

## **Intro to Case**

This is a detailed case study which follows the development of a business, Turbochef Technologies, through various phases, including conceptualization and initial team creation, innovation and development, initial public offering, turmoil and, finally, industry validation. While the case study deals with the trials and travails of a specific company, its lessons are universal and apply to virtually all businesses and entrepreneurs searching for success.

## **Background on Narrator, Jeffrey Bogatin**

I spent the first twenty years of my career as a successful women's apparel wholesaler and importer. In the late 1980s/early 1990s, I began to see my industry change in ways that were counterproductive. The risk / reward ratios were becoming unattractive. Retailers were consolidating, private label merchandise was on the rise, and costs and overhead were soaring. Most critically, I realized that my companies' core competencies were beginning to diverge with the strategies of both my suppliers and my customers.

## **The "Gold Standard" Business Model**

I saw in the early 1990's a liquid market for public venture capital. The markets were favorable to new technologies, had low risk to high reward opportunities for entrepreneurs and allowed them to maintain control. One example of this type of business was a company based on a digital printing press, Presstek. With a nominal investment, the company was able to develop an early stage prototype and went public by retaining a small underwriter, Whale Securities. The Founders of Presstek were able to raise six million dollars for less than a third of the company while maintaining control. The stock of the company rose dramatically at points, starting from in the single digits and hitting highs into the hundreds.

## **An Introduction to a New Technology**

I was introduced to Phil McKee, a Dallas-based entrepreneur/project manager who was working on a French fry vending machine. McKee believed that he could develop a French fry vending machine by using air impingement instead of a traditional oil-based fryer. He estimated the cost of prototype development at \$250,000. Based on the current vending machine market and the Presstek business model, I believed that this business had potential.

After several months and many updates, I flew to Dallas for a preview of our vending machine oven. Upon arriving at their office in Dallas, I saw a gigantic contraption that must have weighed approximately 700 pounds. I was baffled, as I had no idea how something so large could ever fit into a vending machine. McKee, however, demonstrated the oven. He bought three food products from the local convenience store for a demonstration: a frozen Tony's Pizza, a microwave ready packet of French fries, and Banquet microwavable fried chicken. The demonstration was impressive. The products were cooked ten times faster than in a traditional oven or three times faster than in a microwave. And, the cooked products were of uniformly high quality and tasted better than when traditionally cooked.

Based on this product, we modified the business model from a vending machine to an entire cooking system which we called Turbochef. The idea was to create a product

which could be used to prepare restaurant quality food in a much shorter amount of time and without a ventilation system. By creating such a product, we would fit an entire restaurant cooking kitchen into a 7 square foot unit. Our business concept was to offer restaurant quality food service in the time it took to make change and pour a drink.

### **Outsourcing Innovation**

As McKee was a project manager, we had two choices in how to develop the product. We could hire engineers and build the product ourselves or we could outsource the technology development. We chose the latter and retained Earl Winkelman, an electrical engineer and businessman who had developed Spectravision (a technology that allowed consumers to watch a first-run movie in a hotel room). Winkelman was the type of talent that we were looking for as he had the history of taking an idea, developing it and assisting in bringing it to market as a finished product.

### **The Competition**

I could not help wondering why major corporations such as Electrolux, General Electric, Whirlpool, Sharp, Panasonic, and Maytag did not have a similar product. It turned out the answer was actually quite common. The large companies were not interested in developing an inherently new, untested type of technology. The executives at these companies felt it was more prudent to continue with the same product lines and test new ones through partnerships and acquisitions. This strategy was less risky to their personal careers and their companies. However, it perpetuated the status quo. This approach is described well in a book The Innovator's Dilemma by Clayton Christenson.

Big corporations have a difficult time dealing effectively with processes which are inherently creative and deliverables which are not clearly defined due to their intrinsic economic nature. Because big corporations are based on economies of scale, they are better off purchasing a new technology once it has established its promise rather than investing in the vagaries of the research and development process. Big corporations prefer to become involved once the inherent risk and variability of development no longer exist.

The second major issue of “not invented here” is the often adversarial relationship between the outside innovators and company management.

### **Outsourcing Commercialization and Production**

We needed to create a model that we could demonstrate to the investment community and a plan on how to commercialize the oven. While we had the original prototype, we did not have drawings or a bill of materials – both necessary to create a model.

At this stage in our development process, Texas Instruments (TI) was downsizing its military business segment and looking to utilize those facilities to create a contract manufacturing business. Winkelman's colleagues had worked at Texas Instruments, which was our means of introduction. With my goal of producing the ovens and taking the company public, Texas Instruments as a world class, respected manufacturer fit well with my scenario of a well known outsource partner.

Due to my relative inexperience with the industry, the negotiations were led by McKee. I was also in New York and trusted that McKee had a broader knowledge of the

appliance and foodservice equipment industry. My goal was to get our product into the market as soon as possible.

