



Appropriate Infrastructure

Development Group

(AIDG)

Business Plan

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1. Executive Summary

Consider an organization that could take a novel design for providing energy or clean water from an engineering lab in the United States to a rural village in a developing country, field-test it in two weeks, and in six months have it produced, marketed, and sold to rural villages across multiple countries on multiple continents. Consider an organization that could incubate a micro-enterprise/manufacturing facility that provides affordable and environmentally responsible options for clean water, sanitation, and energy to people living on less than two dollars a day. Year after year this organization could continue adding new countries and new populations to its network in a way that would not require major grant funding. Consider an organization that could provide community assistance to schools and orphanages in developing countries, and give volunteers in the developed world hands-on opportunities to assist in these projects. Consider an organization that could have 60 experienced engineers collaborating with people from top research institutions in the developed world, working to solve problems for the rural poor, all at the salary cost of four US-based engineers.

The organization you are considering is currently in development. This organization is the Appropriate Infrastructure Development Group (AIDG) and its affiliated network of micro-manufacturing workshops. The AIDG uses a novel combination of business incubation, education, and outreach services to promote the spread of affordable and environmentally sound infrastructure solutions in rural communities throughout the developing world.

Technologies such as clean stoves powered by sugar cane waste, electricity generated from pig manure, water purified by the sun, and pumps powered without gas or electricity are not the abstract hopes of some distant research and development facility. They are open-source technologies that currently exist, without licensing, and can be manufactured at very low cost to serve regional populations. With the right providers, the basic amenities of a first world standard of living, such as water, sanitation, and electricity, are available to the rural poor. These amenities help people lift themselves out of poverty. They save time and money, they prevent debilitating diseases, and they create opportunities for enterprise and commerce. Without the right service providers and manufacturing facilities, however, these technologies never make it out of research labs and into communities. This is where the AIDG finds its niche.

2. Company Description

The Appropriate Infrastructure Development Group (AIDG) is a Massachusetts-based non-profit organization founded in 2004 that received 501(c)3 status in January of 2005. The AIDG was established with the aim of increasing the use of appropriate technologies in developing countries through business incubation, education, and community outreach. The AIDG is based in Weston, MA, and is co-located with Xelateco, its first incubated business in Quetzaltenango, in the Western Highlands of Guatemala.

Mission

The AIDG provides access to environmentally friendly infrastructure in impoverished communities in developing countries through a combination of business incubation, education, and direct outreach. The AIDG's focus is the promotion of affordable and environmentally sound technologies to address gaps in basic services and infrastructure in rural areas of developing countries. We incubate businesses that provide renewable energy, water, and sanitation technologies to underserved communities, development agencies, and private individuals. The AIDG offers developing world design experience for university students interested in appropriate technology while providing hands-on assistance to rural communities in need.

Target Population

The AIDG aims to increase the use of environmentally sound infrastructure improvements among rural agriculturalists who are currently unserved or underserved by large-grid water, electrical, and sanitation infrastructure. The AIDG is aimed towards providing products and services affordable to populations living on under 2 dollars a day.

Programs

The AIDG has three primary programs: business incubation, education, and community outreach.

- **Business Incubation.** AIDG's Business Incubation Program locates engineering talent in developing countries and helps them to form businesses that provide village and home scale

renewable energy and sanitation technologies to underserved communities, development agencies, and private individuals. We provide seed capital, in the form of a recoverable grant, as well as comprehensive technical and logistical support over a two-year incubation period. After this incubation period, interest-free repayments of the recoverable grant are paid back over 15 years and used to start new businesses in other geographic areas and regions. Our objective is to use this self-sustaining replication model to create a global network of micro-manufacturing facilities, known as workshops.

The staff from previously incubated businesses will train employees at the new workshops to ensure that learning is propagated throughout the network. Workshops are set up as design-build facilities with a diverse product repertoire, capable of adapting to fluctuations in demand and the needs of the local market (see Appendix A). Investing in manufacturing facilities ensures that the long-term knowledge and productive resources required to fabricate, install, repair, and innovate much-needed infrastructure technologies are disseminated to the communities and individuals that need them the most. Each workshop facility serves as a focal point for the AIDG's community outreach and education programs in the region.

- Education. The AIDG Education Program provides internship opportunities for qualified professionals, undergraduate, and graduate students. This program fosters information exchange between university students and faculty and workers at our incubated businesses. Any new product innovations that are developed in concert with the internship program are disseminated to all of the workshops. Through the Project Placement Program, students with novel designs are invited to manufacture and test the designs in one of our incubated or post-incubation facilities. Designs are matched with interested communities for ongoing testing, and long-term performance information is relayed back to the student via the Internet.
- Outreach. Through the AIDG Outreach Program, workshop employees and volunteers perform infrastructure improvements for rural community organizations, such as schools, hospitals, and community centers. Such projects, while providing needed services, demonstrate the utility of the workshop's products and increase acceptance among the greater population. They help the workshop employees understand the needs of the target populations they are trying to serve. By contracting the workshop to do an outreach project, the AIDG provides a supplemental income stream to the workshop during its incubation period.
- AIDG outreach projects are the basis for our TecoTours service-learning program. Through our TecoTours program, groups of volunteers interested in working in developing countries provide a tax-deductible gift to gain hands-on experience working on outreach projects. This program is an

opportunity to develop a constant stream of financial support independent of foundation or grant revenue.

Though each program—incubation, education, and outreach—is described separately, they are integrated to such a degree that none would be able to function alone. For example, the income generated by the TecoTour program supports the incubated workshops, which in turn provide a working space for employees and international volunteers. Community outreach serves to foster local demand for the workshop's products, while concurrently providing training to workshop employees. The incubated businesses provide a functional environment to run the internship and education programs, while the products from the Project Placement Program aid the research and development of products for the workshop.

Company Goals and Objectives

The AIDG seeks to become a multinational charity capable of enacting programs based on the needs of a region and not based on the geographic constraints of its own operations. The AIDG seeks to provide a rapid, low cost and effective response to immediate infrastructure needs in developing countries. The AIDG seeks to create organizations that are self-sufficient and can continue operating once the AIDG leaves a region. The AIDG seeks to refine a wide range of appropriate technologies from the design stage to distribution. Finally, the AIDG seeks to develop a broad base of funding support that will enable it to operate sustainably.

Developments to Date

In August 2005, the AIDG hired ten Guatemalan workers, recruited from technical schools and universities within the city of Quetzaltenango, to staff its first incubated business, XelaTeco. The team has a background in a range of fields including metalworking, electronics, and mechanical and electrical engineering. In keeping with our commitment to diversity, three of the ten XelaTeco employees are women. In November 2005, the AIDG helped XelaTeco win a contract for a 40-home micro-hydroelectric system with material costs funded by the United Nations Development Program (UNDP).

In association with the AIDG, XelaTeco has installed multiple biodigesters, windmills, and solar water heating systems for impoverished communities and organizations in Guatemala. In response to the devastation of Hurricane Stan, the workshop distributed 750 emergency stoves to aid in the relief effort. These community outreach projects have provided XelaTeco with additional training in the installation,

maintenance, and troubleshooting of technologies. They have also increased awareness and interest in the XelaTeco product line, particularly in solar water heating systems.

Our 2006 Internship Program attracted an impressive pool of candidates from around the country. Twelve interns, mostly from Stanford, MIT, and Tufts, have joined AIDG and XelaTeco staff in Guatemala in the summer and fall. In July 2006, we successfully conducted our first TecoTour with a group of eight volunteers. The AIDG has recently entered into collaboration with Professor Amy Smith from MIT's D-Lab to manufacture and distribute a sugarcane charcoal-making machine in Haiti. This August, AIDG staff will join with Dr. Smith and a small team from MIT in Cap-Haïtien to conduct trainings in the manufacture of the alternative charcoal maker.

