Changing the agri-food business through new partnership structures

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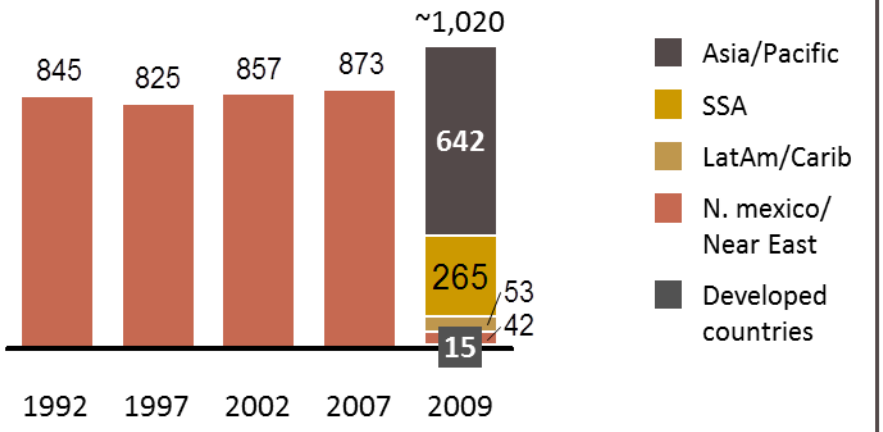
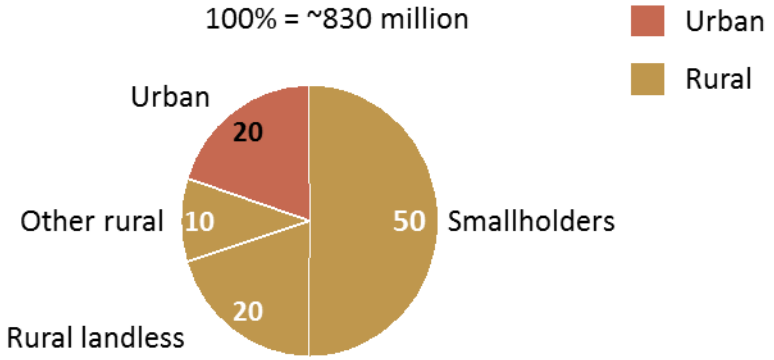
Agriculture needs to improve, to better fulfill its social and economic potential

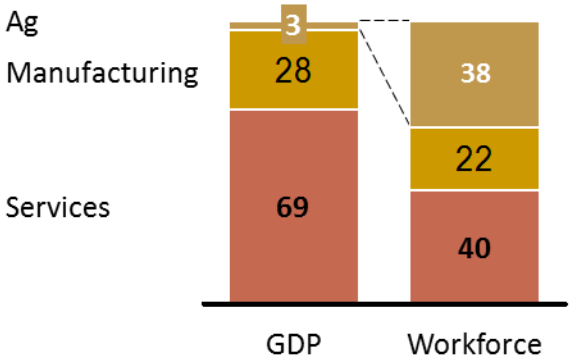
Undernourishment higher . . .
Millions, Undernourished



. . . primarily in rural areas and among farmers
Percent, Undernourishment, 2005

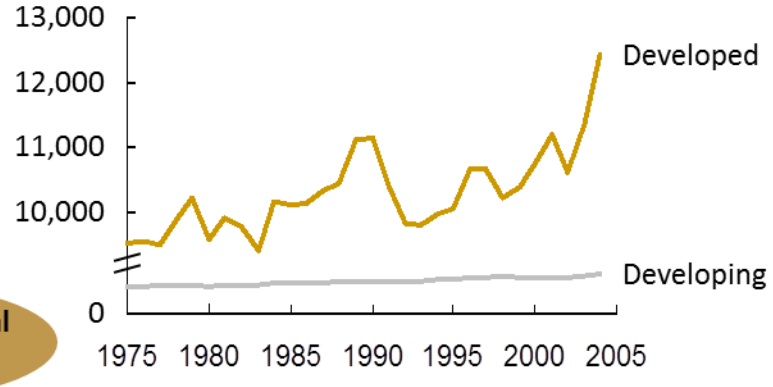


High portion of global employment . . .
Percent, worldwide



Significance of rural job creation

. . . But value growing disproportionately slowly
Agriculture GDP per worker, Real U.S. $



