# SIX METHODOLOGICAL GUIDELINES FOR ORGANIZING INCLUSIVE INNOVATION IN BOP PROJECTS

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## ABSTRACT

Base-of-the-Pyramid (BoP) inclusive innovation projects aim to design, produce and market products and services for large and relatively poor market segments in developing countries, for example for people who have less than several dollars to spend per day. BoP projects have 'normal' goals, deliverables, budgets and timelines. In addition, there are six guidelines that are 'special' for projects in a BoP context. 'Special' as they might be different from how they are dealt with in regular innovation processes. Based on a literature review a conceptual framework is proposed following six elements: 1) Collaboration building and cooperation; 2) Business models and financing; 3) Scaling-up innovation; 4) Co-creation, active participation and social embeddedness; 5) Institutes, policies and strategic alignment; and 6) Focus on capabilities and evaluation. These guidelines are plotted on the phases of a typical inclusive innovation project, as a first attempt to support practitioners to practically apply the guidelines.

*Keywords* – Methodology, business model, collaboration, co-creation, scaling, capabilities, strategic alignment, innovation

## 1. INTRODUCTION

The difference between BoP context and traditional western markets, is nicely captured by London and Hart [1] in the phrase: "Needs, needs, needs, but no market". In both contexts there are consumer needs but whereas these needs are served in the western context through a functional 'market', such a market is non-existing in the BoP; the poor's unmet needs can be regarded as untapped market opportunities. Research indicates that innovation strategies that are effective in serving or entering existing consumer markets are ineffective in creating new consumer markets [1] [2].

When developing inclusive innovations for the BoP, an entrepreneur faces specific challenges that are uncommon in 'regular' innovation projects. Although many inclusive innovation projects nowadays aim for a market based approach, they are working in an environment that has a history of aid and development cooperation. One of the major concerns to consider is therefore "the development effect" during the project as it is influential in decisions about the adoption of new technologies and subsequent behavior [3].

This paper is a theoretical exploration into six methodological guidelines that describe the specific challenges a BoP entrepreneur can come across in inclusive innovation project. It combines lessons learned from the development discourse with state of the art research on inclusive innovation at the BoP leads. The six methodological guidelines are: 1) Collaboration building and cooperation; 2) Business models and financing; 3) Scaling-up innovation; 4) Co-creation, active participation and social embeddedness; 5) Institutes, policies and strategic alignment; and 6) Focus on capabilities and evaluation.

## 2. COLLABORATION BUILDING AND COOPERATION

"The opportunities at the BoP cannot be unlocked if large and small firms, governments, civil society organizations, development agencies and the poor themselves do not work together with a shared agenda" [4]. Inclusive innovation projects involve different stakeholders, form diverse (cultural, educational, ethnic) backgrounds, often from different demographic regions. Collaboration is needed between these stakeholders to ensure everyone is on board. Ignoring this network of organizations and assuming all knowledge and skills can be found in one's own organization, or "when time comes" can be problematic in further development. "MNCs working at the BoP learn rapidly that they have to learn to live with a wide variety of relationships with a large number of institutions" [4].

Organizing and promoting a productive and creative cooperation between organizations and between people is therefore especially critical for BoP innovation projects. Typically different 'knowledge bases' are combined: they involve commercial businesses and not-for-profit organizations and combine commercial and social logic. Despite the fact that "technical expertise in development is still associated with expatriate advisers and with men" [3], more transfer of knowledge from South to North taking place. BoP projects have the potential to combine the transfer of knowledge and technology in 'both directions', e.g. technology goes from North to South, while market intelligence goes from South to North. The last couple of years, examples of 'reverse innovation' have been identified: cases in which an innovation 'from the South' is exported 'to the North' [5]. For a BoP entrepreneur this is relevant, as in scaling the innovation, also the North is a potential market, which might make a more economically viable innovation.

As NGOs, civil society organizations and donors dominate the development agenda and are important stakeholders to collaborate with in BoP projects, specific attention needs to be paid to the different connotations that can be given to the term *partnership* in the development sector. The term partnership is rather vague and how this partnership is shaped and working out in practice depends on the power relations between partners. Although the term partnership might sound like all partners are equal, in reality this is not the case [8]. In this respect it is important to keep in mind that the different partners involved in a collaboration are not equal, although the term partnership does imply equality. "Categories

such as 'targets' and 'recipients' have been replaced by notions of "partnership" for "capacity building." [3]. Knowing that the target group and local partners that are involved in the innovation project have the background in development projects, might mistake certain terminology and expectations that come with it.

