

Action Plan for Social Entrepreneurship

WP 3. Observatory on Social Economy

Deliverable 3.2.2 Formation of Geospacial Database and Electronic Platform for Data Collection and Data on Social Entrepreneurship

Scientific Coordinator: Professor Dimitris Subeniotis

UNIVERSITY OF MACEDONIA

DELIVERABLE

The contents of this study are sole responsibility of University of Macedonia and can in no way be taken to reflect the views of the European Union, the participating countries, the Managing Authority and the Joint Secretariat

The Cooperation Programme INTERREG V-A "Greece-Bulgaria 2014-2020" is co-funded by the European Regional Development Fund (ERDF) and national funds of the countries participating in it

Abstract

The current Deliverable (Deliverable 3.2.2 Formation of Geospacial Database and Electronic Platform for Data Collection and Data on Social Entrepreneurship) is focused on the design and implementation of a geospacial database containing all relevant information and data on the status of the sub-study area. The geospacial database is supplemented with all spatial and descriptive data collected, while it also includes procedures and functions for further spatial analysis. The data collection includes the number of social enterprises in the area, their areas of activity, the number of employees, etc.

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1. Introduction - project description

The aim of this deliverable is the design and implementation of a geospatial database containing all relevant information and data on the status of the sub-study area. The geospatial database will be supplemented with all spatial and descriptive data collected and will include procedures and functions for further spatial analysis. The data collection will include the number of social enterprises in the area, their areas of activity, the number of employees, support agencies etc, and will be updated throughout the project.

2. Implementation plan

In order to complete the necessary tasks, the design and implementation of the project was divided into phases as describe below and pictured in figure 2.

2.1 Phase 1

An initial implementation plan was proposed after receiving the excel database from other partners (ReceivedExcel.xlsx), which would create a complete database design from scratch. Based on the original data provided, a geospatial database was designed that would include all the data needed to implement the project. The initial proposal was designed in MySQL, which is an open-source relational database management system (RDBMS). Based on the file and the data, the following database schema was designed as shown in figure 1. The schema include 9 tables, with ‘Businesses’ as the main table and all other tables are related to the above table with their keys as Foreign keys, except the ‘Representative’ table. Column properties and attributes are as received from the excel file:

- Businesses (General Table)
- RegistryType
- IndividualCategory
- Status
- MainActivity
- Region
- RegionalUnity
- Municipality
- Representative

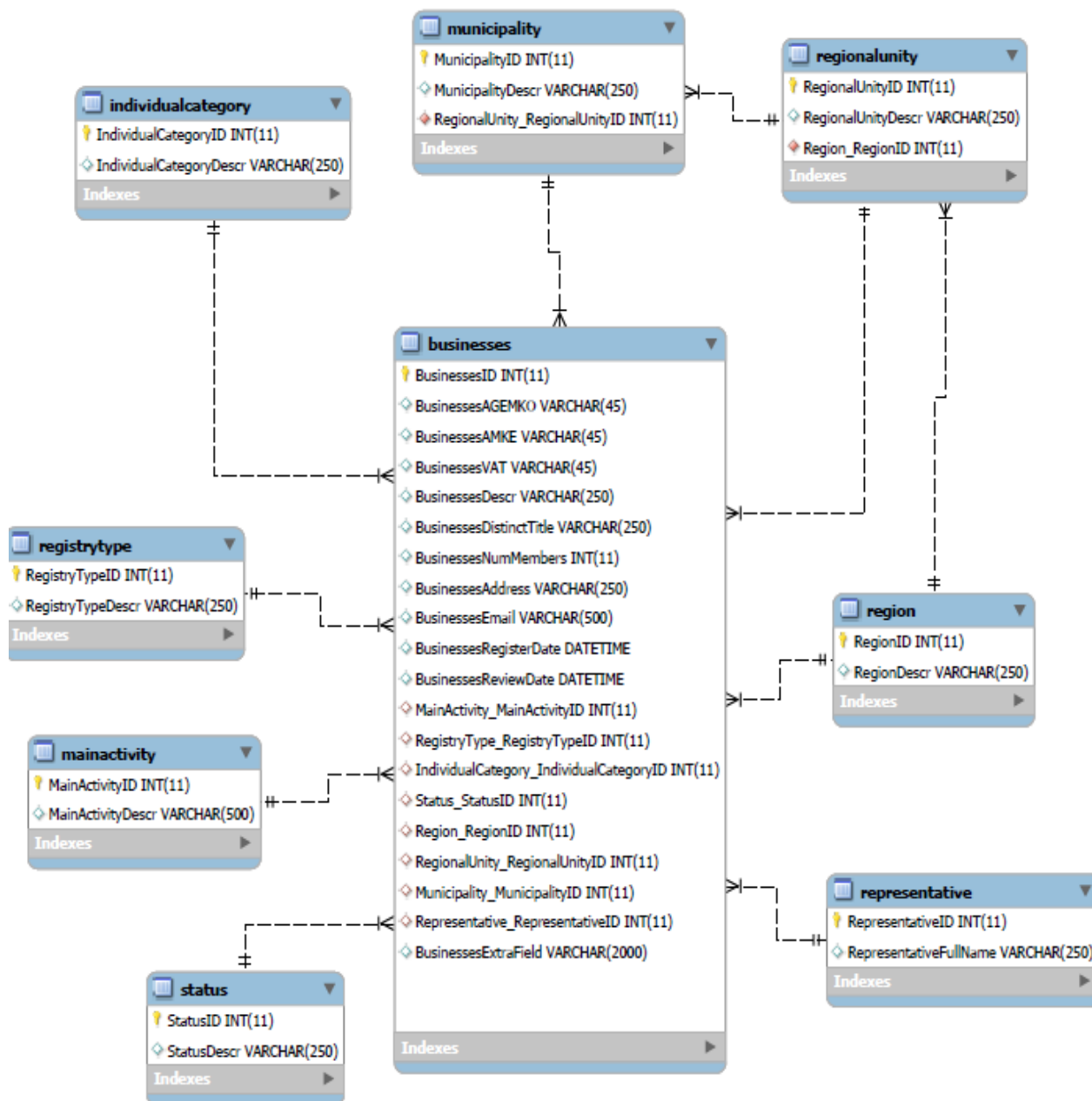


Figure 1. Proposed database schema.

