



© 2018 by the author(s). This is an Open Access article distributed under the terms of the Creative Commons Attribution 4.0 International (CC BY 4.0) License (<https://creativecommons.org/licenses/by/4.0/>), allowing third parties to copy and redistribute the material in any medium or format and to remix, transform, and build upon the material for any purpose, even commercially, provided the original work is properly cited and states its license.

Citation: Ingason, H. T. and Jonasson, H. I. 2018. Project ethics: The Critical Path to Project Success - applying an ethical risk assessment tool to a large infrastructure project. *International Project Management Association Research Conference 2017*, UTS ePRESS, Sydney: NSW, pp. 1-12. <https://doi.org/10.5130/pmrp.ipmarc2017.5639>

Published by UTS ePRESS | <http://pmrp.epress.lib.uts.edu.au>

CONFERENCE PAPER

Project ethics: The Critical Path to Project Success - applying an ethical risk assessment tool to a large infrastructure project

Helgi Thor Ingason^{1*}, Haukur Ingi Jonasson¹

¹Reykjavik University, Menntavegur 1, 101 Reykjavik, Iceland.

*Corresponding author: Helgi Thor Ingason. helgithor@ru.is

Name: International Project Management Association Research Conference 2017

Location: Incheon, Republic of Korea

Dates: 2nd to 4th November 2017

Host Organisation: IPMA-Korea

DOI: <https://doi.org/10.5130/pmrp.ipmarc2017.5639>

Published: 08/06/2018

Abstract

A project ethics tool was applied to review a major infrastructure project in Iceland. The tool is based on the four principles of “virtue” based ethics, “utility” based ethics, “duty” based ethics and “rights” based ethics. The tool uses perspectives of *five key stakeholders*: “the project leader, the project team, the project organization, the society in which the project is based, and future generations that the project might influence”. New ethical aspects of the project were discovered, which has led to a more ethically mature consideration of projects within the company. An ethical risk assessment is a valuable add-on to the more conventional engineering risk assessments usually performed in projects of this sort. Furthermore, the tool helps to expand the horizon when defining success by looking at projects from the perspectives of distinct clusters of stakeholders, whom we can better understand by applying the four ethical theories.

Keywords

Project management, ethics, risk

DECLARATION OF CONFLICTING INTEREST The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article. **FUNDING** The author(s) received no financial support for the research, authorship, and/or publication of this article.

Introduction

Ideas of project success have evolved, but the standard model applied in basic project management teaching is still the iron triangle, and the critical path in projects has to do with tasks and duration. However, it is well understood that project success is, in the end, measured against a variety of criteria that have to do with the project outcome, the interest of the permanent organization involved, the perceptions of the project team and different stakeholders, to give a few examples (Judgev & Müller 2005; Shenhar et al. 2001; Cooke-Davies 2002; Pinto & Prescott 1990). A growing awareness about sustainability and social responsibility has called for a rethinking of the traditional project success concept (Silvius et al. 2012) and impact on the environment is included as an evaluation criterion in the International Project Management Association (IPMA) Project Excellence Model (www.ipma.world/awards/project-excellence/the-pe-model/, assessed on 5 February 2018). The ethical dimension of project management has been discussed in academic journals (Loo 2002; Helgadóttir 2008). Professional project management associations have developed Codes of Ethical and Professional Conduct and made them available on their websites. It is understood that we can talk about a critical project path without dwelling too much on the tasks and their duration. We define project ethics as “the moral deliberation and the self-actualization processes that professional project management should require” (Jonasson & Ingason 2013).

The “modern project manager operates in a complex” and often turbulent environment, s/he works with different stakeholders and “is often faced with difficult decisions” (Ingason 2015) and s/he deals with all kinds of risks that change shape through the project life cycle. An important part of these challenges of project managers are the numerous commitments to project owners and different interested parties, for example, “to avoid real or perceived conflicts of interests and to respect confidentiality”. In addition, project managers have different “commitments to co-workers and employees, to ensure the highest level of health and safety measures and provide a healthy and safe working environment” (Ingason 2015). Last but not least, “the responsibility of project managers towards wider society, for instance not to participate in undermining or harming communities, societies, and economies” (Ingason 2015).

