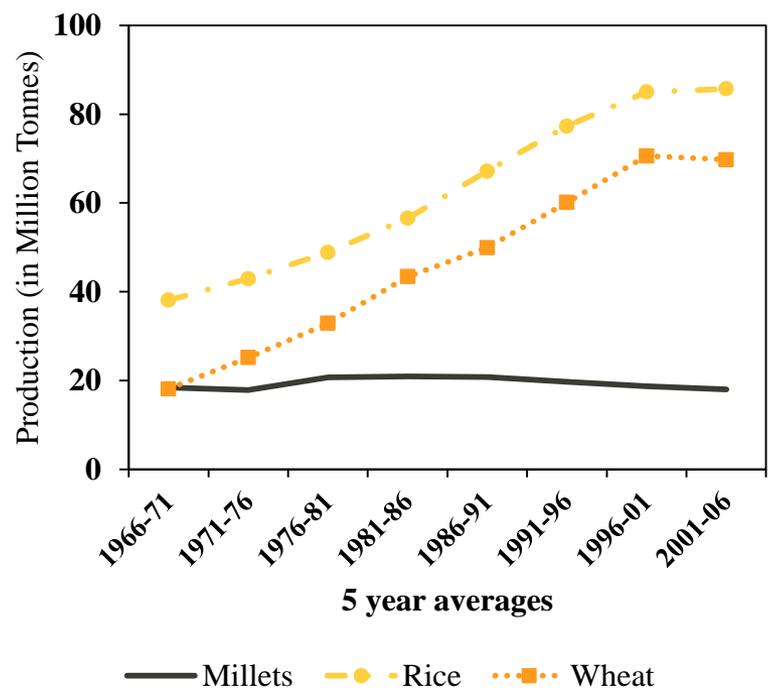


Market/Business Models for scaling up...

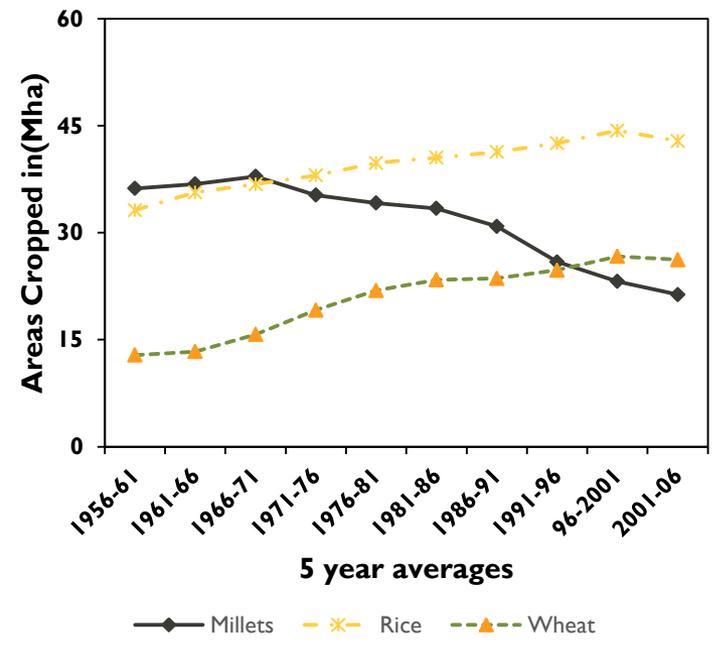
A. Adekunle, D.Lyew, V.Orsat, V.Raghavan

McGill University, Montreal, Canada

DATA AVAILABLE ON THE INTERNET



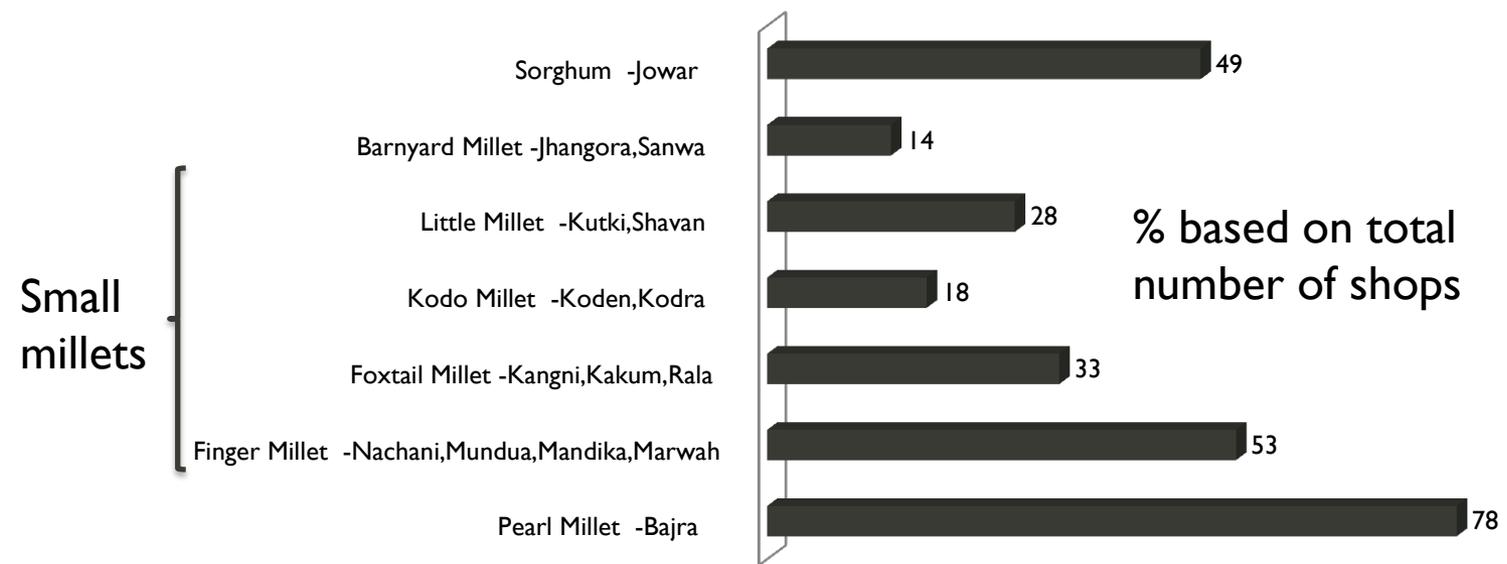
Stagnation!



Area cropped decrease!

WE COMMISSIONED A MARKET RESEARCH TO DELVE DOWN INTO AVAILABILITIES & TRENDS

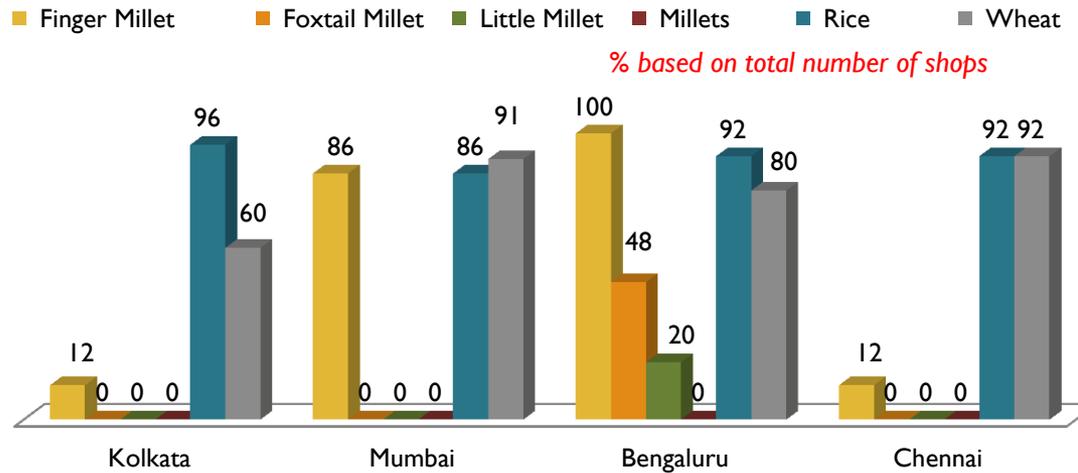
Type of millets available in grocery shops



