

Sustainability: when companies take over the state responsibility^{1, 2}

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ABSTRACT

This paper aims at finding solutions for companies to make sure that their business partners respect their clients' always higher sustainability standards. Indeed, as the usual legal regulation are not law-binding enough, companies have to take the matter on their own hands. To do so, we will first try and find the different possible alternatives and then, the best attributes to assess each of those alternatives. We will then use several Multi-Attribute Decision Making (MADM) methods to find out what is the best solution. We will finally show that the best solution is to include sustainable clauses in project management contracts, thanks to a Pareto analysis.

Keywords: Economic, Social, Environment, Transparency, Sustainability standards, Ethic, Law, Stakeholders, Business, Interests, Regulation, Planet, People, Profit, Obligation

INTRODUCTION

"By early August of each year (soon to be late July), humans will have consumed what the planet can regenerate. [...] In all, we consume the natural resources of 1.7 earths a year."³ And the consequences are huge. The exponential growth of the global population and the ineffective use of the planet's resources are the two main things responsible. All around the world, concerns are rising for the long-term viability of life-as-we-know-it. Global warming, deforestation, pollution, biodiversity losses are as many issues that need to be dealt with if we want our planet to remain viable. As lives are at stake - in 2012, around 6.5 million deaths were associated with air pollution⁴ - people are becoming more and more willing to implement changes in order to

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³ Carboni, J., Duncan, W., Gonzalez, M., Milsom, P., & Young, M. (2018). *Sustainable Project Management: The GPM Reference Guide* (2nd ed.). Novi, USA: GPM Global.

⁴ WHO releases country estimates on air pollution exposure and health impact. (2016, September 27). Retrieved on, October 23, 2018, from <http://www.who.int/news-room/detail/27-09-2016-who-releases-country-estimates-on-air-pollution-exposure-and-health-impact>

adopt a more sustainable way of living. There is a real global trend towards a more transparent and respectful way to consume and produce. Companies that do not comply with the globally accepted sustainability standards suffer the consequences, such as taxes, benefices losses, and bad brand reputation.⁵

Sustainability is a broad and complex notion. The most often quoted definition comes from the UN World Commission on Environment and Development: "sustainable development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs."⁶

For many specialists, the concept of sustainability is associated with three main pillars, namely, economic and social development and environment protection. All economic actor, should, if applying this concept, not only consider the economic impact of its actions but also their environmental and social consequences, companies included.⁷ The future of our planet and the life of our grandchildren are at stake. Yet, it seems that without a compelling regulation, some economic actors will keep looking for a short-term economic profit. This is a big issue in project management. Indeed, in each large-scale project, stakeholders are numerous and often of different nationalities. The fact is that, depending on their culture, or their different interests, all stakeholders will not have the same sustainability and ethical standards. So, how can companies make sure that their business partners respect their clients' always higher sustainability standards?

	Definition	Example
Project	"an investment that requires a set of logically linked and coordinated activities performed over a finite period of time in order to accomplish a unique result in support of a desired outcome" ⁸	A sustainable SME wants to build itself a new building, following sustainable standards. This building is meant to be the future headquarter of the company. The project fit the companies' strategy to be recognized as a high-sustainable standard company.

⁵ Roberts, J. (n.d.). Lack of transparency – Writing for Strategic Communication Industries. Retrieved November 2, 2018, from <https://ohiostate.pressbooks.pub/stratcommwriting/chapter/lack-of-transparency/>

⁶What is Sustainability? | UCLA Sustainability. (n.d.). Retrieved on, October 23, 2018, from <https://www.sustain.ucla.edu/about-us/what-is-sustainability/>

⁷ [Sustainability definition & criteria]. (n.d.). Retrieved November 2, 2018, from https://www.epa.gov/sites/production/files/2015-05/documents/sustainability_primer_v9.pdf

⁸ Adapted from a Linked In discussion initiated by William R.Duncan 1/13/2018- <https://www.linkedin.com/feed/update/urn:li:activity:6357416976318558208/>

<p>Asset</p>	<p>“An “asset” can be described as being “A tangible or intangible resource with economic value that an individual, corporation or country owns or controls with the expectation that it will provide future benefit.”⁹</p>	<p>To carry out this project, the company has at her disposal different resources of different type. In this case, for example, some specific knowledge on sustainable construction, a team of people used to manage both construction and sustainable projects, the appropriate construction equipment as well as a lot where to build the new building, but also the legal agreement to build this building.</p>
<p>Portfolio of assets</p>	<p>It exists 5 types of assets: Information Assets are normally controlled by functional groups such as IT or Engineering; Human Assets are controlled by HR; Physical Assets are controlled by either operation ("plant manager") or other functional entities such as "heavy equipment shop"; Financial Assets are controlled by accounting or finance and lastly; Intangible Assets which are defined to be the difference between a company's book value and market capitalization value is controlled by sales and marketing or public relations departments.” “It is the responsibility of these functional organizations to allocate what are often scarce or limited “organizational assets” to projects, understanding that not all projects have the same priority and in many cases, there are too many projects for the pool</p>	<p>To carry out all of its projects, the company has access to many resources of different types. Those resources need to be correctly managed and allocated to each project. They include specific knowledge, people, money but also equipment or even legal agreements. The portfolio asset managers have for objective to allocate those resources optimally in order to support the company's strategic, tactical and operational growth. As opposed to what one could think, “the historical view of reputation as an intangible asset is the wrong approach”. “As nebulous as reputation can seem, it has real, tangible value (dollars, for example) that can be measured”.¹¹ The Corporate Reputation Quotient Model by Harris Fombrun is the most used method to measure reputation. It captures the stakeholders' perception of one company's emotional appeal, products and services, vision and leadership, workplace environment,</p>

⁹ Adapted from an Investopedia definition. Retrieved on, November 20, 2018, from http://www.planningplanet.com/guild/gpccar/introduction-to-managing-project-controls?fbclid=IwAR1wj7rohXPEStWNIzYMEqFDAdjZn33DdYs6zC_4JjK_D7gaaBIL-11CbW

¹¹ Reputation Management. (2000, August 1). Retrieved November 20, 2018, from http://cw.routledge.com/textbooks/doorley/data/Chapter_1_Reputation_Management_2nd_Edition.pdf

	of existing resources to be able to manage effectively.” ¹⁰	financial performance, and social responsibility. ¹²
Portfolio of projects	“A “portfolio of projects” is no different than any investment portfolio, the objective being to minimize the risk and maximize the return. Any organization, be it Owner or Contractor has a portfolio of assets (resources) available to dedicate to projects, with the objective being to develop the best “mix” of projects which will generate the most favorable return on those assets.” ¹³	Just like assets, the different projects within a company must also be managed. In our company, our building project is not the only project being carried out. We have a lot of different projects, in different sectors, different countries, of different size and type of clients. The goal of projects’ portfolio managers is to ensure that the company can leverage its project selection and execution success.

