

# Building Sustainability into contracts: Change and Dispute Management in Construction<sup>1</sup>

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## ABSTRACT

Sustainability is at the heart of many discussions nowadays, as human activities are subject to evolution in order to reduce negative impacts over our resources and leave to next generations a sane planet and society. Sustainability encompasses many topics as it is a global vision. Therefore, this paper is developed to analyze and identify the best practices and methods to foster sustainability through dispute management and change, with a focus on the construction area, subject to many disputes. In this context, the author will compare the different existing methods for dispute resolution and identify state of the art practices to build sustainability into contracts. Based on this analysis, the author recommends the use of the combination of mediation and arbitration as the best method and suggests a number of key practices. These practices highlight the importance of a proactive approach in contract management.

**Key words:** Sustainability, Change, Dispute, Resolution, Construction, Contracts

## INTRODUCTION

With the objective to reduce the negative impacts of human activities over our resources, sustainable development imposed itself as unavoidable in every business. As a global strategy, it should be introduced in every part of a business in order to maximize sustainability, which makes it a key part to integrate into contracts. Indeed, in order to integrate sustainability into an organization or a business, the agreement of parties is an essential step to manage. Building sustainability into contracts could thus have an important positive impact for businesses and society in general. We consider here sustainability as the ability to last and continue indefinitely by causing no damage to the resources of the project.

Construction is one of the areas most impacted by this change while having to manage contracts in every project. Construction companies, having an important impact on environment, are now widely integrating sustainable practices into their processes in order to

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align with the need of our society and to communicate their will to contribute to the necessary change mankind needs to undertake. Nevertheless, contracts issues are widespread and statistics show that the number of disputes is not decreasing and tend to be a recurrent issue in nowadays contract management for construction, which is jeopardizing contracts efficiency and sustainability. A better management of disputes could enable contractors to avoid time and money consuming disputes, resulting in positive impacts on the business.

In this paper, we will focus especially on the dispute management in construction contracts and aim to identify the best existing practices in order to build sustainability into contracts. In this perspective, we will compare the various methods of dispute management in different sources of contract content and bring into light the best practices for a sustainable contract. The result should encompass a number of good practices that will help contractors introduce or develop sustainability in contracts while improving dispute management in a more sustainable way.

### **Step 1 - PROBLEM RECOGNITION, DEFINITION AND EVALUATION**

The objective of this paper is to answer the following questions:

- 1) How to foster sustainability in contracts through dispute resolution?
- 2) What are the best practices to which we should get inspired?

### **METHODOLOGY**

In order to answer to those questions, we will compare alternative solutions for resolving disputes and then identify the keys for efficient changes and disputes resolution.

### **Step 2 - DEVELOPMENT OF FEASIBLE ALTERNATIVES**

#### **FEASIBLE ALTERNATIVE SOLUTIONS**

1. Prevention: Internal Dispute Resolution
2. Negotiation
3. Standing Arbitration
4. Mediation
5. Arbitration
6. Litigation

#### **ATTRIBUTES TO EVALUATE ALTERNATIVES**

The attributes selected are the following ones:

- Costs: we will evaluate the costs caused by the various alternatives

- Duration: we will evaluate the duration of the resolutions through the various alternatives
- Enforceability: we will evaluate the enforceability of the decision, or bindingness of the solution
- Confidentiality: we will evaluate the confidentiality of the processes for the parties
- Procedural flexibility: we will evaluate the flexibility of the various alternatives
- Fairness to both parties: we will evaluate if those alternatives are fair to both parties

### **Step 3 - DEVELOPMENT OF THE FEASIBLE ALTERNATIVES**

In this section, we will develop the different alternatives presented earlier.

- **Prevention: Internal Dispute Resolution**

As recommended in AIA's Integrated Project Delivery Guide, Internal Dispute Resolution allows teams to preserve the collaborative culture when a dispute may arise. In this situation, disputes are resolved by the project's decision-making body. The different parties have abided to the decisions made in order to resolve internally disputes which allows to solve a dispute quickly but limit flexibility: "In some cases, the participants agree to a "no suit" provision, which waives their rights to litigate or arbitrate".

