

Report on  
The Importance of IT Business Analysts in the Software Development Life Cycle at Titan Technologies  
Limited.

By  
Esham Bin Rashid  
17204008

An internship report submitted to BRAC Business School in Partially fulfillment of the requirements for  
the degree of Bachelor of Business Administration

BRAC Business School  
BRAC University  
May 2022

# Declaration

It is hereby declared that -

1. The internship report submitted is my original work while completing my degree at BRAC University.
2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The report does not contain material that has been accepted or submitted, for any other degree or diploma at a university or other institution.
4. I have acknowledged all main sources of help.

Student's Full Name & Signature:

---

Esham Bin Rashid  
17204008

Supervisor's Full Name & Signature:

---

Mr. Shamim Ehsanul Haque  
Assistant Professor  
BRAC Business School, BRAC University

# Letter of Transmittal

8th May 2022

Mr. Shamim Ehsanul Haque

Assistant Professor  
BRAC Business School  
BRAC University

Subject: Submission of Internship Report on ‘The Importance of IT Business Analysts in the Software Development Life Cycle at Titan Technologies Limited’.

Dear sir,

It is an honor for me to submit the internship report on ‘The Importance of IT Business Analysts in the Software Development Life Cycle at Titan Technologies Limited’, which you have authorized for the fulfillment of my Bachelors of Business Administration program. The report was created with the knowledge I gained during my undergraduate studies as well as the internship program.

I have done my best to prepare this report as accurately and thoughtfully as possible. I'd also want to express my gratitude for your aid and support in completing this report. I believe you will notice my meticulous effort after reading the paper, and it will serve the desired goal.

Sincerely yours,

---

Esham Bin Rashid  
17204008  
BRAC Business School  
BRAC University

# Non-Disclosure Agreement

This agreement is established and entered into by and between Titan Technologies Limited and Esham Bin Rashid, a student at BRAC University, to avoid the unauthorized disclosure of the organization's protected data.

---

Titan Technologies Limited

---

Esham Bin Rashid

# Acknowledgment

As part of my Bachelor in Business Administration undergraduate requirement, I had to complete the BUS400 course. As a part of this course, I needed to take part in an internship program. I was fortunate enough to land an internship placement at Titan Technologies Limited as an IT Business Analyst. I started my internship on 21<sup>st</sup> February 2022. Keeping my job responsibilities in mind the topic for my internship report was selected is 'The Importance of IT Business Analysts in the Software Development Life Cycle at Titan Technologies Limited.'

Firstly, I would like to thank my supervisor Mr. Shamim Ehsanul Haque, Assistant Professor, BRAC Business School, and my co-supervisor Ms. Dr. Samina Haque, Senior Lecturer, BRAC Business School for their continuous support and guidance in selecting my internship topic, making necessary changes to make this paper fruitful. Without their help, this paper might not have been this informative.

Secondly, I would to thank my workplace manager Mr. Yameen Ahmad and my colleagues at Titan Technologies Limited for their continuous support and inspiration. Without your guidance and knowledge-sharing sessions, I would not have come this far. I want to thank everyone at Titan Technologies Limited for taking off their valuable time and spending it teaching the ins and outs of the tech industry.

Thank you to the team for involving me in every single project done so far and giving me the hands-on experience that I desperately needed.

# Executive Summary

This internship report showcases the knowledge I have gathered through my internship period at Titan Technologies Limited as an IT Business Analyst. Through this paper, readers will also get an overall idea about the work done by an IT Business Analyst alongside getting a deeper knowledge of how a tech firm like Titan Technologies Limited operates.

This paper has been written in three separate chapters. In the First Chapter, readers will get an overview of my internship at Titan Technologies Limited, my duties and responsibilities as an IT Business Analyst, and the contribution that I have made as an Intern within the organization. Furthermore, this part also showcases the difficulties that I have faced during my time as an intern at Titan Technologies Limited. Based on these aspects I have given a few recommendations at the very end of this chapter.

In the Second Chapter, I have conducted a detailed analysis of Titan Technologies as a company. Here readers will learn about the background information related to Titan Technologies Limited, the managerial practices followed within the organization, their marketing practices in terms of organizational as well as their flagship product, the Financial situation of the organization in terms of the flagship product and the accounting methods followed by the organization. Furthermore, readers will learn more about the operational practices, technologies, and methodologies used by the organization, and the strength and weaknesses of the organization so on and so forth.

In the Third Chapter, I focus on the core research question that I want to answer through this paper. I am keen on finding out the importance of an IT Business Analyst within a tech firm and is it worth for organizations such as Titan Technologies to be investing in such positions. The results of my research are showcased in this part as well as detailed analysis and recommendations based on the findings.

# Table of Contents

Chapter 1: Overview of Internship.....	11
1.1 Student Information: .....	11
1.2 Internship Information: .....	11
1.2.1 Internship Period, Company Name, Department, Address .....	11
1.2.2 Internship Company Supervisor’s Information: .....	11
1.2.3 Internship Duties and Responsibilities .....	11
1.3 Internship Outcomes: .....	12
1.3.1 Student’s Contribution to the company:.....	12
1.3.2 Benefits to the student:.....	13
1.3.3 Problems/Difficulties faced during the internship period: .....	14
1.3.4 Recommendations:.....	15
Chapter 2: Organization.....	15
2.1 Introduction: .....	15
2.2 Company Overview: .....	15
2.2.1 Company Logo: .....	16
2.2.2 Company Mission: .....	16
2.2.3 Company Vision: .....	16
2.3 Management Practices: .....	17
2.3.1 Recruitment and Selection Process: .....	18
2.3.2 Training and Development:.....	19
2.3.3 Compensation and Benefits:.....	19
2.3.4 Performance and Appraisal System:.....	19
2.4 Marketing Practices: .....	19
2.4.1 Organizational Target Market: .....	20
2.4.2 Organizational Positioning Strategy:.....	20
2.4.3 Flagship Product Marketing Plan: .....	21
2.4.4 Flagship Product Marketing Roadmap: .....	22
2.4.5 Flagship Product LTV: CAC Ratio: .....	22
2.5 Financial Performance and Accounting Practices: .....	24
2.5.1 Projection Based on Subscription Plans: .....	24
2.5.2 Profit and Loss Breakdown: .....	26

2.5.3 Discounted Cashflow Valuation:.....	27
2.5.4 Accounting Methods Followed: .....	29
2.6 Operations Management and Information System Practices: .....	29
2.6.1 Agile Operations (AgileOps): .....	29
2.6.2 Information and Communication Systems Used: .....	30
2.7 Industry and Competitive Analysis: .....	35
2.7.1 Porter’s Five Forces: .....	35
2.7.1.1 Competition in the IT Industry:.....	35
2.7.1.2 Potential of New Entrants in the IT Industry:.....	36
2.7.1.3 Power of Suppliers in the IT Industry: .....	36
2.7.1.4 Power of Customers in the IT Industry: .....	37
2.7.1.5 Threat of Substitutes in the IT Industry:.....	37
2.7.2 SWOT Analysis: .....	38
2.7.2.1 Strengths of Titan Technologies:.....	38
2.7.2.2 Weaknesses of Titan Technologies: .....	38
2.7.2.3 Opportunities for Titan Technologies: .....	38
2.7.2.4 Threats for Titan Technologies: .....	39
2.8 Summary and Conclusions:.....	39
2.9 Recommendations:.....	39
Chapter 3: Project .....	41
3.1 Introduction: .....	41
3.1.1 Background:.....	41
3.1.2 Objective:.....	41
3.1.3 Significance: .....	41
3.2 Methodology:.....	42
3.1.1 Primary Data Sources:.....	42
3.1.2 Secondary Data Sources:.....	42
3.3 Questionnaire Design:.....	42
3.3.1 Survey Findings: .....	42
3.3.1.1 Survey Finding from C Level Executives: .....	43
3.3.1.2 Survey Finding from Managers or Senior Executives: .....	46
3.3.1.3 Survey Finding from Executives or Junior Executives:.....	48
3.4 Summary of the Research: .....	51



3.4 Recommendation: .....	52
Reference .....	53
Appendix .....	54

## List of Figures

Figure 1: Company Logo .....	16
Figure 2: Company Organogram .....	17
Figure 3: Titan Technologies Positioning Map .....	20
Figure 4: Marketing Roadmap for Flagship Product .....	22
Figure 5: SME Plan Projection .....	24
Figure 6: Enterprise Plan Projection .....	25
Figure 7: Profit and Loss Breakdown .....	26
Figure 8: Jibble Logo .....	31
Figure 9: Jibble Dashboard .....	31
Figure 10: ClickUp Logo .....	32
Figure 11: ClickUp Dashboard .....	32
Figure 12: Jira Logo .....	33
Figure 13: Jira Dashboard .....	33
Figure 14: Microsoft Teams Homepage .....	34
Figure 15 Slack Homepage .....	34
Figure 16 Titan Technologies Limited's Porter's Five Forces .....	35
Figure 17: Selecting Designation .....	43
Figure 18: What made C Level Executives hire a Business Analyst .....	43
Figure 19: The ROI of a Business Analyst .....	44
Figure 20: Business Analyst improving business process .....	44
Figure 21 Effectiveness of a Business Analyst .....	45
Figure 22: Necessity of a Business Analyst .....	46
Figure 23: Business Analyst's impact on assisting multiple teams .....	46
Figure 24: Tasks done by a Business Analyst .....	47
Figure 25: Impact of Business Analysts on taking crucial business decisions .....	48
Figure 26: Knowledge sharing for a project done by a Business Analyst .....	48
Figure 27: Business Analyst acting as a knowledge hub .....	49
Figure 28: Business Analyst assisting in technical work .....	50

Figure 29: Business Analyst breaking down complex issues for a team. .... 50  
Figure 30: Dependencies on a Business Analyst’s work ..... 51

## List of Tables

Table 1: LTV: CAC Ratio..... 23  
Table 2: Discounted Cashflow Valuation ..... 28

# Chapter 1: Overview of Internship

## 1.1 Student Information:

Name: Esham Bin Rashid, ID: 17204008, Bachelors in Business Administration specializing in Marketing & E-Business

## 1.2 Internship Information:

### 1.2.1 Internship Period, Company Name, Department, Address

**Period:** 21st February 2022 - Currently.

**Company Name:** Titan Technologies Limited.

**Department:** Product Team.

**Address:** Flat 1B, House 2E, Road 29, Gulshan-1, Dhaka-1212.

### 1.2.2 Internship Company Supervisor's Information:

**Name:** Yameen Ahmad,

**Designation:** Operations Manager

### 1.2.3 Internship Duties and Responsibilities

- Examine the company's goals, objectives, and requirements.
- Prepare reports and business proposals.
- Assist with the planning and design of business processes, as well as making ideas for improvements.
- Conduct research and analysis in support of the company's objectives.
- Assist in the resolution of business difficulties through the use of systems and data.
- Assist with a competitive analysis of various company ideas and make recommendations for USPs.
- Costs and benefits of different actions and/or solutions are estimated, and suggestions are made.
- Assist in the launch of new initiatives

## 1.3 Internship Outcomes:

### 1.3.1 Student's Contribution to the company:

As a Business Analyst Intern, I worked on multiple products for Titan Technologies Limited. For each product, I was responsible for different tasks. A short description of the work done for each of the products is given below:

***An artificial Intelligence assisted human resource management bot:*** For this project, I have done the following tasks -

- Assisted in creating business plans and processes and made recommendations for further improvements.
- Created the Pitch Deck for this product.
- Created the Financial Analysis for this product.
- Create the Valuation for this product.
- Pitched the product idea to potential pre-seed investors.

***An automated QA testing platform:*** For this project, I have done the following tasks -

- Took the initial requirements from the foreign client.
- Created the Project Overview for this particular product.
- Created a list of the Key Success Factors.
- Created a detailed list of the Project Scope.
- Created a detailed document consisting of the Business Requirements.
- Done market research to ensure the correct approach is being followed.
- Done Competitor Analysis (CPM Metrics) to find the gaps as well as fine-tune the product.
- Conducted continuous meetings with the client for further requirements and shared updates accordingly.
- Created a Research and Development report for this particular product.
- Presented the Research and Development report to relevant stakeholders.

*An intuitive mobile application for a foreign-based healthcare service provider:* For this project, I have done the following tasks -

- Took the initial requirements from the foreign client.
- Created a project requirement document for this product.
- Assisted the UI/UX in creating a demo for the mobile application.
- Create a Business Proposal Deck for this product.
- Presented the proposal to the foreign client and got approval.

