



RESEARCH  
PROGRAM ON  
Roots, Tubers  
and Bananas

S E P T E M B E R 2 0 1 8

# The Scaling Strategy for the Roots, Tubers and Banana Program

MICHAEL FRIEDMANN • SPHI MEETING – NAIROBI, 2018





# Outline

- Quick overview RTB program
- Need for scaling approach
- Science of scaling
- Scaling in RTB program
  - Scaling readiness
  - Scaling Fund – 3S PLUS & Cassava Peels for Feed innovation packages
- Wrap-up



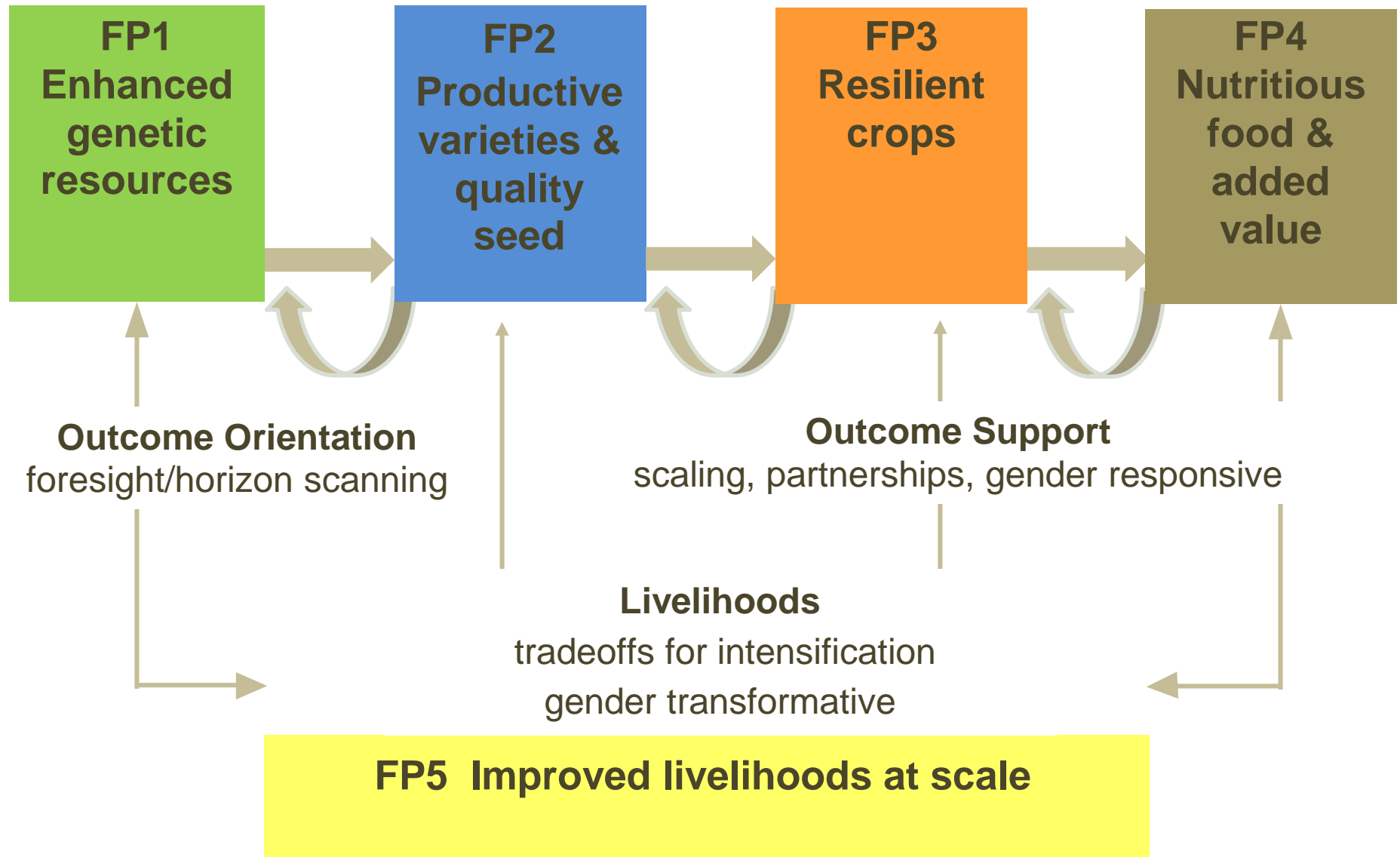
## RESEARCH PROGRAM ON Roots, Tubers and Bananas

