**DB with data flow**

DB is structured around groups of tables:

Usr group

Area goup

Kml

Property

Business

District (rent, investment, land)

Transactions (due, payment, etc)

Collector

System group (labels and configuration).

Other group (helper tables used by all)

These are explained below.

**USR group of tables**: These tables get populate by the new users and what they do when logged into the LRE system.

|  |  |  |
| --- | --- | --- |
| Table name | Columns | Description |
| Usr\_users | username  pass  adminpass  masterpass  title  name  position  address  city  state  zip  email  phone  baselanguage  activestatus  loged | ALL the users are added at this table with their details such as username password. Adminpass and masterpass are for administrator at disctrict level and administrator at national level to add new administrators, etc.  username – unique username  pass – password chosen by the user  adminpass – administrator password  masterpass – super-administrator password  title – mr / mrs  name – person’s full name and last name  position – position at the district  address – workplacement address  city - City  state – District & Region  zip – postal code  email – work e-mail  phone – office or mobile phone  baselanguage – English, but it could be adapted to be multilangual  activestatus – reference to hlp\_activity\_status  loged |
| Usr\_roles | id  description | Types of roles and their description:  Master administrator = 0  District administrator = 10  Revenue Accountant / Superintendent = 20  Field Entry Person (billboards etc) = 30  Collector = 100  Auditor / Reader = 200  id – role id  description – the role desription |
| Usr\_user\_role | username  roleid | Table that links the user with their role.  username – reference to usr\_users  roleid – reference to usr\_roles |
| Usr\_user\_logs | id  username  activity  time  comments | Log for changes the user makes  id  username  activity  time  comments |
| Usr\_user\_region | username  regionid | Table that links the user with their region.  username – reference to usr\_users  regionid – reference to the area\_region |
| Usr\_user\_district | username  regionid  districtid | Table that links the user with their district  username – reference to usr\_users  regionid - reference to the area\_region  districtid - reference to the area\_district |
| Usr\_user\_subdistrict | username  regionid  districtid  subdistrictid | Table that links the user with their subdistrict  username – reference to usr\_users  regionid - reference to the area\_region  districtid - reference to the area\_district  subdistrictid – reference to area\_subdistrict |
| Usr\_user\_zone | username  regionid  districtid  subdistrictid  zoneid | Table that links the user with their zone  username – reference to usr\_users  regionid - reference to the area\_region  districtid - reference to the area\_district  subdistrictid – reference to the area\_subdictrict  zoneid – reference to the area\_zone |

USR links between the tables:

Usr\_user\_logs

Usr\_user\_region

Usr\_user\_district

Usr\_user\_subdistrict

Usr\_user\_zone

Usr\_users

Usr\_user\_role

Usr\_roles

**Area group of tables**: These tables are populated with data about region to zone based on the information from the national to the local level.

|  |  |  |
| --- | --- | --- |
| Table names | Columns | Description |
| Area\_region | id  regionid  region\_name  activestatus  coa\_regionid  ??  regionnameTCPD  regionnameCoA | It contains all the regions and their code based in TCPD and chart of accounts.  id  regionid – unique id on the national level  region\_name – region name  activestatus – reference to hlp\_activity\_status  coa\_regionid – regaion id provided by chart of accounts |
| Area\_district | id  districtid  district\_name  regionid  activestatus  boundary  districtnameTCPD  districtnameCoA  coa\_regionid  coa\_districtid  coa\_disttypeid | District is a level below to region and therefore it has to reference it. The district code is used from TCPD and chart of accounts (district is used to name district, municipality or metro, which is based on population)  id  districtid – unique code at national level  district\_name – district name  regionid – references regionid in area\_region  activestatus - reference to hlp\_activity\_status  boundary – boundary of the district  districtnameTCPD – district name as provided by TCPD (occasional values differ from district\_name)  districtnameCoA – name provided by chart of accounts  coa\_regionid - references coa\_regionid in area\_region  coa\_districtid - code provided by chart of accounts  coa\_disttypeid – refences code in hlp\_area\_district\_type |
| Area\_subdistrict | id  subdistrictid  subdistrict\_name  districtid  activestatus  coa-districtid  coa-submetroid | Subdistrict is a level below to district and therefore it has to reference district. The subdistrict code is used from TCPD and chart of accounts (called sub-metro).  id  subdistrictid – unique code at national level  subdistrict\_name – subdistrict name  districtid - references districtid in area\_district  activestatus - reference to hlp\_activity\_status  coa-districtid - references coa\_districtid in area\_district  coa-submetroid – code provided by chart of accounts |
| Area\_zone | id  zoneid  zone\_name  subdistrictid  activestatus | Zone is the lowest level and is below subdistrict and therefore it has to reference it. The zone code is used from TCPD.  id  zoneid – unique code national level  zone\_name – zone name  subdistrictid - references subdistrictid in area\_subdistrict  activestatus - reference to hlp\_activity\_status |

Area links between the tables:

Area\_region

Area\_district

Area\_subdistrict

Area\_zone

**Kml group of tables**: These tables get populated from the data that comes from Town and Country Planning. These data are used to display the boundaries of districts and parcels. Each parcel has a unique code called UPN.

|  |  |  |
| --- | --- | --- |
| Table names | Columns | Description |
| kml\_district\_boundary\_tcpd | id  boundary  regionid  districtid  districtname | It contains the boundaries of the district  id  boundary – boundary of the district  regionid – references the regionid in the area\_region  districtid – references the districtid in the area\_district  districtname - references the district\_name in the area\_district |
| kml\_parcel\_boundary\_tcpd | id  boundary  lupmis\_color  upn  address  landuse  status  parcelOf  districtid | It contains the boundaries of the parcels within the district. Each parcel has its unique UPN.  id  boundary - boundary of the parcel  lupmis\_color –  upn – unique parcel number  address – address of the parcel (street name, postcode, city)  landuse – land use  status -  parcelOf -  districtid – references area\_district |

Kml group of tables link:

There are no links between the tables.