*An intuitive mobile application for an e-commerce company:* For this project, I have done the following tasks -

- Took the initial requirements from the foreign client.
- Did Requirement Analysis.
- Did Competitor Analysis.
- Assisted the UI/UX in creating a demo for the mobile application.
- Create a Business Proposal Deck and Document for this product.

### 1.3.2 Benefits to the student:

As an Intern coming from a business background in a software development company provided with multiple opportunities. I have learned a multitude of soft skills as well as hard skills while doing this internship. Below I have listed the thing I have learned during my internship period -

- **How to write a Business Requirement Document:** A Business Requirement Document (BRD) focuses on the business perspective as it holds the details of the business solution for a project. As a Business Analyst, I learned how to draft a Business Requirement Document. Through this document, it is ensured the implementation of all the requirements to achieve business objectives.
- **How to write a Business Proposal:** A business proposal is a document that is used to present your value proposition on how the product or service you sell can be useful to a client. As a Business Analyst, I learned how to make a Business Proposal Document and

Deck. Through this internship, I have also learned how to present the Business Proposal to potential investors and clients.

- **How Software Development Lifecycle works:** Software Development Life Cycle is the application of standard business practices to building software applications. It's typically divided into six to eight steps: Planning, Requirements, Design, Build, Document, Test, Deploy, and Maintain. During my internship period, I worked closely with different departments which worked in different stages within the software development life cycle. This allowed me to learn how different teams work together and learn the technical terms associated with software development.
- **How to do System Analysis:** As a Business Analyst, I need to understand how system analysis works. Through the internship period, I learned how to write user stories, Functional and Non-functional requirements for a project, Use Cases, Use Case Scenarios, Use Case UML diagrams, Broken Down Use Cases, etc. Through this, I got a technical understanding of how product development works.
- **Learned the basics of System Architecture and Tech Stacks:** As a Business Analyst, I learned the basics of system architecture on a high level as well as how each of the tech stacks works.
- **Learned about Design Principles:** As a Business Analyst, I was also required to learn more about the design principles so that I can collaborate with the UI/UX team fruitfully. This internship helped me to understand the basics of design principles, hook theory, and reward system so that I can communicate with the relevant stakeholders with utmost clarity.

### 1.3.3 Problems/Difficulties faced during the internship period:

During my internship as a Business Analyst, I had several challenges that I had to overcome. First and foremost, this position is for people with a strong technical background. In my instance, though, I was a business student with an insufficient grasp of technical procedures and vocabulary. Just to communicate with the development team, I had to go through a steep learning curve. Saying that, finally, I got over that communication barrier, and today I have the bare minimum of expertise to

communicate with highly technical folks. In the end, the obstacle proved to be a blessing in disguise.

### 1.3.4 Recommendations:

There isn't much to suggest because I admired Titan Technologies' intern management. To be honest, I believe that most students who do not have a growth mentality would struggle to succeed here since it is a highly hands-on internship where you must learn everything on your own. They will only point you in the right direction; the rest is up to you. However, this is an important area that Titan Technologies could improve upon. They may present a thorough guideline, a road map of sorts, to their interns so that they can follow it. Otherwise, it's a wide ocean in which interns may drown owing to a lack of expertise.

## Chapter 2: Organization

### 2.1 Introduction:

I started as a Business Analyst Intern at Titan Technologies Ltd. on February 21, 2022. This paper explains the work I've done as well as how the Business Analytics function is an intriguing component of the software development lifecycle. Software Development Life Cycle is the application of standard business practices to building software applications. It's typically divided into six to eight steps: Planning, Requirements, Design, Build, Document, Test, Deploy, and Maintain. My job entails developing business requirements papers while working on a feasibility study with the software development and artificial intelligence teams. I was required to bridge the gap between the business and technical teams by doing so. To sum it up, my work fell under the product development stage. However, as per necessity other tasks were also done by me.

### 2.2 Company Overview:

Titan Technologies Ltd is a sister concern of Cisscom LLC, a software development firm based in California. Developing innovative and leading-edge tech products and services for Fortune-500 corporations.

Cisscom was founded in 2012, and we specialize in developing reliable software systems for both corporate and consumer industries. Our solutions are designed to be simple and effective, and we seek to make our clients' life simpler by offering high-quality product user experiences and seamless integration with leading-edge technology to create scalable solutions that meet business objectives.

At Titan Technologies Ltd, we are passionate about our clients' success, and we work diligently to assure their happiness and long-term connection. They work -

- From conception to completion, collaborate with their clients.
- With the highest emphasis, focusing on the demands and vision of the customer.
- To maximize the product's potential, develop effective methods and build high-quality products.
- To ensure international standards are maintained during the project's completion phase.

### 2.2.1 Company Logo:



Figure 1: Company Logo

### 2.2.2 Company Mission:

Designing tech solutions to be simple and effective.

### 2.2.3 Company Vision:

We seek to make our clients' life simpler by offering high-quality product user experiences and seamless integration with leading-edge technology to create scalable solutions that meet business objectives.



## 2.3 Management Practices:

Before getting started with the management practices let's take a look at how the organization is structured.

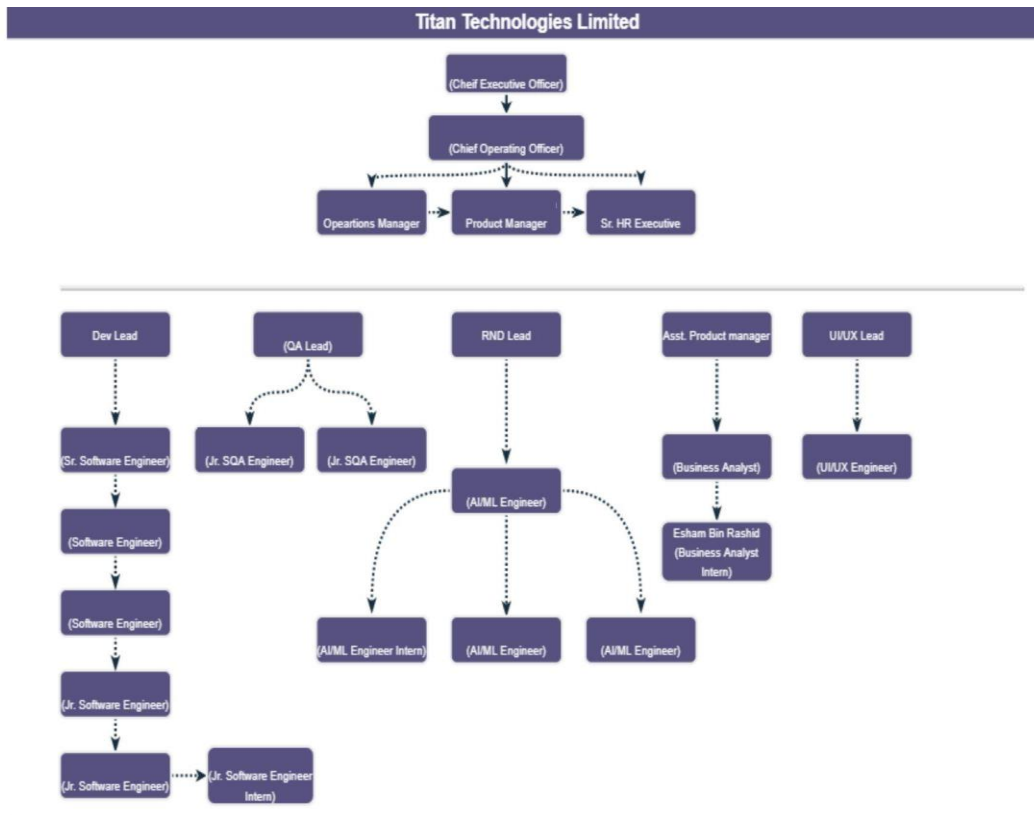


Figure 2: Company Organogram

As per the organogram mentioned above, it might seem the organization has multiple layers. However, Titan Technologies operates in a flat management structure. Here a single person is managed by one or two managers. From project to project the manager also changes. There is no set stone rule. Saying that Titan Technologies tries to maintain the above organogram as much as it can.

Here at Titan Technologies, the management follows a **Collaborative Management Style** which falls under Democratic Management. In Democratic Management generally, employees are given room and space where voices are heard and decisions are made taking their voices into account as well. Saying that in **Collaborative Management Style** management creates an open forum for ideas to be discussed extensively before making decisions based on majority rule. Staff is empowered to take ownership of

outcomes, which can lead to increased engagement, innovation, and creativity. There are benefits to this approach of which a few are listed below -

1. The employees feel trusted, heard, and valued by all levels of management.
2. They are motivated to produce their best work, work together to solve problems, and completely engage in the process.
3. Because of open communication, workplace disputes are frequently resolved before they become serious problems.
4. When people are engaged, turnover is reduced, and various perspectives frequently lead to better ideas and outcomes.

Titan Technologies is using this method of management only because it's best suited when a business wants to foster innovation, drive collaboration, and engage employees. This is something that they are trying to achieve. For the agile mindset, this management style is working just fine for this organization.

### 2.3.1 Recruitment and Selection Process:

Titan Technologies follows a multiple-step approach in terms of its recruitment process. For non-technical and technical positions, the recruitment varies. However, for the most part, the recruitment process revolves around the same philosophy. Below I am explaining the step-by-step recruitment process which is followed by Titan Technologies -

- The Human Resource Executive creates a recruitment post and posts it on LinkedIn and Facebook. He/She also informs the existing employees about the open positions so that they can also refer other candidates.
- He/She collects all the Resumes which it is ranked based on the candidate's skills.
- The top candidates are called in for a primary interview.
- If it is a technical position then the candidate is given a task that he/she needs to complete within a given period. If the candidate is non-technical then a business case is given which needs to be solved.
- If the candidate passes all the tests, then he/she is invited to attend a virtual meeting with the CEO of Titan Technologies. In this meeting, all the members of the management team are also present.

- If the candidate passes this stage, he/she gets onboarded in the company by filling up the necessary documents.

### 2.3.2 Training and Development:

Titan Technologies provides the employees with the necessary training to enhance their capabilities. The company arranges workshops and knowledge sharing sessions where all the employees collaborate. The company also provides free courses to employees from reputed teaching platforms. They also provide separate time for the employees to do their research and development. Furthermore, through Titan Technologies their employees can also learn from industry leaders through different projects of sorts.

### 2.3.3 Compensation and Benefits:

The employees receive a competitive remuneration package. On top of that, all the employees are provided with paid leaves, health insurance as well as subsidized lunch and snacks.

### 2.3.4 Performance and Appraisal System:

Each employee who is working for Titan Technologies Limited has a contract where the Key Performance Indicators are mentioned. By achieving these Key Performance Indicators employees are expected to earn more on top of their existing package. Titan Technologies also have a yearly appraisal scheme where based upon an employee's performance their package is revised.

## 2.4 Marketing Practices:

Titan Technologies does not focus on marketing itself. They have their fair share of social media profiles as such. However, those are used mostly for recruitment purposes. The organization mostly relies on word of mouth and corporate partnerships done by the CEO. The CEO himself brings in projects which the team completes. Titan Technologies does not have a solid marketing plan but they do conduct some other elements of marketing. However, I am going to explain the Marketing Roadmap and LTV: CAC ratio of Titan Technologies Limited in terms of their flagship product

### 2.4.1 Organizational Target Market:

Titan Technologies focuses on foreign customers. They do not work for domestic companies or clients for the most part. The target market for them is the SMEs as well as fortune 500 companies who want to outsource their work. Furthermore, another segment that they highly focus on is the entrepreneurs who have an idea but do not have the technical expertise to execute his/her vision. This is where Titan Technologies comes in. If I want to sum up their target market it will break down into three segments -

1. Visionary Entrepreneurs and Investors.
2. Small to Medium Scale Organizations looking for Digitalization.
3. Fortune 500 Companies looking to outsource their work.

