PLC, Finding a Place in the International Market

A case on industry analysis and internationalization process

Ana Alexandra Antunes Santos Silva

Supervisor:

Prof. Paulo Marcos

Dissertation submitted in partial fulfillment of requirements for the degree of MSc in Business Administration, at Universidade Católica Portuguesa, June 17th 2013.

PLC, Finding a Place in the International Market

A case on industry analysis and internationalization process

Ana Alexandra Antunes Santos Silva

Abstract

The metallic structures surface treatment and maintenance industry is a support industry for larger revenue-builders' sectors, such as the oil and gas and hydroelectric industries. Nowadays, this industry, facing a globalized world and growing demand from its supporting industries, faces challenges that are testing its current growth and internationalization strategy. PLC is one company operating in that industry and struggling with the new paradigm of imposed subsidiary based growth – as demanded by some local governments – versus the ongoing project based growth into foreign markets. It is Mr. Santos job to recommend and prepare for the PLC board of directors their future internationalization strategy knowing that a radical change in current strategy may be unwelcomed and that the projects prospects in the Peruvian and Colombian markets are very appealing to PLC board despite lacking capacity to embrace them as it is. At the same time, disregarding managerial problems in the Brazilian and Angolan markets – which represent a big part of PLC revenues – may be fatal to PLC future success.

Resumo

A indústria de tratamento e manutenção de estruturas metálicas é uma das indústrias que suporta outros sectores de maior dimensão, como é o caso da indústria petrolífera e de gás natural. Actualmente, esta indústria, inserida num mercado globalizado e procura crescente por parte das indústrias que suporta, enfrenta desafios que estão a pôr à prova o seu actual crescimento bem como as estratégias correntes de internacionalização. A PLC é uma das empresas nessa indústria e está a tentar arranjar soluções para este novo paradigma entre a estratégia de crescimento com base na criação de subsidiárias, imposta por alguns governos locais, e a estratégia actual baseada em projectos pontuais em mercados externos. O objectivo do Sr. Santos é recomendar e preparar a futura estratégia de internacionalização para a direcção da PLC, sabendo que um mudança radical na estratégia actual pode não ser bem-vinda pela direcção e que os potenciais projectos nos mercados peruano e colombiano são muito atractivos aos olhos da direcção apesar da falta de capacidade para os abraçar de momento. Além disso, desconsiderar os problemas de gestão no Brasil e em Angola – mercados muito representativos em termos de vendas para a PLC – pode ser fatal para o futuro sucesso da PLC.

Acknowledgements

I would like to start by thanking my parents for all the support they have given me throughout the years, for being supportive and pushing me to reach higher both in my personal and academic lives. Their support and love made me the person I am today and have influenced me deeply to achieve every single goal I set for myself. I would also like to thank my sister with whom I have also shared the most important moments of my life and who has always been there when I needed her.

I special and very dear thanks to Bernardo Domingos who has been a very important part of my life since the beginning of college, who has constantly believed in me and without whom this work and all my life achievements since the day we met would not have been as valuable.

I also would like to thank my dearest friends and family who have made each and every single day of this journey more interesting and fun, even in its worst days.

I would like to show my appreciation to Prof. Paulo Marcos whose help was essential to the development of this thesis.

I could not end without acknowledging the support from PLC CEO and chairman as well as their business development director for the unfaltering help and availability during the development of this thesis.

Table of Contents

Figures Index

Tables Index

Introduction

The main objective of this case study is to provide instructors a tool to lecture the general topics of industry and internal analysis, at the same time as reflecting on the internationalization process most firms nowadays face at some stage.

By being based on a true company's experience it is a highly practical case that will allow students to better understand the highly capital intensive metallic structures maintenance industry while addressing up-to-date strategic and marketing topics.

It is expected that students acquire practical knowledge by applying several frameworks and concepts while solving the case, such as SWOT analysis, Porter's five forces, competitive advantages, Uppsala model and general business strategies framework.

Instructors, on the other hand, are expected to conduct class discussion, be prepared to relate the topics to make them clearer to students and to extract conclusions after each proposed discussion questions to optimize the study of the following case study.

Case Study – PLC, Finding a Place in the International Market

As of April 2013, from his window-seat on the Air France flight AF442, Rui Santos looked at Guanabara Bay thinking about his past two years at Perrot Licerge Company S.A. (PLC).

Mr. Santos, business development director of PLC, was hired in May 2011 to take the lead of the company's internationalization process in the Portuguese speaking countries. He was responsible for the expansion into those nations and the consolidation of PLC presence in the Angolan market in an attempt to improve their financial records that were being dragged down by the company's negative performance on that market.

With this task at hand Mr. Santos has helped the company turn their operation in Angola profitable and set foot in the Brazilian market. In Angola, PLC had one signed contract and in Brazil, at this point, three contracts were in operation.

Though results are positive, Mr. Santos was deeply concerned with what would be PLC reaction to them. Octave Licerge, PLC CEO, had shared with him during a conference call that in spite of the rapid Brazilian growth and the recovery in the Angolan market, the number of new projects was below their expectations:

> "It is our desire to increase our presence in the international market to further minimize the risks of the cyclical operations in the European market, which is focused on asbestos removal from all buildings – demanded by law in France – and maintenance of nuclear power plants concrete structures"

The company needs to define an international growth strategy for the next two years, becoming paramount to identify key markets and new potential markets as well as to conceive an entry strategy to each of them. They were aware that by following the wrong strategy, PLC could easily fall behind their competitors and lose market share on emerging markets.

Recently, new contract opportunities have been presented to PLC both in Colombia and Peru. Mr. Santos, though knowing PLC is lacking management workforce to tackle even more geographies, has been wondering if these opportunities could or should be taken into consideration when developing the internationalization proposal he would present to the company during their next meeting.

Perrot Licerge Company S.A. case was prepared by Ana Alexandra Silva under the supervision of Professor João Borges de Assunção and Professor Paulo Marcos. It is intended to be used as basis for class discussion and not as an endorsement, a source of primary data, or an illustration of effective or ineffective management.

This case is based on actual experiences and real events. However, proprietary data has been disguised to preserve confidentiality keeping all the essential facts and relationships intact.

However, Mr. Santos, while going through the presentation he would be delivering in a few hours in Le Havre to PLC board of directors, believed that there was a question more important than where the company should internationalize to next.

The company has been forced to implement subsidiaries in a few countries due to local laws, and its current project based business strategy has to be reviewed.

As Mr. Santos saw it there were only two ways to proceed: maintaining the current project-based strategy – following clients to where they were – pursuing expansion on a project-based perspective, or deciding on a more sustainable strategy, building capacity in a given region and growing inside that market by becoming competitive and creating sustainable competitive advantages.

His presentation to the board of directors could define the future of PLC. Mr. Santos was still unsure how his proposal would be received by PLC's management team, though he had thoroughly analyzed the pros and cons of each strategy. As such, he had left one slide blank to be fulfilled during the flight. Despite that, he was confident that establishing a structured strategic course of action to PLC internationalization process was essential to the company's success and growth, if properly defined and implemented.

PLC overview

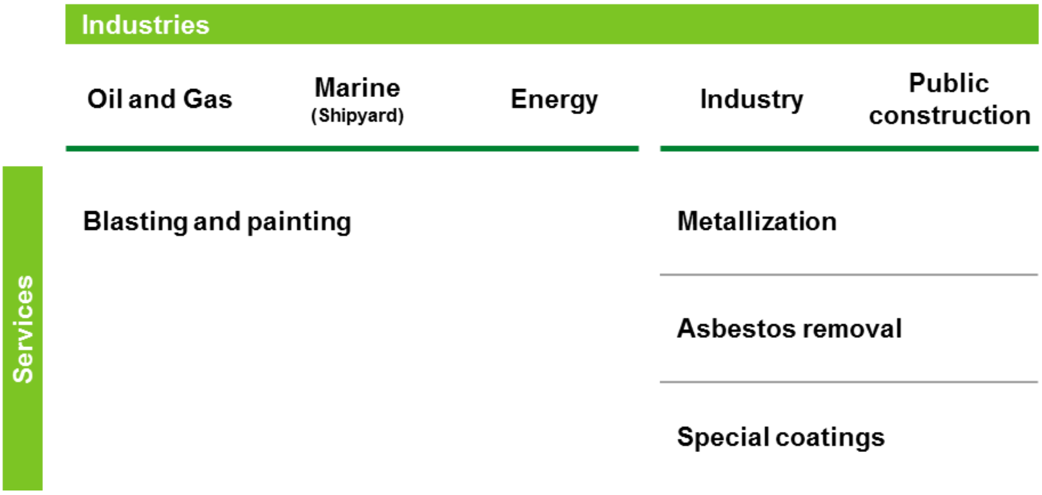
Perrot Licerge Company S.A., is a family owned specialized company working in the metallic structures surface treatment and maintenance industry. The company, founded by Perrot Licerge in 1947, as a painting[1] company for large industrial complexes, has quickly grown and today offers four different services within five industries (see **Figure 1**).

Nowadays, the company is run by his sons, Octave Licerge and Gustave Licerge both board of director members of PLC, which has become the specialized leading company in the market.

The 1947 painting company has transformed itself over the years. Through time PLC has never lost its family orientation which is reflected on the company values upon which their competitive advantage is based. Mr. Santos explained "it has been the company's policy that geographic and sectorial expansion never goes beyond the level of expertize PLC resources own".

[1] The application of resins that both protect and color a metallic structure is called painting in the mentioned industry.

