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*The Project Stakeholder Management and Engagement
Strategy Spectrum: An Empirical Exploration*
by Aurangzeb Z. Khan, Miroslaw Skibniewski,
and John H. Cable

The Project Stakeholder Management and Engagement Strategy Spectrum: An Empirical Exploration[1, 2]

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Project stakeholders are now universally acknowledged as a prime critical success factor on every complex project. Hence, and especially for key decision-makers of projects, a profound knowledge of practical strategies and measures which can be applied to effectively and efficiently manage and engage their stakeholders, both primary and secondary, is essential. Doing so can significantly reduce threats, existential or otherwise, to their projects on the one hand while helping the projects benefit considerably from the sustained support, encouragement and goodwill of their stakeholders on the other.

Experience with large and complex construction and civil infrastructure projects shows that in general much ignorance currently still prevails about how stakeholders should be managed and engaged appropriately in this important field. The many observed and often avoidable conflicts which arise and linger on or escalate over time between such projects and their stakeholders and the frequent and surprising ineffective stakeholder management and engagement still often witnessed is clearly indicative of this knowledge deficiency persisting in practitioner circles. This deficiency appears to have been rarely addressed comprehensively and at sufficient depth in the project stakeholder literature.

Through an analysis of extensive available documentation collected from diverse sources in the public domain on over fifty on-going and completed high-profile construction and civil infrastructure development projects across the globe, as well as on some selected projects in other fields, the authors have explored a broad spectrum of stakeholder management and engagement strategies applied in practice. In particular, the authors have focused their attention on seeking out innovative and effective strategies designed to maximize benefit for both the projects and their stakeholders and to thus ensure attainment of a 'win-win' situation for both. Through their research the authors hope to deliver insights to project decision-makers and motivate them to significantly improve the

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[1] *Editor's note: Second Editions are previously published papers that have continued relevance in today's project management world, or which were originally published in conference proceedings or in a language other than English. Original publication acknowledged; authors retain copyright. This paper was originally presented at the 2018 University of Maryland Project Management Symposium in May 2018 and included in the conference proceedings.*

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quality of their interaction with their stakeholders over time through pursuit of conceptually sound and empirically tested strategies which serve the interests of their projects while simultaneously ensuring that the legitimate interests of their stakeholders are duly taken into consideration.

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Introductory Comments

In their paper *A Governance Framework for Managing and Engaging Project Stakeholders* which was presented at the University of Maryland's first project management symposium in June 2014, the authors proposed and discussed four pillars – i.e., the institutional, instrumental, technical and educational – on which they argued that professional and successful management and engagement of project stakeholders by organizations regardless of their sectoral context (public sector, commercial, not for profit) can rest. For analytical clarity the authors reserved the term 'management' for the project's dealings with its primary stakeholders and 'engagement' for its dealings with its secondary stakeholders – a distinction which is normally not applied in the project stakeholder literature where the terms are often used interchangeably. Both (primary) stakeholder management and (secondary) stakeholder engagement lie at the end of a complex process which commences with project contextualization in stakeholder perspective followed by stakeholder identification and a thorough stakeholder analysis, and finally culminating in design and execution of effective and efficient management and engagement strategies which are basically intended to influence stakeholders in favor of the project.

This paper's objectives are two-fold: First, to propose a practical strategy framework which can assist projects in managing their primary stakeholders and especially in engaging their secondary stakeholders more effectively because the latter lie outside the project's formal control making the task of engaging them comparatively more difficult for projects than managing their primary stakeholders. Second, this paper seeks to acquaint readers with selected examples of excellent stakeholder management and engagement used on projects across the globe, primarily in the field of Construction and Civil Infrastructure Development (CCID), and also in other selected fields. CCID-projects were considered a logical choice for analytical focus because projects falling under this broad category, such as highways, railway, air- and seaports, power stations and electricity transmission infrastructure, oil & gas fields and pipelines, dams, mining, major buildings and industrial facility construction and development and other projects having immense economic significance, typically have highly complex stakeholder patterns which allow many possibilities for the application of creative stakeholder management and engagement. For this exploratory research several projects were carefully reviewed using books, articles in several project and construction management research journals, reports, case studies, project documentation and other published information freely available in the public domain. In addition, a small number of interviews were conducted with several project professionals with at least ten years of relevant project experience. Consequently, numerous excellent examples of stakeholder management and engagement emerged but space constraints must restrict the discussion here to just a handful of them. The examples selected for inclusion in this paper are purely inspirational and intended to show project owners, planners and executors how projects may benefit immensely from good and innovative stakeholder management and engagement practices, without excessively burdening the projects, financially or otherwise. It is hoped that this will not only educate them about the breadth

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and diversity of good practices used for dealing with stakeholders, but also encourage them to apply their minds creatively to develop and implement good practices on their own projects.

