

## Analysis for the Robotic process automation firm's future development based on the business model

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**Abstract.** Robotic process automation tool provides an open-source platform that enables their customers to automate repetitive tasks to reduce their time of working, in which tool can be used in various industrial fields such as banking, healthcare, finance, etc. Our analysis is based on SWOT analysis, Porter's five force, pistol analysis, and financial projection. We set the UiPath which is one of the leading companies in the industry as an object to analysis whether it deserves the long-term investment and what is the advantage and disadvantages of the company. Besides that, our article also illustrates the environment of the industry, whether it will support UiPath or not. Eventually, we find the UiPath is an investable company, so our team decides to use 1 billion to invest in the company in exchange for 7% equity.

**Keywords:** *Robotic Process Automation (RPA), UiPath, SWOT analysis, Porter's five force, Pistol analysis*

### 1. Introduction

UiPath provides an end-to-end automation platform, which provides a series of robot process automation solutions through a set of interrelated software products. Their mission is to release human creativity and creativity by realizing fully automated enterprises and empowering workers through automation. The main technology of UiPath is RPA, that is, through specific techniques that can simulate human operation on the computer interface. Automatically execute corresponding process tasks according to rules to replace or assist human beings to complete relevant computer operations. To complete some simple and reciprocating work and achieve the purpose of reducing costs for customers. Compared with [1], our research focuses more on the future development of path's core technology RPA technology. Compared with another study, the effectiveness of data mining studied in our study also shows the efficiency of UiPath technology in different industries [2]. The novel idea of using UiPath in weather forecast involved [3], our research also mentioned the use of UiPath in different industries such as digital government, finance, and manufacturing. Research [4] shows the effect of RPA technology in the academic system of educational institutions. Our study also mentioned the application of RPA in single reciprocating work. Our research also found some disadvantages of UiPath in the process of robot automation [5]. Encouraging society and enterprises to use RPA technology on a large scale [6], our study also mentioned that the use of UiPath is favored by customers, and data show that the number of users is increasing year by year. For how to realize robot process automation [7], our research focuses on the effectiveness that robot process automation can bring to society and enterprises. It is mentioned that RPA technology will involve the application of accounting process automation [8]. Our research also involves the application of professional fields other than accounting. Emphasizes that the technology provided by enterprises like UiPath for society and customers can greatly reduce errors in work [9]. But our research also specifically shows where

UiPath will play a role. The effectiveness of data acquisition using RPA technology [10]. Our study shows some defects of UiPath in this regard.

UiPath is an enterprise worthy of in-depth analysis. In analyzing the future development of UiPath, we will use Porter 5 force analysis, SWOT analysis, financial analysis, and PEST analysis, and will analyze it in combination with the financial data in recent years. To get a real and objective analysis. Through Porter's five forces analysis, we conclude that UiPath has some long-term cooperation with some large international firm, in which UiPath is the leading company in the industry with it owning advantages and customers. Although some new competitors are rising, UiPath also finds some ways to keep its position in the industry like expanding its target users. According to SWOT analysis, we conclude that although the application and popularization of RPA technology are currently developing, it cannot stop the advantages of high efficiency and low cost brought by this technology to society. The whole society is full of expectations and enthusiasm for companies with RPA core technologies such as UiPath. Therefore, we believe that UiPath is full of opportunities in its future development. Breaking down UiPath's financial report, several ratios indicate improvement of management and operations efficiency. Therefore, we have good confidence to believe UiPath would turn a loss into profit very shortly. Besides, we use PEST analysis to conclude that UiPath is in a relatively favorable environment in terms of politics, economy, and technology, as a result of which UiPath can benefit a lot from its environment in the future growth. In general, according to the analysis methods we use, the conclusion is that no matter from the favor of customers, the current RPA industry environment, or even the financial data of UiPath, all show the world the status of industry bears of UiPath and its advantages. At the same time, it also makes more investors see the possibility of great development of RPA. Therefore, UiPath is a great enterprise worthy of trust and investment.