Figure 1. Services offered by PLC and the industries of operation



Source: PLC website

As such, and because PLC is competing in a highly competitive and fragmented market requiring highly specialized workforce, its internationalization consolidation has not taken a fast track. According to Mr. Santos:

> "(...) The company is proud of employing highly qualified personnel and increasing its technical competencies through in-house training. That is how PLC has managed to stay competitive and grow: PLC sets high standards to their employees to deliver the best service in time and as scheduled to our clients."

Le Havre, a French northern coast city, is home for PLC headquarters. For about 12 years the company has maintained its focus on a regional development, strengthening its position in the northern French market by providing their core business service: painting.

The 1970's brought many transformations. PLC started offering blasting services[2] which complemented their painting service and created 10 blasting and painting facilities throughout France, enhancing their regional reach and becoming a national company.

To complement their services' portfolio, PLC ventured into the capital intensive special coatings market[3] embracing at the same time a new client market: the marine industry. The most important clients for PLC became the ones from the marine industry along with the ones hiring special coating services. With a strong and leading position in the French market the search for contracts abroad was initiated.

[2] Blasting is the process of eliminating all residuals, oxidation and surface contaminants from the metallic structures through high pressure machinery that smoothen the structure while creating microscopic holes to prepare the metal to receive the painting (resin application).

[3] Special coatings are protective covers applicable to surfaces making them resistant to certain characteristics. Examples are fireproofing doors, nonskid floors, water-resistant surfaces, among others.

With the acquisition of their first service vessel (in 1985), which has enabled the company to work on the maintenance of oil rigs offshore, their entrance in the international markets, especially in Africa, could be more thoroughly pursued.

“For each project a dedicated team”

The growth of the company was highly driven by the service portfolio diversification. They specialized in different surface treatment and maintenance services to be able to have a valuable offer to clients. By doing surface preparation, paint resin application and applying a water-resistant layer over metallic structures, for instance, PLC gets ahead of the smaller companies that do not have the capacity to perform such a comprehensive work.

PLC has two characteristics that are the foundation for their competitive advantage: one, as already mentioned, is their focus on employee qualification; the second one is their investment in research and development (R&D). PLC owns their own R&D center and is at the vanguard of innovation in their field of expertise. Some of the patented technologies that have been developed by PLC, and many of the products used by the industry, were developed in-house for a better service performance.

PLC strives to address each contract and client need in a customized manner, providing tailor-made solutions to the majority of situations. Their resources, both physical and human, are highly specialized to compete in quality in the sectors they are established in.

As the company motto conveys: “for each project a dedicated team”, PLC policy is in line with delivering high quality, with expert teams that can present the best results in the market.

According to Mr. Octave Licerge “what makes us different from the competition is the fact that we provide services with the utmost quality possible in the surface treatment sector and we strive to make it better than all others”.

Going abroad

The internationalization process started in the 1970’s, within Europe, where market needs were alike the ones in their home market both cultural and geographically, allowing PLC to manage the operations through their headquarters in Le Havre.

Their first non-European project was developed in Nigeria, in 1971, following Chevron which was looking for a metallic structure maintenance company that would be interested in working for them in Nigeria. Finding that the project had the dimension and would reach the demanded level of profitability to be considered a worthwhile investment, PLC decided to venture into the Nigerian market at a time when many others rejected the opportunity classifying it as a high-risk investment. It proved to be the right move for PLC at the time. As the first foreign company providing the Nigerian market with high-standard surface treatment services, other projects followed in that country and the company finally established a subsidiary and kept hold of a first-mover advantage.

In 1985, the acquisition of a service vessel allowed PLC to sign more contracts in Africa, since now they could more easily work in offshore platforms, where the company specialized in servicing the oil and gas offshore and onshore clients, as it was in most African nations.

The vessel's acquisition enabled PLC to start its cross-continental internationalization process slowly, testing the market before venturing onto creating subsidiaries. Using the vessel was a flexible way to work and allowed mobility in Africa. Though their first projects were in Nigeria the company soon signed contracts in oil rigs in Cameroon, Angola, Algeria and Egypt.

Always remaining true to their principles of never undertaking projects above and beyond their ability to sustain them with high quality service delivery, PLC decided to respond to the growth in client demand in Africa by acquiring more service vessels. By 1994 they had three fully operational vessels and were able to undertake more than one project abroad at the time.

The expansion followed the oil and gas expansion in African countries where PLC expertise could be applied. Nowadays, the company has subsidiaries in many African countries (see **Figure 2**). The implementation of most of them was a result of the regulatory measures undertaken by those countries making it mandatory for companies working on the oil sector – key sector for those economies – to have local representation.

There are many constraints to the African operations related to political and legal factors. There is political instability in the majority of those markets and the legislation is frequently changed, making it hard for companies to adapt.

With expertise to grow beyond current markets, it was Mr. Licerge desire to explore the Portuguese-speaking nations' potential, which he knew to be booming, according to suppliers. With that in mind, and after thorough studying all the alternatives, Mr. Licerge hired Rui Santos as business development director and together they defined the Brazilian market as a priority market to go into.

Figure 2. Geographic distribution and respective industries

Regions and activity sector			
	Europe	**Africa**	**Latin America**
	France Industry Public construction Energy **Rest of Europe** Industry Public construction	Oil and Gas	Marine (Shipyard)
Countries	Belgium France Luxemburg Switzerland	Algeria Angola Congo Egypt Ivory Coast Nigeria	Brazil

Source: Case writer based on PLC information

Nowadays, PLC has operations in three different continents, is market leader in France and one of the most important global players in the blasting and painting and special coatings global markets.

All the internationalization process of PLC so far was based either on going after clients into new markets, when project dimension and profitability were considerable or, on a much smaller base, on assessing suppliers' ventures to spot potential opportunities, as was the Brazilian case. The former strategy implies that no structure is created regardless of creating subsidiaries. "We choose our projects bearing in mind that if something goes wrong we can mobilize our equipment without losing any capital assets and making sure revenues are much higher than transportation costs associated with foreign projects.", explained Mr. Octave Licerge.

For PLC, the implementation in and development of local regions is a major endeavor. However, the company is very flexible and keen on moving towards new markets depending on clients' strategy and suppliers' expansion in order to avoid dependency risks related to a specific location or the provision of a single service.

Services Offered and Their Application

As of 2013, PLC is an international company, with clients in Europe, Africa and South America. PLC provides 4 main services (see **Table 1** and **Exhibit 1**).

Table 1. PLC Services

Blasting and painting	Blasting is the process of removing residual chemicals and preparing the surface for the application of coloring and protective resins that avoid surface oxidation and corrosion.
Asbestos removal	Asbestos is a toxic chemical present in many constructions. A law in enacted in France requires all constructions containing asbestos to have that substance removed from it to reduce health problems.
Special coatings	Special coatings are the surface treatments that provide anti-skid, fireproof, paint-resistant, water-resistant and other special characteristics to any given surface.
Metallization	Application of metallic resins that grant a metallic look to the painted surface, very common in the automotive industry.

Source: Case writer based on PLC information

Blasting and painting services account for the greatest part of PLC sales (84% of total sales) since it serves the oil and gas industry as well as the marine industries, which are the fastest growing in terms of PLC client base.

The company serves other industries within this area of expertise. Mainly in Europe, where the energy market is their main focus, the company has managed to achieve a strong position working in 95% of the nuclear facilities. Besides that, for the blasting and painting in confined spaces PLC R&D center developed one of the most advanced technologies to work on the penstocks (water pipes in hydroelectric facilities) – using remote controlled technology to operate their patented robot – preventing their employees from the high safety and health risks this type of work represents.

The **asbestos removal** is the least significant of all services provided by PLC (less than 1% at this point), since it only a minority of clients still requires the proper surface treatment to remove it and due to its low potential. The removal of asbestos from structures using that chemical is mandatory by law in France due to the elevated health risks associated to it. As such, the service has been fast declining and there is a progressive reduction in the service volume as the number of serviced buildings rise.

Metallization is the application of metallic coatings to non-metallic surfaces; it is often used in the automobile industry but also in the energy and shipbuilding industry. However, due to its lower protective properties against water than other special coatings it is not used in a large scale and is not the part of PLC core services (represents approximately 3% of total services).

PLC **special coating** is the second largest business unit (12% in total sales). This service is designed to the industrial sites and public works sectors. As such, it is highly dependent on macroeconomic factors, especially political decisions and economic environment. This service is mainly performed in Europe and has been decreasing in relative weight on the company's total sales.

Mr. Santos has stated:

> "The company is following an international diversification to avoid being too dependent on the stagnant European market, where opportunities have not been booming, competition is high and prices are lower. As such, it is important to enter new markets providing different services to diversify the risk and reduce exposure to country risk, which is high in our industry, since it is focusing on the oil and gas clients based on developing nations"

Industry suppliers

Companies operating to provide materials to the metallic structures maintenance industry do not abound. There are two main supplies needed by PLC and its competitors: paint and machinery.

While paint is produced and commercialized by a wider variety of global and local suppliers, machinery is mostly concentrated in very few global suppliers, mainly from Germany or the United States.

When it comes to paint, changing between suppliers may not have a big influence on the quality of the job delivered as long as the paints used present the same components and technical specifications.

Machinery suppliers on the other hand, are not only scarce but also cannot and should not be changed frequently. Changing machinery involves new staff training and new job techniques which may cause delays in projects or even decrease quality of the delivered service.

PLC strives to maintain good relationships with its suppliers to assure they have access to the best technology available and that they do not have to incur in costs due to constant changes in machinery. At the same time, maintaining a good relationship is also in the best interest of suppliers since the oil and gas industry is one of their biggest clients and PLC is a top player in that market.

Oil and Gas and Marine Market overview

PLC operates in a very labor intensive industry – salaries and wages represent on average 19% of total sales[4] – in which specialized labor is required and the demand for it is high whilst qualified candidates are a scarce resource worldwide. The work of PLC involves high-risk operations in adverse and hostile environment that require a high level of expertise from employees.