Financial Status

Since obtaining our 501(c)3 status in January 2005, the AIDG has raised nearly \$80,000 from private donations. In June 2006, the AIDG was named one of the world's best emerging social enterprises by Echoing Green and will be granted \$60,000 in seed capital to help expand its programs over the next two years. It has secured \$45,000 in capital for programs in 2006. The AIDG is seeking to secure an additional \$135,000 in capital in 2006 to staff the organization and build the capacity for expansion to multiple regions.

3. Industry Analysis & Strategic Position

The creation of Small to Medium Enterprises (SMEs) that serve populations making less than two dollars a day is a growing field in international development. Many groups, particularly micro-finance organizations, promote SMEs as an engine for economic and social development. Few, however, create SMEs that focus on infrastructure improvements. Those **Appropriate Technology Development NGOs** that do address this issue have certain weaknesses in their models that we feel are addressed by the AIDG model. In addition we will consider the growth potential for the AIDG in the **Service Learning Tourism** arena.

Appropriate Technology Development NGOs

Though Appropriate Technology represents a growing field in international development. Only a small number of non-governmental organizations (NGOs), in particular Practical Action (formerly the Intermediate Technology Development Group - ITDG), Green Empowerment, and KickStart (formerly Approtech) provide training to produce low cost appropriate technologies for use in rural communities.

Practical Action (ITDG), founded in 1966, has the greatest field experience of almost any infrastructure development NGO. The organization provides training worldwide in the design and manufacture of appropriate technologies. Years of practical use have proved the utility of these designs in the field. As a result, the AIDG and its associated shops use many ITDG designs and reference manuals.

Green Empowerment promotes renewable energy and water systems within underserved communities in developing countries. The organization provides training and funding to local technical NGOs to construct appropriate technology systems on a per project basis.

The Kickstart model provides the closest parallel to the AIDG framework. The organization, created in 1991, trains and equips businesses to produce a range of appropriate technology products from water pumps to soil cement block presses. Currently, Kickstart does not produce renewable energy systems and operates primarily in Eastern Africa.

While each of these organizations has its definite strengths, their individual models contain several weaknesses that are addressed in the AIDG's operational framework..

Weaknesses in Infrastructure Development Models	The AIDG Response
Education and Training with no mechanism to provide for long-term production or maintenance of installed technologies (Practical Action, Green Empowerment).	Sustainability. AIDG provides the capital investment and technical training needed to create sustainable businesses that will produce, install and repair these technologies on

<p>A limited geographic region of individuals/communities benefit from technologies due to localized NGO activity. (Practical Action, Green Empowerment, Kickstart)</p>	<p>the ground even after AIDG has ended its incubation program in that region.</p>
<p>A limited product line is available to address diverse infrastructure needs (Green Empowerment, Kickstart).</p>	<p>Wide Distribution. By investing in manufacturing facilities in many geographic regions, the AIDG intends disseminates these technologies to communities in need on a global scale.</p>
<p>Target users of the technologies (individuals, communities, or partner NGOs) may require outside funding to purchase the technologies (Green Empowerment).</p>	<p>Extended Product Line. AIDG shops produce a wide range of products: windmills, micro-hydroelectric systems, solar hot water heaters, water pumps, housing materials, water purification systems, communications technologies, and biogas systems.</p>
<p>Partner NGOs typically lack the technical capability to produce complex infrastructure systems (Green Empowerment).</p>	<p>Low cost. The majority of products would be affordable to local NGOs and private parties without the need for outside grant funding.</p>
<p>Where the operational framework does involve business incubation, the replication model is not self-sustaining and requires continuous rounds of private fundraising. Dialogue and information exchange between the different incubated businesses is not formerly incorporated into business planning (Kickstart).</p>	<p>High Technical Skill. The engineers and technicians employed at AIDG shops are equipped to produce simple technologies such as ram pumps and biodigesters as well as complex tools such as foundry-cast hydroelectric turbines or acid-etched custom electrical control circuits.</p>
	<p>Strong Replication Model. As they become profitable, AIDG shops repay their initial investment into a fund to create new businesses. Shop staff provide early training to newly formed businesses. With five to seven profitable manufacturing enterprises, this process will be self-sustaining.</p>

Service Learning Tourism Groups

Another field of growth is service-based or learning-based tourism. Several organizations have capitalized on the rise of international tourism by blending it with social/environmental programs to generate income. Such income has become a large percentage, sometimes the vast majority, of revenue for certain non-profit organizations. These profit-making ventures can in turn support other organizational needs. Three of the major organizations engaged in this sector are, Amigos por Los Americas, the Earthwatch Institute, Solar Energy International.

Amigos Por Las Americas is a Latin American focused volunteer coordination group that empowers young people to take leadership roles through community service in Latin America and their home communities. Each year approximately 600 young leaders participate in various AMIGOS Latin American programs. AMIGOS volunteers, their adult mentors, and their host communities forge friendships that last a lifetime. Program participants pay a \$3700 fee for the summer.

The Earthwatch Institute engages people in scientific field research and provides educational opportunities to promote the understanding and action necessary for a sustainable environment. Founded in 1971, the organization has grown such that they now send approximately 4,000 volunteers annually with scientists to perform research around the world.

Solar Energy International (SEI), founded in 1991, provides education and technical assistance so that others will be empowered to use renewable energy technologies. SEI's hands-on educational programs, which began in 2000, take place primarily in the US through fee-based workshops. In 2005, SEI oversaw 16 workshops, and led several other programs related to youth, women, and international development.

While each organization has distinct strengths, AIDG's TecoTour Program will provide meaningful benefits by incorporating appropriate technology knowledge and practical hands on impact for rural populations in developing countries. In essence the AIDG Tecotour blends some of the most compelling elements of each of these three programs.

Existing Service Learning Model	The AIDG's TecoTour Adaptation
Amigos , provides volunteers with opportunities to have a direct impact in rural communities in developing countries.	The AIDG will give the same sort of grass roots impact but with Appropriate Technology learning, and a global location offering.
Earth Watch allows impact on environmental issues throughout the globe.	The AIDG combines the sense of environmental protection with a sense of helping people. Technologies installed protect the environment but also improve people's lives
SEI provides hands on experience with cutting edge appropriate technologies.	The AIDG will give the same sort of experience in a framework of helping others.

The TecoTour program is unique in that it is the only international service-based learning program incorporated into an appropriate technology SME organization. These TecoTours are integrated with our educational programs. For example, new designs from the Project Placement Program can be installed by a TecoTour group at an outreach location site, such as a new biodigester design at an orphanage. This gives participants the ability to learn about technologies they would not be exposed to through a program like

Amigos. Finally, TecoTours have the flexibility to install a wide variety of products for communities with a distinct need, not just demonstration technologies as is the case with SEI.

Another major advantage of the TecoTour program is that it is significantly less expensive than trips by other organization in the region. For example, Amigos charges \$3700 for a summer long experience in Mexico, and Earthwatch charges \$1,995 for a nine day trip in Central America. The TecoTour program in Guatemala will be priced around \$1,000 and has a duration of ten days. The cost of the TecoTour includes lodging food and transport during the tour but does not include airfare to the region.

Strategic Position

The AIDG is positioned to create a prolonged, profound, and sustainable impact in developing countries. By using local engineers and materials to create self-sufficient manufacturing facilities, we plan to increase the access of the rural poor to the basic amenities that define the developed world's standard of living: electricity, sanitation, potable water, and clean cooking fuels. Through our innovative operational model, we intend to produce lasting change by:

- Incubating workshops worldwide;
- Training the new workshops with workers of previous workshops;
- Fostering direct economic and technical support between workshops;
- Fostering information exchange between students and faculty from international universities and workshop employees; Developing new products and solutions through these relationships
- Providing a diverse product range that is customizable to the local market;
- Partnering with well-established local NGOs and
- Providing an opportunity to international volunteers that is integrated into our educational and outreach programs, while supporting communities in need.

