



Forward Markets: An Unfolding Strategy

March 2017



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Setting the Context



“Agri-business for Trade Competitiveness Project (ATC-P), branded as Katalyst, is a market development project that aims to contribute to increased income for poor men and women in rural areas. It does so by increasing the competitiveness of farmers and small enterprises by facilitating changes in services, inputs and product markets.

Katalyst’s approach is based on the premise that enhanced private and public sector business services, and an improved enabling environment, lead to more competitive enterprises, sustainable economic growth,

and poverty reduction. Katalyst is co-funded by the UK Government, SDC, and Danida and implemented by Swisscontact under the umbrella of the Ministry of Commerce, Bangladesh”.

Katalyst started its operation in Bangladesh in 2003 with Phase 1 of the project. In Phase 1 (2003-2008) the project achieved significant impact to jobs and income by increasing the competitiveness of micro, small and medium-sized enterprises in selected urban and rural sectors. During Phase 1, it helped to create around 200,000 jobs and benefited 700,000 farmers and small businesses by increasing their access to better services, technology, inputs and representation.

Phase 2 of the project (March 2008 – March 2013) was built on the achievements of Phase 1. Its emphasis was to increase the strategic coherence of Katalyst’s market development activities. It focused on a portfolio of agricultural, semi-rural industrial and service sectors with prospects for large-scale impact on the poor, as well as mitigation of environmental, social and gender-related issues. Under Phase 2, Katalyst worked in a cross sector named “packaging” to promote development of a packaging services market that could offer appropriate service and product to poor farmers. The overall vision of this cross-cutting sector was to “contribute to increased value addition for farmers and businesses through reduced post-harvest wastage, ensured product quality and create opportunities for increased market access by developing and promoting proper packaging services and products.” Katalyst identified ‘packaging’ as a key area where interventions may result in benefiting the rural producers and farmers through reducing Post Harvest losses.

By ‘packaging’ Katalyst means not only materials like bamboo basket, plastic crate, jute sack etc. that are used for packing agro produces during transit to carry varying distances but also essential services such as cleaning, sorting, grading, handling etc. that are integral part of keeping the produce fresh. Though packaging is used by almost all the sectors, Katalyst narrowed its focus on four sectors as its entry point namely, vegetable, fish, selected fruits and flowers. These sectors were selected based on Katalyst’s assessment of potential pro-poor impact and relevance to packaging services market. The other key considerations, governing selection of these sectors, were number of farmer/producers involved, value and volume of the market, and interest of potential private sector firms willing to involve and invest in packaging material development. During Phase 2, Katalyst reached out and contributed to the increased competitiveness of around 2.36 million farmers and small businesses, and increased their income by around USD 295 million.

Phase 3 of the project commenced in March 2014 and will be implemented until March 2017. By the end of Phase 3, the project aims to reach 1.43 million additional farmers and small and medium enterprises, and increase the income of its additional beneficiaries by USD 260 million.

Under the phase 3, the scope of packaging sector broadened to Forward Markets¹. In the overall portfolio of Katalyst

Under the phase 3, the scope of packaging sector broadened to Forward Markets. Katalyst aimed to explore and deepen understanding of forward market value chains

¹ Katalyst defines forward market as “all functions, actors and policies involved in the transfer of agro produces from the point of production to the point of consumption”. Forward market provides an essential link between the producer and the consumer. Scope of forward market begins with a decision to produce a saleable farm commodity and ends with the purchase of that commodity by the ultimate consumer. Forward Market, thus involves a diverse range of pre-and post-harvest functions e.g. assembling, grading, sorting, storage, transportation, distribution, credit support etc. Various actors and institutions involved in the agro forward market value chain include farmers, agro traders and wholesalers (e.g. *arotdars*, *beparis*, *forias* etc.), processors, importers, exporters, marketing cooperatives, regulated market committees and private agro procurement companies/retailers. Public policies and programs relating to the pricing, handling, and purchase and sale of farm inputs and agricultural products also fall under the purview of forward market.

across core sectors, Forward Markets is a key intervention area under the broad theme of “Marketing”. Given the diversity it requires, a dedicated team has been assigned to explore and intervene in the forward market segment activities integrated with the sector strategies. Katalyst explored and deepened understanding of forward market aspects of the value chain of various agriculture products wherein it not only identified key constraints but also designed commensurate interventions to address these constraints. The focus of such interventions was around sectors like fish and vegetable.

Context & Scope of the Present Study

The present study, which was commissioned to an international consultant Kirti P Mishra², conducted a qualitative assessment to capture the impact and learning from Katalyst’s work in forward markets mainly for fish and vegetable sector. A qualitative approach was followed for conducting the assessment of Katalyst’s Forward Market (FM) initiative in the fish and vegetable sector. The consultant carried out in-depth interactions with key stakeholders involved in specific activities implemented under different components of forward market. Visits were made to various field areas to meet farmers, retailers, and representatives & personnel of companies in leadership roles. Interviews with key functionaries of various partner organisations were also carried out. The information collected from the above mentioned respondents was analysed for preparing the draft report. While the draft report was presented in a multi-stakeholder workshop at Dhaka to share the findings and gather feedback, final report was prepared incorporating the workshop feedback.

² Mr. Kirti Prasanna Mishra is a Masters in Statistics and SMP-IIM-C. He is a founding member of Ecosiate Consultants, with expertise in Innovation and Social Business. With over two decades of wide ranging experience in working with various donors, international agencies, governments and corporates Kirti is one of the leading consultants in India on Strategy formulation for development projects. He is a great believer of Inclusive Marketing and specializes in establishing large scale pro-poor innovative business solutions through private sector partnership. He has been part of Missions of IFAD, World Bank, GIZ, DFID, OXFAM and others for program ideation and concept development. He has designed and conducted various development programs in the areas of Agriculture, Skill Development, Sanitation and Livelihoods. He has led bi-lateral and multi-lateral projects in Odisha, West Bengal, Jharkhand, Andhra Pradesh, Maharashtra, Gujarat and Rajasthan. His global engagements include consulting assignments in Bangladesh, Nepal, Malaysia, Mozambique and Kenya. Other than several prestigious forums of CII and others in India, he has presented at some International forums like, SEEP Network in USA, Social Innovation in Japan, BoP Innovation in Bangladesh, Livelihoods and Enterprise in Sri Lanka.

2

Key Constraints in the Sectors



Production and Marketing aspects of agricultural produce are intertwined with each other. Market-driven production rather than production-propelled marketing is the order of the day. Often, the farmers and allied extension departments dealing with production enhancement are totally dissociated from the marketing setup. The need of the hour is to bring convergence amongst farmers, the extension departments and private sector in marketing of agricultural produce. This calls for convergence of actors and resources therein to explore the synergies for the benefit of farmers.

Katalyst, with its understanding of these two sectors has identified various constraints in the promotion of these activities. Following section explains in detail various sectoral constraints

Constraints across Vegetables and Farmed Fish Sector

There is a lack of understanding and knowledge among farmers about the importance of postharvest management practices and the impact these can have on potential revenue.

- 1. Lack of knowledge on postharvest practices:** Lack of knowledge (needed for, among others, grading, sorting, packaging and storage) at farmers and traders level leads to incurring of significant postharvest losses (around 20-25 percent in vegetables, around 10-15 percent in fish³). Farmers and traders have accepted such system losses to their core business and fail to recognise the potential benefit that can be achieved by minimising such losses, both in terms of greater quantity offered to the market due to lesser wastage and better market price fetched due to quality retention and/or improvement. Traders engage in procurement practices which fail to incentivise farmers to produce quality products and are hesitant in providing market feedback to farmers about requirements in specifications (e.g. size, shape and variety).

