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# Navigate towards impact

Evidence-based approaches to guide innovation and scaling pathways

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# Keynote take-aways

1. Food systems are complex and volatile
2. Systems approaches are essential to:
  - Understand complex food system dynamics
  - Identify entry point for innovation and scaling
3. Systems complexity can paralyze action
4. Innovative methodology for understanding and intervening in complex adaptive food systems
5. Focus on navigating towards impact through short- and long-term feedback loops
6. Balance action with reflection and adaptation



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# Innovation and scaling

Why scaling innovation matters for resilient food systems?



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# Innovation approach to resilience

1. Innovation can play an important role in increasing agri-food system resilience
2. Innovations can be of technological (e.g. weather forecasting) or institutional nature (e.g. climate insurance)
3. Billions of euros invested in science and innovation to deal with current (short-term) and future (long-term) challenges
4. Investments in science and innovations today may be the solutions 10-15 years from now
5. Innovation use at scale essential for impact

# Our unique context





# Reasons for poor performance

1. Strong focus on the technologies, and not on the systemic enablers
2. No evidence-based approaches to identify bottlenecks for innovation and scaling, and develop (cost-)effective and contextualized scaling strategies and partnerships (one-size-fits-all)
3. Scaling bottlenecks are ignored or framed as being outside of our comfort zone or zone of influence
4. Unrealistic ideas about impact (from unproven idea to 'reaching' 2M farmers in 3 years)



# Scaling the new way

1. Integral part of project/ innovation design
2. Evidence-based scaling strategies
3. Realistic scaling based on resources allocated
4. Embrace failure and learning - out of the 100 innovative Ideas, 5 will become game-changers
5. Scaling strategies and partnerships are fit-for-purpose and contextualized

**Increase the likelihood that investments reach scale!**



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# Scaling Readiness

An approach to navigate complexity and innovation  
scaling along an impact pathway



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# Scaling Readiness Background

- Original concept developed in 2017 by Dr Murat Sartas and Dr Marc Schut based on 5 principles:

1. Innovations scale as part of packages (systems approach)
2. Innovation and scaling pathways can be measured using evidence
3. Strategize around bottlenecks
4. Scaling is a multi-stakeholder affair and requires partnerships
5. Scaling is an emergent and unpredictable process of change

- How can we support?

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## Scaling Readiness: Science and practice of an approach to enhance impact of research for development

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### ABSTRACT

Scaling of innovations is a key requirement for addressing societal challenges in sectors such as health, agriculture, and the environment. Research for development (R4D) programs, projects and other interventions struggle to make particular innovations go to scale. Current conceptualizations of scaling are often too simplistic; more systemic and multidimensional perspectives, frameworks and measures are needed. There is a gap between new complexity-aware theories and perspectives on innovation, and tools and approaches that can improve strategic and operational decision making in R4D interventions that aim to scale innovations. This paper aims to hedge that gap by developing the key concepts and measures of Scaling Readiness. Scaling Readiness is an approach that encourages critical reflection on how ready innovations are for scaling and what appropriate actions could accelerate or enhance scaling. Scaling Readiness provides action-oriented support for (1) characterizing the innovation and innovation system; (2) diagnosing the current readiness and use of innovations as a proxy for their readiness to scale; (3) developing strategy to overcome bottlenecks for scaling; (4) facilitating and negotiating multi-stakeholder innovation and scaling processes; and (5) navigating and monitoring the implementation process to allow for adaptive management. Scaling Readiness has the potential to support evidence-based scaling strategy design, implementation and monitoring, and – if applied across multiple interventions – can be used to manage a portfolio of innovation and scaling investments.

### 1. Introduction

Academic and professional interest in how innovations spread in society has long historical roots, going back to the work of Eynon and Gross (1943) and Rogers (1962) on the adoption and diffusion of innovations. Today, such processes of adoption or diffusion are generally labelled as the scaling of innovations. Innovations can be technologies, products, services and practices, but also organizational and institutional arrangements. Scaling refers to the increased use of innovations beyond the group involved in its initial design and testing. Scaling is considered important in the context of global investments in research and development to address societal challenges related to health, agriculture, and the environment. The scaling of innovations is particularly relevant to research for development (R4D) organizations that have a mandate to develop, test and validate innovations to achieve Sustainable Development Goals (SDGs) and to demonstrate to donors that their research innovations are adopted in society to show return-on-investment (Bankov and Byerlee, 2010).

