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Letter to Shareholders

Team Green is pleased to report that your firm is the world’s leading cell phone provider. With the highest share price, level of profitability and return on equity, Team Green has strived to become a premier transnational organization. Increasing its share price over the last five rounds, Team Green has persevered through a global recession, a price war and industry overcapacity. With leading market shares in each of the triad markets, Asia, Europe and the United States, Team Green is able to offer its customers the most technology-advanced phones at the lowest price available. Having the industry’s lowest production costs allows Team Green to sell phones at prices below what it costs many our competitors to produce them.

Team Green’s success can be attributed to its corporate mission:

“To efficiently manage a portfolio of cell phone technologies in a manner that maximizes shareholder value by using flexible global production to capitalize on shifting regional demand.”

By adhering to this mission statement Team Green is able to operate as a portfolio, using its strengths in certain technologies to subsidize its weaknesses in others. This creates an organization capable of winning the global chess match played between members of the cell phone industry.

Team Green is focused on maximizing shareholder value through stable growth. Unlike its competitors, Team Green’s financial performance is predictable. With the industry’s lowest earnings volatility, Team Green offers its shareholders consistent performance. Consistency is achieved through careful planning. By focusing on planning Team Green is able to operate as a portfolio, using its strengths in certain technologies to subsidize its weaknesses in others. This creates an organization capable of winning the global chess match played between members of the cell phone industry.

Team Green also used planning in the development of technology three and four. By planning research and development years in advance for these technologies Team Green was able to avoid large unnecessary capital outlays. These outlays plagued our competitors. Finally, Team Green used careful planning when allocating production of technology four to both the United States and Asia. While other teams focused solely on Asian production to move rapidly down the production cost curve, Team Green allocated production to both Asia and the United States realizing that a market for this technology would soon develop in the United States.

Team Green is also able to achieve consistent performance by creating and leveraging knowledge. Through the articulation of tacit knowledge into explicit knowledge using detailed written memos, Team Green has created a database of explicit knowledge. This database is used throughout the decision making process when similar business situations arise. Unlike other companies, who repeatedly make the same mistakes, Team Green’s knowledge focus ensures that mistakes made in the past are not repeated.
Team Green’s knowledge focus has its roots in its administrative heritage. In the third year of business, Team Green made a grave error. By neglecting research and development, it found itself two years behind the competition in the debut of technology two. This led to an array of problems that plagued the organization for several years. Having gone through this hardship Team Green made it a point to learn from experiences thus establishing an environment for knowledge creation. As quoted by David Gavin’s in Building a Learning Organization, “A productive failure is one that leads to insight, understanding and thus an addition to commonly held wisdom of the organization.”

Looking forward, Team Green plans to continue to focus its attention on sales growth rather than profitability. Focusing on sales growth has two distinct advantages. First, it helps increase Team Green’s already large market share. Second, it enables Team Green to move more rapidly down the production cost curve than its competitors. With lower production costs and higher market share, Team Green will force industry consolidation. This will create a more stable, competitive environment in which Team Green will be able to realize the profits that it is currently deferring.

With the lowest production costs, most technologically advanced cell phones, and the highest market share, Team Green is well positioned to maintain its lead in the cell phone industry. By continuing its focus on careful planning and knowledge creation Team Green will ensure that this lead is preserved.

Company Overview

Team Green is a globally diversified producer of cell phones focused on producing the most innovative products at the lowest prices. Striving to become the world’s primer transnational organization, Team Green has distributed production capacity evenly
between the United States and Asia. This gives Team Green the flexibility and responsiveness needed to operate in a changing global environment.

In order to maximize shareholder value Team Green has centered its efforts on maintaining constant, sustainable growth. In order to achieve this objective Team Green manages its individual cell phone technologies as components of a product portfolio. Management of each component technology in this portfolio changes as it moves through different stages in the product life cycle. This product life cycle differs between markets. For example, when a particular technology is in the mature phase of its life cycle in Asia it is in its emerging phase in the United States. By treating the organization as a portfolio of products, technologies that are in their mature “cash generating” phase in one market can be used to subsidize other markets where the same technology is in its “emerging phase.” The cross subsidization of technologies helps Team Green better manage business risk which helps facilitate long term planning.