## 2. Firm description

UiPath is a global company for RPA founded in Romania by Daniel Dines, in which the company operates various forms of automation such as performing Citrix automation, PDF automation, Web automation, and Windows desktop automation, with these applied in different industries. UiPath's services have mainly consisted of UiPath Studio, UiPath Robot, and UiPath Orchestrator. As for UiPath Studio, A platform designed for RPA developers who want to build complex process automation with built-in governance features, such as powerful debugging tools, application programming interface automation, or web application. In terms of the UiPath Robot, it is used to emulate the behaviors of humans to improve the process of automation. And UiPath Orchestrator is a web based application that maintains the strict process of automation. Most of its revenue is generated by maintenance and support accounted for 88.89%. its business is primarily focused on Asia that represents 46.19%.

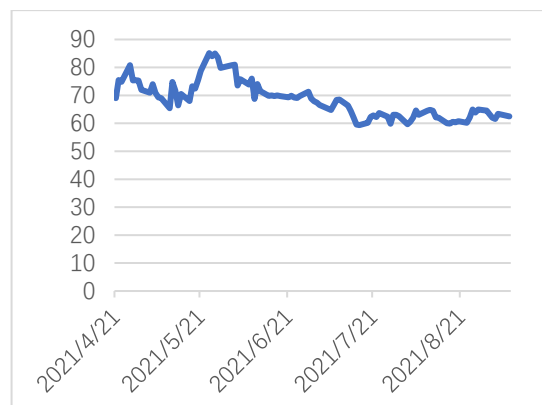


Figure 1. Adjusted Closing Price of UiPath

UiPath has been trading for 5 months which its stock price has been fallen below its initial offering price, indicating the company's performance did not meet investors' expectations leading its stock price trading lower. The stock has not yet gone through a huge sell-off which means there are investors still betting on the company's potential. UiPath's stocks are also held by several large institutional holders, e.g. Ark Investment Management, LLC, Price (T. Rowe) Associates Inc, and Coatue Management, LLC. This should provide some confidence to an individual investor that representing the company has not yet reached its full potential which investor could still hold the shares till it starts to turn the loss into profit.

### 3. Industry analysis

As for the industry analysis, we are mainly forced on the customers, UiPath's advantage, Barrier to entry, threaten by the competitors and their core business. This section is an analysis of Porter's 5 Forces.

In terms of the customers, there are over 700 companies have signed contracts with UiPath, with some global companies such as Allianz, Dentsu Inc., GE, HP, Walmart, VMware, and SMBC had long-term contact. Apart from the enterprises, the individuals are also more than 7900, who rather pay some money to experience UiPath's platform which can help the users with no coding skills to design Robotic processes in a visual interfere.

The advantage of UiPath is not that obvious, yet it still has so many good aspects in the RPA industry. As for the workflow, it is different from traditional automation, which cannot do the interaction between human and digital efficiently and easily as the workflow UiPath has. The workflow of the UiPath can provide a well-rounded platform to reduce the complexity of manipulation, to accelerate the speed of automation. In terms of outstanding machine learning, the modal of out-of-the-box, drag-and-drop is humane and operation logic in line with human nature.

The product is suitable for any size of organization to use, to consume, regardless of maladjusted. It is quicker than traditional in-house development, in which advantage will be very attractive to the customers. Finally, the advantage is the citizen development, this can assist the users who even have no skills of coding to use their studio to create simple RPA for their department, so the simple learning interest customers have higher enthusiasm and are more willing to choose UiPath.

As for the barrier to entry, AI is a topic that cannot be skipped, in which the artificial intelligence is smarter than the RPA, which can only handle the task is repetitive and rule-based. If tasks are variable and not rigid, the RPA cannot be able to cope with the mission on its own. In this case, RPA must collaborate with the AI to solve the problem, in other words, AI can work without RPA, but RPA cannot live without AI. Besides, the programming language of RPA is the highest-level, easy to learn, and manipulating items. In other words, the learning cost of RPA is not as high as another low-level language, with shorter lines comparing with the others. In this sense, the progress of learning is not so long.

