

PROJECT 4a:
CASE STUDIES ON SUCCESS TRAITS

InfraReady



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About the CAPI Processed Food Research Program

Food processing is one of the country's largest manufacturing sectors and an essential channel for Canadian agricultural products. Yet the rising trade deficit is signaling deteriorating performance. CAPI has launched a research consortium to galvanize a new approach. CAPI is not only focused on the problems but how to move forward to address them. This case study is part of a project to isolate company traits of success and what we can learn from companies to inspire change which includes a cross-case analysis.

Project 4a: Food Processing Company "Traits of Success": Despite the challenges confronting the sector, many individual companies are doing well. By collaborating with several business schools across the country, 13 case studies on diverse food companies were undertaken to isolate how companies are succeeding and positioning themselves to do even better. The individual case studies are based on in-depth interviews with company CEOs or senior leaders. This project is accompanied by a cross-case analysis.

PHASE 1 Diagnosis	PHASE 2 Inspiring practices	PHASE 3 Competitive advantage
1a. Diagnosing the trade deficit	4a. Case studies on company success	7. Conclusions
1b. Reasons for the trade deficit		8. Implications for policy & strategy
2. Explaining the trade deficit	4b. Cross-case study analysis	9. Dialogues on outcomes
3a. Food manufacturing performance	5. Consumers and markets	
3b. Plant openings, closings & investments	6. Innovation insights	

.All completed projects, along with supporting material and data, can be found online at www.capi-icpa.ca.



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EXECUTIVE SUMMARY

SITE: INFRAREADY PRODUCTS LTD.

This case focuses on Saskatoon-based company InfraReady Products Ltd. started, majority owned, and operated by CEO Mark Pickard. InfraReady Products Ltd. (IRP) is a secondary processor that manufactures grain and pulse products for major food companies in Canada and around the world. The primary technology employed is an infrared precooking system that inactivates the grain enzymes so that there is greater safety and shelf-stability, higher water absorption and retention, shorter at-home cooking and preparation times, decreased hard textures and undesirable flavours, decreased processing costs for manufacturers, higher bioavailability of grain nutrients upon ingestion, and the products are easier for manufacturers to use because they are in ready-to-eat formats/products. Currently the company offers cereal grains, oilseeds, pulses, ancient grains and blends that comprise over 250 proprietary products resulting in 1000's of SKUs on shelves around the world.

PHENOMENON AND RESEARCH QUESTION

InfraReady Products Ltd. is a Canadian success story, a profitable business onto itself, and a real testament to how vision, faith in the vision, perpetual curiosity, and collaboration can help create growth and innovation for a company in a mature category.

Mark Pickard had his work cut out for him when he envisioned a myriad of commercial food applications for an infrared technology in precooking grains. Finding the necessary support and financing was critical for bringing Mark's business plan to life, as was his belief that this new way of processing grain products would be accepted by Canadian food producers. Armed with supportive colleagues and collaborators, a real insight into the technology and food science, and a vision, IRP was launched in 1994 through the Saskatchewan Wheat Pool (SWP) as incubator, headed by Mark Pickard.

Today, IRP offers over 250 products to more than 100 food companies in Canada and throughout the world. Herein the question of interest becomes: "How did Mark take a singular technology idea and parlay it into so many products with such diverse applications (e.g. breakfast/lunch/dinner foods, energy bars, baked goods, vodka, kitty litter) with relevance to so many global manufacturers?"



FACTORS OF SUCCESS FOR INFRAREADY PRODUCTS LTD.

Strategic Infrastructure Model

- Stated vision, mission, purpose that everyone in the organization can follow
- Solid reinvestment model
- Keeping costs low to ensure healthy margins

Visionary Leadership & Management Style

- Solid vision of what the future holds, what they want to accomplish, and to some extent how to get there
- A high risk tolerance
- Hands-off management style--high degree of autonomy and responsibility

Deep Knowledge of Food Science and Food Technology

- Solid training and experience developing tacit knowledge about food science and food technologies
- Partnering with research houses, incubators, innovative organizations
- Knows the possibilities and limits of raw materials and food technology

Perpetual Product Innovation and Development

- Continuous product innovation
- Mark is always thinking about how better and differently to use the existing raw materials and technology
- A willingness to defy convention, think divergently
- Empowering staff to consider and express new ideas, market relevance

Commitment to Transformative Value Creation, Customer Focus

- Incremental innovation is 'value-add', not 'value created'
- Strive to improve customers' business
- Customer-centric organization--everyone is empowered to help make the customer happy
- Everything is made-to-order
- Great relationships with very loyal customers

Proprietary Technology

- Infrared technology that is hard to replicate
- Represents a core competency
- Improves food safety, shelf stability, flavour, texture, grain water absorption, grain water retention, cooking convenience, digestibility, manufacturer production times

Accreditation and Credibility

- Certified by British Retail Consortium (Grade A), Global Food Safety Initiative, Organic Crop Improvement Association (organic), INFANCA (Halal), Montreal Halal (Halal), Health Canada, COR (Kosher), among others
- Improves: ability to export, customer prospects, sales cycle, inspection times, credibility in the industry, among others
- Expensive and difficult for competitors to replicate; improves quality of IRP's products

An International Scope

- Mark thinks Globally--is attempting to diversify his business for profitability by offering new products to new markets continually
- Exports to USA, UK, Trinidad, Taiwan, Hong Kong, Singapore, Malaysia, Philippines, Thailand, Indonesia
- 50% of IRP's business is exported from Canada

COMPANY HISTORY & DESCRIPTION

Mark Pickard wants to feed the world...and he just might. In a presentation to Saskatchewan government officials in 2013, Mark described a world where 50 million new mouths are born every year, the Earth's available land can feed up to 6.5 billion people, and by 2050 we'll have 9.5 billion hungry people. In order to meet this demand, global food production will need to rise by 70% in order to feed everyone. Rising costs of fuel, increased demand, and climate change mean the rising cost of food is a challenge for many. Part of the solution? Inexpensive, easy-to-grow, bioavailable nutrition in the form of whole grains and pulse products that have many applications, don't spoil easily, have notable health benefits, and are easy to transport: the type Mark has put to work processing and producing.