The so-called project ethics tool (PET) (originally named project ethical risk assessment tool (PERIA) in Jonasson & Ingason 2013) is based on the idea that project risk “can be identified through ethical deliberation, and the mirroring of project management objectives and processes in moral theory”. It presents five different layers of risk and key ethical decision making agents in project management, i.e., the project leader, the project team, the project organization, the society and future generations. The model challenges the project manager to ask critical questions to identify potential risks in projects. If this assessment is done in a structured way, it can provide the project manager with valuable insights into some of the fundamental preconditions for the project and thereby increase the likelihood of project success, by reducing project risk.

This paper shows how the PET was applied in the context of a large infrastructure project—the laying of a new electrical line—in Iceland; a controversial project that had been faced with strong opposition within the local community. The controversy stemmed from increased public awareness regarding environmental stakes, local interests and foreseen environmental interest of future generations. The owner of this project under scrutiny is a public utility company. The project was still in the concept and planning phases, i.e., no actual construction took place in this project. In fact, this project never entered the construction phase. The application of the PET matrix helped to shed light on various aspects of the

project, previously not identified. The advantages and disadvantages of the model and its applications are discussed, as well as how the model could be simplified and applied in a more effective way.

Theoretical review

A distinction is commonly made between “project success and project management success” (De Wit 1988; Baccarini 1999; and Munns & Bjeirmi 1996). ‘Project success’ refers to the *outcome* of the project, while ‘project management success’ refers to the *project process* as such, and projects are constrained both by project outcome and project processes (Bryde 2005). It has been argued that improved “scheduling techniques” will lead to increased project success, and if a project exceeds its budget or due date, or the outcome does not satisfy the performance criteria, the project is commonly “assumed to be a failure” (Belassi & Tukel 1996). More recent papers have focused on new thinking around measuring success on a business and strategic level as well, and a good example is a paper by Shenhar et al. on long range planning from 2001.

In their book *Project Ethics*, Haukur Ingi Jonasson and Helgi Thor Ingason (2013) ask from an ethical perspective what would constitute a virtuous project leader, project team or project organization. They wonder if the needs of a few are sometimes allowed to override the needs of the many in projects, and if sometimes actions in projects are taken according to a vague, biased or overly rigorous sense of duty. Last but not least they ask about the situation when a “project violates the rights of stakeholders, interested parties” or society. The answers to these questions, according to Jonasson and Ingason, also determine project success and project management success. The book outlines *four ethical principles*, the normative or prescriptive principles of:

- virtue based ethics, considering how the outcome of the action taken will reflect on the character of the doer, see for instance Aristotle [1999],
- utility based ethics, considering if the action will create more wellbeing for the many, see for instance Mill (1863),
- duty based ethics, considering how the action will stand up to a universal moral principle, see for instance Kant 1785 [1953])
- rights based ethics (considering the social contract and the rights of others, see for instance Locke (1689).

Using the term agent as a synonym for the project manager, team, owner, and sponsor, the four ethical principles can be put in simple context with project management as follows:

- The agents should behave in such a way that their actions can become a moral standard for others in the same position.
- The agents should act in such a way that indicates the utmost respect for the rights of all interested parties.
- The agents should measure the project against their moral standard and act in such a way that they can be content.
- The agents should take into account the increased wellbeing of the many in their project, and act accordingly.

The Project Management Institute (PMI) has defined its Code of Ethics and Professional Conduct (www.pmi.org/~media/PDF/Ethics/ap_pmicodeofethics.ashx, accessed 10 September 2013). It was developed by PMI volunteers, and all PMI members and credential holders are to sign it. Its purpose is to guide project management practitioners towards what

is right and honourable. Its chapters are on responsibility, respect, fairness, and honesty and they describe the expectations that PMI members have of themselves in the global project management community.