The competitor of UiPath rose. As for the biggest rivals whereby the Blue Prism and Automation Anywhere fight for the same customers base as UiPath. Both have already got certain extents of ahead, in which automation anywhere are the most "cloud-ready" between the blue prism and the UiPath. Many new competitors have rather potential to grow up quickly, who target specific customers and differentiate from UiPath to survive in this highly competitive industry.

The core model of UiPath is business-to-business, with signing long-term contracts with big enterprises to make profits steadily.

### 4. Swot analysis

The SWOT analysis method is an enterprise strategic analysis method, which analyzes according to the established internal conditions of the enterprise to find out the advantages, disadvantages, and core competitiveness of the enterprise. Where, S stands for strength, W for weakness, O for

opportunity, and T for threat, where S and W are internal factors, O and T are external factors. Through SWOT analysis, we can clearly reflect the advantages and disadvantages of the enterprise and the future development direction. So, we chose SWOT analysis. After SWOT analysis, we conclude that although the RPA industry is not fully mature at present, UiPath, as the enterprise representative of RPA technology, has won the favor of many enterprises and customers in the market. Although there may be some technical disadvantages, the problems solved by UiPath for customers have far exceeded the existence of these disadvantages, and this is not a disadvantage of UiPath, but a technical barrier in the whole RPA industry. I believe that these problems will be optimized over time. The following are the four directions of our analysis.

#### **4.1 Strength**

The strength of UiPath is that it has a flexible licensing model and low entry cost. UiPath is one of the first RPA software suppliers to popularize and democratize RPA, so that the organization can start with low-cost annual investment. This is a huge advantage in consolidating the initial business case for automating repetitive business processes because it accelerates the traditional rapid return of RPA. Secondly, customers are extremely satisfied with all aspects of UiPath. In addition to the impressive G2 ranking, UiPath is the top three RPA software vendors with the highest score in Gartner peer insight - 4.6/5 star detailed assessment and contraction, integration and deployment, service and support, and product capabilities. In addition, UiPath's management team is also quite strong. It has top talents in the industry in terms of technology, finance, and law. CEO, Mr. Daniel, who worked as a senior software development engineer at Microsoft for five years, has very cutting-edge technical means. Mr. Marius has participated in some important projects, such as leading the team to succeed in AV capture all. Mr. Ashim was responsible for finance and global operations at GE for 10 years. Mr. Brad is the general counsel of SAP (computer software) in the global field and served as a system engineer for GE for 2 years.

#### **4.2 Weakness**

The weakness of UiPath is that the tool of robot process automation improves the efficiency of the organization by reducing repetitive manual work, but automation has some limitations. Then, when applying automation, it requires work-related judgment. This whole process cannot be completed independently, but other software is required to provide some conditions and judgments. Secondly, the local hosting of the UiPath orchestrator server is not available in the UiPath Community Edition. This makes the user experience not very good and limits the user's use conditions. In addition, the number of robots in the orchestrator Community Edition is limited, so it can not complete multiple tasks at the same time, making the work efficiency much lower than expected.

#### **4.3 Opportunity**

UiPath's opportunities in the industry are far beyond the reach of other RPA enterprises. In 2018, the global market value of robot nurse assistants was \$380.3 million, which is expected to reach \$1486.3 million by 2025, with a CAGR of 21.5% in the forecast period. Secondly, UiPath has a rich customer base. It provides different services for different customers to make its products more targeted. UiPath serves not only large companies like IBM but also small and medium-sized companies. Therefore RPA provides convenience for different industries, such as finance and manufacturing, which have many laborers and heavy repetitive work. In addition, when the epidemic breaks out, employees cannot work offline, so enterprises will be prompted to use RPA and other automation tools. Therefore most importantly, the market and customers are more and more enthusiastic about UiPath. 53% of respondents have used RPA. In the next two years, 19% of people will choose to use RPA to solve the inconvenience in life or work. From this, we can see that the market and customers are very enthusiastic and dependent on UiPath.