In 1993, newly minted MBA Mark Pickard worked at the Saskatchewan Wheat Pool (SWP), which was responsible for researching, developing, processing, and marketing wheat production in the province of Saskatchewan on behalf of its farmers, and conducted research and new development in the sector. Mark had recently been made aware of an infrared technology that inactivated the enzymes in wheat and precooked the grain so that microbial count was lower, cooking time was shorter and shelf-life was longer. Mark foresaw the immediate commercial relevance of this technology for wheat and other grains and put together a business plan for SWP to review. The leader at SWP believed in Mark, saw his passion for the technology, and respected that he was willing to risk his own personal and social capital to make InfraReady a success. In 1994, InfraReady was launched under SWP's funding and protection, championed and operated by Mark. Mark believed in the business, and especially the technology, and describes 'never looking back'. Even in 1994, the grains category was mature. Ancient Egyptians were known to cultivate grains and pulses, and use them as primary dietary substrate to feed the masses. In Saskatchewan, wheat production was not particularly innovative and little was actually done to modify the grains, instead, most product innovation came down to packaging, format changes, and marketing. The infrared technology that Mark championed represented innovation of grain products that wasn't just incremental, it was transformative—it didn't just *add value*, it *created value*. Creating value through transformative innovation would allow InfraReady to deliver new value to customers, the likes of which they never would have seen before. Some of the advantages of infrared precooking include: decreased microbial count, increased food safety, increased shelf-life, increased food stability, decreased raw flavours, decreased hard textures, higher water absorption, higher water retention, decreased preparation and cooking time (e.g. not having to soak pulses for 24 hours and clean them multiple times), lower processing costs for manufacturers (grains are ready to go directly into food, secondary processing is finished in most cases), starch gelatinization that improves bioavailability of nutrients and digestibility of energy, variation in purposes that had not yet been available on the market, among others.

InfraReady operated reasonably successfully and steadily under the SWP for 4 years (1994-1998) championed by Mark himself, growing from 2 employees, no clients, and no products, to 13 employees, 100 products, and international exports. With an impressive track-record, proven successes, a growing list of products and clients, in 1998, Mark decided that he should take InfraReady out on its own and run it independent from SWP—though this would take significant venture capital.

Mark risked his own personal and social capital, which helped him raise the venture capital he needed for InfraReady as well: the Agrifood Equity Fund (AEF; Government of Saskatchewan) was the initial lender, alongside SWP. Requiring more venture funds to be an independent operation, Mark sought investment from the only other interested party at the time—Bill Hetland, who owned and operated Hetland Seeds, and could therefore also be a quality supplier to InfraReady Product Ltd (1998).

In 2004, Mark was looking to have AEF's investment portion redeemed because of high interest rates on their capital—close to 18%. Mark had gone to school with two gentlemen who he knew well and had a good working relationship with—Bill Hetland (who was already invested in IRP), and a gentleman named Ken Davis. Ken Davis was familiar with the sector given he himself runs 'Spectrum Ingredients', which produces many similar products to IRP, will sometimes source from IRP, and services the south-east Asian market predominantly. Ken had an interest in investing with IRP and in 2004 took on AEF's investment portion. Through management buyout Mark bought back all of SWP's initial investment, and Bill Hetland stayed on as the third investor. By 2004 Mark now owned 68% of IRP, Ken Davis owned 15.5% and Bill Hetland owned 15.5%, which is how it stands to this day.

IRP's RAW MATERIAL PRODUCTS

Cereal Grain	Wheat, Purple Wheat (AnthoGrain™ Wheat), Barley, Triticale, Rye, Malt Wheat and Barley, Brown Rice, White Rice, Buckwheat, Millet, Corn
Oilseeds	Brown Flax, Golden Flax, Sunflower, Sesame, Soy Beans, Pumpkin, Poppy
Pulses	Green Peas (Whole and Split), Yellow Peas (Whole and Split), Red Beans, Black Beans, Navy Beans, Pinto Beans, Chickpeas, Small Green Lentils, Large Green Lentils, French Green Lentils, Red (Crimson) Lentils (Whole and Split)
Ancient Grain	Quinoa, Amaranth, Spelt, Kamut™ Khorasan Wheat, Wild Rice
Blends	Customized mixtures for customers (2-17 grain-blends, usually flake or meal form), Infrared precooking step enables the blends to absorb more water than raw grain blends, so presoaking isn't required. Blends can also be used up to 20% of the flour weight in a baked ingredient to optimize their wholesome goodness. InfraReady also offers a range of distinctive pulse blends. These brightly coloured blends are ideal for soup, casserole and vegetarian applications.



Today, IRP continues to grow, with more than 250 custom designed proprietary products, over 100 customers, exports all over the world, and five major sources of raw materials: cereal grains, oilseeds, pulses, ancient grains, and blends. IRP prides itself on working with healthy whole grains that are sourced from the best producers (e.g. Hetland Seeds) in order to ensure the promised high quality of products and maximum value for customers. IRP operates at a reasonable margin given that physical capital is limited to modest offices attached to a medium-sized manufacturing plant in the industrial zone of Saskatoon, Saskatchewan and the recognized high quality and ease-of-use of IRP products command a competitively higher rate in-market.

IRP's STATED BRAND PROMISE

To provide measurably superior quality, innovative and nutritious food ingredients that have recognizable consumer benefit in an environment of honest, open, and transparent communication with all clients.

CATEGORY, INDUSTRY, & COMPETITIVE CONTEXT

The technology that IRP uses—an infrared precooking system—varies significantly from what other processors and manufacturers working in the category typically use. Most other manufacturers in the sector will fractionate the grains (e.g. processed wheat, sugar etc.), which devalues the grain itself, and doesn't improve the products made of the grains ultimately. Mark's objection to this type of grain processing is that the nutritional value of the grains—as well as the ultimate quality of the finished products—is decreased. Mark says: "We had a business based on health and wellness, 'getting the good from the grain' [corporate tagline circa 2005] is about feeding people and really creating consumer and societal benefits."

One of the reasons that Mark is happy for IRP to remain a non-consumer-facing secondary processor is that he believes consumers have a lack of understanding around what infrared does and doesn't do to food. Instead of trying to overcome the hurdle of explaining the technology to consumers through marketing, Mark describes an interest in providing maximum value to his consumer-facing customers by being 'defined not necessarily by the technology we use, but by the benefits with provide' with such key selling features as improved food safety, quicker prep times, longer shelf-life, etc. Because Mark has a food science background, he reports having originally designed the business plan for SWP in 1993 with

much more of a technological focus—it turns out that ‘how you provide it’ doesn’t matter as much as ‘what you provide’ in this industry.



