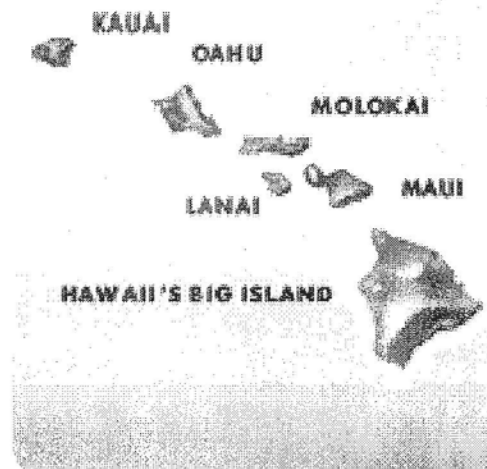


State of Hawaii

Response #2 to NTIA

*Broadband Data and
Development Grant*



December 14, 2009 – Mapping Budget Narrative

In response to the NTIA's request on December 8, 2009 to clarify the relationships of subcontractors and the allocation of resources by task, as well as, to reduce the Mapping budget, the following Work Plan Summary has been prepared. At the request of NTIA, the Mapping Budget has been revised and reduced by \$210,827 from an original amount of \$1,660,767 to a revised amount of **\$1,449,940**. The Applicant successfully negotiated with its Subcontractors to: 1) provide for additional cost sharing, especially for positions providing management oversight; 2) provide a blended rate for services and accommodate less complexity in resourcing of positions; and 3) reallocate certain scope elements to less expensive resources where possible. These measures effectively reduced the Mapping budget by approximately 13%.

A major aspect of the project restructuring was the transfer of a significant proportion of the work to be performed from Broadmap to the University of Hawaii Pacific Disaster Center ("UH/PDC"), which enabled Broadmap to eliminate certain tasks from its scope and certain fixed costs including data licensing. This shift permitted the project to benefit further from the high quality and low cost resources of UH/PDC and also resulted in the added benefit of ensuring that approximately two thirds of the work will occur within the State of Hawaii. Additionally, Broadmap was able to assume responsibility for Quality Control and Quality Assurance, obviating the need for the involvement in the State's mapping project of RHD Consulting. The Applicant also moved key management personnel to the Applicant Cost Sharing portion of the Mapping budget, which alleviated this burden on the Federal Share.

UH/PDC, Broadmap, Akimeka, and Referentia also replaced the use of fixed rates for tasks involved in the project with the use of blended rates (based on time and materials with a cap). Employing a blended rate strategy, the overall number of positions decreased significantly from the original proposal, further reducing costs, although the timeframes for performance were marginally extended. This modest extension in the project length did not alter the plan of deliverables, however, because all of the tasks originally targeted to be completed during the first two years of the project are still designated to be completed in that time period. Personnel Fringe Benefits and Indirect Costs were built into the negotiated blended rates with Subcontractors. In addition, most of the travel budget with the exception of intra-state travel was reallocated to the performance of tasks to ensure the completion of deliverables under the project.

The Applicant does not anticipate additional reductions to the Mapping budget nor does the Applicant believe that the project can be completed successfully for less than the revised amount proposed herein. Project timeframes have been adjusted properly based on revised dependencies, modified workflow and resource availability, and the extension of time required by NTIA to award the grant.



Work Plan Summary		Mapping Budget			
Task Description	Team Assigned	Resource/Role	Federal Cost (2 Years)	Percent Allocation of Total	Timeframe (from Grant Award Date)
1. Grant is awarded to State of Hawaii DCCA.	DCCA	Personnel- Applicant & Principal Investigator	Y1: \$0 Y2: \$0 Sub-T: \$0	0.0%	0 months
2. Computer equipment is purchased, software licenses (materials/supplies) are purchased, and host system environment is installed and configured by Subcontractor ₁ for the project. Applicant's Share of baseline data inclusive of geographic base-layers, imagery, demographic data, and broadband data are loaded onto the system in preparation for data analyses. The system and all data on the system will be secured. Applicant's Share of materials/supplies is \$785,309.	HW/SW: DCCA	Personnel- None	HW/SW: Y1: \$178,780 Y2: \$35,756 Sub-T: \$214,536	HW/SW: 14.8%	2-4 months
	Labor: UH/PDC	Subcontractor ₁ - System Administrator	Labor: Y1: \$63,899 Y2: \$60,579 Sub-T: \$124,478	Labor: 8.6%	
3. Travel budget is established for Subcontractor ₁ to meet with DCCA and Broadband Providers periodically. Nine (9) intra-state day trips are provided for at a round-trip cost of \$250 each.	UH/PDC	Subcontractor ₁ - Technical Project Manager	Y1: \$1,750 Y2: \$500 Sub-T: \$2,250	0.2%	24 months
4. Technical project plan/charter, project strategy, and delivery milestones are properly executed and administered. Project and technical tasks are actively managed through their completion and satisfaction of all deliverables is ensured.	UH/PDC	Subcontractor ₁ - Technical Project Manager	Y1: \$109,516 Y2: \$103,157 Sub-T: \$212,673	14.6%	24 months



Work Plan Summary		Mapping Budget			
Task Description	Team Assigned	Resource/Role	Federal Cost (2 Years)	Percent Allocation of Total	Timeframe (from Grant Award Date)
5. Data is obtained from Providers via confidential data sharing agreements. Raw data is formatted and normalized for use. Secure Extract-Transform-Load (ETL) process is developed and automated to accommodate periodic raw data updates from Providers.	UH/PDC	Subcontract ₁ - Data Processor/ Software Engineer	Y1: \$140,163 Y2: \$0 Sub-T: \$140,163	9.7%	4-6 months
6. Formatted/Normalized data is uploaded into the GIS platform that will be customized for Hawaii-specific data intake, geo-processing, data aggregation and maintenance.	Broadmap	Subcontract ₂ - GIS Analyst(s)	Y1: \$185,680 Y2: \$0 Sub-T: \$185,680	12.8%	4-6 months
7. Relational database is designed and configured to host data elements that meet the technical standards of the NTIA NOFA. The database environment will be integrated with the GIS platform to facilitate population of the NTIA data tables following analyses. All data will be secured within the database.	Broadmap	Subcontract ₂ - Database Administrator	Y1: \$35,795 Y2: \$0 Sub-T: \$35,795	2.5%	4-6 months
8. Normalized data is analyzed within the GIS platform. Spatial analyses resulting in infrastructure overlay findings are combined with the current broadband inventory. Geocoding of the data is performed. Broadband rates and levels of service are aggregated by census block. The pervasiveness and capacity of broadband availability to served, un-served, and under-served areas is combined with demographic data to increase its accuracy. Anchor institutions are documented and analyzed to potentially augment broadband capability.	Broadmap	Subcontract ₂ - GIS Analyst(s)	Y1: \$171,810 Y2: \$0 Sub-T: \$171,810	11.8%	6 months



