



# **BLOOM**

Democratizing the future of farming

# 1

## THE OPPORTUNITY

Unlocking the potential of smallholder farmers  
to alleviate poverty and increase food security

# THE GLOBAL PROBLEM

- 9.1 billion people by 2050
- Food production must increase by 70% to meet demand
- 500 million smallholder farms across the developing world
- Provide **80% of the local food supply**
- These are the areas where most of the population growth will happen.
- **Growing recognition**
  - Smallholders produce much more sustainably than large farms.
  - They have the potential to feed the growing population.
  - Allowing people to make a living as smallholders can slow migration and overpopulation in cities.

# SMALLHOLDERS' STRUGGLE

- Agriculture is a complex system that depends on many variables.
  - Those with good information, inputs, technologies and tools can thrive.
  - In developing countries, **only larger corporations have access to these.**
- 
- Smallholder farms chronically underproduce  
[comparison, % of productivity of larger farms?]
  - Family farmers constitute the largest segment of those  
who live in extreme poverty.



# THE FOURTH INDUSTRIAL REVOLUTION IS RESHAPING AGRICULTURE RIGHT NOW

But so far it has only been widening the gap between wealthy corporations who can afford cutting edge technology and poor family farmers.



*"More productive small farmers are the key to achieving (targets) on hunger and poverty. If you care about the poorest, you care about agriculture. (...) A huge part of the job we share is bringing today's breakthrough agricultural science and technology to poor farmers."*

- Bill Gates

BUT HOW DO YOU DO IT?

# MARKET OPPORTUNITIES & TRENDS



- 120 MILLION FARMERS, INDIA



- 500 MILLION FARMERS, GLOBALLY



- 9 BILLION PEOPLE  
DEPEND FOR FOOD



- US\$ 450 BILLION AGRI FINANCING NEEDED

*Smart Agriculture will grow at a CAGR of 13.27% between 2017 and 2022*

**US\$ 11.23 BILLION**

**US\$ 5.18 BILLION**



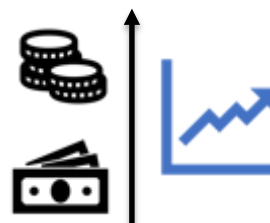
*The future of food can be secured by using smart, actionable, time-bound intelligence  
in connecting small farmers to knowledge, finance, and markets*



**80  
MILLION  
JOBS  
CREATION**



**US\$ 2.3  
TRILLION ROI**



**US\$ 320 BILLION  
INVESTMENT PER  
YEAR**

# WE NEED COMPREHENSIVE AND SCALABLE SOLUTIONS

1. **TECHNOLOGY** by itself is not enough
  - Illiteracy. No smartphones. Resistance to change.
2. **TRADITIONAL FARMER DEVELOPMENT** is not enough.
  - Too slow to scale. We need to move quickly to ensure food security.
3. **ACCESS TO FINANCE AND INPUTS** are not enough.
  - Farmers still use antiquated practices.
  - They are still exploited by middlemen or can't sell.
4. **ACCESS TO MARKETS** is not enough.
  - Without an integrated solution, smallholders can't compete.

Some startups offer fragmented solutions. But they don't work.

*See World Bank study.*

But what if you can provide all?

And add something else that no one has thought of...

# 2

## TWO LEADERS

**EKUTIR & FAIRTRASA** joined forces to provide a fully integrated, end-to-end solution that addressess every challenge that smallholders face.

# EKUTIR

made data-driven, precision agriculture **accessible and effective**  
for even the poorest, most secluded **smallholder farmers**

- Works with over 74,000 farmers
- in India, Bangladesh, Cambodia, Nepal and Haiti
- **Doubled incomes on average**
- Independent audit of eKutir projects have shown improvements in **gender equality, local nutrition and health and clean water & sanitation**
- Supported by MIT, the Bill and Melinda Gates Foundation, Facebook, Internet.org and Grand Challenges India, among others
- First certified B-Corp in India



# FAIRTRASA

established **direct global sales channels** for previously isolated farmers,  
and turned the philanthropic activity of **smallholder development** into a  
**self-sustaining social enterprise**