Experience shows that achieving impact at scale is more complex and difficult than anticipated in intervention proposals (Ahrens et al., 2010; Thornton et al., 2017). Earlier conceptions that innovations could simply be transferred by intermediaries and change agents (e.g.,

extension officers or health educators) and then diffuse within communities of individual beneficiaries (Rogers, 1962) has been largely refuted (Rising, 1988; Leeuwis, 2004). Historians of technology, for example, argue that scaling of innovation involves competition between supporters of different technological solutions, and those who defend interests and sunk investment associated with incumbent technological systems (Geels and Schot, 2007; Schot and Geels, 2008). Others stress that the scaling of one innovation (e.g., using a new seed variety) depends on the simultaneous upscaling of other complementary practices (e.g., weeding, pesticide-use, distribution of inputs, credit provision) and the downscaling of existing practices (e.g., the current dominant seed variety) (Wigboldus et al., 2018). This dynamic also points to the existence of interdependencies among the people who are involved in these practices (Leeuwis and Aarts, 2020). Moreover, several authors argue persuasively that scaling of something in one domain (e.g., in agriculture) may have implications for outcomes in another domain (e.g., in health) and that local level scaling processes may influence, and be influenced by, dynamics at higher levels (Cash et al., 2006; Giller et al., 2008; Schot et al., 2014; Wigboldus et al., 2018). In view of such interdependencies, it has been argued that the development of scalable innovations depends on conducive interactions in multi-stakeholder networks, wherein what may be desirable and possible in one

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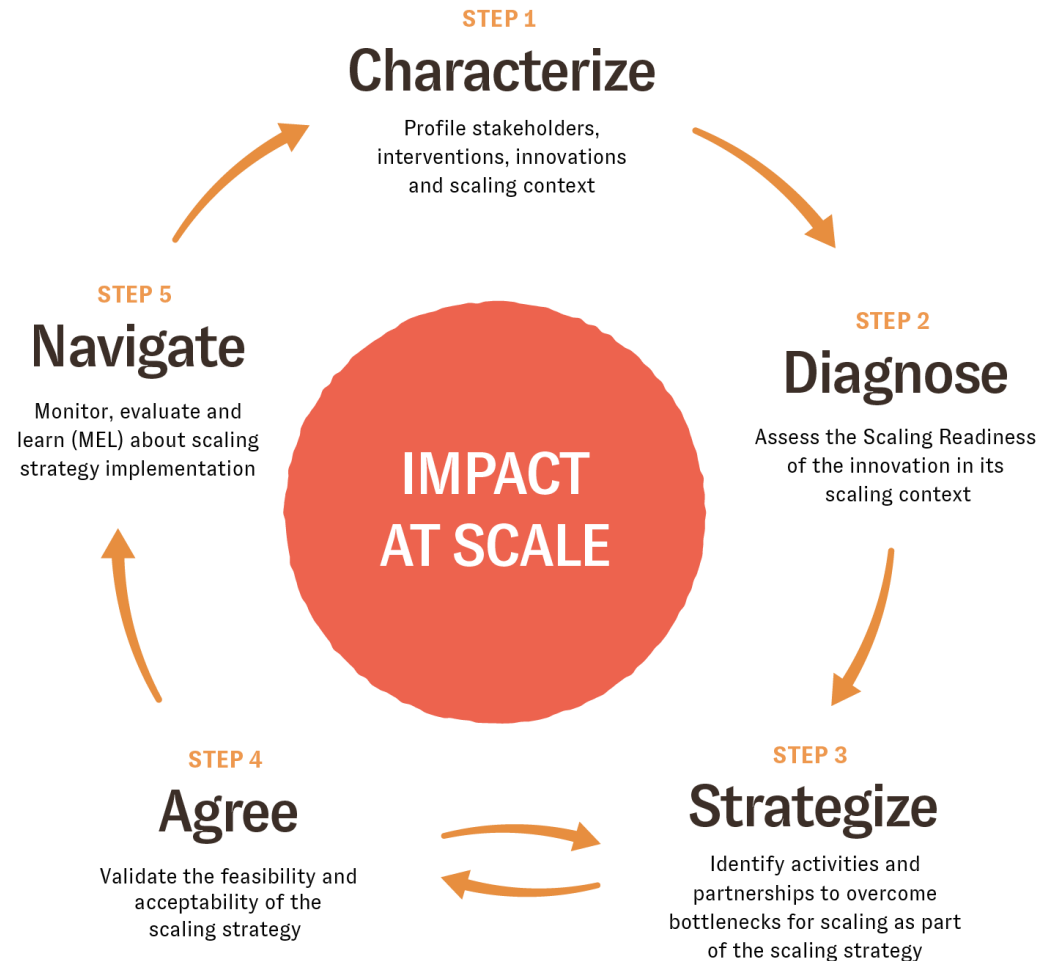
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0308-521X/© 2020 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