**“a partnership collaboration”**



- Broad based collaborative platform
- 220+ partners

# Program Structure: Flagship Projects (FP)



# Science of scaling: crossing the gap

## Science of scaling allows us to:

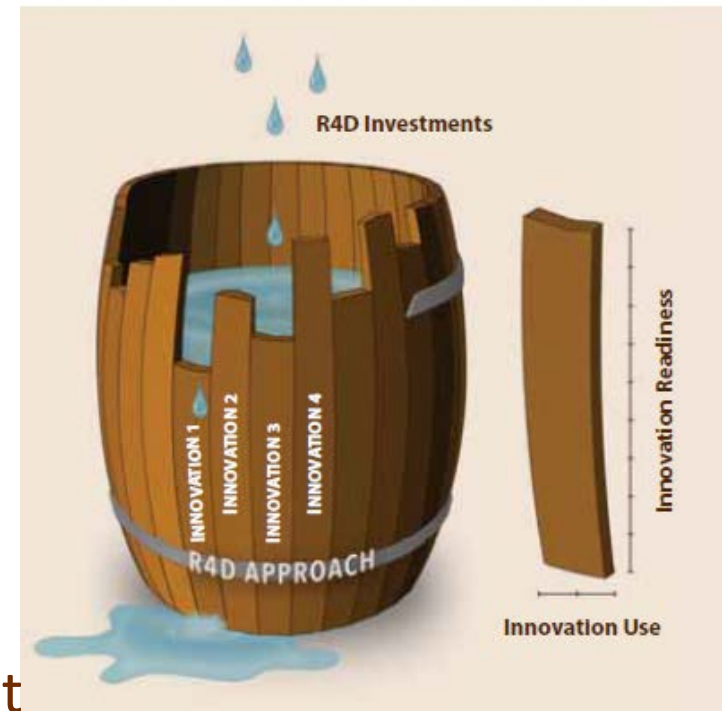
- translate research outputs to development outcomes
- find mechanisms to connect pathways of research and development
- determine how scaling occurs in practice and what tools and methods can accelerate scaling of innovations
- make informed decisions on how to optimise the likelihood that our research will contribute to having impact at scale

*the scaling of innovations lies at the core of achieving RTB's ambitious targets of reaching millions of beneficiaries*



# Science of scaling: crossing the gap

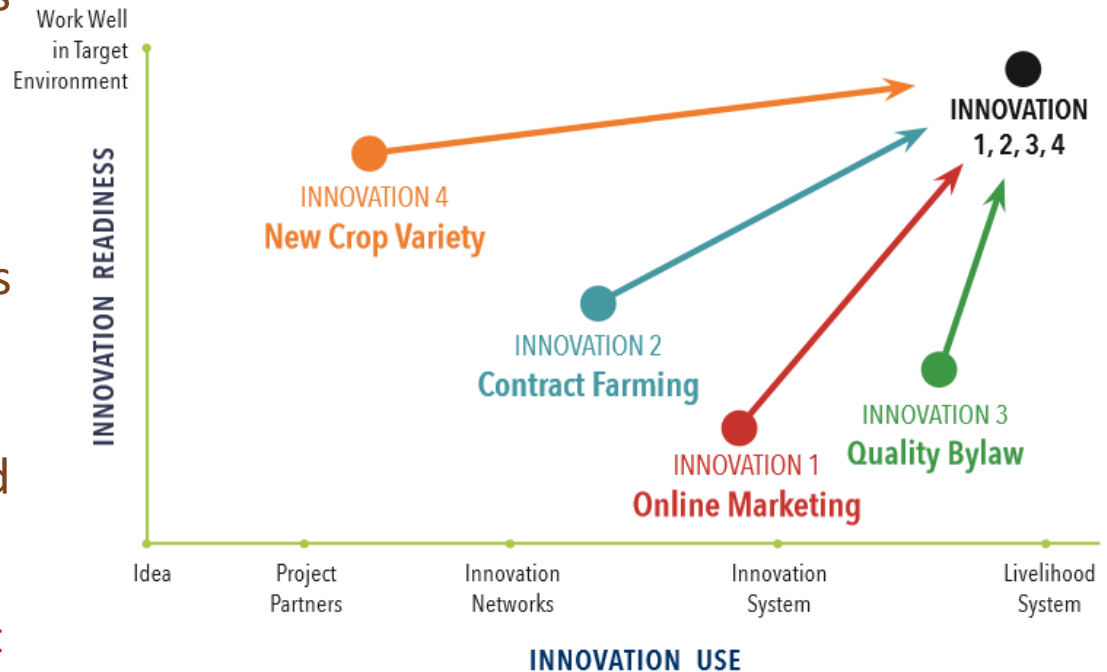
- unpack different components of the innovation package
- identify bottlenecks in the innovation package
- select entry points
- identify strategic partners
- theory of scaling
  - to design, implement and monitor compatible stakeholder engagement strategies



