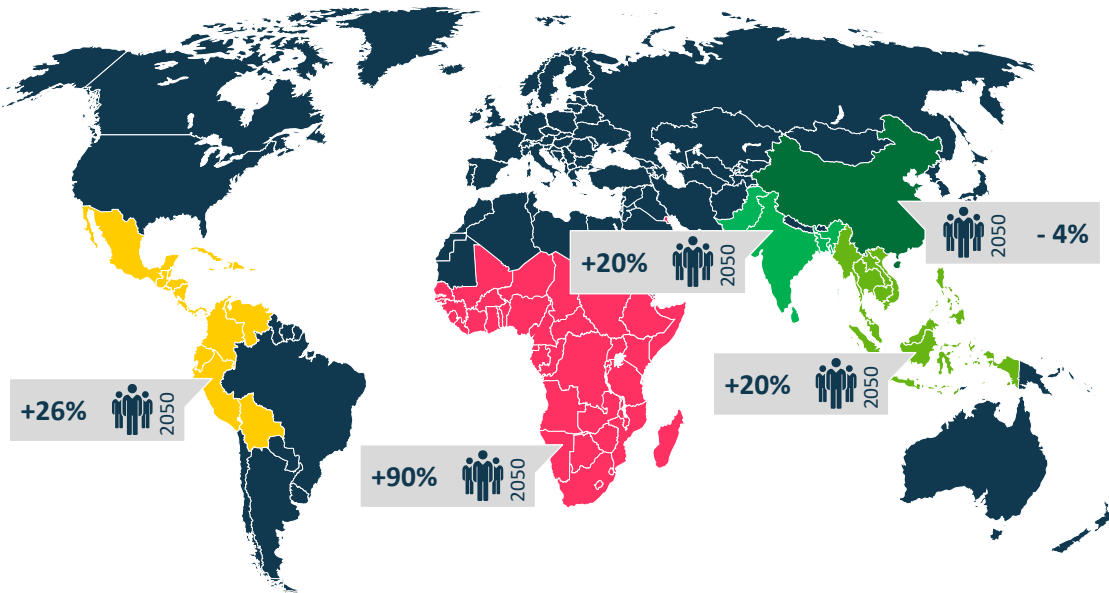


# Smallholder Farming Centre of Excellence (SHF CoE)

# Context

The operating environment for the CoE

# Context- Smallholder Agriculture Proposition



Population Distribution:

Latin America	Africa	ASIA
0.4	1.3	4.0

## South Asia

170 Mha  
85% SH<sup>1</sup>  
HDI 0.6

## China

145 Mha  
80% SH<sup>1</sup>  
HDI 0.7

## SEA

70 Mha  
85% SH<sup>1</sup>  
HDI 0.6-0.8

## Africa

150 Mha  
75% SH<sup>1</sup>  
HDI 0.4-0.7

## Latin America<sup>2</sup>

17 Mha  
10% SH<sup>1</sup>  
HDI 0.6-0.7

## Smallholder Farming Proposition

- Supports food security for ~6 Billion people living in these geographies
- Population growth expected to be high across most of these geographies

## Significance in Agriculture & Food

- 700M ha (up to 85% of arable land) by 550M farmers
- Productivity at ~50% of world average
- 80% of food production in developing countries ; rising GDP driving food & nutrition demand

## Population & Livelihood Standards

- ~50% of population engaged in agriculture (<2% in USA, <5% in Europe, ~10% in Brazil)
- 12 to 15% share of agriculture in GDP
- ~85% share of population growth upto 2050<sup>3</sup>
- Human development index (HDI) on the lower end in smallholder countries (global average: 0.728)

1 Percentage of harvested area in smallholdings (< 10 ha)  
 2 Central America, the Carribean + Colombia, Venezuela, Ecuador, Peru and Bolivia  
 3 www.worldometers.info  
 \* Other data reflect internal estimates based on various external sources