The same applies for any other company competing in the maintenance and treatment of metallic structures and other industrial surfaces industry. Hence, labor prices are astonishingly high. There are only a handful of people that have the necessary qualifications and there are many companies competing to hire those employees. As a matter-of-fact, growth in the industry is, in some way, limited by labor availability. For PLC, it has been a reason for their cautious expansion, since quality of service is highly valued and qualified labor a condition for that.

Though companies may be allowed and certified to train their employees in certain specific tasks, there are some certificates, such as NACE and FROSIO[5] that can only be provided by qualified institutions, making it more difficult to find and employ employees with those qualifications.

Despite labor offer constraints, the maintenance and treatment of metallic structures and other industrial surfaces sector is fast growing due to the strong growth of the oil and gas industries in developing nations in the past few years driven by the oil consumption from India and China[6]. The oil and gas industry is expected to continue its growth trend and reach a value of US $ 7,783 billion in 2017 with a 6.7% CAGR between 2012 and 2017[7].

Currently, PLC has a 22% market share in the countries they are operating in, and a global market share of 11% of total industry revenues, setting them as the leader in their regional markets and second in global oil and gas industries (see **Exhibit 2**)

In its turn, in the shipbuilding industry if on one side commercial ship orders have plummeted due to oversupply, the oil and gas and offshore shipbuilding has been

[4] Average calculated from PLC real data from 2009 until 2012

[5] NACE is a certification for the corrosion surface treatment industry proofing a person preparation to work in that industry. Frosio is the certification of inspectors for surface treatment that gives its certified members the knowledge and skills required to ascertain whether or not a surface treatment job is of high quality and in accordance with safety standards.

[6] Source: Global Oil & Gas Exploration & Production: Market Research Report. IBIS World. March 2013.

[7] Source: Global Oil and Gas Refining and Marketing Industry 2012-2017: Trend, Profit and Forecast Analysis. Lucintel. March 2012

supporting the sector's positive growth[8], which represents 10% of the whole shipbuilding industry[9].

PLC works both for the shipbuilding industry in (1) the maintenance of rigs, vessels and FPSOs (floating production storage and offloading – floating vessels used for oil storage and processing on offshore platforms) either conducting regular programmed maintenance dockings or vessels conversions and (2) surface preparation at dry docks for vessels building and construction. Such industries have contributed largely for PLC continuous growth along with their client industries growth.

Perle Techni

PLC is competing in a highly fragmented market where there are many local small companies performing specialized services but providing a very narrow service range (see **Exhibit 3**). Large multinationals are not common and PLC is one of the few. Their largest competitor is Perle Techni, a French company founded in 1957 that has embraced from the start an aggressive internationalization strategy that was further propelled after being acquired by an investment fund.

Perle Techni is a publicly traded company that provides the majority of their services abroad, their operations in Europe account for 46%[10] of total sales and it's largest client sector is the oil and gas representing 67,5% of the group's total sales[11].

Perle Techni has been able to penetrate many geographies and its international presence is much stronger than PLC's. Moreover, they also have a broader service base, including passivation and other highly specialized services most of the largest competitors are not able to offer since they have fewer resources. On one hand PLC has always had a more conservative approach regarding expansion; on the other hand, being part of an investment fund has allowed Perle Techni to grow rapidly due to the larger financial resources' availability. In addition, the qualifications they require from their employees are different from those PLC demands from theirs. Since Perle Techni performs a broader spectrum of services in larger projects – achieving a higher volume than PLC – they can better balance their teams, having a mixture of low-qualified and highly-qualified employees – as more people may be on board of working ships due to its larger size – that may focus on specific tasks requiring different levels of specialization.

[8] Source: Deutsche Bank, through *Global Shipbuilding Outlook – 45% of Shipyards Have No Orders Post 2012* (November 2012). http://gcaptain.com/. (last accessed on March, 15th 2013).
[9] Source: World Marine Markets. Douglas-Westwood Limited. March 2005.
[10] Source: http://prezioso.fr. (last accessed on March, 18th 2013)
[11] Source: http://prezioso.fr. (last accessed on March, 18th 2013)

For PLC that is much harder, since their working vessels do not have the same capacity and projects are smaller, obliging them to focus on highly-qualified employees that perform most of the tasks regardless of their required specialization level.

Perle Techni internationalization strategy is greatly defined by being part of an investment fund and a public trading company which demands a certain contract volume and regional diversification. Adaptation to local and client specific characteristics follows the aggressive volume expansion sought after by Perle Techni. This volume driven strategy has been reflected, in the past year, in performance shortcomings when addressing clients' needs and contract timings, which has been seen as an opportunity for PLC to acquire new contracts with former Perle Techni clients who no longer were satisfied with the performance of the latter company.

Setting foot in Angola

The company started expanding to Angola in the 1970's using service vessels to perform works at offshore platforms. It took more than twenty years and the imposition of Angolan laws demanding companies servicing the oil and gas industry in Angola to be based in the country to convince PLC to create their Angolan subsidiary. Still, despite having created the company, no management structure whatsoever was put into place – PLC continued running the operations in Angola from its Le Havre headquarters.

The problems and how they are being addressed

The operation in Angola is highly influenced by the ever changing laws in the country. Now companies are not only demanded to create an Angolan subsidiary but the majority of the capital has to be held by Angolan nationals (more than 50%). PLC has, following the guidance of Sonangol – regulatory oil and gas agency in Angola – requirements, identified their local partner and they are currently formalizing the company's new contract.

Besides that, it is now required to employ even fewer foreign labor force (the Angolanization program), only 49% of labor could be foreign. That poses a great problem in operations: the hiring of qualified employees. Angolan professionals do not have the certificates and training level expected and sold by PLC. So far, PLC has been able to fill in the vacancies that require only the technical expertise that they can provide as in-house training to the staff with local labor force. They also have hired local labor force to make inspections and supervision of certain areas to abide the law.

The frequent changes in Angolan laws are a constant through time, and it is a cause of enormous uncertainty for most companies operating in the country.

When Mr. Santos was hired in 2011, the Angolan operations were contributing negatively for the overall net profit. The overall loss caused by Angolan operation was over 5 million USD. Those results were due to several reasons, among which, the most important are:

1) A **seven-year fixed price contract signed with Chevron** in 2006 that had never been revisited or renegotiated and that, through its course required progressively more overhead labor force and machinery than PLC had anticipated;
2) The ever progressive **levels of quality and safety requirements** from the client reduced productivity massively;
3) The aforementioned **Angolanization law restricting the access to foreign and specialized work force** and progressing increases in the local employees training programs increased costs and contributed significantly for the decrease of the project productivity.

After Mr. Santos was hired, the aforementioned contract was renegotiated, and the services' price was increased by 8 % making the activity slightly over break-even, but with the prospect of a contract renovation for the next 7 years more advantageous for PLC.

Adding to it, there is still an unresolved problem to be addressed. It is of high importance to create a management body for PLC in Angola. Business is growing and opportunities are not being fully addressed due to lack of capacity. Currently, the activity has been managed at corporate levels by Mr. Santos and Mr. Licerge. Mr. Santos is also responsible for the Brazilian market and the elaboration of international analysis to spot new markets' opportunities in the Americas and Portuguese speaking countries. Far from being ideal, and facing strong competition from Perle Techni and many other very small players, PLC has to move fast to find the right team to manage the situation closely and full-time.

The main issue, as observed by Mr. Santos, is that:

> "Ideally we would need someone from the oil and gas industry to work at our high-ranking management positions in Angola. However, wages paid by oil and gas operators to such employees are very competitive and service companies such as PLC are neither capable of keeping such wages nor available to pay as high a salary to a single person due to company's policies"

Though the salary is not as competitive as those oil and gas operators pay, the challenge of a new position and the autonomy given to the employee who would assume a high-rank in PLC might be enough a reason in some cases, according to Mr. Santos.

PLC is looking for structuring the Angolan team appropriately and expects to have it finished by no later than June 2013.

Brazilian venture

The entrance in the Brazilian market assumed a completely different approach from what PLC had been doing so far. Mr. Santos continued the prospect work started by Mr. Licerge looking for international opportunities abroad in Portuguese-speaking nations. While in contact with what would become future suppliers they have identified promising local partners and opened a subsidiary in Brazil.

PLC and Mr. Santos believe that "the best way to get to know the industry and its opportunities in a foreign market is through suppliers", not only they know the market thoroughly, but they know who are the major players (clients, competitors) and they are aware of the market-specific regulations, such as laws and politics regarding applied to the industry.

As such, PLC got in contact with the major resins producers in the world that were operating in Brazil (Jotun, Sherwin Williams and International Paint) to analyze alternatives. During that process two employees of one of those firms quit their jobs seeking to open their own company. At this point, Mr. Santos was informed of a major ships construction opportunity and actions were set forth that conducted to the incorporation of PLC Brazil in December 2011, headquartered in Rio de Janeiro, next to the head-office of the industry major players, and branched in Grande do Sul, close to the worksite related to that opportunity.

The local partners have in-depth knowledge of the industry and, together with PLC closed, a contract in the Marine construction sector with Ecovix to blast and paint 8 FPSOs and 4 drill ships. Later on they competed and won the project of ship assembling in dry docks. Nowadays, they have a third contract running with Quip to hydro blast and paint ballast tanks for a Petrobrás FPSO.

This successful entry in a new market was in great part achieved by having been the first major multinational company in the sector to start operating in the Brazilian market. First-mover advantage is very important in these industries and has proven to be working in favor of PLC.

Moreover, Brazil offers great diversity in industries PLC could service apart from shipbuilding for the oil and gas industry. A good example of that is the hydroelectric industry which represents a great future opportunity since Brazil has one of the largest hydrographic systems in the world.

