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HOW TO REACH A SUSTAINABLE INTERNATIONALIZATION IN THE AGRO-FOOD SECTOR?

FRULACT: A SUCESS STORY

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FRULACT: A SUCCESS STORY

Abstract

This case describes how Frulact was able to succeed in its internationalization strategy and highlights the role of innovation as a differentiating tool, thus leveraging the multinational's competitive advantage against competitors with higher scale. The combination of Frulact's international approach together with a market-oriented innovation, enabled the company to maintain a sustainable position in the agro-food market.

Frulact, founded in 1987, 100% owned by Portuguese family, which is the Iberian leader and 5th largest worldwide producer of fruit preparations, with 7 production units and a center entirely dedicated to RDI (FruTech) – a key milestone to the sustainable success of Frulact.

Keywords: internationalization, agro-food sector, innovation, fruit preparations

A spoon of yoghurt. A bowl of ice-cream. A sip of juice. Small gestures so trivial that we often forget that behind a creamy strawberry yoghurt or a refreshing peach juice there is a complex process. A mixture of scientific formulas, applied knowledge and a great dose of innovation is part of the recipe. But in such a competitive sector that is agro-food, how can a company stay competitive and sustainable?

But there is a family-owned business, 100% owned by Portuguese capital, which is the Iberian leader and fifth largest worldwide producer of fruit-based preparations for the food industry with a leadership position in the European, Middle Eastern and North African markets.¹ It all started in 1987. 120 square meters of land in the backyard. A gap in the market. Irreverence in the DNA (Frulact, a empresa “uau”; Jornal de Negócios; 2014)². With these three ingredients, Frulact was founded in Lavra, Matosinhos, in 1987. It was the culminating point resulting from Arménio Miranda’s years of experience in the industry of dairy products, working at Longa Vida³. Together with his two sons, Francisco and João Miranda – the current CEO – Frulact was born. In an improvised factory, several fruit preparations such as chila and caramel topping were envisioned, developed and produced. Demand for those innovative “raw materials” of dairy, ice-creams, beverages and pastry was born straight away, with Longa Vida being on the front line.

So far, each company of dairy products produced their own preparations (Longa Vida) or imported them. With the launch of Frulact a “radical change” happens in the sector in Portugal, as declared by João Miranda in Jornal de Notícias, a Portuguese newspaper.² Soon, in the early 90’s Frulact dominates the market becoming the national leader, as importations cease to exist. The company’s main clients included Longa Vida, Agros, Vigor, Laticínios Âncora, Mimosa and Gresso. But Portugal was never enough, at least not for long. “Can we get 4, 5 or 10 more

years like this? Then what, are we completely devoured?” thought João Miranda at the time.² In fact, nowadays, only 2% of Frulact’s production is sold to the Portuguese market.

From Maia to the World – Portugal and Spain

The small Frulact quickly started growing both in size and in vision. Miranda’s family soon understood that “the national market was too small” for their ambitions.⁴ It was necessary to gain more volume and conquer a larger market.⁵ In 1992, they moved to a brand new facility, built from scratch, in the industrial area of Maia. At the same time, the first step of the internationalization process was taken. In 1994, Frulact entered the market of its neighboring country, Spain. André Rocha, currently a member of the Executive Board, explained: “From the moment that our product has value and can be sold in other geographies to grow the business, internationalization is a one way road”. Surpassing risks and challenges, the national company was dominating the Spanish market, exporting more than half of its production (51%).¹ In 1998, Frulact continued to expand, purchasing the deactivated facility of the Fruit Growers’ Cooperative of Cova da Beira, establishing a first stage processing unit^a in Ferro, Covilhã. The strategic location, close to fruit cultivation areas and near the Spanish border, allowed Frulact to gain a deep knowledge and monitor the entire supply chain from the beginning: the fruit channel.

Frulact’s international expedition was starting strong but for the fruit preparations’ company to go further, they needed to become present physically, through production, on the markets they wanted to enter. In addition, a consolidating movement was happening in the sector creating

^a Fruit processing without the addition of new ingredients, including activities such as washing, peeling, cutting, crushing/grinding and freezing, depending on the purpose of its application.

large clients of non-Portuguese origin - for instance, Nestlé purchased Longa Vida – more global and with less direct presence in Portugal.

From Maia to the World – New Geo-strategic markets

The main challenge of the supply chain management was logistics. As André Rocha explains “our product can’t travel more than 2000 km either because of the expensive shipping costs or due to the perishable condition of the fruit preparations. Hence if we want to sell in Central Europe, for instance, we need to have a production unit there. Internationalization is almost a natural model of this business”.

With this in mind, Frulact opened two production units in North Africa: one in Morocco^b (1999) and the other in Tunisia^c (2000). Similar to the Portuguese units at Maia and Covilhã, they were placed nearby areas of high fruit production, especially of strawberries and apricots.

The choice of the markets was not random either. It required a constant observation of the market’s dynamics – competitors that enter, competitors that exit, clients that grow, clients that decrease – and the analysis of the top selling products, consumer trends, legislation, profitability, among other critical strategic factors. Frulact’s competitive strategy entailed looking for markets where more value capture was possible. For the recent multinational company, target markets ought to display high profit margins as well as potential for value added. Besides, being closer to the clients and supply sources allowed Frulact to provide a better service and a quicker delivery of perishable products in large scale. Timing was also part of the deal in such a competitive sector. Thus, when a market exhibited growth potential and faced

^b Closed in 2001.

