



SERVICE LEVEL BENCHMARKING IN URBAN TRANSPORT FOR INDIAN CITIES

VOLUME IV – SOFTWARE USER MANUAL

Project Cities : Ahmedabad , Surat,
Hubli-Dharwad, Mysore . Bhubeswar,
kohima



सत्यमेव जयते
Ministry of Urban Development
Government of India

Submitted to
Ministry of Urban
Development, GOI



Study Undertaken by
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CEPT University, Ahmedabad
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DATA COLLECTION AND REPORTING TOOL

(SLB-UT)

USER'S MANUAL FOR WEB APPLICATION

JULY, 2013



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1. INTRODUCTION

The Data collection and Reporting tool (SLB - UT) is a web browser based application accessible through internet connection. The tool delivers Urban Transport scenarios of various cities in scope covering 11 benchmarks, set for service level delivery. The majority of work performed by the application will be done on IUT, Delhi's servers, thus making it possible to interact with complex data on nearly any computer with a web browser. The tool shall be used by Public, Decision-making authorities, Data entry persons and Administrators of the tool.

System Requirements

The web application is designed for Microsoft Internet Explorer 8.0 or higher, Mozilla Firefox or higher and Google Chrome 25.0 or higher. The web application will perform best on computers with a high-speed internet connection similar to digital subscriber line (DSL), cable, or faster. The screen resolution set to 1024x768.

Launching the Web Application

To get started with accessing the web application, type the following address into your web browser or click on the link below:

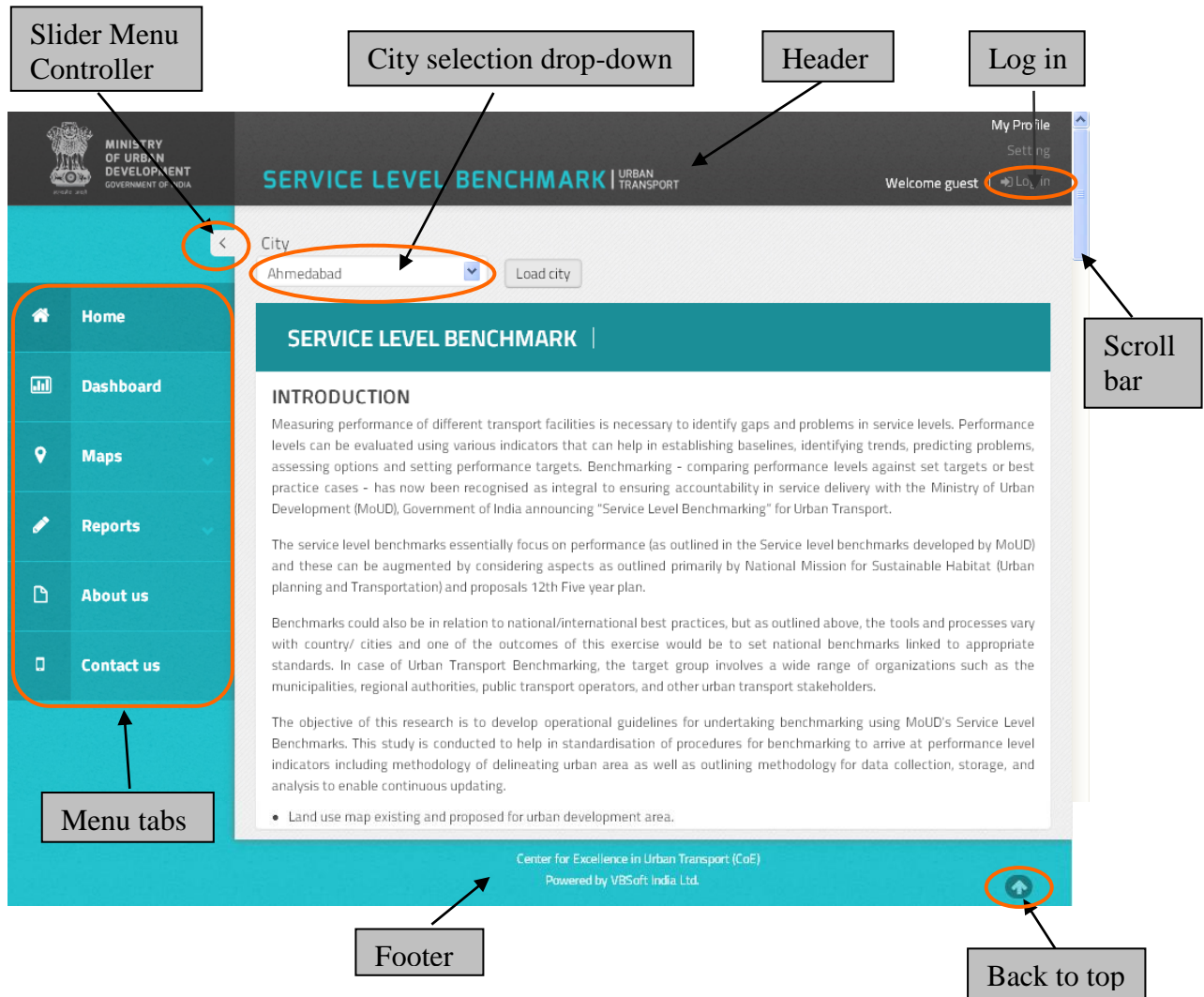
<http://115.115.179.66:93/CEPTLive.aspx>

The link is for internal use only for the time being, till the application goes live.

The first time you access the application a large amount of information is transferred to your computer, and it may take up to 30-60 seconds for it to load depending on your computer speed, internet connection type, and server load.

Application Layout

The Home page window is divided into a series of frames, as shown below, that contains the various navigation options used in the tool. Each frame and its contents are described in more detail in the sections that follow.



GETTING STARTED

2. END-USERS & AUTHORITIES

The end-users or decision-making authorities don't need to login to the tool to view the Urban Transport quality for the cities in scope. Below are the functionalities available to these users of the application.

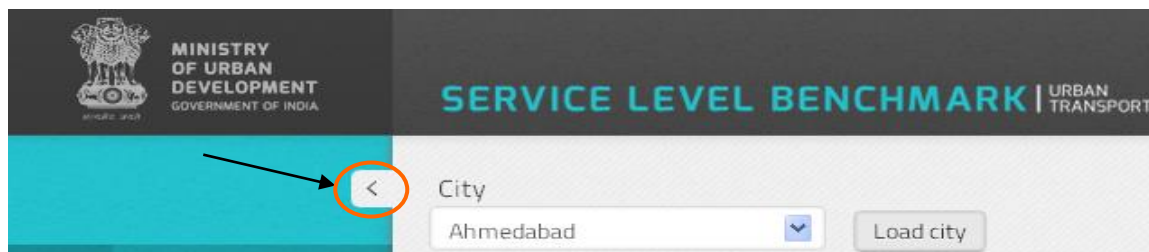
2.1 Menu Tabs

The Menu tabs are displayed at the left of the main screen as shown above. Menu tabs allows the users to navigate to various pages on the screen.

2.1.1 Home

Once the application URL has been entered, the default Home page is displayed on the screen as shown above. The Home page provides the information like Introduction of Service Level Benchmark (SLB), Objectives of SLB, the Study approach, Data establishment and methodology used etc.

The '**Slider menu controller**' (Shown below) is used to hide/unhide the Menu Panel and have full view of the page and SLB related information on the screen, as and when needed.



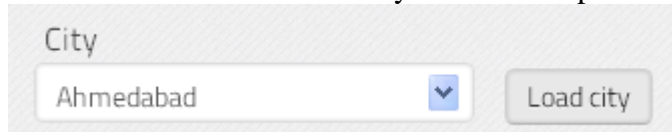
The '**Back to top**' arrow at the bottom of the screen (Shown below) takes the user back to the top of the page.



a) City Profile

The user might want to know the services quality of Urban Transportation for a particular city in scope. This page enables the user to view the details for which they wish to know the background, its demographic area, Modes of transportations available in the city and its service levels of transportation quality based on the pre-defined monitoring benchmarks.

The end user can select the city from the drop-down. Once the city is selected, click on '**Load city**'.



Below shown screen will be displayed with the City's LOS of the predefined benchmarks. It also displays Introduction, Urban Transport Scenario and the Study area considered for the selected city.

The Panels - Benchmark, Introduction, Urban Transport Scenario and Study Area, are collapsible and can be collapsed whenever the user would like to have the detailed view of the information captured about the city.

The 'Navigation Panel' also provides the functionality to the user to directly go to the home page or previous page by clicking on that icon as shown above.

The screenshot shows the 'SERVICE LEVEL BENCHMARK | URBAN TRANSPORT' interface. At the top, it displays 'MINISTRY OF URBAN DEVELOPMENT GOVERNMENT OF INDIA' and user information like 'My Profile', 'Setting', and 'Welcome guest | Log in'. Below this is a navigation bar with 'City profile' highlighted. The main content area features a 'BENCHMARK' section with a bar chart showing LOS for various categories and a table of benchmark values. The table data is as follows:

Category	Value
Public Transport Facility	2
Pedestrian Facility	2
Non Motorised Transport	2
Intelligent Transport System	3
Travel Speed	1
Parking Space	3
Road Safety	3
Pollution	2
Integrated landuse transport	2
Financial Sustainability	2

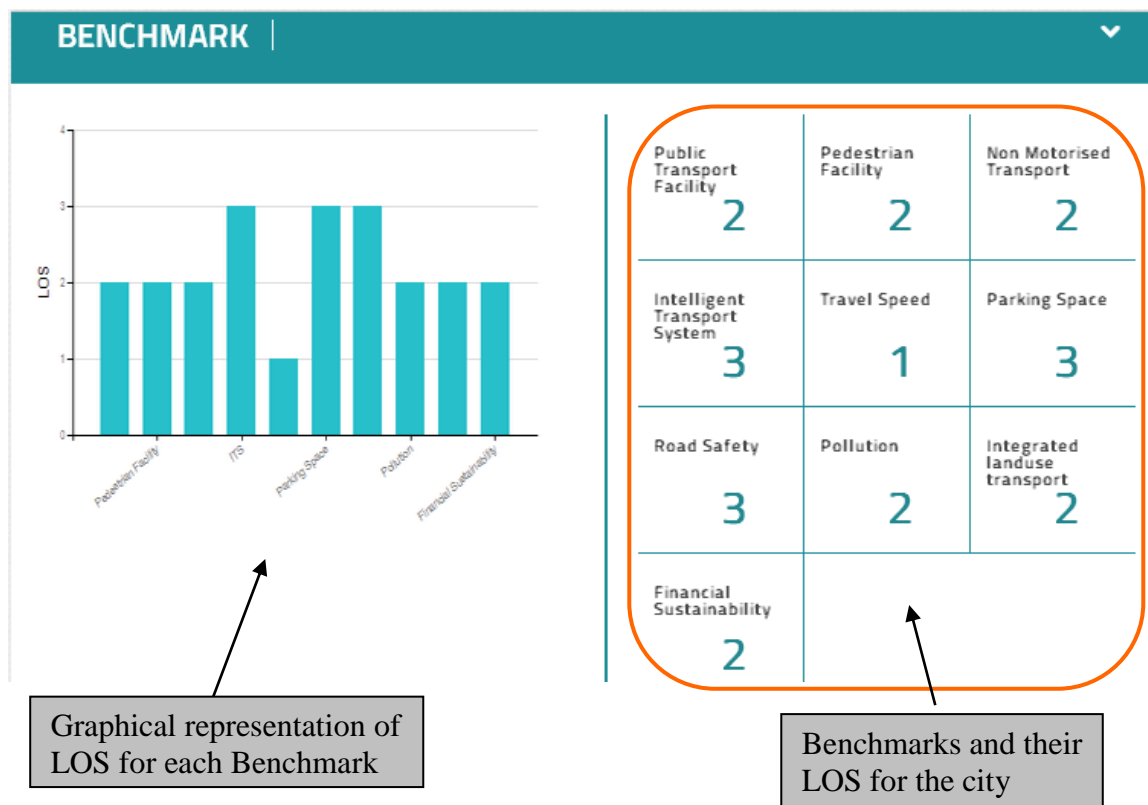
Below the benchmark table are three collapsible panels: '1. INTRODUCTION', '2. URBAN TRANSPORT SCENARIO', and '3. STUDY AREA'. The interface also includes a 'Navigation Panel' on the left and a 'Collapsible Panel' callout pointing to the expand/collapse icons on the benchmark table and the bottom panels.

The user can also switch over to another city to view or can select another year for which he/she would like to know the LOS for a particular city. (Shown below)

Select City: Ahmedabad
 Select Year: 2011
 GO

There are four Levels of service (LoS) specified, viz. 1, 2, 3, and 4 with 1 being the highest LoS and 4 being the lowest to measure each identified performance benchmark.

The Benchmark Panel is divided in 2 sections as shown below. Left section provides the graphical representation of the LOS for each SLB. This facilitates the user with quick analysis of the major contributing SLBs for low or high LOS for that city and on the improvement areas needed. Right section provides the LOS for each SLB and also facility to navigate to the drilled down information on a particular SLB. Details of the same are discussed in the next head - Benchmark Information.

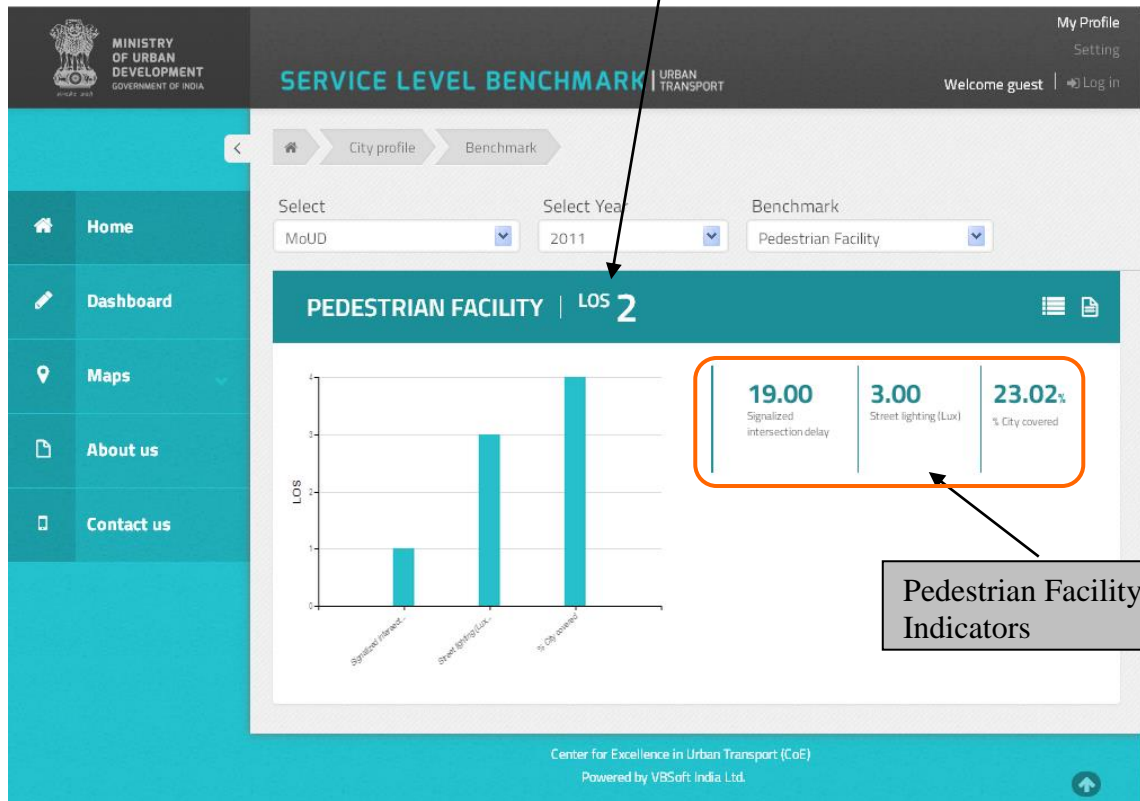


b) Benchmark Information

The user can have the drilled down information by clicking on a particular benchmark on the right section, as shown below.



Pedestrian Facility's LOS



Pedestrian Facility's Indicators

A benchmark comprises of various other aspects considered to come up with that benchmark's LOS. These aspects are named as 'Indicators'.

Eg: To know the LOS for the Pedestrian Facility of Ahmedabad city in year 2011 - a) % City covered(footpaths), b) Quality of Street Lighting(Footpaths) & c) Signalized intersection delay(Waiting time at signals for >45secs) for pedestrians are considered.

Further drill-down information at Indicator level can also be viewed by clicking on a particular indicator. Upon scrolling down the page, user can view the information for that indicator at the second half of the page.(Shown below)

SLB Info & Calculations

MINISTRY OF URBAN DEVELOPMENT GOVERNMENT OF INDIA

SERVICE LEVEL BENCHMARK URBAN TRANSPORT

My Profile Setting
Welcome guest Log in

City profile Benchmark

Select: MoUD Select Year: 2011 Benchmark: Pedestrian Facility

PEDESTRIAN FACILITY | LOS 2

19.00 Signalized intersection delay
3.00 Street lighting (Lux)
23.02% City covered

SIGNALIZED INTERSECTION DELAY

Indicator's Value: 19.00

Computation details: Click here for calculation detail

Indicator Information: Click here for indicator information

Targeted and Achieved LOS

	Total	Source	Month/Year
Major junctions in the city	118.00	GIS Computation	Jan-11
Number of intersections having average pedestrian waiting time of > 45 sec	22.00	No input source information exists	

Center for Excellence in Urban Transport (CoE)
Powered by VBSof India Ltd.

The user can view the calculation methodology used for arriving at the Indicator's value. As shown above, once the user clicks on 'Click here for calculations detail', below shown pop-up will be displayed on the screen of the user.

Signalized intersection delay

a) Total number of signalized intersections

b) Signalized intersections having average waiting time of pedestrians > 45 sec

Calculate [b / a] and Compute LOS

Close

Same way, Benchmark (SLB's) & Indicator's information and calculation methodologies can be viewed by clicking on the respective icons shown in previous page.

The Source of information gathered could be either Primary or Secondary. Secondary source are indirect sources of information collected by someone other than the user, through RTO, Pollution control board, Traffic Police etc. They are the Research based on the work of others. Primary source are direct sources of information collected through surveys, GIS Computations etc.

Above provided example of 'Signalized Intersection Delay' was that of a Indicator with information collected from secondary sources. Primary Indicators are shown below

STREET LIGHTING (LUX)

Road information

Footpath: LOS ▼
 Road: LOS ▼
Filter

Waypoint number	Road name	Lighting condition	Footpath LOS	Road LOS
1	Lemington Road	Median lighting (one pole)	3	4
3	Clap Road	Median lighting (one pole)	4	4
5	Clap Road	Median lighting (one pole)	4	4
7	Selapur Road	Median lighting (one pole)	4	4
33	Rani Chinamma Circle	6-arm junction	1	4
59	Jublee-Circle- Dharwad	6-arm junction	1	1

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The user can filter the information based on the LOS arrived at, for Footpath or Road.(Shown below) Select the LOS(1, 2, 3 or 4) from the dropdown of Footpath and click on 'Filter'. The table will regenerate based on the LOS filtered.

The screenshot shows the 'STREET LIGHTING (LUX)' interface. At the top, there's a teal header with the title and a dropdown arrow. Below it, the section is titled 'Road information'. There are two dropdown menus: 'Footpath:' with the value '2' and 'Road:' with the value 'LOS'. A red circle highlights a 'Filter' button to the right of the 'Road:' dropdown. Below these controls is a table with the following data:

Waypoint number	Road name	Lighting condition	Footpath LOS	Road LOS
45	Haliyal Road S.H.28	Median lighting (one pole)	2	4
37	P.B.Road	Undivided -Single side lighting	2	4
70	Haliyal Road	Undivided -Single side lighting	2	4
77	Haliyal Road	Undivided -Single side lighting	2	4
87	Railway Station Road	Undivided -Single side lighting	2	4

At the bottom of the interface, it says 'Center for Excellence in Urban Transport (CoE) Powered by VBSof India Ltd.' and there is a small teal button with an upward arrow.

2.1.2 Dashboard

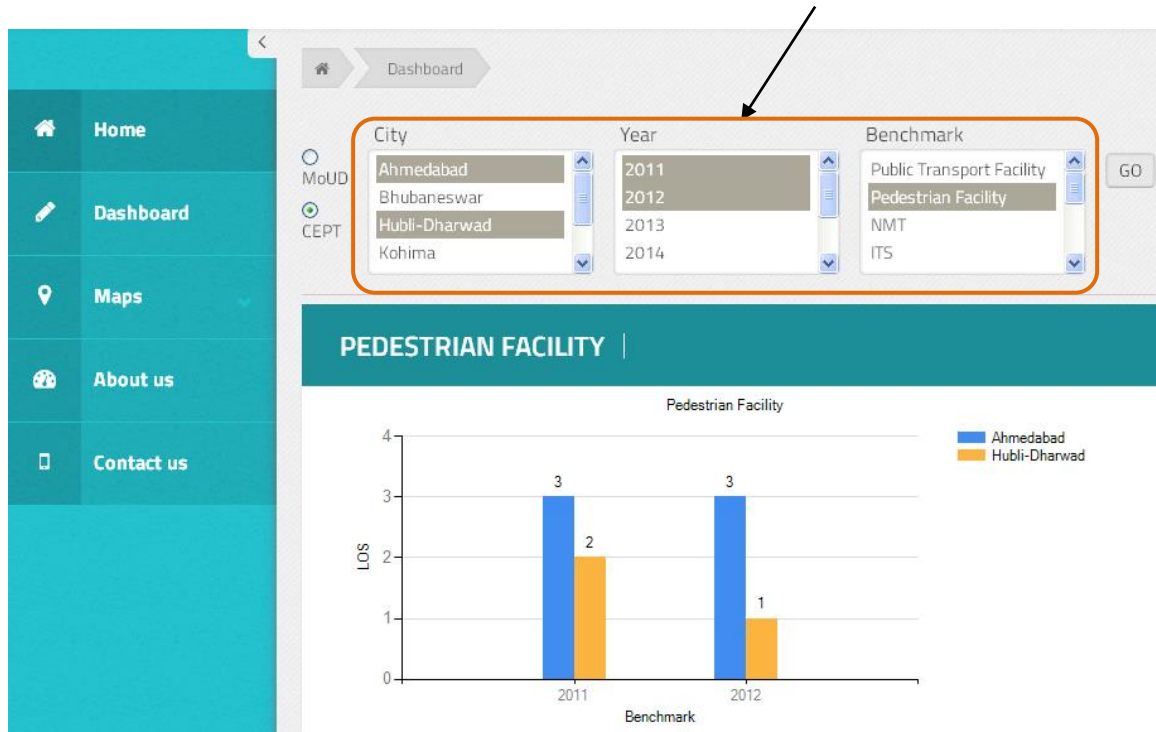
User can view the graphical charts for comparisons between various city/s, benchmark/s and year/s by going to the 'Dashboard' tab from the Menu tabs as shown below.