Farmers lack of knowledge of modern postharvest management techniques frequently results in the practice of excessive feeding (to artificially increase the weight of the fish), and the use of unregulated chemicals (to ensure a longer shelf-life during the harvesting and marketing period). While this inadvertently results in more than permissible chemical residue in the fish rendering it unsafe for human consumption, it limits sector's reach to international markets.

The government, despite its willingness, lacks both extension manpower and financial resources to strengthen efforts to disseminate information necessary for correct input use, and to enforce regulations that affect food safety.

- 2. Lack of appropriate packaging materials:** Market for improved packaging materials (such as plastic crate and corrugated paper) is characterized by few local manufacturers, low penetration and relatively higher cost as compared to the conventional packaging materials. Hence, these are not widely available to farmers and traders and even when available, relatively higher cost and inability to see through the benefits in the long run, poses a deterrent towards their purchase. Similarly, shortage of storage structures and lack of appropriate transportation mode limits the efficiency of value chains.

- 3. Lack of enabling environment and compliance with the export regulations:** While the export market has tremendous potential to be harnessed, it is highly competitive in nature. Low awareness and capacity of value chain actors to comply with export regulations does not allow them to leverage the export potential to its fullest. While, the current export guidelines



have not been updated over the past decade, there are limited sources from where these stakeholders

³ As per the study conducted by Katalyst

can access relevant information. Entities such as DoF and BFFEA are making efforts to disseminate this knowledge but these are not sufficient to reach all the relevant actors in the value chain.

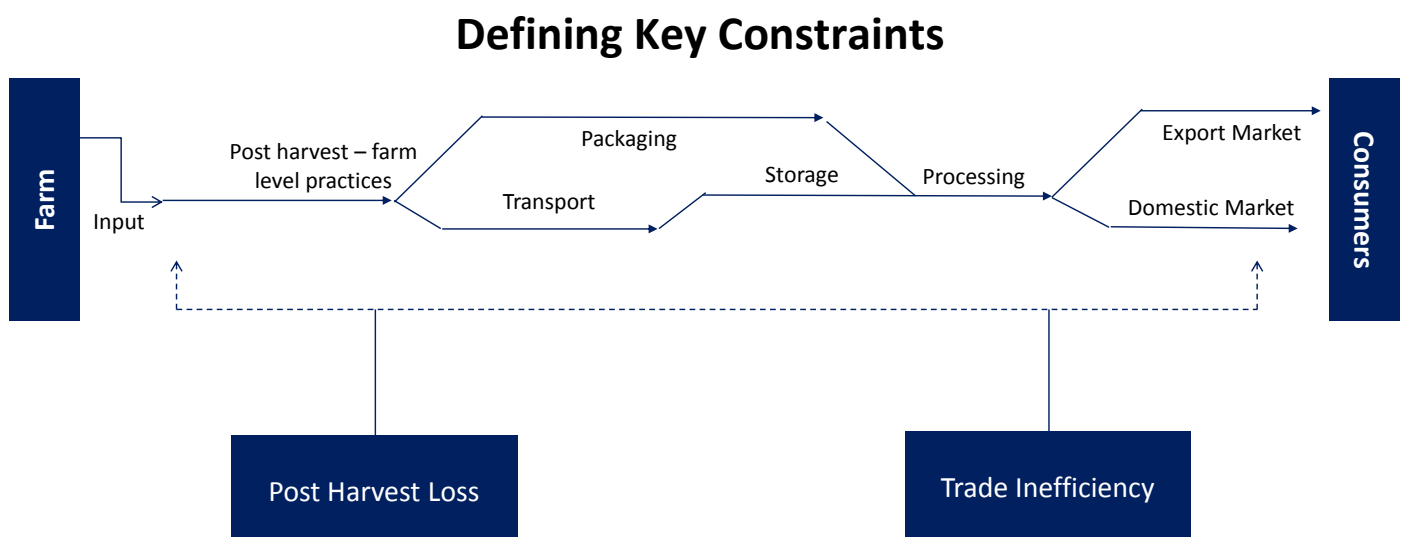
The main prawn export value chain actors, (e.g. depots, commission agents, processing plants and other government bodies) due to their unawareness regarding regulations and its compliance mechanism, are unable to make significant headway into the export markets. It has among other fallouts, specifically resulted in inadequate testing facilities to ensure that prawn meets export standards.

Key Constraints and its addressal

The agricultural marketing system is no more confined only to regulated markets. Different alternative marketing systems such as Farmer Procurement Model, Group based Marketing, Hub & Spoke model and Direct Market, etc. have emerged as a result of various interventions undertaken by different stakeholders.

These alternative marketing systems have the potential to measure up to the challenges of modern agricultural production system. This would be possible only when production protocols and marketing mechanisms work hand in hand through an integrated planning process. Katalyst, with its long presence and understanding of the production and marketing in the agriculture and allied sectors in Bangladesh has initiated various initiatives to bridge various gaps both in the production process by innovative methods to enhance productivity and establishing forward linkages for efficient marketing of these produce. Most of these initiatives have shown the positive results, as captured in the subsequent sections.

These initiatives, designed in a programmatic approach, were in the perspective of addressing the key constraints namely (i) post-harvest losses, and (ii) trade inefficiencies through introduction of better post harvest management (PHM) and trade efficient systems as illustrated in the diagram below:



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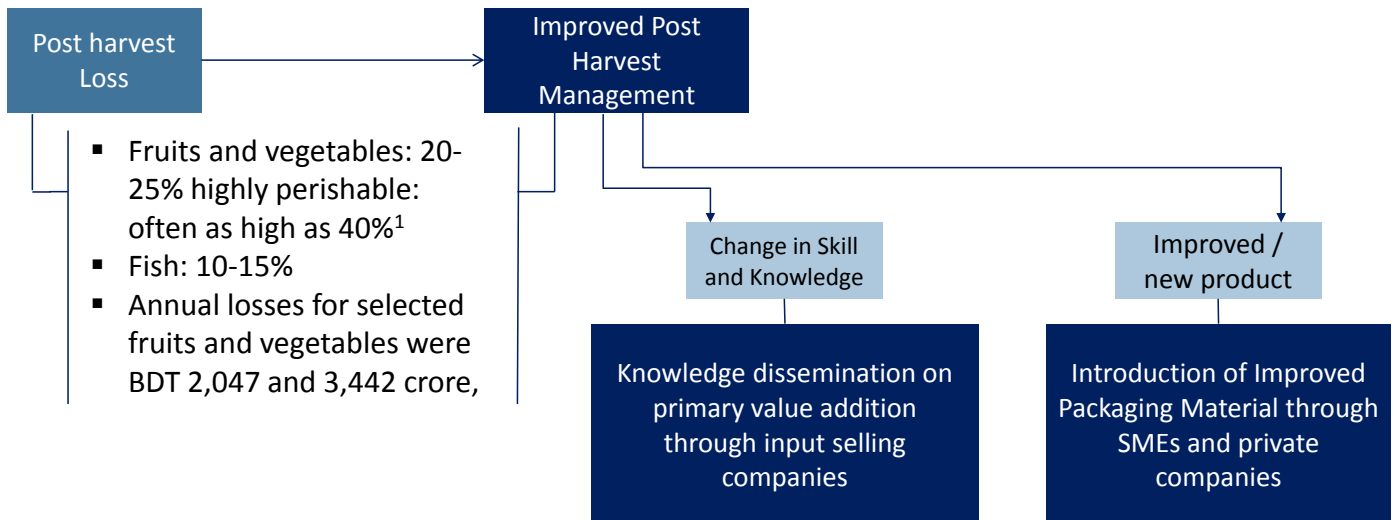
Post-Harvest



In order to reduce PHL, the strategy was to introduce improved post harvest management (PHM) practices by way of introducing improved / new products and change in skill and knowledge of stakeholders. The PHM intervention framework has been illustrated in the diagram on the next page.

