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Demand Intelligence Framework for Scaling Innovative Solutions in Low and Middle Income Countries

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We also recognize the continued support and collaboration of national and regional partners, whose engagement ensures that the solutions developed are responsive to local needs, strengthen innovation systems, and contribute to building more resilient agrifood systems.

To learn more about CGIAR Scaling for Impact (S4I) program, please contact:

scaling@cgiar.org

About CGIAR Scaling for Impact (S4I) program

Scaling for Impact (S4I) is a CGIAR program (2025–2030) that tests, refines, and scales innovations in food, land, and water systems. It works to align those innovations with stakeholder needs to achieve transformative impact.

Website: <https://www.cgiar.org/cgiar-research-portfolio-2025-2030/scaling-for-impact/>

About CGIAR

CGIAR is a global research partnership for a food secure future.

Visit <https://www.cgiar.org/research/cgiar-portfolio> to learn more about the initiatives in the CGIAR research portfolio.



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AUTHORS

Murat Sartas - International Institute of Tropical Agriculture

Matieyedou Konlambigue - International Institute of Tropical Agriculture

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DESIGNED BY

Radia Rowshan, Communication Analyst, CIMMYT

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1. Introduction

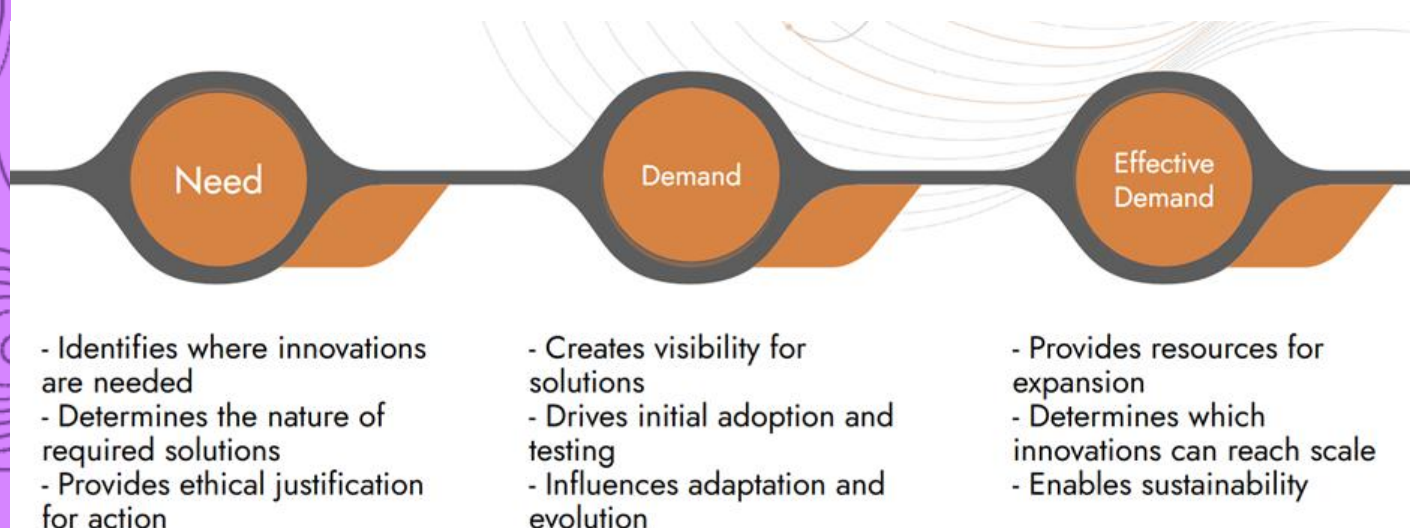
The success of any innovation hinges not on its novelty, but on its resonance within a complex human and economic system. For research and innovation (R&I) organizations, particularly those serving the Global South, a deep understanding of this system is the most critical asset. To achieve this, it is necessary to build a systematic capability for **Demand Intelligence**, with the following definition.