SOURCE: FAO; USDA; WDI; FAOSTAT; CIA World Factbook; Global Insight; UN Hunger Task Force

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Globally agriculture planning is moving quickly and solutions which have worked before may not be relevant any more

	Yesterday's approaches . . .		. . . may not work tomorrow
Resource utilization	Convert potential arable land to cropland		Diminishing land availability, soil degradation, high environmental cost
	Rapid scaling of irrigated land area, overdraw on groundwater		Depleted ground water stores render urgent water efficiency measures
	Agriculture's environmental impact accepted or ignored		Environmental sustainability as necessary stipulation
Productivity growth	Reliance on increased yields in developed countries		Yield growth in developing countries vital to meet global demand
	Acceptance of low smallholder productivity		Difficult to feed growing populations with imports/food aid
Improved crop mix	Priority on calories and increasing cereal production		Importance of crop diversity, nutritional content and food affordability
	Focus on yield and output produced		Efficiency in whole value chain necessary for access, food security

Significant issues exist at every stage of the value chain which hinder progress

Stages	Specific issues at each stage
Research & Development	▪ Orphan crops ▪ Specific soil/ climate adaptations ▪ Capturing return on investment
Input distribution and adoption	▪ Financial risk for farmers ▪ Insufficient credit ▪ Inadequate distribution channels
Farming	▪ Best practices not understood/adopted ▪ Degraded soil health/ fertility ▪ Threats from disease, pests, climate ▪ Greenhouse gas emissions
Trading and processing	▪ Poor post-harvest management ▪ Lack of operating capital ▪ Lack of local storage and processing
Manufacturing and retailing	▪ High price volatility ▪ Lack of market linkages or demand sinks ▪ Poor quality and safety standards
Consumer table	▪ Food share of household expenditure ▪ Poor nutrition awareness ▪ Understanding of sustainable production ▪ Food waste in developed countries

Cross-cutting issues

Policy environment
Unpredictable or distorted incentives

Infrastructure
Expensive or absent. Difficult to access inputs and-farm-market connections

Market linkages
Information, coordination, and aggregation failures

Public and private sector decision makers are already engaging on many specific interventions

Specific interventions in the value chain

Research & Development

- High yield and stress-tolerant seed
- Bottom of the pyramid designs
- Local varieties/adaptations
- Proper incentives for R&D
- High-caliber institutions
- Grants for orphan crops

Input distribution and adoption

- Agri-dealer networks
- Product bundling
- Risk mitigation in purchasing
- Farmer networks/organizations
- Fertilizer dealers

Farming

- Contract/ nucleus farms
- Crop selection optimization
- Water demand reduction
- Emissions management
- Practical capability building
- Train off-farm skills, diversification
- Improve extension services
- Property and tenure rights
- Monitor land use change
- Water supply efficiency

Trading and processing

- Build trading businesses
- Local cold storage, processing plants
- Optimize food aid procurement
- Investments in “value-add” industries (e.g., oil refining)
- Support co-ops

Manufacturing and retailing

- Sustainable sourcing
- Fair trade pricing
- Local distribution networks
- Access to export markets
- Build ports
- Quality/safety standards
- Grain exchanges

Consumer table

- Fortification
- Ethical labeling
- Build consumer awareness on diet diversity/ nutrition
- Nutrition education
- Access to potable water
- Teach proper food prep habits
- Prioritize maternal/infant health

Cross-cutting interventions

Policy environment

- Market access
- FDI, trade policy
- Land use change
- Land tenure
- Input subsidies
- Food safety
- Extension and education
- Gender equity

Infrastructure

- Roads
- Electricity
- Phone towers
- Ports
- Water pipes/aqueducts
- Cold Storage and silos
- Rail