An ethical tool, the 'PMI Ethical Decision-Making Framework' can be found on the PMI webpage (www.pmi.org/About-Us/ethics/Ethics-Resources.aspx, accessed 10 September 2013). This is a five-step process that the user can apply when faced with an ethical dilemma: (1) Assessment; (2) Alternatives; (3) Analysis; (4) Application of ethical principles and (5) Action. In step (4) the user applies ethical principles by asking three questions: (i) Would my choice of action lead to the greatest good? (ii) Would the choice treat others the same way the user would like to be treated? (iii) Would it be fair and beneficial to all concerned?

On a similar note, the IPMA addresses ethics in several contexts in the most recent version of its competence baseline (IPMA 2015a). IPMA has issued the IPMA Code of Ethics and Professional Conduct (IPMA 2015b). This is the outcome of an extensive research project by the authors of this article, concluded in 2015 (Ingason 2015).

The British Association for Project Management (APM) has a code of professional conduct where the responsibilities of members are defined under the headings 'honesty', 'respect', 'the duty to act in the best interest of employers and clients', 'keeping professional skills up to date', and 'claiming expertise only in appropriate areas'. Finally, responsibility to the profession and the association is addressed (see www.apm.org.uk/about-us/how-apm-is-run/apm-code-of-professional-conduct/, accessed 20 July 2017).

An initiative by Alberta Innovates Health Solutions (AIHS) is also worth mentioning. AIHS supports researchers and collaborative research activities focusing on improving health, wellness and health services. AIHS has developed *A Project Ethics Community Consensus Initiative* (ARECCI), an ethics decision support tool for projects (<http://www.aihealthsolutions.ca/arecci/areccitools.php>, accessed 10 September 2013). The tool focuses on research, and quality improvement projects in the health sector. Its ethical guidelines enable users to identify and integrate ethical considerations in their projects; to determine the level of risk for project participants; to appropriate ethical review requirements and to use an online 'ethics screening tool.' In the ethical guidelines, the user is urged to justify how the knowledge gained from the project will be useful, to state how the user will ensure that the participant selection process is fair and appropriate, and to confirm if informed consent is needed in the project.

The Markkula Center for Applied Ethics at Santa Clara University has published general guidelines for making ethical decisions (www.scu.edu/ethics/practicing/decision/making.pdf, accessed 10 September 2013). The guidelines are a five-step process. In the first step, the user is to recognize ethical issues. Secondly, he is urged to get the relevant facts of the case, identify what is at stake in the outcome and what options for acting are at hand. The third step is to evaluate the alternative actions. This is the critical step, where the user must identify which option will do "the most good and the least harm (utilitarian approach), which option best respects the rights of those who have a stake (rights approach), which option treats people equally or proportionately (justice approach), which option best serves the community (common good approach)" and which option leads the user "to act as the sort of person" he wants to be (virtue approach). The fourth step is to make a decision and test it, and the fifth and final step is to act and reflect on the outcome.

A similar process, 'Five Steps of Principled Reasoning,' has been published by the Josephson Institute of Ethics (www.ethicsscoreboard.com/rb_5step.html, accessed 10 September 2013).

This process consists of the following five steps: clarify, evaluate, decide, implement and finally, monitor and modify. The third step, decide, is where an ethical deliberation takes place. The user makes judgements about the most likely consequences, evaluates alternatives according to his or her personal conscience, prioritises his or her values, determines who will be helped most and harmed the least, considers the worst case scenario, considers whether ethically questionable conduct can be avoided and finally, applies three ethical guidelines: a) Are you treating others as you would want to be treated? b) Would you be comfortable if your reasoning and decision were to be publicised? c) Would you be comfortable if your children were observing you?