Program ¹⁴	Strategic Program	Set of related projects, combined with the purpose to attain the sponsor’s future state. This program is linked to a specific strategic goal and its early results influence the further decision-making process	Within this company, a specific structure has been developed to oversee the different projects related to this strategy. They have for mission to ensure that all those projects are working toward the final goal of being recognized as a high-sustainable standard company.
	Operational Program	Interdependent constituent projects, aiming to affect sponsor’s day-to-day operations	In the same company, another structure is responsible for overseeing projects that have an impact on the day-to-day operations of the company. For example, a project that aims at implementing a new recycling system within the company’s

¹⁰ Giammalvo, Paul D (2015) Course Materials. Contributed Under [Creative Commons License BY v 4.0](https://creativecommons.org/licenses/by/4.0/). Retrieved on, November 20, 2018, from http://www.planningplanet.com/guild/gpccar/introduction-to-managing-project-controls?fbclid=IwAR1wj7rohXPEStWNIzYMEqFDAdjZn33DdYs6zC_4JjK_D7gaaBIL-11Cbw

¹² ©2003 Value Based Management.net. (n.d.). Summary of the Corporate Reputation Quotient. Abstract. Retrieved November 22, 2018, from http://www.valuebasedmanagement.net/methods_corporate_reputation_quotient.html

¹³ GUILD OF PROJECT CONTROLS COMPENDIUM and REFERENCE (CaR) | Project Controls - planning, scheduling, cost management and forensic analysis (Planning Planet). (n.d.). Portfolios of Projects. Retrieved November 20, 2018, from http://www.planningplanet.com/guild/gpccar/introduction-to-managing-project-controls?fbclid=IwAR1wj7rohXPEStWNIzYMEqFDAdjZn33DdYs6zC_4JjK_D7gaaBIL-11Cbw

¹⁴ Global Alliance for Project Performance Standards (2011) [Program Typology](https://www.planningplanet.com/guild/gpccar/introduction-to-managing-project-controls?fbclid=IwAR1wj7rohXPEStWNIzYMEqFDAdjZn33DdYs6zC_4JjK_D7gaaBIL-11Cbw). Retrieved November 20, 2018, from http://www.planningplanet.com/guild/gpccar/introduction-to-managing-project-controls?fbclid=IwAR1wj7rohXPEStWNIzYMEqFDAdjZn33DdYs6zC_4JjK_D7gaaBIL-11Cbw

			building will affect all employees daily.
	Multi-Project Program	Created interdependence of constituent project in order to receive benefits from the synergy	It can also happen that a company develops a specific structure to oversee several projects that have nothing in common but may benefit from each other. For example, our building construction project can be linked to a project of sustainable furniture development. Both can benefit from sharing knowledge about materials or suppliers.
	Mega-Project	Project with a significantly larger scale than the typical sponsor's projects have.	A company can also have Mega-Project, so big that it becomes a Program itself. For example, a company may want to launch a big project aiming at developing a whole village in a developing country. Many smaller sub-projects are included in this big project, for example, the building of a school and a hospital, the formation of some people, the development of a water cleaning structure, and so on.

FIGURE 1: CONTEXTUALISATION ¹⁵

“The primary purpose of business is to strive for profit within the applicable legal framework.”¹⁶ In this optic, it seems that only the law, and thus, the state, has the power to force companies to move toward a most sustainable way of doing business. Yet, and despite several international efforts and an increasing number of national regulations, the actual legal framework is far away from being effective and law-binding enough to reach a sustainable development.¹⁷ But, the fact is, even if one state is willing to implement sustainable laws – and it is a common fact that this is not often the case, and depends a lot on the stage of development of this state – its law only applies within the range of its jurisdiction. The national laws have no power over the foreign business partners of national companies.⁶ So today, no international law support companies that

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¹⁶Peterkova Mitkidis, K. (2014a). SUSTAINABILITY CLAUSES IN INTERNATIONAL SUPPLY CHAIN CONTRACTS: REGULATION, ENFORCEABILITY AND EFFECTS OF ETHICAL REQUIREMENTS. Retrieved on, October 23, 2018, from https://www.academia.edu/7689470/SUSTAINABILITY_CLAUSES_IN_INTERNATIONAL_SUPPLY_CHAIN_CONTRACTS_REGULATION_ENFORCE

¹⁷CISDL. (2005). What is Sustainable Development Law? Retrieved November 2, 2018, from <http://cisdl.org/public/docs/What%20is%20Sustainable%20Development.pdf>

are willing to play by the rules of a sustainable development. Today, companies cannot rely on any law to help them ensure that their business partners will not tarnish their own brand image because they do not respect human rights. In the context of project management contracts, we believe that implementing sustainable clauses could be a solution. This paper aims at evaluating if the solution is viable, effective and to what extent.

