Southeast Asia Competitiveness Initiative

VIETNAM

Fruit Cluster Strategy

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The report was developed by Dr Roger H. Ford, Dr Francisco Roman, Mr Kevin Murphy, Mr Nguyen Hong Truong and Ms Jennifer V. Herink. The methodology used in this study includes a variety of industry cluster and competitiveness diagnostic tools; an industry expert and competitiveness specialists have applied these diagnostic tools to the data collected from fruit industry stakeholders. While the strategies and initiatives outlined in this report have a high probability of making a major impact on the sales growth and profitability of the fruit cluster over a 3-5 year time period, this study was limited by time, scope and budget. Further study and technical assistance will be required to validate and implement the initiatives identified in this report.

List of Terms

AFTA	ASEAN free-trade agreement
B2B	Business to business
BTA	Bilateral Trade Agreement
HCMC	Ho Chi Minh City
HSB	Hanoi School of Business
HVP	High Value Product
JAA	J. E. Austin Associates, Inc.
MARD	Ministry of Agriculture & Rural Development
MOST	Ministry of Science & Technology
MOT	Ministry of Trade
MPDF	Mekong Project Development Facility
OECD	Organization for Economic Cooperation and Development
R&D	Research and Development
SARS	Severe Acute Respiratory Syndrome
SME	Small-medium sized enterprise
SWOT	Strengths, Weaknesses, Opportunities, and Threats
US	United States
USAID	U.S. Agency for International Development
USD	U.S. dollar
VNCI	Vietnam Competitiveness Initiative
VND	Vietnam Dong
WTO	World Trade Organization

Preface

In an era when technological and transportation advances are making the world seem smaller and smaller, businesses, industries, and even governments are having to learn how to compete in the global economy. The internet, decreasing telecommunications and transportation prices, and international trade agreements are causing goods, services, raw materials, jobs, and even direct labor to flow rapidly from country to country, among firms and consumers who are always looking for better quality at a better price. Many manufacturers in developing countries continue to depend on comparative advantages, such as cheap labor, and find themselves stuck in a 'low-cost trap', competing with other developing countries in a way that actually keeps them poor.

At the national level, competitiveness can be defined as sustainable growth in productivity that results in an improved standard of living for average citizens. A nation's competitiveness is driven by its micro-environment, macro-environment, and quality of business strategy and operations.[1] At the industry level, competitiveness is also driven by the cooperation and coordination of all firms within an industry, including each point of the supply-chain. This grouping, which includes all stakeholders in an industry, is referred to as a 'cluster'.

For more than 20 years, research by Dr. Michael Porter and others has demonstrated that a key to both industry and national success is the presence of industry clusters.[2] Dr. Porter explains that,

> "Once a cluster forms, the whole group of industries becomes mutually supporting. Benefits flow forward, backward, and horizontally... Interconnections within the cluster, often unanticipated, lead to the perception of new ways of competing and entirely new opportunities... National industries are thus more able to sustain advantage instead of losing it to other nations who innovate... As more industries are exposed to international competition in the economy, the more pronounced the movement toward clustering will become."[3]

Cooperation and coordination facilitate efficiency. By supporting each other in a cluster, competing firms will increase their own market-share as they leverage pooled resources to tackle international markets together.

As part of its commitment to facilitate a smooth and successful implementation of the Vietnam/USA Bilateral Trade Agreement, the United States Agency for International Development, (USAID) has funded the

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[1] Michael Porter, 1990. *The Competitive Advantage of Nations*, Free Press, New York., pp. 6-19.
[2] Ibid, p. 73.
[3] Ibid, pp. 151-152.

Vietnam Competitiveness Initiative (VNCI). J. E. Austin Associates (JAA) is managing VNCI through its Vietnam Representative Office and its counterpart, the Hanoi School of Business, Vietnam National University.

VNCI investigated approximately 20 potential industry clusters during the fall of 2002. That research led to a decision to offer assistance to four clusters in two cities: the Software/ICT Clusters in Hanoi and Ho Chi Minh City, the Fruit Cluster in Ho Chi Minh City, and the Fine Arts Ceramics Cluster in Bat Trang village outside of Hanoi. VNCI is working with the leadership and members of these clusters to identify weaknesses in their competitiveness and to formulate strategies, implement initiatives, and remove constraints to competitive growth in the local, regional, and global economies.

VNCI initiated its work with the industry clusters by identifying and bringing together 'cluster champions', including the heads of industry business associations, leading entrepreneurs, appropriate government officials, and other key individuals to explain and drive the process. This involved applying a set of business and industry diagnostic tools, rather than relying on a single diagnostic tool, to better understand the local industry and its current competitive position in both the local and global economies.

VNCI staff, along with other JAA experts and industry consultants, are assisting the cluster leadership to develop and implement a strategic plan for each cluster, including a menu of specific strategic action initiatives designed to improve the competitiveness of the industry and individual firms. A key component of this process is developing a strong cluster by identifying appropriate areas for cooperation among firms that can remove constraints and improve competitiveness for all.

This document is the Competitiveness Strategy for the FruitCluster in Vietnam. We hope that the contents are useful to furthering the development and success of the cluster, resulting in improved competitiveness, which will lead to higher exports, employment, company profit and added value for the industry and the nation of Vietnam. This is only a strategy, however. The end result will depend on the continuing collaboration of the cluster members as they implement the strategies and action initiatives suggested in the document, and, even more important, as they discover new ways to innovate and cooperate that the strategy authors have not even considered.

It has been said that,

> "competitive advantage starts with an explicit strategy shared within the cluster itself."[4]

We would like to thank and congratulate the Fruit Clusters for taking this important first step towards building a lasting competitiveness strategy.[5]

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[4] Michael Fairbanks and Stace Lindsay, 1997. *Plowing the Sea*, Harvard Business School Press, Boston, p. 82.

[5] For a more detailed explanation of the cluster approach used by J. E. Austin Associates, please see the Cluster Engagement Model located in Annex 3.

1. Executive Summary

Facing the challenges of joining the global market, the fruit industry in Vietnam is hungry for a strategy or 'road map' to guide their success. The jump in fruit exports from an average of USD 49.8 million in 1991-1999 to 213 million in 2000 and 300 million in 2001 showed the vigorous production capacity of Vietnamese fruit and its very high potential of becoming a major fruit exporter; the serious drop in exports by one third in 2002 reveals the need for competitiveness building along the production chain.

Vietnam's fruit industry has strengths of a wide product range, diversified and favorable natural conditions, workforce availability, and the potential for high levels of production. However, unsophisticated post-harvest technology, poor cooperation between the production elements, a low quality product, poor infrastructure support, high production costs, and a lack of management skills and other factors have been identified as hindering sustainable growth of the industry. Foreign competition and global standards requirements, together with the opportunity to enter the global market have challenged the industry to find ways in which producers can cooperate to build competitiveness.

The current strategy of the Vietnamese fruit industry is based on basic comparative advantages and selling fruit at low cost with low profit margins. To strengthen its competitiveness against foreign competitors, the fruit industry needs to move from a competition strategy based on low prices to competition based on high value products.