# Scaling Readiness involves innovation readiness and use

**AR4D project to scale technological innovation** (eg. new crop variety – orange dot), needs to:

- innovate in other complementary innovations
- all complementary innovations are critical for scaling
- each critical innovations has different readiness (y-axis) and use levels (x-axis).



**Readiness**-how good a component is to fulfill its function

**Use**-which type of stakeholders use the innovations at the moment

*Customized strategies for innovations can guide the movement of each innovation to higher readiness and use*



# Scaling in RTB





# Scaling in RTB

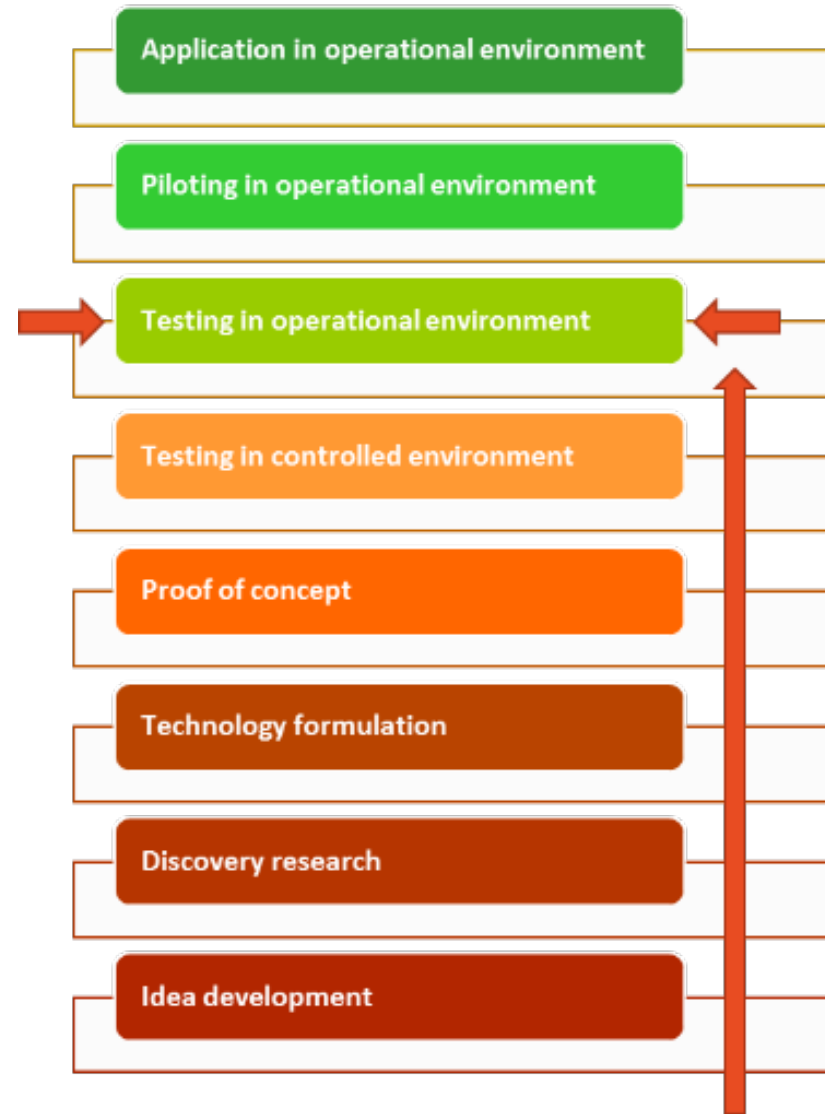
1. Dedicated team (cluster) supports scaling by “technology” teams
2. Inventory of scalable innovations
3. “Stress tested” 20 best bet innovations through peer review (World Café)
4. Launched RTB Scaling Fund: 3 awards!