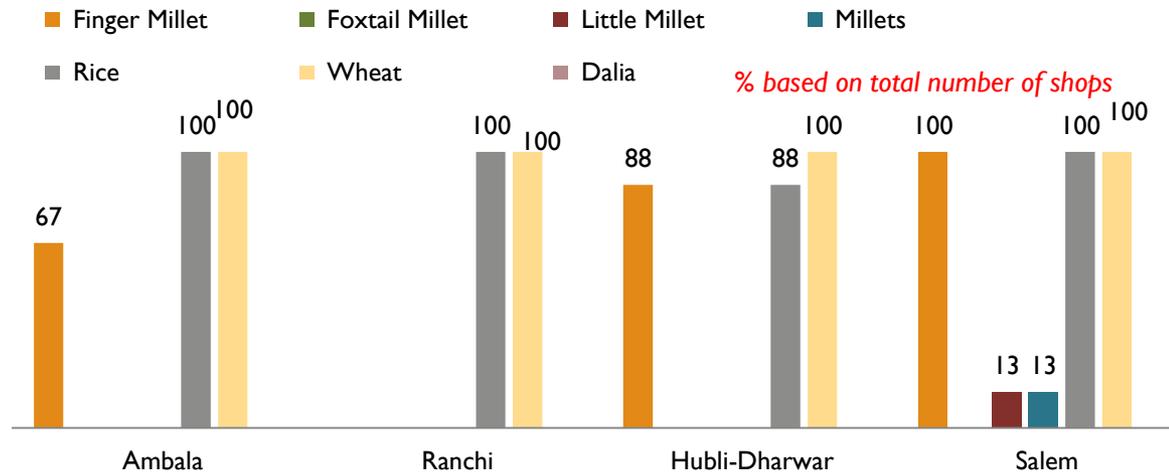
What % does the small millet group comprise in retail arena

Millet stocking across Tier 1 cities

Source: Indianet 2017 research: Full report available

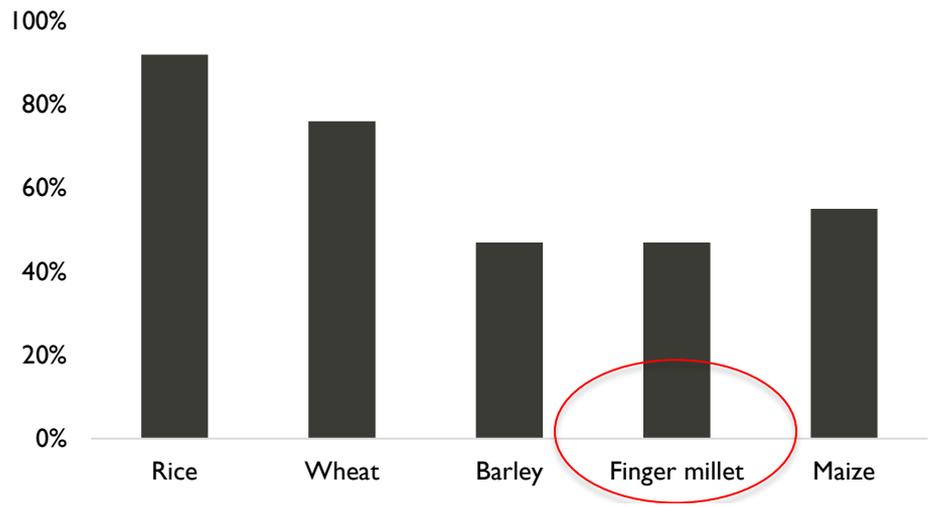


Millet stocking across Tier 2 towns



Ambala, Haryana
 Ranchi, Jharkhand
 Hubli-Dharwar,
 Karnataka
 Salem, Tamil-Nadu

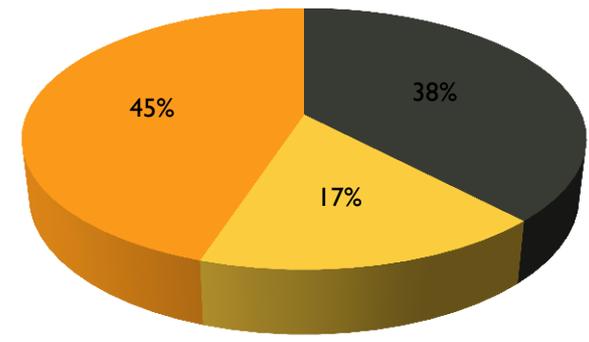
Proportion of commodities stocked in shops



Except for Rice and Wheat, every other grain sold very little in comparison. 34% of the shops claimed selling Wheat which constituted 31-40% of the total sale of grains. In case of Rice it was 27% who said the sales constituted 31-40%. In the case of millet the overall proportion of sales was between 1-10% of the total!

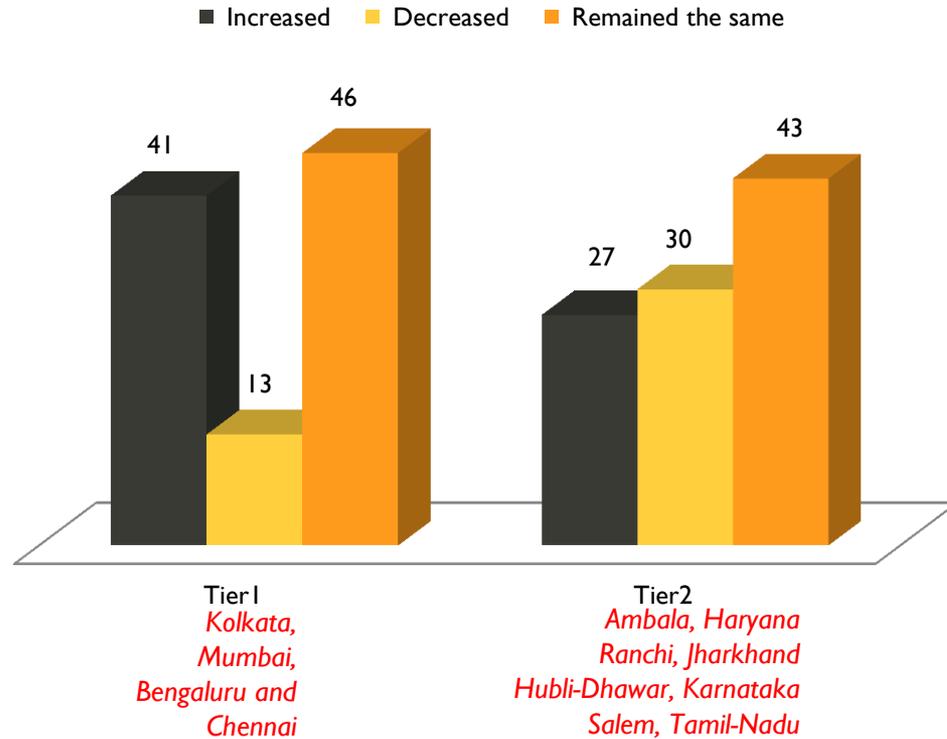
Status of sales of millets

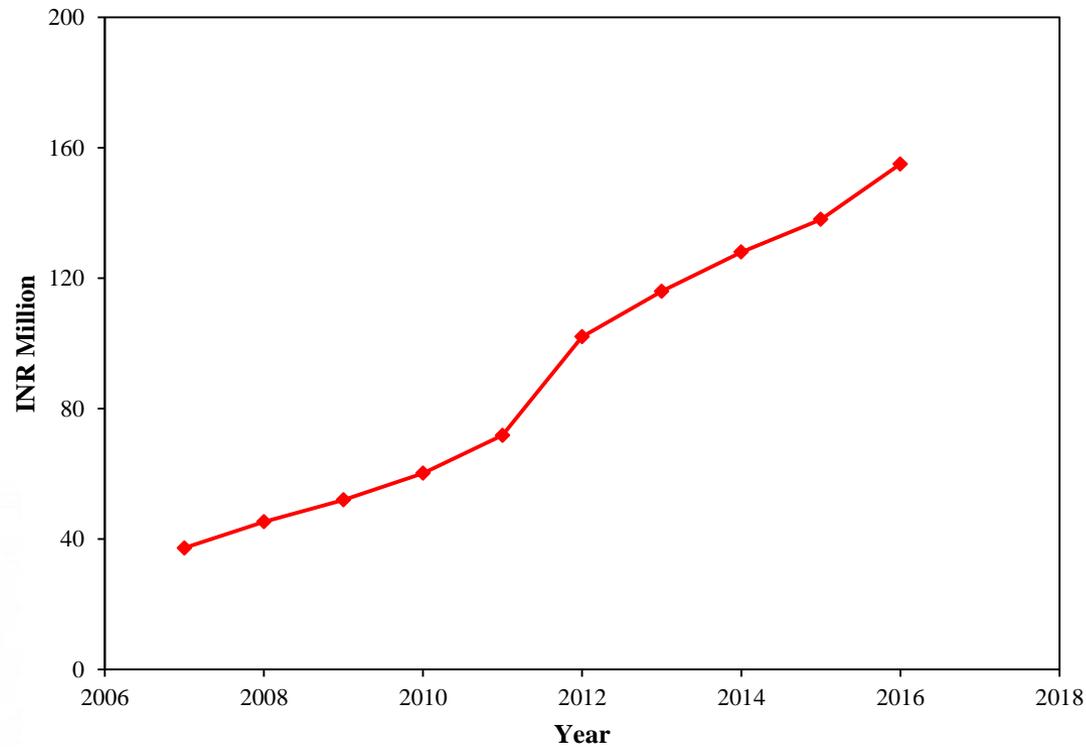
■ Increased ■ Decreased ■ Remained the same



A little over a third of the shops in a survey agreed that the sales of millet have increased over the past. 17% said the sales had gone down and 45% said that the sales remained the same – no change.