**Property group of tables**: Property details are added through the LRE after the Parcel has been digitised and its appearing with its UPN.

|  |  |  |
| --- | --- | --- |
| Table names | Columns | Description |
| Property\_details | id  upn  subupn  districtid  subdistrictid  zoneid  town  floor  doornumber  streetname  locality\_code  ownerid  nr\_rooms  year\_completed  property\_type\_code  property\_use\_code  nr\_persons  roofing\_type\_code  ownership\_type\_code  constr\_material\_type\_code  nr\_storeys  planningpermit  buildingpermit  fee\_fixing\_property\_code  area\_m2  activestatus  value\_prop  assessed  comments | All the details of the property. UPN & SUBUPN kreate the unique-key in this table. Property can be added, modified or deleted. Property can be liable or exempted from tax.  **id**  **upn** -  **subupn**  **districtid** – reference to area\_district  **subdistrictid** - reference to area\_subdistrict  **zoneid** - reference to area\_zone  **town** -  **floor** – floor where the property is situated (valid for subupn)  **doornumber** – house/building door number  **streetname** – street name  **locality\_code** – locality code  **ownerid** – reference to hlp\_owners\_clients  **nr\_rooms** – number of rooms  **year\_completed** – year the property completed  **property\_type\_code** – referencing hlp\_property\_type  **property\_use\_code** - referencing hlp\_property\_use  **nr\_persons** – number of persons in the property  **roofing\_type\_code** – referencing hlp\_property\_roofing  **ownership\_type\_code** – referencing hlp\_property\_ownership  **constr\_material\_type\_code** – referencing hlp\_construction\_material  **nr\_storeys -**  number of floors for the property  **planningpermit** – planning permit, yes / no  **buildingpermit** – building permit, yes / no  **fee\_fixing\_property\_code**  - reference to fee\_fixing\_property  **area\_m2** – coverage area  **activestatus –** reference to hlp\_activity\_status  **value\_prop –** value of the property  **assessed** – date and time of assessment  **comments** – anything extra |
| Property\_details\_history | id  upn  subupn  districtid  subdistrictid  zoneid  town  floor  doornumber  streetname  locality\_code  ownerid  nr\_rooms  year\_completed  property\_type\_code  property\_use\_code  nr\_persons  roofing\_type\_code  ownership\_type\_code  constr\_material\_type\_code  nr\_storeys  planningpermit  buildingpermit  fee\_fixing\_property\_code  area\_m2  activestatus  value\_prop  assessed  comments  modification\_date | All the current and historical details of the property. Rows are added in the same time as the property details are modified / added / deleted. Auto incremental id is the unique-key in this table.  **id**  **upn**  **subupn**  **districtid**  **subdistrictid**  **zoneid**  **town**  **floor**  **doornumber**  **streetname**  **locality\_code**  **ownerid**  **nr\_rooms**  **year\_completed**  **property\_type\_code**  **property\_use\_code**  **nr\_persons**  **roofing\_type\_code**  **ownership\_type\_code**  **constr\_material\_type\_code**  **nr\_storeys**  **planningpermit**  **buildingpermit**  **fee\_fixing\_property\_code**  **area\_m2**  **activestatus**  **value\_prop**  **assessed**  **comments**  **modification\_date** – date and time of new modification |
| hlp\_property\_roofing | id  code  description  value  comments | Code and description of the roofing.  **id**  **code** – unique code  **description** – description of the code  **value** – value for such roof (future use)  **comments** |
| hlp\_property\_construction\_material | id  code  description  value  comments | Code and description of the construction material  **id**  **code**  **description**  **value**  **comments** |
| hlp\_property\_ownership | id  code  description  value  comments | Code and description of the ownership.  **id**  **code**  **description**  **value**  **comments** |
| hlp\_property\_type | id  code  description  value  comments | Code and description of the property type  **id**  **code**  **description**  **value**  **comments** |
| hlp\_property\_use | id  code  description  value  comments | Code and description of the property type  **id**  **code**  **description**  **value**  **comments** |

Property links:

hlp\_property\_roofing

hlp\_property\_construction\_ material

hlp\_property\_ownership

hlp\_property\_type

hlp\_property\_use

[fee\_fixing\_property]

property\_details

property\_details\_history

**Business group of tables**: Business details are added through the LRE after the Parcel has been digitised and its appearing with its UPN.