Because ‘what you provide’ is so important in an industry that produces tons of raw products for use in thousands of finished consumer products, around the world, production and operating standards are of high competitive importance. To answer this, most processors have one or more certifications that guarantee their standards, cleanliness, and quality, which saves everyone in the value chain time, energy and effort; customers then don’t need to audit processors (suppliers) independently and continually. Mark notes that certifications are both costly, and administratively time-consuming, so many competitors will rest with just a handful of meaningful certification designations. IRP values certification heavily, and has multiple relevant designations: British Retail Consortium Grade A certification (a Global Food Safety Initiative auditing scheme), Organic Crop Improvement Association (organic), Kashruth Kosher (COR), INFANCA Halal Certifications, Health Canada certifications, among others. IRP also maintains significant ties to allies, thought-leading industry associations, and policy makers such as: AIB International, OCIA, Kashruth Council of Canada, INFANCA, Saskatchewan Trade & Export Partnership (STEP), Pulse Canada, Saskatchewan Pulse Growers, Flax Council of Canada, American Association of Cereal Chemists, Institute of Food Technologists, Saskatchewan Ministry of Agriculture, Agriculture & Agri-Food Canada, Health Canada, Office of Controlled Substances, Industrial Hemp Regulations, Canadian Trade Commissioners Abroad, Saskatchewan Food Development Centre, POS Pilot Plant, Richardson Centre for Functional Foods & Nutraceuticals, Saskatchewan Food Processors Association, University of Saskatchewan, University of Manitoba, University of Alberta, among others.

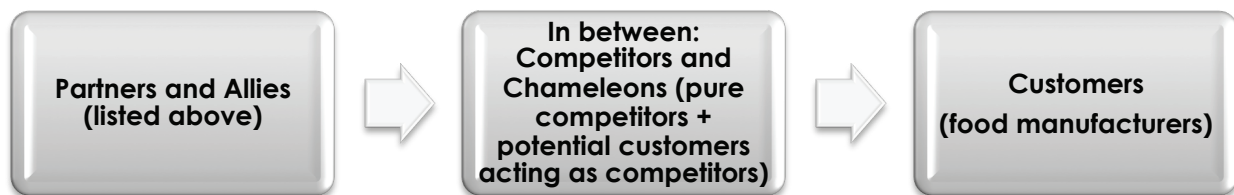
Many organizations in the grains category will span multiple stages of the value chain (e.g., primary and secondary processing, secondary processing and manufacturing, manufacturing and retailing etc.), which Mark calls ‘chameleon’ competitors, because they represent the ability also to be collaborators or even customers. Mark describes a competitive context that is complicated by the fact that on occasion a competitor (e.g., a secondary processor/manufacturer) will be a customer for a product, or a supplier (e.g., a primary processor) will become a competitor when they sell directly to a manufacturer. Accordingly, it can sometimes be a challenge to anticipate in any given context or moment what another organization represents—competition, collaborator, customer, or supplier, etc.

IRP's PARTNERS

Investor Ken Davis' Spectrum Ingredients - www.spectrum-ingredients.com.sg
Investor Bill Hetland's Hetland Seeds - www.hetlandseeds.com

Mark describes that most competitors compete on price in the grains category, especially primary processors. The infrared technology that IRP uses means that it constitutes a secondary processor that 'doesn't just add value, it creates value'. Accordingly, where competitors cannot offer the same high quality of products IRP is able to 'set the bar' in terms of quality and price which means IRP makes a higher margin typically than the competition. The resulting profitability in turn gets reinvested into new product development and accreditation costs, decommoditizing IRPs product and rendering them of consistently higher quality. This commitment to quality is well known to IRP's customers, competitors, and collaborators and forms the backbone of IRPs brand promise (above). Mark says: "None of our customers would say that we were inexpensive, but they would never say we had an inferior product."

Figure 1.0: IRPs Competitive Landscape from Mark Pickard's Perspective



SUCCESS FACTORS FOR INFREAREADY PRODUCTS LTD.

STRATEGIC INFRASTRUCTURE MODEL

Mark has developed a 'strategic infrastructure model' that includes key performance indicators (KPIs), the brand promise, and IRP's current tagline, which is used to help the organization 'build customer experience, improve manufacturing capability, improve core business processes'.

Mark's developed strategic infrastructure model is effectively the following:

Destination

- Tagline: "The Good we Get from Grain"
- Vision: Creating value in food ingredients using innovative technology with a commitment to quality and customer satisfaction.
- Mission: "To create value through innovation, quality, and commitment."
- Brand Promise: To provide measurably superior, innovative and nutritious food ingredients, that have recognizable consumer benefit, in an environment of honest open, and transparent communication with all our clients.
- Destination: Innovative, international supplier of whole grain ingredients

Key Performance Indicators

- ROCE (Return on Capital Employed): when we reinvested this dipped, but now we are at about 9% ROCE, which will come up over time.
- Total Sales Per Ton: Drive up value of every ton that we sell (1800\$ per ton average, now at 1953\$).
- Operating Margins: COGS per ton, labour hours per ton, margin per ton.

Enhanced Customer Experience

- Complete BRC, Innovation Sessions, Sell Sheets, Move forward a verified kill step, Develop company public newsletter, Comprehensive product list, Customer requests addressed within 24 hrs

Improved Manufacturing Capability

- Comanufacturing, Screening, Blending, Shipping and Receiving, HR self-reliance

Improved Core Business Processes

- Quarterly reviews, Comanufacturing profit-centre

This strategic infrastructure model is printed on a post-card and distributed to all 25 staff members at IRP. This model helps describe where the organization is headed, how it will reinvest, and what the most important objectives are, so that everyone is aligned. Further, this model was designed to help with organizational costs and efficiencies, as Meghan Allan, Research and Development Manager at IRP put it:

"We don't waste materials. In a safe and effective manner we will re-appropriate materials. We use our KPIs and metrics at every level in what we do. Anytime a product is produced, the weights of the raw material are calculated, we calculate loss and how much we are producing, there are goals around micronizing hours and equipment hours, overall capacity, man hours are tracked [etc.]. Everything in production is tracked in terms of input, output, and efficiency. We all know about tons an hour and kilograms an hour to get to the necessary targets. We know roughly how long things take and what we have to produce during the day when people are around in order to get the order out the door. Our production manager is responsible for expenses, and works very hard to decrease them. Our logistics and procurement person works very hard to get lowest price on input materials and deliveries. Securing the lowest price for as long we can is the intention—we build this into contracts so we can guarantee the lowest costs while maintaining the highest quality production. We strive to keep costs to customers reasonable, so we take margins and efficiency very seriously and literally."

A lack of waste and continual reinvestment is part of the financial model at IRP. IRPs annual budget allocation the following: At \$6M (2012) in revenues, 20% of net is spent on market and product development, 10% of net as dividends (Mark, Bill, Ken), 70% (or remainder) is retained earnings, allowing that debt-to-equity is currently 0.3, the current ratio is 6:1, and in general IRP maintains high liquidity. As mentioned previously, working capital is limited to the current modest building and manufacturing facility (pictured above), which allows the maintenance of lower costs and higher margins. In fact, Mark says that "a certain margin is built into price and we try to meet those margins consistently or higher by being efficient. If we can be more efficient we do, we try to overshoot the intended margin on the price."

