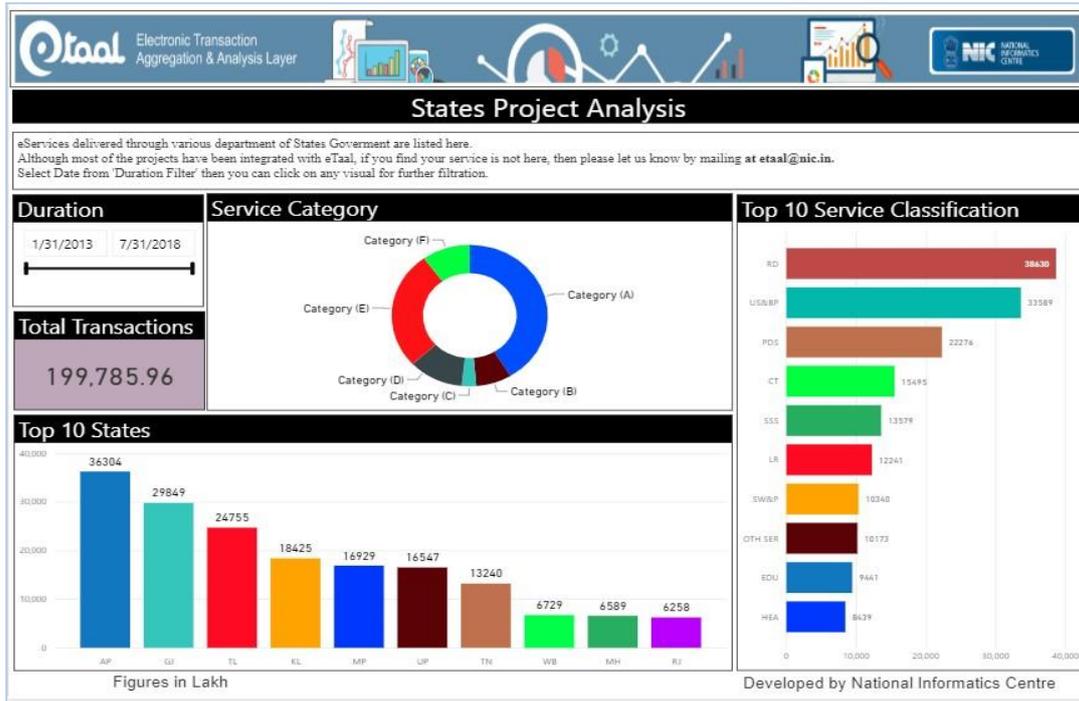
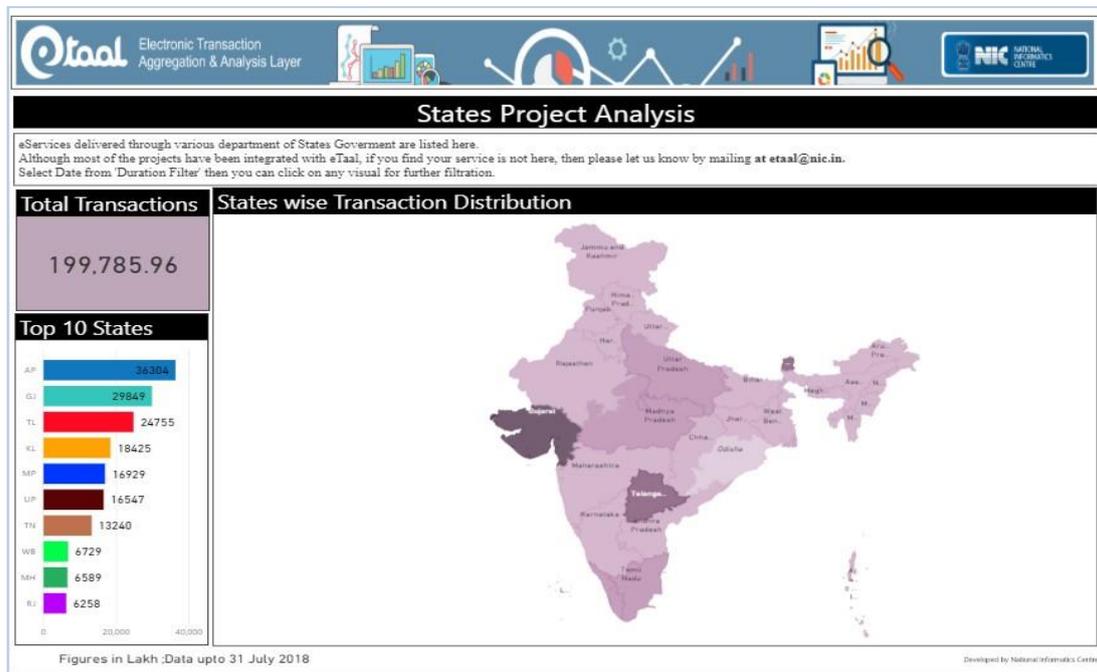


Figure-50.2 (State wise eTransaction distribution)

- Analysis shows **Total Transactions**
- Top 10 States
- States wise Transaction Distribution



8.8 Top 10 Central Projects

The home page of eTaal displays “**Top 10 central Projects**” since 1st Jan 2013 on basis of total eTransaction count as shown in Figure-51