Well-designed and skillfully executed stakeholder management and engagement fulfills multiple fundamental objectives: for primary stakeholders it aims at least to ensure attainment of the project goal within cost, time and other constraints and to the satisfaction of the client while for secondary stakeholders it seeks to reduce or if possible to eliminate existing opposition to the project and to prevent the emergence of opposition in future, and to enable the project to benefit as much as possible from its secondary stakeholders through utilization of their goodwill, knowledge, experience, show of support, and all other forms of practical assistance that they are able and willing to apply for the project. Stakeholder opposition and predisposition towards projects are not static; they can and usually do change over time and as project circumstances change. Stakeholders initially favoring a project may become hostile towards it and vice versa. Once opposition to the project emerges and consolidates itself, reducing or overcoming it may be costly, frustrating and challenging. If the project has effective stakeholder management and engagement strategies in place from the onset, serious opposition to it is less likely to evolve. Hence, projects must give careful consideration to management and engagement of their stakeholders as early as possible, preferably even prior to the project's formal initiation and as the project subsequently advances into its planning phase and detailed information about the identified stakeholders, especially the secondary ones, becomes available through the stakeholder analysis process, its management and engagement strategies must become more focused, inclusive and refined.

Big and complex CCID projects typically have a very large and heterogeneous community of stakeholders, especially secondary ones, with diverse interests, goals, roles and responsibilities, experiences, needs, wants, ambitions, apprehensions, mindsets, level of power and influence, and so forth. It is usually not possible to effectively manage or engage stakeholders with a single one-size-fits-all or even with a handful of off-the-shelf management or engagement strategies applied across the board. Just as all projects are unique in their context, so too are their stakeholders and to influence them to support a project usually a bundle of innovative strategies, some focusing solely on individual powerful stakeholders, others on specific groups of stakeholders, may be needed. Strategies are not cast in stone; they must be continually monitored and periodically carefully assessed by the project and if assessment proves them to be ineffective and/or inefficient, they must be modified or substituted with fresh strategies.

Project Primary Stakeholders: The Management Imperative

According to Cleland/Ireland, all primary stakeholders share one basic feature in common, namely, they all have contractual obligations or some legal responsibility to the project. In large and complex CCID projects, many entities from individuals to large organizations typically fall under this stakeholder category. They include, inter alia, the project owner, client or sponsor, steering committee, the project manager and team, senior executives, functional and resource managers, consultants, external financers, legal advisers, partners, contractors and subcontractors, vendors, and participating government agencies. These all have their respective interests, roles and responsibilities in the project as well as shared and entity-specific motivation and concerns about the project and develop their respective expectations and perceptions about it over time. Primary stakeholder involvement in the project is usually voluntary and through it these

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stakeholders seek to maximize their net gain which they may assess in monetary terms and/or also in terms of other considerations deemed of importance to them, for instance, reputational, experiential, networking, capacity-building and so forth. For projects undertaken by public agencies and not-for-profit organizations, developmental or social considerations and objectives eclipse pursuit of commercial gains. Regardless of organizational or sectoral context, project success hinges mainly on the ability, willingness and determination of all its primary stakeholders to fulfill their agreed commitments to the project in a responsible, timely and professional manner and to collaborate closely in their common fundamental pursuit, namely, achievement of the project goal. Primary stakeholders normally are not expected to display adversity to the project per se but sometimes, for instance, when a realization sinks in that they have overestimated their net gain from the project or underestimated the level of effort required or expected from them, demotivation and loss of interest in the project can result. Consequently, their performance level or quality of work may decrease. Such situations obviously can have a quite detrimental impact for the project. Disenchanted or disgruntled primary stakeholders are, moreover, more amenable to initiating or fueling conflicts on the project which if unaddressed or mismanaged can linger on or escalate into crises situations, resulting in cost and schedule overruns and potentially even endangering the project's existence or goal. Hence, the onus rests mainly with the project to prevent such situations from arising in the first place or to react to and deal with them promptly and effectively in the event that they do arise. The best way to do so is to ensure that all its primary stakeholders' interests are comprehensively safeguarded over the project life-cycle and that their motivation and concern, and their expectations and perceptions - which collectively influence their attitude and crucially their behavior towards the project - are carefully and continuously monitored and systematically addressed. This is where the project's stakeholder management strategies must focus on.

A now sizeable body of literature provides ample insight on how primary stakeholders on CCID-projects, and also on other types of projects, are managed effectively in practice. Actually, the same principles of general management which apply to organizations apply equally to projects since these too are basically organizations, albeit of a temporary nature. Both the authors' research and their personal experience indicate that successful primary stakeholder management strategies on projects basically revolve around good information, communication and collaboration, leadership, motivation, trust and relationship-building, conflict prevention and management, monitoring and controlling, benefitting from cultural diversity and from facilitating stakeholders as much as possible within the projects' constraint systems. Information and communication appears to constitute a universal (and is probably the most cost-effective) stakeholder management strategy. Research shows that good communication among all primary stakeholders invariably promotes performance and coordination of work tasks besides keeping key stakeholders closely informed about project progress and developments which may retain their interest in the project as it progresses through its life-cycle. Ensuring awareness, understanding and acceptance among stakeholders of the project goal, objectives, mission and purpose, and clarifying and ensuring fulfilment of their respective project roles, responsibilities and commitments are critical for avoiding conflicts between stakeholders. Conflicts can also be proactively managed through, inter alia, thorough and realistic project planning, clear formulation of contracts, careful selection of competent and experienced project managers and team members, consultants, contractors, sub-contractors and vendors, unwavering emphasis on professionalism and ethical behavior, and by following a robust and fair dispute and grievance settlement process which is acceptable to all

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stakeholders. With the advent of globalization and consequent increasing cultural diversity encountered in CCID project environments, knowledge of the often widely different cultural backgrounds stakeholders bring along with them to the project is assuming greater relevance both for avoiding preventable issues and conflicts as well as helping projects benefit from the multifarious benefits which accompanies cultural diversity. The importance of motivating project human resources by providing them with a safe, clean and comfortable work environment, individualized performance incentives, respect and access to counselling and mentoring services is also widely acknowledged and pursued. And so forth.

