Patterns for Sustainable Development

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Introduction

This pattern writing project began with the discovery of a small paperback book called *Two Ears of Corn* by Roland Bunch.[1] The title is from Jonathan Swift's *Gulliver's Travels*:

> *Whoever could make two ears of corn, or two blades of grass, to grow upon a spot of ground where only one grew before, would deserve better of mankind, and do more essential service to his country than the whole race of politicians put together.*

This little book, subtitled "A Guide to People-Centered Agricultural Improvement," contains many of the same ideas that are documented as patterns in *Fearless Change*.[2] *Two Ears* is often used for courses in agriculture, for example: "The Diffusion and Adoption of Agricultural Innovations," whose description reads:

> *Factors that influence rates of diffusion and adoption of innovations. Consequences of adopting or rejecting innovations. Processes by which change agents influence introduction and adoption of innovations.*

In the introduction to *Two Ears*, you will find the following:

> *The introduction of innovations into Third World agriculture has met with everything from disaster to exhilarating success. Well bred animals have often died of disease and malnutrition. Home and school vegetable gardens have yielded disappointing results in many*

[1] World Neighbors, 1982.

[2] Manns, M.L. and L. Rising, Addison-Wesley, 2005.

> *projects in India and nearly everywhere they have been tried in Latin America. Yet poor goat herders in a remote program area in the Bolivian Andes have walked for fourteen hours to buy animal vaccines, and Indian farmers involved in a program in Guatemala are producing, with their own native varieties, up to 3,200 kilos per hectare of dry beans, twice the average yield in the United States. Some innovations increase the production of thousands of farmers while others fail to be accepted by even a handful. If we are going to work with only a few innovations, how can we choose the and school vegetable gardens have yielded disappointing results in many projects in India and nearly everywhere they have been tried in Latin America. Yet poor goatherds in a remote program area in the Bolivian Andes have walked for fourteen hours to buy animal vaccines, and Indian farmers involved in a program in Guatemala are producing, with their own native varieties, up to 3,200 kilos per hectare of dry beans, twice the average yield in the United States. Some innovations increase the production of thousands of farmers while others fail to be accepted by even a handful. If we are going to work with only a few innovations, how can we choose the ones that will find the widest acceptance? World Neighbors' experience indicates that there are a number of widely applicable criteria that can guide us in choosing the appropriate technology for any particular area.*

This book and the ideas it contains point in a direction that will appeal to many in the patterns community, where we search for better ways. It has broad implications for how we introduce innovation anywhere. After reading this book and seeing ideas close to patterns we know well, we decided to begin documenting patterns for sustainable development, building on the ideas in *Two Ears of Corn* and studying how development organizations work successfully.

1. Sustainable Development Explained

Sustainable development is a broad concept that deals with many issues such as climate change and clean energy; transportation; production and consumption; conservation and management of natural resources; public health; social inclusion, demography and migration; and global poverty.

The notion of sustainable development originated in environmental movements in earlier decades and was defined by

the World Commission on Environment and Development[3]: "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Sustainable development comprises a number of areas and highlights sustainability as the idea of environmental, economic and social progress and equity, all within the limits of the world's natural resources. In other words, sustainable development is about offering a better quality of life for everyone, now and for generations to come. It offers a vision of progress that integrates immediate and longer-term objectives, and regards social, economic and environmental issues as inseparable and interdependent components of human progress.

Sustainable development should not be confused with aid or relief. Aid is important in areas of extreme poverty or where a disaster has occurred. Aid brings immediate assistance and allows for short-term survival of the recipients. Sometimes this is enough to help people get back on their feet and return to normal, but typically the goal of aid is not to provide a long-term solution.

The overarching goal of sustainable development is to encourage recipients to make significant change to better their lives. A consequence of being sustainable is that the circumstances of the recipients are permanently altered. Permanent change is cultural change. However, this cultural change is not meant to clone the culture of the development organization. Recipients should be encouraged to evolve their culture in a direction of their own choosing.

2. The Patterns: Goals

The focus of the patterns in this paper is sustainable development in impoverished areas. In these places, aid is often supplied but long-term change is more appropriate. It is easy to read some patterns, for example Empowered Women, as an attempt to change a culture because it is "the right thing to do," since we tend to think that we can make things better by cloning our values and imposing our ideas of morality. This would be a misinterpretation of the intent of these patterns, which is simply to document what works.

The target user of these patterns is an organization that provides development assistance for communities in need. We often think of these communities as being part of the "third world," but they could easily be found anywhere, including in what are called "developed countries".

Two terms that are used throughout this paper—program and project—refer to the strategy and tactics an organization might use in development. Program refers to a group of related projects managed in a coordinated way to obtain benefits and control not available from managing them individually. Programs may include elements of related work outside the scope of the projects in the program. A project is a temporary effort to create a result.

Another term often used in the development literature is "technology." This does not necessarily mean a high-tech solution; it simply refers to any set of tools used to solve a problem.

3. The Patterns: Format and Relationships

The patterns in this beginning of a pattern language follow the same variation of Alexander's format used in *Fearless Change* with the addition of a photo.

