

ZY LABORATORY EQUIPMENT ENGINEERING TECHNOLOGY

Lin Yuan¹, Arphaporn Jongwiriyaenchai²

^{1,2}Graduate School, Southeast Asia University, Bangkok, Thailand

E-mail: ArphapornJ@sau.ac.th

ABSTRACT

ZY Laboratory Equipment Engineering Technology has gathered a group of senior professionals known as managers in the industry, with rich management experience and advanced business philosophy. The company is mainly engaged in, Laboratory furniture making, Pneumatic circuit design and installation, Fume hoods and ventilation systems, Consulting & Design. The financial budget is for the five-year planning period, with a capital investment of 5 million yuan. In terms of fixed costs, ZY Laboratory has a lot of R&D costs, base salary and office expenses and forecasts based on the company's 2020 data and development plan for the next four years.

Keywords: Beijing Best Friends, Laboratory Equipment Engineering

Section 1 Introduction

Industry Analysis. The main factors driving the development of the industry

Political factors:

According to the 12th Five-Year Plan, cultivating and developing strategic emerging industries is of great significance to promoting the upgrading of industrial structure and accelerating the transformation of economic development mode. It is necessary to make breakthroughs in a number of key generic technologies supporting strategic emerging industries a priority task in scientific and technological development.

Social factors:

The report of the 18th National Congress clearly put forward the idea of accelerating the construction of a national innovation system and promoting the efficient allocation and comprehensive integration of innovation resources. Based on the analysis of the present situation of science and technology development at home and abroad, the construction of the national laboratory is one of the important measures to promote the construction of our national innovation system.

Advanced Western countries have established national scientific research bases in different forms. For example, the National Laboratory in the United States, the Institute of Physics and Chemistry, the Institute of Molecular Sciences in Japan, and the Max Planck Institute in Germany. These national scientific research bases have made outstanding contributions to the development of national and international science and technology, and have a high influence and status in the international science and technology field

Section 2 Industry Analysis

The main factors driving the development of the industry

The Ministry of Science and Technology of China approved the establishment of five national laboratories on November 25, 2003. Over the past 11 years, the National laboratory under construction has made great progress

in the construction of an innovative scientific research system and scientific and technological innovation activities, playing a leading role in the construction of the national innovation system. However, the state has not been on the construction of the national laboratory acceptance, urgent need for the state to give a formal approval and confirmation. These national laboratories under construction are all supported by domestic research institutions with the highest academic level. The Ministry of Science and Technology has cancelled all the original state key laboratories of these supporting institutions, leading to the uncertainty of the academic platforms of these institutions. In the long run, it will greatly affect their talent acquisition, research innovation and international influence.

Industry size, growth rate and sales forecast

The state Key laboratory is the embodiment of the highest level of scientific research standards in an industry. China has about 700. The market of laboratory construction industry in China is relatively dispersed and there are many competitors. According to annual statistics released by the CNCA, the top five competitors took a combined market share of only about 3.6 percent in 2019.

Since 2015, the market size of laboratory equipment in China has shown an overall growth trend. In 2015, the market size of laboratory equipment in China was 36.67 billion yuan. In 2020, the market size of laboratory equipment in China reduced to 49.26 billion Yuan, and about 54.19 billion yuan in 2021. China's laboratory equipment market is expected to grow to 57.24 billion yuan in 2022.

Risk analysis and countermeasures

Intersection of industry product types and building process automation

Different experimental design concepts

Lack of laboratory design standards

Traditionally unable to co-ordinate installation and rationalise space allocation

Developing specialist areas, expanding industry norms and leading customer concepts

The system platform and application software of professional software network facilities and customer image display design concept

Section 3 Marketing plan

In combination with the current market product diversification and the wide range of market customer groups, the company's marketing plan is mainly formulated in the following directions:

1. Laboratory furniture customization, standardization, scale.
2. Laboratory design for docking design institute, reference national standards, learning foreign advanced concepts.
3. Improve the scientific management of the overall laboratory engineering and the standardization of site construction.

The Marketing Department has promoted the strength and popularity of the company's brand through exhibitions and forums, and the sales Department has connected with various universities and research institutes across the country to enhance the brand influence of the company in the scientific research industry, and promoted by national institutions to various enterprises in related industries.

Section 4 Management team and company structure

Foreign studies on team building management from team formation and definition, team classification and training to influencing factors (scale, technology, motivation) show that foreign countries (mainly western developed countries) have far-reaching, comprehensive and scientific influence. Domestic scholars' research on team building includes the research on the steps of team building, the specific content of team building, the core points and the corresponding misunderstandings. At present, some research achievements have been made, but they are still in the exploratory stage.

Section 5 Operation plan, production design, development plan

Set up a technology center with a special research and development site. The main research and development direction is the laboratory system improvement and optimization, the construction of energy saving, environmental protection, safety laboratory.

We have successfully achieved dozens of achievements transformation, formed a number of main products and services, product technology in the forefront of the industry. The core and key technologies of the products have obtained invention patents, utility model patents, appearance patents, and the number of soft products has reached the domestic leading level. The Company has established the Measures for the Management of Scientific Research Project Funds, which stipulates the expenditure scope of research and development funds and the principles for the establishment of research and development expense accounts.

Section 6 Financial projections

The financial evaluation of the project is a very important and objective index to judge whether the project has commercial value. From 2020, the financial budget for project operation is for the five-year planning period, with a capital investment of 5 million yuan. In terms of fixed costs, Best Friend has a lot of R&D costs, base salary and office expenses and forecasts based on the company's 2020 data and development plan for the next four years.

References

- Foresight Industry Research Institute (2021). 2021 China Live Streaming E-Commerce Industry Market Status and Development Trend Analysis Six Factors Boosting the Explosive Development of the Industry. Shenzhen.
- Henriques, Paulo., Lopes, Matos., Pedro, Verga., & Jerónimo Helena Mateus. (2022). Eager to Develop Sustainable Business Ideas? Assessment through a New Business Plan (BP4S Model). *Sustainability* (2).
- Souto Jaime, E., & Rodríguez-López, Ángel. (2021). Entrepreneurial learning in an experiential and competences training context: A business plan in Bachelor thesis. *The International Journal of Management Education* (3).
- Simon, Kiesel., & Nicholas, Harkiolakis. (2021). Findings from 20 years of business plan competitions in North-Bavaria. *International Journal of Teaching and Case Studies* (1).

- Li, C., Khantanapha, N., & Rattanapun, S. (2022). Express Parcel Packaging Waste Recycling Platform. *International Journal of Health Sciences*, 6(S4), 1425–1433. Retrieved from <https://doi.org/10.53730/ijhs.v6nS4.6243> (SCOPUS)
- Supot Rattanapun. (2564). 5G Technology: Re-future the Printing Industry. The Federation of Thai Printing Industry. Retrieved from <https://www.printfederation.or.th/knowledge/2564-p36/>
- Rattanapun S., Sanont R., Siriwongse T., and Thungwha S. (2021). Factors Affecting the Success of Online Bookstore Business in Thailand. *The International Journal of Business Management and Technology*, 5 (1), 27-34.
- Zhongnong Tianhong Biotechnology Co. (2020). A new model of e-commerce under the epidemic - live e-commerce. Beijing.