- Impacted over 40,000 farmers
- in 6 countries across Latin-America
- Trademark 3-tier development model
- Turned **subsistence farmers** into **independent agro-entrepreneurs**
- Distributed over \$1.7 million in fair trade premiums
- Annual revenue approx. \$70 million
- Received awards and support from the World Economic Forum, Ashoka, the Schwab Foundation and Yale University, among others
- Invited to join the New Vision for Agriculture expert group at WEF



# 3

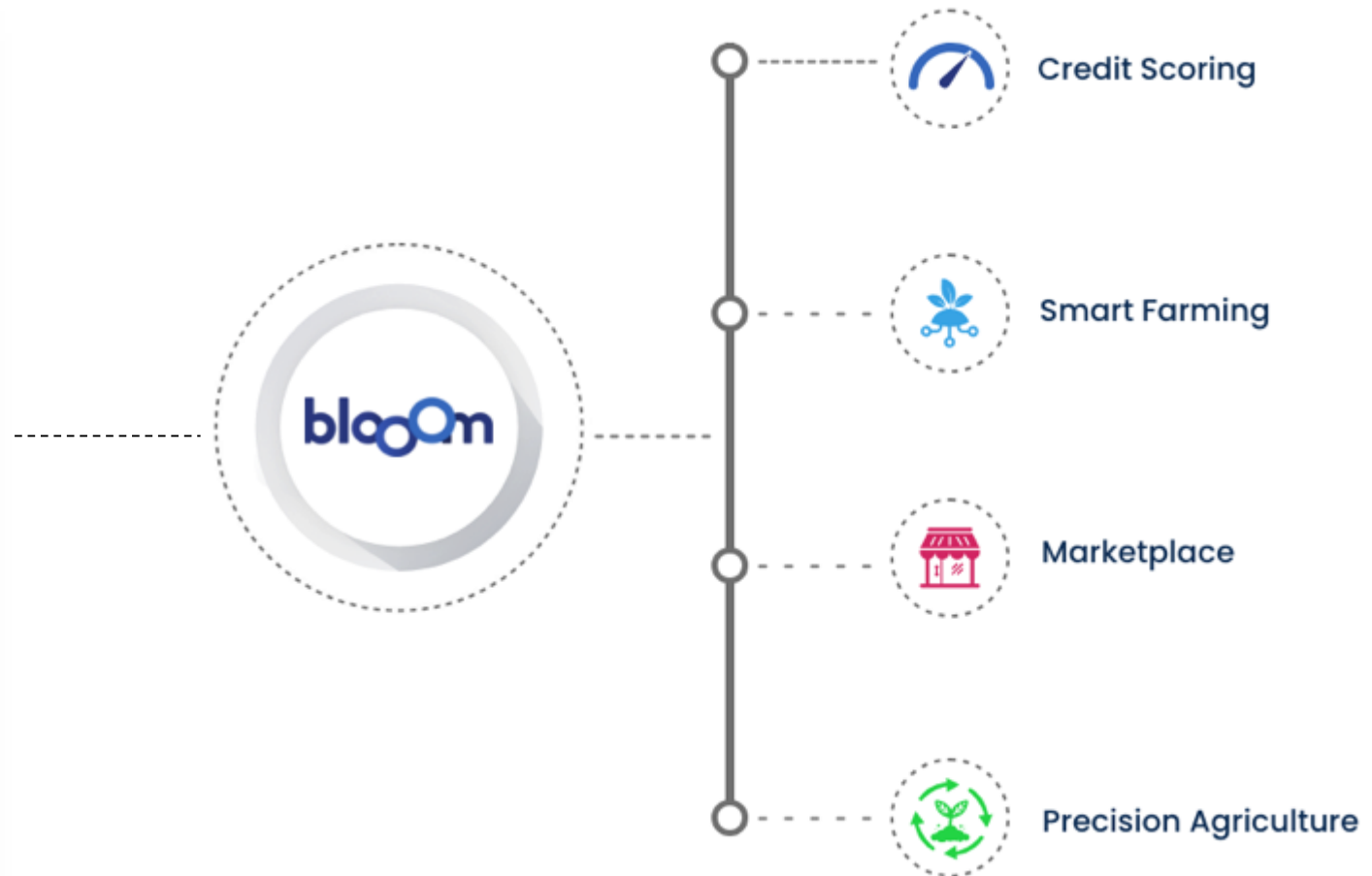
## THE SOLUTION

Propelled by technology, driven by humans  
and secured by a global network.