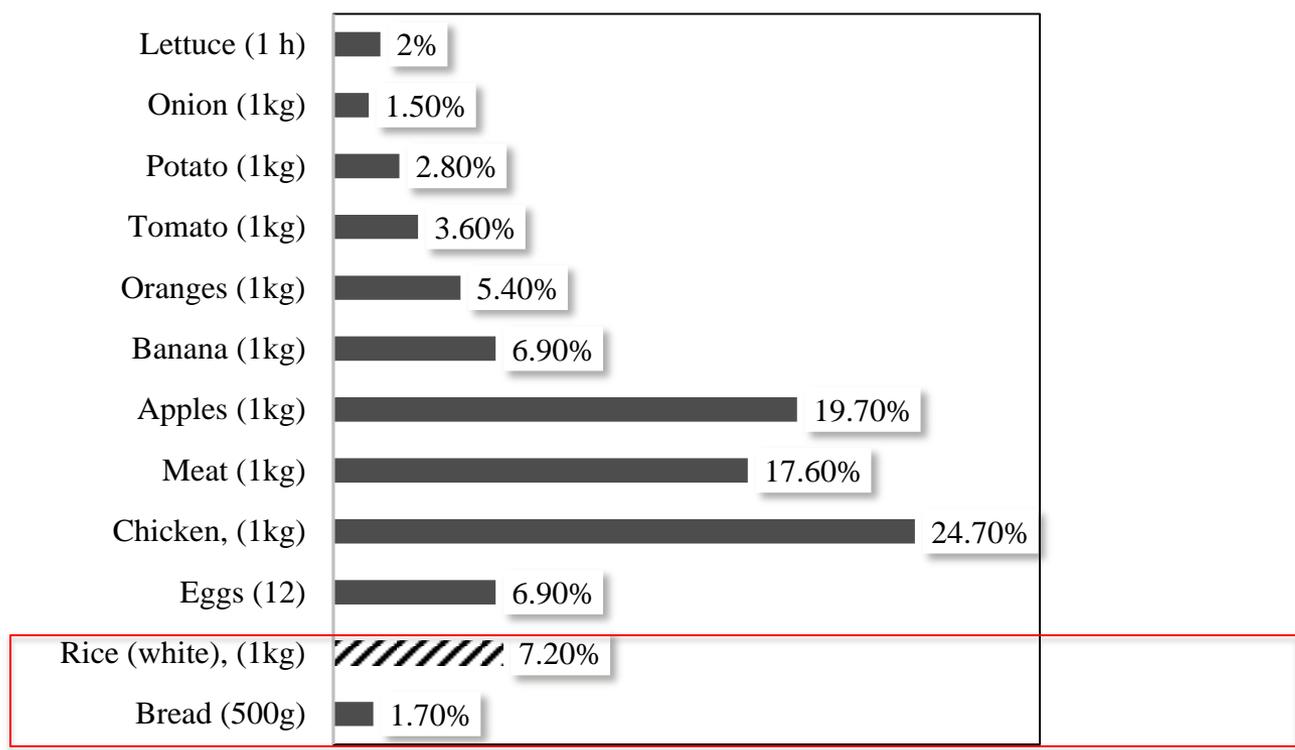
Status of sales of Millets





But average disposable income is increasing, *implying that there's an opportunity to grow small millet related business!*

ASIAN FOOD MODEL



Opportunity exists to cut into the rice and break market! Our project was really needed

We know that innovative millet inspired recipes exist

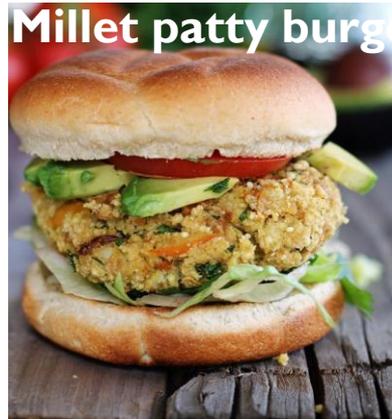
Breakfast



Snacks



...even “westernized”



