The activities of Inveneo in Developing Countries

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Inveneo Overview

- Inveneo is a 501(c)(3) non-profit organization offering technology products and services for aid and non-governmental organizations (NGOs)
  - Low-powered computers, WiFi based data and voice networks
  - Ruggedized, low-cost, adopted for specific needs in an appropriate manner
- Provides alternative to “do-it-yourself” and high-priced consulting firms
  - Based on off-the-self components
  - Using sophisticated open-source solutions
  - Tight integration with easy to use user interfaces
- First products being deployed
  - 2 years development already done
  - Partnership with ActionAid for initial deployment in Uganda
  - Many more requests for installs
  - Leading technology companies are interested in partnerships

OUR MISSION

To strengthen communities, bridge families, and save lives by enabling NGOs to better serve remote villages around the world through information and communication technology (ICT).

WHAT WE DO

We create and package innovative, ruggedized, and easily deployable ICT systems (ranging from wi-fi, VoIP and computing systems) that NGOs can afford and quickly utilize to serve the communities they support.

OUR TECHNOLOGY

A low cost, ruggedized, pedal and solar-powered PC and communications system that provides NGOs, and the communities they serve, access to simple computing, voice calling, e-mail and the Internet.

Our background

- Founded in July 2004
- Founding members have:
  - significant backgrounds in technology industry
  - experience in working with technology systems in developing countries
  - A desire to improve the process by which technology is employed by NGOs in developing countries

Inveneo's Team

- The Team
  Each team member has an proven track record in developing and deploying technologies globally for major corporations and start-ups

- Kristin Peterson - Awareness/Partner Development, Chairperson
  - Background: Over 15 years global market development for telecommunications technologies. Defined, launched and managed several telecommunications services for AT&T as well as start-ups. Currently runs Velocity Consulting, specializing in product and marketing plan development/execution and business development for telecom start-ups in wi-fi, networking

- Mark Summer - Networking Architect/Fundraising, CEO
  - Background: VoIP Networking Architect and Operations Management. Most recently CTO of IPDeliver. Currently runs consulting company, ImmediateIT, specializing in VoIP Technology.

- Bob Marsh - Computer Technology, Project Manager, Treasurer
  - Background: 30+ years in Consumer and wireless computing technology - starting with the first home computer (in the Smithsonian), member of the Home Brew club, participated in and ran several start-ups mostly focused on personal computing, wireless, and document management. Currently holds senior positions in a two other bay area non-profits.

- Steve Okay - Software Development, Technology Support, Remote Installations, Chief Technologist
  - Background: Networking Technology Support and Embedded Software development - currently an independent consultant to Penguin Computing. Specialist in wireless and Linux.

- Lee Felsenstein – Hardware Development, Visionary, Advisory Technologist
  - Background: co-Founder of the legendary Homebrew Computer Club (1975-86) in Silicon Valley. Co-designed the first complete personal computer incorporating video display, and the first commercially successful portable computer. Former CTO of Interval Research Corporation. Laureate of the Tech Museum of Innovation and Pioneer of the Electronic Frontier (awarded by Electronic Frontier Foundation). Currently engineering for PemStar.

Organizations We Serve

- NGOs
- Aid Organizations
- Educational / Research Institutions
- Established Projects & Programs in developing regions with a need for ICT technology and solutions

A new approach to bringing IT technology to NGOs in remote places

inveneo		Others
Open Source	not	Proprietary
Integration	not	Invention
Needs-based	not	“What we have”
Ruggedized	not	General purpose
Alternate Power	not	Conventional
Affordable	not	Out of reach
Sustainable	not	Throwaway

Inveneo Responsibilities
Project Guidelines*

- Inveneo Involvement
  - Commitment: Six months minimum to lead, facilitate and support implementation of system.
  - Project leader: Oversees logistics of project scope, evaluation criteria, and implementation.
  - Implementation team: Dedicated implementation team (2 – 3 people) to undertake site survey, implementation, training, and knowledge transfer.
  - System implementation: Project planning, application integration, site survey, system design, system testing, and system implementation.
  - Interconnections: Implementation and linking of villages to each other and to Central Hub.