#### 4.4 Threats

UiPath also has some threats. As we all know, all Internet-related enterprises will face a problem, that is, the data information of companies and customers is leaked. When the product is running, system failure will also occur. Although system failure is usually temporary, it will also bring certain losses to the company and users. Secondly, RPA is suitable for single reciprocating work. Unlike AI, it is a flexible and intelligent tool, so the technical threshold of RPA is much simpler than AI. Therefore, RPA technology may face a lot of replication risks in the future. We also find that this industry closely related to the Internet is also facing the risk of hacker intrusion. It will even be used by some people with ulterior motives to achieve some bad purposes, such as stealing data or destroying data.

### 5. Fincial ANALYSIS

The main purpose of digging into UiPath’s financial reports is to assess if the company is healthy and stable. Since UiPath is the only public company in the RPA industry, we have quite limited knowledge about its competitors. Therefore, we can only compare UiPath’s performance over time to see if those critical criteria match our assumptions. By using ratio analysis, it could tell us the fundamentals about the company. The very first ratio that we choose to use is the Sale to Asset ratio which could tell us how efficiently the company is using its asset to generate sales.

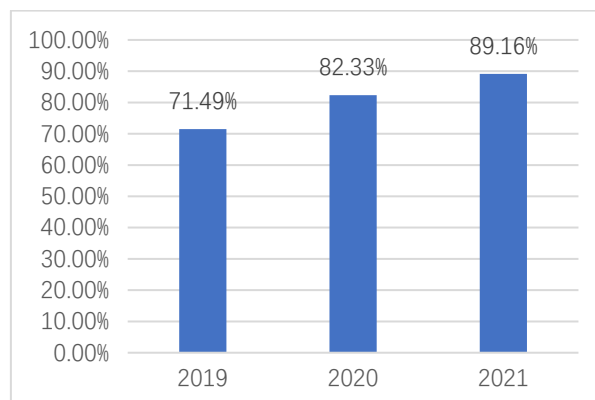


Figure 2. Sales to Asset Ratio

UiPath’s Sale to Asset Ratio is growing from 66% in 2020 to 70% in 2021, which shows a positive sign of improvement which grows more efficiency of UiPath’s operation. The next ratio we choose is the current ratio which could tell how liquid the company is and if the company will face significant liquidity problems.

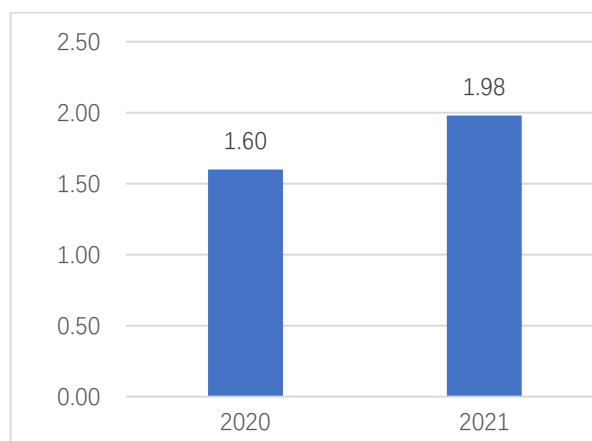
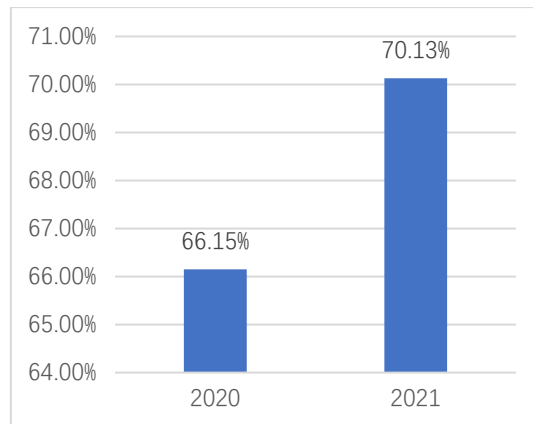


Figure 3. Current Ratio

UiPath’s current ratio also shows a positive sign of improvement which grows from 1.6 in 2020 to 2.0 in 2021 which could boost investors’ confidence. The liquidity ratio indicates that the company has enough cash and cash equivalents to cover its short-term debt.