Each pattern includes:

Pattern Name in bold

Photo[4]

Opening Story in italics, usually a description of the photo, to convey the essence of the pattern

Abstract in bold

Context

Problem statement in bold

Description of the Problem and Forces

"Therefore" in italics

Essence of the Solution in bold

Elaboration of the Solution followed by "= = = = = = = = = ="

Resulting Context

At least three Known Uses in italics

Names of patterns are in a different font, for example, Early Wins.

This paper contains the following patterns: Organizational Cornerstones, Cultural and Environmental Awareness, Early Wins, and Constructive Participation. Small Support Group, Empowered Women, and Passing on the Gift appeared in an earlier publication.[5]

Figure 1 shows the relationships among the patterns currently in the pattern language. Organizational Cornerstones seems to be an entry-level pattern but the other connections are not solid. There are missing patterns in this language; this is a substantial and known deficiency and a source of continuing work. Some connections indicate implementation or Alexander's "completeness" for example, Small Support Group, Empowered Women, and Passing on the Gift can be used to implement or complete Constructive Participation.

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[3] *Brundtland Commission 1987*

[4] The photos have been removed from this paper but are included in the current version of the pattern language at lindarising.org.

[5] Rising, L. and K. Rehmer, "Patterns for Sustainable Development," Proc. of the 16th Conf. Pattern Languages of Programs (PLoP '09). ACM. Also see lindarising.org.

Fig. 1 – The Structure of the Pattern Language

4. Organizational Cornerstones

As an organization spend some time trying to understand your values.

In 1989 the staff at Heifer International was challenged to think about how Heifer's mission is carried out worldwide. They wanted to identify the most important components of Heifer's programs— those values and beliefs that make it more likely that the benefits of the projects are sustainable. Over a six-month period input was solicited from around the world. From this an initial list of values was drafted. This list was piloted during project evaluations in Guatemala. Some changes were made and twelve cornerstones made the final list. To help people remember them they used PASSING ON THE GIFTS as an acronym. Heifer's cornerstones for just and sustainable development are:

Passing on the Gift

Accountability

Sharing and Caring

Sustainability and Self-Reliance

Improved Animal Management

Nutrition and Income

Gender and Family Focus

      on the

Genuine Need and Justice

Improving the Environment

Full Participation

Training and Education

Spirituality

Your organization wants to make the world a better place. It has a passion for its cause and has had some success. It continues to face challenges as it moves forward in its good work.

It's easy to get caught up in all the need the world presents. Your organization faces limits on time and energy.

To ensure that development efforts live on after the donor organization departs, set up a system whereby recipients of a gift make a commitment to give a similar gift to others.

Your organization has passion for an idea today, but what about tomorrow? Can this passion be sustained? Change is all around us and the organization is pulled in many directions. It seems that even the best-intentions and the hardest work and the greatest abilities are no match for the challenges being faced. Is it worth the time and energy? Is this really what we want to do?

Your organization must see itself clearly, as it is being pulled in different directions. It's easy to sign on for too much or to have an unfocused approach. It's hard to say "no" to communities in need.

Therefore:

Ensure that each recipient of a gift agrees to give gifts to others, where the gift is not a simple hand-out but a means to enable the recipient to help himself.

As an organization spend some time trying to understand your values. Define your vision and mission statements. Use these as a basis for your organization's actions. Everyone in your organization should contribute.

Someone in the organization must have passion for this task and must take ownership of the steps. It will involve compromise and openness so that all voices are heard.

Your organization, concerned with sustainable development, should make sure they has first defined its values—traits or qualities that represent the organization's highest priorities and most deeply held driving forces.

The rest of your strategic framework should build on these values. They are the foundation, the cornerstones, for everything your organization does.

Organizations usually have a mission statement—a concise description that says why the organization exists—and a vision statement that describes what the organization wants to become.

Once the values and the mission and vision statements are in place, as your organization works with other groups, this framework will provide a way of moving forward. If we look at Heifer International, for example, when a group wants to partner with Heifer, the Cornerstones or values are shared with them. When groups begin planning their projects, they are introduced to the Cornerstones in a workshop and may choose some or all of these or create their own. Together the Cornerstones compose a holistic approach to development to which Heifer Project International aspires.

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This pattern will help the organization develop a better understanding of its values, its mission and vision. It will be better equipped to make decisions about whether or not to take on a given project. Taking time for the exercise will also help to evaluate whether passion for a new proposal can last. It takes a long-term commitment for real change.

Realize that an explicit statement of your goals will cause some people to look to other organizations that more closely address their concerns. A narrower focus could also point out some shortcomings in your organization. That doesn't mean you should give up. Everyone has a unique contribution in any setting. It may mean you may have to work harder; you may have to fight the system a little more; you may need to recruit additional help. When you are challenged to succeed despite some obstacles, it often means you have the benefit of learning and developing.

Being explicit about your goals will help recruit suitable participants and might also help with fund raising. A clear statement of values, along with a mission and vision can give supporters a good elevator pitch.