# Scaling Readiness

Stepwise approach to scaling of innovation:

1. Characterise
2. Diagnose
3. Strategize
4. Agree
5. Navigate

Transparent and manageable process that avoids action paralysis



# Step 1 - Characterize

- What are we trying to develop and scale? For what purpose? What is our scaling ambition?
- Understand innovations as part of packages

Resistant varieties  
Sensitization of cassava farmers  
Credit schemes for purchasing  
resistant varieties  
By-laws and policies

- Demonstration plots with local varieties and resistant varieties
- Functional Government Seed System
  - Innovation Platform
- Contract farming with cassava processor
- Collective communal action

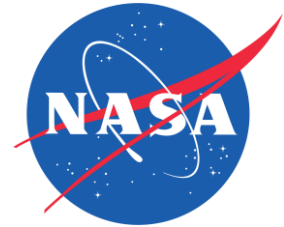




## Step 1 – Embrace heterogeneity

- “Interventions aiming to increase the resilience of food systems *will have different impacts in different geographical contexts*, depending on their agroecological and climatic setting, government policies, private sector engagement, community participation and institutional capacities.”
- Embrace heterogeneity
  - Intervention/ Scaling Innovation X in Serbia will look differently from Intervention/ Scaling Innovation X in Spain (agro-ecology/ policies/ market dynamics/ etc.)

# Step 2 – Diagnose innovation readiness



- Each innovation is measured along 9 levels of readiness ranging from
  - Level 1: an idea or hypothesis
  - Levels 2-5: innovation of which individual concepts, components have been tested or validated theoretically, empirically
  - Levels 6–7: innovations are successfully tested in a controlled environment
  - Levels 8–9: innovations are proven to work in an uncontrolled environment
- Scoring against a certain level is evidence-based

**9 READY**  
Validation of the capacity of the component to meet specific objectives in natural /real /uncontrolled conditions without support from an R4D initiative

**8 INCUBATION**  
Testing the capacity of the component to meet specific objectives in natural/real/uncontrolled conditions with support from an R4D initiative

**7 PROOF OF APPLICATION**  
Validation of the capacity of the component to meet specific objectives in controlled environments

**6 WORKING APPLICATION**  
Testing of the capacity of the component to meet specific objectives in controlled environments

**5 WORKING MODEL**  
Validation of the capacity of the component to meet specific objectives using existing applied-sciences-evidence

**4 FORMULATING WORKING MODEL**  
Researching the capacity of the component to meet specific objectives using existing applied-sciences-evidence

**3 BASIC MODEL**  
Validation of principles that component can meet specific objectives using existing basic-sciences-evidence

**2 BASIC RESEARCH**  
Researching the hypothesis that component can meet specific objectives using existing basic-sciences-evidence

**1 IDEA / HYPOTHESIS**  
Formulating an idea that a component can meet specific objective. Development of the key hypothesis about the elements of the initial concept (e.g. objectives, functions, intended users)