Work Plan Summary		Mapping Budget			
Task Description	Team Assigned	Resource/Role	Federal Cost (2 Years)	Percent Allocation of Total	Timeframe (from Grant Award Date)
9. NTIA data tables are populated with the resulting information. Data flow processes are fully documented and quality control and quality assurance are performed on the dataset. A Substantially Complete Dataset is transmitted to NTIA for review (date to be determined).	Broadmap	Subcontract ₂ -GIS Analyst(s)	Y1: \$65,044 Y2: \$0 Sub-T: \$65,044	4.5%	6 months
10. Crowd sourcing tools are employed to improve accuracy of the database. Quality control and quality assurance are performed on the dataset. Data accuracy is validated by Providers through customized GIS platform viewer. Baseline data is corrected and updated in both the Provider systems and customized GIS platform (ongoing).	Broadmap	Subcontract ₂ -GIS Analyst(s)	Y1: \$19,635 Y2: \$0 Sub-T: \$19,635	1.4%	9-12 months
11. NTIA data tables are populated with the updated information and a Complete Dataset is transmitted to NTIA for review (date to be determined).	Broadmap	Subcontract ₂ -GIS Analyst(s)	Y1: \$27,876 Y2: \$0 Sub-T: \$27,876	1.9%	12 months
12. An internet-based GIS application is developed, tested and deployed for consumers to use. The application will allow consumers to type-in their address into a web form, and will return a map of broadband availability and related information, aggregated at the census block level.	Akimeka Referentia	Subcontract ₃ -Software Engineer	Y1: \$125,000 Y2: \$125,000 Sub-T: \$250,000	17.2%	15-18 months



Two-Year Mapping Budget Summary (Federal Share):

Direct Costs	Amount	Percent of Total	Notes
Sub-Total Personnel			
None	\$ 0	0%	
Sub-Total Fringe			
None	\$ 0	0%	<i>Built into Subcontractor Blended Rates.</i>
Sub-Total Equipment			
Computer Servers and Storage	\$ 83,780	5.8%	
Sub-Total Materials/Supplies			
Software Licensing	\$ 130,756	9.0%	
Sub-Total Travel			
Intra-State Round Trips	\$ 2,250	0.2%	<i>Nine (9) day trips @ \$250 each.</i>
Sub-Total Subcontracts:			
Subcontract ₁ - UH/PDC	\$ 477,314	32.9%	<i>In-State Resource</i>
Subcontract ₂ - BroadMap	\$ 505,840	34.9%	<i>Out-of-State Resource</i>
Subcontract ₃ - Akimeka/Referentia	\$ 250,000	17.2%	<i>In-State Resource</i>
TOTAL DIRECT COSTS	\$1,449,940	100%	
INDIRECT COSTS	\$ 0	0%	
PROJECT TOTAL	\$1,449,940	100%	

In-State/Out-of-State Ratios:

Grant Amount Applied to In-State	\$ 944,100	65.1%
Grant Amount Applied to Out-of-State	\$ 505,840	34.9%



Two-Year Mapping Budget Labor/Non-Labor Summary (Federal Share):

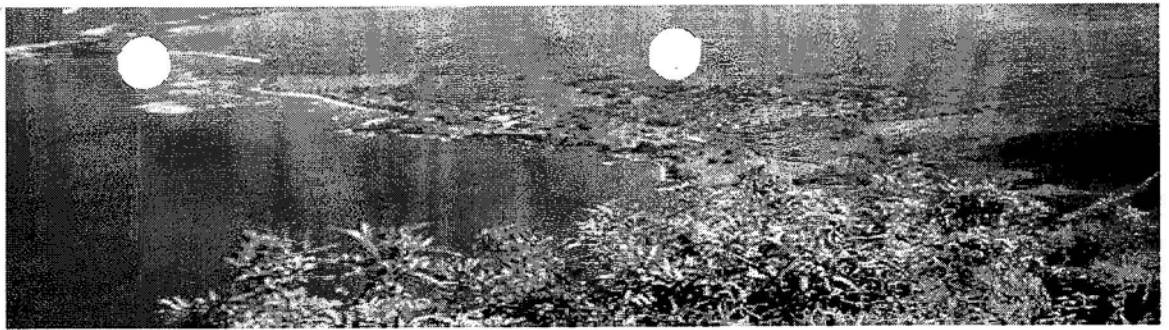
Labor Costs	Amount	Percent of Total	Blended Rate	Per-Year FTE
State of Hawaii DCCA				
Applicant & Principal Investigator	\$ 0	0.0%	\$ 0/hr	0.00 FTE
Subcontract ₁ - UH/PDC				
System Administrator	\$ 124,478	8.6%	\$ 65/hr	0.46 FTE
Technical Project Manager	\$ 212,673	14.6%	\$ 70/hr	0.73 FTE
Data Processor/ Software Engineer	\$ 140,163	9.7%	\$ 60/hr	1.12 FTE (Y1 only)
Subcontract ₂ - BroadMap				
GIS Analyst(s)	\$ 470,045	32.4%	\$ 80/hr	2.82 FTE (Y1 only)
Database Administrator	\$ 35,795	2.5%	\$ 80/hr	0.22 FTE (Y1 only)
Subcontract ₃ - Akimeka/Referentia				
Software Engineer	\$ 250,000	17.2%	\$125/hr	0.48 FTE
TOTAL LABOR	\$1,233,154	85.0% (Labor)		5.83 FTE (Y1) 1.67 FTE (Y2)