Project Secondary Stakeholders: The Engagement Challenge

The project's secondary stakeholders, i.e., those entities which according to Cleland/Ireland do not have a contractual and/or legal obligation to the project but which are affected, or who believe they are affected by it nonetheless, are the focus of the project's engagement strategies. On major CCID projects the number of entities in question may be numerically many times greater than the number of primary stakeholders. Typically they include, for example, local communities (and sometimes the general public), civic, professional, political and religious organizations and associations, environmentalists and advocacy groups, competitors, the media, academia, and government agencies not involved in the project. Broader notions extend the stakeholder definition over and above the individuals and organizations which are directly and indirectly affected by the projects to include non-human and inanimate entities, especially the natural environment, fauna, flora and eco-systems, and even the whole planet, as well as places, structures and artifacts considered to be of historical, archeological or cultural significance. States and their populations, in part or whole, may also be stakeholders on some projects whose effects extend across national borders. Consequently, the range of secondary stakeholder interests, motivation and concern, expectations and perceptions, and attitude and behavior which they display towards the project would be commensurately large and effectively engaging these stakeholders who, unlike the primary stakeholders, lie outside the project's formal control and are often involved in it involuntarily can be, and frequently usually is, comparatively immensely more challenging and risky than managing the primary stakeholders.

Attempting to engage and satisfy all project secondary stakeholders is a desirable undertaking but in practice is off course extremely difficult, if not downright impossible, to achieve within the project constraint framework. Projects usually have well-conceived strategies for managing their primary stakeholders but often they do not for engaging their secondary stakeholders. The unwillingness or inability by projects to effectively engage their secondary stakeholders in their entirety may result from various factors, such as disinterest or a lack of commitment, failure to recognize the entities as stakeholders, cost and time limitations, unavailability of trained human resources, information and knowledge gaps, lack of experience and creativity, or non-existent or inadequate stakeholder engagement policies, processes and tools. A pragmatic engagement approach often adopted by projects is to prioritize and focus engagement by taking into consideration the secondary stakeholders' interest, power and influence dimensions. The greater a stakeholder's interest and its power and influence in the positive and negative sense vis-à-vis the project, the higher is the project's engagement intensity with it, and vice versa. This appears reasonable at first glance but omits that an ethically robust stakeholder engagement approach must also at least try to ensure that all or as many secondary stakeholders as possible, including less powerful and

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even 'powerless' entities, and especially those stakeholders who are affected by the project negatively, significantly and over a comparatively long period of time – whereby 'affected' can manifest itself multi-dimensionally, for instance, in the economic, financial, emotional, health and quality of life spheres - should experience preferably a *net gain* or at the very least *no net loss* from their involvement, whether desired or undesired, in the project. Such engagement is ethical and for the project also beneficial because it may significantly reduce or even eliminate serious (including existential) risks to it and possibly avert the highly negative consequences which may result from individual or collective hostile actions initiated against the project by un- or inadequately engaged secondary stakeholders. Hostile actions, which are the direct expression of the stakeholder psychological attribute behavior, were discussed in detail by the authors with numerous examples from projects across the globe in their paper *Adversarial Project Stakeholders. Influencing Projects With Options* which was presented at the University of Maryland's fourth project management symposium in May 2017.

Project Stakeholder Engagement: The Criticality of Influencing Stakeholder Behavior

An engagement framework for secondary stakeholders which apparently commands much interest in the literature and in practice is being widely applied on projects divides engagement into five broad strategy categories. In ascending order of engagement intensity these categories are: Information and Communication, Consultation, Incentives, Participation or Involvement, and Partnership or Empowerment. These overlap to a considerable extent with the strategies projects use to manage their primary stakeholders. Each category offers considerable space and numerous possibilities for creatively engaging project stakeholders. Information and communication is probably the most widely applied and cost-effective strategy category used for engagement while occurrences of partnership with or empowerment of secondary stakeholders appear to be relatively rare. The five strategy categories evidently account for most of the stakeholder engagement activities observed on CCID projects but, while they easily apply to 'traditional' secondary stakeholders – i.e., individuals, organizations and even countries (which can also be stakeholders on certain schemes as the authors argued in their paper *Stakeholders and Transnational Projects* which they presented at the University of Maryland's third project management symposium in 2016) - they are not directly applicable to 'special' stakeholders, i.e., non-human, non-organizational and inanimate entities which as mentioned earlier fall under the broader notion of stakeholders and which often are adversely (and sometimes very severely) affected by CCID-projects in particular. CCID-projects however are now almost universally required to ensure that their negative foreseen impacts on these special entities, whose protection and preservation has acquired great importance everywhere in recent decades, are minimized. This necessitates a form of 'special engagement' for these stakeholders which does not appear to conveniently fit in any of the five conventional categories. Some interesting examples of this special form of engagement are included in the next section.