“Demand intelligence is the strategic process of analyzing and synthesizing information about the capacity and influence of stakeholders to support, fund, or adopt innovations. It provides actionable insights, forecasts, and recommendations that reveal which innovations can access the necessary resources for expansion, achieve sustainability, and reach scale.”

The capabilities provided by demand intelligence go beyond collecting raw data and processing information; it is about cultivating intelligence—actionable insight derived from processed and contextualized knowledge.

This document outlines a framework to build and apply this intelligence. It is structured around the three core pillars you have identified: **Need**, **Demand**, and **Effective Demand**. Each pillar represents a distinct layer of understanding, and together they form a comprehensive methodology for assessing the true potential of an innovation and acting upon that assessment.

Figure 1. Comparison of Need, Demand and Effective Demand



2. Conceptual Foundation

2.1. Pillar 1: The NEED

Definition: A Need is the fundamental gap between an individual's or community's current state and their desired state or outcome. It exists independently of any proposed solution and represents the core problem or aspiration.

The first pillar is dedicated to the disciplined exploration of this gap. The objective is not to validate a solution, but to develop a profound and empathetic intelligence about the problem itself. This requires looking at the world through the eyes of the end-user.

Intelligence Sources and Development:

To understand the Need, two primary types of intelligence are very relevant:

Contextual Intelligence: This involves understanding the daily life, constraints, and environment of the target population. It goes beyond what the people and stakeholders simply express themselves or what they “want”. The stakeholders might or might not be aware of their needs.

- **Techniques:** Ethnographic immersion, participant observation, day-in-the-life studies.
- **Guiding Questions:** What are the socio-cultural norms that shape behavior? What are the economic realities and cash-flow cycles? What existing systems or power structures define their world?

Problem Intelligence: This focuses on the specifics of the challenge itself and how it is currently managed.

- **Techniques:** Root cause analysis (e.g., "Five Whys"), analysis of existing coping mechanisms, expert consultations with local leaders and extension agents.
- **Guiding Questions:** What is the quantifiable impact of the problem (e.g., in terms of lost income, time, or health outcomes)? What are the frustrations and hidden costs of the current way of doing things? Why have previous attempts to solve this problem failed or succeeded?

Outcome of Pillar 1: A deeply contextualized "Problem Dossier" that articulates the Need with both quantitative scale and qualitative richness, providing the foundational intelligence upon which all further decisions are built.

2.2. Pillar 2: The DEMAND (Potential Demand)

Definition: *Demand is the articulation of a desire to bridge the identified Need, often expressed as interest in a specific type of solution. It is the "pull" an innovation generates when it is presented as a viable option.*

With a clear intelligence of the Need, this pillar assesses whether our specific innovation can convert that latent Need into active Desire. It is a test of the solution's value proposition and its resonance with the target user's mindset and preferences.

Intelligence Sources and Development:

Generating intelligence on potential Demand requires a shift in focus from the problem to the solution's perceived fit:

Value Proposition Intelligence: This measures how compelling and desirable the innovation is when compared to the status quo or other alternatives.

- **Techniques:** Concept testing, choice modeling experiments, willingness-to-pay studies, and user experience (UX) research with prototypes.
- **Guiding Questions:** Does the user immediately grasp the benefit? Is the value offered significant enough to motivate a change in behavior? What features are most valued, and which are seen as unnecessary?

Behavioral Intelligence: This seeks to understand the psychological and social factors that would drive or inhibit the expression of interest.

- **Techniques:** Analysis of perceived risks (financial, social, performance), identification of "early adopter" profiles, and mapping the influence of social proof and trusted advisors.
- **Guiding Questions:** Who in the community must be convinced for others to follow? What is the perceived effort required to adopt and learn the innovation? How does the solution align with the user's identity and aspirations?

Outcome of Pillar 2: A "Demand Forecast" that estimates the size of the population that would likely adopt the innovation if all practical barriers were removed, supported by intelligence on the key drivers of that desire.