Millet patty burger



Millet Pie



Millet Pizza



Millet Cereal mix

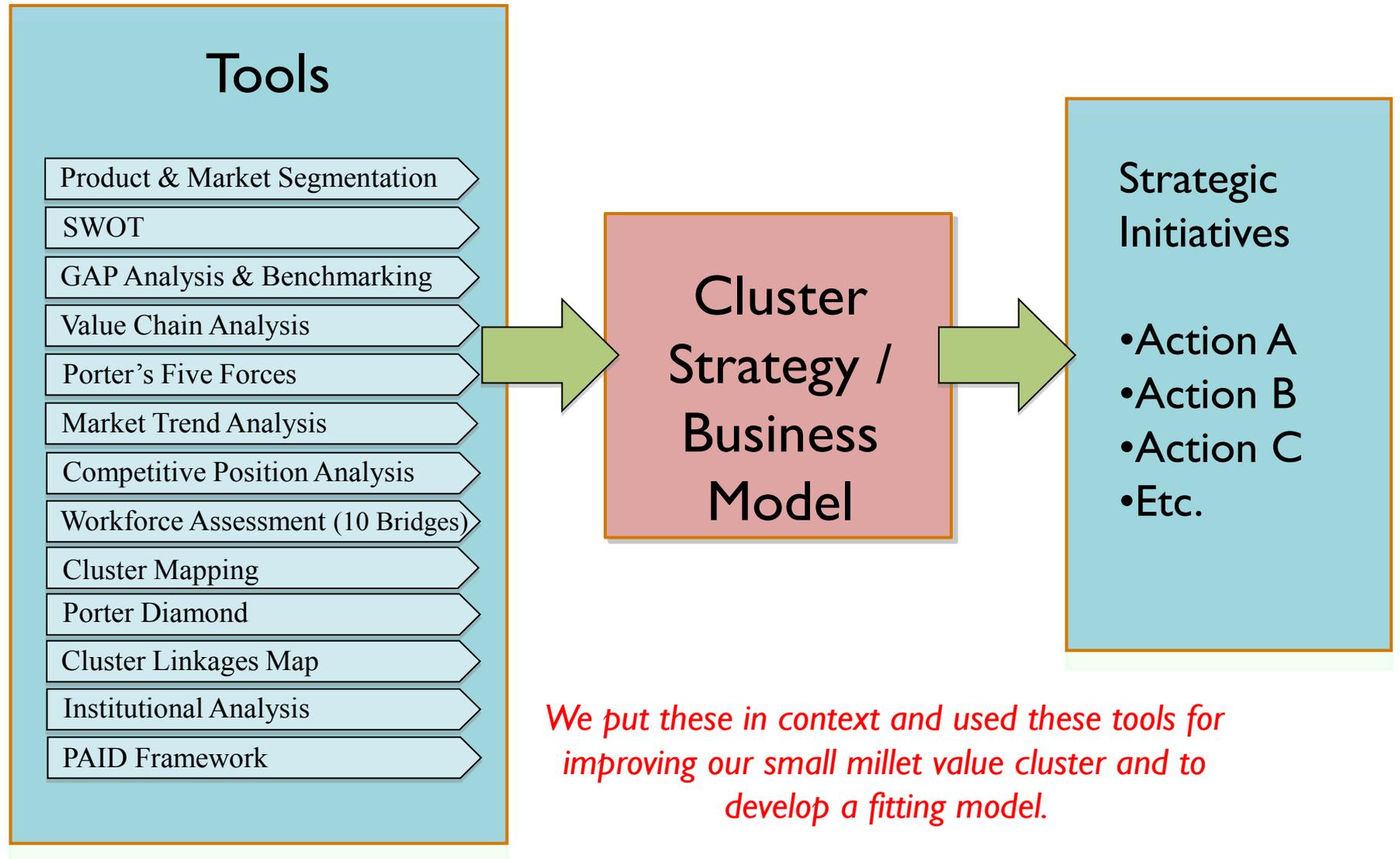
Pastas



Noodles

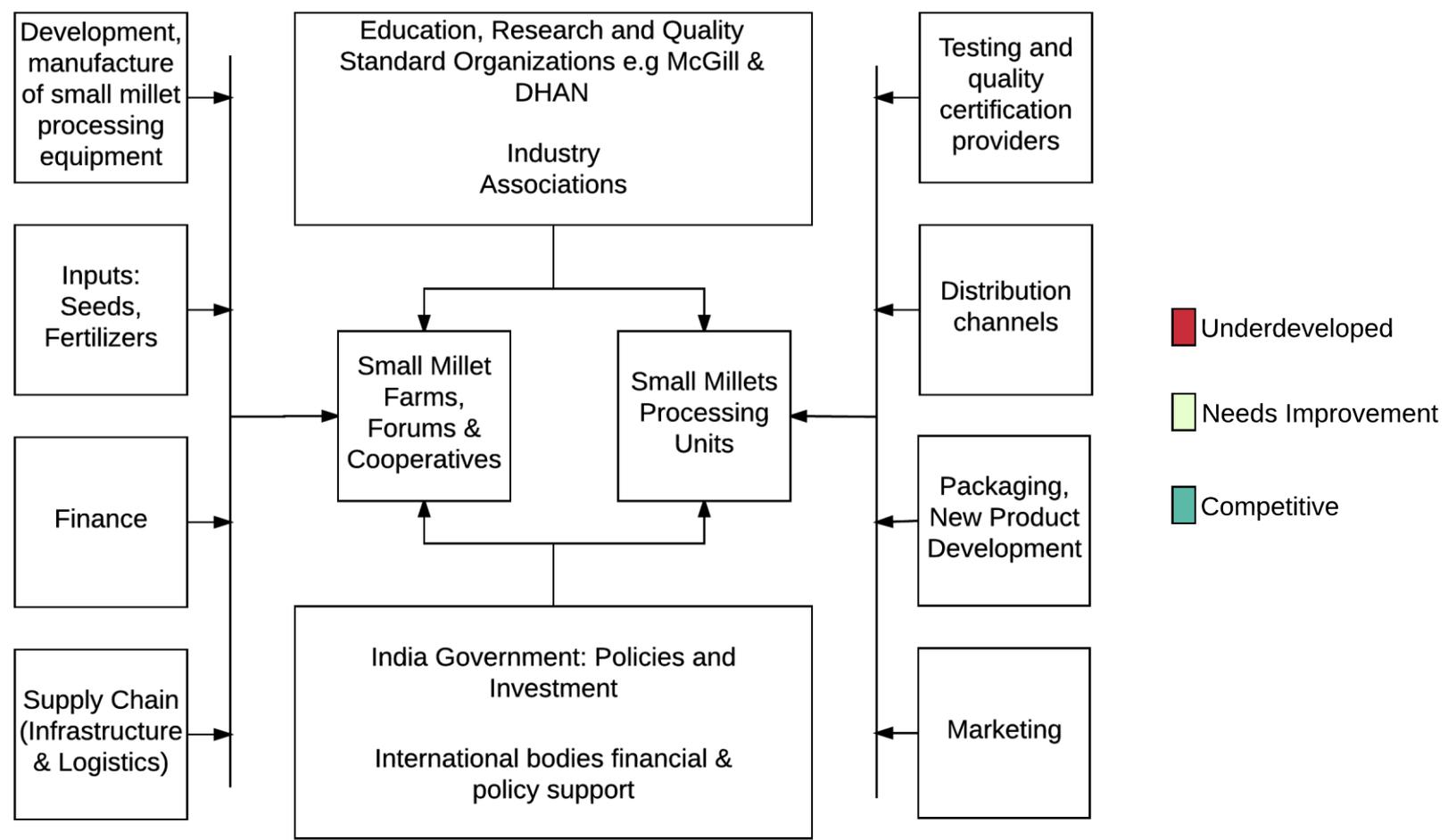
AgBusiness market tools to the rescue!

Marketing model tools



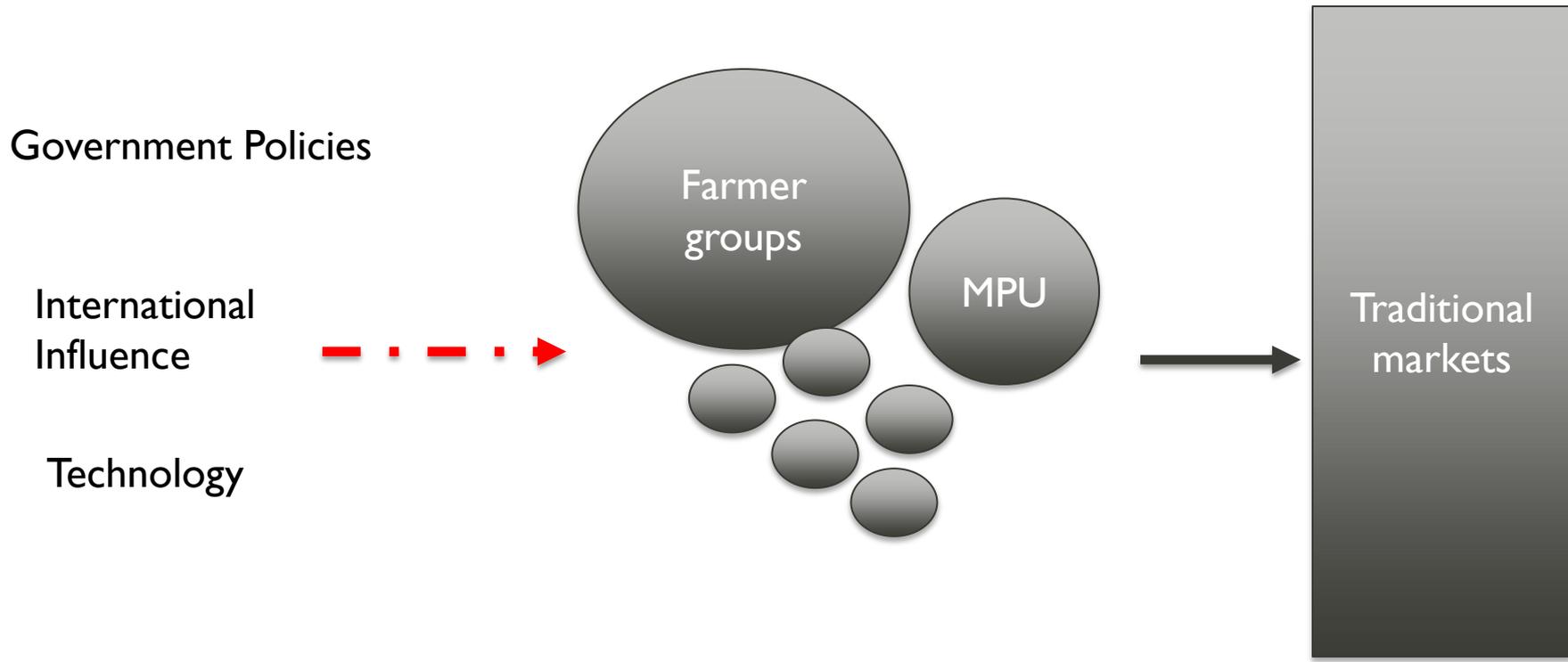
We put these in context and used these tools for improving our small millet value cluster and to develop a fitting model.

...so what does the small millet value chain cluster look like?