An example of Team Green’s portfolio focus occurred this year with its technology four brand. Unlike its competitors, who are producing technology four only in Asia in order to gain a short-term production cost advantage, Team Green is producing technology four in both Asia and the United States. By producing technology four in both regions, Team Green will have a competitive advantage when this technology emerges in the US market. With production capacity already dedicated to technology four in the United States, Team Green will avoid having to ship product from Asia. Shipping product from Asia to the United States has a per unit cost of over thirty dollars. This represents a cost that Team Green will not have to incur thus enabling Team Green to under price the competition. Without strict adherence to Team Green’s mission statement, it is likely that the organization would have followed its competition and produced technology four solely in Asia. However, doing this would have contradicted a key element of the transnational organization, flexibility. As mentioned by Bartlett and Ghoshal, one of the three key elements of a transnational corporation is flexibility. A transnational must be flexible, able to respond to changes in the global environment. When production costs increased twenty percent in Asia last year those firms that had only produced technology four in this region were forced to incur higher production costs. Team Green on the other hand was able to quickly shift technology 4 production to the US avoiding these high costs.

Review of Financial Performance

Selected Financial Indicators

After struggling for several years, Team Green has been able to establish a strong financial position. This position is reflected in three key ratios; asset turnover, profit margin, and leverage ratio. These three ratios, when combined into a Dupont Analysis, determine the company’s return on equity.

\[ \text{ROE} = \text{Profit Margin} \times \text{Asset Turnover} \times \text{Leverage Ratio} \]
**Profit Margin**

As stated in the Letter to Shareholders, Team Green is focused on sales growth rather than profitability. Therefore, no attempt has been made to maximize the company’s profit margin. Nevertheless, the firm’s profit margin last year at 9.2% exceeded the competition. This figure highlights the importance of production costs. Despite under pricing our competitors in every market our firm was still able to achieve a level of profitability over three percentage points greater than the nearest competitor. This helps refute claims made by other firms in the industry that Team Green is engaging in unfair pricing.

**Asset Turnover**

Team Green is focused on maximizing sales growth. Sales growth is a measure of how efficiently the firm’s assets are being managed. The more sales are generated per dollar of assets the higher level of firm efficiency. Often organizations allocate too much of their attention on profitability ignoring the effects of asset turnover. This is the classic explanation of why companies such as Kmart fail. Kmart prides itself on having higher profit margins than Wal-Mart yet it ignores its weaker asset turnover. Team Green is attempting to avoid becoming the next Kmart by ensuring sales growth ensuring that asset turnover is not sacrificed in order to maximize profitability.

**RONA**

![Graph showing RONA](image)

Team Green’s leverage ratio, at 2.05 represents a debt to equity ratio of 49%. This ratio has been held constant throughout the last ten years. Team Green is confident that a debt of equity ratio of approximately 50% represents the firm’s optimal capital structure. With this level of debt Team Green is able to obtain the benefits of financial leverage without sacrificing the flexibility that equity financing provides.
**Return on Equity**

By combining profit margin, asset turnover and leverage ratio Team Green’s return on equity is derived. At 27.8%, Team Green’s ROE far exceeds even the closest competitor, Team Ichiban. This is the result of achieving a proper balance of profitability, asset utilization and leverage.

![ROE Chart]

**Selected Line Item Analysis**

**Outsourcing Costs**

Unlike some of our competitors, Team Green does not rely on outsourcing. Outsourcing, although often less expensive than in-house production, does move Team Green down the production cost curve. The consequence of not moving down the production cost curve far exceeds the benefits of lower outsourcing costs. Nevertheless, many of our competitors continue to rely on outsourcing.