4.Operational Plan

AIDG Location

The AIDG is currently a distributed organization that leverages multiple communications tools (see information technology list Appendix B) to create a virtual office space that allows seamless collaboration between individuals across multiple time zones and different countries. This however does not provide a complete work environment in the US for AIDG's educational efforts. The AIDG is in the process of locating inexpensive office space in Boston to be shared another organization. This space will provide a flexible volunteer coordination, event, educational program, and office space. Ideally it will also offer experimental design space, and storage space for tools, materials, and in-kind donations intended for developing country shops. It will give the US staff the ability to solve engineering difficulties for international workers in a fully equipped environment. It will augment the Project Placement Program and provide a US-based location for students to hone designs before installing them in a developing country setting. It will also help the AIDG strengthen its ties with Boston-based academic institutions and increase the ability to leverage volunteers from these institutions in a structured environment. Currently the AIDG is reviewing options for such a space with members of the MIT media lab.

In international locations, the AIDG co-locates its office with the incubated workshop facilities and depending on the scale of the program provides housing space for long-term volunteers.

AIDG Internal Operations

The AIDG's internal operations are broken into six key areas:

- **Fiscal Control Activities:** Annual budgets are laid out by the Executive Director and treasurer and presented to the board for approval. Program budgets are approved by the Executive Director and presented by the respective program directors. With additional secured funding receipts and expenses will be reviewed monthly by an external accountant to reduce the workload of year end auditing. The logistic and support position will handle the processing of donor gifts and expense reports. Currently, since the AIDG lacks permanent staff in the US, when all US staff are out of the country, Board member Grey Lee manages weekly all incoming donation deposits and upon request from the Executive Director handles outbound international wire transfers.
- **Marketing and Media:** The marketing and media strategy are laid out and enacted by the Director of Media and Outreach with consultation of the other program directors and the Executive

Director. The media plan for the organization is reviewed by the other directors and approved every six months by the Executive Director. Once the plan is approved, the Director of Media and Outreach has the authority to contact media, arrange interviews, book venues and spaces, arrange fundraising events, design and change web or print or video content.

- **Grant Writing :** The search for foundation and government support is managed by the Executive Director, the Media and Outreach Director, and the volunteer grant writing team and team coordinator. Potential grants are researched and presented to the Executive Director and the Media and Outreach Director by the grant writing team coordinator.
- **Donor Outreach** Donor outreach is managed Media and Outreach Director but involving all of the program directors, with major asks and presentations being performed by the Executive Director.
- **Program Support** Occasional experimental and technical program support is provided from the US to the incubated shops by any and all available US staff based at the time of the request.
- **Strategic Relationships** Strategic partnerships with Universities and other NGOs are identified and managed by the Executive Director, with consultation of the other staff directors.

AIDG Incubation Program

The incubation program forms the heart of the AIDG's work. It consists of three phases, Site Survey, Establishment and Ongoing Training.

Site Survey

Workshop siting is integral to effectively serving local communities and delivering an integrated suite of education and outreach services. New locations for incubated workshops are selected through a careful process. After significant background research on a region and potential city hubs for a one year period, the incubation director and one other staff member will perform one or two 2-3 week assessment trips in proposed country sites. These trips will generally occur in the end of the second quarter of the year before the proposed expansion. This will include meetings with local NGOs, assessment of regional infrastructure capabilities and rural need, assessment of vendor tools, material and manufacturing capabilities in the region, security and threat assessment, real estate availability assessment, legal framework and structure assessment, and a general tourism infrastructure assessment. The following conditional requirements will be graded during these assessments:

1. Rural Need Near an Urban Center. The populations we target for outreach typically inhabit the rural subsistence agricultural sector within three hours from an urban center. Communities are characterized as generally underserved from the standpoint of access to basic infrastructure and utilities.

2. Materials, Educational and Transportation Infrastructure. Materials utilized for the micro-enterprise must be locally available and affordable. Excellent, versatile, and experienced employees are more easily found in cities with good educational opportunities for technically minded students. Accessibility from urban centers to rural areas is necessary for delivery of products and on-site project work. Road infrastructure must be sufficient for interns, or for Tecotours, to be able to have quick exit from the country in the event of any emergency.

3. Functional Commercial and Monetary System: Host countries and project areas must have reliable banking infrastructure to allow for incubation funds to be available for incubation and outreach programs in a timely fashion. This includes transfers from the United States to host countries, functional legal structures that work within the country's current official laws, and reliable ATMs. Currency must be sufficiently stable, or otherwise manageable, to allow for regular disbursements of AIDG loans. Countries should have relatively reliable electricity, Internet, telephone, and water, and gas such that AIDG programs can function effectively and safely.

4. Existing NGO presence. Workshops target local NGOs as a primary customers and distribution channels. This positions each workshop to leverage existing networks in the region to help disseminate its products to the people that need them. NGOs also offer bulk buying power for initial sales. It is easier in the beginning to convince an NGO to buy ten pumps than it is to convince ten individuals. Further, NGOs with a good local reputation reinforce the utility and standing of the products generated by the micro-enterprise.

5. Tourism. Active tourism, or existing tourist infrastructure and regional tourist attractions, offer the manufacturing facility with a support base both for the Educational Program interns and the Outreach program TecoTour groups.

6. Safety: The AIDG will tolerate some regional and sporadic poverty motivated crime. The AIDG will not operate in regions with ongoing armed conflict or organized targeting of international interests.

Findings will be presented to all of the staff directors. At the beginning of the third quarter a decision will be made on the expansion. If a location is denied, an assessment trip to an alternate location will be performed during the third quarter and an additional decision meeting will be held. During this meeting a discussion is held on potential partners, TecoTour and internship schedules, and potential initial technology offerings for the incubated workshop.

Establishment

During the 4th quarter of that year the Incubation Program Director is responsible for locating a Country Program Manager who is hired by the AIDG and trained in the US. The Incubation Director and the Country Program Manager then travel to the country and begin the process of founding the shop. These two are then responsible for, establishing the legal framework, finding space, establishing logistics and material transfer channels, establishing financial transfer channels, and locating and hiring employees for the new incubated shop the new incubated shop is given an initial operating recoverable grant of \$6,000 outside of in kind, or purchased, tool and equipment donations. If the financial and legal framework is not established to handle the electronic transfer of the assets transfer is handled in cash. These activities are given roughly a 2 month scope. When the new business is established, staff from pre-existing micro-enterprises will be brought in to assist in the training of the new shop. They will provide a 6 week intensive production, sales and marketing, training with the aid of the Country Program Manager and Incubation Director. After this period the shop begins its production and sales process and a negotiated schedule for recoverable grant disbursement, these disbursements are handled electronically and total \$24,000 per year, for two years, but are disbursed at a schedule negotiated between the Incubation Director, Country Program Manager and with approval from the Executive Director.

Ongoing Training

After the intensive training, the newly developed enterprise will have a physical space with necessary tools, materials, and training to produce several appropriate technologies. But the full range of technologies will come through training provided by future visits from the incubation director, placements of interns with previous experience with AIDG, visits from the outreach director and work on outreach projects. Over the two years the AIDG will bring two other teams from previously incubated shops to provide additional technology specific training as the shops seek to expand their technology offerings. The shops will take part in online information sharing and technology training between shops. Other advancements will be passed from the Country Program Managers of other regions to the incubated shop Country Program Manager.

AIDG Education Program

Education Programs are divided into two types of programs, **Internships** and **Project Placement**. The **Internship Program** is designed to give students direct hands-on experience in international development and appropriate technology implementation in developing countries. It also provides an opportunity for the transfer of technical knowledge between workers in our incubated businesses and university students. Internships occur year-round. Interns are permitted to apply for multiple year positions. Interns applying for a second or third year of the program are placed in new shop facilities to help with the training and incubation on new technologies. Applications for internships close 30 days prior to the start of the program. Internships are unfunded by the AIDG, except with written approval by the Executive Director, and are typically funded by the university of the intern. Internship applications are reviewed by the Education Program Director, and interns are placed in accordance with needs reported to the Education Program Director by the Outreach Director and Country Program Managers.