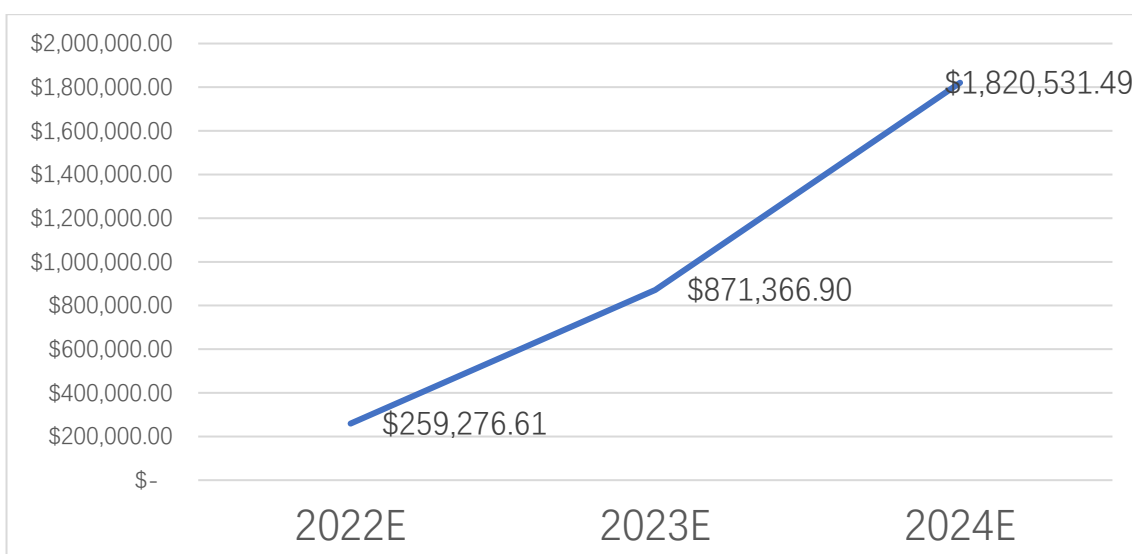


**Figure 4. Gross Profit Margin**

UiPath’s gross profit margin grew from 71% in 2019 to 82% in 2020 and to 89% we projected in 2021. It shows UiPath’s leadership position in the SaaS industry. Therefore, the increase of gross profit margin also shows signs of improvement. However, the average gross profit margin in the SaaS industry is around 80% which UiPath had already achieved in 2020.

By looking at these three ratios, generally, we could conclude that UiPath is a healthy company.

Based on the assumption that UiPath’s healthy condition, we could project UiPath’s profit and loss statement for the next three years. UiPath is going to turn the loss to profit in 2022. By discounting the profit for the next three years, we could get an approximate valuation of the company using a required rate of return of 30%, since UiPath is at the start-up stage because of its risky nature. The market capitalization of UiPath is \$32 billion, but using the discounted cash flow method would come up with an internal valuation of \$14 billion. By knowing the internal valuation of the company, it could help investors understand if the proposal, for example, 100 million dollars in exchange for 7% UiPath’s equity, makes sense or not.



**Figure 5. Profit/Loss Projection**

## 6. Environmental analysis

In this section, various environments surround UiPath will be analyzed to predict whether the future environments are conducive to the developments of UiPath or even the RPA industry. In general, there are mainly three kinds of factors, political factors, economic factors, and technological factors, that have been considered in analyses due to their greater influence on the RPA industry, which will be explained in detail in the following essay.