Market linkages

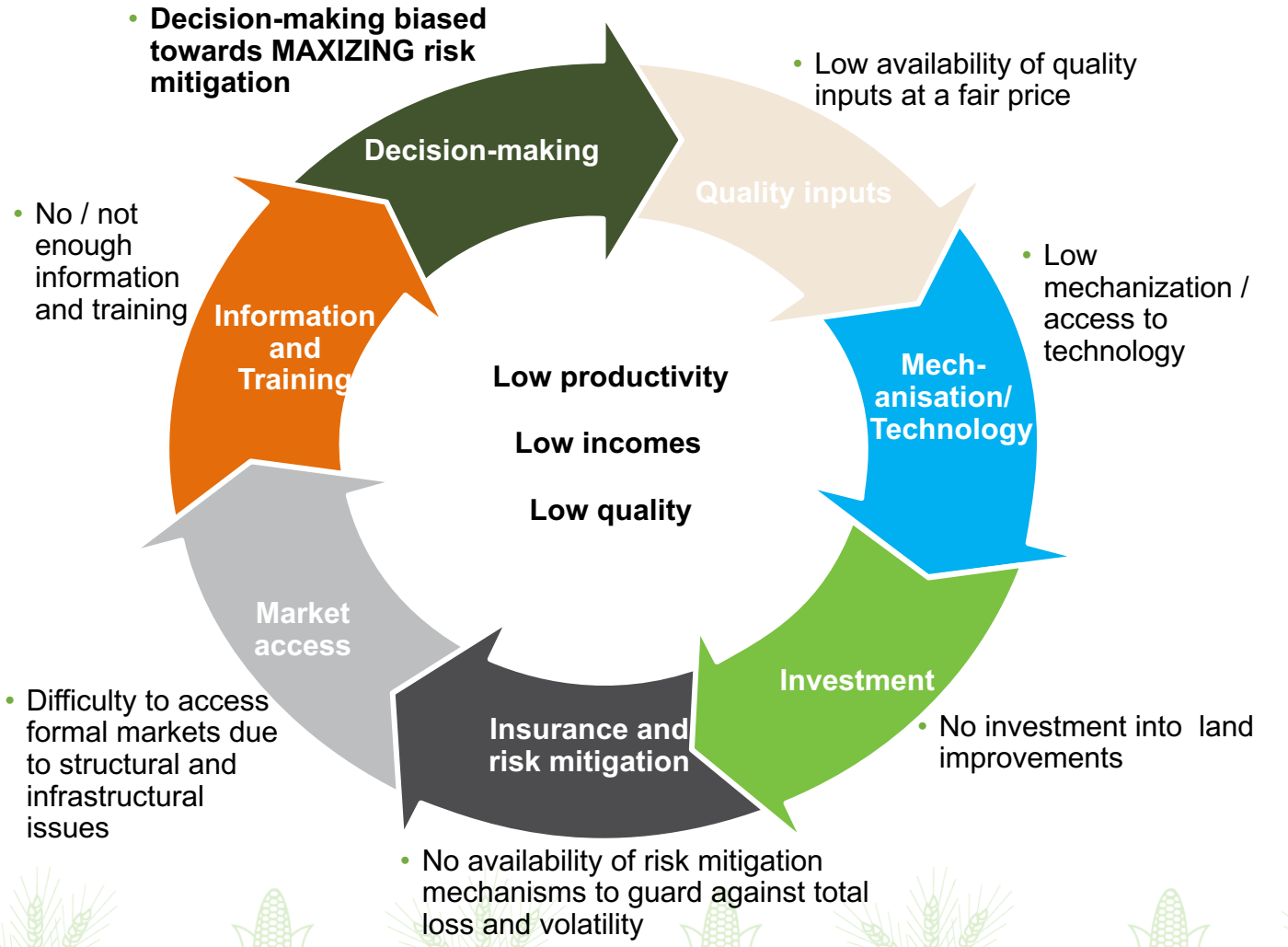
- Input delivery
- Price information
- Risk-sharing/insurance
- Credit/patient capital
- Knowledge-sharing
- Skills training

A better understanding is required of the optimal tradeoffs between different stakeholder needs and also what results can be achieved

	Definition	Country example
1 **Agriculture GDP** 	• What is the best way to increase the **quantity and value** of the agriculture production in the country?	• **Rwanda**: maize yields increased 2x, and agriculture GDP reached 7%/annum
2 **Smallholder income** 	• What is the best way to **increase the incomes of smallholder farmers** – out of subsistence, and poverty?	• **Morocco**: smallholder income increased from $1000 to $3000
3 **Internal food security** 	• What will it take for the country to be **food secure**? – Which **staple crops**? – How ensure **food balance**?	• **Ghana**: vision to increase rice self-sufficiency from 30% to 70%
4 **Sustainability** 	• What is needed to ensure a balance between increased agriculture production, and **environmental sustainability**?	• **Global**: preserve X% of forest by integrating agriculture and forestry initiatives under REDD+

Most significantly, subsistence farmers (smallholders) are stuck in a poverty trap preventing them from improving their livelihood