Non-Labor Costs	Amount	Percent of Total
Sub-Total Equipment		
Computer Servers and Storage	\$ 83,780	5.8%
Sub-Total Materials/Supplies		
Software Licensing	\$ 130,756	9.0%
Sub-Total Travel		
Intra-State Round Trips	\$ 2,250	0.2%
TOTALNON-LABOR	\$ 216,786	15% (Non-Labor)
INDIRECT COSTS	\$ 0	0%
PROJECT TOTAL	\$1,449,940	100% (Labor/Non-Labor)

In-State/Out-of-State Ratios:

Grant Amount Applied to In-State	\$ 944,100	65.1%
Grant Amount Applied to Out-of-State	\$ 505,840	34.9%

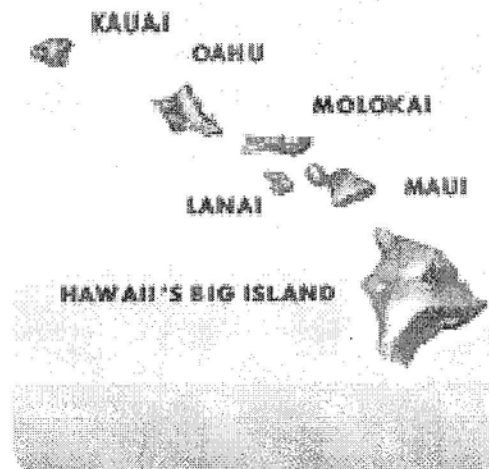




State of Hawaii

Response #2 to NTIA

*Broadband Data and
Development Grant*



December 14, 2009 – Planning Budget Narrative

In response to the NTIA's request on December 8, 2009 to re-scope the Planning element of the project, the following Provisional Work Plan Summary has been prepared. At the request of NTIA, the Applicant will work with the NTIA over the next **60 days** to refine the Planning scope based on the methodology outlined below. The Applicant will utilize the significant progress made and information contained in the Hawaii Broadband Task Force Final Report dated December 2008 (attached herewith) to guide its Planning activities under this project and to complete the project goals of identifying barriers to the adoption of broadband and IT services. The Planning Budget is anticipated to be awarded in an amount not-to-exceed **\$500,000 for five years**.

The State's project will be led by a Planning Committee that will contribute its time and will be charged with identifying barriers to the adoption of broadband and IT services, the creation and facilitation of local technology planning teams, and the establishment of computer ownership and Internet access programs. To this end, the Planning Committee will oversee the development of a 5-Year Master Plan for broadband adoption and advancement as Critical Infrastructure that may be referenced by governmental and grant funding agencies for future Capital Improvement Projects and other policy implications.

In the preparation of this Provisional Work Plan Summary, it has been anticipated that substantial barriers to broadband adoption in Hawaii are high-speed broadband availability and retail price. Specifically, it has been suggested that insufficient infrastructure exists in some areas of the State to support a single-provider broadband service, particularly at speeds and data-rates that are desired by consumers, and inadequate infrastructure exists in much of the State to support multiple-provider high-speed broadband services. It is anticipated that multiple-provider broadband service conditions are necessary to create competition and reduce prices for consumers. This suggestion requires additional research and analysis. Therefore, the Planning Committee will leverage data findings from the broadband Mapping grant and will add granularity to existing recommendations listed in the Hawaii Broadband Task Force Final Report (see attached document for reference).

The Planning Committee will seek to identify, prioritize, and guide the implementation and adoption of broadband as Critical Infrastructure in strategic locations that would allow the State to connect gaps in existing communications infrastructure thereby increasing broadband services for the public, broadband adoption rates, and higher-quality education, communication, disaster management, and emergency response.

Outcomes of this 5-Year Master Plan may include; 1) the implementation of broadband capabilities and capacities as part of the State's Critical Infrastructure program; 2) a roadmap for closing any physical gaps in high-speed broadband infrastructure; and, 3) the implementation of policy at the State and Local levels that supports a minimum broadband technology requirement in all building/community development projects that will enhance computer/internet access, disaster management capabilities and emergency services/communications with the public.



The anticipated outcome may also include the promotion and creation of streamlined processes and the potential for a state-level uniform regulatory body that facilitates the permit application process for broadband providers so that they may implement broadband infrastructure in alignment with the 5-Year Master Plan. The privately-funded marketing and sales efforts of these ventures, combined with additional public education initiatives identified by the Planning Committee, should substantially increase broadband adoption in the State and serve the public demand for high-speed services at a low cost.

The Planning Committee will likely be comprised of public/private agency membership from the following sectors in Hawaii: Policy, Technology Implementation, Communications, Research, Education, Emergency Services, Disaster Management, and Public Outreach. The Planning Committee will meet regularly to review information provided and will offer expert guidance and recommendations on fulfilling the scope of the 5-Year Master Plan. The Hawaii Broadband Task Force has drawn certain conclusions related to broadband availability and adoption in the State. It is the aim of the Planning Committee to fine tune and then address these conclusions.