Katalyst with its initial understanding on the post-harvest loss decided to carry out intervention that would address the PH losses by introducing improved packaging materials and knowledge dissemination. The focus was to intervene in a way that it would ensure bigger reach and acceptability of these inputs. Katalyst designed interventions by creating in-depth understanding of the ecosystem and successfully implemented them by combining development of new products with appropriate knowledge dissemination including careful planning on the information to be exchanged, key role players, IEC material, modes of communication etc.

Post Harvest Management (PHM) Intervention Framework



The following section captures both the intervention areas

Change in Skill & Knowledge

Katalyst worked closely with the existing partners to showcase the importance of various primary value addition processes like sorting, grading, washing, packaging etc. and its importance in the post-harvest losses and better prices. Linkage workshops were carried out to bring BB retailer, vegetable farmers, and agro vegetable traders under one umbrella to create linkages and provide information on PHL.

Agro Inputs Companies

- Partex Agro Limited
- Aftab Bahumukhi Farms Limited
- National AgriCare Group
- Spectra Hexa Feeds Limited
- Getco Agro Vision Limited

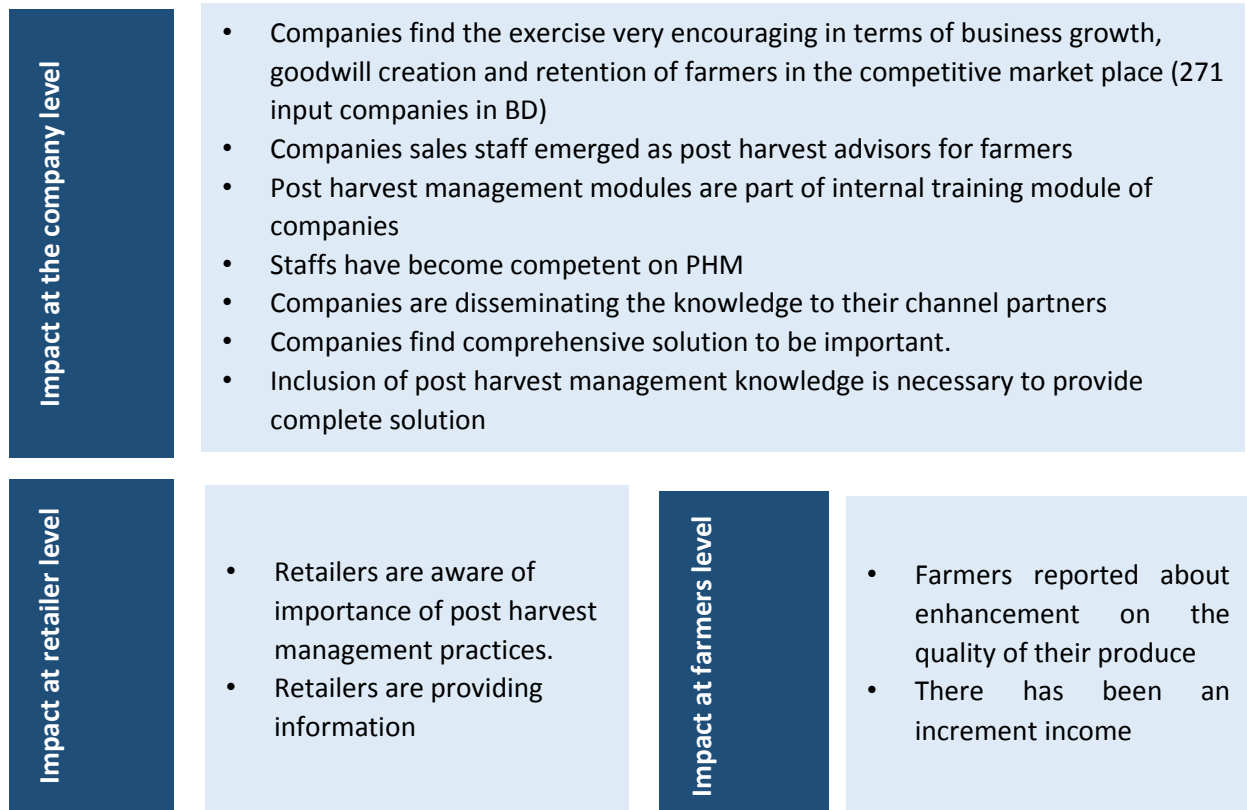
Systematic approaches have been followed that includes,

- 5 reputed inputs companies are partners
- Standardised modules have been developed and incorporated into Co's existing training module
- Company staffs have been trained on improved Post harvest Management practices
- Updated modules have become part of regular product training modules of the companies
- Distribution partners of the companies have been engaged in disseminating production and post harvest knowledge

- Integration of the training modules with the existing product training programs of the channel partners. This helped in better utilisation of existing resources.

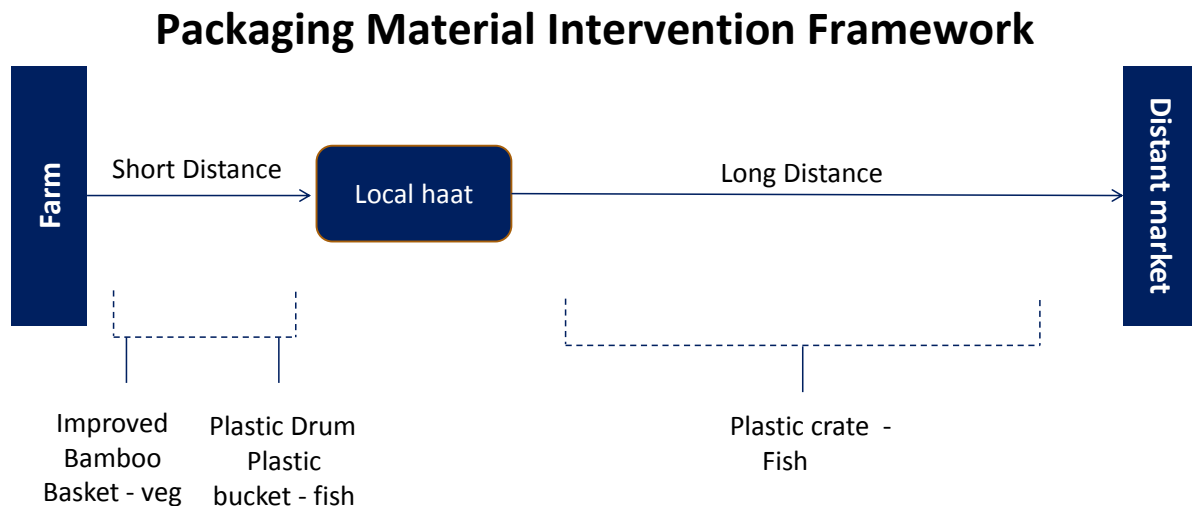
Impact Created Across Stakeholders

The interventions has impacted at three levels; company, retailers and farmers. The key aspects as observed is captured below