Research method

In 2013 the authors of this article came up with the project ethical risk assessment tool (PERIA), that was described in their book *Project Ethics* (Jonasson & Ingason 2013). They later renamed and now call the tool project ethics tool (PET). In the book, four classical ethical principles are presented through a list of critical questions about different aspects of the project/programme under consideration. Navigating through these questions should enable the project “leader—or anyone else interested in the project”—to identify, contemplate and make decisions regarding ethical risks in the project. This boils down to some fundamental ethical principles from the western intellectual history as to identify ethical risks, encourage ethical reflection and to make sound ethical decisions. The PET uses perspectives of *five key stakeholders*: the project leader, the project team, the project organization, the society in which the project is based, and future generations that the project might influence. The *four ethical principles* laid out in the PET questions are the normative or prescriptive principles of virtue based ethics, utility based ethics, duty based ethics and rights based ethics.

More specifically, the PET model applied in this research is shown in Figure 1.

The purpose of the research was to apply the PET analysis to make an ethical risk assessment within a large infrastructure project; an electrical infrastructure and power transmission project in Iceland. The project had been the centre of some public debate, and the project steering committee wanted to assess the project in retrospect and learn from this experience, for the benefit of future projects.

According to PET, the project was viewed from the perspective of five different stakeholders or interested parties; all of which, besides the last one, are also regarded as decision makers:

- The project manager.
- The project team.
- The project organization.
- The society.
- The future experiences that the project affects (not present as a decision-making agent).

The PET analysis took place in two workshops, which the authors of this paper coordinated. Each workshop was a half day session with seven days interval. The reason for breaking the work into two sessions was that due to the intensity of thinking we expected that half a day was a maximum time for effective work with the group, and also that the scope of the discussions called for two such sessions. The research method applied here falls under the category of action research. We are applying a democratic, participatory process, with the objective to develop practical knowledge. The process is designed to facilitate understanding, followed by improvement, and the people affected by the improvement are a part of the

PERIA *		Categories of key agents (agents/stakeholders/interested parties)					
		Individual	Team	Organisation	Society	Future generations	
		Identifies potential risks (including ethical risks) imposed on the project leader.	Identifies potential risks (including ethical risks) imposed on the project team.	Identifies potential risks (including ethical risks) imposed on the project organisation.	Identifies potential risks (including ethical risks) imposed on the society that hosts the project.	Identifies potential risks (including ethical risks) imposed on future generations.	
VIRTUE ETHICS Risk identification based on project outcome for one(self)	Fully informed and with a clear conscience, are you sure that the project outcome will contribute to the long-term well-being of the following key agents?	Yes () No () Justify!	Yes () No () Justify!	Yes () No () Justify!	Yes () No () Justify!	Yes () No () Justify!	
	UTILITY ETHICS Risk identification based on project outcome for many	Fully informed and with a clear conscience, are you sure that the project outcome will contribute to the long-term collective (accumulated) well-being (more satisfaction/less pain) of the many, including, but not limited to, the following agents?	Yes () No () Justify!	Yes () No () Justify!	Yes () No () Justify!	Yes () No () Justify!	Yes () No () Justify!
	DUTY ETHICS Risk identification based on process in terms	Fully informed and with a clear conscience, are you sure that the project process (everything that happens in the project) is managed in such a way that it could define a universal principle with regards to how projects should be conducted by agents in the same role as the following key agents have for the current project?	Yes () No () Justify!	Yes () No () Justify!	Yes () No () Justify!	Yes () No () Justify!	Yes () No () Justify!
RIGHTS ETHICS Risk identification based (equal) process of the many	Fully informed and with a clear conscience, are you sure that the project process (everything that happens within the project) fully values/respects all the essential rights of the following key agents?	Yes () No () Justify!	Yes () No () Justify!	Yes () No () Justify!	Yes () No () Justify!	Yes () No () Justify!	

*PET is the intellectual property of Nordica Consultine Group ehf.