You will also need an understanding of the work itself, the various domains and expertise required. You must develop Cultural and Environmental Awareness and Learn about Partner Organizations.[6]

Effectiveness of an organization depends not only on its contributions, but on the environment. Both are continually changing. The result of this initial reflection is just the start. Continual reexamination of the organization and the development effort are required if you are to be successful in the long-run.

In their book about the Salvation Army,[7] Robert Watson and Ben Brown answer the questions: How do we do what we do with such a small core of officer/managers? And how have we managed to do it for so long when so many other organizations with similar ambitions have come and gone? We don't consider the two aspects of our mission, to preach and to serve, as separate from one another. We don't serve people who are hurting only to preach to them. And we don't preach without offering the example of service without discrimination. To us, the two obligations are inseparable. Some like to call it our holistic ministry—soup, soap, and salvation. But no matter how it's characterized, this integrated ministry of religion and social work is still a distinguishing mark of the Army, even in this information age. When an organization becomes so large and serves so many, there is always the temptation to become so preoccupied with raising money and operating the machinery that you forget your "first love." I am pleased to tell you that there are tens of

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[6] This pattern has not been written.

[7] *The Most Effective Organization in the U.S.,* Crown Business, 2001.

thousands in the Army family across this country who still find their greatest joy in serving others in the name of Christ in the trenches of human need.

Delancey Street is a self-help organization for former substance abusers, ex-convicts, homeless and others who have hit bottom. Started in 1971 with four people in a San Francisco apartment, Delancey Street has served many thousands of residents, now in five locations throughout the United States. The organization has a set of core beliefs that motivate all participants:

- *First and foremost, we believe people can change. When we make a mistake we need to admit it and then not run from it, but stay and work to fix the mistake. And though no one can undo the past, we can balance the scales by doing good deeds and earning back our own self-respect, decency, and a legitimate place in mainstream society.*
- *We believe that people can learn to live drug free, crime free lives of purpose and integrity. Rather than following a medical model or a therapeutic model, we've developed an educational model to solve social problems. We teach people to find and develop their strengths rather than only focusing on their problems.*
- *Rather than solving one issue at a time (e.g., drugs or job skills) we believe that all aspects of a person's life interact, and all people must interact legitimately and successfully with others to make their lives work. Delancey Street is therefore a total learning center in which residents learn (and teach) academics, vocational skills, and personal, interpersonal, practical and social survival skills. We believe the best way to learn is to teach; and that helping others is an important way to earn self-reliance. Person A helps person B and person A gets better.*
- *Delancey Street functions as an extended family, a community in which every member helps the others with no staff of experts, no "program approach." Everyone is both a giver and a receiver in an "each-one-teach-one" process.*
- *Economic development and entrepreneurial boldness are central to our model's financial self-sufficiency and to teaching residents self-reliance and life skills.*
- *Delancey Street is value-based in a strong traditional family value system stressing the work ethic, mutual restitution, personal and social accountability and responsibility, decency, integrity and caring for others in a pro bono publico approach.*

Solar Cookers International (SCI) was founded in 1987 by a group of people in the sunny Central Valley of California. They pooled their solar cooking knowledge to produce manuals to enable others to build and use simple solar box cookers. SCI brought solar cooking to the attention of development and relief agencies. Publicity about SCI's work spread abroad and brought them into contact with other nonprofit groups worldwide starting to promote solar cooking and to offer nascent information services to interested groups in the developing world. SCI's unique roles in the early- to mid-1990s were in networking with a handful of peers and encouraging local solar cooking promotion

efforts. In November 2007, SCI expanded its work but stayed within its solar cooking mission. It began a two-year pilot project to increase water quality awareness and introduce the Safe Water Package and the Portable Microbiology Laboratory to communities in western Kenya. Because of acute cooking fuel shortages, boiling water is often impractical in locations where household water sources are heavily contaminated. It takes approximately one kilogram of firewood to boil one liter of water. Yet, water must only be heated to 149°F (65°C) to be free from disease-causing microbes. This work has led to use of solar cookers as safe water tools. SCI's expanded Mission Statement: Solar Cookers International promotes solar cooking and solar water pasteurization systems to benefit people and environments.

Its goals:

> *1. Influence local, national and international agencies and related networks in support of solar cooking, water pasteurization and testing (SC/WP & T).*

> *2. Develop international programs, in partnership with international agencies, government ministries, educational institutions, nongovernmental organizations and/or community-based organizations, for the purpose of promoting SC/WP & T. (Secondary goal: Achieve independent spread of SC/WP & T in parts of Kenya.)*

> *3. Facilitate broader access to SC/WP & T knowledge and enhance SCI expertise. (Secondary goals: Increase information-exchange and synergy among solar cooking promoters and experts worldwide; Market educational materials including solar cookers, ovens, instructional guides, books, DVDs and other products that focus on SW/WP & T.)*

> *4. Partner with other relief agencies to assist refugees and disaster relief with SC/WP & T, training and follow-up services.*

5. Cultural and Environmental Awareness
Learn as much as you can about the cultural and environmental factors of an area selected for development.