### 2.4.2 Organizational Positioning Strategy:

This is one of the key aspects by which Titan Technologies is generating revenue. Most foreign third-party software development companies charge a very high amount of money for a robust solution. The labor cost in those countries is very high. As a result, it is expected that if you build

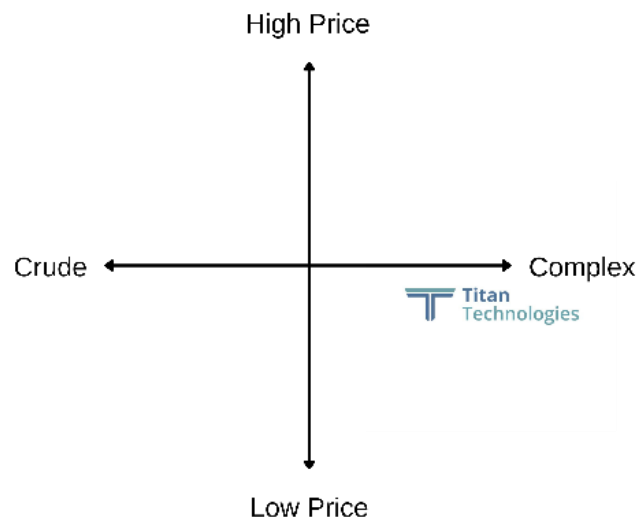


Figure 3: Titan Technologies Positioning Map

software from scratches the cost will be very high. However, since Titan Technologies is located in Bangladesh and the labor here is cheap, they can provide the same level of service if not more at a very lower rate. This is a plus point for foreign companies looking for a software development firm. They are burning less money but getting the same work done.

As per the posting chart, one can understand that Titan Technologies is developing highly complex products at a lesser cost. Through this, they are attracting a lot of foreign clients.

### 2.4.3 Flagship Product Marketing Plan:

The marketing plan for the flagship product of Titan Technologies Limited is divided into phases. Below I am going to explain the marketing plan of the flagship product based on the phases –

- **Phase One:** At this point, a very rudimentary version of the product will be released. We want to focus on a community-based marketing approach to achieve natural product growth. Because the product is tackling a certain community's needs, this strategy may anticipate achieving a lot of traction while spending less money. To get traction, we will concentrate on Search Engine Optimization and Cold Calling.
- **Product Market Fit Phase:** Once the product has reached the point where it is market-ready and can be used by individuals from all walks of life, we will focus on influencer and content marketing, as well as sales team-led offline activation runs.
- **Hard Launch and Growth Phase:** Because the product has attained its full potential at this point, marketing techniques will change. Because we already have a client base that has signed up and is utilizing our product. Following that, we'll concentrate on corporate clientele. B2B sales will be used to acquire these corporate clients. Furthermore, we intend to form strategic collaborations with investment firms, particularly angel investors, to bring our product to market.

## 2.4.4 Flagship Product Marketing Roadmap:

# Marketing Road Map

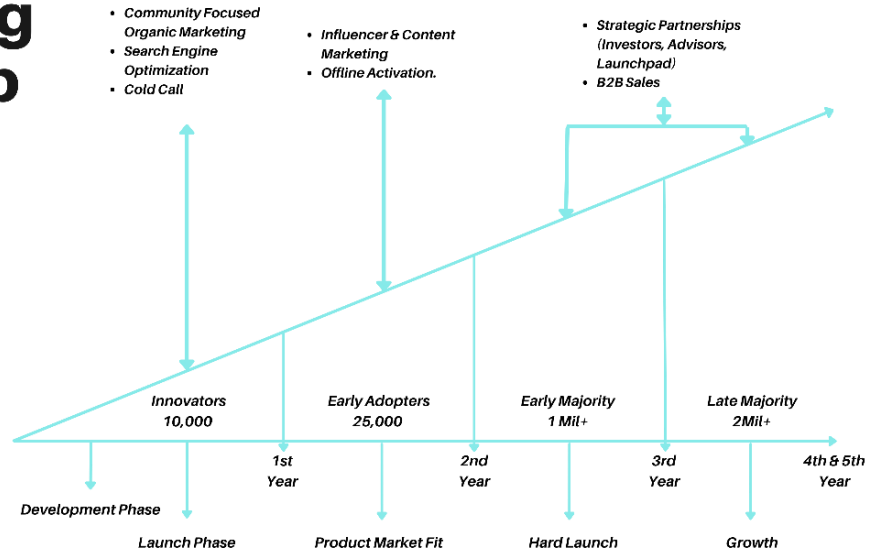


Figure 4: Marketing Roadmap for Flagship Product

## 2.4.5 Flagship Product LTV: CAC Ratio:

The Customer Lifetime Value to Customer Acquisition Cost (LTV: CAC) ratio measures the relationship between the lifetime value of a customer and the cost of acquiring that customer.

Particulars	Year 1	Year 2	Year 3	Year 4	Year 5
CAC	\$91.47	\$2.40	\$2.99	\$1.15	\$0.91
<b>Particulars</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
Average Purchase Value	\$0	\$9	\$22	\$15	\$19
<b>Particulars</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
Average Purchase Frequency Rate	1.3	6.0	5.8	5.9	5.9
<b>Particulars</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
Average Customer Lifetime (Years)	0.5	2	5	7	10

<b>Particulars</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
LTV	\$0	\$112	\$645	\$640	\$1,125
<b>Particulars</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
LTV: CAC	\$0	\$12	\$29	\$42	\$59

Table 1: LTV: CAC Ratio

Explaining the mentioned table below:

- Firstly, I calculated the Customer Acquisition Cost. This entails how much money is being spent on acquiring a single customer. In the first year, we can see that to acquire a single customer we are spending \$91 approx. However, in the coming years, we can see the acquisition cost going down by a drastic amount eventually going down as low as \$0.91.
- Average Purchase Value looks into the average purchase price of every single customer. In the first year we can see that the average purchase value is 0\$ however in the second year we can see it rose to \$9 from a single purchase. In the coming years, it goes higher eventually settling at \$19.
- Average Purchase Frequency Rate Showcases how frequently a product is being purchased. In the first year, we can see that the average purchase frequency is 0.5 times. However, in the coming years, it rises and eventually, it goes to a steady pace of 5.9 times.
- Average Customer Lifetime is an assumption as to how long a particular customer will be with a particular company or use your particular product. Initially, since the marketing efforts are quite low and the product is yet to be polished the customers will be using our product for 6 months. As the product gains popularity eventually, we expect the product to have a loyal customer base who will stay with us for at least 10 years.
- Customer Lifetime Value looks into how much money a single customer is willing to spend on a particular product throughout their lifetime. In the case of Titan Technologies Flagship product, from spending \$0, it goes up to \$1,125.
- Coming down to the LTV: CAC Ratio. This explains by spending \$1 on acquiring a customer how much money you are getting in the long run. In the case of Titan Technologies initially, the ratio is \$0. However, as per the table, we can see that the ratio goes up to \$1: \$59. This means at the end of 5 years by spending one dollar we can get up to \$59 in return.

## 2.5 Financial Performance and Accounting Practices:

Due to a non-disclosure agreement with Titan Technologies, I am unable to reveal all financial details. However, I'll illustrate how Technologies is valued in terms of its flagship product. Because the majority of the company's revenue comes from this flagship product, its value will represent the company's overall success.

### 2.5.1 Projection Based on Subscription Plans:

To begin, I'd like to state that this product is a subscription-based service. As a result, two revenue streams from two separate packages are available. One is the basic version, while the other is the premium version. Let's start with the most basic package and evaluate its performance.

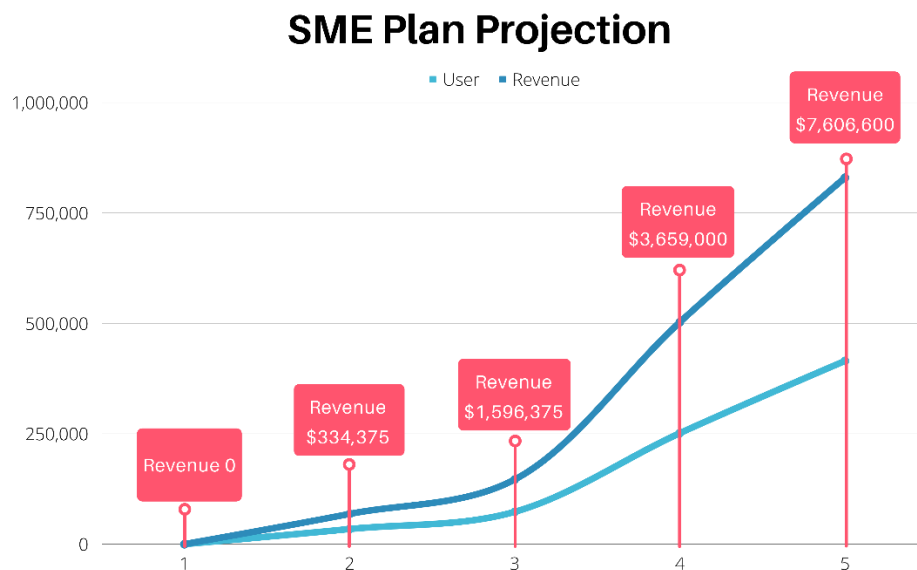


Figure 5: SME Plan Projection

The graph above depicts a projection of Titan Technologies' income over the next five years. The graph is simplistic since I couldn't fit a lot of information into it due to the non-disclosure agreement. It does, however, provide a clear picture of the money earned by this simple plan. I'll explain the graph below:



- At the end of the first year, you can see that the revenue generated from this product is \$0. This is because at this stage the product was at the development stage where the developers, as well as the business team, were building and fine-tuning the product to achieve product-market fit.
- From the end of the second year, you can see that the product has already started to generate revenue. Alone in the second year, this particular plan has generated \$334,375 in revenue. If you look at the graph you can see that from the second year to the end of the fourth year there is a 10x growth there. For a startup, this is an ideal growth rate.
- In the projected fifth year the projection stands at a whopping 7 million USD just only from the basic plan.

Now we'll look at the premium plan. Because this strategy has not yet been implemented, the prediction is based on assumptions.

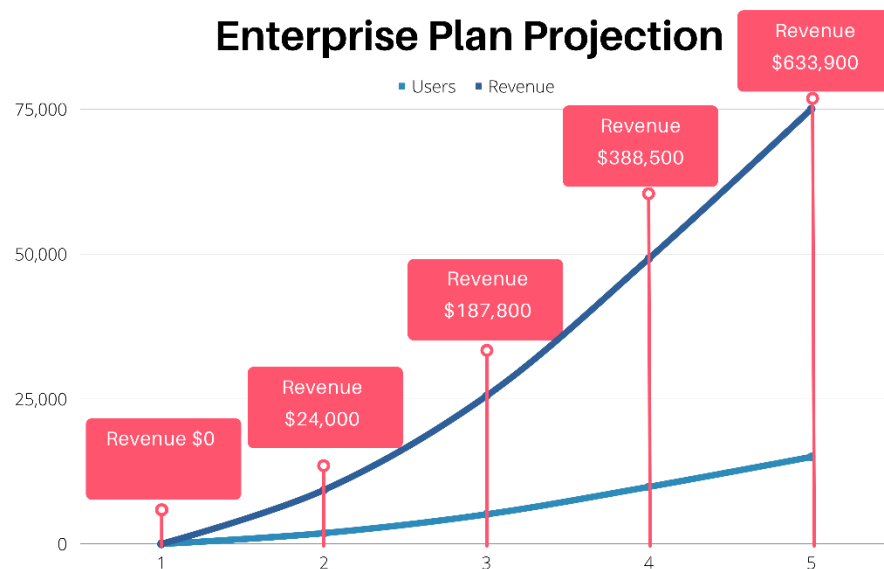


Figure 6: Enterprise Plan Projection

The graph above depicts a projection of Titan Technologies' income over the next five years from the premium plan only. I'll explain the graph below:

- For the first two years, the team focused on enhancing the product to offer a premium experience to its customers. As a result, you can see that the revenue generated within this period is close to none.
- However, from the end of the third year, the revenue is expected to flow in. The total revenue from this package by the end of the third year is \$187,800.
- From the third year onward, you can see that the projected revenue is growing at a rate of 3x. Since this is a premium package the growth rate is lower compared to the basic package. This particular package needs time to pull the desired growth rate.

## 2.5.2 Profit and Loss Breakdown:

A profit and loss statement is critical for a company's decision-making process. It demonstrates whether the company's activities result in a profit or a loss after all connected expenses have been taken into consideration. As a result, if necessary, the firm can take corrective action.

Below is the profit and loss breakdown for the flagship product.

