

Best Methods of Alternate Dispute Resolution to tackle Conflicts in the IT Industry: A tactical approach to future IT contracts^{1, 2}

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ABSTRACT

Information technology is one of the common industries which faces disputes often, and conflicts has been there from the beginning of time. Mostly conflicts arise due to disagreements and then contract breach which leads to fighting for the rights for years, causing huge loss and eventually closing down their business. In this era, there are many ways to deal with an issue. Finding the right source of impact and executing effective methods of dispute resolution can be the smarter move. This paper deals with analyzing several alternate dispute resolution methods using the multi-attribute decision making process. This paper gives evidence on the use of Prevention as the best method of alternate dispute resolution to be applied in early stages of a contract to scale down the issue from escalating to Litigation and the possible clauses to be included in written contract.

Keywords: Alternate Dispute Resolution, Conflicts, Information Technology (IT), Failure, Contract, Project Management, Tech Industry, Litigation,

INTRODUCTION

Information technology is a rapidly evolving field and has several technological aspects which change regularly and demands competence. They have a broad scope and seeks to integrate more of their information functions. It can be a challenge to cope with such a transforming environment. Our capacity to understand and learn about the developing IT initiatives can be a challenge because of its proliferating cost, complexity and the impacts on business processes. For years, IT projects continue to fail at an alarming rate, and there are numerous reasons why the sector continues to face failures often. The cloud portfolio management of Innotas by Planview conducted a survey in 2013 that revealed 50% had experienced a failure in IT projects in 2012. After three years, the Innotas annual project 2016 and portfolio management reported

¹ Editor's note: This paper was prepared for the course "International Contract Management" facilitated by Dr Paul D. Giammalvo of PT Mitratata Citragraha, Jakarta, Indonesia as an Adjunct Professor under contract to SKEMA Business School for the program Master of Science in Project and Programme Management and Business Development. <http://www.skema.edu/programmes/masters-of-science>. For more information on this global program (Lille and Paris in France; Belo Horizonte in Brazil), contact Dr Paul Gardiner, Global Programme Director, at paul.gardiner@skema.edu.

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55% failure which was polled by 126 IT professionals between January and March of 2015. So, we can conclude that the numbers had increased in the following years³.

According to the study of 600 IT and business executives by a software development firm, Geneca, "75% confess that the lack of confidence in the success of the project causes failure in projects, 80% reveals that they waste their time on rework, 78% sense that the stakeholders have inconsistent involvement and project is less synced which eventually results in confusion. Only 55% understands the business case and the requirements for projects. Less than 20% only develops an appropriate requirement process by the business case. And at the end of a project, hardly 23% agrees to it"⁴. Similarly, a project management survey in 2017 by KPMG states that "leading change and effective communication are among the top skills lacking for most of the project management professionals." "Only 29% of projects are delivering to budget, and only a fifth of projects are consistently delivering on their planned benefits. While most projects have active and engaged sponsors, only 10% are seen as providing extremely effective governance activities.

Finally, only one-third of projects are delivering the desired outcomes"⁵. From all these statistics, we can observe that failure of IT projects can be attributed more to poor project management than technological issues. Therefore, for root cause analysis, there are four main areas to be focused, they are project management, change in scope, different stakeholder interest and refuted change request. It is necessary to analyze how these factors affect a project and what resolutions can be determined for one of the most critical factors in a project, i.e., project management style.

³ Florentine, S. (2017, February 27). IT project success rates finally improving. Retrieved from <https://www.cio.com/article/3174516/project-management/it-project-success-rates-finally-improving.html>

⁴ Geneca. (2017, January 25). Why up to 75% of Software Projects Will Fail * Geneca. Retrieved from <https://www.geneca.com/why-up-to-75-of-software-projects-will-fail/>

⁵ Barlow, G., Tubb, A., & Riley, G. (2017). Driving Business Performance. Retrieved from <https://assets.kpmg.com/content/dam/kpmg/nz/pdf/July/projectmanagementsurvey-kpmg-nz.pdf>