Figure 1 Project ethics tool (PET).

process (Pasian 2015). The PET tool applied in this research is merely a vehicle to facilitate the knowledge sharing and discussion in the group. The concepts included in the PET tool are not common to the participants in the workshop, and as a consequence, the coordination of specialists in ethics was needed to lead the workshop.

The participants were six men who had been active participants and leaders in the project. They were a representative from the planning department of the company, a representative from the company project management office who provided assistance to all of the company’s project managers, the project manager for this project, the design manager for the project,

a representative from the division responsible for general planning and environmental assessment, and a representative from the main external consultant that supervised the writing of the environmental assessment report, and negotiations with owners of land and other stakeholders. The choice of participants was made by the coordinators and the representative of the company that asked for the ethical assessment. The choice was based on creating a balanced, yet not too large group of people who could reflect on different interests and different perspectives that had been raised in the project.

The role of the coordinators in the workshops was to lead the working group through the PET discussion process, enabling them to examine the project thoroughly. This included, among other things, to explain different forums to participants, to conduct a discussion in the group and to balance the meeting. The role of the coordinators was not to interfere with the discussion, but sometimes it was necessary to stimulate it or to ask for explanations of statements and information submitted. As coordinators, the authors gathered detailed minutes in the workshops and processed a detailed report. Both coordinators wrote their own notes, they were compared, and in the rare instances of discrepancies, they were clarified. The outcome was a singular comprehensive report that gives a good overview of all the moral issues related to the project.

Results

We divide this section into two parts. First we give a very brief overview of the outcome of the workshops, and then we elaborate on the experience of applying the PET model, as perceived by the participants and ourselves. The PET analysis leads to the following conclusions that can be drawn:

Virtue based PET analysis: A moral agent should always act in such a way that he/she/it can be content with his/her/its actions.

1. The project manager for the project initially started the project without having sufficient knowledge about project management. This inevitably caused him a feeling of discontent and was hence **not in accordance** with the principles of virtue.
2. By the time the PET exercise was conducted, the project manager and the project team had gained much experience and knowledge; the project manager had been certified by IPMA as a senior project manager (level B) and felt much more content; the project manager and the team had acquired the skills needed to take on a project of this scale. This was deemed as **in accordance** with the principles of virtue.
3. The project manager and the project team felt content as they had made a continuous effort to find solutions, plan, and consult with stakeholders. This was deemed as **in accordance** with the principles of virtue.

Utilitarian based analysis: A moral agent should always act in such a way that his/her/its action leads to increased wellness (less suffering/more happiness) of as many as possible.

4. The project manager and the project team strove to ensure the effectiveness and performance of the project. This was deemed as **in accordance** with the utilitarian principle.
5. The lack of experience and knowledge of the project manager and the project team at the beginning of the project may have led to waste and compromised the interests of professional project managers, i.e., the interests of the project management profession. This was deemed as **not in accordance** with utilitarian principles.

6. External conditions in Iceland (e.g., the economic situation) delayed the project work, and the consequence of this was that work delivered earlier in the project was undermined which led to inefficiency. This was deemed as **not in accordance** with utilitarian principle.
7. The project had time and time again been postponed and extended, due to in countless consultations with particular stakeholders, and this had undermined the interest of other stakeholders. This was deemed as not in accordance with utilitarian principles.
8. The project manager and the project team have not put the consulting work for the project out to tender. This may have led to waste. This was deemed as **not in accordance** with utilitarian principles.
9. The project manager and the project team did seek counsel from technical consultants to ensure efficiency. This was deemed as **in accordance** with utilitarian principles.

Duty Based Analysis: A moral agent should always act in such a way as your behaviour could become a universal moral standard of an agent in the same role as you are in.

10. The project manager and the project team did with time try to fulfil their professional obligations according to professional project management standards (IPMA, PMI). This was deemed as **in accordance** with the duty principle.
11. Documentation and definitions of roles within the project are lacking. This was deemed as **not in accordance** with the duty principle.
12. The project manager and the project team had gone rather far in their outreach to interested parties and stakeholders. This well-intended consultation to ensure everyone was happy had led them astray, and had become counterproductive. This was deemed as **not in accordance** with the duty principle.