# Profit & Loss Breakdown

Particulars	Year 1		Year 2		Year 3		Year 4		Year 5	
	Amount	Amount	Percentage	Amount	Percentage	Amount	Percentage	Amount	Percentage	
<b>Sales</b>	\$0	\$358,375		\$1,784,175		\$4,047,500		\$8,240,500		
<b>OPEX</b>										
Salaries								\$544,294	6.61%	
Media Buying								\$65,702	0.80%	
PR & Activations								\$44,658	0.54%	
Administration								\$77,542	0.94%	
Misc. Expense								\$14,644	0.18%	
<b>OPEX Total</b>	\$148,886	\$221,676		\$495,301		\$603,864		\$746,840		
<b>CAPEX</b>										
Office Equipments								\$8,824	0.11%	
Office Furnitures and Fittings								\$4,394	0.05%	
Rent Advance								\$2,471	0.03%	
<b>CAPEX Total</b>	\$27,559	\$2,447		\$24,335		\$12,059		\$15,688		
<b>Net Profit</b>	-\$176,445	\$134,252		\$1,264,539		\$3,431,577		\$7,477,972		

Figure 7: Profit and Loss Breakdown

As per the above table, one can understand how the profit and loss breakdown was calculated for this particular product. The profit and loss breakdown is calculated based on Sales, Operational Expenses (OPEX), and Capital Expenses (CAPEX). I'll explain the table below:

- The sales row showcases the accumulated sales for each of the five years. If we take a look at the table, we can see that in the first year the accumulated sales are \$0 as previously mentioned due to product development and fine-tuning to achieve product-market fit.
- As the sales for the first year are \$0 and the OPEX and CAPEX are \$148,886 and \$27,559 respectively. The total Burn rate for that year comes down to \$176,445. In the first year, the organization did not make any profit but rather invested a huge sum of money in product development.
- However, from the second year, we can see that the product is generating Net Profit. In the second year alone the product generated sales worth \$300K approx. Deducting the OPEX and CAPEX the net profit comes down to \$134K Approx.
- In the coming years, we can see a steady increase in the number of sales made. At the end of year five, the total amount of sales stands at \$8.2 Million Approx. Deducting the OPEX and CAPEX the net profit comes down to \$7.5 Million Approx.

Analyzing the profit and loss statement we can see that; the product is very profitable of the constant rise in the number of sales as well as considering that the OPEX and CAPEX don't change as much.

### 2.5.3 Discounted Cashflow Valuation:

Discounted cash flow (DCF) is a valuation approach that uses predicted future cash flows to determine the value of an investment. DCF analysis aims to determine the current value of an investment based on future forecasts of how much money it will earn.

Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Terminal Value
<b>EBIT</b>	\$0	\$358,375	\$1,784,175	\$4,047,500	\$8,240,500	
<b>Operational Tax</b>	0	0	0	0	0	
<b>Net Operating Profit Less Adjusted Tax</b>	\$0	\$358,375	\$1,784,175	\$4,047,500	\$8,240,500	
<b>Investments (-)</b>	0	0	0	0	0	
<b>Depreciation (+)</b>	0	0	0	0	0	

<b>Investments in Working Capital (-)</b>	0	0	0	0	0	
<b>Free Cash Flow</b>	\$0	\$358,375	\$1,784,175	\$4,047,500	\$8,240,500	\$29,965,455
<b>Weighted Average Cost of Capital 30%</b>						
<b>Growth Rate 2.5%</b>						
<b>Discounted Period</b>	1	2	3	4	5	
<b>Discount Factor 1/(1+WACC%) ^ Discounted Period</b>	0.77	0.59	0.46	0.35	0.27	0.27
<b>Discounted Cash Flow</b>	\$0	\$212,056	\$812,096	\$1,417,142	\$2,219,406	\$8,090,673
<b>Value</b>					<b>\$4,660,701</b>	
<b>Aggregated Terminal Value</b>						<b>\$12,751,373</b>

Table 2: Discounted Cashflow Valuation

The above table showcases the Discounted Cashflow Valuation method. I used this method to determine the current value of the company. The steps I have followed are given below:

- **Step 1** - From the P&L got the revenue for the 5 years.
- **Step 2** - From the Revenue, we need to deduct the Operational Tax.
- **Step 3** - This will give us the Net Operating Profit Less Adjusted Tax.
- **Step 4** - From the Net Operating Profit Less Adjusted Tax, we need to deduct Investments, Investments in Working Capital, and then add Depreciation.
- **Step 5** - From that, we get the Free Cash Flow.
- **Step 6** - Discount factor is calculated based on this function,  $1/(1+WACC\%)^{\text{Discounted Period}}$ . For WACC we have taken 30%, the lower the WACC the higher the valuation. It showcases the business is generating revenue and is self-sustaining.
- **Step 7** - Discounted cash flow was calculated by multiplying the Discount factor by the Free cash flow for each year.
- **Step 8** - Terminal Value was calculated with this formula, Free Cash Flow for year 5 / (30%-2.5%).
- **Step 9** - Discounted Cash flow for Terminal Value was calculated based on the 5th Year's Discount Factor multiplied by the Terminal value Free cash flow.
- **Step 10** - In terms of the 5 Year projection Titan Assist's Value stands at 4.66 mil USD and in terms of Terminal Value 12.75 mil USD.

To sum up the current valuation for this company is **4.66 million USD Approx.**

#### 2.5.4 Accounting Methods Followed:

Titan Technologies is a relatively new company and does not have those many complex accounting calculations as it does not require them.

The organization follows basic accounting principles. The organization focuses on the Balance Sheet, Income Statement, and Cashflow Statement because through the Balance Sheet assets and liabilities are tracked, through the Income Statement profit and loss are tracked, and through the Cashflow Statement investments that individuals can readily turn into cash are tracked. By doing so, the stakeholders get a high level of understanding of the financial health of the company and can make better decisions accordingly.

Since the company is a private limited company and the records are kept private, I am not privileged to showcase them in this report.

## 2.6 Operations Management and Information System Practices:

### 2.6.1 Agile Operations (AgileOps):

Titan Technologies at the core follows the Agile Methodology. As a software company, this particular method is also reflected in its operational aspect as well. Agile operations, often known as AgileOps, is a digital business operating model that relies on Agile methodology and DevOps practices to help businesses adapt to change rapidly and effectively. AgileOps is an umbrella word for operations and development teams that collaborate closely with business executives, data analysts, and the rest of the company. Below I am going to explain the key benefits of AgileOps -

- Rather than relying on management to foster innovation, AgileOps encourages employees to form ad hoc teams to address a specific problem or capture an opportunity.
- AgileOps' key performance indicators focus on the number of successful business services supplied rather than conventional lines of code or software bugs addressed.

- With AgileOps, the IT team or teams can focus on product and process improvement, and not just bug fixes.
- The importance of a certain demand or commercial solution is sometimes overshadowed by the power of a managerial personality.

Not just only the mentioned benefits are achieved through AgileOps rather it also helps the organization in many other ways. Some of my key findings are mentioned below -

- **Customer Satisfaction:** In agile operations, continuous effective communication with stakeholders is critical. Because development is iterative and incremental, clients may discover changes in their demands as they occur and effectively generate the solution to their exact specifications. When there is a high level of interaction and personalization, customers are more delighted with the end outcome.
- **Greater Control Over Projects:** In previous development methods, developers were constrained by a set timeframe, allowing them little flexibility to respond to changing demands. Agile's iterative structure gives both developers and clients more control over the project's outcomes. Whether a customer wants to add new demands or the market environment changes, developers can pivot and meet new challenges.
- **Ensuring Quality Products:** Agile operations incorporate Agile testing into your production process. Daily testing and validation ensure that problems are rapidly identified and corrected, resulting in a higher-quality iteration.

By using this method Titan Technologies is ensuring that its daily operations are running smoothly. Through this, all the teams work more collaboratively. Disputes are dealt with within a short time. Furthermore, by adopting this philosophy Titan Technologies Does not require a separate department to monitor every aspect of the day-to-day operations. Rather everything is run by a system which I will be explaining in the next section.

## 2.6.2 Information and Communication Systems Used:

Here at Titan Technologies a blend of multiple Information and Communication Systems is used. These tools and software can be divided into two parts one is for Organization and Project

Management and another is for Communication with internal departments and external stakeholders.

For Organization and Project Management Titan Technologies is using Jibble, ClickUp, and Jira. Each of the mentioned tools has different use cases which I am going to explain below –



Figure 8: Jibble Logo

- **Jibble:** It's a time and attendance tool that lets businesses keep track of their employees' actions. Titan Technologies uses this tool to keep track of employees' work hours from which the payroll is created. Every employee is required to use this tool to validate their working hours.

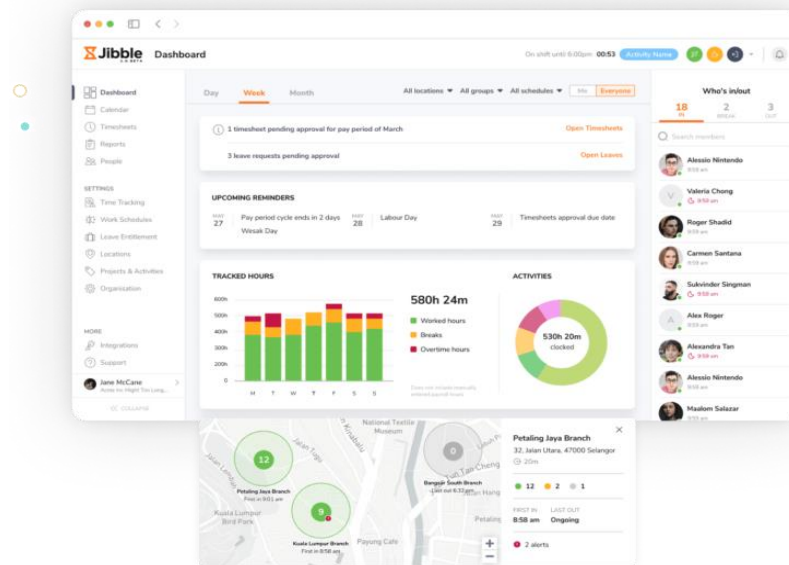


Figure 9: Jibble Dashboard



Figure 10: ClickUp Logo

- **ClickUp:** You may use it to produce rich-text Docs for marketing plans, reports, strategies, and other documents. Within ClickUp, you can keep them all in one location and even tie them to projects. You may also edit and interact in real-time with your teammates. However, Titan Technologies uses it for Project management for the most part as it can manage it. Some clients of Titan Technologies prefer using ClickUp as it is easy to use.