Improved & New Products (Packaging Material)

It was analyzed that vegetables and fish travel either short distance or long distance to reach markets. To ensure reduction of post-harvest losses needed based solutions need to be arrived at. Katalyst had developed an intervention framework which was understood in detail. The following illustration captures the packaging material intervention framework:



Improved Bamboo Baskets (IBB)

Intervention to reduce short distance post-harvest losses in vegetables:

During transit, because of the poor quality of packaging material (bamboo baskets), significant post harvest losses occurred. To reduce the losses, working on better packaging materials was imminent. In order to do so, Katalyst with the help of its co-facilitator GMark Consulting started to work in packaging space as early as in 2010. Initially a number of group discussions were conducted at different haats in Bogra, Comilla and Jessore region to draw insights towards the same. Subsequently, a design research was commissioned to Enroute, Katalyst's facilitation partner. Design inputs integration and local improvisation was done based on the insights gathered through the above exercise. Moreover, PHM (knowledge level change) intervention was also conducted under the contract with Enroute.

The IBB thus introduced were better in quality and helped in the reduction of the post-harvest losses. The major improvement in the existing design were

- 1) **Quality:** IBB are made of mature and dry bamboos that are not affected by insects or bugs. They have smoother inner surface which ensures quality retention as the produces remain scar-free and look fresh.
- 2) **Durability:** IBB are tightly weaved with broader bamboo strips leaving little or no gaps. This improves durability of the baskets.
- 3) **Ease in Handling:** IBB have extra strips of bamboo at the edge of the basket that balances load of the basket. Additional nylon rope or distinguished wiring is inserted for easy handling.
- 4) **Capacity improvement:** IBB have a higher carrying capacity than traditional ones

Awareness of the IBB at the bamboo basket producers and farmers level have resulted in development of 11 more improved bamboo baskets without any facilitation by Katalyst

As an intervention strategy, Katalyst promoted IBB and conducted various activities in 100 major vegetable markets of Bangladesh to build capacity of bamboo basket (BB) producers and retailers and promote the use of improved bamboo basket at the farmers' level. Series of workshops were organised to promote use of IBB in 100 major vegetable haats of Bangladesh. Along with this, direct interaction with a no. of farmers and farmers groups was conducted to promote use of IBB.

What Katalyst did?

- **Design improvement:** Design improvement was based on requirements of farmers of specific areas.
- **Structured training of 7 days:** The designing of training which has two distinct aspects of skill building and experiential marketing at haat was found to be useful to ensure impact. Moreover, to ensure the supply of IBB, initially 150 BB retailers were trained, under whom now 750 producers are producing IBB.
- **Sustained campaign to introduce new practice:** The awareness programs at the targeted villages and holding repeat meetings ensured adoption of new practices
- **Focus at retailer level optimised the model:** Retailer as the key focus on the interventions helped building capacity of IBB producer's as well as attracting consumers to buy IBB

It was observed that above mentioned interventions have created following major impacts as captured in the table below

Stakeholders	Impact Created
Retailers	<ul style="list-style-type: none"> • Better price fetched resulting in enhanced income • Cost saved due to better handling and transportation
Farmers	<ul style="list-style-type: none"> • High acceptability and adoption due to improved design
IBB Producers	<ul style="list-style-type: none"> • Better market and income • Skill improvement

However, following aspects would need greater attention

- Steady supply of IBB to the retailers
- Price point of IBB is perceived high by some buyers and particularly by the non-users
- Availability of quality raw material
- Non users are concerned about the price difference while valuing the benefits



Retailer of the Improved Bamboo Baskets



Vegetables transported to haat



Empty baskets after sales in the haat

Plastic Drums and Plastic Buckets

Intervention to reduce short distance post-harvest losses in fish:

Katalyst, through its partner, built capacities of the channel partners and farmers to make them understand the usefulness of adopting plastic crates and drums. The focus was to ensure that the adoption of new practices would lead reduction of post harvest losses, particularly when they use to transport to nearby markets. Linkage workshop was conducted by the agro fish traders in 60 fish markets for short distance transfer where fish farmers, local packaging traders and fish traders were present. Following table summarises impact of this intervention at stakeholder level.

Stakeholders	Impact
Farmers	<ul style="list-style-type: none"> ▪ Farmers were encouraged to use plastic crates or drum ▪ Farmers are using plastic – but for high value produce (for prawns and large carp) ▪ Farmers are bit concerned about the cost implications
Traders	<ul style="list-style-type: none"> ▪ Traders control the business of crates – supply crates to farmers as an embedded service ▪ Having concern on price points for big crates ▪ Quite Optimistic about the growth of RFL model in the area
Producers	<ul style="list-style-type: none"> ▪ Demand for crates in increasing ▪ Producers have introduced new designs and also planning to introduce products like insulated crates for high value fish products

Plastic Crates

Intervention to reduce Long distance post-harvest losses in fish

Unlike IBB, it was noticed that for long distance transport Plastic Based Packaging (PBP) helped considerably in reducing the post-harvest losses in the fish sector. Since plastic based packaging materials, for example plastic crate, plastic drums, water tank etc. were either unavailable or unaffordable to the farmers and traders, Katalyst focused on the promotion of affordable and appropriate plastic based packing. For the same, renowned plastic based companies like Bengal Polymer Wares Ltd. and RFL Plastic Ltd. were partnered with the project to ensure availability of plastic based packaging. Under this intervention, these private players manufactured & supplied specialized plastic based packaging materials focusing on the requirements of fish value chain. Linkage workshops were conducted in 80 major fish market those operate in long distance to promote use of appropriate packaging in presence of Bengal Polymer Wares Ltd. and Pran-RFL.

Plastic Baskets by RFL Plastics Ltd

RFL Plastics, a sister concern of PRAN-RFL group, is a fairly large company producing various products like furniture, storage products, bottles etc. Katalyst partnered with RFL to produce fish baskets for transportation of fish. The intervention was designed in a structured way that it fetched encouraging results

Process Drivers

- Market study to understand usage pattern of plastic crates in fish market. A detailed study was conducted on the existing packaging materials and transportation practices including the type and size of fish that was traded.
- Based on the feedback moulds were developed & tested and were used for producing new crates
- Based on the market feedback, two new products were launched. New products had two major advantages viz. use of handle and improved carrying capacity
- The company organised promotional campaigns in haats to engage local traders. They received good Response and sold 5000 pieces within 5 months of the launching of the new products in market.

Market Drivers

- Better initial research for identification of product gaps
- New products were targeted in those markets where traders were progressive enough to understand its benefits and use it
- The value proposition offered by the product proved to match the needs of post-harvest functions like transportation, handling of produce leading to reduction of post-harvest losses
- Networking and promotional activities with local traders helped in enhancing the sale
- The products also targeted institutional buyers
- Utilisation of the Company's existing robust distribution system to tap the market

It is important to mention that motivated by the initiative, RFL is currently working towards developing another new product i.e. insulated crates as they find great potential for the same. The company is also working on an aggressive market expansion strategy to expand sale of its current products.