In conclusion project partners should be strategically chosen, keeping in mind the (political and strategic) agenda of the collaboration and the partners involved [6]. Especially with local partners, that have seen agencies come and go in that past years, "trust might be difficult to build after 50 years of suspicion and prejudice based on little evidence and strong stereotyping" [3]. Strategically selecting partners, setting up partnerships and manage the partnerships, should therefore be the main focus of collaboration and cooperation.

## 3. BUSINESS MODELS AND FINANCING

During the development process there is ample time needed to develop a viable business model in several iterative stages. In developing a business model, one should take into account that the principles on which the market in a BoP context is currently functioning, might differ from the Western market place. Neoclassical economics assumes that it is always the market that allocates resources most efficiently [7], however for social goals in for example health and education (that are typical in BoP projects), this is very likely not the most effective and efficient model [7] [8]. Decisions for purchasing goods is not a full rational process and is done entirely on the basis on self-fulfillment, rather people make decisions by the commitment, emotional attachment, deliberation and human interaction [7]. Sen [9] describes this as an exchange economy which depends on mutual trust and the use of norms – explicit and implicit [9].

In initial stages of the innovation project it is challenging to find sufficient financial resources, due to the (possible) uncertain outcomes of innovation projects. Many current initiative in BoP ICT projects are becoming 'dead pilots', partially because they are fully grant-based [8]. In 'regular' development projects, financing usually comes through donors. Donors often require certain outcomes and impact of the project, as well as proper monitoring of the project. But donors find it difficult to finance open-ended needs assessment as "these are difficult to assess according to sector-based criteria" [3]. Also the way donors spend their money has found much critique; Dambisa Moyo [10] summarized it in the title of her book "Dead aid", saying that the aid money has done very little for Africa. However, many projects, though possibly market-based today, often have used grants in their initial phases to grow [8].

Therefore BoP innovation projects often require innovative financial approaches [4]. Micro financing is one of the options, but it is typically available for individuals and for micro-businesses. Regular banking services are typically available for larger companies. Small and medium businesses, however, often lack access to appropriate financing options ('missing middle'), which can limit their potential growth [11]. "Investor interest in BoP markets is based on expectations of a large-volume, low-risk and high return on capital employed business opportunity" [3], but they state that they are still missing adequate models to measure the social impact of the entrepreneurs they want to invest in. Current developments in crowd funding platforms, incubator labs and venture capitalist for African entrepreneurs can contribute to the development of BoP projects. Also recently a Business model Canvas instruction for BoP entrepreneurs was launched [12].

## 4. SCALING UP INNOVATION

Scaling-up the results of an innovation project into full deployment and, e.g., bringing new business initiatives to new regions or new sectors, is always a challenge, and especially so for BoP project. Even the most popular ICT4D initiatives, have too high expectations over too short time. In 2005 Nicholas Negroponte announced an initiative called One Laptop Per Child (OLPC) at the World Economic Forum in Davos, Switzerland. The vision was that with this relatively cheap laptop children in underdeveloped regions could help teach themselves and others. It was envisioned that within 2 years 20 million OLPCs were introduced. This appeared to be a rather ambitious goal as is explained in an evaluation of this project in the Communications of the ACM in June 2009. It is stated that *"expecting a laptop to cause such a revolutionary change showed a degree of naiveté, even for an organization with the best intention and the smartest people"* [13].

In the study by Hystra [8] it is stated that many ICT4D projects can be regarded as "dead pilots". Projects that have reached the million customer landmark, remain the exception [8]. Dambisa Moyo in her critique on aid also points out that there is a "Micro-macro paradox; a short term efficacious intervention may have few discernible, sustainable long-term benefits. Worse still, it can unintentionally undermine whatever fragile chance for sustainable development may already be in play" [10]. In 2009 Unicef Uganda published a picture of all the mHealth pilots in Uganda [14], which again shows the difficulty of coming out of the pilot-phase and go to commercialisation of the service. This illustrates, despite the fact if these pilots will become sustainable, many pilots are started, also very often trying to solve similar problems. Reaching scale in this sector therefore is a big challenge and could possibly partly be attributed to the fact that donors mainly finance projects that have a well stated goal. There are some often occurring structural flaws resulting in a failure to achieve scale are listed [1]:

- A purely top-down approach to Base of the Pyramid enterprises. Successful Base of the Pyramid enterprises are mostly built bottom-up.
- Lack of knowledge of the basic tools of business.
- Lack of textbook solutions for local, micro level challenges: creating markets where there are none, engaging a community already fractured along caste or tribal lines, non-traditional approaches to marketing, building bridges to governments and other stakeholders that often seem distant and unreachable, managing distribution chains in the face of unreliable transport and power, etcetera.