Provisional Work Plan Summary		Planning Budget			
Task Description	Team Assigned	Resource/Role	Federal Cost (5 Years)	Percent Allocation of Total	Timeframe (from Grant Award Date)
1. Grant is awarded conditionally to State of Hawaii DCCA. DCCA works with NTIA to finalize detailed scope and allocate resources to the proposed budget.	DCCA	Category TBD- Applicant & Principal Investigator	Y1: \$TBD Y2: \$TBD Y3: \$TBD Y4: \$TBD Y5: Sub-T: \$500,000	TBD%	TBD months



Provisional Work Plan Summary		Planning Budget			
Task Description	Team Assigned	Resource/Role	Federal Cost (5 Years)	Percent Allocation of Total	Timeframe (from Grant Award Date)
<p>2. Create a Planning Committee with the input and approval of NTIA. The Planning Committee may be comprised of public/private agency membership from the following sectors in Hawaii: Policy, Technology Implementation, Communications, Research, Education, Emergency Services, Disaster Management, and Public Outreach. The Planning Committee will be charged with identifying barriers to the adoption of broadband and IT services in the State, and creating a 5-Year Master Plan for broadband adoption and development as Critical Infrastructure that may be referenced by governmental and grant funding agencies for future Capital Improvement Projects.</p> <p>The Planning Committee will leverage data findings from the broadband Mapping grant and will add granularity to existing recommendations listed in the Hawaii Broadband Task Force Final Report (see attached document for reference).</p> <p>Further, the Planning Committee will seek to identify, prioritize, and guide the implementation and adoption of broadband as Critical Infrastructure in strategic locations that would allow the State to connect gaps in existing communications infrastructure thereby increasing broadband services for the public, broadband adoption rates, and higher-quality education, communication, disaster management, and emergency response.</p>	DCCA				



Provisional Work Plan Summary		Planning Budget			
Task Description	Team Assigned	Resource/Role	Federal Cost (5 Years)	Percent Allocation of Total	Timeframe (from Grant Award Date)
3. Perform a detailed Gap Analysis of the data findings from the broadband Mapping grant. Utilize benchmarks already established in the Hawaii Broadband Task Force Final Report (see attached document for reference). Create a roadmap for closing the gaps as a prerequisite to drafting the 5-Year Master Plan.	UH/PDC				
4. Working with State and Local planning agencies, review State and Local General Plans and Community Plans to determine capacity and growth rates for broadband service. Use information and knowledge gathered as component of the 5-Year Master Plan.	RHD				
5. Working with Department of Business, Economic Development and Tourism (DBEDT) review State and Local economic indicators and forecasts and overlay with demographic and broadband data. Use information and knowledge gathered as component of the 5-Year Master Plan.	UH/PDC				
6. Working with DCCA's Business Registrations Division (BREG) geocode all relevant business data and overlay with demographic and broadband data. Identify potential anchor institutions and any gaps in critical infrastructure. Use information and knowledge gathered as component of the 5-Year Master Plan.	UH/PDC				



Provisional Work Plan Summary		Planning Budget			
Task Description	Team Assigned	Resource/Role	Federal Cost (5 Years)	Percent Allocation of Total	Timeframe (from Grant Award Date)
7. Working with Hawaii State Civil Defense (HSCD) and County Civil Defense (CCD), review State and Local Disaster Plans and overlay Critical Infrastructure with demographic and broadband data. Identify potential anchor institutions and any gaps in critical infrastructure. Use information and knowledge gathered as component of the 5-Year Master Plan.	UH/PDC				
8. Working with State and Local Emergency Services, review State and Local emergency communication asset locations and build a framework for a communications network supported by broadband as a secondary or primary system. Use information and knowledge gathered as component of the 5-Year Master Plan.	UH/PDC				
9. Working with State and Local Information Technology (IT) and Communications departments, review State and Local IT and communication asset locations and build a framework for a metropolitan communications network supported by broadband as a secondary or primary system. Use information and knowledge gathered as component of the 5-Year Master Plan.	UH/PDC				
10. Review existing State and Local Capital Improvement Project plans to identify timing and opportunities for co-location of new fiber facilities and critical broadband infrastructure. Use information and knowledge gathered as component of the 5-Year Master Plan.	RHD				



Provisional Work Plan Summary		Planning Budget			
Task Description	Team Assigned	Resource/Role	Federal Cost (5 Years)	Percent Allocation of Total	Timeframe (from Grant Award Date)
11. Draft the 5-Year Master Plan for Planning Committee Review complete with results of information gathering, gap and other analyses, identification of key broadband development locations, and prioritization for implementing broadband in these locations.	RHD PDC/UH				
12. Provide additional strategy and recommendations for State and Local agencies to implement broadband as Critical Infrastructure including, but not limited to: <ul style="list-style-type: none"> a. A bill/ordinance requiring developers to file a broadband plan for newly planned communities and other planned developments including high-rises and hotels for disaster management and emergency response purposes (this may also lower insurance rates). b. A bill/ordinance requiring registered community associations to file a broadband plan for disaster management and emergency response purposes (this may lower insurance rates). c. A bill/ordinance requiring high-rise and hotels to install bi-directional amplifiers (allowing greater penetration of digital signal) for disaster management and emergency response purposes (this may also lower insurance rates). 	DCCA				
13. Finalize the 5-Year Master Plan after Planning Committee Review and comment. Keep the plan up-to-date.	RHD PDC/UH				



Five-Year Planning Budget Summary (Federal Share):

Direct Costs	Amount	Percent of Total	Notes
Sub-Total Personnel			
TBD	\$ TBD	TBD%	
Sub-Total Fringe			
TBD	\$ TBD	TBD%	<i>Built into Subcontractor Blended Rates.</i>
Sub-Total Equipment			
TBD	\$ TBD	TBD%	
Sub-Total Materials/Supplies			
TBD	\$ TBD	TBD%	
Sub-Total Travel			
Intra-State Round Trips	\$ TBD	TBD%	<i>Anticipate no less than twenty (20) day trips @ \$250 each.</i>
Sub-Total Subcontracts:			
Subcontract ₁ - UH/PDC	\$ TBD	TBD%	
Subcontract ₂ - RHD Consulting	\$ TBD	TBD%	
TOTAL DIRECT COSTS	\$ 500,000	100%	
INDIRECT COSTS	\$ TBD	TBD%	
PROJECT TOTAL	\$ 500,000	100%	



BUDGET AND NARRATIVE – Broadband MAPPING

Years 1 and 2

BUDGET INFORMATION

1. *In-Kind Match – For all in-kind line items, please provide additional detail:*
 - a. *A more detailed description and breakdown of the data/personnel/software*
 - **Personnel \$101,250 match** – This represents an approximately .48 FTE (average over years 1 and 2) level of support by officials within DCCA and other State agencies to provide oversight and serve as the main interface to the broadband service providers in the State for collecting the data and negotiating the terms of access, as necessary.
 - **Other – Software, Maps, Imagery, Business and 3D Data - \$785,309 match** - Each Team member as well as the state GIS agency provided a list of tangible data sets, imagery, and computer hardware and software that will be donated to the Program. Software, Data set values, and other costs were estimated based on the current market value and written representation by providers. Details are listed in the table below:

Software, Maps, Imagery, Business and 3D Data	Description	Cost
NAVTEQ	Complete Digital Mapping for the State of Hawaii	\$39,000
Digital Globe	Satellite I+B4imagery Server by State, Unlimited Use	\$25,000
InfoUSA	Anchor Institution, Business and Household POIs	\$23,000
Google	3D Building Data, Imagery	\$32,000
State Provided Data		
LIDAR	Lanai, Oahu North Shore Kahuku area, Oahu North Shore Mokuleia area, Oahu Honolulu Harbor, Big Island Waimea area, Big Island Kilauea Crater area, Big Island Kona area, Maui Kihei area	\$165,074
DOQQ's	DigitalGlobe DOQQ's, First Delivery of DOQQ's, DOQQ's for Kauai, Second Delivery of DOQQ's	\$68,200
IKONOS	IKONOS Consortium	\$262,000
Re-cast USGS quads from Old Hawaiian Datum to NAD 83	State Share of Co-op Agreement	\$23,485
Broadband Data:		
ComSearch	Spectrum Holdings, Teleco, Microwave and Antenna Db, License Information, Classification of Spectrum ...	\$50,000
Media Prints	Geographic Boundary for All Cable Systems in the U.S.	\$20,000
Crowd-Src Platform and Data	Application for Importing User Generated Data	\$20,000
Software & Platform:		
	GIS Development Platform	\$18,600
	GIS Server Platform to Serve Maps to Web.	\$20,000



Software, Maps, Imagery, Business and 3D Data	Description	Cost
	GIS Tools for Demographic Analysis	\$14,000
	PC GIS Viewer to Deliver to the State.	\$5,000
Total Product In-Kind		\$785,309

- **Other – Foundation Support –\$300,000 match** – Google in-kind support based on written representation.

b. *How the data/personnel/software will be used on this project*

The data and personnel and software are integral to all phases of the project. Much of the core data sets will be used to establish a geo-referenced base map that will contain census data, population data, address data, anchor institutions, broadband infrastructure, business and economic data. The software is used to process the information received and to geo-code or geo-reference the information on the basemap. The software is also used to perform spatial analysis and to visualize the data layers on a map.

c. *A more detailed explanation of how the in-kind value was calculated*

See 1.a above

2. *BB Planning and Mapping Budgets and Narratives:*

*Please provide additional detail to the budget spreadsheets and narratives such that the information below is completed for the first two years of your proposed budget. Please retain a separate budget narrative and spreadsheet for mapping and planning. **A sample spreadsheet is attached to this email.** We have attached a spreadsheet that you may use as a guide to delineate this information in a spreadsheet format. If your budget already provides the information needed for the tabs “Detailed Mapping Budget,” “Detailed Planning Budget,” “Contracts Budget,” please still complete the “Overview” tab.*

The key points for a budget are that (a) Federal and non-Federal funds are separated, (b) Planning and Mapping budgets are distinct, (c) All line items are broken out by year, and (d) Sufficient granularity of each line item... such as demonstrated in the attached template where personnel costs are distinct and broken down by individual, etc. Additionally, your budget narrative should provide narrative detail (such as description of position or calculation of travel costs), while your revised spreadsheet should include detail for all budget areas. More description of narrative requirements follows.



Narrative Information:

Personnel Salaries: For each position allocated to the projects, provide a description of the position responsibilities, annual salary, and percentage of time dedicated to this project for Year 1 and Year 2. Please ensure that costs are clear for both Years 1 and 2, as opposed to both years cumulatively. Be sure to clearly indicate if a portion of time is paid through an in-kind match (i.e. clear federal vs. match distinction). If a contractor is providing personnel support this should be listed in the subcontracts section, not in this section.

Existing personnel will provide main or baseline levels of effort for all skill set categories and contractual support will be utilized in cases where project requirements exceed the available resources. This arrangement will provide a flexible solution to meet “peak” demand for the deliverables and milestones. Although labor categories are described below with estimated requirements, the final level and type of contractual support will depend on the actual availability of existing personnel at the time of project execution.

Position Title	Year 1-2 Allocation (FTE)	Estimated Annual Salary	Position Responsibilities
Principal Investigator	0.48		Primary point of contact for Applicant. Functions as the main interface with service providers and coordinates requests for data and overall project administration.
Sub-Principal Investigator	0.08		Will direct the implementation team is and responsible for the overall administration of the sub-awardees.
Project Manager	0.34		Will focus on assisting with managing the day-to-day details of the technical execution and is also specifically tasked with ensuring high quality standards are met.
Broadband Subject Matter Expert	0.20		Will be the technical expert that will provide advice on the broadband coverage data and oversee the interpretation of data from the providers.
Geographical Information System Data Subject Matter Expert	0.26		Will be the technical expert that will provide advice on the design of and oversee the implementation of GIS project applications.
Information Technology Subject Matter Expert	0.14		Will be the technical expert that will provide advice on the appropriate technology that will be used in the performance of this project.



Position Title	Year 1-2 Allocation (FTE)	Estimated Annual Salary	Position Responsibilities
Information System Subject Matter Expert	0.25		Will be the technical expert that will provide advice on the design of and oversee the implementation of project related information systems required in the performance of this project.
Quality Assurance / Information Assurance	0.11		Will be the lead in ensuring that the highest quality of deliverables is achieved and that information is sustainable, well-interpreted and accurate.
Geographical Information System Engineer	0.47		Will be the lead implementer of the project's GIS applications.
Software Engineer	0.47		Will be the lead implementer of non-GIS project applications and processes.
System Administrator	0.38		Will manage and administer use of systems and project information services.
Database Administrator	0.17		Will manage and coordinate project database services.
Test Engineer	0.27		Will be developing and implementing protocols for testing project data, processes, and applications.
Geographical Information System Analyst	0.37		Will provide GIS analysis and help in identifying areas that may require additional attention.
Data Processor	1.67		Will be developing and implementing required data intake and interpolation applications.
Programmer	0.62		Will be developing and implementing required automated applications and processes.