- We operate a **unique, fully integrated and inclusive human-technology hybrid model**.
- We analyzed the **needs and difficulties faced by every member of the food value chain**.
- We worked on it until we could be sure that **everyone feels comfortable using our platform** and **everyone can derive fair benefits**.
- We believe that our model can start to democratize the Fourth Industrial Revolution.

# SMART FARMING FOR SMALLHOLDERS

Bloom is a digital platform with a mobile front end used to engage with smallholder farmers and web – enabled back end to aggregate data, transaction and enable interactions with markets and financial institutions.



# SMART FARMING FOR SMALLHOLDERS

At the heart of our model is our digital platform:

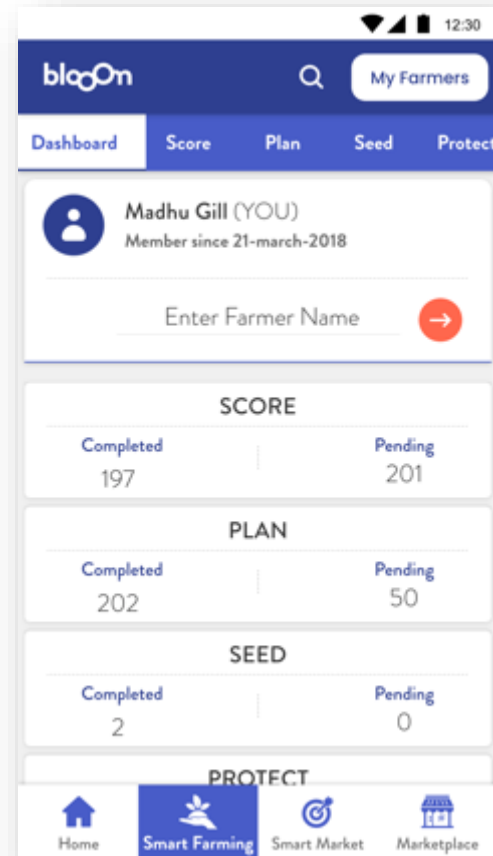
a real-time data-driven back-end and a smartphone app front-end

## PLAN

Creates crop plan with attention to climate, sustainability, market demand and land quality.

## NURTURE

Performs soil analysis on a plot of land and offers recommendations for optimum plant growth.



## SCORE

Performs individual risk analysis based on 169 factors, and offers recommendations for risk mitigation.

## SEED

Helps farmers secure trusted, high quality seeds appropriate for climate, soil and the time of year.

## PROTECT

Helps farmers prepare for and manage plant diseases, pests and weeds with attention to sustainability.

# SMART FARMING FOR SMALLHOLDERS

Our digital platform also provides:

## PRECISION FARMING ON A PLOT OF LAND

Captures farming details and offers real-time recommendations for input use.

## DIGITAL MARKETPLACE

Connects farmers directly with buyers or consumers in rural and urban markets, cuts out middlemen.  
Allows farmers to harvest only when produce is sold.

## CREDIT SCORING

Based on the risk analysis and the transactions captured by the platform creates a credit score and makes smallholders, for the first time, bankable.



# SMART TRADING

The screenshot shows the 'blooOn' mobile application interface. At the top, there's a status bar with signal, battery, and time (12:30). Below the app logo, there are three tabs: 'Spot', 'Future', and 'Impact'. Under 'Spot', there are two buttons: 'Spot Todays Trade' and 'Reource Gap'. A text input field labeled 'Enter Farmer Name' is present. Below this, there's a form for product details with dropdown menus for 'Type of produce' (Tomato), 'variety' (Variety), 'Color' (Green), 'Size' (Big), and 'Special Characteristics' (Big). There's a 'Quantity' input field with radio buttons for 'Kg' (selected) and 'Tonne'. A 'Unit Price' input field is also visible. A blue button labeled 'Check quoted price' is at the bottom of the form. A 'Save' button is located below the form. At the very bottom, there's a navigation bar with four icons: 'Home', 'Smart Farming', 'Smart Market' (highlighted), and 'Marketplace'.