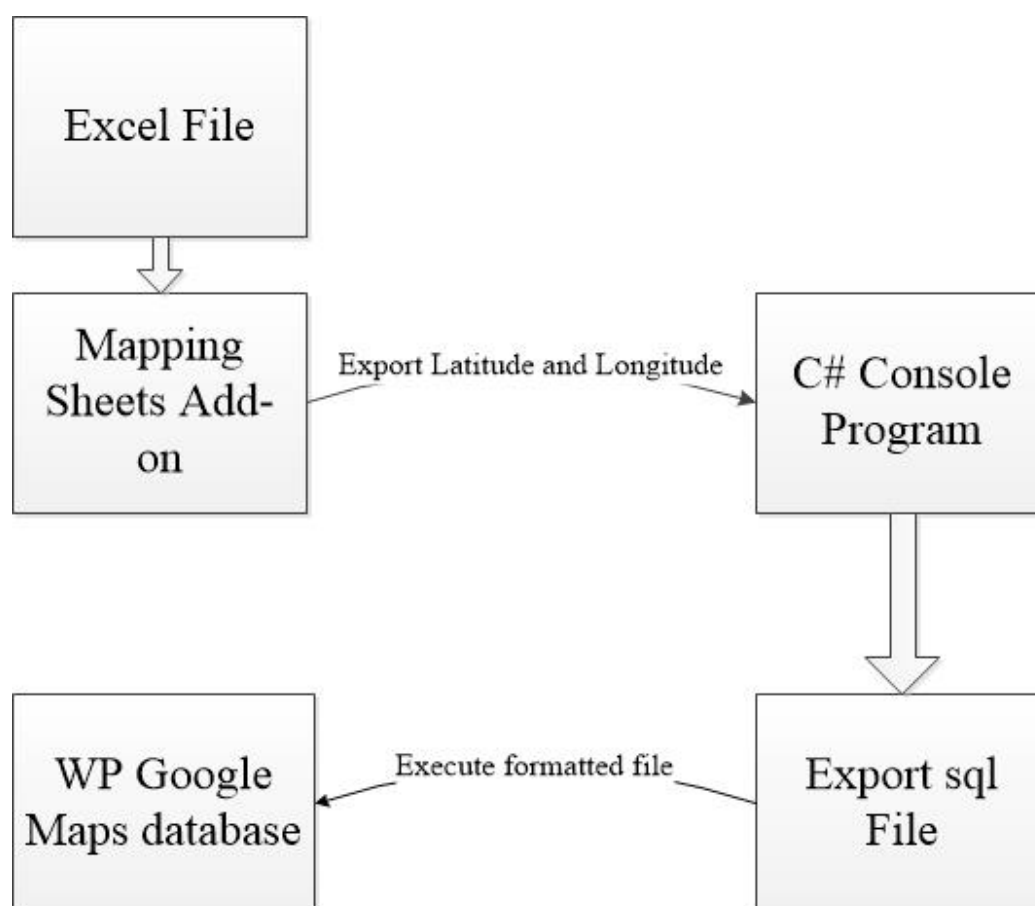


Figure 2. Design of the application

2.2 Phase 2

Phase 1 was developed as a back-up plan, in case the following actions failed. Due to the fact that the hosting site (<http://consulting.apfse.eu/>) was already build in the WordPress platform (<https://wordpress.com>), the WP Google Maps Plug-In was purchased and used in order to support and show on the Google Maps the cooperating parties on the existing system. The WP Google Maps Plug-In allows the creation of custom Google maps with high quality markers containing locations, descriptions, images, categories, links and directions as we needed. In addition, it has the following capabilities:

- Create multiple maps.
- Allow visitors to get directions to the markers.
- Add descriptions, links and images to markers.
- Add categories to map markers.
- Filter markers by category.
- Mash up multiple maps.
- Add different marker icons.

- List map markers in the four ways; basic list, basic table, carousel, advanced table.
- Allow visitors to use their map location as the starting or ending point for the directions.
- Choose between the Default Google Maps Info window and the new Modern Info window.
- Export/Import markers to a CSV file for quick editing.
- Link Fusion tables to Google Maps.
- Show visitor’s location on the Map.
- Import KML/KMZ files to your map.
- Allow users to use their map location for the store locator.
- Store locator search by category.
- Hide all map markers until a store locator search is done.
- Move your marker list inside the map window.
- Multiple map widget functionality.
- Add retina-ready map marker icons.

Figures 3 and 4 show the WP Google Maps Plug-In template used in the website.

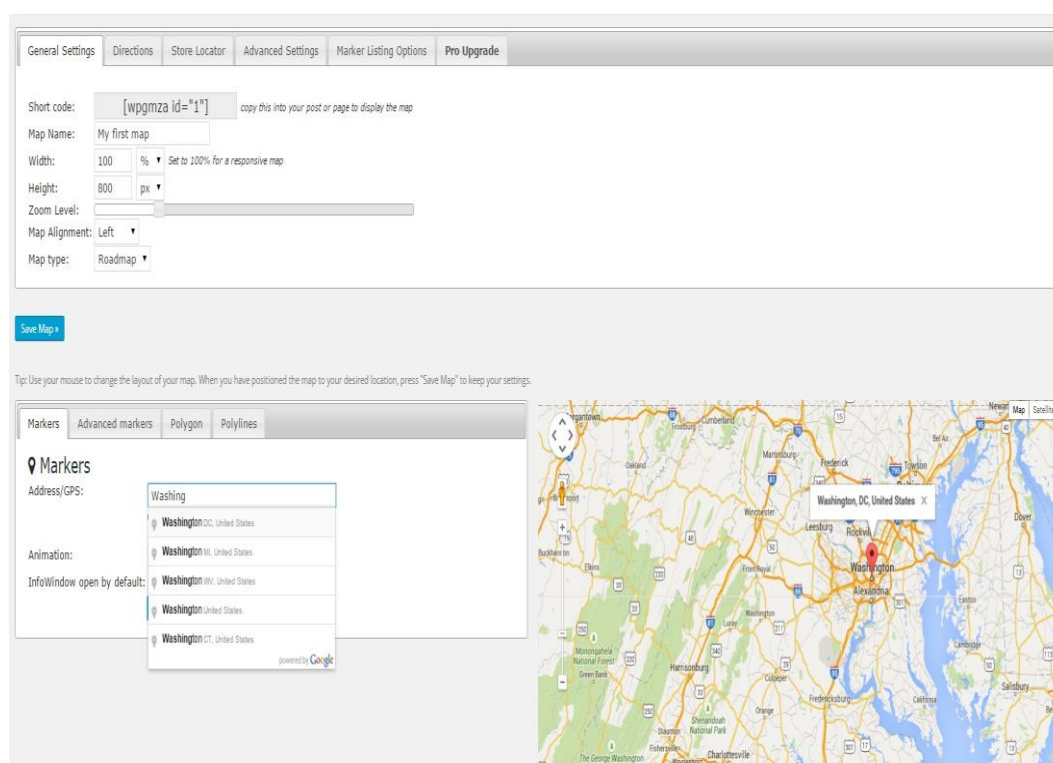


Figure 3. WP Google Maps Plug-In template.

