



Fostering Excellence in GIS


www.URISA.org

GIS for the People

Sustainable, Simple and Affordable
GIS for Community Based
Organizations

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INTRODUCTIONS



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Presentation Overview

Part 1 - Michelle Thompson

Public Participation Geographic Information Systems

Part 2 - Andrew Walter

Planning and Implementing Technical Solutions for Nonprofits

PART 1 - OVERVIEW

Public Participation Geographic Information Systems

- WhoData.org & WhoData.net
- Meet the Team
- Scope of Work
- Community Projects

(Switch to WhoData slides)

PART 2 - OVERVIEW

Planning and Implementing Technical Solutions for Nonprofits

- Planning the technical side of your project
- Barriers for non-technical organizations
- Solutions
- Case studies

PLANNING...

Nonprofits and community organizations have big goals and objectives that come from skilled and experienced people.

- Where does this project fit in the priority list
- For an organization that has no GIS, simple mapping goes a long way
- Is there a target objective or is this a long term implementation

...PLANNING...

Inventory Staff capacity and needs

- What skills do people have
- How much time do they have

Informs the next set of questions

- What kind of user training is needed
- Short or long-term technical training
- Long-term 3rd Party Support

...PLANNING...

Technology needs assessment

- Servers
 - On-site or Cloud based
- Software considerations
 - GeoDatabase, Geometry tables or .shp
 - Map server
 - Web UI
 - Desktop UI

...PLANNING

Goals beyond THE goal

- Main project goal, and...
- Centralized information
 - One database to rule them all?
- Simplicity is always the correct answer
- What reporting is needed beyond maps
- Will you be sharing data
- Save complex analysis for phase 2

BARRIERS TO ENTRY...

The Backend - Technical skills

- Set-up systems
- Manage and maintain
- Long-term support

Available Information (data) -What state is it in

- What information do you have and is it organized
- This includes non-spatial data
- Sources of base maps and other spatial data

...BARRIERS TO ENTRY

Resources - Who is in charge

- Who is responsible for evaluating, deploying and maintaining information

Costs

- Hardware
- Software Licensing
- Training



SOLUTIONS...

- Be realistic, start small
- Plan for the future, implement the basics

Backend - Technical Skills

- In-house or volunteer staff (follow the plan)
- Consultants set things up and train you
- Outsource the whole thing (hosted)
- Rapid application development, RAD
- Plan for bug fixing - a bumpy deployment is better than accepting bad data

SOLUTIONS...

Available information - database

- Structured Excel worksheets for import
- Scanned document naming convention
- Get your spatial data from the experts
 - Maybe give something back
- If you have data rules get them as close to the data layer as you can

...SOLUTIONS...

Resources - Who is in charge

- In house champion is a requirement
- Data maintainers
 - Work outside GIS if data is not spatial
- Training
 - MOOCs (Massive Open Online Course)
 - ESRI virtual campus

...SOLUTIONS

Cost options

Prepackaged solutions

- Reasonable cost, simple to manage
- Support is usually part of the package
- Limited or targeted function

Packaged software and Open Source

- Complex to set up but getting easier
- Very flexible
- Many support options
- Packaged software can be expensive

CASE STUDY - DSNi


Boston, MA
Dudley Street Neighborhood Initiative
Community Land Trust

Powered by: **The Jones Payne Group**

Information Maps Search

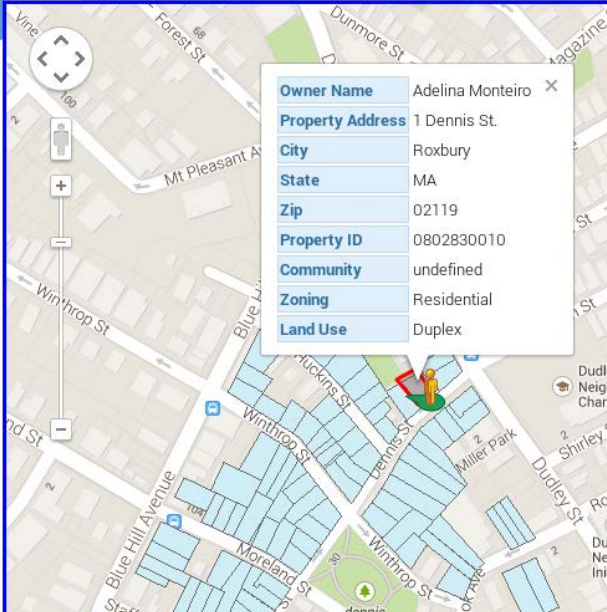
Street View

1 Dennis St, Boston, Massachusetts
Address is approximate



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Owner Name	Adelina Monteiro
Property Address	1 Dennis St.
City	Roxbury
State	MA
Zip	02119
Property ID	0802830010
Community	undefined
Zoning	Residential
Land Use	Duplex