^c Closed in 2004.

healthy competition, in addition to all the circumstances mentioned above, it was time for Frulact to open a new production unit there.

The French adventure started in 2003, when Frulact entered the market through exports. But it was later, in 2006, that another remarkable step in the internationalization process of the multinational was taken. France was the country where everybody wanted to grow. It already represented 35% of Frulact's business. "It was the market with the highest consumption – each of the four French clients Frulact visited consumed more than the entire company's production – the most demanding and with the greatest notoriety" as stated by João Miranda. Those were among the reasons why France was considered the "Dairy Cathedral".⁷ A challenging market demanded a meticulous preparation: extensive market studies, French lessons for the personnel and the purchase of "kilos and kilos of French dairy products in order to comprehend the organoleptic (flavor) profile of the market and its potential customers" as the CEO explained⁷. With an investment of five million euros, Frulact acquires a French company from the sector, GBP (Granger Bouguet Pau) established in Vichy, in the center of France. Following the same strategy of geographical proximity to customers and markets, the Portuguese group enters the European top-5 of its sector.

In the same year, in the end of May, a third production unit in Portugal is inaugurated. Again, close to areas with high fruit production levels in Tortosendo, Covilhã but contrary to the production unit in Ferro, this new facility was exclusively designed for operating in the second-stage processing^d. Its creation aimed to support Frulact's entrance in the colossal French market.

The acquisition of GBP together with the further purchase of a production unit of the Group Kerry in Apt, South-east of France (2009), allowed Frulact to strengthen its presence in the

^d Usage of the fruit transformed in the 1st stage processing for the development of a product that incorporates other ingredients such as dyes, flavorings and hydrocolloids. The goal of this stage is the preparation of a product that can be incorporated in food products.

French market, as it enabled great proximity to the French customers. In the same year, Frulact opted to concentrate its industrial production in Apt, deactivating the production unit in Vichy.

In 2007, Frulact also announced the creation of a new production unit in Algeria^e. This was possible through a joint-venture by which Frulact detained 51% share. In 2008, Frulact established its first production unit in Larache, Morocco- Fruprep - aiming not only to reinforce its presence in the Moroccan market but also throughout all Middle East and North Africa (MENA), through exports. Later, in 2014, Innovafruit is inaugurated also in Larache, in a project partially financed by the European Bank for Reconstruction and Development (BERD). João Miranda believed that the growth of the food processing industry, in global terms, was going to highly concentrate in Africa. This was among the reasons for Frulact's huge bet in Morocco.

Pursuing the investment in Africa, Frulact built, in 2012, a production unit located at Pretoria area, South Africa, resulting from a joint-venture with the local company Blendtonels. This was the logical progressive step towards the global presence Frulact was building. This unit not only feeds the major dairy players of the country but also clients spread over the 15 countries belonging to SADC (Southern African Development Community), a potential market with over 257 million consumers. **Exhibit 1** provides a timeline of the production units.

Today with 7 industrial units - 3 in Portugal, 1 in France, 2 in Morocco and 1 in South Africa - Frulact is present in 28 countries and in 4 continents with a production of over 65 thousand tons of fruits preparations, all of them serving diverse markets and having different purposes. **Exhibit 2** presents information about Frulact's worldwide footprint.

^e Closed in 2013.

André Rocha explained that there is a balance between Frulact's production units: "Some have more volume, like here in Europe, because the market is bigger; the ones in Morocco are more profitable, the ones in Southern Africa are more exploratory; the one in France is more consolidated as France is the world's biggest dairy market". The overall profitability stays intact because the good performance of some production units pays off the potentially not so good performance of others. **Exhibit 3** presents information about Frulact's turnover by market.

Now, Frulact is going for the "American dream". With an investment of nearly 14 million euros, the production unit number 8 is expected to be operational by the end of the current year (December, 2016). Frulact Canada, located in the Cataraqui Estates Business Park in Kingston, Ontario, has approximately 75 000 square foot and will hire at least 50 employees. Kingston was chosen due to its location at the midpoint between Toronto and Montreal, a region concentrating more than 90% of Canada's yogurt production capacity and also due to its location near the U.S. border. Miranda explains that the production center will serve as a platform not only for the Canadian market but for the entire Northeast American region¹², where Frulact has been active for four years through exportations. Moreover, this new investment will provide the foundations for the further intended expansion plans into the North American west coast, accelerating Frulact's organic growth and recognition as a key global player. The North American market is one of the most significant on a worldwide scale. This market, which includes the United States and Canada, is commercially attractive because of its much lower per capita consumption of dairy products compared to the European market, which by itself bears out its high potential in terms of market penetration. Moreover, in Canada the yogurt with fruit segment accounts for 68% of the total market, compared to 58% in the United States, 33% in Europe, 32% in SADC and 6% in the North Africa & Middle East.

Internationalization Challenges

The adjustment of Frulact's growth and internationalization strategy from a merely exporting company to a new approach to the international markets posed some challenges, mainly related with expatriation of human resources, partnerships and logistics. Rocha highlighted that these aspects originated the typical internationalization mistakes of innocent companies, but at the same time, created strong learning opportunities, allowing Frulact to internationalize better and better in the following projects.