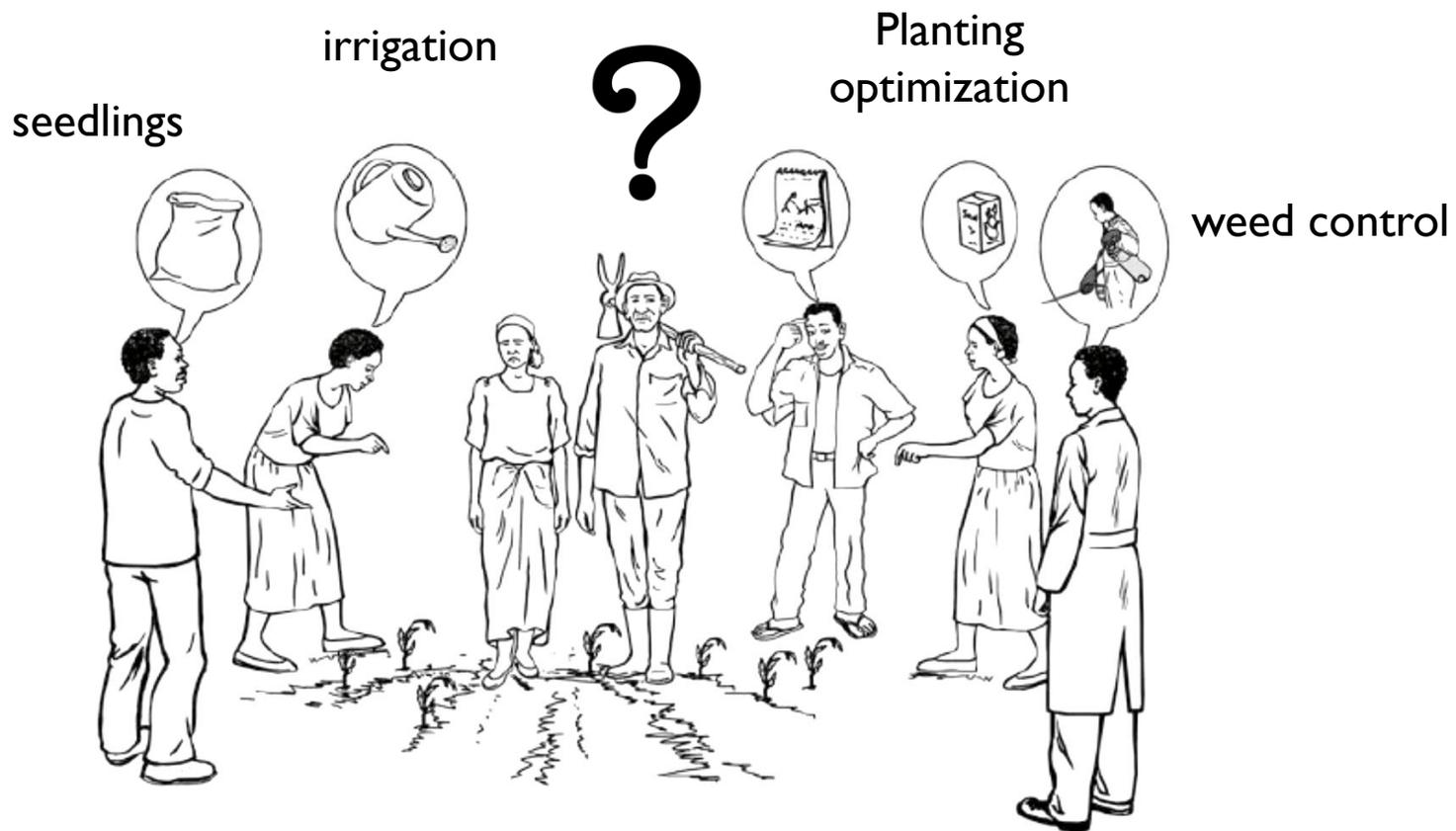
..conceptualized from our research

...we also derived the existing market model



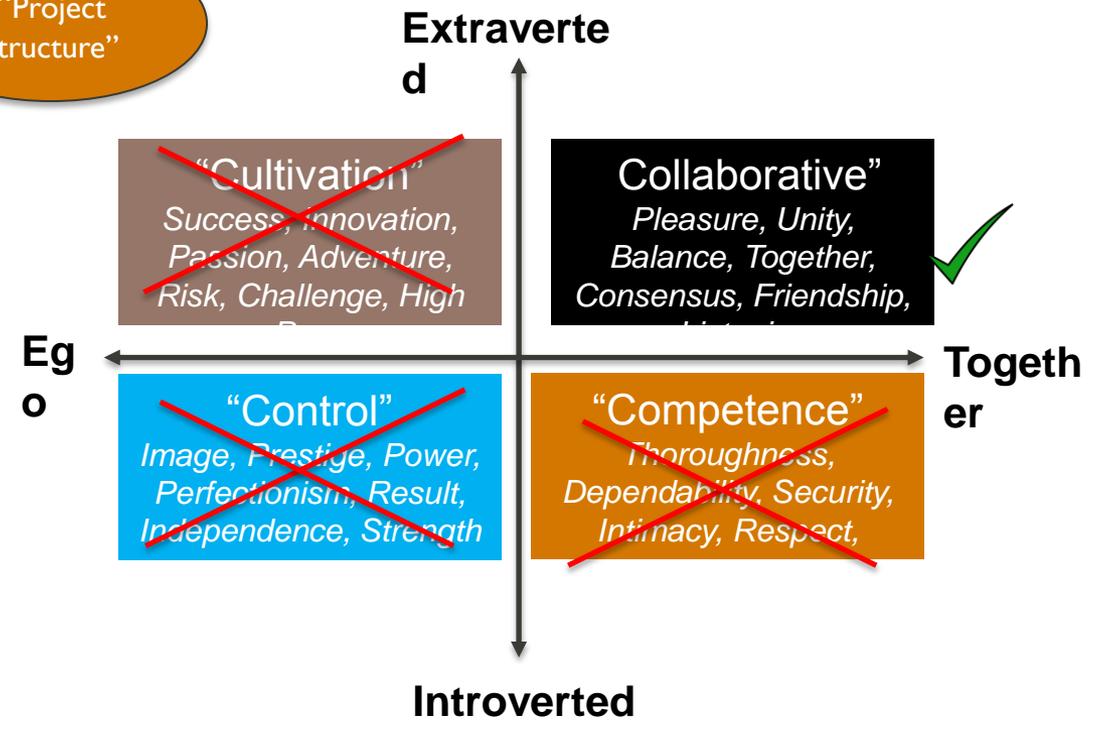
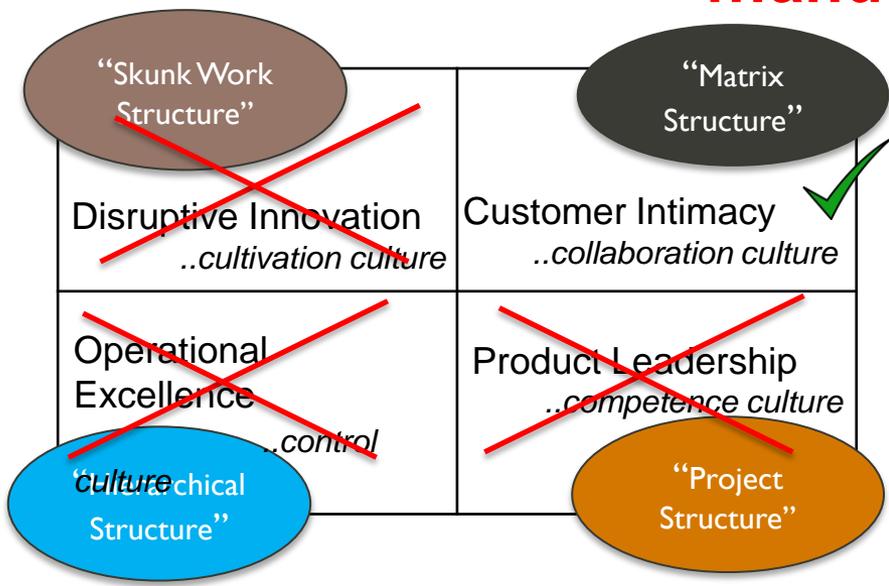
...characterized by inadequate innovation, and interconnectivity