# Challenges in SH Farming - need for systemic solution

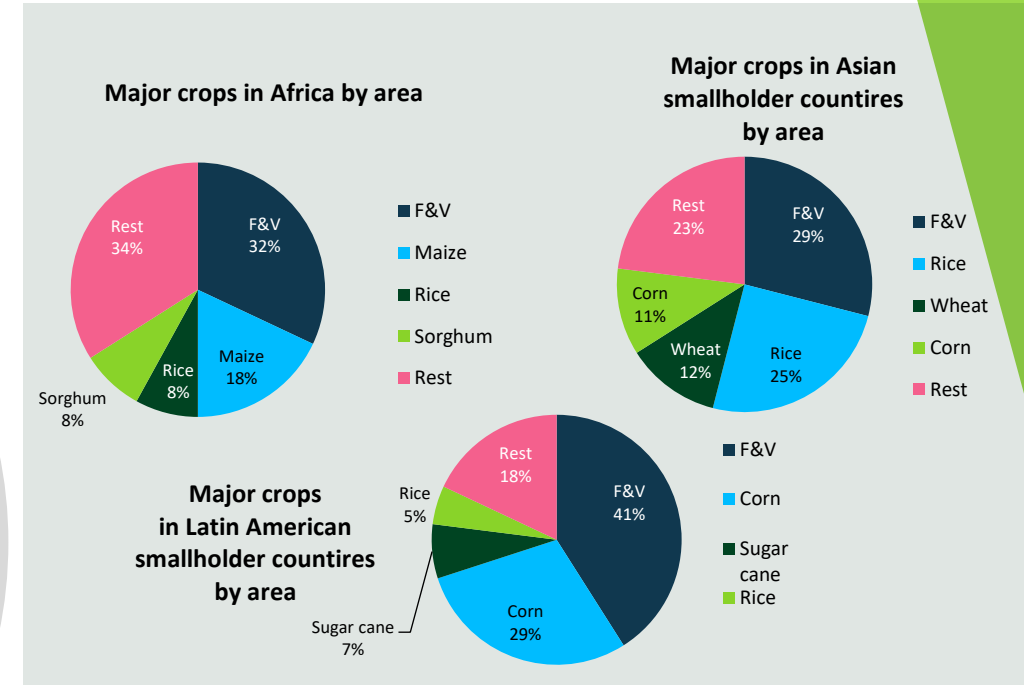
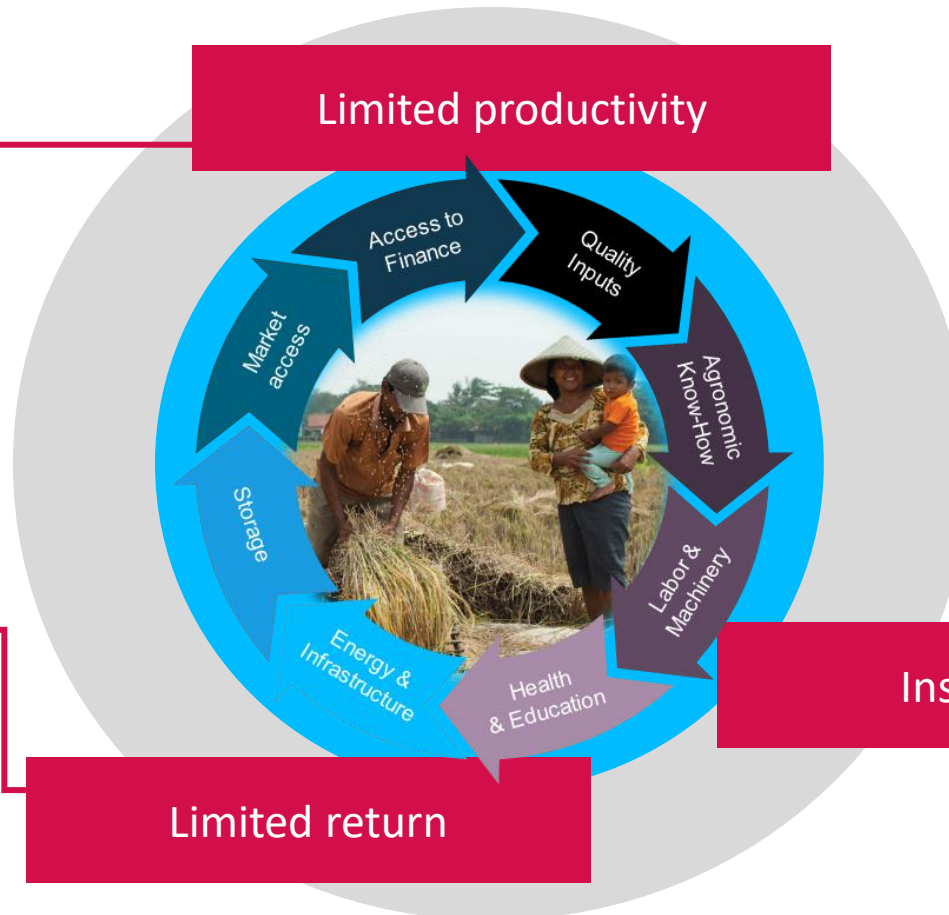
More than 2 billion people live on about 550 million small farms. And many more depend on smallholders who play an increasing role in supplying and feeding a growing population while being at high risk of poverty and malnutrition.