In 2006, with the help of an external consultant, Mark did an overhaul of IRPs corporate values and formalized a 'code of conduct' document which championed respect for all employees, zero tolerance for discrimination, along with much else. What was interesting about this practice Mark notes was that the new code of conduct effected the hiring practices and ideology about HR at IRP, which led him to develop a formal human resources and hiring plan. Once this was complete, the quality of human resources attracted, hired and retained became higher, which increased the quality of their products and processes. As Meghan Allen, Manager of Research and Development put it:

"There is low employee turnover in our company now. Prior to 2007 there was higher turnover. There was a turning point in 2007 that made a difference in terms of the hiring, the quality of people that were brought in increased substantially."

VISIONARY LEADERSHIP& MANAGEMENT STYLE

VISION AND VISIONARY LEADERSHIP

In a 2013 presentation to the Saskatchewan Government officials, Mark described his leadership agenda as: “Quiet confidence, Work ethic by example, Have no fear of failure, Technical leadership, Opportunity based—hold to a dream.”

Not only does this list accurately describe Mark’s leadership agenda as described by others, it demonstrates exactly the type of self-awareness and reflexivity that his employees laud and appreciate about his leadership and management style. Mark is has a quiet confidence that at first glance might not seem logical in a leader so successful. A closer look however, and it becomes apparent that Mark is very strategic, knows his fortes, is a tireless worker, and has a grand vision for the organization and for his purpose in life.

A placard on the wall is a quote from Proverbs 29:18: “Where there is no vision, people perish”. Mark leads by this quote and describes that in the food business, people will literally perish if quality or quantity of food subside. Mark describes not being particularly interested in money, albeit profitability for the company’s sake, but instead having a real human need to help solve the food crisis he foresees for 2050, which would require 70% greater productivity in food production if all 9.5 billion mouths are to eat. Mark feels a huge social responsibility in what he does, because ‘we feed people’.

The social responsibility and philanthropic initiatives at IRP are plenty—everything from developing exclusive products for food banks and donations, to voluntary contributions of time, etc. Because Mark believes so whole-heartedly in his vision—and his company’s role in fulfilling it—Mark is comfortable with taking on risk, looking at things differently, breaking the mold. One employee describes that Mark is willing to consider almost any intelligent suggestion from them and morphs a bit himself, year-over-year, in order to stay relevant to customers. When asked about his leadership style, Mark says:

“Quiet confidence, we don’t have to run around beating our chest about being the best. I have a high tolerance for risk and reward. It’s not about being the best anymore, it’s about being the highest quality for my customers. ‘Analysis paralysis’ is the biggest problem out there. We are much more intuitive in terms of how we run business and make decisions at times. Sometimes you have to be ready to die, invest your social capital, your personal assets, everything you got into this project, into this business. If you don’t go into it like that then you won’t necessarily succeed. Fear of failure isn’t something that we have here, or even think about. We just go for it, believe in it, and don’t worry about failing, even if we do. How far are you willing to take it? If there is any doubt than don’t go, it will eat you up.”

MANAGEMENT STYLE

Mark is a champion of ideas and people. When writing the business plan for IRP in 1993 for SWP, he describes believing in the technology, and knowing it was going to need a champion if anyone was going to use it, buy into its value, etc. Mark describes ‘having a vision, setting goals, and championing good ideas’, which is reverberated by his staff. Mark says he gets out of bed every morning for new opportunities, and spends about 66% of his time on product and business development, and only 33% on managing the business and people themselves. This is probably made possible because Mark has set

the tone of an autonomous culture, one where “no one was to write long-winded emails to each other. Everyone knows each other in our small company, they know how to work together and communicate easily.” Mark is known to his employees as being a ‘macro-manager’—the undoubted leader, non-confrontational, positive, constantly working and available, supportive and autonomous, not one to micro-manage processes, and checks in only when necessary. Accordingly, staff feel empowered and responsible for their work and functional role within the organization. Mark feels comfortable with this management style because ‘the proof is in the work’—because of the smaller size of the organization, he can keep track of everything going on to some extent, and knows immediately when something isn’t working.



When asked why people believed in his vision, his leadership, invested in it, and trusted in it, Mark describes:

“The personal credibility has to be there: that will get you through the valley of death, they will invest in you as a person, as a leader, in your organization. You have to be credible; trustworthy...what you represent has to be something they can believe in. This is like being the captain of a ship: I have to chart the right course, have to make the right decisions, have to have leadership, have to have a vision. We have great technical leadership. I wish I was better at financial and managerial stuff. Really I’m a technical guy, I don’t lead the production crew, I lead the development crew (business and product). Early on I wanted to be involved with everything, I had to learn to back off and not micro-manage, and leave the stuff that you aren’t good at to the people who are good at it. There’s a certain management style [required] to get a company started, and another one entirely to make a company successful and to keep it growing. I had to evolve. Sometimes I feel like we are stalled, but maybe it matters more how you manage and measure growth.”

RISK PROFILE

It is said about Mark, as he says himself, that he is very comfortable with taking risks—he sees this as necessary for innovation, progression, and customer satisfaction. As an example, in 2012 IRP was asked to ramp up quickly in their manufacturing capacity for a specific client. The amount of training and capital development was impressive and condensed in a short time-frame. This opportunity represented huge growth for the company, scaling up and delivering would be key. Mark and his staff worked together to deliver for this customer. About the experience, an employee said:

"I think in order to be successful we have to take risks. Some are necessary: purchasing new equipment [specific] for a customer that might not lead to new business...that capital overhead is a risk. Mark is good at making upper management feel like they are part of the decisions. Everyone is all on board by the time a decision is made, so that they help mitigate risk by producing toward a goal."

This was risk Mark saw as opportunity: the riskier thing for IRP's ultimate success and profitability would have been to say no to this customer. In the immediate term the capital investment and expenditures will negate some of the growth expected from this volume, though Mark sees growth has having a 'time horizon'. "Successful businesses aren't built overnight, it takes time, patience, and vision."

DEEP KNOWLEDGE OF FOOD SCIENCE AND FOOD TECHNOLOGY

Mark has as deep level of knowledge and understanding about food and grains at the bio-chemical and molecular levels: temperatures for gelatinization processes, granular results of enzymatic activity, microbial symbioses, hybridization and genomic strains etc. Mark has an impressive formal education, though one gets the sense that most of this tacit knowledge was learned by living in Saskatchewan, trial and error, genuine curiosity, self-education, the company he keeps, and years spent on site and within research incubators.