Typical Agbusiness models are ...one size fits all

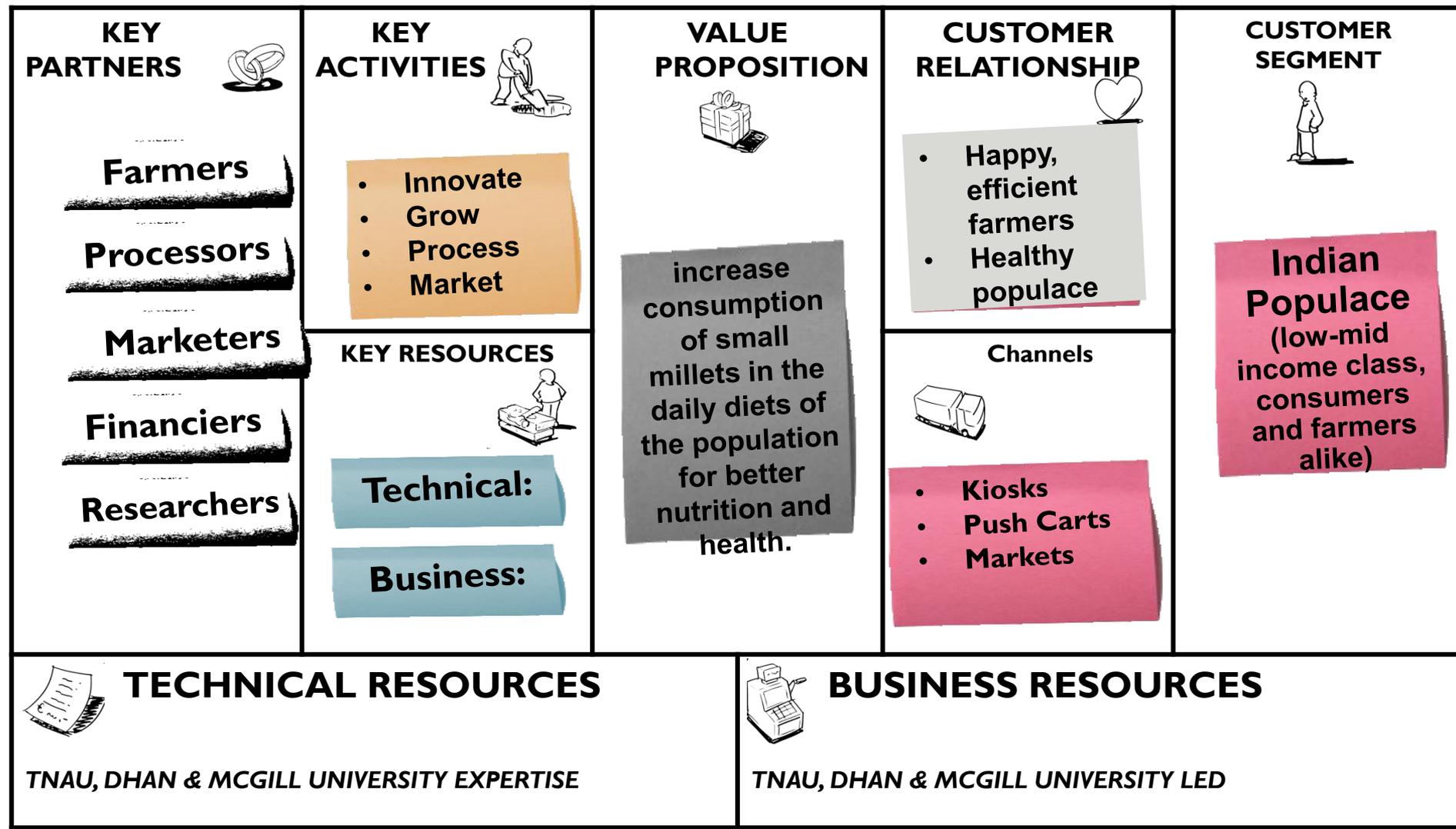


...but we need customized models

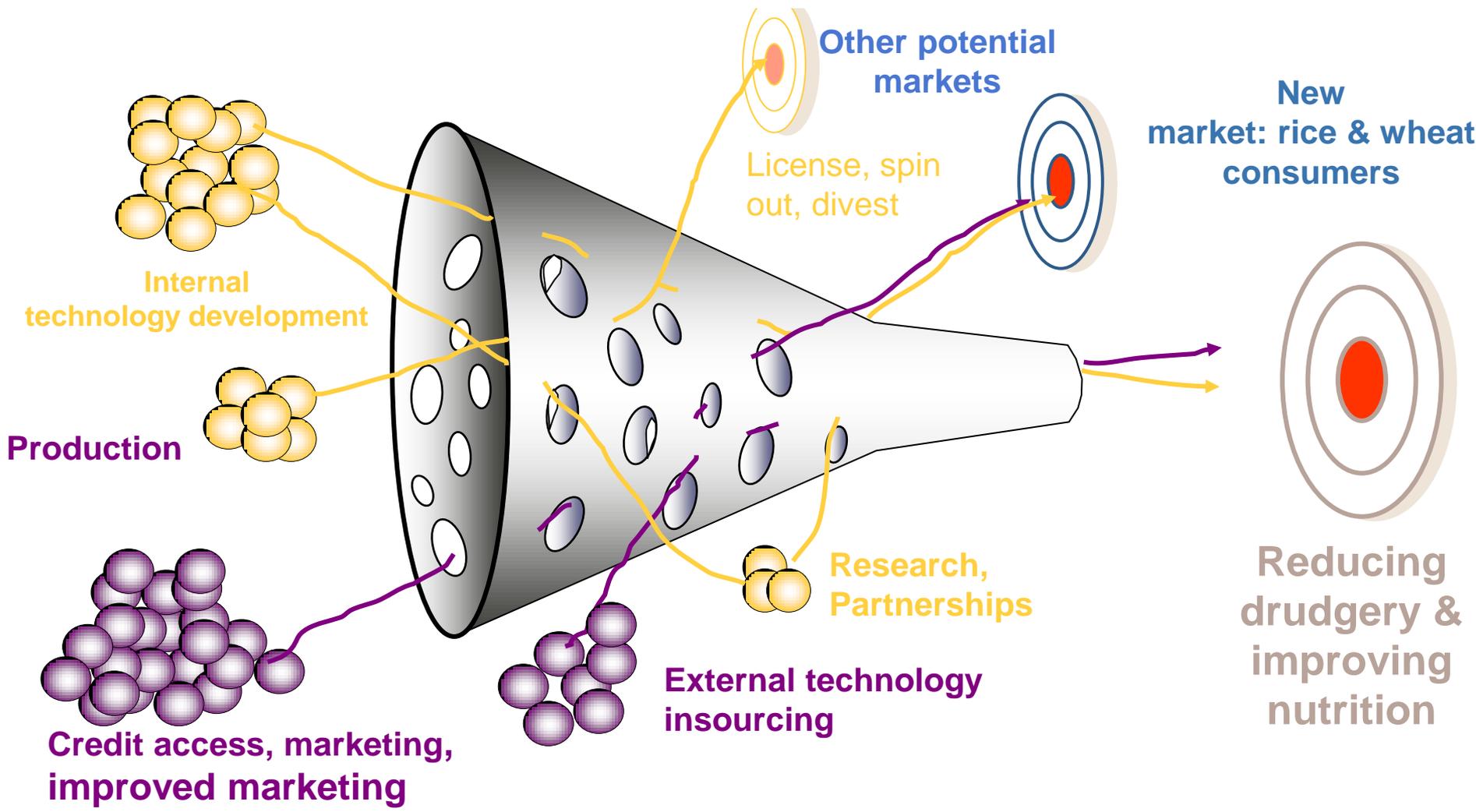
...and a right structure and culture



...our brainstorming canvas



...and we arrived at this innovative concept



Open innovation driven models

...overall ecosystem of the models

Leadership

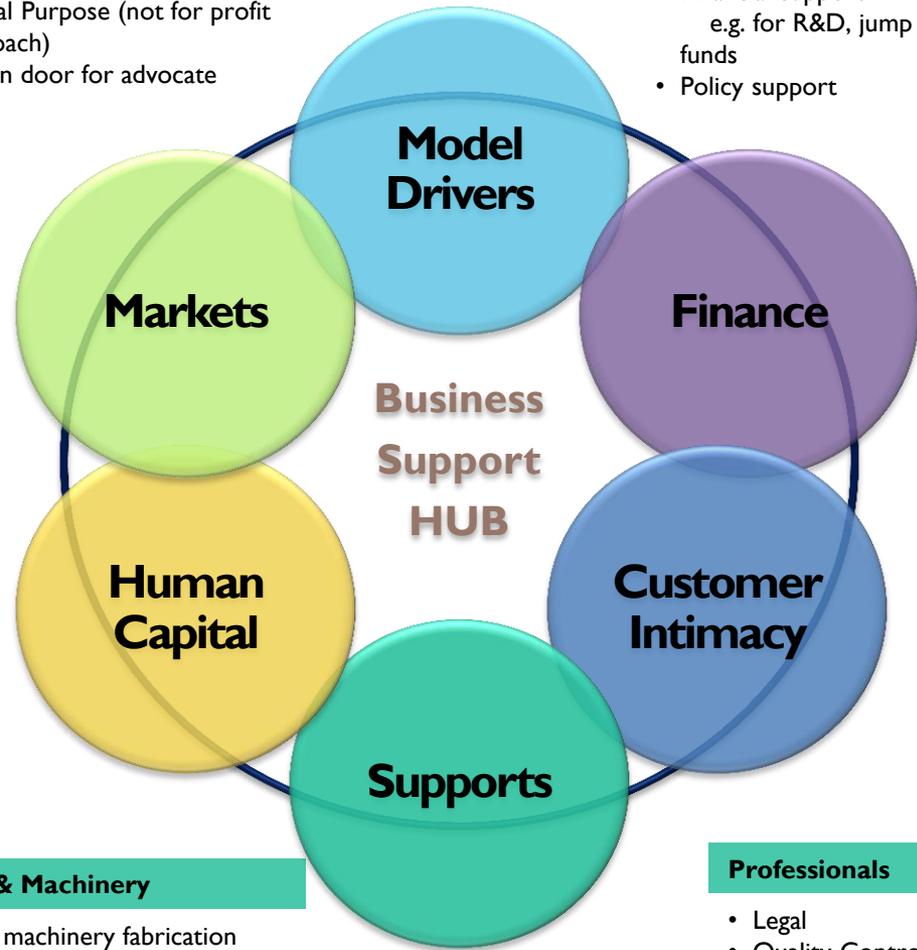
- Encourage Innovation
- Social Purpose (not for profit approach)
- Open door for advocate

Government, NGO & Research Institutes

- Investment, support
- Financial support
 - e.g. for R&D, jump start funds