* Recommended guidelines, some flexibility exists for actual implementations

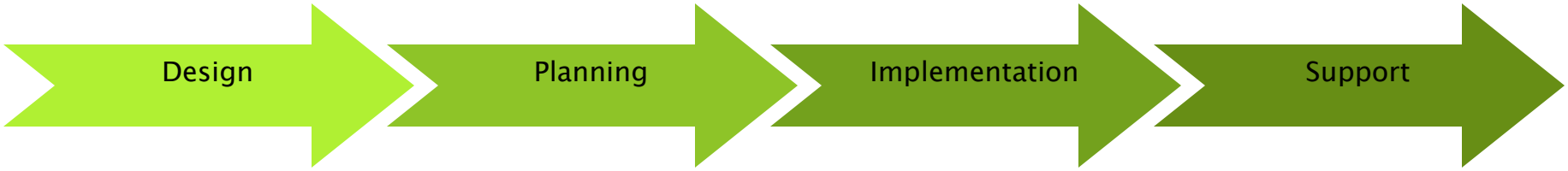
NGO Partner/Village Responsibilities

Project Guidelines*

- NGO Partner & Village Involvement
  - Commitment: Minimum of a six month commitment for the project.
  - Application: Specific application identified with measurable results: e.g. “improve access to healthcare services for 300 villagers, provide email capabilities to 500 people, etc. ”
  - Project Leader: A dedicated person to act as the project leader. They typically speak, read and write functional English and are technology aware (trainable in the technology).
  - Village project owners: Assigned people in the field and primary contact for the local project and local training.
  - ICT Secure location: A secure location and safeguards to house the ICT equipment.

* Recommended guidelines, some flexibility exists for actual implementations

Implementation and Support



During the Design Phase Inveneo works with the Project Owner to achieve mutual understanding of the overall project goals and the intended system usage. Inveneo works with the Project Owner to evaluate the system applicability and any need for customization.

During the Planning Phase Inveneo responds to Requirements Documents and RFPs, performs Site Surveys and develops detailed Implementation Schedules with Project Budgets.

During the Implementation Phase Inveneo manages the equipment procurement; installs, configures and tests the system onsite; performs training sessions and hands the fully functional system over to the Project Owner.

During the Support Phase Inveneo provides top level support to the Project Owner and it's trained team members. Inveneo monitors the systems remotely, provides system updates and performs any needed upgrades, continued training and diagnosis of damaged components.

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Essential Solution Design Elements

- Modular Configuration
  - Pre-configured component substitution options
  - All elements modular – example: substitution of solar/wind/hydro/bio-diesel for pedal power
- Open Source Design Philosophy
  - System design: We integrate open source technology combined with easy to use user interfaces and other custom developments.
  - Hardware spec & channels: We specify and supply best-in-class, proven technologies, integrated with commonly available elements such as bicycle parts & car batteries
  - Value-added services: We provide access to training, resources, partners
- We partner with technology companies for system components & delivery, helping them achieve their social mission and reach new markets
  - Incorporate low cost and design-appropriate technologies in the system (e.g. Cisco, AMD)
  - To collaboratively produce integrated solutions/packages and deployment kits

Inveneo's Modular Product Suite

- Pedal and solar powered PC and communication station (available)
  - deployed in remote villages / health clinics / schools etc. with no access to phone lines and electricity .
- Solar powered WiFi phone station (available)
  - small, easy to deploy phone stations for areas without access to phone lines and electricity. Data hook-up included.
- Solar powered relay station (available)
  - extends the range of the Wi-Fi LAN by up to 20km.
- Central Hub Station (available)
  - Connects communication and phone stations to the PSTN and Internet. Provides network monitoring, PBX functionality and Intranet server features.

