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Category 4: Return on Investment (ROI) Methodology and Business Case Development for Multi-agency NSDI Projects:

Development of "Return on Investment" Documentation for the Proposed Maine Orthoimagery Program

Keywords: budget, funding, return on investment, geospatial data, orthoimagery

Maine – Final Report

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c) Project title
Development of "Return on Investment" Documentation for the Proposed Maine Orthoimagery Program FINAL REPORT

d) Applicant Organization

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Maine GeoLibrary
Maine Office of GIS
Applied Geographics, Inc
Sebago Technics, Inc
Maine Land Use Regulatory Commission
Maine Department of Environmental Protection
Maine Department of Transportation
Maine Department of Conservation
Maine Department of Marine Resources
Maine Emergency Management Agency
Greater Portland Council of Governments
Southern Maine Regional Planning Commission
US Geological Survey

g) Executive Summary

Access to current imagery data has been identified as key component of Maine's geospatial data framework. In 2003 the state initiated its first statewide orthoimagery program. Due to poor economic conditions, resources have not been available to continue data acquisition on a regular basis. Recently, in 2010, Maine converted all known orthoimagery holdings to web services for free public consumption.

The Maine GeoLibrary Board, as part of its CAP-funded strategic planning process, recognized the need for continued data acquisition, and in 2009 established a GeoSpatial Data Workgroup to develop a statewide orthoimagery data acquisition plan. The Workgroup worked with a wide range of stakeholders to produce a comprehensive acquisition plan based on a shared investment strategy.

In this project we conducted ROI analyses, using the FGDC workbook as a template, on the state's currently unimplemented orthoimagery program and related web services. The plan proposes a fifteen year program that would acquire orthoimagery based on three and five year cycles with combined resources of the state, counties and federal agencies. All data would be available to the public for download and via web services.

Because the utility and need of current imagery intersects a wide cross section of geospatial users, it is important to develop an understanding of specific cost savings that accrue from current imagery data availability. Key decision makers need to understand how investments in imagery data and web services will benefit their organization and why they should support a regular program for data refreshment and open access.

h) Project Narrative

We computed ROI in support of implementing Maine's orthoimagery program and expansion of web services to support delivery of such data. This program would include recurring collections of orthoimagery data on a variable 3-5 year cycle, with differing resolutions depending on population size, for the next 15 years. The program is structured such that municipalities could 'buy up' to better products from the baseline specification if desired, and is suitable as a contribution to national imagery collections. One of the key services that results from this program is the easy access to imagery via publicly-available OGC-compliant web mapping services. The financial benefits of this project are many and include:

- more efficient delivery of services (public and private), which translates directly into cost (or tax) savings, due to better geospatial intelligence
- direct savings on development of geospatial data due to better purchasing power of a single unified orthoimagery program
- direct savings on small organizations trying to implement geospatial technology by not having to host large quantities of imagery data, due to the presence of free web services

The GeoLibrary Board, in cooperation with MEGIS, worked with two geospatial vendors (Applied Geographics and Sebago Technics) to hold user forums and interviews, document examples of real cost savings, and complete the ROI computations as outlined in the FGDC ROI workbook. This vendor completed and delivered an ROI case study, completed ROI spreadsheets, financial analyses summary, and a multi-agency financial business case, based on the specifications outlined by the FGDC workbook, the specifications of this award, and integrating the results of the 2007 NSGIC ROI study for the proposed "Imagery for the Nation".

The participating agencies in this project were eager to have documentation supporting ROI for orthoimagery data and web services, so that those organizations collectively can approach their leadership to encourage financial support. As Maine has recently elected both a fiscally conservative legislature and governor, such analyses will be even more valuable when requesting state support.

This project complements, and is a natural extension to, Maine's current CAP-funded strategic plan and business plans, both of which are part of the "Fifty States" initiative. The strategic plan clearly shows the needs for fresh orthoimagery and an easy way to access such data, while the business plan (although cadastrally-based) also indicates the importance of orthoimagery. This ROI analysis will provide needed support to implement one of the

costlier programs recommended by these planning processes, that of orthoimagery collection. As the GeoLibrary Board is the central geospatial coordinating body in Maine, this project will directly connect to the geospatial community via the representatives serving on the Board, and the Maine GIS Stakeholders group.

This project nicely integrates also with a 2012 award for business plan implementation (CAP Category 4 G12AC20133). We are currently using the results of the ROI study to support the statewide promotion of our orthoimagery program.

The approach for structuring and organizing the ROI analysis was to follow the FGDC workbook provided during the ROI training. We identified 13 business sectors using orthoimagery in Maine, but due to funding constraints we decided to focus on three that are important and current to Maine: forestry, transportation, and stormwater management.

We first contracted the ROI work to Applied Geographics, a subject matter expert with deep experience in strategic planning and financial analysis of geospatial assets. They conducted all of the interviews and computed the ROI.

There were no major deviations from the original proposal, nor were there significant challenges. Minor challenges included guidance from GITA regarding ROI computation that turned out to be out of date (such as how to compute depreciation).

This project is already yielding dividends and Maine is using the results for further outreach. The attached final report and one-page (well two pages, but printed front and back is 1 piece of paper) summary have already been incorporated into our promotional outreach for the orthoimagery program.

i) CAP Feedback

Maine has received several CAP grants and has found them very helpful in developing processes that support geospatial coordination. The assistance we received was sufficient for this project and has helped to promote our orthoimagery program.