I believed that we should put ten units into the marketplace; McKee suggested that the cost would be \$10,000 per unit. However, this \$100,000 investment quickly ballooned into \$2,000,000, and we still only had a prototype.

Eventually, TI came back to us with their analysis and quoted us a cost of \$250,000 to commercialize the manufacturing process of the ovens and a cost of \$5,000 per unit thereafter for the next 1,000 units.

This was a significant step for Turbochef as a core competence of innovation was entirely different than the core competence of manufacturing. Unfortunately, neither Turbochef nor TI had the additional needed skill of commercialization. This crucial skill set between innovation and product roll out was a critical cause of failure and delay. This problem would lead to the projects conclusion under less than hoped for results of both parties.

### **Turbochef as a Transformational Technology**

A major question that I have received over the years has been to explain how the technology is transformational. I believe that this is easily done in the context of one product category; pizza.

Currently, there are approximately 100,000 pizzerias in the United States. Most produce a pizza in 8 minutes using a conveyor oven or in 15 minutes using a deck oven. This difference of 7 minutes and a slightly more uniform product is what drove the chain pizza business such as Pizza Hut and Domino's. This was revolutionary to the pizza industry.

Based on Subway's current strategy and their 25,000 locations, there are 25,000 competitors overnight who can sell an equal or better quality pizza in one minute. Over the next few years, for a lease of \$100 per month, 100,000 new convenience stores can offer the same. For the last 10 years, pizza growth has been 3%. We can all do the math of these potential consequences to the industry. Turbochef will enable this transformation.

In the late 1990's, Kraft introduced the frozen DiGiorno pizza, which was the first supermarket premium quality pizza. This was the first product in Kraft's history to reach a billion dollars of revenues based on a 30-minute cook time and \$6 cost versus the foodservice industry standard 45-minute delivery time and \$15 cost.

What happens when Turbochef becomes ubiquitous and the cook time is 2 minutes? The handwriting for the current pizza establishment is on the wall. Consumers in the world over will always choose to save time and add quality. Interestingly a family that orders in pizza three times per week can pay for the residential oven just on these savings alone. This is the future of transformational.

### **Continued Investment and Other Move-Forward Decisions**

Despite my belief in the product, I questioned whether I would live to see a return on my investment. The risk/reward scenario that I had calculated initially rapidly changed. I was also learning the difficult lesson that although I had been successful in other business ventures, that success could not be directly translated into the public

markets. The public prefers a verifiable promoter with a following who has been through the process of taking a company public before.

To get perspective and an objective set of advice, I called Don Gogel, a close friend and a principal at Clayton, Dubalier, and Rice (CDR). Gogel arranged a meeting for me with Chuck Ames, a legendary manufacturing executive who was a partner at CDR. Chuck told me to cut my losses and run. He was aware that technology development is often a substantial capital drain and the ability to get deliverables based on financial measurement for the most part elusive.

With belief in the transforming nature of the technology, I was not yet ready to heed his advice. Gogel arranged an additional meeting with another CDR partner named Andy Pierson, who had previously been the President of Pepsico. Andy gave me a piece of advice and a referral: the advice was that big corporations buy established companies, not start them; and the referral was Steve Reinemund, the President of Pizza Hut, at that time a division of Pepsico.

### **Pepsico**

After demonstrating our prototype to Reinemund, he was immediately interested. I remember him saying “This is going to change our world. I have five thousand Red Roofs, basically old style eat-in Pizza Huts, that are a dead concept. Right now, I cannot out-advertise, out-menu, or out-cook my competitors.”

Reinemund saw the benefits of Turbochef: he could substantially reduce his preparation time and, by extension, delivery time, thereby getting a leg up on both emerging competitors such as Papa John’s and entrenched competitors such as Domino’s. Indeed, he would be able to revitalize the Red Roofs by not only preparing pizza faster, but also providing menu versatility with a wider variety of rapidly prepared, yet high quality food products. Moreover, due to the proprietary non-vented nature of the equipment, he could open pizzerias in locations where it could not be done before, such as airports and lobbies of office buildings. Last, but not least, due to the versatility of the equipment, he could have extensive menu changes seamlessly integrated into the core offering without corresponding operational issues and difficulties.

Reinemund was our cheerleader. I remember him pulling out a set of keys, tossing them to McKee and saying: “These are the keys to Pizza Hut. They are yours.” To add to our enthusiasm, he called to tell us that Pepsico was interested in making an investment in Turbochef.

By the end of our investment meeting at their headquarters in Purchase, NY, the Pepsico executives expressed an interest in purchasing 50% of the equity in Turbochef for a total consideration of \$10,000,000. There were other bells and whistles to the proposed deal, but this was the crux, from my perspective. The Pepsico executives said they would need a few weeks to perform the due diligence and get the necessary paperwork in order. As we left the Pepsico offices, we were extremely excited. The largest restaurant company by units in the world was potentially becoming our partner.