The screenshot shows the 'SERVICE LEVEL BENCHMARK | URBAN TRANSPORT' dashboard. The top left features the logo of the Ministry of Urban Development, Government of India. The main header is teal with the title 'SERVICE LEVEL BENCHMARK | URBAN TRANSPORT'. Below the header, there's a 'City' dropdown menu with 'Ahmedabad' selected and a 'Load city' button. A teal sidebar on the left contains menu items: 'Home', 'Dashboard' (highlighted with a red box and an arrow), 'Maps', 'About us', and 'Contact us'. The main content area has a teal header 'SERVICE LEVEL BENCHMARK |' and an 'INTRODUCTION' section. The text in the introduction reads: 'Measuring performance of different transport facilities is necessary to identify levels can be evaluated using various indicators that can help in establishing assessing options and setting performance targets. Benchmarking - corporate practice cases - has now been recognised as integral to ensuring economic Development (MoUD), Government of India announcing "Service Level Benchmarking". The service level benchmarks essentially focus on performance (as outlined in the 12th Five year plan and these can be augmented by considering aspects as outlined in the 12th Five year plan. Benchmarks could also be in relation to national/international best practices.'

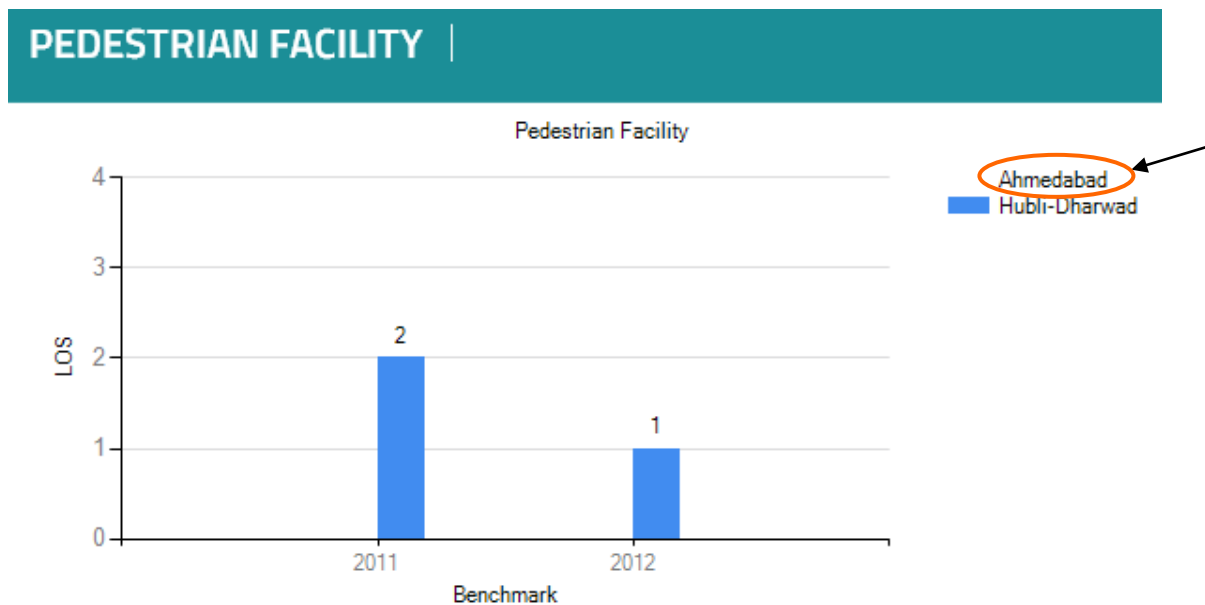
Select the 'City', 'Year' and 'Benchmarks' for which you would like to view the graphical representation of the service levels. The graphs will be populated for the selected benchmarks and

provide the summarized view of the service levels for the selected Cities and Years in comparison.

The tool provides the facility to have multiple selections of the Cities/Benchmarks/Years by pressing CTRL and making selections using a mouse click.



The user can unselect a particular City and view the service levels for the benchmark/s by directly clicking on the City name as well, instead of modifying the selection list. (Shown below)

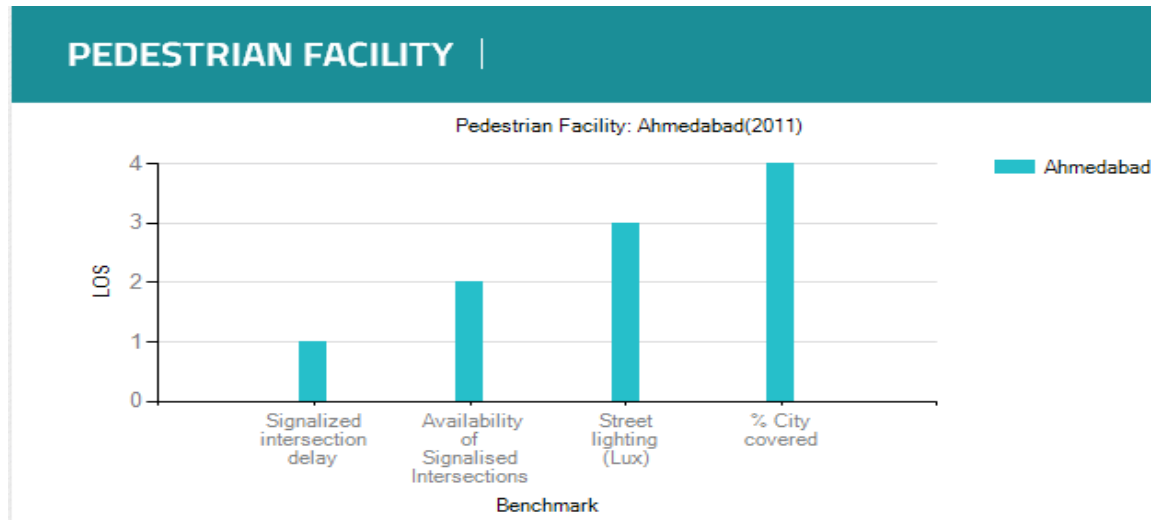


At times, the end-user or decision-making authorities would want to know the areas where the city

is performing good/bad for the selected benchmark in a given year and also the impacting indicators that are contributing to the service levels to where they are.

The application provides the facility to view the drilled down information of each benchmark for the selected year/s and city/s.

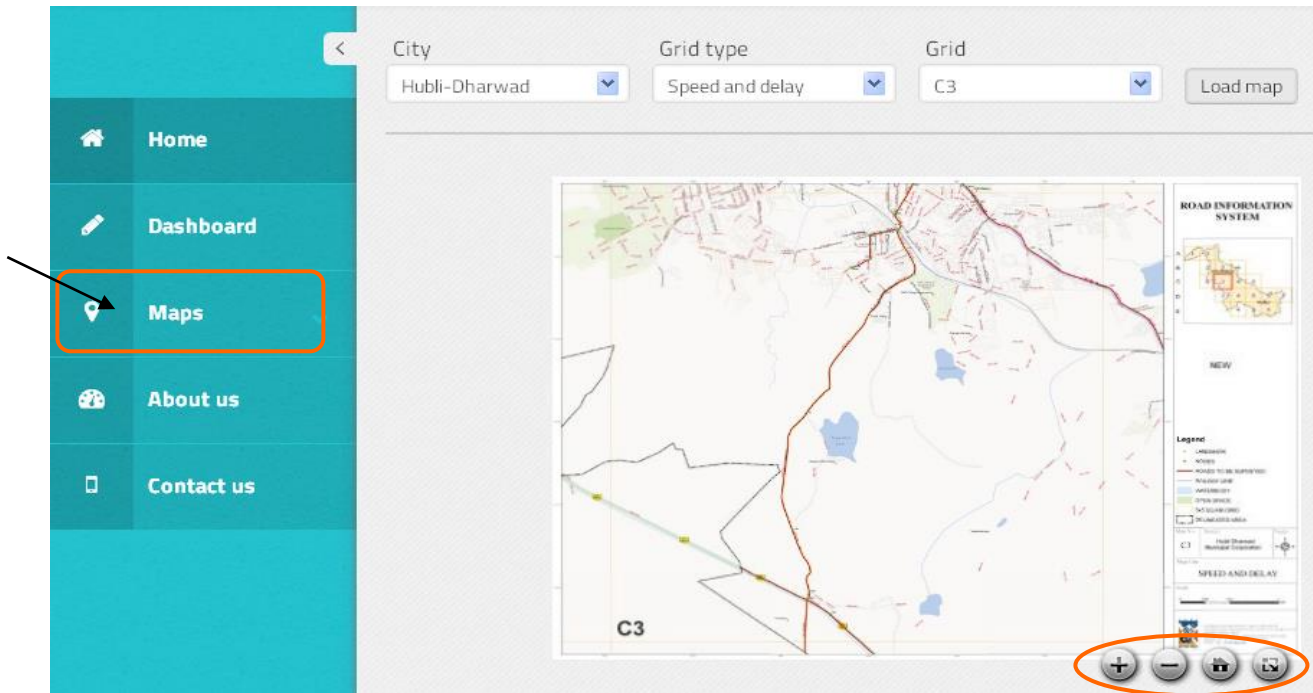
Click on the particular LOS bar for which you wish to view the drilled down information for the selected city and benchmark. The application will display the indicators that are part of the selected benchmark (Shown below-Ahmedabad's Service level bar selected)



Clicking on any of the indicator bars once more, takes the user back to the previous page of the chart.

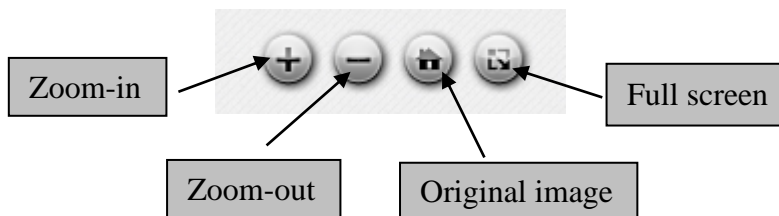
2.1.3 Maps

The application provides the facility to view the City maps and the maps for the study areas considered for indicators using primary survey data of a particular grid.



The user can select City, Grid type (Indicator) and Grid number for which they wish to view the map and clicking on **'Load map'**(Shown above). User can toggle the map image to and fro with the help of mouse and can zoomed-in by clicking anywhere on the map.

The four buttons (highlighted in above screenshot) provided on the Maps screen, enables the user to zoom-in, zoom-out, full screen view and to move back to the original image sizes.



2.1.4 About us

'About us' tab provides the information and background of CEPT-COE.

2.1.5 Contact us

'Contact us' tab contains the contact details of the authorities responsible to provide the technical support or assistance/clarifications on the information captured on the tool.

3. SYSTEM ADMINISTRATOR

The System Administrator (SA) is responsible for managing the user's access to the application and to add/delete/modify the user access. He is also authorized to manage the Cities/Benchmarks/Indicators apart from the additional rights of City Authority.

Each of these SA rights and its contents are described in more detail in the sections that follow.

3.1 Manage User

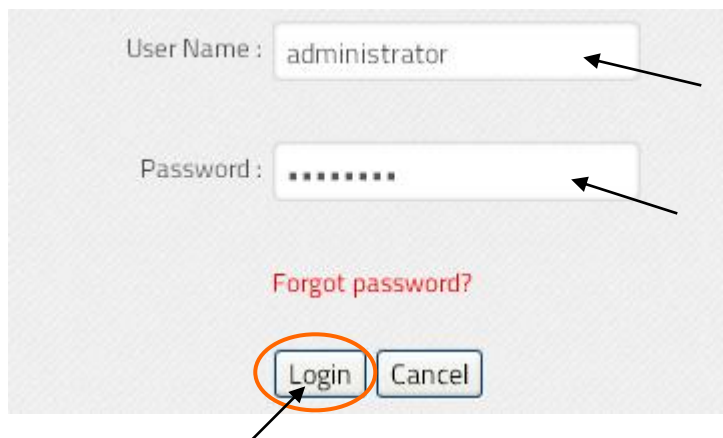
This menu is used to manage the user access i.e create, modify or delete users profiles.

3.1.1 Login

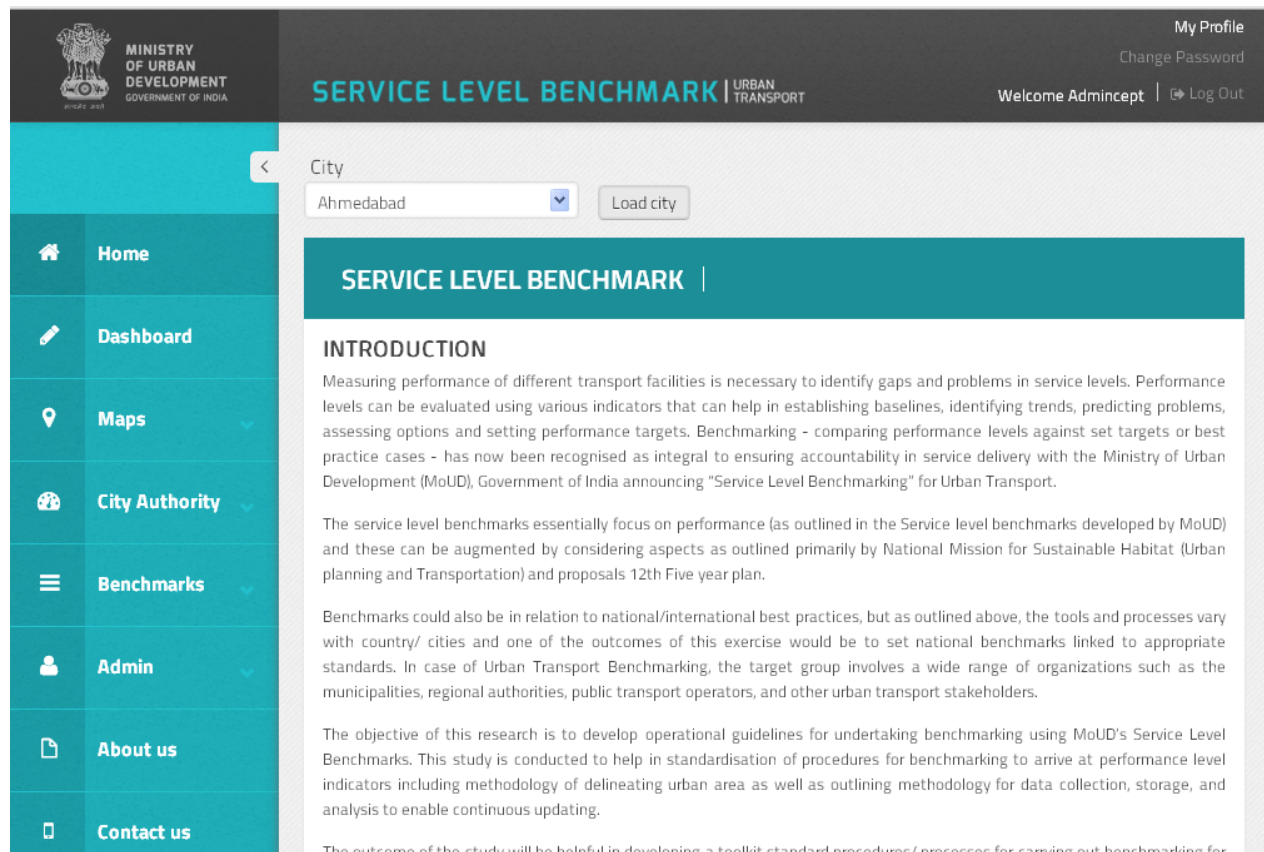
The SA shall have access to the application for a particular city or all the cities in scope. He/She can log in to the application by clicking on the log in icon at the Header/top right corner of the Home page (Shown below)



Enter the Username and Password as shown below and click on '**Login**'



Once the SA logs in to the application, below screen will display for the user.



The user can log out from the application by clicking on Log Out at the top right corner of the home page screen.

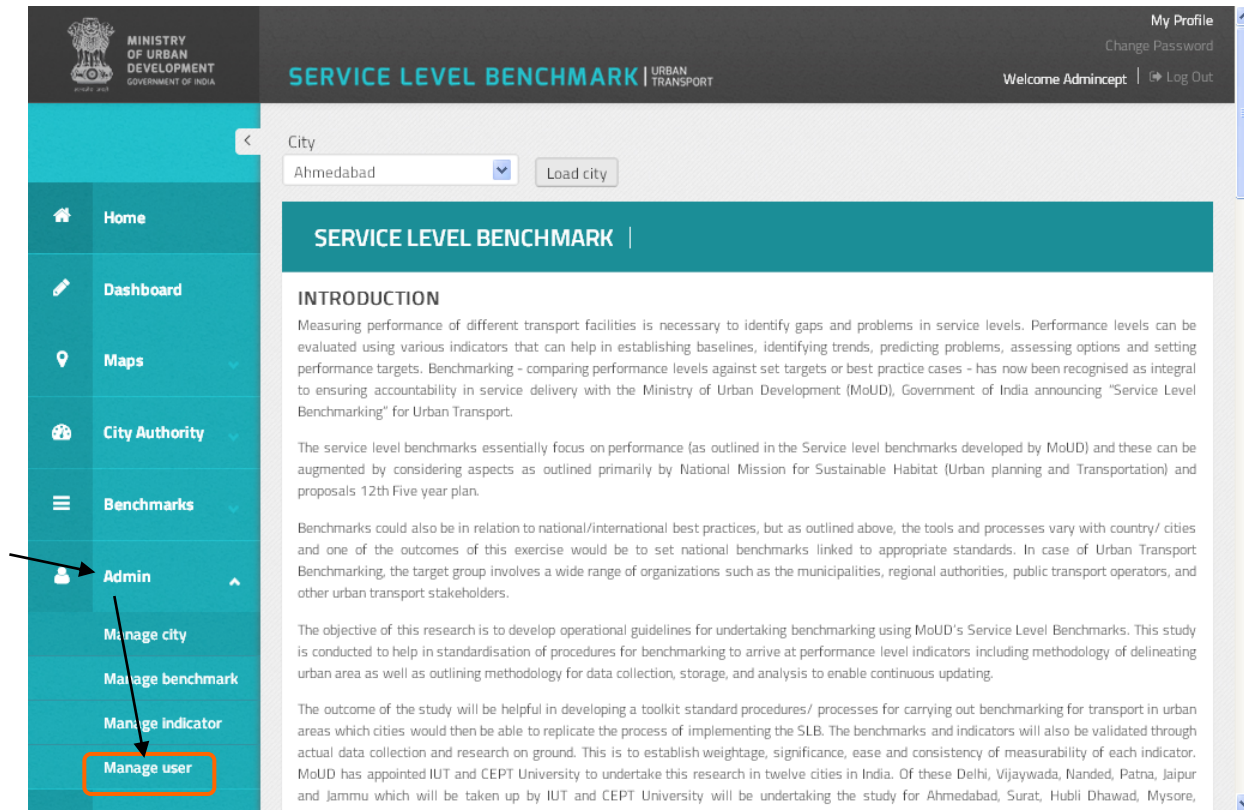


The login, Change Password – First Time, Change Password & Forgot Password are discussed in more detail under section 4.1

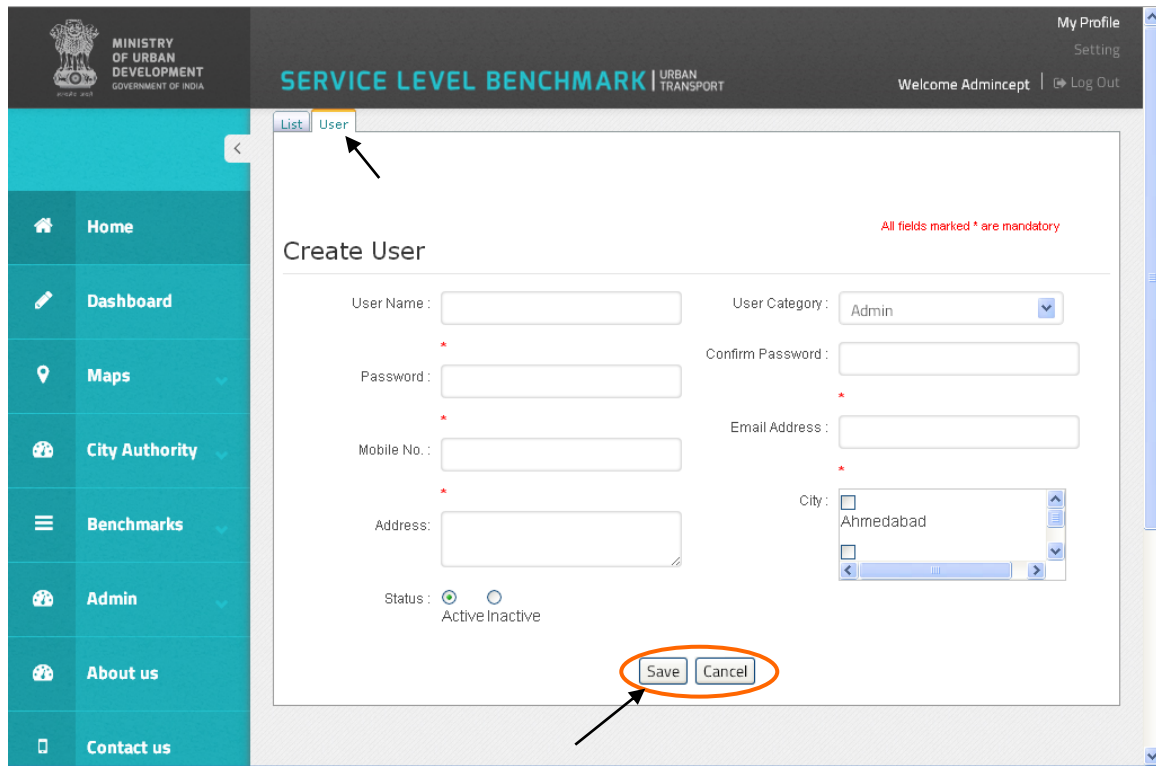
3.1.2 Create New user

The new user can be created by the SA, based on the access level to be granted to the new user. The new user can have rights to view or edit the data for 1 city or multiple cities based his access level.