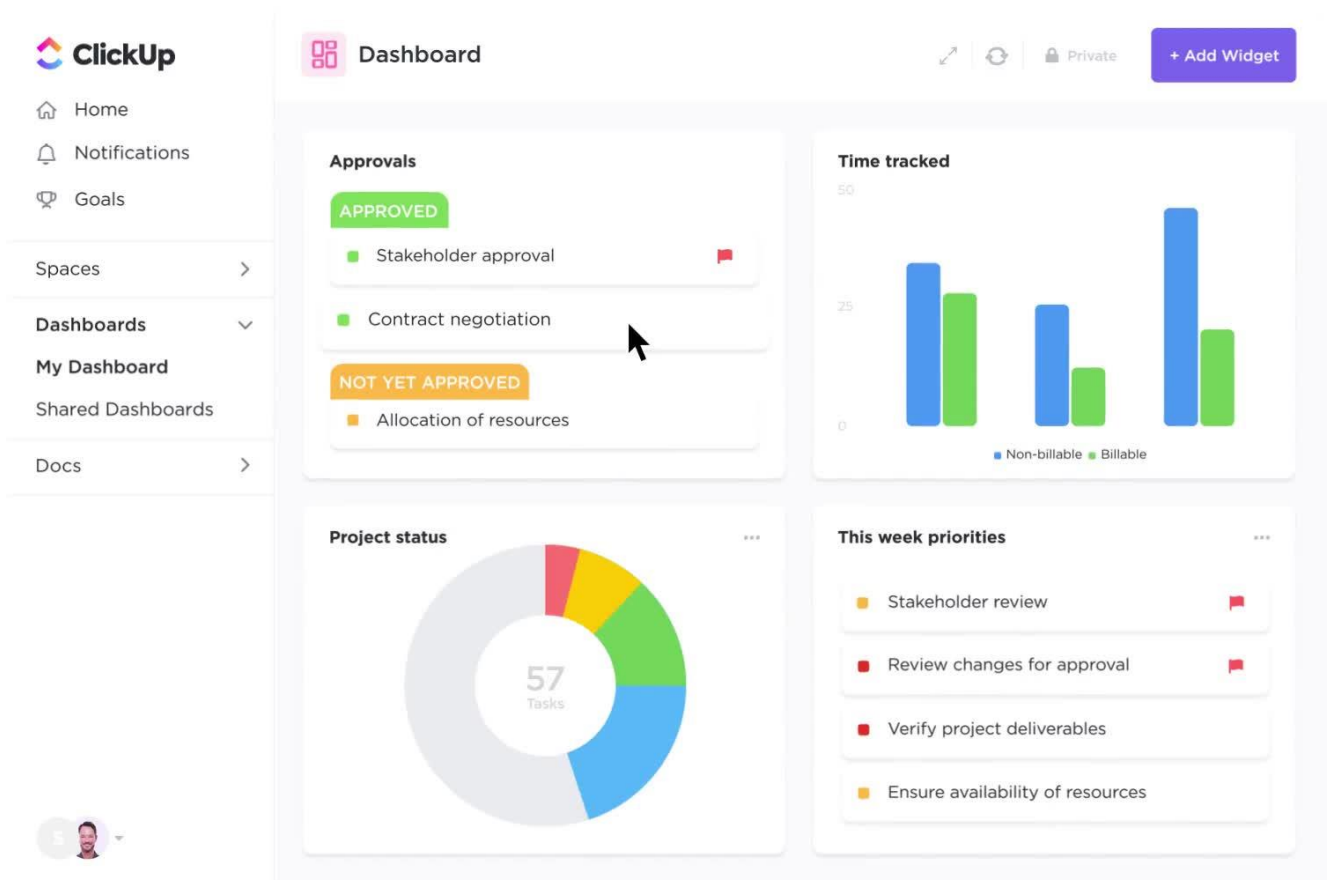


Figure 11: ClickUp Dashboard



# Jira Software

Figure 12: Jira Logo

- **Jira:** Jira is one of several platforms for managing work in various-sized teams. Jira was created to become a bug and issue tracker. Jira has evolved into a powerful task management tool that can be used for everything from requirements and test case management to agile software development. For most Projects and even internal work and team management, Titan Technologies is currently using Jira as their go-to platform.

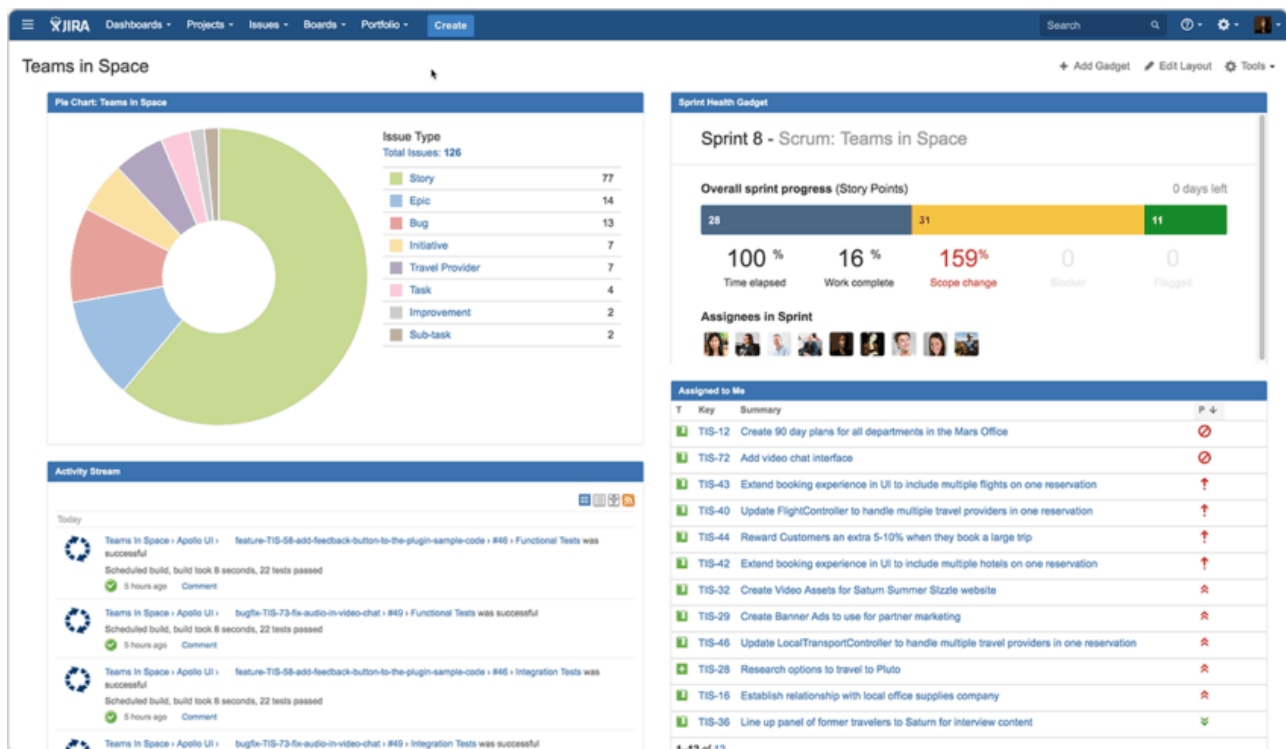


Figure 13: Jira Dashboard

For communication with internal team members and external stakeholders, Titan Technologies uses Microsoft Teams and Slack.

- **Microsoft Teams:** This is Titan Technologies' go-to communication tool. Through this, all of the internal communications are made. All of the virtual meetings are also done

through Microsoft Teams. For document sharing and collaboration, Microsoft Teams is used extensively.

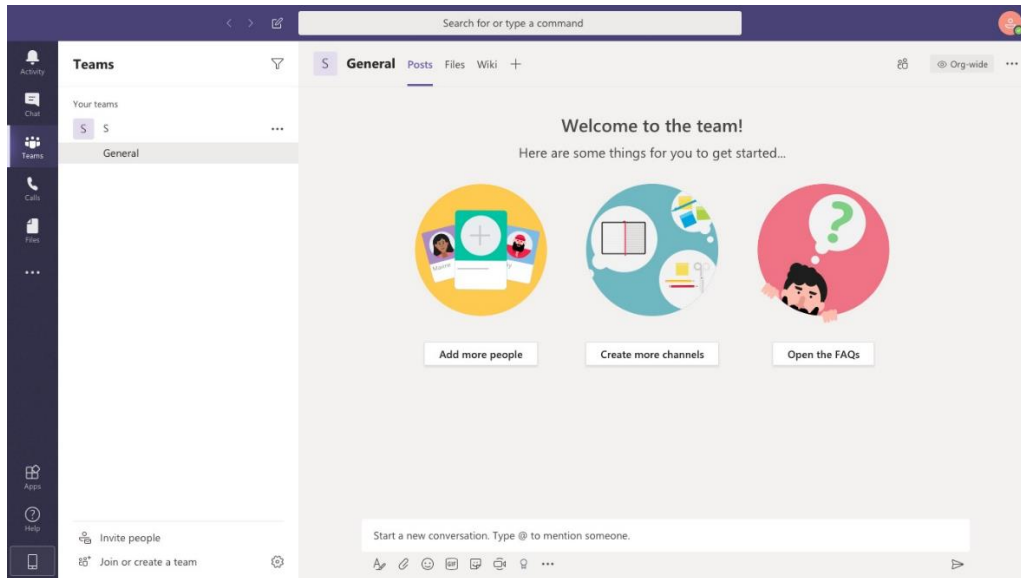


Figure 14: Microsoft Teams Homepage

- **Slack:** This is used to communicate with external stakeholders.

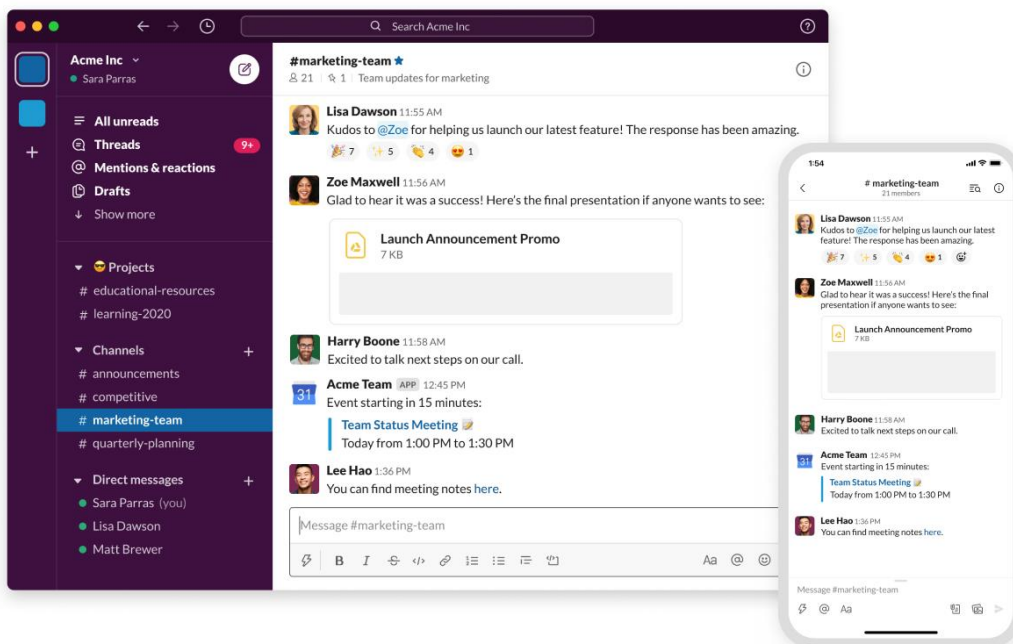


Figure 15 Slack Homepage

## 2.7 Industry and Competitive Analysis:

### 2.7.1 Porter's Five Forces:

Porter's Five Forces is a framework for examining a firm's competitive landscape. By using this framework, I will be analyzing the competitive landscape for Titan Technologies Limited.

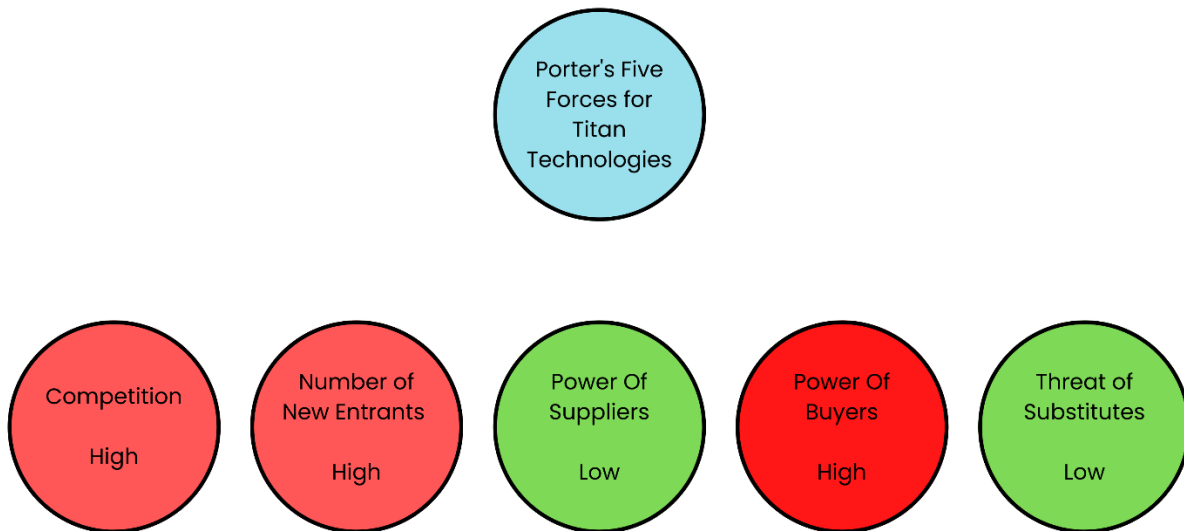


Figure 16 Titan Technologies Limited's Porter's Five Forces

#### 2.7.1.1 Competition in the IT Industry:

The first of the five elements is the number of competitors and their ability to undercut a company. The more competitors a company has, and the more identical products and services they offer, the weaker it gets. Suppliers and customers will seek out a competitor who can provide a better deal or lower costs. When competitive competition is low, on the other hand, a company has greater leeway to charge higher prices and dictate transaction terms to boost sales and profits.