Working at the Saskatchewan Wheat Pool, Mark would have no doubt picked up some of this deep knowledge of food science, though many of Mark/IRP's liaisons, relationships, and associations (e.g. incubators, research houses, universities, industry organizations, etc.; see list above) would also likely have contributed to this deep knowledge and continuing education. Mark describes himself as a 'technical guy', which lends itself well to understanding and investigating food technologies, such as the use of infrared for precooking grains.

Mark describes:

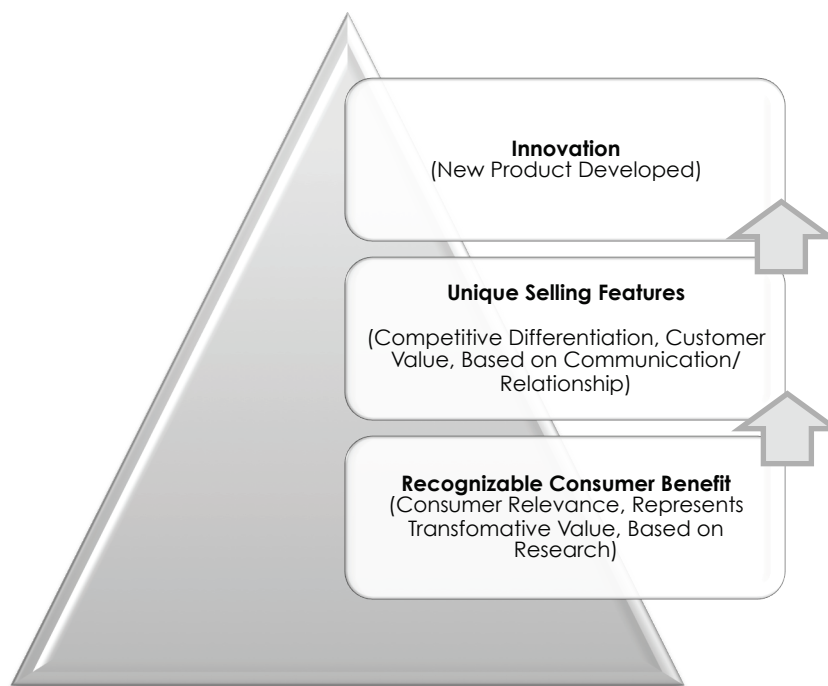
"[Our] core competency, a core differentiator, is the intellectual capital—the infrared technology is the core of our business that allows the transformation of the commodity products, but we are technical people, not just technology [purveyors], but food science. We have a strong technical core—know what food science requires and what people are looking for and how we can help them."

Mark, and indeed the employees he has hired, have an extensive and vast knowledge of the base grains/raw materials that they are using, what can and can't be done with them, what technology does and doesn't do to food, and the extent of their ability to deliver quality food products. As mentioned, infrared technology does not affect the nutritional quality of the grains it precooks, which is a very important quality of the food substances that IRP produces, from Mark's perspective. Knowing what is and isn't possible with their raw materials and technology, how food substances will interact with others in the finished form (e.g., granola bars), and what can be done with the food (innovation) is a core competency of IRP. Mark is continually using this deep, tacit knowledge of food, food science, and food technology to offer products and value at the intersection of: a) what can be done with the food and technology available (e.g. product innovation), b) what the customer wants (e.g., precooked grain) and is looking for (e.g., value), and c) the consumer needs and trends he is foreseeing (e.g., Celiac-friendly gluten-free grains).

PERPETUAL PRODUCT INNOVATION AND DEVELOPMENT

IRPs primary core competency stems from a personal characteristic of Mark: perpetual curiosity in technical product innovation and new development. Mark comes at innovation from a technical end and marries it with research about consumer trends and forecasting. Mark thinks about product innovation all of the time, as an example, will consider a specific grain, all of its characteristics, all the ways it can be modified, and all of the possible applications for these modifications. Once he has determined a modification that he thinks will answer a customer need and preempts a consumer trend (e.g. gluten-free precooked grains), he will sell it to customers by developing a prototype and ‘short-circuiting’ the innovation testing and development process. Mark notes that many of his customers have cut back on their R&D budgets, so he strives to create value for them by doing this R&D at IRP, helping the customer along the development journey, and speeding the innovation process. Mark is continually asking himself ‘how do I get more value out of the grain?’

Mark’s Innovation Framework:

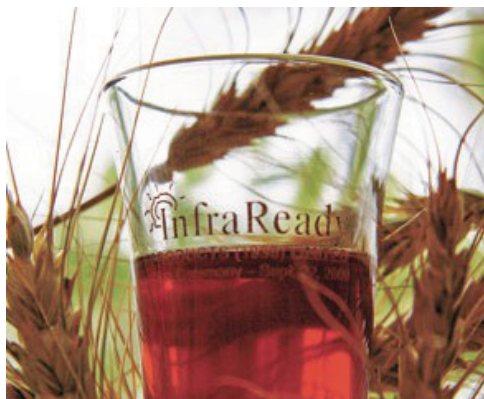


IRP does significant consumer research through a contract consultant that reports in periodically. Most secondary processors are focused singularly on the B2B market, though Mark feels that having an eye to the B2C market allows him—IRP—to create value for customers (e.g., food manufacturers) by preempting their consumer research efforts. Says Mark:

“We’re always looking to manipulate the raw materials for the better—in order to get more value out of the grains. This is our unique capability, plus we are continuing to do research. If I talk to my customers about the same stuff as 5 years ago, he will tune out. I have to come up with new innovations all the time.”

What are consumers looking at, what do they want, what is the latest trend. Innovation is not episodic, it is continuous. Sometimes I bring in new sources of ingredients too: e.g., quinoa. We're huge in quinoa now. That wasn't even around 10 years ago."

A recent example of this type of perpetual innovation seeking came when Mark was considering the 'Purple Wheat' that he was processing; the purple colour is the result of anthocyanins in the grain which is high in anti-oxidants and has many health benefits (e.g., ocular health) and can be distilled to an anthocyanin extract used in nutraceutical applications (e.g., visual acuity remedy). Mark thought further about this and realized this could be further distilled into a purple vodka that would have high anthocyanins, be organic, and have high levels of antioxidants. This would be a "healthy" vodka, the world's first. Mark brought this concept all the way to prototype phase before he realized that processing purple wheat was a core competency of IRP, producing alcohol was not.



Either way, this product remains the intellectual property of IRP, and might someday find a home in the marketplace.