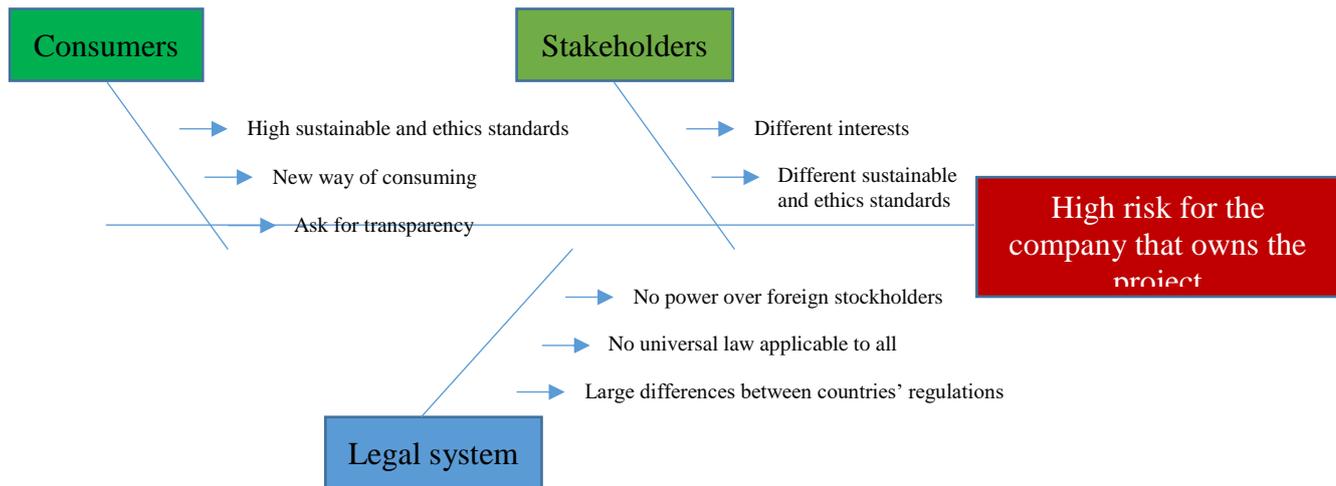


FIGURE 2: WHY DO COMPANIES NEED SUSTAINABLE CLAUSES IN PROJECT MANAGEMENT CONTRACT: ROOT CAUSE ANALYSIS¹⁸

By the end of this paper, we will be able to evaluate the effectiveness of sustainable clauses in project management contract. We would know in which case it is useful to implement them and how to make them powerful. In other words, we will be in the position to offer a solution to companies that are willing to protect their reputation, brand image, and benefits when contracting with foreigners.

METHODOLOGY

Step 1:

As the states and the current legal regulations do not manage to properly support companies desiring to follow high sustainable standards, those companies should try and find new solutions. A key aspect of their risk management strategy is indeed to find ways to ensure that all the

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stakeholders participating in their projects understand and respect their own standards. Failure to do so may result in dramatic outcomes, such as¹⁹:

- Legal consequences
- Tarnished reputation
- Higher costs
- Weaker financial position

To avoid those outcomes, the company leading the project should be completely able to manage corruption, health, and safety, environmental impact, working conditions, and trade compliance issues. Companies should be able to work toward the realization of the 8 Millennium Development Goals set by the United Nations in 2000²⁰:

Yet, there are several reasons why they fail to do so, namely:

- Failure to detect those issues soon enough
- Failure to find appropriate solutions to solve those issues
- Failure to implement the solutions
- **Failure to prevent those issues from happening**

In this paper, we will focus on the last reason and try to find solutions to prevent those issues from happening.

Step 2:

Several very different solutions exist and can be implemented by companies owning a project to ensure that all stakeholder understand and respect the same sustainable standards.

1. **Sustainable contracts:** This concept, developed by the Sherpa association, aims specifically at developing a “specific and original juridical tool” that would turn public interests into international contractual obligations.²¹ The goal here is to provide a full contractual tool, facilitating companies’ decisions making while providing interpretation standards to judges and arbitrators. Yet, “the implementation of such a tool requires the emergence of an international juridical doctrine able to draw a coherent synthesis from disparate norms”.

¹⁹ Sandvik GROUP. (n.d.). Sustainability risks. Retrieved November 8, 2018, from <https://www.home.sandvik/en/sustainable-business-reports/sustainable-business-report/sandvik-and-sustainable-business/risk-management-process/sustainability-risks/>

²⁰ United Nations Millennium Development Goals. (n.d.). Retrieved November 18, 2018, from <http://www.un.org/millenniumgoals/>

²¹ Queinnec, Y. (2010, January). Sustainable Contracts - Concept's outlines and exploration tracks. Retrieved November 17, 2018, from <https://www.business-humanrights.org/sites/default/files/reports-and-materials/Sherpa-on-sustainable-contracts-Jan-2010.pdf>

2. **Sustainable clauses:** They are “provisions in business contracts that cover social and environmental issues which are not directly connected to the subject matter of the specific contract.”⁶ An example of sustainable clause may be to avoid child labor or minimize CO2 emissions. Thus, they do not focus on the product delivered but rather on how it will be delivered. Usually, sustainable clauses are redacted within either quality or performance quality prescription recommendations.²²
3. **Monitoring organization/Audit:** The idea here is to give the responsibility to monitor ethical and thus, sustainable behaviors of contractual parties, to an external and unbiased organization or department. Those auditors would be in charge to ensure that all contractual parties respect their engagement.²³
4. **Code of conducts/Ethic charter:** Code of conducts are used since the antiquity to guide people's behavior. The Ten Commandments or the Hippocratic Oath are well-known examples. They are mainly used to provide a clear and universal understanding of what is good and what is bad. “When everyone clearly knows the ethical standards of an organization they are more likely to recognize wrongdoing; and do something about it.”²⁴ Even if they are not clearly stating any sanctions for bad behavior, they act as a disruptive element. In a contractual context, a code of conduct can be agreed between all parties in order to ensure a certain behavior.
5. **Prevention/Persuasion:** Today, more and more theories support that companies “need to be persuaded that sustainability is not only worthwhile but necessary”.²⁵ Indeed, more and more specialists believe that including sustainability in one company's strategy triggers several long-term advantages. In Harvard Business Review, we can read that: “In the short term, ethical behavior may prove costly to a company's bottom line. But according to the advocates of corporate social responsibility, ultimately the market will

²² Ofori, G., & Chan, P. (n.d.). Procurement Methods And Contractual Provisions For Sustainability In Construction. Retrieved November 17, 2018, from <https://www.irbnet.de/daten/iconda/CIB8757.pdf>

²³ Oster, K. (2013, January 14). *Audit Procedures for Ethical Behavior*, Chron Retrieved from <https://smallbusiness.chron.com/audit-procedures-ethical-behavior-60555.html>

²⁴ Gilman, S. (2005, March). Ethics code and code of conduct as tools for Promoting an Ethical and Professional Public Service. Retrieved from <https://www.oecd.org/mena/governance/35521418.pdf>

²⁵ Hibberd, P. (2015, July). Sustainability - The role of Construction Contracts. Retrieved November 17, 2018, from https://corporate.jctltd.co.uk/wp-content/uploads/2016/02/Sustainability-the-role-of-Construction-Contracts-P_Hibberd-2015.pdf

reward such behavior.”²⁶ Companies, and more broadly, all stakeholders, must thus be convinced that adopting sustainable standards will benefit them.