# Scaling in RTB

## RTB Scaling Fund

- Design & implementation of scaling strategies for most promising RTB innovations
- Semi-competitive
- Cross-team collaboration
- Complementarities with other funds
- Proposals
  - USD 200 – 500 K
  - 12 to 24 months

### Scaling readiness stages



## Scaling fund 2017 3 projects



FP2 - OFSP 5S+

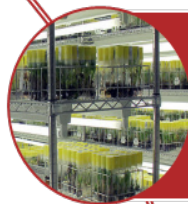


FP3 - BXW management



FP4 - Cassava peels

## Scaling fund 2018 5 proposals under assessment



FP1

- Scaling In Situ Conservation Incentive Mechanisms
- One concept note jointly with FP2



FP2

- Scaling RTB crop variety using farmer citizen science
- Increasing scaling up and adoption of potato in Africa



FP3

- AdiosMacho-Po® and AdiosMacho-St®
- Recovery strategies for BBTD-affected fields
- Strategies for excluding and containing emerging banana diseases



FP4

- Orange Fleshed Sweetpotato (OFSP) Puree
- Small scale flash dryers for cassava



# Triple S PLUS innovation package- Scaling Fund



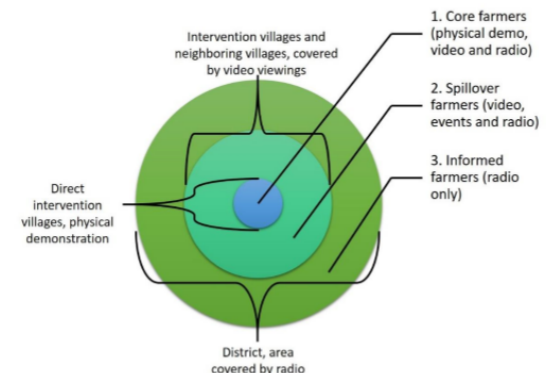
# The problem

- increasingly prolonged dry periods
- shortage of planting material at the onset of rains
- planting material may have accumulated virus diseases and weevils

## Triple S PLUS innovation package

- Triple S PLUS innovation package is based on gender responsive communication comprising five steps:
  - awareness raising, sensitization, planning and preparation;
  - healthy root selection and loading of the Triple S container;
  - monitoring, de-sprouting and preparing to plant out stored roots;
  - root bed preparation and planting out 6-8 weeks before the rains start;
  - harvesting vines from the Triple S root bed to use for planting material.
- steps communicated using multi-media approach
  - simple language and cartoons to the core group of farmers by Trainers of Trainers using the Triple S Training Resource Set.
  - A Guide for Trainers; Triple S training flip charts; and three farmer handouts
  - facilitated video showings; radio

**Diagram 1:** Graphic representation of the coverage of physical demonstration (to core farmers), video viewings (to core and spillover farmers) and radio programs (to informed farmers).