Special effort is typically needed to ensure the sustainability of the innovation and effective scaling-up. If money streams are secured to continue the project, a proper scaling strategy has to be put in place. Making use of the social network to diffuse the innovation would be one of the strategies to include [15].

## 5. CO-CREATION, ACTIVE PARTICIPATION AND SOCIAL EMBEDDEDNESS

A significant part of the BoP population is not integrated into the global market economy, which makes it difficult to understand market demand [11] and to relate these to people's needs [4]. In development projects the lack of knowledge about market demand,

can be the lack of knowledge about a culture: "Cultural barriers and gaps in local knowledge are often seen to impede the progress of development interventions." [3]. Culture is often used for categorizing what cannot be identified or explained" [3] and is therefore given as the reason for failure of the project. In development cooperation they have therefore applied participatory approaches and involve the local people to understand the culture and create ownership. "Many development projects had floundered because people had been left out, where they were allowed in, much more was achieved with less" [16]. Embedding BoP projects in local communities can help to understand culture and history, and to integrate them into the community in order to co-create innovative and systemic solutions for mutual value [17] [11].

But now the question arises: who are the local people? "A distinction between donors 'partners' and the ultimate beneficiaries – the real locals – is impossible to sustain" [3]. Therefore in co-creating with "local people" and "local organizations" is similar, but one just has to wonder who is the BoP?.

The BoP entrepreneur also brings his or her own culture in the development of the service. Van Stam [18] has made a comparison between different aspects of a Western culture and the Ubuntu culture in Zambia [18]. The way 'local people' look at the BoP entrepreneur is influencing the way they respond. "Whether colonial or government, donor supported development projects, has a profound influence on the way in which local people respond to the latest one" [3]. In tandem with various interventions, people have learned to adapt their behavior in anticipation of where they see potential benefit" [3]. In co-creating with them, involving them in the development process this should be kept in mind as it can influence the response and also the own view of what is good.

Co-creation can be done on multiple levels. It is related to user involvement in product and service development. An user can be involved in multiple ways, and co-creation is the most advanced and intensive one. It is therefore also a more time-consuming method and should be used strategically and not as a rigid model for developing new services.

The idea of co-creation is that instead of one organization gathering a lot of information and transforming that into a product, this is a process in which both sides contribute and create the product together [17] [19]. What should be kept in mind is that in co-creation processes it is important there is a stakeholder that has a stake in the final product to succeed, meaning wanting to create a business with it. Only then the right decisions can be made. It requires an open mindset from people that are used to thinking "what is best for them", as the 'them' in this case are often people that are difficult to relate to. Furthermore, what is aimed for with the service, often a social goal, might not be what users want, which means that it needs to be "repackaged" in order to reach its potential. Only through co-creation and active participation of the target group, such structures can be discovered.

## 6. INSTITUTES, POLICIES AND STRATEGIC ALIGNMENT

The scaling-up of BoP innovation projects typically requires well-functioning institutions and institutional structures to support the scaling-up of the innovation. Unless somebody knows how to interact with a particular bureaucracy, gain access to resources and negotiate obstructions, the best policy documents achieve nothing [16]. In the development sector the well-functioning of institutes

and institutional structures is related to activities in 'good governance'. Alongside the opening up of markets, deregulation and privatisation ran an agenda for political reform: calls for democracy and 'good governance" [16].

In the development discourse there is a strong donor's assumption that they have better understanding of a country's needs than its' own government [3]. Most of the time certain preconditions are set for overseas development aid, and agendas of multilateral donors is mostly based on the UN millennium development goals. This means that what happens in a local context, is mostly depending on agendas of national and international institutions. Strategic alignment either for future buy-in of the idea, or to influence a future agenda, is necessary from the early stages of the development process.

Despite BoP projects not having an explicit ambition to change policy agendas, governance agendas and policies will have influence for e.g. the uptake and implementation of the service on a local and international level. For example it is critical to understand national or local policies and to use them constructively and strategically in further developing and deploying the innovation. Sometimes, it may be necessary to work at influencing or modifying policies, e.g. if they directly affect success or failure of the innovation. Overall, sufficient institutional capacity and sufficient infrastructure are critical for scaling-up innovations.

