1. LRE forecast

# Development of dRev tool

## Programing

### Main functionality

#### 2013 (Cost neutral extension)

##### Start Page

###### Start page will be Log in page with username and password. Possibly have a map of Ghana in the back, blurred and zoom into the respective district after log-in. District information is stored in the user table[D1]

##### Main Page

###### Header, footer and leftmost column, central column and rightmost column. Left most column will contain the Menu. Central column will contain the map. Right most column will contain some of the functionalities that depend on the map layers

##### Navigation

###### Home link, should close all the open windows and bring the user at home page

##### Search

###### Search facility will allow search based on 4 indicators: upn, subupn, owner name and address. It will search the entire DB for these 4 indicators and return many results in text and visual format on the map. Text can be either as pop-up or in the right most column. Visual representation on the map will be in distinctive colour e.g. Yellow

##### Maps

###### Maps should be available for Property, Business, Rent, Lands, Investments and other.

###### Maps will include a layer with collector zone information, like collector name, telephone nr, total of expected revenue for the zone, and total of collected revenue

###### Clicking on a property basic information about the property will be displayed. (the same is valid for other layers, like business,)

###### System allows monitor status of payment on a map

##### Revenue entry

###### There should be two buttons one to receive new payments and the other to view details of the previous payments

###### Third button modify / delete payments

###### Receipt of Revenue entry must be possible

##### Printing

###### Enhance printing of demand notices

##### Authentication

###### Security features, like authorization of users, access to the database, physical access to the server

##### Subtopic

##### Hosting

###### Initially the system will be installed at each district

###### Engage NITA for hosting the application

##### Administration modul

###### input from Arben

#### 2014 (Extension)

##### Authentication

###### Application will match the user to the role and area. Depending whether there will be one server or separate district servers.

###### User roles should be: Master, Administrator, Collector / Cashier, Manager and Regular-User.

###### Master – is a super-administrator, that can add administrators and remove them. Also it can do the same functionality as administrator.

###### Adminstrator – can change the labels use in the application, add / remove and modifyregions, districts and subdistricts, together with their name and code. Add / remove and modify Fee and Fine code and their values. Add / remove and modify users and their roles and areas.

###### Collector / cashier – can add the new revenue that has been collected at collection points. Collector may be able to see only data in his district / sub-district or zone.

###### Manager – overviews a larger area up to level of district and can see the collected revenue, but cannot enter any revenue data into the system.

###### Regular-user – can be from region, or national level and they will be able to see only their area with the summary of data displayed.

###### Users that belong to one area such as district, should be able to see only their district data. Users at the region level, should only see the data of that region. Regional users, should be seeing only the summary data (based on several indications: total paid, total unpaid, business, property, instalments etc) of several district areas.

##### Log User activities

###### Log everything the user changes. Stage one, log every time the user logs in and out. Stage two log in every change such as payment, modifications etc

##### Reports

###### should be displaying the summarised data in the table structure in the middle cell and also PDF format (for printing)

###### Reports that can be displayed should depend on the users role and area.

###### Periodic reports

Previous years reports will sumarise the previous year and periods.

Current year reports will produce data based on day, week, month etc

Future year reports will produce the data based on same or changed indicators

###### Demand notices

###### System should have monitoring tools for revenue projection

##### Property Valuation

###### Input of property data from valuation process; collaborate with Global Communities on their tool developed for STMA (also perhaps seek input from Land Valuation Board)

##### Payer information

###### System should have alert functionality, like SMS or email

##### Data exchange

###### Export to GIFMIS – exact format should be established.

###### Import from Land Valuation, as soon as Land Valuation uses UPN

###### LUPMIS

established format should be kept. The DB design should take into account this and keep the original LUPMIS tables intact, with any additional new columns added at the end of those tables.

Requires synchronization with LUPMIS, if the database structure is changed

##### Administration modul

###### import fee fixing information

###### import of Land Valuation data

depending on introduced UPN

### add functionality for Land Valuation

#### I think with one or two entry forms they should be able to use dRev as well

## Testing of software functionality

### Establish a test district

### Software team shall be located at test district

### Software deficiencies shall be addressed directly at the district

#### Re-testing of improved software

## Implementation

### installation at districts

### initiate import of legacy data

## Implementation of Network

### Assist districts to setup the local area network

### Establish the platform for data exchange between Planning Office and Finance Office

## Data processing

### Owner data, collected during SNPA must be added to dRev

## Data cleaning

### Owner data, collected during SNPA, must be checked and inconsistencies eliminated

## Clarify with Land Valuation property values classifications

# Central Orga

## Help Desk

### Assist MLGRD and LGSS to establish a help desk facility for user and technical support

### Support structures are necessary for

#### User support, how to work with dRev

#### Technical support, how install and maintain the system, including network support for the local area network

#### Programming support, to continuously enhance the system

## System Maintenance

### Assist MLGRD and TCPD to establish a team of technicians to continue improving the system

## Regional Support Structures

## Consolidate district address files to a national address file

## Establish Hosting at NITA

### Setup of Server

### Installation of dRev

### Validation of installation

### Quality check at district level

#### Check if connection is working and responds time is satisfactory

## Assist MLGRD in using D-Rev as a monitoring tool

### Additional programming will be necessary to establish the monitoring maps for the M&E unit

# District Implementation

## Coaching

### Acting and revising software on feedback from bills distribution

### Improve communication FO / BO with Planning office

#### establish a process for feedback

## Maintenance

### GIS data in MapMaker

### Revenue data in RevTool

### Establish a common information exchange process

## Establishing the system for feedback

### collaboration between FO and POs

# Training

## Central Level

### Programming

#### database

#### PHP

#### Javascript

#### OpenLayers

### M&E unit at MLGRD

#### Database analysis

#### Database driven decision making

#### How to use a Geographic INformation System for decision making

## District Level

### Network

#### Local Area Network

#### NITA connectivity

### Data processing

#### Data collection

#### Data verification

#### Data exchange

### Data Integrity

#### Data Entry Clerks

# Manuals and Documentation

## 2013

### Brief introduction and user manual as part of the system, i.e. online manuals

## 2014

### Deatiled documentation including installation, technical details and trouble shooting instructions