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STRATEGIA ROZWOJU MAŁEJ FIRMY DZIAŁAJĄCEJ W BRANŻY MECHANIKI OKRĘTOWEJ

Streszczenie: W artykule przedstawiono plan działania małej firmy pracującej w branży mechaniki okrętowej. Firma świadczyłaby usługi w zakresie autoryzowanego serwisu znanego producenta okrętowych systemów automatyki. Przedstawiono czynnikową analizę możliwości (za i przeciw przedstawionych usług). Ponadto przedstawiono potencjalnych odbiorców usług oraz istniejącą konkurencję. W materiale oparto się na jawnych informacjach o firmach działających w wymienionej branży.

DEVELOPMENT STRATEGY OF THE SMALL COMPANY WORKED IN MARINE ENGINEERING BRANCH

Summary: Paper presents business plan of small company working in the marine engineering branch. The firm would provide the technical service of famous marine control systems manufacturer products. The opportunity study of company operation (pro and contra analysis) has been done. Targets of services and present competition have been presented. Common known knowledge about companies operating in mentioned branch has been used in the paper.

1. INTRODUCTION

As one of the reliable link of maintenance of the technical systems is possibility to use of specialized technical service on demand. For ships one of the most important elements are control and safety systems of marine power plants and marine propulsion system (such shown in Fig. 1). On the basis of the Polish market research [1-4], it can be stated that there is a lack of some specific full technical services of some manufacturers products in Poland (e.g. nearest spare part dealer in Czech or technical service in Holland). These required services consist of repairs, maintenance, adjustment, installation and commissioning. Topic related of starting this kind of the business is given below. Financial analysis has not been shown as confidential information.



Rys. 1 Widok wolnoobrotowego wysokoprężnego okrętowego silnika głównego
Fig. 1 View of main marine low speed diesel engine

Author developed the analysis of requirement for basic and auxiliary equipment and consumables which will be necessary for providing of services. Not all of them are indispensable on the beginning of the investment, so part of equipment can be bought during deployment of activity. Presented list of equipment and consumables will be modified in the future depending on requirements. Essential for providing of services are presented in [2].

The place for company workshop is an important factor that affects the firm's development. Szczecin as a port city is characterized by big amount of corporations i.e. repair and construction shipyards, ports. There are also located headquarters of the biggest Polish shipowners: the Polish Steamship Company Group and the Euroafrica Lines as well as offices of other shipowners in Szczecin. Szczecin as one of the main communication nodes has the biggest locomotive workshop in the region (Polish State Railways PKP „Szczecin Port Centralny”).

There are Railway Infrastructure Repair Company „Zakład Napraw Infrastruktury” (which repairs and maintenance of diesel locomotives) and locomotive workshop „Stargard” in Stargard Szczeciński, in the distance of 40 km from Szczecin. There is one of the biggest Polish ports in Swinoujście, in the distance of 100 km from Szczecin. Additionally there is HCP „Cegielski” Company (manufacturer of traction and marine diesel engines under licenses of Wartsila and MAN B&W companies) in Poznań, in the distance 200 km from Szczecin. Also, an advantageous transport infrastructure helps in cooperating with shipbuilding enterprises and ports in the biggest Polish port cities – Gdynia and Gdańsk.

In all mentioned facilities are handled and maintained products manufactured by famous company (called: mother company) e.g. [7], mainly speed governors, speed supervision, protection and control systems, load / energy sharing systems in:

- traction diesel engines (diesel locomotives, traction cranes, construction machines of Plasser & Theurer and reparation trains),
- marine diesel engines (marine main propulsion engines and auxiliary engines in diesel generating sets),
- stationary diesel generators (electric power plants, hospitals, hypermarkets).

According to results of market analysis of demand and supply for mentioned services, it is proposed the establishment of limited liability company to provide services to Polish market area. The firm will be owned by author of the plan. Objectives of company operation will be technical services of machines and devices manufactured by mother company. The project is categorized into machinery sector, mainly in marine, railway and energetic branches. Area of company operation will be in the first step: Pomerania (Pomorze) and Grande Polonia (Wielkopolska), and in the next step area of Poland.