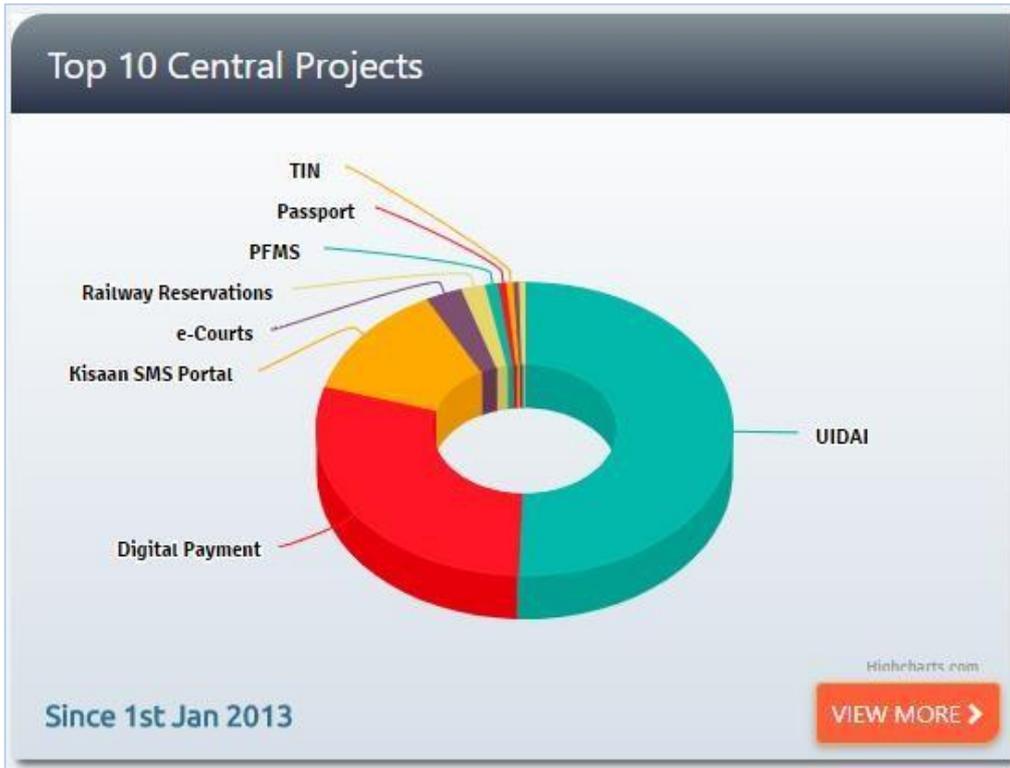


Figure-51

By clicking on “View More” Tab, user can view “Central Govt. project Analysis” dashboard which contains the following- Total eTransactions, Quarter and month wise distribution of eTransaction, Distribution of Central Government projects, Top 10 services, Service classification (Top 10) v/s projects

This is shown in Figure-52. Select year from ‘Year filter’. Then you can click on any visual for further filtration.

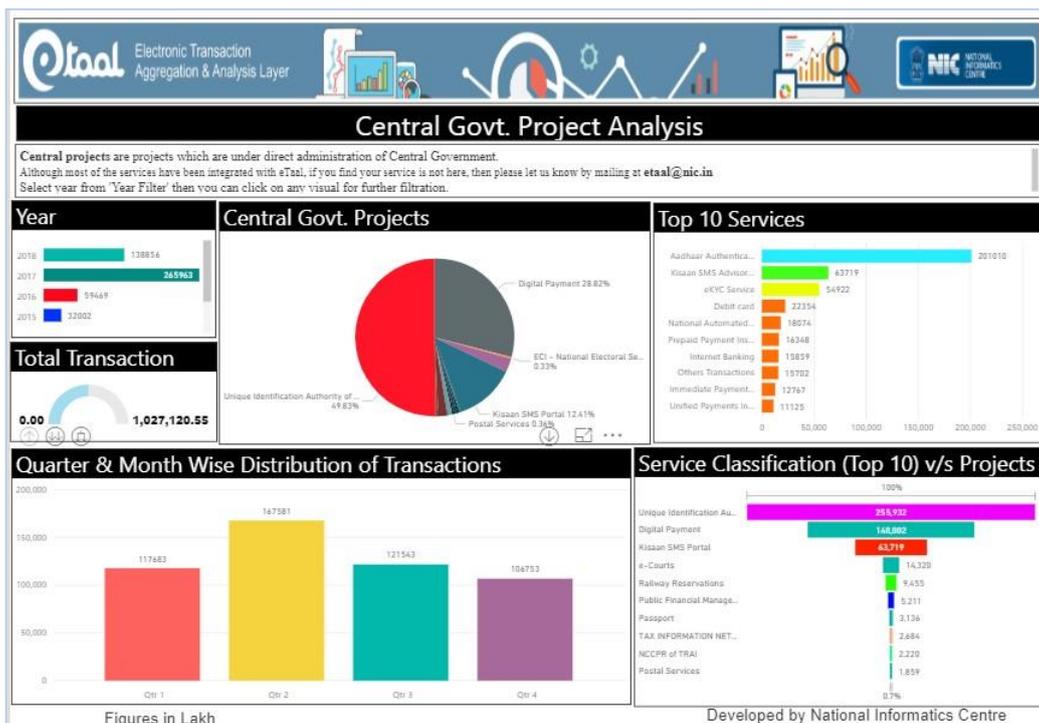


Figure-52

8.9 State Wise MMP Analysis

The home page of eTaal displays “States wise MMP Analysis” on the basis of total eTransaction count since 1st Jan 2013 as shown in Figure-53.