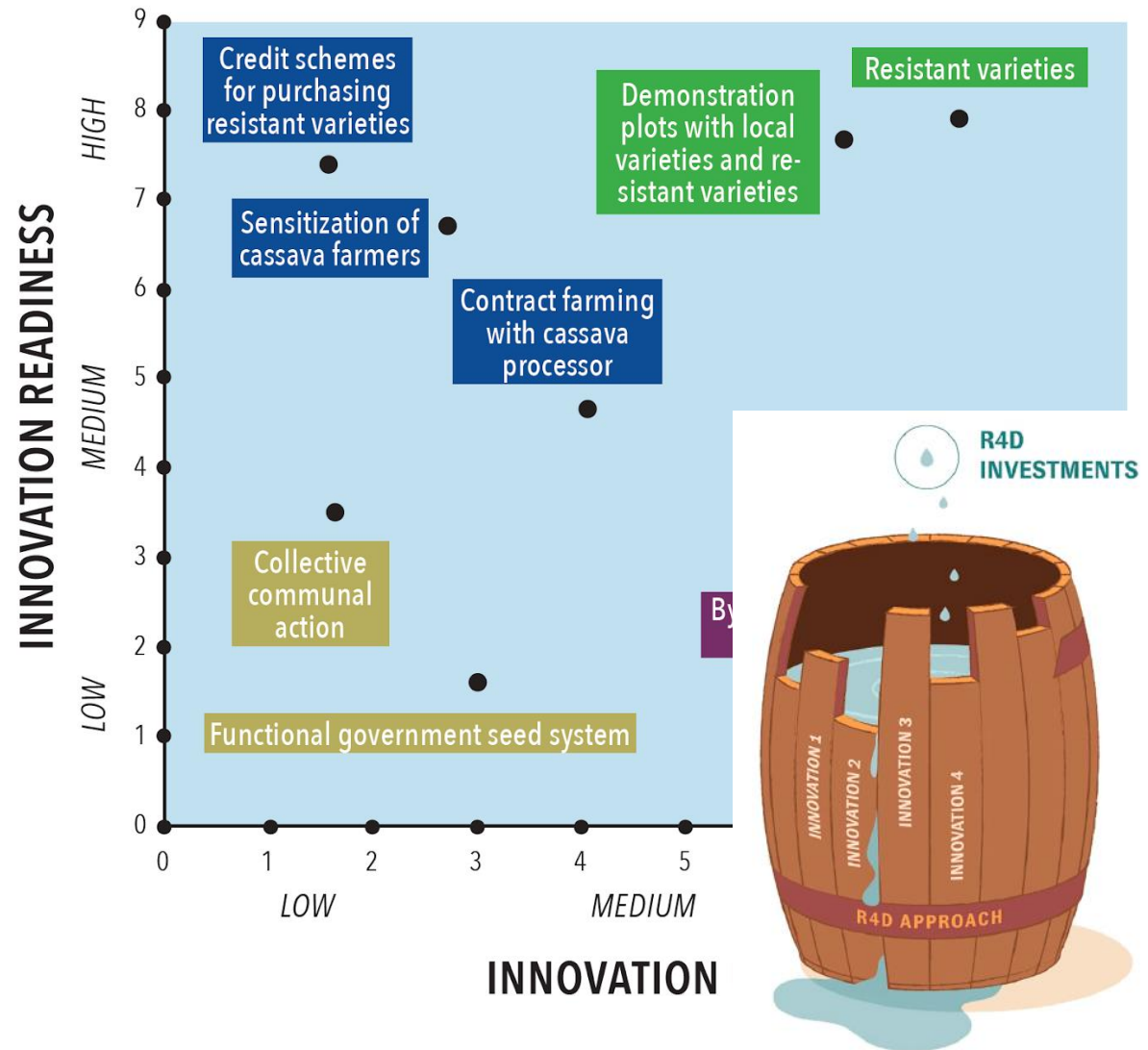


## Step 2 – Diagnose innovation use

- Innovation use represents the extent to which an innovation is already being used and by whom using an innovation systems/ network analysis approach:
  - Levels 0-1: No Use of project use only
  - Levels 2–3: Innovations are used only by R4D direct project partners
  - Levels 4–7: Innovations are used by other projects, organizations or actors (next-users)
  - Levels 8–9: Innovations are commonly used by their intended users (end-users)
- A ‘farmer’ can be a project partner, next-user or end-user depending on his/her role and incentivization

# Step 2 – Diagnose the bottlenecks

- Scaling Readiness assessment of an innovation package showing how “government seed system” is the main bottleneck.