Meghan Allen, Research and Development Manager: *"Innovation is not [exclusively] a formal process. We have weekly production meetings that allows us to talk about innovation and new products etc., we talk about it in due course in the meeting. I think about innovation all the time, at home, while driving. Mark is good at this too—he is always looking for new stuff, new ideas, innovation, new product development. I take cues from him. He has always been this way. I don't think this company would be here if he wasn't that way. He sees opportunity where no one else does. He sees value in things that perhaps not everyone would see value in."*

A couple of years ago Mark was considering innovation using a waxy hull-less barley that he noticed had high levels of amylopectin which retained water better. Prevailing applications were for use in lower-fat bakery products such as muffins, because higher water retention (helped by precooking using infrared) meant that less fats had to be used for consumers to enjoy the same consistency. Having an intimate knowledge of the barley itself and its reaction to liquid (absorptive), Mark realized it would be perfect for use in his cat's litter box: clumpable, absorptive, all natural, sustainable (based on renewable crops), local, safe for cats, soft to touch, compostable, biodegradable—this was inexpensive, organic, non-toxic cat litter.



Mark doesn't abide by convention. He's always thinking a new application for existing products, new uses for existing technology, as well as new grains and new technologies. Mark has recounted as always having been innovative. He would look at equipment and see something outside of convention: e.g., the equipment that IRP is currently using was bought by Mark from SWP because he saw a wider application and use for that equipment. Mark marries bottom-up technical development and innovation with marketplace research and a wider view of the world he is good at recognizing trends before they happen, such as the current popularity of quinoa. Says Meghan:

"We are good at recognizing new trends before they happen—e.g., quinoa, we were there a couple of years before. So when customers started asking for it, we already had many lines in production. This is probably this is because we have good relationships with organizations outside ours—like Pulse Canada. We have our ear to the ground, we are not just a technical lab that works in isolation—we're really trying to relate it to what is happening in the world and develop products before the market even knows that they are going to need them. By the time our customers are asking for it, we typically have a couple of lines, lots of research; have thought a lot about the products and uses for the product."

COMMITMENT TO TRANSFORMATIVE VALUE CREATION, CUSTOMER FOCUS

Mark doesn't want to have customers buy what IRP makes. He wants to make stuff his customers want to buy. In fact, he describes this as 'letting the customers run the company, to some degree', which is the very definition of a customer-centric orientation. Mark acknowledges that there is no business without customers, and he strives to create real and enduring value for them, so they keep coming back, they pay a slight premium for guaranteed quality, and lines of communication are open and easy.

"I like to communicate with allies and make sure to keep open lines of communication. I try constantly to improve marketing communications. Currently, we're thinking we need more in terms of customer surveys. I want our allies to know more about our business and the success, this could end up in the 'chameleon' or competitive hands, but we hope not, and we hope that this transparency really creates more collaboration and engagement."

An example of extreme customer focus came a while back, when Nabisco hired Mark as a consultant to help with large-scale manufacturing solution for low-fat Snackwells™ crackers. Nabisco wanted the cracker to have great shelf-life but be low in fat—this was hard, as whole wheat didn't have much of a shelf-life. Mark and some others figured out to improve the shelf-life of the wheat in the crackers, using

a specific manufacturing technology: shelf-stable, low-fat Snackwells™ was the result. The appropriate manufacturing equipment was purchased by Nabisco, assembled on the 6th floor of a manufacturing building, and put into production...for 48 hours. No sooner had production begun than the marketing department decreed 'low fat' to be 'out', allowing that shortening could be used again, which is high in antioxidants, which could activate the right wheat enzymes without special technology. Snackwells™ was acquired by Kraft, and Mark got a phone call one day. At ten cents on the dollar, would IRP like to buy the enzyme deactivating technology Mark himself had counselled Nabisco to buy? Mark jumped at the opportunity and by 2009 had all new equipment for shelf-stable whole wheat flour that is enzymatically inactivated so that it keeps better—IRP is now a leader in supplying this wheat and apparently Kraft is working on acquiring a solution for it again!

Currently, the company still believes that customer-focused innovation is its lifeblood, which is enabled by their smaller size and willingness to deal with other smaller customers: business vitality flows from continuous pursuit of opportunities and solving clients' problems (e.g., shelf-life and stability issues, Halal certifications, etc.) no matter their size. About who his customers are and what makes for a great relationship, Mark says:

"Great innovation and great opportunity come from great customer relationships. The 'big guys' [e.g., food manufacturers] don't care as much about relationships because they aren't innovators, the smaller companies have decision-makers closer to the action, they are more in touch with what the consumer wants, will make the decision, buy your product ... so [we at IRP] don't go after the big guys all the time, sometimes the smaller guys are easier to sell to. The big guys care more about corporate brands than product innovation."

Mark is so focused on transformative value that answers customers' needs, he counts it as a success even if IRP doesn't get the sale. IRP will often produce something in short-run or prototype to show customers based on their stated requirements. Sometimes however, that potential customer will take the concept to another producer who claims to be able to manufacture it for a lower price. Mark says: "I would count that as a success because we gave them what they wanted, but a failure because we didn't get the business." Mark does respond to this or demonstrate defeat—he knows that sourcing it elsewhere for a lower cost would result in a lower quality, something he isn't willing to stoop to. When the sale does come through however, some customers are very closed about what they do with the products—they don't want IRP to replicate the innovation or marketing idea for their competitors. This alone can have its business limitations, though Mark is pleased to offer this loyalty in good faith, so that trust is fostered and future sales are ensured.

Another example of the supreme customer focus of IRP is that everything is made to order. Because of the close relationships that IRP maintains with its customers, they are able to offer modifications, one-offs, and customized products without issue; Meghan says:

"We have a 'yes we can' attitude. We have a reputation for going the distance and delivering. We all answer to the customer, everyone can answer the customer [not just Mark]. The fact that we are smaller and all able to work together really helps us do this. Everyone is very customer-centric, so we are all trying to answer their issues. Atin [Parmer, Operations Planner and Customer Service Manager] and Mark work hard to maintain these relationships at a high level, but everyone is mobilized to solution things for the customer. We work

really hard to provide for our customers' requests, no matter how demanding. Word of mouth has really done us wonders—people are aware of us and we have a good reputation. We don't do any cold-calling—customers typically come to us. We can offer you higher quality products that meet the exact needs you are looking for in your final product—our competitors don't have that. We're a customer-driven company, we want them to be happy. Small customers are just as important as big ones. Happy customers keep coming back."

PROPRIETARY TECHNOLOGY

Mark saw a use for infrared in precooking grains in 1993 that no one else did, and presented a business plan to incubator Saskatchewan Wheat Pool in order to start a business based on it. To this day, very few others use infrared technology in the precooking of grains. Mark also notes that those with same or similar technology, IRP has never notably lost any business to others and vice versa – "the food ingredients market is huge, there's lots of room for all of us to play." Interestingly, when Mark is referring to the 'food ingredients market', he isn't just referring to Canada, he considers his market a global one (see below).