Figure-53

By clicking on “View More” Tab, user can view “State wise MMP Analysis” dashboard. This dashboard allows user to see eTransaction count for the selected duration for various Mission Mode Projects under various States. This is shown in Figure-54

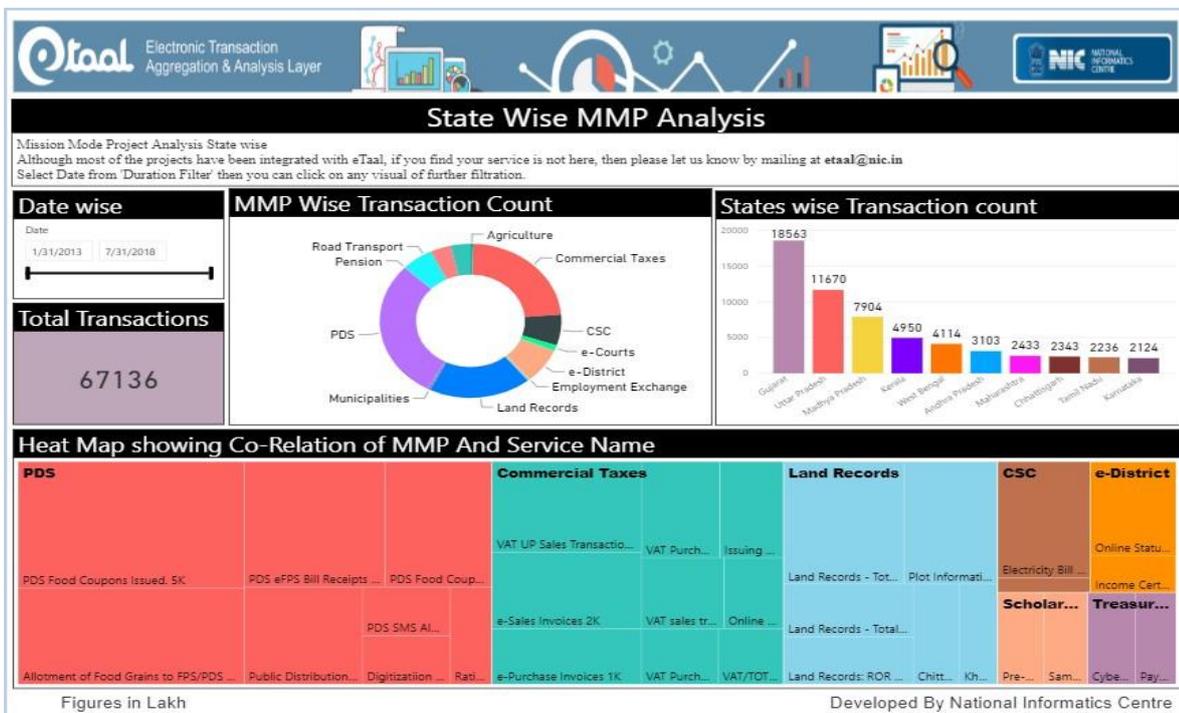


Figure-54

9. Service Enrollment

Service Enrollment is reserved for administrator for approving the Project entry, Service entry and Enrollment of web services by owner of the project. This option could be invoked only after login through eTaal Login. The 'Service Enrollment' tab is located on the Left menu Bar as shown in Figure-55.

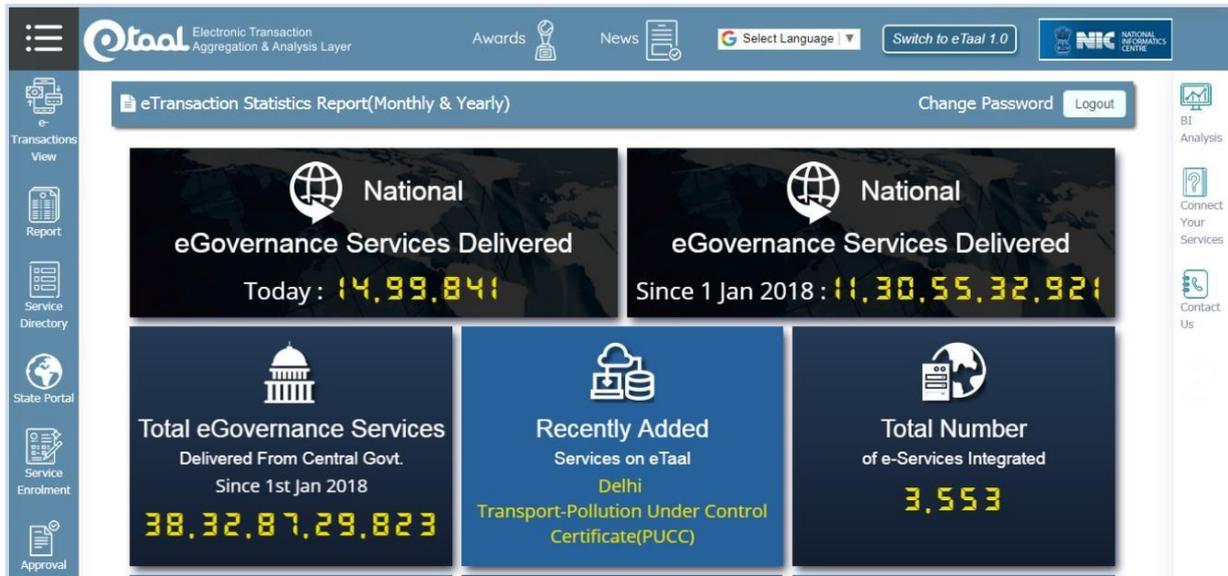


Figure-55

After click on "Service Enrollment" Tab popup will open including –

- Sector/Project Entry
- Service Entry
- Modify Service
- Web Service Enrollment

9.1 Sector/Project Entry

Entry of the project is done by the owner of the project. The owner needs to specify the Project name along with the person who has requested for the entry of it. Once all the details of the person along with the Project name are entered, it can be saved by clicking on the Save Button. Complete list of the projects can be viewed by clicking on the 'Show List' Button. Clear Button is used to clear the details already entered in the current screen. The Approve Button is used to approve the list and save it permanently in the database. Screenshot of the project entry page is shown in below Figure-56.