Key Takeaways

Dimension	Knowledge dissemination	Short Distance Post harvest losses interventions	Long Distance Post harvest losses intervention
Intervention Product	Training modules	Introduction of Bamboo baskets	Plastic Crates
Resources	Development of suitable training modules	Use of local material (bamboo) and skill sets helped in development of the product locally	Tie-up with private sector that could manufacture plastic crates
Research	Integration of the training modules with existing product training programs of the channel partners.	Research inputs on quality and design based on the ground realities	Detail market research feedback on product requirements and acceptability of such products
Support	Finding suitable local partners for the training	Support & training to the local manufacturing units	Use of existing outreach of producers for dissemination of the product to the users
Impact	Helped companies in creating goodwill	High level acceptability and considerable reduction in PHL. More than 750 producers are currently producing IBB.	Better response, over 5000 crates were sold. Now company is trying to introduce new products
Way forward	Support for further training and orientation is required. Roping in other partners to increase visibility, spread and impact.	Spreading to more geographical areas. Strengthening of both backward and forward integration with logistic and financial support	Brining more suppliers in the mainstream. Further research on products development.



4

From Trade Inefficiency to Trade Efficiency



Trade is a powerful engine for economic growth, poverty reduction, and development. However, harnessing that power is often difficult mainly because of various constraints such as lack of trade-related infrastructure, obstacles restraining their productive capacity, policies, knowledge platforms, enforcement etc. Furthermore, proper sequencing is needed to ensure front-loading of some prerequisite actions without which other reforms are bound to fail.

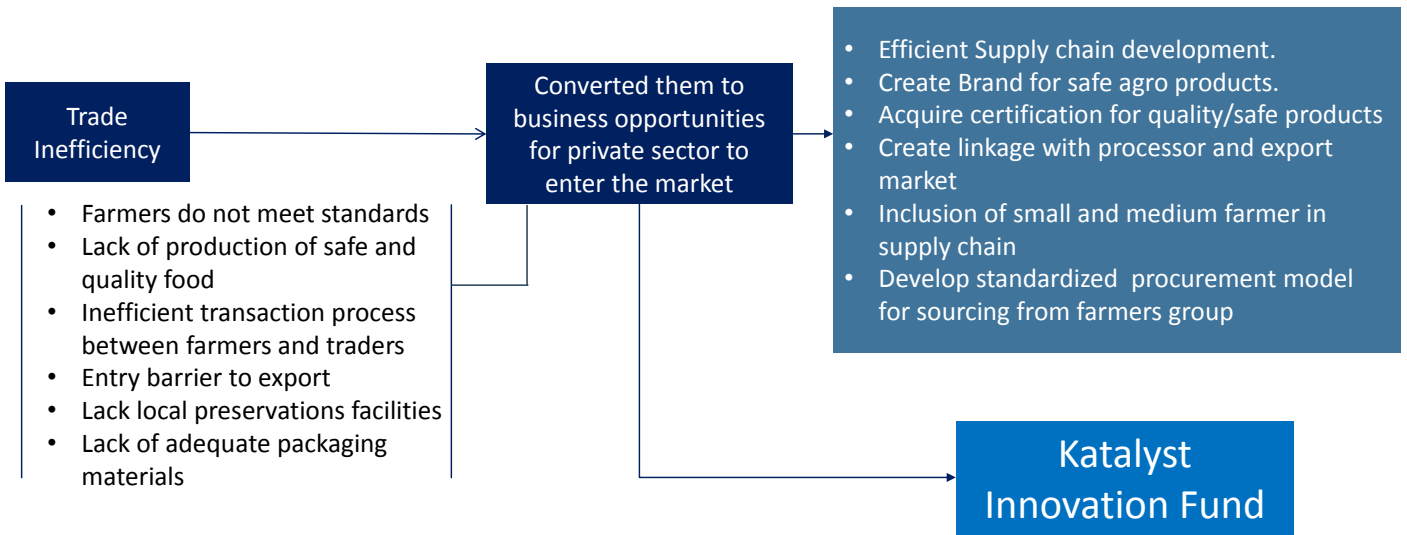
Existing inefficiencies in carrying trade both in the domestic and export markets were seen as a major deterrent to improve the value chain of both farmed fish and vegetables sectors. A range of constraints add to trade inefficiencies e.g. farmers' produce not meeting quality specifications and standards, lack of

production of safe and quality food, inefficient transaction process between farmers and traders, entry barrier to export markets, lack of local preservations facilities and lack of adequate packaging materials etc. were identified.

It was understood that Farm to Consumer movement can be significantly improved and embedded value can be unlocked if these trade constraints could be overcome. The focus was to bring about systemic change and partner with corporates who were not only facing these constraints but were willing to co-work on these constraints to bring inefficiencies in the value chains. With focused analysis these inefficiencies were converted into business opportunities for the private sector to enter the markets.

One of the major interventions was to set up **Katalyst Innovation Fund (KIF)** to ensure development of enduring partnerships with private sector in addressing identified constraints. KIF worked directly with private sector players and business enablers wherein product-process innovations and creation of an enabling environment were focused upon.

Trade Efficiency Intervention Framework



Katalyst identified various stakeholders who can contribute in bringing better trade efficiencies. Following are some of the interventions that aimed to bring in trade efficiencies. Following section depicts how partnerships with 6 organisations helped in addressing trade efficiencies across the value chain.

KIF’s Forward Market Partners

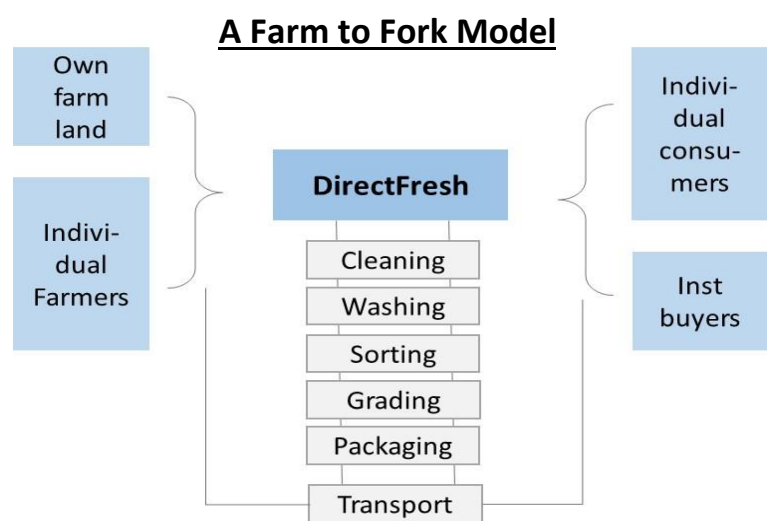


Direct Fresh

Direct Fresh founded by Sam Bretzfield and Mishal Karim has four verticals namely - dry, imported food from the UK; high-end perishable premium products like cheeses, meats and vegetables from France; imported vegetables from Thailand; and healthy, local, chemical-free fruit, vegetables and fish.