### 6.1 Political Factor

To begin with, the political environment throughout the globe is generally in favor of the future development of the RPA industry, especially in developed countries such as the U.S. For example, according to the report, RPA continues to Receive Strong U.S Government Acceptance (UiPath), from UiPath official website, the U.S government has put a spotlight and emphasis on the value of RPA in the Budget of the United States for Fiscal Year 2020 and the Budget of the United States for Fiscal Year 2021.

Furthermore, the states government even has already adopted RPA technologies in their daily work. For instance, to reduce administrative workload and burden while putting more resources toward higher-value work, U.S states California, Maryland, Ohio, and Texas are all using UiPath to help administrators greatly improve their office efficiency. Therefore, from this aspect, it can be estimated that RPA will keep earning trust and preference from the government office in the future.

### 6.2 Economic Factor

The RPA industry in the US enjoys a relatively more favorable economic environment compared to other companies in foreign companies. The strong national economic development indications in the U.S support the growth of UiPath and other domestic companies to a large extent. For example, when UiPath from the U.S is compared with Blue Prism, another RPA company from the U.K, the apparent gaps caused by the national economy can be seen. Specifically, based on the United States GDP Growth Rate report (Trading Economics) and U.K GDP Growth Rate 1961-2021 (Macrotrends), from a national point of view, in 2018 the economic growth rate in the U.S is 3 percent whereas, in the UK, it's 1.25 percent. Furthermore, in 2020, the purchasing power parity per capita in the US is 60,235 dollars while in the UK is 41,627 dollars, which means that the UiPath or the RPA companies in the US can develop better than others and make it easier to democratize their products, all of the data are available from United States GDP Growth Rate report (Trading Economics) and United Kingdom GDP per capita PPP (Trading Economics).

Besides, from the views of customers, they would always like to adopt the RPA technologies because it can certainly help them to save a huge amount of capital on labor.

### 6.3 Technological Factor

However, the RPA industry has a relatively low barrier to entry because it basically does not need any high coding skills, which means that RPA may be hit by low code technologies. This technology can quickly generate applications with a small amount of code, in the future.

Besides, due to the low technological barriers of the RPA industry, it may face the threat from the "Revolution of RPA technology integration", which means that the RPA may be integrated with other technologies such as AI.

## 7. Conclusion

Based on the above analysis, we find that UiPath is in an industry in which intense competition emerges, although UiPath is the current leadership position that possesses the highest market share, it does not possess any competitive advantage that could help the company win in the long run. The common problem that exists in the RPA industry is that RPA is the simplest Artificial Intelligence technology that would be replaced easily by a smarter Artificial Intelligence technology. Also, UiPath

is vulnerable to hacking, both internal and external. Insiders could steal out the filters that the company used to set as a standard underneath RPA to achieve an unfair advantage.

However, the risks and problems do not clear UiPath out of the category of a good investment, and its industry is at a booming stage which more people are willing to adopt RPA technology to replace the daily simple and repetitive work which indicates more potential users. In addition, UiPath has shown signs of improvement in its operating efficiency indicating its strong management efforts. Moreover, a high gross profit margin is common within the SaaS industry, UiPath could be easily profitable if the operating expense is reduced. In summary, UiPath is a good company with great potential to become better in the next 10 to 20 years, however, it might start to fade away in the next 50 years because of the emergence of smarter Artificial Intelligence.

However, since UiPath is the only public company in the RPA industry, there is still a lack of financial data about other major competitors for comparison to determine whether UiPath will remain ahead in the future. Besides, since publicly available financial data on UiPath are only from recent years, 2019-2021, more financial information from different years is needed to improve the accuracy of future predictions as much as possible. Furthermore, more information relates to SWOT, PESTEL, and Porter 5 should be incited to complete the considerations of effects from other unexpected factors.

On the other hand, based on the healthy financial analysis and threats analysis made above, whether UiPath will be able to stand up to the hits and threats brought by low-coding technologies will be the subject of future research to get depth in further understanding of capability and situation of UiPath in RPA industry

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