In their paper *Understanding Project Stakeholder Psychology. The Path to Effective Stakeholder Management and Engagement* which was presented at the University of Maryland's fourth project management symposium in 2017, the authors argued that influencing stakeholder behavior is critical for projects because by exercising the options available at their disposal – whereby options symbolize the degree of power and influence which the stakeholders individually or collectively can bring to bear on a project - stakeholders can directly affect projects in both the positive or

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negative sense, the latter often resulting in cost and schedule overruns, unwanted scope changes, reputational damage, or sometimes even premature termination of projects. Stakeholder behavior is normally but not always a reflection of the attitude they develop towards the project and which results from juxtaposition of their motivation and concern, as well as expectation and perception. Behavior is dynamic; sometimes it changes significantly even over brief time periods to reflect changes in stakeholder motivation and concern, expectation and perception. To understand stakeholder behavior it is hence very important for projects throughout their life-cycles to continuously and carefully monitor and assess these four attributes. Stakeholder behavior towards projects can be categorized as supportive, adversarial or indifferent. Supportive and adversarial behavior can be further subcategorized into passive behavior (stakeholders will not exercise their options for or against the project) and active behavior (stakeholders will exercise their options for or against the project provided circumstances permit them to do so). Active behavior is measured on an intensity scale which ranges from marginally active on its lower end to very active on its higher end. It is reasonable to assume that stakeholders who form attitudes that are more strongly supportive of or opposed to the project will adopt active instead of passive behavior towards it and, furthermore, their activeness will be located higher up on the intensity scale than other stakeholders who feel less strongly about the project. Project engagement strategies must therefore focus first and foremost on influencing secondary stakeholder behavior over time by attempting to keep or steer it in favor of the project. Doing so reduces risks to the project, possibly to a very considerable extent, and, at the same time, provides the project with an opportunity to benefit from stakeholder active support.

Based on their research the authors propose here for consideration by projects an engagement strategy framework for secondary stakeholders which is basically consistent with the conventional engagement strategy category system outlined earlier in the sense that it also aims ultimately to influence stakeholder behavior. The framework proposed here by the authors merely attempts to supplement, and not to substitute, the existing system. Whereas projects normally tend to engage their secondary stakeholders according to their type, interest in and the power/influence they command over the project - whereby more engagement energies are sensibly directed towards those stakeholders which are deemed relatively more important for the projects' success - the authors believe that engagement needs to go a step further. One way of doing this is to assign stakeholders to their relevant behavioral category, i.e., supportive, indifferent or adversarial, and then pursue a set of category-specific, practical and mutually reinforcing objectives, their collective purpose being to ensure that stakeholders support rather than oppose the projects. This approach is comparatively more systematic and focused and may consequently yield better results; its major limitation is that it too applies only to the 'traditional' and not to the 'special' secondary stakeholders.

Table 1 lists in alphabetical order a total of seventeen engagement objectives spanning the supportive, indifferent, and adversarial secondary stakeholder behavioral categories. These objectives can be applied to all project categories, CCID and otherwise, and regardless of where the projects are undertaken. They have been identified by the authors with the secondary stakeholders in mind. As experience shows these stakeholders often present especially great challenges for large and complex schemes such as those typified by CIID projects and many such projects have incurred major cost and/or schedule overruns or been prematurely terminated due to their intervention. Normally, the observed behavior of secondary stakeholders on CCID projects spans the whole

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behavioral spectrum from highly supportive to extremely adversarial, is volatile and often expressed violently, and the level of overall risk they pose for the project may be higher than for the primary stakeholders who as voluntary participants in projects are consciously seeking and can expect net gains from them, are contractually and legally tied to their projects, and who thus can be assumed to confine themselves to the active supportive behavioral category. Such support must not be taken for granted though: Inadequately managed, neglected or demotivated primary stakeholders may eventually become indifferent towards their projects and, on occasions, may even display active adversarial behavior to them which in consequence may cause very serious problems and issues for the projects as experience with many high-profile projects has aptly shown.

Table 1: Engagement Objectives by Secondary Stakeholder Behavioral Category

Behavioral Category	Stakeholder Engagement Objectives
Supportive (active, passive)	▪ **Accommodation**: To address and attempt to overcome both the general and the specific concerns of supportive stakeholders to the maximum feasible extent. ▪ **Conversion**: To convert passive supportive stakeholders, especially the powerful/influential ones, into active supportive stakeholders. ▪ **Discouragement**: To discourage actively supportive stakeholders, especially powerful/influential ones, from transforming into passive supportive, indifferent or adversarial stakeholders. ▪ **Enhancement**: To increase the number of supportive stakeholders, especially the active and powerful/influential ones, and the intensity of their support for the project. ▪ **Mobilization**: To mobilize supportive stakeholders, especially the powerful/influential ones, to form a unified and public front in support of the project. ▪ **Persuasion**: To persuade active and passive supportive stakeholders to exercise their power and influence in support of the project. ▪ **Retention**: To retain the interest of supportive stakeholders, especially the active and powerful/influential ones, in the project. ▪ **Participation**: To solicit and incorporate useful information, ideas and suggestions provided by supportive stakeholders which could benefit the project planning, design, execution and other phases.

