

Where instinct meet science...

Projects Portfolio



Prepared By:





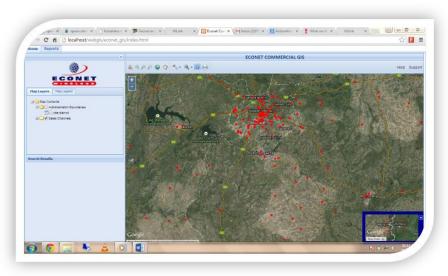
PROJECTS HIGHLIGHTS

Assignment name: Econet Network GIS	Name of Client: Econet Wireless Zimbabwe
	Duration: 6 Months
Country: Zimbabwe	
Location within country: Whole Country	
Year of assignment: 2014 – 2015	

Narrative description of Project:

The challenge was to develop a GIS solution to harness the power of geography as part of a business intelligence (BI) solution and therefore give Econet Wireless Zimbabwe a competitive advantage in telecommunication industry. Also in view of the ongoing network rollouts, - speed, quality and reliability are of the utmost importance and the GIS application should be able to show supporting reports e.g.:

- Network build reports
 - ✓ Network roll out
 - ✓ Site Acquisition
 - ✓ Engineering services
 - ✓ Operations



Econet Network GIS

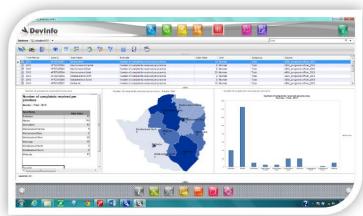
- Project Management
- Data Capturing
- System development, Setup and Configuration on Econet's LAN
- Data updating and support
- User Manual development and Training



Assignment name: Monitoring and Evaluation System	Name of Client: Transparency International Zimbabwe (TIZ)
	Duration: 5 Months
Country: Zimbabwe	
Location within country: Whole Country	
Year of assignment: 2014	

Narrative description of Project:

- Carry out a review of the current TI Z M&E System to support development of a new system
- **2.** Develop a Logical framework based M&E System. The system shall use results based reporting approach in its design;
- **3.** Setting up trackable and target-based M&E system. The system will allow setting of targets and monitoring and evaluation up to individual employees.
- **4.** Development and refinement of indicators for M&E. Current indicators are not properly formed and do not cover impact evaluation
- **5.** Linking daily programme activities to the M&E system to facilitate performance management
- **6.** Creating a metadata database for all the indicators. The metadata describes each indicators, shows how the indicated is derived, states source of data, etc
- **7.** Upgrading the M&E database and system to accommodate all the indicators that will be defined
- 8. Training individuals on how to use the M&E system for reporting purpose



TIZ M&E Dashboard

- Data Capturing
- Database Design and Development
- System Design, development and installation
- User Training
- Project Management



Country Programme Action Plan (CPAP) DevInfo Database

Country: Zimbabwe

Location within country: Whole Country

Narrative description of Project:

DevInfo technology offers a database system to organise, store and display data in uniform format to facilitate data sharing between government departments and UN agencies using the same system, in order to monitor social development. We developed a Country (Zimbabwe) Programme Action Plan indicators database. This included indicators from WASH, Child Protection, Education and Young Child Development section. The database has more than 180 indicators. We also conducted user training to help UNICEF staff generate various products using DevInfo

Name of Client: UNICEF - Zimbabwe

Duration: 11 months

Sample Screen Shot:



- Cleaned all the CPAP indicators from all the sections
- Designed the indicator database
- Constructed the indicator database
- Captured the indicators data
- Customised the user interface
- Trained users



Assignment name: Activity Mapping Tool

Name of Client: UNICEF Sierra

Country: Sierra Leone

Duration: 6 Months Sample Screen Shot:

Location within country: Whole Country

Year of assignment: 2013 - 2014

Narrative description of Project:

The challenge was to develop an Activity Mapping Tool in order to create a visual overview of the interventions of NGOs and CBOs in the country, with an initial focus on the Human Development Pillar in the Government's Agenda for Prosperity. It is expected to generate information that will assist in decision-making about development programming in the future. The mandate is to develop interactive maps and finally create a website managed by the Government of Sierra Leone. The final product should be produced and distributable on CDs and accessible on the In addition, the consultant will be required to provide training for nationals to build their capacity in updating the mapping information periodically.