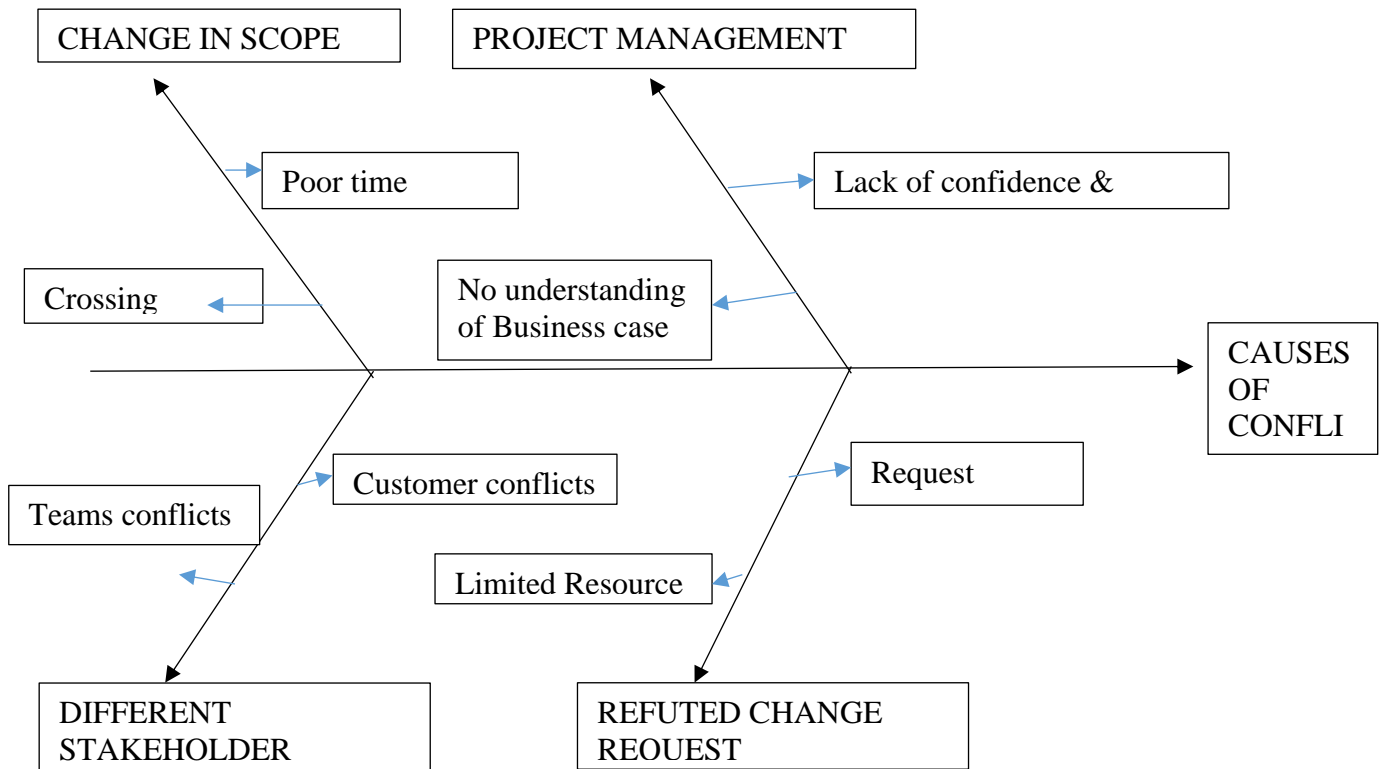


Figure1: Fishbone diagram of root causes of conflicts in an IT project⁶

	DEFINITION	EXAMPLE
Project	An investment that requires a set of logically linked and coordinated activities performed over a finite period to accomplish a unique result in support of the desired outcome ⁷ .	New technology purchases and implementation regardless of cost, Development and establishment of new IT service, Capability establishment and development, Outsourcing ⁸ .

⁶ Fishbone diagram is prepared from the reference Rongala, A. (2018, August 29). Causes of Conflicts in a Project? How to Resolve them - Invensis Learning Blog. Retrieved from <https://www.invensislearning.com/blog/causes-of-conflicts-in-a-project-how-to-resolve-them/>

⁷ Planning Planet. (n.d.). Guild of Project Controls Compendium and Reference. Retrieved October 30, 2018, from: <http://www.planningplanet.com/guild/GPCCAR-modules>

⁸ What-is-an-IT-Project. (n.d.). Retrieved from <https://files.nc.gov/ncdit/documents/files/What-is-an-IT-Project.pdf>

Program	Strategic program: Deliver assets and benefits that are directly linked to attaining the sponsoring organization's future state ⁹ .	Technology support blueprint, Overall Business Strategy, IT strategy with the current budget, outline of current and future projects.
	Operational program: Deliver assets and benefits that are critical to the sponsoring organization's day to day operations ¹⁰ .	Response plan, Delivery Plan
	Multi-Project Program: Achieve synergies from projects with common traits such as shared resources, similar clients or product technology ¹¹ .	Many parallel projects with the same resource pool, Projects are implemented in different departments. More than one project using the same technology. The same client has several projects within an organization.
	Mega-Project: Deliver a specific asset to the sponsoring organization ¹² .	Server virtualization, Data center automation, Specific client management initiative, Unified collaboration initiative e.g., Accenture developed Accenture client exchange, a communication platform for employees and clients.
Portfolio of Assets	Information Assets: Controlled by functional groups such as IT or Engineering ¹³	eStrategic goals, plans, products & services, Intellectual properties, Projects, training materials, Customer List, operations, organizational culture, Research & Development.
	Human Assets: controlled by HR ¹⁴ .	Customer service, Employees, Training & Development services, Recruitment, People Solutions, E-learning ¹⁵ .
	Physical Assets: controlled by either operation ("plant manager") or other functional entities such as "heavy equipment shop" ¹⁶ .	A building, Office Equipment

⁹ Planning Planet. (n.d.). Guild of Project Controls Compendium and Reference. Retrieved October 30, 2018, from: <http://www.planningplanet.com/guild/GPCCAR-modules>

¹⁰ Planning Planet. (n.d.). Guild of Project Controls Compendium and Reference. Retrieved October 30, 2018, from: <http://www.planningplanet.com/guild/GPCCAR-modules>

¹¹ Planning Planet. (n.d.). Guild of Project Controls Compendium and Reference. Retrieved October 30, 2018, from: <http://www.planningplanet.com/guild/GPCCAR-modules>

¹² Planning Planet. (n.d.). Guild of Project Controls Compendium and Reference. Retrieved October 30, 2018, from: <http://www.planningplanet.com/guild/GPCCAR-modules>

¹³ Planning Planet. (n.d.). Guild of Project Controls Compendium and Reference. Retrieved October 30, 2018, from: <http://www.planningplanet.com/guild/GPCCAR-modules>

¹⁴ Planning Planet. (n.d.). Guild of Project Controls Compendium and Reference. Retrieved October 30, 2018, from: <http://www.planningplanet.com/guild/GPCCAR-modules>

¹⁵ Human Asset. Retrieved from <https://www.humanasset.com/>

¹⁶ Planning Planet. (n.d.). Guild of Project Controls Compendium and Reference. Retrieved October 30, 2018, from: <http://www.planningplanet.com/guild/GPCCAR-modules>

	Financial Assets: controlled by accounting or finance and lastly ¹⁷	Investment, Funds in Banks, Stocks,
	Intangible Assets: The difference between a company’s book value and market capitalization value is controlled by sales and marketing or public relations departments ¹⁸ .	The skill set of an employee (critical employee), goodwill, copyrights, trademarks, patents, computer programs, client networks, Research and Development.
Portfolio of Projects	Any organization, be it Owner or Contractor has a portfolio of assets available to dedicate to projects, with the objective being to develop the best "mix" of projects which will generate the most favourable return on those assets ¹⁹ .	Exploring the portfolio of available assets to support projects and matching them to support IT company. Infrastructure, Application maintenance, IT services.

Table 1: Definitions and Examples of PPP²⁰

In Max Wideman, a project is explained as “A temporary endeavor undertaken to create a unique product, service or result”²¹. An IT project is an example. It aims to deliver a unique product within the given time and cost. An IT project team will include a whole range of stakeholders like IT professionals, outsourcing consultancies, etc. Each stakeholder will have expectations from the project, and when these expectations are not met, it leads to significant disagreements and gets escalated or unsatisfactorily resolved and eventually results with severe damage to the company. Therefore, Conflict in an IT project is all about a dispute between a project stakeholder over project related issue, that escalates to the point where the objectives of the project are highly threatened.

When an IT project fails, the contract associated with it fails too. A well-written contract establishes the party’s respective legal duties and obligations and can aid to improve expectations and communications at the beginning of the relationship. An IT contract is usually unique, and it is mandatory to ensure the delivery of the agreement in time and within the contracted cost. As the failure in IT project emerges, I feel it is obligatory to address the causes of conflicts and how it affects a contract with the project.