A. Expatriation

The necessity of expatriation arose with Frulact's strategy of expansion and geographical diversification. An expatriate is already familiarized with the company's products and culture. At the same time, it allowed the parent company – Frulact Maia – to control its subsidiaries more easily. Considering the above, Frulact's human resources management was upgraded through the implementation of redesigned career plans. This, aligned with the subsequent incorporation and expatriation of board members, allowed the enrichment of the cultural matrix as well as the adaptation to different markets. Despite of this need, nowadays Frulact only has 5 expatriates, 3 in South Africa and 2 in Morocco. Currently, Frulact employs more than 500 individuals from over 10 countries (**Exhibit 4**), demonstrating the corporate multiculturalism and illustrating the diversity in nationalities, races and genders. **Exhibit 5** displays the evolution of the number of Frulact's employees from 2000 to 2015.

B. Partnerships

Rocha, also the project manager responsible for the implementation of the new production unit in Canada, highlighted the importance of a company to introduce itself into the socioeconomic environment where it aims to operate. This is accomplished by a symbiotic process through the creation of partnerships with all type of stakeholders connected to the company's business

model, such as suppliers, local fruit cooperatives, state entities, clients, etc. Suitable and successful partnerships are unquestionably vital and have always been a key contributive factor for the success of Frulact's entrance in the several countries where it has established production units. It smooths the resistance towards foreign investment when being perceived as a big benefit for the local economy. It must be felt as a win-win situation for both parties. On one hand, it creates jobs and brings investment to the city, positioning it as an attractive location for other businesses in the food manufacturing industry. On the other hand, Frulact is given assistance and support throughout the building process and during recruitment of new employees for the facility, allowing the company to accelerate its growth as a global company.

Regarding suppliers, is crucial to establish solid and durable relationships with farmers of the regions where Frulact has production units, to guaranty the flow of production and ensure a regular provision at competitive prices. "We have to work with those who can guaranty stability, in price and quantity, because we have a commitment with clients such as Nestlé, Danone, Senobre and Unilever that have to put their products on the shelves. We can't afford annual price variations of 100% to 200% as some producers want. No consumer would admit that the price of a cherry yogurt would rise 40% from one moment to another", Miranda explained.¹⁴ Concerning quantities, Frulact also faced some problems in the past, even having to stop a project with a client because Cova da Beira's producers didn't guaranty the agreed volumes.

The choice of business partners has been the most delicate issue throughout Frulact's internationalization process. In 1995, Frulact identified North Africa as a market of great potential and started exporting. However, due to the extremely high customs duties, prices became prohibitive and the company made the strategic decision of settling in Kenitra, 60 km from Rabat, in a joint venture with Moroccan partners. Unfortunately, the intercultural variables

and business culture dictated the failure of the partnership. In 2000, elected Tunisia as the strategic location to establish a new production unit to function as a supply platform to the Middle East's dairy industry.

In a partnership with a local group of automotive wiring harness that was diversifying into the agro-food sector, Frulact invested in a production plant in Nabeul, near Tunis. Regarding capital sharing, Frulact accepted that its dominant position of 60% diluted over time, accepting a fifty-fifty joint venture within a period of 3 years. When the 50/50 capital division was reached, the partnership who had achieved break even on the second year and had even surpassed the business plan's objectives during the first three years, collapsed. Frulact learnt a serious lesson on the consequences of bad business partners. The Tunisians radically changed their behavior, creating such a climate of discomfort and terror to the expatriates that the Tunisian "partner" ended up being charged of robbery and, consequently, arrested. In 2014, Frulact sold its share. Moreover, the production unit in Algeria, created through a partnership with a local competitor, ended in 2013, due to divergent interests stresses the importance of vision alignment between business partners. "Failure is not desirable, but only those who risk fail. The important thing is that the risk is dimensioned and controlled" states Frulact's CEO.¹⁵

C. Logistics

Logistics is what allows Frulact to successfully articulate its supply chain (**Exhibit 6**) from the supplier to the final client. Frulact roots its production process – and its success - in the field of the first-stage processing activity, with two production units entirely dedicated to it, in Portugal and Morocco. The production units are located near cultivation lands, creating synergies and ensuring the continuous supply of a wide range of raw-materials that respect strict food quality standards at competitive prices. The second-stage processing activity is developed under full balance between technology and respect for the fruit's integrity. With a tailor-made philosophy,

Frulact produces personalized fruit preparations through a combination of fruit (in pieces, pulp, puree, concentrate), sugars and flavorings.

Quality control procedures that start in the cultivation field are outstandingly well sustained at the production line level, where the most rigorous microbiological and food safety parameters are implemented. Frulact has a specialized department that ensures the appropriate management of the Quality, Environment and Food Safety System (QEFS) and its continuous improvement, being actively present on the company's suppliers in order to ensure the same level of performance from field to final client. Frulact's focus on achieving excellent quality standards allows the company to fulfil or even exceed its client's expectations. The company's concern for quality has been distinguished by several prizes and leading certifications, such as the Food Safety Management Systems (ISO 22000 – including HACCP system) and BRC - British Retail Consortium Certification. **Exhibit 7** displays Frulact's certifications over time.

Frulact is a B2B company with a short distribution channel once it sells directly to the brands who are responsible for the incorporation of Frulact's fruit preparations (sent in containers of 1000 kilos) into their final products, which will be sold to the final consumer.

The optimization of the Supply Chain is key to the success of Frulact's business not only concerning production – reduce stock-outs, allow quicker deliveries, better response capability - as well as financial aspects – decrease of transportation and storage costs, shorten delivery times, etc. Frulact has an ongoing integration project of its supply chain, involving the six production units and more than 200 suppliers, with the goal of improving and standardizing procedures, thus maximizing the value chain. Moreover, Frulact has focused on improving its support systems towards efficiency and adaptability to national and international clients' needs, specifically delivery times.