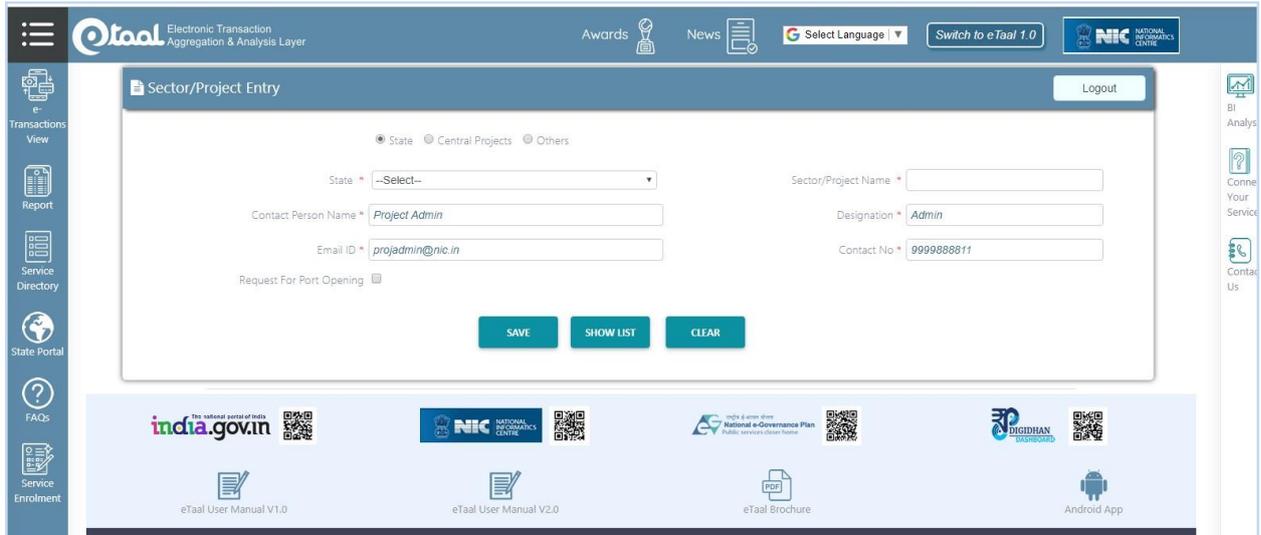


Figure-56

9.2 Service Entry

Entry of Service is done by the owner of the project. He/she needs to specify the Service name along with the person who has requested for the creation of it. Screenshot of the Service creation page is shown in Figure-57 below

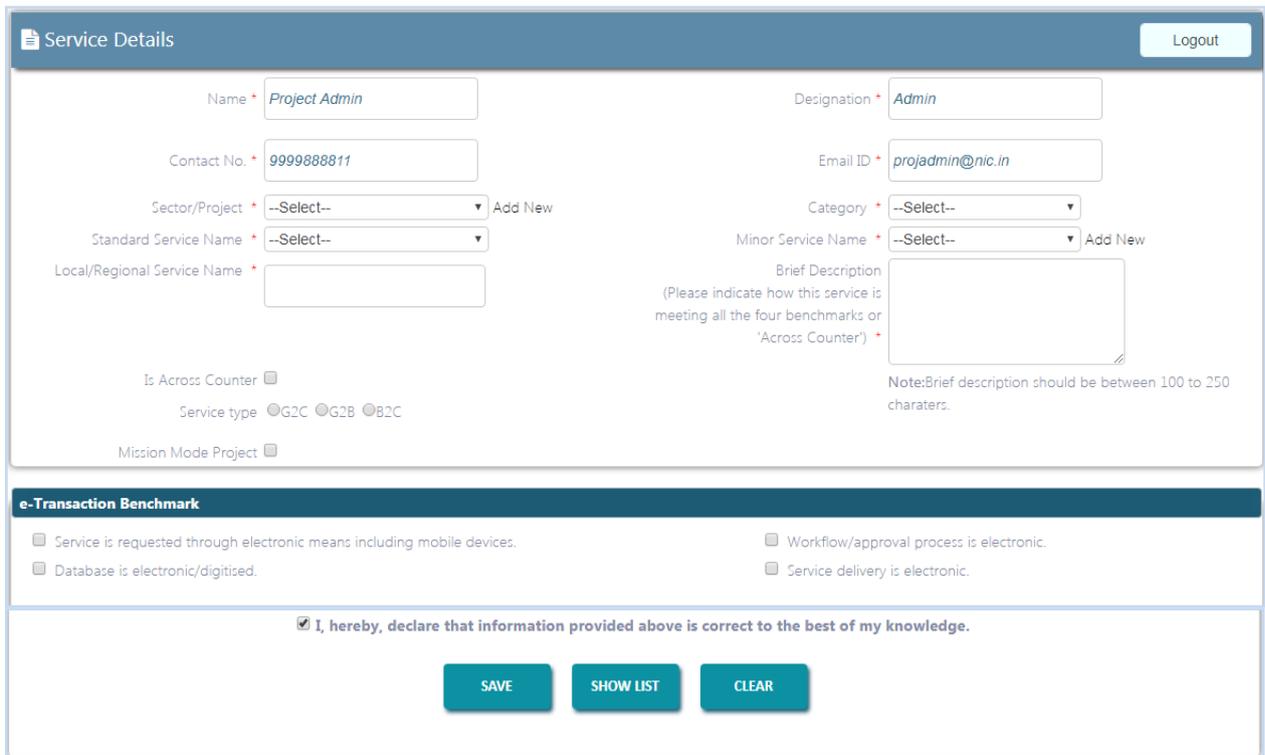


Figure-57

Service creation consists of two sub-sections:

1. ‘Service Reported By and Service Details’ Section: In this section, a detail of the person who is reporting the service is entered. The name, designation, contact no. and email id is captured.