The **Project Placement Program**, similar in scope, allows teams of university students to be placed in their innovative designs in communities of need. These designs, brought to life by the students while collaborating with the employees of the incubated business, can then be monitored and maintained long after the student teams leave. Accurate data regarding the utility of the design can be transferred via the Internet, and successful advances in appropriate technology can be rapidly introduced to other incubated workshops in other regions. The applications are reviewed by the Education Program Director in coordination with the Outreach and Incubation directors. Funding may be provided for these projects at the discretion of the Education Program Director in the budget submitted to the Executive Director.

AIDG Outreach Program

The three main types of AIDG outreach projects are: **General Outreach**, **TecoTours** and **Discretionary Humanitarian Outreach**. Community Organizations and NGOs can apply for **General Outreach** projects. All outreach projects require applications from the community itself, as well as visitation rights (as appropriate), safe transportation and working conditions, and the use of photo and video of the installed products for marketing purposes. All outreach projects are limited in scope to be built and installed within one work week using technologies from the incubated workshops, except with written approval from the Executive Director. Follow-up visits are made at two months, six months, one year, and two years to collect feedback from outreach projects and help assess the impact of the improvements. Projects are funded by AIDG general funds, which derive from grants, donations, and TecoTour revenue. As the program develops further, donors will be able to target contributions to specific community projects.

Applications for outreach projects are submitted to the Country Program Manager for review bi-monthly and approved by the Country Program Manager and the Outreach Director. The Program Manager

and Outreach Director can also issue requests for proposal (RFPs) to communities to fulfill demand for a specific type of project if needed for incubation training or **TecoTours**. Projects are categorized as either **General Outreach** or **TecoTour**. The number of outreach projects will be coordinated quarterly with the Outreach Director, Education Director, Incubation Director, and Country Program Managers, and is approved by the Executive Director. The outreach program budget is approved annually by the Executive Director.

TecoTour programs enable the AIDG to do outreach projects requiring bulk physical labor that would be beyond of the capability of existing workshop staff to fulfill within a week. Example projects include large trenching jobs for biogas systems, long water pump system runs, or cement work for water tower construction. In exchange for providing much-needed labor for rural infrastructure projects, TecoTour participants learn about appropriate technologies and experience a unique community-based travel experience in a developing country setting. This knowledge transfer furthers AIDG's mission by influencing both potential future development workers, Tecotourists fit the profile of people we see currently doing good work on the ground, and creating a network of support in the US to aid with fundraising and awareness.

In addition, up to eight **Discretionary Humanitarian Projects** per region may be completed annually outside of the standard application process with written approval of the Executive Director. Such projects include disaster relief (such as post-hurricane stove distribution or water system development), infrastructure responses to disease outbreaks, repair of sudden failures in infrastructure systems, or discretionary responses to cases of extreme need. These projects may be larger compilations of smaller projects. For example, in response to Hurricane Stan in 2005, AIDG contracted Xelateco to produce multiple types of stoves on multiple occasions, but counted them all as a single project.

5.Goals and Milestones

In the next 6 months the AIDG seeks to:

- Secure an additional \$150,000 a year in grant revenue to pay for the establishment of three core paid staff positions, cover the creation of an office space, and invest in the growth of our other fundraising and revenue generating activities.
- Develop the supporting materials and resources to formalize the processes behind our incubation, outreach, and education programs. Formalize the feedback and evaluation mechanisms to determine the successes and failures within these programs.
- Aid Xelateco in completing its largest project to date in Guatemala, a 40 home hydro electric system, and refine the sales and marketing of Xelateco's smaller products in the greater Xela region.
- Refine our marketing and outreach materials and processing to handle an anticipated rise in interest with national TV exposure on PBS in January.
- Develop formal relationships with University engineering programs to begin recruitment for 2007 project placement and internship programs.
- Market TecoTours to colleges, high schools, and church groups in New England. Preregister 30 individuals for 2007 TecoTours.

By the end of 2008 the AIDG seeks to:

- Open three more shops: one in the Dominican Republic, one in Haiti, and one in Thailand.
- Sustainably support a staff of five US-based staff and four international country-based staff.
- Support a 130 person volume on TecoTours.
- Perform \$75,000 in outreach projects across 4 countries.
- See the first repayments from Xelateco on its recoverable incubation grant.
- Acquire hard metrics on its workshop operations and outreach population benefits to position the organization for larger scale expansion.

- Build a three month operational buffer into its cash reserves.

Longer Term Goals

The AIDG has the potential to be a large multinational development organization with the scope and responsive capability of Mercy Corps or Practical Action. The AIDG's mission and the flexibility of its solution strategy permit it to help people in a range of situations (e.g. with a different product set the model can succeed to help people in rural Mongolia as effectively as in the Amazon). The unique synergy of its programs gives it a strong value proposition to many types of funders and supporters. With the proper establishment of its programs and model and with proper planning in its processes, it has the potential in 10 years time to see its programs enacted on a global scale, with an estimated operating budget in the 10 million dollar range.

6. Risks and Mitigation Strategies

Risks

There are multiple risks associated with the AIDG's programs and its expansion to different regions and programs. These risks can be roughly divided into four categories:

Risks to the health and safety of AIDG volunteers, interns and employees

AIDG employees and volunteers are a fluid group of students and professionals. This structure allows the organization to utilize skills and expertise of a diverse group at low expense. The risk to individuals traveling and living in and around AIDG workshop sites is the same as that of any traveler in an unfamiliar, developing country. Concerns include crime, vehicle safety, and tropical diseases. In addition, AIDG affiliates that help in the workshops will encounter workplace hazards described in (2) below.

Risks to the health and safety of workshop employees

Employees of AIDG-incubated workshops will work daily in the welding, carpentry and electrical tasks associated with manufacturing appropriate technologies. The operation of power tools and carrying heavy materials pose a risk to employees. Traveling in vehicles to installation and maintenance sites poses an added risk.

Risks to the health and safety of consumers of workshop technologies

A third risk is that posed to consumers of technologies manufactured by AIDG-affiliated workshops. Risks may be associated with AIDG products if they are installed or utilized incorrectly, or if they break.. Examples of potential risks include handling of flammable biogas, handling of animal excrement, faulty electrical wiring, and faulty water purification systems.

Economic and Political Instability Risks

Most of the possible regions of AIDG incubation have the potential for political and or economic instability. This can affect the ability of AIDG to support an incubated shop, repayment of recoverable grant assets by a shop, or the ability for the AIDG to run its education or outreach programs.

Mitigation of Risks

In order to minimize the risks outlined above, AIDG will undertake the following mitigation strategies.

- A primary way that the AIDG mitigates risks to employees, volunteers and interns is by not operating in sites that are notably unstable politically or militarily. A main criterion for workshop site selection is a reasonable level of safety and stability. The AIDG will assist all employees, volunteers and interns with orientation and preparation for work at the workshop sites. This includes identifying needed vaccinations and assisting with travel plans to the sites. The AIDG will assist with locating safe housing and will provide an orientation packet with safety and other information specific to each site. The existence of a stable tourist infrastructure in the region aids in this endeavor. The AIDG will ensure proper occupational safety training at the workshops.
- To ensure the health and safety of workshop employees, AIDG-affiliated workshops will comply with all country-specific occupational safety regulations. In situations where in-country regulations are significantly lower than US standards, the AIDG will follow US standards. All workshop employees will receive adequate training in handling equipment. Only experienced drivers with required certifications will be cleared to drive workshop vehicles.
- In order to ensure consumer safety, AIDG workshops will utilize existing designs that have been proven in the field. In cases where designs have been modified or created by workshop employees or students and professionals associated with the AIDG, designs will be field tested prior to manufacturing at a large scale. Workshop employees will be responsible for explaining the proper use and maintenance of the technologies to the end-use consumers in the appropriate language, except for cases in which this responsibility is acquired by contracting organizations. In addition, workshop employees will be available for maintenance and repair throughout the life cycle of the product. Program insurance will be maintained by the AIDG on its outreach and education projects.