- **SPOT MARKET**

Spot market creates a digital marketplace for the vegetables immediately after the harvest. The platform will connect all the major major stakeholders in the post harvest industry

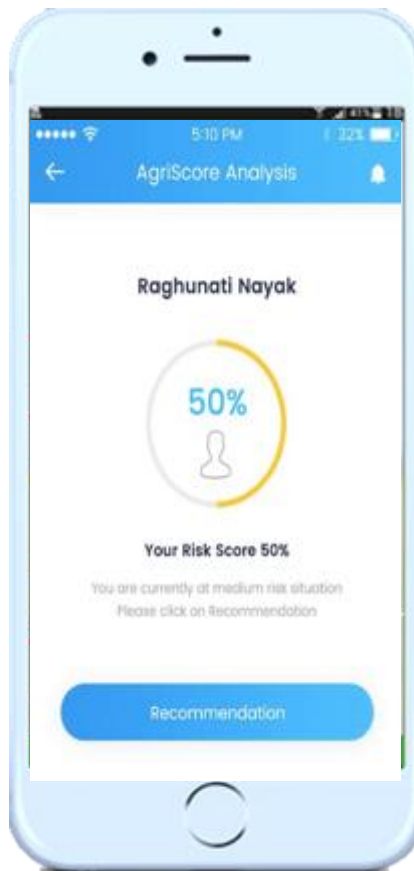
- **IMPACT MARKET**

Impact market creates a digital marketplace for the buying and selling of vegetables that go unsold and are therefore wasted causing major losses to every one in supply chain

- **FUTURE MARKET**

Future market of digital marketplace for ease of selection of crops from multiple reliable farmers or sellers. Perishable crops can be sold fixed interval to avoid post harvest damages.

# FARM – DATA-DRIVEN FINANCING



## FARM- FINANCIAL AND AGRI RISK MANAGEMENT

Finance smallholder farmer with minimized risk

- Generate credit/risk scores for farmers using predictive, non-financial data assets collected through a mobile platform, which is excluded from traditional credit bureaus, and link them to a central server. Use Machine Learning to curate statistically reliable credit scores.
- The primary data asset used by FARM is the data collected by FARM agents/micro-entrepreneurs which is collected from the farmers using the pre-harvest and the post-harvest components
- The credit scores facilitates the funding and financing of the farms and farmers.

# A HUMAN-CENTRIC MODEL

- In many areas, smart-phone penetration is low.
  - People in secluded farming communities are often illiterate.
  - To introduce change, you first need to build trust.
- We train educated members of the local community to serve as **microentrepreneurs**, our change agents on the ground.
- They are the primary users of technology.
  - They are trusted because they live there. They foster adaptation.
  - They serve as farmers' links to input vendors and buyers.



# WE DEVELOP ENTREPRENEURS

- Tried and tested 3-Tier model to turn subsistence farmers into independent agro-entrepreneurs.
- Farmers who reached Tier 2 have left poverty behind and do not return.
- At that point there is no more need for philanthropy.



# ROBUST MARKET CONNECTIONS

- Tier 2 and Tier 3 farmers can also sell through export channels fully owned and operated by us
- We have sales offices and well-established market connections in the U.S. and across Western Europe



# 4

## AN INTEGRATED AND INCLUSIVE SOCIAL ENTERPRISE

A financially sustainable model designed around the values of co-creation and stakeholder needs

## A FULLY INTEGRATED VALUE CHAIN: EVERYONE IS INCLUDED AND EVERYONE BENEFITS



Farmers



Educated  
members of the  
community

=

Microentrepreneur



Input  
suppliers



Financial  
institutions



Buyers



End  
consumers

# BENEFITS FOR FARMERS

- Best practice and best fit solutions on what, how and when to grow
  - Access to a vetted network of input suppliers
  - Direct access to rural, urban and international markets
  - Transparency, ability to choose the best price
- 
- Increased yields — 75% on average
  - Reduced costs — 50% on average
  - Increased income — 200% on average
- 
- Predictability, security, control over one's own fate
  - Permanent escape from poverty



# BENEFITS FOR FARMERS

- The share of women among the farmers we serve is **between 33% and 50%** of the total workforce, an exceptionally high ratio in developing countries.
- We maintain this in every new project as our target.