- Policy support
- Applied & Developmental research
- Technological transfer
- Conferences
- Business plan contests

Networks

- Millet growers network
- Millet marketing network
- Millet processing Units



Financial Capital

- Micro-loans
- Angel investors
- Debt

Labor

- Processors
- Retailers
- Growers
- Machine Operators

Engagements

- Social experiments
- Advertisements
- Feedback & Surveys
- Behavioural Analysis

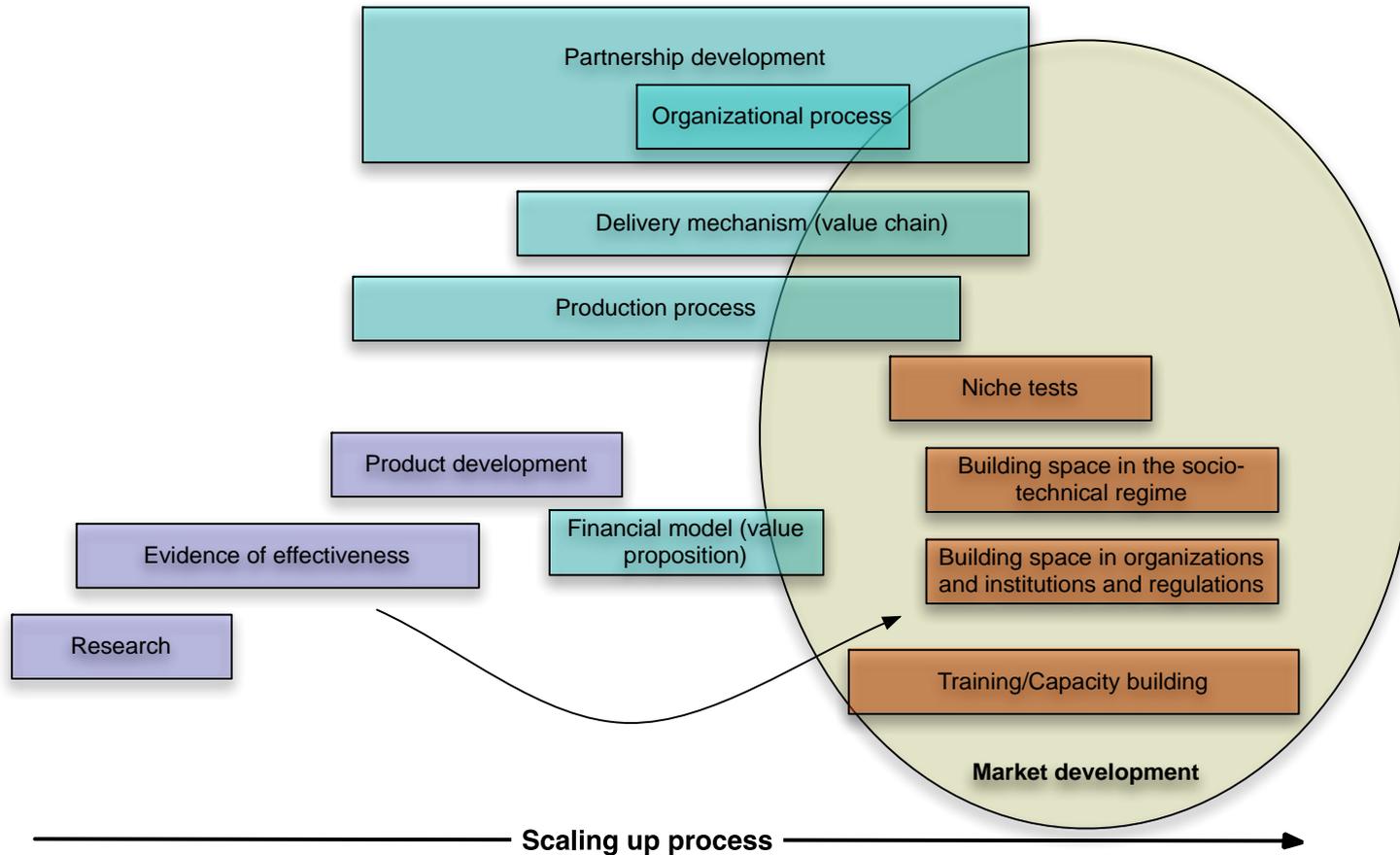
Infrastructure & Machinery

- Equipment and machinery fabrication
- Telecommunications
- Transportation & Logistics
- Zones, incubators, co-working, clusters