Though projects are booming in Brazil, granting PLC revenues of over € 5.8 million in less than one year, the lack of qualified labor force, the strict labor unions and the restrictions to foreign labor and materials are current problems faced by the company in Brazil that are yet to be more thoroughly addressed.

The same objective set for Angola regarding a management team was set for Brazil: until the end of June 2013 a management team should be in place.

What comes next?

Currently, PLC has been presented two distinct opportunities in the Colombian and Peruvian market.

In Colombia, oil exploration has been rapidly growing and 570 oil wells will be adjudicated in 2014[12] which represents for PLC an opportunity to enter the market by providing on and offshore blasting and painting services.

At the same time, in Peru there are opportunities both in the gas and the hydroelectric energy sectors, together representing an overall cross-industrial investment of € 1,069 million[13].

PLC came across these opportunities due to a former employee of a Brazilian paint supplier company that is now one of PLC partners in the Brazilian market. Since then, Mr. Santos has visited Peru and is planning a visit to Colombia to get to know the prospective clients more in depth.

At this point, the projects look favorable, no political instability is felt, especially in Peru, and both countries are lacking multinational competitors in surface treatment. It would be the perfect timing to move into those markets, gaining competitive advantages and taking the most out of the countries' investments on the exploration of energy sources.

---

[12] Source: Proexport Colombia
[13] Source: ProInversión Peru

Additionally, going into these markets would be done through the same strategy used so far, based on single one-time projects. The company has done it for many years and is comfortable with that, knowing it implies few risks.

The alternative would be developing the Brazilian and Angolan markets, seeking more opportunities in the same or different industries, since the hydroelectric sector represents a great share of the Brazilian economy while the oil and gas sector is growing fast in both countries. By doing so, high investments would have to be done in managerial workforce to allow sustainable growth. Greater local infrastructures would also have to be created to support the activity development and expansion.

When the flight crew started the flight safety information sequence, Mr. Santos had already gone over his notes many times. He was comfortable with the results achieved in both Angola and Brazil, he was sure it was the best that could have been delivered with the resources available.

At the same time, he was confident that there was no better time to venture into other Latin American country to engage in further internationalization. However, Mr. Santos knew that there were different risks for the company whether the strategy would continue to venture into new markets or to begin focusing in developing the current ones. PLC board of directors was used to their current strategy and if he wanted to suggest a different approach he would have to be very well prepared.

Closing his eyes while the plane took off, he knew by the time he had landed his presentation would have to be finished and the last slide still had to be filled in with his final decision.

Literature Review

Firms' internationalization process is closely related with their own business strategy. However, there are many other factors, some internal and others external (Aharoni, 1966), that will ultimately shape the course of an internationalization venture.

I will focus on how to make a strategic analysis of industries and firms aiming to later link it to how firms' international expansion fits into their own strategy considering different international environments.

By using the following concepts and frameworks solving the case should become simpler and students are to be presented with theory before case discussion to improve their contribution in the classroom.

Industry and firm's strategic analysis

To have a clear overview of how to design a strategic plan it is important for every company to be able to hover over the industry getting a birds-eye view of it. Only by doing so, will companies be able to fully grasp the environment they are competing in and will they be able to define whereas they want to be in that industry and where they want to stand (or want to stand) in the midst of its competitors, suppliers, buyers and substitutes.

Many frameworks have been developed to analyze industries and their business environment. PESTEL analysis may help defining the overall business macro environment by looking into political, economic, social, technological, environmental and legal factors affecting the industry whereas Porter's five forces framework helps measuring industries' degree of attractiveness (Porter, 1979).

Porter (1979; 1980) was a pioneer in defining a thorough framework analysis that would later help companies define which kind of industry they were in – or, firstly, if they should set foot in that industry – and categorizing them in what concerned their business' strategy.

The five forces affecting attractiveness were customers' bargaining power, suppliers' bargaining power, threat from substitutes and threat from new entrants and industry rivalry. Each of this forces contributed positively or negatively to the overall industry attractiveness, which the higher it was the more interesting for a company would be to enter that market (Porter, 1979).

Focusing now on the company itself, by defining the source of competitive advantage of a given company (low cost or higher cost) and the competitive scope (narrow or broad target) a different competitive business strategy could be pinpointed (Porter, 1980). This framework (see **TN Exhibit 1**) would present companies with generic guidelines on how to succeed with the general strategic decisions aforementioned. Hence, a company ought to decide if they want to achieve competitive advantage through an aggressive price strategy, producing at very low costs, or if they wanted to differentiate themselves from competitors providing high quality at premium prices. Following that, the company has to decide what will be its target dimension: the entire market or just a few selected segments of markets. A company should try to pursue only one of these strategies, otherwise risking falling into the stuck-in-the-middle strategy – key to low profitability (Porter, 1980).

Internationalization process

Firms' internationalization process has been the center of international business authors for the past decades. Most studies have presented the internationalization process as a consequence of firms' gradual increase in involvement in the foreign markets (Johanson & Vahlne, 1977). As such, internationalization seldom comes referenced as the result of a thorough comparison and evaluation of optimum resource allocation to different countries (Johanson & Vahlne, 1977; Aharoni, 1966).

Hence, according to the uppsala model (Johanson & Vahlne, 1966) market knowledge and market commitment are both influenced and exert influence over the decision to commit with international affairs and over the performance of current activities, since they highly affect the perception of opportunities and risk. This implies that more country knowledge improves the chances of a successful internationalization move, and, as such, reduces psychic distance[14] (see **TN Exhibit 2**).

On the other hand, Malhorta and Hinings (2010) have focused their attention not in defining the internationalization focus itself but rather attempting to understand the underlying reasons behind the existence of different processes of internationalization and the several approaches to the commitment of resources in foreign markets.

In fact, there are several factors that influence the degree of internationalization and the entry mode chosen by firms. Service firms are more prone to succeed in

[14] "The psychic distance is defined as the sum of factors preventing the flow of information from and to the market" (Johanson & Vahlne, 1977)

establishing modes of operation with high resource commitment than manufacturing companies even if they have no international experience for it is easier for them to redistribute resources and service firms require lower overheads (Erramilli, 1991). At the same time, it has been asserted that aggressiveness in choosing entry modes is higher when firms are following existing clients whilst is lower when following new ones (Erramilli & Rao, 1990).

Mass production and disaggregated production organizations have their entry focus on the market while project-based organizations focus on projects at entry. Moreover, from the former to the latter firm objectives or their degree of presence change from increasing market share, scanning the new location and sustaining the project flow, respectively (Malhorta & Hinings, 2010).

As mentioned, the decision of going abroad may be initiated by different factors pinpointed by Aharoni (1966) such as an outside proposal from a highly influential source, fear of losing a given market, "band wagon" effect – if a competitor is performing well on a given market it will be considered a must go into market – and foreign strong competition in home market.

Thus, it becomes essential, when analyzing the possibility of going abroad, to identify the type of company, the decision trigger and the set of entry modes before making the final decision.

Following these studies on internationalization processes, I aim to conduct my discussion of the case based on the impact of companies' type in their entry mode selection while considering the triggering factor to the internationalization decision.

Combining a thorough industry analysis and defining a solid business strategy adapted to the industry's characteristics is the key to a profitable healthy business and the first step to a good internationalization process. Every time a company decides to venture into a new market, which it may (or may not) be familiar with, it is imperative that an in-depth analysis takes place to assure the proper fit between company, local environment and culture.

Teaching Note

Perrot Licerge Company S.A. case was prepared by Ana Alexandra Silva under the supervision of Professor João Borges de Assunção and Professor Paulo Marcos. It is intended to be used as basis for class discussion and not as an endorsement, a source of primary data, or an illustration of effective or ineffective management.

This case is based on actual experiences and real events. However, proprietary data has been disguised to preserve confidentiality keeping all the essential facts and relationships intact.

The study and resolution of the case could be enriched by a few additional readings:

1. Aharoni, Y., 1966. *The Foreign Investment Decision Process*. Third Edition: Division of Research, Graduate School of Business Administration, Harvard University
2. Malhorta, N. and Hinings, CR., 2009. *An Organizational Model for Understanding Internationalization Processes*. Journal of International Business Studies, Vol. 41, pp. 330-349.
3. Johanson, J. and Vahlne JE., 1977. *The Internationalization Process of the Firm – A Model of Knowledge Development and Increasing Foreign Market Commitments*. Journal of International Business Studies, Vol. 8, No 1, pp. 23-32

Synopsis

Perrot Licerge Company S.A. is a family owned French company operating in the metallic structures surface treatment and maintenance industry. It is a market leader in France and renowned worldwide by the technical quality of its completed projects. The 66-year-old company has managed to grow through portfolio diversification as well as international expansion. Being one of the oldest multinational in the industry and by investing heavily in their research and development department and in their employee training and qualification levels, PLC has a clear competitive advantage in the industry.

However, in recent years the Angolan operation has recorded a worrying drop in profitability presenting negative results and bringing down PLC financial statements. This was a consequence of: (1) constantly changing working local laws – the Angolanization program demanded the employment of more local labor force in place of foreign employees – that reduced productivity; (2) an outdated contract that should be revisited and renegotiated in order to diminish the impact of increased demand for overhead labor force and machinery and (3) the progressive levels of quality and safety requirements from the clients.

Measures had to be taken to regain control over the Angolan market. Adding to that, the company, headed by Octave Licerge, had recently decided they wanted to consolidate and expand their presence in the Portuguese Speaking Nations as well as the South American markets. As such, Rui Santos was hired to lead this internationalization process.

