Spatial Analysis and Geoprocessing with GIS

Resources

- ArcGIS

ArcGIS for Home Use http://www.esri.com/software/arcgis/arcgis-for-home

- QGIS

Download Free and Open Source GIS http://qgis.org/en/site/

- GRASS

Download Free and Open Source GIS http://grass.osgeo.org/

Guides

Spatial Analysis Workbook
http://www.lib.umd.edu/binaries/content/assets/public/gov-info-gis/research-and-instruction/spatial-analysis-workbook.pdf

Spatial Analysis and GIS: A Primer
ftp://131.252.97.79/Transfer/ES_Pubs/ESVal/spatial_statistics/spatial_analysis_primer.pdf

Azzam, T. & Robinson, D. (2013). GIS in Evaluation: Utilizing the Power of Geographic Information Systems to Represent Evaluation Data. American Journal of Evaluation 34(2): 207-224.

QGIS Wiki http://hub.qgis.org/projects/quantum-gis/wiki/How_do_I_do_that_in_QGIS

Boundaries, streets, and community data

- Download Census Data for GIS http://www.census.gov/geo/maps-data/data/tiger.html
- Census Data Guide http://www.gsd.harvard.edu/gis/manual/census_getdata/
- National Historical Geographic Information System (NHGIS) https://www.nhgis.org/news

Logic Model Resources

1) Program Theory and Logic Models. *Wilder Research, 2009.* Available at: http://www.evaluatod.org/resources/evaluation-guides/LogicModel_8-09.pdf
   - Addresses the 'why' behind creating a logic models, and thus provides information to invest the client in building a logic model. This resource also contains several examples and worksheets.

2) Fretchling, J. *Logic Model Methods in Program Evaluation*. San Francisco: Jossey-Bass, 2007.
   - A comprehensive textbook outlining the step-by-step approach to create a logic model. This book also emphasizes the theory underlying the logic model.

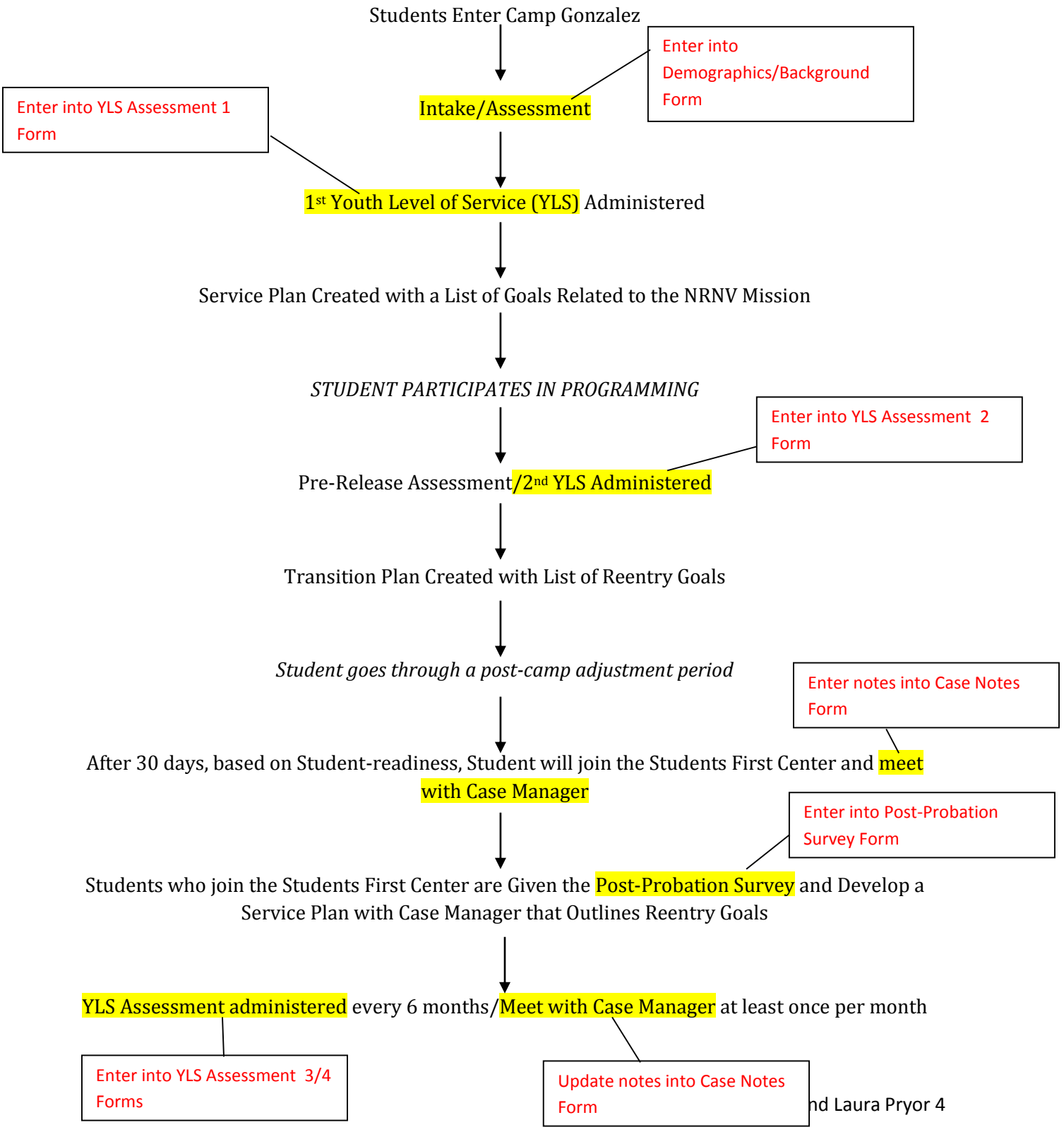
3) Honeycutt, Sally and Michelle C. Kegler. *Logic Models as a Platform for Program Evaluation Planning, Implementation, and Use of Findings Slides from SI10.* AEA 2010 Summer Institute; available on eval.org: http://comm.eval.org/coffee_break_webinars/Resources/ViewDocument/?DocumentKey=4e1cf3b8-61fa-4c36-9108-9b489e05d92b
   - Slides provide a great overview of the various logic model components. Handout can be shared with a client to help introduce the logic model and the process for creating a logic model.