- Project Management
- Data Capturing
- Database Development
- System Design, development and installation
- User Training



4Ws Mapping – Interactive Education Atlas

Country: Zimbabwe

Location within country: Whole Country

Year of assignment: 2013

Narrative description of Project:

Education is a key parameter for sustainable human development and is essential for achieving international development targets. Development presupposes the change of a society and the individual - education and learning of all types are key tools in enabling that change to take place, it leads to new possibilities, new horizons and development for the individual as well as for the nation. Thus efforts made towards ensuring that children have access to education will play a significant role in realising the whole of the Millennium Development Goals (MDG) agenda and the eradication of poverty. Education is also a fundamental human right and offers the hope that we can fulfil our potential as human beings. To better coordinate their response and further strengthen partners' support to the education sector, the Education Working Group (EWG) partner have built on the experience of other sectors (Water and Sanitation, Nutrition and Community Home Based Care) and has initiated this ATLAS which presents a clear overview of who is doing what, where and when.

Name of Client: UNICEF - Zimbabwe

Duration: 11 months Sample Screen Shot:



- Data Collection from all implementing partners (NGOs, local government, etc)
- Creation of an Access-based projects and interventions database
- Province, District and Ward thematic maps creation using ArcView 10
- Map Vectorisation and Cartographics using ArcGIS ArcView 10
- Atlas Interface Design
- Atlas Content Formating and Layout
- Atlas Coding using ActionScript 2.0



Developing an Identification of Poor Households Digital Map Tool to drive socioeconomic development by reducing poverty throughout the country.

Country: Cambodia

Location within country: Whole Country

Year of assignment: 2012

Narrative description of Project:

The Identification of Poor Households (IDPoor) Programme was established in 2006 within the Ministry of Planning to officially establish national procedures for identification of poor households and to realise their implementation throughout Cambodia. A primary function of the IDPoor Programme is to provide regularly updated information on poor households to a and nonwide range of Government governmental service providers, allowing them to target services and assistance directly to the poorest and most vulnerable. The Interactive IDPoor ATLAS gives providers access to recently collected IDPoor information in formats that enhance its visualisation, comparison, and interpretation. Its primary objective is to promote the usage of IDPoor information and facilitate more effective planning and targeting of poverty reduction programmes throughout the country

Name of Client: Data for Development

(Cambodia Government)

Duration: 6 Months

Sample Screen Shot: IDPoor Interactive Map

Atlas



- 1. Development of more than 300 thematic maps based on the poor household numbers and percentages using ArcGIS ArcView 10
- 2. Map Vectorisation and Cartographics
- 3. Atlas Interface Design using Adobe Flash Technology
- 4. Map Content Formating, Layout and XML database development for map interactions
- 5. Atlas Coding using ActionScript 3.0
- 6. Projetc Management
- 7. Creating a web version using the currently created map atlas tool





Production and publication of country-wide (including urban areas) intervention mapping for Water, Sanitation and Hygiene, Nutrition, Education and Child Protection.