|  |  |  |
| --- | --- | --- |
| Table names | Columns | Description |
| business\_details | Id  upn  subupn  districtid  subdistrictid  zoneid  locality\_code  da\_no  landmark1  landmark2  floor  doornumber  streetname  business\_name  business\_certif  ownerid  date\_established  date\_end  revenue\_status  area\_m2  nr\_employees\_code  environment\_impact\_code  fee\_fixing\_business\_code  business\_temporary\_construction\_code  comments | All the details of the business. Business can be added, modified or deleted. All business are liable for tax. Charities and NGO’s don’t get here.  **id**  **upn –** unique parcel number – identifies where the business is located  **subupn –** together with UPN make the uniqueness if more than one business is on the same parcel  **districtid** – reference to area\_district  **subdistrictid** - reference to area\_subdistrict  **zoneid** - reference to area\_zone  **locality\_code** – from the questionnaire  **da\_no** – district assembly number  **landmark1** - from the questionnaire  **landmark2**- from the questionnaire  **floor –** floor if business address is tower of offices  **doornumber** – number on the door  **streetname –** street name  **business\_name –** business name  **business\_certif –** business certificate issued by TCPD / assembly  **ownerid** – reference to the ocid in the table hlp\_owners\_clients  **date\_established** – date business is established  **date\_end** – date business has ended  **activitystatus** - reference to hlp\_activity\_status  **area\_m2** – size of the area the business covers  **nr\_employees** – number of employees  **environment\_impact\_code** – reference to the hlp\_business\_environmental\_impact  **fee\_fixing\_business\_code** – reference to the fee\_fixing\_business table  **business\_temporary\_construction\_code** – reference to the hlp\_business\_temporary\_construction  **comments** |
| business\_details\_history | Id  upn  subupn  districtid  subdistrictid  zoneid  locality\_code  da\_no  landmark1  landmark2  floor  doornumber  streetname  business\_name  business\_certif  ownerid  date\_established  date\_end  revenue\_status  area\_m2  nr\_employees\_code  class\_category\_code  environment\_impact\_code  fee\_fixing\_business\_code  business\_temporary\_construction\_code  comments  modification\_date | All the current and historical details of the business. Rows are added in the same time as the business details are modified / added / deleted. Auto incremental id is the unique-key in this table.  **id**  **upn**  **subupn**  **districtid**  **subdistrictid**  **zoneid**  **locality\_code**  **da\_no**  **landmark1**  **landmark2**  **floor**  **doornumber**  **streetname**  **business\_name**  **business\_certif**  **ownerid**  **date\_established**  **date\_end**  **revenue\_status**  **area\_m2**  **nr\_employees**  **class\_category\_code**  **environment\_impact\_code**  **fee\_fixing\_business\_code**  **business\_temporary\_construction\_code**  **comments**  **modification\_date** – date and time that modification happened |
| hlp\_business\_environment\_impact | id  code  description  value  comments | Code and description of the environmental impact for the business.  **id**  **code –** unique code  **description** – description of the code  **value –** for future use  **comments** |
| hlp\_business\_temporary\_construction | id  code  description  value  comments | Table for temporary structures such as kiosks etc which operate as business.  **id**  **code** – unique code for all types of temporary construction  **description –** description of those temporary constructions  **value –** for future use  **comments** |

Business group links:

hlp\_business\_environmental\_impact

[fee\_fixing\_business]