Nepal SEEDS was founded in 1998 by trekking guide KP Kafle. He has inspired a group of his friends to support a non-profit organization that provides funding for projects at the most basic grass-roots level. Nepal SEEDS uses a collaborative partnership approach to assisting needy communities in Nepal. They adopt a low-key approach to providing assistance to needy communities in Nepal. Their basic principle is to deliver cost-efficient, grass-roots projects that foster indigenous knowledge through culturally appropriate health care, environmental, and educational projects. They eschew the top-down, "we the foreigners know what is best for you" attitude that has long characterized major development organizations, preferring to allow villagers to propose projects to the Board of Directors. Contrary to views that often characterize larger development organizations, the Nepal SEEDS Board of Directors recognizes that, as foreigners, they are not well equipped to know what is best for the communities they serve.

Through a dialogue they arrive at solutions that are economically feasible, sustainable, and sensitive to local cultural concerns. Their strategy has proven successful. Nepal SEEDS provides funding, material assistance, and professional advice; villagers provide land, labor, and local materials. Nepal SEEDS also provides training at both the individual and community levels so that villagers are able to maintain projects in their absence. By bestowing ownership, recipients reciprocate by making commitments to sustain their projects, and use their initiative to develop innovative solutions when problems arise. Much of their success is contingent on the personal relationships and rapport that they have cultivated with people in the project areas. Familiarity between directors and project recipients is a formula for success; mutual trust derives from a proven track record of accountability on both sides.

Your organization has decided to provide development assistance to a specific part of the world. As an organization, you have identified Organizational Cornerstones well enough to see that the development assistance you wish to provide fits your goals and capabilities.

Well-meaning programs can fail, because they fail to recognize conditions that exist in the community.

Development effort is a complex undertaking. Hundreds of things can go wrong, and often do. The literature is full of cases where programs failed or produced poor results because of a lack of understanding about the program area.

In Afghanistan, a project failed to convince farmers to castrate their bulls even though the farmers knew it would make their animals easier to handle. The problem was that castration of younger animals also inhibited the growth of the hump on which the animals' yokes rested. Had program leaders been aware of the problem, they might have saved the project by, for example, introducing a different yoke.

Production of pyrethrum in Kenya dropped because of a major effort designed to boost production by organizing village men into marketing co-ops. Project organizers did not realize that village women, who grew most of the crop, would cut production once their profits were diverted to the men's cooperatives.

In Bolivia, one program introduced a productive variety of corn that was hard to grind and turned out to be best suited for making bootleg alcohol—a fact that escaped the attention of program leaders, but not of the villagers.

In many cultures, people are not accustomed to participating freely in meetings. Even when they are, they often hold back information that reflects negatively on themselves or others. They also tend to withhold opinions that do not agree with those of other villagers, especially when the other villagers hold positions of authority or power.

Therefore:

Become aware of cultural and environmental factors that affect the community well before a project begins. Involve the community. Listen; learn.

Technology for the developing world has to keep in mind the picture of the people to be helped. What are their daily problems? How can the device, appliance, technique, or service help them find solutions to these problems? The answers to these questions will help create products and services that can truly revolutionize their world.

Becoming aware of cultural and environmental factors that affect an area is much more than just study. You get the best information by developing personal relationships with the locals.

It might seem more efficient to gather the entire community together for a meeting, since meetings have advantages over conversations in that they seem to save time over individual conversations and allow people to bounce ideas off each other and discuss agreements. However, research shows that brainstorming is not productive in developing countries or in the developed world in organizations that have been advocating this practice for years.[8] Elicit constant feedback one-on-one from the villagers. Probably no amount of professional information gathering in Afghanistan would have made the connection between castration and the shape of an ox yoke. Nor is it likely that any multidisciplinary team of development specialists would have predicted that the corn varieties introduced into Bolivia would be used for making bootleg alcohol. However, after the projects had started, Afghan farmers could easily have said why they refused to castrate their animals and Bolivian farmers knew soon after the first harvest of the new corn that a lot of it would be going into whiskey.

Local details matter. It's impossible to second-guess the people. The incredible array of problems that arise will not be avoided through increasingly sophisticated, complex, and expensive multidisciplinary analyses. Rather, we can most easily and frequently avoid them by maintaining a system of honest and on-going two-way communication with those in the local community.

Living among the villagers is an important way to learn about cultural and environmental factors that affect a program. The closer the program leaders come to living as the villagers do, the better the result will be. It is only when you can come to speak the villagers' vocabulary, understand their priorities, and identify with their feelings and wants that they will come to trust you and you will get the understanding that will help you be truly effective.

Realize that you can't know everything about a situation and that at some point you need to start doing something. Learn as you go along in order to change.

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[8]Sawyer, K., *Group Genius*, Basic Books, 2007.

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As you apply this pattern and continue to learn about the area, your project is more likely to be successful. Start with Early Wins. After some initial success, new insights will emerge to help understand even better ways to understand the area. While it is impossible to learn so much that you never make a blunder, on-going learning about an area and its culture make it less likely that you will make an obvious or very serious mistake. Realize that in any culture, the people may not actually want what is best for them. Also, what people say they want may not actually be what they want.