Sample Data Outline

Outcome	Data Source	Measure
Students enroll/complete high school	Post-Detention Survey (New Data Source)	*High School Placement *High School Completion Date
Students enroll in post-secondary education and/or vocational certification program	Post-Detention Survey (New Data Source)	*College/Vocational Placement *College/Vocational Placement Date
Students complete employment training	Post-Detention Survey (New Data Source)	*Employment training completion date
Students attain legal employment docs	Post-Detention Survey (New Data Source)	*Legal employment documents status
Student reduces contacts with law enforcement	Case Notes	*Arrests total *Most recent arrest date *Incarcerations total *Most recent incarceration date
Students successfully complete probation	Case Notes	*Completion of Restitution * Completion of Restitution Date *Completion of community service *Completion of community service date
Students seal juvenile record	Case Notes	*Juvenile records sealed
Student minimizes the type and frequency of substance abuse	Youth Level of Services Assessment	*YLS: Assessment Area Five a. Chronic drug use b. Chronic alcohol use c. Substance Abuse interfering with life
The number of clean/sober clients increase	Case Notes	*Drug test passed
Identify hobbies of personal interest	Youth Level of Services Assessment	*YLS: Assessment Area Six a. Organized activities b. Better use of time c. Personal interests

Sample Data Collection and Storage Plan

Highlights = Data to use for Year 1 evaluation



Commonly Used PM Data Platforms

1. Microsoft Excel: Excel is a commonly used platform – The spreadsheet application allows you to build worksheets, perform calculations, create graphics, and make pivot tables. Free tutorials on how to use Excel can be found here: http://www.gcflearnfree.org/excel

2. Microsoft Access: Database software that allows you to organize, store, and report on information. The built-in reporting tool is convenient for running quick queries often needed for performance management. Free tutorials on how to use Access can be found here: http://www.gcflearnfree.org/access

3. Efforts to Outcomes: A nonprofit software solution designed explicitly for performance management purposes. The software allows for data organizing, reporting, and analyzing in a user-friendly, targeted manner. More on ETO and its prices/features can be found here: http://www.socialsolutions.com/eto-impact-non-profit-software.aspx

4. Salesforce/Visualforce: Salesforce is traditionally used as a client relationship management (CRM) tool; however, the platform allows for unique form development and reporting consistent with many PM needs. Visualforce is an application of Salesforce that allows developers to customize the Salesforce page to meet the unique PM needs of the client. Knowledge of the Visualforce markup language is required to use this application. More information about Visualforce can be found here: http://www.salesforce.com/us/developer/docs/pages/Content/pages_intro_what_is_it.htm

5. Google Drive: For a free and simple way to create an PM system, Google Forms, Google Spreadsheet, and Google Docs can perform all of the necessary functions. These platforms allows for easy sharing with other users, yet features are relatively 'stripped down' compared to other options. You can find an overview of Google Drive here: https://support.google.com/drive/answer/2424384?hl=en

Reporting Resources

Skill Development

1) Data Visualization in Microsoft Excel (David Shellard): *"This Coffee Break Demonstration will explore how you can use Microsoft Excel for basic data visualizations that will showcase your data. For simple data visualizations evaluators do not necessarily need the newest tools that are discussed on blogs and articles. Excel is a tool most people will have access to but many will not know how to tap into its enormous potential. Using an example data set we will walk through a sampling of Excel's data visualization tools including chart selection and formatting to reduce the data-ink ratio."*
http://comm.eval.org/coffee_break_webinars/Resources/ViewDocument/?DocumentKey=32043175-5983-454e-820a-a8a720290908

2) Design and Build a Data Dashboard on a Budget: *"The data dashboard is rapidly gaining popularity in the social sectors for evaluation, performance measurement, and monitoring purposes. Evaluators are often asked to help their clients with a tight budget to create and use dashboards, and yet few evaluators are knowledgeable about what is necessary to facilitate a data dashboard design-build in a way that will add value. Our presenter will outline what is involved in designing and building a dashboard using Microsoft Excel or Tableau and how to integrate this tool into an organization's performance measurement and monitoring process. We will also discuss the bottom-line by answering this question: What are some effective approaches to designing and building a dashboard and how much do these approaches cost?"*
http://comm.eval.org/coffee_break_webinars/Resources/ViewDocument/?DocumentKey=2daa9e39-b44f-405b-a091-155e4f3fb24c

Platforms

1) Tableau: Tableau provides data visualization software. Its various products allow users to create customized data dashboards. Knowledge of how to operate the software is a pre-requisite for effective use. More information about tableau can be found at: http://www.tableausoftware.com/about

2) BloomBoard: Specific to education-related performance management, Bloomboard provides tailored and interactive data dashboards. Clients need not understand the software; simply provide BloomBoard with the raw data, and they will do the rest of the work for you (using Tableau software). More information can be found here: http://www.bloomboard.com/about