Part of the reason that IRP has stayed a secondary processor that does not do consumer marketing (albeit research), is that "infrared precooking doesn't mean much to consumers... and is largely misunderstood". In fact, even to most food manufacturers, IRP's messaging refers mostly to 'precooking' for the purposes of 'food safety, shelf-stability, flavor and texture improvements, high water absorption/retention, convenience (quicker prep times) and gelatinization (digestible)'—the benefits are communicated predominantly, very little is said about the technology. This is interesting for a 'technical guy' running a technology-heavy company where all employees are heavily interested in and know about food science and food technology. It turns out that customers are not particularly interested in how the end-result is produced, just that it is. Mark says:

"Many customers in the grain space are not familiar with our technology, so infrared was an interesting problematic choice in this space, especially with consumers. It is all perceptive, but we had to make sure that our customers understood what infrared does and doesn't do. At the consumer level there is still misunderstanding. So we didn't want to use our name with the consumer population and we didn't want to do the marketing to them. With our clients—say buyers or food technologists in food companies—we describe that we have a technology that delivers a product that has key selling features: improved food safety, increased shelf-life, stability, flavor (see brochure). It is a company not necessarily defined by the tech we use but by the benefits we provide. This has been an evolution, when I first proposed the business plan in 1993 to SWP I thought it was more about the technology."

Undoubtedly however, the use of this technology and all of its notable benefits in precooking grains that renders them easier to use, safer, more stable, more flavourful, easier to digest, etc. is one of 'InfraReady's' implicit core competencies—rarely imitated, central to IRP's business practices, and ensuring valuable results for customers.

ACCREDITATION AND CREDIBILITY

When IRP was new in the food industry, Mark recalls having some difficulty being taken seriously because:

“Early on this is hard to adopt [a positioning strategy of customer service] because you don’t have credibility in the industry—they don’t know yet that you are reliable, responsible and secure... credibility is earned. You can’t show up in the food scene and say ‘I have the magic bullet’, the world is filled with skeptics. You have to earn your credibility. We did [earn credibility] by getting accreditation and being with the customers this long.”

Accreditation through regulatory bodies or granting organizations often requires what are lengthy, administratively heavy, expensive processes. The value in pursuing these however is significant. With certain certifications customers won’t audit you independently (which can also be variable and time-consuming); many regulatory requirements are met; export becomes easier given customs agencies and international customers have a metric for your standards and compliance; the quality of the food product is increased, rendering better customer results and reputation. These certifications can stand as competitive differentiators in the marketplace and passing inspections (e.g., CFIA) becomes easier and swifter; and the quality of suppliers (e.g., farmers, transportation companies) is forced up given standards for raw ingredients and handling of materials, among other key advantages. IRP has many certifications that Mark is both proud of (which is merited given the hurdles, expense, and duration of some of these) of and sees as a competitive advantage for IRP:

- ☒ British Retail Consortium Certification
- ☒ Global Food Safety Initiative Certification
- ☒ OCIA Certification (organic)
- ☒ Kosher (Cor) Certification
- ☒ INFANCA Halal Certifications
- ☒ Montreal Halal Certification
- ☒ Health Canada Certifications

This level of accreditation represents a competitive advantage as well as a derived core competency for IRP. It is not only impressive, it is very hard for many competitors in food manufacturing to mimic this level of accreditation, given how expensive and time-consuming these processes are. BRC and GFSI are very important for large IRP customers, such as Cargill, Nestle, Nabisco, Pepperidge Farms (Campbell’s), etc. Other accreditations are important for IRP’s export business, which currently comprises almost half of IRPs annual revenues.

AN INTERNATIONAL SCOPE

Almost 50% of IRP’s annual revenues come from international exports. As of 2012, IRP made \$6M in revenues, 54.5% of which was from Canadian sales, 33% from sales in USA, 12.4% from ‘off-shore’ customers (Asia, Europe, Caribbean); year over year the proportion of sales that are not from Canadian sources increases. The following is a list of current and former international countries IRP ships to and does business with:

IRP's INTERNATIONAL SCOPE	
Current Countries of Exports	United States of America, United Kingdom, Trinidad, Taiwan, Hong Kong, Singapore, Malaysia, Philippines, Thailand, Indonesia
Past Countries of Exports	Argentina, Colombia, Mexico, Netherlands, Panama, Sierra Leone, South Korea, Guatemala

As mentioned above, it is no surprise that IRP would have an international scope, given Mark's global perspective and value system. Mark is deeply grounded in family values—a wife, two daughters, one cat, and his daughter's horse—and feels a moral obligation to consider the generations to come, in terms of both food quality and quantity. Prior to settling down and having a family, Mark travelled extensively, even living and working abroad—he understands the macro spectrum of business globally and isn't afraid to do business outside of Canadian border. In fact, Mark describes that it is often easier and cheaper to do business to the south (USA), than to try to ship products to other provinces and territories—vastly separated geographically—within his own country. This propensity is partly due to logistical and transportation concerns (easier to ship due south than to attempt thousands of miles of transport east or west), but can include regulatory barriers between provinces, and cost incentives offered by the United States government. Mark notes that many of his former Canadian competitors are now relocated or relocating (e.g., Alliance Grain Traders) to American states where there are intentional tax incentives, potential volume sales are higher, and costs of doing business are lower.

When asked about exporting specifically, Mark notes that the “Canadian market is small. Exporting is valuable for expanding the business. I wouldn't want to be solely dependent on this market.” In a risk-mitigating diversification strategy, IRP offers ‘diverse products to diverse markets’. In fact, during the last 15 years, some markets have dried up, while others have opened up, giving further credence to a diversification strategy. This is an interesting strategy for a smaller company, which might not have the resources to handle significant risk. In fact, if we look at a growth matrix, we can see that IRP occupies three out of four possible growth quadrants, which is particularly ambitious, though likely the reason IRP has been as successful as it has at exporting and remaining adequately diversified.

Figure 2.0: IRP's growth strategy as depicted by 'Ansoff's Matrix'



Interestingly, Malaysia and South East Asia are buying Canadian grains at huge rates, contrary to the popular understanding that they have their own rice patties and grains. Exports into Malaysia and South East Asia are very strong for IRP, as well as one of IRP's key investor's (Ken Davis') company, Spectrum Ingredients (ships exclusively to South East Asia from Saskatchewan). Despite the partnership that Mark and Ken have with IRP, they do not seem to collaborate overseas. Mark notes that there are some 'strange' regulatory hurdles in exporting that can be obstacles: e.g., quinoa has very high tariffs, which is a hurdle for maintaining margins. Apparently, most of the exporting-based regulatory hurdles IRP has dealt with have been with the USA—another reason Mark looks to 'off-shore' international markets in order to diversify his customer base. He notes that the USA is particularly challenging to deal with because, while it can be a lucrative market, "once you are red-flagged there you'll get audited at every turn. Don't get red-flagged in the USA." Being 'red-flagged' by the USA represents a barrier to trade Mark has seen some of his competitors fall into.