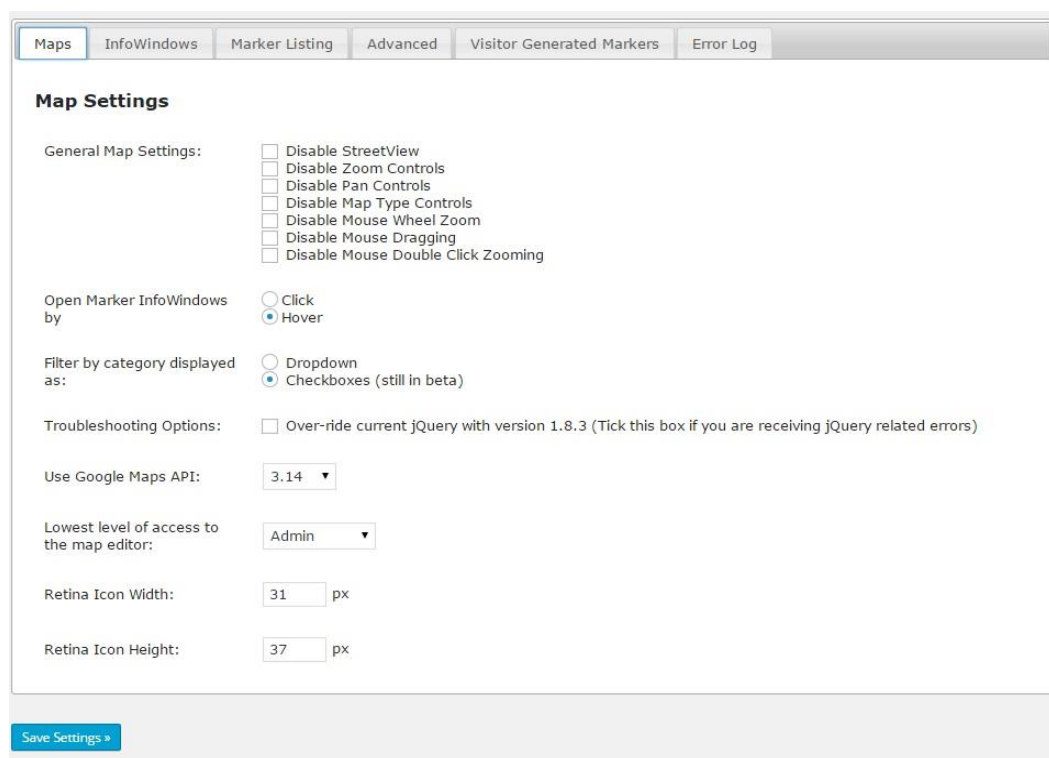


Figure 4. WP Google Maps Plug-In template (another view).

2.3 Phase 3

Obtaining and using WP Google Maps Plug-in in order to support and customized Google Maps on the existing page.

2.4 Phase 4

Due to the absence of some primary data like latitude and longitude on the excel database file that were needed for the WP Google Maps Plug-in an additional process to the primary file (excel file) needed to be completed. In order to fulfill the latitude and longitude the primary file needed to be converted into a Google spreadsheet and be formatted to the appropriate style in order to use the Mapping Sheets add-on and retrieve latitude and longitude of the file data. The Mapping Sheets add-on (https://gsuite.google.com/marketplace/app/mapping_sheets/736233853391) provides an easy way to process the data directly from Google Sheets onto a map, either to show each location details in an info window or for filtering over the map based on several conditions, but also to find locations within a distance to a place and ultimately to calculate the optimal route directions (see figures 5, 6, 7 and 8). Mapping Sheets is a generic data driven web app using Google Maps that loads data and settings from a .json file in the Google Drive. The

Mapping Sheets add-on is free to access, publicly available with no fee, and no credentials are required for access.

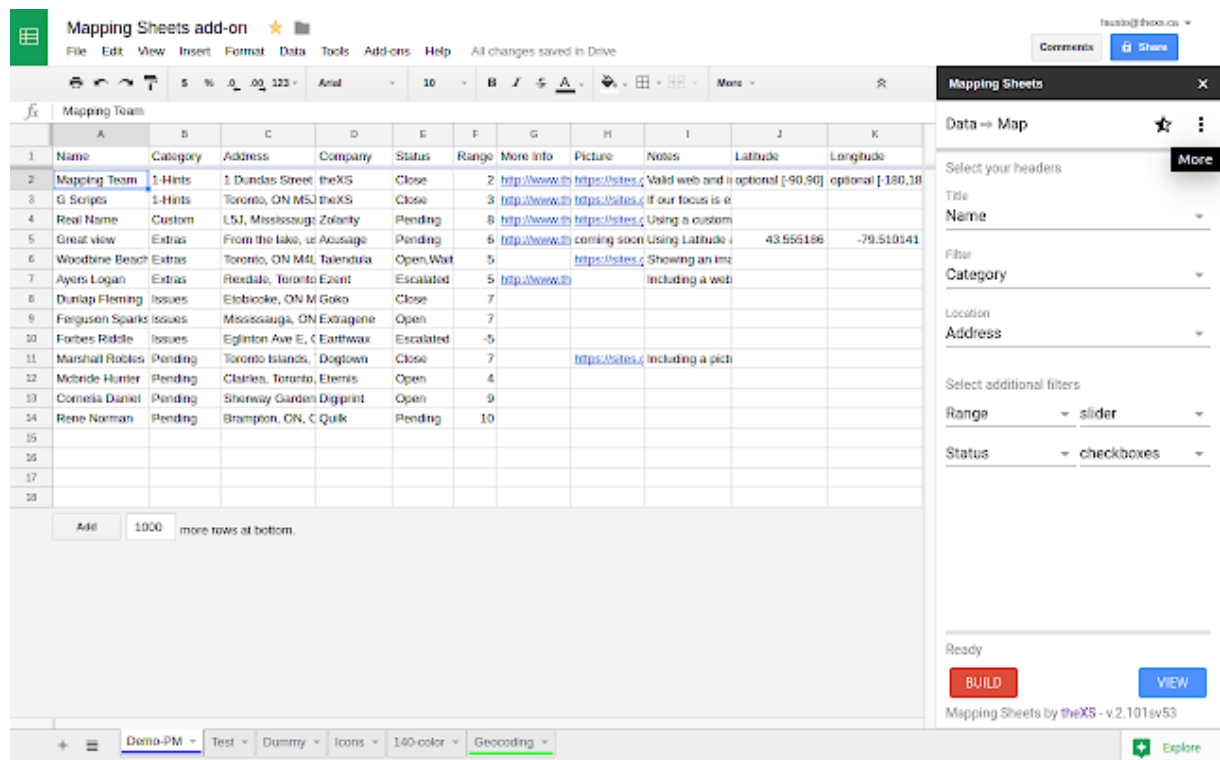


Figure 5. Mapping Sheets Add-on template, spreadsheets format

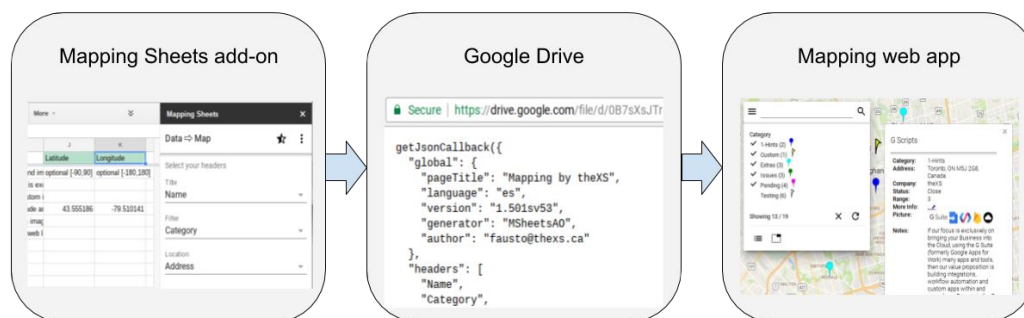


Figure 6. Mapping Sheets Add-on template, processes and workflow.