In the second stage of company operation author expect, that additionally services will be provided by the firm, such as conduct of training courses on handling and maintenance of products manufactured by mother company, and acting as sales representative of mother company (sales of spare parts and products).

The main objective of the project was providing of the full technical services of machines and devices manufactured by some famous manufacturer of marine control systems in the area of Poland and on board ships calling at Polish ports and shipyards. There is a lack of such technical services in the mentioned branches in the area of Poland. The firm's activity will be expanded on cooperation with the companies such as: construction and repair yards, the biggest Polish shipowners Polish Steamship Company Group JSC and Euroafrica Lines Ltd., the biggest Polish ports in Szczecin, Swinoujscie, Gdynia and Gdansk as well as engine making companies HCP „Cegielski” in Poznan and finally more far in Silesia factory of „Zgoda” in Swietochlowice.

2. OPPORTUNITY STUDY

Before making the decision about starting the business – an activity of company providing authorized technical services of products manufactured by mother company, opportunity study has been performed. The study consists of the analysis of market demand and services supply by existing on the market bodies in the area mentioned in the plan. There is many of potential targets of the services [6], e.g. shown in Fig. 2. This topic is up on date even in financial problems in polish shipyards during last years.



Rys. 2 Widok jednego z nabrzeży Stoczni Szczecińskiej Nowej [6]
 Fig. 2 View of one of the piers of Stocznia Szczecinska Nowa [6]

Because of high specialization of services presented in the project, potential competitors in area presented in the plan practically **do not exist**. Firms operating on the market are characterized by main services other than technical service. Mainly they are companies which are no-authorized by famous makers companies or authorized companies operating in different branches than presented in the project. There is a lack of significant competition in marine, railway and energetic branches. Additionally, most of the firms are small or medium companies, which are providing distribution of industrial automation products as main service. Technical service (maintenance, repairs, consulting) of the industrial automation systems are mostly secondary task of the firms. Among of analyzed firms are presented in [5].

Factor analysis (pro and contra of plan execution) has been developed. The analysis has been done on the basis of data received from firms operating in mechanical, marine, energetic, transport and industrial automation branches as well as information about mentioned firms, particular branches and whole machinery sector collected by the author of the plan.

Basic factors which are favourable for execution of the plan are:

- heavy demand from industry side for services presented in the plan;
- small amount of highly skilled service engineers trained in the scope of services executed in the plan;
- big amount of potential consumers (target groups) of services mentioned in the plan.
- a lack of direct competition in the area of services executed in the plan;
- many possibilities for obtain of funds for business development, such as: European Union funds, preferential bank credits etc.;
- experience of the owners in the range of designed activity of the firm.

Basic factors which are unfavourable for execution of the plan are:

- relatively high costs of renting and/or purchasing of the room for workshop, required machines, devices, standard and special tools, measurement instruments and essential consumables;
- necessity of additional professional trainings execution due to high specialization of knowledge in the planed activity of company;
- intricacies of commercial and administrative law.

3. SCOPE OF SERVICES

Company could be provided services, such as:

- warranty and post-warranty service on the basis of orders and agreements between the firm and mother company, according to agreed payment rates and quality of service;
- post-warranty service ordered directly by customers (clients), according to agreed with mother company payment rates and quality of service.

Services executed by the firm will be done at customer's place or locally in the workshop. Client will be charged for transport of machines, devices and components under the service. Prices for services will be established according to mother company rates. Terms and time of service execution will be in accordance to warranty terms. Sequence (order) of executed services will be depended on sequence of received orders. Orders marked as urgent will be executed as the first.