## Step 3 - Strategize

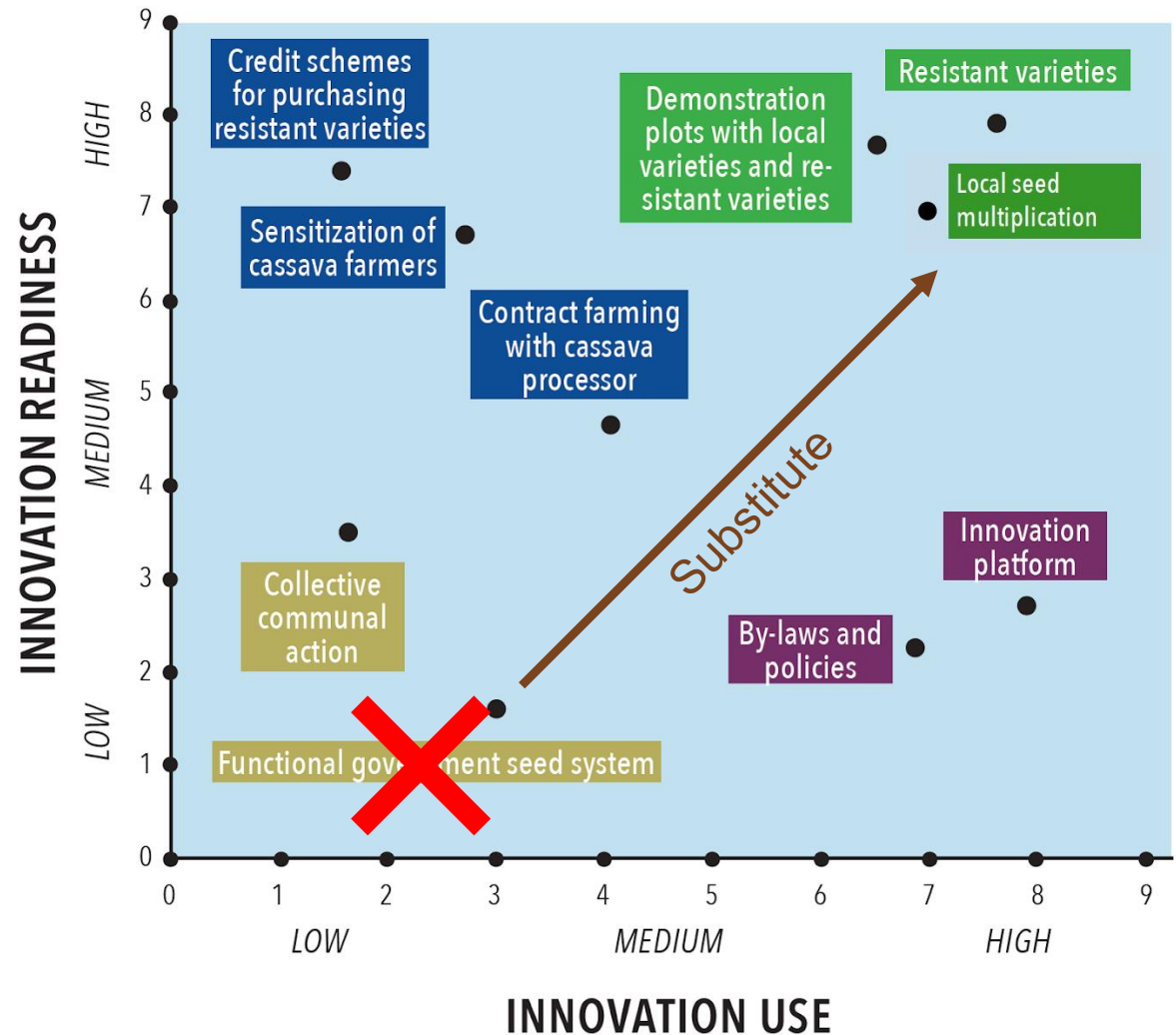
Strategic option	Description
Substitute	Can the bottleneck be replaced by another innovation which is of higher readiness and/ or use in the given context?
Outsource	Are there any organisations or external experts which can improve the Scaling Readiness of the bottleneck more (cost-)effective and efficient than your intervention team?
Develop	If outsourcing is not possible, feasible or too expensive, can the intervention team improve the readiness and/or the use by investing available intervention capacities and resources?
Relocate	Can the intervention be implemented in another location where the bottleneck is absent or can be addressed by one of the above strategic options?
Reorient	Can the objective of the intervention be changed so that the (new) bottleneck can be addressed by one of the above strategic options?
Postpone	Can the scaling of the innovation package be achieved at a later point in time?
Stop	If none of the above strategic options are likely to overcome the bottlenecks for scaling, then stopping the investment in the scaling intervention should be considered as an option.