**Research and Development**

Team Green consistently seeks to be among the industry leaders in R&D expenditure. By spending above industry average on research and development Team Green is able to move rapidly down the production cost curve creating a first mover advantage. The only way to achieve low production costs is to spend liberally on R&D. This is a notion that Team Green learned in its second year of operation. Not aware of the relationship between R&D and production costs, Team Green avoided R&D expenditures in effort to become a low cost leader. This strategy backfired with Team Green found itself debuting its technology two phone two years after the competition. Being late to the market ensured that Team Green’s technology two production costs would always be above the competition. As a result, Team Green never made a profit producing this technology.
Cash Reserves
Team Green prides itself on its ability to manage cash inflows and outflows. Team Green currently has over 500 million in cash reserves. These reserves are a source of competitive advantage. Cash provides our firm a level of flexibility that our competitors do not possess. The most liquid of assets, cash can be used to capitalize on market opportunities as soon as they emerge. For instance, Team Green plans to increase production capacity next round. Having 500 million in cash will enable Team Green to purchase plants without having to issue high cost debt or equity.

As Team Green moves into the cash-generating phase of the business life cycle, it has begun to repurchase stock. Stock repurchases are made in lieu of dividends in order to maintain financial flexibility. Once a firm begins issuing dividends it is obligated to continue their issuance. Although this is not a legal obligation, cutting dividend payments sends a negative market signal that will place downward pressure on the firm’s stock price. By repurchasing stock Team Green avoids entering into a dividend payment obligation giving it the flexibility to cope with changing market conditions.

Disaggregating Stock Price
In order to maximize stock price, Team Green has spent a considerable amount of time determining what factors alter it. There are four key stock price determinants. These are sales growth, market share, EBITDA, and technological capacity. After ten rounds of observation, it is clear that these variables are largely responsible for a firm’s share price.

Sales Growth and Market Share
The importance of sales growth and market share on stock price can be observed by analyzing the change in Team Green’s stock price between years eight and nine. Although Team Green made considerable profits in year nine these profits were generated by sacrificing market share and sales growth. As a result, Team Green’s stock price did not increase. This situation also occurred in round two. Given that stock price remained unchanged, the negative effects of lower sales and market share growth must have a large impact on share price.

EBITDA
Stock price reflects cash flow generation not profitability. Profitability, as measured by net income, is comprised of non-cash charges such as depreciation. Therefore, it is irrelevant when measuring firm performance. A better measure of firm performance is EBITDA. EBITDA does not include non-cash charges making it a better indicator of stock price appreciation.

Technological Capacity
The stock market is not interested in the effect research and development has on the income statement. During round eight, Team Green incurred a fifteen million-dollar loss. Nevertheless, its stock price increased over twenty dollars per share.
This occurred because the stock market ignored research and development expenditures when measuring performance. Although research and development is treated as an expenditure on the income statement it more closely resembles a capital asset. Therefore, the market treats it as a non-cash expenditure.

While our competitors remain fixated on achieving high levels of profitability, Team Green has focused its attention on maximizing sales growth, EBITDA, and technological capacity. These are the drivers of share value, not net income. By focusing on these variables Team Green has established a competitive advantage over the competition that continue to evaluate performance based on profitability.

Management’s Discussion and Analysis

Global Market Conditions
The cell phone market has been plagued by four factors; weak demand, oversupply, price competition, and short product life cycles. These factors have depressed returns causing the virtual bankruptcy of four of the eight companies in the market. Given that these firms are bankrupt, they will be expected to leave the market which will help improve returns. With eight competitors, the cell phone industry resembles a perfectly competitive market. Perfectly competitive markets are not able to support the level of research and development necessary to meet customer needs. As companies leave the industry the market will being to resemble an oligopoly. An oligopoly market structure will reduce price competition and lengthen product life cycles. Both of these factors will help increase returns.

Product Portfolio
Team Green offers its customers only the most technologically advanced cell phones. Selling both technology 4 and technology 3, Team Green targets the highest growth markets. By doing this it avoids selling older technologies with negative growth rates. When a technology enters the later stage of its product life cycle production costs among those producing the technology converge. As firms continue to produce an aging technology they move into the flatter portion of the production cost curve. When this occurs Team Green’s production cost advantage ceases to exist. This notion becomes clear when observing production costs for technology two. The range between production costs for technology two is $6. When every Team has the same cost structure, the ability to earn excess returns is removed thus companies selling this technology become relegated to mediocrity.