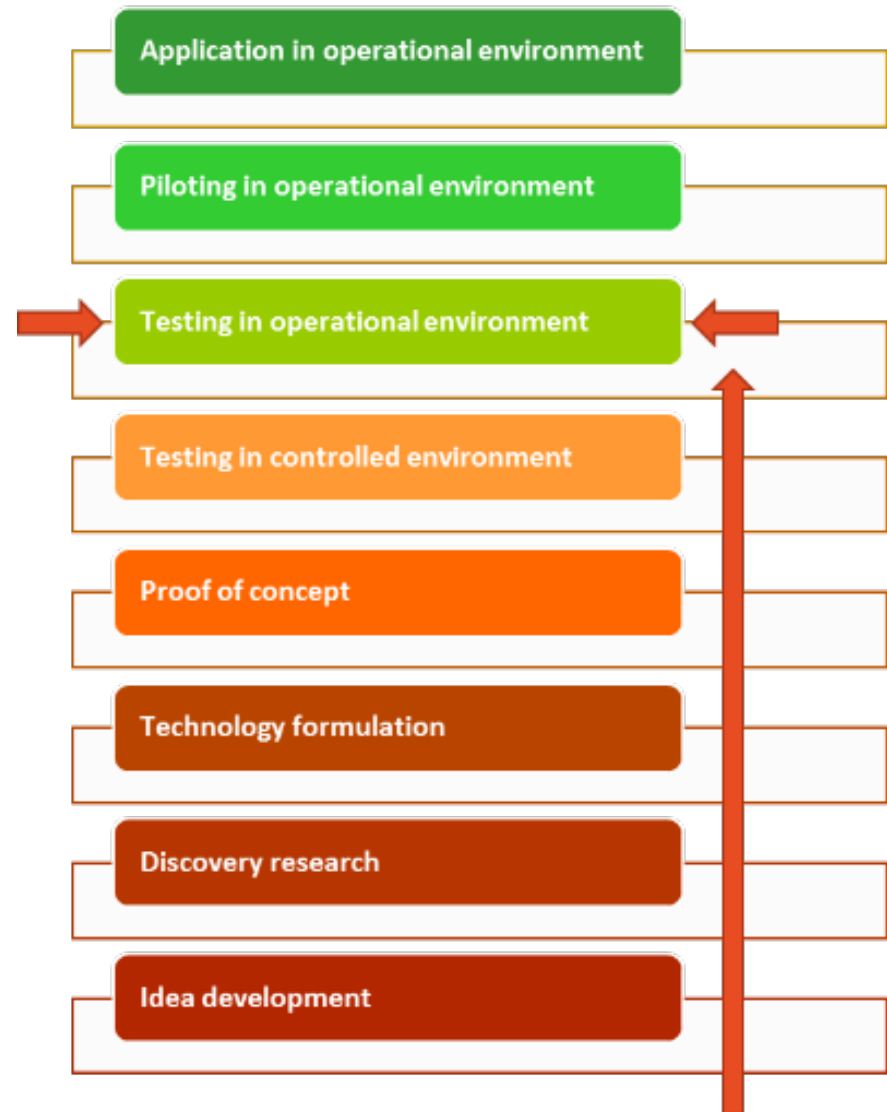


# Scaling readiness -Triple S+

- Triple S tested under operational environment in Uganda, Ethiopia, Kenya, Tanzania, Mozambique and Nigeria
- Triple S PLUS has been tested under operational conditions in Malawi, Ghana and Burkina Faso

*To be successful at scale, need to think beyond Triple S as a technical practice, but as an innovation package with complementary activities. This needs strong scaling expertise and appropriate conditions to work effectively*

## Scaling readiness stages





# Cassava peels for feed innovation package- Scaling Fund

## The Problem

- Peels 15% or more of harvest
- Valuable feed resource wasted due to drying constraints (takes up to 3 days to dry), high cyanide content, and contamination by mycotoxins
- Africa, constitutes 25 million tons incremental waste annually
- Dumping (to rot) pollutes underground water; burning pollutes the air