Personnel Fringe Benefits: For each position allocated to the projects, provide the cost for fringe benefits, if available. As above, benefits for contractor support should be clearly delineated in the project section.

The fringe benefits rate is 30%. Fringe benefits include healthcare, social security, workers compensation, vacation, and retirement. The fringe benefits cost is **\$63,802** for years 1 and 2.



Travel: Provide additional information such that the basis for all figures is clear. For example, if assuming airplane travel, provide an estimated cost for each roundtrip ticket and how many trips are expected. For mileage, provide an estimate of how many miles are expected and how many trips, etc. Be sure to distinguish between federal funds and any matching funds. Please provide additional information about partner meetings.

Intra-State

Monthly partner meetings are planned during the 1st quarter after project initiation. Trips from Maui to Oahu will be taken on a quarterly basis for the 2nd through 4th quarters and once every 2 quarters for the balance of the project. Estimated number of trips for partner meetings: 9 trips @ \$250 per tip = \$2,250.

Item	QTY	Price	Total
Air	9	\$200	\$1,800
Car	9	\$50	\$450
Intra-State Total		\$250	\$2,250

Domestic

Monthly partner meetings are planned during the 1st quarter after project initiation. Trips from Washington D.C. to Oahu will be taken on a quarterly basis for the 2nd through 4th quarters and once every 2 quarters for the balance of the project. Estimated number of trips for partner meetings: 9 trips @ \$3,000 per tip = \$27,000.

Item	QTY	Price	Total
Air	9	\$1,052	\$9,468
Car	9	\$250	\$2,250
Per diem	9	\$1,698	\$15,282
Domestic Total		\$3,000	\$27,000

The total combined cost for travel is **\$29,250** for years 1 and 2.

Equipment: For hardware costs, provide a detailed description of all equipment to be purchased, when it will be purchased in the first two years, and the basis for the figures used. Be sure to distinguish between federal funds and any matching funds. Also please explain how you estimated the hardware requirements for this project, and who the owner of the hardware will be.



Hardware

Servers: 2 application, 1 web and 1 database servers will be required for project implementation. Cost of 3 servers, storage, and ancillary equipment is **\$83,780**.

Estimated costs were derived from preliminary vendor quotations and detailed below. The purchase of equipment is projected to occur within the 1st year with the anticipated owner to be the University of Hawaii.

Equipment	Description	Qty	Price	Total
Database Server		1	\$28,000	\$28,000
	8 Core / 64 Threads @1.4 GHz			
	32GB RAM (4x4GB), 2 x 146GB SAS HD, DVD		incl	
	4 x 1 GbE / 100 / 10 Mb		incl	
Accessories	SG-XPCIE1FC-EM4 FC-AL HBA	2	\$1,000	\$2,000
	SESX3G11Z 300GB SAS 10K Hard Drive	4	\$625	\$2,500
	9733A-Z Optical Cables	4	\$45	\$180
Storage		1	\$16,850	\$16,850
	3.6 Terabytes 12 x 300GB 15K SAS	12	incl	
	512 MB Cache FC-AL controller	2	incl	
	Power Supply	2	incl	
		2	\$15,000	\$30,000
	4 Core / 32 Threads @1.2Ghz			
	16GB RAM (4x4GB), 2 x 146GB SAS HD, DVD		incl	
	4 x 1 GbE / 100 / 10 Mb		incl	
Web Server		1	\$3,200	\$3,200
	Quad Core AMD Opteron 3.0Ghz	2	incl	
	8GB RAM (4x2GB)		incl	
	500 GB SATA Drive	2	\$300	\$600
Shipping for Above				\$450
Hardware total				\$83,780

Materials/Supplies:

- For software costs, provide a detailed description of all equipment to be purchased, when they will be purchased in the first two years, and the basis for the figures used. Be sure to distinguish between federal funds and any matching funds.
- For all supplies expected to be purchased, please provide the information such that the basis for figures is clear. Be sure to distinguish between federal funds and any matching funds.



Software

Applicable database and server software is projected to cost **\$95,000**. Estimated costs were derived from preliminary vendor quotations and detailed below. The purchase of equipment is projected to occur within the 1st year with the anticipated owner to be the University of Hawaii.

Software	Description	Qty	Price	Total
RDBMS		2	\$40,000	\$80,000
Map Server		1	\$15,000	\$15,000
Software total				\$95,000

Subcontracts: For any significant subcontract, please provide the cost allocation in a format similar to the one listed directly above. Your current contractor budget only allocates personnel hours. If the contractor will be purchasing any equipment, performing any travel, etc. that should be clearly delineated.

The total amount of subcontracts for years 1 and 2 is **\$871,137**. The final allocation and type of contractual support will depend on the actual availability of existing personnel at the time of project execution. It is not anticipated that subcontractors will purchase equipment or have travel expenses outside of what has been listed in the above sections. The areas of responsibility on the project for each partner are summarized below.

BroadMap and their national coalition (including One Economy and New America Foundation) will provide broadband specific domain expertise. BroadMap has vast expertise in broadband mapping and data modeling, data collection and verification, data updates, and broadband planning. Additionally, the coalition offers end-to-end expertise in broadband planning at a large scale. The coalition has also access to a variety of national, interstate, and intrastate broadband data that are important to the Program.

RHD Consulting LLC provided consultancy to the State’s Broadband Task Force. The firm will act as a State broadband subject matter expert and advisor to the project.

Akimeka, a Native Hawaiian and Service Disabled Veteran Owned Small Business with expertise in enterprise architecture of large systems, will provide system architecture and information assurance services.



Referentia Systems Inc., a Native Hawaiian-Owned Small (8A) technology firm with expertise in network engineering and system architecture will provide data guards and security solutions as required to control access to sensitive data. Referentia is a premier provider of data-guard solutions to the U.S. Department of Defense (DoD) for securing access to highly sensitive data.