Rights Based Analysis: A moral agent should always act in such a way that his/her/its actions indicate outmost respect for the rights of all stakeholders and interested parties.

13. The company had failed to fulfil its legal obligation to ensure the right to clients in the area to safe and secure provision of electricity. This was deemed as **not in accordance** with rights based principles.
14. The company has strived to ensure the rights of landowners and local authorities in the area through extensive consultation. This was deemed as **in accordance** with rights based principles.
15. The company claims that environmental aspects are taken into account as much as possible, it was pointed out that the laying of the electricity transmission line is reversible. Taking this into account this was deemed as **in accordance** with rights based principles.

Discussion

We divided the section in two. First, we summed up and commented on the direct outcome of the workshops, and then we elaborated on the experience of applying the PET model, as perceived by the participants and ourselves.

OUTCOME OF THE PET ANALYSIS

Some of the more interesting findings of the PET exercise are the fact that the knowledge and experience of the project manager and his team was not sufficient in the beginning. This had led to waste and compromised the interests not only of the company but also of project management as a profession. Furthermore, it is shown that the delay of the project

as a consequence of too many consultations with some stakeholders had led to waste. An interesting contradiction was revealed as it was pointed out that not putting consulting work out for tender violates utility principles, but at the same time seeking counsel from trusted technical experts increased efficiency and was considered positive from a utilitarian aspect. The analysis revealed that the documentation and definition of roles in the project were lacking, and this is not according to the duty of a professional project manager, professional project team, and a project oriented organization. One interesting observation is that the extreme to which the project manager and the project team went in consultation with stakeholders to ensure that everyone was satisfied was in fact not deemed as in accordance with the utilitarian principle. This was seen as having a larger weight than the perceived duty of the project manager to consult with stakeholders. One of the main drivers for the project was the need to provide electricity to clients in the area, and thereby fulfil legal obligations of the company. By prolonging the project and thus postponing the delivery of power, the company hence violated the rights of their clients.

The practical relevance of the four ethical principles is mainly that they illuminate the ethical issues (risks) at stake. Using them to evaluate a project or managerial actions shows that different theories will gain more importance than others, depending on the issue at hand. In principle, all of them have equal standing, but their relevance turns out to be case sensitive. The ability to deploy the theories and explore their relevance in each case takes practice, so we suggest that management teams consult with a practically oriented expert on ethics, and also invite the appropriate experts to the table in the process of identifying and tackling ethical issues.

THE EXPERIENCE OF USING THE PET, AS PERCEIVED BY THE GROUP AND COORDINATORS

All participants in the work had technical backgrounds and discovered that the theoretical background for this research was new to them. It was hence necessary to use some time to explain the four different ethical theories upon which PET is based. It was also necessary to ensure that the discussion was focused and according to the different sections of the PET model. Explaining the conceptual difference between virtue, utility, duty, and rights took some time and helping the participants to view the project from the different perspectives of the project manager, the team, the organization, the society and the future generations required a focused effort. One of the two coordinators facilitated the meeting, but the other took notes, and this proved to be an efficient method.

For most of the time, the participants could discuss the project from the different ethical perspectives after the premises had been explained by the facilitator. The facilitator did not have to interfere too much in the discussion. Sometimes the discussion dried out and the facilitator needed to inspire the participants, offer remarks, or even provocative comments to kick-start the discussion again.

The format of the workshop was such that there was good time to discuss each and every aspect of the PET model, and one topic of the model was never left until the groups were satisfied with the content and agreed that nothing more was to be said. Then the group moved on to the next topic. The time we applied for the analysis could not have been shorter without jeopardizing the outcome.