¹⁷ Planning Planet. (n.d.). Guild of Project Controls Compendium and Reference. Retrieved October 30, 2018, from: <http://www.planningplanet.com/guild/GPCCAR-modules>

¹⁸ Planning Planet. (n.d.). Guild of Project Controls Compendium and Reference. Retrieved October 30, 2018, from: <http://www.planningplanet.com/guild/GPCCAR-modules>

¹⁹ Planning Planet. (n.d.). Guild of Project Controls Compendium and Reference. Retrieved October 30, 2018, from: <http://www.planningplanet.com/guild/GPCCAR-modules>

²⁰ By Author

²¹ Wideman Comparative Glossary of Project Management Terms v5.5. (n.d.). Retrieved from http://www.maxwideman.com/pmglossary/PMG_P12.htm#Project

To summarize, this paper addresses the following research questions –

- 1) What are the different dispute resolution techniques?
- 2) How project management affects the failure of IT projects and what is the best resolution for it?

METHODOLOGY

STEP 1. Summarizing Problem

A large amount of cost, time and effort are imposed in a project, so it is necessary to manage the conflicts effectively. The project manager has primary responsibility in developing an effective resolution. Project management is a critical factor caused by the gap between what has been specified and the problem that needs to be solved. IT litigation involving claims of infringement, breach of Licenses, technology transfer agreements, unfair competition and antitrust, distribution battles are some of the examples of frequent IT disputes.

To summarize, this paper aims at discussing dispute resolution techniques in IT projects and find the best solution to be used by project managers to resolve the dispute in an IT project.

STEP 2. Feasible alternative solutions

When two parties deal with a dispute, they want to settle the matter quickly, effectively and with the low cost incurred. One of the dominant mechanisms is litigation for resolving conflicts in the technology industry.²² One of the popular manners to reach the disposition is Alternate dispute resolution (ADR). For this paper, I will consider different alternate resolution techniques to apply for conflicts in project management ²³

1. Prevention
2. Negotiation
3. Standing Neutral-Dispute Review Board
4. Non-Binding Resolution – (For example Mediation)
5. Private Binding Resolution – (For example Arbitration)
6. and Litigation

²² Mintzer, R. (2015, August 12). Litigate Different: Why the tech sector is turning to ADR. Retrieved from <https://svamc.org/wp-content/uploads/Litigate-Different-Why-the-Tech-Sector-Is-Turning-to-ADR-Corporate-Counsel-1.pdf>

²³ Planning Planet. (n.d.). GUILD OF PROJECT CONTROLS COMPENDIUM and REFERENCE (CaR) | Project Controls - planning, scheduling, cost management and forensic analysis (Planning Planet). Retrieved from <http://www.planningplanet.com/guild/gpccar/formal-disputes-resolution>

STEP 3. Development of feasible alternative

Alternate Dispute Resolution (ADR) process

ADR refers to “**Procedures or processes that are voluntarily adopted to resolve controversies before taking recourse to legal action**”²⁴. In the 1980s, experts suggested ADR as sensible and cost-effective, following years witnessed many companies being adopted to ADR policy which reportedly benefitted them in large scale.²⁵ In this process, both the parties can control the process as well as the solution. ADR involves resolving disputes outside of the courtroom, but that does not make them outside of the legal system. For instances, there are parties, who give up on their constitutional rights and take the dispute to court after agreeing to contract in binding arbitration but can follow with legal consequences, so it is essential to know that participation in ADR can have legal consequences.

Some of the advantages of ADR in the tech industry are

- 1) The neutral parties who have experience in technological issues could be chosen by the party itself²⁶.
- 2) Privacy can be maintained. Tech companies have highly sensitive information to keep out of public and being a business dispute, and they try to reach a private solution without the interference of the people ²⁷.

²⁴ Planning Planet. (n.d.). GUILD OF PROJECT CONTROLS COMPENDIUM and REFERENCE (CaR) | Project Controls - planning, scheduling, cost management and forensic analysis (Planning Planet). Retrieved from <http://www.planningplanet.com/guild/gpccar/formal-disputes-resolution>

²⁵ Carver, T. B., & Vondra, A. A. (1994, May 1). Alternative Dispute Resolution: Why It Doesn't Work and Why It Does. Retrieved from <https://hbr.org/1994/05/alternative-dispute-resolution-why-it-doesnt-work-and-why-it-does>

²⁶ Mintzer, R. (2015, August 12). Retrieved from <https://svamc.org/wp-content/uploads/Litigate-Different-Why-the-Tech-Sector-Is-Turning-to-ADR-Corporate-Counsel-1.pdf>

²⁷ Mintzer, R. (2015, August 12). Retrieved from <https://svamc.org/wp-content/uploads/Litigate-Different-Why-the-Tech-Sector-Is-Turning-to-ADR-Corporate-Counsel-1.pdf>