Mr. Santos and Mr Licerge started by addressing the Angolan situation, which was on track and profitable again in less than one year, and then turned their attention to the Brazilian market where they installed a subsidiary from where three contracts are ongoing at the moment.

Before pursuing any international opportunities like the ones in Peru and Colombia, Mr Santos is concerned in defining whereas PLC should continue its casuistic internationalization following their clients and suppliers or if it should start creating solid long-lasting roots in key-markets, such as Angola and Brazil.

Mr. Santos' job is to present to PLC board of directors his proposed strategic expansion plan and in addition to define which opportunities to follow in the international scene. The case depicts all necessary background on PLC internationalization strategy so far and on the current available options to allow a strong and justified alternative analysis and ease the decision making process.

Suggested Assignment Questions

It is expected that students read the case and prepare the answer of the following questions for class discussion:

1. Analyze PLC current position in the metallic structures surface treatment and maintenance industry and define the industry's attractiveness.
2. What are PLC main sources of competitive advantage? May they be considered sustainable through time?
3. How would you define PLC business strategy? What is the impact of that strategy on their current internationalization process?
4. Being a business-to-business industry identify what buying behaviors may be expected from PLC clients and their impact on the company's business?

5. What key factors should be considered by Mr. Santos before proposing any step into further internationalization?
6. Considering PLC current internationalization strategy, strategic objectives, entry triggers as well as market specific characteristics what do you believe is the best entry approach for companies operating in this industry? What advice would you give Mr. Santos?
7. Put yourself in the shoes of Mr. Santos, how would you shape the future expansion plan to be presented to PLC board of directors in the upcoming meeting in Le Havre? Is it the only possible course of action?

Teaching Objectives

This case presents the following teaching objectives:

1. To have students acquire a good comprehension on the very specialized metallic structures surface treatment and maintenance industry.
2. To highlight the importance of building strong client relationships in industries where the performance of a company is dependent on the performance of another industry.
3. To help the practical comprehension of the decision making process in internationalization related issues.
4. To have students explore what are the key issues to consider when defining entry strategies in foreign markets.
5. To enlighten students on the different internationalization triggering factors and their impact on the internationalization strategy.
6. To make clear the importance of multiple factor analysis when taking internationalization decisions.
7. To present the importance of a strong market analysis on a firm’s strategic decisions.

Use of the Case

This teaching case may be used to study internationalization related issues at a beginner’s level in several management undergraduate courses exploring the International Business fields.

The suggested assignment questions may be used by instructors to generate class discussion between students and to introduce subjects such as market analysis, entry modes, triggering internationalization process and finally the internationalization strategies adopted by multinational firms.

Relevant Theory

1. SWOT analysis

   Framework that allows for the evaluation of a given company internal strengths and weaknesses while identifying and measuring the external opportunities and respective threats that the company is facing or may come to face in the short term.

2. Porter’s Five Forces

   By analyzing the five market forces defined by Porter (1979) one should be able to define whether a give industry is attractive and to which degree. Industries’ attractiveness is defined as its degree of competition, the higher it is the less attractive an industry will be considered.

   The forces upon which the degree of competition hinges are the threat of new entrants, the threat of substitutes, customers’ bargaining power, suppliers’ bargaining power and rivalry. By defining how strong each of them are one can define how it affects the overall industry.

3. Porter Generic Strategies

   Porter (1980) has categorized companies’ strategies into three main groups according to their source of competitive advantage and their competitive scope (see **TN Exhibit 1**): cost leadership, differentiation and focus strategies. Moreover, the author stated that each company should seldom (preferably never) choose to pursue more than one of the generic strategies since that would be risking falling into the stuck-in-the-middle strategy, confusing and not profitable.

   Defining the strategic position for a company helps them establish what positioning they want and gives an orientation course for them to follow to make sure they reach profitability.

4. Uppsala Model

   Uppsala Model (also known as U Model) defines the intertwined relationship between (1) market knowledge and commitment and (2) commitment decisions and current activities (see **TN Exhibit 2**).

   Though not recent, the model continues updated in what concerns the influence exerted by market knowledge in decision making. Johanson and Vahlne (1977) identified that the deeper market knowledge and market commitment (defined as the level of interaction a company already has with a given market) the higher commitment a company will be willing to assume towards that market. As such, current activities and those commitment decisions will in its turn change and increase market knowledge and market commitment.

5. Entry triggers

   There are several reasons why a company may decide to venture abroad. The most common have been identified by Aharoni (1966) and are the most influential until today, even if some variants may have been introduced in the meantime.

   He points out four main reasons:

   i. Receiving a foreign proposal from a highly influential source;
   ii. Fear of losing a given market;
   iii. Following the "band wagon effect" – following competitors' success or market trend;
   iv. Strong foreign competition in the home market.

Analysis and Discussion

There are seven discussion questions to be addressed with this case, each one of them corresponding to one of the discussion questions proposed before. They have been divided into two main topics to better improve and structure class discussion.

A timeline for a 90-minute class discussion is suggested below:

1.	External and Internal Analysis			
	a.	**Question 1**	Current situation and industry attractiveness	15 minutes
	b.	**Question 2**	Sustainable competitive advantages	5 minutes
	c.	**Question 3**	Business strategy definition	10 minutes
	d.	**Question 4**	Consumer buying behavior analysis	10 minutes
2.	Recommendations			
	a.	**Question 5**	Internationalization fit	15 minutes
	b.	**Question 6**	Entry strategies	10 minutes
	c.	**Question 7**	Final recommendations	20 minutes
3.	Summary and wrap-up			5 minutes

The following discussion is proposed:

Question 1. Current situation and industry attractiveness

15 minutes

In this part of the class the current situation will coincide with the development of a SWOT analysis to understand where the company stands in terms of their own strengths and future perspectives versus current shortcomings and market threats. The SWOT will ultimately lead to the establishment of the company's key success factors (KSF).

Further, in order to analyze the industry's attractiveness a Porter's five force analysis will be required. By discussing each force students should be led to conclude whether the industry is attractive and to which extent.

A proposed board plan for this discussion topic may be found on **TN Exhibit 3**.

For the SWOT analysis the following should be mentioned:

Strengths

Strong market reputation. Throughout their history PLC has always aimed to provide high quality services for their clients. Students should be able to point out that PLC is proud of assembling highly qualified teams to perform the work in every area of expertise and has outperformed its competitors in terms of service delivery in the past years. Moreover, through focusing on quality personnel the job delivered tends to be of the upmost quality, standing out amongst the competitors in the sector and creating a name for PLC in the industries they work for. Building reputation is a continuous process that requires high standards and attention to clients' needs as well as market supply gaps. PLC has managed to stand out by positioning itself as the family owned business which delivers top quality service, meeting schedules and adapting its offer to better suit each client's requirements

Long lasting clients' and suppliers' relationship. In this industry it is important to highlight that a large portion of new projects come from current clients or current suppliers. Word-of-mouth is paramount in this business and being able to build strong and lasting relationships with both clients and suppliers may be the key for succeeding in the field. For PLC, adapting to client needs and moving with them to new projects or geographies has been the preferred strategy so far. At the same time, following suppliers to where new business opportunities may be rising has also been a common practice. The importance of suppliers is linked to their own scarcity. The offer of specialized suppliers that are able to produce, in large volumes, the necessary materials according to the required specifications of the industry is scarce. PLC has a very strong client and supplier network which has enable them to have a stable growth along the years and has provided them deeper market knowledge when venturing into new geographies.

Advanced R&D department. PLC R&D department has been one of the most important departments contributing for the company's technological update. Adding to the high employee qualification required by PLC it also invests in creating and/or developing their own materials. As a result the company has manage to patent at least two machines in the past few years that helped them operate in high pressure-low security environments reducing the risk for employees and improving efficiency levels.

In house training. Due to their focus on attracting the best workforce possible, students may also argue that PLC in house training is one of PLC's strengths since it fosters professional development and increases employee preparation to face hard situations during their work. It is one of the few companies in the field that actually has this training programs and it outsources it for other companies in the industry.

Weaknesses

Lack of managerial human resources in key markets. Though growing fast, especially in the past two years, PLC lacks the managerial workforce that would allow it to grow faster and stronger. Hence, competing to attract managers in an industry where support companies compete with their clients' companies for managerial workforce makes it hard for PLC to get a strong grip on experienced employees, who demand larger wages – aligned with oil and gas industry levels – than PLC would be able to pay. Though wages at oil and gas are much higher career progression may not be so fast.

Small project capacity. PLC owns two vessels and has a smaller dimension than its biggest competitor Perl Techni. Hence, though being a medium size company, PLC is not able to take many projects at the same time since they have an employee and vessel limitation. Employee limitation is also a consequence of the high standards set for employee qualification level.

Qualification demands. Though enhancing the quality of the job performed and delivered to clients, improving PLC reputation, the hiring qualification standards set by PLC are higher than average in the market and the number of employees with these set of technical qualifications is not abundant and is not well distributed worldwide, making it hard for PLC to reach for candidates and to choose from a very small database. That may be seen as a factor holding back PLC growth rate.

Opportunities

Operates in ambivalent markets. PLC operates in more than one industry, though the majority of its activity is performed to the oil and gas industry. As such, when entering new markets it is important to assess not only the client industry in which PLC will start to operate but also the opportunities that may rise in other industries. In Brazil there is high potential when it comes to the hydroelectric industry (Brazil has one of the largest watersheds in the world), future potential markets are being looked at not only for their oil industry but also their hydroelectric and natural gas industries, such as Peru and Colombia. Most of the markets they are already present in, though favoring the oil industry, are now developing large projects in other high potential industries.

Growing oil and gas industry. The expected CAGR between 2012 and 2017 to the oil and gas industry is of 6.7%. Being the larger industry in which PLC operates (especially if summed with the shipbuilding supporting the oil industry), the growth in oil and gas will certainly be in favor of PLC growth internationally.