Subsistence farmer poverty cycle



Situation analysis

- Smallholder farmers fall outside the formal supply chain
- It is possible to break this vicious cycle without subsidies and donor grants etc.
- Innovations in the existing supply chain structure are required

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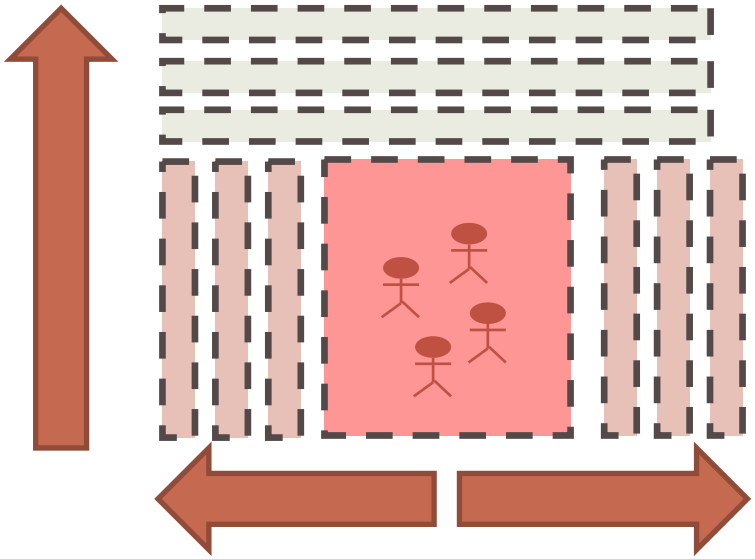
There is a need to create conditions which allow farmers to “widen” and increase the margin pool, as well as define non-farming enablers that support increased incomes and productivity for farmers

Project objective



1. **Restructure the value chain** in order for the small holder to take a larger part of the margin pool between input products and the delivery of finished products to the market

2. **Build small holder capabilities** in order to increase the size of the margin pool through better yield and higher quality products

3. Involve stakeholders (government, private companies, NGOs) in order to **identify and address critical non agriculture related enablers** and blockers to smallholder success

- Cooperatives models have also tried to achieve increased incomes for the farmers, but in most cases not succeed for various reasons, including:
  - Lack of capability in managing all aspects of the value chain on a commercial basis
  - Expecting farmers to develop commercial and business skills across the board, even with limited education levels
  - Dependence on government subsidies to make the model function and subsequent political interference

Most of the food and agriculture focused companies want to help increase smallholder farmer incomes, especially since there are not many alternative opportunities available in rural areas to absorb marginal farmers

To leverage the value chain opportunities companies/investors need the following:

Well defined and transparent investible projects/opportunities

Viable last mile implementation mechanisms, especially those connecting smallholder farmers

Legal and regulatory certainity around the potential investments, including a level playing field

Risk sharing/mitigation mechanisms, which also lower the costs of reaching the various stakeholders along the value chains

An acceptance on part of financial players and investors to create innovative solutions to meet the funding needs of the stakeholders along the value chains

Agriculture sector companies and other stakeholders also need to change their business as usual approach:

- Huge opportunities for players willing to collaborate along the value chains
- Advantages in reduced costs per unit sold due to sharing of distribution channels
- Creation of more robust value chains due to increased interaction and integration between the players along the value chains
- Reduced risks for the financial institutions in funding integrated value chain projects, leading to reduced collateral requirements