As an outsider, you probably will never understand an area to the same extent as someone who has grown up in the area or has lived there for a long time, but if you listen to the individual voices of the community during a project and have a willingness to change and adapt, then a program that may otherwise have failed might be modified into one that can succeed.

Start to use Constructive Participation, since locals have intimate knowledge of the area. As village leaders move into decision making roles, they can help the program increase the likelihood of success in the area.

Muhammad Yunus won the Nobel Peace Prize in 2006 for his work with the Grameen Bank and the microcredit innovation. When Grameen Bank started working with Groupe Danone (known as Dannon in the U.S.) a French food-products multinational corporation, the management at Danone wanted to apply their old business model. Muhammad Yunus was insistent. "We will start with one mini-factory. If the factory is small and produces food that is sold to the people who live nearby, they will think of it as their factory. If it is successful, we can expand." In the rest of the world, Danone yogurt is produced in large quantities. Large shipments are delivered in refrigerated trucks to special air-conditioned warehouses, from which the yogurt is finally taken to supermarkets and grocery stores. At every step, refrigeration is used to keep the product cool and maintain the live cultures in a dormant state. In Bangladesh, maintaining this kind of refrigeration regime from factory to consumer would be impossible. Most rural Bangladeshis are off the utility grid, and many shops and stores in village markets don't have electric power. The local distribution system in Bangladesh would have to emphasize a quick turnaround from factory to consumer, with yogurt leaving the production line in the morning and ending up in children's stomachs within 48 hours. Danone was concerned at first about setting up a series of small plants. They thought it would make yogurt production costly and inefficient, but in the initial experiment, they learned that small could be just as efficient as big.

Prostitutes in Sonagachi, the red light district of Calcutta, India, are a world unto themselves. Social norms about female sexual behavior in India are such that prostitution carries even a larger stigma in India than elsewhere. Cut off from the wider world, prostitutes have their own subculture with an elite of madams and pimps. As in any subculture, its members strive for status. The

AIDS epidemic in India and the role of prostitutes in spreading AIDS caused increased concern about risky behaviors. Dr. Smarajit Jana, head of the All India Institute for Hygiene and Public Health, tried an experiment in 1992. He and his team learned about the sub-culture of the prostitutes and worked with it to fight AIDS. They formed a mutually respectful relationship with the madams, pimps, prostitutes, and clients. They noted the class system within Sonagachi. By trial and error, with feedback from the prostitutes, Dr. Jana and his team found a strategy for fighting AIDS. They trained a small group of twelve prostitutes to educate the others about the dangers of AIDS and the need to use condoms. These educators wore green medical coats when they were engaged in their public health work, which gave them greater status in Sonagachi. Condom use in Sonagachi increased dramatically. By 1999, HIV incidence in Sonagachi was only 6%, compared to 50% in other red-light-districts in India.

In the 1990s, agriculture development workers in Bangladesh were dismayed that small-acreage farmers were applying only a tiny fraction of the fertilizer that their rice crops needed, even though they could triple what they had invested in fertilizer from the increased rice yields. Development workers complained about the irrational and superstitious behavior of small-acreage farmers, and set up extension programs and farmer-training programs. But the farmers continued to apply only a fraction of the fertilizer that their rice needed to thrive. Finally, someone asked some farmers why they were using so little fertilizer. The farmers replied, "Every 10 years or so, there is a major flood during the monsoon season that carries away all the fertilizer we apply. So we only apply the amount of fertilizer we can afford to lose in a 10-year flood." Suddenly it became clear that the farmers were excellent, rational decision makers and that it was the agriculture experts who had a lot to learn. With very good reason, subsistence farmers care much more about the risk of losing their farm than they do about possibly tripling their income in a particular year.

After a great deal of success in Bangladesh with one irrigation invention, the treadle pump, many people now ask me if they could use treadle pumps to help farmers in other countries. "How deep is the water table in your village?" I ask, because a treadle pump won't lift water more than about 27 feet. "I don't know" is the most common answer. "Tie a rock on the end of a piece of string, go to the nearest well, and measure how deep the water table is," I say. "Or go to the government ministry of water resources—they likely have maps with that kind of information." The fact is you can't make practical plans unless you gather a lot of details about each specific village context. What kind of high-value crops you can grow depends on the type of soil and the climate. The price of fruits and vegetables is usually highest at the time of year when it's most difficult to grow them, so it's important to know why these crops are difficult to grow at that time of year and what can be done to overcome the difficulty.[9]

[9]Polak, P., *"12 Steps to Practical Problem Solving," World Ark,* March/April 2008, 30-35.