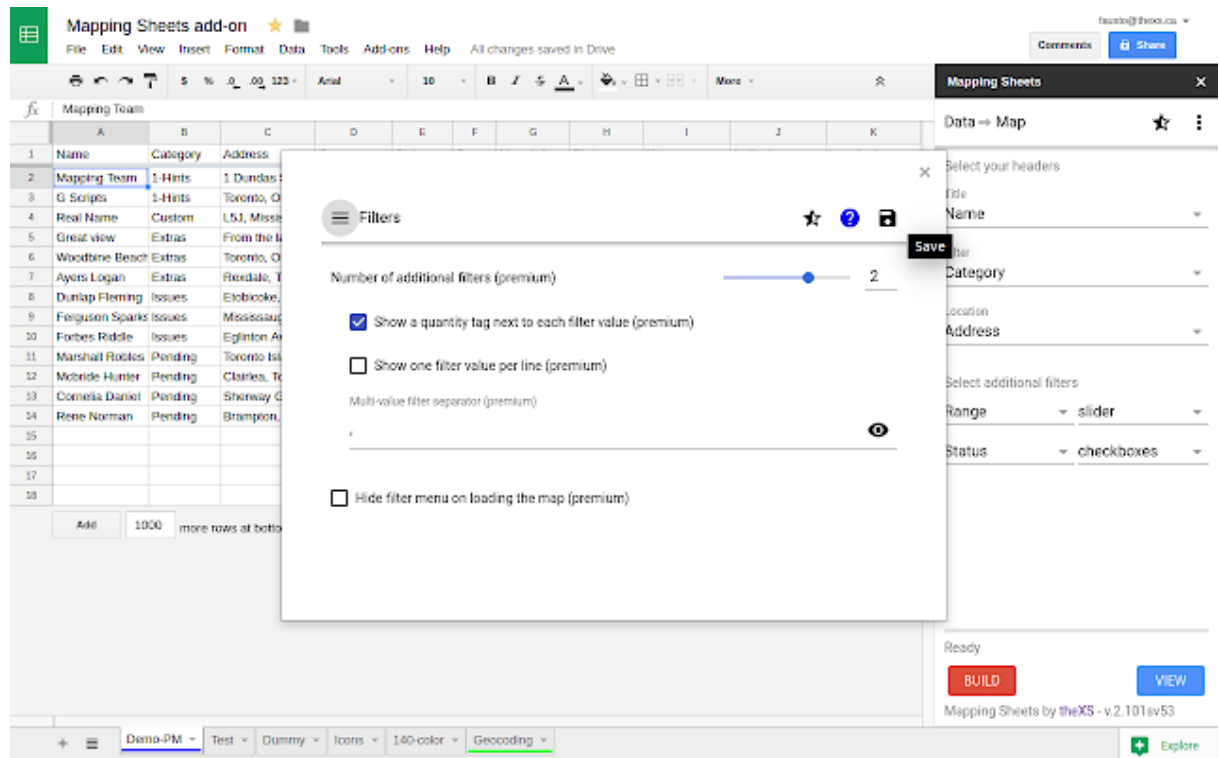


Figure 7. Mapping Sheets Add-on template, filters options

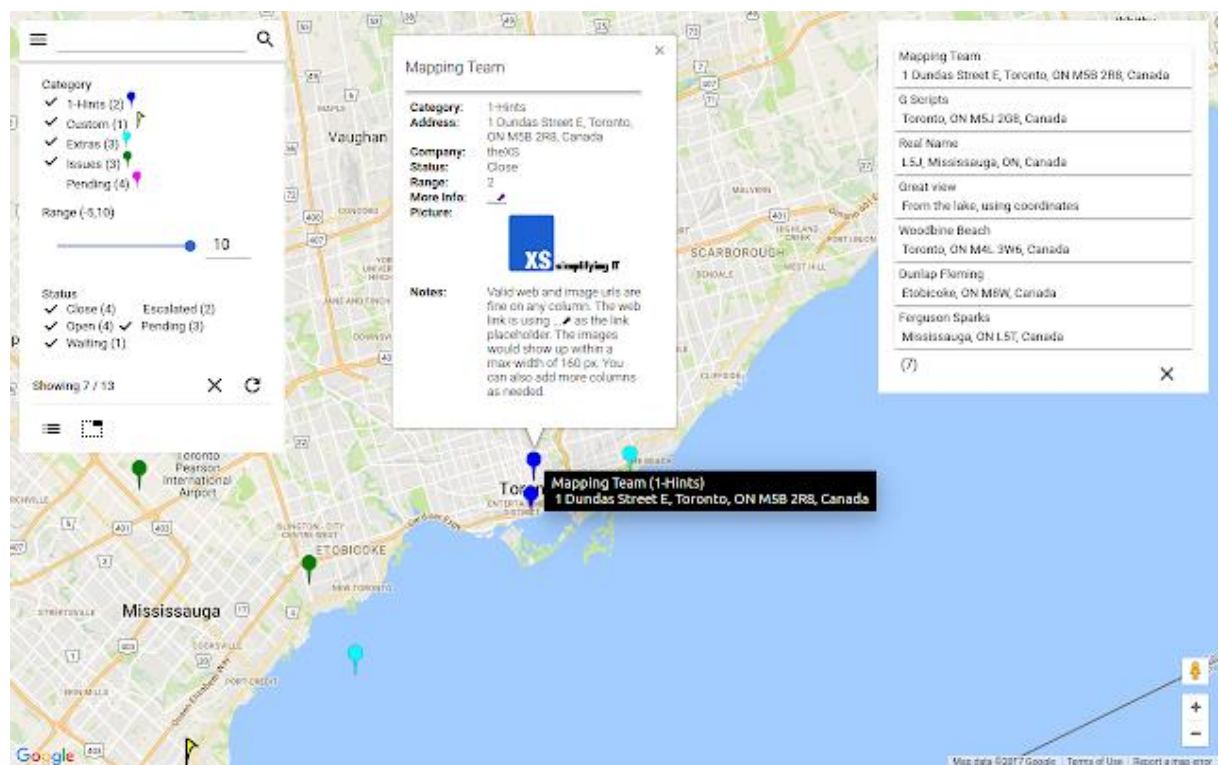


Figure 8. Mapping Sheets Add-on template, marker

2.5 Phase 5

A C# console application was created in order to process and properly format the data that were exported from the Mapping Sheet Add-on and to be executed to the WordPress database. The above program works as follows: the program receives as input file the processed file from the Mapping Sheet Add-on, then it formats the data to the appropriate format that the WP Google Maps Plug-in needs, creates the appropriate sql syntax and data that are needed and then exports an .sql file. The exported file is the executable file that will be executed to the WordPress database of the site. Figures 9, 10, 11, 12 and 13 show a sample of the C# program and figure 14 shows the sql syntax and data that were created and exported from the C# program.