hlp\_business\_temporary\_construction

business\_details

business\_details\_history

**District group of tables**:

|  |  |  |
| --- | --- | --- |
| Table names | Columns | Description |
| district\_investment | id  upn  subupn  districtid  investmentid  investment\_name  investment\_value  assessed  contractid  contract\_name  contract\_value  duration  date\_start  date\_end  activestatus  ownerid  clientid  comments | It contains the current details about the investments of the district assemblies. All the investments even if portable should be linked to UPN. Add / modify or delete functions can be performed on this table. The values from here will go into expenses table  **id**  **upn**  **subupn**  **districtid**  **investmentid** – id of the contract  **investment\_name –** title of contract  **investment\_value** – value of investment  **duration –** duration of the contract (if applicable)  **date\_start –** starting date  **date\_end –** ending date  **activestatus –** reference to hlp\_activity\_status  **ownerid** – investor  **clientid –** beneficiary  **comments** |
| District\_investment\_history | id  upn  subupn  districtid  investmentid  investment\_name  investment\_value  duration  date\_start  date\_end  activestatus  ownerid  clientid  comments  modification\_date | It contains the historical and current details about the investments of the district assemblies. Add rows is always performed to this table, with the date of medication and action taken: add, delete or modify.  **id**  **upn**  **subupn**  **districtid**  **investmentid**  **investment\_name**  **investment\_value**  **duration**  **date\_start**  **date\_end**  **activestatus**  **ownerid**  **clientid**  **comments**  **modification\_date** |
| District\_land | id  districtid  upn  landid  land\_name  land\_value  assessed  contractid  contract\_name  contract\_value  duration  date\_start  date\_end  activestatus  ownerid  clientid  fee\_fixing\_land\_code  fee\_fixing\_property\_code  fee\_fixing\_business\_code  area\_m2  comments | It contains the current details about the lands of the district assemblies. All the lands are linked to UPN. Add / modify or delete functions can be performed on this table  i**d**  **districtid** – reference to area\_distrtict  **upn** – unique parcel number  **landid –** id of the land as given by the assembly (if applicable)  **land\_name –** land name  **land\_value –** land selling value  **assessed** – assessed date  **contracted** – contract id for use of land  **contract\_name –** contract title  **contract\_value** –value of the contract, base for revenue  **duration** – duration of the contract  **date\_start –** the actual day the contract is applied  **date\_end –** the day the contract ends  **activestatus –** reference to the hlp\_activity\_status  **ownerid –** owner of the land  **clientid** – user of the land  **fee\_fixing\_land\_code -** reference to fee\_fixing\_land (royalities)  **fee\_fixing\_property\_code -** reference to fee\_fixing\_property  **fee\_fixing\_business\_code –** reference to fee\_fixing\_business  **area\_m2 –** surface area of the land  **comments** |
| District\_land\_history | id  districtid  upn  landid  land\_name  land\_value  assessed  contractid  contract\_name  contract\_value  duration  date\_start  date\_end  activestatus  ownerid  clientid  fee\_fixing\_land\_code  fee\_fixing\_property\_code  fee\_fixing\_business\_code  area\_m2  comments  modification\_date | It contains the historical and current details about the lands of the district assemblies. Add rows is always performed to this table, with the date of medication and action taken: add, delete or modify.  i**d**  **districtid**  **upn**  **landid**  **land\_name**  **land\_value**  **assessed**  **contractid**  **contract\_name**  **contract\_value**  **duration**  **date\_start**  **date\_end**  **activestatus**  **ownerid**  **clientid**  **fee\_fixing\_land\_code**  **fee\_fixing\_property\_code**  **fee\_fixing\_business\_code**  **area\_m2**  **comments**  **modification\_date** |
| District\_rent | id  upn  subupn  districtid  town  floor  doornumber  streetname  locality\_code  landmark1  landmark2  rent\_value  assessed  contractid  contract\_name  contract\_value  duration  date\_start  date\_end  activestatus  ownerid  clientid  fee\_fixing\_rent\_code  fee\_fixing\_business\_code  area\_m2  comments | It contains the current details about the rents of the district assemblies. All the rents are linked to UPN. Add / modify or delete functions can be performed on this table  **id**  **upn**  **subupn**  **districtid**  **town –** town  **floor –** floor (if applicable)  **doornumber –** or table / desk number  **streetname –** street name  **locality\_code –** from the business questionnaire  **landmark1**  **landmark2**  **rent\_value** – sale value of the area being rented  **assessed –** assessment date  **contracted –** contract id  **contract\_name –** name of the contract  **contract\_value –** the value on the contract  **duration –** duration period  **date\_start** – startdate  **date\_end –** end date  **activestatus – reference to** hlp\_activity\_status  **ownerid –** owner of the property  **clientid –** client renting the property  **fee\_fixing\_rent\_code –** reference to fee\_fixing\_rent  **fee\_fixing\_business\_code –** reference to fee\_fixing\_business  **area\_m2 –** the area the contract covers  **comments** |
| District\_rent\_history | id  upn  subupn  districtid  town  floor  doornumber  streetname  locality\_code  landmark1  landmark2  rent\_value  assessed  contractid  contract\_name  contract\_value  duration  date\_start  date\_end  activestatus  ownerid  clientid  area\_m2  comments  modification\_date | It contains the historical and current details about the rents of the district assemblies. Add rows is always performed to this table, with the date of medication and action taken: add, delete or modify.  **id**  **upn**  **subupn**  **districtid**  **town**  **floor**  **doornumber**  **streetname**  **locality\_code**  **landmark1**  **landmark2**  **rent\_value**  **assessed**  **contractid**  **contract\_name**  **contract\_value**  **duration**  **date\_start**  **date\_end**  **activestatus**  **ownerid**  **clientid**  **area\_m2**  **comments**  **modification\_date** |

District group links:

District\_investment District\_investment\_history

District\_land District\_land\_history

District\_rent District\_rent\_history

**Transactions group tables**: This group includes the tables that have values in them. From these tables the reposts for each property / business can be generated. Also reports from higher levels such as district and national revenue, based on year, month, week or day.