As per the information provided by the Bangladesh Association of Software and Information Services (BASIS), there are more than one thousand registered IT companies in Bangladesh. This means that there is a lot of competition in this industry. Most of the IT firms in Bangladesh either do work for domestic clients or foreign clients. Some IT firms

target both markets. In the case of Titan Technologies Limited, they do not serve domestic clients. They purely focus on foreign clients especially clients from North America. However, this particular niche is also getting saturated as more and more North American clients are outsourcing their work to companies like Titan Technologies Limited. As a result, the competition in the IT industry is fierce and the power of an individual firm here is low.

### 2.7.1.2 Potential of New Entrants in the IT Industry:

New market entrants have a tremendous impact on a company's power. The less time and money it takes a rival to join a firm's market and develop credibility, the more vulnerable an established company's position becomes. If entrance barriers were reduced, existing enterprises in a sector with high entry barriers might charge higher prices and negotiate better conditions.

In terms of the Bangladeshi IT industry, the threat of new entrants is very high. The Government of Bangladesh has taken the Digital Bangladesh initiative for which they are incentivizing investors to invest in the IT industry. This means that more and more companies will start to form which we are seeing already. A person can start a small IT business from scratch very easily. For Titan Technologies Limited this is a huge threat. As more companies start to form the negotiation power of Titan Technologies will fall in the long run.

### 2.7.1.3 Power of Suppliers in the IT Industry:

This considers how quickly suppliers may raise input costs. It is influenced by the number of providers of critical inputs to an item or service, the uniqueness of these components, and the cost of switching suppliers. The fewer suppliers in an industry, the more reliant a firm is on them. As a result, the supplier has greater clout and can raise input costs and demand additional trade advantages. When a corporation has a large number of suppliers or low switching costs between competitor suppliers, on the other hand, it may keep its input costs low and increase profits.

However, in the IT industry, the power of suppliers is irrelevant. As there are not a lot of resources needed to run an IT business the power of suppliers here is low. Saying that if a firm is into the licensing business with for example Microsoft, SAP, etc., in that case, the power of suppliers is high. Titan Technologies Limited does not operate in the licensing business and thus is free from any suppliers.

#### 2.7.1.4 Power of Customers in the IT Industry:

The power of customers is influenced by the number of buyers or customers a firm has, the importance of each client, and the expense of finding new consumers or markets for the company's product. Because the client base is smaller and stronger, each customer has more leverage to negotiate lower rates and better deals. A business with a large number of smaller, independent consumers will find it simpler to raise prices and boost profits.

In the case of Titan Technologies Limited, the power of customers is quite high. As the organization is heavily relying on North American clients and the only value proposition that it can offer is a lower price will not be the deal maker. There are thousands of companies just like Titan Technologies who will do it for cheaper or maybe better. The customers have a wide range of companies to choose from. As a result, in this industry, the power of customers is quite high.

#### 2.7.1.5 Threat of Substitutes in the IT Industry:

Competing goods or services that can be used instead of a company's goods or services are a risk. Companies that produce goods or services that have no close equivalents will have more leeway in raising pricing and negotiating favorable terms. If close substitutes are available, customers will be able to skip purchasing a company's goods, weakening the company's influence.

However, In the case of the IT industry, the threat of substitutes does not exist at an industry level. However, if it comes down to the firm level there are loads of companies that offer the same service. For Titan Technologies Limited this will not be an issue as the industry itself is secured from other industries.

Analyzing Porter's Five Forces Model for Titan Technologies one thing for certain that is the competition in this spectrum is fierce. To sustain itself in this industry Titan Technologies Needs to focus on constant innovation and maintaining quality.

## 2.7.2 SWOT Analysis:

SWOT analysis (strengths, weaknesses, opportunities, and threats) is a framework for assessing a company's competitive position and developing strategic plans. Internal and external elements, as well as existing and future possibilities, are all evaluated in a SWOT analysis.

### 2.7.2.1 Strengths of Titan Technologies:

In terms of Technological advancements, Titan Technologies have a strong base. They have their own dedicated in-house Artificial Intelligence Team which does not exist in most other organizations. Titan Technologies specializes in developing Artificial Intelligence-driven solutions. This means that they have a niche in the market that other companies are not addressing at this moment. Other than that, they also have a high-functioning development team as well as a quality assurance team through which they are providing robust solutions to their respective clients.

### 2.7.2.2 Weaknesses of Titan Technologies:

There are a few key weaknesses that I have observed during my time working with Titan Technologies. One of which is the size of the team. To handle such big projects in my understanding an organization needs manpower. However, Titan Technologies is still operating with a very small team and for this reason, in many cases, they fail to deliver what they promise due to a lack of manpower and the skills needed.

### 2.7.2.3 Opportunities for Titan Technologies:

The opportunities for an early startup tech firm like Titan Technologies are endless. In Bangladesh startups like Titan Technologies are incentivized and encouraged to do business. There are endless technological advancements that can be done within the organization to enhance its efficiency as well as deliver high-quality products. Not only

that the market segment can also be expanded to other regions as well generating foreign revenue.

#### 2.7.2.4 Threats for Titan Technologies:

As with the opportunities the threats for Titan Technologies are endless too. Previously in the Porter's Five Forces Model, I have explained how the existing market within the Tech industry is extremely volatile. The market is currently very competitive and saturated with tech startups offering a multitude of solutions and services. This means that the power of buyers is very high and the substitutes within this industry are at a high number.

To sum it up for Titan Technologies finding the competitive advantage in the current scenario will be very hard as the competition is very fierce. However, by leveraging the Artificial Intelligence team and constant innovation Titan Technologies can create a substantial advantage within the industry in the coming years.

### 2.8 Summary and Conclusions:

To summarize, Titan Technologies Limited has the potential to grow into one of the most innovative software development companies in Bangladesh. It was my pleasure to work in such a fast-paced environment. I did not only learn about the business aspect through Titan Technologies rather they prepared me to be a better cross-functional team member. Saying that all of the information provided was through my research and findings and analysis respecting the non-disclosure agreement signed between me and Titan Technologies Limited. In this report, I tried to cover every single aspect of how Titan Technologies operates and tried to make it as detailed as possible keeping confidentiality in mind.

### 2.9 Recommendations:

As a Tech startup, Titan Technologies Limited is doing quite well as per my experience and observation. However, there are some key areas where they can improve which are listed below -

- **Addressing Overtime Work Culture:** Titan Technologies Limited encourages its employees to work overtime daily. Even on off days, and weekends they try to get work done by their employees.

Rather than focusing on encouraging efficiency, they focus more on the work hours put in. Employees here are expected to stay even after the office hours are over. From my experience working there, this is harming the workforce. Employees within Titan Technologies Limited most of the days are drained and have no wiggle room this creates a very unpleasant work environment. In my opinion, if employees are assigned tasks based on workload, then and are also given sufficient free time their performance and productivity will improve drastically.

- **Not solely relying on Agile Methodology:** As per my time working here, I have seen that the organization and the management are solely relying on the Agile methodology. However, this agile methodology is a mindset that not everyone has. As a result, the work gets slowed down. Companies take years to adopt this methodology. For such a small-scale organization where people are not ready to take in such methodology in my opinion will create more problems. Rather the management should focus on introducing new ideas gently and giving people to adapt to the changes.
- **Lack of Accountability:** During my time working at Titan Technologies Limited I have seen that there is a lack of accountability within the organization. Most of the members of the organization are not accountable for their work. As a result, this is creating discrepancies within the organization.
- **Focusing on Marketing:** Titan Technologies Limited does not have a proper marketing strategy. As an organization, not many people know about the company. However, through proper marketing, this issue could be fixed. Through this, the organization can expect to generate more leads which will create more revenue.
- **Streamlining Communication:** During my time working here I have seen, there is a lack of communication within the company. In many cases, managers have to go to every single employee to learn about the work they are doing. Otherwise, they are blank as to what each of the members of the team is doing. If a proper communication channel was maintained within the organization where people were required to communicate their work this would solve the problem. Furthermore, this would create accountability among the employees.



# Chapter 3: Project

## 3.1 Introduction:

As the world undergoes technological progress, we can observe that the demand for cross-functional workers with a deep understanding of the business sector as well as information systems is increasing. However, in terms of demand, the number of such specialists is now fairly low. As a result of this problem, businesses are increasingly experiencing difficulties in communicating with IT specialists and vice versa. Businesses, particularly those focused on software development, are suffering as a result of this.

### 3.1.1 Background:

I started as a Business Analyst Intern at Titan Technologies Ltd. on February 21, 2022. This paper explains the work I've done as well as how the Business Analytics function is an intriguing component of the software development lifecycle. Software Development Life Cycle is the application of standard business practices to building software applications. It's typically divided into six to eight steps: Planning, Requirements, Design, Build, Document, Test, Deploy, and Maintain. My job entails developing business requirements papers while working on a feasibility study with the software development and artificial intelligence teams. I was required to bridge the gap between the business and technical teams by doing so. To sum it up my work fell under the product development stage. However, as per necessity other tasks were also done by me.

### 3.1.2 Objective:

I intend on finding out the impact of such IT Business Analysts on the Software Development Life Cycle at Titan Technologies Limited.

### 3.1.3 Significance:

Through this research, the readers will be able to understand the significance of an IT Business Analyst in the software development life cycle as well as the need for them within an IT firm.

## 3.2 Methodology:

Both Primary and Secondary data sources were used to create this project.

### 3.1.1 Primary Data Sources:

Throughout my internship period, I noted down various aspects to create the questionnaire which was later circulated within the organization to learn more about the significance of the issue mentioned above.

### 3.1.2 Secondary Data Sources:

Secondary data were collected through the International Institution of Business Analysis (IIBA) official website and research papers.

## 3.3 Questionnaire Design:

This was an extremely important feature of this project. I designed three different surveys for three different levels of workers to determine the impact of my position as an IT Business Analyst at Titan Technologies. The first group was the C-Suite Executives, who are the ones who make the most important corporate decisions. Following that are the Managers and Senior Executives, who are in charge of various teams inside the corporation. Finally, the executives and junior executives are the individuals in the firm who conduct the majority of the hands-on work, which in the case of Titan Technologies Limited is largely developers and engineers.

Because of the complexities, one questionnaire, in my opinion, would not provide a comprehensive image of the influence produced by a Titan Technologies Limited business analyst. As a result, I prepared three separate survey questions for three different staff hierarchies.

### 3.3.1 Survey Findings:

A set of questions were distributed among the member of Titan Technologies Limited. They were asked to fill up the digital survey form to as best of their knowledge. The results of those surveys are given below –

Pick your designation level  
24 responses

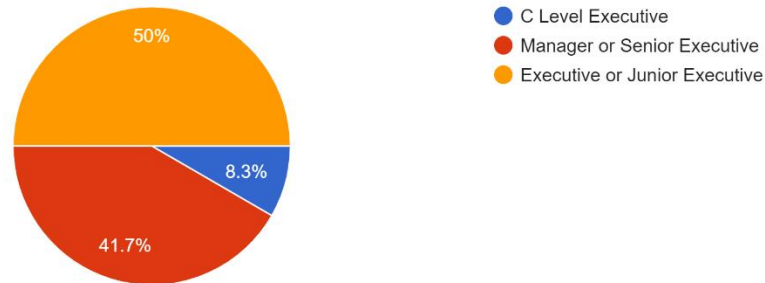


Figure 17: Selecting Designation

**Analysis:** As per the pie chart shown above you can see that all 24 employees participated in the survey. Within this survey 8.3% of the employees were the C Level Executives, 41.7% were Managers or Senior Executives, and finally, 50% of the respondents were Executives or Junior Executives.