	A	B	C	D	E	F
4	ΣΠ.ΜΕΡΚΟΥΡΗ 22Α 11634 ΑΘΗΝΑ	37,9700271	23,7477288		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	Ραμόν Κου.Σ.Επ.
5	ΣΑΜΟΘΡΑΚΗ ΕΒΡΟΥ 68002 ΣΑΜΟΘΡΑΚΗ	40,4215921	25,652533		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	Βαράδεσ Κου.Σ.επ
6	Λ.ΣΟΦΟΥ 12 54625 ΘΕΣΣΑΛΟΝΙΚΗ	40,6372647	22,9371058		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	LEADCOMPASS KOIN.Σ.ΕΠ.
7	ΜΑΡΑΘΩΝΟΣ 3 11146 ΑΘΗΝΑ	38,0121121	23,7473397		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	WOMENASSOCIATIONS K
8	ΓΕΝΝΑΔΙΟΥ 189 18452 ΠΕΙΡΑΙΑΣ	37,9896025	23,6279171		ΚΟΙΝΩΝΙΚΗ ΚΑΙ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	Orbis Anima KOIN.Σ.ΕΠ.
9	ΓΕΜΕΛΙΑΡΗ 8 15124 ΑΜΑΡΟΥΣΙΟ	38,0539117	23,8057407		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	ECCO TRANS KOIN.Σ.ΕΠ.
10	25ΗΣ ΜΑΡΤΙΟΥ 13 21100 ΝΑΥΠΛΙΟ	37,5648534	22,8066128		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	ΤΟ ΚΟΥΖΙΝΑΚΙ ΤΗΣ ΜΑΜΑ
11	ΣΤΡΕΦΙ ΑΡΧΑΙΑΣ ΟΛΥΜΠΙΑΣ 27065 ΑΡΧΑΙΑ ΟΛΥΜΠΙΑ	37,668637	21,5500406		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	Αγρόκτημα Στρεφίου ΚΟΙΝ
12	ΑΝΘΕΩΝ 1 38333 ΒΟΛΟΣ	39,3697991	22,9373408		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	ΕΡΓΟΝ ΚΟΙΝΩΣΕΠ
13	Χ'ΒΑΣΙΛΕΙΟΥ 13 17343 ΑΓΙΟΣ ΔΗΜΗΤΡΙΟΣ ΑΤΤΙΚΗΣ	37,9344639	23,7421029		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	Πρότυπο Χοροθεατρικό Κ
14	ΦΛΕΜΙΓΚ 15 56533 ΠΟΛΙΧΝΗ	40,6595389	22,9404814		ΣΥΝΕΤΑΙΡΙΣΜΟΣ ΕΡΓΑΖΟΜΕΝΩΝ PIG BOSS	PIG BOSS ΣΥΝ.ΕΡΓ.
15	ΓΕΩΡΓΙΚΗ ΣΧΟΛΗ ΙΝΣΤΙΤΟΥΤΟ ΣΙΤΗΡΩΝ ΘΕΡΜΗΣ 57001 ΘΕΡΜΗ	40,539039	22,991965		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	AGROTECH KOIN.Σ.ΕΠ.
16	3ΗΣ ΣΕΠΤΕΜΒΡΙΟΥ 144 11251 ΑΘΗΝΑ	37,9971803	23,7313915		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	EatHealthy KOIN.Σ.ΕΠ.
17	ΝΑΥΑΡΧΟΥ ΚΟΥΝΤΟΥΡΙΩΤΟΥ 9 19004 ΣΠΑΤΑ ΑΤΤΙΚΗΣ	37,9621065	23,9180705		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	Ο ΑΓΙΟΣ ΕΦΡΑΙΜ ΚΟΙΝ.Σ.ΕΠ.
18	ΕΡΓ.ΚΑΤ. ΑΓ.ΣΑΒΒΑ 2Β ΤΟ 1044 66100 ΔΡΑΜΑ	41,149001	24,1470796		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	Go forest ΚΟΙ.Σ.ΕΠ.
19	ΓΛΥΝΟΥ ΔΗΜΗΤΡΙΟΥ 8 16345 ΗΛΙΟΥΠΟΛΗ	37,9401316	23,7574566		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	ALDENTE KOIN.Σ.ΕΠ.
20	ΚΑΡΑΪΣΚΑΚΗ 16-18 10554 ΑΘΗΝΑ	37,9774818	23,7242256		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	ΤΑ ΠΑΝΤΑ ΠΕΙ Κου.Σ.Επ.
21	ΑΜΦΙΚΤΥΟΝΟΣ 33 11851 ΑΘΗΝΑ	37,974625	23,7182862		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	ΣΥΝΤΡΙΜΜΙ ΚΟΙΝ.Σ.ΕΠ.
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23	ΙΟΥΛΙΑΝΟΥ 67 10433 ΑΘΗΝΑ	37,9918209	23,7274071		ΚΕΝΤΡΟ ΒΙΒΛΙΟΥ ΕΚΔΟΣΕΩΝ ΚΑΙ ΠΟΛΙΤΙΣΤΙΚΩΝ ΔΡΑΣΕΩΝ	Red Marks KOIN.Σ.ΕΠ.
24	ΚΑΡΑΪΣΚΑΚΗ 16 30100 ΑΓΡΙΝΙΟ	38,6259348	21,4078429		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	AKROBATHS KOIN.Σ.ΕΠ.
25	ΠΑΠΑΝΔΡΕΟΥ ΓΕΩΡΓΙΟΥ 52 14342 ΑΘΗΝΑ	37,9807493	23,7678226		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	ΠΥΣΙΔΑ ΕΝΑΛΛΑΚΤΙΚΗΣ Ο
26	ΜΕΣΟΓΕΙΩΝ 463 14342 ΑΘΗΝΑ	38,0139642	23,82468		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	ANAKYKΛΩΣΗ ΥΔΡΑΣ ΚΟΙΝ
27	ΓΑΛΑΝΑΔΟ ΝΑΞΟΥ 84300 ΝΑΞΟΣ	37,0750161	25,4106355		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	ACTIVE LAND KOIN.Σ.ΕΠ.
28	ΜΗΤΡ. ΑΜΒΡΟΣΙΟΥ 5-7 41221 ΛΑΡΙΣΑ	39,6400673	22,4251273		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	ΕΝΑΣΤΡΟΝ ΚΟΙΝ.Σ.ΕΠ.
29	ΠΑΡΜΕΝΙΩΝΟΣ 65 13676 ΘΡΑΚΟΜΑΚΕΔΟΝΕΣ	38,1287377	23,7612335		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	ΦΡΟΝΤΙΔΑΣ ΠΑΙΔΙΚΗ ΠΕΡΙΠΤΩΣΗ ΚΟΙΝ
30	ΚΑΣΤΟΡΙΑΣ 11 13122 ΙΑΙΟΝ	38,0231042	23,7114939		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	Ανοητικό Κίτρος ΚΟΙΝ.Σ.ΕΠ.
31	ΚΩΝΣΤΑΝΤΙΝΟΥ ΟΙΚΟΝΟΜΟΥ 6 54627 ΘΕΣΣΑΛΟΝΙΚΗΣ	40,6452675	22,9206963		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	FEELMAKER KOIN.Σ.ΕΠ.
32	ΑΡΚΑΔΙΟΥ 11 32131 ΛΙΒΑΔΕΙΑ	38,4394184	22,8744348		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	ENNEA ΜΟΥΣΕΣ-ΠΗΓΕΣ ΚΡ
33	ΠΑΠΑΦΛΕΣΣΑ 66 22200 ΜΕΓΑΛΟΠΟΛΗ	37,403028	22,135197		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	Μυρόπολις ΚΟΙΝ.Σ.ΕΠ.
34	ΧΡΗΣΤΟΥ ΚΑΨΑΛΗ 0 3200 ΜΕΣΟΛΟΓΓΙ	38,3686739	21,430415		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	ΡΟΜΑ ΟΛΟΙ ΜΑΖΙ ΚΟΙΝ.Σ.ΕΠ.
35	ΑΜΜΟΧΩΣΤΟΥ 7 13451 ΚΑΜΑΤΕΡΟ	38,0592002	23,7121285		Συνεταιρισμός Εργαζομένων Πελοποννήσου	ΠΕΙΣΙΣΤΡΑΤΟΣ ΣΥΝ.ΕΡΓ.
36	ΕΡΜΟΥ 90 19200 ΑΤΤΙΚΗ	38,0482354	23,5376934		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	ΟΛΟΙ ΕΜΕΙΣ
37	ΒΑΛΑΤΕΣΙΟΥ 14 26223 ΠΑΤΡΑ	38,250674	21,7413985		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	ΣΤΕΦΗ ΚΑΛΑΒΡΥΤΙΝΩΝ ΚΑ
38	ΛΕΟΠΤΕΡΑ ΘΕΣΗ ΤΣΙΑΡΧΕΣ 44100 ΚΟΝΙΤΣΑ	40,0480719	20,7528378		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	H ΠΙΝΔΟΣ ΚΟΙΝ.Σ.ΕΠ.
39	ΟΜΗΡΟΥ 142 18344 ΜΟΧΑΤΟ	37,9487143	23,6846201		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	URBAN VEGETABLES KOIN
40	ΑΣΣΟΣ Π.ΣΟΦΙΚΙΤΗ 1 20006 ΒΡΑΧΑΤΙ ΚΟΡΙΝΘΙΑΣ	37,9547597	22,8036157		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	ΟΙ ΜΕΛΙΣΤΕΣ ΚΟΙΝ.Σ.ΕΠ.
41	ΦΝΑΦΟΡΕΙΤΗ 6 10439 ΑΘΗΝΑ	37,9902894	23,721046		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	ΕΥΕΛΕΪΙΑ ΚΟΙΝ.Σ.ΕΠ.
42	ΑΓ.ΒΑΣΙΛΕΙΟΥ 21 70014 ΧΕΡΣΟΝΗΣΟΣ ΗΡΑΚΛΕΙΟΥ ΚΡΗΤΗΣ	35,312958	25,3962763		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	κ.ο.ε. ο.ε.Ελλάνας
43	ΤΣΙΡΙΓΩΤΗ 4 45444 ΙΩΑΝΝΙΝΑ	39,6689897	20,8524843		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	ΣΥΝ-ΘΕΤΩ ΚΟΙΝ.Σ.ΕΠ.
44	ΘΗΡΑΣ 1 41334 ΛΑΡΙΣΑ	39,6314231	22,4125369		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	free d art ΚΟΙΝ.Σ.ΕΠ.
45	ΣΚΥΡΟΥ 78 11362 ΑΘΗΝΑ	37,9971412	23,7454524		ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΜΛΟΓΙΚΗΣ	OPEN THEATER ΚΟΙΝ.Σ.ΕΠ.
46	Β.ΠΑΠΑΜΙΧΑΗΛ 2 19400 ΚΟΡΟΠΙ	37,8999511	23,8782896		ΛΟΓΙΣΤΙΚΗ ΕΚΠΑΙΔΕΥΣΗ ΚΑΙ ΕΠΙΜΟΡΦΩΣΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗΣ	ΑΝΑΓΕΝΝΗΣΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗΣ

Figure 9. Processed input file with the latitude, longitude of the cooperating parties

```
//...
//4. DataSet - Create column names from first row
//5. Data Reader methods
//6. Free resources (IExcelDataReader is IDisposable)
excelReader.Close();

foreach (DataRow row in result.Tables[0].Rows)
{
    if (!row.IsDBNull(10))
    {
        MainTable record = new MainTable();
        string katigoria = row.IsDBNull(1) ? string.Empty : row[1].ToString();
        string katastasi = row.IsDBNull(3) ? string.Empty : row[3].ToString();
        string afm = row.IsDBNull(5) ? string.Empty : row[5].ToString();
        string epwnumia = row[6].ToString().Trim();
        string diakritosTitlos = row.IsDBNull(7) ? string.Empty : row[7].ToString();
        string drastiriotita = row.IsDBNull(9) ? string.Empty : row[9].ToString();
        string address = row[10].ToString().Trim();
        string email = row.IsDBNull(14) ? string.Empty : row[14].ToString();
        DateTime year = row.IsDBNull(16) ? DateTime.Now : Convert.ToDateTime(row[16].ToString());
        string telephone = row.IsDBNull(14) ? string.Empty : row[18].ToString().Replace(',', '|');

        record.Catigoria = katigoria.Trim();
        record.Katastasi = katastasi.Trim();
        record.Afm = afm.Trim();
        record.Epwnumia = epwnumia.Trim();
        record.DiakritosTitlos = diakritosTitlos.Trim();
        record.Drastiriotita = drastiriotita.Trim();
        record.Address = address.Trim();
        record.Email = email.Trim();
        record.Year = year;
        record.Telephone = telephone;
        _context.MainTable.Add(record);
        _context.SaveChanges();
    }
}

DataSet result2 = new DataSet();
string filePath2 = System.AppDomain.CurrentDomain.BaseDirectory;
filePath2 = Path.Combine(filePath2, "All.xlsx");
// ...

```

Figure 10. C# code 1

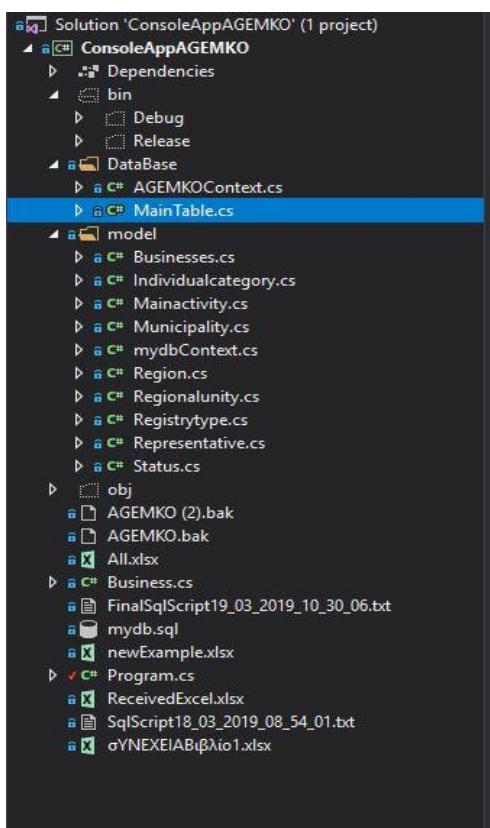


Figure 11. Project Solution Tree of the C# program

```

MainTable.cs  X NuGet: ConsoleAppAGEMKO Program.cs mydbContext.cs
ConsoleAppAGEMKO ConsoleAppAGEMKO.DataBase
1  using System;
2  using System.Collections.Generic;
3
4  namespace ConsoleAppAGEMKO.DataBase
5  {
6      9 references
7      public partial class MainTable
8      {
9          3 references
10         public string Categoria { get; set; }
11         2 references
12         public string Katastasi { get; set; }
13         2 references
14         public string Afm { get; set; }
15         3 references
16         public string Epwnumia { get; set; }
17         4 references
18         public string DiakritosTitlos { get; set; }
19         3 references
20         public string Drastiriotita { get; set; }
21         5 references
22         public string Address { get; set; }
23         5 references
24         public string Email { get; set; }
25         5 references
26         public string Latitude { get; set; }
27         5 references
28         public string Longitude { get; set; }
29         5 references
30         public int Id { get; set; }
31         3 references
32         public DateTime? Year { get; set; }
33         4 references
34         public string Telephone { get; set; }
35     }
36 }
    
```