Country: Zimbabwe

Location within country: Whole Country

Year of assignment: 2011

Name of Client: United Nations Children'f Fund

(UNICEF)

Duration: 11 Months

Sample Screen Shot: Interactive Nutrition

Intervention Map Atlas



Narrative description of Project:

Nutrition interventions contribute to achieving the MDGs related to child mortality, maternal health, primary education, gender equality, and HIV/AIDS. In Zimbabwe, UNICEF is the lead United Nations agency in the Nutrition sector. Coordination of sector interventions takes place within the context of the Nutrition Cluster, which brings together local and international NGOs, donors, UN agencies and Government departments. relevant strengthen its coordination role, UNICEF started in 2006 with the development if sectorspecific planning tools, such as the Nutrition Atlas. This Atlas presents a clear overview of 'who is doing what and where' and is aimed to improve evidence-based planning programming as well as coordination of Nutrition interventions. This CD-ROM was developed to facilitate interpretation and utilisation of Nutrition intervention data

- 1. Data Collection from all implementing partners (NGOs, local government, etc)
- 2. Creation of an Access-based projects and interventions database
- 3. Province, District and Ward thematic maps creation using ArcView 10
- 4. Map Vectorisation and Cartographics using ArcGIS ArcView 10
- 5. Atlas Interface Design
- 6. Atlas Content Formating and Layout
- 7. Atlas Coding using ActionScript 2.0



Assignment name: EcoCash GIS

Name of Client: Econet Services

Duration: 4 Months

Sample Screen Shot:

Country: Zimbabwe

Location within country: Whole Country

Year of assignment: 2013 - 2014

Narrative description of Project:

The challenge was to develop a GIS solution to harness the power of geography as part of a business intelligence (BI) solution and therefore give EcoCash a competitive advantage in the financial business.

We developed a solution based on a client/server architecture that geographically maps key business assets (agents, banks, network coverage, etc). A comprehensive geodatabase with supporting data sets that includes demographics, administrative areas, settlements, schools, etc. Functionality, from simple agent queries to revenue analytics was built. Users where then trained based on their use cases.



- Project Management
- Data Capturing
- System development, Setup and Configuration on Econet's LAN
- Data updating and support
- User Manual development and Training



Support Mapping Exercise for Population Services Zimbabwe's Outreach Sites and Support Centres

Country: Zimbabwe

Location within country: Whole Country

Year of assignment: 2011

Name of Client: Population Services Zimbabwe

(PSZ) - USAID

Duration: 40 Days

Sample Screen Shot: PSZ GIS



Narrative description of Project:

The main objective was to increase efficiencies in outreach service targeting, operational management (scheduling, fleet management, site selection, decisions on campsites) and monitoring; that will lead to the attainment of optimal geographical coverage, equitable service provision and saturation achieved by redeployment of resources. Training was aimed at building the capacity of PSZ staff through training, supervision and backup support in the use of Geographic Information Systems and Global Positioning tools.

- 1. Identify and advice on the most appropriate GIS software and GPS gadgets to be procured based on PSZ needs.
- 2. Setup the software and hardware at the PSZ Support Office's M&E department, train staff on its use and demonstrate its performance.
- 3. Train the M&E Officer, Marketing Officer, Outreach Coordinator, Project Manager and Clinical Services Manager in Geographic Information Systems including the use of the acquired GIS software.
- 4. Train PSZ Drivers/Project Assistants (10), Service Providers (8) and Nurse Aides (8) on how to use the GPS equipment in recording coordinates.
- 5. Working through PSZ, Liaise with ZimStats, Ministry of Health and Child Welfare, ZNFPC, OCHA, and other agencies to get updated spatial data on health facilities in Zimbabwe, demographic statistics, boundaries (district, ward and or catchment) and other relevant information for developing GIS maps.
- 6. Develop a GIS for PSZ service deliver points superimposed on various spatial data to enhance management and planning of outreach activities.



Water, Sanitation and Hygiene (WASH)

Interactive CD Atlas

Country: Zimbabwe

Location within country: Whole Country

Year of assignment: 2008

Name of Client: UNICEF Zimbabwe

Duration: 3 Months

Sample Screen Shot: WASH Atlas

Narrative description of Project: Safe drinking water and sanitation are basic to

human survival, healthy living, dignity and productivity. Lack of these fundamentals is one of the main underlying causes of water-related diseases, malnutrition and child mortality. It is becoming increasingly evident that Water, Sanitation and Hygiene (WASH) is of crucial importance for the attainment of most of the Millennium Development Goals (MDGs).