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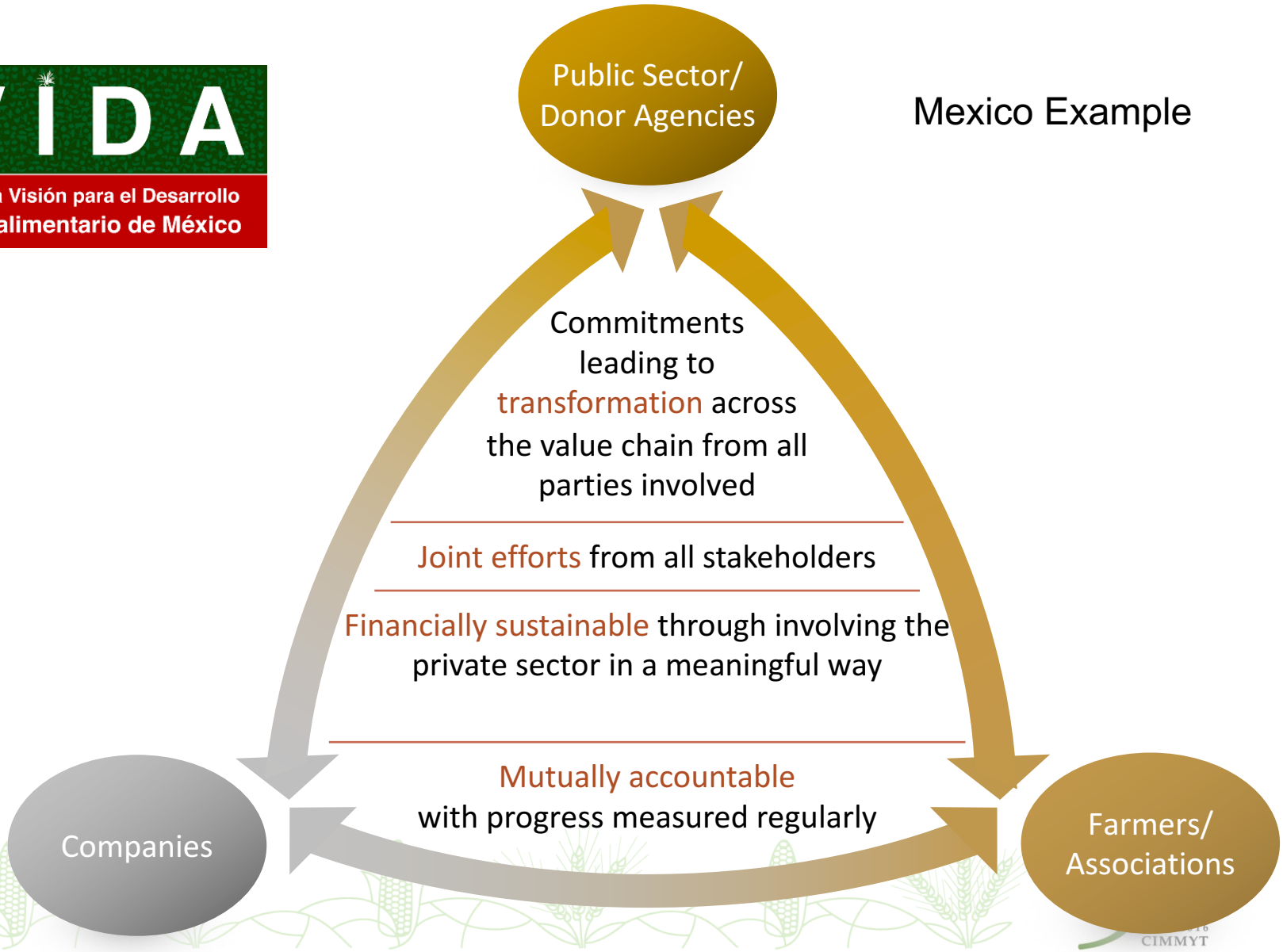
In addition to companies; governments, global organizations and most importantly farmers are now willing to collaborate with each other to help improve existing agriculture and supply chains through PPPs

VIDA
Nueva Visión para el Desarrollo Agroalimentario de México

Mexico Example



Innovative Public Private Partnerships are being set up to develop value chains in an integrated manner

On the ground scalable interventions | **Policy and high-level interventions**

	Specific interventions in the value chain	Support required for the interventions to succeed
Research & Development	▪ High yield and stress-tolerant seed ▪ Local varieties/adaptations	▪ Proper incentives for R&D ▪ High-caliber institutions`
Input distribution and adoption	▪ Agri-dealer networks ▪ Product bundling ▪ Risk mitigation in purchasing	▪ Farmer networks/organizations ▪ Fertilizer dealers and input availability ▪ Quality seed availability
Farming	▪ Contract/ nucleus farms ▪ Crop selection optimization ▪ Water demand reduction ▪ Practical capability building	▪ Train off-farm skills, diversification ▪ Improve extension services ▪ Property and tenure rights ▪ Water supply efficiency
Trading and processing	▪ Support SMEs to enter value chains ▪ Local cold storage, and processing ▪ Optimize food aid procurement	▪ Investments in "value-add" industries (e.g., oil refining) ▪ Support farmer groups/co-ops
Manufacturing and retailing	▪ Sustainable sourcing ▪ Fair trade pricing ▪ Local distribution networks	▪ Access to export markets ▪ Quality/safety standards ▪ Grain exchanges
Consumer table	▪ Fortification ▪ Ethical labeling ▪ Build consumer awareness on diet diversity/ nutrition	▪ Nutrition education ▪ Access to potable water ▪ Prioritize maternal/infant health