Industry and Competition

The highly competitive agro-food sector displays a complex value chain: different companies in different markets and for different consumers. It includes a range of activities related with the transformation of raw materials into food products or beverages and their availability to the final consumer, including diverse activities such as agriculture, food and beverage industry and distribution.¹⁸

According to the Portuguese Statistical National Institute data of 2014, this sector contributes greatly to the national economy with a turnover of 14, 8 thousand million euros and a gross value added of 2, 7 thousand million euros, being the second industry that employs the most in Portugal. In the last 5 years, data from the Portuguese Planning and Politics Department (GPP) disclosed that the sector in question exhibited superior growing exporting rates than importing ones. Besides, GPP indicated that the exports of the agro-food sector were growing at a much faster rate – 7,9% - when compared to the 3,4% average annual growing exporting rate of other goods, thus contributing decisively to the internationalization of the Portuguese economy.¹⁹

Frulact operates in this sector, specifically in the fruit branch, with its core activity being the conception, development and production of fruit-based preparations for the food industry. The company's portfolio includes a wide range of fruit preparations for dairy products, beverages, ice-creams and industrial pastry. **Exhibit 8** provides data regarding the applications of Frulact's products. Frulact is a B2B company with worldwide top clients of the dairy sector such as Danone, Nestlé, Yoplait, Senobre, Pascual, Lactalis, Novandie, Emmi, Iparlat, Lactogal, among many others. In 2015, Frulact reached around 100 million euros in sales, with 13% EBITDA and a Net Profit before Taxes of 6%. Not bad for a company that started in a backyard. **Exhibit 9** displays information about the sales and EBITDA of each of the 7 production units.

Currently, Frulact's main global competitors are AGRANA, ZENTIS and ZUEGG among other smaller fruit preparations' players that have a regional focus, serving specifically the market in which they operate.

AGRANA is the worldwide leader on the fruit segment and the European one in the production of concentrated fruit juices. The company started its transformation activities in 1998 in Austria and supplies from local producers to big international players. It produces a wide range of sugar, starch and fruit-based products, having 55 production units spread through 25 countries. AGRANA's value proposition to regional and global clients is the offer of high quality products, the best service, innovative concepts and experience in the development area.

ZENTIS is a family business founded in 1893 in Aachen, Germany, dedicated to the production of jams. It started the production of fruit preparations for the dairy industry after the Second World War, in 1960, and is currently specialized in the fruit processing. ZENTIS conveys the motto of "innovation that comes from tradition" and is recognized in the market for its high quality standards. The company's geo-strategic locations in the European market allow its proximity to the main and emergent consumption markets. ZENTIS dominates the North American market.

ZUEGG is also a family business created in 1860, in Lana, South Tirol, in the then Austria-Hungary, although today is headquartered in Verona, Italy. It initiated the transformation activities in 1917, focusing on the production and commercialization of fruit jams. The brand centers its communication on the values of Nature, Emotion and Tradition, supported by the strong historical heritage and experience of generations in the fruit production and in the transformation of fruit-based products. ZUEGG is known in the market as one of the players with the best ratio Competitiveness/Quality with key locations in the European market and a strategic alliance with Danone Europe (France, Italy, Spain and Russia).

FRUTECH

Innovation has always been part of Frulact's DNA, being recognized by several entities, as stated on **Exhibit 10**. Among the propositions of the company's vision - operating at a global level and reaching the top-3 of the sector - Frulact aims to be recognized as the most innovative company of the sector. With this in mind, in 2012, Frulact (then celebrating its 25th anniversary) inaugurated FruTech – Agro-Food Innovation and Technology Center –in an adjacent building to the central services and to the industrial unit, at Maia. Representing an investment of over three million euros, FruTech, fully equipped at the laboratorial and pilot scale, together with laboratories of food microbiology and physicochemical analysis, library, videoconference room and auditorium, was the solution of Frulact's constant growing need of Research, Development and Innovation (RDI), due to its internationalization strategy. When operating in a large market, in contrast to market niches, and taking into consideration the company's scope of action – fruit preparations' production with incorporation of technology and know-how – is crucial to seek and create competitive advantages by differentiation, thus the investment on Frutech. “Each year, Frulact loses 15% of its business: this is the weight of the products that are discontinued. It is imperative to innovate constantly to keep growing” – explained Frulact's CEO.²¹ Products have more and more limited editions and a shorter lifetime, stressing the importance of the role of innovation towards a more proactive and constantly adaptable posture with clients and within the sector.

With 45 IDI technicians, FruTech's core objective is to potentiate Frulact's capacity to develop new products with high added value. With this, the company is able to achieve its main ambitions: superior client service - increasing the responsiveness to clients' requests, reducing time-to-market – and sustainability – quicker adjustment to technological changes and development of optimized and more competitive processes, considering the environmental

impact and energy efficiency. Frulact's commitment to innovation is supported by its growing investment in RDI activities, from 1.8%, in 2014, to 2.8%, in 2015, of its turnover, providing the tools for a more proactive posture in the sector – predicting future tendencies, anticipating client's requests - rather than only reacting to the market dynamics.