To strengthen its coordination role, UNICEF started in 2005 with the development of sector-specific planning tools, such as the WASH Atlas. This Atlas presents a clear overview of 'who is doing what where' and is aimed to improve evidence-based planning and programming as well as coordination of WASH interventions. This CD-ROM was developed to facilitate interpretation and utilisation of Nutrition intervention data.



- · Concept design for interactive interface for presentation of intervention data for different implementing organisations (WASH Cluster).
- Developing a final interactive CD-ROM including 2007 2008 intervention data for WASH. The CD-ROM has an interactive interface that allows the user to 'zoom in' to ward level and access intervention and implementing organization details for each ward in Zimbabwe.



Nutrition Interactive CD Atlas

Country: Zimbabwe

Location within country: Whole Country

Year of assignment: 2008 - 2009

Narrative description of Project:

Nutrition interventions contribute to achieving the MDGs related to child mortality, maternal health, primary education, gender equality, and HIV/AIDS. In Zimbabwe, UNICEF is the lead United Nations agency in the Nutrition sector. Coordination of sector interventions takes place within the context of the Nutrition Cluster, which brings together local and international NGOs, donors, UN agencies and relevant Government departments. strengthen its coordination role, UNICEF started in 2006 with the development if sectorspecific planning tools, such as the Nutrition Atlas. This Atlas presents a clear overview of 'who is doing what and where' and is aimed to improve evidence-based planning programming as well as coordination of Nutrition interventions. This CD-ROM was developed to facilitate interpretation and utilisation of Nutrition intervention data.

Name of Client: UNICEF Zimbabwe

Duration: 3 Months

Sample Screen Shot: Nutrition Atlas



- NGO Nutrition Interventions Access Database Querying & Report Generation
- XML Database Development
- Excel Analysis: Pivot Tables, Charting and Importing
- Province and District Maps Importing From ArcView to Adobe Flash
- Map Vectorisation and Cartographics
- Atlas Interface Design
- Atlas Content Formating and Layout
- Atlas Coding using ActionScript 2.0
- Country to Ward-Level Interaction Design



MultiSector Interactive CD Atlas

Country: Zimbabwe

Location within country: Whole Country

Year of assignment: 2009

Name of Client: UNICEF Zimbabwe

Duration: 3 Months

Sample Screen Shot: MultiSector Atlas

Narrative description of Project:

In Zimbabwe, UNICEF is the lead coordinating agency in the WASH and Nutrition sectors. Coordination of the sectors interventions brings together local and international NGOs, donors, UN agencies and relevant Government departments. In line with its coordination role, UNICEF compiles reports which it distributes to stakeholders. These reports present a clear overview of 'who is doing what where' and are aimed to improve evidence-based planning and programming as well as coordination of sectors interventions. To facilitate the dissemination of sectors intervention data, I was engaged by UNICEF to develop interactive atlases that facilitate interpretation and further encourage utilization of this data. I developed a MultiSector Atlas. This is a combination of the WASH, Nutrition, Agriculture and Food interventions by all the implementing organisations in Zimbabwe.



Description of actual services provided in the assignment:

Specific Project Tasks

- NGO WASH, Nutrition, Food and Agriculture Interventions Access Database Querying & Report Generation
- XML Database Development
- Excel Analysis: Pivot Tables, Charting and Importing
- Province and District Maps Importing From ArcView to Macromedia Flash
- Map Vectorisation and Cartographics
- WASH & Nutrition Atlases Integration
- Atlas Content Formating and Layout
- Atlas Coding using ActionScript 2.0
- Country to Ward-Level Interaction Design



Services Convergence Mapping

Country: Zimbabwe

Location within country: Whole Country

Year of assignment: 2012

Narrative description of Project:

The main objective was to develop an interactive tool to show the areas (districts) covered by various services UNICEF is offered throughout the country through implementing partners. The services mapped included; Nutrition, Cash Transfer, RBF Health, Health 4+, New-born Corner Project and Proposed WASH districts. An interactive tools was developed that showed the abovementioned services layers. Through coding (computer programming), a functionality to allow the user to switch on and off the service layers was incorporate. This allowed users to combined different services offered by UNICEF throughout the country at district level and then map gaps and overlaps of the services.