2.3. Pillar 3: The EFFECTIVE DEMAND¹

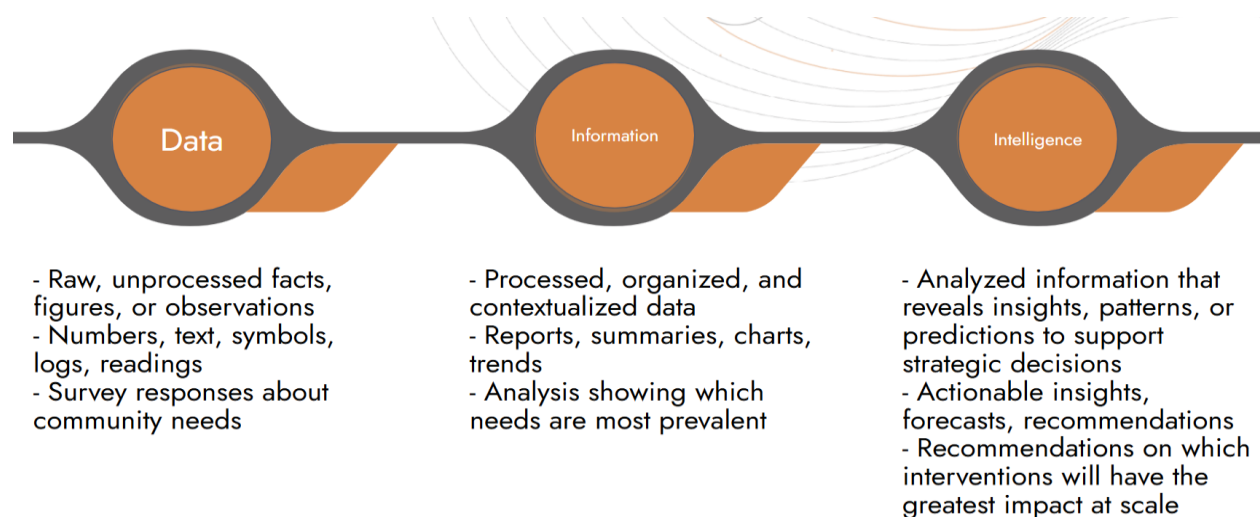
Definition: *Effective Demand is Demand backed by the tangible ability to act. It represents the portion of potential Demand that can be realistically converted into acquisition and use, given real-world constraints such as purchasing power and access.*

This final, crucial pillar is the ultimate reality check. It determines whether desire can be translated into action. Generating intelligence here requires a rigorous evaluation of the evidence we gather. As Figure 1 indicated, effective demand significantly differs from need and demand.

¹ Since the CGIAR Science of Scaling Program focuses on scaling, this framework articulates the pillar of the demand intelligence that is relevant for scaling, i.e. effective demand intelligence.