7.Organization and Management

Staff and Management Structure

The AIDG foresees the creation of a tight organization to manage resources in a scalable fashion across multiple locations. These staff are supplemented by pro bono accountants, legal aid, volunteer/intern workers, TecoTour helpers, document writers, and pro bono contracted technical support. As a small organization with a relatively flat organizational structure and a multitalented resource pool that is responsible to multiple people over multiple programs the AIDG relies on RACI (Responsible, Accountable, Consulted, Informed) task assignment to ensure accountability and regional functioning of programs . Since the AIDG is an international organization that must work together seamlessly, it will hold an annual all-staff conference in the United States to reinforce organizational structure and cooperation between different regional operations. The AIDG staff in the next five years will include:

Executive Director

The role of the executive director is to maintain the financial health, programmatic functioning and compliance of the organization with the mission and all national and international laws. The Executive Director (ED) is responsible for the formation of the processes by which the organization will operate. The ED will perform outreach and fund raising, will guarantee the fiscal responsibility of the organization, will evaluate the success of the organizations programs and determining programmatic vision, will form strategic partnerships, and will represent the organization in public events and media. The ED is a fiscal agent for the organization, has the right to hire or fire on behalf of the organization, and has the right to enter into contracts on behalf of the organization.

During the first several years of the company the ED will review the performance of all staff. The ED is responsible for managing the development of new strategic partnerships. He is also responsible for making final reviews on grant and funding requests, and major donor requests and relationships. During the first two years of operation, the Executive Director will also take on the duties of the Director of Incubation and Outreach and will spend three to four months out of the country. The ED will take several trips per year to project and incubation program sites for program evaluation and feedback.

Incubation Director

The Incubation director (ID) is responsible for the establishment and training of existing and new workshops. The ID has the power to enter into contracts and issue recoverable grants on behalf of the AIDG internationally with written approval from the Executive Director. The ID is charged with finding locations for potential new businesses, identifying country director staff, finding local staff for new

incubated businesses, establishing legal framework for new incubated businesses, identifying locations for new businesses, managing the intensive initial training for new businesses, and refining the criteria and practices for the Incubation Program. In addition, the ID oversees the Country Program Director's ongoing training and education programs and selects the suite of technologies to be produced in each new workshop. The ID is responsible setting performance targets for the incubated workshops, and helping them reach those targets. The ID spends approximately six months of the year outside of the United States.

Education Program Director

The Education Program Director (EPD) is responsible for the management and development of the Internship and Project Placement programs. S/he promotes and manages the internship application process, and manages the Project Placement program in coordination with the Executive Director and Outreach Director. They coordinate with the country program manager, incubation director, and outreach director to guarantee the most advantageous placement of interns and experimental projects across the workshops. The EPD spends approximately three months of the year out of the United States

Outreach Director

The Outreach Director manages community outreach programs. S/he coordinates with the Marketing Director to promote the TecoTour program and manage the scheduling and assignment of TecoTour projects in collaboration with the Country Program Manager, and is responsible for on-site oversight of the TecoTours. S/he identifies in-country NGO contacts to facilitate the siting of potential outreach projects, and manages the work of contracted workshops on the outreach products. The Outreach Director spends approximately five months of the year out of the United States.

Development and Marketing Director

The Development and Marketing Director is responsible for the acquisition and management of donor gift relationships and the marketing of the organization to the general public. S/he is the primary organizer for large donor asks, and is also responsible for the development of an institutional donor campaign, seeking gifts in the \$2500-\$10,000 range from industrial or environmentally focused small businesses, churches, and social clubs. S/he will be responsible for the creation and implementation of online and print marketing materials, the year end report, newsletters, and outreach materials for TecoTours. S/he will design all donor request materials and will review all grant and foundation request materials for formatting and style. S/he will develop opportunities for and organize AIDG's presence at public events, presentations and in the media. The Development and Marketing Director takes several trips per year to workshop locations to acquire marketing materials and success stories.

Administration and Logistics Manager

The Administration and Logistics position will be a more demanding logistical support position than a traditional administrative assistant. S/he will be responsible for the processing of donor gifts and thank yous, day to day organization of receipts and financial data for the Executive Director, Treasurer and accounting consultants, and materials logistics provision for Incubation Director, Country Program Managers and Outreach Director (e.g. orders and shipping of tools or materials from the states, organizing fabrication of demo products here, handling customs documentation). In addition, the Administration and Logistics Manager oversees day to day contacts for the TecoTours and Education programs and provides logistic support for those programs. Since these duties represent an intense but sporadic workflow, the Logistics manager will help the Development and Marketing director with the formation of materials and the Executive Director with the creation and management of grant requests and organizational process documents. S/he will also be responsible for ensuring database accuracy across database systems (verifying database integrity and that team members are appropriately updating information). The Administration and Logistics Manager travels several times a year in support of the TecoTour program.

Country or Region Program Manager (e.g. Guatemala Program Manager)

The Country Program Manager is the core staff member to create an AIDG presence in a country. Initially responsible for the training and incubation of the workshop facility in coordination with the Incubation Director, s/he later manages Outreach, TecoTour, and Project Placement for that country. S/he has the right to enter into contracts and leases, issue loans to the workshop, and perform any legal activity on behalf of the AIDG within the country with written permission per contract from the Executive Director. S/he works closely with each of the program directors to ensure the day to day in-country operations of all AIDG projects. During vacation periods, the AIDG directors will work directly with incubated workshop staff.

Current AIDG Staff

The AIDG has developed a tight grassroots management structure based around individuals contributing significant early efforts to the team that fills several of these roles. Presently, these individuals apart from the Guatemala Program Manager are unpaid, and the AIDG is seeking to provide back pay for fiscal year 2006 to several of these staff members. As a result of the salary situation, the AIDG has not been able to leverage the full capacity of the current staff since staff contributions to AIDG have been balanced with other livelihoods.

Peter Haas, Executive Director (also serving as Incubation Director)

Peter Haas received a B.A. in 1998 from Yale University in philosophy and psychology. Before founding AIDG he worked both in the information technology field as a consultant in network

provisioning, telecommunications wiring, RF and wireless consulting, electronic systems, and programming, and on an organic farm / horse ranch doing infrastructure improvement work in water systems, electrical systems, masonry, plumbing, drainage, erosion control, irrigation, welding, carpentry and sustainable building.

Catherine Lainé, Development Director

Catherine Lainé received her B.A. from Swarthmore College in Biology. After spending a year and a half as an academic visitor at the Wellcome Trust Center For the Epidemiology of Infectious Diseases at Oxford University, she began her studies at Harvard School of Public Health in Infectious Disease Epidemiology where she is completing her PhD. She currently runs an independent design and media consulting firm for small organizations (www.paintedfoot.com). She is fluent in French and proficient in Haitian Creole and Spanish.

Benny Lee, Education Director (also Serving as Outreach Director)

Benny Lee received his M.A. in Urban and Environmental Policy and Planning at Tufts University in Boston, Massachusetts. His area of expertise is in environmental policy in the built environment, and renewable energy issues in sustainable development. Having obtained his B.A. in Science, Technology and Society from Vassar College in 2001, he worked for 3 years as a field geologist and environmental scientist with an environmental consulting firm. He is fluent in Spanish, and lives in Guatemala.