Name of Client: UNICEF - Zimbabwe

Duration: 11 months

Sample Screen Shot:



- 1. Province, and District thematic maps creation using ArcView 10
- 2. Map Vectorisation and Cartographics using ArcGIS ArcView 10
- 3. Tool Interface Design
- 4. Tool Content Formating and Layout
- 5. Tool Coding using ActionScript 2.0



Capacity Development – GIS Training Toolkit

Country: Zimbabwe **Location within country**:

Year of assignment: 2013

Narrative description of Project:

The main objective was to build capacity within UNICEF staff at various levels and from different sections. I trained 19 staff members including cluster coordinators, M&E specialists, emergency specialists, etc on the use of GIS for various humanitarian work applications at UNICEF. The intention was to train each section so that it is self-sufficient to manage and analyse complex data sets. A number of practical tutorials were done with each user practising on their own laptop using ArcView GIS software. An interactive training kit was developed. The training included publications mainly on its use in humanitarian work, tutorials, videos, website links and other resources to complement the training.

Name of Client: UNICEF - Zimbabwe

Duration: 11 months

Sample Screen Shot: GIS Training Toolkit



- 1. Organised the GIS training workshop
- 2. I was the training facilitator
- 3. Designed and developed the GIS training toolkit



Zimbabwe National Action Plan for OVC-**Capacity Development Resource Materials**

Country: Zimbabwe

Location within country: Whole Country

Year of assignment: 2009

Sample Screen Shot: Capacity Development

Name of Client: UNICEF Zimbabwe

Resource Materials DVD

Duration: 2 Months



Narrative description of Project:

This Electronic OVC Toolkit is the first of its kind designed for Zimbabwean implementers of the National Action Plan for Orphans and Vulnerable Children. The DVD-ROM is a collection of original quality and renowned publications from leading capacity development agencies around the world. This electronic OVC toolkit started as an innovative idea meant to strengthen the capacity of international Non-Governmental Organisations (INGOs), local Non-Governmental Organisations (NGOs), Faith Based Organisations (FBOs) and Community Based Organisations implementing OVC programmes in Zimbabwe.

- Project Management
- Content (Database) Management
- Interface and Graphic Design
- XML database design and authoring using Access
- Authoring and ActionScript Programming



Livestock Information Management System (LIMS) - WebGIS

Country: SADC Countries

Location within country: 15 SADC Countries

Year of assignment: 2007 - 2008

Name of Client: Southern African Development Community (SADC) – PRINT Unit

Duration: 2 Months

Sample Screen Shot: Livestock Information Management System (LIMS) - WebGIS



Narrative description of Project:

Livestock Information Management Systems with PRINT unit. The expected results of this consultancy included the assessment report of the web mapping technologies frequently used. The second part of the project entailed the design, development and implementation of Web Mapping Tool compatible with the current on-line disease database for mapping results of query using one or more map layers and at different scales. The system enables the querying and mapping of current and future records from the PRINT On-line disease database.

- WebGIS Software Tools Assessment
- GPS Livestock Disease Incidence Data Cleaning & Formatting
- Livestock Demographic Data Cleaning
- GPS Livestock Disease Incidence Mapping
- SADC Countries map editing
- User Requirements Analysis
- WebGIS Livestock Information Management System (LIMS) Design & Development
- LIMS Server Deployment



Assignment name: Zimbabwe Tourism
Gateway - GIS Applications and Solutions

Name of Client: Zimbabwe Tourism Authority

(ZTA)

Country: Zimbabwe

Location within country: Whole Country

Year of assignment: 2011 - Current

Sample Screen Shot:

Duration: 3 years



Narrative description of Project:

This is an on-going project. This is a GIS (map) anchored tourism information and concierge system. The focus of this project is the deployment of touch-screen visitor/tourist information kiosks that will have the greatest impact on tourism revenues by enhancing visitor information services in the country. The kiosks will be located at strategic places such as airports, tourism offices, information bureau, hotels, etc. The core features include; advertising, tourism directory, bookings and enquiries, tourism events and news, and way finding – to places of interest. In the idle mode, the system switches into a digital signage for advertising tourism service providers.