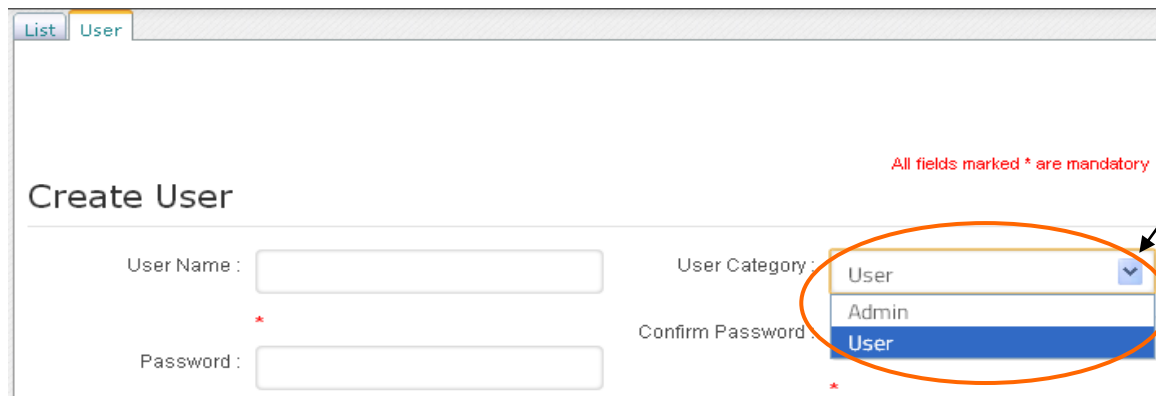
Go to '**Admin**' Menu tab and click on '**Manage user**'



The '**User**' tab on the screen, allows SA to create new user. Enter the details of the user as shown below. The fields with ' * ' are mandatory fields.

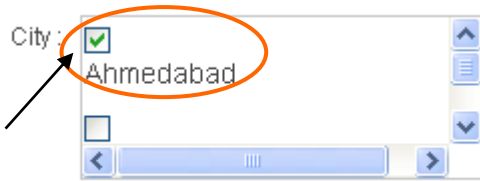


The SA can select the category of the new user, whether he is going to be the City Authority User or Admin, by selecting the right option in drop down under 'User Category' field.



The new password entered, should be minimum 8 characters & maximum 15 characters and contain at least a special character,(e.g - \$,*,#,@...), a numeric value(0-9) and an alphabet(A-Z). Password and Confirm Password, both the fields entry should match.

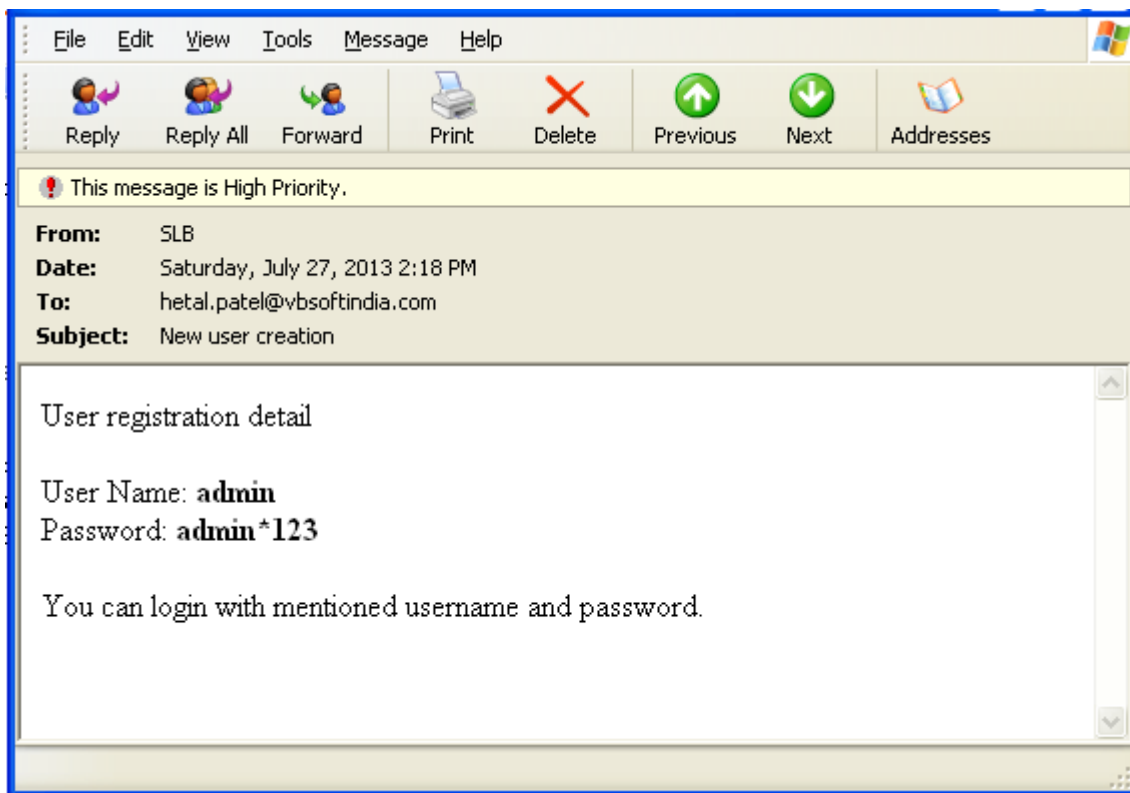
The 'City' field gives the facility to grant city-level access to the users. At times, the user might have rights to access multiple cities instead of 1. In that case, the SA will grant access to the user by selecting the Checkbox against the city/s for which the user is eligible to have access to.



At times, the user might have access but is not an active user of the application. In this case, 'Status' field gives SA, the option to modify the user's access level to either Active or Inactive status. This is mainly used to edit the profile of the existing users of the application.

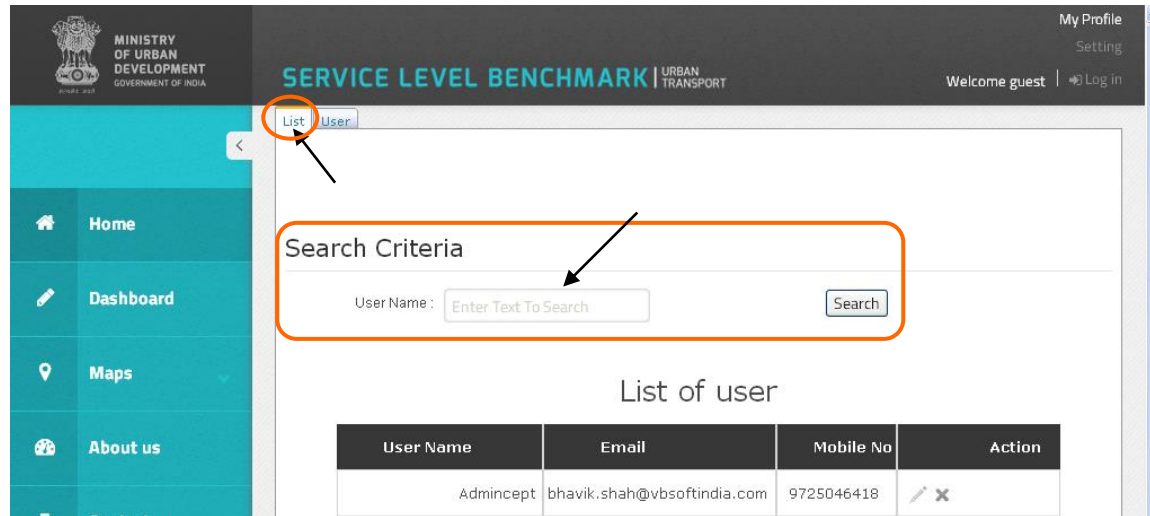


Click on 'Save', once all the required fields are updated else click 'Cancel' to discard the updations made. Once the New user is created, Username and Password details are mailed to the user at his registered email address (Shown below) and the system will pop-up successful password creation message.



3.1.3 Modify / Delete User

SA can view the list of existing users of the application by clicking on 'List' tab under 'Manage user' tab of Admin menu (Shown below). This screen allows SA to Search, modify or delete the profiles.

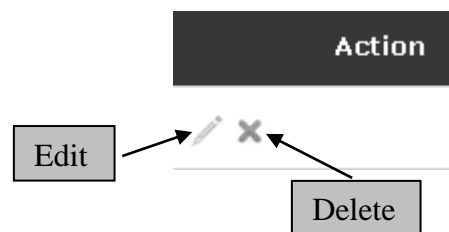


❖ Search

Search Criteria helps the SA to search the user by entering the User name in the 'User Name' field and clicking on 'Search' to view the user's profile details..

❖ Modify

Once the searched profile of the user is populated under List of user, SA can edit the user profile by clicking on Pencil icon under Action as shown below.



This takes the user to the User tab and SA can make the necessary changes to the profile except the Username which is once created, cannot be modified. Click on 'Update', once the necessary changes are made else 'Cancel' to discard the modifications.

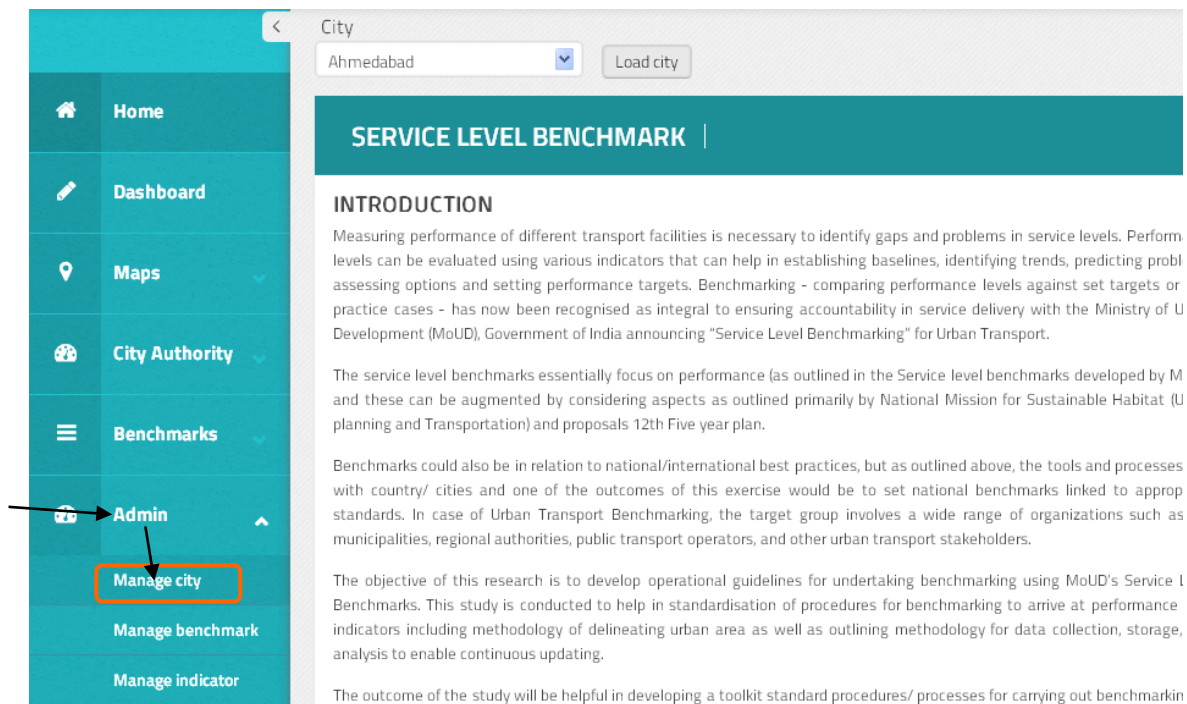
❖ Delete

The user profile can be deleted by clicking on the delete icon as shown above. Application will ask for deletion confirmation with the SA. Once the deletion is confirmed, the user profile will be permanently deleted from the application.

3.2 Manage City

This menu is used to add new city, in scope, for benchmarking and / or modify the city related information like City profile, Study area, Population etc. whenever required.

Go to 'Admin' Menu tab and click on 'Manage city'



3.2.1 Add new city

Select 'Add new city' from the drop-down. Select the year for which the new city is added and enter the details of the new city as shown below in the next page.

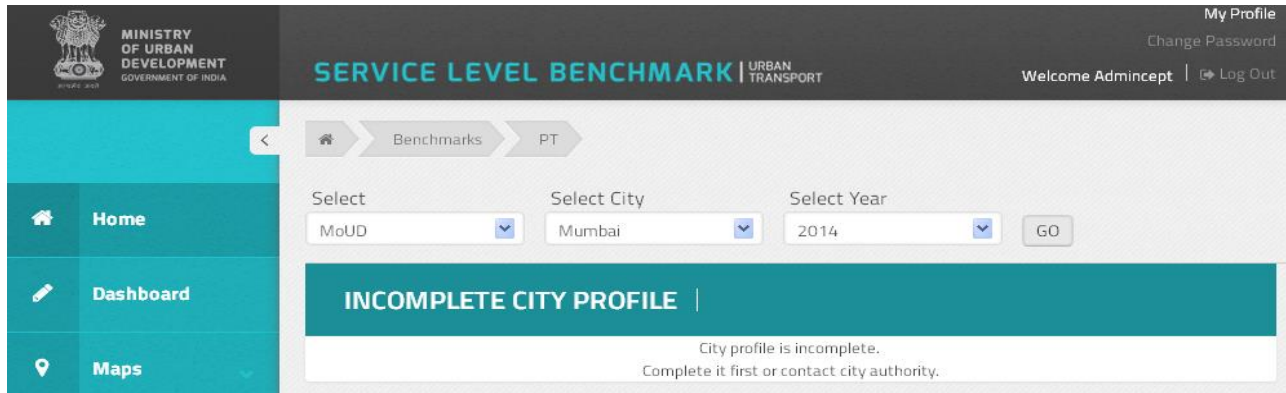
The application provides the facility to change the font type, font size, indentation, bold, underline etc. with the help of toolbar provided for each text box as shown below in the next page.

The SA can view the text in Normal view or HTML view as well with the help of the buttons provided at the bottom of each text box as shown below (Mode of View). HTML mode allows the user to provide spacing between the paragraphs through coding as well.

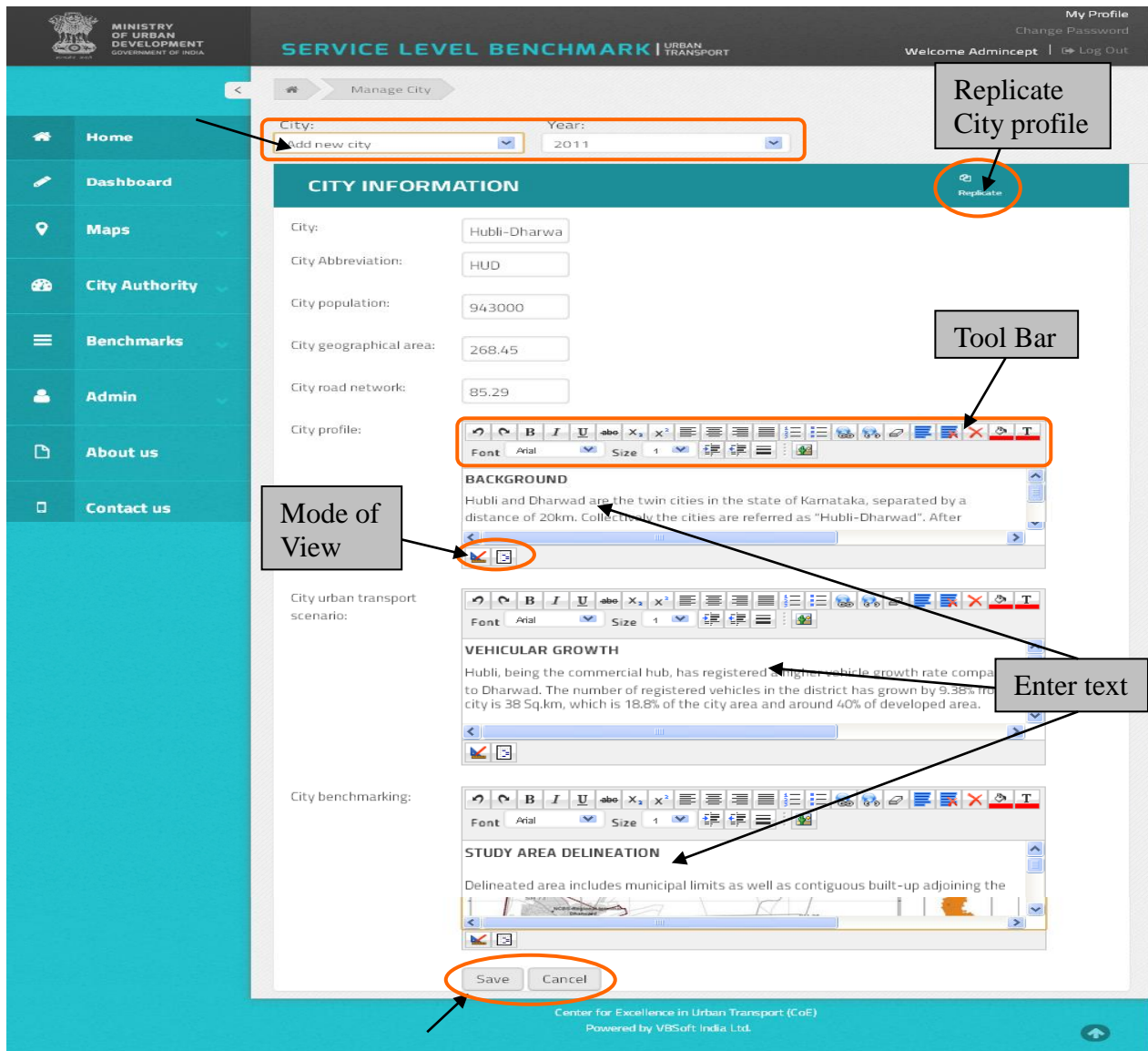


Click on 'Save', once all the details are updated in the fields. Click on 'Cancel' to discard the updations made.

Note: The City authority/Admin will be able to view the Benchmark/Indicator values for only those years in which the City profile is updated from 'Manage city', else, system will notify the user to update the city profile for that year first.



Replication button, shown below, allows the user to replicate the city profile to next year instead of entering all the details manually again for the new year.



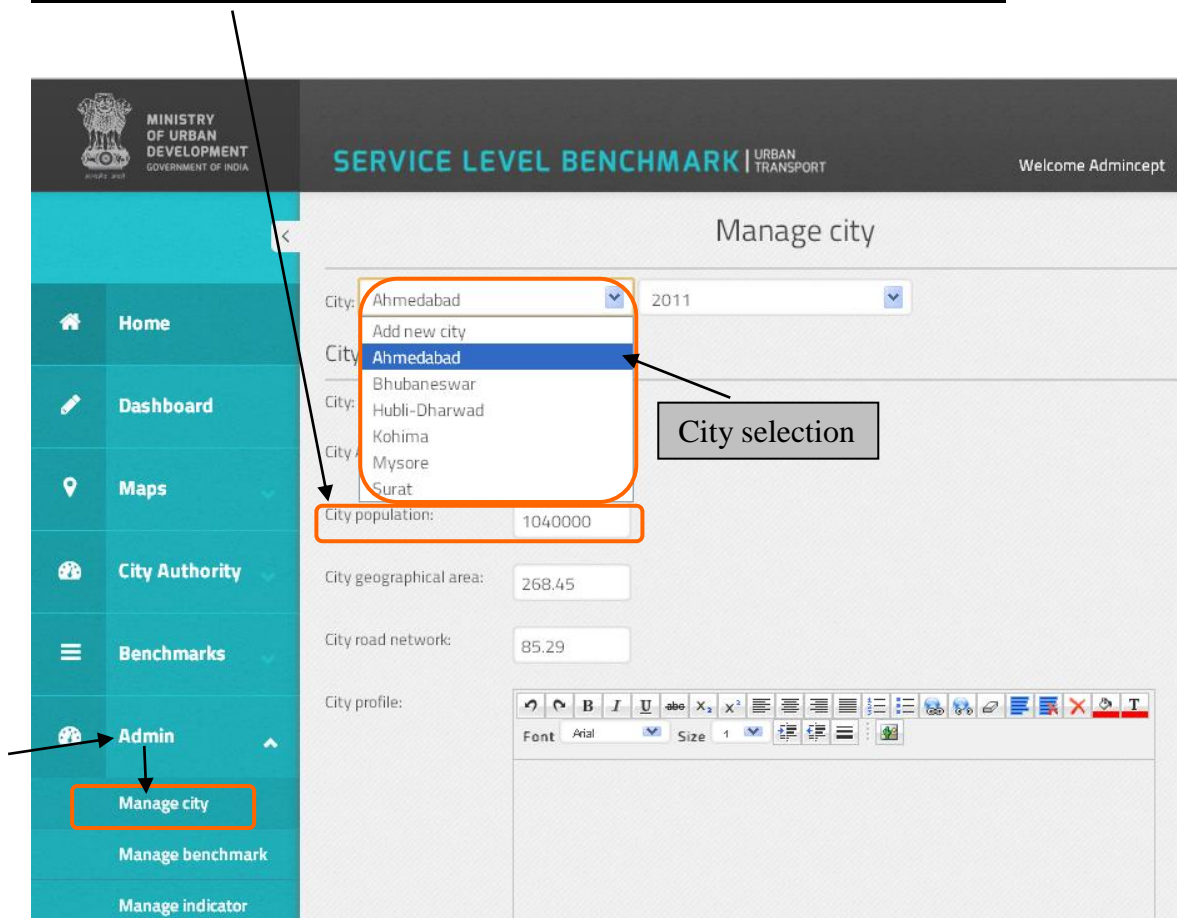
3.2.2 Modify City Information

The information like City population, study area, maps, urban scenario etc might change over a period of time for a city. In order to enable the user to update these changes to the city, 'Manage city' tab is used.