## Challenges

- Access to resources
  - High-quality inputs
  - Credit
  - Machinery & labor
- Agricultural know-how & best practices

## Challenges

- Access to markets (value chains)
- Price information
- Low bargaining power
- Limited storage options
- Know-how (farming as a business)



## Challenges

- Rely on family labor
- Undeveloped infrastructure
- Vulnerable to weather incidents and water scarcity
- Lack of risk management solutions
- Health

# Smallholder Farming CoE

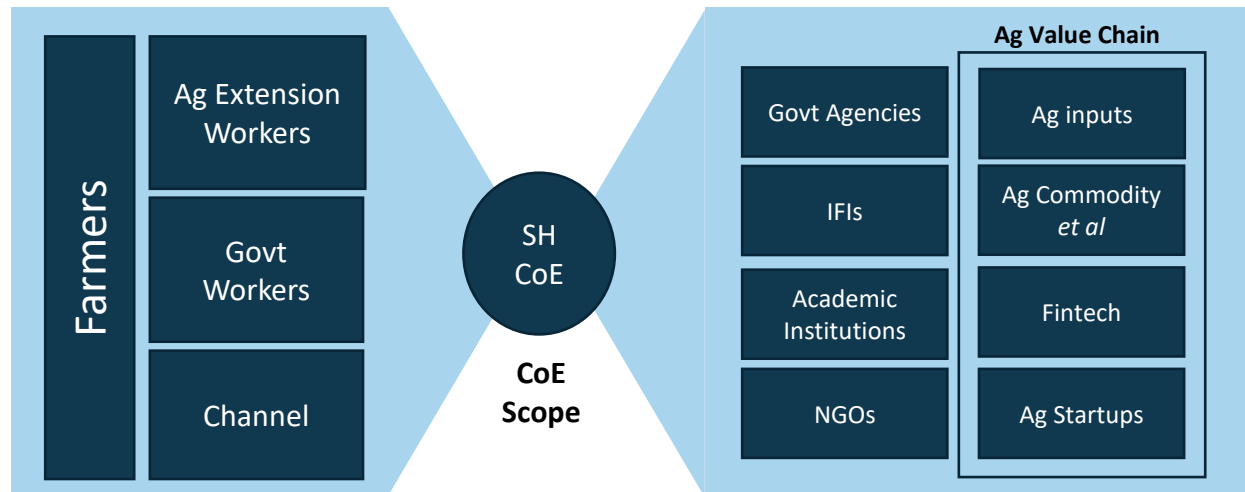
**Vision :** Strengthen food system **resilience** and **improve** smallholder livelihoods

**Mission:** Establish a **unique multi-stakeholder platform** that advances the technology, skills and knowledge fundamental to improving smallholder productivity & profitability