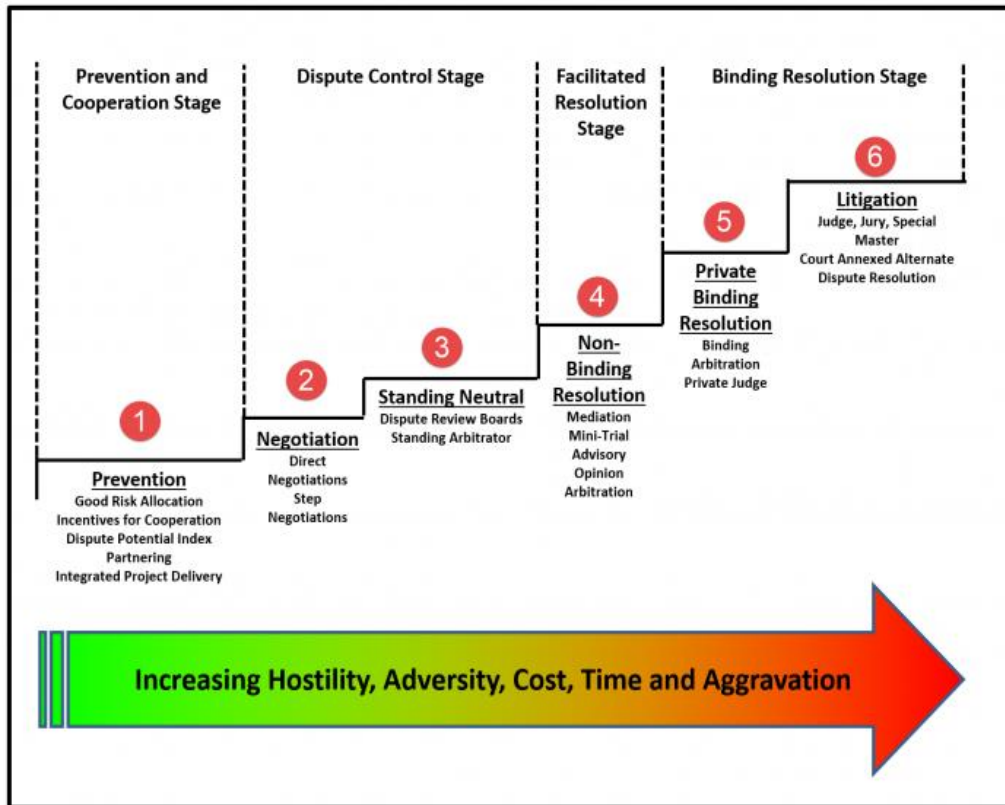


Figure 2: Illustrating the Escalation Steps in the ADR process²⁸

These techniques should be analyzed to see the best option to resolve issues in IT projects by project managers.

Prevention: Prevention is the primary step to be taken to avoid conflicts. Parties can use prevention and cooperation techniques to align the interest, improve cooperation and minimize the adversity of problem.

Negotiation: One of the first dispute resolution used which can result in a win-win situation for both parties. There is no neutral decision maker, and decision and responsibility lie in the hands of the parties. Negotiation is an informal process, and the parties participate voluntarily. Benefits are the speedy resolution and inexpensive, but the drawbacks are there are no set of rules, and any of the parties can bargain and be unethical.

Dispute Review Board: one or more impartial professionals formed at the beginning of a project to assist in the resolution of conflict, encourage dispute avoidance and keep up to date information about the project.

²⁸ Planning Planet. (n.d.). GUILD OF PROJECT CONTROLS COMPENDIUM and REFERENCE (CaR) | Project Controls - planning, scheduling, cost management and forensic analysis (Planning Planet). Retrieved from <http://www.planningplanet.com/guild/gpccar/formal-disputes-resolution>

Mediation: This method has a mediator or third party involved but the power to decision vest in the hands of the parties. Facilitate negotiation is the primary role of a mediator and to make them reach a mutually acceptable agreement of their conflict. Resolution goal of mediation differ it from facilitation

Arbitration: For Arbitration, Both parties will choose a private person who is responsible for the process as well as has the power to decide to resolve the dispute. Specialized expertise in the subject will be chosen to arbitrate the dispute. A disagreement which might go to court gets to arbitration due to the agreement between the parties.

Litigation: It is a traditional dispute resolution process used when parties are unable to reach an agreement through negotiation. A lawsuit will be filed before a court of law. Litigation has many disadvantages, yet it is an option when ADR goes wrong.²⁹

We can analyze from Figure 2 that there are four stages which are prevention and cooperation stage, Dispute control stage, Facilitated Resolution stage and Binding resolution stage. With the increase in stages, the technique changes from informal to formal, and the decision becomes binding. If we can tailor these techniques from starting of a project, then we can manage conflict within a project effectively.

STEP 4: Selection of criteria

“Industry experts have confirmed that cost, time to resolution, and decision-makers with specialized expertise are critical concerns in technology company disputes”³⁰,¹ said Gary Benton, Gary Benton, a U.S., and international mediator and arbitrator and the founder of the Silicon Valley Arbitration and Mediation Center, an organization that advances the use of ADR in technology and related fields.

Given the specialized nature of the industry, sector knowledge is vital. The essential factor influencing the choice of an arbitrator is based on the understanding of the industry.³¹ Parties can resolve IT disputes covering technology protected in several jurisdictions in a single proceeding making it possible to avoid the expense. Under the WIPO Rules³², the results and proceeding of the mediation, arbitration, and expert determination are confidential. This confidentiality allows the dispute to be more focused by both parties, avoid negative publicity,

²⁹ Coleman, Deutsch & Marcus, 2014 (adapted version from Planning Planet. (n.d.). Guild of Project Controls Compendium and Reference. Retrieved October 30, 2018, from

<http://www.planningplanet.com/guild/gpccar/formal-disputes-resolution>

³⁰ The global legal post. (2017, September 28). Tech companies want speedy and private dispute resolution. Retrieved from <http://www.globallegalpost.com/big-stories/tech-companies-want-speedy-and-private-dispute-resolution-93449448/>

³¹ Wong, G., & Atkinson, M. (2017, February 13). What does The Queen Mary International Dispute Resolution 2016 Survey tell us about the future direction of TMT disputes? | Lexology. Retrieved from

<https://www.lexology.com/library/detail.aspx?g=2d914503-ccb3-4c2f-9206-e23d5a90468d>

³² WIPO. (2011, September). Technology Transactions: Managing Risks Arising from Disputes. Retrieved from http://www.wipo.int/wipo_magazine/en/2011/05/article_0010.html

and facilitates settlement. Litigation often has adversarial nature which fosters hostility and resentment between parties, rendering the dispute intractable and potentially destroying a working relationship. The dependency of developing countries on the foreign sources of technology makes the necessity to maintain these relationships³³. Benefits of ADR include time and cost efficiency, flexibility, party control, neutrality, a single procedure, confidentiality, and expertise³⁴.

From the above literature, we can conclude that the following attributes are the key to compare and rank alternate dispute resolution methods in tech projects³⁵.

Many researchers focused on practical, human and social issues to identify common factors that affect performance and selection of dispute resolution attributes³⁶.