### *A Changing of the Guard at Pepsi*

Two weeks later, Pepsico announced that it was promoting Steve Reinemund to be the new chief of Frito-Lay. Alan Huston would replace him as President of Pizza Hut. This took the wind out of our sails, as Reinemund had been our greatest fan and now his

attention lay elsewhere. In the next few days, we were informed that the investment in Turbochef was now Huston's call.

Pizza Hut issued us a purchase order for fifty ovens. In turn, we brought this order to Texas Instruments and inked the deal to commercialize the manufacture of the ovens. We deployed three ovens into Fastinos restaurants in Wichita. Initially, they broke down constantly. McKee and Winkleman, along with others, worked around the clock to keep the ovens operating and, miraculously, got it done.

At that point, I was asked to come to Wichita to meet with Huston. Huston had different priorities than Reinemund. He was more focused on boosting sales figures in a conventional manner rather than introducing an innovative product. He did see Turbochef as a catalyst to revolutionize his entire business.

Our relationship with Pepsico ended poorly as the few ovens that were installed in Fastinos restaurants were not optimal and should not have been installed. Despite my initial hesitation to install the ovens, at that point, leadership from Fastinos asked us to move forward. Our team worked tirelessly to get them working. Despite these efforts, the Fastinos chain failed and Turbochef received bad press, which was particularly toxic given the insular nature of the foodservice industry.

We learned a hard lesson in how big corporations are run. With the changing of the guard, comes a total revamping in the strategic thinking. If the CEO of the company is not signed on to your success with defined deliverables a new technology has minimal chance inside a big organization.

### **Manufacturing Versus Commercialization**

Meanwhile, the team at Texas Instruments which had been tasked with the commercialization of the manufacturing process for the Turbochef ovens was having problems and running far behind schedule. McKee was the point person with TI and from whom I received information. At the time, I had falsely put much of the blame for our problems on TI.

I received a call from the Vice President of Contract Manufacturing at Texas Instruments. He explained that nobody at Turbochef had a clear understanding of what was involved in making the oven commercially. He pointed out that the design was a constantly moving target, which is not what I had been hearing from McKee.

The Texas Instruments executive further pointed out that on a \$250,000 contract to commercialize the oven, Texas Instruments had invested \$3,000,000 of their own funds. He was concerned that Texas Instruments would end up losing even more on the project, as they had no idea how to proceed. I was extremely concerned. However, McKee had quick answers for all of my concerns. According to him, Texas Instruments was incompetent and the project's lack of success was fully their fault.

I tried to be objective and consider both viewpoints, but, by that point, I was too heavily invested in Turbochef and McKee to accept Texas Instruments' position. In addition, our disparate locations made internal communications more difficult.

We returned to Texas Instruments' manufacturing facilities in Dallas and they brought in a razor sharp manufacturing commando. In forty-five days, he was able to get McKee to settle the contract and deliver a few ovens, along with a bill of materials and product schematics. For a nominal payment, Texas Instruments had delivered us the commercialization of the first generation Turbochef along with ten units of the product.

Despite their investment, TI wanted to dissolve the partnership with Turbochef. They were not comfortable with our people. The key lesson here is that when a supplier does not want a customer's business to the extent that they are willing to take a loss in order to cut away, it is critical to understand why. Loss of trust can almost never be overcome.

There were many additional lessons learned here. Experience and hard knocks are the only teachers. The ability to combine experience into a definable business with measurable deliverables is a simple but definitive formula for success.

### **Customer Acquisition and Industry Barriers**

The Pizza industry in the 1990's was dominated by four major players: Little Caesar's, Pizza Hut, Domino's and Papa John's. Little Caesar's was a leader in the take-out, medium-quality segment. They famously offered two pizzas for the price of one. Pizza Hut pioneered the red roof concept of casual dining built around the pan pizza and had since expanded into the pizza delivery business. Domino's was the leader in the pizza delivery business. They had created the concept of thirty minute pizza delivery, or the pizza is free. The final player was Papa John's, which offered a delivered pizza for a dollar more than Domino's, but a dollar less than Pizza Hut, with about the same quality as Pizza Hut. They were gaining rapidly in the delivered pizza space.

The competition was steep. Battles erupted over price, and the result of this competition was an erosion of profits for these players. I had thought that they would be clamoring over a new technology, like Turbochef, that would give them an advantage in a unique way. Turbochef could cook a pizza in sixty seconds, reduce energy costs by so much that the savings on that alone would pay for the oven, decrease labor costs by up to 50%, increase facility utilization by up to two eating segments, and save in cheese costs due to its unique cooking method which reduced shrinkage by up to 20%. Even if a back-up oven was necessary at first, the returns and transformative effects were phenomenal.

It was during meetings with players, like Little Caesar's, that I learned my most difficult lessons about the foodservice industry. The company gatekeepers seemed bent on doing everything possible to keep entrepreneurs, such as myself, away from the decision makers. They were not interested in innovation as it translated into unacceptable career risk.