Cross-cutting initiatives required for creating the right eco-system

Policy environment

- Market access
- FDI, trade policy
- Land use change
- Land tenure
- Input subsidies
- Extension and education
- Gender equity

Infrastructure

- Ports, roads and railways
- Electricity
- Phone networks
- Irrigation/aqueducts
- Cold Storage and silos

Market linkages

- Input delivery
- Price information
- Risk-sharing/insurance
- Credit/patient capital
- Knowledge-sharing and skills training

The missing link

The PPPs are also testing an innovative field model to achieve inclusive growth. A Special Purpose Entity (SPE) is proposed to create and manage integrated value-chains

SPE model

- To achieve inclusive growth in a cost efficient manner companies, governments and farmer associations need to:
  - Come together and create complimentary supply chains through SPE's in limited and well defined geographic zones
  - Leverage on Information & Communication Technology (ICT) tools to reach out and make supply chains more efficient
  - Accommodate the cyclical nature of farmers' cash flows
  - Adapt product and services to circumstances present in particular rural areas
  - Fix margins and ensure a transparent cost structure towards both ends of **the supply chain**[1]

Reach out to geographically dispersed small holders through a direct supply chain that guarantees:

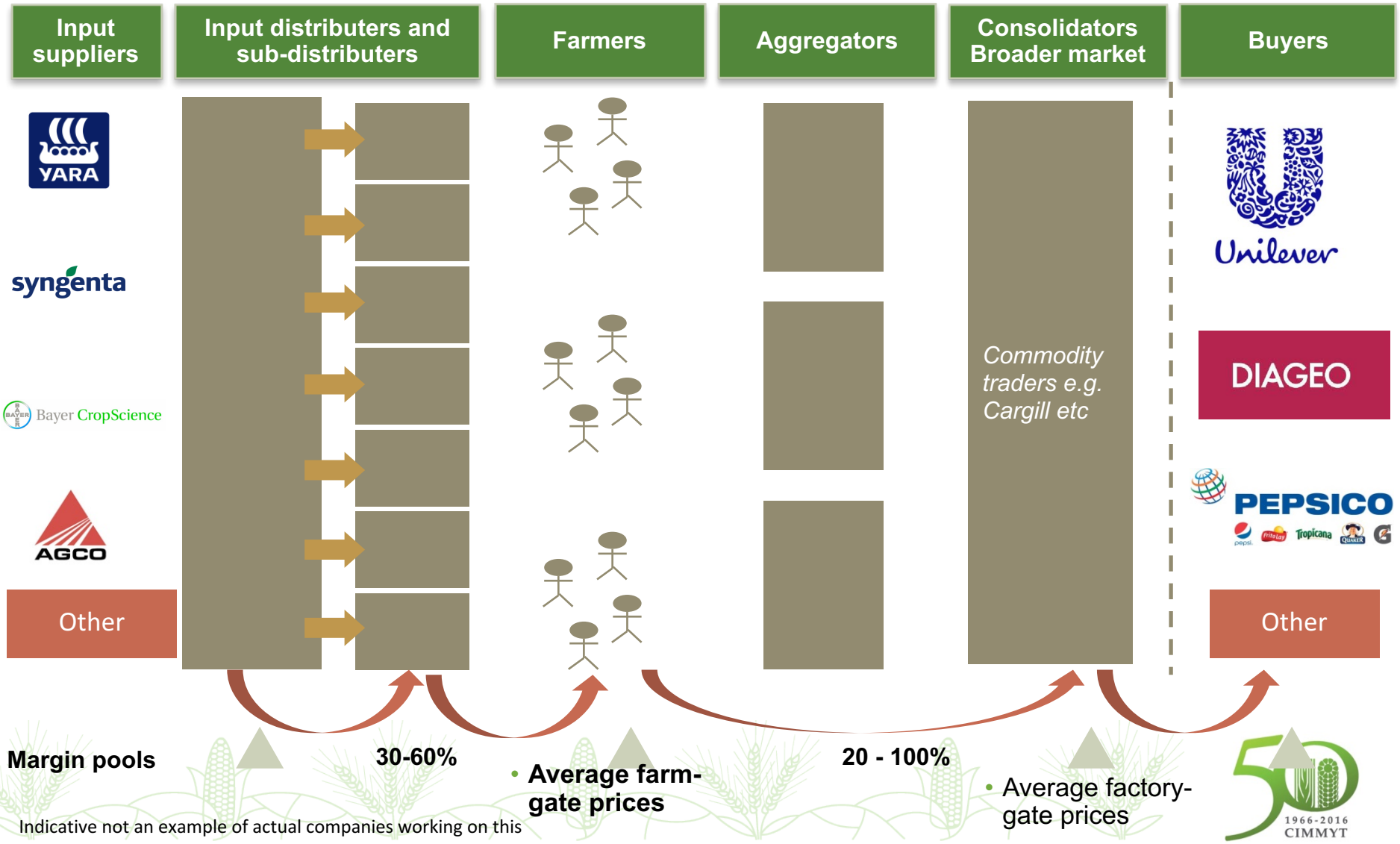
- Transparency
- Fair trade
- Price stability; and
- Traceability