Select the existing city from the drop-down for which modification is to be done and select the year. Make the necessary changes to the content wherever applicable for that city.

Click on 'Save', once all the details are updated in the fields. Click on 'Cancel' to discard the updations made.

The City Authority entering the Benchmark / Indicator values for his / her city will have to first update the Population under 'City population' from this menu tab.



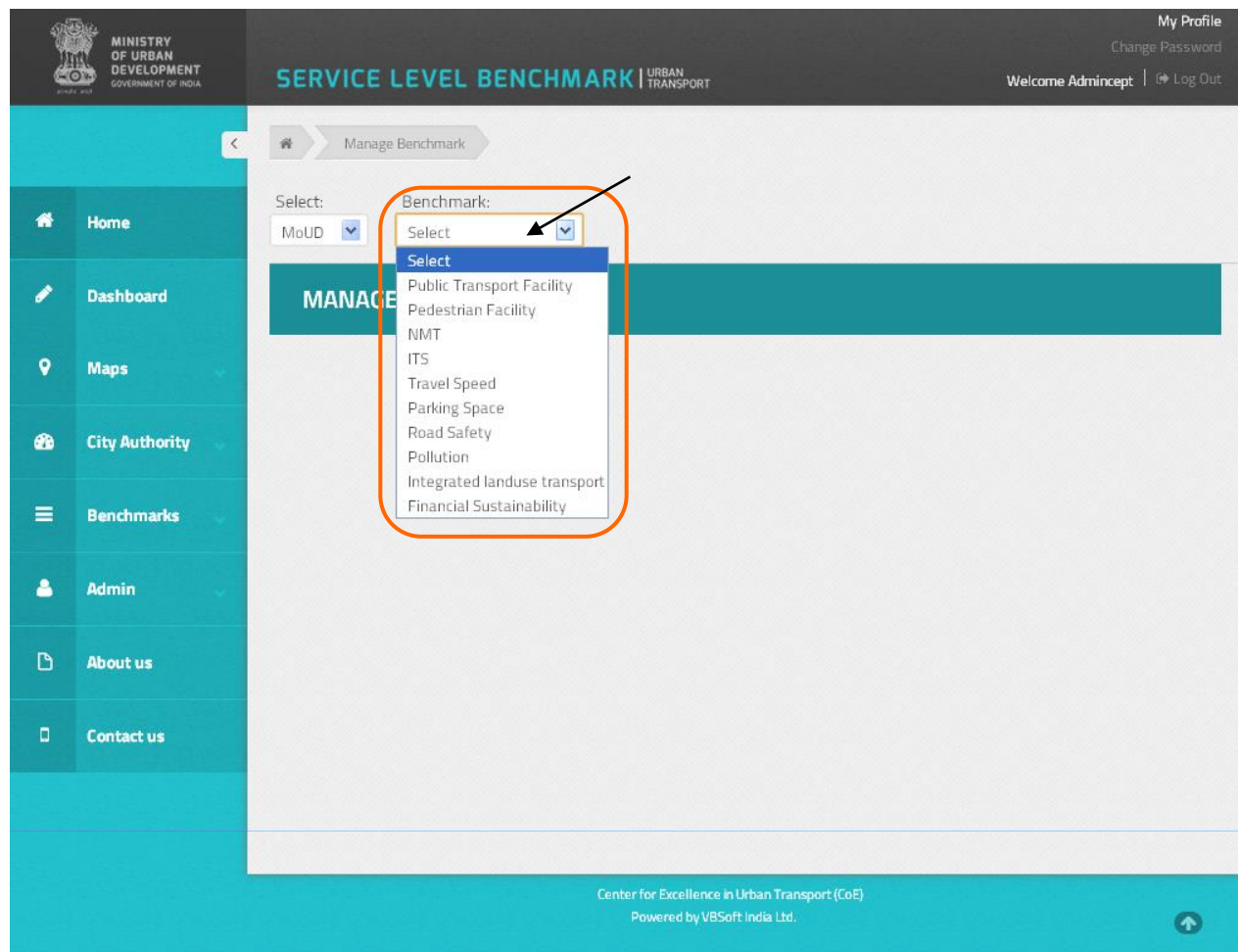
The indicators, which are dependent on the population size figures, will **NOT** generate the right values, in case the City population is not updated by the user at 'Manage city' tab.

3.3 Manage Benchmark

Over a period of time, the authorities might have better calculation methodologies for a benchmark, as a process improvement. Also, new indicators might be added to the benchmark, due to which, the overall benchmark LOS might change.

This menu is used to update the LOS ranges for a particular benchmark, update benchmark information or calculation methodologies.

Go to '**Admin**' Menu tab and click on '**Manage Benchmark**'. As shown below, select the '**Benchmark**' to be updated from the drop-down.



Make the necessary changes to either LOS ranges, Benchmark description or Calculation methodology as shown below and click on '**Save**'.

Click on '**Cancel**' to discard any changes made to the benchmark's information.

The screenshot displays the 'MANAGE BENCHMARK' interface. At the top, it shows the Ministry of Urban Development logo and the text 'SERVICE LEVEL BENCHMARK | URBAN TRANSPORT'. The user is logged in as 'Admincept'.

The main content area is titled 'MANAGE BENCHMARK' and includes the following elements:

- Select:** MoUD (dropdown)
- Benchmark:** ITS (dropdown)
- Benchmark name:** ITS
- Benchmark LOS ranges:** Four rows, each with a range of values (e.g., 5.00 to 7.00, 8.00 to 10.00, 11.00 to 15.00, 16.00 to 20.00).
- Benchmark description:** A text area with a rich text editor toolbar.
- Calculation methodology:** A text area with a rich text editor toolbar.
- Buttons:** 'Save' and 'Cancel' buttons at the bottom.

Annotations with arrows point to the following areas:

- LOS Ranges:** Points to the four rows of benchmark ranges.
- Tool bar:** Points to the rich text editor toolbar above the description field.
- Enter text:** Points to the description and calculation methodology text areas.
- Save/Cancel:** Points to the 'Save' and 'Cancel' buttons.

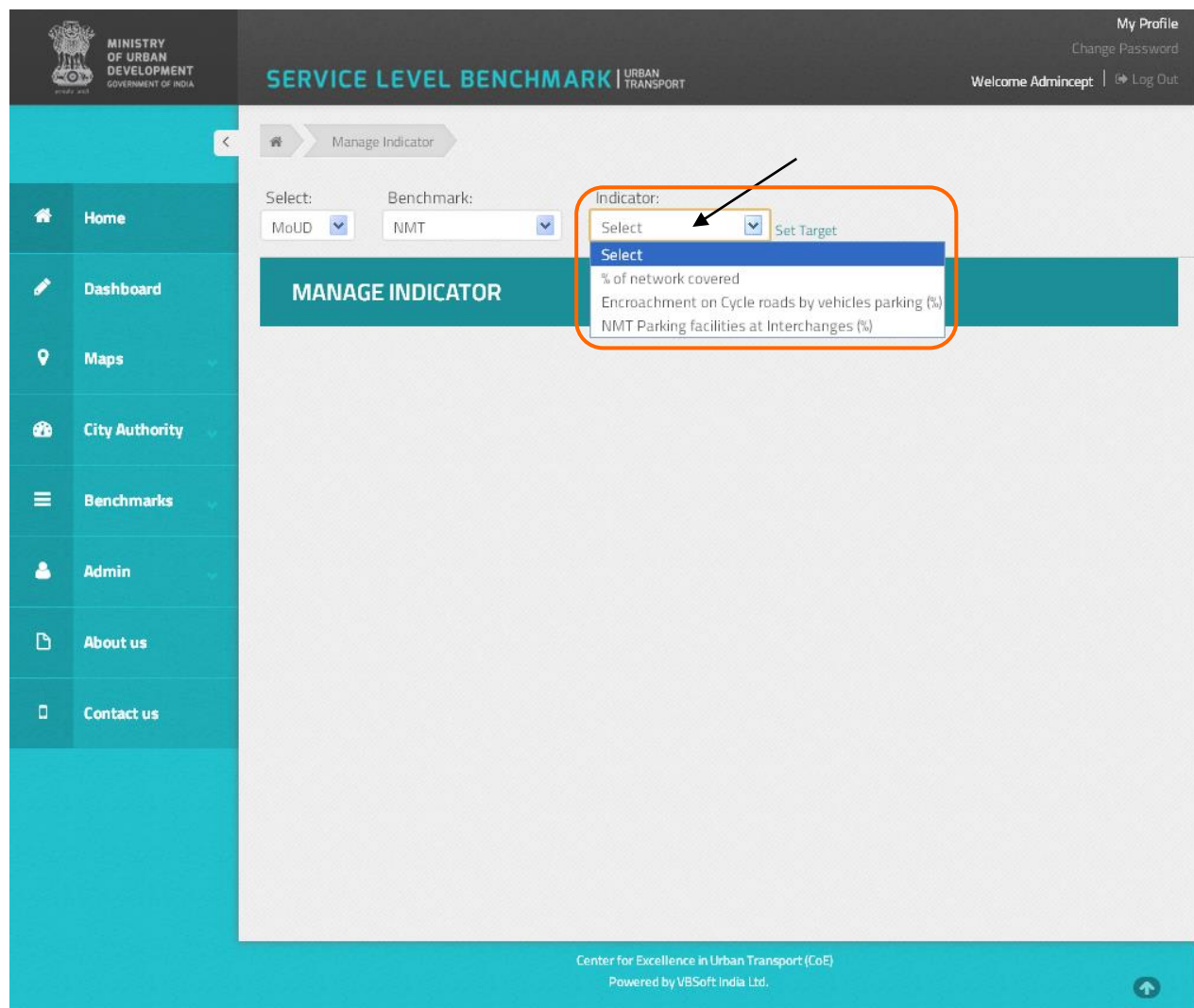
3.4 Manage Indicator

This menu is used to update/modify the LOS ranges/Unit for a particular indicator, update/modify indicator information, Modify or Set LOS target for an indicator or update/modify calculation methodologies.

3.4.1 Update / Modify Indicator information

Go to '**Admin**' Menu tab and click on '**Manage indicator**'. As shown below, select the '**Benchmark**' from the drop-down for which the indicator is to be updated.

Select the '**Indicator**' that needs to be updated.



Make the necessary changes to LOS ranges, Indicator Units/description, Target set(explained in next section) or Calculation methodology as shown below and click on '**Save**'.

Click on '**Cancel**' to discard any changes made to the Indicator's information.

The screenshot displays the 'Manage Indicator' page in the SLB-UT application. The interface includes a top navigation bar with the Ministry of Urban Development logo and 'SERVICE LEVEL BENCHMARK | URBAN TRANSPORT' text. A sidebar on the left contains navigation links: Home, Dashboard, Maps, City Authority, Benchmarks, Admin, About us, and Contact us. The main content area is titled 'MANAGE INDICATOR' and contains the following fields:

- Select:** MoUD (dropdown)
- Benchmark:** NMT (dropdown)
- Indicator:** Encroachment on Cy (dropdown) with a 'Set Target' button circled in orange.
- Indicator name:** Encroachment on Cycle roads by vehicles parking (%)
- Indicator LOS 1 range:** 0.00 to 10.00
- Indicator LOS 2 range:** 10.00 to 20.00
- Indicator LOS 3 range:** 20.00 to 30.00
- Indicator LOS 4 range:** 30.00 to 100.0
- Indicator Unit:** %
- Indicator description:** A rich text editor containing a blank space.
- Calculation methodology:** A rich text editor containing:
 - a) Total length of the Parking on Cycle Track
 - b) Total length of NMT network
 - Calculate [a / b] * 100 and Compute LOS
- Buttons:** 'Save' and 'Cancel' buttons at the bottom, with 'Save' circled in orange.

Annotations with arrows point to the 'Set Target' button, the LOS ranges and unit section, the 'Enter text' area in the description editor, and the 'Save' button.

3.4.2 Set Target

The MoUD will set the targets for each of the indicators considering the existing UT scenario for that city. Based on these set targets, the decision making authorities can focus on the improvement areas for a particular benchmark of that city and come up with action plan to achieve the set target or excel in below target or far below target areas of the benchmark/indicator.

As shown above, the SA can click on '**Set target**' and a pop-up window will open as shown below.

The screenshot shows a 'Set Target' form with the following fields and annotations:

- Select City:** A dropdown menu with 'Ahmedabad' selected. An arrow points to the dropdown arrow.
- Select year:** A dropdown menu with '2014' selected. An arrow points to the dropdown arrow.
- Achieved Target:** A text input field containing 'LOS'. An arrow points to this field from a box labeled 'LOS - 1, 2, 3 or 4'.
- Comment:** A text area for comments. An arrow points to this field from a box labeled 'Comments ,if any'.
- Step below Target:** A text input field containing 'LOS'. An arrow points to this field from a box labeled 'LOS - 1, 2, 3 or 4'.
- Comment:** A text area for comments. An arrow points to this field from a box labeled 'Comments ,if any'.
- Far below Target:** A text input field containing 'LOS'. An arrow points to this field from a box labeled 'LOS - 1, 2, 3 or 4'.
- Comment:** A text area for comments. An arrow points to this field from a box labeled 'Comments ,if any'.
- Buttons:** 'Save target' and 'Cancel' buttons are circled in orange at the bottom. An arrow points to the 'Save target' button.

Select the '**City**' and '**Year**'. Update the LOS for the Achieved Target, Step below Target and Far below Target for the indicator and comments, if any.

Based on these set targets, the decision-making authorities will get to know the targets achieved by the Cities compared to the targets set here.

Click on '**Save target**', once all the fields are updated. Click on '**Cancel**' to discard the updates.

3.5 Manage Input Source

The secondary data might be collected from various sources like RTO, Census of India, Municipality etc. This Menu tab is used to add new source of information that is not found in the existing list.

Go to 'Manage input source' under Admin menu tab and you will find the existing list of the sources which can be edited or deleted.

The screenshot displays the 'Manage Source' interface. On the left, the 'Admin' menu is expanded, and 'Manage input source' is highlighted. The main area features a 'MANAGE SOURCE' section with a 'Source:' text box and 'Save' and 'Cancel' buttons. Below this is a 'List of source' table with columns for 'Source' and edit/delete actions. The table lists various sources such as 'BRTS Janmarg', 'Bus operators (STU/SPV/Municipal/Pvt)', 'Census Of India', 'CEPT', 'COE, CEPT University', 'Development Control Regulation', 'GIS Computation', 'LUX level survey', 'Municipal corporation', 'Municipality', 'Municipality / Census of India', and 'Urban development'. Annotations include 'Enter Source name' pointing to the text box and 'Edit/Delete Source name' pointing to the edit/delete icons in the table.

Source	
BRTS Janmarg	
Bus operators (STU/SPV/Municipal/Pvt)	
Census Of India	
CEPT	
COE, CEPT University	
Development Control Regulation	
GIS Computation	
LUX level survey	
Municipal corporation	
Municipality	
Municipality / Census of India	
Urban development	

Once clicking on 'Edit', the source name will appear under Source text box for editing.

Enter the new source name to be added and click on 'Save'. Click on 'Cancel' to discard the changes.

3.6 Report

Performance Report Card for the city, which would form the basis for reporting and monitoring, can be viewed and modified by the SA from this menu tab.

Go to **'Report'** under Admin menu tab. Select the City and Year and click on **'Load Report'**

The user will be able to view the list of Benchmarks, their LOS achieved for the selected year, LOS targeted for next year and Action plan to achieve the target. The **'LOS Achieved'** for the year will be automatically populated by the system based on the Benchmark's indicator values updated by City Authority.

To update the **'LOS Targeted'** and **'Action to achieve the target'**, click on the right most button in the table. (Shown below). The selected benchmark will display under the Benchmark text box above the table. User can then update the targeted LOS and action plan from the text boxes provided and click on Save.

MINISTRY OF URBAN DEVELOPMENT GOVERNMENT OF INDIA

SERVICE LEVEL BENCHMARK | URBAN TRANSPORT

Welcome guest | Log in

Benchmark Report

Select MoUD Ahmedabad Select Year 2011 Load report

BENCHMARK REPORT

Benchmark: ITS

LOS Actually Achieved: 3

LOS Targeted for next year: 2

Action Plan to achieve the target: Comment

Save Cancel

Edit

Benchmark Name	LOS Achieved	LOS Targeted	Action to achieve the target
Public Transport Facility	2		
Pedestrian Facility	2		
NMT	2		
ITS	3		
Travel Speed	1		
Parking Space	3		
Road Safety	3		
Pollution	2		
Integrated landuse transport	2		
Financial Sustainability	2		

Center for Excellence in Urban Transport (CoE)
Powered by VBSof India Ltd.

4. CITY AUTHORITY/DATA-ENTRY USER/SURVEYOR

The City Authorities / Data entry persons / Surveyors are the ones who are responsible for entering the actual values to measure the Benchmark / Indicator for his / her authorized city/s.

The SA will also have these permissions equivalent to the City Authority's access level, apart from the existing rights for 1 or multiple cities.

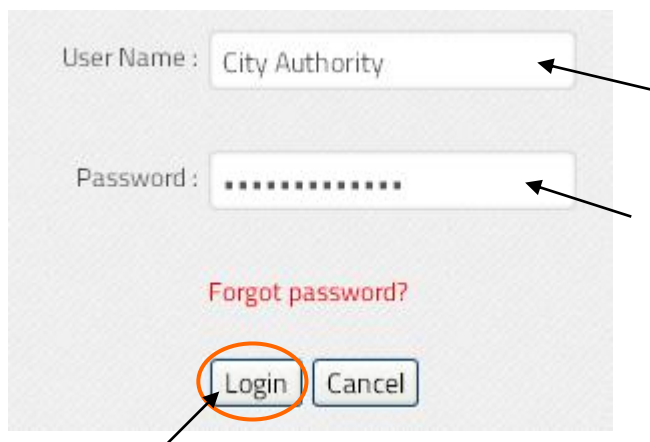
These users are granted access to a city or multiple cities based on their rights for data entry. Upon login, they would see only those cities in the City drop-down, for which they have access to.

4.1 Login

User can log in to the application by clicking on the log in icon at the Header/top right corner of the Home page (Shown below)



Enter the Username and Password as shown below and click on '**Login**'



In case, the user enters wrong Username/Password for 3 consecutive times, the application will be blocked for 1 hour and will notify the user to try logging in again with the correct Username/Password after 1 hour.

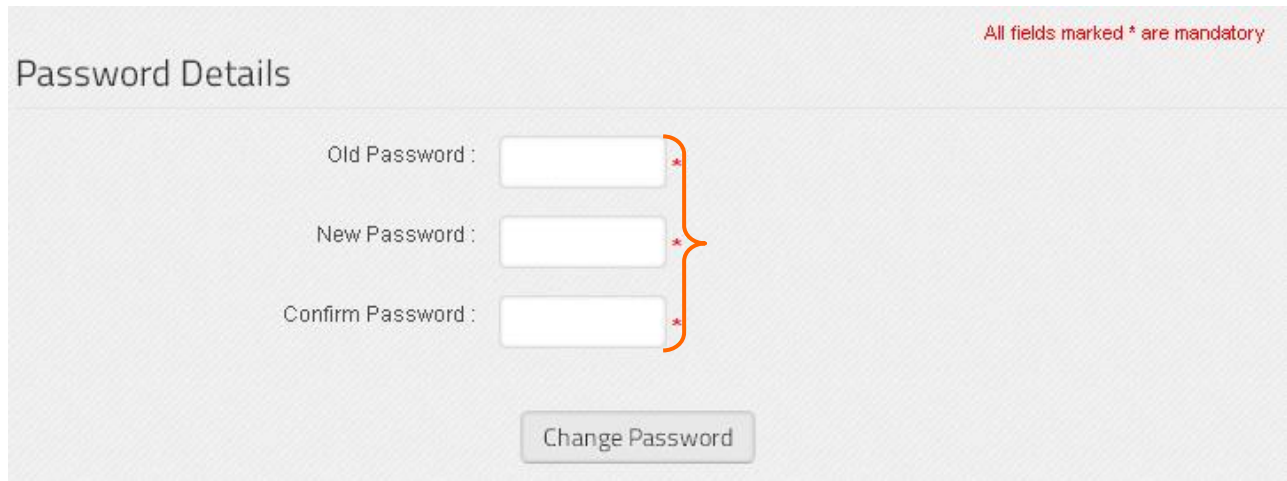
The user will be automatically logged out of the system if the application remains inactive for more than 20 mins. User can relogin to the system and continue.

The user can log out from the application by clicking on Log Out at the top right corner of the home page screen.



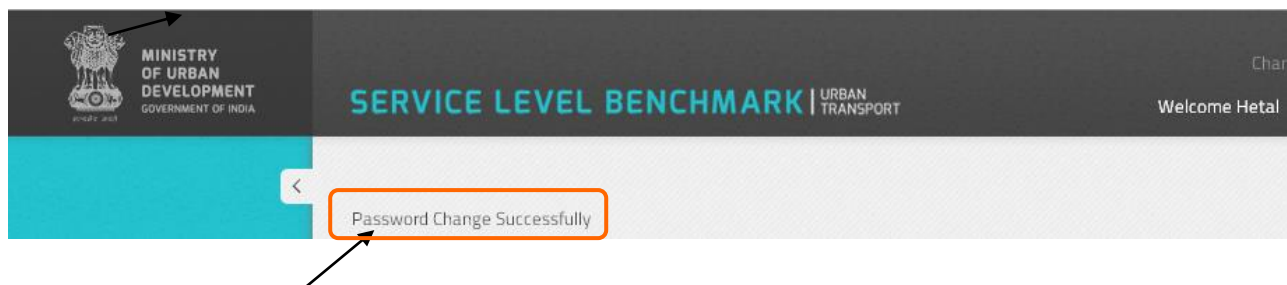
4.2 Change Password - First Time

When the new user profile is created in the application, the automatic mail will be sent to the user with the login details. Upon first time login with the new username and password, the system prompts the user to change the password. Enter the Old password, New password and Confirm password as shown below:



The new password, should be minimum 8 characters & maximum 15 characters and contain at least a special character,(e.g - \$,*,#,@...) , a numeric value (0-9) and an alphabet(A-Z). Password and Confirm Password, both the fields entry should match.

