



Designing knowledge management interventions in agricultural research for development

Methods, experiences, and lessons learned

Knowledge sharing for development impact

The International Center for Tropical Agriculture (CIAT, its Spanish acronym) offers an approach by which research programs and projects can design knowledge management (KM) plans on the basis of their impact pathways. This approach resulted from the CIAT KM group's experience in applying the Theory of Change method to various projects carried out in recent years by the Center's Decision and Policy Analysis (DAPA) Research Area. The approach has proved to be highly effective for identifying, designing, and implementing appropriate KM interventions and for deriving lessons learned from the experience.

In this brochure, we present CIAT's KM planning approach, describing seven useful interventions in projects, explaining how these interventions ultimately contribute to impact, outlining a Theory of Change for KM, and describing the roles of different players in a project's journey towards impact. Finally, we highlight five lessons learned that you should consider when designing KM interventions in research for development.

KM interventions

Knowledge management can better enable researchers to achieve development impact through seven key interventions:



1 Planning the research

Researchers plan their work in a participatory way, according to the principles of results-based management, and evaluate the process periodically in search of unexpected opportunities to improve the research.



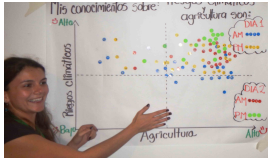
3 Managing data and information

In keeping with open-access policies, data and information relevant to research are made readily available, accessible, and applicable to a wide public. As a result, scientists and their partners are better able to use and find new purposes for data and information.



5 Using information and communication technologies (ICTs)

Project participants use ICTs more skillfully to compile and share data and information, based on a well-conceived strategy to address the needs of different user groups. The strategy centers on knowledge exchange solutions, which take into account the overall context of the project, its diverse audiences, and the relevance of project content to them.



2 Using KM tools

Researchers and partners strengthen their skills in a variety of areas – participatory research, leadership, facilitation, tutoring, networking, and social media, among others – so they can contribute more effectively to multi-actor platforms and transdisciplinary teams.



4 Sharing research in progress

Through facilitated dialogue, aimed at building confidence and finding common ground, research partners and other stakeholders integrate their ideas and activities, and on this basis create learning cycles that give rise to new opportunities for working together more effectively.



6 Co-creating information and knowledge products

Researchers and their partners develop products in multiple languages (such as databases, infographics, mobile phone applications, and manuals) through a collaborative process that takes into account the expressed needs of different user groups.



