The AIDED Model: A Practitioner's Guide

Many innovations that have been shown to be both efficacious and cost-effective are not widely implemented in practice. Why this occurs is the subject of much scholarship and debate, particularly in global health where the need for scale up of evidence-based practices is critical for improving human health. The AIDED Model posits five interrelated components as essential to the complex process of scale up: 1) assess the landscape, 2) innovate to fit, 3) develop support, 4) engage user groups, and 5) devolve efforts for spreading the innovation. The AIDED model was developed by a team of global health researchers at Yale, and is based on the study of successful global health innovations in family health.

At the most basic level, the AIDED model highlights essential issues that must be addressed to help innovations become embedded into the routines of the target user group, and then to turn that initial success into a replicable phenomenon that spreads to many subsequent user group. **This guide includes descriptions and guiding questions for health policy makers and practitioners who are interested in applying the AIDED model to design, implement and scale up innovation.**

The suggested use for this guide is to work through the questions outlined in the two sections while planning scale-up activities. These questions can be used in creation of project plans and supporting scale-up documents. It is suggested that implementers refer back to this document at regularly established intervals throughout implementation to monitor and evaluate progress. It is important to note that AIDED steps are not linear and should be applied in conjunction with each other.

The two sections of the guide include:

1. Defining the Innovation and the User Groups
2. Applying the Five Steps of the AIDED Model

Five components of the AIDED Model

- **Assess:** Understand users receptivity to the innovation and the degree of support for the innovation in the political, regulatory, economic, socio-cultural, and technological environments
- **Innovate:** Design and package the innovation to fit with user groups and their environmental context, and to enable the initial user groups to spread the innovation via social networks
- **Develop:** Build on sources of support and address resistance among stakeholders and opinion leaders; encourage policies, social norms, and infrastructure that will support take up of innovation
- **Engage:** Use existing roles and resources within user groups to introduce, translate, and integrate the innovation into each user group's routine practices
- **Devolve:** Use on existing social networks to release and spread the innovation to new user groups

1. Defining the Innovation and the User Groups

The innovation: The AIDED model may apply to many different types of innovations, as long as they are clearly defined. Some questions to consider when defining the innovation are:

- What, specifically, is the outcome or action that the innovation is designed to produce?
- Imagine the innovation as a package to be delivered to the targeted user group. What information, products, or services are ***essential*** components of this package?
- What aspects of the innovation could be ***tailored or adapted*** without compromising the key outcome(s)?
- What is truly new and/or unfamiliar to the target user group in this innovation?
- Can mechanisms to promote learning, adaptation, and evolution be engineered into the innovation?

The first group to use the innovation: Whether a country, a village, a specific demographic group, a specific healthcare facility, or some other target group, the first user group of an innovation must be well-defined. For scale up of an innovation, the AIDED model emphasizes the necessity of understanding the interaction between the innovation and the first target group. It can be tempting to design an innovation that is so simple or effective that it could be used anywhere, but in reality, a thorough understanding the initial user group, will help the innovation to spread later on. Questions to consider when defining the index user group include:

- How does the user group define itself?
- What constitutes membership in this group?
- How are new ideas, products or behaviors typically introduced to members of the group?
- Who maintains the status quo inside of this group (who may be resistant to change), and how is the status quo preserved?

Later groups to use the innovation: The AIDED model suggests that scale up, often the most challenging process in global health innovation, works best along pre-existing networks between and among user groups. Questions to consider when defining the index user group include:

- Which potential later groups have connections to the first user group via pre-existing communication or collaboration networks?
- In what ways are the later groups similar to and different from the first user group?
- How do the later groups perceive the first user group?
- Do these groups share ways of bringing new ideas, products, or behaviors to their members?