The foodservice companies were interested in well-known equipment – not new technology. The measures of evaluating equipment were price, size, weight and reliability. Questions such as return on investment were not considered. Equipment was procured based on long-standing relationships which were zealously guarded by the corporate gatekeepers. Nobody was willing to go out on a limb and recommend a new piece of equipment, as the absolute worst thing that could happen in the foodservice industry is an equipment breakdown. If it were a new, unknown piece of equipment, then the individual who had championed the purchase and usage of that equipment could have his or her career destroyed. It was much more difficult to blame someone for passing on an unproven technology and have it succeed elsewhere than to blame them for investing in such a technology only to have it fail. After all, no one ever lost his or her job for using established suppliers. Simply by asking the question of what our breakdown rate was after two years, the gatekeeper could effectively end any productive conversation.

Still, I couldn't understand why we could not sell a product that, by any objective measure, should have been flying out the door. I had compared the scenario to my days in the garment industry, where I believe it would have been different. If I had been the first person to invent Lycra and showed it to a brassier manufacturer, the worst he could do would be to request a few yards of free product so he could make a sample. In less than twenty-four hours, he would be showing the sample to his top customers and within a week, the product would be on shelves and available for consumer evaluation.

So why were we unable to get the Turbochef product even into the test kitchens of our customers for free? Why were we unable to get ovens into restaurants for a test run? Why were we unable to convince a major food franchiser to do a market test when the technology was so powerful? I had to either bypass the gatekeeper or convince him.

The short answer was trust. Turbochef did not have the core industry relationships, capital and service capabilities necessary to satisfy the establishment.

## **IPO**

In October 1993, I began the planning process for taking Turbochef public. Like many entrepreneurs deciding on how to raise capital, I had invested a great deal of time and money in this business and wanted to maintain control of the Company. Using the financial markets would enable me to keep 30% to 80% of the company, as opposed to going the venture capital route, where I may end up with just 10% to 25% of the company. In the case of Turbochef, we had the additional consideration that if we were to bring in private capital, McKee's stake would have been diluted to such an extent that he could potentially lose his incentive.

### *The Gatekeepers of the IPO Process*

There were many gatekeepers and processes involved in the IPO process which can be frustrating to the entrepreneur and to the company in need of financing – such was the case for Turbochef. Of course, an IPO is incredibly time sensitive. The window of opportunity for going public can close in a heartbeat and failing to close the deal can destroy a company, no matter how promising its product.

1. *Choosing an Underwriter.* We selected Whale Securities to be our underwriter for the following reasons. (1) They specialized in taking pre-revenue and early stage companies public in a niche market, also known in business parlance as “public venture capital”. (2) They were a boutique and would give us the attention that a larger bank may not have. (3) They had succeeded with Presstek. (4) I had a relationship with a principal decision maker at the Firm, Billy Walters, who I believed would provide us with good service.
2. *Pricing the IPO.* The initial pricing for the IPO was agreed quickly upon with Walters. Walters wanted a lower price for the IPO so that customers could see a rise in the stock and that it got sold; I wanted a higher price and to give up less of the company. We agreed upon a post-money valuation of \$30 million, which was a compromise between the higher valuation that I proposed and the one that he had. It was far from an exact science as pricing non-revenue companies is an entirely subjective process.

3. *Legal Council.* We confronted two separate issues. The first was in choosing our own council, which was guided by three criteria. (1) The firm had to have experience with public offerings. (2) I had to feel comfortable with the people with whom I would be working. (3) The Firm agreed to cap their fee at \$75,000, which assured me that they would get the job done quickly and efficiently. The second issue was in working with the Underwriter's council. We found their objective was not in line with ours – it was their job to protect the Underwriter. In our case, the attorney's became heavily involved in what would be the final pricing and structuring of the IPO and slowed the process by months. It was frustrating as management's attention was heavily diverted to the IPO.
4. *Roadshow.* We began the road show with a large-scale meeting at the Plaza Hotel which was attended by seventy-five brokers and high net worth retail investors. We were looking to raise six million dollars in the first round. Turbochef was highlighting its product to the food service world and its new Chairman, Frank Carney, who was a founder of Pizza Hut. We demonstrated our product, and Frank told them what we believed, that Turbochef was going to revolutionize the foodservice industry in an even larger way than conveyor ovens had revolutionized the pizza industry.
5. *Funding.* Funding of the IPO is contingent upon team of brokers sponsoring the IPO and the quality of investor you can bring into the process to provide comfort to the underwriter. Initially, Whale did not give its top brokers the mandate to sell Turbochef during the IPO, which could have left us under funded. We were eventually funded as a result of our personal relationships with top-tier investors. This relationship not only brought us the funding but also provided the underwriter a method to raise less of the money with their existing clients, introduce new clients to them and tie management to the success of the project by not having their friends potentially lose money.