1. Critical condition to ensure that the SPE does not convert into a monopoly provider

Agriculture supply chains in most emerging markets are not efficient. Leading to uneven value distribution along the chain not related to risk taken by various players especially smallholder farmers

Existing value pools

Example

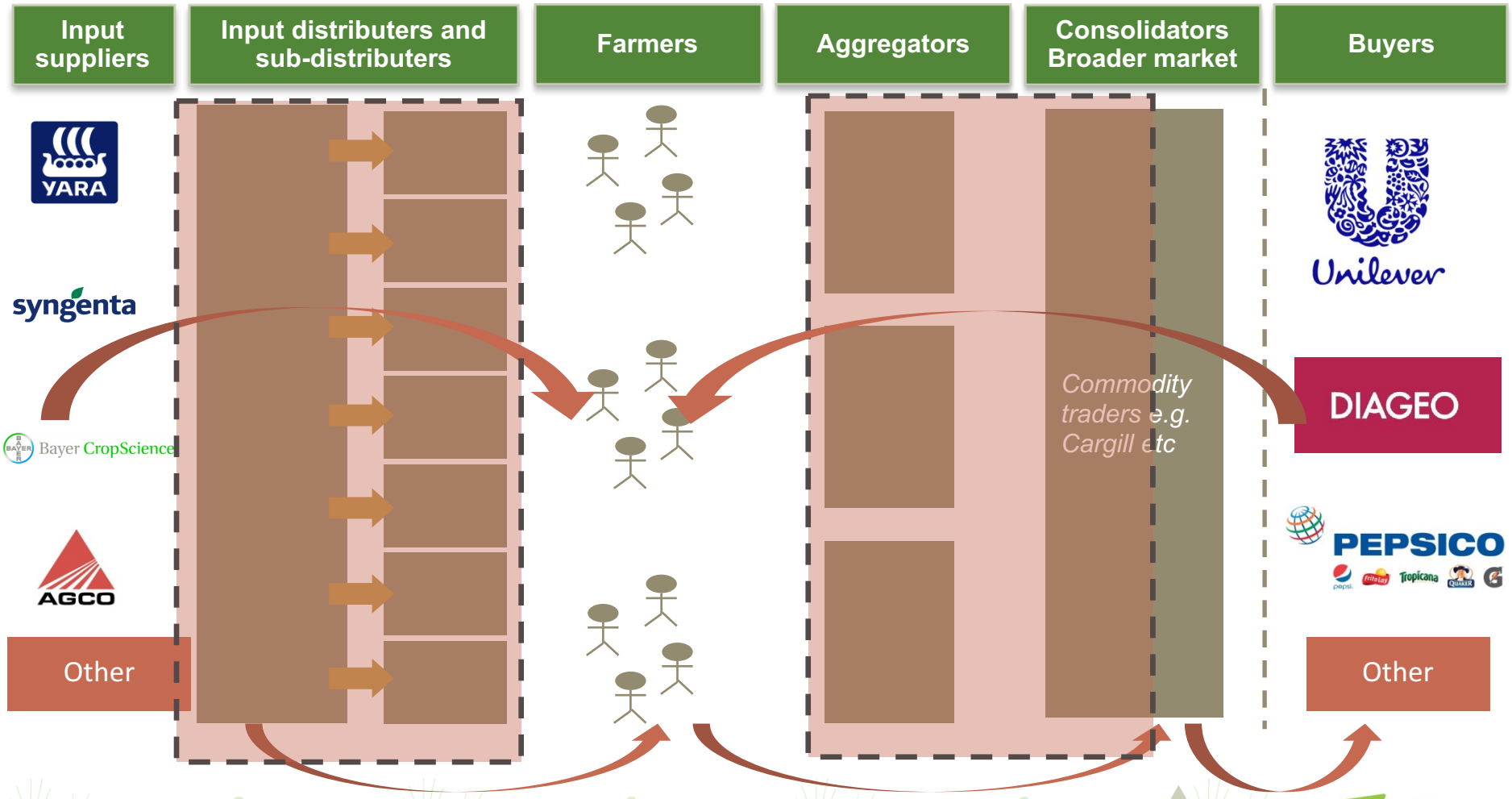


Indicative not an example of actual companies working on this

The value pool distribution can be made more efficient through improved information flows backed by alternate access channels, that allow the farmers to earn more money without noticeably increasing factory-gate prices

Example

Alternative access channel potential positioning



Margin pools

Opportunity to **increase value earned by farmers through reduction of undue rents in the value chain**

- Opportunity to **fix costs at +/- 20%**

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The SPE coordinates the work and output of several actors and companies in the value chain on a cost plus basis

What is it?

- Autonomous entity that operates on a cost-plus model
- Geographically focused
- Neutral broker in coordinating overall functionality of the various pieces of a value chain
- Managed by a team of professionals who handle transactions with at least 30,000 farmers, SMEs, MNCs, and other stakeholders

Special Purpose Entity

What does it do?

- Coordinates the work and output of various actors and companies in the value chain
- Generates scale needed for cost effective involvement of various service providers already approved to provide those services by regulators
- Allows service providers to work across the value chain and gain insights into how underserved smallholder farmers and SMEs interact with a formal supply chain through non-cash transactions

The proposed SPE ownership structure includes farmers, companies and NGOs initially, with farmer associations increasing their stake over a period of time

SPE structure

Parties	Examples	Provides
Government	• Department of Agriculture • Department of Trade and Industry • Department of Finance	• Regulatory basis, for PPPs, policy structure to support contract farming, outreach to farmer groups, trust and confidence building with farmers
Private sector	• Input providers (seed, irrigation, mechanisation) • Banks, Insurance companies • Consumer companies (e.g. Pepsico, McCain)	• Input, off-take agreements, Expertise, Technology, Resources such as finance and know-how