Also, details of services are entered in following format:

- a. Select Project, Category (A, B, C, D, E, F), Major Service (Standard Service), Minor Service (Sub Standard Service).
 - b. Enter local name of service to be added and brief description of the Service.
 - c. Check whether the service is across counter or mission mode project.
2. ‘eTransaction Benchmark’ Section: All the benchmark are required to be fulfilled by the eService to participate in eTaal which are as follows:
- a. Service is requested through electronic means including mobile devices.
 - b. Workflow/approval process is electronic.
 - c. Database is electronic/ digitized.
 - d. Service delivery is electronic.

9.3 Modify Service

After the successful creation of service by the owner under the “Service Entry” link as explained above, if required, the owner can modify the service details under the “Modify Service” link of Service Enrollment. The screenshot of the Modify Service screen is shown in Figure-58 below

Figure-58

9.4 Web Service Enrollment

Web service can be registered by owner of the project. He/she needs to register the Web Service along with the details. This module is smart enough to identify and verify the correctness of the input parameter and output parameter. Web service Enrollment page is shown in Figure-59 below

Figure-59

Data exchange in eTaal is based on web service. This page is used to add new web services/URLs in following steps:

1. Select type of web service: Whether it is Web Reference Based or Web URL based.
2. Select State and Project Name.
3. Enter the complete URL of web service.
4. Enter 'Web Service Name' (Name of the class used in web service) and press 'Invoke Service'.
5. System will show all the methods available under selected web service.
6. Select the desired method name, system will show all the input parameters available under that selected web method. At the same time, it shows Return type of the method.
7. It provides Test Area which accepts the value of the input parameter and tests the output of the service using 'Get Data' button.
8. Click on 'Save URL' button to save the web service in eTaal application.

Once the entire process as stated above is complete, the service is ready for integration with eTaal. Before integration, the eService is subject to validation and approval by the National Level Project Management Committee (PMC). Similar Committees exist at the level of States and UTs.

10. Approval

Steps for Service Approval by State Project Management Committee

For the Approval/Rejection/Modification of the Service as enrolled by the User, the State Admin needs to login to eTaal using its login credentials. Once logged in, the State Admin is required to click on the Approval tab in the menu bar as shown in Figure-55.

The State Admin needs to review the service details and accordingly click on Approve/Reject/Modify by clicking on Radio Button as shown in the below Figure 60 - wherein;

A – Approve

R – Reject

M – Modify

Sl #	Ministry/ Dept./ State	Standard Service	Service Name	Brief Description	Category	Benchmark	ACS	Applied On	Approved By	Rejected By	Action	Remarks
1	Assam [eDistrict Assam]	Agriculture & Allied	APPLICATION FOR SOIL FERTILITY REPORT	To know about the fertility of ones land a report can be asked from the competent authority. The final report includes the chemical analysis of the soil along with lime and fertilizer recommendations for the crop specified	A	YYYY	Y	21.01.16	HR Admin, Dept. Head	N/A	<input checked="" type="radio"/> A <input type="radio"/> R <input type="radio"/> M	Change the c ▾
2	Assam [eDistrict Assam]	Employment	SURRENDER OF EMPLOYMENT EXCHANGE CARD	when a citizen no longer requires the assistance from Employment Exchange in getting a job they surrender their Employment Exchange cards.	A	YYYY	Y	21.01.16	N/A	N/A	<input type="radio"/> A <input type="radio"/> R <input type="radio"/> M	Change the c ▾
3	Gujarat [eGujCop]	Police	Arrest Form	This application captures the Arrest Memo and Chehra Nishan Patrak Details. Details like arrest date/time place of arrest relative details Descriptive Roll etc.	A	N,YYY	Y	22.02.16	N/A	N/A	<input type="radio"/> A <input type="radio"/> R <input type="radio"/> M	-- Select -- ▾
4	Gujarat [eGujCop]	Police	Property Search/Seizure Form	This application captures seize property details with Panchnama. Details like property name type value quantity estimated amount etc. are captured in this application.	A	N,YYY	Y	22.02.16	N/A	N/A	<input type="radio"/> A <input type="radio"/> R <input type="radio"/> M	-- Select -- ▾
5	Gujarat [eGujCop]	Police	Final Report/Form	There is two different entry form for Charge Sheet and Final Report. These applications capture charge sheet/final report details - accused sent for trial accused not sent for trial tip court details charge sheet type	A	N,YYY	Y	22.02.16	N/A	N/A	<input type="radio"/> A <input type="radio"/> R <input type="radio"/> M	-- Select -- ▾

Figure-60

The State Admin can review the services and accordingly “Accept”, “Reject” or “Modify” the service. In case of Approval of service by the State Committee, the State Admin needs to select the radio button “A” and on clicking the “Submit” button; this service is forwarded to National eTaal Committee for approval.

For the approval of Service, the Service needs to be approved by at least two State Committee members.

The State Admin needs to enter Remarks in case if “Reject” or “Modify” is selected, highlighting reason for rejection or modification of the service requested.

The Service needs to be rejected / approved by at least two out of three State committee members while it can be requested for modification by any one member.