### **Our Internal Struggle**

The months after the IPO went quickly. We were trying to launch a new technology into a market which, as already mentioned, was essentially hostile to innovation. It was a daunting task, especially as the product continued to have issues pertaining to reliability, government safety rating, cost, design, and size. The situation was complex and difficult; the core of the company did not understand how the situation would be rectified. Unfortunately, our key employees chose to keep me in the dark about the problems rather than keep me in the loop. With most of the company in Dallas while I was in New York, most of the information that I received seemed to be filtered.

My lack of industry experience and not being on-site blinded me to many of the problems. When a business is just getting off the ground, hands on management is critical. Engineers were not given the latitude and flexibility that they needed to solve problems. The process was geared towards "groupthink." As a result, for every problem that was "solved" in this fashion, two others would arise. In addition, the project leader, as it turned out, did not know how to use scientific methods to attain reliability, and because he was afraid of being "found out", did not hire any specialist who did. I had also been forced to learn the difficult lesson that people who work for you can be incredibly duplicitous. In the past, I had been able to detect an untruth as they were easy to verify

(e.g., “the check is in the mail.) Now, with a more complex product, the lies were more sophisticated.

I had believed that the product was ready for commercialization and, as such, pushed for increased sales. These sales, however, could not be realized because the underlying technology was simply not where it had to be. My lack of industry experience had caused me to keep missing two obvious points. First, if reliability is the most important to the industry, then nothing less can be acceptable. Second, if the cost of equipment rather than return on investment is the customer’s metric, then that is the metric which must be addressed. If you could not meet industry standards, a valuable insight is to target your product to customers who had other priorities, like return on investment.

### **Early Adopter: Whitbread**

With the stock drifting downwards, internal problems and the company burning through funds, it was a difficult time. We received a respite when, in March of 1995, Danny McAuley, a special concept manager at Whitbread, was introduced to Turbochef. At that time, Whitbread was the largest pub and restaurant operator in the United Kingdom, with approximately 6,000 locations, including Pizza Hut restaurants, and a high end chain of pubs called Beefeaters. McAuley saw Turbochef as a solution, not just a pizza oven. He wanted to use Turbochef in the context of high end dining. The ability to cook a rack of lamb or beef Wellington in two minutes using Turbochef could afford Beefeaters the opportunity to create menu options which would set it far apart from its competitors.

In May of 1995, Whitbread signed a deal with Turbochef, whereby our ovens would be put in 300 Beefeater locations. The deal further stipulated that Turbochef would pay for all service calls beyond four per year. This was a terrific win, because the industry standard was two and Whitbread was also providing the set up service network. I could not help feeling that this was the catalyst Turbochef needed.

### **Managing Shareholder Expectations**

In April of 1995, the month before the deal with Whitbread, Bob Emerson of Stonehill Management walked into my office. Emerson was a hedge fund manager who specialized in the restaurant and food service industries. He was also on the board of Lone Star Steakhouse, which was a successful public company. After viewing our demonstration, he brought another successful investor and food service veteran to see our product.

The stock showed signs of life. The share price marched up every day, and the trading volume was impressive. There were only 1,200,000 shares in the public float by early June. Whale asked for several hundred thousand shares. My key investors and I were able to sell some of our shares at that point. Additionally, all of the bridge investors had a liquidity moment that allowed them to make six to ten times their initial investment. The stakeholder community was energized.

In June of 1995, right after the deal with Whitbread, Emerson told me that he owned in excess of a million shares. He had bought almost the entire liquid float of the company. Interestingly if Emerson had been a private long term investor he could have bought control of 75% of the company for the same amount. However, as a hedge fund

manager he was interested in stock appreciation and liquidity rather than retaining managing interest in a company. The key lesson here is that you must know your investors and understanding their goals and critical metrics.

Over the next several years, Turbochef steadily rose in value from a market capitalization of \$12 million to more than \$400 million. Interestingly enough, almost every major move in the stock was connected to Emerson buying, selling or being squeezed by short sellers as he margined large amounts of Turbochef stock. Unfortunately, Emerson's Stonehill Fund did not perform well over the next several years and, after steadily losing assets, finally closed.

On the one hand, Emerson's investments in the stock created liquidity for Turbochef and allowed us to access capital at highly favorable terms. On the other hand, however, Turbochef was so overvalued that we had difficulty in matching operational performance to the artificially high valuation of the market. This caused frictions within the entire stakeholder community. Managing shareholder expectations and building a business are two entirely different tasks and skill sets. Although they may seem the same in terms of goals, they can be quite different.

### **Changing Focus**

I had a sudden epiphany when I was in a Barnes & Nobles book store late on a Saturday evening and came across a book entitled Inside the Tornado by Geoffrey Moore. The book suggested that, in the early stages, new technologies need to go after niche markets that need a solution, rather than the primary markets for which they are intended. We needed to find economic buyers because we were selling return on investment. I realized that the Whitbread order may have been a false positive and restaurants were probably not our initial best customers.