### 3.3.1.1 Survey Finding from C Level Executives:

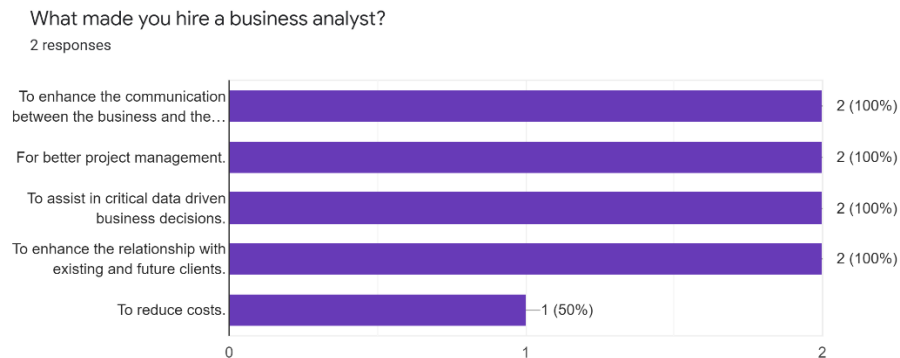


Figure 18: What made C Level Executives hire a Business Analyst

**Analysis:** As per the bar chart above we can see the reasoning behind what made the C Level Executives hire a business analyst in the first place. Predominant reasons are to reduce the lack of communication between the technical and business team, for better management of projects, to assist in critical business decisions, and client relationship management. Another aspect that they

mentioned was to reduce overall cost. This result explains the importance of a Business Analyst and what makes them ideal to hire.

Do you think investing on a business analyst is a good decision in terms of ROI?

2 responses

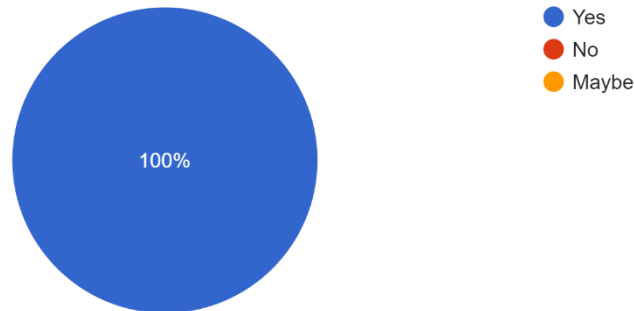


Figure 19: The ROI of a Business Analyst

**Analysis:** As per the pie-chart shown above, we can see investing in a Business Analyst have a good return. Because of that 100 percent of the C Level Executives agreed that they are seeing the results.

Do you think your business process has improved since the appointment of a Business Analyst?

2 responses

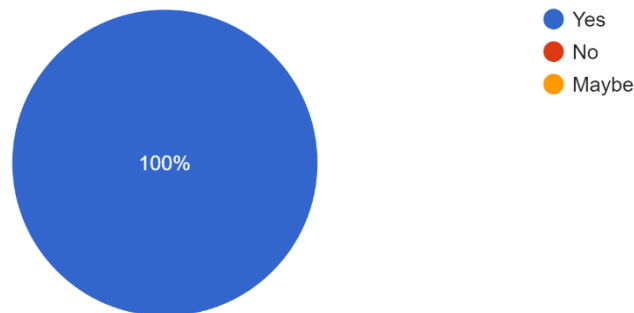


Figure 20: Business Analyst improving business process

**Analysis:** From the pie chart shown above we can understand one thing. Previously the business process of Titan Technologies was hampered in many ways. However, since the appointment of a Business Analyst, those issues were mitigated. This is why again 100 percent of the C-level

executives agreed that the business process has improved since the appointment of a Business Analyst.

On a scale of 1 to 5 rate the effectiveness of your appointed business analyst.

2 responses

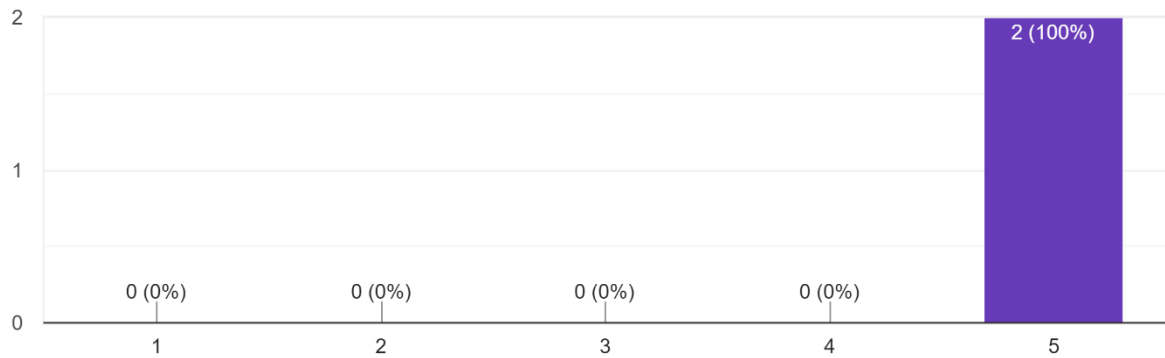


Figure 21 Effectiveness of a Business Analyst

**Analysis:** From the Bar Chart above we can see whether the C Level Executive thinks that hiring a Business Analyst was effective or not. From their answers, we can see that both of the participating members agreed that, indeed the effectiveness of appointing a business analyst is showing.

### 3.3.1.2 Survey Finding from Managers or Senior Executives:

Do you think a business analyst is necessary?

10 responses

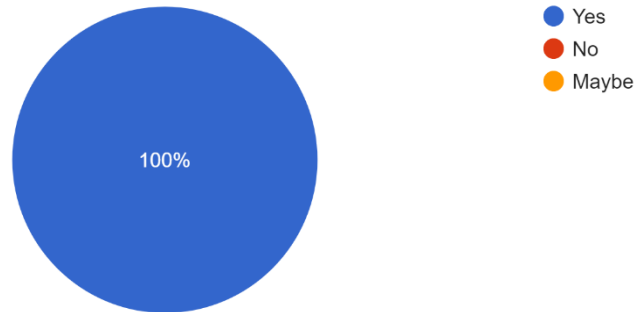


Figure 22: Necessity of a Business Analyst

**Analysis:** As per the pie chart above we can understand whether the managers and senior executives of Titan Technologies find it necessary to have a Business Analyst in their organization. Analyzing the results, we can see that out of the 10 respondents all of them agreed to the fact that, there is a necessity for a business analyst within the organization.

Do you think a business analyst has a positive impact in assisting multiple teams?

10 responses

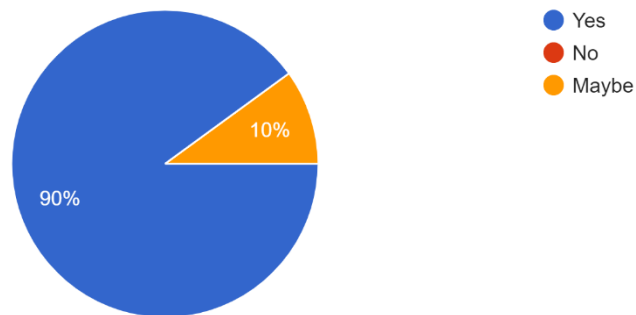


Figure 23: Business Analyst's impact on assisting multiple teams

**Analysis:** The above question focuses on finding out whether a cross-functional team member as a Business Analyst has any positive impact within the organization. As per the pie chart, we can see that 90% of the respondents said that a Business Analyst has a positive impact on assisting multiple teams. However, only 10% of respondents replied that they are unsure whether a business analyst has a positive impact on assisting that particular team.

What kind of work does a business analyst help you with?

10 responses

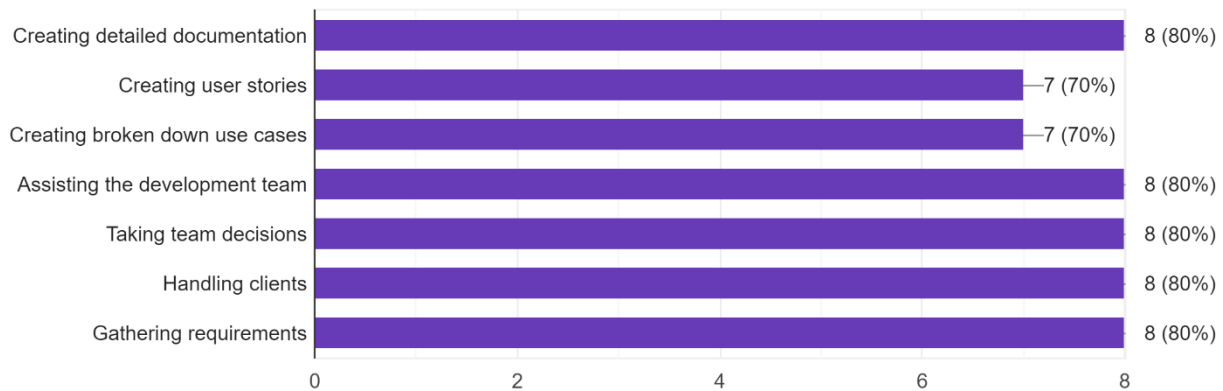


Figure 24: Tasks done by a Business Analyst

**Analysis:** The above question focuses on finding out what kind of work is predominantly done by a Business Analyst. As per the bar chart, we can see that most of the respondents said that a business analyst assists them by creating detailed documentation, assisting the technical team, assisting in team decisions, handling clients, and gathering requirements from that. Not only that 70% of the respondents also mentioned that a business analyst also helps them with creating user stories and creating broken down use cases which improves their development time within the development life cycle.

Do you think since the appointment of a business analyst taking crucial business decisions has become easier?

10 responses

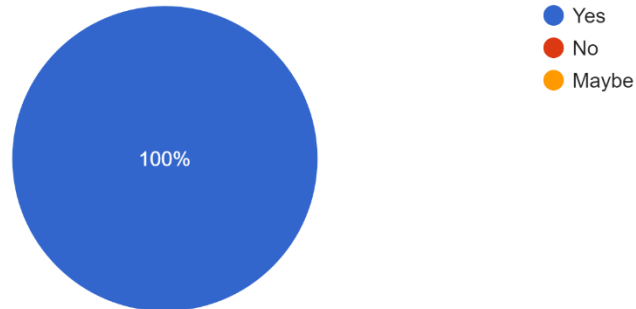


Figure 25: Impact of Business Analysts on taking crucial business decisions

**Analysis:** As per the pie chart above we can see that 100% of the respondents agree that a business analyst assists them in taking crucial business decisions that impact the business financially.

### 3.3.1.3 Survey Finding from Executives or Junior Executives:

Does a business analyst give you clear idea about a project?

12 responses

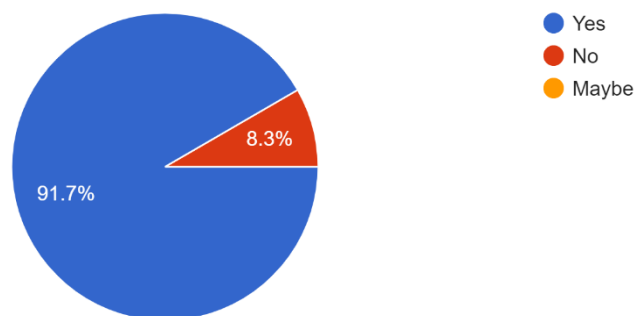


Figure 26: Knowledge sharing for a project done by a Business Analyst



**Analysis:** One of the major tasks of a Business Analyst is to give a clear idea about a particular project to technical members of a particular team. This question tries to find out whether a Business Analyst does that or not. 91.7% of respondents replied that the business analyst successfully gave a clear idea about a particular project.

Whenever you do not understand a certain aspect of a project whom do you go to for clarity?  
12 responses

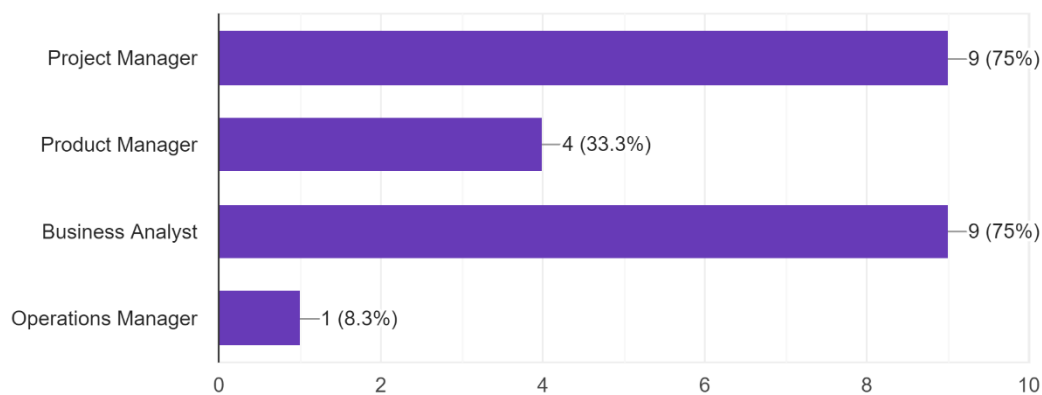


Figure 27: Business Analyst acting as a knowledge hub.

