

# **THE IMPORTANCE OF TECHNICAL DUE DILIGENCE FOR INVESTORS**

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# INTRODUCTION

## Getting acquainted with the concept of Technical Due Diligence

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As people who work in the most rapidly changing industry of all time, we all dream of creating the next big invention, that one innovation that is bound to take the industry by storm, and getting over the finish line with the guidance of mentors and investors who seek value in what we do.

But this race to disrupt and evolve, in order to create novel, worthwhile services to consumers, is not an easy one to win. The challenge gets tougher with every little milestone achieved, and sooner than later, we may find ourselves at that dreaded bend in the road called technical due diligence.

Technical due diligence is a highly recommended component of the technology company investment cycle, whether you are a private equity firm, investment bank, or acquiring company. It is usually undertaken before fundraising rounds, or in some cases, right before mergers and acquisitions.

In this white paper, we will focus on answering the key questions related to why emerging businesses should consider it, and how they can get the process right to build long term scalability and profitability.



# ANSWERING THE IMPORTANT QUESTIONS

## What is Technical Due Diligence?

Let's say the plumbing in your house breaks down. Would you go ahead fix it yourself, or call an expert to help you get things back on track? Most people reading this would probably choose the latter. Sure, it will be a little more costly than fixing it yourself, but this cost would be negligible when you consider the time, energy and work you save upon.

In fact, you may not be aware of the nuances and fine details of the components that make up the plumbing department and may end up causing more harm than good if you try to do everything yourself (unless you are a home construction expert. Then, it would not be as difficult) With all these variables in mind, having a third party expert to fix what's necessary makes more sense, right?

The same principle applies when investing in a software company. In a digital first world, software solutions are easily the making or breaking point for memorable customer experiences, and as we embrace this digital first approach, investments in software are becoming more common by the day. This is where technical due diligence comes into play. White Source states that **Technical due diligence is the process of analyzing and evaluating the technology, product, architecture and processes in an organization prior to the acquisition of a company or an investment in it.**

Using a third party expert to help evaluate and analyse the technical aspects of the target software company is required to understand the value of the investment you are choosing to make. Without this in place, there's no guarantee that you'll get the return on investment you're seeking, or even if partnership is really worth it at all.

In a list of 20 due diligence activities necessary before a merger or acquisition, Forbes notes technical due diligence and intellectual property review as number two.

Most acquiring firms have a set of investment objectives in place when acquiring a new technology company or software company. It is essential that they perform extensive technical due diligence to evaluate the product, architecture, processes, and organization, in line with the set objectives. This helps both the investor and the technology company validate any assumptions the investment firm has made, such as scalability, long term profitability and the overall growth curve.

Many companies may find themselves asking - why not just do a basic technical due diligence yourself, especially if both companies operate in the same domain? But this is not viable, because in some cases, competitive intelligence may be at stake, and technical due diligence with a third party can help preserve that integrity. Second, getting experts on board is way better than wading in the deep end of the ocean alone. It offers the acquired company an objective view into their functioning, and the ability to compare hundreds of companies to the target adds further value to the diligence process!

Investors usually have financial and legal experts on board to evaluate the investment opportunity. They may also have a Chief Technology Officer for evaluating the technology and aligning it with their demands

before they make the investment. Domain expertise and technology variance matters the most.

For example, if the Investment firm wants to invest in a Machine Learning disruptive product, it needs to evaluate the following carefully:

Is this disruption needed in the industry at this point in time?

- Is the Machine Learning component being correctly built with the latest technology in place?
- What is the approach being followed to create this solution?
- Where will it lead to the maximum impact?

According to the Institute of Mergers, Acquisitions and Alliances, the capital markets are seeing the highest levels of M&A activity ever, and in 2017 hit over \$2.9 trillion for the fourth year in a row.

Now, their internal CTO is under the gun because this may not be the CTO's area of expertise. Should the CTO out-source this technical due diligence? Turning to SMEs (Subject Matter Expert) to evaluate and enable an in-depth understanding of the entire tech stack is a better way to go about this.

A potential investee will be apprehensive about sharing all details because it's their intellectual property. But that doesn't mean it can't be done. The best way to avoid confusion is to ensure that technical due diligence is part of the vetting process just like legal and financial due diligence takes place!