Click on '**Change Password**' once the password details are updated. A message will get generated on the screen for successful password change.



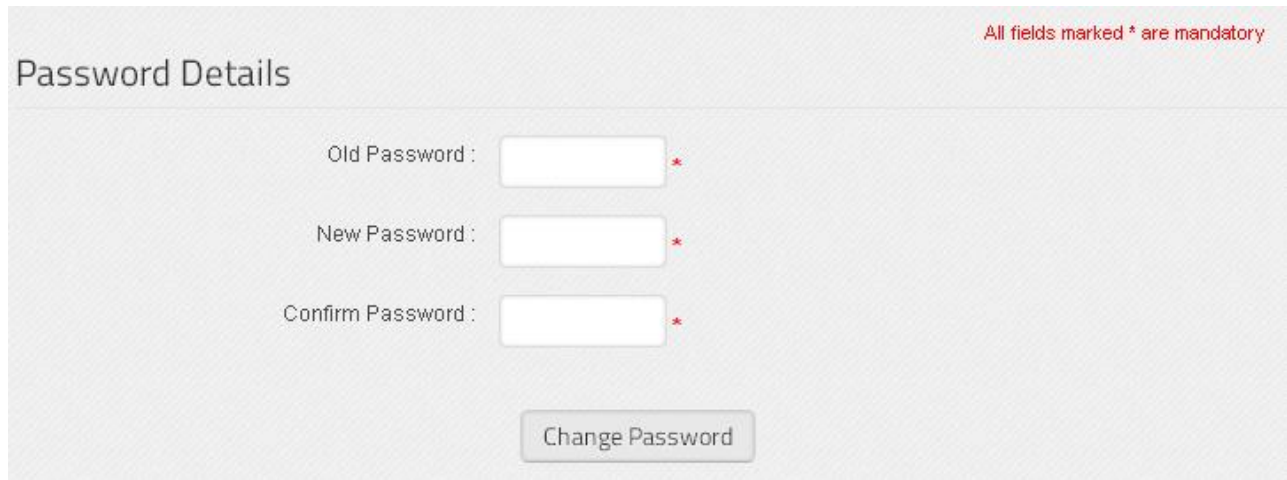
4.3 Change Password

After logging in to the system, the user has the facility to change the password by clicking on the top right corner of the page (Shown below)



Enter the Old password, New password and Confirm password fields and click on '**Change Password**'(Shown below). The new password entered should be unique and should not be same as

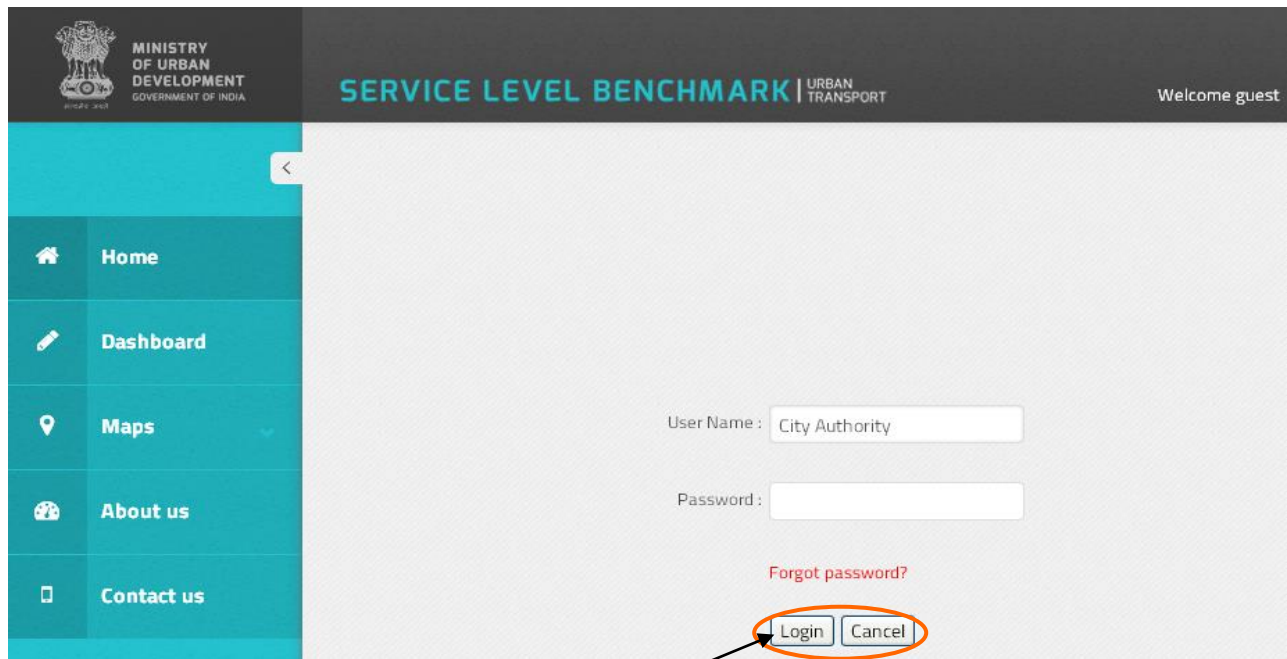
last 3 passwords used.



The screenshot shows a form titled "Password Details" with a red notice at the top right stating "All fields marked * are mandatory". The form contains three input fields: "Old Password :", "New Password :", and "Confirm Password :", each followed by a red asterisk. Below the fields is a "Change Password" button.

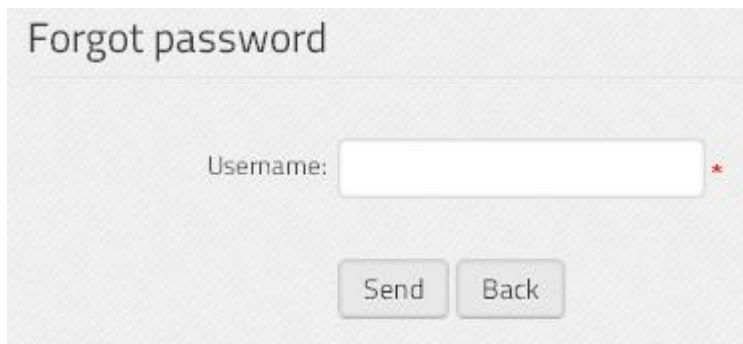
4.4 Forgot Password

In case the user is not able to login or has forgotten the Username/Password, click on '**Forgot Password**'.



The screenshot shows the login page of the "SERVICE LEVEL BENCHMARK | URBAN TRANSPORT" system. The header includes the Ministry of Urban Development logo and the text "Welcome guest". A sidebar on the left contains navigation links: Home, Dashboard, Maps, About us, and Contact us. The main content area has a "User Name" field with "City Authority" entered and a "Password" field. Below the password field is a red link "Forgot password?". At the bottom, there are "Login" and "Cancel" buttons, with the "Login" button circled in orange and an arrow pointing to it.

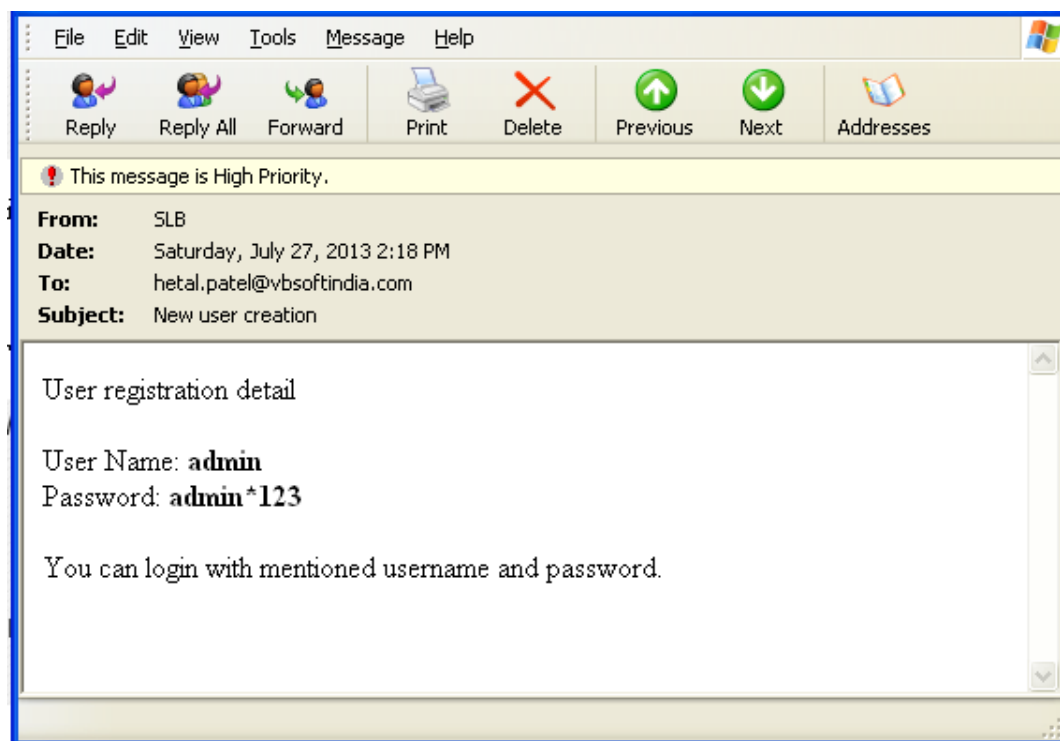
Enter the Username and click on '**Send**'.



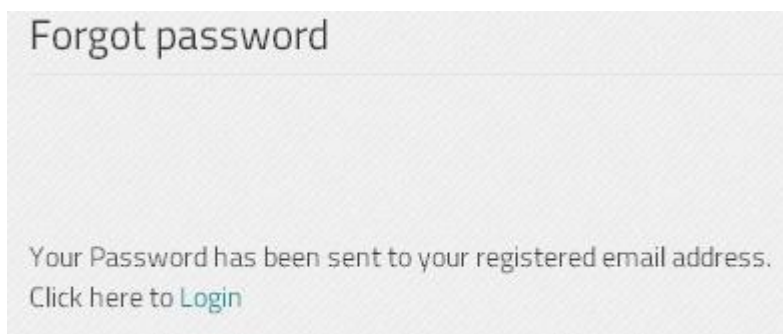
Forgot password

Username: *

The login details will be emailed to the user at his/her registered email address on the system as shown below.



Below message will be shown on the screen.



4.5 Data Entry

The data entry can be done by the city authorities, surveyors or admin for the cities based on the level of access granted to them.

The data for all the Benchmarks are collected either through Primary or Secondary sources. The collection of primary data is mainly through various surveys conducted to arrive at the value for calculating the level of service. They are direct sources of information collected through surveys, GIS Computations etc.

Secondary source are indirect source of information collected by someone other than the user, through RTO, Pollution control board, Traffic Police etc. They are the Research, based on the work of others.

We will explain both the source's data entry into the application, in detail, in the subsequent sections below.

4.5.1 Secondary Data

Secondary source are indirect source of information collected by someone other than the user through RTO, Pollution control board, Traffic Police etc. They are the Research based on the work of others. Primary source are direct source of information collected through surveys, GIS Computations etc.

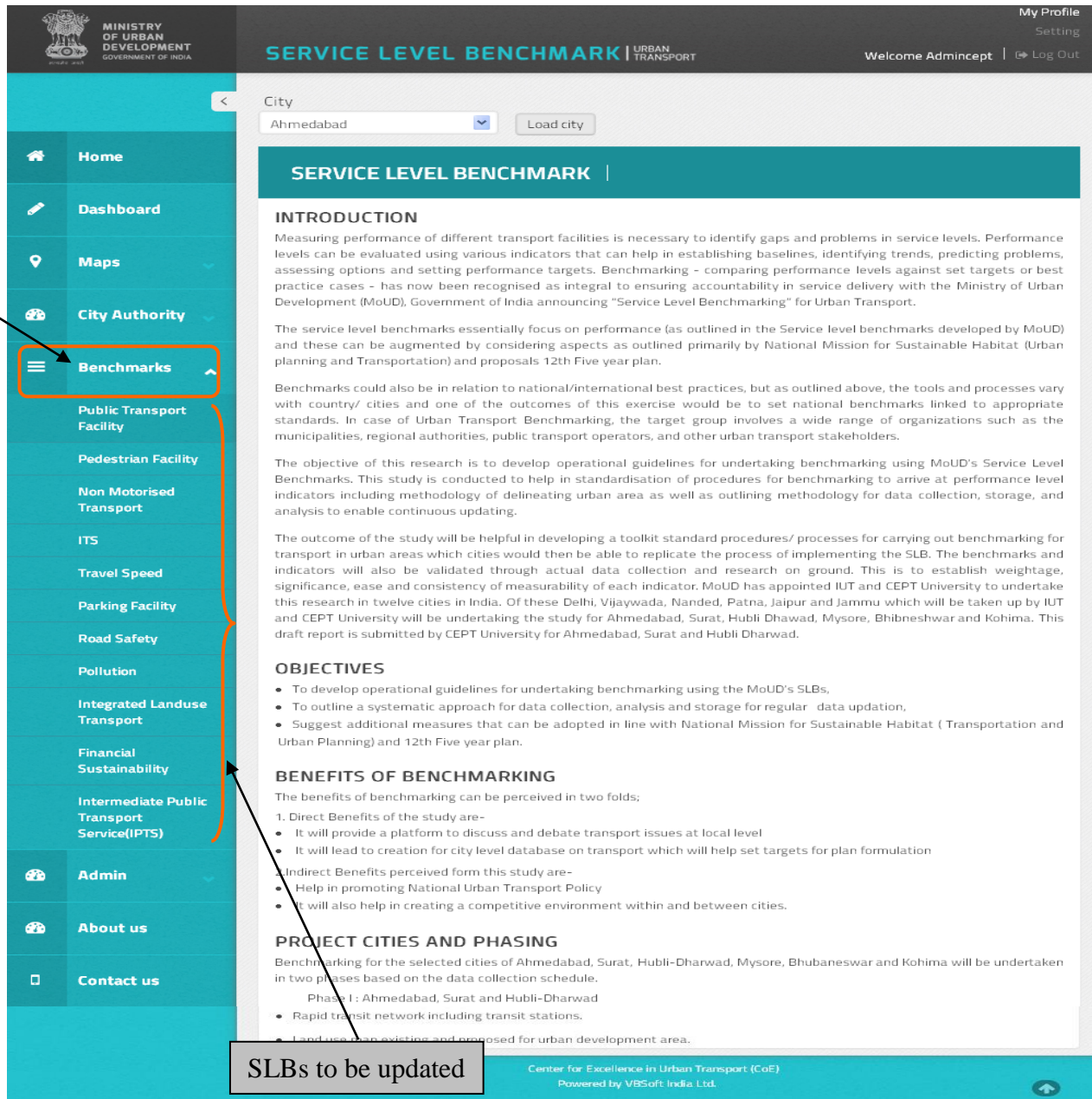
The City authority can perform below functions for a particular city:

- a) Data-Entry
- b) Reset
- c) Attach
- d) Replicate
- e) Save

Each of these functions are explained in detail below:

a) Data-Entry

Go to '**Benchmarks**' menu tab (Shown in next page) and select the benchmark for which values are to be entered.

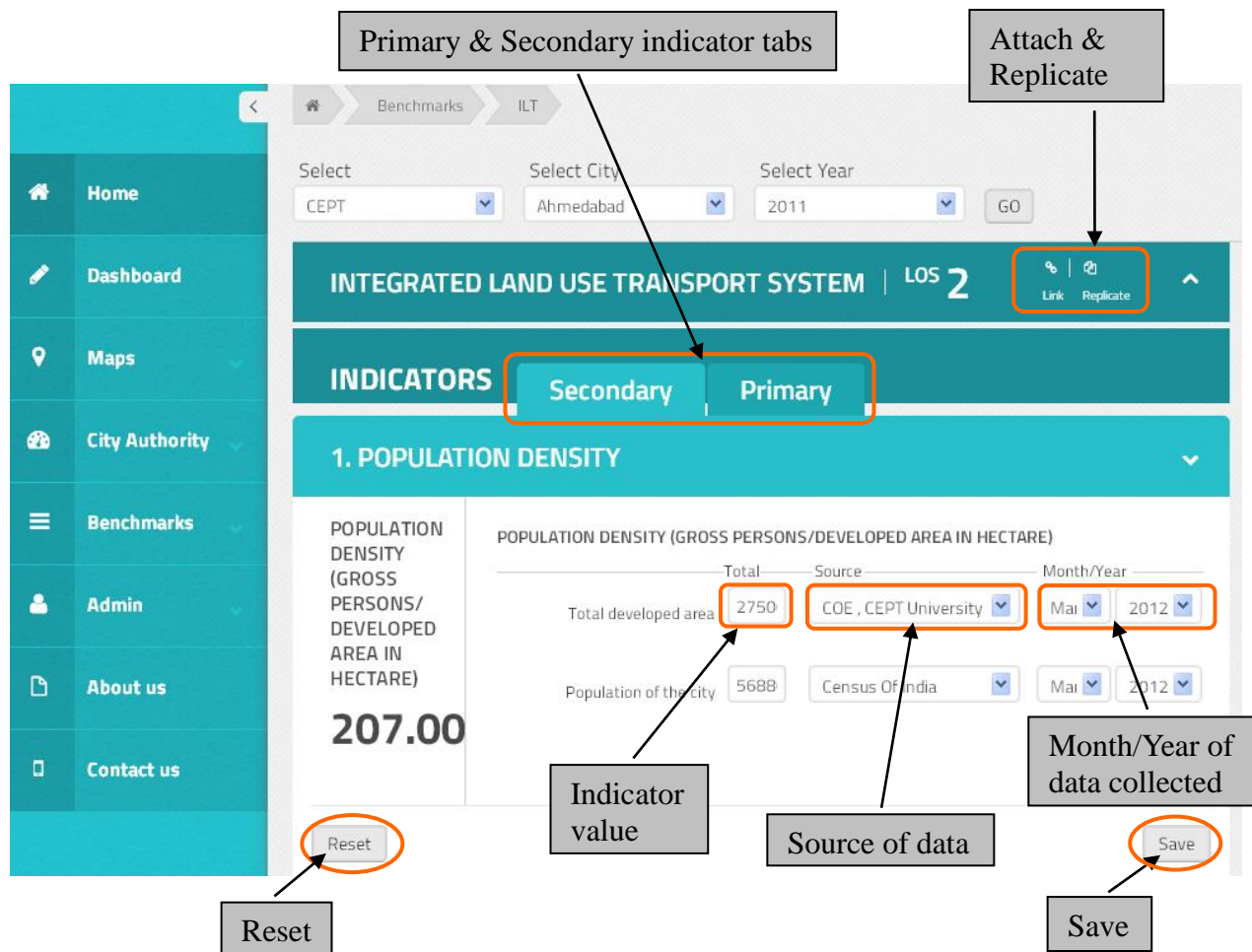


Below options will appear on the screen once the benchmark is selected.



Select the City and Year for which the values are to be entered and click on 'GO'

The page will show 2 tabs under INDICATORS, for those benchmarks which have indicators using Primary source of data. (Shown below)



For entering the secondary data, click on tab '**Secondary**' as shown above. The list of all the indicators for the selected Benchmark will get displayed on the screen in collapsible panel.

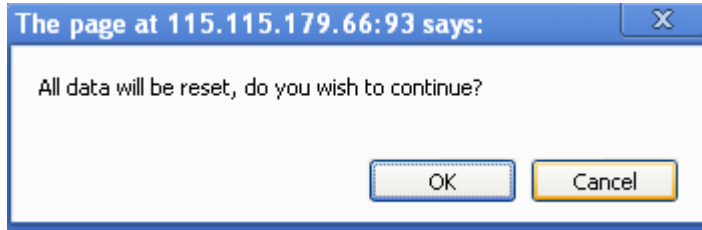
Enter the values against each text box of the indicator. Select the source of information from the drop-down from where the data is collected and select the Month/Year.