As a result of this analysis, VNCI has identified key strategies in five critical action areas to improve the competitiveness of Vietnam's fruit industry. These five action areas are:

1) Cluster formation
2) Government support
3) Training
4) Technology
5) Branding

A menu of short-term, intermediate-term, and long-term action initiatives, which correspond to each action area, have been identified to help the fruit cluster develop the above areas. These action items are offered in hope that some will receive the support of the cluster, VNCI, and other donors as they partner to fulfill the strategic objectives of the cluster.

2. Background

Vietnam produces about 3.8 million tons of fruits and 5 million tons of vegetables annually.[6] Exports account for only 15-20% of these products, as most remain in the domestic market. Of exported products, 85-90% are in processed form, mostly canned, but some are also dried and frozen.[7] After a rapid increase in exports for several years, the export market dropped sharply in 2002 as a result of new restrictions imposed by China, Vietnam's largest fruit and vegetable market.[8] Fruit exports to China were reported in the Vietnamese press to have dropped an additional 40% in March alone.[9] Table 1 indicates the change in fruit exports per year.

Table 1. Vietnamese fruit exports 1991-2002

Year	USD (millions)
1991	33
1992	32
1993	24
1994	21
1995	56
1996	90
1997	69
1998	53
1999	70
2000	213
2001	300
2002	200

China, Taiwan, Japan, Hong Kong, and Russia are the main markets for Vietnamese fruit. China receives 80% of Vietnam's fruit exports. Transactions are usually conducted through private brokers who act as middlemen, reducing growers' profits. Such dealings are risky because payment is made by installment, without a letter-of-credit guarantee. Payment of the last installment is not cleared until the next shipment is delivered to the customer.

While most Vietnamese fresh fruit is exported to China, canned and frozen fruit are mostly exported to Europe and the US. In general, Vietnamese processed fruit has a reputation for poor preservation and sanitation (including high levels of dangerous pesticides and fertilizers), but a high price. Product loss due to bruising is estimated at approximately 20%.[10]

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[6] T. K. Thi, "The Competitiveness of Vietnamese Pineapple and Tomato" in FAO & MARD, (2000), cited in "Vietnam Export Potential Assessment" by C. Lindahl, ITC document ITC/DTCC/02/2629, p. 53.
[7] Ibid
[8] Data for Table 1 supplied by Lindahl op cit, and Dr Vo Mai, President of Vinafruit.
[9] "Vietnamese fruit exports to China fall 40%," *Vietnam News*, April 3, 2003.
[10] Data supplied by Dr Vo Mai, President of Vinafruit and Mr Nguyen Van Ky, General Secretary of Vinafruit.

Local products dominate the domestic Vietnamese market. Imported fruit is expensive and fruit from China, which is the most commonly imported, is perceived as not as good as Vietnamese products because of Chinese growers' use of pesticides, some of which are feared to contain internationally banned chemicals. However, Chinese fruit does have appealing color and packaging.

Domestic purchasers buy the majority of Vietnam's fruit. The largest group of foreign purchasers are Chinese buyers located at the border with Vietnam. Private enterprise domestic purchasers mainly deal in fresh fruit, while state-owned plants handle canned and frozen fruit. The Vietnamese government is planning to create central purchasing markets for fruit produced all over Vietnam. The three locations for the central market being considered are HCMC, Cai Be (in Tien Giang province) and Hanoi.

The main types of fruit exported by Vietnam are coconut, pineapple, banana, mango, lychee, longan, dragon fruit, watermelon, and rambutan. These are all tropical fruits that are primarily grown in the south. While the industry benefits from good soil and climate for a wide variety of tropical fruits, productivity levels are still below the world average. The Vietnamese government has set ambitious objectives for fruit exports and the state-owned enterprise Vinafruit, started in 2001, is working on developing a strategy for the Vietnamese fruit industry. Because fruit has a higher yield per land unit than other crops, a national government policy to encourage fruit production on land currently used for other agricultural uses has also been developed. Table 2 shows the total fruit yield and area under fruit crops in Vietnam.

Table 2. Yield and area of fruit[11]

Type of fruit	Total fruit yield (1999)	Area of fruit trees
Citrus	405,000 T	63,000 ha
Banana	1,243,000 T	95,000 ha
Mango	189,000 T	41,000 ha
Pineapple	263,000 T	32,000 ha
Longan , rambutan, lychee	545,000 T	131,000 ha
Cashew nut	41,000 T	168,000 ha
Coconut	1,134,000 T	190,000 ha

The fruit industry in Vietnam has a lot of potential; the area under fruit crops has grown annually at an average rate of 6.5% over the last decade. This growth rate is twice as high as the rate for food crops but not as great as the growth rate for multi-year industrial crops. In spite of this growth, fruit still accounts for a small proportion of total crop area (4%). The vast majority of rural households in Vietnam grow fruit and vegetables with about 85% growing at least one fruit or vegetable crop. Fruit is grown primarily for sale rather than for home consumption. Seventy-four percent of fruit produced is sold on the domestic market. Vietnamese products hold a market share of 46% in the Northern Uplands, compared with 91% in the Mekong Delta in the south. This disparity in market share proportion shows that the degree of commercialization of fruit is greater in the south than in the north.

[11] Data supplied by Dr Vo Mai, President of Vinafruit and Mr Nguyen Van Ky, General Secretary of Vinafruit.

Per capita consumption of fruits and vegetables is calculated to be an average of 71 kg per year, roughly three-quarters of which are vegetables. The average annual value of fruit and vegetable consumption (including home consumption) is VND 126,000 per person or VND 529,000 per typical household. This represents about 4% of the total annual household budget.[12] Strategies to improve the fruit industry's competitiveness can help the industry realize its full potential in both the domestic and export markets.

[12] Data consolidated from "Fruits and Vegetables in Vietnam; Adding Value from Farmer to Consumer", International Food Policy Research Institute, 2002.

3. Diagnostics

3.1 SWOT analysis

A SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis provides an initial indicator of issues and problems faced, as well as key opportunities available to the industry. Data collected from group discussion during a meeting of the Fruit Cluster in January 2003, and a survey, served as the source of information for this analysis. A full summary of the SWOT analysis follows in the charts below.