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Indifferent	▪ **Conversion**: To convert indifferent stakeholders, especially currently or potentially powerful/influential ones, into active or at least passive supportive stakeholders. ▪ **Prevention**: To prevent indifferent stakeholders, especially those currently or potentially wielding considerable power/influence, from transforming into adversarial stakeholders.
Adversarial (active, passive)	▪ **Accommodation:** To effectively address to the maximum feasible extent the general and specific concerns adversarial stakeholders have about the project. ▪ **Awareness**: To convince adversarial stakeholders that they stand to benefit, not lose, from the project. ▪ **Compensation:** To compensate stakeholders in full for any financial, material or other losses they experience in consequence of the project. ▪ **Division**: To create and promote discord among active adversarial stakeholders in order to prevent them from joining forces to oppose the project (keeping legal and ethical considerations in mind). ▪ **Negotiation**: To influence passive and especially active adversarial stakeholders to drop their opposition to the project by directly engaging them in a constructive dialogue and by encouraging supportive stakeholders to do likewise with them. ▪ **Prevention**: To prevent passive adversarial stakeholders, especially powerful or influential ones, from transforming into active adversarial stakeholders. ▪ **Incentivization**: To provide financial, material and other tangible incentives to adversarial stakeholders in exchange for a reduction in the intensity or elimination of their opposition to the project.

Source: Developed by the authors

A simple relationship exists between the engagement objectives in Table 1. and the five conventional engagement strategy categories outlined earlier. Each objective is pursued through application of one or a combination of two or more or sometimes all five categories. Each category may encompass several specific 'strategy execution measures' (SEMs). It is these SEMs which interface directly or indirectly with the secondary stakeholders and help determine the behavior

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they adopt towards the project. SEMs are generally context-sensitive and project-specific; what works well in one project environment may not work well or may not work at all in another. The project can and must promptly modify or substitute them when proven ineffective or are demonstrably less effective (and efficient) than envisaged. Failure or delayed rectification of non- or underperforming SEMs and their substitution with alternative, more effective (and efficient) SEMs not only constitutes a waste of project resources with little or nothing to show by way of return but would, moreover, make the project engagement system appear inept and, in the worst case, may aggravate rather than pacify its stakeholders. Therefore, SEMs must be chosen very carefully. This necessitates a thorough and careful analysis using available high-quality information about the stakeholders and acquiring a good understanding of their four related attributes motivation and concern, and expectation and perception.

The engagement effectiveness of the SEMs can be accurately assessed by using quantitative or qualitative performance indicators (PIs) linked to pre-specified set targets and comparing the variance, positive or negative, between their achieved results as revealed by the PIs and the associated target values. Negative variance indicates underperformance, positive variance the opposite. This requires continuous monitoring of the SEMs throughout the project life-cycle. This straightforward relationship which exists between stakeholder engagement objectives and their SEMs, PIs and target values, can be elucidated by a simple example: Suppose for instance that a CCID project decides to pursue its retention engagement objective for its active secondary supportive stakeholders by disseminating information to them about the project's progress by printing and circulating a project newsletter every month (i.e., the SEM) to the local community and to which it expects to receive in response per month at least one hundred written appreciative comments (i.e., the target) from community members about the project. The PI (number of written comments received by the project media center) indicates however that while initially the number of comments received by the project office exceeded one hundred, thus surpassing the target (positive variance), the number has progressively declined over the passing months as the project progresses through its life-cycle to the extent that written comments received numbered less than forty in the previous month (negative variance). This indicates that this SEMs effectiveness is dropping over time and consideration should be given towards substituting it with an alternative SEM if the target level of appreciative comments from stakeholders is to be maintained.

Secondary Stakeholder Engagement: Best Practice Examples From Across the Globe

Many excellent examples of project stakeholder engagement were discovered while researching for this paper. Due to the space constraint, only a handful have been selected for inclusion in this section. To avoid conveying the impression that stakeholder engagement is purely an altruistic service performed by CCID-projects (and by projects in other fields), it must be pointed out that engagement is often a legal, policy or procedural requirement on which public grant of approval for projects hinges.

All entities falling in the category of secondary stakeholders (and primary stakeholders too), from individuals to organizations, have motivation (i.e. needs, wants) and/or concern in relation to the projects affecting them. Based on their motivation and concern they develop expectations and perceptions through which they then form attitudes and adopt behavior which is supportive, indifferent or adversarial towards the projects. To tilt stakeholder behavior towards the supportive