Foreign Operations
Team Green manages its global operations to maximize flexibility. By producing all technologies in both the U.S. and Asia, Team Green is able to shift production to take advantage of changing market conditions. This helps minimize the negative effects of market specific occurrences such as increasing tariffs, rising transportation costs, and labor disputes. Last year, Team Green was able to realize the benefits of flexible global production when Asian production costs rose by 20%. In order to deal with the higher Asian production costs, Team Green shifted production of technology 4 to the United
States. This enabled Team Green to sell technology 4 cell phones in Europe at a lower cost than its competitors, who were able to produce only in Asia. The ability to quickly shift production from one market to another is a key trait of a transnational organization.

Research and Development
At the center of Team Green’s production cost focus is R&D. Without R&D, Team Green would not have early access to technologies that allow them to move further and faster down the production cost curve than their competitors. The amount spent on R&D and licensing is not as important as how and when the spending occurs. In order to take full advantage of the benefits of R&D companies must focus on careful planning. Not having the ability to produce an emerging technology in its acceptance stage places a company at a severe disadvantage for that technology’s entire life.

Without planning, companies are forced to make large, lump sum expenditures to acquire the ability to produce new technologies. These expenditures could be spread over several years to minimize the overall cost of acquiring these technologies. An example of this occurred last year when Team Kaputt spent over 400 million in an attempt to acquire technology 4. If Team Kaputt had allocated R&D funds toward technology 4 in earlier years, the cost would have been dramatically lower.

Market Share
Team Green is focused on maintaining the largest aggregate market share even if it means sacrificing short-term profitability. Having a large market share increases its control of the market, improves in later rounds. Thus creating a spiral-effect: increasing market share, which increases demand, which then increases market share. In addition to increasing demand, market share represents higher production. As stated above, high production means lower
production costs. Teams with the highest market share tend to have the lowest production costs. Given the short product life cycle of cell phone technologies, companies cannot afford to maintain low market shares. Doing so will ensure prohibitively high production costs.

Merely having the largest aggregate market share is not enough. This market share needs to be distributed among emerging technologies. Emerging technologies have the steepest production cost curves, which allows early movers to capitalize on large production cost differentials. Team Green has confined its market share to technologies 3 and 4 as seen in the graphs below.

Team Green has an 18% market share in technology 3 and a 30% market share in technology 4. Both of these markets are still relatively new. Therefore, by establishing large market shares in these markets, Team Green is able to build a sizeable separation between its prices and the competitions. For example, the gap between Team Green’s technology 4 production costs and Team Orange’s technology 4 production costs are $170. With such a large differential between prices, teams such as Team Orange, have no ability to compete on price.

Competitor Analysis

The cell phone industry operates in a competitive environment. In order to succeed in this environment an organization must understand its competitors’ strengths and weaknesses and anticipate how these strengths and weaknesses may effect its own team’s strategic position. For example, product demand is directly related to the technological competence of competing companies. When several companies hold the same level of technological competence Team Green’s ability to sell cell phones decreases dramatically. This was evident in year eight when every Team had acquired the ability to produce technology three in Asia. As a result, demand was spread over eight teams leading to weak industry wide demand.
Team Green has built a considerable production cost advantage over its competitors. However, this competitive advantage will not last indefinitely. Team Blue, the nearest competitor to Team Green, has production costs very similar to Team Green. In addition, Team Blue has significantly more production capacity. Although having large production capacity is a liability during times of weak demand, such as the ones characterizing the current market, it becomes an advantage during times of strong demand. With larger capacity, Team Blue has the ability to grow its sales and thus its market share more rapidly. Understanding the threat that this presents, Team Green has begun increasing plant investment.