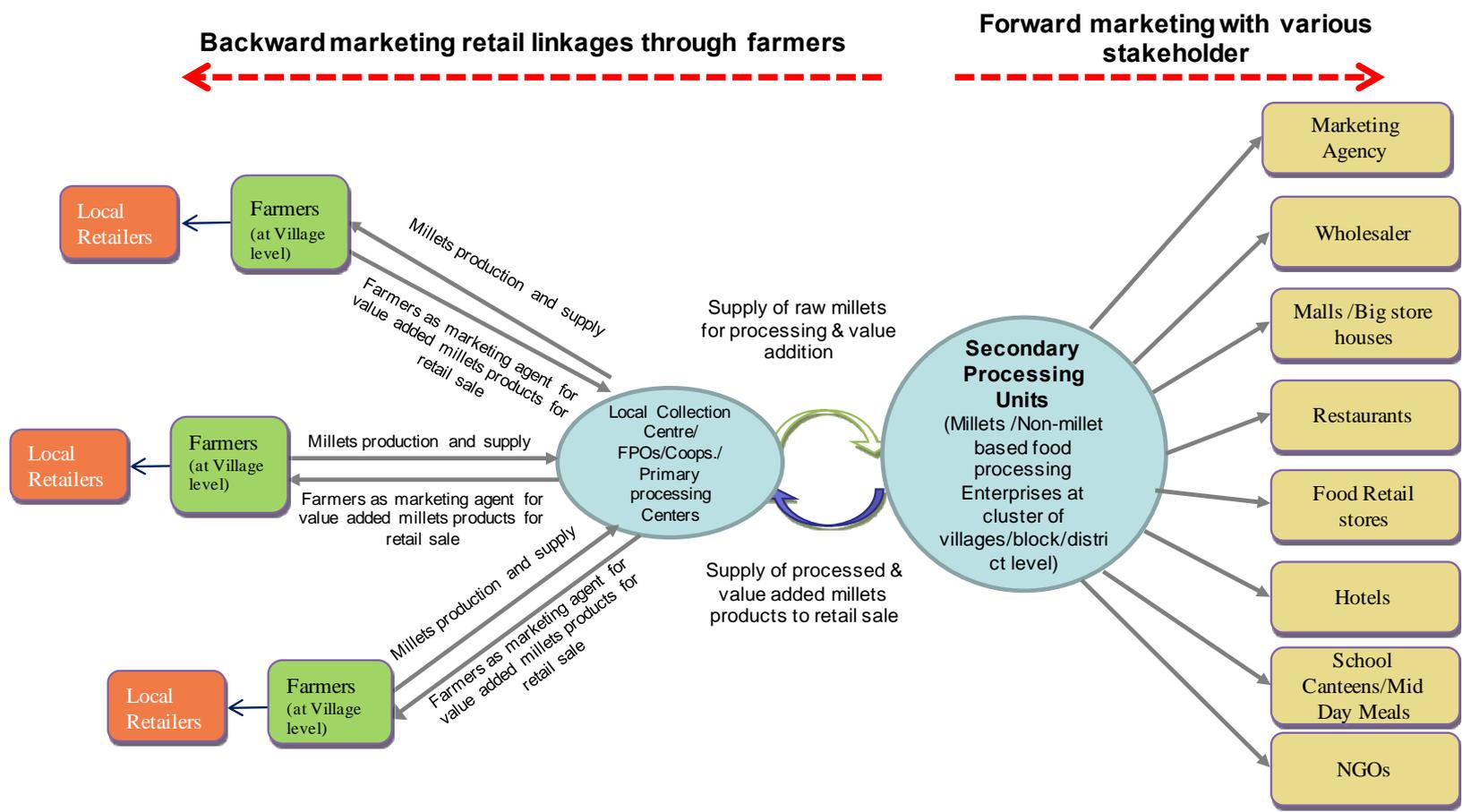
Professionals

- Legal
- Quality Control
- Technical experts, advisors

..for scaling up, we proposed this iterative model

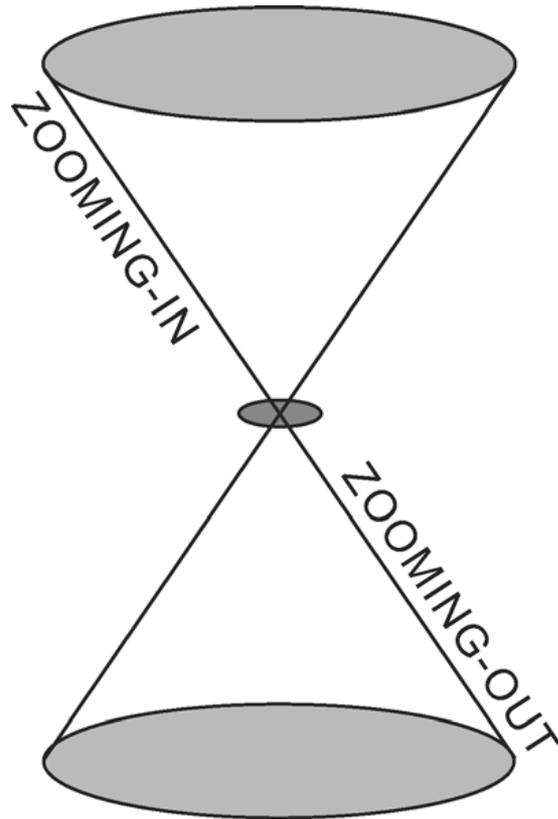


...to support entrepreneurs, we adapted a modified pulse model



Pulses model provided by Dr. Laurette Dube and Dr. Tribhuvan Nath.

...for ancillary services, we adapted a zooming in/out model



- (1) sustainable practices, both at the farm and higher system levels;
- (2) learning those practices;
- (3) facilitating the learning;
- (4) institutional frameworks that support such facilitation, comprising markets, science, extension, networks of innovation, etc.
- (5) conducive policies.

Paul Ven Mele 2006.

...to ultimately lead to a business incubator for millets

Need

**Capture nutrition
from millets**

**Technology
transfer**

**State-of-the-art
equipment**

Function

**Access to modern
equipment**

**Training and
operation**

**Reduce financial
burden**

**Help farmers to
develop a new
product**

**Help improve and
scale-up the
process**

**Promotes
entrepreneurship**

Bigger picture

Development of new products and businesses.

**Increases revenue
during good
season**

**Minimizes capital
and operational
costs**

**Have promoted
new Govt. subsidy
schemes**

**Extended shelf
life → Later
revenue**

**Provides
confidence and
hope**

**Reduces financial
stress → may
lower suicide
among farmers**

...tapping from typical success stories: FPBI at TNAU, India

- ✓ **Multi product
Research, Teaching and
Production facility**
- ✓ **State of the art food
processing equipment**



Raw material storage



Plate heat exchanger



Tubular heat exchanger



Evaporator



Spray dryer

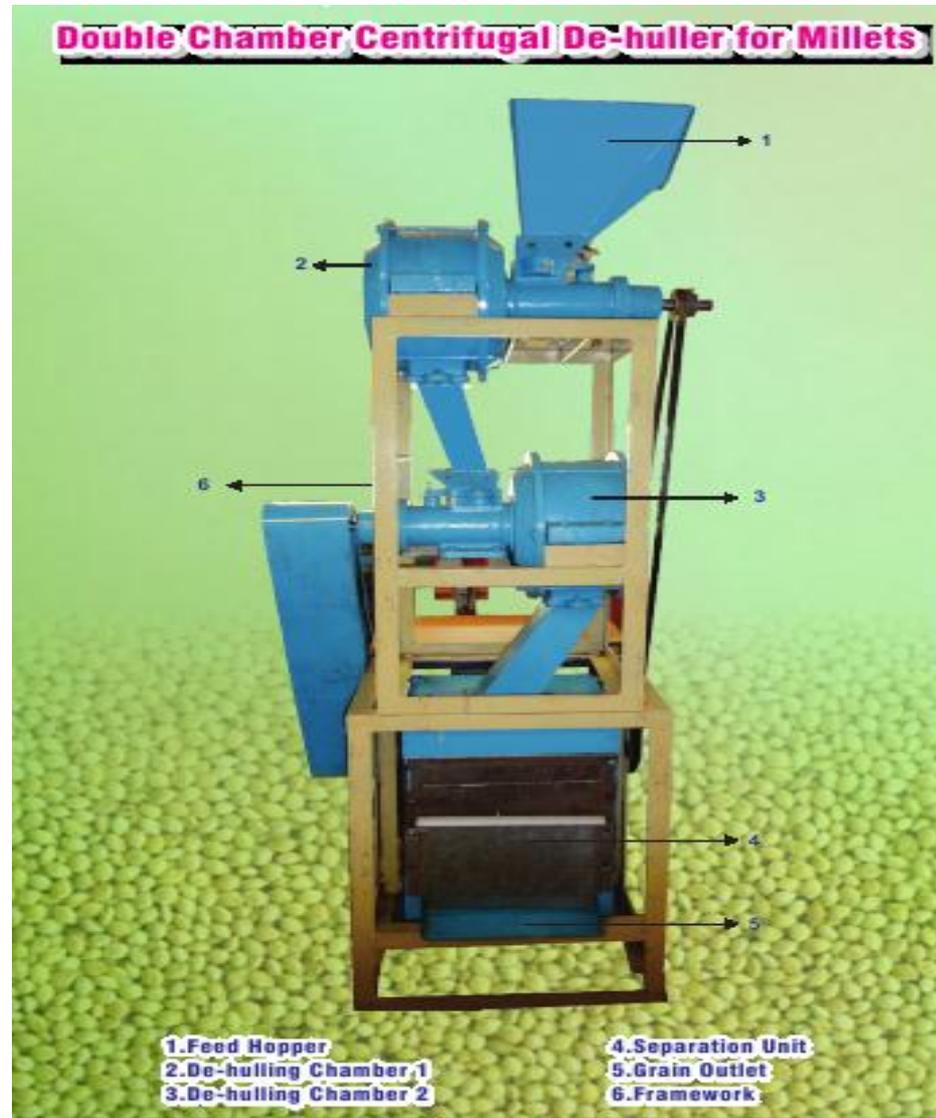


Scraped surface heat exchanger





...vision



...progress made

New Four Roller Dehuller



...progress made

CONCLUSIONS

- Directed model development for business services and marketing improvement of the small millet value chain.
- Open innovation driven, customer intimacy type of marketing models have been developed.
 - Wide spread
 - Easy acceptability
 - Feedback & continuous improvement

நன்றி