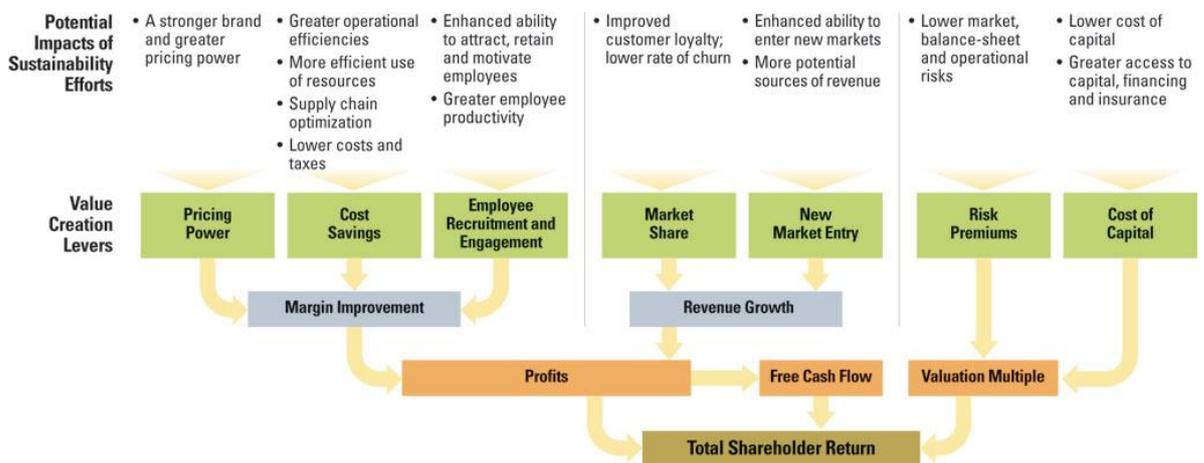


FIGURE 3: HOW SUSTAINABILITY AFFECT VALUE CREATION ²⁷

Now that we have listed all the possible solutions, we must find the adequate criteria to evaluate those solutions. The goal here is to find all the attributes necessary to rank all the solutions and asses which one is the best.

- **Effectiveness:** The most obvious criteria is, of course, the effectiveness of the solution. It aims at evaluating whether the solution implemented really helps companies to ensure that all stakeholders understand and respect their sustainable standards. It answers the question “how well does it meet my need?”.²⁸
- **Complexity:** The level of complexity of the solution must also be assessed. The more “varied interrelated parts” there is, the more complex the solution becomes.²⁹ The complexity of the solution can be assessed thanks to a tool, called the Crawford-Ishikura Factor Table for Evaluating Roles or CIFER, developed by the Global Alliance for the Project Professions.

²⁶ Andrew Stark (1993- May-June), *What's the Matter with Business Ethics*, Harvard Business Review, Retrieved from : <https://hbr.org/1993/05/whats-the-matter-with-business-ethics>

²⁷ Massachusetts Institute of Technology. (2009, October 1). *The Business of Sustainability: What It Means to Managers Now* | MIT Sloan Management Review. Retrieved November 17, 2018, from <https://sloanreview.mit.edu/article/the-business-of-sustainability-what-it-means-to-managers-now/>

²⁸Smith, N. (n.d.). *A Framework to Model and Measure System Effectiveness*. Retrieved November 17, 2018, from http://www.dodccrp.org/events/11th_ICCRTS/html/presentations/054.pdf

²⁹ Baccarini, D. (1996). *The concept of project complexity a review*. Retrieved November 17, 2018, from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.598.6190&rep=rep1&type=pdf>

Project Management Complexity Factor	Descriptor and Points			
1. Stability of the overall project context	Very high (1)	High (2)	Moderate (3)	Low or very low (4)
2. Number of distinct disciplines, methods, or approaches involved in performing the project	Low or very low (1)	Moderate (2)	High (3)	Very high (4)
3. Magnitude of legal, social, or environmental implications from performing the project	Low or very low (1)	Moderate (2)	High (3)	Very high (4)
4. Overall expected financial impact (positive or negative) on the project's stakeholders	Low or very low (1)	Moderate (2)	High (3)	Very high (4)
5. Strategic importance of the project to the organisation or organisations involved	Very low (1)	Low (2)	Moderate (3)	High or very high (4)
6. Stakeholder cohesion regarding the characteristics of the product of the project	High or very high (1)	Moderate (2)	Low (3)	Very low (4)
7. Number and variety of interfaces between the project and other organisational entities	Very low (1)	Low (2)	Moderate (3)	High or very high (4)

FIGURE 4: CRAWFORD-ISHIKURA FACTOR TABLE FOR EVALUATING ROLES³⁰

- **Cost:** The cost of the implementation of the solution must also be considered. Cost, along with time and quality, is part of the so-called Iron Triangle used since decades to assess projects' success.³¹ Managing cost is closely linked to managing benefits. Incidentally, the cost-benefit analysis is probably the most comprehensive method of economic evaluation available.³²
- **Impact on the relationship between contractors:** This criterion has for objective to evaluate the impact of the solution on the relationship between contractors. It is well known that a "good relationships with subcontractors are positively and advantageously associated with main contractor competitiveness".³³ Yet, it is also very easy for a

³⁰ Global Alliance for the Project Professions. (n.d.). Project Complexity Tool- GAPPS' CIFTER: GAPPS. Retrieved November 19, 2018, from <https://globalpmstandards.org/tools/complexity-rating/project-complexity/>