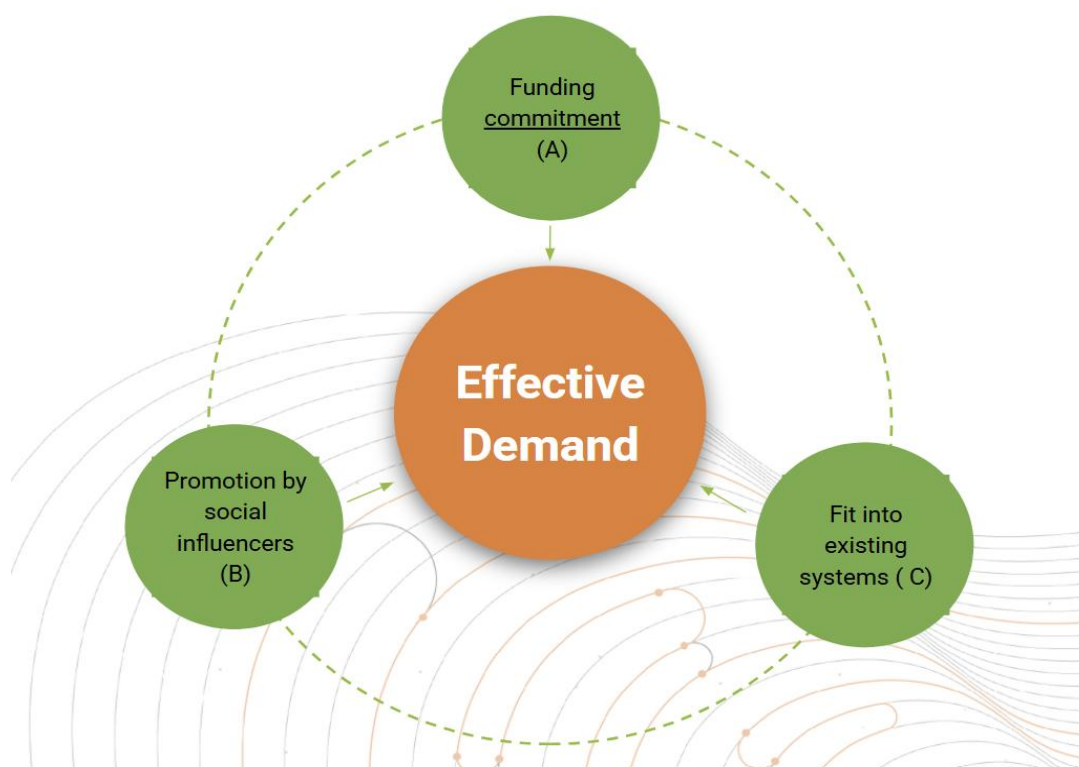
Methodology: Parametrizing effective demand is complex and currently there is no academically proven comprehensive method for creating actionable demand intelligence for scaling innovative solutions in the low and middle income context. Moreover, due to the urgency of the use of the demand intelligence, the method for generating demand intelligence needs to focus on resourcing existing capabilities and intelligence sources rather than going the full knowledge cycle and trying to create primary data and process them into information.

Figure 2. Main milestones in the knowledge generation lifecycle



The effective and efficient demand intelligence activities must be designed to seek out indicators for the three critical domains: assessing if the solutions are/to be **Funded**, **Championed**, and or **Fit** to the existing delivery systems.

Figure 3. Main components of Effective Demand



Intelligence Sources on Effective Demand

Intelligence on whether the solution is/to be FUNDED: This domain investigates the existing funding or strong funding commitments. To generate proper intelligence, it is necessary to prioritize specific, actionable indicators that show certain or high likely investment commitment.

Inter-governmental or non-private funding varies in forms and certainty. Many of the instruments are proven to show very low or low likelihood of being realized. For instance, only a few of the very common funding instruments for international non-private research such as policy agendas, the pledges of the Conference of Parties (COP), memorandum of understanding, framework agreements actually become real funding disbursements. Moreover, even some of the more solid funding commitments to international organizations such as UN or CGIAR experience significant cuts. Therefore, funding intelligence indicators and data sources need to be considered or articulated rigorously.

Intelligence on whether the solution has enough CLOUT. This domain assesses the necessary influence for scaling innovative solutions or having enough sway to convince large scale of users. True intelligence identifies genuine clout, not just a position of high ranking in the government, civil society or private sector. For instance, in the international research circles, only a few of the national research system researchers, international researchers, UN organization experts have actually clout although they have high level positions while agricultural input suppliers or ministry of finance experts have strong clout although they don't have recognizable positions.

Intelligence on whether the solution can FIT the existing delivery systems: This domain assesses the practical, on-the-ground fit of the innovative solutions to existing delivery systems including logistical, financial, market as well as the social, cultural aspects of the delivery systems.

Intelligence on the fit should be based on the nature of the delivery system rather than isolated performance of the solutions. For instance, frugal solutions, i.e. cheap and usually simple solutions, religious integrated solutions are typically better fit to existing multi-dimensional delivery systems than indigenous solutions and exclusively women targeting solutions which are in turn better fit than transformative technologies or game changing policies.