In case, the user is not able to find a particular source in the dropdown from where the data was collected, the user can add the new source name from the Admin menu tab, as explained previously.

b) **Reset**

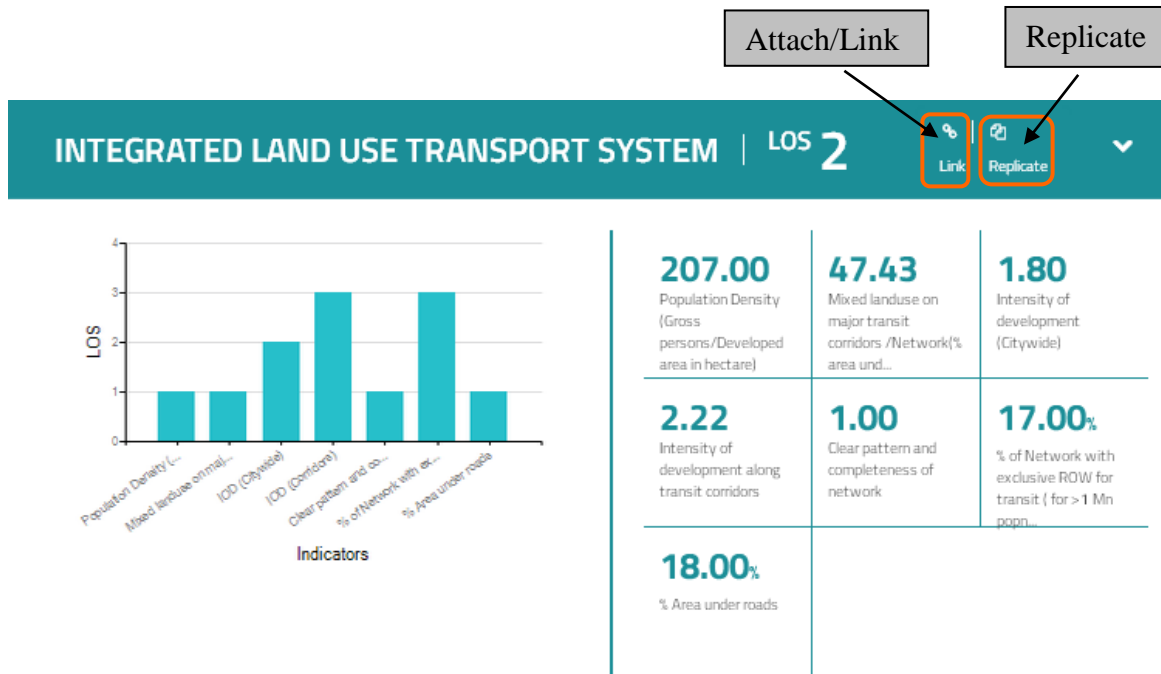
The user can reset the indicator values and selections back to the previous state by clicking on the '**Reset**' button provided at the bottom left corner of the indicator Panel (Shown above)

A pop-up will get generated by the system to confirm on reset of the values as shown below:

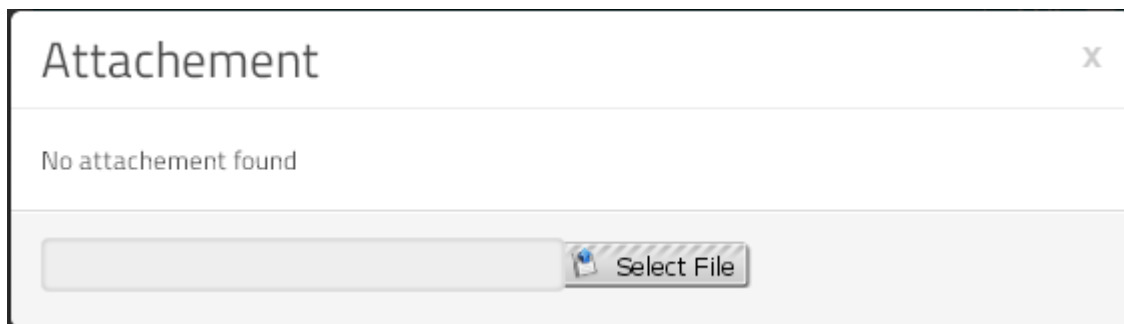


c) Attach a doc

The user can attach the survey forms, maps or any other relevant doc to be attached in the application for the selected benchmark by clicking on the 'Link', shown below.

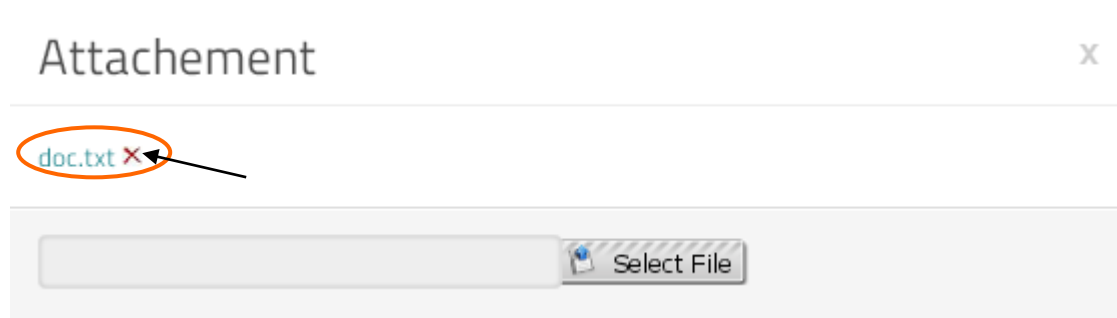


A pop-up will appear on the screen to attach the file.



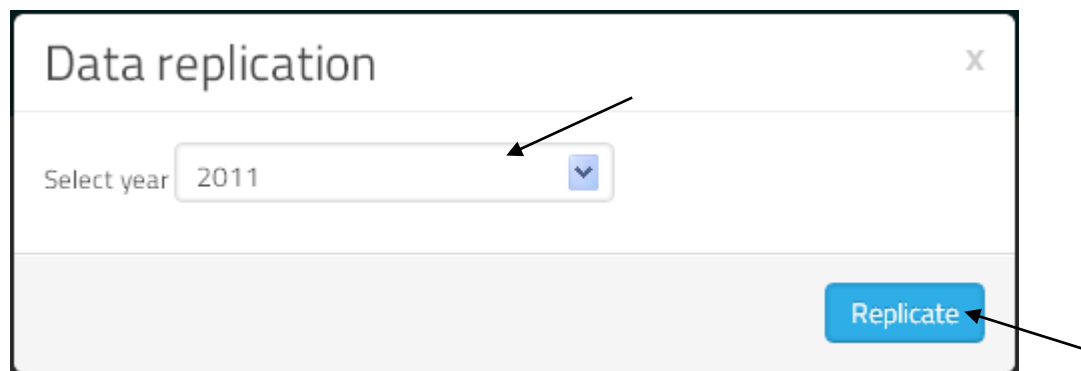
Click on '**Select File**' and locate the file to be attached from the browse window.

User can delete the attached file as well by clicking on the 'X' next to the file as shown below:



d) Replicate

The indicator values for a particular benchmark might not change frequently and the user might not want to reflect the same values next year as well. In this case, the user has the facility to replicate the whole benchmark's values to the next given year by clicking on '**Replicate**' button instead of entering same values again.



Select the Year for which the data is to be replicated and click on Replicate. The existing years values will be replicated to the selected year.

Also, the user need not enter the same indicator values which are repeating in more than 1 benchmark. User shall enter the repeating indicator value only once and rest of the benchmarks with this indicator will be replicated by the system. (Shown below)

Select: MoUD | Select City: Ahmedabad | Select Year: 2011 | GO

PUBLIC TRANSPORT FACILITY | LOS 2

INDICATORS | Secondary | Primary

1. PRESENCE OF ORGANISED PT SYSTEM IN URBAN AREA

Presence of organised PT system in urban area: **100%**

Total buses on road offering stage-carriage services: **767**

	Total	Source	Month	Year
Private	0	BRTS Janmarg	Jan	2011
Public (STU)	96	BRTS Janmarg	Jan	2011
Public (SPV)	0	BRTS Janmarg	Mai	2013
Public (Municipal service)	671	BRTS Janmarg	Jan	2011

Organized PT system: **767**

	Total	Source	Month	Year
Public (STU)	96	BRTS Janmarg	Jan	2011
Public (SPV)	0	BRTS Janmarg	Mai	2013
Public (Municipal service)	671	BRTS Janmarg	Jan	2011

Reset | Save

e) Save

Click on 'Save' once the relevant values and options are selected for that indicator and system will notify the user of successful updation of the data with below message.



The Primary indicators reflecting under Secondary tab, will have only the final values of the indicator and the text boxes will be disabled for editing.(Shown below). More will be explained in detail in the next section of Primary indicators.

MINISTRY OF URBAN DEVELOPMENT
GOVERNMENT OF INDIA

My Profile
Change Password
Welcome Admincept | Log Out

SERVICE LEVEL BENCHMARK | URBAN TRANSPORT

Benchmarks > NMT

Select MoUD: Ahmedabad | Select City: Ahmedabad | Select Year: 2011 | GO

NON MOTORIZED TRANSPORT FACILITY | LOS 2

INDICATORS | Secondary | Primary

1. % OF NETWORK COVERED

% of network covered	
5.16%	Total
	Total length of road network (km) 89
	Total length of Cycle network (km) 15

2. ENCROACHMENT ON CYCLE ROADS BY VEHICLES PARKING (%)

Encroachment on Cycle roads by vehicles parking (%) **6.52**

For calculation details plz click here

3. NMT PARKING FACILITIES AT INTERCHANGES (%)

NMT Parking facilities at Interchanges (%) **30**

For calculation details plz click here

Primary indicators

Center for Excellence in Urban Transport (CoE)
Powered by VBSoft India Ltd.

4.5.2 Primary Data

The collection of primary data has been mainly through various surveys conducted to arrive at the value for calculating the level of service. Below are the list of Indicators which have used the data coming from primary sources. We will discuss each of these benchmarks in detail in the next section.

Benchmarks	Primary Indicators
Public Transport Facility	Average waiting time for Public Transport users (min)
	Level of Comfort in Public Transport (Crowding)
	Average travel speed of public transport (Kmph)
Pedestrian Facility	Signalized intersection delay
	Street lighting (Lux)
	% City covered
Non-Motorized Transport Facility	% of network covered
	Encroachment on Cycle roads by vehicles parking (%)
	NMT Parking facilities at Interchanges (%)
Travel Speed	Average travel speed of personal vehicles (Kmph) - CARS
	Average travel speed of personal vehicles (Kmph) - 2 Wheelers
	Street lighting (Lux levels) on roads
Integrated Landuse Transport System	Mixed landuse on major transit corridors /Network(% area under non-residential use)
Intermediate Public Transport Services	Average travel speed of IPTS(Auto)

4.5.2.1 Public Transport Facility

All the 3 indicator's Routes and Stops can be managed by '**Manage public transport**' menu under '**City Authority**'.

1) Avg travel speed - Public Transport

User will first need to add the routes and stops to be considered for calculating the avg travel speed for a city and map them.

Step.1 Manage Route

- Go to '**Manage Route**'
- Select the city from the drop-down.
- Search the route if its already existing in the system by entering the name or no.
- If its already existing, a list will display below to show all the route names/numbers similar to the one searched with.
- If searched route does not exist, update new route by entering the new Route name and number.
- '**Route active**' field is used when a particular route is not in use for the survey at the moment but can be used later. The user can make the route inactive by selecting the right option from the drop-down, instead of deleting it permanently.
- Enter the no. of segments the new route will have, to calculate the avg speed for that route. **(This step is specific to Avg travel speed calculations only)**

- Click on 'Save Route'

Click 'Cancel' to discard the changes. The search option in all the menu tabs under 'City Authority' is given to facilitate the user to directly search the parameter to be edited and the search result will get listed in the bottom half of the page.

The user can edit by clicking the edit button and the route info will display under 'Update route information'. Delete button next to edit allows the user to delete the particular route from the system permanently.

The screenshot shows the 'MANAGE ROUTE' interface. On the left, the 'City Authority' menu is expanded, and 'Manage Public Transport' is selected. The main content area has tabs for 'Manage Route', 'Manage Stop', 'Average Speed', 'Waiting time', and 'Level of comfort'. The 'MANAGE ROUTE' section includes a search form with fields for City (Ahmedabad), Route number, and Route name. An 'Update route information' section is circled in orange, containing fields for Route number (542), Route name (AHM542), Route active (Yes), Seating capacity, and No of segment (2). Below is a 'List of Route' table with columns: Route number, Route name, Seating capacity, No of segment, Active, and edit/delete icons.

Route number	Route name	Seating capacity	No of segment	Active	
152	AHM152			Yes	
152/1	AHM152/1			Yes	

Step.2 Manage Stop

- Go to 'Manage Stop'
- Select the city from the drop-down.
- Search the stop GIS number if its already existing in the system by entering the name or no.
- If its already existing, a list will display below to show all the stops names/numbers similar to the one searched with.
- If searched stop does not exist, update new stop by entering the new Stop GIS name and number.
- 'Stop active' field is used when a particular stop is not in use for the survey at the moment but can be used later. The user can make the stop inactive by selecting the right option from the

- drop-down, instead of deleting it permanently.
- Click on **'Save stop'** once the stop details are updated.
- Click **'Cancel'** to discard the changes.

The user can edit stops by clicking the edit button and the stop info will display under **'Update stop information'**. Delete button next to edit allows the user to delete the particular stop from the system permanently.

Once the route and stop information are updated in the system, user will have to map these routes and stops.

The screenshot shows the 'MANAGE STOP' interface. The 'Manage Stop' tab is selected. The form includes a dropdown for 'City' (Ahmedabad), input fields for 'Stop GIS number' and 'Stop name', and a dropdown for 'Stop active' (Yes). There are 'Search stop' and 'Cancel' buttons. Below the form is a 'List of Stop' table with the following data:

Stop GIS number	Stop name	Active	
AHM50456	Heera Baug	Yes	✎ ✕
AHM51456	satyagrah chhavni	Yes	✎ ✕

Step.3 Average speed

- Go to **'Avg Speed'** tab
- Select the City and Year for which the avg speed is to be calculated.
- Select the route to be mapped. The system will display the existing stops mapped to the selected route as shown below.
- Select the stops that need to be added to the selected route from the drop-downs **'Stop from'** and **'Stop to'**.
- Update the **'Segment length'** and **'No. of runs'**
- Click on **'Save'**.

The newly mapped segments will get displayed in the list of stop as shown below. These stops can be edited or deleted as explained previously. If the routes and stops are already added in the system then user can directly map the routes and stops instead of following the above mentioned steps of

‘Manage Route’ and ‘Manage Stop’

From GIS id	Stop name	To GIS id	To name	Segment length	Runs	
HUD50087	Hubli CBT	HUD50502	RGS	3.1	3	

Step.4 Primary tab

- Go to Benchmarks menu tab and select the Public Transport Facility benchmark.
- Select the city and year for which the routes and stops were mapped for travel speed calculations.
- Click on Primary tab under INDICATORS.
- Select the City again.
- Replicate the file to the new year.
- Select the year to download the file and click on download.
- Open the downloaded excel file and update the Average Time taken by the surveyor from one stop to another for each segment of a route and for each run.
- Save the file
- Upload the updated file by giving the path of the updated file from ‘Choose file’ option.

	D	E	F	G	H	I	J	K	L	M
	Route Name	Stop From GIS Id	Stop From Name	Stop To GIS	Stop To Name	Segment Length	RunType	AverageTime (Min)	Year	
1	Dharwad CBT to K HUD50012	HUD50012	Dharwad CBT	HUD20040	Kalegary, Anjrayna	5.58	UP 1	24.03333	2011-1-1	
2	Dharwad CBT to K HUD20040	HUD20040	Kalegary, Anjrayn	HUD50012	Dharwad CBT	5.58	DN 1	25.25	2011-1-1	
3	Dharwad CBT to K HUD50012	HUD50012	Dharwad CBT	HUD20040	Kalegary, Anjrayna	5.58	UP 2	25.46666	2011-1-1	
4	Dharwad CBT to K HUD20040	HUD20040	Kalegary, Anjrayn	HUD50012	Dharwad CBT	5.58	DN 2	25.21666	2011-1-1	
5	Dharwad CBT to K HUD50012	HUD50012	Dharwad CBT	HUD20040	Kalegary, Anjrayna	5.58	UP 3	24.48333	2011-1-1	
6	Dharwad CBT to K HUD20040	HUD20040	Kalegary, Anjrayn	HUD50012	Dharwad CBT	5.58	DN 3	25.88333	2011-1-1	
7	DWD CBT-MADII HUD50012	HUD50012	Dharwad CBT	HUD50006	Madhiyal Last Stop	2.04	UP 1	11.46666	2011-1-1	
8	DWD CBT-MADII HUD50006	HUD50006	Madhiyal Last Sto	HUD50012	Dharwad CBT	2.04	DN 1	9.28333	2011-1-1	
9	DWD CBT-MADII HUD50012	HUD50012	Dharwad CBT	HUD50006	Madhiyal Last Stop	2.04	UP 2	11.45	2011-1-1	
10	DWD CBT-MADII HUD50006	HUD50006	Madhiyal Last Sto	HUD50012	Dharwad CBT	2.04	DN 2	8.26666	2011-1-1	
11	DWD CBT-MADII HUD50012	HUD50012	Dharwad CBT	HUD50006	Madhiyal Last Stop	2.04	UP 3	11.45	2011-1-1	
12	DWD CBT-MADII HUD50006	HUD50006	Madhiyal Last Sto	HUD50012	Dharwad CBT	2.04	DN 3	9.65	2011-1-1	
13	DWD CBT - MAL HUD50087	HUD50087	Hubli CBT	HUD20009	Malapur	1.77	UP 1	9.43333	2011-1-1	
14	DWD CBT - MAL HUD20009	HUD20009	Malapur	HUD50087	Hubli CBT	1.77	DN 1	8.73333	2011-1-1	

Once the updated file is uploaded, the system will perform the calculations in the background and provide the Avg travel speed of public transport vehicles in the ‘Secondary’ under Avg. Travel Speed indicator.

INDICATORS Secondary Primary

AVERAGE SPEED

City: Ahmedabad

Download route segment.

Route segment information for 2011 Download

Replicate

2011 Route segment information to: 2011 Replicate

Upload route segment information

Route segment information for 2011 Choose File No file chosen Upload

The system will not allow replication to the new year if there is already data existing in the new year. User will have to first remove the mapped routes and stops from the new year and then replicate. If there are routes/stops changes to the file, replicate the file to the new year first and then follow the whole process of adding the new routes/stops, mapping them to the new year, downloading the file from the new year and updating the avg time as explained before. Upload the updated file and system will calculate the Avg travel speed for the new year with the modified routes/stops.

2) Avg waiting time

Add the routes and stops as explained above under 'Manage Route' and 'Manage Stop' in Avg Travel Speed section

Step.3 Waiting time

- Go to Waiting time tab
- Select the City and Year for which the Avg waiting time is to be calculated. Once the City and year are selected, the list under 'All stops' will show all the stops created in the system for that city.
- Select the each route from the drop-down for which the stops are to be mapped
- Select the stops from 'All stops' and add them to the 'Mapped stops' by clicking on right side pointing arrows. The user can select multiple stops at a time by pressing CTRL and clicking on the stops to be added.
- To deselect the stop added under 'Mapped stops', click on left side facing arrows as shown below.
- Remove mapping will remove the stops mapped to the selected Route.
- Click on 'Save' to freeze the changes else click on 'Cancel' to discard the changes.

The screenshot shows the 'MANAGE WAITING TIME' interface. At the top, there are five tabs: 'Manage Route', 'Manage Stop', 'Average Speed', 'Waiting time', and 'Level of comfort'. An arrow points to the 'Waiting time' tab. Below the tabs, there are four dropdown menus: 'City' (Hubli-Dharwad), 'Year' (2011), 'Select' (MoUD), and 'Select route' (----AnandNg-Dhr). Below these are two lists: 'All stops' and 'Mapped stops'. The 'All stops' list contains 13 items: HUD20009----Malapur, HUD20011----Malapur 2nd Stop, HUD20013----Madhiyal 1st Stop, HUD20014----Central Bank Colony, HUD20016----Chidamber Seva Samiti, HUD20018----Durgadevi, HUD20019----Haveri Peth Circle, HUD20020----Vikas Nagar 2nd Stop, HUD20024----S P Office, HUD20025----S P Office, and HUD20028----Shivaji Circle. The 'Mapped stops' list contains 5 items: HUD20001----Agri College Last Stop, HUD20003----Administrative Bhavan, HUD20004----Dairy Farm, HUD20005----Pepsi Company, and HUD20008----M G Bank. Between the lists are two buttons: '>>' and '<<'. At the bottom are three buttons: 'Save', 'Cancel', and 'Remove mapping'.

Step.4 Primary tab

- Go to Benchmarks menu tab and select the Public Transport Facility benchmark.
- Select the city and year for which the routes and stops were mapped for avg waiting time calculations.
- Click on Primary tab under INDICATORS.
- Select the City again.
- Replicate the file to new year.
- To download the file to update new years information, select the year and click on download.
- Open the downloaded excel file and update the Headways column for each route's stop.
- Save the file
- Upload the updated file by giving the path of the updated file from 'Choose file' option.

	A	B	C	D	E	F	G	H	I	J	K
	Route	Route Name	Stop GIS Id	Stop Name	RouteStopMappingId	HeadWays					
1	D2	DWD CBT-NEHARUN	HUD20756	shivallayya	27410	11					
2	D2	DWD CBT-NEHARUN	HUD20729	basaya nagar	27406	11					
3	D2	DWD CBT-NEHARUN	HUD50021	Shrinagar Stop	27409	11					
4	D2	DWD CBT-NEHARUN	HUD20049	LIC Stop	27407	11					
5	D2	DWD CBT-NEHARUN	HUD20055	Naidu Girini	27408	11					
6	D2	DWD CBT-NEHARUN	HUD20067	Sarvamangal Hospital	27405	11					
7	D2	DWD CBT-NEHARUN	HUD20082	Nehrunagar Cross	27404	11					
8		DWD CBT-RAMNAG#	HUD20080	RLY Kalyan Mantap	27421	36					
9		DWD CBT-RAMNAG#	HUD20096	Elmeke	27422	36					
10		DWD CBT-RAMNAG#	HUD20052	Court	27420	36					
11		DWD CBT-RAMNAG#	HUD20108	Shri Ramnagar Last Stop	27423	36					
12		DWD CBT-RLY STN	HUD20052	Court	27418	16					
13		DWD CBT-RLY STN	HUD50023	RLY Stn Dharwad	27419	16					
14		DWD CBT-SAMPIGEN	HUD20049	LIC Stop	27394	45					
15		DWD CBT-SAMPIGEN	HUD20014	Central Bank Colony	27396	45					
16		DWD CBT-SAMPIGEN	HUD20018	Durgadevi	27397	45					
17		DWD CBT-SAMPIGEN	HUD20020	Vikas Nagar 2nd Stop	27395	45					
18		DWD CBT-SAMPIGEN	HUD20024	S P Office	27393	45					
19											

Once the updated file is uploaded, the system will perform the calculations in the background and provide the Avg Waiting time of public transport vehicles under the 'Secondary' tab under Avg. waiting time indicator.

AVERAGE WAITING TIME

Select: MoUD | Select City: Hubli-Dharwad | Select Year: 2011 | GO

City: Hubli-Dharwad

Download route waiting time.

Route-stop waiting information for: 2011 | MoUD | **Download**

Replicate

2011 | Route-stop information to year: 2012 | Replicate

Upload route Segment information

Route segment information for: 2011 | MoUD | Choose File | No file chosen | **Upload**

3) Level of comfort

Add the routes and stops as explained previously under 'Manage Route' and 'Manage Stop' under Avg Travel Speed with the exception to update the 'Seating Capacity' as well under Manage Route for Level of Comfort calculations.