Inveneo's Modular Product Suite cont'd

- NGO remote office (available) – a Linux based system utilizing open source applications to provide reliable and affordable infrastructure
  - Easy to use web based administration
  - Can double as "Central Hub Station"
  - file and printer sharing – SAMBA
  - Internet access gateway with firewall and Wi-Fi access point
  - VoIP based PBX (Asterisk)with unlimited extensions and voicemail features
  - VoIP telephone adaptors
- ICT School package (future)
  - low cost, energy efficient consuming work stations
  - internet access gateway with firewall, dial-on-demand support, Wi-Fi access point and optional VoIP capabilities
  - network hub, cables etc.

Inveneo's Professional Services

- Custom network design
  - site surveys to map and design network layout
  - network design based on future expansion plans and redundancy requirements
- On-site implementation
  - turn-key installation including training of local IT staff
- Training
  - customized training materials
  - training classes for users, IT staff and development managers

Inveneo's Planned Services

- Hosted email accounts and web sites
  - offered through a partnership with a hosting provider
- Monitoring and updates
  - utilizing Inveneo's own technologies by providing monitoring and updates through low-bandwidth monitoring and metrics tools
- Hosted PBX interfaces and interconnection
  - call from one "remote office" to another using IP phones
  - subscription to VoIP call termination services and phone numbers through partnerships with service providers (only offered where legal)

Inveneo's Community Involvement

- We will continue to work on software projects within the Open Source community
- We will continue to participate in events like W4D, the ICTP school and others to share our skills and experience in addition to our paid services

Deployment Case Study

Case study: Uganda deployment

- In partnership with ActionAid: 

  An international development agency whose aim is to fight poverty worldwide. Formed in 1972, ActionAid has been growing and expanding to where it is today – helping over 13 million of the world's poorest and most disadvantaged people in 42 countries worldwide through a staff of over 1700 (89% from developing countries) and an income of 116 million Euros in 2003.

Case study: Uganda deployment

- Current situation
  - ActionAid has operated successful programs with villages in remote areas of western Uganda over 6 years. Participants have no access to power or phone.
  - Programs focus on education, HIV/AIDS related issues, empowerment and income generating activities. ActionAid uses a unique approach called “ReflectCircles”
  - Lack of communication infrastructure between the villages impairs the impa of the programs as well ability of villagers to pool their resources.

The Reflect Circle Process

- An approach to adult learning and social change
  - used by over 350 diverse organisations in more than 60 countries.
  - Democratic, group-oriented process, using local methods and practices for education and decision making amongst participants
  - Participants develop their own tools for accomplishing goals they decide upon as a group based on what works best for them

The Reflect Circle Process

- Details at www.reflect-action.org

Reflect Center in Fort Portal, Uganda

Fort Portal Reflect Circle

Fort Portal, Uganda Area

Case study: Uganda deployment

- Deployment / Application
  - Site survey completed to confirm feasibility
  - Initial deployment of “Central Hub Station”, “Relay station” and five “PC and Com. Stations” to be completed in the second quarter of 2005
  - To be extended to include 20 more villages upon successful deployment of first five villages

Fort Portal, Uganda Area

Case study: Uganda deployment

- Expected results
  - Increased income (up to 100%) through improved access to market prices for crops
  - Ability to cooperate between villages to pool resources (increased buying power, coordinate a truck hire to transport goods etc.)
  - Locally accessible database of traditional medicine to treat AIDS related opportunistic diseases
  - Research of government and NGO grants and programs by villagers and application for these

Current Operational Status

- Partner NGOs
  - ActionAid, more to be announced soon
- Industry support
  - Cisco Foundation, Intel, more to be announced soon
- Products ready to be deployed in 2nd quarter
- First deployment in April in Uganda
- More deployments in planning stage
- Self funded to date – looking for outside funding to scale operation