|  |  |  |
| --- | --- | --- |
| Table names | Columns | Description |
| Due | id  upn  subupn  year  code  value  comments | It is used to for the due value of a property / business that is required to pay for the ongoing year.  Rows / data are added automatically. Any cancelation necessary, it needs to go through the administration module – it shows as negative value. The log of any activity on this table should be kept. Based on UPN  **id**  **upn –** reference to the UPN of the property\_details / business\_details/ district\_land/ district\_rent or district\_investment  **subupn** – if applicable, reference to the SUBUPN of the property\_details / business\_details/ district\_land/ district\_rent or district\_investment  **year**  - due for the year  **code** – code to reference fee\_fixing\_property / business / land / rent / investment / fees\_fines  **value –** value from fee\_fixing\_property / business / land / rent / investment / fees\_fines associated with the code  **comments** |
| Due\_history | id  upn  subupn  year  code  value  comments  modification\_date | It is used to keep the current and old \ cumulative due value of a property / business that is required to pay for the ongoing year.  Rows / data are added automatically. Based on UPN. Access only through administration module.  **id**  **upn**  **subupn**  **year**  **code**  **value**  **comments**  **modification\_date** |
| Tickets | id  starting  ending  username | Receipts that the collector is issuing to the clients when paying on the spot (in the office, when there is no internet / electricity). These are used later to be added to the payments in the LRE system. Tickets are linked to the collector.  **id**  **starting** – starting ticket number from the bunch of tickets assigned to the collector  **ending -** ending ticket number from the bunch of tickets assigned to the collector  **username –** reference to usr\_user that has the role of collector in usr\_roles |
| fees\_fines\_guidelines | id  code  description  value1  value2  value3  unit  comments | Table where the data comes from the central level for all the fees and fines codes and description. There are 3 recommended values but are not used in calculations. Districts based on this table fill their fees and fines with values and the table fees\_fines gets populated matching the code and description from the guidelines  **id**  **code** – unique code at national level  **description –** description of the code  **value1** – recommended value for Metro  **value2** – recommended value for Municipality  **value3 -** – recommended value for District  **unit –** reference to hlp\_unit  **comments** |
| Fees\_fines | id  districtid  code  description  value  unit  year  comments | Table that contains all the fees and fines for all situations. E.g. Fee for Hawker, fine for late payment. Get filled by district and it should be standardised on the national level with the coding and naming (similar to fee\_fixing\_guidlance).  **id**  **districtid –** reference to area\_district  **code –** reference to fees\_fines\_guidelines  **description –** title of the code (matching with description at fees\_fines\_guidelines)  **value –** district value  **unit –** unit matching unit at fees\_fines\_guidelines  **year –** year the value is applied for  **comments** |
| Fee\_fixing\_guidelines | id  code  description  value1  value2  value3  unit  comments | Fees recommendations coming from the Ministry of Finance. It contains fees for all properties and businesses based on their class and category.  **id**  **code** – unique nationwide code for all the regular charges  **description –** name of the code  **value1** – recommended value for Metro  **value2** – recommended value for Municipality  **value3 -** – recommended value for District  **unit –** reference to hlp\_unit  **comments** |
| Fee\_fixing\_property | id  districtid  code  description  value  unit  year  comments | Data comes from District and contains fees for property where each district has their own values. It contains fees for all property based on their class and category.  **id**  **districtid** – reference to area\_district  **code –** reference to fee\_fixing\_guildelines for property  **description** title of the code (matching with description at fee\_fixing\_guidelines)  **value –** district value  **unit –** unit matching unit at fee\_fixing\_guidelines  **year –** year the value is applied for  **comments** |
| Fee\_fixing\_business | id  districtid  code  description  value  unit  year  comments | Data comes from District and contains fees for businesses where each district has their own values. It contains fees for all businesses based on their class and category.  **id**  **districtid** – reference to area\_district  **code –** reference to fee\_fixing\_guildelines for business  **description** title of the code (matching with description at fee\_fixing\_guidelines)  **value –** district value  **unit –** unit matching unit at fee\_fixing\_guidelines  **year –** year the value is applied for  **comments** |
| Fee\_fixing\_rent | id  districtid  code  description  value  unit  year  comments | Data comes from District and contains fees for rent where each district has their own values. It contains fees for all rents based on their class and category.  **id**  **districtid** – reference to area\_district  **code –** reference to fee\_fixing\_guildelines for rent  **description** title of the code (matching with description at fee\_fixing\_guidelines)  **value –** district value  **unit –** unit matching unit at fee\_fixing\_guidelines  **year –** year the value is applied for  **comments** |
| Fee\_fixing\_land | id  districtid  code  description  value  unit  year  comments | Data comes from District and contains fees for land where each district has their own values. It contains fees for all lands based on their class and category.  **id**  **districtid** – reference to area\_district  **code –** reference to fee\_fixing\_guildelines for land  **description** title of the code (matching with description at fee\_fixing\_guidelines)  **value –** district value  **unit –** unit matching unit at fee\_fixing\_guidelines  **year –** year the value is applied for  **comments** |
| Fee\_fixing\_investment | id  districtid  code  description  value  unit  year  comments | Data comes from District and contains fees for investment where each district has their own values. It contains fees for all investments based on their class and category.  **id**  **districtid** – reference to area\_district  **code –** reference to fee\_fixing\_guildelines for investment  **description** title of the code (matching with description at fee\_fixing\_guidelines)  **value –** district value  **unit –** unit matching unit at fee\_fixing\_guidelines  **year –** year the value is applied for  **comments** |
| Payment | id  upn  subupn  districtid  payment\_date  payment\_value  instalments  instalment\_order  station\_payment  receipt\_payment  type\_payment  paid\_by  paid\_for  comments | It is used to for the payment values of a property / business that is paid during the ongoing year.  Rows / data can be added or cancelled (new row id added). The log of any activity on this table should be kept. Based on UPN & SUBUPN, date, paid by, paid for.  **id**  **upn -** reference to the UPN of the property\_details / business\_details/ district\_land/ district\_rent or district\_investment  **subupn -** if applicable, reference to the SUBUPN of the property\_details / business\_details/ district\_land/ district\_rent or district\_investment  **districtid** – reference area\_district  **payment\_date –** date the payment was made  **payment\_value** – payment value  **instalments –** number of instalments  **instalment\_order** – the order of the instalment  **station\_payment –** paypoint / collectorid  **receipt\_payment –** reference to ticket  **type\_payment –** type of payment (cash, card etc)  **paid\_by** – full name of the person who is paying  **paid\_for** – display name of the property owner (for verification purposes)  **comments** |
| Payment\_history | Id  upn  subupn  districtid  payment\_date  payment\_value  instalments  instalment\_order  station\_payment  receipt\_payment  type\_payment  payer  paid\_for  comments  modification\_date | It is used for the current and historical payments of values from a property / business.  Rows / data will be added automatically. Based on UPN, date, paid by, paid for.  **id**  **upn**  **subupn**  **districtid**  **payment\_date**  **payment\_value**  **instalments**  **instalment\_order**  **station\_payment**  **receipt\_payment**  **type\_payment**  **payer**  **paid\_for**  **comments**  **modification\_date** |
| Balance | id  upn  subupn  year  value  comments | It is used for balance between due and payments for the current year.  **id**  **upn** - reference to the UPN of the property\_details / business\_details/ district\_land/ district\_rent or district\_investment  **subupn -** if applicable, reference to the SUBUPN of the property\_details / business\_details/ district\_land/ district\_rent or district\_investment  **year –** current year  **value –** sum(due[upn,subupn]) – sum(payment[upn,subupn])  **comments** |
| Balance\_history | id  upn  subupn  year  value  comments  modification\_date | It is used for balance between due and payments for the all the previous and the current year.  **id**  **upn**  **subupn**  **year**  **value**  **comments**  **modification\_date** |
| demand\_notice\_record | id  upn  subupn  year  value  comments | It is used for issuing demand notice and record keeping  **id**  **upn -** reference to the UPN of the property\_details / business\_details/ district\_land/ district\_rent or district\_investment  **subupn -** if applicable, reference to the SUBUPN of the property\_details / business\_details/ district\_land/ district\_rent or district\_investment  **year** – current year  **value –** reference to balance  **comments** |
| Expenses | id  upn  subupn  year  value  comments | Petty cash and other expenses. (table to change and match the new requirements which are expected when application get ready for use)  **id**  **upn**  **subupn**  **year**  **value –** value of the expenses  **comments** |