1. **Cost** – Money spent on resolving the dispute can increase with time, so it should be avoided
2. **Involvement of specialized Expertise** – The state and federal judges may not have specific experience in the particular subject matter of the dispute even if they are well skilled.
3. **Confidentiality** - As IT projects deal with sensitive information, the privacy of the project should be maintained
4. **Process-involved** – Complex process can increase the time to resolve an issue
5. **Time to Resolution** – Dispute should be resolved faster to save cost
6. **Risk to relationship with parties** – Business relations should not be affected due to the rising issues
7. **Flexibility** - Parties can select the procedure, industry standards and the discovery rules to be applied.
8. **Enforceability** - ADR methods are non-binding and cannot be enforced upon by the court.
9. **Outcome** - There will be lesser new disputes between parties if they arrived at a consensus-based settlement.
10. **Neutrality** – Depends on the competence and integrity of the neutral third party. He or she must remain impartial
11. **Need for court intervention** – The court needs to intervene in cases where arbitral tribunal has not been constituted

³³ Min, E. J. (n.d.). Alternative Dispute-Resolution Procedures: International View. Retrieved from <http://www.iphandbook.org/handbook/ch15/p03>

³⁴ WIPO. (n.d.). Efficient Alternative Dispute Resolution in Intellectual Property. Retrieved from http://www.wipo.int/wipo_magazine/en/2009/03/article_0008.html

³⁵ Sherwin, P., Vermal, A., & Figueira, E. (n.d.). Perceived Advantages and Disadvantages of International Arbitration - Proskauer on International Litigation and Arbitration. Retrieved from <https://www.proskauerguide.com/arbitration/19>

³⁶ Ye She, L. (n.d.). Factors which impact upon the selection of Dispute Resolution methods for commercial construction in the Melbourne industry: Comparison of the Dispute Review Board with other Alternative Dispute Resolution methods. Retrieved from http://www.irbnet.de/daten/iconda/CIB_DC24501.pdf

12. **Absence of appeal** – Cannot appeal as international awards are final. The advantages of having just one procedure and disadvantages of not having another round of tribunal.

13. **Limited discovery** - The degree of discovery will vary from one case to another and depends on the parties wish. Mostly viewed as an advantage by parties.

14. **Freedom to choose the place and language** - Parties can define the convenient location and language

The scale of Best, Neutral, Worst is used to compare the resolution techniques. Using the Multi-Attribute Dominance Method (MADM), each technique is analyzed to the attributes and scored as below. The alternatives will be ranked by demonstrating dominance. Minimum acceptable level to continue the analysis is above 10.

WORST	0
NEUTRAL	1
BEST	2

±

Attributes	Prevention	Negotiation	DRB	Mediation	Arbitration	Litigation
Cost	2	2	2	2	1	0
Involvement of specialized expertise	0	0	2	2	2	1
Confidentiality	2	2	1	1	1	0
Process involved	2	2	1	1	1	0
Time to resolution	2	2	1	1	1	0
Risk to Relation with parties	2	2	2	1	1	0
Flexibility	2	1	1	1	1	0
Enforceability	2	2	1	1	0	0
Outcome	2	2	1	1	0	0
Neutrality	0	0	2	1	1	1
Need for court intervention	0	0	0	0	1	2
Absence of appeal	0	0	0	0	1	2
Limited Discovery	2	2	1	1	1	
Freedom to choose the place and language	2	2	2	2	1	
SUM	20	19	17	15	13	6

Table 2: Multi-Attribute Decision making Matric of ADR techniques with attributes³⁷

By analyzing this table 1, we can narrow down the alternatives to Prevention, Negotiation, DRB, Mediation, Arbitration processes as better methods to be examined further than litigation which scored below 10. By eliminating this technique, we can move forward in analyzing suitable solution among the remaining five techniques in a broad way.

³⁷ By Author

Table 1 was created from literature by understanding the advantages and disadvantages of each technique. Technology industry majorly focuses on innovation, but litigation can restrain the business and refrain from the advancement of the product. As litigation can consume a significant amount of time and energy, it can also destroy the long-standing relationship between supplier, customer, and stakeholders. Even though there is an involvement of the third party in the litigation method, it is not expertise like in dispute review board, mediation, and arbitration. For further analysis, Non-Dimensional data technique will be utilized to access the five remaining alternatives.

FINDINGS

Step 5 -Analysis and Comparison of the Alternatives

By using MADM Analysis of all the feasible alternatives of ADR in Table 1, We can conclude that Prevention is one of the best methods, on the contrary, Litigation is one of the worst methods for ADR. Out of 6 alternatives defined and analyzed, we can cancel out litigation, and the remaining options for further analysis are prevention, negotiation, dispute review board, mediation, and arbitration. In the above case, alternatives were analyzed on face value without any complicated calculation which made it easier to decide, but in non-compensatory technique, poor performance in some criteria cannot be compensated by high performance. So, the rest of the alternatives are going to be analyzed using the compensatory technique.

Set undesirable scenario =0			
Set Desirable scenario =1			
Attribute	value	Formula	value
Cost	Low	$(3-1)/(3-1)$	1
	Medium	$(2-1)/(3-1)$	0.5
	High	$(1-1)/(3-1)$	0
Involvement of specialized expertise	Low	$(3-1)/(3-1)$	0
	Medium	$(2-1)/(3-1)$	0.5
	High	$(1-1)/(3-1)$	1
Confidentiality	Low	$(1-1)/(3-1)$	0
	Medium	$(2-1)/(3-1)$	0.5
	High	$(3-1)/(3-1)$	1
Process involved	Low	$(3-1)/(3-1)$	1
	Medium	$(2-1)/(3-1)$	0.5
	High	$(1-1)/(3-1)$	0
Time to resolution	Low	$(3-1)/(3-1)$	1
	Medium	$(2-1)/(3-1)$	0.5
	High	$(1-1)/(3-1)$	0
Risk to Relation with parties	Low	$(3-1)/(3-1)$	1
	Medium	$(2-1)/(3-1)$	0.5
	High	$(1-1)/(3-1)$	0
Flexibility	Low	$(1-1)/(3-1)$	0
	Medium	$(2-1)/(3-1)$	0.5
	High	$(3-1)/(3-1)$	1
Enforceability	Low	$(3-1)/(3-1)$	1
	Medium	$(2-1)/(3-1)$	0.5
	High	$(1-1)/(3-1)$	0
Outcome	Low	$(3-1)/(3-1)$	0
	Medium	$(2-1)/(3-1)$	0.5
	High	$(1-1)/(3-1)$	1
Neutrality	Low	$(1-1)/(3-1)$	0
	Medium	$(2-1)/(3-1)$	0.5
	High	$(3-1)/(3-1)$	1
Need for court intervention	Low	$(3-1)/(3-1)$	1
	Medium	$(2-1)/(3-1)$	0.5
	High	$(1-1)/(3-1)$	0
Absence of appeal	Low	$(1-1)/(3-1)$	0
	Medium	$(2-1)/(3-1)$	0.5
	High	$(3-1)/(3-1)$	1
Limited discovery	Low	$(1-1)/(3-1)$	0
	Medium	$(2-1)/(3-1)$	0.5
	High	$(3-1)/(3-1)$	1
Freedom to choose the place and language	Low	$(1-1)/(3-1)$	0
	Medium	$(2-1)/(3-1)$	0.5
	High	$(3-1)/(3-1)$	1

Table 3: Non-Dimensional Data Technique³⁸

³⁸ By Author

The compensatory approach includes non-Dimensional Data technique which is used to quantify the relative ranking. An undesirable scenario is set to Zero (0), and a Desirable scenario is set to one (1). For example Cost, Time to resolution, Risk to relation with parties and enforceability, need for court intervention should be kept low, so the value for Low = 1, while high = 0. For the rest of the attributes, the undesirable scenario is Low =0, and the desirable scenario is high =1. From Table 2, we got the values of Low, medium, high which can now be applied to calculate the relative weighting.