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category – which, after all, is the fundamental goal of sensible stakeholder engagement - projects must endeavor to simultaneously maximize stakeholder motivation, mitigate or where possible eliminate stakeholder concern, both general and specific, and ensure that positive stakeholder expectations and perceptions prevail over time. Projects apparently are consciously attempting to do so. Incentives, especially economic ones, are a particularly effective means of attracting secondary stakeholder interest in and support for projects. To address the stakeholder crucial motivation factor 'employment and income generation' many of the CCID-projects reviewed by the authors emphasized their job creation effect, notably during the construction phase, numbering thousands or in a few cases tens of thousands of newly-created jobs across various skill categories. In economically depressed areas marked by chronically high unemployment and deprivation project-driven job creation is especially important, whether the jobs are only of a temporary nature (i.e., confined mainly to the project execution phase) or are of longer duration (i.e., after project completion when projects enter their operational phase). Besides jobs, some of the CCID-projects reviewed highlighted the business opportunities they provided local businesses desirous of supplying them items, inputs and services of any type available and required by the projects. By prioritizing their procurement from local sources, CCID-projects can contribute, sometimes significantly, to the development of the local economy, earning them considerable stakeholder goodwill and support in the process. Completed CCID-projects often have the consequential effect of attracting further investment through projects into their localities which in turn result in fresh job creation and business generation opportunities. Some CCID-projects reviewed, such as shopping malls, museums, and theme parks, emphasized the improvement in the quality of life for residents and outsiders they offered on completion which in turn rendered the localities more desirable places to live in and consequently resulting in a boost of property values and rental incomes.

Virtually all projects reviewed apparently had robust systems in place to communicate general and specific information about the project to their secondary stakeholders. This was done, for example, through project websites and/or a combination of numerous other information mediums such as newsletters, press releases, public information events, media interviews, dedicated phone lines, e-mail addresses and so forth. Communicating information directly from and about the project is a very important engagement strategy as it may directly address misgivings or apprehensions stakeholders have about projects instead of them having to rely on other sources where the information may not necessarily be accurate.

Dirt and dust, noise, vibrations, traffic hazards and diversions, and reduced pedestrian access to homes and businesses constitute some of the main general concerns secondary stakeholders have about CCID projects, especially those projects which are undertaken in urban localities. Consequently, many CCID projects implement various 'mitigation measures' to reduce or where possible to eliminate the adverse impacts their construction activity has on local residents and businesses. Oftentimes such measures are a pre-requisite for obtaining construction permission from local public administration and their adherence is carefully monitored by public officials. A case in point is the 360 Residences project in San Jose, California. Specific engagement measures identified in the project's construction impact mitigation plan included, inter alia, erection of signage and covered walkways and protected pathways at and around the construction site, introduction of a vibration monitoring program to ensure that vibration ceiling levels were not exceeded and affected local residents were warned in advance about pile driving activity schedu-

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les, placement of acoustic barriers around pile driving equipment and muffling all construction equipment, use of water trucks and street sweepers to prevent dust from exceeding pre-specified ceiling levels, and use of dust bags and filters for power tools. Other notable engagement measures included coordinating work activities with the nearby California Opera to minimize any adverse impacts of construction work on the Opera's performances, and offering monthly project progress updates as well as the opportunity for stakeholders to provide their feedback about the project through a project website.

In recent years the off-site fabrication of building components and their shipping and rapid assemblage at construction sites is attracting considerable interest and popularity. By adopting this approach large structures which normally take months to complete can be erected in a few weeks, sometimes even in a few days. This constitutes a highly effective engagement measure because it drastically reduces the time period of inconvenience experienced by local residents who normally would be compelled to endure the nuisance and issues caused by months of building and other construction activity undertaken conventionally in close proximity of their homes and workplaces. Several recent examples come from China: in Changsha in China's Hunan province just 19 days were required to erect a 57-story office building, a time-lapse of which is viewable on YouTube.

The lack of consultation on projects is often cited empirically as constituting a principal cause of secondary stakeholder discontent with and opposition to projects. An interesting example where excellent consultation with stakeholders greatly facilitated an initially highly controversial project comes from the town of Kaikoura which is located on the east coast of New Zealand's southern island. The town, a popular tourist destination, historically has been prone to flooding resulting often in considerable damage to residential and commercial property. A seemingly effective and lasting solution to this problem was the construction of a flood wall but this proposal was not greeted enthusiastically by the town's local population. To gain the support of the town's residents, the project team adopted a listen-and-learn approach and incorporated local concerns and suggestions especially into the project's design and its execution phase. The result of this engagement was a wall design which was not only effective in keeping floodwater away and protecting Kaikoura against several different flooding risks, but which was also aesthetic and artistic in appearance and in harmony with the localities natural beauty. When residents saw a visualization of the design, their general mood swung in the wall's favor and other initially skeptical stakeholders soon opted to follow suit. To minimize the project's impact on tourism, construction was undertaken over a six-week period during the off season and the wall's concrete panels were pre-cast off-site and their size reduced for easy transportation.

Incentives can be a powerful engagement strategy which if chosen wisely can heavily influence secondary stakeholders in favor of projects. Incentives can manifest themselves in financial, material and other forms. Examples of incentives offered by projects reviewed for this research include the donation of school books, computers, medical equipment and food supplies, provision of student scholarships, and creation of parks and playgrounds for the benefit of local residents. Sometimes cash itself may suffice as an incentive: the British Government is currently offering 2.5 million pounds per year to a local community which would be willing to host an underground nuclear waste storage facility project.