When asked about how IRP overcomes regulatory obstacles and customs issues in general, Mark indicates that it comes down to education, teamwork, and product innovation:

"Know the regulations in local areas: Every country has different rules and regulations and you have to be prepared to meet these policies and regulations—you have to do your research, know them, know how to work around them, or mitigate them. You have to be willing to go that extra distance in order to be able to export. This is a lot of work, but it allows for growth. Innovation and teamwork is critical. Innovation is constantly looking for new products that customers might want. What else can we do other than what we are currently doing to make ourselves successful? Finding new products, finding new customers, being able to adapt to new and emerging markets is key. Definition of innovation: new products and new organizational processes. I don't think you can have one without the other and be successful."

CONCLUSION: OVERVIEW OF IRP'S SUCCESS FACTORS

By interviewing the founder, primary owner, and current CEO of InfraReady Products, Mark Pickard, some of what makes the company a success became clear. IRP is a successful company whose exports comprise almost half of annual revenues. Notably, IRP is run by a food science expert who started the company inside an overseeing incubator called the Saskatchewan Wheat Pool and later bought the fledgling company from them to run on his own. The factors of success identified narrow in on the traits necessary for the company to run (successfully) as it does today (e.g., profitably, exporting significantly), as well as the characteristics of founder Mark Pickard that lead to such success.

STRATEGIC INFRASTRUCTURE MODEL: Through iterative consideration, outside consultants, and refinement, Mark has developed a 'Strategic infrastructure model' that provides a stated vision, mission, and purpose that everyone in the organization can understand, refer to, and follow with ease. This model includes a process for reinvestment into the company, policy about maintaining low costs though not at the expense of product quality, and ensuring healthy operating margins.

VISIONARY LEADERSHIP AND MANAGEMENT STYLE: Arguably the most important factor for IRP, Mark Pickard has visionary leadership and a functional management style. Mark lives by a motto from Proverbs 'where there is no vision, people perish' and applies this to his business: he has a vision for IRP, therefore people are fed nutritiously. Mark thinks on a global, longitudinal scale and is therefore able to preempt consumer trends and customer demands with ready supply. Mark is highly self-reflexive, humble, and quietly confident, leading to great respect from his peers, politicians, community members, and employees, etc. This respect allows Mark a 'hands off' management style in general and gives him cognitive space and time to focus his energy as he prefers—one third on servicing existing business (e.g., customers) and managing operations, two thirds on considering new business (e.g., new customers) and product innovations. Mark is comfortable with risk and sees *not taking* some risks as riskier—sometimes the status quo is the riskiest strategy (e.g., saying no to a prospective customer because they didn't have a specific technology). Further, Mark sees effective management and coaching as a risk mitigating factor—employees will perform to the goal if they believe in it, have bought in.

DEEP KNOWLEDGE OF FOOD SCIENCE AND FOOD TECHNOLOGY: Mark is a food science expert, partly for having come from the Saskatchewan Wheat Pool (research and innovation in food), partly due to an impressive formal education, and partly because he takes a genuine interest and is self-taught. Mark reads into food science and food technology extensively, takes an active interest, and has enough formal training and experience to really know what he is looking at/considering. Mark partners with other food science innovators (e.g., Hetland Seeds, Spectrum Foods) as well as universities, researchers, incubators, regulatory people at the frontier of this science, technology, industry. 'You are the company you keep' could apply to Mark and IRP in this context.

PERPETUAL PRODUCT INNOVATION AND DEVELOPMENT: Mark is continually considering new product innovations and different ways of treating the grains/pulses he can procure, using his technology. New ways of processing the grains (e.g., infrared), new ways of using the grains (e.g., as kitty litter), new grains to procure (e.g., quinoa), new markets in the world to enter (e.g., Malaysia with lentils) are all manners of expansion Mark considers regularly. As mentioned above, on a growth matrix, IRP/Mark has done every one except marketing directly to the end-consumer. Mark has developed his own innovation framework that outlines how and what is valuable throughout the innovation process—it is through this lens that Mark is able to take products to full development (e.g., ReadyMate kitty litter) or drop the prototype before too many costs are sunk with little return (e.g., anthocyanin wheat-based vodka).

COMMITMENT TO TRANSFORMATIVE VALUE CREATION AND CUSTOMER FOCUS: Mark is deeply committed to really transforming the food products that he offers—not offering incremental value, but truly creating new value for customers. Mark doesn't want his customers to buy what he makes. He wants to make what they want to buy and focuses heavily on trying to understand what this is, or will be (e.g., research, ear to the ground, global, longitudinal perspective, etc.). Mark is focused on creating real value for IRP and his clients and in doing so has developed a customer-centric culture at IRP. Manager of Research and Development, Meghan Allen, describes their approach as 'yes we can' when it comes to customer demands, requests, queries.

PROPRIETARY TECHNOLOGY: IRP is predicated on the technology that Mark proposed to the SWP early in his career—an infrared technology that precooks grains making them better in terms of shelf-life, safety, preparation times, etc. This technology is the core differentiator and core competency for IRP, and forms part of the backbone of the IRP competitive advantage.

ACCREDITATION AND CREDIBILITY: Mark was always careful to acknowledge that credibility in his industry was earned, not easily won. Accordingly, he has put great effort into being reliable, consistent, and well-known for the quality IRP produces. This quality is made consistently possible in part because of accreditations that are lengthy and expensive to earn—merits like the British Retail Consortium's Grade A rating of their plant and facilities, Global Food Safety Initiative approval, Montreal Halal Certifications, Organic Crop Improvement Association accreditations, Kosher accreditations, among others. This level of accreditation becomes a competitive advantage given the administrative labour and costs associated with them—these are categorical barriers to entry, operation, and advantage in this industry. Mark's interest in accreditation further stems from his being committed to superior quality, customer-centric, and genuinely interested in food science and technology standards.

AN INTERNATIONAL SCOPE: Mark thinks globally, internationally, longitudinally—simply put, he thinks 'big'. This allows him to preempt trends, look for solutions anywhere, consider customers from anywhere on the earth, consider procuring, moving, being, operating anywhere. The business happens to be geographically situated in Saskatchewan, but Mark's focus and strategies are not necessarily. Almost half of IRP's revenues annually are from exports; the list of countries IRP exports to grow annually.

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