

Machinery Learning

Translating Assessment into Adaptation toward **Scale**
in Agriculture Mechanization & Beyond

iDE

Purdue
University
Scale Up
Conference
Session 2:
Assessing
Scalability

26 Sep 2018



iDE @ Scale

CSISA-MI Mechanization and Irrigation Project
2013-2018



Objectives

Sustainably transform agriculture in Southern Bangladesh through broad-based access to mechanization services

Technologies

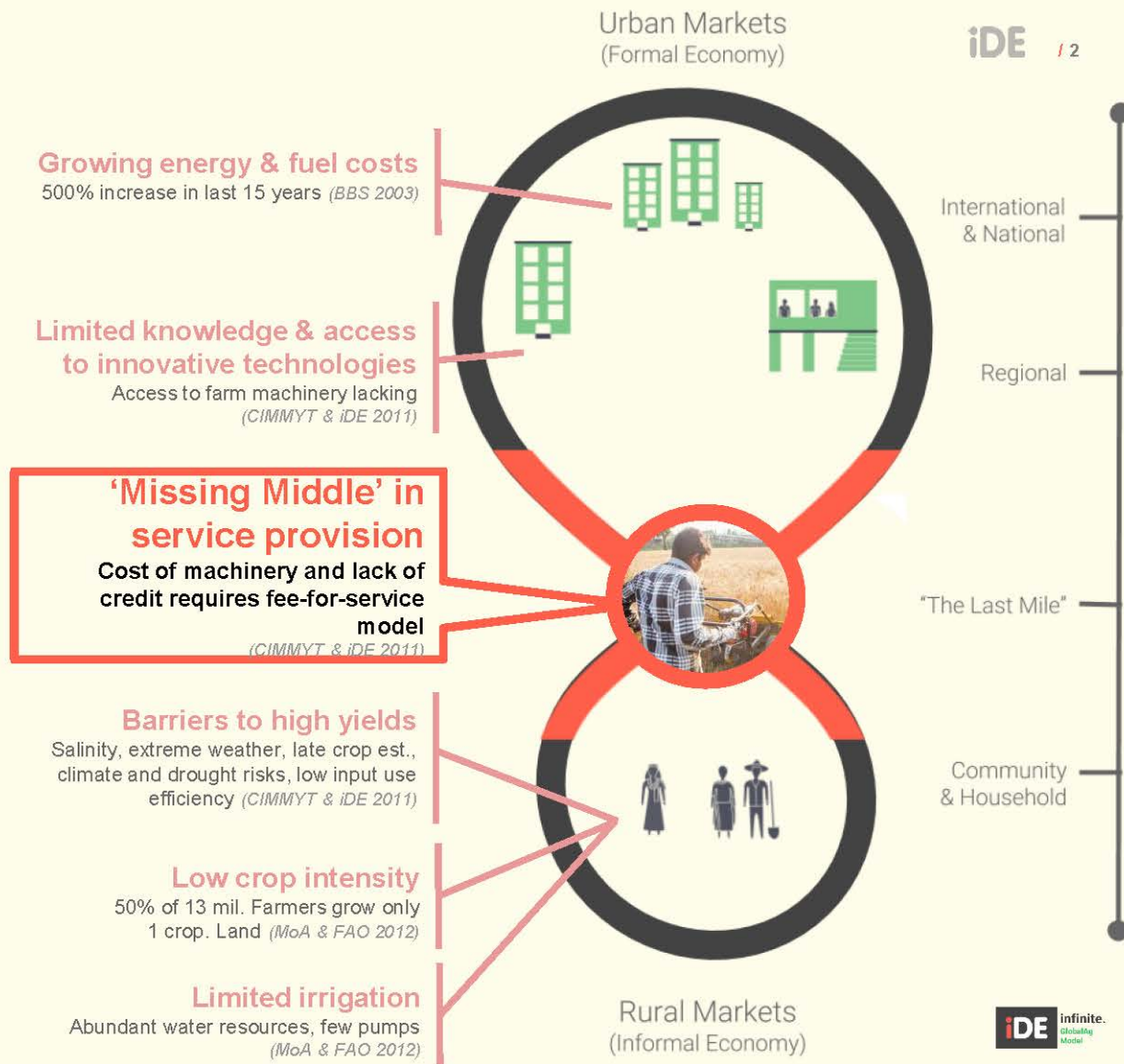
- Power-tiller operated seeder
- Reapers (SP & PTO)
- Axial flow pump

Project Approach

- Market systems devt.
- Facilitation focus
- Microenterprise networking
- Human-centered design

Results

- ~3,000 rural entrepreneurs
- 191,000 farmers
- 92,000 ha
- \$3.6+ million of private-sector co-investment from 5 lead firms