**Analysis:** As a cross-functional member one of the biggest tasks for a business analyst is to give everyone clarity about a project. As per the bar chart, we can see that 75% said they go to either the Project Manager or the Business Analyst. This showcases how a Project Manager and Business Analyst work together for the successful completion of a project.

Does a business analyst assist you with technical work?

12 responses

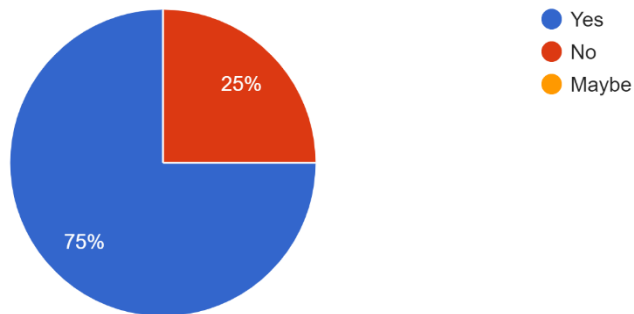


Figure 28: Business Analyst assisting in technical work

Does a business analyst break complex tasks into smaller easy to understand tasks?

12 responses

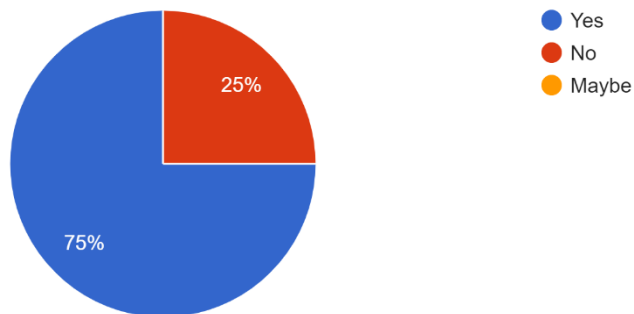


Figure 29: Business Analyst breaking down complex issues for a team.

**Analysis:** The above-mentioned two questions are co-related. Within the organization, 75% of the people replied that a Business Analyst breaks complex tasks into smaller and easy to understand tasks. This implies that a Business Analyst is going into the technical aspect for them. This means that in the product development phase a Business Analyst is breaking down complex business goals and ideas into simple terms so that the technical team can understand and work on them. This ensures and smooth transition in the later stages of the software development life cycle.

### Overall rate the importance of a business analyst in your work

12 responses

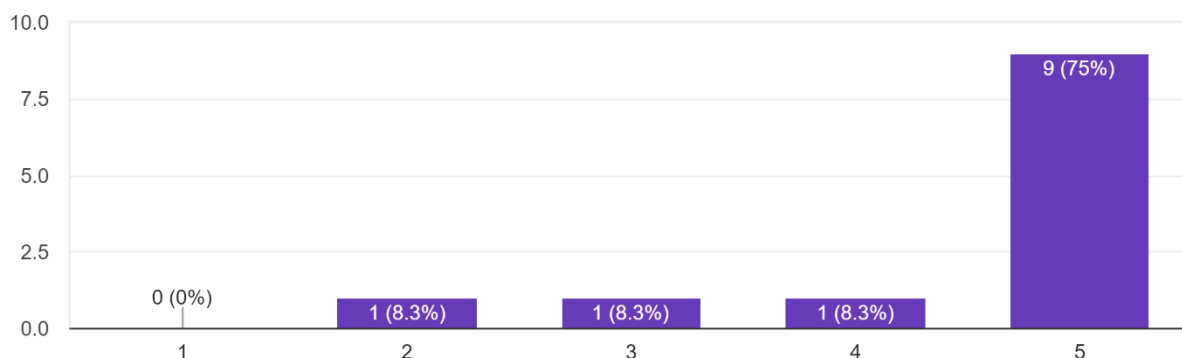


Figure 30: Dependencies on a Business Analyst's work

**Analysis:** Though this particular question we can understand how much other employees' work is reliant upon a Business Analyst's work in the software development life cycle. From the bar chart above we can see that 75% of the employees of Titan Technologies Limited are heavily relying on the work of the Business Analyst. This showcases the importance of a Business Analyst's tasks.

## 3.4 Summary of the Research:

As per the analysis done above, we can get a grasp of the importance of an IT Business Analyst within Titan Technologies Limited. The survey was conducted on three different levels of employees starting from C Level Executive and going down to a Junior Executive.

Through the analysis of the C Level Executives' answers, we get to know that an IT Business Analyst is a crucial part for them as in many cases those C Level Executives cannot get their vision through to the development team due to barriers in knowledge. Onboarding a Business Analyst directly solved their problem and they are seeing their return on investment. Furthermore, the managers and senior-level executives also heavily rely on the work done by a Business Analyst as it helps them to make data-driven business decisions that directly impact the software development life cycle. The executives and junior executives also get directly benefitted from the work done by the Business Analyst as it gives them clear

direction as to what the tasks needed to be done. From a project management and organizational management standpoint, a Business Analyst plays a crucial role for Titan Technologies Limited.

Furthermore, without a Business Analyst's work developing a tech product becomes an issue. As a result, organizations like Titan Technologies are investing in the Business Analyst role as they directly impact the software development life cycle by ensuring that the bridge between the business aspect and the technical aspect always stays intact.

### 3.4 Recommendation:

As per the research done there is not much to recommend in terms of improvement of the decisions taken by Titan Technologies.

However, going through this research other small-scale startups can benefit heavily. Hiring a Business Analyst is not only going to improve the overall team but also increase efficiency among the team members and the return on the investment will be visible.

# Reference

- Business Analysis Blog | 3 Reasons Why Companies are Hiring Business Analysts | IIBA. (n.d.). Retrieved May 7, 2022, from <https://www.iiba.org/business-analysis-blogs/3-reasons-why-companies-are-hiring-business-analysts/>
- How SWOT (Strength, Weakness, Opportunity, and Threat) Analysis Works. (n.d.). Investopedia. Retrieved May 7, 2022, from <https://www.investopedia.com/terms/s/swot.asp>
- Porter's 5 Forces. (n.d.). Investopedia. Retrieved May 7, 2022, from <https://www.investopedia.com/terms/p/porter.asp>
- What is a business analyst? A key role for business-IT efficiency. (n.d.). CIO. Retrieved May 7, 2022, from <https://www.cio.com/article/276798/project-management-what-do-business-analysts-actually-do-for-software-implementation-projects.html>
- What is SDLC? Phases of software development & models. (2019, May 15). PhoenixNAP Blog. <https://phoenixnap.com/blog/software-development-life-cycle>
- Why Your Team Needs Business Analysts? Top Reasons. (2021, November 25). Intellipaat Blog. <https://intellipaat.com/blog/why-business-analysts-are-important/>

# Appendix

Initial Internship Report Proposal on  
The Importance of IT Business Analysts in the Software Development Life Cycle at Titan  
Technologies Limited.

Submitted By

Esham Bin Rashid  
17204008

Submitted To

Supervisor – Mr. Shamim Ehsanul Haque  
Assistant Professor  
&

Co – Supervisor - Dr. Samina Haque  
Senior Lecturer

BRAC Business School

BRAC University

Date of Submission: 12<sup>th</sup> March 2022

**Problem statement:** As the world undergoes technological progress, we can observe that the demand for cross-functional workers with a deep understanding of the business sector as well as information systems is increasing. However, in terms of demand, the number of such specialists is now fairly low. As a result of this problem, businesses are increasingly experiencing difficulties in communicating with IT specialists and vice versa. Businesses, particularly those focused on software development, are suffering as a result of this.

**Research questions:** The following are the questions that I will be concentrating on:

1. What is the most significant problem that a software development firm's stakeholders face?
2. Do cross-functional workers have a place in an organization?
3. What is an IT Business Analyst's approach to resolving this problem?

**Objective:** Through the research questions mentioned above I intend on finding out the impact of such IT Business Analysts on the Software Development Life Cycle.

**Background Information:** Titan Technologies is a subsidiary of Cisscom, a US-based information technology company. It is situated in Irvine, California, and was founded in 2012. Clients all across the world benefit from the firm's end-to-end software development and testing services. Cisscom's sister firm, Titan Technologies Ltd., was created in the year 2021. Titan Technologies Ltd., like Cisscom, specializes in 360-degree software development and the production of sophisticated software solutions for organizations and consumers.

I started as a Business Analyst Intern at Titan Technologies Ltd. on February 21, 2022. This paper explains the work I've done as well as how the Business Analytics function is an intriguing component of the software development lifecycle. Software Development Life Cycle is the application of standard business practices to building software applications. It's typically divided into six to eight steps: Planning, Requirements, Design, Build, Document, Test, Deploy, and Maintain. My job entails developing business requirements papers while working on a feasibility study with the software development and artificial intelligence teams. I was required to bridge the gap between the business and technical teams by doing so. To sum it up my work fell under the product development stage. However, as per necessity other tasks were also done by me.

**Preliminary Methodology:** I currently have first-hand experience with this industry, but throughout writing this report, I will conduct both first-hand and second-hand research on the primary problem mentioned above. Qualitative and quantitative research, as well as supporting facts and logic, will be used to accomplish this.

**Significance of the Issue:** Through this research, the readers will be able to understand the significance of an IT Business Analyst in a Tech Firm.

Proposed Timeline for the report (Based on Assumptions, subject to change as per feedback):

Topic covered	Timeline
Chapter 1	March 18, 2022
Chapter 2	April 9, 2022
Chapter 3	April 29, 2022

On the mentioned dates I am planning to submit the proposed chapter for inspection. And within the first half of May, I intend on finishing my report.



## Survey on the importance of a Business Analyst

---

\* Required

1. Pick your designation level \*

*Mark only one oval.*

- C Level Executive    *Skip to question 2*
- Manager or Senior Executive    *Skip to question 6*
- Executive or Junior Executive    *Skip to question 10*

### Survey Questions for C Level Executive

2. What made you hire a business analyst? \*

You can pick multiple answers

*Check all that apply.*

- To enhance the communication between the business and the development team.
- For better project management.
- To assist in critical data driven business decisions.
- To enhance the relationship with existing and future clients.
- To reduce costs.

3. Do you think investing on a business analyst is a good decision in terms of ROI? \*

*Mark only one oval.*

- Yes
- No
- Maybe

4. Do you think your business process has improved since the appointment of a Business Analyst? \*

*Mark only one oval.*

- Yes  
 No  
 Maybe

5. On a scale of 1 to 5 rate the effectiveness of your appointed business analyst. \*

*Mark only one oval.*

	1	2	3	4	5	
Not Effective	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Effective

#### Survey for Managers or Senior Executives

6. Do you think a business analyst is necessary? \*

*Mark only one oval.*

- Yes  
 No  
 Maybe

7. Do you think a business analyst has a positive impact in assisting multiple teams? \*

*Mark only one oval.*

- Yes  
 No  
 Maybe

8. What kind of work does a business analyst help you with?

*Check all that apply.*

- Creating detailed documentation
- Creating user stories
- Creating broken down use cases
- Assisting the development team
- Taking team decisions
- Handling clients
- Gathering requirements
- Other: \_\_\_\_\_

9. Do you think since the appointment of a business analyst taking crucial business decisions has become easier?

*Mark only one oval.*

- Yes
- No
- Maybe

#### Survey Questions for Executives and Junior Executives

10. Does a business analyst give you clear idea about a project? \*

*Mark only one oval.*

- Yes
- No
- Maybe

11. Whenever you do not understand a certain aspect of a project whom do you go to for clarity? \*

*Check all that apply.*

- Project Manager  
 Product Manager  
 Business Analyst  
 Operations Manager  
 Other: \_\_\_\_\_

12. Does a business analyst assist you with technical work? \*

*Mark only one oval.*

- Yes  
 No  
 Maybe

13. Does a business analyst break complex tasks into smaller easy to understand tasks? \*

*Mark only one oval.*

- Yes  
 No  
 Maybe

14. Overall rate the importance of a business analyst in your work \*

*Mark only one oval.*

	1	2	3	4	5	
Not much	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Important