

The challenge

A global system of networked knowledge may benefit those who are facile with networks – human, organizational and cyber – but the same system is further sidelining communities which are marginalized, have poor quality education and are losing their youngest, most facile members. Increasing levels of poverty, unemployment, ill health and loss of working age populations create a cycle of deteriorating resilience and adaptation.

Yet such communities are not without inherent strengths. They understand the impact of the global forces that are brought to their boundaries – climate change, disease, population shifts, social and economic dynamics. They have existing social, political and economic systems that have made some adaptations to modern challenges. They have young populations who are eager to learn and take advantage of new opportunities. A community-based learning system which takes advantage of the strengths, is aimed specifically at increasing resilience and is built around knowledge-economic incentives may be sustainable, and have positive returns to the global community.

The vision

The missing element *for these communities* is the ability to assess resource efficacy within a local context that is changing dynamically. Specially, the communities and local partners need the ability to:

- understand new situations, analyze them and combine this knowledge with existing circumstances, resources and understandings;
- access, learn from, use and integrate knowledge from global sources into the local solutions; and,
- adapt these solutions based upon feedback of success, analysis and increased understanding as learning progresses.

Much of this requires specific, local knowledge, but knowledge which is integrated with global resources and guidance.

The design

Bayoom hub is a networked, partner-based learning system that begins with local partners to build both horizontal and vertical networks to support community-based projects. Both the community project *and* the networks should be sustainable and scalable.

We work with local partners to design the means to gain knowledge from the communities. Such knowledge becomes the basis for solutions that work within local circumstances. This is the basis for sustainable solutions. Catalogued observations of local processes is also the beginning point for horizontal networks and vertical networks

Once a sustainable system is in place for a community, and data is helping to improve it dynamically, the same model can be expanded to other communities. Networked communities provide a wealth of data of what works, when and how it works (or fails), with whom it works, and under what circumstances. This requires continual, accurate, valid information from the communities that can only be garnered through skilled research designed with local guidance. Using careful analysis, the data can begin to show patterns (big data).

With each community network initiative, **BOH** works closely with local partners to design the interface and local networks. Networks of data increase sustainability for communities and the partnership initiative. All parties benefit from what they are learning. We use our partnership network to analyze the learning process (AI).

BOH provides the framework for learning through both horizontal and vertical networks of communities and partners. It also provides the administrative, logistical and legal framework to collaborate with larger entities - such issues as sharing data, analysis and research (including sharing with communities). It is a joint decision.

We are innovation

The structure itself is an innovation and we have experts in community learning, research, institutions and building knowledge-based networks. **BOH** brings in other expertise as needed. We learn from each initiative and partnership in the same way we all learn from the communities – by building networks (among partners) and learning from how we work.

BOH also has intentions to build at least two other types of innovations into this framework. First, we are creating networks from which people learn. How can we continually build the software that helps each of our partners learn from each other? This means moving beyond chats, emails and video conferencing to something that works to build new ideas collectively and asynchronously. Such a learning network ought to lend itself to analysis and improvement using AI.

Second, we will innovate the ways in which outcomes and processes are documented. We want to broaden the base by which research is designed, validated and disseminated. Often, academic papers are the sole province of senior researchers. But, through innovation, small groups from various parts of the project (community, student, researchers) can collaborate. We will build a framework that integrates incentives to do so. Also, videos, stories, small innovations, blog and notes should be collected at the community level and placed back on the web. This is not the usual slick “final product of a project” video, but ongoing knowledge coming from the community and the on-the-ground researchers. This is grist for the rest of the world.