Explore strategic options to overcome scaling bottlenecks



# Step 3 - Strategize

- E.g. replace bottleneck by an innovation that has higher Scaling Readiness
- Evidence based partner selection



## Step 4 – Agree on Scaling Strategy

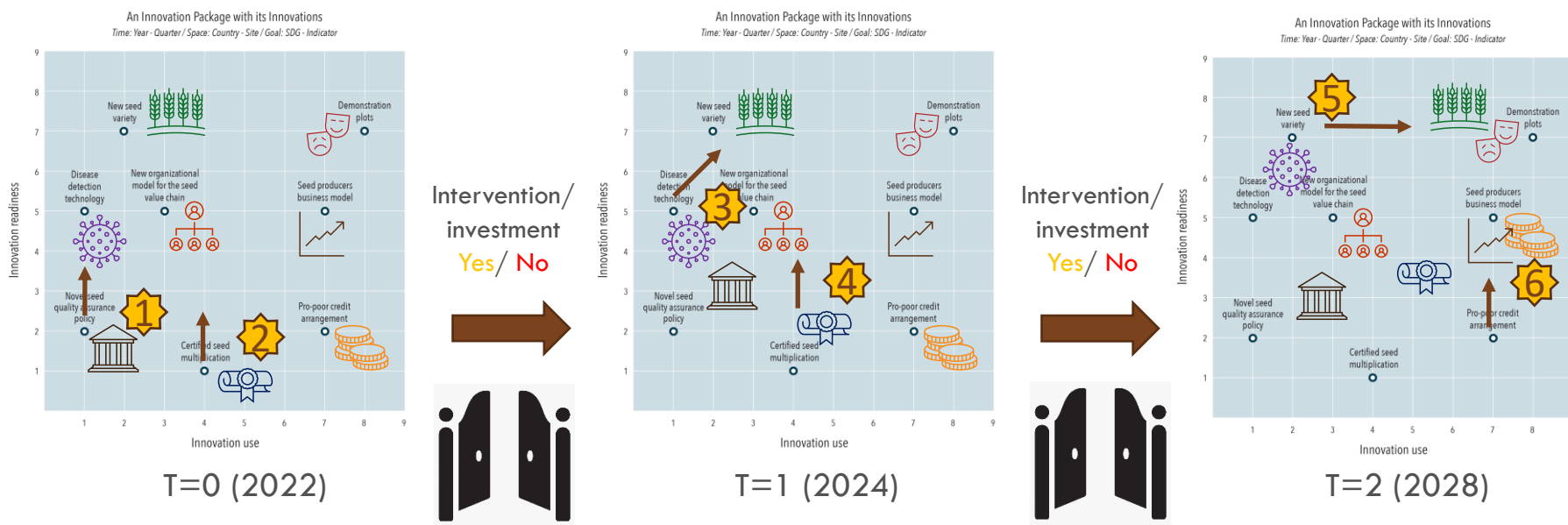
- Engage key stakeholders (project partners, donors, etc.) in developing a Scaling Strategy and Scaling Action Plan



- Best strategy may not always be politically feasible

# Step 5 – Navigate, monitor and learn

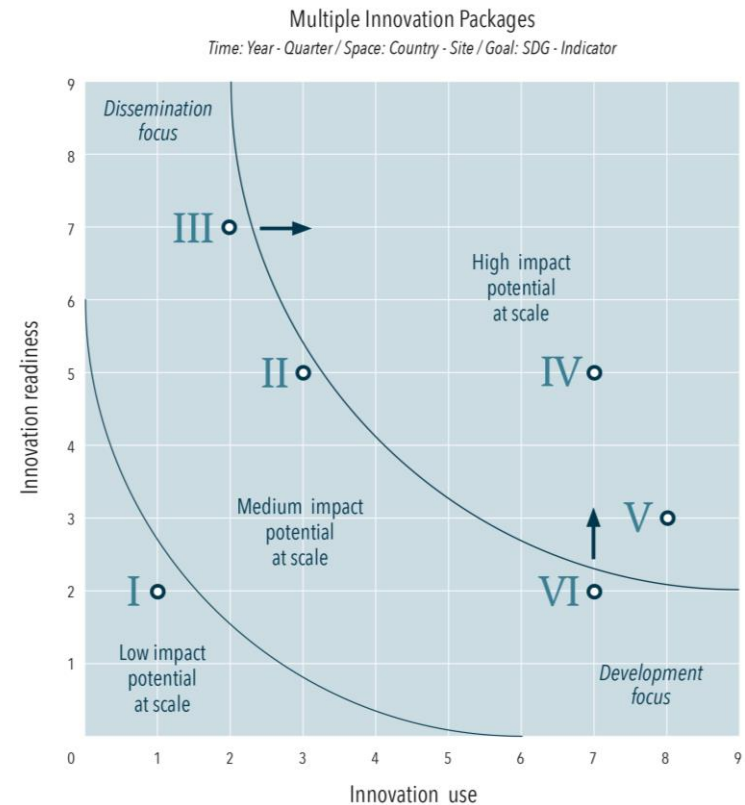
Did the strategy and actions have the desired effect?