As I thought about it, I began to focus on the potential that Turbochef held for a number of other businesses, including supermarkets, hotels, and convenience stores. In these segments, food service was not the primary focus.

Shortly after my realization that we needed to focus on alternative markets, I had a meeting with HFS, which owned Ramada, Howard Johnson, and Days Inn, as well as a range of other brands in the hotel business - about 5,000 total locations that were run as a franchise. They were looking for a cooking technology that possessed both high and low end functionality. On the low end, they needed something that could be operated by an unskilled employee to prepare breakfast, as well as cook a quick pizza for guests checking in late. On the high end, they wanted something around which he could design a kiosk version of a Quick Service Restaurant. If Turbochef could solve both problems, they would be able to eliminate the traditional on-premise dining facilities at their company's franchised hotels, as almost all of these dining facilities were loss leaders.

Certain customers buy with entirely different sets of reasons. HFS is a hotel that had 100 rooms of year-round occupancy and could charge five dollars per room per night for this amenity. If foodservice could run at breakeven, then you would have approximately \$175,000 of additional EBITDA, and the hotel, based on then industry selling multiples, would be worth \$1.5 million more. These customers had no problem paying Turbochef \$500 per month for 60 months where the standard industry had issues paying \$5000 one-time for ownership of an oven, even though the return on investment characteristics were very similar. HFS looked at return on investment and the industry

focused on equipment cost. We sold a solution to HFS but the food service industry could not get past the paradigm of equipment cost. A solution could validate our market capitalization but selling equipment could not. We could not be profitable on anything other than a solution and selling equipment or fancy equipment was not worthy of our market cap or future prospects.

## **Maytag**

### *A Partnership*

In July of 1997, Turbochef met in Dallas with a group from Maytag led by Lloyd Ward, who had been hired by Maytag away from Pepsico to reengineer and recharge the company with his marketing expertise. Within minutes of seeing the Turbochef product, Ward believed in our product. He saw a product which would empower him to own the kitchen appliance category. Further, he formed a relationship with McKee and believed that McKee could help change the Maytag culture from the outside by introducing new product ideas that would fuel the innovation strategy.

Within a month, we formed the groundwork for a Maytag / Turbochef collaboration. The arrangement would involve a monthly fee coupled with a \$10 million stock exchange. At the time, Maytag stock traded at \$28 per share while Turbochef stock traded at \$17 per share. The exchange meant that Maytag would own approximately 3% of Turbochef. In addition, our current technology would remain the intellectual property of Turbochef. Coincidentally, about two months after we began talks, Maytag purchased Blodgett, a commercial oven company. It was made clear that in order to partner with Maytag, we would have to enter into a separate agreement with Blodgett. We were concerned that Turbochef would be incompatible with Blodgett, as they focused on equipment and we on technology. Despite this, we believed that the partnership with Maytag would be worthwhile as they could channel enough cash into the commercialization project to make it successful.

### *Personnel Changes*

After the agreement with Maytag and Blodgett was executed, Turbochef's Board examined key personnel in the Company and recognized that McKee would have to be replaced. What we did not realize at the time was the strength of McKee's relationship with Ward and the difficulties it would create in dealing with Maytag. McKee's replacements were unable to effectively get things done at Maytag internally as they did not have the support in which McKee did with Ward.

About six months after McKee's departure, Maytag announced that they would name the residential oven product "Accellus", thereby renegeing on their verbal promise to us of putting the Turbochef name on the product. This only served to further destabilize our already uneasy relationship. Additionally, we were faced with another challenge in working with a large company. If a product was "not invented here", it was very difficult to get Maytag to become involved. These issues were straining the partnership.

Meanwhile, McKee still owned more than 1,700,000 Turbochef shares and used every liquidity opportunity for the next several years to offload large portions of his stock. This caused a continuous downward pressure on the share price. This was happening while Maytag was investing approximately \$100 million to manufacture the

commercial and residential products. In addition, our new team was able to effectively address the technical problems that Turbochef faced; we were able to move towards commercialization and improved the product's reliability. We could not satisfactorily explain to our shareholders a reasonable basis for this dichotomy of increased investment and falling share price. Falling share prices are not necessarily the definitive measure of a company's prospects or current state. The general measure in thinly traded stocks is whether or not there are more buyers than sellers.

### *McDonalds*

Through Blodgett, we were introduced to McDonald's. The entire project started when McDonald's decided that they needed an oven to cook biscuits and muffins in five minutes as opposed to the nearly thirty minutes it took in a conventional oven. McDonald's also wanted to increase the speed of cooking a cherry pie. They claimed that they could support a price of \$7,500 per oven based on the corresponding time savings. Turbochef offered a product which cut the cooking time from nearly thirty minutes to just two minutes.