6. Early Wins
Show immediate small successes.

Grameen Foundation's Village Phone program has long been touted as the poster child for using mobiles in the economic empowerment of poor women. The program gives villagers in Bangladesh—and now in several other countries—access to microcredit to buy a mobile phone that can then be rented to other villagers who do not have a mobile of their own. The mobile phones not only create a new business opportunity for the poor, but also bring access to information, market, health and other services to the remote rural areas of Bangladesh. This was a major innovation, but a small thing: placing modern cell phones in the hand of the woman from the poorest households in remote villages, something that no telecom operator had dared to do in the past. A borrower buys a mobile phone to become the Telephone Lady of the village. She provides the telecommunication services to the village while earning profits for herself. By the end of 2008, there were about 354,000 village phone ladies who have together taken loans amounting to BDT 2.57 billion (USD 37 million). Now that mobile phone use is more common within the villages, the Telephone Ladies are gradually becoming Internet Ladies, offering the use of small computers to others in their areas. Building on their success as entrepreneurs with phones has enabled them to move to a new venture.

Your organization identified Organizational Cornerstones. You have selected an area for development. You have started to have Cultural and Environmental Awareness to determine the needs you can address. You're ready to start supporting projects.

Your organization has a list of potential solutions to tackle the problems in the field. Where should you start?

It's easy to be overwhelmed by the problems in a development situation. You want to tackle all the problems immediately, but everyone involved in the program has a limited amount of energy and time. Usually, the local people are only willing and able to work on a few problems at a time and they will tackle these problems at their own pace.

When people work for a long time without achieving recognizable success, they start to doubt that they can solve the problem. When programs fail, cooperation can degenerate into mutual recrimination and bitterness.

We have a tendency to want evidence in the form of a big success. Surely, that will be convincing. What's hard to see is the power of a lot of very small successes.

Therefore:

Identify a very small number of high priority problems that show potential for solution and address them to show immediate small successes.

Start with a limited number of projects chosen, above all, to achieve significant success in the shortest time possible; three months is a recommended time. Stay close to these pilot programs, so that 90% of them, if at all possible, achieve success.[10]

We all like to continue doing tasks that bring us satisfaction. Success is as crucial to making participation constructive as it was to creating the enthusiasm that motivated the participation in the first place.

In an agricultural setting, this can mean increased crop yield, decreased costs, decreased risk, or some combination of these. Carefully choose sustainable technologies for their ability, in a relatively short time, to bring significant increases in yields and/or decreases in costs without increasing risks.

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Applying this pattern builds a series of small successes. Early recognizable success is crucial in making participation constructive. Success can attract the highly concerned leaders that can result in **Constructive Participation**. It can strengthen bonds between workers and earn positive feedback from neighbors and friends. Success eliminates pressure to deceitfully claim results that were never achieved. It will overcome hopelessness and help to convince people that they can solve their own problems. Skeptical individuals are more likely to be convinced when they see that the program has achieved successes that benefit them directly.

One of the goals of successful projects is to teach people how to design and run their own projects. A second goal is to develop confidence both in the development organization and in the participants themselves. After achieving success on a small scale, doubts are diminished and hope is increased. The community is more likely to consider additional projects that they determine meet community needs and to put together a plan to make it happen. Make the community aware that not all projects will be successful and that failure provides learning opportunities. Successes and failures help to point the way to possibly larger projects.

Between 1987 and 1993, the Cantarranas Integrated Agricultural Development Program, financed by Catholic Relief Services and managed by World Neighbors, worked in some 35 villages around the central Honduran town of Cantarranas. They applied simple technologies that would not mean a lot of upheaval for the local farmers: in-row tillage and intercropped green manures. When these proved successful and agricultural output was increased, the program was gradually expanded into more general agricultural development and preventive health.

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[10]Bunch, R., *Two Ears of Corn, A Guide to People-Centered Agricultural Improvement*, World Neighbors, 1982.

In his two best-selling books, Three Cups of Tea and Stones into Schools, Greg Mortensen describes his efforts to build schools in Pakistan and Afghanistan. The interest in female education extended to women's vocational centers in Kabul—places where women could gather to learn skills such as weaving, embroidery, and other domestic crafts. The units became neighborhood literacy centers—classrooms where older women who had been deprived of the chance to go to school could learn to read and write. Classes were held in homes taught by teachers moonlighting for extra cash. It was a good experiment—but they failed to anticipate the reaction. Women attending these classes told their friends, who in turn told their friends, and soon applicants were signing up in such numbers that each center soon reached maximum capacity. Initially women came to learn to read and write, but the scope of their ambitions began to expand radically. Some started book clubs. Others began to exchange information about dental hygiene and reproductive health. The curricula spilled into nutrition, diet, and disease prevention. There were seminars on typing, learning to read calendars, counting money, and the most popular of all, for which the demand was off the charts: the rudiments of using a mobile phone. This was the result of a small, simple experiment with women who had been forced to lead restricted and sequestered lives, putting them into the same room, and giving them the license to dream. The idea of women teaching other women was so electrifying that each class rapidly grew, forcing them to set up 2, 3, and sometimes 4 teaching shifts to handle the load. Husbands permitted wives to attend classes hoping that learning to read and write might enable them to earn additional income for the family. Each night after preparing dinner and attending to domestic duties, many women did their homework together with their daughters.