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Many examples where the strategy of stakeholder participation in projects contributed significantly to the success of the projects come from the fields of social development and natural resource management in developing countries. Such projects include, inter alia, poverty alleviation, health, provision of access to clean drinking water and basic sanitation, education, gender and minorities empowerment, and forestry and water resource management schemes. Participation means that the intended beneficiaries (i.e. stakeholders) of projects financed, directly undertaken or technically assisted in large measure by regional and international development banks and/or development organizations are increasingly being given the opportunity to involve themselves – or 'participate' in such schemes. Participation can occur in different project phases and at different points in time: before project initiation (participatory need assessment, selection), during the project life-cycle (participatory design, planning, execution) and/or after project completion (project outcome and impact monitoring and evaluation). Direct stakeholder participation is viewed as not only offering projects a higher chance of successfully achieving their goals but also, and perhaps more importantly (and backed by a growing body of empirical research) guaranteeing the effectiveness and sustainability of project results and outcomes which is increasingly being acknowledged as constituting the yardstick of success in projects, notably in the social development field. Participation dimensionality and intensity may be higher on some projects, lessor in others. Several organizations have over time developed sophisticated 'stakeholder engagement toolkits' detailing the types, processes and tools of stakeholder participation in projects. Some toolkits encompass dozens of specific stakeholder engagement measures. Irrespective of how it manifests itself, participation gives stakeholders a sense of ownership of, responsibility for and identification with the projects which will ultimately affect them and their lives, often profoundly over an extended period of time.

An excellent example of project stakeholder engagement incorporating many innovative and diverse strategy execution measures was demonstrated by Petro-Canada. Now defunct, this Canadian energy corporation was rated highly for its fair, ethical and professional approach in its dealings with its secondary stakeholders in all its projects and operations inside and outside Canada. Its concise and succinctly formulated one-page document *Stakeholder and Community Engagement Policy*, approved in 2007 by Petro-Canada's CEO, spelled out the corporation's approach emphasizing, inter alia, the importance of information sharing and consultation with its stakeholders as well as listening to them and understanding their needs, concerns and expectations, building trust and respectful relationships as well pursuing collaboration with them for mutual benefit, demonstrating social and cultural sensitivity, and incorporating stakeholder suggestions and seeking to develop solutions with them jointly. Three examples selected from the many posted on Petro-Canada's website show how the corporation implemented its 'win-win' policy in practice:

Example 1: In 2005 Petro-Canada signed production-sharing contracts for three exploration blocks off-shore from the Caribbean Islands of Trinidad & Tobago. The local fishing community was identified as a key secondary stakeholder and major part of the local economy. Several measures were adopted to engage them such as safety at sea training courses for local fishermen covering basic boat and engine maintenance, use of safety equipment and survival techniques, and the donation of radar reflectors for local fishing boats and GPS hand-held units to course participants. To ensure that drilling and fishing activities could take place simultaneously and also to compensate local fisherman for their non-access to the 500 meter safety zone around the drilling

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rig, Petro-Canada installed twelve 'fish aggregating devices' to attract fish and create a fishing ground, and provided a chart with the GPS coordinates of the fish aggregating devices along with laminated cards for use in fishing boats. Furthermore, to reduce the possibility of interaction between Petro-Canada vessels and local fishing boats and their fishing gear a defined route for the corporation's vessels approaching the exploration site off Tobago was approved.

Example 2: In 1995 Petro-Canada sought to expand its lubricants facility at Mississauga in Ontario province. The proposed project was opposed by many residents concerned at the potential noise, odor, safety and adverse environmental repercussions. Drawing on its experience at another of its facilities, Petro-Canada set up a Public Liaison Committee, consisting of elected public officials, community representatives, public health experts, the Ministry of Environment, and officials from the Petro-Canada lubricants facility, to communicate between the facility and local community. A technical subcommittee was created consisting of local residents with experience in industry with the objective of reviewing technical issues prior to discussing them in the public liaison committee. Additional measures included air monitoring programs to measure and report facility emissions, and technical measures to ensure that emissions remain within acceptable levels. Independent consultants were tasked with reporting on air quality upwind and downwind of the facility on a quarterly basis. The overall result was that an open and effective dialogue between Petro-Canada, the community and elected public officials took place through the Public Liaison Committee and communication improved considerably to the extent that there was a marked decrease in the number of complaints received by Petro-Canada from local residents and each complaint received was reviewed and responded to.

Example 3: For its Fort Hills Mine project in Fort McMurray, Canada, Petro-Canada made 180 'regulatory conditions and commitments' to the mine area's inhabitants. Quite diverse in nature, these included local participation in the reclamation planning and design process, provision of funding for a First Nation daycare facility, collaboration with the local school industry for funding diverse events and other educational support measures for First Nation students, promoting student employability skills, development of a community/youth camp and hiring of camp services, provision of funding of First Nation elder committees, distancing the mine behind the 100-year high water mark, creation of a visual buffer of vegetation between the Athabasca river and the mining operations for aesthetic effect, minimization of disruption to marine and wildlife, fish relocation and other bio-conservation measures.

An interesting and recent example of high-level stakeholder participation bordering on partnership in the context of renewable energy projects comes from the German state of Brandenburg where a proposed scheme to construct a wind park on farmland outside the small town of Schlalach-Muehlenfliess initially encountered opposition from the local population. A working group '*Wind Power in Schlalach'* created by local residents took up the responsibility for negotiating with prospective wind power companies. The group came up with the idea of a 'pooled space model' under which the annual lease income for the wind park would be put in a common fund and distributed among the 100 or so small land owners proportionately in relation to the size of their land leased out to the wind power company Enercon. Through this arrangement each land owner was guaranteed an annual income of about 3,000 Euros from the fund. Local community participation in the project design phase led to selection of the wind park's turbine model of their choice. To attract the support of other stakeholders a citizen's foundation was created which

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received a small share of the income generated by the wind park and which was allocated for youth programs and road repairs. In addition, the community was assured benefits from the taxes generated by the wind park. Wind Power in Schlalach even came up with the idea to purchase shares in Enercon in future which would make it a co-owner of the company and guarantee it additional income.