³¹ Atkinson, R. (1999, December). Project management: cost, time and quality, two best guesses and a phenomenon, its time to accept other success criteria. Retrieved November 17, 2018, from <https://www.sciencedirect.com/science/article/pii/S0263786398000696>

³² Planning Planet (PP Admin). (2016, January 5). GUILD OF PROJECT CONTROLS COMPENDIUM and REFERENCE (CaR) | Project Controls - planning, scheduling, cost management and forensic analysis (Planning Planet). Retrieved November 17, 2018, from <http://www.planningplanet.com/guild/gpccar/introduction-to-managing-cost-estimating-budgeting>

³³Tan, Y., Xue, B., & Cheung, Y. T. (2017, February). Relationships between Main Contractors and Subcontractors and Their Impacts on Main Contractor Competitiveness: An Empirical Study in Hong Kong. Retrieved November 17, 2018, from https://www.researchgate.net/publication/314111794_Relationships_between_Main_Contractors_and_Subcontractors_and_Their_Impacts_on_Main_Contractor_Competitiveness_An_Empirical_Study_in_Hong_Kong

relationship to go south and lose any form of trust, which has disastrous consequences on the project's success.

- **Impact on the external image of the company:** It is also important to question the external image that the company sends back when adoption the chosen solution. As the Forbes Agency Council says, "Brand Image matters more than you think"³⁴ especially now that customers are paying more and more attention not only to what they buy, but to whom they buy it.
- **Feasibility:** The degree to which it would be possible and convenient to apply the chosen solution is also one of the most important criteria. Some solutions may need specific upstream requirements to be even practicable.³⁵ The question here is are we able to meet those requirements.
- **Sustainability:** It may also be important to assess how the solution is sustainable. One way to do so is to see to which extent the chosen solution responds to the 17 Sustainable Development Goals set by the United Nations in 2015.

³⁴ Timothy, S. (2017, September 13). Why Brand Image Matters More Than You Think. Retrieved November 19, 2018, from <https://www.forbes.com/sites/forbesagencycouncil/2016/10/31/why-brand-image-matters-more-than-you-think/>

³⁵ Queinnec, Y. (2010, January). Sustainable Contracts - Concept's outlines and exploration tracks. Retrieved November 17, 2018, from <https://www.business-humanrights.org/sites/default/files/reports-and-materials/Sherpa-on-sustainable-contracts-Jan-2010.pdf>



FIGURE 5: SUSTAINABLE DEVELOPMENT GOALS ³⁶

- **Flexibility:** The flexibility of the solutions is also important. It questions its ability to adapt to different situations. “Flexibility is becoming more important for organizations”.³⁷ Companies must be resilient and able to respond efficiently to inherent environmental uncertainties.
- **Time duration:** Last but not least, it is important to estimate the time it will take to implement the solution. Once again, the reason why evaluating time is important is obvious. As for cost, time management is a key aspect of project management and has a huge impact on effectiveness and productivity.³⁸ As the implemented solution becomes an asset, it is important to evaluate the duration of its lifespan.

³⁶ United Nations. (n.d.). Sustainable Development Goals ∴ Sustainable Development Knowledge Platform. Retrieved November 19, 2018, from <https://sustainabledevelopment.un.org/?menu=1300>

³⁷ Goldena, W., & Powellb, P. (2000, August 1). Towards a definition of flexibility: in search of the Holy Grail? Retrieved November 20, 2018, from <https://www.sciencedirect.com/science/article/pii/S0305048399000572>

³⁸ Tran, L. (2015, April 10). The Importance of Time Management (Aspects of Project Management Part 1) - InLoox. Retrieved November 17, 2018, from <https://www.inloox.com/company/blog/articles/the-importance-of-time-management-aspects-of-project-management-part-1/>

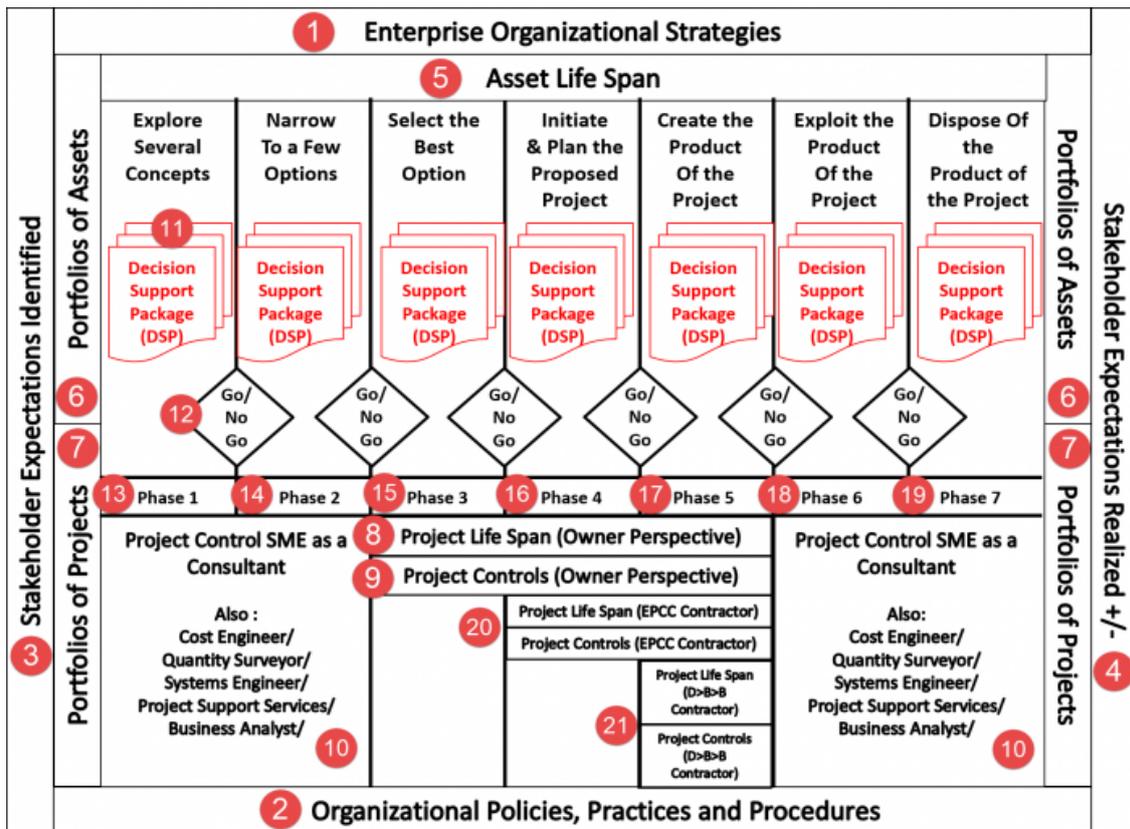


FIGURE 6: THE 10,000 METRE VIEW OF ASSET, PROJECT AND PROJECT CONTROL LIFE SPANS³⁹

Step 3:

Now that we have listed what we consider to be our 5 main attributes, we have to rank them from the most important to the least important. In order to do so, we are going to use a **non-compensatory model** of the Multi-Attribute Decision Making (MADM) method.

First, we will use what is call the **disjunctive reasoning method**, which “takes a look at all the attributes and conduct a Pair-Wise comparison to determine which attributes are the most important by asking “which is more important?” and give a score of 1 to the winning option and a score of 0 to the losing option”.⁴⁰

³⁹ Giammalvo, Paul D (2015) Course Materials. Contributed Under [Creative Commons License BY v 4.0](https://creativecommons.org/licenses/by/4.0/). Retrieved November 17, 2018, from <http://www.planningplanet.com/guild/gpccar/introduction-to-managing-project-controls>

⁴⁰Sullivan, Wickes & Kroelling (2014) [Engineering Economics](https://creativecommons.org/licenses/by/4.0/) 15th Edition Using the approach. Retrieved from: <http://www.planningplanet.com/guild/gpccar/managing-change-the-owners-perspective>

	Effectiveness	Complexity	Cost	Impact on the relationship	Impact on the external image	Feasibility	Sustainability	Flexibility	Time	Ordinal Ranking
Effectiveness	1	1	1	1	1	0	1	1	1	7
Complexity	0	1	0	1	1	0	1	1	1	5
Cost	0	1	1	1	1	0	1	1	1	6
Impact on the relationship	0	0	0	1	1	0	1	1	1	4
Impact on the external image	0	0	0	0	1	0	1	1	1	3
Feasibility	1	1	1	1	1	1	1	1	1	8
Sustainability	0	0	0	0	0	0	1	0	0	0
Flexibility	0	0	0	0	0	0	1	1	1	2
Time	0	0	0	0	0	0	1	0	1	1

FIGURE 7: DISJUNCTIVE REASONING METHOD ⁴¹

According to this method, we can now rank our attributes from the most important to the least important, namely:

1. Feasibility
2. Effectiveness
3. Cost
4. Complexity
5. Impact on the relationship between contractors
6. Impact on the external image of the company
7. Flexibility
8. Time
9. Sustainability

⁴¹ By Author

Step 4:

Still using the **non-compensatory model** of the **Multi-Attribute Decision Making (MADM) method**, we will now look at another method, called the **dominance technique**²². The goal here is to assess the impact of each possible solutions listed on step 1, on the attributes. We will use colors to reflect those impacts:

Green = good

Yellow = medium

Red = bad

	Sustainable Contract	Sustainable Clauses	Monitoring Organization/Audit	Code of conducts/ Ethic charter	Persuasion/ Prevention
Feasibility	Low	High	Medium	High	Medium
Effectiveness	High	High	Medium	Low	Medium
Cost	Low	Low	High	Low	Medium
Complexity	High	Medium	Low	Medium	Medium
Impact on the relationship	Negative	Negative	Negative	Medium	Medium
Impact on the external image	Good	Good	Medium	Good	Good
Flexibility	Medium	High	Low	Medium	High
Time	Medium	Medium	Medium	Good	Medium
Sustainability	High	High	Medium	Medium	Medium

FIGURE 8: DOMINANCE TECHNIQUE ⁴²

We are now going to weight each attribute:

	Sustainable Contract	Sustainable Clauses	Monitoring Organization/Audit	Code of conducts/ Ethic charter	Persuasion/ Prevention
Feasibility	0	1	0,7	1	0,7
Effectiveness	1	1	0,4	0	0,6
Cost	1	1	0	1	0,6
Complexity	0	0,8	1	0,7	0,5

⁴² By Author

Impact on the relationship	0	0	0	0,5	0,4
Impact on the external image	1	1	0,6	1	1
Flexibility	0,5	1	0	0,5	1
Time	0,4	0,5	0,5	1	0,7
Sustainability	1	1	0,5	0,6	0,7
TOTAL	4,9	7,3	3,7	6,3	6,2

FIGURE 9: DOMINANCE TECHNIQUE: RANKING ⁴³

Thanks to this second technique, we are now able to determine the minimum acceptable level an alternative must reach to keep being analyzed. We will set this **minimum to 5**, so **both sustainable contracts and monitoring organization/audit alternatives can be eliminated**. Both are really compelling solutions that may have a negative impact on the relationship of the company with its contractors. Concerning sustainable contracts, the solution is still too difficult to implement, as it requires an international jurisdiction. As for the monitoring organization, it simply costs too much and is not flexible enough, especially compared to other solutions.

Among the 3 last solutions: sustainable clauses, code of conducts/ethic charter and persuasion/prevention the first one seems to be the best, for now.

Step 5:

We are now going to summarize the decision-making process of the study we led in step three and four by using an **additive weighting technique**⁴⁴ allowing us to rank the alternatives by comparing the weight of the attributes with the weight of the alternative. Since we decided to eliminate two alternatives: sustainable contract and monitoring organization, we are now focusing on the four remaining alternatives.