## 7. FOCUS ON CAPABILITIES AND EVALUATION

At the start of the development agenda, just after the second world war, development was measured in terms of GDP per capita. Later a focus was shifted to more social goals, ultimately resulting in the millennium development goals. This resulted in projects and programs that were set-up around reaching the targets as set by the United Nations. Furthermore there was a shift in providing money, to providing goods and later providing knowledge and people. Still outcomes of projects needed to be measured in terms of e.g. how many people were reached, benefited from it, and how it contributed to the millennium development goals. Notwithstanding that the MDGs are indeed good pillars to alleviate poverty, a new discourse was introduced by Amartya Sen that said to focus on increase of people's capabilities to live the life they want to lead [9]. Focusing on capabilities instead of e.g. numbers of beneficiaries or providing goods, is an innovative approach that is felt to relate more to sustainable development.

However, to be able to measure the increase of capabilities, and which works better than the other, proper evaluation mechanisms need to be put in place. Common methods are counter factual analysis (what would have happened if we would not have done the intervention) or follow the money (how much (people) are reached, with the money that is spent). Esther Duflo has introduced a method that is new to the development sector and provides proper insight in what works and what doesn't an her evidence based approach with randomized control trials [20] [21].

The last methodological guideline therefore describes the importance of the focus on capabilities and evaluation to ensure that the initial goals of the BoP project will in the end achieve it, one way or the other. It is critical for BoP innovation projects to focus on increasing people's capabilities, while organizing and managing the project. This Capability Approach [22] [23] involves a focus on people's development and freedom—instead of a focus on 'merely' supplying hardware or equipment ('too little'), or
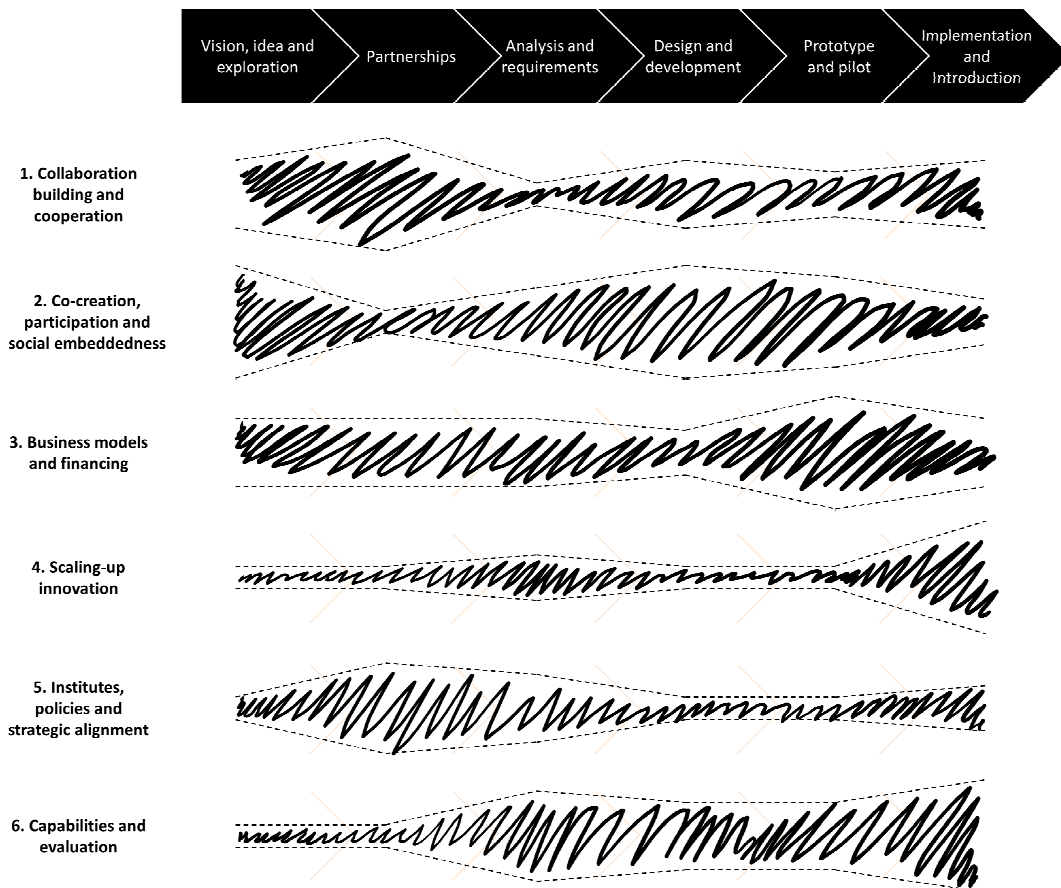
**Figure 1** Conceptual Framework

'overdoing' it by prescribing specific behaviour ('too much') [9]. This focus on people's capabilities, development and freedom can be integrated into the project plan, and needs to be evaluated in iterative cycles of the project, in order to ensure a productive combination of commercial and social goals. The ways to evaluate the improvement of people's capabilities is currently discussed, both practically and theoretically [23] [24].