In the competitive cell phone industry a company’s actions are as much determined by the competencies of their competition as their own competencies. Therefore, it is important to make decisions on a relative basis. This is the central concept behind “Game Theory,” a tool that Team Green used successfully last year to fend off a late fun by Team Blue. Team Blue, with relatively the same production costs and technological competence as Team Green threaten to remove Team Green from its industry leading position. However, through the use of “Game Theory” Team Green was able prevent this from occurring. As mentioned above, Team Blue possesses more production capacity than Team Green. Therefore, Team Blue is required to generate a higher level of sales than Team Green in order to amortize the costs associated with their additional capacity. Given this notion, Team Blue would be hurt relatively more than Team Green if it did not generate a high level of sales. Realizing this Team Green lowered its prices stealing demand away from Team Blue thus preventing them from generating the sales necessary to amortize the large number of plants they operate. Although this may have hurt Team Green in an absolute sense, it benefited Team Green on a relative basis. Distinguishing between absolute and relative is the key behind “Game Theory” and the single most important factor behind Team Green’s success.

**Business Outlook**

Team Green expects industry demand to increase beginning next year. This will have implications on Team Green’s strategy. Team Green is currently utilizing its plants at 91% capacity. This exceeds the optimal production level of between 75% to 85%. In order to lower capacity utilization without sacrificing Team Green’s market leading position two actions will be taken. Team Green will increase the number of plants in operation by three. This will enable Team Green to produce more units. However, this does not solve Team Green’s short-term capacity needs. In order to generate capacity in the short-term Team Green is going to shift production to its highest margin products. This means moving away from technology three and into technology four. Team Green is able to generate the same level of cash flow selling one technology four phone, as it is able to generate selling two technology three phones. Therefore, the negative impact of this strategy will be marginal.

**Simulation Learning Outcomes**

*Logistics*
Managing an organization with operations in various regions is extremely complex. This complexity was not fully appreciated until participating in this simulation. A global organization must deal with an array of problems that a national organization never faces. These include issues such as the managing of transfer prices to avoid income taxes; the movement of cash between divisions to meet short-term needs; and the shifting of production to take advantage of favorable factor costs. All of these issues came into play during the decision-making process for year nine. Production needed to be shifted from Asia to the U.S., cash needed to be reallocated to the U.S. from both Europe and Asia, and transfer prices need to be adjusted upward to the European market.

**Demand**

Several factors play a role in determining demand. These include factors other than simply price and marketing. Not only is demand determined by pricing and promotion, it is determined by the actions of competitors as well as existing market share. This was not fully understood prior to the simulation. The simulation provided a dynamic, learning environment in which multiple demand determinants were allowed to interact in a realistic manner.

**Competitor Activities**

In the business world, the actions of competitors are unpredictable and in many cases irrational. This makes it difficult to formulate decisions that take into account the actions of competitors. Team Green attempted to be proactive by anticipating competitor movement and responding accordingly. Unfortunately, teams often acted in a counter-intuitive manner causing great turbulence in the market. In year eight, Team Green expected five teams to enter the technology 4 market. However, despite the fact that they had the ability, some teams did not enter the market. Team Green … in demand to account for five teams’ worth of production. Nevertheless, only three teams produced technology 4, which left Team Green without enough products to satisfy the market’s demand.

**Risk Assessment**

Being too risk-adverse is risky in itself. Early in the simulation, Team Green was too cautious in regards to spending for R&D and licensing. By not spending enough, Team Green was placed at a severe disadvantage for the rollout of technology 2. This disadvantage was so great that Team Green was forced to abandon all attempts to be competitive in this technology. The technology 2 blunder proved to be a valuable lesson that followed Team Green throughout the entire simulation. Often being risk adverse means taking a loss to subsidize future growth. Not realizing this in the first years of operation, Team Green was forced to incur much higher levels of risk in later rounds.

**Learning**

Team Green realized the benefits of learning early in the simulation. This enabled it to avoid repeating its own mistakes, and the mistakes of its competitors. As was seen in the Phillips case, often technologies such as the V2000 that may be technologically superior are not accepted by the market. Team Green used the knowledge gained from this case to avoid making the mistake of selling a cell phone technology that has not yet developed a
market. Had Teams, such as Team Blue and Team Grey, developed the same level of learning, they would have made the same mistakes.

Final Remarks

The Global Simulation provided an excellent opportunity for Team Green to build managerial skills. By forcing students to make decisions in a dynamic environment, the global simulation was able to build business skills in ways traditional textbooks are not able to do.