	Step 1	Step 2	Sustainable Clauses		Code of conducts/ Ethic charter		Persuasion	
	Relative Ranking	Normalized weight (A)	(B)	(A)*(B)	(C)	(A)*(C)	(D)	(A)*(D)
Feasibility	9	0,2	1	0,20	1	0,2	0,7	0,14
Effectiveness	8	0,18	1	0,18	0	0,00	0,6	0,11

⁴³ By Author

⁴⁴ Sullivan, Wickes & Kroelling (2014) [Engineering Economics](http://www.planningplanet.com/guild/gpccar/managing-change-the-owners-perspective) 15th. Adaptation from planning planet. Retrieved from: <http://www.planningplanet.com/guild/gpccar/managing-change-the-owners-perspective>

Cost	7	0,16	1	0,16	1	0,16	0,6	0,09
Complexity	6	0,13	0,8	0,11	0,7	0,09	0,5	0,07
Impact on the relationship	5	0,11	0	0,00	0,5	0,06	0,4	0,04
Impact on the external image	4	0,09	1	0,09	1	0,09	1	0,09
Flexibility	3	0,07	1	0,07	0,5	0,03	1	0,07
Time	2	0,04	0,5	0,02	1	0,04	0,7	0,03
Sustainability	1	0,02	1	0,022	0,6	0,013	0,7	0,016
SUM	45	1,00	SUM	0,84	SUM	0,68	SUM	0,65

FIGURE 10: ADDITIVE WEIGHTING TECHNIQUE⁴⁵

This method confirms what we were supposing in step 4. The best alternative for a company to ensure that all stakeholder understand and respect the same sustainable standards is indeed to implement sustainable clauses in project management contract. This alternative differentiate itself from the two others that, once again, have quite similar scores.

Step 6:

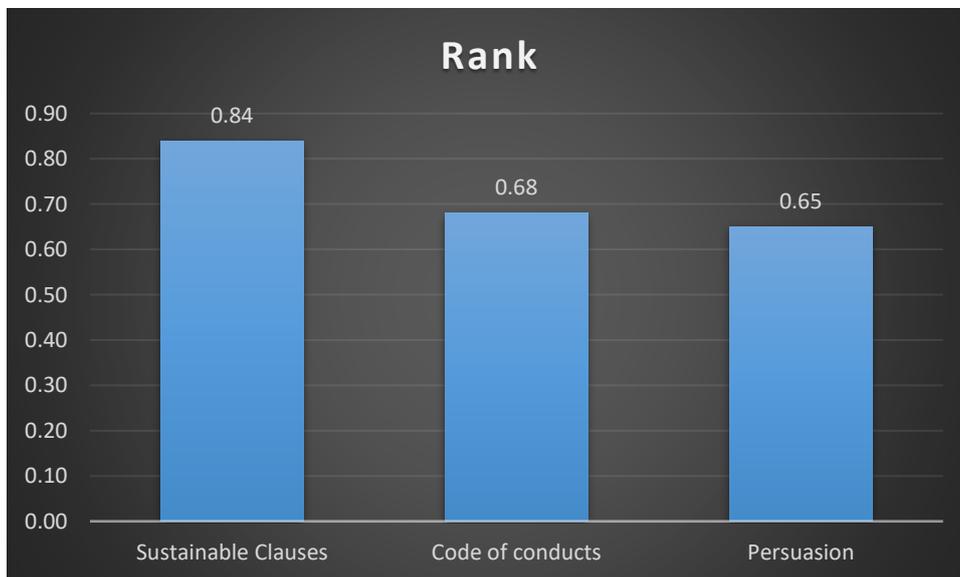


FIGURE 10: ALTERNATIVES RANK GRAPH⁴⁶

⁴⁵ By Author

⁴⁶ By Author

This graph shows that the best alternative is clearly **sustainable clauses**. This alternative is a bit more formal and law-binding than the 2nd et 3rd best alternatives, respectively, **code of conducts** and **persuasion**.

The **sustainable clauses** alternative is a better choice by 197,3% compared to **monitoring organization** (7,3/3,7*100) and by 148,98% compared to **sustainable contracts** (7,3/4,9*100).

“SCCs are provisions in business contracts that cover social and environmental issues which are not directly connected to the subject matter of the specific contract.” They prescribe specific behavior regarding topics such as human rights, labor conditions, environmental protection, and anti-bribery provisions. Even if those clauses may not always be law-binding, the reputation consequences for breaking them is bad enough to force companies to respect those clauses.⁴⁷ Indeed, the 2015 Global Risk Management Survey showed that companies considered the reputational risk as the most significant risk to the enterprise.⁴⁸ A bad brand reputation could have disastrous consequences such as market-share lost, failure to attract and retain talents, economic slowdown and even legal consequences.⁴⁹ Sustainable clauses are thus a good way for a company to ensure that all stakeholders implicated in a project will follow its sustainable standards.

Step 7:

After this sixth step, we can say that the best alternative is indeed sustainable clauses. We will now try and find out how a company can measure the impact of using this solution.

At the end of *step 1*, we explained that our primary goal was to make sure that all stakeholders would respect the main company’s sustainable standards. So, obviously, the first indicator of the efficiency of sustainable clauses is **the number of time stakeholders fails to respect the company's sustainable standard**.

Yet, we will push the analyze a bit further and we will assume that one stakeholder did not respect the company’s sustainable standards and assess the consequences on the company.

⁴⁷ Peterkova Mitkidis, K. (2014a). SUSTAINABILITY CLAUSES IN INTERNATIONAL SUPPLY CHAIN CONTRACTS: REGULATION, ENFORCEABILITY AND EFFECTS OF ETHICAL REQUIREMENTS. Retrieved on, October 23, 2018, from <https://www.academia.edu/7689470/SUSTAINABILITY CLAUSES IN INTERNATIONAL SUPPLY CHAIN CONTRACTS REGULATION ENFORCE>

⁴⁸ Ching, W. (2015, September 8). Defining Reputational Risk | Risk Management Monitor. Retrieved November 22, 2018, from <https://www.riskmanagementmonitor.com/defining-reputational-risk/>

⁴⁹ Eccles, R., Newquist, S., & Schatz, R. (2014a, August 1). Reputation and Its Risks. Retrieved November 22, 2018, from <https://hbr.org/2007/02/reputation-and-its-risks>

To do so, we will use a Pareto analysis. “A Pareto analysis helps prioritize decisions so leaders know which ones will have the greatest influence on their overall goals and which ones will have the least amount of impact.”⁵⁰

First, we will analyze what the consequences are for the company if it did not use sustainable clauses.