Strengths

Table 3. Strengths of Vietnam's fruit industry

Industry feature	Number of responses[13]
1. Product	*51*
-variety	33
-quality	7
-customer appeal	1
-uniqueness, specialization to Vietnam	9
-rate of insect damage	1
2. Natural conditions	*36*
-climate	14
-available cultivation area	8
-soil quality	7
-year-round cultivation	4
-suitable for area specialization	3
3. Labor	*17*
-available numbers of workers	5
-workers' personal characteristics, such as commitment, creativity, adaptability	5
- experience	4
-cost	2
-expert knowledge	1
4. Production potentials	4
5. Background conditions	*4*
-country specialization in agriculture	1
-Vinafruit	1
-Bi-lateral trade agreement	1
-infrastructure	1

Participants in the survey of Fruit Cluster members listed several perceived strengths of their industry, the most commonly cited being the wide variety of fruit

[13] Indicates the number of respondents who cited the feature as a strength in a survey of Fruit Cluster members.

produced in Vietnam. The product was described as good quality, with many fruits being unique to Vietnam. The second most commonly cited strength was the natural conditions such as climate, available cultivation area, and soil quality which were perceived as beneficial to agriculture. The third significant strength identified was the labor pool, due to the large numbers of available workers and workers' personal characteristics of being committed and hard working. It is critical that these strengths are leveraged to overcome cluster weaknesses and to take advantage of opportunities, to be discussed.

Weaknesses

Table 4. Weaknesses of Vietnam's fruit industry

Industry feature	Number of responses[14]
1. Post-harvest technologies	28
-preservation	11
-processing	10
-packing	7
2. Level of cooperation between production elements, industry sectors, regions, enterprises, levels	16
3. Planning and specialization	16
4. Product quality, or inconsistent quality control	15
5. Markets	14
-available information and understanding	4
-stability, access	10
6. Cultivation techniques, and adoption of new, modern technologies	13
7. Infrastructure	12
-quality	4
-availability of processing factories	1
-availability of foreign investors	1
-transportation	3
-warehousing	1
-distribution	2
8. Seed quality	10
9. Capital	10
-availability	6
- institutional and governmental support	4
10. Productivity	9
-levels of productivity	5
-stability of production levels	3
-handling of overproduction	1
11. Competitiveness	7
12. Clarity of government development policies	5
13. Marketing of Vietnamese fruit products	4
14. Image and branding quality	4
15. Production costs	4
16. Product appeal and appearance	2

[14] Indicates the number of respondents who cited the feature as a weakness in a survey of Fruit Cluster members.

17. Stability of export product supply	2
18. Management	2
19. Research investment levels	2
20. Agricultural experts	1

The perceived weaknesses of the industry identified by the participants far outnumbered the strengths. The most commonly cited weakness was poor post-harvest technology, including preservation, processing, and packing technologies. Next most often cited was the lack of cluster organization and cooperation in terms of the interaction between the various sectors, regions, and enterprises. Poor master planning, especially a lack of geographical specialization, was also commonly cited. Poor product quality and consistency, a lack of market knowledge and access, and out-dated cultivation techniques were also often-cited weaknesses, as were poor quality seeds, a lack of capital and low productivity.

These major weaknesses are in the areas of technology, business practices, and government support. Lack of cooperation is mentioned as a top concern for the fruit industry; formation of a strong cluster will be critical for achieving industry competitiveness.

Opportunities

Table 5. Opportunities for Vietnam's fruit industry

Industry feature	Number of responses[15]
1. Large international markets: USA, Japan, Europe, China	18
2. Support and finance -government policies -VNCI - USAID -Vinafruit -international organizations, projects, joint-venture projects, foreign investors	*17* 5 4 5 3
3. Cultivation techniques, product quality	8
4. International integration: AFTA, BTA, OECD, WTO	5
5. Infrastructure development (provision of processing facilities)	2
6. Clustering in fruit production	1
7. Specialization	1
8. Research and information dissemination	1
9. Investment levels	1
10. Improving living standards and flow-on to growth of the domestic market	1
11. Standardization (seeds, technologies, and quality)	1

The participants listed eleven areas of opportunity, with four main opportunities being most commonly cited. The first is the potential to export to the large international markets of USA, Japan, Europe, and China. Second is gaining

[15] Indicates the number of respondents who cited the feature as an opportunity in a survey of Fruit Cluster members.

support and assistance from the government, USAID/VNCI, Vinafruit, and other international organizations. The third commonly cited opportunity is the opportunity to improve cultivation techniques and product quality, and, finally, the opportunity to integrate with the ASEAN Free-Trade Agreement (AFTA), the US-Vietnam Bilateral Trade Agreement (BTA), and the Organization for Economic Cooperation and Development (OECD). These opportunities were identified at the industry-level. At the firm level, feedback from businesses shows that they still need support, including finance, technology, information, and legal support, to meet these opportunities.

Threats

Table 6. Threats to Vietnam's fruit industry

Industry feature	Number of responses[16]
1. Competition with other nations within the region (Thailand, China)	36
2. Production costs and flow-on to pricing	4
3. Slow technology adoption	3
4. Quarantine issues	3
5. Unclear strategies and orientation for industry development	2
6. Lack of price subsidization	2
7. Challenges when join AFTA (loss of market share)	2
8. Shrinkage of markets or loss of value due to low quality	1
9. Unstable markets	1
10. Legal framework doesn't yet guarantee interests among enterprises	1
11. Farmers' lack of cultivation knowledge	1
12. Slow seed innovation (10 years of same seeds)	1
13. Protectionism of other countries	1

While the participants listed over a dozen threats, the bulk of their concern was expressed by a single point: regional competition with China and Thailand. Other threats were considerably less prevalent in the responses. The drop in export sales shown in Table 1 supports this concern about regional competition.

3.2 GAP analysis

The GAP Analysis compares a given industry in one country with other countries that are either the industry leaders or main competitive rivals of the local country. The comparison is given for each of the variables which have been identified as being critical to competitive success for the industry. The five key success factors were defined by the participants of the GAP Analysis as government/private cooperation; quality and reputation; a strong cluster of supporting industries (packaging and presentation); advertising/branding; and transportation costs.

[16] Indicates the number of respondents who cited the feature as a threat in a survey of Fruit Cluster members.

The data for this GAP Analysis was obtained from a diagnostic analysis of the industry led by Mr. Kevin Murphy, conducted at a meeting of fruit cluster members in January 2003 in Saigon.

The GAP Analysis (see Table 7, in which 1 stands for the best quality and 5 stands for the weakest quality) indicates that Vietnamese fruit producers do not perceive themselves as being in competition with world fruit leaders, such as New Zealand and the USA. While these two countries set the world standard, Vietnam primarily competes in the local region against Thailand and China. In all of the variables and sub-variables Vietnam compares very poorly, suggesting that the industry requires substantial development in order to be globally competitive in the fruit industry.

Table 7. GAP Analysis

Success factors	Thailand	China	Vietnam	New Zealand[17]
1. Government/private cooperation				
• Transport	1	1	4	N/A
• Thai-China agreement/inspection	1	1	3	N/A
• Thai-China bank arrangements	1	1	5	N/A
• R&D, extensions, university/school	1	1	4	N/A
2. Reputation/quality	1	3	4	N/A
3. Strong cluster e.g. packaging, presentation	3	4	5	1
4. Advertising/3 kinds of branding (material, company, country)	3	5	5	1
5. Transportation cost (actual cost)	N/A	N/A	4	N/A

3.3 Diamond analysis

The Porter Diamond[18] is a strategic tool used to analyze the competitiveness of firms, industry clusters and regions. Fortune 500 companies and governments in many parts of the world have used it as a diagnostic tool to identify opportunities to improve competitiveness. The tool was based on the findings of extensive research that identified key factors explaining competitiveness of industry clusters in widely varying national environments. For further information on diamond analysis, readers should refer to Dr. Michael Porter's key work on this strategic tool.[19] The diamond analysis demonstrates the four determinants of competitiveness, described below, in the context of the Vietnamese fruit industry.