Katalyst has closely worked with Direct Fresh, one of the largest supply chain outlets to leverage their facilities and establish direct network with the producers. This has helped in the establishing efficient and sustainable supply chain for vegetables and eliminating the middleman in the process. The important outcomes of these initiatives are:

- ❖ Through this initiative Direct Fresh was able to directly interact with large number (~1100) of farmers. They thus substantially widened their product supplier base with farmers as direct suppliers. This also helped them to reduce middleman transaction costs. The direct interaction with the farmers also helped Direct Fresh to understand the ground realities including various constraints for production and plausible interventions.
- ❖ It also introduced Good Agricultural Practice (GAP), Integrated Pest Management (IPM) and Integrated Disease Management (IDM) and to adopt modern post-harvest management and fair procurement practices.
- ❖ Given this high reach-out with the producers Direct Fresh established proper software based MIS with the support of Katalyst. This ensured better efficiency in operations and led to availing certification.
- ❖ Direct Fresh also understood importance of cold storages and storage facilities. These facilities play an important role in reduction of the Post-harvest losses and enhance quality.
- ❖ Direct Fresh has also got the HACCP certificate through SGS. The handholding by SGS led to adoption of professional processes and systems. Introduction of all the above measures ensured quality, timely supply of goods, and allowed them to explore various possibilities for export (in international markets both neighbouring as well European).



Taking the initiative beyond the pilot stage

Positive outcome of the partnership has built the capability of Direct Fresh in many ways. It led to establishment of an integrated business model was built directly with the farmers' network. The model not only offered to buy back their produce at better price but also provided support on good management practices and helped farmers to reduce input costs.

Direct Fresh has added fish to their portfolio as part of their plan to expand business. In fact the company is looking at adding few such verticals over the period of time. The market for Direct Fresh is going to expand fast as they are planning to focus more on institutional buyers. In addition, with their plans of opening retail shops, it would invariably be working in the space of integrated Farm to Fork businesses.

Success of this initiative has also attracted investors. Direct fresh has received BDT 60 million by offering equity to investors. Company believes that the experience and learning of the KIF partnership was pivotal for achieving this.

Meridian

Meridian Group with corporate office in Chittagong was incorporated in 1992 and has today become one of the few renowned food companies in Bangladesh. Meridian started its inception with Meridian Hotel & Restaurant, but now it is a complete market oriented organization focuses on Quality, Technology, Creativity, Market Demand & Consumers' satisfaction. The group's business now includes Foods, Agro based products, Agro processing, Real estate, Hospitality, Marketing, Fishery etc.

The company's strategy is guided by several fundamental principles. The existing products grow through innovation and renovation while maintaining a fine balance between quality and consumers need. It is almost an unsaid principle that long term potential is never sacrificed for short term gains. The company's priority is to bring the best and most relevant products for people, wherever they are, whatever their needs, throughout their lives.

With the support of the Katalyst, Meridian group now started working with Fish farmers,

- ❖ Introduction of partnering with farmers for production of good quality fish, ensuring buy back has helped in strengthening supply of both quality and quantity.
- ❖ Meridian directly worked with the framers and brought in the improved production processes. Meridian has been giving training to farmers to move from traditional and semi-intensive practices to more intensive practices⁴ resulting in significant increase in the yield over traditional practices. In order to ensure high productivity Meridian is providing good quality fish seed to the farmers.
- ❖ Under the partnership Meridian has started a fish retail business model. It is now reaching out to consumers directly through retail outlets. The retail outlet at Chittagong could manage a turnover of ~ BDT 5 lakh per month. Company is leveraging the brand value it enjoys in the market. This helped in building the confidence of the company that the approach and process adopted by them are in right direction.
- ❖ During the partnership Meridian worked with SGS for almost a year and obtained HACCP Certification.



⁴ The yield is 1.5 MT per acre, 3 MT per acre and 8 MT per in traditional, semi intensive and intensive methods respectively.

Taking the initiative beyond the pilot stage

Meridian encouraged by the success of the partnership, now plans to introduce live fish in the market. It is also working toward developing right transport system to ensure quality and timely supply of live fish into their retail outlets and other markets.

Meridian has started exporting Tilapia. This is a good indicator of the improved standard in the production and the company's management processes. Inspired with experience of HACCP Meridian has also planned to avail ISO certification.

This partnership has helped company to get into a new business model which is an end to end model of production through farmers, supply chain integration, market expansion including establishing one's own retail outlets.



Green Housing and Energy Ltd. (GHEL)

GHEL, a leading micro finance organisation shifted its focus to livelihoods and enterprise promotion around a decade back. It focused on alternate energy to create model villages. GHEL tried to find technology based solutions for problems in agriculture sector. GHEL realised that reduction of wastage in agriculture sector, particularly in vegetable and fruit sector which is more than 20% could create significant impact for the sector and the stakeholders involved from production till consumption. It strived and identified interventions that had the potential to offer solution to the impending problem.

It worked with Katalyst to introduce a chilling storage facility, mainly for vegetables, at the last mile so that the poor farmers can have a place to store produce and fetch better price. However, the need was more on building a mini chilling facility. GHEL successfully overcame the technology challenge and developed an innovative model through some rigorous efforts.

GHEL through this partnership co-created appropriate technological solutions. It built storage with cooling chamber, with space for storing. The physical structure was made up of hollow bricks. However, GHEL understood that technology breakthrough was only a part of the solution framework. It then invested significantly on building capacities of farmers and traders to make sure that they effectively use the chilling facility. A series of training programs for farmers and local traders were conducted to make them understand the purpose and utility of the facility. Its focused effort to establish connectivity between farmers, *adotdar* and traders positively impacted in creation of efficient value chains.

Taking the initiative beyond the pilot stage

GHEL with its valuable experience in the financial sector is working towards developing mini chilling facilities as an innovative business model. RDA, the leading government body at Bogura, impressed with impact of the model and realizing its potential has offered GHEL space in their campus to set up one such facility. It is also in contact with private sector to work together and scale up this last mile logistic facility.

Advanced Chemical Industries (ACI) Limited

Advanced Chemical Industries (ACI) Limited is one of the leading conglomerates in Bangladesh, with a multinational heritage. The company has diversified into four major Strategic Business Units namely Pharmaceuticals, Consumer Brands & Commodity Products, Retail Chain and Agribusinesses.

Given the reach of the ACI in agribusiness, Katalyst partnered with them for retailing of fish by conceptualizing a retail chain model. Under this intervention a retail marketing model for fish in a commercial location was introduced. A well managed modern retail store was opened in a commercial location for offering consumers the choice to buy fresh and good quality fish. It set up a call centre for consumers to place order for home delivery. ACI team managed promotional campaign by using social media. It reached to schools in the vicinity to make students aware about their outlet and distributed leaflets to share with their parents.

ACI introduced a range of fishes to cater to the needs of different market segments. It started with 30 varieties and reached to 70 varieties within six months of operation. To meet the local demand it added live-fish and sea-fish species in the retail outlets. To ensure consumers buy hygiene products it introduced good packaging materials such as paper bag and tissue bags.

ACI managed retail outlet achieved a sales turnover of ~ BDT 10 lakh per month. As suggested by the strategy head a single outlet has the potential of reaching a turnover of BDT 100 lakhs per year. 2 more locations have already been identified for expanding the retail chain model.

Taking the initiative beyond the pilot stage

ACI with this exposure for working on direct retail models and necessary compliances to ensure quality standards has understood the potential of the Branded Fish product. The consumer insights gathered through this partnership made ACI realise that it could create a Fish Brand of its own. As suggested by the Strategy Head, ACI has concrete plans to launch “ACI fish brand”. Company plans to reach out a large number of stores through its brand. While it would be a low cost model as it would not require capex to set up retail stores but company has to spend significant resources to build the new brand itself.

Company believes they are ready to tap international market and has started working on an end to end supply chain model. It plans to work with farmers directly. ACI would develop a procurement model wherein it would support farmers on at different stages of production, supply management and marketing.