Steve Crowe, Guatemala Program Manager:

Steve Crowe graduated from Ganon University with a B.S. in Mechanical Engineering and Energy Systems design in 2004. Prior to joining AIDG he ran a private consultancy on mid-scale photovoltaic systems and worked in facilities engineering for Rocket Systems Inc. He lives with his wife, a Guatemalan citizen, in Xela a short commute from Xelateco.

AIDG Board of Directors

Adam Hyde, Chairman

Adam works as a consultant with BluSkye Ventures, Inc. He is supporting the main client, Wal-Mart Stores, with implementation of a company-wide transformation towards three sustainability goals: carbon neutral, zero waste, and offering sustainable products to customers. Recently he helped organize a climate change 'knowledge fair' at Wal-Mart's Home Office in Bentonville, of top-level executives punctuated by special guest Al Gore. Adam earned his Masters (with distinction) in Holistic Science from Schumacher College-UK, and a BS in Environmental Studies from the University of Vermont. Previously, Adam has worked with government agencies and community-based nonprofits on natural resource

conservation and land stewardship initiatives. He has also started and managed a successful Community Supported Agriculture project. He currently lives in Portland, Oregon.

Grey Lee, Clerk

Grey Lee is the Executive Director of Land's Sake, Inc, a community stewardship non-profit enterprise in Weston, Massachusetts, with a mission to connect people to the land. Their model is to engage the public with conservation land through organic farming, active forestry and environmental education programs in order to foster a strong conservation ethic. He holds a Master's in Real Estate Finance from the London School of Economics and a BS cum laude in Environmental Studies from the University of Vermont's College of Agriculture and Life Sciences. He has worked as an extension agent in Brazil with the MST (Landless Peasant's Movement) and is fluent in Portuguese and Spanish.

Peter Haas, Founder, Executive Director (see biography above)

AIDG Advisors

The AIDG has been developing relationships with several respected professionals in the field of international development and has been seeking guidance from these individuals on numerous issues. While not an official technical advisory board, the AIDG hopes to foster these relationships into a more formal role as our programs expand.

Calestous Juma, Harvard University

Calestous Juma is a former Executive Secretary of the United Nations Convention on Biological Diversity and Founding Director of the African Centre for Technology Studies in Nairobi, and he also served as Chancellor of the University of Guyana. He has been elected to several scientific academies including the Royal Society of London, the US National Academy of Sciences and the Academy of Sciences for the Developing World. He has won several international awards for his work on sustainable development. He holds a PhD in science and technology policy studies and has written widely on science, technology, and environment. He teaches courses in developmental policy as part of the [MPA/ID Program](#). He is lead author of *Innovation: Applying Knowledge in Development*. He is editor of the *International Journal of Technology and Globalisation* and *International Journal of Biotechnology*.

Amy Smith, Massachusetts Institute of Technology

Dr. Amy Smith is the instructor for the MIT D-Lab classes at the MIT Edgerton Center joint creator of the Public Service Design Seminars (in conjunction with the Public Service Center) as part of the [Service Learning Program](#), and co-creator of MIT's [IDEAS Competition](#). She is also co-founder of the [International Development Initiative](#). She is a winner of a MacArthur award for her work in appropriate technology.

AIDG Long-Term Volunteers**Erica Mintzer (Business Process Support)**

Erica Mintzer is a medical student at Yale University School of Medicine, where her research focuses on local food systems and childhood obesity. She worked for three years as a Research Analyst at Tellus Institute, a non-profit environmental research and consulting firm in Boston, MA. At Tellus, she supported projects in the corporate redesign, human well-being and sustainable communities program areas. Her interest in sustainable development has been cultivated by extensive living and traveling in Latin America, including teaching at the Centro de Educación Creativa, an environmental school in Costa Rica. She graduated with a B.A. in Latin American Literature from Dartmouth College in 2002.

Peter Zink (Manufacturing Process Support)

Peter Zink is a PhD Candidate in Manufacturing Engineering at Boston University specializing in Materials Science and a full-time research assistant working on the development of Intermediate Temperature (600-800 C) Solid Oxide Fuel Cells. Pete provides high tech fabrication support to Xelateco including computer design and CNC fabrication of experimental parts and molds. Prior to returning to school he worked as a Business Systems Analyst at Commonwealth Financial Network in Waltham MA, and as a master carpenter in his own woodworking business. He holds a B.A. in Physics from the University of Colorado. Inspired by his first trip to Xelateco, he has recently taken up beekeeping.

Emily Levin (Grantwriting Coordinator)

Emily Levin manages the River Restoration Program at the Ipswich River Watershed Association in Ipswich, MA. She holds a masters degree in water science, policy, and management from the Yale School of Forestry and Environmental Studies and a B.A. in geology from Amherst College. She has travelled widely in Asia and Latin America, and studied sustainable development in Costa Rica. Most recently, she spent several months in India researching rainwater harvesting systems as an alternative to large dams. She previously served as an environmental policy analyst at a consulting firm in Cambridge, MA.. She was inspired to work with AIDG after visiting the XelaTeco workshop during a trip to Guatemala. She now manages our grant writing process and a team of grant writing volunteers.

Michelle Jost (Tecotour Program Development)

Michelle Jost is the Conservation Programs Manager for the John G. Shedd Aquarium where she manages the Right Bite sustainable seafood awareness program and the Green Initiative. Before joining the Shedd team, Michelle worked closely with scientists worldwide to develop volunteer-based research expeditions for the international non-profit, Earthwatch Institute. While with Earthwatch, she managed trips to Africa, the Caribbean, and Mexico to assist with field research on community health, Leatherback sea turtles, and whale sharks, respectively. Michelle graduated with honors from the University of Wisconsin-Madison with a degree in Conservation.

Kelli Horner (Engineering Design Review)

Kelli Anne Horner earned her MS degree in June 2006 from Stanford University in Environmental Engineering and Science. While at Stanford, Kelli was a teaching assistant in the Civil and Environmental Engineering Department. She served as the treasurer of Engineers for a Sustainable World from 2005-2006. Prior to her graduate work, Kelli was an Environmental Staff Engineer for two years at Kleinfelder Inc., in San Jose. She graduated from California Polytechnic State University, Pomona in 2002 with a BS in Civil Engineering. She lived for an extensive period in both Tanzania and Venezuela, and is currently located in Guatemala.

8. Community Involvement & Social Responsibility

The AIDG is dedicated to producing positive and long-lasting social change through our incubated businesses and community outreach. Recognizing our responsibilities, we have adopted policies that ensure that our businesses operate as good corporate citizens within their respective countries.

Anti-discrimination policy

The AIDG is an "equal opportunity employer." The AIDG will not discriminate and will take "affirmative action" measures to ensure against discrimination in employment, recruitment, advertisements for employment, compensation, termination, upgrading, promotions, and other conditions of employment against any employee or job applicant on the bases of race, creed, color, national origin, sex or sexual orientation.

The AIDG is committed in all areas to providing a work environment that is free from harassment. Harassment based upon an individual's sex, sexual orientation, race, ethnicity, national origin, age, religion or any other legally protected characteristics will not be tolerated. All employees, including supervisors and other management personnel, are expected and required to abide by this policy. No person will be adversely affected in employment with the employer as a result of bringing complaints of unlawful harassment.

Environmental Protection

Our products are designed with environmental sustainability at the forefront. For example, our biodigesters are designed to harness methane gas produced during the decomposition of waste and use it as a fuel source, while also reducing a dangerous source of contamination. Instead of dams or water diversion, our small-scale hydroelectric systems use water wheels that have little environmental impact. Overall, we avoid as much as possible the use of techniques, designs and processes that negatively impact the environment. In the shops we seek manufacturing processes that have minimal environmental impact. Limitation of waste stream by design is of vital importance to us. Most of our products are adapted in scale and performance to local materials to both reduce waste and reduce wasted labor. We try to avoid extra cuts and scraps of materials that would augment our waste stream when we go to scale in the production of a product.