Demand conditions

[17] Vietnam does not compete directly with New Zealand, but New Zealand is used here as a surrogate for "world class" market leaders, which could also include the USA.
[18] The Competitiveness Diamond was highlighted as a useful tool in USAID's recent strategy document, *Foreign Aid in the National Interest: Promoting Freedom, Security, and Opportunity*. See Chapter 2, "Driving Economic Growth," page 66.
[19] Michael Porter, *The Competitive Advantage of Nations*, NY: The Free Press, 1990.

The demand conditions for the Vietnam Fruit industry are mostly negative. Vietnam producers and sellers lack a close connection to their customers who generate the demand. Producers sell mostly through intermediaries to unsophisticated markets, while China, the major competitor, is becoming a more sophisticated customer and supplier in the fruit industry. Producers are not getting feedback from end buyers.

Factor conditions

Vietnam relies mostly on basic, rather than advanced, factors of production. Basic factors of production include abundant and low cost labor, a plentiful and wide variety of raw materials and fruit varieties, and low level production and logistic transportation methods.

Cluster of related and supporting industries

The Vietnam fruit industry lacks a strong cluster of related and supporting industries. Packaging, transportation, information services are all weak. Some relationships with agricultural universities and institutes exist and are improving.

Context for firm strategy

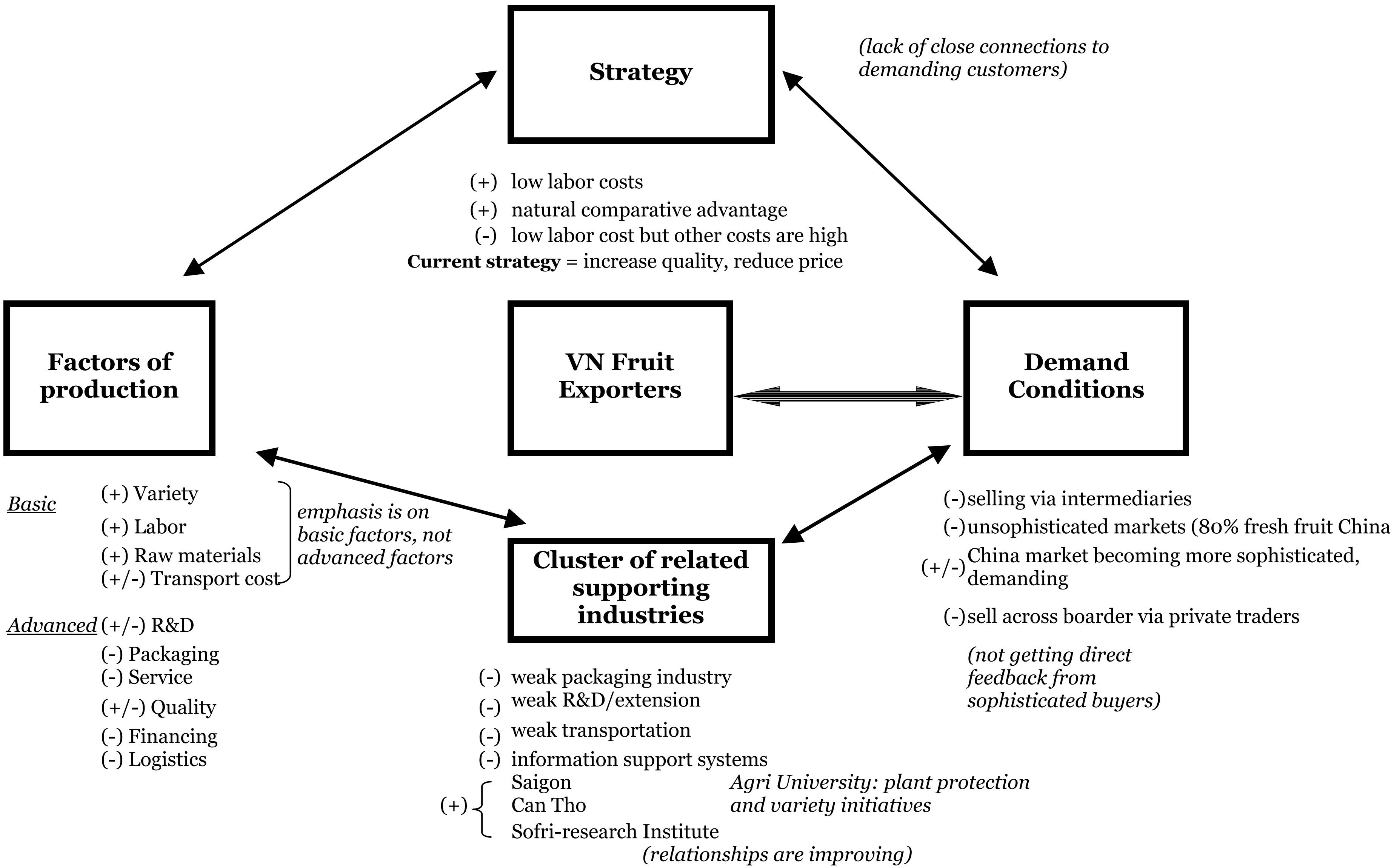
The current strategy of the Vietnam fruit industry relies on basic comparative advantages and selling fruit at low cost with low margins. A more desirable strategy is to improve quality and lower prices further to maintain competitiveness with China and Thailand. This will be difficult due to a lack of capital and some high fixed costs (relative to competitors), such as transportation.

Conclusions of Diamond Analysis

Some conclusions that can be drawn from the Diamond Analysis are that the fruit industry needs to move to adopt more advanced competitive factors, which will require better information and which can only come from a closer connection with sophisticated and demanding customers. This will require the fruit cluster to become better organized to help industry elements to cooperate and help find resources for the industry.

Figure 1. Diamond Analysis - Vietnam's fruit industry

Four determinants of cluster competitiveness



3.4 Major issues facing the industry

During the SWOT analysis conducted in January, VNCI asked the 70 participants for one additional diagnostic. Each participant was given a short questionnaire and asked to list the major issues or problems facing the industry, from their personal perspective. The results of this analysis are given in Table 8.

More than 100 responses were grouped into 16 categories. The most commonly cited issues were, in order of response frequency, (1) insufficient or unclear government policies; (2) lack of cluster development; (3) poor product quality; (4) poor post harvest and/or biological technologies; (5) Lack of market information; (6) poor seeds/ lack of product innovation; (7) high price; and (8) low quality, low-tech cultivation. The issues identified in this analysis correlated with the results from the other analyses.