SGS: Quality, Standards & Certifications

SGS is the world's leading inspection, verification, testing and certification company. They are recognized as the global benchmark for quality and integrity. They operate through 1,800 offices and laboratories with more than 85,000 employees around the world.

SGS core services can be divided into four categories:

- **Inspection:** comprehensive range of world-leading inspection and verification services, such as checking the condition and weight of traded goods at trans shipment to control quantity and quality, and meet all relevant regulatory requirements across different regions and markets
- **Testing:** global network of testing facilities, staffed by knowledgeable and experienced personnel, enables to reduce risks, shorten time to market and test the quality, safety and performance of your products against relevant health, safety and regulatory standards
- **Certification:** to demonstrate that products, processes, systems or services are compliant with either national or international standards and regulations or customer defined standards, through certification
- **Verification:** ensure that products and services comply with global standards and local regulations. Combining global coverage with local knowledge, unrivalled experience and expertise in virtually every industry, SGS covers the entire supply chain from raw materials to final consumption.

Katalyst introduced SGS to help the four existing partners and prepare them for HACCP certification through training and hands on support. SGS helped the companies learn various aspects like maintaining internal documentation, establishing processes and systems to ensure better effective management standards etc. This was mainly done to make them comply with the certification norms. As shared by the companies, new practices such as supplier evaluation form, product specification form etc. have been introduced through this process.

SGS has conducted internal audit of these organisation. Based on these findings, they further helped these companies to set up appropriate processes, quality norms etc. It also advised them specific areas for improvements in order to adhere to the certification norms. SGS finally conducted an audit and issued HACCP certificate which is the entry level compliance certificate.

As claimed by SGS, the certification would immensely help companies to work with institutional buyers, both domestic and international. As discussed with companies they believe HACCP would help them in entering international markets which generally value such certifications.

Under the partnership, SGS conducted a workshop to educate companies on the importance of quality and standards for their businesses.



Taking the initiative beyond the pilot stage

At present SGS works with 60 odd organisations in Bangladesh. However, by working closely with these four organisations, they generated new learnings such as

- Importance of early handholding
- Compliance limitations on the part of organisations
- Type of support required and how SGS can fill that niche
- Diversification with other portfolios

SGS, as suggested, would take the experience to other potential clients in fish and vegetable sectors and beyond.

Business Promotion Council (BPC)

The Ministry of Commerce through the Business Promotion Council (BPC) aims to promote the growth of potential industrial sectors of Bangladesh economy that are yet to take off. Therefore, other than the already established sectors such as readymade garments, the underperforming but potential sectors such as the information and communication technology, leather and leather goods, fisheries and frozen fish, medicinal plants and herbal medicines, light engineering, and agro processed and horticultural products, have all received special attention from the Ministry of Commerce. Individual councils have been formed for these six sectors within the Business Promotion Council in order to enhance their export capability and competitiveness.

The Business Promotion Council (BPC) thus with support of respective government organizations and trade associations having immediate stake on the identified sector helped to increase competitiveness enterprises need to be able to produce the appropriate product within right price, using the appropriate technology and should be compliant to the requirements of the buyers. Katalyst has thus with support of BPC brought following changes in Fish and vegetable sector.

Fish sector

- Value Chain Development for Fish Processing for Domestic & International Market
- Updating fish trading policy guidelines and conducting advocacy workshops with Department of Fisheries
- Facilitate Industries to Produce Quality Feed Meal and Fish oil by Using Offal
- 30 farmer clusters each consisting 50 farmers were formed and registered with Department of Fisheries
- Partnered with 4 processing plants and 4 feed companies
- 3 expert workgroup meeting were conducted throughout 2016

Vegetable sector

- GAP based module development
- Farmers awareness training on GAP, GHP & GMP
- Exposure visit(packaging, existing & new market) - 1 completed
- Warehouse/packing house management model development
- Cold chain model development with transport and supply system (transport of refrigerator Van)
- Capacity of the Exporter have been developed in terms of quality products, appropriate packaging and improved procurement practice

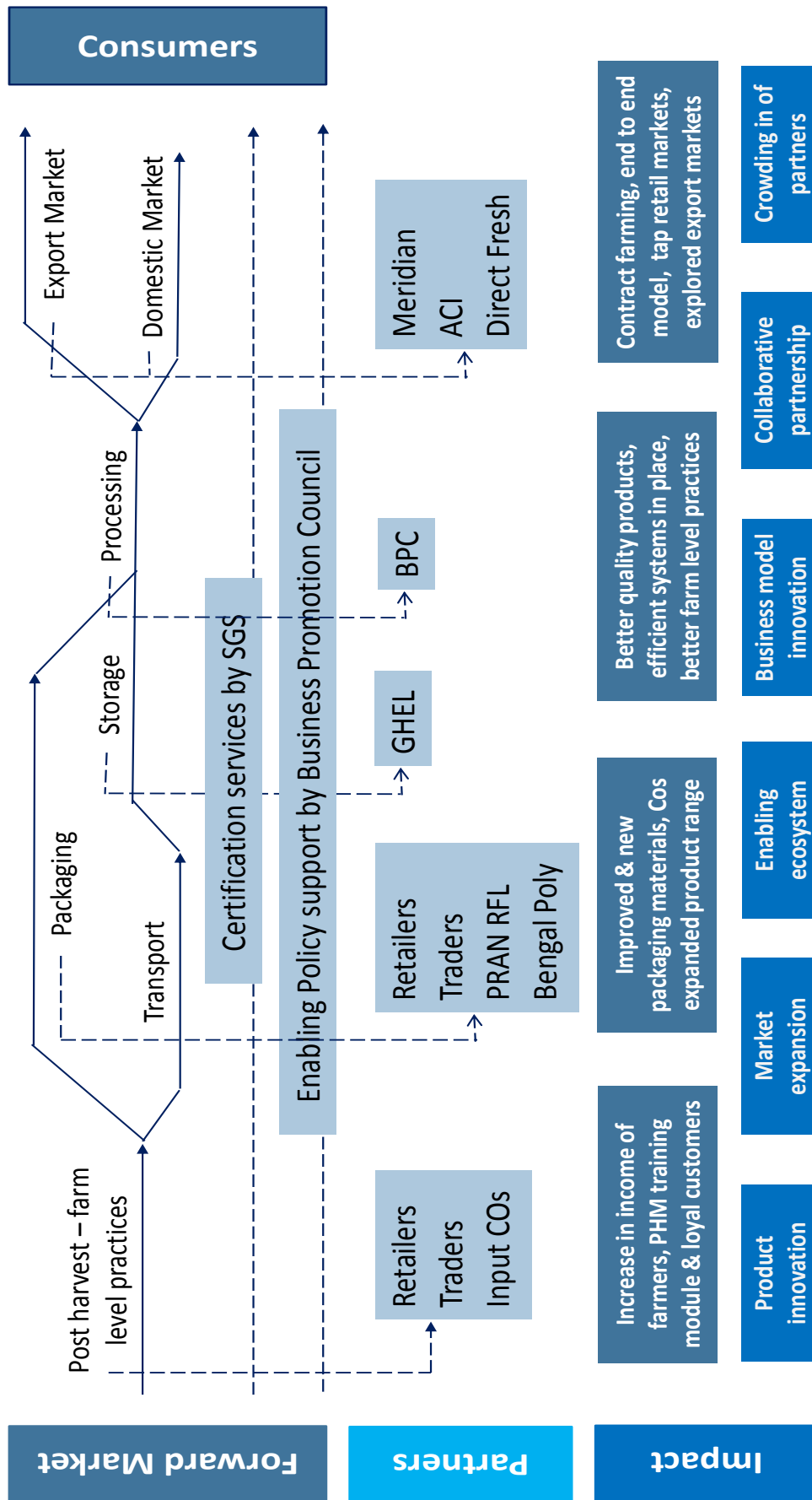
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Strategic Roadmap for Future



Katalyst under the Forward Market (FM) intervention designed a framework and successfully delivered the same. In fact it almost defined and delivered an implementable FM framework. FM initiative starts from harvest and ends with market appreciating various functionalities during the journey. Katalyst could successfully demonstrate introduction of innovative solutions at different levels through its private sector partners. It also brought together players who worked towards making the environment more enabling. The illustration on the Page 30 offers a holistic view of the FM interventions.