On occasions projects have engaged their stakeholders effectively by adopting measures which do not appear to fit in squarely with any of the conventional stakeholder engagement strategy categories discussed above. Three interesting, simple and cost-effective examples come from Pakistan and were shared by one of the author's graduate students based on their personal past project work experiences. Here engagement revolved primarily around the 'deference' shown by their projects towards their secondary stakeholders. In one example, a large national engineering public-sector company was tasked with executing projects in the remote mountainous Kohistan region in northern Pakistan. Being outsiders the project team initially encountered skepticism and distrust from the deeply conservative local population. By appropriately modifying their behavior for the duration of their stay in the area – for instance, by wearing local-style clothing, not shaving, communicating through translators in the local language, and not wandering around during the Islamic prayer time - the project team was able to develop the trust of the locals and complete their work without encountering resistance or interference from them. In the second example, a hunter with extensive area and terrain knowledge was disturbing a conservation project undertaken by the World Wildlife Fund in a forested region of northern Pakistan. To engage the hunter the Fund hired him for their project prompting him to cease his hunting activity and, given his acquaintanceship with and influence over other local hunters in the area, to encourage them to curtail their own hunting. In the third example, a peace-keeping military contingent Pakistan was dispatched under the auspices of the United Nations to a West African country ravaged by civil strife. To gain the confidence, goodwill and respect of the distrustful local population, the contingent came up with the idea to clean up a local cemetery thinking that such an unconventional gesture would be regarded with much appreciation by the area inhabitants. This turned out exactly to be the case and the Pakistani contingent subsequently encountered less problems dealing with the local population than contingents from other countries.

Technological advances in recent years have helped facilitate the engagement of inanimate and non-human stakeholders to a significant extent. For decades much controversy has resulted from the damage inflicted by CCID-projects on the natural environment which is now universally acknowledged as a stakeholder. With the advent of eco-friendly 'green technology', and in the hope of reducing their chemical emissions and its consequent contribution to global warming and environmental damage, several coal-fired power plant projects in planning, execution or operation across the globe have opted to voluntarily incorporate this still nascent, evolving technology into their technical design despite the considerable additional cost and other uncertainties accompanying it. In the building construction context, the concept of 'green building' as an eco-friendly alternative to conventional building has likewise garnered increasing attention and interest culminating in the construction or renovation of numerous large structures inside and outside the United States which fall in this category.

Interesting technical design features incorporated into projects can sometimes also serve the purpose of effectively 'engaging' animal stakeholders. Many highways, for instance, were construc-

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ted with 'wildlife crossings' whose purpose is to enable animals to safely cross the highways, thereby reducing the likelihood of road accidents and consequent human and animal mortality, injury and cost. Such crossings come in several forms, for instance, underpass tunnels, viaducts and overpasses (mainly for large or herd-type animals), canopy bridges (for monkeys and squirrels), tunnels and culverts (for small mammals such as otters, hedgehogs and badgers), and amphibian tunnels (for frogs and other amphibians). To facilitate mobility of marine life, amphibian tunnels and fish ladders or fishways have been installed at many dams and other man-made obstructions constructed on rivers and waterways across the world to enable fish to bypass the barriers.

CCID-projects often are undertaken at places having important historical, archeological or cultural significance and the possibility that such projects can or inevitably will cause lasting damage to sites, structures and artifacts deemed protection-worthy is often a source of major concern. Damage or destruction can be averted to some extent by relocation which often is a legal requirement which is binding on projects. Though technically challenging, time-consuming and quite costly to undertake, several famous structures were saved from destruction simply by dismantling, moving and reassembling them at safe places located outside the project area. A celebrated case in point is the relocation in the late 1960s of the massive pharaonic Abu Simbel Temples in Egypt from their original site, which was submerged by water after construction of the Aswan High Dam, to a site located several meters above the dam water level. In the context of road or highway construction projects in particular, relocation has been used on numerous documented occasions to move cemeteries as well as the habitats of rare animals, insects, plants and trees although in several cases it has not been fully successful.

Concluding Remarks

The authors' research reveals that CCID-projects can and in practice are applying diverse and effective measures as part of their strategies for managing their primary and engaging their secondary stakeholders. As the chosen handful of examples presented by the authors shows, project stakeholder management and especially engagement strategies offer enormous space for creative, interesting and effective solutions which appear limited only by the cost, time and other constraints under which projects operate. Both projects and their stakeholders can benefit immensely from well-chosen stakeholder management and engagement strategies and this is not only ethically desirable but, if pursued by projects systematically, whole-heartedly and professionally, and is sustained over time, can bring about attainment of the best possible overall situation - namely, a 'win-win' situation – for both of them. It is a field of tremendous practical significance for projects which undoubtedly could still benefit from more extensive and in-depth research in future.

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