MANAGE ROUTE

City: Hubli-Dharwad

Search route

Route number: HD10 | Route name: | Search route | Cancel

OR

Update route information

Route number: HD10 | Route name: Hubli OCBS to Dharwad | Route active: Yes | Seating capacity: 42 | No of segment: 1 | **Save route** | Cancel

List of Route

Route number	Route name	Seating capacity	No of segment	Active	
HD10	Hubli OCBS to Dharwad	42	1	Yes	

Step.3 Level of Comfort (LOC)

- Go to Level of comfort tab
- Select the City and Year for which the LOC is to be calculated.
- Select each route from the drop-down for which the stops are to be mapped
- Select the stops from the drop-down
- Enter the selected stop's sequence number
- Click on 'Save' to freeze the changes else click on 'Cancel' to discard the changes.
- The saved stops will get listed under the stops table.

MANAGE LEVEL OF COMFORT

City: Hubli-Dharwad 2011

Select route: ----BWD AGASI-GAM/

Select stop: HUD20001----Agri Co

Stop sequence number: 5

Save Cancel

List of Stops

Stop GISID	Stop Name	Sequence Number	
HUD20005	Pepsi Company	3.1	✎ ✕
HUD20008	M G Bank	4	✎ ✕

Step.4 Primary tab

- Go to Benchmarks menu tab and select the Public Transport Facility benchmark.
- Select the city and year for which the routes and stops were mapped for LOC calculations.
- Click on Primary tab under INDICATORS.
- Select the City again.
- Replicate the file to new year by selecting the route and year from the dropdowns
- To update the replicated file for the new year's information, select the year and route and click on download. LOC file is to be updated and uploaded for each route separately.
- Open the downloaded excel file
- Update the number of male/female passengers boarded and alighted from the bus at each stop of the selected route for each run.
- Save the file
- Upload the updated file by selecting the year and route.
- Follow the above 3 steps for all the routes.
- Select the city and year under 'Calculate city wise LOS' and click on 'Calculate city LOS'.

	A	B	C	D	E	F	G	H	I
1	Route	Route Name	Stop Name	Stop GIS Id	No Of Seats	Stop Sequence	Run: 1-Up-MorPeak-Boarding-Male	Run: 1-Up-MorPeak-Boarding-Female	Run: 1-Up-MorPeak-Bo
2	105	Lal darwaja to	Aayojamaga	AHMS0001	47				
3	105	Lal darwaja to	Abu Koba C.	AHMS0007	47	1.100000024			
4	105	Lal darwaja to	Kalyan Mil	AHMS1461	47	1.200000048			
5	105	Lal darwaja to	Aayojamaga	AHMS0002	47	2			
6									
7									
8									
9									
10									

The system will perform the calculations in the background and provide the Level of Comfort for public transport under the 'Secondary' tab under Level of comfort indicator.

Select: MoUD | Select City: Hubli-Dharwad | Select Year: 2011 | GO

LEVEL OF COMFORT

For calculation details plz click here

City: Hubli-Dharwad

Download

Route-stop information for: 2011 | ---AnandNg-Dhr | Download

Replicate

---AnandNg-Dh | 2011 | To | 2011 | Replicate

Upload level of comfort

Route information for: 2011 | ---AnandNg-Dhr

Upload file: Choose File | No file chosen | Upload

Calculate city wise LOS

City: Ahmedabad | Year: 2011 | Calculate city LOS

4.5.2.2 Pedestrian Facility

The indicators for Signalized intersection delay and lux can be managed by 'Manage Pedestrian Facility' menu under 'City Authority'.

1) Signalized Intersection Delay

The user will have to first have to update the intersection and each intersection's number of arms in the system.

Step.1 Manage Intersection

- Go to 'Manage Intersection' tab
- Select the city
- Search the intersection if it is already existing in the system
- If not, add the intersection under '**Save intersection information**'
- Enter the intersection name
- Enter number of arms the intersection has
- There are few cities which has the facility where the all the arm's signals of a particular intersection will remain red for vehicles and green for the pedestrians for few seconds. In these cases, the calculation methodology for these intersections will change and user will have to select the radio button 'Sum' under Calculation type. For rest of the cities, which doesn't have this facility implemented yet, select the calculation type as 'Average'
- Select the right option from the drop-down for Active status of the Intersection
- Click on '**Save intersection**'

The screenshot displays the 'MANAGE INTERSECTION' interface. On the left is a sidebar with navigation options: Home, Dashboard, Maps, City Authority, Benchmarks, Admin, About us, and Contact us. The main content area has four tabs: 'Manage Intersection', 'Manage road type', 'Manage way point', and 'Waypoint-road mapping'. The 'MANAGE INTERSECTION' section is active, showing a form to manage intersection details. The 'City' dropdown is set to 'Hubli-Dharwad'. There are two search options: 'Search intersection' with 'Intersector name' set to 'brindavan' and 'Save intersection information' with 'Intersection name' set to 'Brindavan Road', 'Number of arm' set to '2', 'Calculation type' set to 'Average', and 'Active' set to 'Yes'. A table below shows a list of intersections with columns for 'Intersect name', 'No of arm', 'Calculation method', and 'Active'. The table contains one entry: 'BRINDAVAN CIRCLE' with 1 arm, Average calculation method, and Active status.

Once the Intersections and their number of arms are updated, user will have to update the signal time taken by each Arm of the updated Intersection.

Step.2 Primary tab

- Go to Benchmarks menu tab and select the Pedestrian Facility benchmark.
- Select the city and year
- Click on Primary tab under INDICATORS.
- Select the City and Year again.
- Replicate the file to new year and then add the new intersections and no. of arms and their name, if any, for the new year.
- Select the Intersection name for which the arm name and its signal time is to be updated
- Update the Arm name and its signal time(The Arm1,Arm 2...will display only those many Arms as many number of arms updated in 'Manage Intersections' for that intersection.
- Click on 'Save'

SIGNALISE INTERSECTION

For calculation details plz click here

Manage Intersections

City: Hubli-Dharwad 2011

Intersection name: SARVODAYA CIRCLE

	Arm Name	Signal time
Arm: 1	At A	85
Arm: 2	At B	75
Arm: 3	At C	75
Arm: 4	At D	80

Save Cancel

Replicate

2011

intersections information to: 2011

Replicate data

Based on each arm's signal time updated, the system will count those signals which has signal time >45 secs and update the indicator 'Number of intersections having average pedestrian waiting time of > 45 sec' under Secondary tab accordingly.

2) Street lighting(Lux level) on Footpath

For updating the lux information, user will have to first update the types of roads a particular city

has and their way-points for each road. This information can be updated from ‘Manage Pedestrian Facility’ under ‘City Authority’ menu tab.

The lux level for Footpath and Road, both are covered in this section itself

Step.1 Manage road type

- Go to ‘Manage road type’ tab
- Under ‘Save road type information’ enter the type (Road or Junction) for which the information is to be captured.
- Enter the Road type code
- Enter the Road type description
- Enter the Footpath and Road’s formula for calculating the lux levels
- Click on ‘Save road type’

MANAGE ROAD TYPE

Search road type
 Road type code:

OR

Save road type information
 Type:
 Road type code:
 Road type description:
 Footpath formula:
 Road formula:

List of road type

Road type	Road type code	Footpath formula	Road formula	
Junction	J1	$(Q1+Q3+Q4+Q5+Q6)/5$	$(Q1+Q2+Q3+Q4+Q5+Q6)/6$	<input type="button" value="edit"/> <input type="button" value="delete"/>
Junction	J2	$(Q1+Q3+Q4+Q6)/4$	$(Q1+Q2+Q3+Q4+Q5+Q6)/6$	<input type="button" value="edit"/> <input type="button" value="delete"/>

Step.2 Manage way point

- Go to 'Manage way point' tab
- Select the city
- Enter the Waypoint GIS code for the Road type updated
- Enter the way point name
- Click on 'Save waypoint'

Way point Name	Gis code	
Haliyal Road S.H.28	45	

Step.3 Waypoint-road mapping

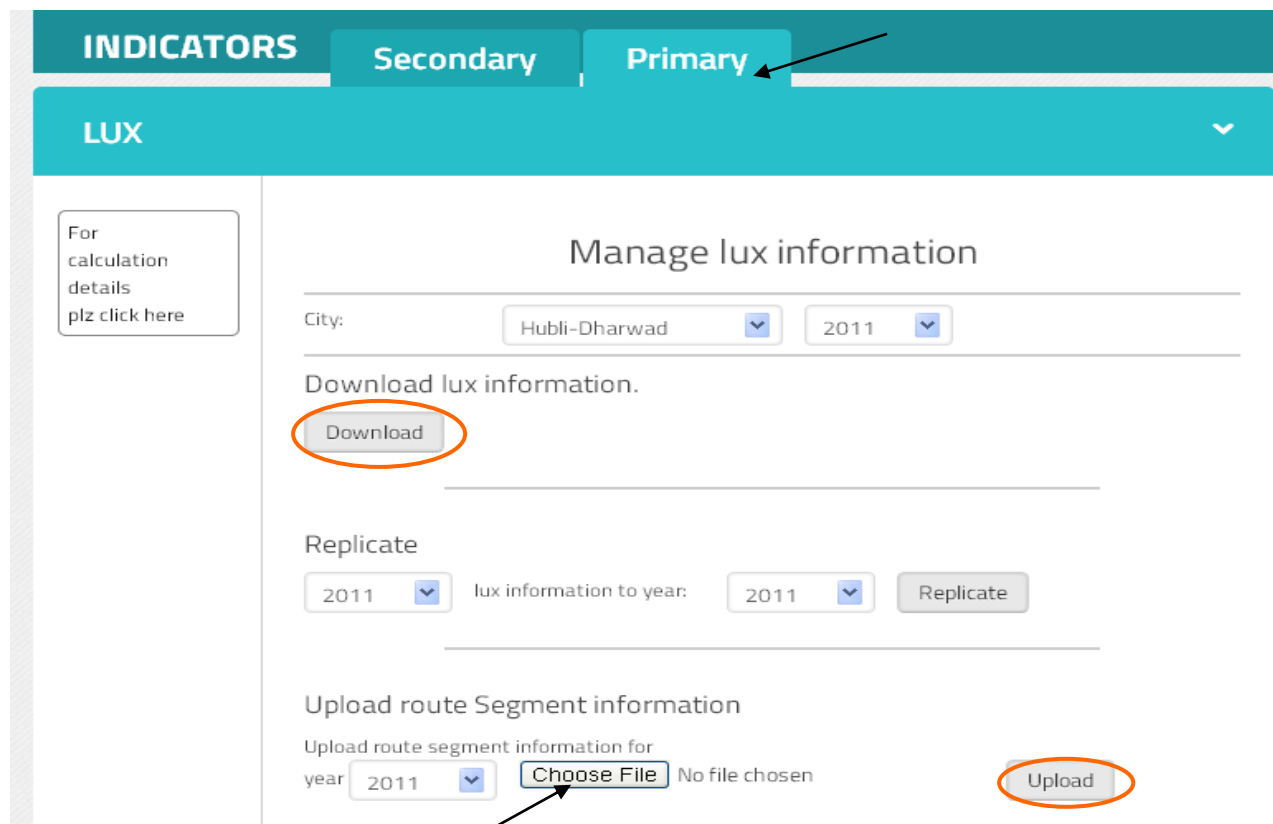
- To map the newly created waypoints with the updated road types, go to 'Waypoint-road mapping' tab
- Select the City, Year and Road type
- The list will get generated with all the waypoints having the entered road type for the selected year and city
- To map the waypoint GIS code with the Road type, enter the GIS code under 'Save road type information' and click on 'Save mapping'

Way point Name	GIS code	Roadtype	
P.B.Road	16	R12	✘
P.B.Road	17	R12	✘

Step.4 Primary tab

- Go to Benchmarks menu tab and select the Pedestrian Facility benchmark.
- Select the city and year
- Click on Primary tab under INDICATORS.
- Select the City and Year again.
- Replicate the file to new year to update the new information for the new year first.
- Download the lux file and update the Readings for the Road type/code updated for each waypoint
- Save the file
- Upload the saved file by selecting the year and clicking on 'Upload'

	A	B	C	D	E	F	G	H	I	J
	Road type	Road type description	Way point number	Way point name	Reading 1	Reading 2	Reading 3	Reading 4	Reading A1	Reading A2
2	Road--R1	Median lighting (one pole)	1	Lemington Road	4	4	3	2	0	0
3	Road--R1	Median lighting (one pole)	29	Hubli Airport Road	8	7	4	3	0	0
4	Road--R1	Median lighting (one pole)	46	Haliyal Road S.H.28	5	4	3	2	0	0
5	Road--R12	Undivided -Single side lig	16	P.B.Road	6	4	7	4	0	0
6	Road--R12	Undivided -Single side lig	17	P.B.Road	18	18	19	11	0	0



The system will perform the calculations in the background and provide the LOS for the street lighting (lux level) for Footpath under the ‘**Secondary**’ tab of Street lighting (lux) indicator.

3) % City covered / % of network covered / Encroachment on Cycle roads by vehicles parking

% of network covered & Encroachment on Cycle roads indicators are from benchmark - NMT but we have covered these indicators here since the calculations and methodology to come up with all the 3 indicators values are from the same source excel file of RNI(Road Network Inventory).

The user will have to enter the grid information in order to calculate these 3 indicators. The grid updations are discussed under section ‘**Manage Grid**’ of 4.5.2.3 below.

Update all the information based on the category and type of encroachment in order to calculate the % of city covered with footpaths, % network covered with cycle tracks and the % of encroachment on the cycle tracks by vehicles parking.

ROAD NETWORK INVENTORY

For calculation details plz click here

City:

Download RNI information.

Grid:

Replicate

RNI information for To:

Upload RNI information

year No file chosen

Node ID	Length of Right-of-way	Median Width	Carriage width	Number of Carriage width	Width of the Category	Direction	Count	Type	Width (M)	Length (M)	Type of Encroachment	Encroachment
50526	2210	38.5	5.1	9.5	2.71	3.5 Cycle track	Left	0	0	0	Shop	
50526	2210	38.5	5.1	9.5	2.71	3.5 Cycle track	Left	0	0	0	Hawker	
50526	2210	38.5	5.1	9.5	2.71	3.5 Drain	Left	0	0	0	0-1	
50526	2210	38.5	5.1	9.5	2.71	3.5 Drain	Right	0	0	0	0-1	
50526	2210	38.5	5.1	9.5	2.71	3.5 Footpath	Left	0	0	0	Shop	
50526	2210	38.5	5.1	9.5	2.71	3.5 Footpath	Left	0	0	0	Hawker	
50526	2210	38.5	5.1	9.5	2.71	3.5 Footpath	Left	0	0	0	Hawker	
50526	2210	38.5	5.1	9.5	2.71	3.5 Footpath	Right	0	0	0	Parking	
50526	2210	38.5	5.1	9.5	2.71	3.5 Footpath	Right	0	0	0	Other	
50526	2210	38.5	5.1	9.5	2.71	3.5 Parking pro	Left	0	0	0	0-1	
50526	2210	38.5	5.1	9.5	2.71	3.5 Parking pro	Left	0	0	0	0-1	
50526	2210	38.5	5.1	9.5	2.71	3.5 Parking pro	Right	0	0	0	0-1	
50526	2210	38.5	5.1	9.5	2.71	3.5 Parking pro	Right	0	0	0	0-1	
50526	2210	38.5	5.1	9.5	2.71	3.5 Road	Left	0	0	0	Shop	
50526	2210	38.5	5.1	9.5	2.71	3.5 Road	Left	0	0	0	Hawker	
50526	2210	38.5	5.1	9.5	2.71	3.5 Road	Right	0	0	0	Shop	
50526	2210	38.5	5.1	9.5	2.71	3.5 Road	Right	0	0	0	Hawker	
50526	2210	38.5	5.1	9.5	2.71	3.5 Road	Right	0	0	0	Hawker	
50526	2210	38.5	5.1	9.5	2.71	3.5 Road	Right	0	0	0	Parking	
50526	2210	38.5	5.1	9.5	2.71	3.5 Road	Right	0	0	0	Parking	
50526	2210	38.5	5.1	9.5	2.71	3.5 Road	Right	0	0	0	Parking	
50526	2210	38.5	5.1	9.5	2.71	3.5 Road	Right	0	0	0	Other	
50526	2210	38.5	5.1	9.5	2.71	3.5 Service road	Left	0	P	0	Shop	
50526	2210	38.5	5.1	9.5	2.71	3.5 Service road	Left	0	P	0	Hawker	

Upload the updated file by selecting the updated Grid and year.

The system will perform the calculations in the background and provide the final values for all the 3 indicators under the '**Secondary**' tab of Pedestrian Facility and NMT

4.5.2.3 Travel Speed

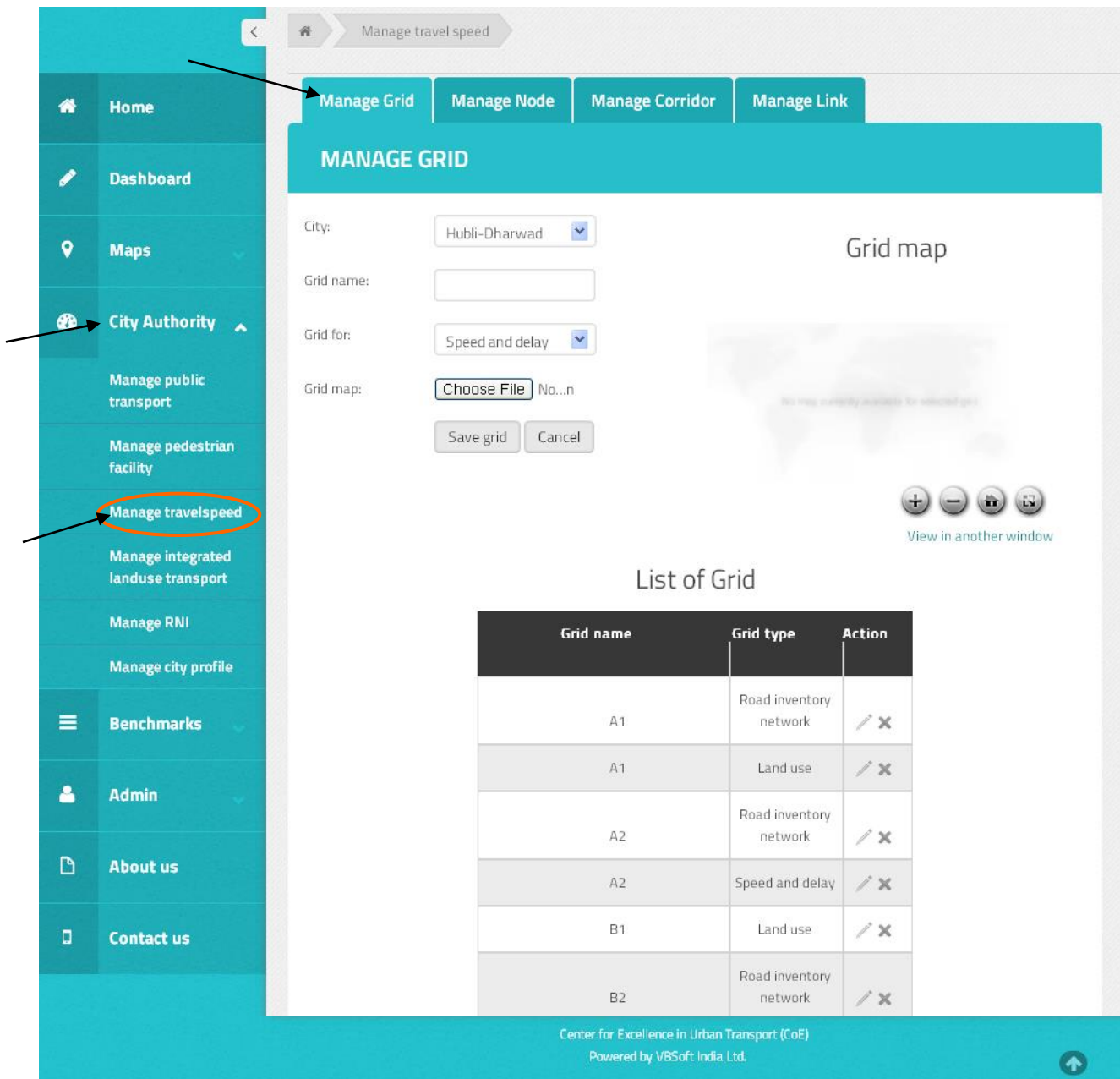
Average travel speed of personal vehicles for Cars, 2 Wheelers and Auto are explained in this section. All the 3 indicator's Grids, Nodes, Corridors and Links can be managed by '**Manage travel speed**' menu under '**City Authority**'.

1) Avg travel speed - Private Vehicles

User will first need to add the Grids, Nodes, Corridors and Links to be considered for calculating the avg travel speed - Personal Vehicles for a city.