Attribute	Prevention	Negotiation	DRB	Mediation	Arbitration
Cost	LOW	LOW	LOW	LOW	HIGH
Involvement of specialized expertise	LOW	LOW	HIGH	HIGH	HIGH
Confidentiality	HIGH	HIGH	MEDIUM	MEDIUM	MEDIUM
Process involved	LOW	LOW	MEDIUM	MEDIUM	MEDIUM
Time to resolution	LOW	LOW	MEDIUM	MEDIUM	MEDIUM
Risk to Relation with parties	LOW	LOW	LOW	MEDIUM	MEDIUM
Flexibility	HIGH	MEDIUM	MEDIUM	MEDIUM	MEDIUM
Enforceability	LOW	LOW	MEDIUM	MEDIUM	HIGH
Outcome	HIGH	HIGH	MEDIUM	MEDIUM	LOW
Neutrality	LOW	LOW	HIGH	MEDIUM	MEDIUM
Need for court intervention	LOW	LOW	LOW	LOW	MEDIUM
Absence of appeal	LOW	LOW	LOW	LOW	MEDIUM
Limited Discovery	HIGH	HIGH	MEDIUM	MEDIUM	MEDIUM
Freedom to choose the place and language	HIGH	HIGH	HIGH	HIGH	MEDIUM

Attribute	Prevention	Negotiation	DRB	Mediation	Arbitration
Cost	1	1	1	1	0
Involvement of specialized expertise	0	0	1	1	1
Confidentiality	1	1	0.5	0.5	0.5
Process involved	1	1	0.5	0.5	0.5
Time to resolution	1	1	0.5	0.5	0.5
Risk to Relation with parties	1	1	1	0.5	0.5
Flexibility	1	0.5	0.5	0.5	0.5
Enforceability	1	1	0.5	0.5	0
Outcome	1	1	0.5	0.5	0
Neutrality	0	0	1	0.5	0.5
Need for court intervention	1	1	1	1	0.5
Absence of appeal	1	1	1	1	0.5
Discovery	1	1	0.5	0.5	0.5
Freedom to choose the place and language	1	1	1	1	0.5
SUM	12	11.5	10.5	9.5	6

Table 4: Non-Dimensional data technique³⁹

³⁹ By Author

From Table 3, we can notice that Prevention has more weight than the rest of the alternatives. Prevention scored a total of 12 which is twice better than Arbitration.

Step 6 – Selection of the preferred alternative.

	Cost	Involvement of specialized expertise	Confidentiality	Process involved	Time to resolution	Risk to Relation with parties	Flexibility	Enforceability	Outcome	Neutrality	Need for court intervention	Absence of appeal	Limited Discovery	Freedom to choose the place and language	Total	Rank
Cost		1	1	1	1	1	1	1	1	1	1	1	1	1	13	1
Involvement of specialized expertise	0		0	1	0	1	1	1	0	1	1	1	1	1	9	5
Confidentiality	0	1		1	0	1	1	1	0	1	1	1	1	1	10	4
Process involved	0	0	0		0	1	1	1	0	1	1	1	1	1	8	6
Time to resolution	0	1	1	1		1	1	1	1	1	1	1	1	1	12	2
Risk to Relation with parties	0	0	0	0	0		1	1	0	1	1	1	1	1	7	7
Flexibility	0	0	0	0	0	0		1	0	1	1	1	1	1	6	8
Enforceability	0	0	0	0	0	0	0		0	0	0	0	1	1	2	12
Outcome	0	1	1	1	0	1	1	1		1	1	1	1	1	11	3
Neutrality	0	0	0	0	0	0	0	1	0		1	1	1	1	5	9
Need for court intervention	0	0	0	0	0	0	0	1	0	0		1	1	1	4	10
Absence of appeal	0	0	0	0	0	0	0	1	0	0	0		1	1	3	11
Limited Discovery	0	0	0	0	0	0	0	0	0	0	0	0		0	0	14
Freedom to choose the place and language	0	0	0	0	0	0	0	0	0	0	0	0	1		1	13

Table 5: Demonstrating Lexicography: Disjunctive Reasoning⁴⁰

By using Disjunctive Reasoning⁴¹, we make a pairwise comparison of attributes and give 1 to the Better option and 0 to the other. Each Attribute is ranked from 0 to 13. This comparison will help us determine which is the best attribute for this paper.

⁴⁰ By Author

⁴¹ Planning Planet. (n.d.). Guild of Project Controls Compendium and Reference. Retrieved November 6, 2018, from: <http://www.planningplanet.com/guild/gpccar/managing-change-the-owners-perspective>