Comprehensive Overview of the Forward Marketing Interventions



Key Learnings for Future Interventions

Bangladesh, an emerging economy, is becoming bedrock for new opportunities and innovative businesses. Private sector is willing to diversify and expand businesses to newer and unexplored areas. There has been a significant change happening in the technology domain across many sectors such as IT, packaging, transport etc. and many new business ideas are pouring into these sectors. Simultaneously Bangladesh is fast emerging as a place for Impact investors and venture capitalists. However, emerging private sector to work on innovative business solutions in order to match to the changing requirements of the economy needs contemporary thinking. Forward Market intervention offers many answers on this, mainly to development sector stakeholders who are in collaboration with private sector. However, it is important to take a holistic view of the FM intervention.

Katalyst by virtue of its working with a range of private sector entities including informal sector, start-ups, medium sized, large sized established companies to address the issue of PHL and Trade Inefficiencies has gained significantly both in the technical and management aspects to design and deliver innovative business solutions through appropriate collaboration. With greater internal capacities, Katalyst may keep its ongoing work on the innovation ecosystem by converting emerging constraints into opportunities and leveraging the strength right processes and systems that has been put in place. Remarkably, all this turnaround and learning have happened for Katalyst within 2 years of engagement with its partners.

Some of the key learnings are captured below

Designing Product & Process Innovation

It has only garnered greater understanding of product and process innovation framework but also nuances involved in the different stages of business innovation viz. ideation, prototype creation (with GHFL), piloting (ACI and Meridian - retail of fish), and readiness to scale up (with Direct Fresh and PRAN RFL). The ability and competence of Katalyst to understanding market needs and pushing companies to conduct R&D to develop and deliver innovative products and processes are critical.

There are more than 250 input companies in BD and infusing the idea of providing post harvest management training to farmers as part of their engagement protocol with farmers is invariably one of the most practical and cost effective way of reaching the farmers. Not only the reach with right content was assured under this partnership, engagement of private entities changed the way farmer looked at the post-harvest losses. This is an effective process innovation to build a loyal customer base in this highly competitive market.

Ability to Expand Markets

The players in the system are now working in both in domestic and export markets and since the process is in place, it has potential to transcend the geographical boundary of Bangladesh and augurs well for greater expansion. Various interventions also helped private sector players to think out of box to expand their existing business. ACI after successfully undertaking retail fish business has planned to move to retail of branded fish which would expand the market significantly.

Business Model Innovation

Many of the Private sector players have undertaken conscious and informed business model innovations. Innovation in core businesses by private sector players underwrites the conviction of these players that has got instilled because of the KIF support. Private entities have inducted an integrated business strategy based on innovation in business model. It is encouraging to note that some private entities have broad based their business thought process by taking an informed leap, while some have built around their core competencies for gradual expansion.

The mantra of 'know your consumers' for better business model innovation has been well demonstrated in KIF wherein private sector's efforts in turning the constraints into thriving opportunities at the micro-meso-macro continuum augurs well for the ecosystem players to experiment further.

Private sector in order to overcome inefficient procurement mechanism, engaged deeply with farmers while working to increase the productivity at the farm level and procuring produce from the farmers. Farmer to Fork model is the new 'NEW' and a relevant business model innovation.

Working with Right Partner

The FM intervention which is very diverse and dynamic in nature pushed the team to go through rich working experience of a range of stakeholders. This has helped them to learn that how to select partners, whom to partner and most importantly for what.

Building Opportunity for Investors

The various inputs delivered to partners to create a sustainable business case make the proposition attractive for investors to join hand. KIF approach followed with Direct Fresh to grow with new business ideas and better internal systems and processes helped it to generate financial equity for itself. With Katalyst's ability to network with impact investors at global level it offers a tested 'KIF model' for such FIs to join as partners in expanding the start-up and innovation culture in the country.

KIF – a Programmatic Framework for Nurturing Innovative Businesses

Quite clearly KIF's overall framework includes support beyond finance and mentors partners in non-technical aspects as well. The in-house capacity to assess market needs, ability to select right partners, ability handhold partners to take business decisions, capability to develop right network, skillsets for assessing financial analysis and business planning make KIF itself a case for programmatic replication. Katalyst with its acquired capacity to conduct appropriate search and development activities and has emerged as an Incubator as well as an Accelerator of new age business models.

Consultative Workshop

A knowledge sharing workshop was organized where relevant industry stakeholders including procurement companies, packaging industries, government representatives, input companies, key personnel from related development organizations and projects and sector experts etc. The workshop was conducted with the following objective of collecting information that could guide incorporation of feedback on the findings of the study for investigation.

The participants shared knowledge and information on the agro forward market value chain and provided their comments and suggestions. These have been categorised in five aspects and are presented below:

1. Logistics and new business models

- a. Strengthening last mile logistics by establishing chilling chambers at producers' level
- b. Equipping farmers with access to technology and take some initiatives to remove middleman
- c. Suggesting proven Business models and techniques to improve functioning of value chains

2. Value chain and related aspects

- a. Fresh vegetable collection centres can be expanded to further strengthen value chains which in turn would benefit small farmers
- b. Project should link with formal financial institutions so that interventions can advance in a timely manner
- c. Increase women's participation as a producer
- d. More emphasis on reducing the value chain cost keeping the quality and service
- e. Taking initiative to maintain pond eco system to make it profitable for fish farmer
- f. Need to think more about value added products and tapping fish export market
- g. Inclusive Value Chains to be focused - Focus on creating value chain based start-ups along with working with big companies
- h. Emphasize more on building strategies in which small farmers are the central focus than the commercial farmers
- i. Think about working to improve vegetable varieties like other neighbouring countries
- j. Design interventions specifically on value chain or post-harvest management

3. Go for Export with Bangladesh (BD) as a Brand

- a. Create platform for agro enterprises (Individual /farm) so that they can go for export
- b. Katalyst should focus on organic shrimp production and its exports
- c. Think about seed export which has good future prospects
- d. Providing support to build BD product as strong brand

4. Knowledge dissemination

- a. Katalyst can organize trainings for all input companies for skill development
- b. Taking initiative for poultry industry as there is much chance to work
- c. Bring out a manual on Post-harvest management on fruits

5. Ecosystem building

- a. Increase Trader Association's role for the betterment of the sector
- b. Research on foreign technologies and suggesting them to private companies for adoption
- c. Create more opportunities for certification of Companies
- d. Food safety should be further encouraged and traceability systems should be improved