Service at customer's place will be done with support from client in the form of delivery to place of work: all standard essential tools and technical staff of client depend on necessities (matter of problem). Services executed in the customer's place will be including mainly:

- installation, exchange or commissioning (preliminary adjustment) whole machines and devices manufactured by mother company, particularly such as: speed governors, actuators, controllers, starting boosters, components of speed measurement and remote control systems etc.;
- installation or exchange of components of devices manufactured by mother company, particularly such as: links, couplings, springs, electric motors, solenoids, relays, speed sensors etc.;
- adjustment of remote control systems for diesel engines with equipment manufactured by mother company, particularly: feedbacks adjustment, compensation adjustment etc.;
- adjustment of load / energy sharing systems and the quality of operation of power plants or drives with many prime movers driving machines by means of gearbox, particularly: adjustment of nominal (operation) speed, compensation adjustment, speed droop adjustment;
- adjustment of working characteristics of particular components of speed control system, particularly: zero speed droop setting (limit for isochronic operation), adjustment of torque limit devices, adjustment of load limiting devices due to scavenging air pressure etc.;
- preliminary adjustment of speed control and protections systems during sea trials and commissioning tests of machinery equipped with devices manufactured by mother company.

Services executed in the workshop will be including mainly:

- repairs and adjustment of machines and devices manufactured by mother company;
- testing and calibration of components of devices manufactured by mother company.

4. SCHEDULE OF THE PLAN'S EXECUTION

Execution will be preceded according to the schedule:

- Execution of the authorized training in the mother company. Due to high specialization of services presented in the plan, there can be necessary to train/examine plan's author as service engineers certified by mother company. Additionally due to formal requirement associated with authorized service activity, there is necessary to train plan's author in characteristics, structure, operation and quality system of mother company.

- Establishment of limited liability company. First formal stage of plan's execution will be establishment limited liability company.
- Purchase/leasing of room for workshop. In the first stage of the plan room for workshop in port (industrial) district of Szczecin will be leased. The location makes efficient execution of services for potential customers.
- Purchase/leasing of basic workshop's equipment. The next stage of the plan will be purchase or lease a pick up car and basic workshop's equipment presented in the analysis of requirement for basic and auxiliary equipment and consumables.
- Gaining of special service tools and devices. Essential special service tools as well as governor test stand will be gained from mother company on preferential terms (discounts, renting, leasing etc.).
- Establishment of the cooperation with machinery industry in northern and central Poland. During the opportunities study preliminary contacts have been established with representatives of machinery industry in shipping, rail and energetic industry branches in northern and central Poland. After beginning the business the contacts will be expanded and the cooperation with earlier mentioned firms will be established. Many permanent contracts will be provided.
- Beginning of business (providing of service). The firm will execute the cooperation with customers according to the schedule. The scope of firm's activity will include services presented in preliminary proposal of services.

5. FINAL CONCLUSION

Preliminary opportunity study made by the author shows clearly advantage of plan execution favourable factors over unfavourable factors.

Additionally, unfavourable factors are not significant difficulty for the plan execution, if possibility of obtain of additional funds from banks and European Union sources will be taken into account.

It is assumed, that respective authorized training courses and essential special service tools as well as governor test stand will be gained from mother company on preferential terms (discounts, renting, leasing etc.).

Opportunity analysis' results suggest that development of activity in the scope of services presented in the plan is really essential.

The company can develop the scope of executed services in the future. One of services will be leading the training courses on maintenance and operation of mother company products, which will be dedicated for supervision (management) and operational personnel which are handling machinery equipped with mother company control devices. Potential recipients of courses will be:

- technical superintendents;
- marine engineers;
- railway engineers and electro-mechanicians;
- academic teachers;
- industrial instructors;
- plant operation engineers;
- executive staff and foremen in machinery departments in the shipyards and diesel engines manufacture companies;
- technical workers in shipyards and diesel engines manufacture companies;
- other workers' groups depending on request.

Another additionally service executed by the company owners will be distribution of spare parts and complete products manufactured by mother company. Distribution will be provided as sales representative of mother company.

In the moment of beginning of the business, the initial capital of company could be used as a basic founding source. Initial capital is required be legal and formal rules for operation of limited liability company. Additionally, every possibility such as purchasing, leasing or renting will be utilized to reach of machines, tools and measuring instruments, which are essential to run the business. The Company can gain funds for buying of part of workshop's equipment with use of European Union sources for supporting of business.

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