Attribute	STEP 1	STEP2			Prevention		Negotiation		DRB		Mediation		Arbitration	
	Rank	Normalised weight (A)	(B)	(A)x(B)	(B)	(A)x(B)	(B)	(A)x(B)	(B)	(A)x(B)	(B)	(A)x(B)	(B)	(A)x(B)
Cost	13	13/91	=	0,14	1	0,143	1	0,143	1	0,143	1	0,143	0	0,00
Involvement of specialized expertise	9	9/91	=	0,10	0	0,000	0	0,000	1	0,099	1	0,099	1	0,10
Confidentiality	10	10/91	=	0,11	1	0,110	1	0,110	0,50	0,055	0,5	0,055	0,5	0,05
Process involved	8	8/91	=	0,09	1	0,088	1	0,088	0,50	0,044	0,5	0,044	0,5	0,04
Time to resolution	12	12/91	=	0,13	1	0,132	1	0,132	0,50	0,066	0,5	0,066	0,5	0,07
Risk to Relation with parties	7	7/91	=	0,08	1	0,077	1	0,077	1	0,077	0,5	0,038	0,5	0,04
Flexibility	6	6/91	=	0,07	1	0,066	0,50	0,033	0,50	0,033	0,5	0,033	0,5	0,03
Enforceability	2	2/91	=	0,02	1	0,022	1	0,022	0,50	0,011	0,5	0,011	0	0,00
Outcome	11	11/91	=	0,12	1	0,121	1	0,121	0,50	0,060	0,5	0,060	0	0,00
Neutrality	5	5/91	=	0,05	0	0,000	0	0,000	1	0,055	0,5	0,027	0,5	0,03
Need for court intervention	4	4/91	=	0,04	1	0,044	1	0,044	1	0,044	1	0,044	0,5	0,02
Absence of appeal	3	3/91	=	0,03	1	0,033	1	0,033	1	0,033	1	0,033	0,5	0,02
Discovery	0	0/91	=	0,00	1	0,000	1	0,000	0,50	0,000	0,5	0,000	0,5	0,00
Freedom to choose the place and language	1	1/91	=	0,01	1	0,011	1	0,011	1	0,011	1	0,011	0,5	0,01
SUM	91		SUM	1,00	SUM	0,846	SUM	0,813	SUM	0,731	SUM	0,665	SUM	0,41

Table 6: Non-Dimensional Data Technique – Additive weighting technique⁴²

Total of relative ranking comes to 91. A is the normalized weight of each attribute. From Table 5, We used an additive weighing technique to compare all the alternatives to find the preferred option. We can conclude that Prevention has a score of 0.846 which is closer to the value 1.00. And Negotiation happens to be the preferred alternative with a score of 0.813.

Step 7 –Performance Monitoring and post-evaluation of results

Like the famous saying "Prevention is better than Cure," there should be strategies to analyze and to apply dispute prevention at early stages. We should identify and implement dispute resolution before things go out of hand. Nowadays business and industries are developing codes of practice as a prevention strategy. These codes provide standards of conduct which aims at building relationship better and encourage openness. For a successful ADR mechanism, there should be good communication and understanding by showing genuine interest and values, Power of reversal which means that the winner shouldn't blame the loser but share responsibility and build a robust relationship between parties.⁴³

⁴² By Author

⁴³ Staugas, J. (2002, January 3). Strategies for dispute prevention and management in commercial arrangements. Retrieved from <https://epublications.bond.edu.au/cgi/viewcontent.cgi?article=1169&context=adr>

As dispute prevention is our goal, “Partnering can be regarded as an innovation or a new name for traditional principles of cooperation and trust⁴⁴.”

Dispute resolution clauses should be included in contracts which explains the procedures that need to be followed instead of the legal proceedings ⁴⁵.

- The other party should be given a written notice setting out the nature of the dispute that can arise and take steps to prevent it.
- Discussions should be held with the other party (directly or through representatives) within five days of receiving written notice to avoid from escalation.
- Prevention clauses should be present so that parties don't go straight into litigation.

An ADR practitioner can be appointed in an organization to make dispute resolution clause so that there will be a consensus agreement on the contract clause. ADR practitioner should be qualified and registered.

Similarly, an expert determination clause should be included in contracts of industries where expert opinion is required to help resolve a dispute. This clause may consist of similar information to the dispute resolution clause.⁴⁶

The disputes can be resolved quickly and cheaply through these processes and also ensures the continuity of business with each other.

The contract should state that you and the hirer should split any costs associated with the dispute resolution process. To avoid the dragging on of process, the contract should include an expert determination clause or specific timeframes in a dispute resolution.⁴⁷

CONCLUSIONS

In IT projects, there are numerous ways in which a conflict arises. Some of the factors contributing to IT failure due to project management are the lack of expertise with experience in IT project management, complications due to malfunctioning hardware and Bad planning and lack of understanding of challenges. These factors affect major contract failures.

Through this paper, we analyzed different alternative dispute resolution that can be used to solve the persisting conflicts. One of the best options is Prevention. Prevention can help us

⁴⁴ Heal, A. J. (2010, May). AGREEING TO DISAGREE: Contract Clauses and Proactive Strategies for Resolving Disputes. Retrieved from https://www.blaney.com/sites/default/files/Contract-Clauses-and-Proactive-Strategies_AJH.pdf

⁴⁵ Australian Government. (2018, October 22). What do I include in a contract? Retrieved from <https://www.business.gov.au/people/contractors/understanding-contracts/what-do-i-include-in-a-contract>

⁴⁶ Australian Government. (2018, October 22). What do I include in a contract? Retrieved from <https://www.business.gov.au/people/contractors/understanding-contracts/what-do-i-include-in-a-contract>

⁴⁷ Australian Government. (2018, October 22). What do I include in a contract? Retrieved from <https://www.business.gov.au/people/contractors/understanding-contracts/what-do-i-include-in-a-contract>

reduce the cost, time that parties usually waste for these conflicts. Dispute prevention clause should be mentioned in the contracts and project managers should review and respect the agreement. The principles of openness, flexibility, trust, and clear communication are influenced by dispute prevention, management, and resolution. The importance of conduct and supporting the enforceability of proper faith requirements in contracts are some of the factors that are getting recognized and helps promote dispute prevention.⁴⁸

BIBLIOGRAPHY

1. Atkinson, S., & Benefield, G. (n.d.). Why IT contracts are bound to fail. Retrieved from <https://www.computerweekly.com/opinion/Why-IT-contracts-are-bound-to-fail>
2. Geneca. (2018, September 13). Why up to 75% of Software Projects Will Fail * Geneca. Retrieved from <https://www.geneca.com/why-up-to-75-of-software-projects-will-fail/>
3. Systemation. (2016, August 18). Your Biggest Project Risk is Poor Project Management. Retrieved from <https://www.systemation.com/your-biggest-project-risk-is-poor-project-management/>
4. LLC, O. (n.d.). Why 50% of IT projects fail, and how to NOT let that happen to you - ObjectStyle.com. Retrieved from <https://www.objectstyle.com/agile/software-projects-failure-statistics-and-reasons>
5. Farkas, B. (2011, October 10). Software and Application Development Agreements: Protect Your Copyright. Retrieved from <https://www.nolo.com/legal-encyclopedia/software-application-development-agreements-copyright-29584.html>
6. Rossi, B. (2018, May 15). Top 6 reasons why IT contracts fail - Information Age. Retrieved from <https://www.information-age.com/top-6-reasons-why-it-contracts-fail-123459435/>
7. Johnstone, D., Huff, S., & Hope, B. (n.d.). IT Projects: Conflict, Governance, and Systems Thinking. Retrieved from <https://www.computer.org/csdl/proceedings/hicss/2006/2507/08/250780197b.pdf>
8. Kumar Jha, A. (n.d.). Disputes in IT contracts - Source, Impact and Resolution tactics in early stages. Retrieved from <https://pmworldjournal.net/wp-content/uploads/2018/07/pmwj72-Jul2018-Jha-disputes-in-IT-contracts-student-paper.pdf>
9. Florentine, S. (2017, February 27). IT project success rates finally improving. Retrieved from <https://www.cio.com/article/3174516/project-management/it-project-success-rates-finally-improving.html>
10. DDe Swart, L. (n.d.). Root cause analysis for project delays at a high-tech company. Retrieved from https://pure.tue.nl/ws/files/55363480/Swart_d_0748374.pdf