This allows both investors and investees to have proper paperwork in place, in line with official requirements. This also allows investors to delegate technical due diligence responsibilities to the right person or company, even if it's a third party!





# THE PROCESS OF TECH DUE DILIGENCE

## How does Technical Due Diligence work?

Technology due diligence requires a combination of resources to perform the range of inquiries. For starters, the acquirer's senior technical managers will have formed a view based on publicly available information and pre-diligence discussions. Diligence usually kicks off with requests for additional information from the target in the form of disclosures.

Assessing the technology disclosures with respect to policies, process documentation, bills of materials of open source components, security breaches, and others related to software can help direct exploration into the software itself. A refined technical due diligence process is quick, efficient, and answers the investment questions in easy-to-understand terms with sufficient detail.

According to a Deloitte Survey, among all corporate respondents, technology is the most common choice when asked where they were interested in doing acquisitions outside of their own industry/sector, at 16 percent

Most acquirers will make their own assessment of strategy, product, and people. Private equity firms may go outside or may recruit a CTO from a portfolio company to look at the development process. Strategic acquirers usually have the expertise, access, and skills to do it themselves.

A good starting point involves looking at process documentation and then probing into how adherence is monitored and ensured. It is important that this analysis is undertaken one step at a time - if you jump into everything all at once, that's cause for concern!

75% of corporate respondents expect to pursue divestitures in 2020, the second highest level in the past four years. Change in strategy, financing needs, and divesting in technology that no longer fits with the emerging business model were cited as the most important reasons for divesting a business among corporate respondents.

A strong technical due diligence will ensure that the product survives in the long run. This does not mean immediate success, but it does guarantee that failure due to unforeseen technical issues would be drastically reduced, thereby ensuring that finances are being utilised for the correct purpose!

### How target companies are analysed for acquisition:



Technical risks to the investment coupled with the cost to mitigate



Opportunities for growth post-investment close to help meet objectives



Strengths that should be preserved/ built-upon moving forward

# TAKING ONE STEP AT A TIME

## A checklist for building Technical Due Diligence



### CODE QUALITY AND DATA SANITY

How well can your testing processes and reporting perform? What are your proposed solutions to code errors? These questions directly relate to the maintenance of server architecture, state of current data management systems and the enterprise's data security and privacy prowess.



### OPERATIONAL PROCESSES AND WORKFLOWS

How often do you monitor quality assurance and security testing processes? What is the means of their deployment? How much does it aid development and cost efficiency in the current setup, and does this setup need to be revamped?



### ARCHITECTURE AND INFRASTRUCTURE

Analyse the current state of infrastructure. Take stock of programming languages, product differentiators, app servers, databases and all other technologies that compose your product, and its API documentation. Will this technology suffice for the next few years, or does it need upgrades?



### WATERTIGHT ORGANISATIONAL STRUCTURES

Does your company have the right people and expertise to take this forward without changing things around too much? Who are the key internal and external stakeholders and what are their roles? Outsourced partners and contractors also need to be considered.



### INTELLECTUAL PROPERTY AND TECHNOLOGY DEBT

Does the enterprise have its own intellectual property in place? What is the cost of licensing, web hosting and competing technologies? It is imperative to get clarity on all these points before deciding to take the next step forward.

## GETTING IT RIGHT

### The role of Technical Due Diligence in aiding long term enterprise scalability

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Tech Due Diligence helps identify key strengths and weaknesses early on. This does not mean that it can hamper investments entirely but it can surely help investors place the right amount of trust and confidence in the money they spend.

A strong technical product with a weak marketing strategy is a recipe for failure, but it's a challenge that can be easily solved! However, a strong marketing strategy with a weak technical product is a recipe to lose money and reputation and there's no coming back from there.

At Josh Software, we invest in startups that have a good sales and marketing strategy, who offer a differentiator in the cluttered market through their domain expertise.

We then undertake a detailed technical due diligence and either choose to make the investment ourselves, or connect the startup with venture capitalists and private equity firms who take care of the financial and legal due diligence for investment.

This has proven quite successful for the few startups that we have invested in. It has not only helped these startups scale up seamlessly, but also ensured more profitable returns than early stage investments, owing to the strength of the technical expertise of Josh Software. Ultimately, it all leads to a better valuation for the company, and also makes sure that the investors are more confident of investing in the company!