From the only three Portuguese agrofood companies with a certification of RDI Management Center through the Portuguese norm 4457:2007, an initiative by COTEC (Business Association for Innovation), Frulact is one of them. Pilar Morais, general director of the group's RDI, considered this norm a significant step for Frulact because it disciplined the group to have market-oriented innovations. With this, FruTech was divided into two areas: the Innovation and Technology department and the Research and Development (R&D) department. "Over the years, we felt it made sense to have an independent innovation area (R&D), with its own resources and projects, where the team is very customer/market-oriented (tailor-made products) and have KPIs such as rapid response to customer requests and time of placement of the product on the market." In addition, the company has 2 small international R&D poles in Morocco and South Africa.

On the Innovation and Technology department, the technicians are dedicated to medium/long-term disruptive projects, although there is also a strong focus on commercialization. Maria Ana Marques, who works in this department, explained that the goal here is to create new concepts as well as understand the raw materials and how to modify them in order to optimize the processes, for instance, alternative technologies to pasteurization, as is the case of Ohnico heating and high pressure pasteurization.

To increase its innovation capacity, Frulact has several partnerships with investigation centers and universities, managing the intellectual property created and differentiating products with higher added value. Frulact also has a technical and commercial team working synergistically

with the biggest clients worldwide. It requires strong partnerships between marketeers and development technicians of those clients in order to fully understand their business and, consequently, fulfill their demands and even suggest new products aligned with their mission and business model. At the same time that it is a strategic tool, innovation also has to be a state of mind of the organization and Frulact promotes this through an idea management platform – Frui9 – where any employee can leave his/her ideas on new products or technology development. Later, the ideas are filtered and evaluated by the related department that decides if the idea is archived, developed or implemented. Operating in such a dynamic market, Frulact promotes the Innovdays, technical workshops of knowledge sharing with external partners of key themes to Frulact’s business.

Innovation that tastes well and sells

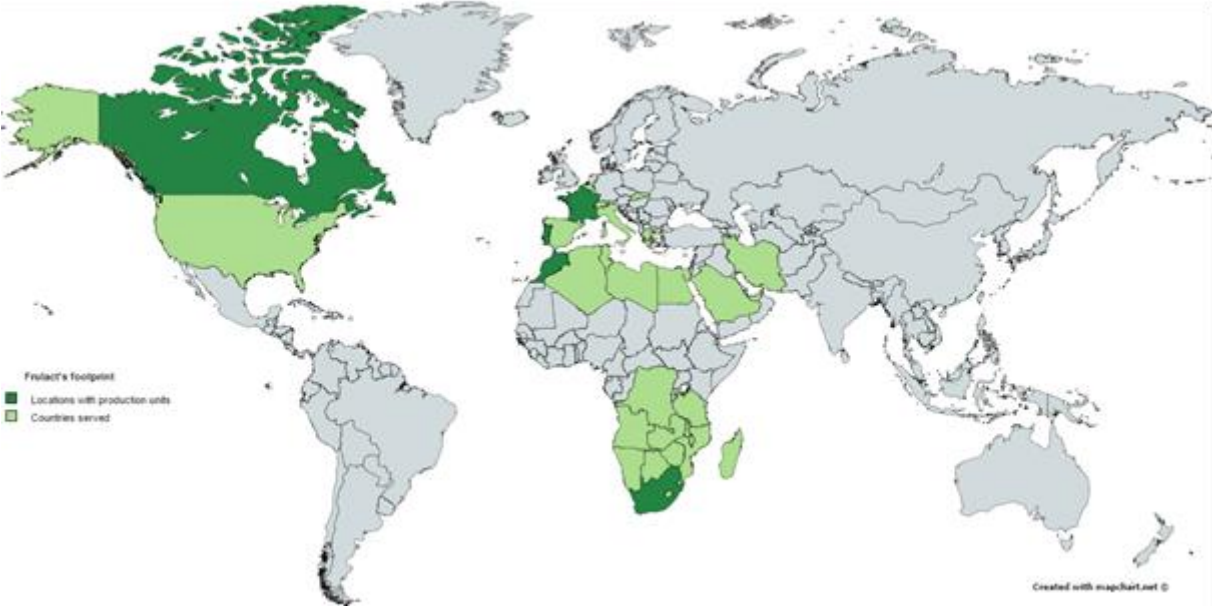
The multinational commitment towards innovation is paying off. Around 60% of the new products Frulact’s launches in the market are “proactivities” – **Exhibit 11** provides some examples - created by RDI team. In 2015, Frulact received 3384 project requests and sent 8129 samples of new products, within an average of ten days. From the amount of projects developed, the success rate (implemented projects/total projects) was 20%. More significant was the percentage of Frulact’s sales coming from new products – 23% - an excellent result but, even so, the company aims to increase it.

With its eyes on the future, Frulact’s constant commitment towards innovation, mainly after Frutech’s creation, is consolidating and strengthening the company’s internationalization process and its relevance in the sector. In such a competitive and dynamic market, companies that survive are those able to turn its internationalization strategy into a sustainable one. And Frulact is doing that, with the use of a powerful weapon called innovation. Its proactivity is bearing fruit and achieving its mission propositions is becoming more and more a closer reality.