# ■ BENEFITS FOR MICROENTREPRENEURS

- Meaningful, well-paying and reputable employment in the local community
- This role is **targeted especially at youth** who would otherwise have to leave their community to find suitable employment



# ■ BENEFITS FOR INPUT SUPPLIERS

- Ease of market access
- Wider customer base
- Economies of scale
- Intelligent data analysis



# ■ BENEFITS FOR FINANCIAL INSTITUTIONS

- The data captured by the digital platform makes smallholders, for the first time, **bankable and insurance-worthy**
- A whole new market for financial institutions to tap into
- Access to predictive intelligence



# BENEFITS FOR BUYERS

- Transparency
- Expanded, easy access to high quality, locally grown produce
- Cost reduction due to the elimination of intermediaries
- Ability to plan sourcing ahead of time
- On-time delivery



# BENEFITS FOR CONSUMERS

- Increased food security **through diversified sources that grow sustainably**
- Transparency: through **block-chain technology**, access to the entire history of the produce

In the long run, this can substitute expensive certificates and **democratize fair trade**

- Food that is this way guaranteed to be good
  - for the body
  - for people
  - and for the planet



# BENEFITS FOR OUR PARTNERS

Philanthropic organizations and governments benefit from a model that lifts the poorest farmers out of poverty permanently at a very low cost

- Based on our experience so far, **the average cost of the development of a single smallholder farmer is \$4.04/year** [Suvankar may want to add more here]
- This is based on our low-cost ICT platform and microentrepreneurship model, which means that costs are unlikely to rise as we expand to other regions
- Once farmers reach Tier II, they are self-sufficient and do not need additional philanthropic capital

[We may also want to talk about environmental and specific SDG contributions here.]



# OUR REVENUE MODEL

We only need philanthropic capital to reach subsistence farmers in new, primarily LDC countries. In our established markets, our enterprise turns a profit based on the following model:

- Bare minimum subscription fee from farmers (\$5 - \$10 per year, depending on region).
  - We can confirm that farmers are comfortable paying, since their income growth greatly exceeds this sum.
- Commissions from the sale of input materials
- Commissions from the sale of produce
- Income from the sale of advertising space on our platform
- Income from the sale of information created by the use of our platform
  - Risk assessment data for insurance companies
  - Credit score for banks
  - Market intelligence for input providers



# 5

## BUILDING THE FUTURE OF FARMING AROUND THE WORLD

And unlocking the potential of smallholder farmers  
to alleviate poverty and increase food security

# THE PLAN AHEAD

- Our model allows for exponential growth
- Our goal is to reach 1 Million farmers in 4 years, and
- 5 Million farmers by 2025
- We identified 19 developing and LDC countries with high potential for scaling our model. We considered, among other factors:
  - Internet penetration, No. of users, ICT development, ease of doing business and GINI indices
- Our research showed strong opportunity for scaling to Haiti, Uganda, Tanzania, Ghana, Kenya, Madagascar, Myanmar, Nepal, Bangladesh, Vietnam and Thailand.
- We already established strong connections with several countries.





# MEASURED PROGRESS

- Our economic and social impacts as well as stakeholder satisfaction will be continuously monitored by our multi-level and -dimensional measurement framework, and will be analyzed and refined by our academic partners.
- Using data from farming households, microentrepreneurs, and the ICT platform itself, we are able to make continuous quality improvements in the resources, services and programs that we provide to rural farmers.



# EKUTIR & FAIRTRASA

*GLOBAL*

Democratizing the future of farming