The group was open minded and inspired from the beginning to the end. A short retrospective discussion towards the end of the second session revealed that the participants

were in general very happy with the work, but tired because this challenged them to think in new ways. All of them agreed that the workshop and the application of PET had opened new doors to them, and shown them some new aspects of the project that they had not considered before. In a written note sent to the coordinators after delivering the final report, the project manager expressed his sincere thanks, and said that he was confident that this exercise would lead to better and more ethical evaluation of future projects at the company.

In our own retrospective after delivering the final report, we agreed that this version of the PET model was rather heavy, and required a lot of effort and guidance on behalf of a coordinator well trained in ethical reflection. We concluded that a modified version of the model might be of use for organizations that wanted to apply the PET method without the assistance of external consultants. We have now developed a simplified version of the PET model.

The in-depth discussion that came out of applying the PET led to deeper considerations and provided the participant with more value in terms of information than a simplified version (without the coordination of experts) would have done. The most important aspect is the process itself; the discussion and reflections by a panel of people that know the project and understand its boundaries and content. Such reflexivity within the project team, and the role of learning and doing this as a collaborative practice is the key.

Conclusions

We applied the project ethics tool (PET) to a major infrastructure project in Iceland in hindsight. New ethical aspects of the project were discovered in this process. This has led to a more ethically mature consideration of the projects in the company. The PET ethical risk assessment is, therefore, a valuable add-on to the more conventional engineering risk assessments usually performed in projects of this sort. The tool can also be applied in the design and planning process, and thus provide valuable information that can be used to reduce risk by taking into consideration aspects of the project that would not otherwise be considered. The tool is not simple in the present version, and requires facilitation by specialists. However, the PET tool in a simplified version should be a standard tool in the toolbox of every project manager.

This paper has given examples of the findings when applying the PET model to a real major infrastructure project. It can safely be concluded that this exercise has shown to new aspects, new perspectives and new ways of assessing a project. From a risk assessment point of view, this makes good sense, but we also point out the wider implications. This links well to the way we define success, and we can safely conclude that the PET model helps to expand the horizon when defining success. It does this by looking from the perspectives of well-defined clusters of stakeholders, whom we can now understand in a better way by applying the four ethical theories, virtue, utility, duty and rights.

More work is needed to integrate the ethical principles and extend the definition of success. Further research might include the application of this tool in different types of projects and also in different cultural environments, e.g., in a non-western society, i.e., Africa, South America or Asia.

References

Alberta Innovates Health Solutions, 'ARECCI Ethics Decision-Support Tools for Projects' <www.aihealthsolutions.ca/arecci/areccitools.php> accessed 10 September 2013.