Transactions links:

Tickets

Fees\_fines

Fee\_fixing\_property

Fee\_fixing\_business

Fee\_fixing\_land

Fee\_fixing\_rent

Fee\_fixing\_guidelines

Fees\_fines\_guidelines

Due Due\_history

Payments Payments\_history

Balance Balance\_history

demand\_notice\_record

**Collector tables**: (ideally) One collector per collector zone. Collector is the person who collects the data on the field and payments. He / She operates only in that zone.

|  |  |  |
| --- | --- | --- |
| Table names | Columns | Description |
| Collector\_zones | id  districtid  polygon  username  zone\_colour | This are received from the TCPD (ideally) or drawn on the map from the LRE system.  **id**  **districtid**  **polygon** - border  **username** – reference to the username column in the usr\_users table  **zone\_colour** – each zone in different colour |

Collector links:

None.

**System tables**: Used by the LRE System / application.

|  |  |  |
| --- | --- | --- |
| Table names | Columns | Description |
| System\_labels | id  lang  label  info  error | All the labels used in the LRE system  **id**  **lang**  **label** – text that will appear instead of the label in the UI  **info** – as guidance for user for the field  **error** – for log |
| System\_config | variable  value | Admin tool for annual roll over etc.  **variable**  **value** |

System tables link:

There is no link between the tables.

**Other tables**: These are tables which are used by the LRE system in the interface and to populate the main tables.

|  |  |  |
| --- | --- | --- |
| Table names | Columns | Description |
| hlp\_area\_district\_type | code  description  comments | It contains the types that each district can have:  District, Municipality, Metro (based on the population).  **code**  **description**  **comments** |
| Hlp\_owners\_clients | Id  ocid  description  name  parent\_name  dob  address1  address2  address3  tel1  tel2  tel3  email1  email2  email3  comments | Table with the details for all the owners and clients.  **id**  **ocid –** unique id of the owner / client  **description**  **name** – client / owner first middle and last name  **parent\_name** – father’s name  **dob** – date of birth  **address1**  **address2**  **address3**  **tel1**  **tel2**  **tel3**  **email1**  **email2**  **email3**  **comments** |
| hlp\_revenue\_items | id  code  description | Table with the 5 revenue items:  Property, business, Rent, Land and Investment  **id**  **code** – unique revenue item code  **description** – description of the revenue item |
| hlp\_activity\_status | id  code  description | Table with the activity statuses. Used for users, districts, property, busineses etc.  It contains the statuses that property or business can be, exempt from tax – public schools, inactive – during the rebuilding / building phase, active – all other.  **id**  **code** – unique code 0-passive, 1-active, etc  **description** – description of the code |
| hlp\_unit | id  code  description  comments | Unit table is used for types of units: Length (m), area (m2), volume (m3), mass (kg), count (number).  **id**  **code**  **description**  **comments** |

**Data Flow**

**Green – code exists, but needs to be placed in the right place**

**Red – the code does not exist**

TODO: Create Admin Module

TCPD headquarters provides the general boundary for the Districts. LRE application has an admin interface (TODO place the script get\_districts\_from\_kml.php in the admin module) that takes the district boundary KML file and populates the table kml\_district\_boundary\_tcpd.

Each individual TCPD (from each district) provides the parcel boundary and UPN for all the parcels in that districts. LRE application has an admin interface (TODO place the script kml-Lupmis2LRE.php in the admin module) that will take the KML file and populate the table kml\_parcel\_boundary\_tcpd. Result is the parcel boundaries are shown in white.

During this process TCPD will provide the digitised data for property, business, rent, land and investment as well.

User (depending on the role) logs in the LRE application and he / she will be directed to their district. TODO: Admin module for user registration: name, last name, username, pass, region, district, zone.