Exhibit 1: Timeline of Frulact’s production units

| DATE | LOCATION | COUNTRY | OBSERVATIONS |
|------|-------------------|--------------|--|
| 1987 | Lavra, Matosinhos | Portugal | Closed |
| 1992 | Maia | Portugal | |
| 1998 | Ferro, Covilhã | Portugal | |
| 1999 | Kenitra, Rabat | Morocco | Closed due to the closure of the borders between Algeria and Morocco |
| 2000 | Nabeul, Túnis | Tunisia | Closed - Sold its 50% share in 2004 |
| 2006 | Tortosendo | Portugal | |
| 2006 | Vichy | France | Closed |
| 2007 | Akbou | Algeria | Closed - Sold its 51% share in 2013 |
| 2008 | Larache I | Morocco | |
| 2009 | Apt | France | Deactivated the production unit in Vichy |
| 2012 | Pretoria | South Africa | |
| 2014 | Larache II | Morocco | |
| 2016 | Kingston, Ontario | Canada | Expected date |

Exhibit 2: Frulact’s worldwide footprint



Note: Canada production unit is expected to be operational in December, 2016.

Exhibit 3: Frulact's turnover by market (2000-2015)

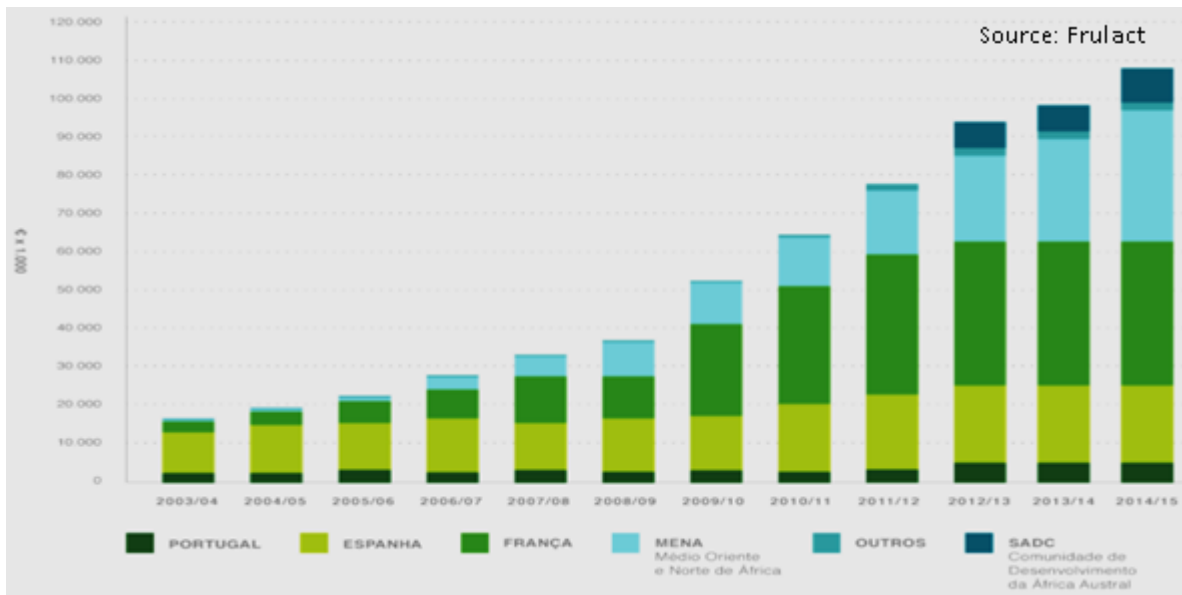


Exhibit 4: Number of Frulact's employees by country

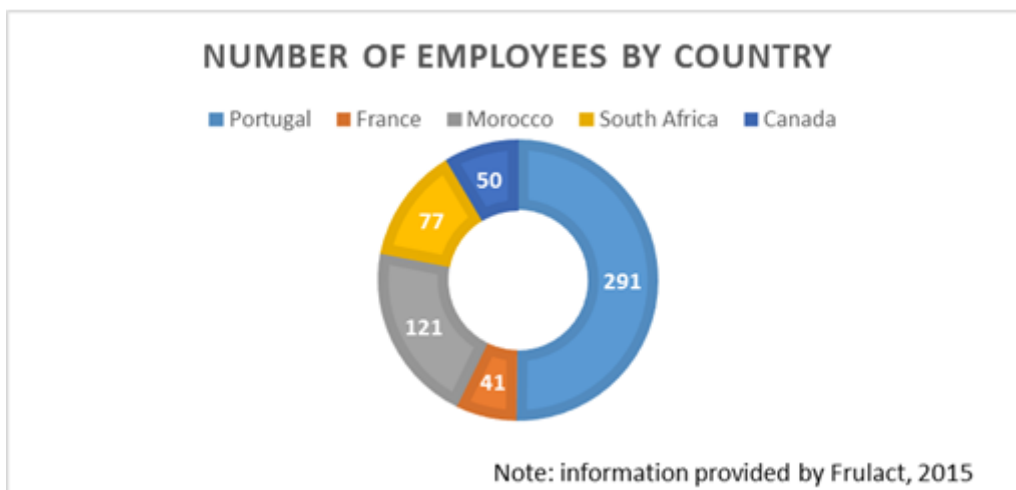


Exhibit 5: Evolution of the number of Frulact's employees (2000-2015)