Community Involvement

The community outreach program, which is funded by the AIDG, allows the incubated business to not only gain extra training with installation and troubleshooting of technologies, but also generates goodwill. By targeting schools and other such institutions for infrastructure improvements, incubated businesses make a meaningful contribution to their communities. To facilitate our community involvement and the increase our responsiveness to customer needs, the AIDG and its businesses also strive to create partnerships with local NGOs.

9.Fundraising and Marketing Strategy

The AIDG has three anticipated income streams: donations from private individuals, grants from foundations and governments, and public support donations associated with our Tecotour programs. Our first TecoTour trial run took place in July 2006, and we aim to have our first tours this winter. Currently our main focus for fundraising is direct solicitation of private individuals and grant writing. The plan detailed below describes our marketing plan for attracting and retaining private donors.

AIDG Donors

Our donors are highly educated and well-informed about international issues. They are concerned about one or more of the following topics: poverty alleviation, children, appropriate technology, sustainable development, the environment in general and global warming in particular. They fall into two main age ranges: 25-35 and 50+. Their prime motivation for being involved with the AIDG is to participate in social change and to support a cause and/or individuals that they believe in. We have been successful in retaining a large proportion of our donors by generating a sense of community and by showing them that their investment has yielded impressive results in the short-term.

Reaching out to Donors

Overall, building on personal relationships while demonstrating results has been the cornerstone of our marketing strategy vis-à-vis our donor population. Currently, the majority of our donors are only one or two degrees of separation from an AIDG staff member. Through the generosity of our friends, family and supporters, we has raised \$85,000 from private individuals since obtaining our 501(c)3 status in January 2005. As we continue approaching personal contacts over the coming year, the AIDG has begun to identify other individuals and organizations that would be drawn to our cause.

Recognizing that multiple platforms are necessary to reach our audience, we have devised an integrated offline and online marketing strategy.

Offline

•**Personal solicitation.** Personal solicitation (face-to-face, over the telephone, and/or over email) has been the single most effective component of our fundraising efforts. Our plan is to devote significantly more resources to this in the coming months.

•**Fundraising events.** Recent fundraising events have brought in a large number of donations for AIDG but also have served to generate positive buzz amongst current and would-be donors. The typical AIDG event emphasizes a sense of community, offers donors and prospects the chance to socialize with their peers in a relaxed environment, and presents the most up to date results of our work. We have been able to keep costs low by hosting events in inexpensive local venues or in the homes of board members or donors.

•**Direct mail.** We have used direct mail to update current donors of our activities as well as reach out to new donor populations. This method has been less successful for soliciting new donors. Testing of our mail packages will be done in the coming months to determine how this piece of our strategy can best be improved.

•**Earned media.** We have recently increased our focus on generating earned media coverage to raise awareness about AIDG. In the past month, we have been featured in the local press, participated in the filming of WGBH's Design Squad and will be highlighted in the October issue of Fast Company.

•**Guerrilla marketing.** To increase our visibility while keeping costs as low as possible, we plan to test a guerrilla marketing campaign in communities with the highest concentration of our donors and prospects. The initial campaign will involve innovative posters, postcards and fliers in locations where persons who fit our donor profile congregate.

•**Festivals, lectures , and conferences.** Festivals, lectures and conferences have afforded the AIDG opportunities to network with like-minded individuals, and raise awareness of our work. Such events typically have not translated into a direct increase of donations, but new partnerships and relationships that have developed over time have been fruitful.

Online

•**Websites.** AIDG.org and AIDG.net act as clearinghouses of AIDG news, information and technology designs. They are our major communications tools and have the capacity to accept on-line donations. We recently relaunched our AIDG.org site and are in the process of fine-tuning our message and content. This fall, we will begin heavily promoting a monthly giving program on our

website and in our mailings. Monthly giving will make it easier for us to budget and make short-term/long-term plans.

- E-newsletter and blog.** The AIDG emails out a quarterly newsletter updating donors and other interested parties about milestones in the organization, events and general news. The blog, which we intend to update each week at minimum, gives the public a closer look at what is going on within AIDG, our incubated businesses and our partner organizations in the field.

- Viral Marketing.** We have nearly completed an entertaining Flash-based animation about AIDG's mission and product that we intend to release around Thanksgiving for our pre-Christmas fundraising drive. Over the next several months, we also plan to create screensavers, backgrounds, and other fun downloadable materials.

- Forums and Blogs.** Participation in online forums and blogs that discuss appropriate technology, environmental issues and international development is another inexpensive way to raise awareness of our work, establish ourselves as experts in the field, and network with like-minded individuals.

Marketing and Tecotours

Tecotours will be marketed through a multifaceted web, print and recruitment campaign. "Picture Yourself in COUNTRY NAME" e.g. "Picture yourself in Guatemala" with photos of life in the US overlaid with subphotos of life in developing countries will form the heart of the campaign. Flyers, print materials and web ads will attempt to show the difference in life between the US and developing countries and will guide viewers to the impacts they could have by participating in a TecoTour. The target market for the tours is high school and college students, backpackers, hikers and experienced trekkers. It is a similar demographic as the users of the Lonely Planet travel guidebooks. Because of intensity of some of the activities, moderate to high level of physical fitness is required for participation. Due to interest of many of AIDG's older donors in visiting Guatemala, however, we are very likely to devise a milder, less rustic version of our Tecotours program as well.

- Guerrilla Marketing.** Starting next spring, the AIDG will unroll a guerrilla marketing campaign around college campuses and cafes in select cities (most likely Boston, San Francisco, and New York) featuring posters and fliers.

- Social networking sites.** The AIDG will also begin marketing the Tecotours heavily on social networking sites such as MySpace, Treehugger and Hugg. In addition, we will approach bloggers writing on associated topics to negotiate donated banner space for the AIDG/Tecotours.

•**Cooperative Marketing.** The AIDG intends to begin setting up partnerships with ecotour operators about offering opportunities for their clientele to participate in some of the service-learning activities when in country.

Organization of Fundraising

All US AIDG staff and long-term volunteers are involved in fundraising, though the Director of Marketing and Development. The Director of Outreach Programs will coordinate operations for the TecoTours. All of graphic and web design needs are supported in house. The Executive Director performs large donor asks.

10.Financial Plan

The AIDG financial plan relies on a mix of public and private funds to create a balanced sustainable revenue stream. The AIDG believes that it with the securing of key base foundation support towards the payment of salaries of four staff members it can, in four years time, reach a sustainable state as a ten person charity with a three month operational budget buffer built into its cash reserves.

The attached five year budget shows six major initial revenue sources, Tecotour Revenue, Government Grants, Grants and Foundation Support, Private Donations, Institutional Donations, Equipment and Tool donations. Each of these revenue sources has a unique strategy.

- **TecoTour Revenue:** Following Earthwatch guidelines of a 35 hour service commitment on TecoTours, the AIDG will be able to classify TecoTour revenue as general public support/donation revenue. As additional workshop locations become established and the number of tours grows the AIDG sees the possibility to manage The AIDG is seeking to run the TecoTours with a revenue of \$1000-\$1200 per person with a lodging food and transport cost in the range of \$250 per person. The AIDG sees the capability to develop the TecoTour program to handle four tours of 10-12 people at each of three shops by 2008, for a revenue of 122,000.
- **Government Grants:**The AIDG is seeking opportunities to support portions of the shop incubation process through USAID. It is aiming to secure a two year \$50,000 a year grant from USAID or subcontracted under a USAID grantee in 2007. The AIDG is also seeking grants from the Departments of Energy, Agriculture, and Education to support various aspects of its programs.
- **Foundation Support:** Establishment of a solid base level of foundation support is vital towards the initial establishment of the AIDG. The AIDG is seeking to have a committed level of foundation support of **\$150,000** a year by 2007. Unlike many groups, however, the AIDG is not

seeking to develop foundation support as the sole backbone of its work, in order to reduce susceptibility to foundation support cycles.