It turned out that McDonald's could not justify the purchase price despite their earlier claims. We were frustrated. Clearly, we possessed a solution for McDonald's to vastly increase its breakfast and lunch offerings which its current equipment simply could not handle. Moreover, they could finally build a set of dinner products – an area where McDonald's had historically struggled. We kept on repeating our observations to McDonald's, but we could not convince them.

Meanwhile, Blodgett agreed to McDonald's requests in changes to the oven specifications. These changes were so dramatic that they were, essentially, developing the next generation ovens (NGOs) for Turbochef. Additionally, McDonald's kept reducing their "acceptable" target price for the ovens.

The total cost for a single unit was nearly \$5,000, but McDonald's declared that they would not pay a penny above \$4,500. The price was cut so much that Blodgett was being asked to make a sale at a loss. This confirmed our fear that Blodgett could only sell Turbochef as equipment rather than a solution. The gatekeepers of these companies were clearly strong obstacles.

### *Maytag's Launch*

In May of 2000, Maytag finally launched Turbochef, which they called the Accellus 5X at an industry trade show. The product came one year later than expected launch, and Maytag did not lend its' marketing muscle and dollars to trumpet the product's arrival. The launch crystallized just how awful the miscommunication had gotten between each of the organizations involved. The manufacturers could not properly manufacture the product; the marketers could not properly market the product; and, the consumers could not see the product properly demonstrated.

The aftermath and the eventual dissolution of the partnership with Maytag was that Turbochef had to build a sales and marketing team, as we had left those core competencies in Maytag's hands. In addition, we had had trouble with manufacturing the oven. Turbochef had begun to set up manufacturing operations in the Jinan province of China, and there were problems sourcing components. The effort to solve them was costly as Jinan was remotely located and the parts were shipped from the US. However,

by May of 2001, the Chinese plant enabled us to manufacture the ovens for a cost of \$3,000 per unit – far superior to anything else we could do. By September, we were shipping first quality ovens. The Chinese ovens were purchased at over \$2,000 less than it cost Blodgett to make them in the United States.

## **Subway**

In mid-2001 we began our conversations with Subway, which eventually became our greatest success. Subway is the world's largest franchiser by unit, with approximately 20,000 locations worldwide and several thousands added annually. The Subway / Turbochef relationship began with Blodgett when a Subway franchisee, Steve Sager, saw an opportunity to sell pizza at his restaurants. Sager owned eight locations and was the area franchise manager for another 100 locations.

Initially, the corporate gatekeepers were not supportive of Sager's idea. However, they were facing a number of challenges. Quiznos was beating them in their core category, as customers were willing to accept slower service in return for a hot product. At the same time, franchisees were clamoring for more product selections to sell at the restaurants. Pizza was a natural choice because its primary eating segment was dinner while Subway was geared toward lunch. Maximizing facility utilization was a natural and instinctive business strategy.

Turbochef uniquely provided Subway with a way to solve their challenges. Our proprietary ovens allowed Subway to create a far superior warm product in 15 to 20 seconds versus the two-minute process at Quiznos. When peak hours are between 12 PM and 2 PM, this is critical. By seamlessly adding hot sandwiches to Subway's line-up, Turbochef would increase top line sales growth by 15% to 20% at each restaurant location. Subway would transform from 100% cold sub sandwiches to 50% to 70% hot sandwiches almost overnight. While the average Subway restaurant had reported revenues of \$350,000 per location prior to Turbochef, this amount could rise to more than a reported \$400,000 after the introduction of Turbochef technology. And this was just in the first year, before accounting for the pizza and breakfast opportunities! Subway did not need to make any changes to their labor force to collect the benefits of the Turbochef product. Most importantly, Subway would be able to install a ventless countertop product that could be put in and have employees trained - in an hour versus the major renovation and weeks of training associated with other cooking equipment. This is the definition of transformational.

With the introduction of the hot product, each franchise owner would make a minimum of \$35,000 to \$50,000 more per location in profit. In turn, this meant that corporate headquarters with their 6% royalty would make approximately \$2,100 more per unit. The ROI was weeks versus years.

The ovens were tested in Puerto Rico by a large franchisee and area manager for Subway who controlled 160 stores. After a 30-day test and spectacular results, his group authorized an oven lease for each location. We had quoted \$250 per month for a lease or \$8,000 per oven for a sale. The test group had accepted – and this was just based on the addition of pizza to the line-up.

### *Subway and the Stock*

On the eve of the Subway Puerto Rico announcement, our stock tanked by 50%. A large shareholder had used this liquidity moment to unload a significant block of his shares. Several months later, when we made an even bigger announcement about Subway going into six test markets with our ovens and advertising support, this shareholder again used the opportunity to dump a large portion of shares, depressing our stock price by another 50%.

Understandably, our shareholders were upset and confused. At the same time, Subway looked at our share price and became concerned. Instead of focusing on the partnership with Subway, we had to deal with our falling share price and lack of liquidity.