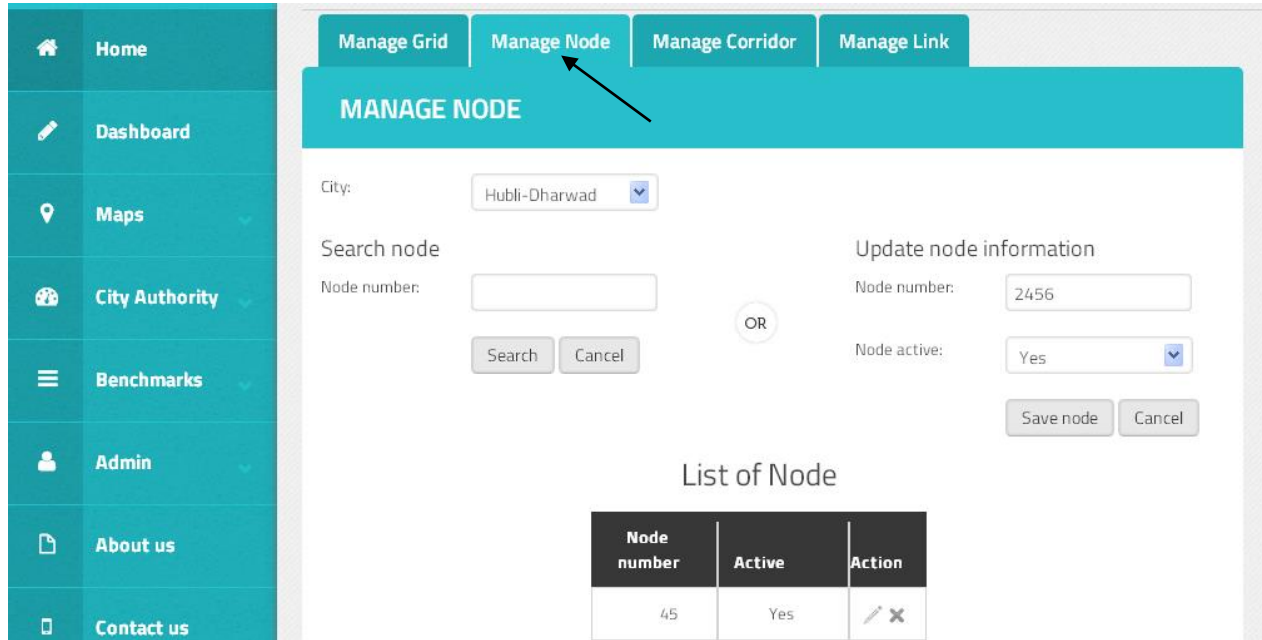
Step.1 Manage Grid

- Go to '**Manage Grid**'
- Select the city for which the grids are to be updated. Upon selection, all the grids mapped for this city will be listed down as shown below.
- Enter the Grid name eg C2
- The Grid can be managed for Road Network Inventory related indicators and ILT as well from this location itself.
- Select the grid type for which the Grid information is to be updated from the drop-down.
- Choose the grid map to be added under Grid map. Once the map is attached, the user will be able to view the attached map on the right of the screen. The map can be used the same way as shown in section 2.1.3
- Click on '**Save grid**'



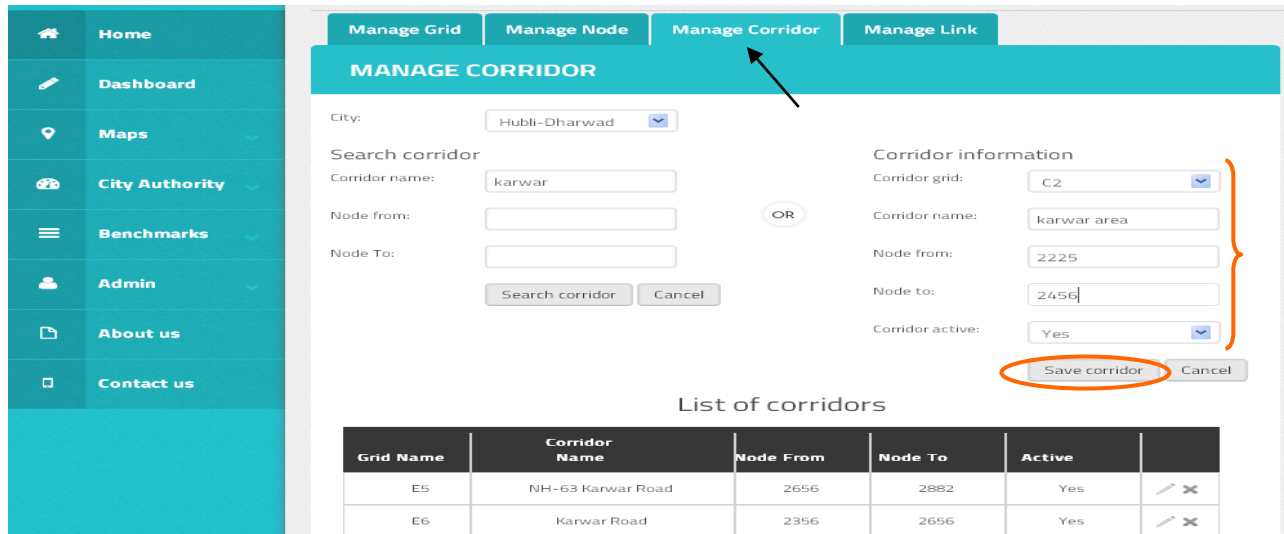
Step.2 Manage Node

- Go to 'Manage Node'
- Select the city
- Search the node number to check if the node already exists in the system. The system will generate all the nodes containing the searched node number.
- If the searched node is not found in the list, update the node information by entering the Node number under 'Update node information'. Eg Node number : 2456
- Select the right option from the drop-down for Node active
- Click on 'Save node'. Click on 'Cancel' to discard the changes



Step.3 Manage Corridor

- Go to 'Manage Corridor' tab
- Select the city
- Search for the corridor to be added as shown below
- If the searched corridor does not exist, add the corridor under 'Corridor information' on the right side of the page by selecting newly added grid under Manage Grid.
- Enter the corridor name, From and to Node numbers(newly added under Manage Node), Corridor status(Active/Inactive)
- Click on 'Save Corridor'



Step.4 Manage Link

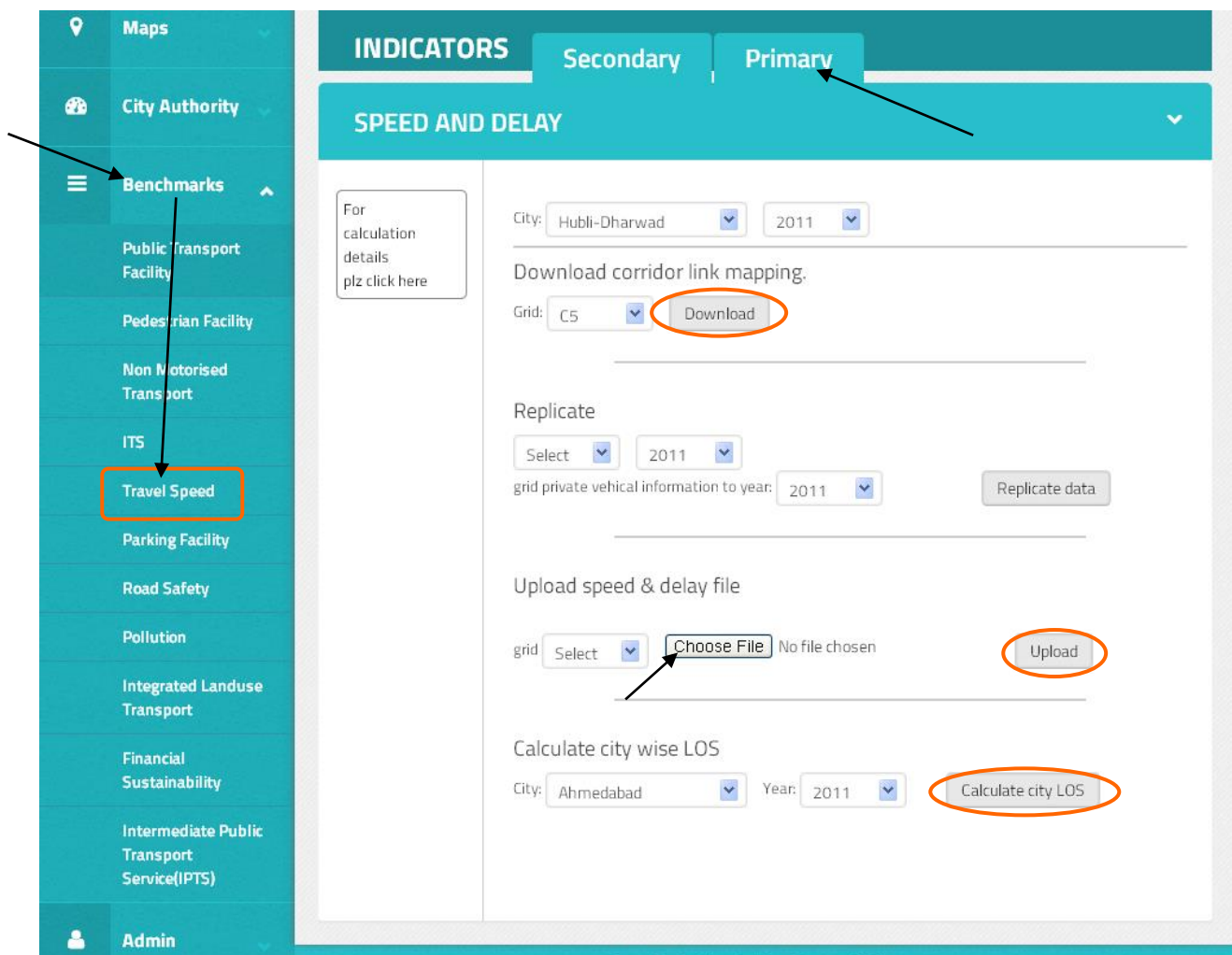
- Go to ‘Manage Link’ tab
- Select the city and year
- User can for the corridor for which the link is to be added as shown below
- User can add the corridor link under ‘Corridor link information’ on the right side of the page by selecting newly added grid and corridor previously.
- Enter the Link name, From and to Link numbers, Link length and Link status(Active/Inactive)
- Click on ‘Save Link’

The screenshot displays the 'MANAGE CORRIDOR LINK MAPPING' interface. On the left is a navigation menu with options: Home, Dashboard, Maps, City Authority, Benchmarks, Admin, About us, and Contact us. The main content area has tabs for 'Manage Grid', 'Manage Node', 'Manage Corridor', and 'Manage Link' (the active tab). Below the tabs, there are dropdowns for 'City' (Hubli-Dharwad) and 'Year' (2011). The 'Search corridor' section includes fields for 'Corridor name' (karwar), 'Node from', and 'Node To', with 'Search corridor' and 'Cancel' buttons. The 'Corridor link information' section includes dropdowns for 'Grid' (C2) and 'Corridor' (karwar road(2225-)), and input fields for 'Link name' (NH-63 Karwar area), 'Link from' (2656), 'Link to' (2711), 'Link length' (200), and 'Link active' (Yes). 'Save link' and 'Cancel' buttons are at the bottom right. Below the form is a 'List of corridors' table with columns: link Name, Node from, Node to, Lenght(m), and Active. A callout box labeled 'Link numbers' points to the 'Node from' and 'Node to' columns. Another callout box labeled 'Corridor name(Node to-Node from)' points to the 'link Name' column. The table contains 8 rows of data for 'NH-63 Karwar Road' with varying node ranges and lengths.

link Name	Node from	Node to	Lenght(m)	Active
NH-63 Karwar Road (2656-2882)				
NH-63 Karwar Road	2656	2712	200.00	Yes
NH-63 Karwar Road	2712	2749	300.00	Yes
NH-63 Karwar Road	2749	2793	200.00	Yes
NH-63 Karwar Road	2793	2845	200.00	Yes
NH-63 Karwar Road	2845	2858	800.00	Yes
NH-63 Karwar Road	2858	2869	800.00	Yes
NH-63 Karwar Road	2869	2879	500.00	Yes
NH-63 Karwar Road	2879	2882	300.00	Yes

Step.5 Primary tab

- Go to Benchmarks menu tab and select the Travel Speed benchmark.
- Select the city and year.
- Click on Primary tab under INDICATORS.
- Select the City and year again
- Replicate the file to new year by selecting the grid and years from the drop-down.
- To update the changes in new year's information, select the grid and click on download.
- Open the downloaded grid-wise excel file
- Update the start time, end time **in Seconds** and delay & delay cause for Cars, 2Wheelers and Auto for each link and save the file
- Upload the updated file by selecting the updated grid.
- Follow the above 2 steps for all the grids.
- Select the city and year under 'Calculate city wise LOS' and click on 'Calculate city LOS'.



The grid-wise excel file downloaded will have all the links added under that corridor of the grid. And the user will have to enter the information for each link for max of 6 runs and not more than that.

	B	C	D	E	F	I	J	K	L	M	N	O
1	Corridor na	Link name	Node from	Node to	Run dire	Length (m)	4Wheeler start	4Wheeler end	4wheeler delay	4wheeler delay cause	3Wheeler s	3Wheeler e
2	PB Road	PB Road	1414	1438	UP1	700	0	2.03	0.35		0	0
3	PB Road	PB Road	1438	1449	UP1	400	2.03	2.46	0		0	0
4	PB Road	PB Road	1449	1438	DN2	400	0	0.42	0		0	0
5	PB Road	PB Road	1438	1414	DN2	700	0.42	1.52	0		0	0
6	PB Road	PB Road	1414	1438	UP3	700	0	1.29	0		0	0
7	PB Road	PB Road	1438	1449	UP3	400	1.29	2.16	0.6		0	0
8	PB Road	PB Road	1449	1438	DN4	400	0	0.43	0		0	0
9	PB Road	PB Road	1438	1414	DN4	700	0.43	1.53	0		0	0
10	PB Road	PB Road	1414	1438	UP5	700	0	1.27	0		0	0
11	PB Road	PB Road	1438	1449	UP5	400	1.27	2.24	0		0	0
12	PB Road	PB Road	1449	1438	DN6	400	0	0.41	0		0	0
13	PB Road	PB Road	1438	1414	DN6	700	0.41	1.49	0		0	0
14												
15												

The system will perform the calculations in the background and provide the Avg Travel speed Cars and 2Wheelers under TRAVEL SPEED benchmark and Auto’s avg travel speed under IPTS benchmark in the ‘Secondary’ tab as shown below

Home | Benchmarks | TS

Select: CEPT | Select City: Hubli-Dharwad | Select Year: 2011 | GO

INDICATORS | Secondary | Primary

1. AVERAGE TRAVEL SPEED OF PERSONAL VEHICLES (KMPH) ^

2. AVERAGE TRAVEL SPEED OF PERSONAL VEHICLES (KMPH) - CARS v

Average travel speed of personal vehicles (Kmph) - CARS: **34.66**

For calculation details plz click here

2) Street Lighting(Lux level) on Roads

This primary indicator has been already explained in detail under section 4.5.2.2 Pedestrian Facility

4.5.2.4 NMT Parking Facilities

This indicator will provide the number of terminals having NMT parking facilities for the city.

- The user will have to go to the NMT Benchmark's Primary tab under INDICATORS.
- Select the City and year. The system will display the list of terminals already updated for that city.
- Select the Terminal from the drop-down which needs to be updated.
- The terminals drop-down will by default display all the stops registered from Menu City Authority's-Manage Stops tab. Incase the user is not able to find the terminal to be updated with NMT facility, the user can add the same by going to the Manage Stops tab.
- Select the right option for the selected terminal whether it has NMT parking facility or not.
- Update the Study area and Accumulation no.
- Click on 'Save'

INDICATORS Secondary Primary

CYCLE PARKING FACILITY

For calculation details plz click here

City: Hubli-Dharwad Year: 2011

Parking facility

Terminal: HUD20049----LIC Sto

Cycle parking available: Yes

Study area:

Accumulation (no.):

Save Cancel

List of terminals

GIS	Terminal name	Parking available	Action
HUD50087	Hubli CBT	False	
HUD50077	Old Bus Stand	False	
HUD50013	Dharwad OCBS	True	
HUD50012	Dharwad CBT	False	

The system will perform the calculations in the background and provide the % of NMT Parking facilities at Interchanges for a city under the 'Secondary' tab of the indicator.

4.5.2.5 Integrated Landuse Transport System

This indicator is to measure the % of land covered with non-residential area for a particular city. User will have to first update the Grids, the land's GIS ids and map the GIS ids with the grids. These updations can be managed by 'Manage Integrated Landuse Transport' menu under 'City Authority'.

Step.1 Manage Grid

The grid updations are discussed under section 'Manage Grid' of 4.5.2.3 above already.

Step.2 Manage Land

- Go to 'Manage Land' tab
- Select the city
- Enter the GIS number and its sq.km area
- Update land type by selecting the right option from the drop-down
- Click on 'Save Land'

City: Hubli-Dharwad

Search land information

Land GIS number:

Search land Cancel

OR

Land information

Land GIS number: 263

Land area (sq km): 45632

Land type: Agriculture

Save land Cancel

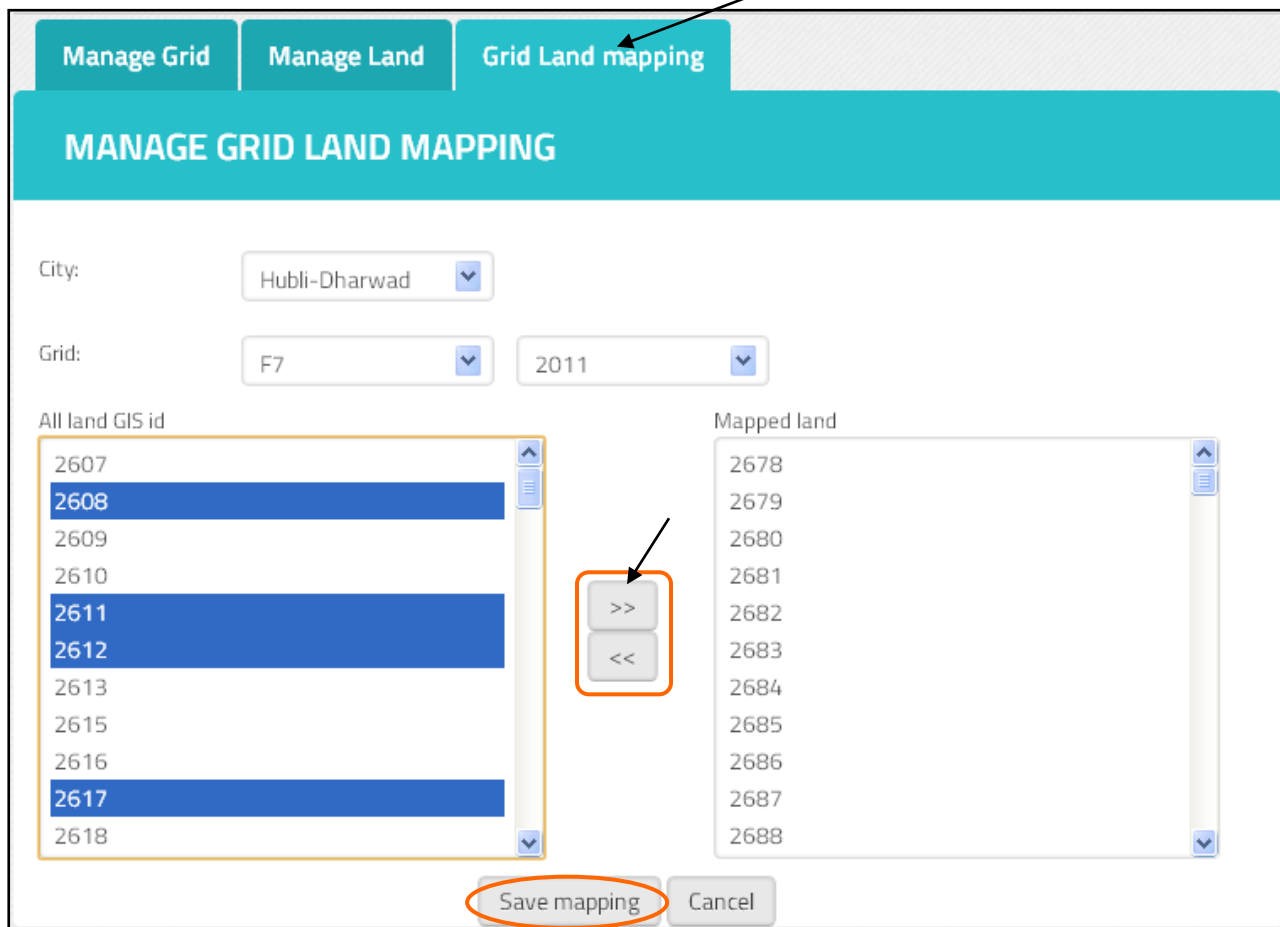
Land information

Land GIS number	Area	Usage type	Action
104	0.000063	Residential	
1040	0.000434	Residential	
1041	0.000299	Commercial	

Step.3 Grid Land Mapping

- Select the city. Once the city is selected, the system will list down all the grids that are updated in the system for the city so far.

- Select the updated grid and year
- Select the GIS ids, from the left GIS list box, that needs to be mapped to the selected grid and click on the right pointing arrow
- To deselect the GIS ids, select the GIS ids from the Mapped Land list box and click on left pointing arrows.
- Click on ‘Save mapping’



Step.4 Primary tab

- Go to Benchmarks menu tab and select the Integrated Landuse Transport benchmark.
- Select the city and year.
- Click on Primary tab under INDICATORS.
- Select the City and year again
- Replicate the file to new year.
- To update the changes to the new year’s information, select the grid and click on download.
- Open the downloaded grid-wise excel file
- Update the Study area, Previous Year usage and Current Year Usage columns from the file for each grid and save the file
- Upload the updated file by selecting the updated grid.
- Follow the above 2 steps for all the grids.

	A	B	C	D	E	F	G	H	I	J	K
	Land Gis C Grid Name	Study Area	MappingCo	Previous Year Usage	Current Year Usage						
2	3886	B1	0.02	2148		Industrial					
3	3887	B1	0.03	2149		Industrial					
4	3894	B1	0.02	2150		Industrial					
5	3896	B1	0	2151		Industrial					
6	3897	B1	0	2152		Residential					
7	3898	B1	0	2153		Residential					
8	3899	B1	0	2154		Industrial					
9	3900	B1	0	2155		Residential					
10	3902	B1	0.01	2156		Residential					
11	3903	B1	0	2157		Residential					

Once the files are uploaded, the system will perform the calculations in the background and provide the Total area, total of non-residential area out of the total area and the % of area under non-residential use (Indicator value)

- Benchmarks
- Public Transport Facility
- Pedestrian Facility
- Non Motorised Transport
- ITS
- Travel Speed
- Parking Facility
- Road Safety
- Pollution

2. MIXED LANDUSE ON MAJOR TRANSIT CORRIDORS /NETWORK

MIXED LANDUSE ON MAJOR TRANSIT CORRIDORS /NETWORK	
Total area within 250m buffer along the major transit corridor	18.7€
% of area under non residential use	7.65

40.80

END OF DOCUMENT