Other: For training purposes not related to travel, please describe in detail and provide a calculation of the cost. For other activities or existing data sets, provide the value and calculation of such value. Be sure to distinguish between federal funds and any matching funds.

This item is not applicable as no other expenses will be incurred.

Indirect Cost: (Administrative Overhead) Please provide a clear description of the costs attributed to administrative overhead.

Indirect costs are calculated at a federally negotiated rate of 20.6% of Modified Total Direct Costs (MTDC). MTDC consists of all salaries and wages, fringe benefits, materials and supplies, services, travel, and the first \$25,000 of each sub-grant or subcontract. The total indirect costs for years 1 and 2 is **\$269,369**.



BUDGET AND NARRATIVE – Broadband PLANNING

Years 1 and 2

BUDGET INFORMATION

1. *In-Kind Match – For all in-kind line items, please provide additional detail:*
 - a. *A more detailed description and breakdown of the data/personnel/software*
 - b. *How the data/personnel/software will be used on this project*
 - c. *A more detailed explanation of how the in-kind value was calculated*

2. *BB Planning and Mapping Budgets and Narratives:*

*Please provide additional detail to the budget spreadsheets and narratives such that the information below is completed for the first two years of your proposed budget. Please retain a separate budget narrative and spreadsheet for mapping and planning. **A sample spreadsheet is attached to this email.** We have attached a spreadsheet that you may use as a guide to delineate this information in a spreadsheet format. If your budget already provides the information needed for the tabs “Detailed Mapping Budget,” “Detailed Planning Budget,” “Contracts Budget,” please still complete the “Overview” tab.*

The key points for a budget are that (a) Federal and non-Federal funds are separated, (b) Planning and Mapping budgets are distinct, (c) All line items are broken out by year, and (d) Sufficient granularity of each line item... such as demonstrated in the attached template where personnel costs are distinct and broken down by individual, etc. Additionally, your budget narrative should provide narrative detail (such as description of position or calculation of travel costs), while your revised spreadsheet should include detail for all budget areas. More description of narrative requirements follows.

Narrative Information: Personnel Salaries: For each position allocated to the projects, provide a description of the position responsibilities, annual salary, and percentage of time dedicated to this project for Year 1 and Year 2. Please ensure that costs are clear for both Years 1 and 2, as opposed to both years cumulatively. Be sure to clearly indicate if a portion of time is paid through an in-kind match (i.e. clear federal vs. match distinction). If a contractor is providing personnel support this should be listed in the subcontracts section, not in this section.

There are four positions that will be funded by the planning grant. The first is a Senior Project Manager who will be paid \$60,000 from a half of full time employment (.5FTE) of \$120,000. The second is a Regional Staff person; a Hawaii resident who will lead the community outreach and who will be paid \$45,000 as .75FTE of \$60,000. The third will be a Digital Connector Director who will direct the training of the trainers and oversee all Digital Connector activities who will be paid \$20,000 at .5FTE of \$40,000. The fourth and final position is the Digital Connector Trainer. There will be 5 Trainers who will be paid \$750 per week per instructor for eight weeks, which comes to a total of \$30,000. We have built in a \$9,061 contingency (5.8%). These four positions plus contingency costs total **\$164,061**.



Personnel Fringe Benefits: For each position allocated to the projects, provide the cost for fringe benefits, if available. As above, benefits for contractor support should be clearly delineated in the project section.

Personnel Fringe Benefits make up the next area of costs. The contingency has been blended into a fixed percentage of **20%**. This comes to a total of **\$32,813**.

Travel: Provide additional information such that the basis for all figures is clear. For example, if assuming airplane travel, provide an estimated cost for each roundtrip ticket and how many trips are expected. For mileage, provide an estimate of how many miles are expected and how many trips, etc. Be sure to distinguish between federal funds and any matching funds. Please provide additional information about partner meetings.

Travel is a necessary component for the Regional Staffer who will be traveling from a home base of Portland, OR to town meetings around the state. This is estimated to cost \$1,000 per month for eight months for a total of **\$8,000**.

Equipment: For hardware costs, provide a detailed description of all equipment to be purchased, when it will be purchased in the first two years, and the basis for the figures used. Be sure to distinguish between federal funds and any matching funds. Also please explain how you estimated the hardware requirements for this project, and who the owner of the hardware will be.

There are no equipment costs.

Materials/Supplies:

- *For software costs, provide a detailed description of all equipment to be purchased, when they will be purchased in the first two years, and the basis for the figures used. Be sure to distinguish between federal funds and any matching funds.*
- *For all supplies expected to be purchased, please provide the information such that the basis for figures is clear. Be sure to distinguish between federal funds and any matching funds.*

The materials/supplies costs are concentrated around the devices and software that the Digital Connectors will be using. These purchases individually are below the cost threshold that would normally qualify as equipment. We will be purchasing an iPod Touch for each Digital Connector at \$220 each, plus \$30 for software and installation is \$250 per Connector; multiplied by 200 Connectors is \$50,000. These materials and supplies will be purchased in years 1 and 2.

There are some miscellaneous costs as well. Approximately \$10,000 will be spent on apparel and book bags for the Digital Connectors as a uniform for them while they are on the ground collecting data. These materials and supplies will be purchased in years 1 and 2.

The total cost for materials/supplies is **\$60,000**.



Subcontracts: For any significant subcontract, please provide the cost allocation in a format similar to the one listed directly above. Your current contractor budget only allocates personnel hours. If the contractor will be purchasing any equipment, performing any travel, etc. that should be clearly delineated.

There are two allotments for Sub-contractual work. The first is \$32,500 for the time for a Senior Data Analyst. The second is \$7,500 for a Report Writer who will work with the entire project team to complete the planning report. The combined costs for these two positions total **\$40,000**.

Other: For training purposes not related to travel, please describe in detail and provide a calculation of the cost. For other activities or existing data sets, provide the value and calculation of such value. Be sure to distinguish between federal funds and any matching funds.