3. Result Framework

Domain	Indicator Category	Sub-Indicator	Key Intelligence Question	Potential Signals & Data Sources (Examples)
Funding Intelligence	1.1 Public & Multilateral	National Budgetary Integration	Is the innovation's domain a funded national priority?	National budget documents, development plans (e.g., FTF), policy papers (e.g., National Solar Mission). ²
		Multilateral & Donor Commitment	Are major donors actively funding this space? What <i>type</i> of funding?	World Bank/ADB project databases, Adaptation Fund grant approvals, donor annual reports. ⁶
		De-risking Instrument Availability	Are mechanisms in place to attract private capital? Are they effective?	IFI program descriptions (PCGs, FLGs), case studies on uptake and design effectiveness. ⁹
	1.2 Commercial & Venture	Venture Capital & Private Equity Flows	Is 'smart money' flowing into this specific sub-sector and geography?	VC databases (e.g., MAGNiTT, PitchBook), industry reports (e.g., PwC), market analysis. ¹⁰
		Corporate Investment & Partnership	Are established corporations investing in or partnering with this type of innovation?	CVC investment announcements, press releases on strategic partnerships, CSR reports. ¹²
Clout	2.1 Macro-Level (Political)	Policy Championing	Is there an influential and consistent government champion?	Minister speeches, policy documents, creation of dedicated agencies, expert interviews. ¹⁸

Domain	Indicator Category	Sub-Indicator	Key Intelligence Question	Potential Signals & Data Sources (Examples)
		Political & Regulatory Stability	Is the political environment stable and conducive to this type of innovation?	Political stability indices, analysis of regime type and historical tech adoption, FDI trends. ²⁰
	2.2 Meso-Level (Institutional)	Key Opinion Leader Endorsement	Is the innovation validated by respected research or industry body leaders?	Academic publications of best scientist of the country, think tank reports, industry standard certifications. ¹⁶
		Intermediary & Network Strength	Are there effective intermediaries to facilitate scaling?	Mapping of NGO networks, innovation hubs, and producer organizations; case studies of partnerships. ¹⁶
	2.3 Micro-Level (Community)	Community Leader Buy-in	Do trusted local leaders (religious, traditional) support the innovation?	Ethnographic studies, local partner interviews, case studies on adoption/rejection. ²⁸
		Frontline Implementer Advocacy	Are frontline workers (health, ag extension) champions of the solution?	Surveys/interviews with frontline workers, analysis of training programs, adoption rates among implementers. ³²
Fit	3.1 Physical & Logistical	Supply Chain Readiness	Can the existing supply chain support the innovation at scale?	Logistics industry reports, infrastructure assessments (e.g., cold chain capacity), last-mile distribution case studies. ²⁵

Domain	Indicator Category	Sub-Indicator	Key Intelligence Question	Potential Signals & Data Sources (Examples)
		Technological Infrastructure	Is the necessary tech (ICT, energy) available and reliable?	ICT penetration/quality data (e.g., UNCTAD), mobile coverage maps, energy access statistics. ³⁹
	3.2 Economic & Market	Alignment with Market Actors	Does the innovation's business model leverage existing players (co-ops, agents)?	Analysis of local value chains, case studies on business model fit (e.g., LSP model). ¹⁶
		Affordability & Value Proposition	Is it affordable, and is the benefit clear and immediate to the user?	WTP studies, price comparisons, case studies analyzing user-perceived benefits. ¹⁶
	3.3 Socio-Cultural	Alignment with Norms & Beliefs	Does the innovation conflict with or resonate with deep cultural norms?	Ethnographic research, anthropological studies, analysis of cultural context (e.g., purity norms, kinship). ²⁸
		Simplicity & Behavioral Change	How complex is the innovation and how much behavior change does it require?	User journey mapping, analysis of training needs, comparison to existing practices. ¹⁶



DISCLAIMER

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