Assess & Adapt

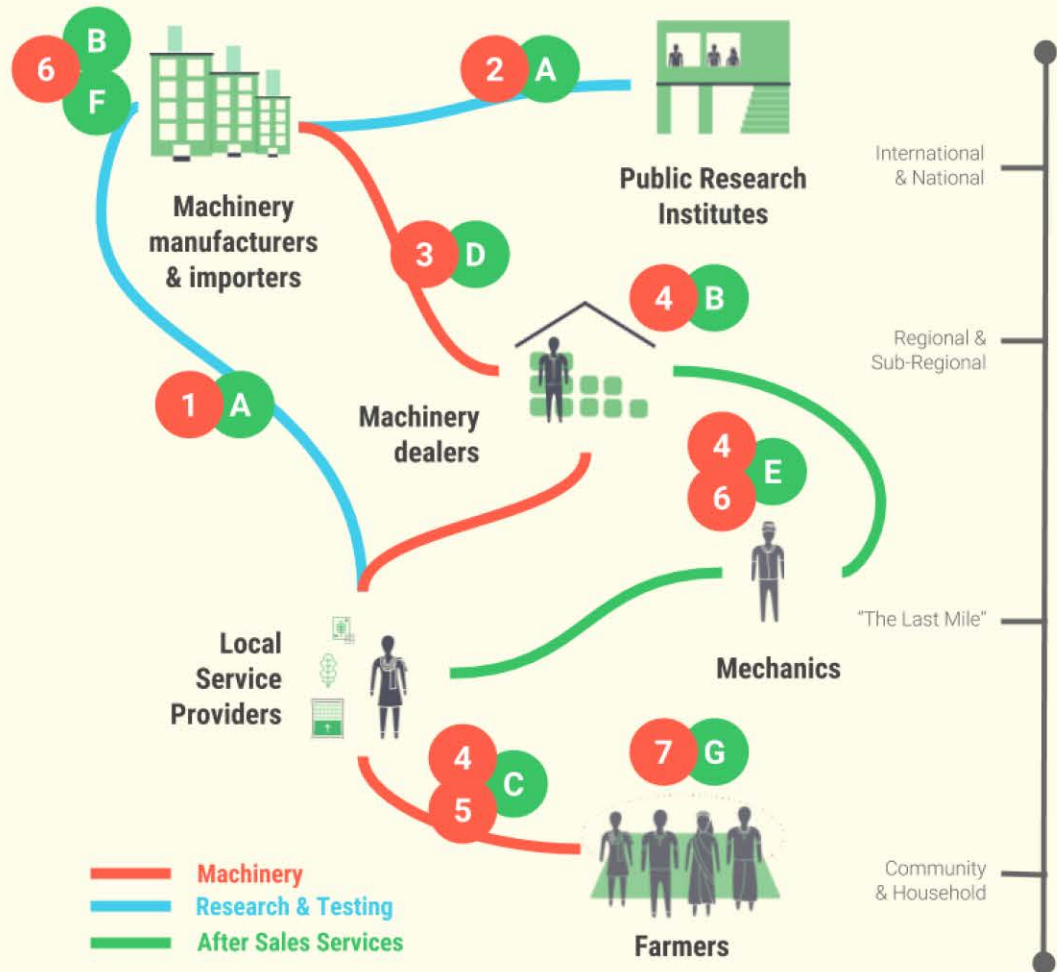
CSISA-MI Scaling + Adaptive Mgmt.

Tactics

Assessing for Scale

Adapting toward Scale

1	Prioritize early-stage field-based user feedback	A	Rapid Human-Centered Design prototyping & testing of modified tech
2	Build feedback loops between lead firm manufacturers, importers & govt. research institutes	B	Restructure firm agreements from MoUs to Joint Venture format & add local ver. for dealers
3	Aggressively scope financial incentive structures in mkt.	C	Shift promotion toward demand-driven crops (garlic & onion) first
4	Continually observe how the market uses the technologies & zonal tipping points	D	Prioritize lead firm financial incentives to dealers
5	Build early adopter persona from initial sales	E	Shift smart subsidies from machinery to spare parts over time
6	Periodic evaluation of firms' Will/Skill mindset	F	Iterative private partner recruitment process based on current partner dynamics
7	Watch for spontaneous diffusion of tech & peer-to-peer learning	G	Build support package for 'copycat' users & add networking interventions to project



Scaling Success

Expanding success from project to portfolio

Lessons Learned & Recs

- Invest enough time & resources for low-friction strategy b/w implementing partners
- Balance systems devt. & deployment: sprint & iterate!
- Limits to validity of zonal tipping-point scaling methodology

Unresolved Challenges

- Initial low quality depresses market demand (AFP)
- Building critical supporting systems (spare parts) in time
- Motivating more impact in high impact/low perceived reward crops/practices (cereals & CA)
- Women's integration as LSPs

iDE's Forward Strategy

- Further expansion of CSISA-MI adaptive mgmt. systems to all iDE projects
- Refinement of best practice into scale- and performance-focused implementation "business model"

595,792 Active Farmer Clients
23,832 Active Model Farms and Gardens

3,556 Active Farm Business Advisors
734 Active Commercial Pockets