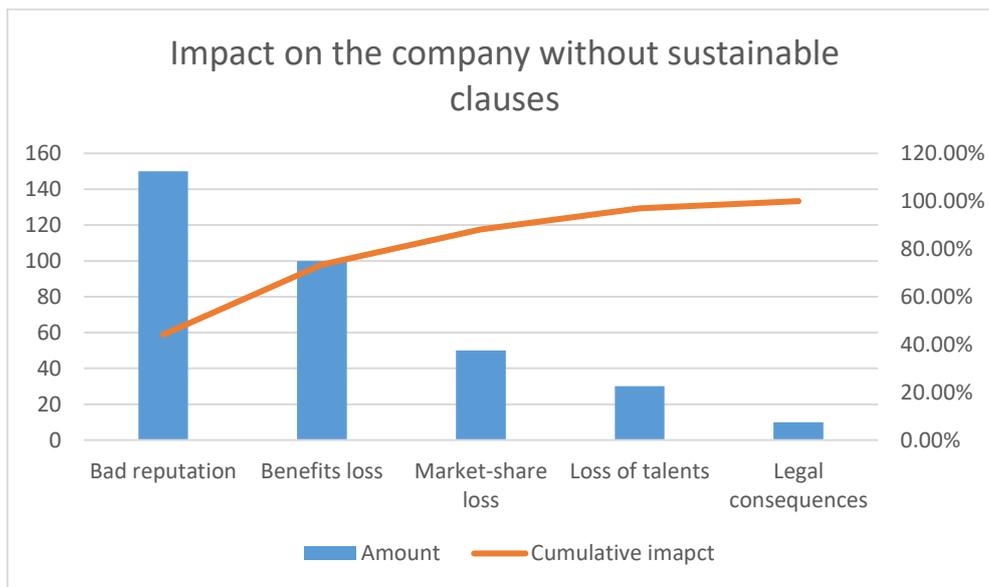


FIGURE 11: IMPACT ON THE COMPANY – WITHOUT SUSTAINABLE CLAUSES ⁵¹

This graph shows how much the impact on the company’s reputation is important when it fails to force its stakeholders to respects its sustainable standards.

Now, how is it different when using sustainable clauses?

⁵⁰ Chad Brooks (2014, March). What Is a Pareto Analysis? Retrieved from <https://www.businessnewsdaily.com/6154-Pareto-analysis.html>

⁵¹ By Author

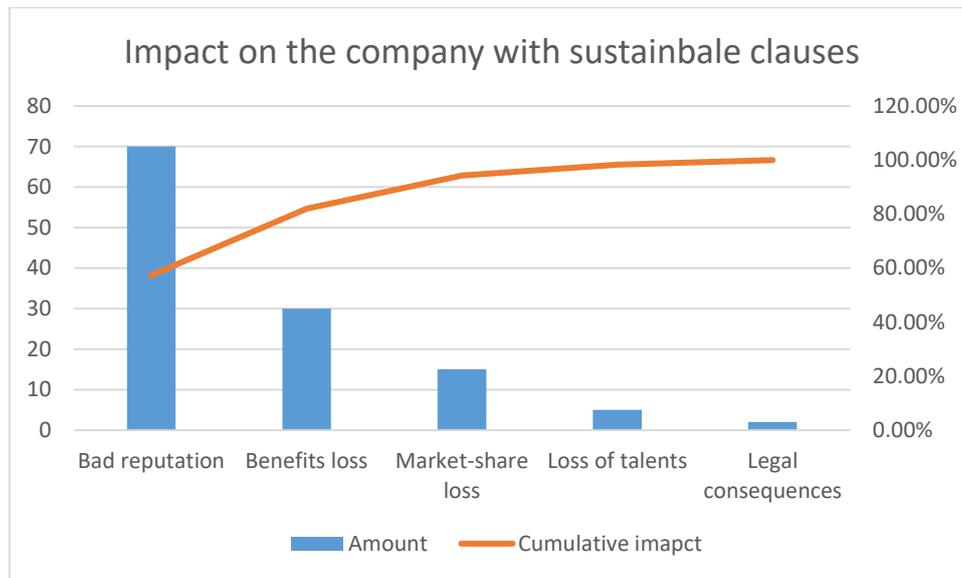


FIGURE 12: IMPACT ON THE COMPANY – WITHOUT SUSTAINABLE CLAUSES⁵²

We can clearly see that with sustainable clauses, the company reduces the possible negative impact that can have a non-sustainable behavior from one of its project's stakeholder. Sustainable clauses enable the company to reduce the impact on its reputation, on its benefits, on its market-share, on its ability to retain talents and on the possible legal consequences.

CONCLUSION

This paper initially aimed at finding solutions for companies to make sure that their business partners respect their clients' always higher sustainability standards. As the usual legal regulation are not law-binding enough, companies have to take the matter on their own hands. Through this paper, we have highlighted the different alternatives as being: sustainable contracts, sustainable clauses, monitoring organization/audit, code of conduct/ethic charter, persuasion/prevention. We have explained each alternative and assessed the impact of each regarding our specific topic. Through the studies led we have eliminated two options: sustainable contracts and monitoring organization/audit, respectively being too complicated to implement and too expensive.

At the end of our study, we have shown how good a solution sustainable clauses is. Of course, using prevention and code of conducts can be complementary, but on its own, sustainable clauses enable the companies to clearly reduce the negative impact of a susceptible lack of sustainability of its partners. As explained before, the reputation of every signatory is in stake

⁵² By Author

when sustainable clauses are included in the project management contract, which is a very good incentive for not breaking those clauses.

Today, the trend is clearly to an empowerment of private parties. Both companies and customers have a continuous greater impact and influence. So, in this optic, one may ask what the future holds. Will international law emerge and formal regulation prevail? Or will the actual trend of informality develop itself, even more, empowering customers to be both judge and jury and finally becoming informal regulators? This paper seems to go with the second option, but only time will show us the true answer.

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