The AIDG will be constantly reviewing and applying to foundations for support, but if other aspects of AIDG's financial plan come to fruition, additional foundation support beyond **\$150,000** will be used as a means to make strategic advances for the organization and not as a primary support for day to day operations.

- **Private Donations:** The AIDG has built itself as a grass roots organization based upon donations of private individuals. It sees fund raising from private donors being **\$75000** in 2006, based on **\$31,459** raised by July 2006. Its projections for growth in fund raising are based upon past experience in 2005 of private gifts coming at the end of the year. In 2005 fundraising from January 1- July 31st was **\$10,265** but fundraising from October 1st-December 31st was **\$26,960**. Taking the 2006 year to date fundraising (January - July) of **\$31,459** we project fund raising in the period of October through December will be **\$45,000** based on 2005 year end giving trends.

Expanding this donor base through media exposure, Fast Company Magazine in October 2006 and PBS in January 2006, we see ourselves capable of sustaining a growth in private donor support from **\$75,000** to **\$120,000**. Additionally with much of the support to date coming in the form of \$100 to \$500 gifts we see the opportunity to transfer much of this donor base from one time gifts towards smaller monthly recurring donations. This helps to more evenly distribute donor receipts through the year and buffer against lower giving outside of the final quarter.

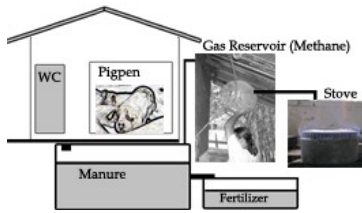
- **Institutional Donations:** The AIDG institutional donor program focuses on organizational giving to the AIDG. Instead of seeking large corporate grants, the AIDG plans with a full time development staff member to begin seeking gifts and sponsorship in the range of \$2,500-\$10,000 from small industrial businesses, small engineering firms, Churches, Kawanis groups, Rotary groups, and similar organizations. We have found thus far the transaction cost of finding this level of support from churches have been far less than the transaction cost of seeking a similar level of support from private donors. We see this program as capable of producing **\$100,000** from 30 donors in four years.
- **Equipment and Tool Donations:** Equipment and tool donations provide a fantastic opportunity to free liquid assets, and reduce the debt burden of the different incubated workshops; recoverable grants. The AIDG will seek tool donations from major suppliers such are Harbor Freight, Northern Tool, Lowes and Home Depot and major manufacturers, e.g. Chicago, Dewalt, Mikita. The AIDG sees the possibility of acquiring **\$20,000** annually in donated tools and equipment.

Long Term Financing Considerations

The AIDG seeks to develop a broad-based set of financial supports that can offset each other should there be a significant downturn in a specific revenue source. We hope to build a two year operational budget buffer, within the three year reserve limit suggested by the Better Business Bureau, that can be used as a platform for general operating security, support of emergency programs such as evacuations of TecoTour groups or disaster relief, and as a springboard for strategic expansions.

Eventually, the AIDG plans to have the workshop incubation process financed by the equity from the recoverable grants returning from previously incubated workshops. Currently the AIDG will not begin the incubation of a new workshop until sufficient grant or private funding is secured to support the expansion.

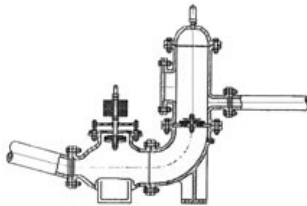
Appendix A: AIDG supported Appropriate Technologies



Biodigesters:

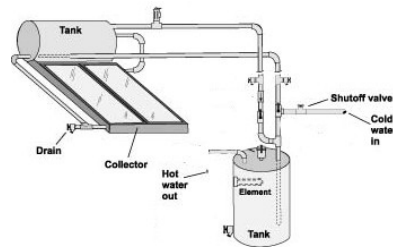
Biodigesters convert waste from animal husbandry to a sanitized fertilizer and methane gas for cooking, heating, lighting, electricity or refrigeration.

Our HDPE biodigesters are made primarily out of rolled tubular 250 micron HDPE, with PVC pipe elements, and custom gaskets made from bicycle tires.



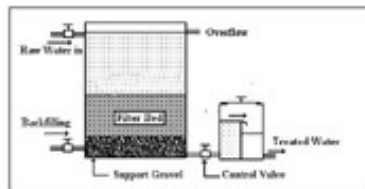
Ram Pumps:

A simple pump made from PVC pipe and commercial plumbing fittings that uses the continuous flow of a large body of water to create pressure differentials that pump a small body of water over 100 meters. They are extremely rugged and can last 10 years without gasket replacement.



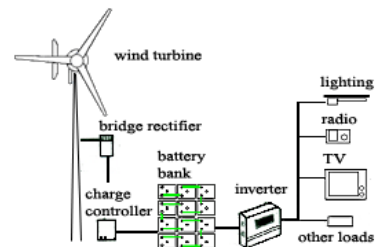
Solar Water Heaters:

AIDG solar water heating systems are thermosiphon heaters that require no electricity. Thermosiphon heaters have been around since the turn of the century and are used all over Central Asia. They have a 36 month payback period when compared to common electric water heating .



Water Filtration Systems:

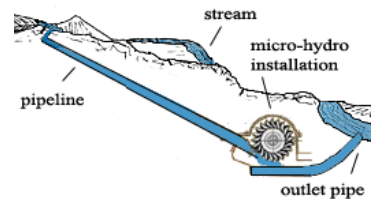
Biosand filtration is the most common form of water filtration in use today in rural regions. Most biosand filters are larger community scale systems that are difficult to maintain. We implement home scale easily maintainable filters that are available at a low cost to families.



Windmills:

The Axial flux windmill design can produce from 1 to 3.3 kilowatts depending on blade and rotor size. They are appropriate for community centers, schools, orphanages.

They are made from magnets, fiberglass and car wheel rotors.



Micro-hydroelectric:

Micro-hydro setups use stream or river water diverted with PVC pipe in mountainous or hilly areas to a drop where the water is shot from custom jet into a custom Pelton turbine. Power outputs can range from 300W for a small rebuilt alternator, to 50 kW for a large generator. We produce custom electronic load controllers to regulate these systems.

Technologies in Development: Solar LED lighting, Sugarcane Charcoal, Agricultural Machines

Appendix B Information Technology

Use of Information technology:

A key to the AIDG's success has been our ability to leverage free and affordable information technology solutions to aid in marketing, information management and communications. Our use of virtual private networks, terminal services, open source software, Internet telephony and a slew of other low cost solutions have allowed the AIDG to enhance volunteer productivity in a way normally reserved for corporate users. We have been successful at maintaining extremely low technology costs while coordinating staff and volunteer activities across the country and within Guatemala.

The AIDG makes use of the following technologies in its day-to-day operations.

Online Marketing

- Content management system for AIDG.org and AIDG.net websites: Joomla! (Free , Open Source)
- Newsletter Management System: PHP List (Free ,Open Source)
- Blog: WordPress integrated into Joomla! (Free ,Open Source)
- Podcast: Audacity sound editing software (Free, Open Source)

Information Management

- Web-based project management system: dotProject (Free, Open Source)
- Donor Management System: Giftworks (purchased at a discount from TechSoup)
- Accounting software: Quickbooks (purchased at a discount from TechSoup)
- Windows 2003 Terminal Services (purchased at a discount from TechSoup)

Communications

- International calls: Skype (Free between computers, low rates to landlines and mobile phones)
- International calls: GSM Cell phones and pre-paid SIM cards for international phone calls
- Virtual Private Branch Exchange System (PBX): GotVmail
- Conference Bridge: Stanaphone (Free)

Office

- Office Suite: Open Office, compatible with Microsoft's Office Suite (Free, Open Source)
- GIMP: Photoshop alternative
- Scribus: Desktop Publishing
- Operating Systems: Ubuntu and other Linux installations (Free, Open Source)