2. Applying the Five Steps of the AIDED Model

ASSESS: Comprehensive assessment will generate understanding of two significant features of the user group. First, the **Assess** step goes well beyond a traditional assessment of needs and wants to understand the **receptivity of the user group** to the specific innovation. Second, it is critical to consider **external factors that influence the receptivity** of the user group. The assessment must identify the socio-cultural, political, economic, regulatory, technological, and informational factors that affect and/or influence the interaction between the innovation and the user group. Questions to consider when defining the index user group include:

- Has a needs assessment been conducted for this user group? What were the results?
- Have similar innovations been introduced to this group in the past? What were the results?
- What political or regulatory factors around and within this user group may affect individuals' willingness to use this innovation? These factors could include formal politics (upcoming elections, conflict with party platforms) or informal politics (organizational power, interests and competing initiatives). Can these factors be manipulated in favor of the innovation?
- What social norms or cultural factors may help or hinder the user group's receptivity to this innovation? Include consideration of gender, religious, and social hierarchies. Can these norms be used to introduce the innovation?
- What key changes in the environment can be utilized to increase user groups' receptivity to the innovation?
- Do groups within or around the target user group have conflicting interests or beliefs that may hinder take up of this innovation? If yes, can those conflicting interests or beliefs be clearly articulated and addressed?
- Does the innovation impose monetary or opportunity costs to the user group or to groups that influence the user group? How might these be offset?
- Does the innovation require technology or information not easily accessed by the user group? How might the innovation be simplified to remove this barrier?

Suggested Outputs

- Mapping of environmental sources of support and of resistance to the innovation
- List of prioritized needs and wants of the user groups developed and reviewed with members of user groups
- Measure of readiness for change in the area of the innovation (i.e. Results of a readiness to change survey)

INNOVATE TO FIT: The **Innovate** step involves designing, redesigning, and packaging an innovation so that it is a very specific match to the receptivity of the targeted user group, and is perceived as advantageous by potential user groups in their specific context or environment. The most successful innovations have been adapted specifically to fit the target user group, and the adaptive learning process—a combination of the Assess and Innovate steps—will need to continue throughout the scale-up process for optimal fit and spread of the innovation.

- Has the innovation been tested with user groups and what were the results?
- What aspects of the innovation could be ***tailored or adapted*** without compromising the key outcome(s)?
- What features of the innovation may be problematic for the target user group?
- How might those features be changed to better fit to the user group?
- What elements of the innovation can be altered or removed?
- What may be added to the innovation to facilitate better fit to the user group?
- What may be added to the innovation to ensure that it spreads from index users to via social networks?

Suggested Outputs

- Synthesis of test marketing results
- Documentation of changes required to make the innovation tailored to user groups' needs and wants, environmental conditions, and features for spread across social networks
- Action plans and project plans for addressing documented changes

DEVELOP: The **Develop** step involves priming the environment around the user group by addressing contextual issues that may directly or indirectly inhibit or promote the initial uptake of the innovation. Priming the environment involves stimulating interest in the innovation and its potential outcomes, and strengthening the networks and relationships that can be used to support initial uptake and facilitate the spread of the innovation. Efforts to develop a supportive environment and overcome potential resistance to the innovation in and around the user group may take many forms, depending on both the innovation and the user group, but include:

- International, national and/or local meetings to build consensus around the need for and feasibility of the innovation
- Coalition-building to unite those with a stake in the outcome of the innovation, including public opinion leaders and high-level champions
- Advocacy campaigns to build support and demand for the innovation
- Regulatory and policy changes to overcome resistance to the innovation and increase its acceptability
- Workforce development and/or infrastructure investments to increase feasibility
- Knowledge sharing and technology transfer
- Social marketing techniques to foster new norms

Questions to ask for this step include:

- Which stakeholders need to be engaged? Who are the most important?
- How can these stakeholders be most effectively engaged? Which activities are appropriate for developing a supportive environment and overcoming potential resistance?
- What is the sequencing of activities to build support?
- Have activities to build support been conducted and what were the results? Is there a need to revisit the Assess and Innovate components?

Suggested Outputs

- Formal or informal commitment of support from high-level champions
- Needed regulatory or policy reforms implemented or in process
- Knowledge sharing, technology and social marketing campaigns conducted
- Stakeholder engagement plan to develop support

ENGAGE: The goal of the **Engage** step is to introduce the innovation to its target group so that it will be accepted by and integrated into the practices of the group with minimal resistance. Information obtained from the Assess, Innovate, and Develop processes (which take place both prior to and during engagement) should be used to further optimize the innovation to user needs and receptivity. Engagement with the user group involves three steps:

1) **INTRODUCE the innovation via boundary spanning individuals:** The best people to introduce an innovation to a group are members of the group themselves who have connections both inside and outside the group. These individuals, called "boundary spanners," are critical to successful introduction of an innovation and should be identified in the earliest stages of planning.
   - Who are the boundary spanners in the first and later user groups? Who is both an accepted member of this group and a known participant in the outside world?
   - How can these individuals be engaged in the Innovate and Develop stages?
   - Are these individuals supportive of the innovation and ready to introduce it to their group?
   - What support or help do boundary spanners need as they introduce the innovation?