Figure 12. C# code 2

```

private static void CreateScript()
{
    AGEMKOContext _context = new AGEMKOContext();
    /*
     * 1= ΕΠΙΧΕΙΡΗΣΙΑ ΚΑΤΗΓΟΡΙΑ
     * 6 = ΕΠΙΧΕΙΡΗΣΙΑ
     * 7 = ΔΙΑΚΡΙΤΙΚΟΣ ΤΙΤΛΟΣ
     * 10 = ΣΤΟΙΧΕΙΑ Δ/ΝΗΣΗΣ
     * 14 = email
     */
    /*
     * Διακριτικό τίτλο
     * Επωνυμία
     * Κατηγορία
     * Έτος ίδρυσης
     * Στοιχεία επικοινωνίας (δ/νον, τηλ, email)
     */
    StringBuilder sbwpgmza = new StringBuilder();
    StringBuilder sbemail = new StringBuilder();
    StringBuilder sbyear = new StringBuilder();
    StringBuilder sbtel = new StringBuilder();
    List<MainTable> listofRecords = _context.MainTable.ToList();

    foreach (MainTable record in listofRecords)
    {
        //style="list-style: none"
        string description = string.Format("<div><ul><li><b>Δ.ΤΙΤΛΟΣ:</b> {0}</li><li><b>ΔΡΑΣΤΗΡΙΟΤΗΤΑ:</b> {1}</li><li><b>ΕΤΟΣ:</b> {2}</li></ul></div>", record.DiakritosTitlos.Replace("'", ""),
        //var output = Regex.Replace(record.Address.Replace("'", ""), @"[d]{3,7}", string.Empty);
        var output = Regex.Replace(record.Address.Replace("'", ""), @"[\d]", string.Empty);

        string query = string.Format@"
        SET @g = 'POINT({0} {1})';
        INSERT INTO 'wpcnt_3_wpgmza' ('id', 'map_id', 'address', 'description', 'pic', 'link', 'icon', 'lat', 'lng', 'anim', 'title', 'infoopen', 'category', 'approved'
        ((2), 1, '{3}', '{4}', '', '', '', '{0}', '{1}', '0', '{5}', '0', '0', 1, 0, 0, '', '{6}', ST_PointFromText(@g));

        , Istring.IsNullOrEmpty(record.Latitude) ? record.Latitude.Replace(',', '.') : string.Empty
        , Istring.IsNullOrEmpty(record.Longitude) ? record.Longitude.Replace(',', '.') : string.Empty
        , record.Id
        , output //record.Address.Replace("'", "")
    
```

Figure 13. WP Google Maps format and data to be exported

```

SET @g = 'POINT(39.5671912 21.7597864)';

INSERT INTO `wpct_wpgmza`(`id`, `map_id`, `address`, `description`, `pic`, `link`, `icon`, `lat`,
`lng`, `anim`, `title`, `infoopen`, `category`, `approved`, `retina`, `type`, `did`, `other_data`,
`latlng`) VALUES

(30, 1, 'ΜΥΡΟΦΥΛΛΟΥ & Ε.Ο. ΤΡΙΚΑΛΩΝ ΙΩΑΝΝΙΝΩΝ 0 42100 ΤΡΙΚΑΛΑ', 'ΚΟΙΝΩΝΙΚΟΣ ΣΥΝΕΤΑΙΡΙΣΜΟΣ
ΠΕΡΙΟΡΙΣΜΕΝΗΣ ΕΥΘΥΝΗΣ ΤΡΙΚΑΛΩΝ', '', '', '', '39.5671912', '21.7597864', '0', '', '0', '', 1, 0, 0,
'', '', ST_PointFromText(@g));

SET @g = 'POINT(37.9700271 23.7477288)';

INSERT INTO `wpct_wpgmza`(`id`, `map_id`, `address`, `description`, `pic`, `link`, `icon`, `lat`,
`lng`, `anim`, `title`, `infoopen`, `category`, `approved`, `retina`, `type`, `did`, `other_data`,
`latlng`) VALUES

(31, 1, 'ΣΠ.ΜΕΡΚΟΥΡΗ 22Α 11634 ΑΘΗΝΑ', 'ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΛΛΟΓΙΚΗΣ ΚΑΙ
ΚΟΙΝΩΝΙΚΗΣ ΩΦΕΛΕΙΑΣ Ρομόν', '', '', '', '37.9700271', '23.7477288', '0', '', '0', '', 1, 0, 0, '',
'', ST_PointFromText(@g));

SET @g = 'POINT(40.4215921 25.652533)';

INSERT INTO `wpct_wpgmza`(`id`, `map_id`, `address`, `description`, `pic`, `link`, `icon`, `lat`,
`lng`, `anim`, `title`, `infoopen`, `category`, `approved`, `retina`, `type`, `did`, `other_data`,
`latlng`) VALUES

(32, 1, 'ΣΑΜΟΘΡΑΚΗ ΕΒΡΟΥ 68002 ΣΑΜΟΘΡΑΚΗ', 'ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΛΛΟΓΙΚΗΣ ΚΑΙ
ΚΟΙΝΩΝΙΚΗΣ ΩΦΕΛΕΙΑΣ Βαράδες', '', '', '', '40.4215921', '25.652533', '0', '', '0', '', 1, 0, 0, '',
'', ST_PointFromText(@g));

SET @g = 'POINT(40.6372647 22.9371058)';

INSERT INTO `wpct_wpgmza`(`id`, `map_id`, `address`, `description`, `pic`, `link`, `icon`, `lat`,
`lng`, `anim`, `title`, `infoopen`, `category`, `approved`, `retina`, `type`, `did`, `other_data`,
`latlng`) VALUES

(33, 1, 'Λ.ΣΟΦΟΥ 12 54625 ΘΕΣΣΑΛΟΝΙΚΗ', 'ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΛΛΟΓΙΚΗΣ ΚΑΙ
ΚΟΙΝΩΝΙΚΗΣ ΩΦΕΛΕΙΑΣ LEADCOMPASS', '', '', '', '40.6372647', '22.9371058', '0', '', '0', '', 1, 0,
0, '', '', ST_PointFromText(@g));

SET @g = 'POINT(38.0121121 23.7473397)';

INSERT INTO `wpct_wpgmza`(`id`, `map_id`, `address`, `description`, `pic`, `link`, `icon`, `lat`,
`lng`, `anim`, `title`, `infoopen`, `category`, `approved`, `retina`, `type`, `did`, `other_data`,
`latlng`) VALUES

(34, 1, 'ΜΑΡΑΘΩΝΟΣ 3 11146 ΑΘΗΝΑ', 'ΚΟΙΝΩΝΙΚΗ ΣΥΝΕΤΑΙΡΙΣΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΣΥΛΛΟΓΙΚΗΣ ΚΑΙ ΚΟΙΝΩΝΙΚΗΣ
ΩΦΕΛΕΙΑΣ ΓΥΝΑΙΚΩΝ ΣΥΝΕΡΓΑΣΙΑ', '', '', '', '38.0121121', '23.7473397', '0', '', '0', '', 1, 0, 0,
'', '', ST_PointFromText(@g));

SET @g = 'POINT(37.9896025 23.6279171)';

```

Figure 14. Formatted data exported from the C# app

2.6 Phase 6

The exported file as show above is executed to the WordPress database of the site (FinalSqlScript.sql) in order our data to be shown to the WP Google Maps Plug-In and in the project website (<http://consulting.apfse.eu/epixeiriseis/>) as show in figures 15, 16 and 17.