Clients' and suppliers' influence. By working for top companies in the different sectors in which they operate PLC is frequently with potentially very profitable new opportunities by current clients. The same goes for suppliers, as long as they are satisfied with PLC, these relationships lead to new projects and most commonly new markets. Fostering this networking is essential in this field.

Threats

Operates in highly unstable markets. Most oil and gas exploration is performed in emerging/developed nations. Most of those markets are highly unstable in a given way. In Angola, for instance, there is the legal instability, laws change by the day and demands regarding employees' nationalities, foreign management bodies and security patterns are often changing strongly affecting performance, efficiency and profitability.

High industry dependency. Although presenting a solid and strong growth rate being highly dependent in one single industry may be seen as a threat in case of economic dramatic shift, since it would expose it to great market risk. Thus, it becomes increasingly important to search for diversified markets where offers may be presented in other sectors besides the oil and gas.

After discussing the SWOT analysis it is important to stimulate students to point out which are PLC KSFs, by identifying which activities or company characteristics are paramount for its success. Students may come up with various KSFs:

- Growing into markets with different potential client industries: to reduce entry and company risk and to enlarge PLC market base;
- Setting high qualification standards for employees: though some students may see it only as a weakness – and operationally it is – these standards are at the base of the good reputation PLC was able to build throughout the years and it is that one of their strongest differentiation factors from its competitors;
- Continuously investing in R&D: one of the most important steps to improve efficiency and adaptation to work environments. It propels development, increases project adaptability and may even increase project capacity.

Moving to Porter's five forces framework it is expected that students are able to pinpoint the most relevant factors for each force and ultimately identify the industry's attractiveness. According to Porter (1979) every industry has a force or forces that are key for its profitability and as such should be faced as the most important strategic problems to address.

Threat of entry

There are several entry barriers in the metallic structures surface treatment and maintenance industry:

- high capital requirements (both human and R&D related);
- size and/or reputation are key to win clients over competitors;
- government policies are overwhelming and constantly changing in developing economies (where most of the oil and gas industry operates);
- it could also be referred that the incumbents own substantial resources to be able to fight back a new entrant.

Since entry barriers are high it will affect positively the industry's attractiveness making it more likely to be profitable to operate in.

Suppliers' bargaining power

The suppliers for the industry in study are very diverse, being the most important ones the paint suppliers and machinery suppliers.

In one hand, suppliers bargaining power may be seen as high since:

- in both cases, but specially in the latter, the supplier industry, though globalized, is very concentrated presenting few players from which to choose;
- for the machinery, products are highly differentiated, since safety and efficiency are top requirements. Hence, switching costs may be high: training the staff will involve high costs when changing the machinery, efficiency in operating the machines is lower at the beginning than it is after the adaptation period;

On the other hand, there are opposing forces that reduce their bargaining power:

- it seems unlikely that any of the suppliers will eventually integrate forward, since the know-how required is too high;
- the industry is a very important client of the suppliers' industries making their success also dependent on the industry's success.

Hence, students may conclude that suppliers bargaining power is medium, mainly because though there are few players the suppliers depend on the success of the industry.

Buyers bargaining power

The factors increasing buyers' bargaining power may be defined as follows:

- the large volumes of services purchased from the industry make buyers more powerful since fixed costs are high in the industry. The larger the project the more financially interesting it tends to become;
- buyers are mostly well-known, large oil and gas companies as well as electricity and nuclear companies. All of these, either by reputation or by purchase volume, exert a significant power over the industry at stake since it may define future success industry's companies;
- to the buyer industries the maintenance services are responsible for an important portion of their costs creating an incentive for them to try to push the prices to the minimum possible. Buyers may negotiate very aggressively to try to improve the services prices.

There are a few factors that may reduce buyers' bargaining power, such as:

- the industry offers a service that is paramount to the buyers' success, since it affects the operation of oil rigs, oil ships, penstocks amongst other essential operational platforms and conducts. Besides, the maintenance of the aforementioned surfaces is mandatory by law, it also increases personnel safety at work, reduces corrosion and decelerates materials' depreciation, increasing its lifetime. Hence, buyers are not in the most comfortable position and the industry gains some power over buyers;

- due to the characteristics of the maintenance service performed to the buyers, if well executed future money savings may be expected. The painting and blasting along with the coating services can be a source of cost savings for the buyers since they avoid accidents and expand maintenance gap periods;
- like suppliers it is unlikely that a buyer would integrate backwards.

Even though there are factors that reduce buyers bargaining power it can be still considered high mainly due to the large volumes represented by the industry's services and by the size of the buyers' companies itself.

Threat of substitutes

There are no substitute services, especially when it comes to surface maintenance. Surface treatment in its turn can be substituted by other surface protectors, such as plastic or rubber covers, but they are not as lasting and in the long run may be much more expansive to the buyers.

Therefore, the threat of substitutes is extremely low.

Rivalry

The rivalry in this industry assumes the following shape:

- There are many companies in the industry but only a few large multinationals. Mostly, industry is largely fragmented, competitors are small and local apart from when the project dimension is too high and then only the top market players are competing for it;
- Industry growth is fast and is expected to continue the pattern for, at least, the next five years;
- Switching costs for buyers are high, locking them with the company or companies they started business with.

The aforementioned characteristics define an industry with low rivalry, where though there are strong competitors, mostly it is a fragmented local industry with huge potential and high expected growth rates.

After having performed the Porter's five forces analysis it becomes clear that it is an **attractive industry** to be in, even if suppliers' bargaining power is medium: it is difficult to get in, buyers exert a small power over the industry and there are not many strong worldwide competitors in a fast growing market.

Question 2. Sustainable competitive advantages

5 minutes

At this point students are asked to reflect on what is a competitive advantage and to what the degree are PLC competitive advantages sustainable. Competitive advantage may be defined as the characteristics used by a firm, through a given strategy, that create value (Barney, 1991).

A few of PLC sources of competitive advantages are:

- Innovation: investment in R&D through which PLC continuously improves its work tools and machines developing better and more adapted tools to their work environment and with a higher safety degree;
- People focus: focus on employees, their training and safety, assuring they are the best people to perform the job will increase efficiency, accelerate delivery, improve quality of service and ultimately satisfy their clients.

Students may address sustainability in one of two ways:

- Characteristics that create value and are not being implemented by other competitors yet. In this case only *innovation* can be defined as a competitive advantage since it is not yet performed by the rest of the industry's players whilst people focus, though being a priority for PLC is also seen in other companies, especially in the smallest ones;
- Characteristics that can be continuously replicated through time achieving the same positive impact in a better way than the competitors: in this case students may point out that both sources are sustainable because both can be replicated through time (and have been) and both create value above competitors and have helped PLC establish itself as market leader.

Question 3. Business strategy definition

10 minutes

After identifying the value creating characteristics that support PLC competitive advantage, discussion will center on generic business strategies that will enable competitive advantage.

Porter (1980) has defined three main strategies upon which to sustain competitive advantage:

- *Cost leadership*: competing aggressively through cost savings, increasing efficiency and reducing prices to final consumers;
- *Differentiation*: focus on creating new innovative products to be able to deliver state-of-the-art products and make profits through inducing needs on consumers' minds;
- *Focused*: adapt to their target market perfectly in order to deliver to those consumers the best possible service

There is a fourth strategy that happens to firms when they are not sure what is their own strategy and try to follow more than one at the same time: *stuck in the middle*. This strategy certainly does not support any sustainable competitive advantage and may end up leading to profit loss in the long run.

PLC has adopted a focused strategy. Though some students may argue that PLC has a differentiation strategy due to its R&D strong investment and constant development of new products and machines, the company only does that to better adapt to different work environments and clients requirements.

Hence, PLC does have an innovation characteristic playing for it but it does not do it for the sake of innovation but aiming for better results according to each clients and project needs.

Currently, PLC is internationalizing in a project based approach. They have long-term clients and suppliers who push PLC to enter new geographies following their steps. As such, focused strategy is perfectly aligned with their growth strategy: it is based on satisfying their clients in the best way possible in order to keep them loyal to PLC and continue hiring them for upcoming projects.

However, if their international strategy were to change to local development and regional growth within their current geographies students may defend that a change in the business generic strategy to an even more aggressive innovation focus, assuming a pure differentiation strategy, might suit PLC's objectives well. This strategy aligned with current market reputation would possibly attract new contracts from new clients who would be seeking efficiency and quality through innovation. PLC personnel training and high qualifications' requirements would also help in setting a top quality service perception in the market's mind.

As such, students should identify that a change in strategic objectives and internationalization process would affect the generic strategy and the competitive advantage to highlight. Furthermore, using a strategy that does not match PLC internationalization objectives properly could cause a misfit between strategy and clients' perception leading to a loss in project volume and a drop in profits.

Question 4. Consumer buying behavior analysis

10 minutes

This point will address the specific characteristics of a business-to-business (B2B) industry. It is expected that students will be able to differentiate B2B markets form consumer markets.

Students will have the tendency to make a parallel analysis with consumer markets and will try to fit PLC in one of the four buying behaviors: complex, variety-seeking, dissonance reducing or habitual.

However similar it may appear to be the decision making process for both the consumer and the B2B markets, there are unmistakable differences that have to be addressed.

Buyers' responses to stimuli are processed differently in B2B markets, but the stimuli themselves do not vary much from consumer markets. Marketing mix stimuli and environmental stimulus play a great role in the decision process.

For PLC, as any other company in this B2B market, their clients have buying centers that are composed for everyone involved in the decision process. Due to the nature of services provided for PLC and their cost volume, the decision from the clients' companies are expected to involve more than one person and require research and evaluation before a final contract may be signed. The involvement of multiple people and the force exerted by the company's culture are the factors that make the decision process so much more complex than in consumer markets.