DSNI - CHALLENGES

Challenges

- Limited technical staff
- Paper files
- disconnected Excel spreadsheets
- Individual knowledge not documented

Needs

- Central organization and asset inventory
- Case tracking and contact management
- Mapping

DSNI - SOLUTIONS

WeaverPRM

- Central database
 - Some spatial tables, many spatial views
 - Outside basemaps, census, city data
- Bing Maps API (pushpin GIS)

Property Viewer

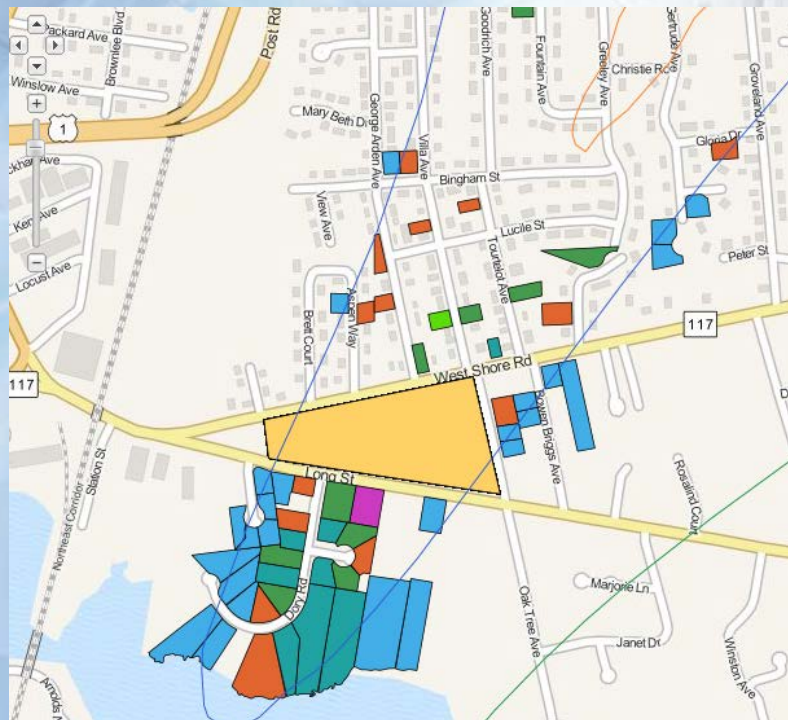
- Google API

DSNI - SUMMARY

- Hosted SQL database
- Hosted web application
- Google map API
- City and state data
- ESRI map server
- Nonprofit pricing helps with licensing
- Hosting partner

CASE STUDY - RIAC

Rhode Island Airport Corporation, RI Large Scale Housing Inventory



RIAC - CHALLENGES

Challenges

- Minimal GIS infrastructure
- Poor basemaps
- Limited time

Needs

- Central organization
- 100% inventory required
- Inventory priority based on location
- Mapping for quality control and funding

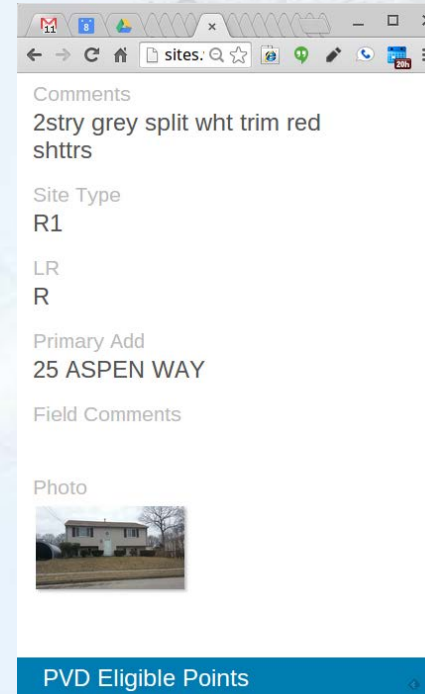
RIAC - SOLUTIONS

Data Sources

- Assessors table data
- e911 point data
- historic parcel data

Putting it together

- SQL spatial
- Spatial joins to create common ID
- SQL Geometry SDDistance to polyline



RIAC - SOLUTIONS

WeaverPRM Mobile Phone App

- Central database
- Pre-determine spatial data
- GPS follow me maps update live

Property Viewers

- OpenLayers
- HTML5 Leaflet
- GeoExplorer

RIAC - SUMMARY

- PostgreGIS database
- Hosted web application
- Hosted mobile application
- Geoserver map server
- Open Source map composer/viewer
- No licensing cost, hosting cost is minimal

TECHNICAL SUMMARY

Database

- Geometry tables with unchanged source data
- ID link tables - existing data to spatial tables

Map Server

- Organize, style and serve


Web UI (javascript)

- Consumption interface for non-technical

Desktop UI

- Edit Geodata if you need to
- Custom map output

QUESTIONS?



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