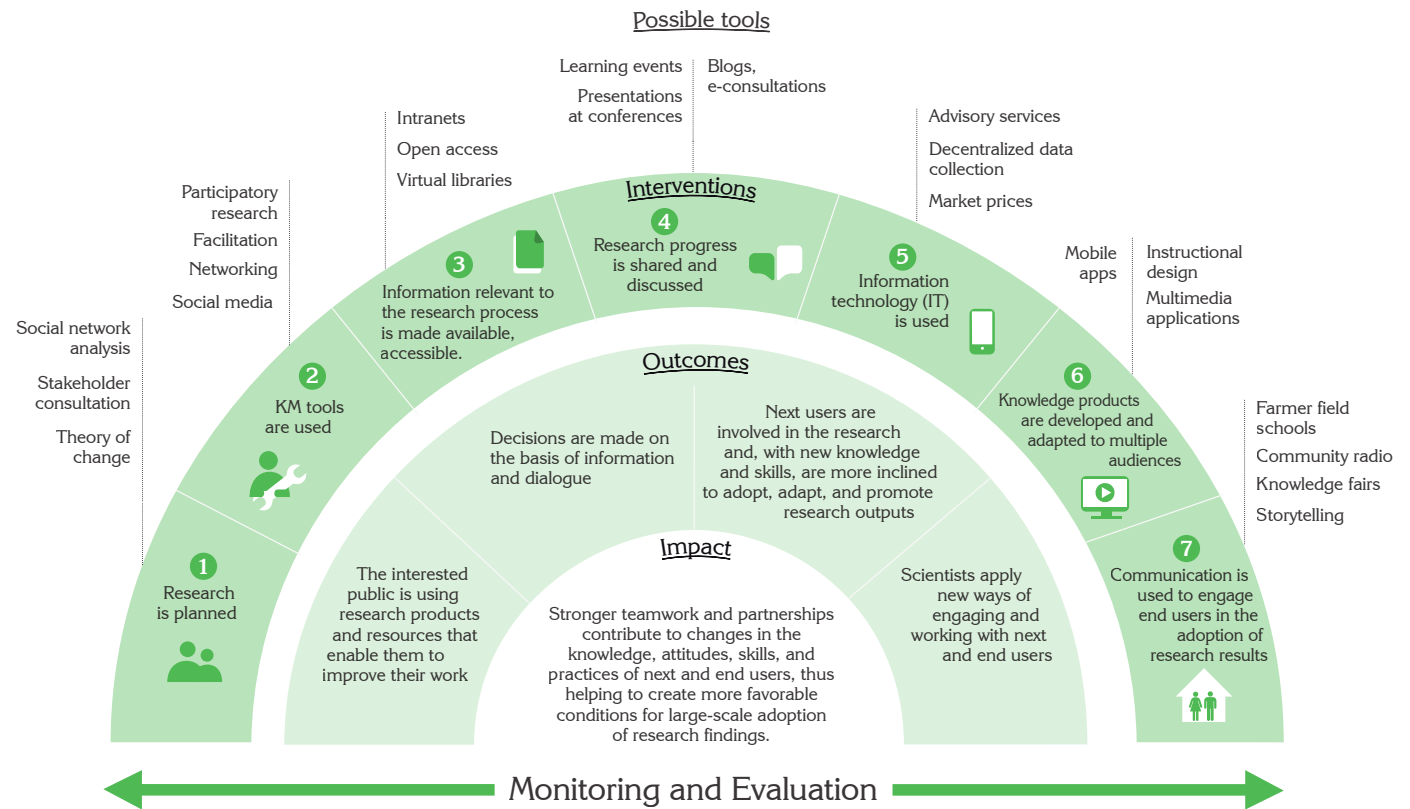
7 Communicating for development

The project relies on combinations of conventional and new communications tools to reach out to the end users of research. Scientists contribute directly to the design of these tools, involving relevant partners, taking into account local knowledge and cultures, and share widely the lessons learned.

*Photos: José Antonio Arana: 1, 3 y 4. Diego Obando: 2. Luis Armando Muñoz: 5. Viviana García: 6. Karina Feijóo: 7.

CIAT's KM theory of change

According to CIAT's KM Theory of Change, different KM interventions, involving the use of diverse tools, contribute to development impact as shown below.



KM in agricultural research for development

As a project or program advances along its impact pathway, as shown in the figure below, the scope increases for using KM interventions to widen the influence of research.

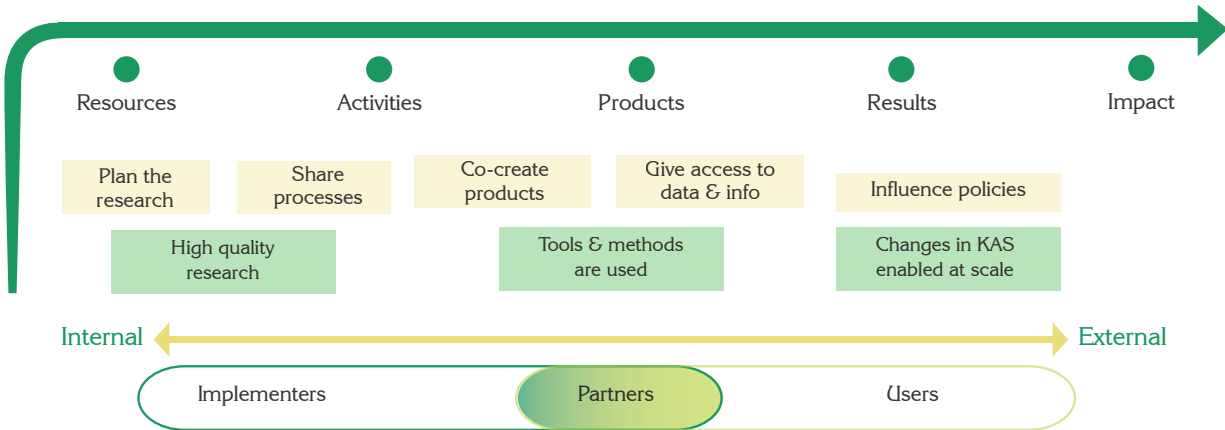
At the outset, researchers conduct participatory planning with their immediate partners to emphasize knowledge sharing from the very start.