In PLC clients' case users are different from influencers, however buyers may coincide with deciders.

Users. Users will be those who ultimately work on the oil platforms or shipping units or those operating hydroelectric facilities or even workers on a given factory.

Influencers. The users are only a part of the influencers, since they already have some know-how on what surface protections last longer and which are safer, for instance. However, there are many more people exerting influence. First there are the management team, who knows what is the most suitable market offer and what should be expected from the service based on previous contracts. Finally, top management and the board of directors (and in some case shareholders) end-up having the final word on which they believe will be the alternative most suitable to help the company reach its objectives.

Buyers and *deciders*. As a result of the high transaction costs that are associated with signing maintenance of metallic structures contracts, the deciders and buyers are top management and board of directors. It cannot be a middle or low hierarchy decision because it is related with the companies' strategic plan and future planning.

For PLC, students should highlight that this multiple player buying and decision process affects the entire offer, from pricing, which should be appealing to management and competitive when compared to the other players in the industry, to technical specification who should be user friendly to push lobbying from users to deciders inside client's company.

As such, understanding the complexity of the decision process in this B2B market is paramount for the success of PLC when it comes to its strategic decisions on pricing, distribution channels and communication and promotion, as well as a good market research to its R&D department.

Further implications may arise from the buying process itself (see **TN Exhibit 3**).

Problem recognition

For PLC clients, problem recognition may arise in two forms: new project that requires surface treatment and preparation or ongoing project that is in need of repair and maintenance.

As such, it is important that PLC keeps a good client relationship in order to be part of the considered suppliers for its clients' new projects and should keep a schedule on upcoming maintenance services in order to prepare for the flow of future contracts' demand.

General need description

The need description should include generic service requirements, timings, estimate prices and size of area to be served. In this stage, if PLC has already worked with a given client the expectations and the requirements will be more adapted to PLC's offers. On the other hand, if it is a completely new client PLC may expect requests that are yet to be adjusted to the company's services portfolio, and may require more negotiation and higher adaptation.

Service specification

Clients at this stage define technical specifications and search for the most cost-effective or value for money option. Engineers try to find the several options the client company has of reducing costs but keep the same quality and efficiency level.

PLC should strive to always have a good value proposition that aligns clients' requirements, efficient service performance and quality delivery. By employing highly qualified workers and its constant R&D efforts, PLC assumes a strong position to address this stage of clients' decision process, since expectations will meet reality.

Supplier search and proposal solicitation

For every job, client market companies will search for the best companies to perform the exact service they are looking for.

PLC reputation is extremely important at this point. Knowing PLC, either by having worked directly with it and being satisfied or by reference through the good reputation that has been built, is the first step to being considered in the possible suppliers.

After deciding which suppliers will be considered the clients' companies request a proposal from suppliers. PLC has to be ready to sell its strongest points and should use its competitive advantages to highlight its fit with the project at hand. Good selling techniques are very important at this point and PLC should be able to stress that its project adaptation is one of their main qualities along with its timely deliver and state of the art equipment and qualified staff.

Order-routine specification and performance review

After selecting the right supplier, the companies will set the formal order.

Assuming PLC was chosen as supplier here starts the operational challenge where the company has to prove *in loco* the qualities that granted them the contract. Here high clients' expectations should be proven true and quality service delivery is of the utmost importance.

Question 5. Internationalization fit

15 minutes

From this question on attention will shift from PLC and its clients' analysis to the definition of the internationalization strategy and future recommendations for the company.

At this point students must address some of the following topics:

- **Management availability**. One of PLC's main problems at the moments is the lack of a permanent management team in each of its subsidiaries, which is increasing the work load of Mr. Santos and reducing his availability to search and evaluate possible new markets. What started as a merely ghost managerial subsidiaries – as it was company's policy ever since it started internationalize – soon, with the rise of new projects and increased project demand from those geographies (adding to project demands in other geographies without a subsidiary representation), became operation managerial support centers for the projects taking place in those countries. More recently, that demand for management teams has become overwhelming and Mr. Santos is in need of a full support team before being able to further increase foreign activity, regardless of the strategy chosen;
- **Project diversity**. Mr. Santos should bear in mind that if the strategy will be developing current markets and establishing new fully developed subsidiaries while expanding, then the more diverse are the project opportunities the better. Countries with more than one client industry may present a larger potential than those which only have one industry for PLC to work for. Furthermore, the more diversified regional businesses become the smaller will be the internationalization and business risk;
- **Cultural adaptation**. Culture know-how makes the internationalization, implementation and adaptation processes much easier on a company. For PLC internationalization process to be successful whichever strategy it decided to follow it is important that there is an *a priori* local cultural knowledge to make the operation successful. That can be achieved not only though direct business and experience but also through clients or suppliers which have already done business in those markets. Hence, it is important that Mr. Santos, before taking a step towards internationalization, analyzes which are the best opportunities available to PLC considering the cultural factors;

- **Current internationalization status**. PLC has been obliged by governmental laws to establish operating subsidiaries in both Brazil and Angola. During the past years the company has been embracing the process of subsidiary creation to be able to maintain operations in those nations. Thus, before further internationalization takes place it is necessary to assess what projects are ongoing, how many more can the company undertake at the same time, what other opportunities the current foreign markets have to offer and what would be more effective to continue project base growth or stay in the home markets.

According to the Uppsala model the more one knows about a given market the more it can take actions towards signing contracts and have a commitment with that new geography. At the same time, the more a company works in a given location the more information it obtains regarding that same location and, as such, the more willing to continue operations and to further increase local participation it will be, since risk perception will no longer be high.

For PLC, it would be important to assess if they would like to continue working in the current markets now that they have a strong cultural know-how about these markets or if they would want to venture into new geographies. In the end, it will be a matter of risk vs. return outcome, the one with lower risk and higher outcome should be the strategy chosen.

Question 6. Entry strategies

10 minutes

After reflecting on what factors should be thought of before moving to internationalization decisions students should now define the most common and best entry strategy for companies operating in this industry.

PLC, until recently, has had a casuistic approach to internationalization: they expand internationally to work on a given project and may leave upon a project's conclusion if no other project presents itself in the meanwhile. This approach is not unheard of in the industry. His biggest competitors have a few subsidiaries but also operate in a few geographies in a project basis. Adding to that, since it is, as mentioned before, a very fragmented and local industry, most companies remain in their country of origin without venturing to new markets.

For PLC and other large multinational competitors the main strategic objective is to conquer market share in, so far, high potential unexplored markets, by creating long lasting tacit alliances with clients and suppliers. As such, the entry strategy has to be aligned with this main global objective.

As referred the most common entry trigger so far for most companies and specially for PLC has been both receiving foreign proposals of very important clients and suppliers and the band wagon effect – if a competitor is being successful others will want a share of that as well – as long as the first applies as well.

There is low fear of losing a given market because it is not the geography of the work itself that worries PLC and its main competitors but their client-base projects. As such, it is important to have highly influential clients because, in the oil and gas industry as well as the hydroelectric, the contracts are signed on a long term basis and the operations are not easily shaken or do they end in few years of exploration. That would give metallic structures maintenance industry companies stability and a strong foothold in the clients' markets.

Being a market where projects are heavily based in developing nations, which are very diverse in terms of industries, the availability of different projects is high and the opportunities in different fields abound.

As such by not developing locally and instead shifting from location according to clients' needs, it becomes impossible for companies, particularly PLC, to take full advantage of the innumerous opportunities in each geographic market.

Students may come with mainly two different suggestions for Mr. Santos:

- Start focusing locally in the development of PLC current markets and after strong autonomous subsidiaries have been created, with fulltime management teams, start focusing on further international expansion.
  With this alternative PLC could benefit from the industry client diversity in Brazil and enter the hydroelectric sector for instance and pursue more projects in their current business, shipyard for the oil and gas companies, which is blossoming at the time. In Angola, besides oil projects the investment in natural gas conducts has been expanding and PLC could further improve its work in that sector.
  It is highly important that subsidiaries are first structured and have capacity to manage local projects so that Mr. Santos will be able to pursue further expansion analysis in foreign markets and assess if PLC will have labor force and enough machinery to conduct this growth

Students may also defend that by establishing a subsidiary PLC does not have to quit going into certain geographies to perform short punctual jobs following important clients' requests. It only implies that in locations where the effort of building a subsidiary is justified by future profitability and project opportunities then it should not be dismissed or neglected like it has been done so far. Market development should come from PLC as well instead of being only left to clients or suppliers own expansion programs.

- On the other hand, it may be defended that PLC should keep its current strategy since it has been profitable so far. However, students choosing this alternative should add to their analysis that PLC has started struggling with lack of managerial support and local laws demanding the creation of local subsidiaries for companies willing to operate in those countries.
  In this case, the best alternative would be increasing Mr. Santos team as a mobility team that could move around when projects in a given location end. Though being feasible this raises questions on employee satisfaction and motivation since they would be moving around frequently. Moreover, it would be more costly for PLC since employees would be hired as expatriates.

Question 7. Final recommendations

20 minutes

Bearing in mind the alternatives mentioned in question 6, students should be able to define that since it has been an imposition from Angola and Brazil that a subsidiary was to be founded before any contract could continue in action, PLC could embrace it as an opportunity to search itself for new projects.

By doing so, PLC would be able to take the most out of the subsidiary creation. It would increase its local presence, enlarge its clients' base and increase profitability.

To do so however, first it would be mandatory to actually create two separate, autonomous management teams leaving Mr. Santos the job of supervising both key regions and keep further analysis of future projects. PLC would be diversifying and, hence, reducing its internationalization risk at the same time that it would be developing its project volume.