Table 8. Strategic issues

Strategic Issue	Net number of times identified[20]	Number of times ranked 3rd priority (weighting 1)	Number of times ranked 2nd priority (weighting 2)	Number of times ranked 1st priority (weighting 3)	Weighted percentage
1. Government policies: insufficient, unsupportive, unclear, no detailed orientation for each line	18	8	4	6	**14.2%**
2. Lack of cluster among stages, localities, enterprises, fields, farmers	15	4	4	7	**13.8%**
3. Product quality	*14*				
-low, unstable	8	1	2	5	**8.4%**
-no standard	1	0	0	1	**1.3%**
-quarantine issues	3	3	0	0	**1.3%**
-not synchronous among areas	2	1	1	0	**1.3%**
4. Poor post harvest and/or biological technologies	11	3	7	1	**8.4%**
5. Lack of information and strategies about market, price and demand of customers	11	4	2	5	**9.6%**
6. Lack of new, high quality, innovative seeds	10	1	5	4	**9.6%**
7. High price	7	4	1	2	**5.0%**
8. Low quality cultivation techniques/ lack high-tech workers	6	3	2	1	**4.2%**
9. Low marketing capacity → market perception of Vietnamese fruits: low quality and low price	5	2	0	3	**4.6%**
10. Lack of capital	4	1	2	1	**3.3%**
11. Low competitiveness	4	1	3	0	**2.9%**
12. Lack an overall leader (for orientation, finding markets)	3	0	1	2	**3.3%**
13. Existence of individual, small cultivation habit	3	0	2	1	**2.9%**
14. Undefined specialization	3	0	0	3	**3.8%**
15. Instability of demand	1	0	0	1	**1.3%**
16. Low air freight lift capacity	1	0	1	0	**0.8%**

[20] The 70 participants were asked to identify and rank the top 3 priorities using a written input form

3.5 Diagnostic summary

The industry diagnostics are used to gauge the current competitiveness of an industry. Multiple tools are applied to develop a more comprehensive and accurate understanding of obstacles to competitiveness. Competitive gaps between Vietnam and other countries can be narrowed by addressing weaknesses, supporting strengths and leveraging opportunities. The need for strong cooperation along the entire production chain is crucial. Cooperation, combined with support from the government, international development organizations, and investors can act as a catalyst to help the industry build competitiveness.

The analysis serves to illuminate key characteristics of the industry that are important to consider in developing a strategy for industry growth. The key characteristic as are (1) core values, (2) guiding principles, (3) areas of competition and cooperation, and (4) key issues facing the industry.

'Core values' of an industry are the stable values that characterize the industry and reflect its focus and aims. The core values of the Vietnamese fruit industry are: pride in Vietnam's long history of experience, knowledge and insight of its agricultural economy – its agricultural heritage; food self-sufficiency, the cultural practice of household independence that drives and is reflected in the economics of this industry; and providing a unique, high-value product. Development of the fruit industry in Vietnam should aim to uphold these core values.

Additionally, development in the sector should be guided and directed by the principal aim of improving Vietnamese labor, natural resources and business practice to integrate Vietnam's fruit production industry with the global agricultural market. The underlying philosophy of the guiding principle is to utilize and enhance industry strengths to achieve the ultimate goal of reaching international markets and meeting global standards.

Areas or 'zones' of competition and cooperation are areas in which businesses within the fruit cluster may interact to build competitiveness. These zones can be used to indicate potential opportunities that could be exploited to develop the industry, as well as indicating ways of overcoming weaknesses and solving problems. The zones of cooperation are drawn from analysis results and industry representatives' input. The zones are: (1) cluster formation; (2) government support; (3) training; (4) technology; and (5) branding. Further discussion on these zones of cooperation is given in the Recommendations (Section 4).

Key issues requiring consideration by industry members, government and other stakeholders include: (1) poor cooperation along the production chain (lack of cooperative business clusters and lack of trust); (2) technological hindrances (especially post-harvest technology); (3) poor infrastructure; (4) insufficient legislative and policy support from government; (5) low quality product; (6) poor marketing and branding; (7) unsophisticated management skills and lack of business knowledge; and (8) an absence of market information. Cooperation and competition within the zones of cooperation will be necessary to address these key issues.

Table 9. Diagnostic summary

Core values	1. Agricultural heritage 2. Food self-sufficiency 3. Unique, high-value product
Guiding principle	• Improve Vietnamese labor, natural resources and business practice to integrate fruit production industry with the global agricultural market.
Zones of competition and cooperation	1. cluster formation 2. government support 3. training 4. technology 5. branding
Key issues	• poor cooperation along the production chain (lack of cooperative business clusters and lack of trust) • technological hindrances (especially post-harvest technology • poor infrastructure • insufficient legislative and policy support from government • low quality product • poor marketing and branding • unsophisticated management skills and lack of business knowledge • absence of market information

4. Recommendations

Vietnam's fruit industry is influenced by wider, global trends. Movement away from "company-to-company" competition to "cluster-to-cluster" competition will influence the dynamics of the industry. In the former, more traditional model, companies competed on the basis of price, but in the emerging model, companies cooperate, forming clusters, and clusters compete based on value-added characteristics, such as quality. The current business practices of Vietnam's fruit industry hinder its competitiveness because cooperation is poor. To address this issue and enhance global competitiveness, the following two strategic moves are recommended:

1. To move away from price-based competition, the cluster should move from away from producing products of variable quality to producing High Value Products (HVP). HVPs draw on technology, packaging, special services and other components to add value to the basic product. Examples of HVPs are lychee, rambutan, mangosteen, and seedless fruit; longan and banana are low-value. 'Niche products', such as the Hoa Loc mango, Bo Ha orange, or Nam Roi pomelo, can help to build brand recognition for quality Vietnamese fruit.

2. The Vietnamese fruit industry can gain more control over the industry dynamic by strengthening the supply chain. Quicker, better and cheaper servicing of requirements will help eliminate the role of foreign middlemen. This strategic move requires a high level of cooperation between production elements, so a strong cluster must be formed. Cooperation along the production chain will result in the fruit industry will becoming a more powerful bargainer in international trading.

Weaknesses were identified by the SWOT analysis in every part of the production chain (see Annex 1), and should be addressed by strategies that will utilize the industry's strengths to grasp opportunities. The modified SWOT analysis given in Annex 2 provides action initiatives based on the analytical findings.

Based on the results of the diagnostics, and considering global trends in the fruit industry, the following zones of cooperation have been identified as critical areas to improve the competitiveness of the Vietnamese fruit industry.

(1) Cluster formation
(2) Government support
(3) Training
(4) Technology
(5) Branding

Action initiatives, which correspond to each zone of cooperation, have been identified to help the fruit industry achieve the above strategies. The action items are provided in the form of a menu of suggestions (Table 10), for which VNCI recognizes there may not be enough time and funding to undertake all initiatives.

Table 10. Strategic action grid

Guiding principle: Improve Vietnamese labor, natural resources and business practices to integrate into the global agricultural market.