NGOs	• Local NGOs (environment, social impact) • International NGOs (e.g. ITC)	• Urgency, Expertise and know how
Farmers	• Smallholder farmers • Farmer groups / organisations	• Produce

Next steps and on going partner engagements, involve testing and validating the model; as well as setting-up data gathering mechanisms to determine future projects

Next steps and on going partner engagements

- Conduct workshops across the different countries in Africa and Latin America to explain the model to relevant stakeholders and set-up data collection mechanisms, especially in conjunction with local governments and academic institutions
- Launch multiple pilots with farmer groups and associations to test the engagement model and its impact
- Work with potential investors and value chain players to validate the efficacy of the investment returns via the proposed engagement model
- Extensive discussions with national governments to identify priority strategic themes, which can then inform the design of higher priority investment projects
- Find potential partners who can benefit from transparent data sharing and farmer group engagement and potentially hand over the data management tools to them

MaxiTerra
Empowering Smallholder Farmers

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There is a critical need to create practical structures which allow complex PPP arrangements to efficiently and quickly implement projects on the ground

Key attributes of the SPE

- The SPE will be a not for profit social impact organization with a fixed cost and margin structure focused on buying, processing and selling agricultural products
- A balanced structure with equal equity ownership between all parties (either up to 80% or 100%)
- Board of Directors/Governors will oversee the SPE activities and actions of the entity
- Decision-making will lie with an independent management team
  - Initially appoint CEO and CFO
- Articles of Association will be drafted by a legal team and govern the entity
- Farmers may initially not form part of the SPE:
  - Trust and confidence in the structure will be built with the farmers
  - After the first few harvests, farmer benefits will be tangible and it will be recognized that the SPE structure is a commercially viable one
  - At this point, farmers will be given the opportunity to hold an equity stake in the entity