Researchers then develop results, tools, and methods in collaboration with partners to ensure these products are relevant to multiple audiences. Next, they work through

networks of strategic contacts to share the products and promote their use on a large scale.

Publicizing new solutions from research through the mass and social media is important for generating wider interest and commitment.

Finally, to achieve impact on a large scale, researchers and partners must use KM interventions extensively to bring about changes in knowledge attitudes, and skills, which influence the decisions and actions of end users.



Lessons learned

The KM approach presented here resulted from our experience with various projects having diverse aims – such as strengthening institutional capacities, developing strategies to cope with climate change, and reducing yield gaps through site-specific crop management. In each of these projects, we applied different elements of our Theory of Change to identify KM needs and design interventions. From this experience, we derived five main lessons, which are already proving useful in the design of KM plans for further initiatives.

1 The Theory of Change method helps make research results more applicable.

It does this by prompting us to find answers to key questions for research: who will we work with, what do we want to achieve, who will benefit from the results, who will use them and how, and what do we want to change or improve?

2 KM helps strengthen institutions and relationships between partners.

Collaborative projects offer partner organizations new opportunities to strengthen relationships on the basis of common interests. KM facilitates this process by building individual and institutional capacities to deal with different organizational cultures and jointly formulate strategies for sharing information and involving researchers in the development of knowledge products.

3 Successful implementation of a KM plan depends on close collaboration between the KM and research teams and on the commitment of project participants.

A fundamental objective of KM in agricultural research is to build bridges between science and those who use its results to develop useful products. To this end, the KM team must have one foot in science and the other in user communities, with a good grasp of both research and user's knowledge, attitudes, skills, and needs.

4 Using ICTs is not an end in itself but rather a means of achieving specific goals.

ICTs are key for enabling smallholder farmers to access information that can help them make better decisions. But often, projects aiming to harness the potential of ICTs put too much emphasis on infrastructure and not enough on its users. KM can help in this regard through (1) strategies for appropriate use of ICTs, (2) analysis of users' knowledge, attitudes, skills, and practices regarding ICTs, and (3) the creation of a favorable environment for using online platforms.

5 KM contributes importantly to the internal communications of participating organizations, thus improving coordination, bridging gaps between administration and research, and facilitating learning.

The KM Theory of Change, by clarifying the roles and needs of researchers, administrators, and project coordinators, helps build connections between them and facilitates their collaboration with partners. This in turn provides a good basis to plan training and product development as well as communications activities that can enhance impact.

Conclusions

These lessons learned are helping CIAT's KM team do a better job of designing and implementing KM interventions in new projects. This work is also creating keen interest among partner organizations in using various KM tools and methods to improve the quality of their work along the impact pathway.

Reference

Staiger-Rivas S; Alvarez S; Arana JA; Howland F; Cunha F; Valencia B; Muñoz LA; Feijóo K. 2014. Designing knowledge management interventions in agricultural research for development: Methodology, experiences, and lessons learned. *Knowledge Management for Development Journal* 10(1): 36-51. <http://journal.km4dev.org/journal/index.php/km4dj/article/viewFile/180/273>

Knowledge Management Blog CIAT: <http://ciatblogs.cgiar.org/knowledgemanagement/>

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