⁴⁸ Staugas, J. (2002, January 3). Strategies for dispute prevention and management in commercial arrangements. Retrieved from <https://epublications.bond.edu.au/cgi/viewcontent.cgi?article=1169&context=adr>

11. Harpham, B. (2017, June 1). 11 Ways to Manage Project Conflict - LiquidPlanner. Retrieved from <https://www.liquidplanner.com/blog/11-ways-mange-project-conflict/>
12. Gemünden, H. G., & Schoper, Y. G. (n.d.). (PDF) Future Trends in Project Management. Retrieved from https://www.researchgate.net/publication/303375998_Future_Trends_in_Project_Management
13. Dontigney, E. (2011, July 31). 5 Conflict Management Strategies. Retrieved from <https://smallbusiness.chron.com/5-conflict-management-strategies-16131.html>
14. Alami, A. (n.d.). Why Do Information Technology Projects Fail? Retrieved from https://ac.els-cdn.com/S1877050916322918/1-s2.0-S1877050916322918-main.pdf?_tid=3a6404af-e0ba-4f74-b86c-204e736c358b&acdnat=1540726294_feec2891d0172544df6c963f292f5dcf
15. Rongala, A. (2018, August 29). Causes of Conflicts in a Project? How to Resolve them - Invensis Learning Blog. Retrieved from <https://www.invensislearning.com/blog/causes-of-conflicts-in-a-project-how-to-resolve-them/>
16. Carver, T. B., & Vondra, A. A. (1994, May 1). Alternative Dispute Resolution: Why It Doesn't Work and Why It Does. Retrieved from <https://hbr.org/1994/05/alternative-dispute-resolution-why-it-doesnt-work-and-why-it-does>
17. McAleer, H. A. (November 11). Need for an ADR model for project success. Retrieved from <https://www.pmi.org/learning/library/need-adr-model-project-success-6420>
18. Mintzer, R. (2015, August 12). Litigate Different: Why the tech sector is turning to ADR. Retrieved from <https://svamc.org/wp-content/uploads/Litigate-Different-Why-the-Tech-Sector-Is-Turning-to-ADR-Corporate-Counsel-1.pdf>
19. WIPO. (n.d.). Efficient Alternative Dispute Resolution in Intellectual Property. Retrieved from http://www.wipo.int/wipo_magazine/en/2009/03/article_0008.html
20. Min, E. J. (n.d.). Alternative Dispute-Resolution Procedures: International View. Retrieved from <http://www.iphandbook.org/handbook/ch15/p03>
21. The global legal post. (2017, September 28). Tech companies want speedy and private dispute resolution. Retrieved from <http://www.globallegalpost.com/big-stories/tech-companies-want-speedy-and-private-dispute-resolution-93449448/>
22. Wong, G., & Atkinson, M. (2017, February 13). What does The Queen Mary International Dispute Resolution 2016 Survey tell us about the future direction of TMT disputes? | Lexology. Retrieved from <https://www.lexology.com/library/detail.aspx?g=2d914503-ccb3-4c2f-9206-e23d5a90468d>
23. WIPO. (2011, September). Technology Transactions: Managing Risks Arising from Disputes. Retrieved from http://www.wipo.int/wipo_magazine/en/2011/05/article_0010.html
24. Barlow, G., Tubb, A., & Riley, G. (2017). Driving Business Performance. Retrieved from <https://assets.kpmg.com/content/dam/kpmg/nz/pdf/July/projectmanagementsurvey-kpmg-nz.pdf>

25. Sherwin, P., Vermal, A., & FIGUEIRA, E. (n.d.). Perceived Advantages and Disadvantages of International Arbitration - Proskauer on International Litigation and Arbitration. Retrieved from <https://www.proskauerguide.com/arbitration/19>
26. Planning Planet. (n.d.). GUILD OF PROJECT CONTROLS COMPENDIUM and REFERENCE (CaR) | Project Controls - planning, scheduling, cost management and forensic analysis (Planning Planet). Retrieved from <http://www.planningplanet.com/guild/gpccar/formal-disputes-resolution>
27. Uwazie, E. (2011, November 30). Alternative Dispute Resolution in Africa: Preventing Conflict and Enhancing Stability – Africa Center for Strategic Studies. Retrieved from <https://africacenter.org/publication/alternative-dispute-resolution-in-africa-preventing-conflict-and-enhancing-stability/>
28. Staugas, J. (2002, January 3). Strategies for dispute prevention and management in commercial arrangements. Retrieved from <https://epublications.bond.edu.au/cgi/viewcontent.cgi?article=1169&context=adr>
29. Australian Government. (2018, October 22). What do I include in a contract? Retrieved from <https://www.business.gov.au/people/contractors/understanding-contracts/what-do-i-include-in-a-contract>
30. Heal, A. J. (2010, May). AGREEING TO DISAGREE: Contract Clauses and Proactive Strategies for Resolving Disputes. Retrieved from https://www.blaney.com/sites/default/files/Contract-Clauses-and-Proactive-Strategies_AJH.pdf
31. Ye She, L. (n.d.). Factors which impact upon the selection of Dispute Resolution methods for commercial construction in the Melbourne industry: Comparison of the Dispute Review Board with other Alternative Dispute Resolution methods. Retrieved from http://www.irbnet.de/daten/iconda/CIB_DC24501.pdf
32. Human Asset. Retrieved from <https://www.humanasset.com/>
33. What-is-an-IT-Project. (n.d.). Retrieved from <https://files.nc.gov/ncdit/documents/files/What-is-an-IT-Project.pdf>

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