Here, it is important to stimulate debate, help students come to the conclusion that though resisting to change and keeping a project based internationalization may seem innocuous in the short run for PLC in the long run it would be unsustainable.

It is relevant to highlight that growth sustainability can only be achieved by enlarging the managerial tools and betting on new market opportunities. Mr. Santos should address that in his presentation to PLC board, since to propose, at this point, a move to Peru or Colombia without firstly cope with Angolan and Brazilian development may prove to be a hasty move, with serious future consequences for PLC.

Tracing a long run internationalization plan may be a good start for PLC to fully understand where it wants to be in the future and how will they achieve that.

Therefore, Mr. Santos should focus his presentation to the board in suggesting further local development in the current markets where PLC is operating while proposing the development of a long term internationalization plan and the enlargement of the subsidiaries teams to focus on local project management and research of further opportunities.

Reference List

Aharoni, Y. (1966). The Foreign Investment Decision Process. Harvard University.

Barney, J., 1991. *Firm Resources and Sustained Competitive Adavantage*. Journal of Management, Vol. 17, pp. 99-120

Kotler, P., Armstrong, G., Veronica, W. and Saunders, J. (1996). *Principles of Marketing*. England: Prentice Hall Europe

Malhorta, N. and Hinings, CR. (2009). An Organizational Model for Understanding Internationalization Processes. *Journal of International Business Studies*, Vol. 41, pp. 330-349

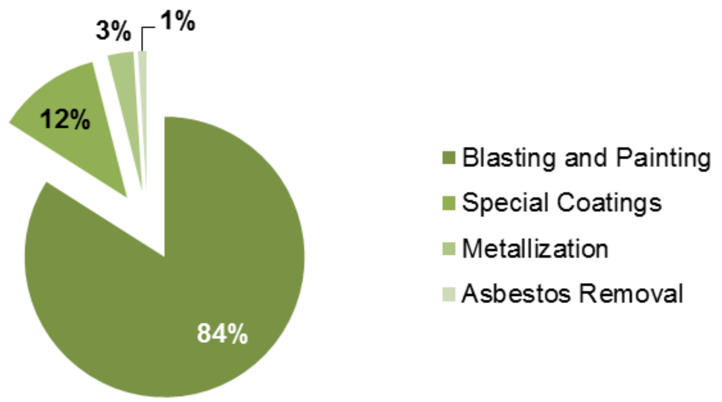
Johanson, J. and Vahlne JE. (1977). The Internationalization Process of the Firm – A Model of Knowledge Development and Increasing Foreign Market Commitments. *Journal of International Business Studies*, Vol. 8, No 1, pp. 23-32

Porter, M. (1979). How Competitive Forces Shape Strategy. *Harvard Business Review*, pp. 137-145

Porter, M. (1980). Competitive Strategy. *Strategic Management Journal*, Vol. 2, pp. 96-95

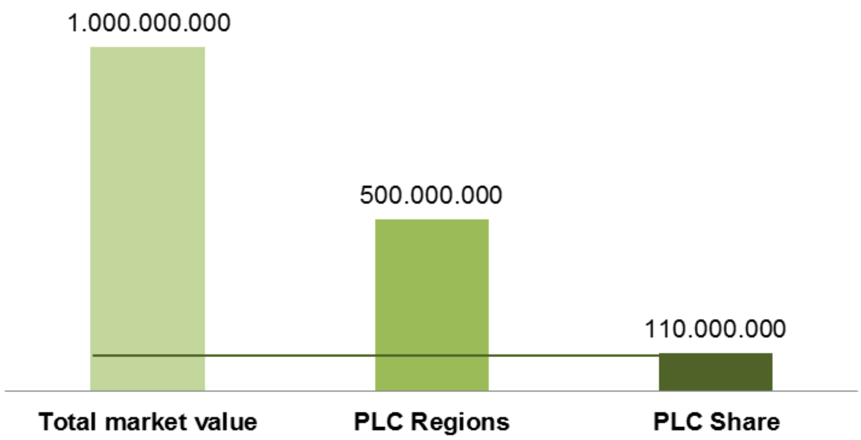
Exhibits

Exhibit 1. Services' Contribution to PLC Total Sales (2012)



Source: Adapted from real PLC data

Exhibit 2. Oil and Gas Revenue Market Share (2012)



Source: Adapted from real PLC data

Exhibit 3. Industry Market Share Distribution (2012)

	Global	PLC market
PLC	11%	22%
Perle Techni	21%	30%
Kinkley	8%	16%
Others	60%	32%

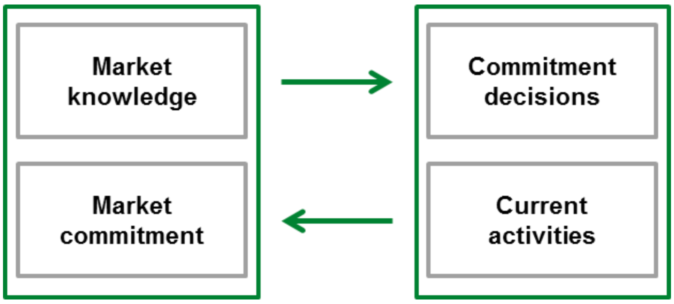
Source: Adapted from real PLC data

TN Exhibit 1. Porter's Generic Strategies Framework

		Competitive Advantage	
		Lower Cost	**Higher Cost**
Competitive Scope	**Broad Target**	Cost Leadership	Differentiation
	Narrow Target	Focus	

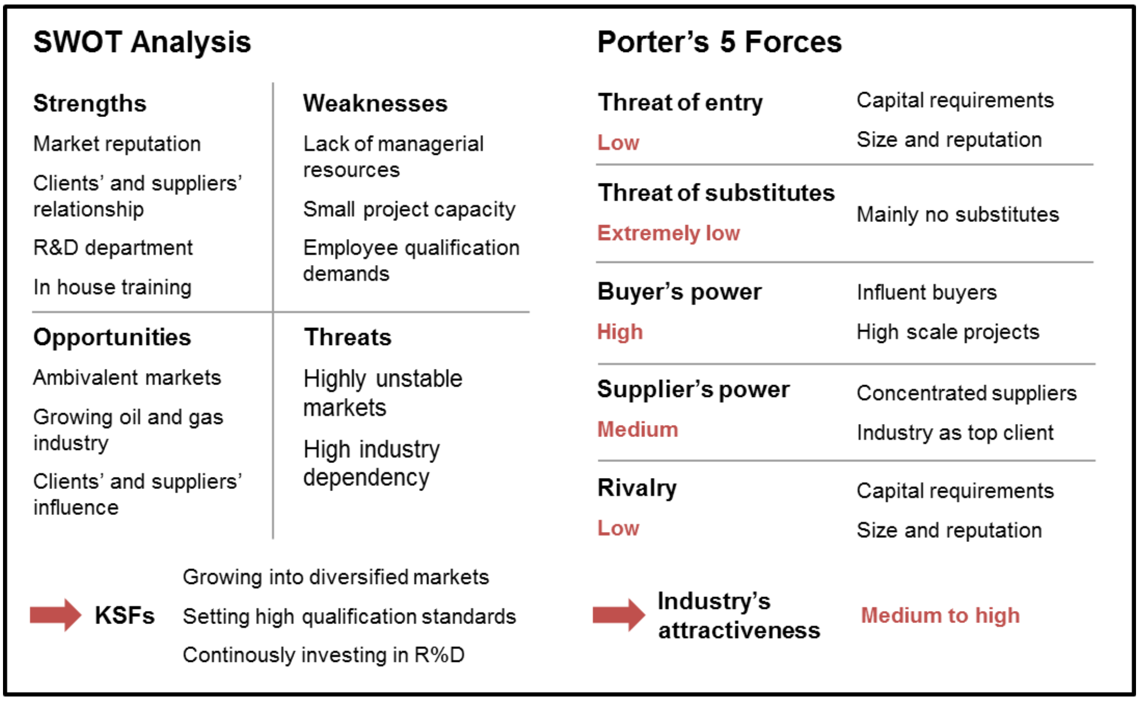
Source: Porter, M. (1980). Competitive Strategy. *Strategic Management Journal*, Vol. 2, pp. 96-95

TN Exhibit 2. U Model



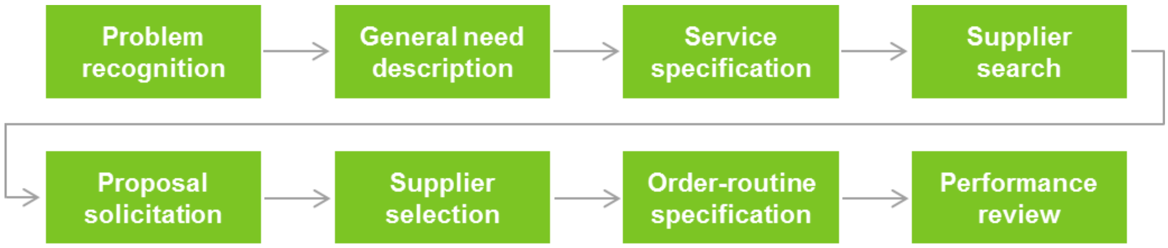
Source: Johanson, J. and Vahlne JE. (1977). The Internationalization Process of the Firm – A Model of Knowledge Development and Increasing Foreign Market Commitments. *Journal of International Business Studies*, Vol. 8, No 1, pp. 23-32

TN Exhibit 3. Suggested board plan for current situation analysis



Source: Case writer

TN Exhibit 4. B2B Buying Process



Source: Adapted from Kotler, P., Armstrong, G., Veronica, W. and Saunders, J. (1996). *Principles of Marketing*. England: Prentice Hall Europe