## The Innovation Package

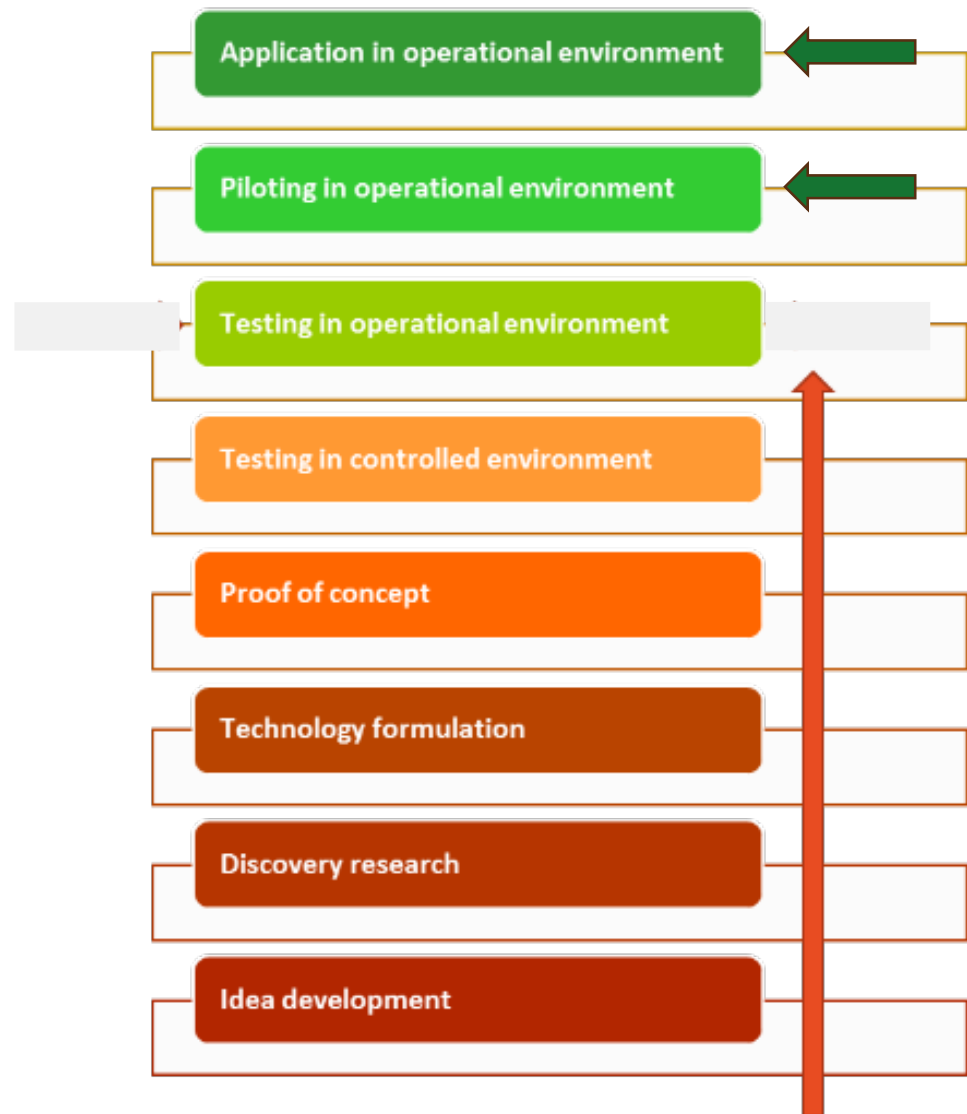
- 3X quicker drying time
- Safe products: 73.2 g/100g starch content; Hydrocyanide <90 mg/kg
- Long storage and compact products for more cost-efficient transportation



# Scaling readiness- Cassava Peels

- **Prototype factories (existing)** –  
Durante Fish, Ibadan; Ojikpata Women Group, Ankpa; Industries, Makurdi; Circular Feeds, Ilishan Remo.
- **Prototype factories (planned)** -  
IFAD-one each in Taraba, Nigeri and Benue; Kogi State Govt in 4 locations; GIZ in Ogun State; CBIN – 2 in Kogi with plans for Ogun State.
- **Medium to large factory** by Niji Foods in 3 locations in Oyo State.
- **Request for training** – over 300 requests for training pending sponsorship support
- **YouTube** (<http://bit.ly/2j7bRu3>) visited by 137k, liked by 530

## Scaling readiness stages



# Scaling Strategy

- use scaling readiness tool to systematically unpack different components of the innovation package
  - components w/ high technology readiness
- identify critically constrained components
  - lower “scaling readiness”
- make management decisions on whether a component could be dropped, substituted, out-sourced, improved, re-orientated or re-located
  - Triple S: videos ready, needed to be translated-so *outsource* translation; *outsource* supply of healthy roots; plan for training on logistics and transport and distribution of vines
  - Cassava peels: prioritize transport to factory, address constraints in environment and product hygiene





## Scaling Strategy

- Partnership scoping-Identify additional key actors to address critical constraints
  - Triple S: Ghana –international NGOs  
Ethiopia –public-sector extension system

Also: diversified OFSP products drive the demand for OFSP vines-*need for a value chain perspective when scaling -what additional actors*

- Cassava peels:
  - Federal Ministry of Science & Technology-product quality control, policies for solid waste management, proper disposal of effluents; others



# Wrap Up





# Science of scaling & translational research

- *Scaling increasingly in the donor spotlight, strategic interest of Phase II and nurtured by PMU*
- *New projects ideally take on scaling readiness approach, so all components move along scale and are ready to go jointly*
- *Ongoing projects-can identify what components need to be prioritized and identify new partners if needed*
- *RTB is developing an evidence base for stepwise thinking about innovation and scaling trajectories to support decision-making on the type of research, capacity development and partnership investments which need to be in place for effective scaling*



# Acknowledgements



**3S PLUS  
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# Thank you