The curriculum for Digital Connector training costs \$50 per Digital Connector for a total of \$10,000. The training itself will cost \$103,000 in total for three regional camps that will train a total of 200 Digital Connectors. This should cover the training costs and any remaining costs will be the responsibility of the Digital Connector. These costs come to a total of **\$113,000**.

Indirect Cost: (Administrative Overhead) Please provide a clear description of the costs attributed to administrative overhead.

The above constitute the entirety of the direct costs, which come to a total of **\$417,874**. One Economy's indirect rate is **19%**, which comes to **\$79,396**. This is the calculation of the overhead costs associated with this project, which includes the time of One Economy's senior management team, rent, financial reporting and administrative costs, basic office supplies, and general work expenses. Adding the Direct and Indirect costs together comes to a total of **\$497,270**.



Data Gathering:

1. Please clarify whether you are planning to request data at the address or census block/street segment level from providers. If you are requesting data at the address level...
 - a. Do you have reason to believe providers will deliver address-level data? (if so, please explain why)
 - b. What are your anticipated action(s) if providers are unwilling to provide data at the address level?
2. Please clarify whether you are planning to request last-mile connection point data. If you are requesting last-mile connection point data...
 - a. Do you have reason to believe providers will deliver last-mile connection point data? (if so, please explain why)
 - b. What are your anticipated action(s) if providers are unwilling to provide last-mile connection point data?
3. Please explain how you plan to incorporate Residential Broadband Service Pricing data into this task (the application implies this is required by NTIA). Do you have reason to believe that providers will be delivering this data upon request?
4. Please provide more information about your potential plans to automate data collection with providers. Is it your expectation that most providers will have data in a format that makes an ETL process feasible? (if so, please provide basis for this expectation.) What are the specific costs in the first two years associated with developing the ETL scripts (distinct from other aspects of data collection)?
5. Please provide more detail about how you will integrate data that arrives via fax.

Accuracy and Verification:

1. Please define more clearly what you mean by 'sample representative' data... how big of a sample? What criteria are employed to determine that the sample data is representative?
2. Please provide more information about the plan to provide "spot checks".
3. Who is the "conference center partner" and who are the "data partners" mentioned in the verification section? Please provide additional information about these partners and their role in this project.
4. Has the web-based data access tool (provider verification) already been created? If not, will its development costs be shared across all of the One Economy contractor projects? Is this tool at all integrated with the public Broadband Atlas web application, or being developed independently?
5. You describe identifying discrepancies via algorithms such as comparing aggregated data to inter-connect network capacities. Please provide more information about how you will determine the inter-connect network capacities. If based upon infrastructure data, how will you be verifying the infrastructure data?
6. Why are you planning to specifically survey the areas with anomalies in order to establish a statewide baseline? Wouldn't the non-anomalous areas be better suited to establishing a baseline (against which to compare the anomalous areas)?

Accessibility:

1. Will PDC host the map on their servers, or will the software/dataset be ported over to a new system?
2. How will the public be made aware of the availability of this broadband map?
3. What is the timeline for the map being publicly available? Is this encompassed by the "Launch of All Broadband Provider Data" item (March 1, 2010), or does that refer only to the underlying datasets themselves being complete?

Security and Confidentiality:

1. Please provide more information about the specific data security protocols in place and whether the partner who maintains the data currently secures any data with security implications. For any partner who will have confidential/secure data reside on their own systems, what are the cyber security protocols in place, and are these same standards/methodologies consistent across all partners? Is the project team working with the Hawaii Department of Homeland Security on this project?

Applicant Capacity, Knowledge, and Experience:

1. As described in the NOFA, please provide a description of the knowledge and experience of the applicant and associated project personnel. If you have not yet hired for certain positions please provide a description of the qualifications and expected work activities for these positions, and note whether these are new hires.
2. Please provide specific examples of past mapping projects completed by the contractors.
3. Please ensure that you clearly delineate the specific responsibilities for each partner mentioned in the project (both public and private).

Expedient Data Delivery:

1. Please explain the purpose, use and estimated cost of integrating Form 477 data into the initial set of data.
2. Please provide substantially greater detail in your timeline. For example, what is the expected timeline for provider outreach? When will on-the-ground verification and sampling activities take place? What is the expectation in regard to the development of NDAs?
3. What is meant by "Broadband Data Sampling interface will be launched to allow Carriers data sampling"
4. How will the Applicant encourage consumers and other stakeholders to take speed tests? What specific information will be captured in each test?
5. In the description of the Complete Set of Data (March 1), what is meant by "Full automation of Wireless Spectrum and Serviceability Data"?
6. Please provide more detail on the "crowd sourcing ingestion tool"

Process for Repeated Data Updating:

1. Please explain how your method will account for construction of new middle-mile and last mile infrastructure and access to new areas?
2. Please clarify whether your primary sources of data for repeated data updating are FCC 477 data and crowdsourcing?

Planning and Collaboration:

Collaboration

1. Have all of the potential partners already been contacted and engaged in the project, or is this process ongoing?
2. Please provide a summary of outreach to Indian Tribes regarding this project.

Planning:

1. The application describes several areas of emphasis for the planning program, (listed as items a through g). For each of these item, please provide a more detailed breakdown and description of the specific activities that you will engage in (and corresponding budget). Please make clear all of the following areas for each:
 - The BDIA-related purpose as listed in footnote 6 of the NOFA
 - The problem(s) to be addressed
 - The proposed solution
 - The anticipated outcomes of the project
 - The cost of this activity broken down by year, and who specifically will be performing the work (staff, hours, etc.)

Budget Information

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 - b. How the data/personnel/software will be used on this project
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Other: For training purposes not related to travel, please describe in detail and provide a calculation of the cost. For other activities or existing data sets, provide the value and calculation of such value. Be sure to distinguish between federal funds and any matching funds.

Indirect Cost: (Administrative Overhead) Please provide a clear description of the costs attributed to administrative overhead.

NOTE: Any requested pre-award costs should be allocated to the respective categories above. Be sure to indicate whether something is a pre-award cost.