11. Technical specification of eTaal

Technical Specifications	Description
Technology	Microsoft Technologies with WCF, ASP.NET Framework 4.5, C#.Net
Operating System	Windows Server 2016 R2 Enterprise Edition
Database	SQL Server 2017 R2
Analytical Tool	Power BI
Browser Supported	Mozilla Firefox 60 or above, Chrome 60 or above, IE 11 or above
Reporting	HTML Reporting
Minimum System Specification	Any desktop, laptop, tablet and mobile phones (Android/Windows/iOS, etc.) with internet Access
Unicode Compliant	Yes

12. Architecture

eTaal is broadly categorized into the following three components:

1. **Dashboard Server Connector (DSC)** - Dashboard Server Connector (DSC) runs as a service on Central Server and acts as watchdog to pull the eTransaction count from various servers located at State and Centre.
2. **Dashboard Client Connector (DCC)** - Dashboard Client Connector (DCC) runs as a service on the Servers which are providing the eTransaction count details.
3. **eTaal Portal** - eTaal Portal is a web portal to give view of dashboard.

Architecture of eTaal as shown in following Figure-61

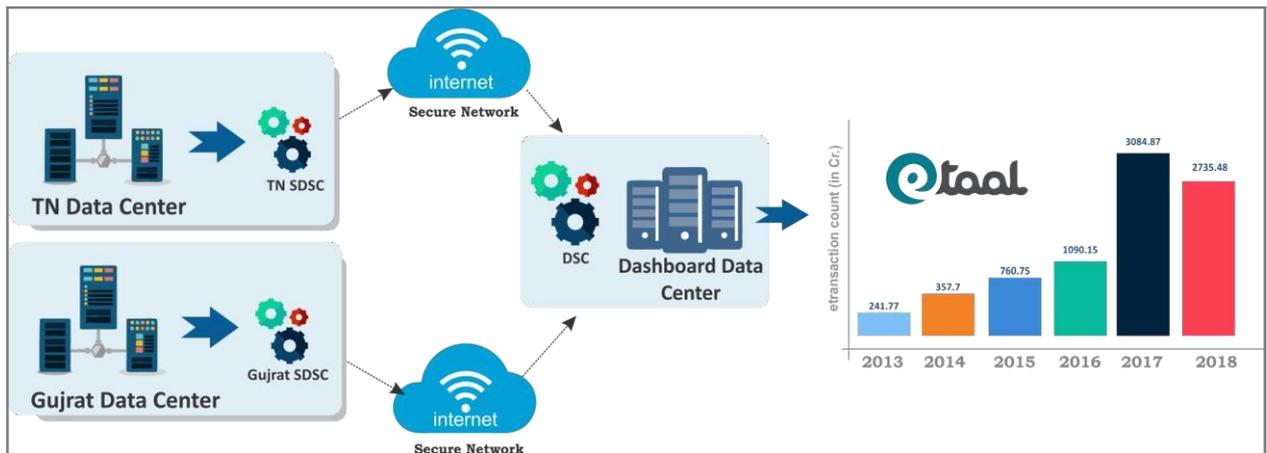


Figure-61

In the architecture of eTaal drawn above, one DSC and multiple DCCs exists. One DCC is for each application.

13. Guidelines

This section provides guidelines for application administrator / developer to create Client Connector and deploy on their servers.

13.1 Prerequisites for participation in eTaal

1. Server on which the data that needs to be integrated with eTaal resides on the Internet.
2. The application whose data needs to be integrated with eTaal may be on any operating environment (Windows/Linux; SQL Server/Oracle/MySQL/PostgreSQL; .Net /Java/PHP etc.)

13.2 Steps for creation of Client Connector

Client Connector may be Web Service, WCF service or URL based data sharing application. Client Connector may be written in any language(C#, VB.Net, Java, PHP etc.). Creation of Client Connector will consist of following steps:

1. Creation of Web Service or WCF service or URL based data sharing application.
2. Creation of 'Stored Procedure' in the database which will give count of eTransaction to web connector.
3. Writing of the code to access stored procedure created to get the eTransaction count.

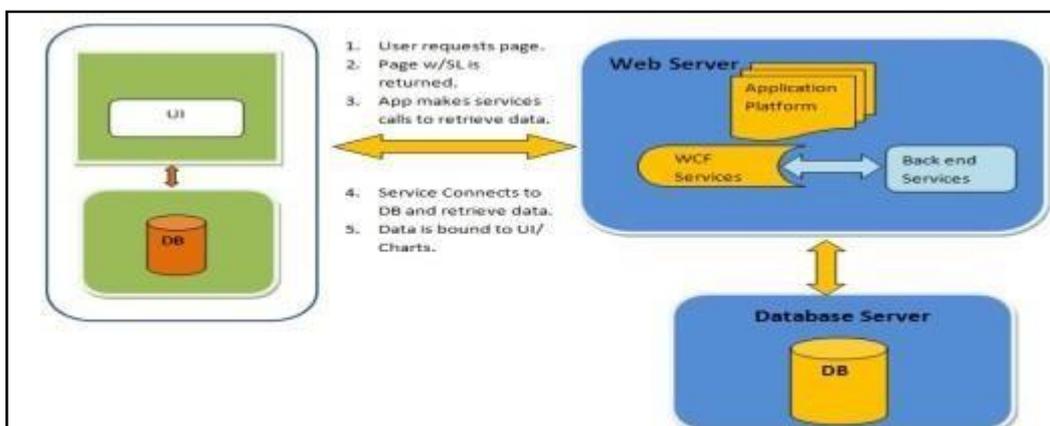


Figure-62

13.3 Specifications of Client Connector

The specifications of Client Connector are given below:

Web Method Name: eTransaction Count

Input Parameters: The web method created for the purpose will have following parameters:

S.No.	Parameter Name	Format	Example
1	Transaction Date	DD/MM/YYYY	23/11/2012
2	User Name	String	MeitY
3	Password	String	xYz#\$36F

Response Type: The web method will return either XML or dataset.