Zones of cooperation	Short-term	Medium-term	Long-term
1. Cluster formation	- Develop Vinafruit website to include information on members to operate as a B2B gateway. - Vinafruit to establish detailed regulations of membership and guidelines for cooperation among members. - Vinafruit to facilitate trust-building activities (code of conduct) and contractual relationships. - Vinafruit to provide information via newsletters, open workshops and member visits on a regular basis. - Vinafruit to facilitate North-South trading cluster.	- Establish quality standards as the prerequisite for cluster membership. - Vinafruit to join international fruit and vegetable industry organizations. - Promote cluster formation level from small, voluntary contractual partnerships to forming cooperative s and corporations. - Identify and establish geographic and product type clusters. - Include lenders, insurance companies, quarantine, and inspection organizations in the cluster. - Set up Vietnam-China border-trading clusters	- Establish a cluster of firms specializing in individual product types - Construct and implement the '4-pillar model': Government, Farmer, Scientist and Enterprise to ensure cooperation at national level. - Large firms to share supply capacity with other firms to attract large orders from foreign customers - Producers and exporters to exchange shares (equity) to raise responsibility and share risk for each other's business. - Eco-tourism initiatives developed through visits to fruit farms.
2. Government support	- Send copies of international policy and trade agreements to fruit firms. - Invite Vinafruit to key conferences related to the development of the industry. - Offer technical support to firms for soil testing or crop pattern analysis. - Provide IPR protection for origin (Vietnam brand) and seed brands. - Support training and education initiatives.	- Develop a master plan for the fruit industry that is consistent both nationally and regionally. - Provide investment to support strategic fruit cultivation and market research (domestic and international). - Open regular dialogue with the clusters. - Develop quality and quarantine standards in line with international standards. - Support access to capital using simplified procedures and issuing special loans.	- Develop legislation for special protection to address international transaction conflict. - MARD to form an information center for collecting and analyzing fruit market data and forecasting. - Build stable domestic fruit markets as a base for exports. - Set up specialization zones for export-focused production.

Zones of cooperation	Short-term	Medium-term	Long-term
2. Government support (continued)	- Provide tax-exemption for production of new fruit varieties or tax waivers for large-scale production - Pass the Law on Associations.	- Encourage FDI in fruit industry. - Help set up large regional clusters that encourage expansion of fruit cultivation areas and improve quality - Improve ISO certifying system. - Develop seed protection legislation. - Develop integrated policies to encourage investment in seed development (for example: tax, subsidies, IPR, national reserve).	- Increase maximum size of land able to be leased by private farms - Apply a 'three-layer model' for fruit cultivation (certified seeds, quality control, quarantine.)
3. Training	- Conduct training needs assessment. - Identify existing short-term courses (by universities, VCCI, MARD, etc.) - Conduct courses for members on business ethics. - Identify donors and develop a training fund for Vinafruit. - Conduct field demonstrations	- Design necessary courses with facilitators. Vinafruit to assist with providing subject experts. - Begin training of trainers. - Conduct business skills re-training for current management team and advanced training for new generation of young employees. - Identify existing foreign language courses. - Building information exploration mechanism. - Train experts for e-commerce in the industry.	- Study foreign experience of biotechnology and international marketing - Field visits/study abroad opportunities - Develop courses on fruit/ vegetable technology, economics and forecasting. - Develop Vietnam case study training

Zones of cooperation	Short-term	Medium-term	Long-term
4. Technology	- Identify Vietnam's weakest technology to develop technology transfer program. - Strengthen technology capacity in all cultivation, processing and preservation in order to produce "high value products" with consistent quality, stable supply, and appealing appearance. - Increase IT support and strengthen IT capacity through training. - Vinafruit to facilitate introduction of new processing technology. - Identify support for acquiring new technology.	- Disseminate information on quality control, including methods and technology. - Acquire modern technology appropriate to scale to apply in Vietnam. - Create new varieties of products to meet market demand. Market survey and analysis needed. - Develop certificated seeds for Vietnam. Build and manage the supply system of certified seeds. Conduct campaign to teach proper seed names and eliminate the use of many names for one seed. - Apply organic fruit production technology. - Apply traditional technology and modern biotechnology to improve provincial seeds and create new seeds. - Develop an agriculture program to create a processing and export zone.	- Import biotechnology from overseas, and set-up Vietnam's own technology development program.
5. Branding	- Conduct a market study to match supply with demand. - Find "nationally famous fruit' to develop Vietnam brand. - Develop an association brand for less famous fruit. - Protect Vietnam origin ("made in Vietnam") fruit products - Establish guidelines and standards for use of Vinafruit and Vietnam brands. - Acquire patent protection for brands and trademarks. - Link brands with quality and high value products.	- Vinafruit to provide information on branding programs to firms. - National brand and association brand labels on products required before shipping. - Vinafruit to set up a fund to promote Vietnam brand to international customers. - Identify and apply advertising and marketing methods. - Firms to hire brand managers.	- Build new customer demand for fruit. - Participate in trade promotion activities overseas.

These action items are offered in hope that some will receive the support of the cluster, VNCI, and other donors towards fulfilling the strategic objectives of the cluster. Additional initiatives are expected to be developed as the proposed action items are explored. Activities should be undertaken with regard to the principle aim of improving Vietnamese labor, natural resources and business practice to integrate fruit production industry with the global agricultural market.

Cluster development, with strong cooperation among stakeholders, and government support are critical to successful implementation of these strategies. The cluster could work with the government to identify and recommend policies favorable to the cluster's development and work with VNCI and professional services firms for assistance with branding, training and technology.

4.1 Cluster formation

The lack of cooperation within the fruit industry may hinder the industry's competitiveness more than the lack of technology. The production chain is not fully integrated and hence the industry cannot provide the global market with a stable and high-value supply. Awareness of the benefits and purpose of a strong cluster comes with an improved understanding of international competitiveness and business management. Insightful members of the industry are already learning how to cooperate, however, a lack of trust hinders full cluster formation.

A Code of Conduct for cluster members may help to adjust behavioral practices and build trust. The '4-Way Test' developed by Rotary International illustrates such a tool. The test identifies four requirements which are essential to building cooperation: (1) truth, (2) fairness, (3) beneficial to all, and (4) promoting better friendships and good will.

The ultimate result of cluster formation is that not "economic benefits" but "social glue" binds industry members together. The leading role of Vinafruit in initiating activities and the training support provided by professional, government and international institutions will accelerate industry cluster formation. The cluster could be formed without Vinafruit's support, but, as an already established industry 'hub', this association could be enhanced by support from VNCI, Mekong Project Development Facility (MPDF) and other development projects and donors.

Sub-clusters could be formed to unite the fragmented interests of the industry and strengthen the domestic market as the base for the export market. Sub-clusters might be grouped by type of product such as cooperatives of dragon fruit or longan; or building North-South trading corporation to maintain a stable supply of fruit to both regions. Cross-border cluster at the Vietnam - China border could also be another initiative to strengthen the bargaining interaction with Chinese importers.