- **Negotiation**

The first possibility when a dispute is arising is to negotiate directly between the parties. This solution is informal and can be flexible but doesn't lead to an enforceable decision. However, this simple solution can permit to resolve some disputes quickly.

- **Standing Arbitration**

The appointment of a standing arbitrator, prior to any dispute, allows him to resolve disagreements before an escalation into a dispute. Nevertheless, this appointment adds costs and duration to the contract management.

- **Mediation**

With the mediation resolution, a mediator is employed in order to facilitate the discussion between the parties. This solution is structured but informal and very flexible. Mediation allows to negotiate an agreement thanks to the role of the mediator that will facilitate the exchanges. However, the decision of the mediation is not binding and thus could be brought to a court. In order to be efficient, the result of mediation should be totally accepted, prior to the process, by the parties.

- **Arbitration**

Arbitration method is using arbitrators’ tribunals which are private independent entities that delivers binding awards that are most of the time enforceable. This process is flexible and based on a written agreement of the parties. Unlike mediation, arbitrators are decision-makers and deliver directly a decision in addition to facilitating the dialogue between parties.

- **Litigation**

Litigation method is the resolution of disputes in front of state courts. It results in enforceable decisions but the process is not very flexible and is often public. The process can be long and costly as parties can appeal a decision and due to review proceedings.

#### Step 4 - SELECTION OF THE ACCEPTANCE CRITERIA

In order to evaluate each of the alternatives, we will use the **Multi Attribute Decision Making (MADM)** process. We already see in the matrix below that Litigation may be the worst solution for resolving a dispute as its main advantage is the enforceability of the decision but the other attributes are below good. A contract will be all the more sustainable with fast, cost-free and fair to parties dispute resolutions. We can thus reject Litigation as best practice for a sustainable contract.

Attribute	Prevention: Internal Dispute Resolution	Negotiation	Standing arbitration	Mediation	Arbitration	Litigation
Costs	Very Good	Very Good	Medium	Very Good	Good	Medium
Duration	Good	Very Good	Medium	Good	Good	Bad
Enforceability	Bad	Bad	Medium	Bad	Medium	Very Good
Confidentiality	Very Good	Very Good	Very good	Very Good	Very Good	Medium
Procedural flexibility	Good	Medium	Very Good	Very Good	Very Good	Bad
Fairness	Bad	Bad	Very Good	Good	Good	Good

Fig. 1 - Multi Attribute Decision Making Matrix

## FINDINGS

#### Step 5 - ANALYSIS AND COMPARISON OF THE ALTERNATIVES

We want here to analyze the alternatives thanks to compensatory models. To do so we turn the relative options into dimensionless values.

Attribute	Prevention: Internal Dispute Resolution	Negotiation	Standing arbitration	Mediation	Arbitration
Very Good	1	1	1	1	1
Good	0.67	0.67	0.67	0.67	0.67
Medium	0.33	0.33	0.33	0.33	0.33
Bad	0	0	0	0	0

Fig. 2 - Turning each option into a Base 1 (dimensionless) scoring model

Then we can create the “relative weighting” of the alternatives.

Attribute	Prevention: Internal Dispute Resolution	Negotiation	Standing arbitration	Mediation	Arbitration
<b>Costs</b>	1	1	0.33	1	0.67
<b>Duration</b>	0.67	1	0.33	0.67	0.67
<b>Enforceability</b>	0	0	0.33	0	0.33
<b>Confidentiality</b>	1	1	1	1	1
<b>Procedural flexibility</b>	0.67	0.33	1	1	1
<b>Fairness</b>	0	0	1	0.67	0.67
<b>Total</b>	3.34	3.3	3.99	4.34	4.34

Fig. 3 – Relative weighting of the alternatives

We can now apply the additive weighting technique by ranking the attributes by importance:

**Fairness > Costs > Duration > Enforceability > Confidentiality > Procedural flexibility.**

Attribute	Ranking	Weighting	Prevention: Internal Dispute Resolution		Negotiation		Standing arbitration		Mediation		Arbitration	
Costs	2	0.10	1	0.10	1	0.10	0.33	0.03	1	0.10	0.67	0.06
Duration	3	0.14	0.67	0.10	1	0.14	0.33	0.05	0.67	0.10	0.67	0.10
Enforceability	4	0.19	0	0	0	0	0.33	0.06	0	0	0.33	0.06
Confidentiality	5	0.24	1	0.24	1	0.24	1	0.24	1	0.24	1	0.24
Procedural flexibility	6	0.29	0.67	0.19	0.33	0.09	1	0.29	1	0.29	1	0.29
Fairness	1	0.05	0	0	0	0	1	0.05	0.67	0.03	0.67	0.03
<b>Total</b>	<b>15</b>	<b>1.00</b>	<b>SUM</b>	<b>0.63</b>	<b>SUM</b>	<b>0.57</b>	<b>SUM</b>	<b>0.71</b>	<b>SUM</b>	<b>0.75</b>	<b>SUM</b>	<b>0.78</b>

Fig. 4 – Additive weighting technique

### Step 6 - SELECTION OF THE PREFERRED ALTERNATIVE

After this relative weighting analysis, we have Mediation and Arbitration which are the two best alternatives, 132% better than Negotiation.

After the additive weighting technique, we have this time Arbitration as the best alternative, 137% better than Negotiation.

Thus, we obtain this ranking of the alternatives:

**Arbitration ≥ Mediation > Standing arbitration > Internal Dispute Resolution > Negotiation**

As we see, the two best alternatives scores, for Arbitration and Mediation, are really close. Thus, even if the first recommendation would be to choose arbitration, an optimal choice would be to combine the two methods. Indeed, the two parties can try to find an amicable agreement through mediation and then move to an arbitration if no agreement is reached.

### Step 7 - PERFORMANCE MONITORING AND POST-EVALUATION OF RESULTS

The aim of the analysis was to find the best alternative for a sustainable management of disputes.

However, identifying the best methods doesn't ensure a total sustainability of the contract over those aspects. Managers have to keep in mind key practices in order to maximize sustainability and be more efficient. A good communication practice is the first key as explained in CSI Manual of Practice: "The project team should work to identify communication

methods and protocols that offer the best opportunity for early identification and discussion of issues, events, or circumstances producing a claim". Indeed, a good communication and coordination allows managers to have a proactive approach and thus to avoid disputes. Another key is prevention: managers should prepare claim resolution action plan in order to deal with any eventuality. Documentation is also a key practice to keep track of every claim or risk and thus to hold all the cards to manage any change or issue. Estimation is as well fundamental to prevent any changes or disputes and ensuring a more sustainable contract.

Finally, Design build projects, a specific practice from the construction sector allows the integration of design and construction services into a single contract. This solution has several advantages including a reduced duration and number of disputes and change orders, an increased flexibility allowing to implement new technologies such as new environmentally friendly technologies.

## **CONCLUSIONS**

In this paper, we wanted to identify the best practices to foster sustainability into contracts by answering the following questions:

- 1) How to foster sustainability in contracts through dispute resolution?
- 2) What are the best practices to which we should get inspired?

Our analysis has permitted to demonstrate that arbitration is the best practice to resolve disputes and that a combination with a mediation could constitute the more sustainable practice and bring efficiency in dispute management. However, even though these practices would be the best for a majority of contracts, managers have to watch for their projects specificities in order to identify whether another option could be better in their particular case.

The second objective was to identify key practices to which we should get inspired. We determined a number of key practices that maximize sustainability in contracts by ensuring a better change and dispute management: communication programs, claim resolution action plans, documentation, estimation. All of these can be implemented in most areas, but we identified a specific practice as well to foster sustainability in Construction contracts: Design build projects.

Those practices have brought into light the fundamental importance of having a proactive approach in order to foster sustainability into contracts.

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