**USER CANNOT DO ANYTHING UNLESS THERE ARE PARCEL BOUNDARIES IN THE LRE SYSTEM.**

User can choose the layer from: Property, Business, Rent, ~~Investment~~ and Land. Each of those layers in the background calls either of the tables: property\_details, business\_details, district\_rent, district\_investment and district\_land. The logic is the same for all of them.

ADD Property.

1. User chooses property layer and the LRE application displays the all the parcels in the district with their white borders.
2. User clicks on the chosen parcel (based on the position on the map or by searching the UPN) and the parcel details are displayed in the pop-up.
3. User decides to add the new Property.
4. New form appears requesting details for the property.
5. Some of the fields on the form are filed by typing, other parts are filled by ticks, but the drop downs on the form are filled from the helper tables such as hlp\_property\_roofing, hlp\_property\_construction\_material, hlp\_property\_ownership and hlp\_property\_type.
6. User also chooses the class and category for the property (drop down). Class and category will use the fee\_fixing\_guidelines to get the code and description, but the value will come from the fee\_fixing\_property with the same code.
7. User also chooses the revenue status for the property (drop down). Revenue status will use the table hlp\_revenue\_status to get the code and description.
8. When the user clicks submit button the new row is added to the tables property\_details, property\_details\_history, due and due\_details. (automatically new row is either added or updated in the balance table)
9. Table property\_details gets filled with the property details, same for the property\_details\_history, but here modification\_date is added and another column will mark that the property is added.
10. Table due is filled with the property’s UPN and SUBUPN (if necessary) class&category code and the value (comes from fee\_fixing\_property) – representing the revenue that this property owes (pending on the revenue status chosen) for the registration / current year.
11. Table due\_history is filled with the property’s UPN and SUBUPN (if necessary) class&category code and the value – representing the revenue that this property owes for the registration / current year, also the modification\_date and type of modification i.e. added.

ADD BUSINESS

1. When the user clicks submit button the new row is added to the tables business\_details, business\_details\_history, due and due\_details. (automatically new row is either added or updated in the balance table)
2. Table business\_details gets filled with the business details, same for the business\_details\_history, but here modification\_date is added and another column will mark that the business is added.
3. Table due is filled with the business’s UPN and SUBUPN (if necessary) class&category code and the value (comes from fee\_fixing\_business) – representing the revenue that this business owes (pending on the revenue status chosen) for the registration / current year.
4. Table due\_history is filled with the property’s UPN and SUBUPN (if necessary) class&category code and the value – representing the revenue that this property owes for the registration / current year, also the modification\_date and type of modification i.e. added.

ADD LAND

1. When the user clicks submit button the new row is added to the tables district\_land, and three rows in due and due\_details. (automatically new row is either added or updated in the balance table)
   * Table district\_land gets new row that is filled with the land details from the interface.
   * Table due is filled with 3 rows:
   1. Property rate or property rate impost value - based on the fee\_fixing\_property\_code.
   2. Business licence value – based on the class and category of the business I.e. fee\_fixing\_business\_code
   3. Royalities value – based on the contract and fee\_fixing\_land\_code.

* Table due\_history is filled with the same 3 rows as due table, but the modification\_date and type of modification are added to each row.

ADD RENT

* + 1. When the user clicks submit button the new row is added to the tables district\_rent, and two rows in due and due\_details. (automatically new row is either added or updated in the balance table)
  + Table district\_rent gets new row that is filled with the rent details from the interface.
  + Table due is filled with 2 rows:
  1. Business licence value – based on the class and category of the business I.e. fee\_fixing\_business\_code
  2. Facilities value – based on the contract and fee\_fixing\_rent\_code.
* Table due\_history is filled with the same 2 rows as due table, but the modification\_date and type of modification are added to each row

Update / Modify Property details (not connected to financial data):

1. User chooses property layer and the LRE application displays the all the parcels in the district with their white borders and some properties with yellow, green, or red borders.
2. User clicks on the chosen property (based on the position on the map or by searching the UPN) and the parcel and property details are displayed in the pop-up.
3. User decides to modify the Property.
4. New form appears showing the property details.
5. User changes some of the fields.
6. When the user clicks submit button the row with the matching UPN and SUBUPN is updated in the property\_details table, while the new row is added to the property\_details\_history table, but here modification\_date is added and another column will mark that the property is modified.

Update / Modify Property class & category (affects the financial data):

1. User chooses property layer and the LRE application displays the all the parcels in the district with their white borders and some properties with yellow, green, or red borders.
2. User clicks on the chosen property (based on the position on the map or by searching the UPN) and the parcel and property details are displayed in the pop-up.
3. User decides to modify the Property.
4. New form appears showing the property details.
5. User changes class&category drop down field.
6. When the user clicks submit button the existing row with the matching UPN and SUBUPN is updated in the property\_details.
7. New row is added to the due table, property\_details\_history and due\_history table, here also the modification\_date is added and another column will mark that the value is modified.
8. Balance table gets updated automatically.