The Delancey Street Foundation was started in California in 1971 by Mimi Silbert, a criminologist, and John Maher, an ex-convict. The two formed the foundation's core beliefs: That people thought to be incorrigible can get better by working hard and holding each other accountable. Most new residents start with simple tools and simple tasks. They are given a broom and a list of chores. While sweeping or mopping or shoveling snow, the more experienced residents whisper in the ears of the new residents, telling them about the foundation and its history. By the end of their time on a maintenance crew they know the entire history of the property they're cleaning. Slowly but surely, in a series of small steps, a foundation is built. While doing menial work, newcomers are also required to get their high school equivalency diploma if they do not already have it. Over time, every resident learns a job skill. Slowly but surely, self-confidence comes back. Delancey Street residents can't say what moment or event caused them to abandon their old ways. All they know is that they're not the same people they once were.

7. Constructive Participation
People must be involved in doing the work.

Roy Kady is one of the Navajo Nation's best-known male weavers. He's a member of the Dibé bi' iina' group (Sheep Is Life) and has dedicated his life to the Navajo's beloved Churro sheep, as well as to the tradition and spiritual art of weaving. "In our lives, sheep have been the most important," Kady said. "Herding sheep provides you with the opportunity to learn about the earth - rocks, land formations, plant life." But the sheep industry, which is vital to both the Navajos' economic future and spiritual well-being, has been deteriorating. After years of continuous over-grazing, much of the Navajo land has eroded and can't continue to support a sheep industry of sufficient size. Constant in-breeding has reduced the quality and number of mature sheep and goats. Fewer than 550,000 head now exist, and as a result, the last 15 years have seen Navajo wool production decrease to one-third its former volume. After being contacted by The Ranchers Roundtable, Heifer International began sending top-quality rams to 100 Arizona and New Mexico families in the fall of 2002. Kady knew immediately that Heifer was different from other organizations. He said. "These families are very independent and like to do things their own way, and Heifer understands because of mutual respect."

Your organization has identified Organizational Cornerstones. You have selected an area for program development. You have started to acquire Cultural and Environmental Awareness to determine what needs you can address. You have identified some projects that might produce Early Wins.

Providing the answer you see as the best way to address a problem without involving the people may satisfy your needs, but it will not provide a sustainable solution.

When you see a problem, your first inclination might be to jump in and solve it. It can be very tempting to produce an immediate solution and then ride off into the sunset basking in the gratitude of the people you have rescued.

Unfortunately, the "knight in shining armor" image runs counter to the locals' feeling that the solution is theirs. You may feel that you are involved in a difficult, uncomfortable, and at times, dangerous job, and your only reward is the appreciation you receive for having made sacrifices. However, your job is not to be a hero, but to make heroes of the people you are working with. Some gratitude will always be forthcoming, of course, but when things are as they should be, in the end, the people will mostly be thanking each other.

The danger is that your influence can be so overwhelming that it will survive long after you have gone. Two years after one African program had been "Africanized," the size of each resident trainee's plot of land, the acreage to be planted in each crop, and the techniques to be used were all still dictated by rules laid down by the development organization who, perhaps inadvertently, had established a tyranny of rules and attitudes that "this is how it is done" that no Africans dared to question.

It is difficult to balance the degree to which you allow people to make and learn from their mistakes compared with telling them what to do or doing it for them.

Therefore:

The work must revolve around participation by the people. Avoid paternalism, that is, doing all the work for the people. Plan up-front for ownership by the recipients.

The opposite of doing for the people is involving the active participation by the people. This participation must happen in the preliminary and decision-making phases as well as project execution. Increasing participation is essential to the long-term survival of the program. Work toward Empowered Women and enlist one or more Small Support Groups.

Participation provides tremendous advantages for a program. It is more likely that the program will respect their cultural values and address their needs. Those who participate can enable a better understanding and better communication between the program and the local people. Involvement of the people helps them learn to appreciate the difficulty of the work of the program and helps to address any suspicion about its motives. Those who participate are more likely to commit to improvement.

Development personnel will likely be required to help get the program started. The degree of assistance needed will vary. Avoid providing any more information than necessary, and work to reduce dependency on your input. To this end, do all that you can so members of the community will follow the recommendations in Passing on the Gift.

Constructive participation is learned over time. Some development agencies, trying to avoid paternalism and the "know it all" attitudes of the past, have moved to the opposite extreme of providing almost no input at all. They set up a local committee and start sending them money, assuming that the only thing needed is funding. This does not work well. It takes effort to help people learn how to participate constructively. Short courses and constant attention to what people are learning from the daily experience in the program is required.

How you work with the people may influence adoption of the technology. Probably the most important factor is developing Cultural and Environmental Awareness. The appropriateness of the technology is key to successful adoption and requires feedback from the people in the early planning stages. It helps to build on traditional practices so as not to introduce a radical change, which forces people to take a big gamble on unproven techniques. Poor people are less likely to take on a large amount of risk. Development must introduce simple techniques that can easily be integrated into traditional practices.[11]

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[11]Cochran, J., *Patterns of sustainable agriculture adoption/non-adoption in Panamá*, Master's thesis, McGill University, October 2003.