In micro cap or thinly traded stocks, the price is generally defined not by the underlying business but whether or not there is a seller or buyer. The effect of a declining stock on the entire stakeholder community is devastating - and even more so when the company is doing well and meeting verifiable deliverables.

### **Starbucks**

Meanwhile, Starbucks had offered another interesting opportunity for our product. I knew Howard Shultz, the Chairman and CEO of Starbucks, which is how Turbochef was introduced to them. After a slow start, Turbochef ovens were successfully introduced to Starbucks stores, enabling them to compete in the hot breakfast market and expand their product lines.

Starbucks has signed an exclusive supply agreement with Turbochef and today is rolling out the product world wide. The ability to capture higher dollars per customer visit is the compelling proposition, along with the ability to attract additional traffic with unique menu offerings during non peak periods.

### **The Sale of Turbochef**

In June of 2003, Richard Perlman, CEO of Ovenworks, approached us with a proposal to buy control of Turbochef. By the end of August, we had agreed to a transaction whereby Ovenworks would purchase 58% of the fully diluted stock of Turbochef for a total consideration of \$13 million. The transaction was completed on October 31<sup>st</sup> of 2003.

Initially, Ovenworks' investment gave Turbochef a major shot in the arm and restored the trust of the company's stakeholders. Before the acquisition, we had struggled to meet our payables for rent, components, salaries, and other day-to-day expenses. With the arrival of Ovenworks funds, all the bills were paid and the suppliers', customer's and employees' confidence was restored.

Ovenworks' takeover also brought in a new set of investors who saw a great product along with validation by Subway and other major businesses, as well as a new management team. They renewed the promise we had made years ago during our IPO: a great technology with unlimited potential and a high probability of success. With this promise and the Subway validation in place, Ovenworks was able to raise an additional \$80 million from the investor community, most of which was reinvested directly into Turbochef. Ovenworks investors took out more than \$30 million while still retaining almost 40% of the company. Shareholders had liquidity.

## **The Future**

As discussed earlier, Turbochef may have been – and may be – best served by focusing its energies on “alternative” businesses.

### *Wholesalers and the Residential Oven*

The average Costco, for example, reportedly gets one million customer visits per month in each of their 400+ locations, with a customer demographic that can easily afford \$3,000 retail or payments of \$100 per month for a superior oven product. In past market tests, 30% of people expressed an immediate interest or interest within one year to buy a Turbochef after a cooking demonstration. As such, selling a residential model directly to the consumer in this venue could be successful. The additional opportunity to tie the Costco food offerings into the Turbochef computer offers a model for customer benefits and stickiness that has never been offered in the appliance industry. This customer would receive a solution, not an appliance. To the general appliance distribution network, Turbochef could supply a fancy appliance which will have a large niche market but not the giant win a solution affords.

### *The Internet and Turbochef*

During one of Turbochef’s difficult times, I had the idea that the Turbochef oven, as the only computerized oven, could be used to bring computing and the power of the Internet into the kitchen. The computer and screen display of the Turbochef oven was the ubiquitous “Trojan horse” to get an Internet ready appliance into the kitchen. Fueling this was the well known fact that families make 75% of their spending decisions in the kitchen. For example, a home cook could purchase an item from an internet pad on the oven – or download the recipe directly to the machine, with cooking instructions included.

In April of 2006, the Patent Office granted Turbochef, and me as lead inventor, a process patent on using the oven as an Internet gateway into the kitchen. This patent may become a major barrier to entry by prospective future competitors. It is my hope that it will be a large source of future revenue for the company. If the computer in the oven is thought of as an iPod and individual recipes are thought of as iTunes, the potential immediately becomes clear. Podcasting into the oven will be a major enhancer for the customer experience and revenue generator for the company.

This technology has the potential for both one-time sales of the core product and “razor blade” style revenues from recipes, advertising, service upgrades and even oven performance upgrades. A good example is to imagine the market value of the iPod if it did not have the iTunes revenue.

This technology has many other benefits not part of the traditional appliance manufacturers. The oven, for example, is capable of remote diagnostics for service which cuts down on the cost of warranty.

Turbochef has the unique ability to download the entire operating system which would allow the consumer to purchase or receive upgrades to the oven to increase the benefit years after initial purchase. If the consumers wished, they could download entire operating systems from diverse providers like an Emeril or Martha Stewart. Again this is a solution and offers extraordinary potential rewards.

### **Concluding Thoughts**

Certainly, it has proven far easier to accurately evaluate each of the actions and events pertaining to the history of Turbochef in hindsight than it was while caught up in the middle of it all. Things did not turn out as I may have envisioned, but there is much to be proud of. Despite the growing pains that the Company went through, Turbochef will always remain one of the great technological inventions in the appliance space. Over time, it will become the cooking standard.

It is my hope that this study will serve as a telling lesson for the budding entrepreneurs of the future. When these entrepreneurs find themselves in similar situations, they will recognize them and execute accordingly. Let this be the hindsight guide for the future.