Exhibit 6: Frulact's Supply Chain

Source: Frulact



Exhibit 7: Frulact's Certifications and Operational Excellence

CERTIFICATIONS AND OPERATIONAL EXCELLENCE

| QUALITY, ENVIRONMENT, FOOD SAFETY AND RDI CERTIFICATION* | | | | | | | |
|--|------------|----------|----------|--------|-----------|------------|--------------|
| INDUSTRIAL UNITS | Tortosendo | Ferro | Mala | Apt | Larache I | Larache II | Pretoria |
| CERTIFICATIONS COUNTRY | Portugal | Portugal | Portugal | France | Morocco | Morocco | South Africa |
| ISO 9001:2008 Quality Management System | ✓ | ✓ | ✓ | | | | |
| ISO 22000:2005 Food Safety Management System | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 2016 |
| ISO 14001:2012 Environmental Management System | ✓ | ✓ | ✓ | | | | |
| NP 4457:2007 - Research, Development and Innovation | ✓ | ✓ | ✓ | | | | |
| BRC - Global Standard for Food Safety | ✓ | | | | | | |
| Biological Production | ✓ | ✓ | | ✓ | | | |
| Halal Foods | | | | | ✓ | ✓ | ✓ |
| Kosher preparations | ✓** | | | | | | ✓ |

*All units are supported by the central services located Mala, included in certifications
**OU – ORTHODOX UNION

| SOCIAL RESPONSIBILITY AUDITS | | | | | | | |
|---|------------|----------|----------|--------|-----------|------------|--------------|
| INDUSTRIAL UNITS | Tortosendo | Ferro | Mala | Apt | Larache I | Larache II | Pretoria |
| AUDITS COUNTRY | Portugal | Portugal | Portugal | France | Morocco | Morocco | South Africa |
| SMETA Four pillars - Sedex | AR | | R | R | AR | | R |
| McDonald's Social Compliance iEnable | AR | | R | | AR | | |

AR = External audit, recorded in platform according to reference
R = Recorded in platform according to reference

Source: Frulact

Exhibit 8: Applications of Frulact's products

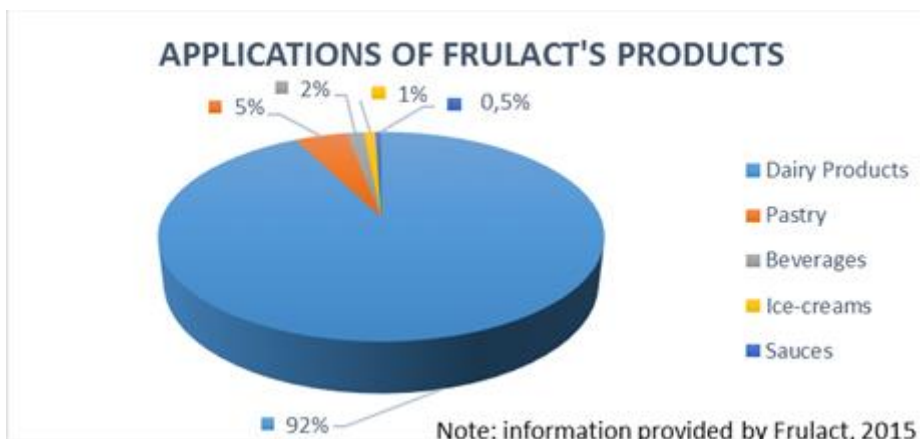


Exhibit 9: Performance in terms of sales and EBITDA of Frulact’s production units

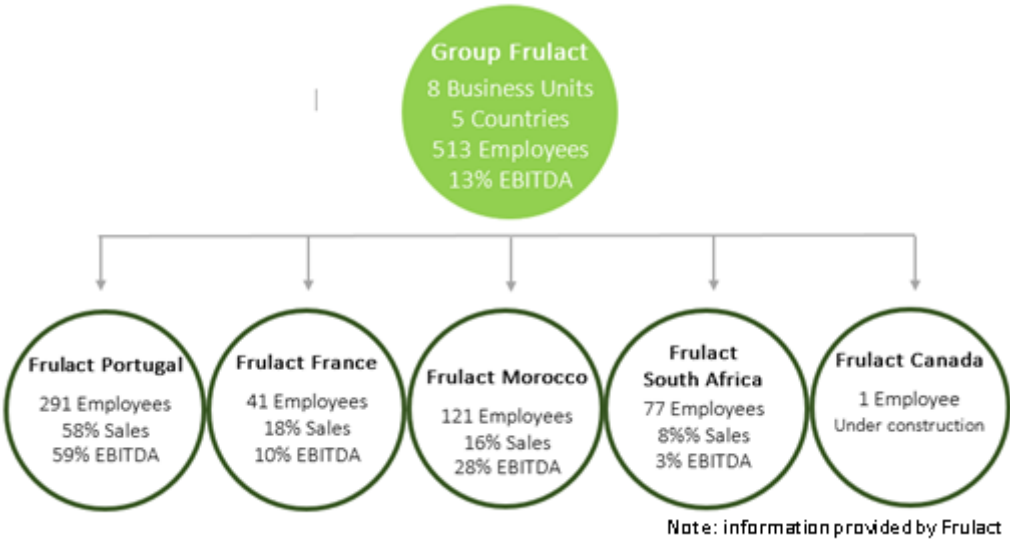


Exhibit 10: Frulact’s prizes

PERFORMANCE AT A GLANCE!