One important goal of all programs should be the eventual ownership of local participants. From the beginning, every activity should be organized so local people can learn how to manage and sustain it. The purpose of each activity, apart from its own results, is that the local people learn how to manage it themselves.

Mistakes will likely be made. Be humble enough to realize your mistakes and realize that some of the local people's methods will be improvements on those you have introduced. Mistakes can provide valuable lessons, as long as they are not so frequent or so disastrous that they reduce the program's enthusiasm or faith in local leadership.

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As a result of their experience, participants learn to plan, solve problems, teach others, and organize themselves. They learn how to face the give and take within an organization and how to help each other without hurting feelings. These skills are essential if they are to form and manage their own organizations successfully.

Participants will increase their self-confidence, pride, and the satisfaction of successful achievement. They will develop the ingenuity and creativity that will help them continue to improve their communities. These changes are crucial to the fulfillment of the broader human goals. This growth through participation is the essence of development, where people learn to take charge of their own lives and solve their own problems.

However, participation is not automatically a good thing. It can divide and tear down as well as unite and build up. The challenge is to keep it constructive. In some programs, a single leader can emerge and take control and everyone else learns to be submissive. In other situations, lack of experience at making decisions as a group causes disagreements. Factions develop and groups disintegrate. Even good decisions can lead to failure, causing disappointment and mutual casting of blame.

Many cultures have no acceptable way of correcting inappropriate or dishonest actions of leaders, so when leaders misbehave, people simply sit back and gradually become convinced that organizations are ineffective, or even dangerous.

Usually little is known about handling money. Financial losses as a result of insufficient planning, poor decisions, graft, or nepotism can cause division and mutual recriminations. These practices teach people that others are not trustworthy, that getting involved in organizations only causes problems, and that locals are not capable of helping themselves. The practices teach manipulation, deceit, exploitation, individualism, hopelessness, and dishonesty. They are destructive and do not produce development—they preclude development. Initial planning and working agreements where risks are anticipated is always a good idea. We hope to

have patterns to address these negative side effects.

CHOICE (Center for Humanitarian Outreach and Intercultural Exchange) offers solutions to the hardships of poverty in the rural villages of the world with simple technologies, self-help initiatives and public awareness. The goal is to establish local institutions that can eventually function without outside supervision. These autonomous institutions may take the form of cooperatives, village committees, women's organizations, small scale enterprises that enhance employment opportunities, or social and cultural organizations that stimulate villager pride and individual dignity. Villagers, however, are taught not to be limited by any of the systems that may have been established with the help of CHOICE; the ultimate goal is to teach villagers to rely on their own ingenuity. CHOICE supports the villagers in the mobilization of their own resources to carry out their chosen solutions. Assistance and intervention from CHOICE is provided only in areas where villagers cannot provide for themselves.

In his two best-selling books, Three Cups of Tea and Stones into School, Greg Mortensen describes how he started building schools with the close cooperation of the local communities in Pakistan and Afghanistan. In 2005, there were riots in response to the Newsweek story about the desecration of the Koran. Areas where NGO offices were located had been destroyed. The buildings, which housed the Aga Khan Development Network, FOCUS, East West Foundation, Afghan Aid, and other NGO offices, lay in ruins, even safes and desks had been smashed to pieces. As he pulled up in front of a new school, Greg and his team could see that no windows were broken. The door was intact. A local resident explained that during the peak of the riots, a faction of the mob had stormed down the road in the direction of the school. Before reaching the boundary wall, they had been met by a group of elders who had donated the land for the school, organized the laborers who had built it, and participated in the laying of the cornerstone. The elders informed the rioters that the school belonged not to a foreign aid organization but to the community. It was their school, they were proud of it, and they demanded that it be left alone. With that, the rioters dispersed. After all the damage had been tabulated, the cost of the riots was assessed at more than $2 million. The school that Greg had helped to build was one of the few buildings associated with an international aid organization that was left standing, and the reason for this, he is convinced, is that the school wasn't really "international" at all. It was, and remains, local in every way that counts.

Global Volunteers is a private, non-profit, non-sectarian, non-governmental organization engaging short-term volunteers on micro-economic and human development programs in close partnership with local people worldwide. Working at the invitation and under the direction of local leaders, volunteers help create a foundation for world peace through mutual international understanding. Their purpose is to maintain a sustained service partnership with the host community and provide volunteers an opportunity to serve. In 1984 Global Volunteers pioneered direct service-learning programs abroad. Today, they mobilize more than 2,500 volunteers annually on work projects, assisting more than 100 host communities in 19 countries on 5 continents through volunteer service, direct project funding and child

sponsorships. Global Volunteers is guided by a unique philosophy of service, stating that to be successful in sustainable development assistance, outsiders must work at the invitation and under the direction of those they are attempting to assist. By remaining faithful to this philosophy they've created opportunities for volunteers to provide a genuine service all over the globe.