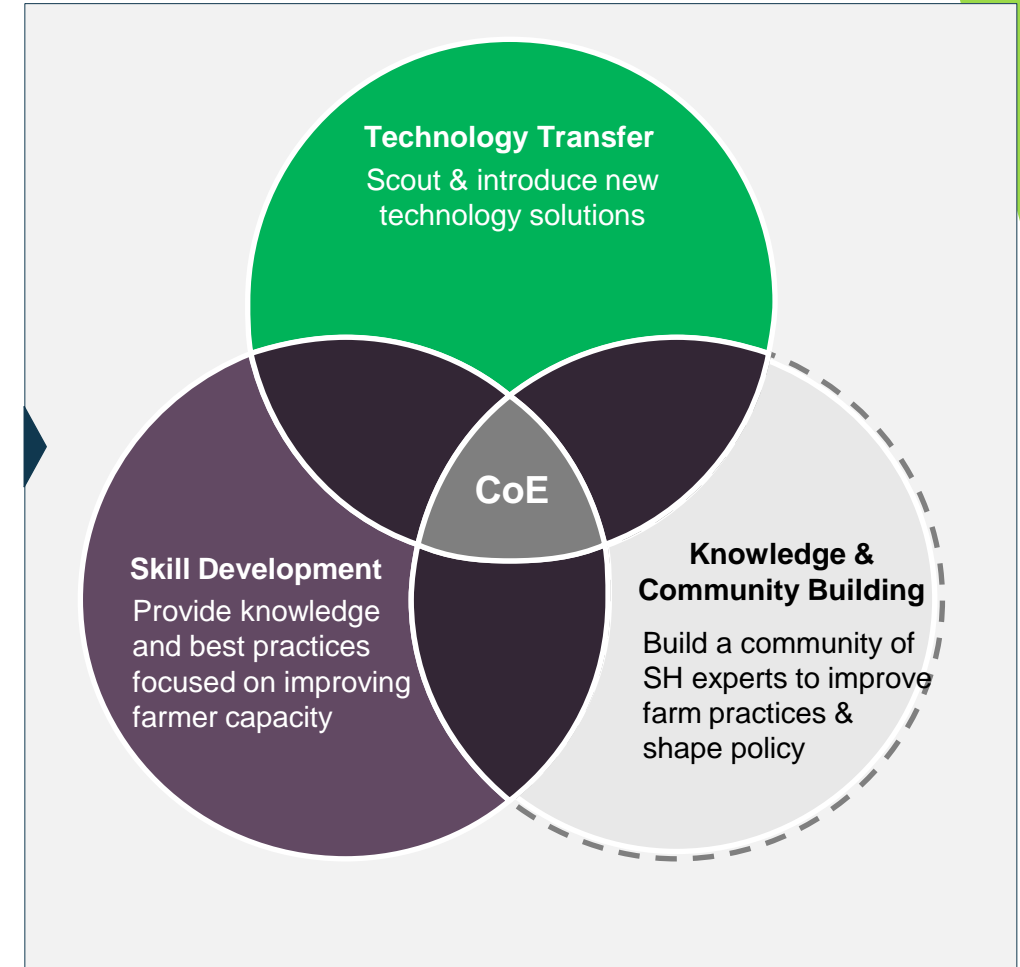
**How:** Utilizing platforms such as the World Bank's and IFC's established networks to reach out to millions of smallholders who need access to tech

## Why a CoE focused on Smallholder Farmers?

- Create a powerful platform focused on improving smallholder livelihood, through a wide coalition of cross-sectoral & like-minded organizations
- Build, nurture and grow a vibrant community of global institutions, government agencies, NGOs, academics and corporates engaging with smallholders in various capacities
- Boost smallholder capacity worldwide through technology transfer, skill development and knowledge building on smallholder agriculture
- Leverage synergies and foster partnerships to improve agricultural productivity of smallholder farmers, improve profitability through better market linkages and influence action towards shaping smallholder-supportive policy, thereby driving food system resilience.