- Database Development
- Map Vectorisation and Cartographics using ArcGIS ArcView 10
- Interface Design
- Content Creation
- Content Formating and Layout
- Coding using ActionScript 2.0



1. 3 Key Project Personnel

We have experienced resources in GIS, Information Management and software development. We have a reputable track record in the NGO sector in similar work. Our lead consultant is Lloyd Manyema who has been involved in all the work we have done for UNICEF and other NGOs. Lloyd recently completed a Partner Mapping Tool (3Ws) for UNICEF Sierra Leone on behalf of the Government. He also worked for UNICEF Zimbabwe and therefore had a chance to be involved in work related to this assignment. Appendix A has detailed CVs of the two project personnel.

Profiles of the Key Team Members		
Team Member	Profile	
Lloyd Manyema GIS & Information Management Specialist • Masters in Engineering Degree - Geomatics • Bachelor of Science Engineering in Surveying and GeoInformatics	Extensive 16 years of experience in GIS and Information Management. Databases, IT Applications. Project Management. Remote Sensing. GPS, Web GIS, Open Source systems. Geostatistical and Statistical Analysis. Mapping. Domain and Requirements Analysis. Research and Knowledge Product Development. Spatial & Non-Spatial Database Development. Monitoring and Evaluation. Capacity Development and Training. Analytical Problem Solving. Innovative Solutions. Systems Analysis. Foresighted. Progressive. Communicative. Results Oriented. Developed more than 15 GIS products, the majority of which are for humanitarian applications. Developed the first of its kind interactive CD atlases with NGO implementing partners' database for the WASH, Nutrition, Food and Agriculture sectors (clusters). The CD shows "who is doing what and where" and is used for programme planning, targeting and M&E.	
Prestige T. Makanga GIS Consultant PhD Candidate (Canada) Masters in Engineering Degree - Geomatics Bachelor of Science Honours in Surveying and Geomatics	Prestige has a passion for GIS and its application in public health and other application areas. His strengths are in GIS analysis, information management, systems requirements engineering and architecture design. His prowess is in Web-GIS, spatial data and the Volunteered Geographic Information (VGI) phenomenon. He has amassed research skills and he is currently studying for a PhD with a Canadian university. He has written a number of papers and publications. He is also currently leading research on Spatial Data Infrastructure and their role in supporting decision making processes in Zimbabwe. Prestige is also the co-leader of the Research committee in the Surveying and Geomatics division of the Midlands State University. He stated working for Technical Systems in 2006 after completing his first degree and has accumulated a lot of experience and expertise in GIS.	
Florence M. Murungweni GIS Specialist Master of Science Degree in Geo-Information Science Bachelor of Science in Geography and Environmental Studies	Florence has over 12 years' experience in GIS with distinct skills and practice in applications of modern technologies GIS applied to population and settlement, HIV and AIDS, Disaster Management, Agriculture, Surveying and Cadastral Mapping, Mining, Natural Resources Management and Environmental Management, Environmental Policy, Environmental Education and Pollution as well as Climate change issues. She has worked in both government and the private sector of developed and developing world. Her specialty in designing course outlines started with NAVTEQ (NOKIA) Company, in the Netherlands where as a Regional Quality Assistant she developed, created and edited QUEST projects manuals to be used for field data collection by field officers. Successfully completed an EU funded research at Forestry Commission (Zimbabwe) where she critically analysed some tools (models) that are used in assessing forest growth.	