- APM Code of Conduct, <www.apm.org.uk/about-us/how-apm-is-run/apm-code-of-professional-conduct/> accessed 20 July 2017.
- Aristotle [1999], *Nicomachean Ethics*, trans. Terence Irwin, 2nd edition; Hackett.
- Baccarini D. (1999), 'The logical framework method for defining project success,' *Project Management Journal*, 30(4), pp. 25–32.
- Belassi, W. and Tukel, O.I. (1996). A new framework for determining critical/success failure factors in projects. *International Journal of Project 36 Management*, 14(3), 141–52.
- Bryde, D.J. (2005). Methods for managing different perspectives of project three success. *British Journal of Management*, 16, 119–31.
- Cooke-Davies, T. (2002). The “real” success factors on projects. *International journal of project management*, 20(3), 185–190.
- De Wit, A. (1988), 'Measurement of project success', *International Journal of Project Management*, Vol. 6, Issue 3, pp. 164–170.
- Helgadóttir, H. (2008). The ethical dimension of project management. *International Journal of Project Management*, 26(7), 743–748.
- Ingason, H. T. (2015). IPMA Code of Ethics and Professional Conduct. *International Journal of Project Management*, 7(33), 1635.
- IPMA Family Social Network, <ipma.ch/research/ipma-family>, assessed on 10 September 2013.
- IPMA (2015a), Individual Competence Baseline for Project, Programme & Portfolio Management, 4th version. International Project Management Association.
- IPMA (2015b), IPMA Code of Ethics and Professional Conduct . <www.ipma.world/resources/ipma-code-of-ethics-and-professional-conduct/>, assessed 20 July 2017.
- IPMA (2018), The PE model. <www.ipma.world/awards/project-excellence/the-pe-model/>, assessed on 5 February 2018.
- Jonasson, H. I., & Ingason, H. T. (2013). *Project ethics*. Gower Publishing, Ltd.
- Kant, Immanuel [1953], *Groundwork of the Metaphysics of Morals*, trans. H.J. Paton, as *The Moral Law*, Hutchinson, London.
- Josephson Institute of Ethics - An ethical decision-making model <www.ethicsscoreboard.com/rb_5step.html>, assessed 10 September 2013.
- Jugdev K & Müller R. A Retrospective Look at Our Evolving Understanding of Project Success, *Project Management Journal*, Vol. 36, No. 4, PMI, 2005.
- Lock, John (1689) [1960], *Two Treatises of Government*, edited by Peter Laslett (Cambridge, University Press.
- Loo, R. (2002). Tackling ethical dilemmas in project management using vignettes. *International Journal of Project Management*, 20(7), 489–495.
- Mill, J.S., Utilitarianism (1863)[1969], in *J. S. Mill, Collected Works*, Vol. 10, ed. J.M. Robson, University of University Press.
- Munns, A. K. & Bjeirmi, B. F. (1996), 'The role of project management in achieving project success,' *International Journal of Project Management*, Vol. 14, Issue 2, pp. 81–88.

Pasian, M. B. (Ed.). (2015). Designs, methods, and practices for research of project management. Gower Publishing, Ltd.

Pinto, J. K., & Prescott, J. E. (1990). Planning and tactical factors in the project implementation process. *Journal of Management Studies*, 27(3), 305-327.

Project Management Institute - PMI Ethical Decision-Making Framework, <www.pmi.org/About-Us/ethics/Ethics-Resources.aspx>, assessed on 10 September 2013.

Project Management Institute - Code of Ethics and Professional Conduct, <www.pmi.org/~media/PDF/Ethics/ap_pmicodeofethics.ashx>, assessed on 10 September 2013.

Santa Clara University, <www.scu.edu/ethics/practicing/decision/making.pdf>, assessed on 10 September 2013.

Shenhar A. J., Dvir D., Levy O., Maltz A. Project Success: A Multidimensional Strategic Concept. *Long Range Planning*, Vol 34 p. 699-725, Elsevier, (2001).

Silvius, G., Schipper, R., Van Den Brink, J., & Planko, J. (2012). Sustainability in project management. Gower Publishing, Ltd.

About the Authors



Dr. Helgi Thor Ingason is a professor at the University of Reykjavik. He is the head of the MPM - Master in Project Management - program at the university. The research fields of Dr. Ingason range from quality- and project management to system dynamics and renewable energy, production, transport and utilization, changes in the energy infrastructure and energy carriers of the future. Dr. Ingason has reported on his research at conferences and in several reviewed conference and journal papers. He is the co-author of 7 books in the Icelandic language on project management, strategic planning, product development and quality management. He is also a co-author of the book "Project ethics", published by Gower in January 2013. Dr. Ingason was interim CEO of Orkuveita Reykjavíkur (Reykjavik Energy) from 2010 to 2011. A co-founder of Nordica Consulting Group, Dr. Ingason is a management consultant and a recognized speaker. He is a member of the Research Management Bord (RMB) of the International Project Management Association - IPMA.



Haukur Ingi Jonasson is an assistant professor at the Reykjavik University School of Science and Engineering. He heads the MPM (Master in Project Management) programme at the university. Haukur is a psychoanalyst in private practice and a management consultant at Nordica Consulting Group; As a consultant, his clients have included the energy companies, banks, hospitals, the government and other public and private organisations.