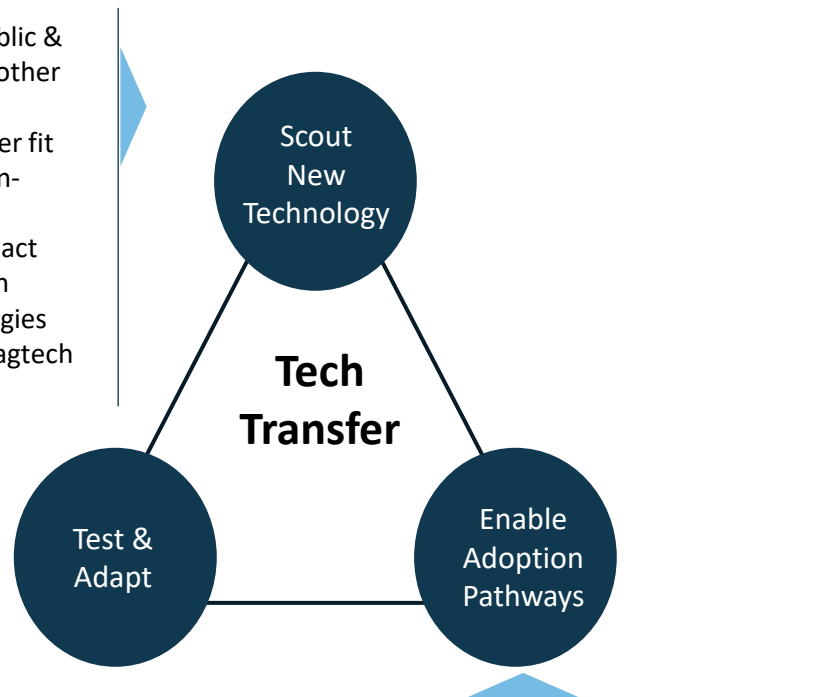
The three focus areas of the CoE are the **impact multipliers** for agriculture; sustained efforts will unlock potential, enabling food system resilience in the region



# Focus Area 1: Technology Transfer

Sourcing, adapting and enabling delivery pathways for technology solutions relevant for smallholder farming

- Source tech from Public & private origins from other world areas
- Screen for smallholder fit
- Look for Digital + Non-digital tech
- Focus on tech to impact across Ag-value chain
- Conduit for technologies being developed by agtech accelerators



- Enable adaptability and testing of new tech
- Scale-adjusted to fit specific cohorts of SH
- Setup tech evaluation infrastructure across eco-regions
- Establish “lighthouse” of technological advancement
- Research Consortia for tech trialing/testing & deployment

- An online repository to share info on tech that meet SH adaptability criteria
- A tech center in Singapore with representation in key SH geographies
- A CoE stamp of endorsement

## • Objective

- Accelerate technology enabled farming to solve productivity challenges
- Adapt / repurpose existing solutions from other world areas to smallholder needs
- Enable testing, adoption & advocacy of new tech for SH adoption
- Develop a credible endorsement of SH relevant technologies
- Be a credible partner in the smallholder innovation ecosystem enabling adoption of new technologies

## Illustration

*“University of Texas has developed a new mechanical planting solution that can help corn farmers in Guatemala increase plant density. It is a low-cost solution and holds a lot of promise for Smallholders in Asia, who struggle to benefit from new genetics that require dense planting”*

# Focus Area 2: Transformational Leadership and SHF Skill Development

Provide knowledge and best practices aimed at improving smallholder farmer capacity

A

## Transformational Ag Leader Development

- Knowledge building in KIPs
- To be certified by relevant academic partners
- Initially virtual, post Covid in person with regional activities

B

## Rural Capacity Building

- Rural capacity building through Training & Demonstration
- Training of Ag-Extension officers across ASEAN
- Self learning portal with Smallholder specific content
- Coaching & Mentoring program for Industry talent

## • Objective

- To develop a cadre of leaders to inform Senior Gov. Officials on the key role of technology and supportive policy in the development of the ag sector
- Address talent deficit and skill development in SHF geographies through structured and unstructured learning
- Accelerate adoption of best practices across SHF geographies through training & demonstrations
- Partner governments and local academia to improve effectiveness of local ag extension programs
- Make SH practice relevant content available for self-learning through knowledge-sharing platforms

# Online Modules

## Ecosystem Approach

- The Need
- Objectives
- Components
- Deliverables

## Transformation Toolkit

- Diagnosing the constraints to farm productivity & profitability: systems approaches
- Yield gaps and their removal
- Sources of transformation knowledge and assistance
- Motivating change
- Fostering entrepreneurship in smallholder farmers
- Women's role in smallholder agriculture

## Crop Establishment

- Traits
- Seedbed and field preparation
- Seed quality/technology
- Fertilisation
- Water management

## Crop Management

- Nutrient management
- Pest management
- Irrigation
- Remote sensing
- Drones
- IoT

## Animal Agriculture

- Co-cultivation of e.g. rice/fish
- Aquaculture- ponds/river/open sea
- Livestock production
- Nutrition
- Disease management/Zoonotics
- Quality control