4.2 Government support

The Vietnamese fruit industry does not have a master plan for development. Fruit production is segregated, divided into different regional areas. Unclear regulations and unsupportive policies and poor infrastructure raise more difficulties for the industry.

These disadvantageous conditions are partly due to deficient support from the government and a lack of international agreements, and also little market information and support for trade promotion. Many enterprises find themselves in the situation of knowing how to be more competitive, but are hindered by the unsupportive policy and regulations. Most managers are aware that without a clear and sound master plan, their business will fail to reach their highest capacity

Opening interaction between the government and the cluster could be facilitated by Vinafruit. Negotiations could be directed towards achieving simplified policies for access to credit and for simplified custom/quarantine procedures at borders. Other issues for consideration are legislation for seed protection and land use. Favorable industry policy, new laws, and more support from technology, capital, and information are necessary for entrepreneurs to enhance their businesses' competitiveness.

4.3 Training

Training is a critical factor for building industry capacity and developing greater competitiveness. A lack of basic education and permanent training opportunities places difficulties on firms in planning, managing, and developing their businesses. Running businesses based only on experience and without a knowledge base or continuing education limits a firms' ability to realize sustainable competitiveness capacity. Appropriate group training strengthens the internal competitiveness capacity of each firm but also brings firms together and fosters cooperation. On-demand courses, foreign field visits, business management courses, and long-term courses in areas such as foreign languages, technical skills and agricultural economics are necessary. A training-need assessment is the first step to identify appropriate courses for broad dissemination. Special courses on business ethics are important for formation of a strong cluster and building successful strategies for competitiveness. Developing Vietnam case study for training is also a goal for trainers to design comprehensive training materials for the industry.

4.4 Technology

Technology, especially post-harvest technology, helps to improve products' quality and consistency, but will also assist in moving the industry toward competition based on more advanced factors.

External groups such as technology institutions, government agencies, professional associations, and international development organizations can help disseminate technology. However, based on the experience of Vietnam's agriculture industry, organic technology can be developed by businesses themselves. Technology that supports research into new varieties of product (such as seedless and organic fruit) should also be considered.

Vinafruit can serve as a link to external groups due to its connection with a wide range of technological and research agencies nationwide, in addition to international supporters. Inclusion of external supporting organizations is also a key factor in strengthening the fruit cluster.

4.5 Branding

The importance of developing and protecting brands has been demonstrated to all Vietnamese businesses by the examples of Ca Com fish sauce and Trung Nguyen coffee, both of which did not adequately protect their brand names and consequently have lost the right to use them in some international markets. Branding is important both internationally and domestically for building customer support and loyalty.

It is recommended that a study of high-value fruit be conducted with the aim of defining two product types that could be branded differently. The first product type are ‘famous’ fruit, which would be nationally branded; the second types are the less well known fruit which would marketed under an association brand.

To assist with protecting and promoting brands, training to raise awareness by providing industry case studies could be effective. Members of Vietnam’s fruit cluster clearly expressed their goal of targeting the global market. This is a long-term goal and can only be achieved through strong and successful branding.

5. Conclusion

With its strengths as a producer of a wide variety of tropical fruit, an abundant workforce, government determination and open international markets, Vietnam has a significant opportunity to compete in the global market for fruit and vegetables. Serious issues hindering the industry's competitiveness have been identified by the industry members themselves; this document has proposed specific initiatives to address these issues.

The lack of a strong cluster and cooperation within the production chain, and unfavorable government policies, are the major concerns of the industry. These concerns indicate that industry members are keenly aware that the key factors necessary to strengthen competitiveness are not just the "hard" factors of technology or infrastructure, but also the "soft" factors, such as human resources and policy.

A commitment to cooperation is the underlying foundation of cluster formation. Currently in Vietnam, while many firms have already joined Vinafruit, the number of firms who really understand the importance of cooperation within a cluster is still low. Government commitment and support from external stakeholders, like VNCI, could accelerate the formation of a strong cluster, given the understanding in the Vietnamese business world that slow-changing firms cannot exist in the competitive world.

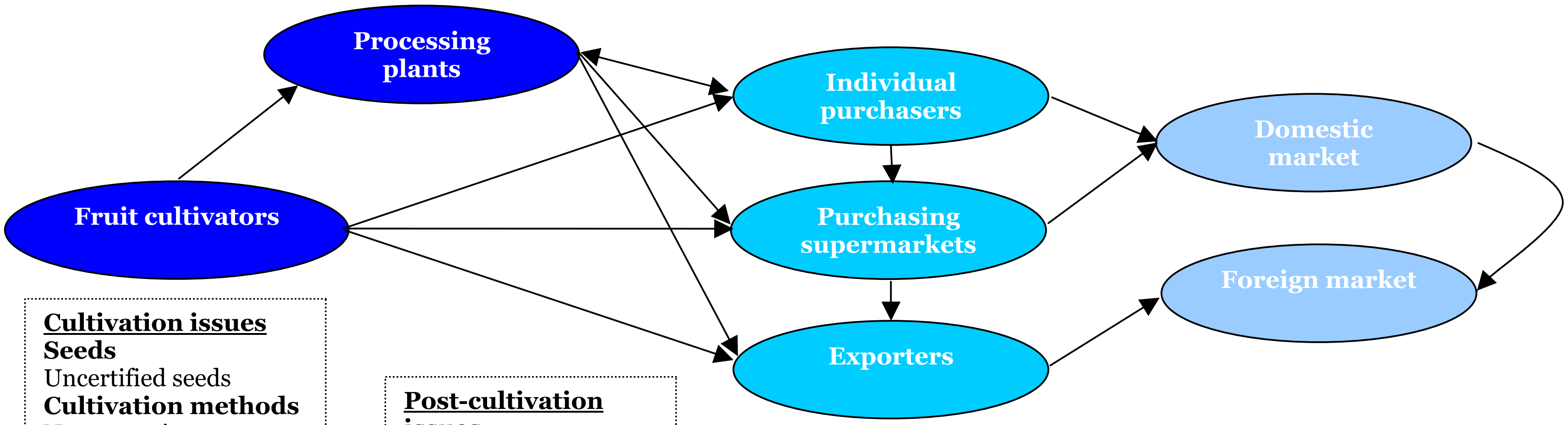
The five zones of cooperation (cluster formation, government support, training, technology and branding) and the supporting action initiatives are proposed as a guide for industry stakeholders to achieve the aims of producing high value products, and gaining influence over production dynamics. Training support, technology transfer and branding development are not only critical at the firm level but are necessary for cluster and government efforts to achieve their full potential.

The aim of these strategies is to development the fruit cluster and build its competitiveness. The cluster members have identified and driven these action initiatives. The level of success of these initiatives in building competitiveness ultimately depends on the continued efforts of stakeholders. Stakeholders' aims and desire for cooperation are critical to putting the fruit industry on the map – both within Vietnam and abroad.