2) **TRANSLATE the message to make it accessible to users:** After boundary spanners introduce the innovation, other members of the group, often entirely within the user group and previously unfamiliar with the innovation, encounter it and are expected to use it. Translation is the process of reframing or adjusting the innovation so that it is not perceived as something that comes from the outside. Translation can mean literally changing from one language to another, or can refer to more subtle efforts, such as adding or removing technical jargon, using pictures or colloquialisms, or even describing the innovation in terms of religious or cultural beliefs that are familiar and comfortable to the users. The goal with this step is to make the innovation and its function or use as clear and easy as possible for those users within the group.
   - Are the messages and requirements for use of the innovation clear and accessible to users?
   - Have technical language, jargon, and instructions, removed or simplified?
   - Can the innovation be adapted and packaged for clarity and accessibility (e.g. with art or pictures, colloquialisms, humor, attractive or streamlined packaging)?
   - Is there a feedback mechanism in place to receive users' questions and incorporate their needs into translation of the messaging?

3) **INTEGRATE the innovation into users' routine practices:** Integration occurs when an innovation becomes part of normal routines and practices (and is no longer new to the user group). Research underlying the AIDED model suggests that integration occurs when:
   - Do the users perceive that innovation has become part of the "usual" way of doing things? If not, why not?
   - Do the users feel empowered to make changes to the innovation and/or its application as if it were their own? If not, why not?

Suggested Outputs
- Innovation introduced and translated amongst index user groups
- Innovation perceived as routine and adapted/replicated
- Changes required to introduce, translate and integrate the innovation
- Action plan to make required changes and progress tracking against scale-up goals

DEVOLVE: Spreading of the innovation to other user groups is most effective when it occurs along pre-existing communication networks and in situations in which there is trust between and among user groups. While the Assess, Innovate, Develop, and Engage steps require investment and attention from the original developer or funder of the innovation, the **Devolve** step along pre-existing networks tends to be a social process that occurs independently of the original developer. There is the potential for the innovation that is spread to subsequent groups to be altered or adapted to the extent that it may fail in some cases. Careful design of the innovation toward simplicity and clear mechanisms for reliable adaptation can guard against the spread of failed or ineffective innovations.

- What are the pre-existing social or peer networks among user groups?
- Who might facilitate spread of the innovation along these networks? Do those individuals or groups (likely boundary spanners) understand and support the innovation?
- Can the innovation spread to a new, receptive user group as it is? If not, what adaptations need to be introduced, or how can the innovation be simplified?
- Is the environment around the new user groups developed to promote receptivity to the innovation?
- Are there avenues for convening key members of social networks to promote spread?
- Who are the boundary spanners in non-index user groups and how can the innovation be introduced to them?
- What are the barriers that non-index boundary spanners can face in their social and professional networks? How can these barriers be overcome?

Suggested Outputs

- Social network mapping
- Innovation shared amongst members of index user groups with new user groups
- Non-index boundary spanners exposed to the innovation

Conclusions

The AIDED model traces the full arc of dissemination, diffusion, and scale up, offering novel insights into the dynamics of spread. The AIDED model highlights the distinct role of groups in ensuring that innovations in global health become embedded in the targeted user groups and then spread for broader impact. The AIDED model is non-linear, and the guiding questions included in this guide can be revisited throughout the planning and implementation process.

Want to learn more about AIDED? Check out these resources:

- *Bradley EH, Curry LA, Taylor LA, et al. A model for scale up of family health innovations in low-income and middle-income settings: a mixed methods study. BMJ Open 2012;**2**:e000987. doi:10.1136/bmjopen-2012-000987*
- *Bradley EH et al. Dissemination, Diffusion and Scale Up of Family Health Innovations in Low Income Countries. Gates Report. October 2011. Available online at http://tinyurl.com/Yale-GHLI-AIDED-Gates-Report*
- *Yale Global Health Leadership Institute at www.yale.edu/ghli*