## Markets

- Market access
- Value chain coordination
- Market information
- Data resources
- Logistics

## Business Management/Finance

- Business skills for smallholders
- Farm management tools
- Access to capital
- Fintech
- Insurance

## Sustainability

- Lives and Livelihood
- Nutritional security in smallholders
- Change management in rural communities
- Gender & age
- Tapping into government and private sectors
- Crisis response & recovery
- Risk communication

## Enabling Policy Environments

- For trade
- Market access
- Technology adoption/utilisation
- Value Chains

## Social Aspects

- Sustainability of systems (Intro)
- Environmental stewardship
- Circularity and waste management
- Energy
- Water

## Case Studies

- Indigenous Food Systems
- Models for Industry Engagement with Smallholder farmers
- Approaches to technology adoption
- Functional Coops and Producer Organisations (PO)



# Focus Area 3: Knowledge & Community Building

Build a community of SH experts to improve farm practices and shape policy advocacy

Events &  
Exchanges

Forum for exchange of best practices at a regional and country level

Policy Advocacy

Trade and policy advocacy enablement

Knowledge  
Repository

A digital repository of curated content focused on capacity building in SH geographies

Recognition

An annual recognition of outstanding contribution to improving SH farming practices and outcomes

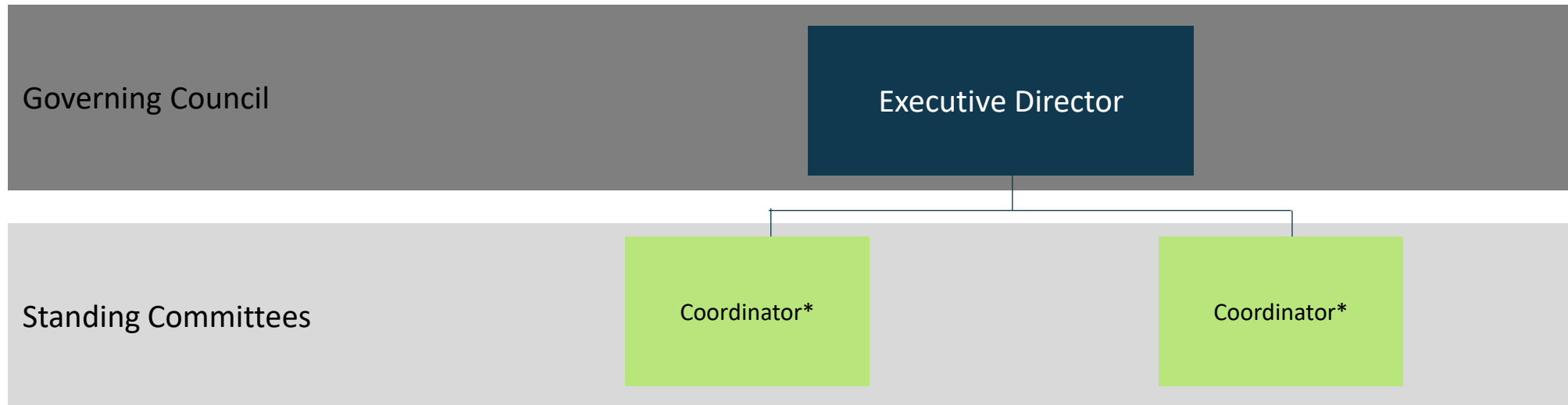
## • Objective

- Develop a vibrant community of experts and practitioners focused on improving SH farming practices.
- Engage with govt stakeholder and shape policy to benefit smallholder farming and sustainable livelihood
- Build a knowledge base of SH farming insights to aid innovation and capacity building
- Reward and recognize outstanding contribution to smallholder farming

## Illustration

*“At an event organized by the Smallholder Farming CoE, there was a deliberation on intensification of planting to improve yields in Rice. The members deliberated on various possibilities and agreed to advocate the adoption of direct seeded rice, which can make rice farming sustainable for farmers in ASEAN and address income issues”*