Continuous (annual) updating of innovation Packages, monitor changes in Innovation Readiness and Use and update strategies as part of Reflexive Monitoring and Adaptive Management

# Innovation Portfolio Management

1. Monitor and manage a portfolio of innovation packages over time at Initiative level
2. Make 'tough' decisions as part of performance management and stage-gating
3. Support resource allocation (which packages need research vs delivery investment)
4. Support resource mobilisation (which innovations are ready for scaling, where, for which outcomes/ SDGs?)



Innovation Package level → Portfolio level  
(Project, program, thematic, country)

# Innovation Portfolio Management



Filter by CGIAR Action Areas



Filter by CGIAR Impact Areas



Filter by Sustainable Development Goals



Filter by Regions of Implementation

## CGIAR Core Innovation #845: Gender-sensitive solutions for local water resource management



## CGIAR Innovation Package #1576: Gender-sensitive solutions for local water resource management in Bangladesh



**Country:** Bangladesh  
**Subnational regions:** Dhaka, Barisal, Rangpur and Rajshahi  
**Demand Partners:** Government of Bangladesh  
**Innovation Partners:** Wageningen University  
**Scaling Partners:** Ministry of Environment, Water Boards  
**SDGs:** 2, 3 and 5  
**Impact Areas:** Climate and Environment



## Scaling Readiness of CGIAR Innovation Package #1576

Details:

- CGIAR Investment since 2022: USD 5.12M
- Partner co-investment since 2022: USD 2.35M
- Innovation Readiness:
  - 2022: 2
  - 2023: 6
- Innovation Packaging: No
- Scaling Strategy designed: No
- Stage-gating advise: Prioritize

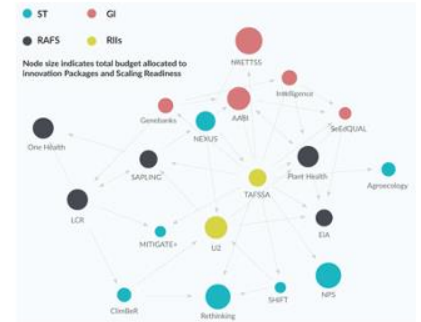
Year: 2023

## CGIAR Portfolio Management Details

**Lead Initiative:** TAFSSA (USD 2M)

**Contributing Initiatives:** MITIGATE+, NexusGains, Resilient cities, National Policy Strategies (USD 1M)

**Bilateral projects:** USAID (USD2.12M)





## Does it work?

- Used globally by a broad range of organizations
- Evidence of how Scaling Readiness influenced strategy design and outcomes in projects
- Multi-million CGIAR investment in mainstreaming Scaling Readiness for Innovation portfolio management (2022-2024)
- Donors have integrated Innovation Readiness and Innovation Use as part of their Results Frameworks
- Online course enrolled 1500 participants in first months which shows the need for innovative tools and methods to advance scaling

# More information

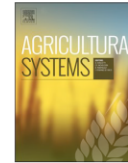
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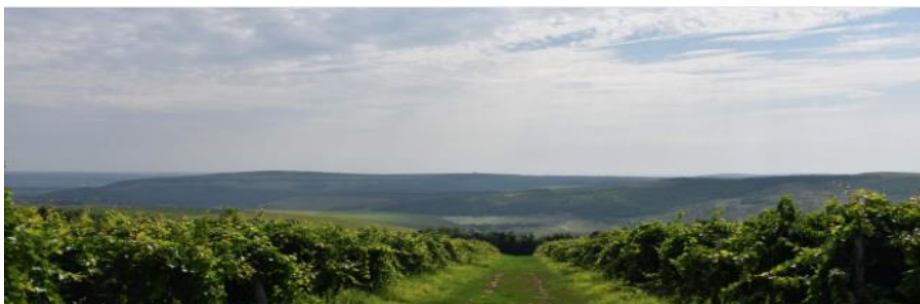
[Course curriculum](#)

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12 OCT 2021

**An innovation perspective to IFAD impact investments: how ready is the conservation agriculture system in Moldova for impact at scale?**



[www.scalingreadiness.org](http://www.scalingreadiness.org)