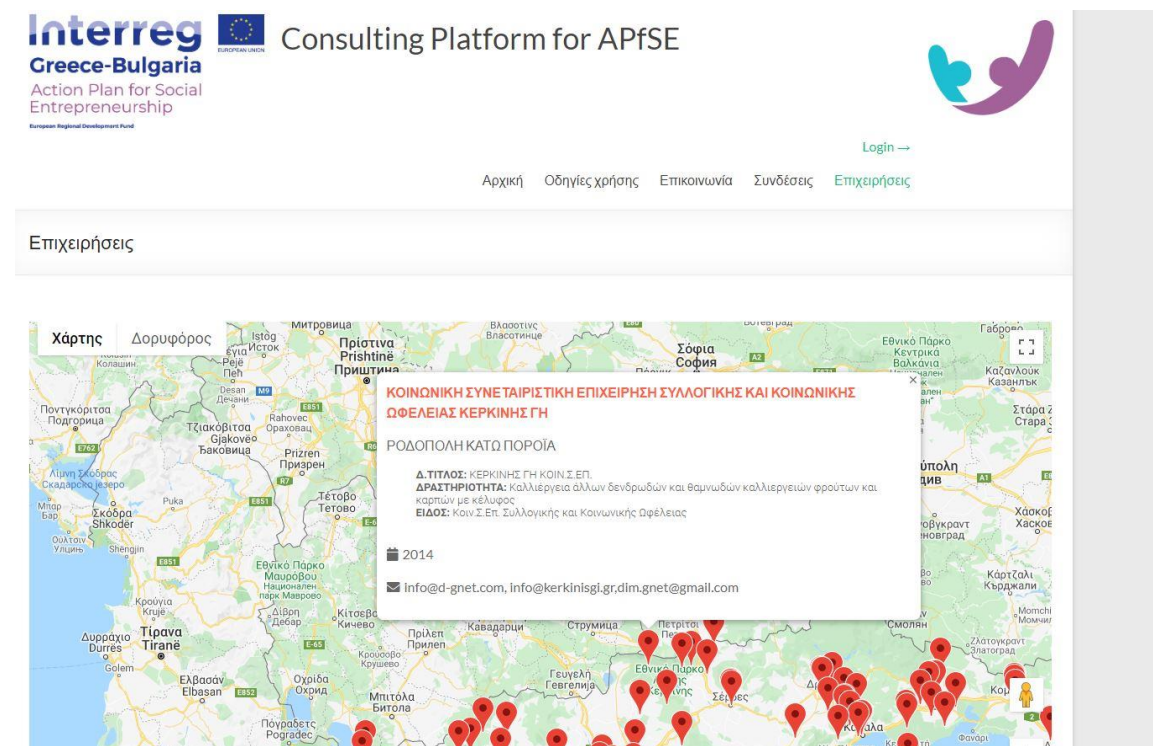


Figure 15. Company Information at <http://consulting.apfse.eu/>

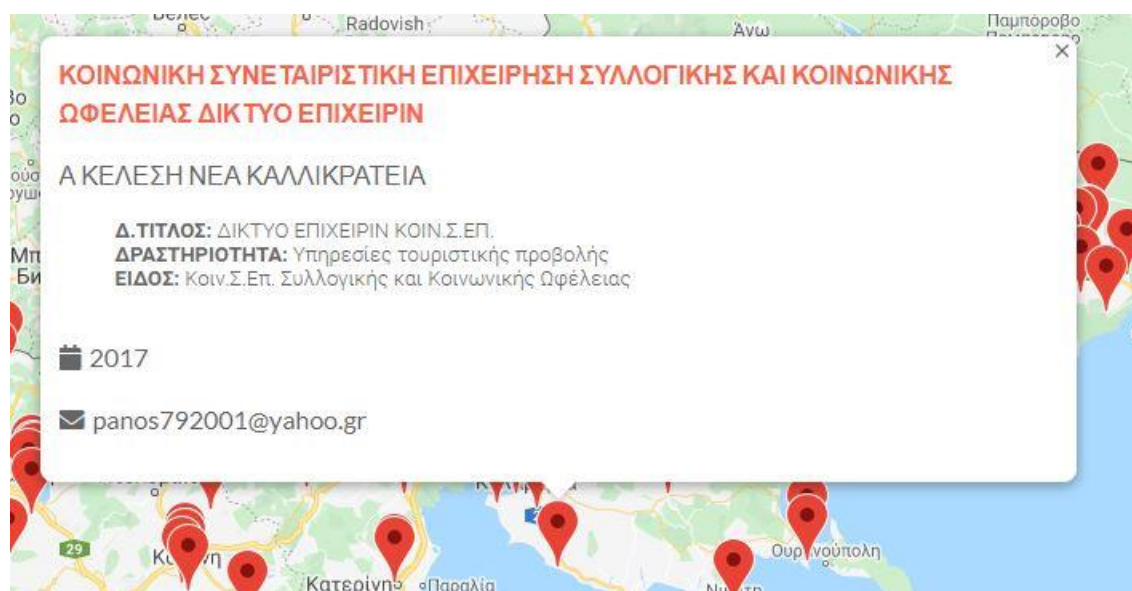


Figure 16. Company information in WP Google Maps Plug-in at <http://consulting.apfse.eu/>

The screenshot shows the website interface for the Interreg Greece-Bulgaria Consulting Platform for APFSE. At the top, there is the Interreg logo and the text "Consulting Platform for APFSE". Below this, the text "Action Plan for Social Entrepreneurship" is displayed. A navigation menu includes links for "Αρχική", "Οδηγίες χρήσης", "Επικοινωνία", "Συνδέσεις", and "Επιχειρήσεις". The "Επιχειρήσεις" (Businesses) tab is active, leading to a map of the Balkan region. The map is densely populated with red location markers, indicating the presence of social enterprises in various parts of Greece and Bulgaria. Below the map, there is a disclaimer in Greek: "«Το έργο συγχρηματοδοτείται από την Ευρωπαϊκή Ένωση και από Εθνικούς Πόρους των συμμετεχουσών χωρών στο πλαίσιο του Προγράμματος Συνεργασίας «INTERREG V-A ΕΛΛΑΔΑ - ΒΟΥΛΓΑΡΙΑ 2014-2020»". To the right of the disclaimer, there is a note: "Ο παρών ιστότοπος αντιπροσωπεύει τις απόψεις των συγγραφέων του και το Πρόγραμμα Συνεργασίας INTERREG V-A Ελλάδα Βουλγαρία 2014-2020 δεν φέρει καμία ευθύνη σχετικά με την χρήση των πληροφοριών που αυτός περιέχει." The footer contains copyright information: "Copyright © 2020 Consulting Platform for APFSE. Κατασκευασμένο με WordPress. Θέμα: Spacious από ThemeGrill." and a link for "Επικοινωνία".

Figure 17. Markers in WP Google Maps Plug-in at <http://consulting.apfse.eu/>

In order to find the cooperating parties and their information, the interested person has to visit the <http://consulting.apfse.eu/> site go to the tab “Επιχειρήσεις” and by clicking on the marker as showed in the above Figures he/she can see all the available information for the cooperating party.

3. Files accompanying this deliverable

- Original Excel file (ReceivedExcel.xlsx), the database with the local companies.
- Phase 3 processed excel with Latitude and Longitude (GeoLocations.xlsx)
- C# Console Application (AGEMKO-master.zip), the source code developed for the online application
- SQL script FinalSqlScript.sql, the SQL script produced by the C# code.
- Consulting Platform for APfSE (<http://consulting.apfse.eu/epixeiriseis/>), the final online platform.