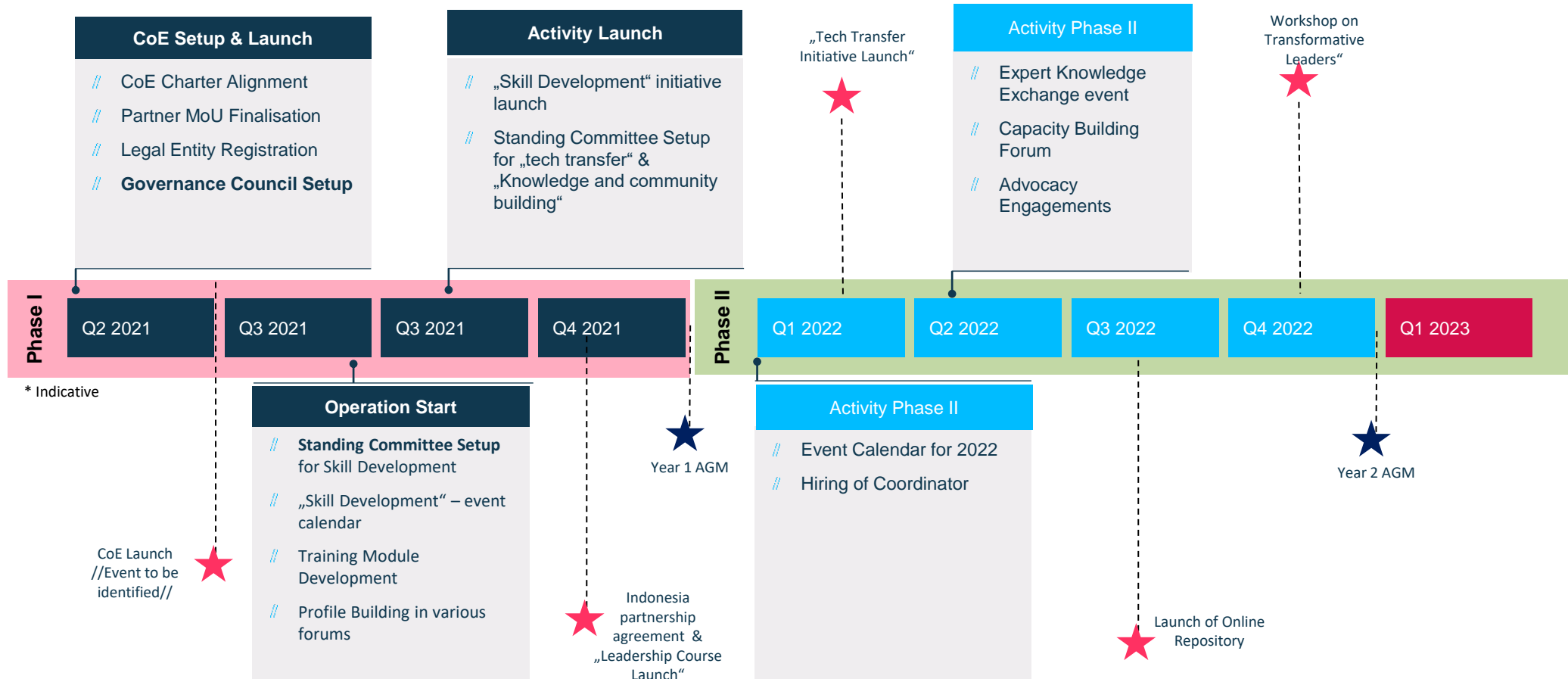
# CoE Secretariat - Operating Structure



Roles & Responsibilities	
Governing Council	<ul style="list-style-type: none"> <li>• Provide strategic direction to the efforts of the CoE, oversee operations and strategic stakeholder engagements.</li> <li>• Complete oversight of funding and implementation of all the CoE projects</li> <li>• Constitutes of the founding members of the Center of excellence.</li> </ul>
Standing Committees	<ul style="list-style-type: none"> <li>• Defines and sets the agenda for each of the focus verticals of the CoE</li> <li>• Planning and implementation of key projects in the focus area including identification of execution partners</li> <li>• Liaison with external stakeholders for the project execution</li> </ul>

# Smallholder CoE – Key Milestones

*Aspiration: In 3 years, make an impact on ASEAN Smallholder farming ecosystem*



Open for Questions