## 8. CONCLUSION

Theory gives ample evidence of the relevancy of the guidelines as described in this paper. Also it gives relevant lessons learned to overcome challenges in developing inclusive innovations. In summary the guidelines are:

1. Collaboration building and cooperation
   BoP projects need multiple stakeholders on different levels, with different backgrounds to work together. Therefore it is needs to strategically choose partners and manage the partnership professionally.
2. Business modelling and financing
   Sustainable ICT business models for the BoP are scarce and it is challenging to find initial investment when outcomes are uncertain. Creative ways to acquire funding (microfinancing, crowdfunding) and innovative business model creation is needed for the adoption of the service.
3. Scaling up Innovation
   Many projects fail after initial pilot phase. For sustainable solutions scaling up is crucial, and developing a scaling

strategy early in the project is needed to ensure sustainability of the project after the pilot phase.
4. Co-creation participation and social embeddedness
   There is a lack of knowledge of market demand and target group characteristics in the BoP. Participatory approaches should be used to ensure ownership by end-users and appropriateness of technology.
5. Institutes, policies and strategic alignment
   Policies and policy makers of governmental and global institutions will have influence on the adoption of the service. Lobbying with these institutions should therefore be incorporated in the development process.
6. Capabilities and evaluation
   Reaching social goals can't be done without increasing people's capabilities. Incorporate proper evaluation mechanisms to ensure the project has the impact it was supposed to have.

To make the guidelines applicable in practice, the guidelines are mapped on an innovation process. We do not wish to discuss the ideal process, and therefore describe an innovation process only in general terms.

In very general terms, an innovation process starts with an idea and then proceeds in several iterative phases towards realization. The first phase focuses on vision and idea development and on exploring possibilities. The second phase is concerned with identifying appropriate partners and building partnerships. The third, fourth and fifth phases are concerned with analysis and requirements, design and development, and building and

evaluating prototypes and organizing pilots. The sixth phase focuses on implementation and introduction of the new product or service, and on deployment.

Moreover, these phases are ideally organized as an iterative process, promoting step-by-step learning, and revisiting and adjusting assumptions. In addition, the process is ideally organized in a multidisciplinary fashion, involving people with different backgrounds, from different organizations.

Although each of the six guidelines need to be taken into account throughout the entire innovation process, we would like to propose that specific guidelines need extra attention in specific phases of the process. Figure 1 illustrates the relative importance of each of the guidelines in each of the phases of innovation in a conceptual framework. In the first two phases (Vision, Idea and Exploration and Partnerships), Collaboration building, cooperation, Co-creation, active participation and social embeddedness, and Institutes, policies and strategic alignment are critical. In the next three phases (Analysis, Design and development, and Prototype and pilot), Capabilities and evaluation, Co-creation, active participation and social embeddedness, and Business models and financing are critical. And, finally, in the final phase (Implementation and introduction) Scaling-up and Capabilities and evaluation are critical.

## 9. DISCUSSION

We identified and discussed several critical methodological guidelines of inclusive innovation processes for the BoP. However, we are aware that further theoretical research and more systematic case studies analysis are needed to get a more solid understanding of how innovation processes for the BoP need to be organized and managed. One area that would need to be studied, for example, are projects that aim at creating sustainable innovation infrastructures (eco-systems) in BoP countries. Such projects address the organization of environments that foster BoP projects by focusing, for example, on setting-up educational programmes or providing seed funding for social entrepreneurs.

Moreover, it would be valuable to further study questions like the following:

- How does the initiator/owner of the project influence the way in which the innovation process is organized? Would the innovation process be different/more effective if it were initiated by, for example, an industrial partner, or by a not-for-profit organization?
- How does the sector (for example, education, agriculture, healthcare, finance, etc.) in which the innovation project takes place, influence the ways in which the innovation process needs to be organized?
- How does the type of innovation (for example, a technical innovation, a social, service innovation, a new product, a new service or process) influence the innovation process? Are some types of innovation more successful? What are then the key success factors?
- Which approaches, tools and methods are used in innovation process? And which are most effective? Do we need other or better approaches, tools or methods in order to overcome the challenges related to the six elements that were identified?

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