- 2003 | Innovation Agro-food company of the year (Ministry of Agriculture)
- 2006 | International Entrepreneur of the Year (Ernst & Young)
- 2007 | Innovation Company of the year (COTEC – Business Association for Innovation)
- 2008 | Innovation and Technology Award (IAPMEI – Institute for SME and innovation)
- 2010 | Entrepreneur of the Year (INSEAD)
- 2011 | Ruban d’honneur – European Business of the year (European Business Awards)
- 2012 | Leader in New Technologies (Best Leader Awards)
- 2013 | Ruban d’honneur – International Growth Strategy of the year (European Business Awards)

Source: Frulact

Exhibit 11: Examples of Frulact’s innovations and on-going developments

| | |
|--------------------------------|--|
| FruShape | Patented idea envisioned by a Frulact’s employee; fruit shaped in heart or star form; similar to the Powerballs (fruit spheres) both can be used in beverages and food products. |
| Bubble Tea | Fruit spheres with liquid center, highly rich in protein, that can be used in the beverages’ industry |
| Clean Labels | Formulations without additives; growing trend towards the naturalness of products |
| Vinegar-based beverages | On-going project financed by QREN, in a partnership with Mendes Gonçalves, owner of the sauce brand Paladin. |

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Teaching Notes

1. What was the gap on the Portuguese agro-food market, when Frulact was founded?

As stated by the CEO, Frulact started out when there was effectively no fruit processing industry in Portugal. Due to the perishable condition of the fruit preparations (60 to 90 days), dairy companies that didn't prepare their own, were struggling to maintain the imports, and Frulact took advantage of that gap in the market.

2. Why Frulact chose to centralize innovation? If so, why does it have two R&D poles in Morocco and South Africa?

The major trade-off faced by multinationals when managing innovation is between efficiency and fulfilling the diverse needs of local markets. Frulact engaged in a center-for-global strategy, opting to centralize innovation. With this, the company is able to reduce costs and, most important, to concentrate the knowledge creation and draw specialization benefits from the recruitment of expert technicians, allowing for a closer control and coordination of the RDI activities. Moreover, it maximizes the interactions with the several entities of the Nacional Scientific and Technological System. However, Frulact has also two R&D poles in Morocco and South Africa. On one hand, those countries don't follow the European directives and regulations, having its own legislation. On the other hand, they have very particular and characteristic tastes, thus the importance of fully integrating the cultural idiosyncrasies of those markets and therefore, fulfilling their specific demands. For instance, the Arabians prefer strong, intense flavors with bright colors, in contrast with the European market.

3. Considering the three technological trajectories typified for the sector (fruit and vegetables' products) – mass production, technological innovation and specialized offer – in which does Frulact fits?

According to Posi- Compete 2020¹, a program that mobilizes Structural and Investment European Funds for the period 2014-20, under the domain of “Competiveness and Internationalization” of Portugal 2020, Frulact falls within the context of specialized offer. Companies in this trajectory, like Frulact, have intense internal product innovation, resorting to the exterior for the process innovation, thus being important innovation sources for the major agro-food brands. Product innovation, a competitive weapon in this sector, requires not only a strong knowledge of scents, textures, flavors and colors, but also a constant evolution of new technological ways to manipulate new ingredients. Consequently, it enables the creation of products with higher added value – Frulact’s value proposition.

4. Frulact aims to be one of the most innovative companies of the sector. Currently its main competitors are AGRANA, ZUEGG and ZENTIS. What are the innovation strategies of these companies – centralized or decentralized RDI?

AGRANA’s strategic goal is to differentiate from its competitors via constant optimization and product innovations. Similar to Frulact, AGRANA’s R&D activities are bundled at the “AGRANA’s Research & Innovation Center”, in Tullin, Lower Austria². ZUEGG follows a decentralized innovation strategy. According to the company’s website³, each ZUEGG’s production unit has its own R&D department with its own laboratory. In order to tackle the specific needs of each customer, each ZUEGG’s project manager is responsible for a group of

¹ COMPETE 2020 ao lado de quem cria valor | Agroalimentar | Vol. III, 87-89 Retrieved from http://www.poci-competite2020.pt/documentacao/detalhe/RoteiroVOL_III (21/05/2016)

² <http://www.agrana.com/en/about-agrana/research-development/> (22/05/2016)

³ <http://www.zuegg.it/EN/Fruit-preparations/Prepared-fruit-Quality-RandD.html> (22/05/2016)

customers, being able to better track and monitor the respective ongoing projects. ZUEGG⁴ also promotes constant contact and interactions between R&D and their clients. Lastly, ZENTIS, with its motto of “innovation based on tradition”, has several production units and R&D departments in Poland, Hungary, Russia and the United States. ZENTIS has R&D teams in each new location. This enables better adaptability of its products, and therefore, superior responsiveness to the local market requirements. Besides, the leading fruit processing company in Europe has an innovation center in Aachen, Germany, where it is headquartered.

5. Has Frulact ever thought about engaging into vertical integration, for instance, incorporating the fruit preparations into the final products or even having its own product line?

In fact, Frulact created a company – Frulact Nutrition that belongs to the Frulact Group – which besides producing under private label for big players of the industry (baby foods, juices, jams...), launched a line of products, under the labels Fru, Fru – Fruit for You and Benefit. Including smoothies, concentrated juices, jams and fruit snacks – a B2C adventure of the company – Frulact’s own products used to be sold only in the Portuguese market. But according to Pilar Morais, the adventure was not that successful. With the arrival of a new administration – including André Rocha – the profitability of the B2C business was evaluated and it fell short of expectations. Thus, Frulact opted to put the B2C business – produced at Maia - in stand-by. The multinational decided to focus on its core business and future goals instead. Frulact’s focus rely on developing more innovative and different concepts (for instance, savory products such as garlic/parsley preparations with applications in cheeses, like Philadelphia) and diversifying its product portfolio.

⁴ <https://www.zentis.de/en/Industrial-Business/Preparations-for-Dairy-Products/About-Us-Where-Innovation-is-at-Home> (22/05/2016)