Modify Property revenue status (affects the financial data):

1. User changes revenue status drop down field
2. When the user clicks submit button the existing row with the matching UPN and SUBUPN is updated in the property\_details.
3. New row is added to the due table, property\_details\_history and due\_history table, here also the modification\_date is added and another column will mark that the value is modified.
4. Balance table gets updated automatically

Add Payment

1. User chooses property layer and the LRE application displays the all the parcels in the district with their white borders and properties with yellow, green or red border.
2. User clicks on the chosen property (based on the position on the map or by searching the UPN) and the property details are displayed in the pop-up.
3. User decides to add the new payment.
4. New form appears (with the UPN, and SUBUPN already on it taken from the property details) requesting details for the payment.
5. The fields on the form are filed by typing. Paid by, paid for, amount, type of payment and ticket – collectors receipt.
6. Ticket must match the collector and the group of tickets assigned previously to collector in that zone.
7. When the user clicks submit button the new row is added to the tables payments and payments\_history. (automatically row matching with UPN is updated in the balance table)

TODO: Cancel Payment:

1. User chooses property layer and the LRE application displays the all the parcels in the district with their white borders and properties with yellow, green or red border.
2. User clicks on the chosen property (based on the position on the map or by searching the UPN) and the property details are displayed in the pop-up.
3. User decides to cancel the payment.
4. New form appears (with the UPN, and SUBUPN already on it taken from the property details) with the list of all the current years payments and tick box next to each row for payment cancelation and comments column.
5. If the tick box is ticked the user may write some comments in the field provided.
6. When the user clicks submit button the new row is added to the tables payments and payments\_history with the negative value. (automatically row matching with UPN is updated in the balance table).

If the property has been evaluated with some value then its due is determined by the rate impost (fee\_fixing\_property), but if the property has no evaluation value then the fix rate is applied (again located at table fee\_fixing\_property).

TODO:

Property/ business interface to have the fee to add which will take all the possible fees from the fees\_fines table. Such as cattle, bicycle, donkey etc.This means creating a new table that has the UPN to be linked to the property\_details table.

Add new DUE @ revenue items depending on the fees and fines choosen.

The new row is added to the tables due and due\_history. (automatically row matching with UPN is updated in the balance table).

TODO: Cancel DUE @ Admin Module

The new row is added to the tables payment and payment\_history. (automatically row matching with UPN is updated in the balance table). NECESSARY COMMENT IN PAYMENT.

TODO

Print the business and property questionnaire from the system based on the current format.

Introduce temp structure in the questionnaire for businesses:

whether it is a temp structure?

also does it have any of the temp structures

choose which ones (kiosk, billboards etc)

their location?

TODO: in Admin module. Year roll over e.g. from 2014 to 2015:

Due table is updated only for properties in property\_details. Similarly for business, rent, land and investments.

Steps:

Update the current year from 2014 to 2015.

Run the code that will take one district and all its the properties and populate the due table.

Each District can choose its own percentage or value fine for areas on properties / businesses.

Table due gets updated with three rows per UPN:

1. Add new row with the areas from previous years (coming from the balance table, row with the same UPN) - if there are any, otherwise the value is 0.
2. Add new row with fines (only if there are areas in previous years) - if it is applicable, otherwise the value is 0.
3. Add new row with current year’s fee\_fixing\_property value matching the class&category code – if the revenue status is active, otherwise value is 0.

(similarly for business: 3 rows are added to the due table, namely: areas, fine and current year due – based on the fee\_fixing\_business class and category)

(similarly for land: 5 rows are added to the due table, namely: areas, fine and 3 for current year dues – based on the fee\_fixing\_property [fixed rate or rate impost], fee\_fixing\_business [depending on the class and category of the business] and royalties [is determined from contract & fee\_fixing\_land])

(similarly for rent: 4 rows are added to the due table, namely: areas, fine and 2 for current year due – based on the fee\_fixing\_business [depending on the class and category of the business] and the facilities [is determined from contract & fee\_fixing\_rent])

Table balance gets updated:

1. Automatically after each row in due table through the trigger for balance table.

UI Design:

End of Year Roll Over

District dropdown

(enter fee)

RUN

CANCEL

Late payment FEE :

%

value

TODO: Triggers for every xxxx\_history table, that updates the xxxx\_history table when their counterpart xxxx is modified. The triggers are activated automatically for the destination table.

XXX\_history should be kep for at least for 5 years before is achieved, because it is necessary for the UPN history.

TODO: Investments

They go into expenses table.

TODO: REPORTS

Reports on national level will be able to see the summary on the national level and if they require more details, then it will show them for the region and district.

Reports on regional level will be able to see the summary on the regional level and if they require more details, then it will show them for the district.

TODO: Demand Notice

Print demand notice from the collector zone. User can click on the collector zone and the pop-up that opens will have the button that will print all the demand notices for the properties in that zone. In order to do it for business, then the user has to switch from property layer to business layer and click on the collector zone and print the business demand notices. It should not print all the layer’s demand notices.

Format of the demand notice is expected by email from Peter Fricker & co.

TODO: Bill Printing (nice to have)

One bill for business that includes all the charges (query based on the ocid from the hlp\_owners\_clients table. It can be done manually with the summary letter preceding the rest of documents.

List of properties / business with exempt from revenue.

Depreciation value for land, rent and investment based on district to be included in all the district\_XXX tables (in the future) residual column as well.

TO BE DISCUSSED:

new table & new interface with upn / subupn with fees\_and\_fines for on the spot fines.

? what about due and payment ?

New table for units: per head, per weight, per volume etc.

RECOMMENDATIONS:

In case of the reduction of due, comes through payment and is a new row in the payment table. Needs physical Approval process to be in place and lastly to edit in the system. Allowed by highest role Financial Officer.