Annex 1

Fruit cluster supply chain issues

Figure 2. Fruit cluster supply chain issues



<u>Cultivation issues</u>
Seeds
Uncertified seeds
Cultivation methods
Non-organic
Quarantine
Fertilizer/pesticide use issues
Quality and productivity
Low, unstable
Cost
High
Capital
Lack of capital
Management skills
Poor
Technology support
Poor
Government policy
Unclear
Subsidization
None
Innovation
Poor
Non-cooperation
Unfair competition

<u>Post-cultivation issues</u>
Infrastructure
Poor infrastructure, cheap but slow
Post-harvest technology

<u>Processing and purchasing issues</u>
Foreign purchasers
Especially Chinese

<u>Issues reaching consumers</u>
Settlement mode and contract practice
Unfavorable (delayed settlement, credit sale without opening L/C)
Foreign competitors tax Reduction of AFTA
Middle men and customer risk
Unfavorable price, real customer unidentified.
Market risk
Lack of market information
Branding
Poor
Logistics
Long distances, expensive

Annex 2

Modified SWOT analysis

Table 11. Modified SWOT Analysis

Based on the strengths, weaknesses, opportunities and threats, the Modified SWOT analysis reveals particular strategic actions to match strengths with opportunities (SO strategy), to use for pre-empting threatens (ST strategy), to address weaknesses to utilize opportunities (WO strategy) and to resolve weaknesses to address threatens (WT strategy). Each strategic action in these four strategies is shown with according S, W, O, T factors. For example, the action "Technology support to improve productivity & quality S1,2; O3,4" uses the strengths 1 and 2 (the strengths are numbered in the S cell) to utilize the opportunities 3 and 4 (the opportunities are numbered in the O cell).

<table>
<tr><td rowspan="6"></td><th>Opportunities</th><th>Threats</th></tr>
<tr><td>1. Market potential: (1) Potential international market, (2) International Integration (AFTA..), (3) Domestic market improved</td><td>1. Regional Competition in Export: China, Thailand...</td></tr>
<tr><td>2. Support from Government and external bodies (Vinafruit, VNCI, etc.)</td><td>2. Competition in domestic market: AFTA ASEAN</td></tr>
<tr><td>3. Investment increased</td><td>3. Unclear macro strategy</td></tr>
<tr><td>4. Improvement in (1) Cultivation techniques, (2) Product quality, (3) Infrastructure, (4) Specialization, (4) Information bank, (5) Standardization</td><td>4. Legal framework</td></tr>
<tr><td></td><td>5. Protectionism of foreign countries</td></tr>
<tr><th>Strengths</th><td rowspan="6">SO
+ Technology support to improve productivity & quality S1,2; O3,4
+ Training workers S3; O2
+ Training management skills/ entrepreneurship. Cluster formation S4; O1
+ Clear policy and strong implementation S5; O2,3</td><td rowspan="6">ST
+ Specialization S1,2; T1,5
+ Branding/marketing unique Vietnamese fruit S1,2; T1,5
+ Cluster formation S4; T2
+ Government price subsidization S4; T2
+ Government master plan S5; T3,4</td></tr>
<tr><td>1. Natural product (variety...)</td></tr>
<tr><td>2. Natural condition (favorable...)</td></tr>
<tr><td>3. Workers</td></tr>
<tr><td>4. Production potentials</td></tr>
<tr><td>5. Favorable background</td></tr>
<tr><th>Weaknesses</th><td rowspan="16">WO
+ Strong cluster formation with strong commitment of non-fruit business parties (technology institutions, government agencies, etc.) W1-10; O2-4

+ Training in management skills/ entrepreneurship. W11-12; O1

+ Cluster formation with involvement of branding experts W13, 14; O1

+ Government support with law and international agreement to help firms to deal with unfavorable contract practices W15; O2

+ Vinafruit to take the leading role for information collection and dissemination for cluster members. W16; O1,2

+ Strong government policy with implementation commitment W17; O2

+ Strong master plan with price subsidization for firms to help get over potential crisis W19, 20; O2</td><td rowspan="16">WT
+ Technology support to improve productivity & quality W1-10; T1,2

+ Strong government policy with implementation commitment T3, 4

+ Strong master plan with strong international agreement to help firms get over potential crisis T5</td></tr>
<tr><td>1. Seed</td></tr>
<tr><td>2. Cultivation method</td></tr>
<tr><td>3. Quarantine</td></tr>
<tr><td>4. Quality and quality control</td></tr>
<tr><td>5. Productivity</td></tr>
<tr><td>6. Cost</td></tr>
<tr><td>7. Post harvest technology</td></tr>
<tr><td>8. Technology support (expert)</td></tr>
<tr><td>9. Logistic/Transportation</td></tr>
<tr><td>10. Capital/Investment</td></tr>
<tr><td>11. Management skills</td></tr>
<tr><td>12. Moral hazard</td></tr>
<tr><td>13. No cluster; low competitiveness</td></tr>
<tr><td>14. Branding/ Marketing</td></tr>
<tr><td>15. Settlement mode and contract practice</td></tr>
</table>

16. Market information		
17. Government policy		
18. Infrastructure		
19. No subsidization		
20. System operation (master plan)		
W1-10: Product quality (“hard” skills)	W11-16: Business management “Soft” skills	W17-20: Government site

Annex 3

Cluster engagement model

Cluster engagement model

Pre-engagement: Cluster selection process.

STAGE 1. Cluster engagement and data collection

Engage stakeholders:

- Industry champions
- Business association leaders
- Government regulatory/oversight agencies

Meet and discuss

- Convene large groups
- Organize cluster steering committee
- Additional meetings/ focus groups

Gather data and conduct secondary research and other measurement

STAGE 2. Cluster diagnostics

Information gained from Stage 1 Data Collection used in applying diagnostic tools (multiple tools used to validate results)

- Industry analysis
- SWOT
- GAP
- Value chain
- Benchmarking
- Porter's Diamond
- Other analysis tools

Diagnostic tools allow for identification of:

- Core values
- Guiding principles
- Boundaries/zones of cooperation/action areas
- Major issues faced
- Effort made to build trust and formulate codes of conduct for cluster co-operation

STAGE 3. Zones of cooperation/action areas

Diagnostic tools and input from cluster members allows for identification of areas of potential strategic activities, called 'zones of cooperation', that are appropriate for unified action.

Boundaries of co-operation vs. competition are defined and agreed by the cluster

STAGE 4. Structuring the results

The zones of cooperation and supporting action initiatives are presented as a menu of potential activities.

Example: Strategic action grid

Zones of cooperation	Short-term	Medium-term	Long-term
1)			
2)			
3)			
….			

STAGE 5. Implementation

Action items are selected from the menu by:

- Cluster
- Sub-cluster(s)
    - Clusters of Convenience
    - Clusters of Contracts
    - Clusters of Opportunity
- Business association(s)
- Donors/helpers
- Individual firms
- Other stakeholders

Implementation of action items may be driven and/or limited by:

- Resources
- Determination
- Cluster maturity
- Innovation ability
- Dependence of effective use of comparative advantages
- Geopolitical factors/environment