Format of XML:

```
<?xml version="1.0" encoding="utf-8" ?>
<eTaal_State>
  <Response ServiceCode="A001102200002" Count="23" LocationCode="08"/>
  <Response ServiceCode="C008104800004" Count="56" LocationCode="09" />
  <Response ServiceCode="B005104200005" Count="92" LocationCode="13" />
  <Response ServiceCode="A016105900007" Count="31" LocationCode="31" />
</eTaal_State>
```

Format of dataset:

This will have following set of data: ServiceCode, ServiceCount, Location Code

Error Code Returned by Service

S.No.	Error Code	Error Description
1	-1	Transaction Date parameter is missing
2	-2	Wrong credentials
3	-3	Data is not available on this date

13.4 Development and hosting environment

1. Client Connector can be created in any of the programming language i.e. Java, C#, VB.Net, PHP etc.
2. It can be hosted on any web server i.e. IIS, Apache Tomcat etc.

13.5 Post deployment steps

1. The port on which the service is running is required to be opened for eTaal Server Connector.
2. Share the URL of **Web Service** with Username and Password to eTaal Administrator.

13.6 Data pulling mechanism and assumptions

Enrollment of web service by user

1. Web service is created by user and hosted on server where project (State/Central) related data resides.

2. Port opening request is made to provide communication between servers (i.e. from Project server to eTaal server).
3. Enrollment of web service is done from Enrollment page (in Admin Corner) of eTaal.

eTaal Process of data pulling from a project

1. Port opening request is made to provide communication between servers (i.e. from eTaal server to the project server).
2. Approval of registration by Project Management Committee (PMC).
3. eTaal fetches data on daily basis by invoking web service with current date as parameter and following data is obtained:
 - a. List of services provided by project on given date.
 - b. Transaction count.
 - c. Date of transaction.
 - d. Location Code as per census (if any).
4. The Process of invoking web service is done as per schedule determined by the user during Enrollment and data is updated (in case of zero transaction of service, no data is updated) in eTaal.
5. For projects having irregular data updating services, web service is invoked by eTaal, it will check for last update (date/time) and pull data from that date.
6. Reconciliation of data between eTaal and project server to be combined once a week.

Assumptions

1. The web service could be hosted on live server or on intermediate server, as defined during Enrollment.
2. Data updated on the project server is accumulative during the day and is reset to zero at 00:00 hrs.

13.7 Sample Codes

Sample Code in .Net

Interface

```
[ServiceContract]
public interface IeTaalService
{
    [OperationContract]
    [FaultContract(typeof(InvalidCodeFault))]
    int eTransactionCount(DateTime TransactionDate, String UserName, String Password);
}
```

Implementation of Interface

```
public class eTaalService : IeTaalService
{
    #region Call StoreProcedure and Fetch Transaction

    string ConnectionString = System.Configuration.ConfigurationSettings.AppSettings["connectionstring"];
    public DataSet eTransactionCount(DateTime TransactionDate, String UserName, String Password)
    {
        try
        {
            var parms = new SqlParameter[3];
            parms[0] = new SqlParameter("@TransactionDate ", TransactionDate);
            parms[1] = new SqlParameter("@UserName", UserName);
            parms[2] = new SqlParameter("@Password", Password);
            return (SqlHelper.ExecuteDataset(ConnectionString, CommandType.StoredProcedure, "SP_eTransactionCount", parms));
        }
        catch (Exception ex)
        {
            throw new FaultException<InvalidCodeFault>(new InvalidCodeFault(ex.Message), new FaultReason(ex.Message));
        }
    }
}
```

Sample Code in Java

```

package in.nic.exchange.action;

import in.nic.exchange.db.DBConnection;

import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import java.text.SimpleDateFormat;
import java.util.ArrayList;
import java.util.Date;
import java.util.HashMap;

public class ExchangeWebService {

public ArrayList<HashMap<String, Float>> countRegistrationsActivityWise(Date date) {

    Connection con = null;
    PreparedStatement pstmt = null;
    ResultSet rs = null;
    System.out.println("date = " + date);
    String query = "select name, sum(transactions) as total_trns from reactivity ra left join
(select * from dashboard where trndate = ?) db on db.activity=ra.code group by ra.code,ra.name order by
ra.code;";

    SimpleDateFormat formatter = new SimpleDateFormat("yyyy-MM-dd");
    String d = formatter.format(date);
    ArrayList<HashMap<String, Float>> result = new ArrayList<HashMap<String, Float>>();
    HashMap<String, Float> map = null;
    try {
        con = DBConnection.getConnection("", "");
        pstmt = con.prepareStatement(query,
ResultSet.TYPE_SCROLL_INSENSITIVE,ResultSet.CONCUR_UPDATABLE);
        pstmt.setString(1, d);
        rs = pstmt.executeQuery(query);
        System.out.println("query = " + query);
        while(rs.next()) {
            map = new HashMap<String, Float>();
            map.put(rs.getString("name"), rs.getFloat("total_trns"));
            result.add(map);
        }
    } catch(SQLException sqle) {
        sqle.printStackTrace();
    } catch(Exception e) {
        e.printStackTrace();
    } finally {
        try {
            rs.close();
            pstmt.close();
            con.close();
        } catch (SQLException e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }

    map = new HashMap<String, Float>();
    map.put(rs.getString("name"), rs.getFloat("total_trns"));
    result.add(map);
} catch(SQLException sqle) {
    sqle.printStackTrace();
} catch(Exception e) {
    e.printStackTrace();
} finally {
    try {
        rs.close();
        pstmt.close();
        con.close();
    } catch (SQLException e) {
        // TODO Auto-generated catch block
        e.printStackTrace();
    }
}
}

return null;
}

public float countRegistrations(Date date) {

    Connection con = null;

```

```

Statement stmt = null;
ResultSet rs = null;
System.out.println("date = " + date);
String query = "select sum(transactions) as trns from dashboard where trndate='";
SimpleDateFormat formatter = new SimpleDateFormat("yyyy-MM-dd");
String d = formatter.format(date);
System.out.println("date = " + date);

try {
    con = DBConnection.getConnection("", "");
    stmt =
con.createStatement(ResultSet.TYPE_SCROLL_INSENSITIVE,ResultSet.CONCUR_UPDATABLE);
    query += d + "'";
    rs = stmt.executeQuery(query);
    System.out.println("query = " + query);
    if(rs.next()) {
        return rs.getFloat("trns");
    } else {
        return 0;
    }
} catch(SQLException sqle) {
    sqle.printStackTrace();
} catch(Exception e) {
    e.printStackTrace();
} finally {
    try {
        rs.close();
        stmt.close();
        con.close();
    } catch (SQLException e) {
        // TODO Auto-generated catch block
        e.printStackTrace();
    }
}

return 0;
}
}

```

14. Awards

The “Awards” section on Homepage highlights details of the awards won by eTaal project since its inception. The Award icon and page is displayed in Figure-63

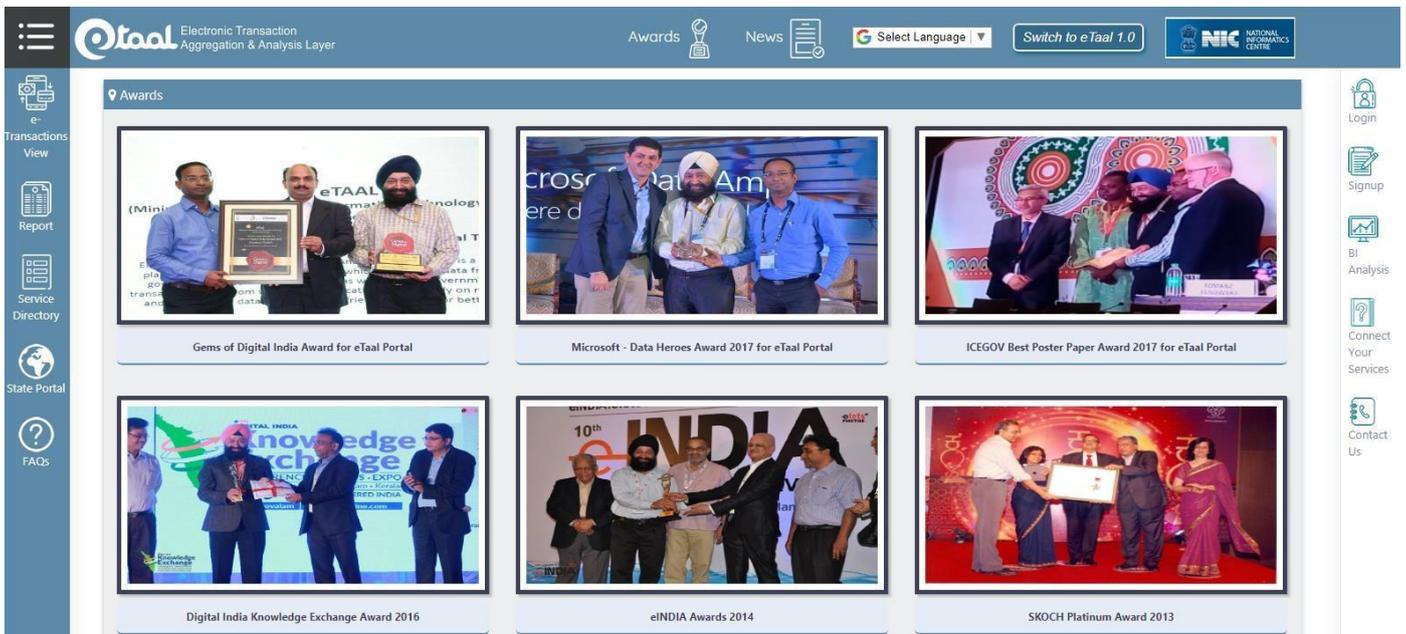


Figure-63

15. Workshop of eTaal 2.0

- eTaal 2.0 workshop at Vijayawada, Andhra Pradesh on 27.11. 2018.
- eTaal 2.0 workshop at Hyderabad, Telangana on 28.11.2018



eTaal 2.0 workshop at Vijayawada



eTaal 2.0 workshop at Hyderabad

16. eTaal Testimonial



Shri J Satyanarayana
IT Advisor to CM & Chairman, UIDAI

eTaal has brought several benefits like measurability leading to better management, visibility, ranking and healthy competition. eTaal has become a trendsetter in establishing similar real-time dashboards. It has the potential to take a great leap by incorporating the quality parameters of the Digital Service Standard. Compliments to the eTaal team for implementing such a useful and sustainable initiative.



Shri Yashwant A. Goswami
Member (Project Management) eCommittee
Supreme Court of India

Among first few things I do after coming to office is to visit etaal.nic.in. eTaal is a great platform developed for people who wish to see updated information every day. Analytical information provided on the web site is a step advance.

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